Task A.4
Environmental Summary Report

NORTH TAMPA PARKWAY
SUPPLEMENTAL NUMBER 1

Federal Aid Project Number: M-206-1(1)

State Project Number: 10230-1521

W.P.I. Number: 7113892

FLORIDA DEPARTMENT OF TRANSPORTATION

July 1993

ENVIRONMENTAL SUMMARY REPORT

NORTH TAMPA PARKWAY
DALE MABRY HIGHWAY/U.S. 41 TO INTERSTATES 75/275
HILLSBOROUGH AND PASCO COUNTIES, FLORIDA

Prepared For:

U.S. Department of Transportation
Federal Highway Administration
and
Florida Department of Transportation
District VII

State Project Number 10230-1521
Federal Project Number M-206-1(1)
Work Program 7113892

Prepared By:

Greiner, Inc.

July 1993

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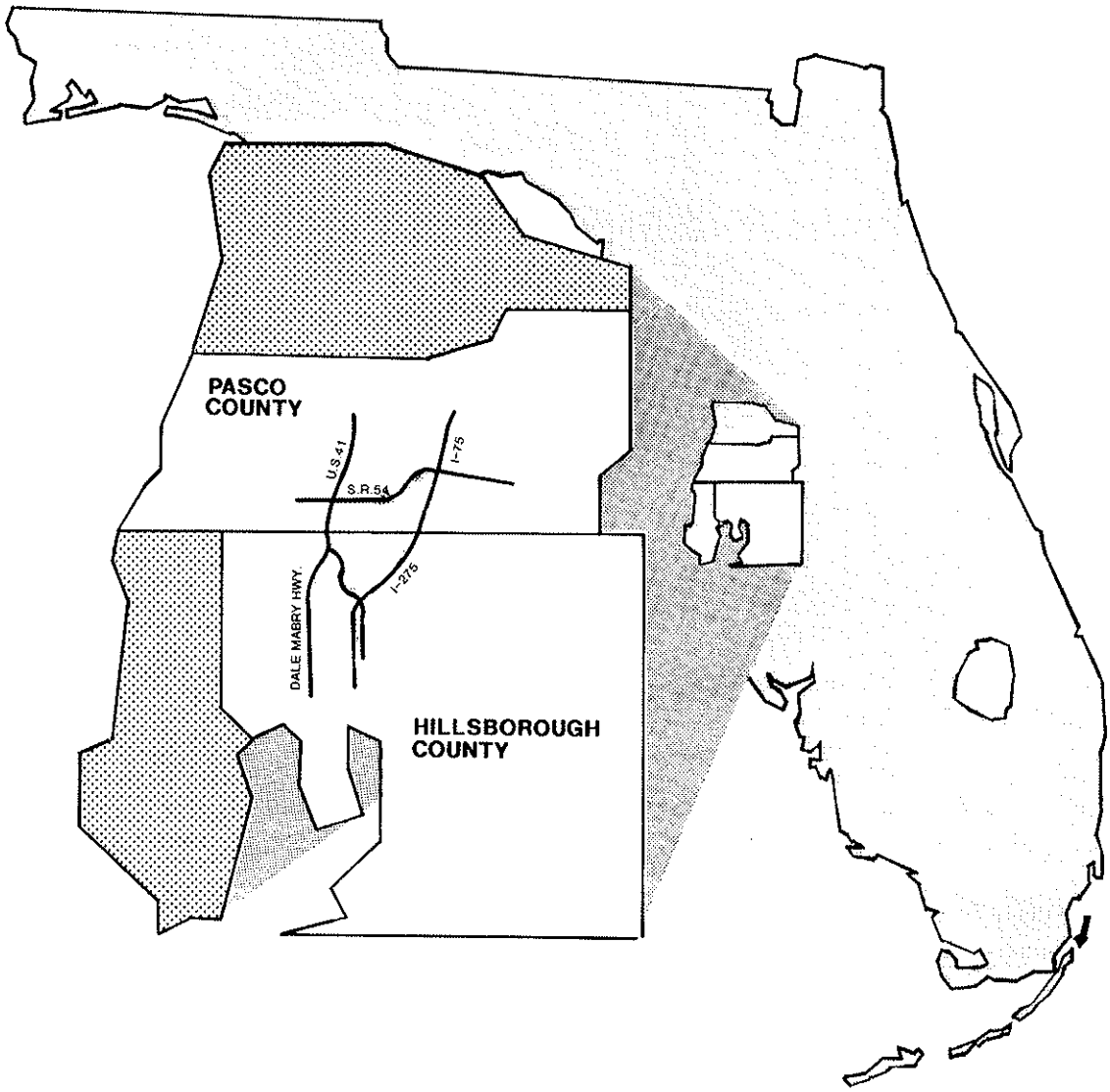
1.0 INTRODUCTION

The Florida Department of Transportation (FDOT) identified the need to improve east-west and north-south travel in northern Hillsborough and southern Pasco Counties. Greiner, Inc., in association with Howard Needles Tammen and Bergendoff, Florida Transportation Engineering, Mesimer Faller and Associates, Piper Archaeological Research and Knight Appraisal Services were retained by the FDOT to conduct the necessary preliminary engineering and environmental evaluations to identify the need, type, design and location of multi-lane improvements to serve the anticipated population of the study area and the urbanized region in the year 2010.

The North Tampa Parkway study area was bounded by Dale Mabry Highway (S.R. 597) and U.S. 41 (S.R. 45) on the west, by Interstates 75 and 275 on the east, S.R. 54 to the North, and an east/west line approximately one mile south of Van Dyke Road (see Exhibit 1.1). The Parkway was proposed as a four-lane divided, controlled-access facility with interchanges for local traffic at Dale Mabry Highway, U.S. 41, Collier Parkway/Livingston Avenue and Interstates 75 or 275. This proposed east-west corridor was envisioned as a scenic corridor incorporating landscaping and other design amenities to provide a buffer area between the roadway and adjacent land use. Included with the development of the North Tampa Parkway were proposed improvements to provide and/or upgrade non-motorized means of travel (i.e., bicycles and pedestrians) through the use of wide curb lanes, bicycle paths, sidewalks, and recreational trails. The initial phase of the North Tampa Parkway Study evaluated 31 preliminary alternatives. Evaluation factors included traffic, environmental, socioeconomic, and cost. Through the evaluation and public involvement process, six Parkway "Build" alternatives, a No-Parkway Alternative, and a No-Build Alternative were carried through the analyses process. Exhibit 1.2 illustrates the six Build and No-Parkway Alternatives.

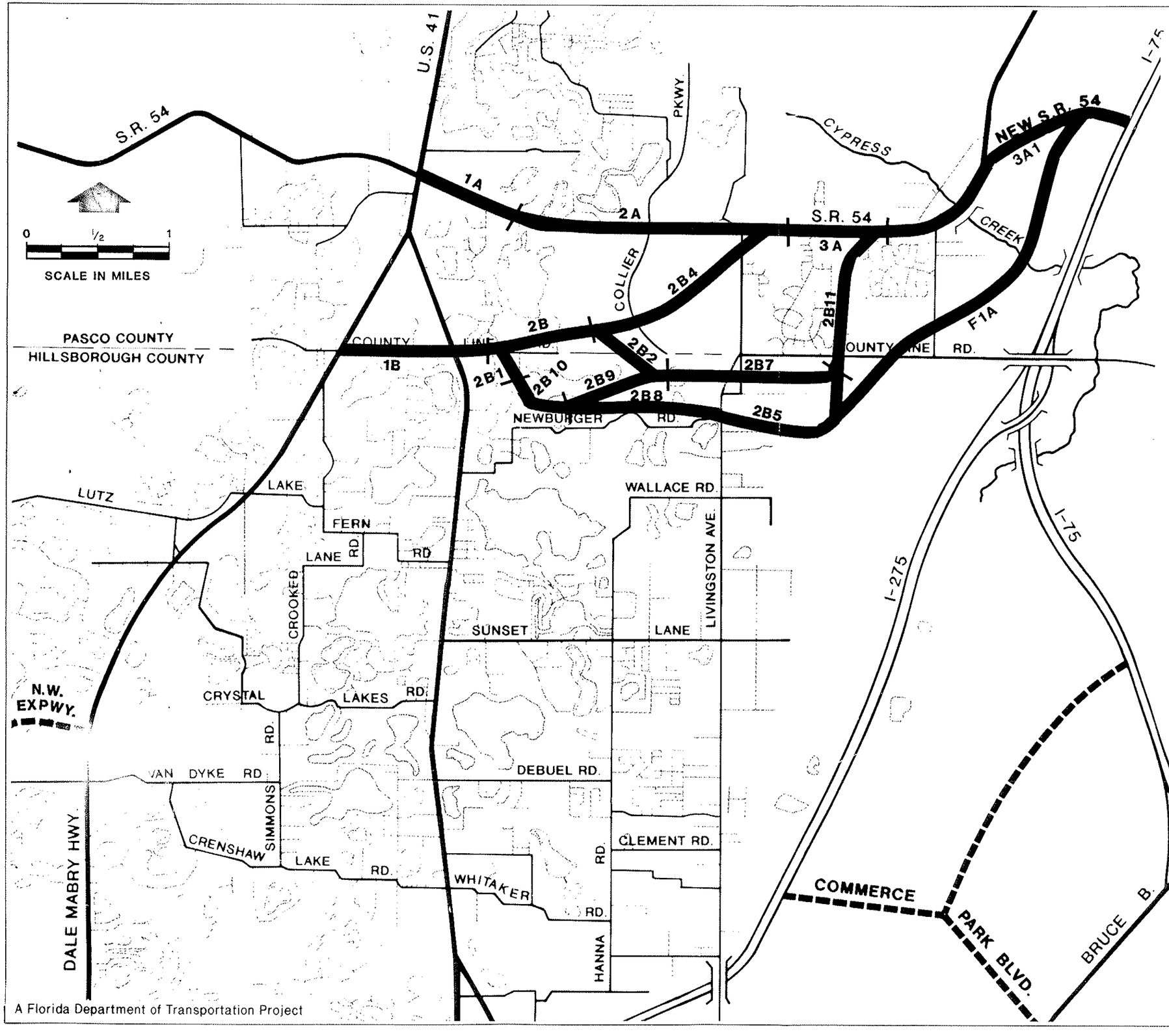


ENVIRONMENTAL SUMMARY
REPORT

PROJECT AREA

EXHIBIT 1.1

A Florida Department of Transportation Project



SELECTED CORRIDOR ALTERNATIVES

CORRIDOR NUMBER	LENGTH (MILES)	CORRIDOR SEGMENTS
A 1 A	6.4	1A, 2A, 3A, 3A1
B 1 A	6.3	1B, 2B, 2B4, 3A, 3A1
B 5 A	8.4	1B, 2B1, 2B10, 2B8, 2B5, 2B11, 3A1
E 1 A	7.2	1B, 2B, 2B2, 2B7A, 2B11, 3A1
E 2 A	7.2	1B1, 2B1, 2B10, 2B9, 2B7A, 2B11, 3A1
F 1 A	7.9	1B, 2B1, 2B10, 2B8, 2B5, F1A

A Florida Department of Transportation Project

ENVIRONMENTAL SUMMARY REPORT

SELECTED CORRIDORS

EXHIBIT 1.2

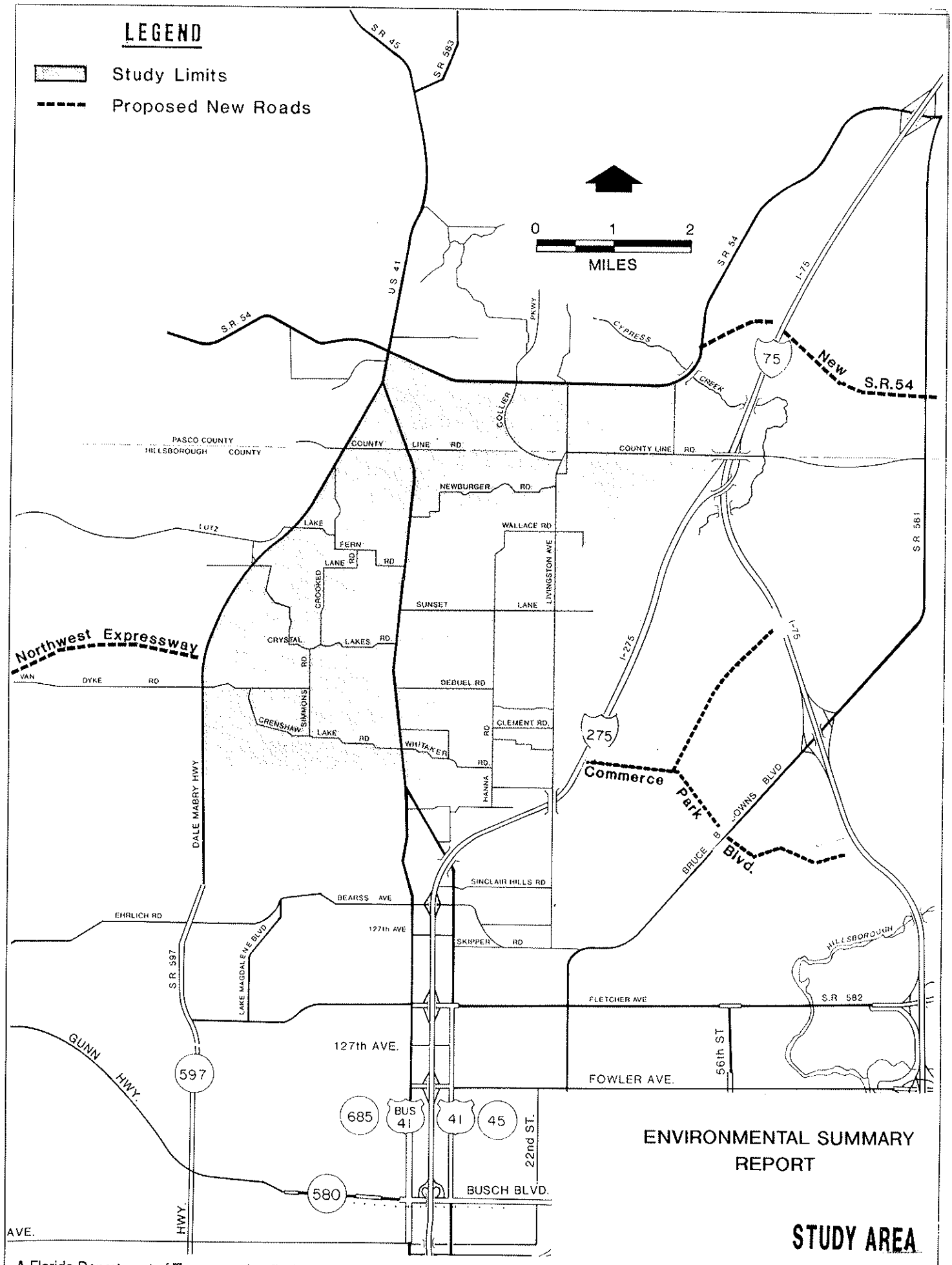
The No-Build Alternative provided for no improvements to the existing roadway system other than those improvements proposed in the long range transportation plans for Hillsborough and Pasco Counties. The No-Parkway Alternative provided for the same improvements as the No-Build along with additional improvements to enable traffic in the study area to operate at an acceptable level of service in the design year.

After careful analysis of the Build, No-Build and No-Parkway Alternatives, the No-Parkway Alternative was selected by FDOT as the preferred alternative. With this alternative, Dale Mabry Highway would be improved to a six-lane divided highway from Van Dyke Road north to U.S. 41. An interchange would be designed to link the Veterans Expressway to Dale Mabry Highway just north of Van Dyke Road. U.S. 41 from Dale Mabry Highway to S.R. 54 would be a six-lane divided highway with an urban interchange at the intersection of U.S. 41 and S.R. 54. S.R. 54 would be a four-lane, rural arterial with an extension added east of Cypress Creek, linking it to I-75 at the new proposed interchange for S.R. 54 and I-75.

Three Categorical Exclusions which document the No-Parkway Alternative were previously prepared for the following roadways and approved by FHWA:

* Dale Mabry Highway from Van Dyke Road to U.S. Highway 41;
* U.S. Highway 41 from Fletcher Avenue to State Road 52; and
* State Road 54 from U.S. 19 to I-75.

The decision by FDOT to reevaluate the above existing environmental documents led to the continuation of the North Tampa Parkway Study. The current study provides data necessary for FDOT to evaluate modifications to the previously approved improvements. Exhibit 1.3 depicts the study location.


LEGEND
Study Limits
Proposed New Roads
0 1 2
MILES
S R 45
S R 583
U S 41
S R 54
I-75
New S.R.54
PASCO COUNTY
HILLSBOROUGH COUNTY
COUNTY LINE RD.
NEWBURGER RD.
WALLACE RD
LUTZ
LAKE FERN RD
CRYSTAL LAKES RD.
SUNSET LANE
DEBUEL RD
CLEMENT RD.
WHITAKER RD.
HANNA RD
SIMMONS RD
CROOKED LANE RD
LIVINGSTON AVE
VAN DYKE RD
Northwest Expressway
DALE MABRY HWY
I-275
275
Commerce Park Blvd.
BRUCE B DOWNS BLVD
SINCLAIR HILLS RD
BEARSS AVE
EHRLICH RD
127th AVE
SKIPPER RD
LAKE MAGDALENE BLVD
S.R 597
HILLSBOROUGH
FLETCHER AVE
S.R 582
56th ST
GUNN HWY
597
127th AVE.
FOWLER AVE.
685
BUS 41
41
45
22nd ST.
580
BUSCH BLVD.
HWY
AVE.
ENVIRONMENTAL SUMMARY REPORT
STUDY AREA
EXHIBIT 1.3
A Florida Department of Transportation Project
NORTH TAMPA PARKWAY STUDY THE GREINER TEAM

2.0 PURPOSE AND NEED

The Florida Department of Transportation, the Hillsborough County Metropolitan Planning Organization, and the Pasco County Metropolitan Planning Organization identified the need to provide a west-east roadway connection between Dale Mabry Highway/U.S. 41 and Interstates 75 and 275 (I-75/I-275). A Preliminary Engineering Report prepared separately for the proposed project documents the corridor selection phase, preliminary design, alternatives development, comparative analysis, and selection and refinement of the Preferred Alternative.

Future demographic and traffic projections indicate that by the year 2010 the roads now servicing the study area would not be able to operate at an acceptable level of service. An evaluation of the "No-Build" Alternative was undertaken as part of this study effort to define 2010 traffic operating conditions on the previously recommended roadway improvements. These previously recommended improvements are now considered to be insufficient to accommodate the revised forecasts for the area as prepared by the respective counties. Examination of other improvement options within the study area are necessary, if acceptable levels of future traffic service are to be provided. The purpose of this study is to prepare a series of engineering and environmental reports documenting the existing roadway conditions, right-of-way requirements, environmental and social impacts, economic considerations, typical sections and design analysis of the No-Parkway Alternative, previously selected by FDOT. The No-Parkway Alternative is based upon modifications to the Long Range Transportation Plan (2010 Plan) for Hillsborough and Pasco Counties. Three areas needing major modifications were identified. These roadway modifications are:

* Connection of Veterans Expressway to Dale Mabry Highway;
* Dale Mabry Highway interchange with U.S. Highway 41;
* U.S. Highway 41 interchange with State Road 54.

All of the above roadways are presently discussed in approved Categorical Exclusions. The FDOT intends to reevaluate the existing approved Categorical Exclusions and seek FHWA approval of the proposed improvements in future reevaluation documents.

2.1 SAFETY

Safety is of prime concern for any improvements to the existing roadways. A Level of Service C was selected as appropriate for any Parkway alternative. Level of Service D was selected for all non-Parkway routes within the study area. The incorporation of the latest safety features pertinent to roadway design is planned for the typical cross sections for any proposed roadway improvements. This includes sidewalks along major streets anticipated to serve areas of pedestrian activity and provisions for non-motorized (bicycle) travel in an appropriate manner consistent with Florida statutes and design policies.

Accident statistics for the last six years, as available from the FDOT and from Hillsborough County, are presented in detail in the accident analysis summary prepared for the study area and are contained in the Preliminary Engineering Report for this project. The information includes the number of accidents for each individual year between 1984 and 1989, length in miles of each analysis segment, actual accident rate, critical accident rate and the safety ratio for each roadway link. The critical accident rate is the statewide average accident rate for a similar facility. The safety ratio (the ratio of the actual accident rate to the critical accident rate) serves to identify safety problems and/or high accident locations. Thus, a safety ratio greater than 1.00 indicates that the roadway is experiencing more accidents than would be anticipated on this type of facility. Three route segments (Lutz Lake Fern Road, Van Dyke Road, and County Line Road) exhibit accident rates approaching

levels typically considered significant by the FDOT. The existing conditions evaluation suggests that existing congestion levels may be contributing to an above average accident condition along a number of the east-west routes within the general study area. Improving traffic safety in the study area requires an examination of roadway improvements to accommodate increasing traffic volumes. Improvements to roadway capacity should decrease the number of rear-end, sideswipe and pedestrian/bicycle accidents.

2.2 CONSISTENCY WITH TRANSPORTATION PLANS

The proposed improvements are in compliance with the Hillsborough County MPO Year 2010 and Pasco County Long Range Transportation Plans, and are consistent with the state Transportation Improvement Plan (TIP) and the State's Comprehensive Plan.

2.3 EXISTING CORRIDOR CAPACITY

To determine the existing traffic operating conditions within the North Tampa Parkway study area, morning and evening peak hour conditions were evaluated. A number of the existing roadway segments along Dale Mabry Highway and U.S. 41 are currently operating at unacceptable levels of service (Level of Service E or F). Of the eleven intersections within the study area specifically designated for evaluation, six are signalized and five are unsignalized. Four signalized intersections have severe deficiencies during morning and/or evening peak hours. The intersection of Dale Mabry Highway and U.S. 41 exhibits travel congestion (Level of Service E or F) during both peak periods; while Dale Mabry Highway at Van Dyke Road, U.S. 41 at Crenshaw Lake Road, and U.S. 41 at S.R. 54 exhibit morning peak period operating

problems. Thus, the existing portions of Dale Mabry Highway and U.S. 41 within the study area have significant capacity deficiencies. Without additional roadway improvements, future increases in travel within the area will only further compound these existing problems.

Table 2.1 presents the 1990 level of service evaluations for the unsignalized intersection locations for both morning and evening peak hour operations. As indicated in the table, all the eastbound and westbound approaches at these unsignalized intersections operate at Level of Service E or F in both peak hours as a result of the heavy traffic volumes using the north-south streets. These heavy north-south volumes also cause the northbound U.S. 41 left-turn movements to operate at Level of Service E at both the County Line Road and Crystal Lakes Road intersections during the evening peak hour.

2.4 TRANSPORTATION DEMAND

Five travel demand corridors were analyzed for alternative selection. After traffic assignments were run, the southern corridors (those below County Line Road) were eliminated. These corridor's traffic projections did not show a need for a Parkway in this area. A Final Traffic Memorandum (October 1990) documents both the existing travel demand as well as future (2010) travel demand for all viable transportation corridors during the study.

Transportation demand for the current Preferred Alternative was reevaluated due to the addition of future land uses not considered during previous phases of the project. The revised Traffic Analysis Zone (TAZ) structure and network from the original work effort was used for this analysis with the exception of the zone located

TABLE 2.1

1990 UNSIGNALIZED INTERSECTION CAPACITY ANALYSES
North Tampa Parkway

	AM LOS			
Intersection	NB	SB	EB	WB
U.S. 41 @ Lutz Lake Fern	C	NA	F	NA
Livingston @ Sunset	B	A	F	E
U.S. 41 @ County Line Road	C	B	F	F
Dale Mabry @ Sun Lake	C	NA	F	NA
U.S. 41 @ Crystal Lake	D	NA	F	NA

	PM LOS			
Intersection	NB	SB	EB	WB
U.S. 41 @ Lutz Lake Fern	D	NA	F	NA
Livingston @ Sunset	D	A	F	E
U.S. 41 @ County Line Road	E	C	F	E
Dale Mabry @ Sun Lake	C	NA	E	NA
U.S. 41 @ Crystal Lake	E	NA	F	NA

immediately east of Dale Mabry Highway between Crenshaw Lake Road and Crystal Lakes Road (Zone 278). A regional shopping mall, approximately 1,280,000 square feet of gross leasable area, is proposed in the area. The mall will be located east of Dale Mabry Highway and north of Van Dyke Road. A Traffic Addendum (April 1993) was prepared and documents the daily traffic assignments resulting from the updated travel demand, design hour traffic volumes, and traffic operations analysis for the Preferred Alternative. A detailed discussion of traffic projections and operations for the Preferred Alternative is provided in Section 3.4.

2.5 SOCIAL/ECONOMIC DEMAND

The potential for existing commercial expansion, infill development and regional growth will continue to contribute to increasing traffic volumes in the study area. The continued growth will increase traffic congestion on the current roadways which are near capacity now. Analysis of ZDATA information for the years 1988 and 2010 provided by the Hillsborough County MPO indicate that area population is expected to increase by approximately 108 percent and employment is expected to increase by approximately 125 percent by the year 2010. In addition a regional shopping mall is proposed for the currently vacant land located east of Dale Mabry Highway and north of Van Dyke Road. The original ZDATA for the travel demand model used to estimate traffic projections did not include this land use. This increase will further degrade traffic services in the area.

3.0 ALTERNATIVES CONSIDERED

The following sections provide a comprehensive comparative analysis for each alternative previously considered, including no-project and construction alternatives. The current North Tampa Parkway Study evaluates revisions to the No-Parkway Alternative, which as refined has been selected as the Preferred Alternative.

3.1 NO-PROJECT ALTERNATIVES

The two "no project" alternatives consist of the No-Build Alternative and the No-Parkway Alternative. These alternatives contain improvements to the major roadway system within the North Tampa Parkway study area, but do not contain an alternative for the North Tampa Parkway. Both include the improvements recommended in the Hillsborough County Metropolitan Planning Organization's (MPO's) 2010 Long Range Transportation Plan plus those recommended in the various PD&E studies conducted for Dale Mabry Highway, U.S. 41, and S.R. 54. In addition, the No-Parkway Alternative incorporates additional access to I-275 via a connection with Livingston Avenue.

3.1.1 No-Build Alternative

The No-Build Alternative serves as a baseline condition and reflects a situation where design year traffic volumes are loaded on the planned roadway system with no parkway being built. It represents a scenario of congestion and unacceptable levels of service which will not be remedied by proposed improvements to the roadway.

The No-Build Alternative will result in a number of adverse impacts on roadways within the study area. These impacts are associated with the deterioration of the level

of service that is projected to occur when the travel demand exceeds the available roadway capacity. The first impact will be the length of time during which congestion occurs. This would extend morning and evening peaks by several hours. The second impact would be the increase in peak period traffic diversion to local and collector streets. This disrupts surrounding neighborhood streets and causes them to operate beyond their capacities.

The analysis of the 2010 No-Build Alternative indicated the following:

* Level of Service E is projected for the Dale Mabry Highway/U.S. 41 at-grade intersection with maximum geometry in the evening peak hour with an average vehicle delay of 55.8 seconds/vehicle.

* Level of Service F is projected for the S.R. 54/U.S. 41 at-grade intersection with maximum geometry during both the morning and evening peak hours.

* Level of Service F is projected for the U.S. 41/Crenshaw Lake Road intersection with maximum geometry during the morning peak hour with a V/C ratio of 1.12.

Under the No-Build Alternative, the majority of the primary intersections in the area, are projected to operate at an unacceptable level of service. Given the projected operating deficiencies, the No-Build Alternative does not serve the travel demand safely and efficiently and is inconsistent with the transportation planning goals in the region. To provide acceptable operating conditions, substantial improvements are required.

There are, however, benefits associated with the No-Build Alternative. There are fewer residential and business displacements and monies are saved from reduced right-of-way and construction costs. Without improvements, the roadways ambient noise levels would remain stable or increase minimally.

3.1.2 No-Parkway Alternative

The No-Parkway Alternative includes a connection from I-275 westward to Livingston Avenue. A full access interchange on I-275 with ramps to/from the north and south is provided with this alternative, thus facilitating traffic movements between Livingston Avenue and I-275.

The concept proposed for Dale Mabry Highway between the Veterans Expressway and U.S. 41 is a six-lane divided facility with two-way frontage roads on either side of the mainline. An interchange is proposed for Dale Mabry Highway and U.S. 41. An urban interchange is proposed for both the U.S. 41/S.R. 54 intersection and the U.S. 41/Crenshaw Lake Road intersection. An extension of S.R. 54 linking it to Interstate 75 is also proposed. Given these improvements, the No-Parkway Alternative will serve the travel demand safely and efficiently. The No-Parkway Alternative is consistent with the transportation goals in the region.

The No-Parkway Alternative would involve residential and business displacements; monies will be needed for right-of-way costs and construction costs for the improved and proposed intersections. The roadways ambient noise levels would remain stable or increase minimally. The enhancements of the No-Parkway will provide an acceptable level of service in the study year 2010.

3.2 CONSTRUCTION ALTERNATIVES

Each of the alternative corridors comprising 31 alternatives was analyzed as to environmental, socioeconomic, and cost factors. The following factors were considered:

* **Environmental Factors**

  Four basic environmental factors were quantified for each alternative. These factors were: the number of noise sensitive sites adversely affected, acres of wetlands taken, acres of floodplain encroached upon and the number of acres of mitigation required to offset environmentally sensitive lands taken.

* **Socioeconomic Factors**

  The following socioeconomic factors were quantified for each corridor alternative: relocations of residences required, relocation of commercial businesses required, historical/archaeological sites potentially impacted, and acres of right-of-way required.

* **Cost Factors**

  Each of the corridor alternatives was evaluated as to costs for right-of-way, roadway construction, structures construction and total costs.

The quantities identified for each factor were then summarized by alternative. The alternatives were refined and compared as to their relative impact based on the following criteria:

* traffic (that is, the relative ability of the corridor alternative to provide traffic service through the area),
* environmental (noise, wetlands, floodplain, mitigation),
* socioeconomic (historical/archaeological, residential and commercial relocations),
* community cohesion (the relative disruption to existing neighborhoods and communities),
* public input (the relative degree of public support or objections as evidenced through comments received as a result of Citizen Advisory Committee (CAC) input, citizen contact and public meetings), and
* project cost (right-of-way, roadway, structures and total).

These criteria were evaluated and compared. These results were then weighted to give relative importance to each of the major criteria.

In general, the remaining study alignment alternatives focused on corridor locations that were either exclusively along existing S.R. 54 or involved combinations of the S.R. 54 and County Line Road corridors, where the primary traffic operations difference involved the location of the Collier Parkway/Livingston Avenue access interchange.

Initially, Level of Service C was established as the desirable operating condition for the mainline and ramp terminals, with Level of Service D being acceptable at other major arterial street intersections. If laneage requirements resulting from this analysis produced cross section improvements for number of through lanes that exceeded the FDOT standards contained in the Florida State Transportation Plan, Level of Service D was accepted.

Additional applications of the travel forecast model were undertaken for the purposes of assessing 2010 travel demands with a four-lane limited access Parkway located along corridor alignments defined as A1A, B1A and the combination of B5A, E1A, and E2A.

The remaining alternatives consist of the six build alignment options. The Final Traffic Memorandum prepared for this project provides a discussion of travel demand as it relates to the following alternatives.

3.2.1 Reasonable and Feasible Alternative Alignments

Alternative A1A - The North Tampa Parkway was proposed to be a four-lane divided, controlled-access roadway with one-way frontage roads on either side. Right-of-way requirements were typically 200 feet and maintained the existing horizontal alignment. A new bridge was proposed over Cypress Creek. Improvements to major (signalized)

intersections would require additional right-of-way acquisition to accommodate turning lanes.

With this alternative, the North Tampa Parkway (including the segment of Dale Mabry Highway northward from the Veterans Expressway) consisted of a four-lane cross section (two lanes in each travel direction) except in the mainline weaving area north of Lutz Lake Fern Road and in the segment between Old S.R. 54 and I-75. In these two areas, an additional lane (thereby creating a six-lane cross section) was needed in each travel direction to accommodate the merge, diverge and/or weave volumes. In all instances, the parallel, one-way frontage roads were two lanes which may have additional turn lanes added at the cross road intersections and/or for the U-turn roadways at each cross road interchange.

Alternative B1A - This alignment was a four-lane divided controlled-access roadway with frontage roads on County Line Road between Dale Mabry Highway and U.S. 41. This alignment follows the existing County Line Road alignment from Dale Mabry Highway to east of U.S. 41. From east of U.S. 41 the alignment followed a northeasterly orientation across Collier Parkway to the existing S.R. 54 alignment east of Livingston Avenue. From here to I-75, this alignment is the same as for A1A. An urban interchange was proposed for the intersection at U.S. 41/S.R. 54 and at U.S. 41/Crenshaw Lake Road. An interchange is also proposed at Collier Parkway. Right-of-way requirements would generally be kept to 200 feet. Improvements to major (signalized) intersections would require additional right-of-way acquisition to accommodate turning lanes.

Alternative B5A, E1A, E2A and F1A - These four alignments vary slightly from Alternative B1A in regard to the transition between County Line Road and S.R. 54. In these four alternatives, the alignment would be located south of County Line Road at the access to Livingston Avenue before turning northward to access the S.R. 54 corridor. The access interchange is at Livingston Avenue to the south of County Line Road. Right-of-way requirements were generally 200 feet. The improvements on S.R. 54 to the I-75 interchange are the same as for Alternative A1A.

3.3 PREFERRED ALTERNATIVE

The preceding sections have provided a summary of comparative analysis for each corridor and alignment alternative. Variables such as right-of-way costs, construction costs, environmental impacts, relocations, traffic congestion and public involvement were included in this comparative analysis. A careful examination of all the parameters involved indicates that construction of the North Tampa Parkway is not a financially prudent alternative nor an acceptable public project to citizens of the local area. A viable alternative to the construction of a new facility would be to construct roadway improvements to the existing transportation network in the area, as previously described in Section 3.1.2 under the No-Parkway Alternative. In addition, the No-Parkway option would result in substantial savings over any Parkway alternative in construction and right-of-way costs.

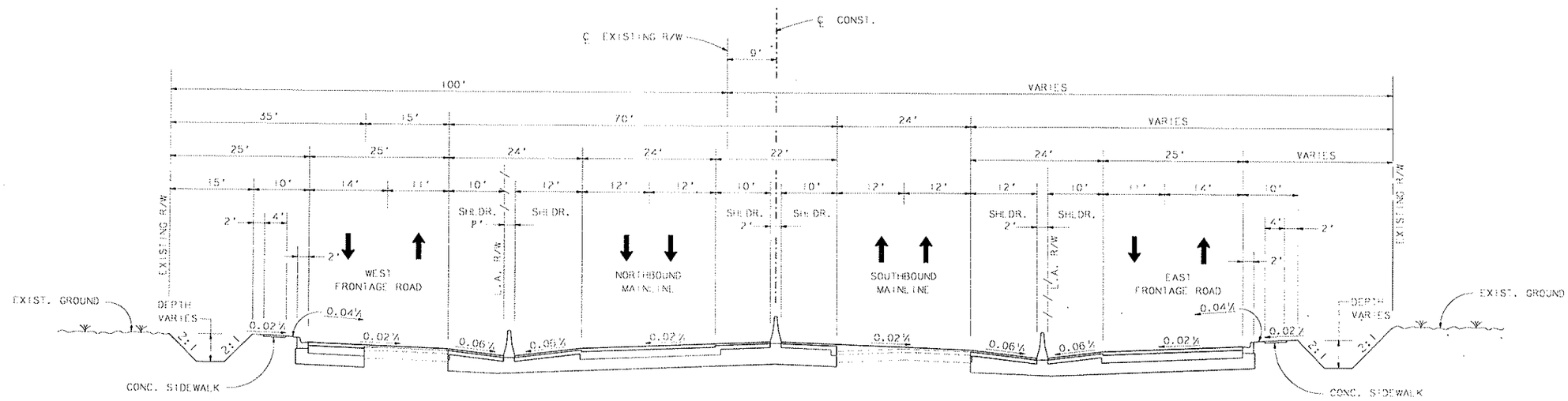
It is therefore recommended to make the necessary improvements contained in the approved Hillsborough and Pasco County Long Range Transportation Plans in stages in order to have an acceptable level of service, as suggested in the No-Parkway Alternative. Improvements to Dale Mabry Highway from Van Dyke Road north to

U.S. 41, U.S. 41 north through the intersection of U.S. 41 and S.R. 54, and S.R. 54 from U.S. 41 east to I-75 need to be addressed in the first stage. Upgrading of these facilities would allow an acceptable level of service in this area. FDOT conceptual plans have already been approved for portions of U.S. 41 and Dale Mabry Highway (State Project No. 10160-2627) as well as portions of S.R. 54 (State Project No. 14504-1601). These plans have been modified to reflect updated design, planning and environmental data resulting from this North Tampa Parkway PD&E study.

The No-Parkway Alternative involves improvements on Dale Mabry Highway from Van Dyke Road to U.S. 41, on U.S. 41 from the Dale Mabry Highway merge to S.R. 54, and on S.R. 54 from U.S. 41 to I-75. This Alternative is consistent with the previous studies conducted by the Department for both Dale Mabry Highway (State Project No. 10160-2527) and S.R. 54 (State Project No. 14505-1601).

The No-Parkway Alternative discussed in Section 3.1.2 of this document was further refined to create the Preferred Alternative. The refinements included 1) updating the traffic projections and operations analyses, 2) adjusting the concept design alignment, 3) reviewing the drainage and stormwater requirements, and 4) updating the environmental impacts including air, noise, wetlands and hazardous materials impacts.

All analyses assumed the four- and six-lane arterial improvements on Dale Mabry Highway (including two-lane two-way frontage roads on each side) and the four-lane arterial improvement on S.R. 54 are in place. The refinements identified the additional improvements required to maintain an acceptable level of service. Exhibit 3.1 illustrates the location of the Preferred Alternative improvements.



TYPICAL SECTION
DALE MABRY HIGHWAY (S.R. 597)
STATE PROJECT NO. 10160-2527

PROJECT NO.

PROJECT DATES

DATES	DESCRIPTION
2-11-93	DRAFT
3-29-93	REVISED
5-10-93	FINAL

GREINER, INC.
Engineers, Architects, and Planners
Tampa, Florida

TYPICAL SECTION
DALE MABRY HIGHWAY

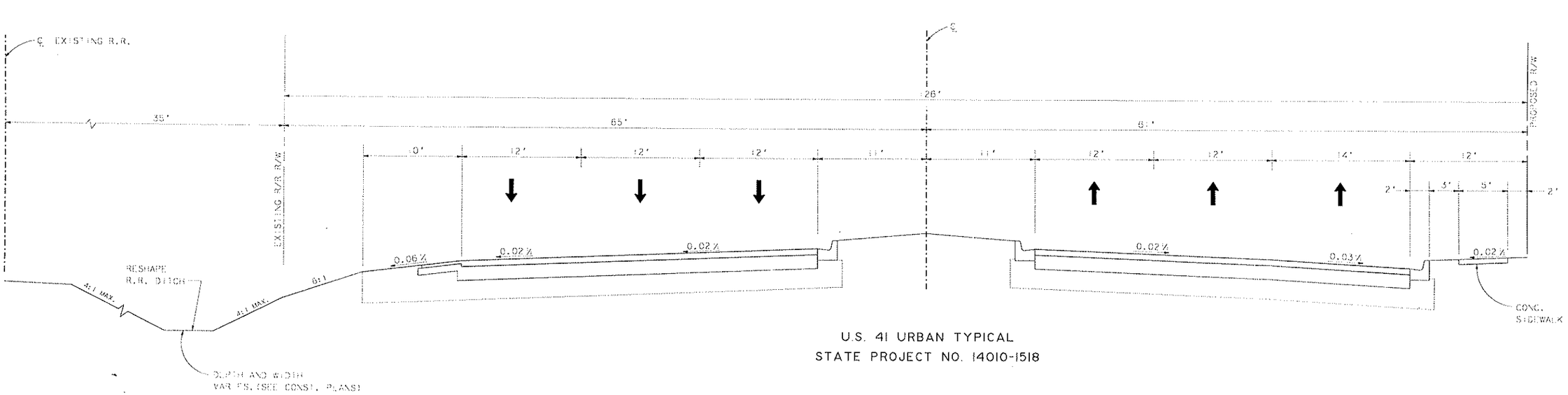
PREFERRED ALTERNATIVE

NORTH TAMPA PARKWAY STUDY

FLORIDA DEPARTMENT OF TRANSPORTATION

STATE PROJECT NO. 10230-1521

EXHIBIT 3.1 1 of 16



U.S. 41 URBAN TYPICAL
STATE PROJECT NO. 14010-1518

PROJECT NO.	
PROJECT DATES	
DATES	DESCRIPTION
5-19-93	FINAL

GREINER, INC.
Engineers, Architects, and Planners
Tampa, Florida

TYPICAL SECTION U.S. 41

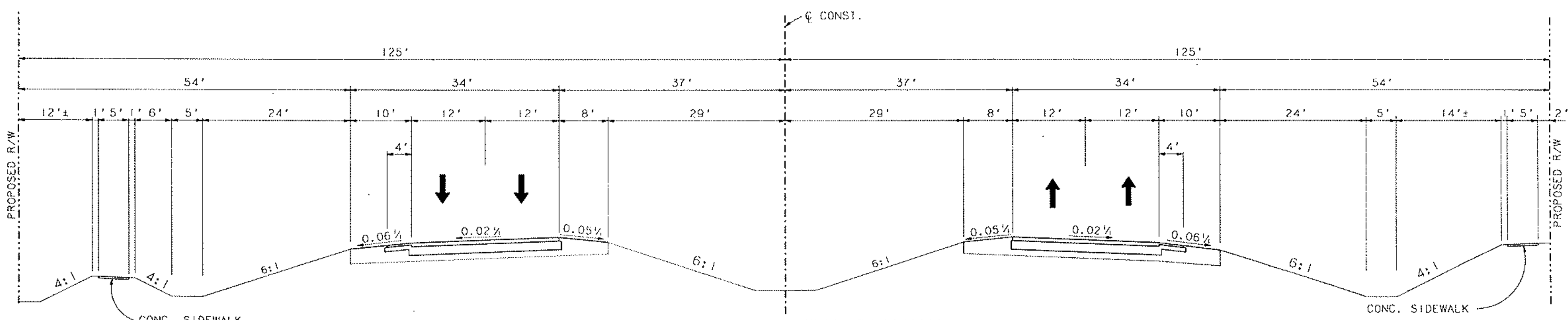
PREFERRED ALTERNATIVE

NORTH TAMPA PARKWAY STUDY

FLORIDA DEPARTMENT OF TRANSPORTATION

STATE PROJECT NO. 10230-1521

EXHIBIT 3.1 2 of 16



4-LANE DIVIDED RURAL ROADWAY
74' MEDIAN - 250' R/W WIDTH
WITH SIDEWALK

PROJECT NO.	
PROJECT DATES	
DATES	DESCRIPTION
1-28-93	DRAFT
3-29-93	REVISED

GREINER, INC.
Engineers, Architects, and Planners
Tampa, Florida

TYPICAL SECTION S.R. 54

PREFERRED ALTERNATIVE

NORTH TAMPA PARKWAY STUDY

FLORIDA DEPARTMENT OF TRANSPORTATION

STATE PROJECT NO. 10230-1521

EXHIBIT 3.1 3 of 16

VETERANS EXPRESSWAY R/W

RETAINING WALL

PROPOSED L.A. R/W

CALUSA TR.

M1
7.2 Ac

S1
0.6 Ac

S2
0.1 Ac

S3
0.8 Ac

S4
1.4 Ac

SR 597 DALE MABRY HWY

PROPOSED R/W

VAN DYKE RD.

EXISTING R/W

EXISTING R/W

PROPOSED L.A. R/W

RETAINING WALL

FUTURE CONSTRUCTION
BY OTHERS

EXISTING R/W

S5
2.9 Ac

EXISTING R/W

CHEVAL PL.

S6A
1.2 Ac

PROPOSED R/W

S6
0.7 Ac

S6A
1.0 Ac

MATCH SHEET 5

PROPOSED R/W

LEGEND

STORMWATER MANAGEMENT POND

WETLAND/FLOODPLAIN
MITIGATION AREA

CULVERT

200 100 0 200 400 600

DATES	DESCRIPTION
11-95	DRAFT PLAN
12-95	REVISED
12-1-	FINAL

PROJECT No. C2318

GREINER, INC.

Engineers, Architects, and Planners

Tampa, Florida

DALE MABRY HIGHWAY

VAN DYKE ROAD TO CHEVAL PLACE

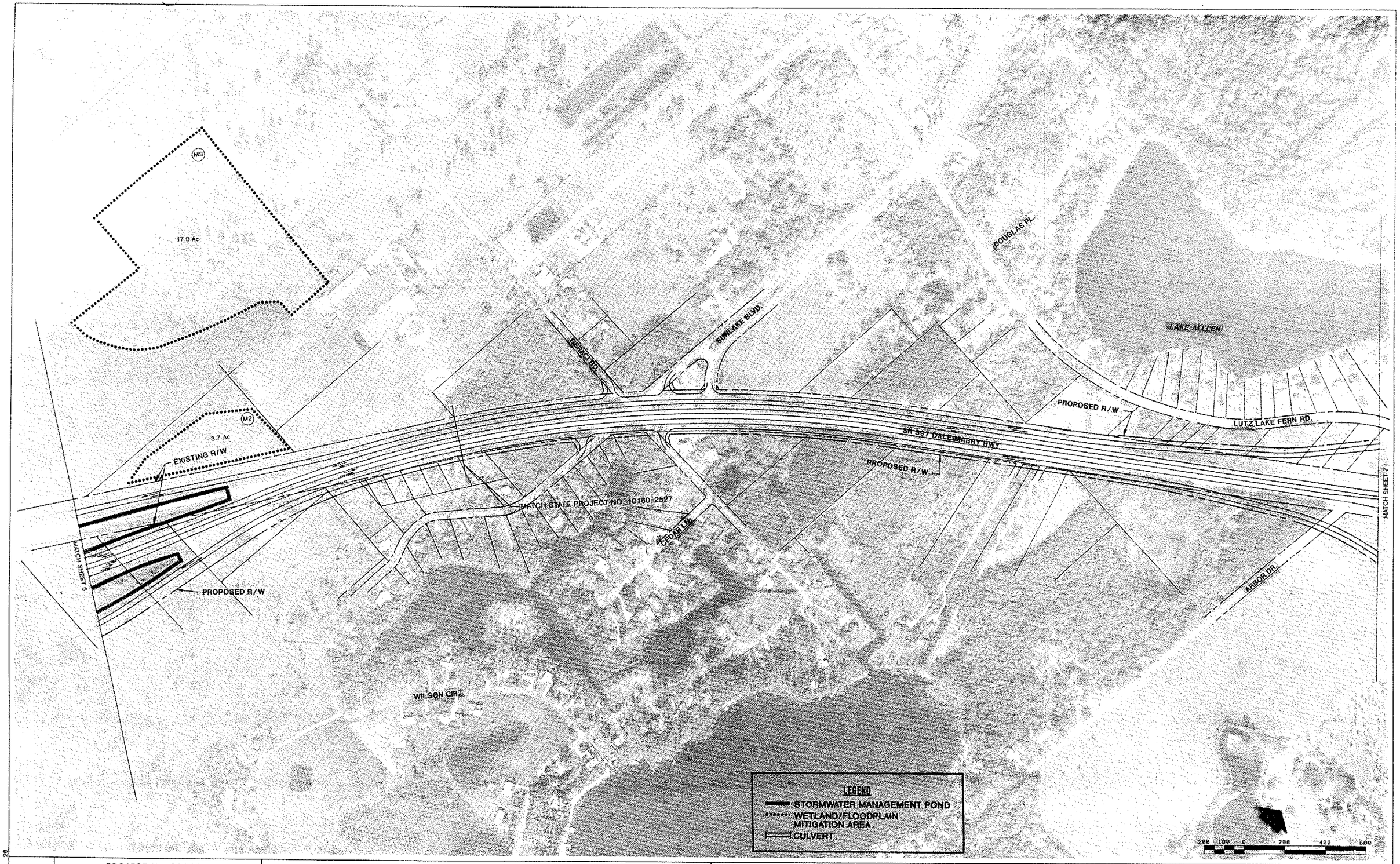
PREFERRED ALTERNATIVE

NORTH TAMPA PARKWAY STUDY

FLORIDA DEPARTMENT OF TRANSPORTATION

STATE PROJECT No. 10230-1521

EXHIBIT 3.1 4 of 16



PROJECT No. C2318

DATES	DESCRIPTION
2-11-93	DRAFT PLAN
3-29-93	REVISED

GREINER, INC.
Engineers, Architects, and Planners
Tampa, Florida

DALE MABRY HIGHWAY

CHEVAL PLACE TO ARBOR DRIVE

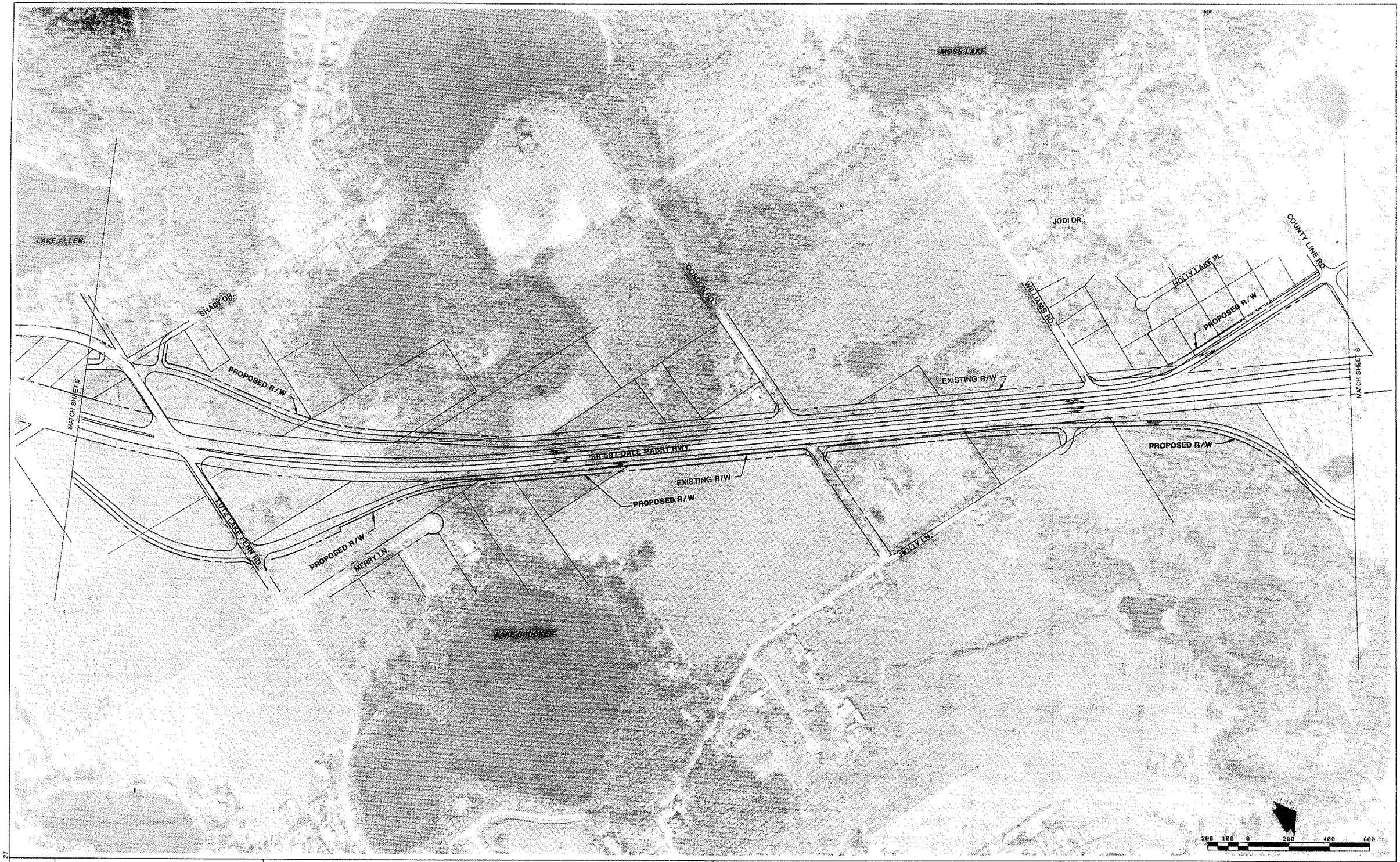
PREFERRED ALTERNATIVE

NORTH TAMPA PARKWAY STUDY

FLORIDA DEPARTMENT OF TRANSPORTATION

STATE PROJECT No. 10230-1521

EXHIBIT 3.1 5 of 16



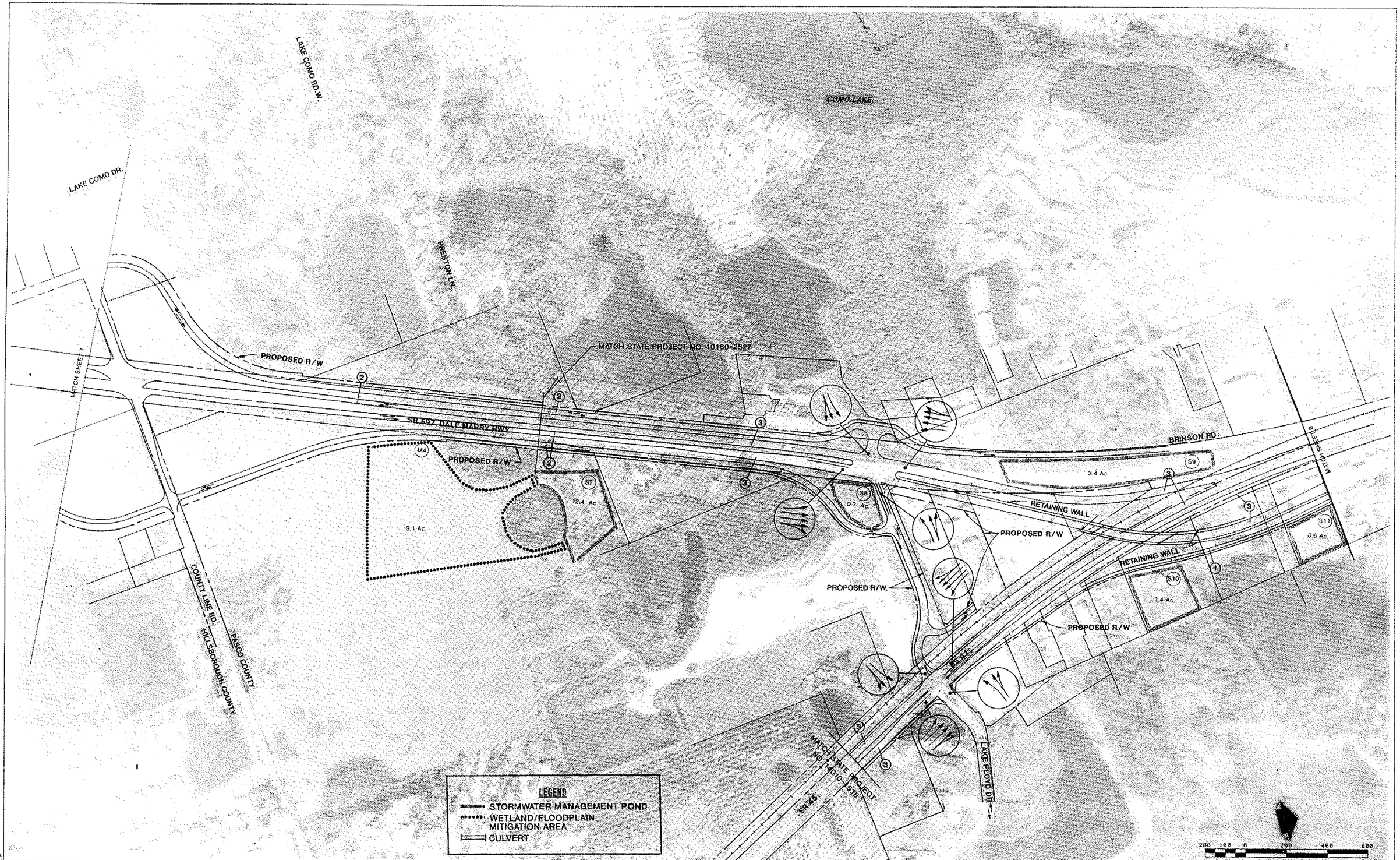
PROJECT No. C2318		
DATES	DESCRIPTION	
2-11-93	DRAFT PLAN	
3-29-93	REVISED	
	FINAL	

GREINER, INC.
Engineers, Architects, and Planners
Tampa, Florida

DALE MABRY HIGHWAY
LUTZ LAKE FERN ROAD TO COUNTY LINE ROAD
PREFERRED ALTERNATIVE

NORTH TAMPA PARKWAY STUDY
FLORIDA DEPARTMENT OF TRANSPORTATION

STATE PROJECT No. 10230-1521 | EXHIBIT 3.1 6 of 16



DATES	DESCRIPTION
2-4-91	DRAFT PLAN
3-29-91	REVISED
4-19-91	FINAL

PROJECT No. C2318

GREINER, INC.
Engineers, Architects, and Planners
Tampa, Florida

U.S. 41

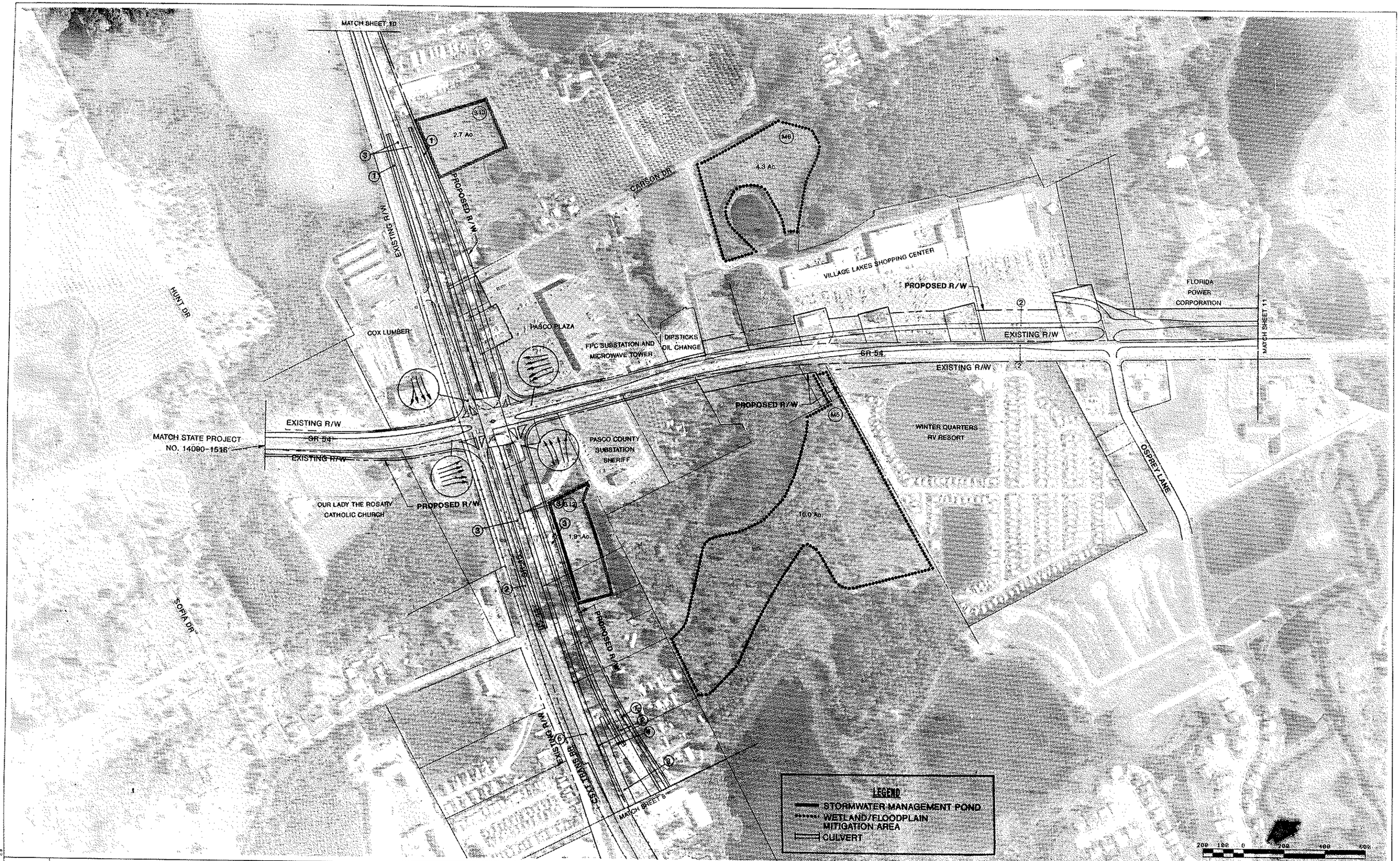
U.S. 41/DALE MABRY HIGHWAY APEX AREA

PREFERRED ALTERNATIVE

NORTH TAMPA PARKWAY STUDY

FLORIDA DEPARTMENT OF TRANSPORTATION

STATE PROJECT No. 10230-1521 | EXHIBIT 3.1 7 of 16



DATES	PROJECT No. C2318 DESCRIPTION
2-4-93	DRAFT PLAN
3-29-93	REVISED

GREINER, INC.
Engineers, Architects, and Planners
Tampa, Florida

U.S. 41
S.R. 54 INTERCHANGE
PREFERRED ALTERNATIVE

NORTH TAMPA PARKWAY STUDY
FLORIDA DEPARTMENT OF TRANSPORTATION

STATE PROJECT No. 10230-1521 | EXHIBIT 3.1 8 of 16

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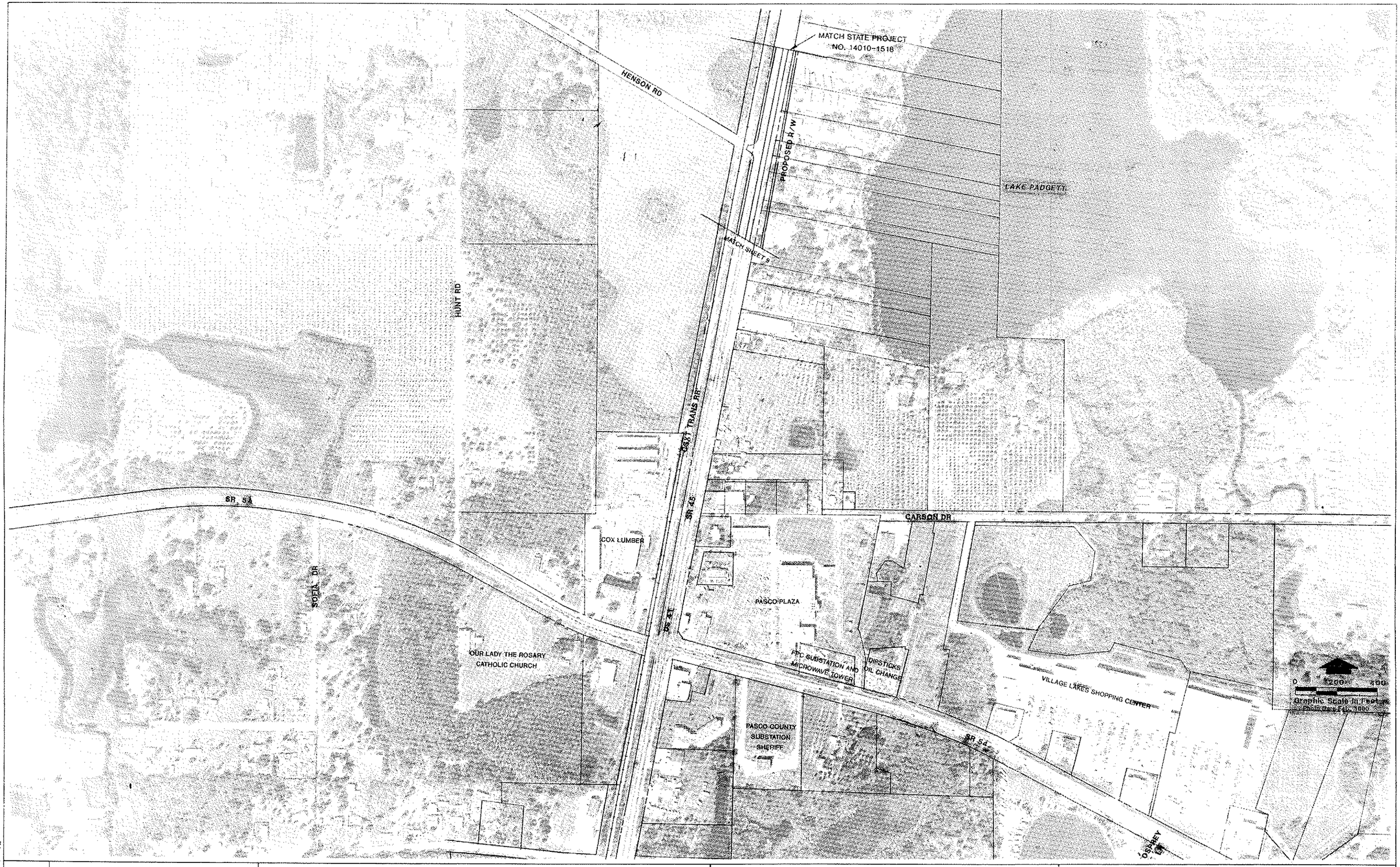

PROJECT No. C2318		
DATES	DESCRIPTION	
4-95	DRAFT PLAN	
	REVISE	
	FINAL	

GREINER, INC.
Engineers, Architects, and Planners
Tampa, Florida

U.S. 41

U.S. 41/HENSON ROAD AREA

PREFERRED ALTERNATIVE

NORTH TAMPA PARKWAY STUDY

FLORIDA DEPARTMENT OF TRANSPORTATION

STATE PROJECT No. 10230-1521 | EXHIBIT 3.1 9 of 16

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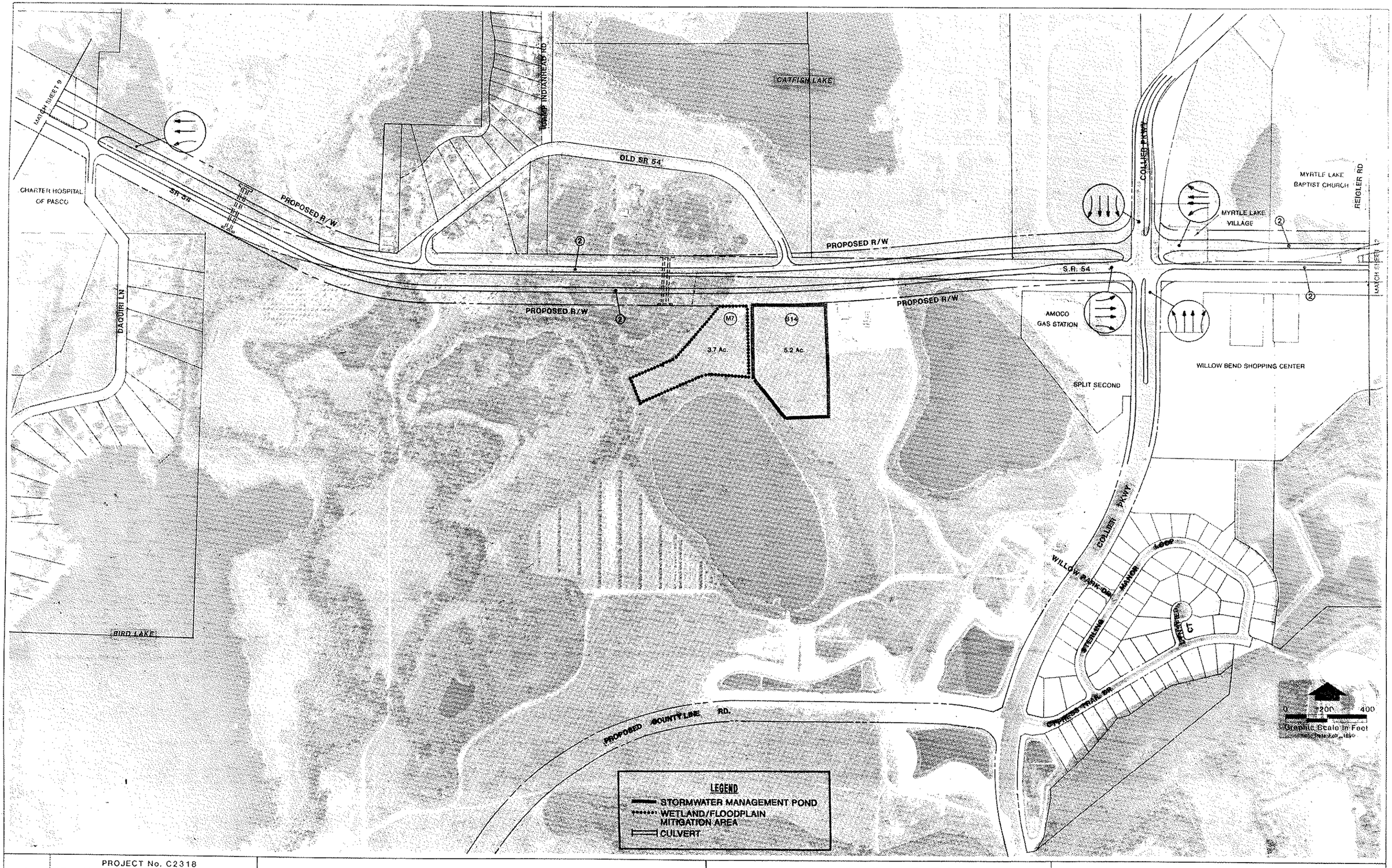


DATES	PROJECT No. C2318 DESCRIPTION

GREINER, INC.
Engineers, Architects, and Planners
Tampa, Florida

STATE ROAD 54

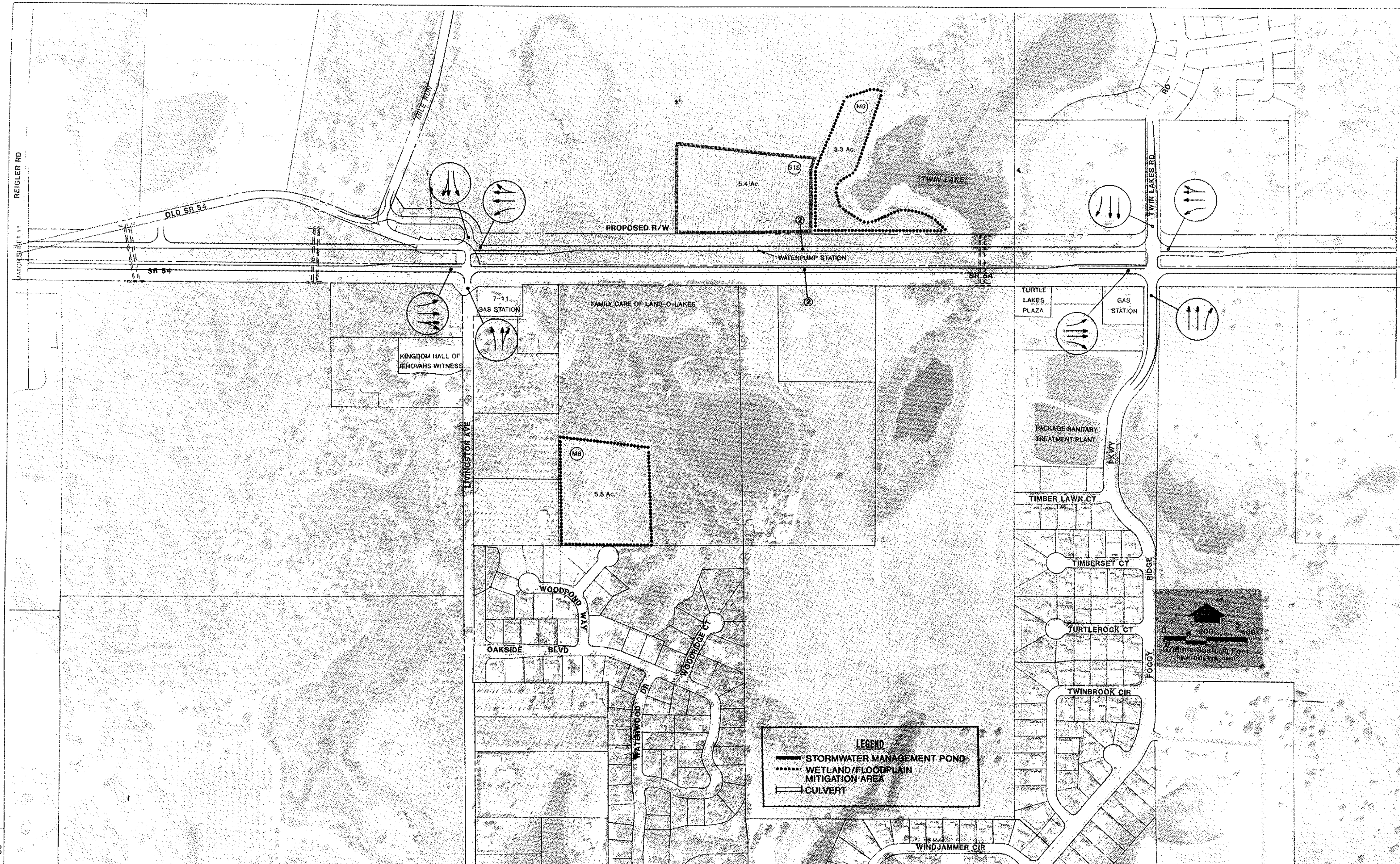
DAQUIRI LANE / COLLIER PARKWAY AREA

PREFERRED ALTERNATIVE

NORTH TAMPA PARKWAY STUDY

FLORIDA DEPARTMENT OF TRANSPORTATION

STATE PROJECT No. 10230-1521 | EXHIBIT 3.1 10 of 16


REIGLER RD
MATCH SHEET 11
OLD SR 54
SR 54
MILE RUN
PROPOSED R/W
5.4 Ac.
S15
M9
3.3 Ac.
TWIN LAKE
2
WATERPUMP STATION
7-11
GAS STATION
FAMILY CARE OF LAND-O-LAKES
KINGDOM HALL OF
JEHOVAHS WITNESS
LIVINGSTON AVE
M8
5.5 Ac.
WOODPOND WAY
OAKSIDE BLVD
WOODRIDGE CT
WATERWOOD DR
TWIN LAKES RD
RD
MATCH SHEET 13
TURTLE
LAKES
PLAZA
GAS
STATION
PACKAGE SANITARY
TREATMENT PLANT
PKWY
TIMBER LAWN CT
TIMBERSET CT
RIDGE
TURTLEROCK CT
FOGGY
TWINBROOK CIR
WINDJAMMER CIR
LEGEND
STORMWATER MANAGEMENT POND
WETLAND/FLOODPLAIN
MITIGATION AREA
CULVERT
0 200 400

PROJECT No. C2318

DATES

DESCRIPTION

GREINER, INC.

Engineers, Architects, and Planners

Tampa, Florida

STATE ROAD 54

LIVINGSTON AVENUE / TWIN LAKES ROAD AREA

PREFERRED ALTERNATIVE

NORTH TAMPA PARKWAY STUDY

FLORIDA DEPARTMENT OF TRANSPORTATION

STATE PROJECT No. 10230-1521

EXHIBIT 3.1 11 of 16

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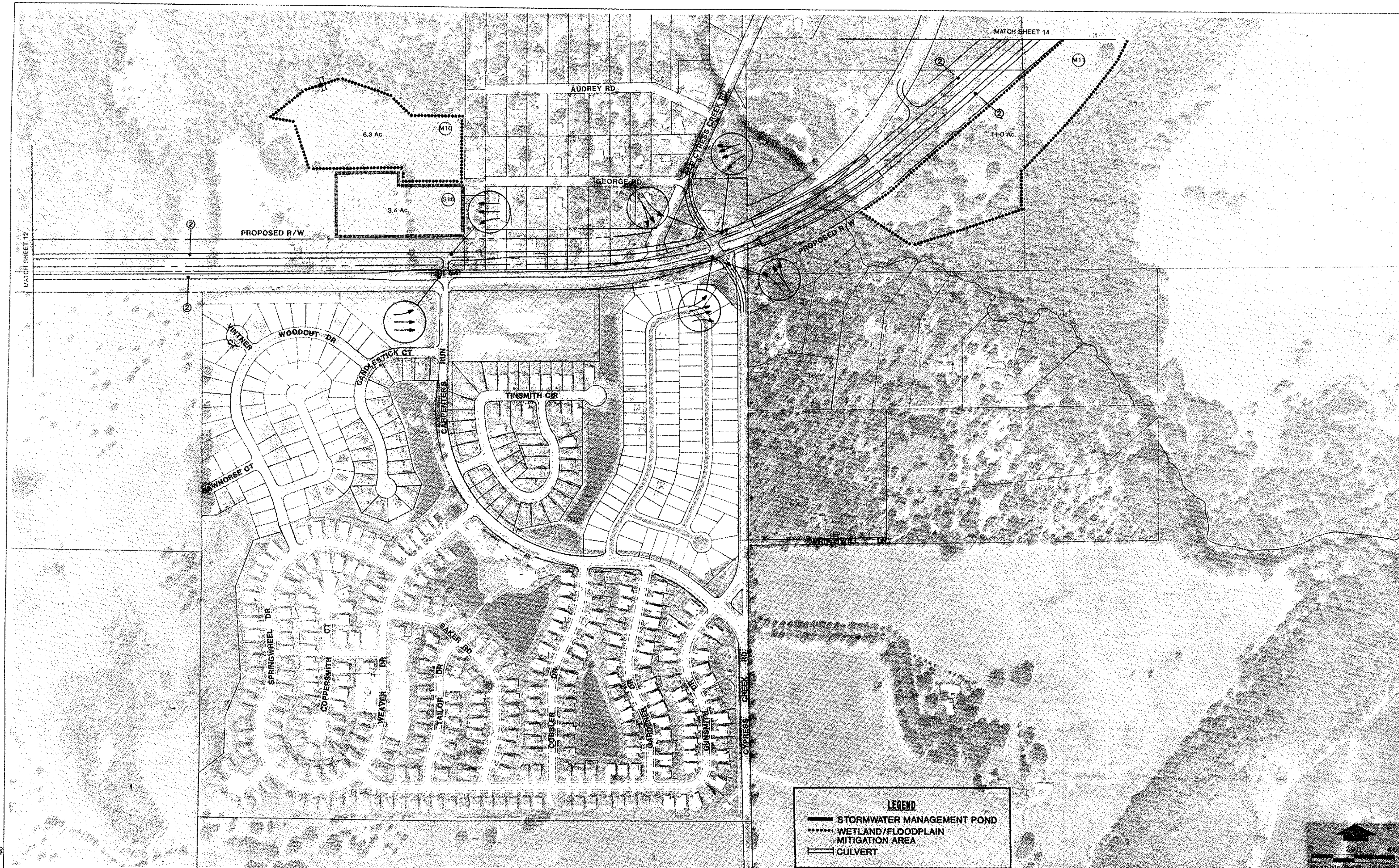

PROJECT No. C2318

DATES	DESCRIPTION
1-28-9?	Draft Plan
?-29-9?	REVISED

GREINER, INC.
Engineers, Architects, and Planners
Tampa, Florida

STATE ROAD 54

CARPENTERS RUN / CYPRESS CREEK AREA

PREFERRED ALTERNATIVE

NORTH TAMPA PARKWAY STUDY

FLORIDA DEPARTMENT OF TRANSPORTATION

STATE PROJECT No. 10230-1521 EXHIBIT 3.1 12 of 16

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PROJECT No. C2318		
DATES	DESCRIPTION	
1-28-93	DRAFT PLAN	
[illegible]	REVISED	
[illegible]	FINAL	

GREINER, INC.
Engineers, Architects, and Planners
Tampa, Florida

STATE ROAD 54

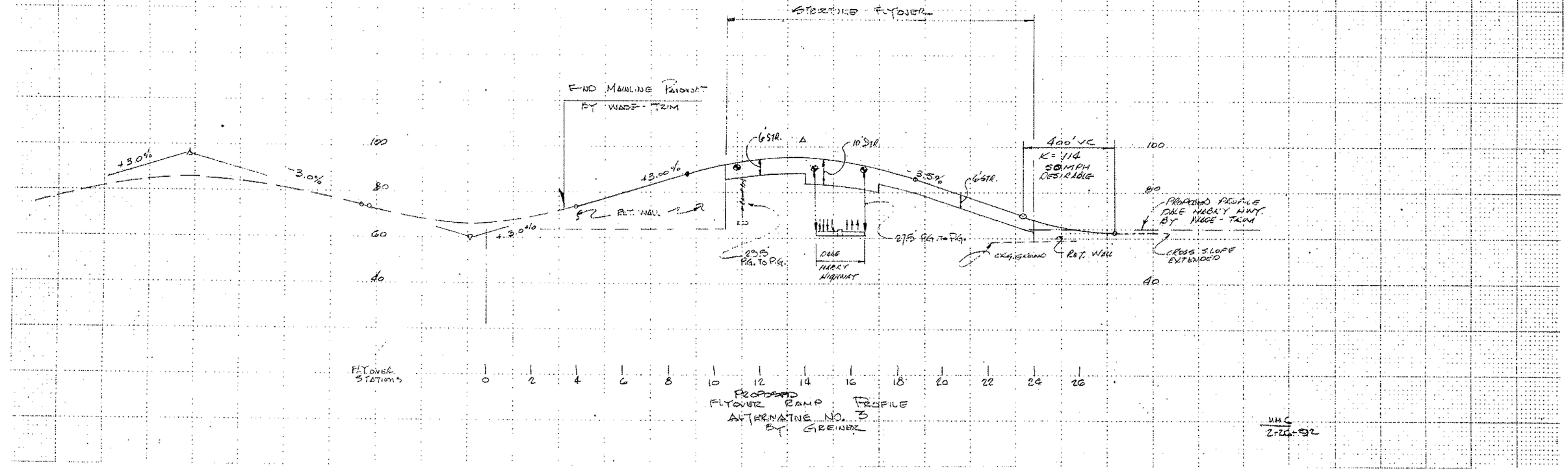
STATE ROAD 54 / OLD CYPRESS CREEK ROAD AREA

PREFERRED ALTERNATIVE

NORTH TAMPA PARKWAY STUDY

FLORIDA DEPARTMENT OF TRANSPORTATION

STATE PROJECT No. 10230-1521 | EXHIBIT 3.1 13 of 16



EXIST R/W | LAND USE | SECT 106 & 4f | PROP R/W | DRAINAGE WET

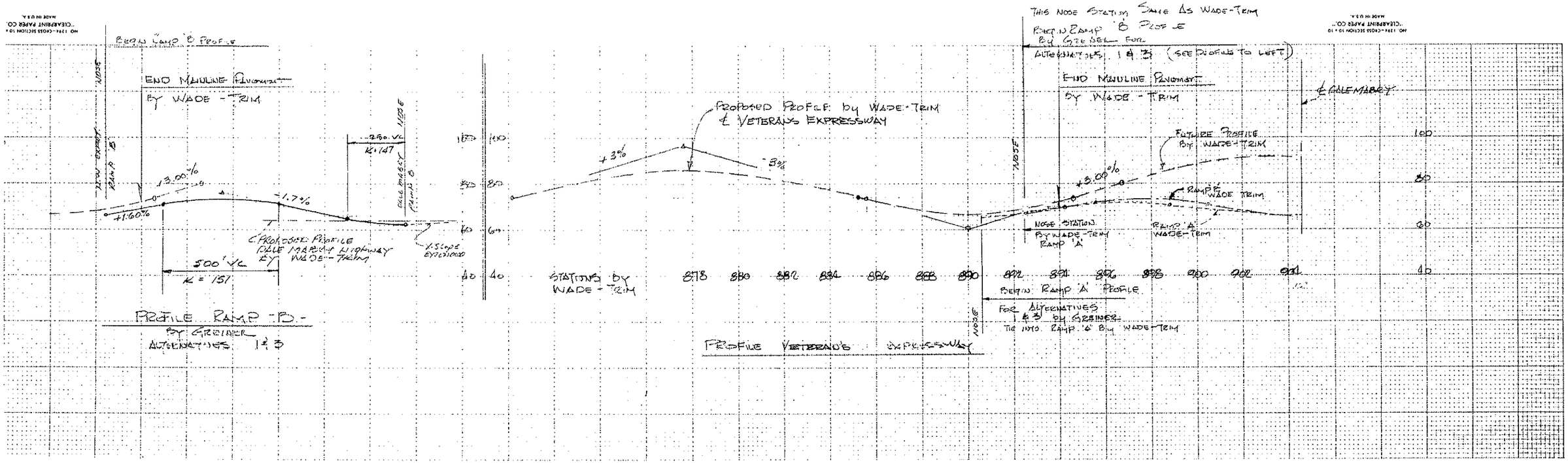
PROJECT NO.	
PROJECT DATES	
DATES	DESCRIPTION
2-11-93	DRAFT
5-19-93	FINAL

GREINER, INC.
Engineers, Architects, and Planners
Tampa, Florida

VETERANS EXPRESSWAY / DALE MABRY HIGHWAY PROFILE LAYOUT
PREFERRED ALTERNATIVE

NORTH TAMPA PARKWAY STUDY
FLORIDA DEPARTMENT OF TRANSPORTATION

STATE PROJECT NO. 10230-1521 | EXHIBIT 3.1 14 of 16



EXIST R/W | LAND USE | SECT 106 & 4F | PROP R/W | DRAIN NOISE WET

PROJECT NO. C2318	
PROJECT DATES	
DATES	DESCRIPTION
3-29-93	REVISED
5-19-93	FINAL

GREINER, INC.
Engineers, Architects, and Planners
Tampa, Florida

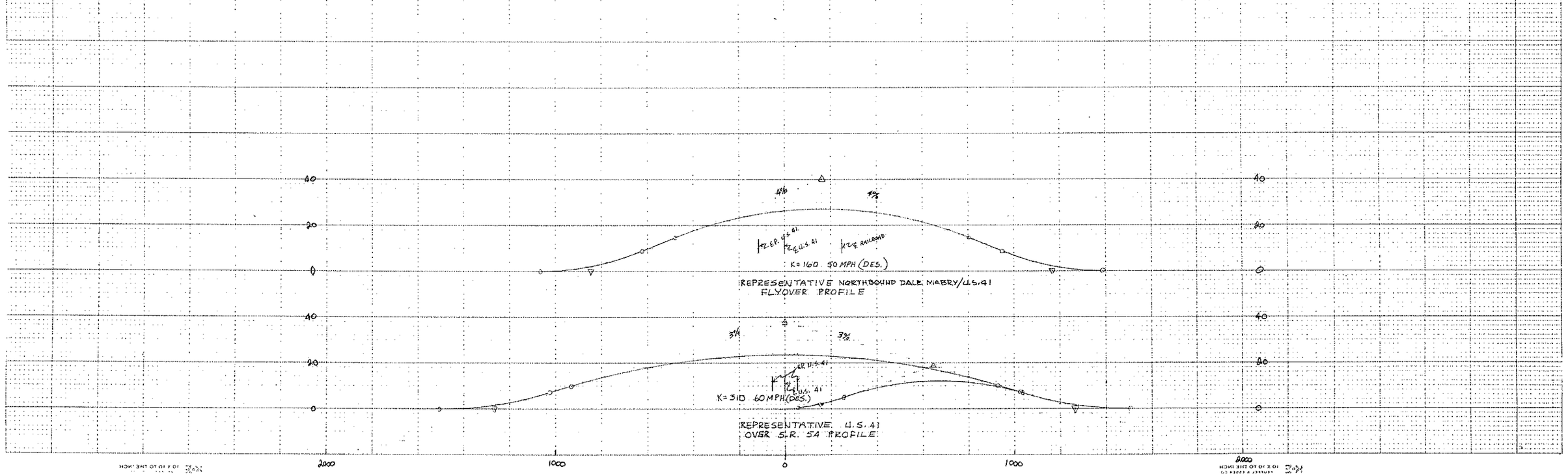
VETERANS EXPRESSWAY PROFILE

PREFERRED ALTERNATIVE

NORTH TAMPA PARKWAY STUDY

FLORIDA DEPARTMENT OF TRANSPORTATION

STATE PROJECT NO. 10230-1521 | EXHIBIT 3.1 15 of 16



PROJECT NO.	
PROJECT DATES	
DATES	DESCRIPTION
2-4-93	DRAFT
3-29-93	REVISED
5-19-93	FINAL

GREINER, INC.
Engineers, Architects, and Planners
Tampa, Florida

PROFILES
U.S. 41/DALE MABRY HIGHWAY INTERCHANGE
S.R. 54/U.S. 41 INTERCHANGE

PREFERRED ALTERNATIVE

NORTH TAMPA PARKWAY STUDY
FLORIDA DEPARTMENT OF TRANSPORTATION

STATE PROJECT NO. 10230-1521 | EXHIBIT 3.1 16 of 16

FIRST R/W | ANCILLARY | SECT 154 & 41 | PROP R/W | DRAIN NOISE WALL

The following sections discuss the analyses and refinements of the Preferred Alternative.

3.4 TRAFFIC PROJECTIONS AND OPERATIONS

The traffic projections and operations for the Preferred Alternative were updated to reflect those items which changed. The update was conducted for Dale Mabry Highway from Van Dyke Road through Cheval Place, U.S. 41 from Dale Mabry Highway to S.R. 54, and S.R. 54 from U.S. 41 to the intersection of Old S.R. 54 and New S.R. 54 east of Cypress Creek. The portion of Dale Mabry Highway from Cheval Place to U.S. 41 and the portion of S.R. 54 from Old S.R. 54 east to I-75 are fully addressed in previously approved projects.

3.4.1 Traffic Projections

Traffic projections for the design year for the Preferred Alternative were estimated using the Tampa Interstate Study travel demand model refined for the original Traffic Memorandum prepared for this project. The revised Traffic Analysis Zone (TAZ) structure and network from the original work effort was used with the exception of the zone located immediately east of Dale Mabry Highway between Crenshaw Lake Road and Crystal Lakes Road (Zone 278). A regional shopping mall, approximately 1,280,000 square feet of gross leasable area, is proposed in this area. The mall is located east of Dale Mabry Highway and north of Van Dyke Road.

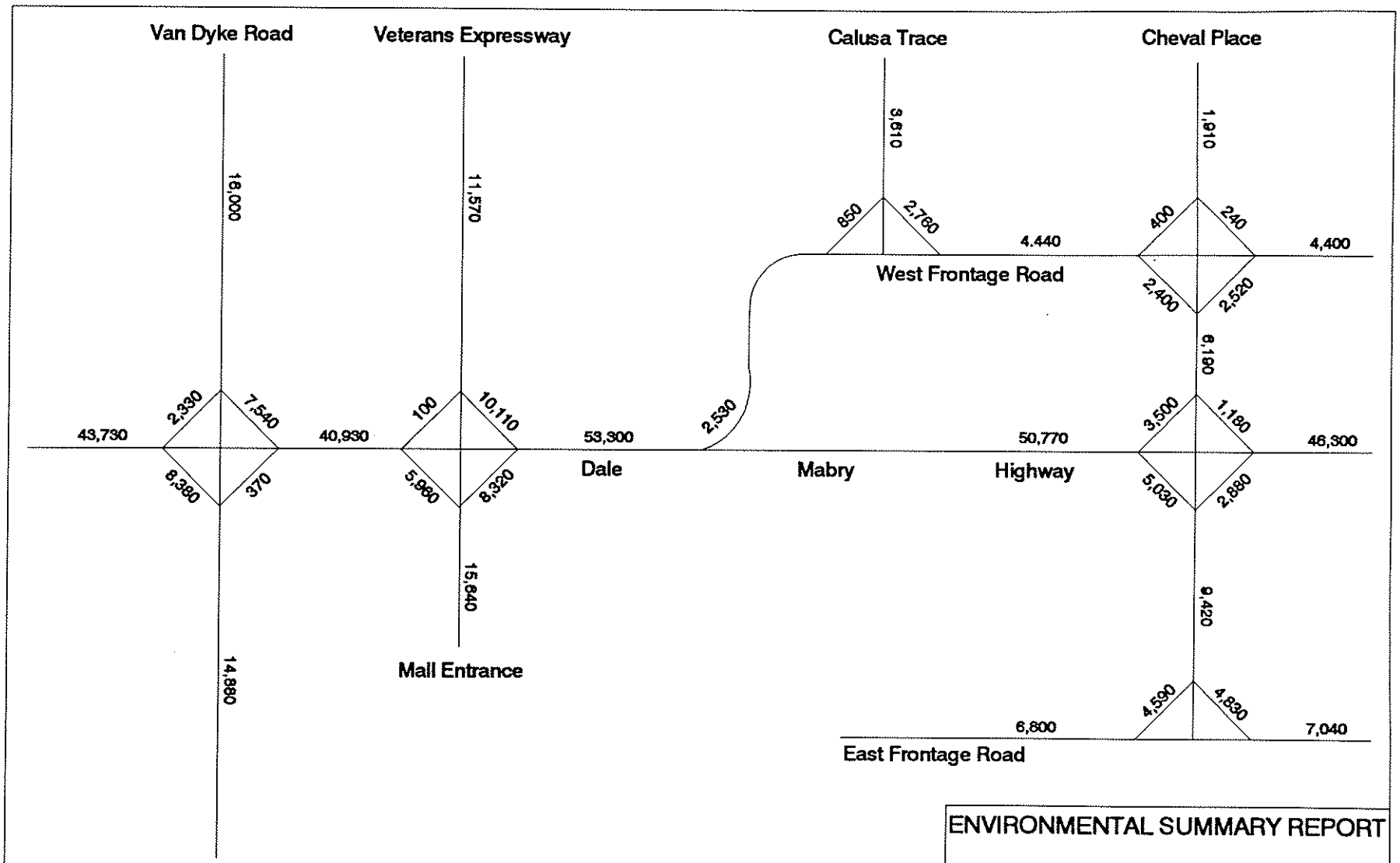
The original ZDATA for the travel demand model used to estimate traffic projections did not include this land use. To accommodate the proposed development, the mall site was input as an additional TAZ as a special generator. The trips generated by the

mall were initially estimated using the trip generation rates documented in Trip Generation, Fifth Edition, Institute of Transportation Engineers, January, 1991. The ITE trip generation rates estimate 38,673 trips per day to/from the regional shopping center. These trips represent both employee and shopping trips. The estimated number of trips were adjusted by the vehicle occupancy rate assumed in the model to more accurately predict vehicle trips from the development. With these inputs, the travel demand model generated a total of 36,034 trips to/from the mall TAZ. This volume is within seven percent of the number of trips generated using the ITE trip rates and was considered within acceptable tolerances.

The daily traffic assignments resulting from the updated travel demand model are illustrated on Exhibit 3.2. The design hour volumes were estimated from the daily projections based on a K-factor of 0.09 and a D-factor of 0.60. These are the same traffic characteristics used in the original work effort. The resulting design hour traffic volumes are illustrated on Exhibit 3.3.

3.4.2 Traffic Operations Analysis

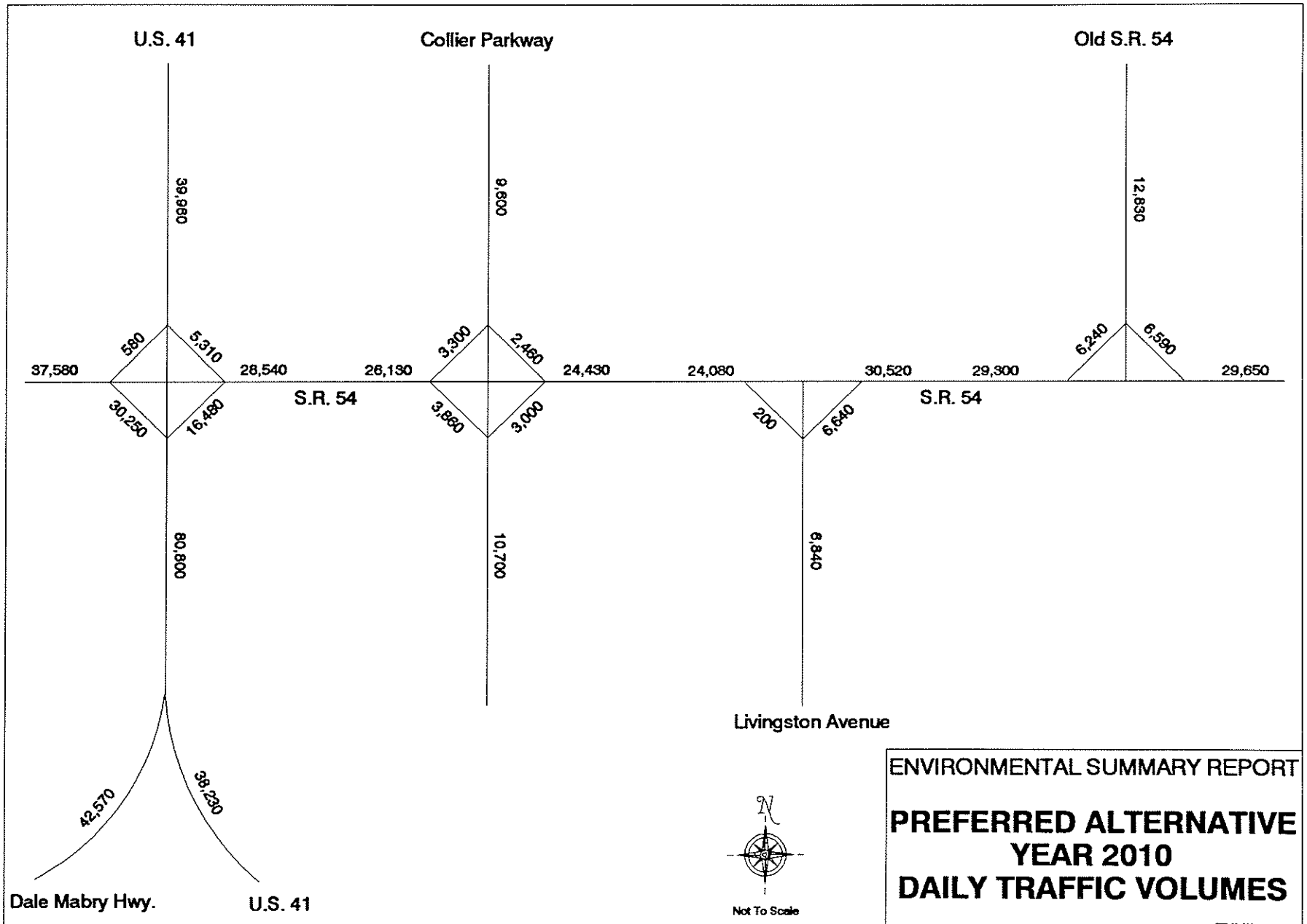
Using the design hour traffic projections illustrated on Exhibit 3.3, capacity calculations were conducted using the methodologies described in the 1985 Highway Capacity Manual. The intersection geometry used for the analyses is illustrated on Exhibit 3.4. Table 3.1 summarizes the results of the signalized intersection capacity analyses for the updated preferred alternative. As seen in the table, all six of the intersections analyzed are projected to operate at acceptable levels of service during the design hour. Of the six intersections analyzed, four are projected to operate at Level of Service C or better, with the remaining two, Dale Mabry Highway at Van Dyke Road and U.S. 41 at S.R. 54, projected to operate at Level of Service D.



ENVIRONMENTAL SUMMARY REPORT

PREFERRED ALTERNATIVE YEAR 2010 DAILY TRAFFIC VOLUMES

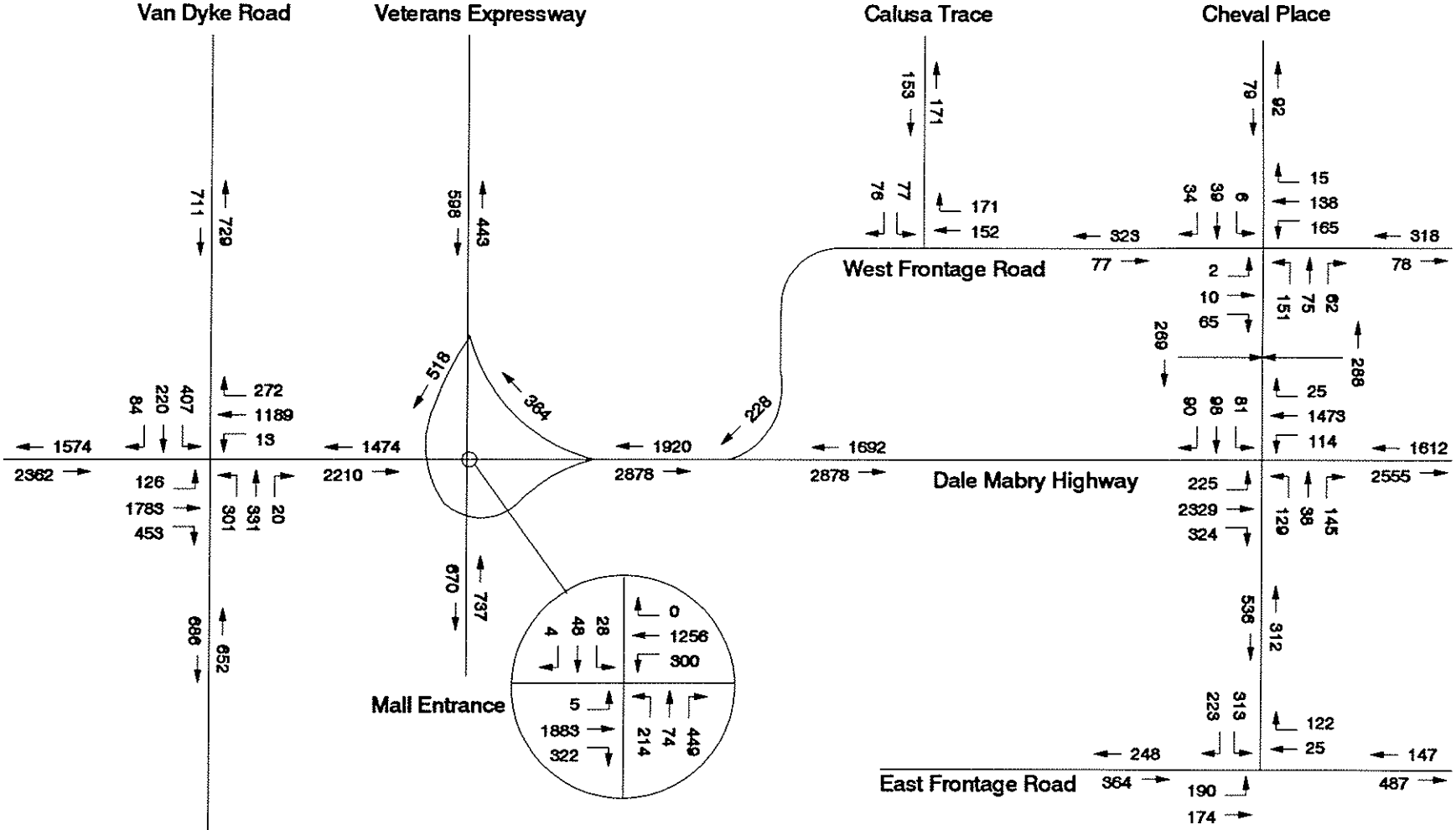
EXHIBIT 3.2
1 OF 2



ENVIRONMENTAL SUMMARY REPORT

PREFERRED ALTERNATIVE YEAR 2010 DAILY TRAFFIC VOLUMES

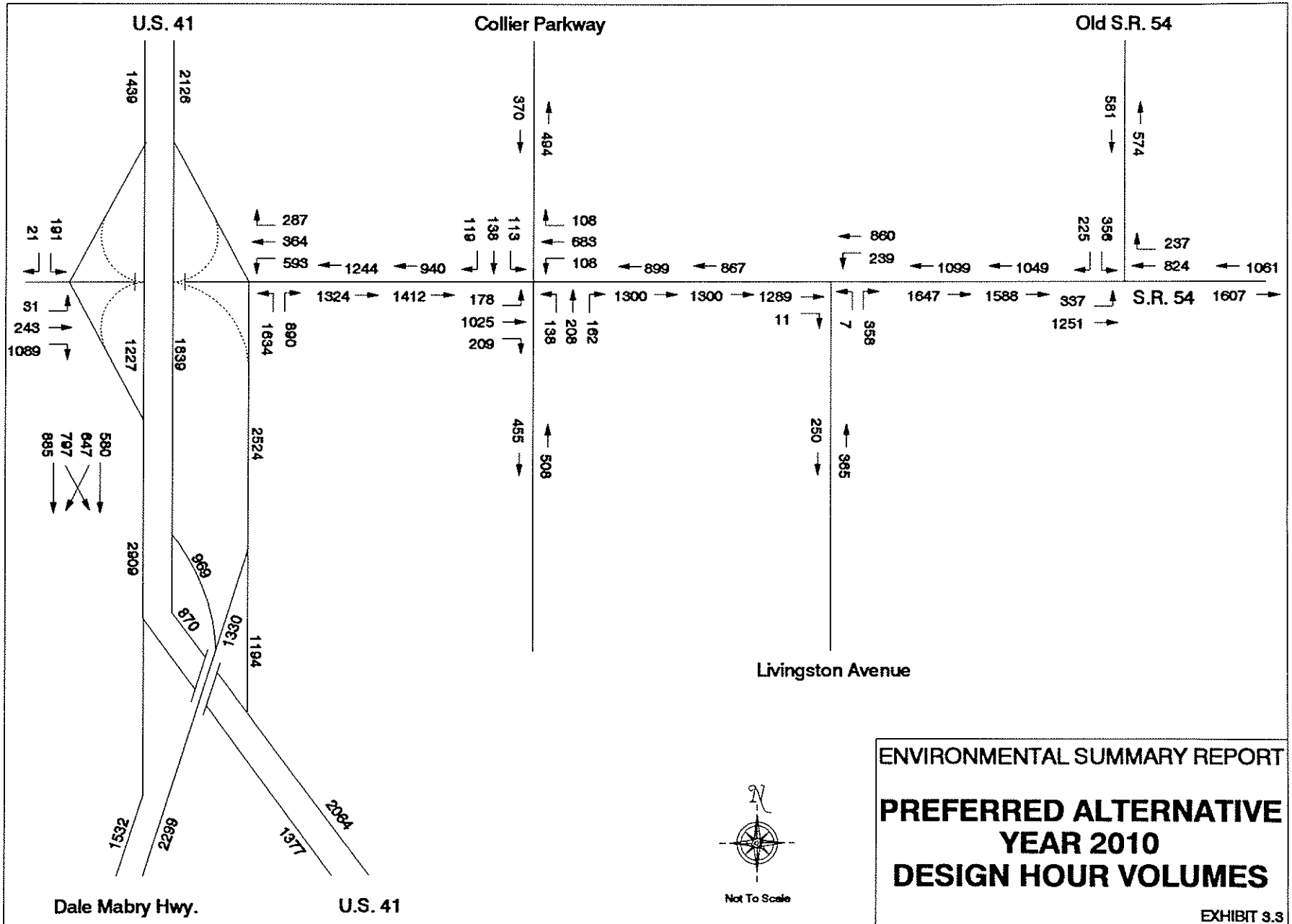
EXHIBIT 3.2
2 OF 2



ENVIRONMENTAL SUMMARY REPORT

PREFERRED ALTERNATIVE YEAR 2010 DESIGN HOUR VOLUMES

EXHIBIT 3.3
1 OF 2



ENVIRONMENTAL SUMMARY REPORT

PREFERRED ALTERNATIVE YEAR 2010 DESIGN HOUR VOLUMES

EXHIBIT 3.3
2 OF 2

TABLE 3.1

PREFERRED ALTERNATIVE YEAR 2010 DESIGN HOUR
SIGNALIZED INTERSECTION OPERATIONS ANALYSIS SUMMARY
North Tampa Parkway

Location	Design Hour Average V/C[1]	Delay[2]	LOS[3]
Dale Mabry Highway and Van Dyke Road	0.783	26.1	D
Dale Mabry Highway and Veterans Expressway	0.822	24.6	C
U.S. 41 and S.R. 54 (Urban Interchange)	0.933	27.6	D
Collier Parkway and S.R. 54	0.645	21.6	C
Livingston Avenue and S.R. 54	0.822	15.4	C
Old S.R. 54 and New S.R. 54	0.781	10.6	B

[1]V/C = Volume to Capacity Ratio
[2]Average Delay in Seconds Per Vehicle
[3]LOS = Level of Service

In addition to the intersection capacity analyses, two additional analyses were conducted. The first analysis was a progression analysis for Cheval Place between the two frontage roads. The second analysis was a weaving analysis for southbound U.S. 41 from the S.R. 54 on-ramp to the diverge with Dale Mabry Highway.

The progression analysis for Cheval Place was conducted using PASSER II-90. The analysis was conducted to ensure that the design concept provides sufficient distance between the frontage road intersections and the intersection with Dale Mabry Highway to accommodate the anticipated queues. The results of the progression analysis indicated that fair progression could be achieved in the design hour and that the anticipated queues would not exceed the storage area available.

The weaving analysis on U.S. 41 was conducted for the southbound movement from S.R. 54 to the Dale Mabry Highway southbound diverge. Using the procedures outlined in the 1985 Highway Capacity Manual, the weaving section is projected to operate at Level of Service C with weaving vehicle speeds of 45 mph and non-weaving vehicle speeds of 48 mph.

The signalized intersection, progression and weaving analyses and calculations are included in the Traffic Addendum published separately.

The traffic analyses conducted with the updated traffic projections indicate that, with the improvements identified under the "No Parkway" Alternative, an acceptable level of service can be provided at critical intersections during the design hour. These improvements include:

* An interchange at the intersection of Dale Mabry Highway and the Veterans Expressway providing a flyover ramp for the eastbound to northbound movement and a direct ramp for the southbound to westbound movement.

* An interchange at the intersection of U.S. 41 and S.R. 54, including the diverge to Dale Mabry Highway. An urban interchange is proposed at this location, in conjunction with a flyover for the northbound Dale Mabry Highway to northbound U.S. 41 movement. These grade separations will increase the available capacity sufficiently to accommodate the projected traffic volumes at an acceptable level of service during the design year.

The two interchanges are critical elements of the improvement in addition to the six-laning of Dale Mabry Highway from Van Dyke Road north through Cheval Place and the four-laning of S.R. 54 from U.S. 41 east to I-75, including the new interchange with I-75.

3.5 ROADWAY DESIGN CRITERIA

The design criteria for the alternative alignments were developed using Department standards as set forth in Roadway and Traffic Design Standards and Manual of Uniform Standards for Design, Construction, and Maintenance for Streets and Highways published by the Department. These documents, coupled with discussions with the Department and FHWA staff, were the basis for determining the design criteria for the Parkway.

4.1.2 Title VI and VIII

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

4.1.3 Land Use

The existing land use patterns within the study area can be generally grouped into four different types: commercial, residential, agricultural, and open space. See Exhibit 4.1 for an overview of existing land use within the area. Commercial development is concentrated along U.S. Highway 41, Dale Mabry Highway, and S.R. 54. The largest concentration of highway commercial use throughout the study area is located along U.S. 41. The intersection of U.S. 41 and S.R. 54 forms the commercial core of the area; this retail concentration is primarily community-level retail. Another developing commercial node is the intersection of S.R. 54 and Collier Parkway. This area is part of a planned development and several commercial establishments have been recently constructed or are under development at this time.

4.1.4 Utilities and Railroads

The study area contains numerous distribution type facilities, both overhead and underground. Major utility installations affecting the various corridors are shown on Exhibit 4.2 and discussed as follows:

* **Florida Power Corporation (FPC)**

  On the north side of S.R. 54, east of U.S. 41, FPC has constructed a major electrical substation and a microwave communications complex. Primary distribution (13KV) is located along S.R. 54 and north along U.S. 41. FPC owns an inactive 125KV system which is scheduled to be upgraded to a 500KV system beginning in 1992. This system lies in the southern portion of the study area.

LEGEND

- A Agricultural and Vacant
- C Commercial
- S Low Density Residential
- M Medium/High Density Residential
- P Major Public Areas
- N Natural Areas

0 ½ 1

SCALE IN MILES

PASCO COUNTY

HILLSBOROUGH COUNTY

S.R. 54

U.S. 41

PKWY.

CYPRESS

NEW S.R. 54

I-75

CREEK

COLLIER

COUNTY LINE RD

NEWBORGER RD

WALLACE RD

LUTZ

LAKE FERN RD

LANE RD

CROOKED

LIVINGSTON AVE.

SUNSET LANE

N.W. EXPWY.

CRYSTAL LAKES RD.

VAN DYKE RD

SIMMONS

CRENSHAW

LAKE RD.

DEBUEL RD

CLEMENT RD.

WHITAKER RD.

HANNA

DALE MABRY HWY

COMMERCE PARK BLVD.

BRUCE B.

DOWNS BLVD.

A Florida Department of Transportation Project

ENVIRONMENTAL SUMMARY REPORT

EXISTING LAND USE

EXHIBIT 4.1

LEGEND

FIBER OPTIC CABLE
U.G. TELEPHONE
O.H. ELECTRIC
WATER MAIN (PROPOSED)

0 1/2 1 MILES

S.R. 54
U.S. 41
I-75
S.R. 54
ELECT. SUB.STA. AND MICROWAVE TOWER
COLLIER PKWY.
CYPRESS CREEK
WATER PUMP STA.
SAN. TREATMENT PLANT
PASCO COUNTY
HILLSBOROUGH COUNTY
COUNTY LINE RD.
COUNTY LINE RD.
PASCO COUNTY
HILLSBOROUGH COUNTY
72" W.M.
72" W.M.
NEWBURGER RD.
WALLACE RD.
LAKE FERN RD
LANE RD
CROOKED LANE RD
LIVINGSTON AVE.
SUNSET LANE
48" W.M.
SAN. LIFT STA.
CRYSTAL LAKES RD.
VAN DYKE RD.
DEBUEL RD.
SIMMONS RD.
CRENSHAW LAKE RD.
CLEMENT RD.
WHITAKER RD.
HANNA RD.
125 K.V. INACTIVE
250 K.V.
DALE MABRY HWY.
I-275
I-75
S.R. 581
BRUCE B. DOWNS BLVD.
SINCLAIR HILLS RD.
BEARSS AVE
EHRLICH RD
127th AVE.
SKIPPER RD.

A Florida Department of Transportation Project

ENVIRONMENTAL SUMMARY REPORT

MAJOR UTILITIES

EXHIBIT 4.2

NORTH TAMPA PARKWAY STUDY THE GREINER TEAM

* **General Telephone Company**

  Overhead and underground distribution cables are located along local roads throughout the study area. Major buried facilities are located along U.S. 41, Sunset Lane, County Line Road and S.R. 54. Located along the west side of U.S. 41 is a major fiber optic cable. An additional fiber optic cable parallel to the existing cable on U.S. 41 is being planned for installation within the next 24 months.

* **Tampa Electric Company**

  Local distribution facilities are found throughout the study area. Primary facilities are located along Dale Mabry Highway, U.S. 41 and Livingston Avenue. Tampa Electric Company operates a 250KV system which is generally outside the study area. Involvement within the study area begins east of Hanna Road.

* **Cable Television**

  Local distribution services are provided by Paragon Cable throughout the study area south of the Hillsborough-Pasco county line. North of the county line, service is provided by Florida Satellite Network.

* **West Coast Regional Water Supply Authority**

  The Water Authority is a major supplier of raw water to Pasco, Pinellas and Hillsborough Counties from wellfields outside the study area. Presently being designed is a 72-inch transmission main which may traverse the study area from east to west generally along County Line Road to Dale Mabry Highway where it proceeds in a southerly direction. The proposed route is preliminary and will not be finalized until a route selection study is conducted. The Authority is currently in Phase I of a three Phase study. Phase II, which will include construction of this transmission main, may be implemented anytime between now and the next ten years.

* **Residential Water and Sanitary Services**

  A majority of residential areas south of County Line Road are provided water and sanitary services by Hillsborough County through a system of gravity and force mains. In the lesser populated areas, wells and septic tanks are predominant. Between County Line Road and S.R. 54, the Turtle Lakes subdivision is served by an on-site wastewater treatment plant.

Design of the Preferred Alternative is anticipated to impact General Telephone Company cables, Tampa Electric Company facilities, and potentially cable television facilities. Each major utility affected should be afforded design consideration.

The Preferred Alternative northbound Dale Mabry Highway flyover ramp crosses the CSX railroad located along the west side of U.S. 41, immediately south of the existing Dale Mabry Highway/U.S. 41 apex.

4.1.5 Right-of-Way and Relocation

Approximately 168 acres of additional right-of-way would be required for the Preferred Alternative. Several relocations within the study area have been identified. Table 4.1 provides a breakdown of the number of relocations involved for the Preferred Alternative. A detailed analysis of construction and right-of-way cost estimates are provided in the Preliminary Engineering Report for this project.

4.2 CULTURAL AND HISTORICAL RESOURCES

Cultural and historical resources include historically and archaeologically significant sites, parks, recreational facilities, schools and churches. The following subsections discuss each of the cultural and historical resources.

4.2.1 Historical and Archaeological Resources

Preliminary evaluations of known historic and archaeologic resources were completed for the study area. Based upon these preliminary evaluations no known historic/archaeologic resources listed or eligible for listing on the National Register of Historic Places were identified. Further, in accordance with procedures contained in 36CFR, Part 800, a Cultural Resource Assessment Survey, including background research and a field survey coordinated with the State Historic Preservation Officer (SHPO) was performed for S.R. 54 from U.S. 19 to I-75. Based upon the right-of-way requirements outlined in S.R. 54's conceptual design plans, none of the sites identified

TABLE 4.1

PREFERRED ALTERNATIVE ESTIMATED RELOCATIONS
North Tampa Parkway

Type	Dale Mabry		U.S. 41		S.R. 54		Total	
	Parcels	Relocations	Parcels	Relocations	Parcels	Relocations	Parcels	Relocations
Business	4	3	43	82	15	22	62	107
Residential	0	0	8	17	9	14	17	31
Other	16	0	10	8	19	0	45	8
Total	20	3	61	107	43	36	124	146

4.3.2 Air Quality

Monitoring is the most reliable means of determining ambient air quality conditions. The Hillsborough County Environmental Protection Commission (EPC), under the supervision of the Florida Department of Environmental Regulation (FDER), operates air monitoring stations near the study area from which a general profile of existing air quality conditions in the vicinity of the project can be derived.

A synopsis of the most recent air monitoring data obtainable is presented in Table 4.2. This information is summarized in terms of monitoring station location, distance and direction from the study area, pollutant(s) measured, and maximum recorded concentrations. Comparison of these data with the National Ambient Air Quality Standards (NAAQS) is also made. As shown, levels of carbon monoxide (CO), sulfur dioxide (SO_2), Ozone (O_3), and PM-10 are within the NAAQS for these pollutants.

According to the Clean Air Act Amendments of 1977, all areas within the state are designated with respect to the NAAQS as either attainment, non-attainment, or unclassifiable. Areas that meet the NAAQS are designated as attainment. Conversely, areas that violate the NAAQS are designated as non-attainment. Finally, areas where data are insufficient for classification as either attainment or non-attainment are designated as unclassifiable. In areas designated as non-attainment, a State Implementation Plan (SIP) is developed to bring the area into compliance with the NAAQS. The attainment, non-attainment and unclassifiable designations for Hillsborough and Pasco Counties are shown in Table 4.3.

As shown in Table 4.3, the U.S. Environmental Protection Agency (EPA) has designated all of Hillsborough County as a non-attainment area for ozone (O_3) and a portion of the county, located 11 miles south of the study area, as a non-attainment

TABLE 4.2

AIR MONITORING DATA IN THE VICINITY OF
THE NORTH TAMPA PARKWAY STUDY AREA
North Tampa Parkway

Station Number	Monitoring Station Location	Distance and Direction from the Study Area	Pollutant(s) Measured	Maximum Recorded Concentration[a]	Air Quality Standard[b]	Duration	Exceeds Standard
1	Gaither High School	1.6 miles, south	Carbon monoxide	4 ppm	35 ppm	1 - hour average	No
				2 ppm	9 ppm	8 - hour average	No
			Sulfur dioxide	10 ug/m^3	60 ug/m^3	Annual Arithmetic Mean	No
				76 ug/m^3	260 ug/m^3	24 - hour average	No
				327 ug/m^3	1300 ug/m^3	3 - hour average	No
			Ozone	.101 ppm	.12 ppm	1 - hour average	No
2	Tampa Stadium	9.4 miles, south	Carbon monoixide	16 ppm	35 ppm	1 - hour average	No
				5 ppm	9 ppm	8 - hour average	No
3	Seminole Heights School	8.5 miles, southeast	Carbon monoxide	7 ppm	35 ppm	1 - hour average	No
				4 ppm	9 ppm	8 - hour average	No
			PM - 10	27 ug/m^3	50 ug/m^3	Annual Arithemetic Mean	No
				55 ub/m^3	150 ug/m^3	24 - hour average	No

[a] Florida Department of Environmental Regulation, ALLSUM Report, 1992

[b] National Air Quality Standards established by the EPA.

ppm = parts per million
ug/m^3 = micrograms per cubic meter

TABLE 4.3

CURRENT ATTAINMENT/NON-ATTAINMENT DESIGNATIONS[a]
North Tampa Parkway

Pollutant	Designations	
	Hillsborough	Pasco
Carbon monoxide	Attainment	Attainment
Nitrogen dioxide	Attainment	Attainment
Sulfur dioxide	Unclassifiable	Attainment
Particulate matter		
- Total suspended particulate	Non-attainment[b]	Attainment
- Inhalable particulate	Unclassifiable	Attainment
Ozone	Non-attainment	Attainment
Lead	Attainment	Attainment

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[a] Source: Section 17-2, (410), (420), and (430) of the Florida Administrative Code.

[b] Restricted to a portion of Hillsborough County not included in the North Tampa Parkway study area.

Designations: Attainment: areas within which the AAQS have not been violated.
Non-attainment: areas within which the AAQS have been violated.
Unclassifiable: areas which have not been classified as attainment or non-attainment.

area for total suspended particulate (TSP). As a result of these designations, Hillsborough County is currently subject to the guidelines of a SIP. Essentially, the SIP calls for the reduction and control of TSP and the precursors to O_3, hydrocarbons (HC) and nitrogen dioxide (NO_2).

The CAA Amendments of 1990 further designate the degree of the O_3 non-attainment status and identify required revisions to the State Implementation Plan. Hillsborough County has been classified as a "Marginal" O_3 nonattainment area. Since Pasco County is an O_3 attainment area, it has not been assigned an area classification.

The "No-Build" and "Build" Alternatives were subjected to a graphical Screening Test for the opening year (2000) and design year (2010). The Screening Test is comprised of a series of curves which were produced by modeling worst-case assumptions for meteorology, traffic, and site conditions. The MOBILE4 emission factor model and CALINE3 dispersion model were used to generate the curves. The Screening Test can be used to determine a critical distance for the "No-Build" and "Build" Alternative traffic conditions. The critical distance is the closest distance a receptor can be to a given intersection without any chance of a significant air quality impact.

Intersections which have a combination of high traffic volumes, low vehicular speeds and nearby receptors are generally considered worst-case locations. Two locations, the U.S. 41/S.R. 54 interchange and Dale Mabry Highway/Cheval Place intersection were selected as worst-case sites and subjected to the graphical Screening Test. The input data and results of the Screening Test for these two sites are shown in Tables 4.4 and 4.5.

At the U.S. 41/54 intersection, the front sidewalks adjacent to commercial buildings and a church were identified as the nearest reasonable receptors. As shown in Table

TABLE 4.4

SCREENING TEST FOR U.S. 41 AND S.R. 54
North Tampa Parkway

Alternative	Year	Average Speed (mph)	Peak-Hour Traffic Volume	Critical Distance (feet)	Closest Receptor (feet)
No-Build	2000	25	5,817	40	65
No-Build	2010	25	7,272	50	65
Build	2000	50	5,817	21	45
Build	2010	36	7,272	31	45

TABLE 4.5

SCREENING TEST FOR DALE MABRY HIGHWAY AND CHEVAL PLACE
North Tampa Parkway

Alternative	Year	Average Speed (mph)	Peak-Hour Traffic Volume	Critical Distance (feet)	Closest Receptor (feet)
No-Build	2000	20	4,223	29	130
No-Build	2010	20	5,278	31	130
Build	2000	40	4,393	10	60
Build	2010	20	5,582	32	60

4.4, the distance to the nearest reasonable receptor is greater that the critical distance for the 2000 and 2010 "No-Build" and "Build" Alternatives. This indicates that the project will not have a significant impact on air quality.

At the Dale Mabry Highway/Cheval Place intersection, the back property line of residential lots were identified as the nearest reasonable receptors. As shown in Table 4.5, the distance to the nearest reasonable receptor is greater than the critical distance for the 2000 and 2010 "No-Build" and "Build" Alternatives. Again, this indicates that the project will not have a significant impact on air quality.

Construction activities will cause minor short-term air quality impacts in the form of dust from earthwork and unpaved roads and smoke from open burning. These impacts will be minimized by adherence to all State and local regulations and to the FDOT's "Standard Specifications for Road and Bridge Construction."

All State and local agencies were provided with an opportunity to comment on this project. There were no adverse comments regarding air quality.

The portion of the project located in Hillsborough County is in air quality nonattainment area which has transportation control measures in the State Implementation Plan (SIP) approved by the Environmental Protection Agency on June 15, 1981. The Federal Highway Administration has determined that both the transportation plan and the transportation improvement program conform to the SIP. The Federal Highway Administration has determined that this portion of the project is included in the Transportation Improvement Program for Hillsborough County. Therefore, pursuant to 23 CFR 770.9(c)(2), this portion of the project conforms to the SIP.

The portion of the project located in Pasco County is in an area where the State Implementation Plan does not contain any transportation control measures. Therefore, the conformity procedures of 23 CFR 770 do not apply to this portion of the project. This portion of the project is in conformance with the State Implementation Plan because it will not cause violations of air quality standards and will not interfere with any transportation control measures.

4.3.3 Noise

A traffic noise study was conducted to (1) identify noise sensitive sites along the project corridor, (2) evaluate traffic noise impacts at these sites for existing conditions and design year (2010) "No-Build" and Preferred Alternatives and (3) evaluate noise abatement measures for reducing or eliminating noise impacts.

Noise Sensitive Impacts

The sensitivity of an area to highway noise is dependent on the land use. FHWA has established guidelines, summarized in Table 4.6, to assess traffic noise impacts with respect to various land uses. Along the project corridor, land uses include residential, commercial, institutional, industrial, and agricultural. Highway noise may result in activity interference at residential and institutional land uses, therefore, residential and institutional sites were considered noise sensitive for the purpose of this study. The noise sensitive sites are in Activity Category B of the FHWA Noise Abatement Criteria.

The FDOT computer model, FLAMOD, was used to establish the 65 dBA contour for 2010 Preferred Alternative conditions. The distance between the centerline of the nearest proposed travel lane and the 65 dBA contour is given in Table 4.7 for various

TABLE 4.6

FHWA NOISE ABATEMENT CRITERIA

Activity Category	Leq (h)	Description of Activity Category
A	57 (Exterior)	Lands on which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose.
B	67 (Exterior)	Picnic areas, recreation areas, playgrounds, active sports areas, parks, residences, motels, hotels, schools, churches, libraries, and hospitals.
C	72 (Exterior)	Developed lands, properties, or activities not included in Categories A or B above.
D	No Criteria	Undeveloped lands.
E	52 (Interior)	Residences, motels, hotels, public meeting rooms, schools, churches, libraries, hospitals, and auditoriums.

References: Code of Federal Regulation, Title 23, Part 772.

TABLE 4.7

65 dBA NOISE CONTOUR FOR THE 2010 PREFERRED ALTERNATIVE
North Tampa Parkway

Roadway	Segment	Approximate Distance from Centerline of Near Lane
Dale Mabry Highway	From Cheval Place to Northern Project Limit	131 feet
Dale Mabry Highway	From Southern Project Limit to U.S. 41	116 feet
U.S. 41	Dale Mabry Highway to S.R. 54	206 feet
S.R. 54	From U.S. 41 to Charter Hospital	120 feet
S.R. 54	From Charter Hospital to Collier Parkway	119 feet
S.R. 54	From Collier Parkway to Livingston Avenue	95 feet
S.R. 54	From Livingston Avenue to Old S.R. 54	153 feet

segments of the project corridor. The 65 dBA contour was used to identify potentially impacted noise sensitive sites which were grouped into nine noise study areas. All of the noise study areas are developed for residential use. The Noise Study Areas (NSA) are shown in Exhibit 4.3 and are described as follows:

* NSA - A, located west of Dale Mabry Highway and south of Calusa Trace, contains nine plotted residential lots represented by Receptors A1 through A9.

* NSA - B, located west of Dale Mabry Highway and north of Calusa Trace, contains nine plotted residential lots represented by Receptors B1 through B9.

* NSA - C, located east of Dale Mabry Highway and north of County Line Road, contains two residences represented by Receptors C1 and C2.

* NSA - D, located west of U.S. 41 and south of S.R. 54, contains 18 residences represented by Receptors D1 through D7.

* NSA - E, located east of U.S. 41 and south of S.R. 54, contains 21 residences represented by Receptors E1 through E7.

* NSA - F, located north of S.R. 54 and west of Collier Parkway, contains 8 residences represented by Receptors F1 through F6.

* NSA - G, located south of U.S. 41 and west of Carpenters Run, contains 13 residential lots represented by Receptors G1 through G7.

* NSA - H, located south of U.S. 41 and west of Cypress Creek Road, contains 9 residential lots represented by Receptors H1 through H8.

* NSA - I, located north of U.S. 41 and west of Old Cypress Creek Road, contains 10 residences represented by Receptors I-1 through I-8.

Model Validation

In order to validate the computer model used to predict noise levels at the previously established receptor sites, noise monitoring was performed along the project corridor. Monitoring was conducted at one site adjacent to Dale Mabry Highway, one site adjacent to U.S. 41, and two sites adjacent to S.R. 54.

LEGEND

STUDY SEGMENTS

PLANNED FUTURE ROADWAY

NSA-B NOISE STUDY AREA DESIGNATION

0 1/2 1 MILES

U.S. 41

S.R. 54

I-75

NEW S.R. 54

S.R. 581

I-275

PKWY

CYPRESS CREEK

COLLIER

NSA-A

NSA-B

NSA-C

NSA-D

NSA-E

NSA-F

NSA-G

NSA-H

NSA-I

PASCO COUNTY
HILLSBOROUGH COUNTY

COUNTY LINE RD

NEWBURGER RD

WALLACE RD

LIVINGSTON AVE

SUNSET LANE

LUTZ

LAKE FERN RD

CROOKED LANE RD

CRYSTAL LAKES RD

VAN DYKE RD

DEBUEL RD

CRENSHAW LAKE RD

SIMMONS RD

CLEMENT RD

WHITAKER RD

THIRTEENMILE RUN

HANNA

DALE MABRY HWY.

VETERANS EXPRESSWAY

SINCLAIR HILLS RD

BEARSS AVE

EHRLICH RD

127th AVE

SKIPPER RD

BRUCE B. DOWNS BLVD.

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ENVIRONMENTAL SUMMARY REPORT

NOISE STUDY AREAS

EXHIBIT 4.3

Concurrent traffic conditions including traffic volume, vehicle mix, and travel speeds were recorded during each monitoring event. The traffic conditions and other roadway/receptor site factors were used as input to validate the noise prediction model, STAMINA 2.1. The predicted noise levels were within 3 dBA of the monitored levels at all four monitor sites verifying that the model accurately predicts noise levels for site conditions along the project corridor.

Predicted Noise Levels

Existing noise levels and design year noise levels for the 2010 "No-Build" and "Build" alternatives were predicted for the previously identified receptors using the FDOT approved "PC" version of the STAMINA 2.1 noise prediction model. Table 4.8 summarizes the results.

Traffic input data used in the model are based on the Traffic Addendum prepared for this project. Demand or Level-of-Service (LOS) traffic conditions, whichever was less, were simulated in the model as a "worst-case" scenario.

Aerial photography base maps showing the existing roadway alignment and proposed alignment for the Preferred Alternative were used to establish horizontal coordinates of the roadways and receptors. Preliminary roadway profiles provided elevation data for flyover ramps and elevated roadways at interchanges.

TABLE 4.8

PREDICTED NOISE LEVELS
North Tampa Parkway

Noise Study Area	Receptor	1990 (Existing) Noise Level (dBA)	2010 No-Build Noise Level (dBA)	2010 Build Noise Level (dBA)
A	1	58	61	61
	2	59	62	62
	3	61	65	64
	4	63	67	64
	5	63	66	64
	6	63	66	64
	7	62	66	63
	8	58	61	60
	9	56	59	59
B	1	57	60	59
	2	58	61	60
	3	60	64	62
	4	62	66	63
	5	62	66	63
	6	62	66	63
	7	61	65	62
	8	59	62	60
	9	57	60	59
C	1	66	68	69
	2	64	66	68
D	1	59	63	65
	2	62	65	68
	3	58	62	64
	4	60	64	67
	5	58	62	64
	6	57	61	63
	7	59	62	65
E	1	56	63	69
	2	55	61	67
	3	54	60	65
	4	56	63	69
	5	55	62	67
	6	53	59	63
	7	53	59	64

TABLE 4.8

PREDICTED NOISE LEVELS
North Tampa Parkway
(Continued)

Noise Study Area	Receptor	1990 (Existing) Noise Level (dBA)	2010 No-Build Noise Level (dBA)	2010 Build Noise Level (dBA)
F	1	66	67	67
	2	63	64	64
	3	60	62	62
	4	65	65	65
	5	64	64	64
	6	59	60	60
G	1	62	64	64
	2	65	66	66
	3	65	66	66
	4	64	66	66
	5	64	66	66
	6	62	64	64
	7	59	62	62
H	1	61	64	64
	2	64	67	67
	3	64	67	67
	4	64	67	67
	5	64	68	68
	6	63	66	66
	7	61	65	65
	8	59	63	63
I	1	62	71	71
	2	61	67	67
	3	59	65	65
	4	59	64	64
	5	59	65	65
	6	59	65	65
	7	60	65	65
	8	60	65	65

See Exhibit 4.3 for location of Noise Study Areas.

Noise Impact Analysis

FHWA Noise Abatement Criteria, previously summarize in Table 4.6, establish guidelines for traffic noise impact assessment with respect to various land uses. When traffic noise associated with a roadway project is predicted to approach or exceed these FHWA criteria, noise abatement measures must be considered. FDOT considers the term "approach" to normally mean noise levels within 2 dBA of the FHWA criteria. For this analysis, noise impacts were identified for locations predicted to exceed a noise level of 2 dBA less than the FHWA criteria for the appropriate activity category. For example, while the FHWA criteria for Activity Category B is 67 dBA, a value of 65 dBA was used in this evaluation to determine noise impacts.

For the 2010 "Build" condition, the predicted noise levels at each representative site were compared to the FHWA criteria. No receptors are predicted to experience noise levels which approach or exceed the FHWA criteria in NSA - A and NSA - B. However, 60 noise sensitive sites located in the remaining seven noise study areas, as listed below, are predicted to experience noise levels approaching or exceeding the FHWA Criteria.

* NSA - **C**, Receptors C1 and C2 representing two (2) single-family residences exceed the criteria.
* NSA - **D**, Receptors D1, D2, D4, and D5 representing 13 single-family residences approach or exceed the criteria.
* NSA - **E**, Receptors E1 through E5 representing 19 single-family residences approach or exceed the criteria.
* NSA - **F**, Receptors F1 and F4 representing two (2) single-family residences approach the criteria.
* NSA - **G**, Receptors G2 through G5 representing nine (9) single family residential lots approach the criteria.

Alignment Selection - Alignment selection involves orienting and/or siting the roadway at sufficient distances from noise sensitive areas so as to minimize noise impacts. The Preferred Alternative follows the corridor established by the existing right-of-way. In the vicinity of impacted noise sensitive sites in NAS-D, NSA-F and NSA-G, additional right-of-way acquired for the preferred alternative minimizes noise impacts and project costs by shifting the proposed roadway centerline away from noise sensitive sites while fully utilizing existing right-of-way. In the vicinity of NSA-C, NSA-E, NSA-H and NSA-I, the proposed alignment minimizes total project impacts including wetland encroachment and relocations. Shifting the proposed alignment away from a particular noise sensitive area would increase right-of-way acquisition costs, wetland impacts, relocations and/or noise impacts to sensitive sites on the opposite side of the roadway.

Land Use Controls - A large percentage of vacant land abuts the project corridor. The land use is not currently noise sensitive and proper land use controls can ensure that the areas will not become noise sensitive in the future. Local government and planning agencies controlling land use can refer to the noise contours previously provided in Table 4.7 and develop policies that minimize the location and growth of noise sensitive land uses adjacent to the roadway. Proper land use controls can also maintain existing buffer areas.

Noise Barriers - Noise barriers reduce noise levels by blocking the sound path between a roadway and noise sensitive areas. A noise barrier evaluation was performed for this project to determine whether reasonable and feasible barriers could be constructed for the noise impacted areas. "Feasibility" primarily addresses engineering considerations (physical constraints affecting barrier construction, ability to provide a substantial noise reduction given certain access, drainage, safety, or maintenance

TABLE 4.9

NOISE BARRIER SUMMARY
North Tampa Parkway

Noise Study Area	Barrier Length (feet)	Barrier Height (feet)	Total Cost	Number of Impacted Receptors	Number of Benefited Receptors	Cost/dBA Reduction/ Benefited Receptor
NSA - C	900	12	$178,200	2	2	$17,800
NSA - D	1,200	16	$316,800	13	13	$3,880
NSA - G	1,000	14	$231,000	9	9	$4,070
NSA - H	580	14	$133,980	7	5	$3,470
NAA - I	890	14	$205,590	8	4	$9,880

NSA-D has 13 impacted residences. A noise barrier 1,200 feet long and 15 feet high would provide a 5 to 7 dBA reduction to the 13 residences at a cost of $3,880/dBA reduction/benefited receptor. Considering the high cost of the barrier, the small increase in noise levels attributable to the Preferred Alternative (3 dBA or less increase over 2010 "No-Build") and mixed commercial and residential zoning in the area, abatement of noise impacts by constructing a noise barrier is not considered reasonable for NSA-D.

NSA-E has 21 impacted residences. The proposed frontage road paralleling U.S. 41 is the primary noise source. Since there is unlimited access to the frontage road, numerous gaps would be required in a noise barrier which would greatly reduce the barrier's effectiveness. Therefore a noise barrier was determined not to be a feasible abatement measure for NSA-E.

NSA-F has two (2) impacted residences. Since unlimited access is provided to S.R. 54 in this area, numerous gaps would be required in a noise barrier which would greatly reduce the barrier's effectiveness. Therefore, a noise barrier was determined to not be a feasible abatement measure for NSA-F.

NSA-G has nine impacted residential lots. A noise barrier 1,000 feet long and 14 feet high would provide a 5 to 7 dBA reduction to the nine lots at a cost of $4,070/dBA reduction/benefited receptor. Considering the high cost of the barrier and the small increase in noise levels attributable to the Preferred Alternative (3 dBA or less increase over existing and no increase over 2010 "No-Build"), abatement of noise impacts by constructing a noise barrier is not considered reasonable for NSA-G.

equipment used in hauling materials and building the roadway improvements. Sensitive areas located close to the construction area may temporarily experience increased noise levels. Construction noise will be minimized to the greatest extent practicable through the adherence to controls listed in the latest edition of FDOT's Standard Specifications for Road and Bridge Construction.

4.3.4 Wetlands

Wetland areas within the No Parkway Alternative corridor which have the potential to be impacted by the proposed improvements were identified and inventoried. Prior to field review, wetlands were identified through review of 1"=200' scale blueline aerial photography, infra-red photography, the Pasco County Soil Survey, and the U.S. Fish and Wildlife Service (USFWS) National Wetlands Inventory (NWI) Maps (Lutz quadrangle, Draft, January 1987 and Odessa quadrangle, February 1984). Field reviews were conducted in October and November 1990, August 1991, and January 1993 to provide a more accurate inventory and evaluation of potential impacts.

The results of these field reviews led to the identification of thirty-five wetland sites which have the potential to be impacted by the proposed project. The location and designation of these sites are shown on Exhibit 4.4. The USFWS National Wetlands Inventory classifications for each wetland site are also shown on Exhibit 4.5 and summarized in Table 4.10.

Wetland Communities

Various types of wetland systems exist with the project area, including cypress swamp communities, mixed hardwood wetlands, scrub-shrub wetlands, and freshwater marshes.

MATCH LINE

COUNTY LINE RD.

LUTZ LAKE FERN RD.

BEGIN PROJECT

VAN DYKE RD.

HILLSBOROUGH CO

PASCO CO

ENVIRONMENTAL SUMMARY REPORT

EXISTING WETLANDS

N

Scale 1"=1,200'

EXHIBIT 4.4

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END PROJECT

CYPRESS CREEK

MATCH LINE

PASCO CO.
HILLSBOROUGH CO.

ENVIRONMENTAL SUMMARY REPORT

EXISTING WETLANDS

N

Scale 1"=1,200'

EXHIBIT 4.4
(Continued)

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...WAY STUDY THE GREINER TEAM

TABLE 4.10

NATIONAL WETLANDS INVENTORY CLASSIFICATION[1]
North Tampa Parkway

Wetland Site[(2)]	Classification	System	Subsystem	Class	Subclass	Water Regime	Special Modification
1	PF02F	Palustrine	---	Forested	Needle-leaved Deciduous	Semi-permanently Flooded	
2	PF02F	Palustrine	---	Forested	Needle-leaved Deciduous	Semi-permanently Flooded	--
3	PF02F	Palustrine	---	Forested	Needle-leaved Deciduous	Semi-permanently Flooded	--
4	PF02F	Palustrine	---	Forested	Needle-leaved Deciduous	Semi-permanently Flooded	--
5	PF02F	Palustrine	---	Forested	Needle-leaved Deciduous	Semi-permanently Flooded	--
6	PEM1A	Palustrine	---	Emergent	Persistent	Temporarily Flooded	--
7	PEM1C	Palustrine	---	Emergent	Persistent	Seasonally Flooded	--
7 con't	PF06F	Palustrine	---	Forested	Deciduous	Semi-permanently Flooded	--
8	PSS1F	Palustrine	---	Scrub/Shrub	Persistent	Semi-permanently Flooded	--
9	PF02F	Palustrine	---	Forested	Needle-leaved Deciduous	Semi-permanently Flooded	--
10	$PUBH_x$	Palustrine	---	Unconsolidated Bottom	---	Permanently Flooded	Excavated
11	$PSS1F^x$	Palustrine	---	Scrub/Shrub	Persistent	Semi-permanently Flooded	Excavated
12	PSS1F	Palustrine	---	Scrub/Shrub	Persistent	Semi-permanently Flooded	---
13*	PF01F	Palustrine	---	Forested	Broad-leaved Deciduous	Semi-permanently Flooded	---

TABLE 4.10

NATIONAL WETLANDS INVENTORY CLASSIFICATION[1]
North Tampa Parkway
(Continued)

Wetland Site[2]	Classification	System	Subsystem	Class	Subclass	Water Regime	Special Modification
14	PEM1F	Palustrine	---	Emergent	Persistent	Semi-permanently Flooded	---
15*	PF02F	Palustrine	---	Forested	Needle-leaved Deciduous	Semi-permanently Flooded	---
16*	PEMIF	Palustrine	---	Emergent	Persistent	Semi-permanently Flooded	---
17*	PF02F	Palustrine	---	Forested	Needle-leaved Deciduous	Semi-permanently Flooded	---
18*	PF02F	Palustrine	---	Forested	Needle-leaved Deciduous	Semi-permanently Flooded	---
19	PF03F	Palustrine	---	Forested	Broad-leaved Evergreen	Semi-permanently Flooded	---
20*	PSS1F	Palustrine	---	Scrub/Shrub	Broad-leaved Deciduous	Semi-permanently Flooded	---
21	PSS1F	Palustrine	---	Scrub/Shrub	Broad-leaved Deciduous	Semi-permanently Flooded	---
22	PEM1F	Palustrine	---	Emergent	Persistent	Semi-permanently Flooded	---
23	PEM1H	Palustrine	---	Emergent	Persistent	Permanently Flooded	---
24*	PEM1H	Palustrine	---	Emergent	Persistent	Permanently Flooded	---
25	PF02F	Palustrine	---	Forested	Needle-leaved Deciduous	Semi-permanently Flooded	---
26*	PF02F	Palustrine	---	Forested	Needle-leaved Deciduous	Semi-permanently Flooded	---

TABLE 4.10

NATIONAL WETLANDS INVENTORY CLASSIFICATION[1]
North Tampa Parkway
(Continued)

Wetland Site[2]	Classification	System	Subsystem	Class	Subclass	Water Regime	Special Modification
27*	PF03F	Palustrine	---	Forested	Broad-leaved Evergreen	Seasonally Flooded	---
28*	PSS1F	Palustrine	---	Scrub/Shrub	Persistent	Semi-permanently Flooded	---
29	PSS1F	Palustrine	---	Scrub/Shrub	Persistent	Semi-permanently Flooded	
30	PSS1F	Palustrine	---	Scrub/Shrub	Persistent	Semi-permanently Flooded	
31*	$PUBH_x$	Palustrine	---	Unconsolidated Bottom	---	Permanently Flooded	Excavated
32*	PF06C	Palustrine	---	Forested	Deciduous	Seasonally Flooded	---
33	R2UBH	Riverine	Lower Perennial	Unconsolidated Bottom	---	Permanently Flooded	---
34	PF06C	Palustrine	---	Forested	Deciduous	Seasonally Flooded	---
35	PF06F	Palustrine	---	Forested	Deciduous	Semi-permanently Flooded	---

(1) United States Fish and Wildlife Service, National Wetlands Inventory Map - Lutz Quadrangle, Draft, January, 1987.

(2) See Exhibit 4.4 for location of these sites.

* These wetlands have either not been mapped by the NWI or they were re-classified based upon field inspection and in accordance with the NWI Classification System.

The cypress communities are dominated by bald cypress (Taxodium distichum). Red maple (Acer rubrum), Carolina willow (Salix caroliniana), wax myrtle (Myrica cerifera), and cinnamon fern (Osmunda cinnamomea) are typical associates, particularly around the edges of the systems.

The mixed hardwood swamp communities are dominated by red maple, sweetbay (Magnolia virginiana), and redbay (Persea borbonia) and have a dense understory typically dominated by wax myrtle, elderberry (Sambucus canadensis), and Carolina willow.

Scrub-shrub wetlands are dominated by Carolina willow and wax myrtle. This type of wetland typically occurs within the project area in previously disturbed areas, including wetlands adjacent to frequently mowed right-of-ways and wetlands subjected to highway surface runoff.

The freshwater marshes are dominated by such emergent species as pickerelweed (Pontederia cordata), arrowhead (Sagittaria lancifolia s. latifolia), cattail (Typha sp.), and water hyacinth (Eichornia crassipes). Freshwater marshes within the study area are either naturally occurring or surround man-made ponds.

The proposed corridor encompasses natural wetlands and man-made ponds. Many of the natural wetlands were impacted by the construction of Dale Mabry Highway and S.R. 54, and recent commercial and residential development. Plant species associated with wetland areas and their surrounding transitional/upland area include wax myrtle (Myrica cerifera), primrose willow (Ludwigia peruviana), and elderberry. Dog fennel (Eupatorium capillifolium) and Brazilian pepper (Schlnus terebinthifolius) are also common in transitional and disturbed areas. Appendix A includes a list of plant

species observed during field reviews. The following discussion summarizes wetland areas which have been identified within the corridor and may be impacted as a result of the proposed project; see Exhibit 4.4 for the location of these sites.

Sites 1 and 2 - Site 1 and 2 are located north of the Dale Mabry/Van Dyke Road intersection and west of Dale Mabry Highway. These cypress swamp communities are bordered by a narrow emergent marsh community. The marsh community is dominated by cattail, and primrose willow.

Sites 3 and 4 - Sites 3 and 4 appear to have been one contiguous cypress swamp community separated by the construction of Dale Mabry Highway. These forested swamps are dominated by bald cypress, red maple, redbay, and wax myrtle. Site 3 is located to the west of Dale Mabry Highway, while Site 4 exists to the east of the highway.

Site 5 - Site 5 is located on the east side of Dale Mabry Highway, across from Site 6. It is a cypress swamp system dominated by bald cypress, red maple, and wax myrtle.

Site 6 - Site 6 is located on the west side of Dale Mabry Highway, north of the Cheval Polo and Golf Club. The area within the right-of-way is dominated by dog fennel, St. John's wort, and various other herbaceous species. It appears to only be temporarily flooded. It is connected to a large cypress swamp community located outside of proposed right-of-way.

Site 7 - This wetland is located on the west side of Dale Mabry Highway and is comprised of an emergent system adjacent to a forested system. The emergent areas are dominated by herbaceous species, including redroot, bog buttons, and cinnamon fern. The forested areas are dominated by bald cypress, red maple, and wax myrtle.

Site 8 - This wetland is located on the east side of Dale Mabry Highway, north of County Line Road. This wetland is bordered by tall stands of Carolina willow, primrose willow, and dog fennel. The interior contains standing water and several young cypress trees.

Site 9 - Site 9 is part of a large cypress swamp community located south of S.R. 54 and west of Dale Mabry Highway/U.S. 41. The dominant vegetation in this system includes bald cypress, red maple, redbay, and wax myrtle.

Site 10 - Site 10 is located on the west side side of U.S. 41, north of County Line Road. This small pond is permanently flooded with grassed side slope. A few water lily (Nymphaea odorata) were observed in the pond.

Site 11 - Site 11 is located on the east side of Dale Mabry Highway, just south of the U.S. 41 apex. This scrub/shrub system is dominated by primrose willow and Carolina willow, and is adjacent to a forested system dominated by cypress.

Site 12 - Site 12 is located on the west side of U.S. Highway 41, north of S.R. 54. This wetland in a circular depression adjacent to the highway, dominated by scrub/shrub vegetation, primarily Carolina willow, primrose willow, and wax myrtle.

Site 13 - Site 13 is a mixed hardwood swamp located south of S.R. 54 and east of U.S. 41. The wetland begins approximately twenty-two feet south of the edge of pavement. The center of this system contains herbaceous species such as arrowhead and cattail. Standing water was present at the time of field review. Dominant vegetation surrounding this central herbaceous area includes red maple, Carolina willow, and redbay in the canopy and cinnamon fern, redroot (Lachnanthes carolinana), gallberry (Ilex glabra), and yellow-eyed grass (Xyris sp.) in the understory. Several mockingbirds and a bobwhite quail were observed at this site. Table 4.4 lists this site as forested because that portion of the system has the potential to be impacted by the proposed project.

Site 14 - Site 14 is a disturbed emergent wetland located north of S.R. 54 and east of U.S. 41. This wetland begins approximately twenty feet from the edge of S.R. 54 pavement and has been impacted by S.R. 54 and adjacent commercial development. This emergent portion of this system is dominated by cattail, swamp fern (Blechnum serrulatum), and broom sedge (Andropogon virginicus).

Site 15 - Site 15 is a cypress swamp surrounding an open water area which is frequently used by local fisherman. This system is located to the north of S.R. 54 and east of the Village Lakes Shopping Plaza. The dominant vegetation includes cypress, dahoon holly (Ilex cassine), wax myrtle, and red maple saplings. Species common to disturbed areas, such as Australian pine (Casuarina litorea), broom sedge, and pepper vine (Ampelopsis arborea), border this system. Site 15 was separated from a cypress swamp located across the street by the initial construction of S.R. 54. The wetland system on the south side of S.R. 54 will not be impacted by the proposed project.

Site 16 - Site 16 is located north of S.R. 54 and is a surface water treatment swale for the adjacent Florida Power Corporation. This wide swale is vegetated with herbaceous wetland species including Bacopa sp., Juncus sp. and Cyperus sp.

Site 17 - Site 17 is a cypress swamp located north of S.R. 54 and was previously connected to a cypress swamp south of S.R. 54. The interior of this system is comprised primarily of cypress trees and cinnamon fern. Additional species dominating the edge of the wetland include red maple saplings and primrose willow. Water from this system flows south, through a large box culvert, to the system on the south side of S.R. 54 (Site 19).

Site 18 - Site 18 is a cypress swamp located north of S.R. 54 and is connected to Site 17. It is dominated by cypress and swamp fern and includes laurel oak (Quercus laurifolia), redroot, and dog fennel. A transition area of upland vegetation exists between S.R. 54 and the wetland system.

Site 19 - Site 19 is located south of S.R. 54 and east of an inactive orange grove. This system in highly disturbed and is comprised primarily of redbay, dahoon holly, laurel oak, muscadine grape (Vitas munsoniana), and dog fennel.

Site 20 - Site 20 is an isolated pond surrounded by scrub/shrub/emergent vegetation. It is located between S.R. 54 and Old S.R. 54. The interior of this pond is dominated by pickerelweed, cattail, and redroot. Transitional areas are dominated by dog fennel, primrose willow, Carolina willow, elderberry, wax myrtle, and goldenrod (Solidago sp.).

Site 21 - Site 21 is similar to Site 20. They are adjacent to each other and separated by a dirt driveway and associated building. Vegetative composition is the same as Site 20.

Site 22 - Site 22 is a freshwater marsh dominated by herbaceous species such as arrowhead, primrose willow and pickerelweed, and shrub species such as Carolina willow. Peppervine, wild balsam apple (Momordica charantia), and para grass (Panicum purpurascens) dominate the understory. This site is located south of S.R. 54, across from Sites 20 and 21.

Site 23 - Site 23 is a man-made pond located south of S.R. 54 and west of the Collier Parkway. Even though the steep slopes of this pond have been sodded, various aquatic species are becoming established along the banks.

Site 24 - Site 24 consists of two open water ponds hydrologically connected by a small wetland. This site is located north of S.R. 54, east of the Collier Parkway and adjacent to the Myrtle Lake Baptist Church. Dominant vegetation along the banks of the ponds includes cattail, broomsedge, Carolina willow, dog fennel, and primrose willow.

Site 25 - Site 25 is a cypress swamp which is isolated by Old S.R. 54 and new S.R. 54. The canopy of this system is primarily comprised of cypress and dahoon holly. The dominant vegetation in the understory includes wax myrtle, red maple sapling, and swamp fern. Dog fennel dominates along the wetland boundary.

Site 26 - Site 26 was previously connected to Site 25 but has been separated by the construction of S.R. 54. This system is similar in vegetative composition to Site 25, except it contains more herbaceous species such as pickerelweed.

Site 27 - Site 27 is a mixed hardwood wetland which has been significantly disturbed by adjacent agricultural activities. The dominant species present within this system include dahoon holly, laurel oak, elderberry, and muscadine grape. This site is located north of S.R. 54.

Site 28 - Site 28 designates Twin Lake and adjacent wetlands. The banks around the lake are dominated by Carolina willow, primrose willow, cattail, wax myrtle, dog fennel, asters (Aster sp.), goldenrods and spanish needles (Bidens bipinata). An osprey was observed within the vicinity of this wetland.

Site 29 - Site 29 is a man-made pond located north of S.R. 54. This pond is densely overgrown with such species as Carolina willow, elderberry, wax myrtle and primrose willow. The open water interior contains cattail and arrowhead.

Site 30 - Site 30 is also a man-made pond located north of S.R. 54. This pond is adjacent to Site 29 and is similar in vegetative composition. Sites 29 and 30 are separated by an unimproved driveway.

Site 31 - Site 31 is a man-made pond located south of S.R. 54 and within the Carpenter's Run housing development. The banks of this pond are sodded and regularly maintained with little to no wetland vegetation present.

Site 32 - Site 32 designates the Cypress Creek floodplain located northwest of S.R. 54. The floodplain to the south of the creek is dominated by large specimens of cypress, red maple, American elm (Ulmus americana) and laurel oak. The understory is somewhat open with saplings of the above mentioned tree species being dominant.

TABLE 4.12

SUMMARY OF WETLAND IMPACTS AND ANTICIPATED MITIGATION
North Tampa Parkway

Wetland Community	Anticipated Impact Acreage Preferred Alternative	Anticipated Mitigation Ratio	Anticipated Mitigation Acreage Preferred Alternative
Mixed Hardwood	2.29 ac.	3.0:1.0	6.87 ac.
Cypress Swamp	19.7 ac.	2.5:1.0	49.25 ac.
Shrub/Emergent	2.5 ac.	2.0:1.0	5.0 ac.
Emergent	6.4 ac.	1.5:1.0	9.6 ac.
TOTAL	30.89 ac.		70.7 ac.

Note: Does not include mitigation requirements for impacts to 100-year floodplain.

TABLE 4.13

ANTICIPATED WETLAND AND 100 YEAR FLOODPLAIN
MITIGATION REQUIREMENTS
North Tampa Parkway

	Potential Impact		Required Mitigation		Available Mitigation Sites	
	Wetland	100-yr.	Wetland	100-yr.	Site No.	Acreage
Dale Mabry Highway:						
Wetland Sites 1 - 7	11.29	20.40	27.9	20.4	M1	7.2
					M2	3.7
					M3	17.0
Subtotal			27.9			27.9
U.S. Highway 41:						
Wetland Sites 8 - 12	3.8	7.3	9.1	7.3	M4	9.1
Subtotal			9.1			9.1
S.R. 54 - U.S. 41 to Collier Parkway:						
Wetland Sites 13 - 23	7.0	24.3	13.05	24.3	M5	16.0
					M6	4.3
					M7	3.7
Subtotal				24.3		24.0
S.R. 54 - Collier Parkway to east of Twin Lake:						
Wetland Sites 24 - 30	6.8	9.3	14.9	9.3	M8	5.5
					M9	3.3
					M10	6.3
Subtotal			14.9			15.1
S.R. 54 - East of Twin Lake to Project Terminus:						
Wetland Sites 31 - 35	2.0	10.2	5.75	10.2	M11	11.0
Subtotal	—	—	—	10.2	—	11.0
TOTAL	30.89	71.5	86.4			87.1

4.3.6 Water Quality

Surface Water

The North Tampa Parkway study area lies within the regional watershed of the Gulf Coast Lowlands Physiographic Province. Overall, this region is characterized by flat, swampy lowlands drained by shallow rivers with wide floodplains (Southwest Florida Water Management District [SWFWMD], 1961). Ground surface elevations range from approximately 35 to 75 feet above the national geodetic vertical datum of 1929. Topographic lows occur in Hillsborough County at the Cypress Creek floodplain located near I-275, and topographic highs occur in the central portions of both Hillsborough and Pasco Counties near S.R. 54 (U.S. Geological Survey [USGS], Photorevised 1987).

The eastern portion of the study area is drained by Cypress Creek, which crosses S.R. 54 and lies approximately two miles east of I-275. Cypress Creek originates in the Big Cypress Swamp and flows south for approximately 10 miles to the Hillsborough River. Numerous small lakes, all less than 150 acres in size, occur throughout the western portion of the study area, but no springs have been reported in the project area. Exhibit 4.6 illustrates study area water resources.

All surface waters in the study area have been designated by the Florida Department of Environmental Regulation (FDER) as Class III Waters (Florida Administrative Code [FAC], Chapter 17-302). Water quality in Class III Waters must be maintained to provide for public recreation and the propagation and maintenance of fish and wildlife populations. No designated Outstanding Florida Waters occur in the vicinity of the study area.

The USGS monitors water quality in Cypress Creek just downstream of the S.R. 54 bridge. Their sampling location is illustrated on Exhibit 4.5. Monitoring results for 1989 and 1990 show that the water quality generally conforms with FDER standard's, the only exception being low levels of dissolved oxygen during the warm summer months (USGS, 1991).

The Preferred Alternative has the potential to impact Class III Waters directly and contribute to cumulative water quality degradation in these waters. However, impacts will be minimized as described below.

Potential short-term surface water quality impacts anticipated from the Preferred Alternative are limited to soil erosion during project construction. Erosion could temporarily increase turbidity in the receiving waters. These waters include Cypress Creek, Lake Floyd, Twin Lakes and other unnamed lakes shown on Exhibit 4.5. Impacts will be minimized through the use of Best Management Practices for erosion control and adherence to federal, state and local water quality standards.

Erosion control techniques for this project may include, but are not limited to:

* Scheduling of construction activities to minimize exposed area and duration of exposure,
* Clearing only minimal distances ahead of grading,
* Revegetating as soon as possible after construction,
* Use of hay bales and silt fences,
* Covering of stockpiled fill material,
* Use of energy dissipators at outfalls, and
* Wetting of exposed areas during windy conditions.

LEGEND

- Study Area
- USGS Water Quality Monitoring Station
- Creek
- Lake
  Note: Lakes larger than 50 acres in size are shown. Numerous smaller lakes also occur within the area.
- Affected Lake
- Affected Creek

0 1/2 1 MILES

U.S. 41
S.R. 54
I-75
BIG CYPRESS SWAMP
PKWY.
COLLIER
Twin Lakes
Lake Floyd
Bird Lake
Tampa Lake
NEW S.R. 54
PASCO COUNTY
HILLSBOROUGH COUNTY
COUNTY LINE RD.
Lake Hobbs
NEWBURGER RD.
LUTZ LAKE FERN RD.
WALLACE RD.
LIVINGSTON AVE.
S.R. 581
LANE RD.
CROOKED
Cooper Lake
Lake Thomas
SUNSET LANE
CRYSTAL LAKES RD.
Lake Stemper
Brant Lake
DEBUEL RD.
VAN DYKE RD.
SIMMONS
CRENSHAW LAKE RD.
WHITAKER RD.
CLEMENT RD.
THIRTEENMILE
HANNA
COMMERCE
PARK
DOWNS BLVD.
BRUCE B. BLVD.
RUN
I-275
DALE MABRY HWY.
VETERANS EXPRESSWAY
SINCLAIR HILLS RD.
BEARSS AVE
EHRLICH RD.
127th AVE.
SKIPPER RD.

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ENVIRONMENTAL SUMMARY REPORT

WATER RESOURCES

EXHIBIT 4.5

Other potential surface water pollutants associated with highway stormwater runoff, such as heavy metals, nutrients, suspended solids, oil and grease, could adversely affect the long-term water quality in the area. These impacts will be minimized through detention and treatment of stormwater runoff. Detention ponds and grassed swales are being proposed for stormwater treatment.

Section 401 water quality certification will be obtained from FDER prior to project construction. This certification is required under Section 401 of the 1977 Clean Water Act to ensure compliance with the federal Clean Water Act and state water quality laws. The certification will be obtained through the Section 404 Dredge and Fill permitting process described in Section 4.3.4 - Wetlands of this report.

A National Pollutant Discharge Elimination System (NPDES) permit will also be required from the U.S. Environmental Protection Agency (EPA) prior to project construction. EPA established NPDES permit requirements for discharge of stormwater runoff through revisions to the Clean Water Act promulgated in November 1990.

FDOT has coordinated with SWFWMD stormwater personnel and provided them with a preliminary coordination package describing the conceptual design of the stormwater management system for this project. As a result of that coordination, FDOT is developing stormwater treatment systems for the project in accordance with the Southwest Florida Water Management District (SWFWMD) Chapter 17-25, FAC. FDOT will continue the coordination effort during subsequent project development stages to ensure compliance with Chapter 40D-4, FAC.

Groundwater

The North Tampa Parkway study area contains groundwater in both surficial deposits and the deeper Floridan Aquifer. These two water-bearing units are separated by a confining layer. The surficial deposits are generally 25 to 50 feet thick and include surface soils and Quaternary terrace deposits. Surface soils are generally fine sands that are acidic and extend to depths of greater than 5 feet. The soils are generally resistant to water erosion, but are susceptible to wind erosion (U.S. Soil Conservation Service [SCS], 1982 and 1989).

The Quaternary terrace deposits generally begin at depths of greater than 5 feet and may extend to depths of 25 or 50 feet. They consist predominantly of unconsolidated sand interbedded with clay, peat and marl. Terrace deposits in the study area form parts of the Pamlico, Talbot and Penholoway Terraces (SWFWMD, 1961).

Groundwater is present under water table conditions in the surficial deposits described above. The shallow water table may rise to within 0 to 6 feet of the ground surface between June and December (SCS, 1982 and 1989). This groundwater is generally unsuitable as a source of potable water supply, because the unconfined surficial deposits are highly susceptible to contamination (SWFWMD, 1961).

A confining layer underlies the surficial deposits. The top of the confining layer occurs approximately 25 to 50 feet below the ground surface and, in some areas, the layer may extend to a depth of 75 feet. Quaternary and Tertiary carbonate and clastic deposits comprise this confining layer. These deposits contain sand, clay, marl, marine shell material, dolomite and limestone (SWFWMD, 1961).

The Floridan Aquifer begins at depths of approximately 25 to 75 feet (SWFWMD, 1961) and may extend to depths of over 3,000 feet in the study area (Fernald and Patton, 1984). Tertiary and Cretaceous carbonates comprise the Floridan Aquifer. These marine deposits consist of solution-riddled and faulted limestone. Groundwater in this deeper aquifer generally flows southwestward towards the Gulf of Mexico and is the principal source of potable water in this area (SWFWMD, 1961). Table 4.14 outlines the hydrogeologic framework of the study area.

The Floridan Aquifer receives some recharge through rainfall in the study area. Throughout most of the area, recharge through the confining layer occurs at a very low rate of approximately 2 inches per year. However, where the confining layer is locally thin or breached, recharge may occur at moderate rates of up to 10 inches per year (SWFWMD, 1961).

The Floridan Aquifer contains high quality groundwater that generally meets drinking water standards in the study area. The water is moderately hard, low in iron and fluoride and somewhat alkaline (Tampa Bay Regional Planning Council, 1982).

No aquifers in the study area have been designated by the U.S. Environmental Protection Agency as "a sole or principal drinking water source" under Section 1424(e) of the Safe Drinking Water Act, as amended (EPA, 1990). However, the Floridan Aquifer is the primary source of potable water within the study area. The groundwater is supplied by both community systems and private wells. The following community systems supply potable water to the area:

* Hillsborough County Public Utilities,
* Windemere Utilities, and
* Sunset Plaza.

TABLE 4.14

STUDY AREA HYDROGEOLOGY
North Tampa Parkway

System	Series*	General Lithology*	Major Lithologic Unit	Depth (feet)	Hydrogeologic Unit
Quaternary	Holocene Pleistocene	Surficial sand, terrace sand	Sand	0-50	Surficial Aquifier
Tertiary	Pliocene	Sand, clay, marl, shell, dolomite and limestone	Carbonate and clastic	25-75	Confining bed
	Miocene Oligocene Eocene	Fossiliferous limestone, dolomite	Carbonate	25-3,000	Floridan Aquifer

* Lithologic units overlap series of the geologic time scale.

Source: Greiner, Inc., adopted from SWFWMD, 1961.

The Preferred Alternative has the potential to affect the quality of groundwater in the Floridan Aquifer, a source of potable supply. However, impacts will be minimized as described below. No sole or principal drinking water source aquifers occur in the study area and none will be affected by project construction.

Potential short-term groundwater impacts associated with the proposed improvements are limited to the periodic dewatering of the surficial aquifer during the installation of utilities and bridge piers and the removal of wells located within the proposed right-of-way. The surficial aquifer is generally unsuitable for potable supply in the study area, so the potable water supply will not be affected by the dewatering.

Wells located within the proposed right-of-way could be directly impacted by project construction activities. The well locations will be surveyed prior to project construction. Those wells located within the project right-of-way will be purchased by FDOT and abandoned in accordance with SWFWMD guidelines (FAC, Chapter 40-D3).

The only potential long-term groundwater impact that could be associated with the proposed improvements is the project's contribution to the cumulative loss of Floridan Aquifer recharge area. However, this impact will be minor because recharge to the aquifer generally occurs at a low rate in this area.

4.3.7 Outstanding Florida Waters

Based on a review of the Florida Administrative Code, Chapter 17-302.700, "Outstanding Florida Waters" (October 1990), it has been determined that no designated Outstanding Florida Waters exist within the limits of the study area.

4.3.8 Hazardous Materials

This section presents the results of a hazardous material survey which was conducted to identify any known, or potential, hazardous material sites associated with the North Tampa Parkway Preferred Alternative. The focus of this survey was on sites adjacent to the existing right-of-way of Dale Mabry Highway, from Van Dyke Road north to U.S. 41; U.S. 41 from south of Dale Mabry Highway to north S.R. 54, and S.R. 54 from west of U.S. 41 to west of Cypress Creek. Because there is no single comprehensive source of information currently available which identifies all known and potential hazardous material sites within the North Tampa Parkway study area, this survey consisted of the following tasks:

* Consulting the following publications by the Florida Department of Environmental Regulation (FDER) and Tampa Bay Regional Planning Council (TBRPC) for locations of potential environmental contamination:
  - Stationary Tank Inventory System (FDER),
  - Petroleum Contamination Overview Report (FDER),
  - Groundwater Management System Hazardous Waste Quick Look (FDER),
  - The Sites List (FDER), and
  - County Government Hazardous Waste Management Assessment for Hillsborough County and Pasco County (TBRPC);
* Reviewing storage tank files at the Pasco County Health Unit and reviewing hazardous waste files at FDER.
* Reviewing R. L. Polk Company City Directories for Tampa dated 1969 to 1988 to identify previous land uses potentially involving hazardous material significance along the project corridor;
* Evaluating historical aerial photography of the North Tampa Parkway study area taken in 1960, 1966, 1972, 1979 and 1985; and
* Conducting field investigations within the study area to verify known hazardous material use.

All of the available information obtained from these tasks was evaluated according to the PD&E Contamination Risk Evaluation Guidelines, Revision 2, developed by the FDOT District 7. Utilizing the FDOT risk evaluation rating system, each investigated site was also assigned a rating of "No," "Low," "Medium," or "High" based upon the information collected during this survey. The risk rating assigned to each site indicates the potential for hazardous material problems which could impact the Preferred Alternative.

Based on the results of this survey, 30 potential hazardous material sites were identified within the project limits. Exhibit 4.6 illustrates the approximate location of each identified site. Additional information including the site's name, address, site characteristics, and the site's risk rating is provided in Table 4.15.

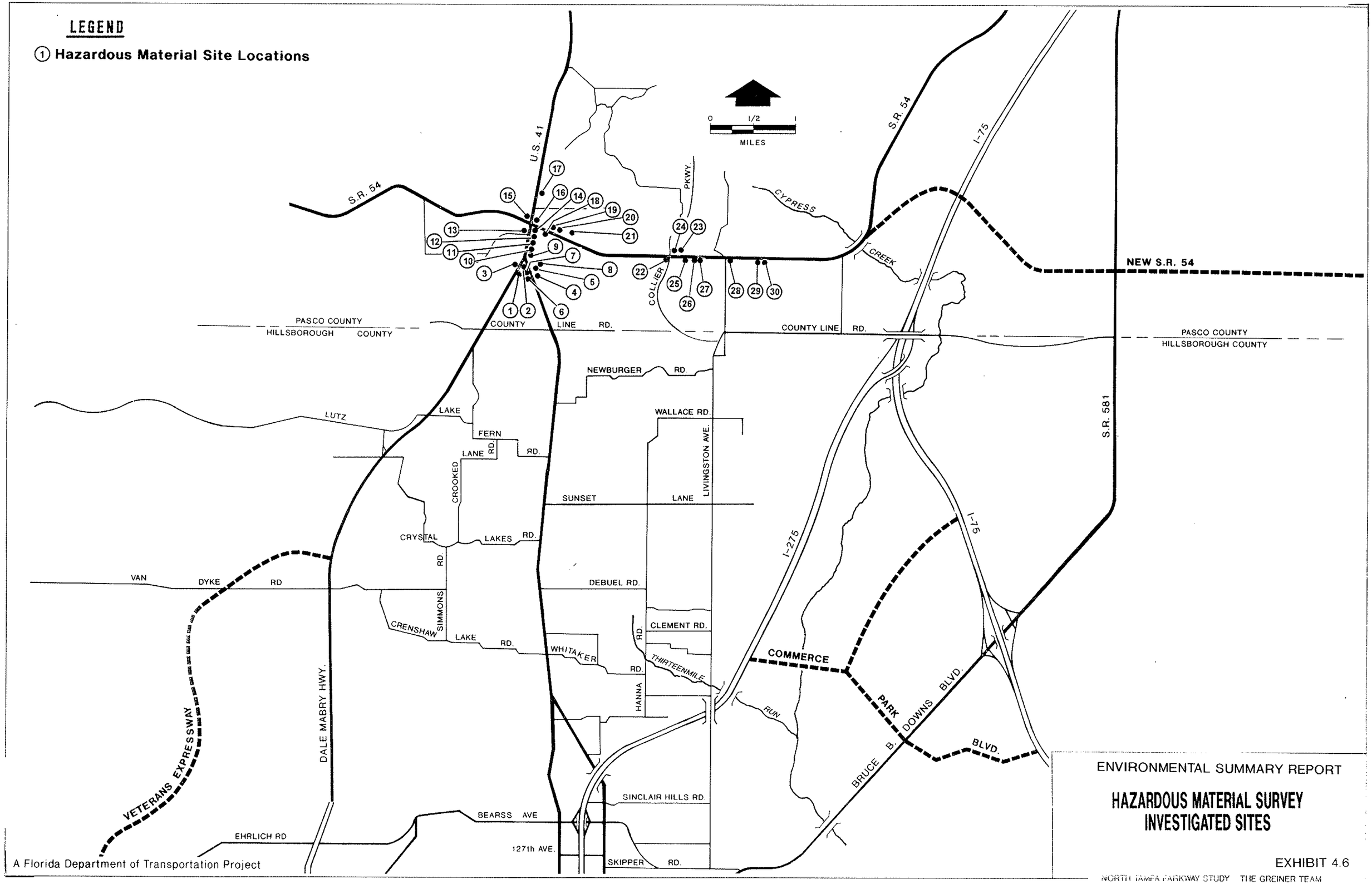
Fifteen of the 30 sites are businesses which maintain or previously maintained underground or above ground storage tanks containing petroleum products. Eight sites are automotive of boat repair facilities. Five sites are dry cleaners. The remaining two sites are a manufacturer and an electric substation.

In accordance with the FDOT risk evaluation system, each site was rated based on the following criteria:

* Proximity to the right-of-way of parcels with hazardous waste involvement;
* Proximity to the right-of-way of parcels with pollutant involvement:
* Physical land use history;
* Current on-site conditions;

LEGEND

① Hazardous Material Site Locations



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ENVIRONMENTAL SUMMARY REPORT

HAZARDOUS MATERIAL SURVEY INVESTIGATED SITES

EXHIBIT 4.6

TABLE 4.15

INVESTIGATED HAZARDOUS MATERIALS SITES
IN THE VICINITY OF THE PREFERRED ALTERNATIVE
North Tampa Parkway Study

Site Number[1]	Site Name & Address	FDER I.D. Nature of Site	Potential Hazardous Number	Storage Materials	Regulatory Enforcement/ Tanks	Approximate Distance Contamination	Risk From R-O-W*	Rating
1	Texaco Station 1616 N. Dale Mabry Hwy. Lutz, Florida	Gas Station	518943105	Petroleum	Five	Groundwater and soil contamination, site remediation completed November 27,1991	20 Feet	Low
2	Tarmac, Florida, Inc. U.S. 41 & S.R. 597 Land O'Lakes, Florida	Cement Batch Plant	518736685	Petroleum	Two	Soil and groundwater contamination detected. Site under FDER consent order to upgrade fuel storage facility and conduct a contamination assessment.	Completely Within	Medium
3	Sun Mark Automotive 1635 N. Dale Mabry Hwy. Lutz, Florida	Automotive Repair	None	Petroleum	No	No FDER files for the site.	80 feet	Low
4	Master Outboard Marine Ser. 1618 Land O' Lakes Blvd. Land O' Lakes, Florida	Boat Engine Repair	None	Petroleum	No	No FDER files for the site.	80 feet	Low
5	S.S. Studios 1720 Land O'Lakes Blvd. Land O'Lakes, Florida	Manufacturer Printing Plates	None	Chrome and chromic acid	No	FDER requested that the process effluent be analyzed for contamination.	40 feet	High
6	Firestone Land O' Lakes Blvd. Land O' Lakes, Florida	Automotive Repair	None	Petroleum	No	No FDER file for the site.	60 feet	Low
7	Lutz Land O' Lakes Auto Body 1641 Land O' Lakes Blvd. Land O' Lakes	Automotive Repair	Non	Petroleum paints and paint thinners	No	No FDER file for the site.	180 feet	Low

TABLE 4.15

INVESTIGATED HAZARDOUS MATERIALS SITES
IN THE VICINITY OF THE PREFERRED ALTERNATIVE
North Tampa Parkway Study
(Continued)

Site Number[1]	Site Name & Address	FDER I.D. Nature of Site	Potential Hazardous Number	Storage Materials	Regulatory Enforcement/ Tanks	Approximate Distance Contamination	Risk From R-O-W*	Rating
8	Dad Lad Auto Body Shop 1704 Land O' Lakes Blvd. Land O' Lakes, Florida	Automotive Repair	None	Petroleum paints and paint thinners	No	No FDER file for the site.	130 feet	Low
9	Land O' Lakes Tires 1900 Land O' Lakes Blvd. Land O' Lakes, Florida	Automotive Repair	None	Petroleum	No	No FDER file for the site.	Completely Within	Medium
10	Linda's Donuts & More U.S. 41 & S.R. 597 Land O'Lakes, Florida	Gas Station	518626610	Petroleum	Three out-of-service	Groundwater contamination detected, no assessments or remediation performed to date.	Completely Within	Medium
11	Liberty Cleaners 2116 U.S. Highway 41 Land O'Lakes, Florida	Dry Cleaner	None	Cleaning Fluids	No	None Reported	Completely Within	Medium
12	Land O' Lakes Discount Auto Parts 2024 Land O' Lakes Blvd. Land O' Lakes, Florida	Auto Parts Store and Former Gas Station	None	Petroleum	Possible	No file for the site.	Completely Within	Medium
13	Tommy's Car Wash Self Service & Auto Land O' Lakes Blvd. Land O' Lakes, Florida	Car Washes and Oil Changes	None	Waste Oil	No	No file for the site.	200 feet	Low
14	Majik Market #39408 U.S. 41 & S.R. 54 Mango, Florida	Gas Station	518520049	Petroleum	Three	Contaminated soil and groundwater discovered. EDI-State Cleanup Site.	Completely Within	Medium
15	Cox Lumber 21033 S.R. 54 Mango, Florida	Lumber Yard	518519968	Petroleum	Two	Contaminated soil and discovered. EDI-State Cleanup Site.	100 feet	Medium

TABLE 4.15

INVESTIGATED HAZARDOUS MATERIALS SITES
IN THE VICINITY OF THE PREFERRED ALTERNATIVE
North Tampa Parkway Study
(Continued)

Site Number[1]	Site Name & Address	FDER I.D. Nature of Site	Potential Hazardous Number	Storage Materials	Regulatory Enforcement/ Tanks	Approximate Distance Contamination	Risk From R-O-W*	Rating
16	Handy Food Store 2400 U.S. Highway 41 Land O'Lakes, Florida	Gas Station	518514970	Petroleum	Three	Contaminated soil removed in December 1989	Completely	Medium
17	Bob's Filtered Oil Co. 2700 Land O' Lakes Blvd. Land O' Lakes, Florida	Gas Station	518841173	Petroleum	Four	Groundwater contamination detected.	Adjacent	Medium
18	Pasco County Sheriff's Substation 21300 S.R. 54 Land O'Lakes, Florida	Training Facility	518630206	Petroleum	One	Contaminated groundwater. EDI-State Cleanup Site.	380 feet	Medium
19	Florida Power Denham Substation 21314 S.R. 54 Lutz, Florida	Electric Substation	None	Polychlorinated Biphenyls (PCBs)	No	None Reported	Adjacent	Low
20	Dipstick Oil Change 21345 S.R. 54 Lutz, Florida	Automotive Oil Change	None	Oil	Seven	No file for the site.	40 feet	Low
21	Real Cleaners 21511 Village Lake #4 (S.R. 54) Land O'Lakes, Florida	Dry Cleaner	Sm. Quantity Haz. Waste Generator 4051P01256	Cleaning Fluids	No	None Reported	100 feet	Low
22	Amoco #60418 22826 S.R. 54 Lutz, Florida	Gas Station	519102577 Sm. Quantity Haz. Waste Generator FLD984241604	Petroleum	Three	Inspection on July 22, 1992 found no evidence of fuel leaks or spills.	Adjacent	Low

TABLE 4.15

INVESTIGATED HAZARDOUS MATERIALS SITES
IN THE VICINITY OF THE PREFERRED ALTERNATIVE
North Tampa Parkway Study
(Continued)

Site Number[1]	Site Name & Address	FDER I.D. Nature of Site	Potential Hazardous Number	Storage Materials	Regulatory Enforcement/ Tanks	Approximate Distance Contamination	Risk From R-O-W*	Rating
30	Cumberland Farms #1060 S.R. 54 at Foggy Ridge Parkway Land O'Lakes, Florida	Gas Station	518732394	Petroleum	Three	Inspection on February 14, 1992 found no violations and no evidence of fuel leaks or spills.	Adjacent	Low

(1) See Exhibit 4.6 for location of sites.

* Distance from the proposed right-of-way to the potential hazardous material source.

Risk Rating Criteria:

No: After review of all available information, there is nothing to indicate hazardous material would be a problem. It is possible that hazardous material could have been handled on the parcel; however, all information (FDER reports, monitoring wells, water and soil samples, etc.) indicate problems should not be expected.

Low: The operation has a hazardous waste generator ID number, or deals with hazardous materials; however, based on all available information, there is no reason to believe there would be any involvement with hazardous materials.

Medium: After a review of all available information, indications are found (reports, Notice of Violation, consent order, etc.) that identify known soil and/or water contamination and that the problem does not need remediation, is being remediated (i.e., air stripping or the ground water, etc.), or that continued monitoring is required.

* Storage of hazardous materials or generation of hazardous wastes or pollution; and

* Known contamination or failure to comply with environmental regulations.

Sites rated "No" are not discussed in this report section. A rating of "Low" was assigned to 16 of the 30 sites because the handling and storage of hazardous materials at these facilities is not expected to impact the Preferred Alternative. A rating of "Medium" was assigned to 13 of the 30 sites because survey data indicate that these sites pose a potential risk of impacting the project. One site was given a "High" rating. These 30 sites are further described below:

Site No. 1 - Texaco Station is a gas station located on the east side of Dale Mabry Highway. According to FDER groundwater and soil contamination at this site has been completed remediated and a Site Rehabilitation Completion Report was approved on November 27, 1991. A compliance inspection performed by Pasco County Health Unit on September 1, 1992 found no evidence of petroleum contamination. Approximately 50 feet of right-of-way acquisition is planned at this site. This site was rated "Low" because previous contamination has been removed and there is no evidence of a new fuel release.

Site No. 2 - Tarmac, Florida, Inc. is a cement batch plant located at the southwest corner of U.S. 41 and Dale Mabry Highway. The site has one above ground and two underground storage tanks which contain diesel fuel. Soil and groundwater contamination has been reported at this site and Tarmac is currently under FDER consent order to upgrade the fuel storage facility and perform a contamination assessment. Right-of-way acquisition is planned for the fuel storage area. This site was rated "Medium" because petroleum contamination is present in the area planned for right-of-way acquisition. Level II investigations should include sampling the soil and groundwater and testing for petroleum products in the area of right-of-way acquisition.

Site No. 3 - Sun Mark Automotive is an automotive repair shop located along the western side of N. Dale Mabry Highway. This site is not registered as a small quantity hazardous waste generator and FDER does not maintain of file for the site. During the site walk through, Site No. 3 appeared to be keeping good housekeeping practices. The site owners have reported that waste oil is temporarily stored in a 275-gallon above ground storage tank and disposed of by National Oil Company. No right-of-way acquisition is required at this site. Site No. 3 was rated "Low" because no right-of-way acquisition is required, the site appeared clean and no known environmental violations have occurred.

Site No. 4 - Master Outboard Marine Service is a outboard boat engine repair and service shop located along the east side of U.S. 41. This site is not registered as a small quantity hazardous waste generator and FDER does not maintain a file for the site. Staff reported that their waste oil is temporarily stored in an above ground storage tank and removed by a waste disposal company. No right-of-way acquisition is planned at this site. Site No. 4 was rated "Low" because no right-of-way acquisition is required, the site appeared clean and no known environmental violations have occurred.

Site No. 5 - S.S. Studios is a printing plate manufacturer located along the east side of U.S. 41. Reportedly, the facility currently discharges their waste products to a septic tank. FDER has requested that the operators analyze their effluent to determine if chrome or chromic acid is entering the septic tank. Approximately five feet of right-of-way acquisition is planned at this site. Site No. 5 was rated "High" because of the known contamination present, the status of regulatory action and right-of-way acquisition is required. Level II investigations should include sampling the soil and groundwater and testing for chromium.

Site No. 6 - Firestone is an automotive repair shop located along the western side of N. Dale Mabry Highway. The site is not registered as a small quantity hazardous waste generator and FDER does not maintain a file for the site. Staff reported that waste oil is stored in an above ground storage tank and removed by a waste disposal company. Site conditions were clean and no evidence of spills was noted. Approximately 50 feet of right-of-way acquisition is planned at this site. This site was rated "Low" because the site appeared clean, no underground storage tanks are present and no known environmental violations have occurred.

Site No. 7 - Lutz Land O' Lakes Auto Body is an auto body shop located in an industrial park west of U.S. 41. The shop is not registered as a small quantity hazardous waste generator and FDER does not maintain a file for the site. No right-of-way acquisition is planned for the site. Site No. 7 was rated "Low" because no right-of-way acquisition is required, the site appeared clean and no known environmental violations have occurred.

Site No. 8 - Dad Lad Auto Body Shop is an auto body shop located east of U.S. 41. The site is not registered as a small quantity hazardous waste generator and FDER does not maintain a file for the site. No right-of-way acquisition is planned for the site. Site No. 8 was rated "Low" because no right-of-way acquisition is required, the site appeared clean and no know environmental violations have occurred.

Site No. 9 - Land O' Lakes Tires is an automotive service facility located along the eastern side of U.S. 41. The facility is not registered as a small quantity hazardous waste generator and FDER does not maintain a file for the site. Complete right-of-way acquisition is planned for the site. This site was rated "Medium" because right-of-way acquisition is required and the site generates waste products. Level II investigations should include sampling the soil and groundwater and testing for petroleum products.

Site No. 10 - Linda's Donuts & More is a gas station located at the southeast corner of U.S. 41 and Dale Mabry Highway. Three 8,000-gallon underground storage tanks were installed in 1993. In 1992, fuel was discovered in the monitor wells. Groundwater analysis detected 36 parts per billion (ppb) benzene and 36 ppb total volatile organics. In July 1992 the tanks were temporarily taken out-of-service. No additional

groundwater or soil assessments have been performed to date. Right-of-way acquisition is planned for the entire site. Site No. 10 was rated "Medium" because petroleum contamination is present in the area planned for right-of-way acquisition. Level II investigations should consist of sampling the soil and groundwater and testing for petroleum products.

Site No. 11 - Liberty Cleaners is a dry cleaner located along the eastern side of U.S. 41 south of S.R. 54. The site is not registered with FDER as a small quantity hazardous waste generator and FDER does not maintain a file for the site. However, staff reports that Safety Kleen disposes of their waste products. Right-of-way acquisition is planned for the entire site. Site No. 11 was rated "Medium" because complete right-of-way acquisition is required and the business stores and uses dry cleaning solvents on-site. Level II investigations should include sampling and testing the soil and groundwater for petroleum solvent compounds according to EPA Method 601.

Site No. 12 - Land O' Lakes Discount Auto Parts is a retail auto parts store which formerly was the site of a gas station site. The site is located along the east side of U.S. 41. The underground storage tanks associated with the former gas station may still remain. This site is not registered with FDER Storage Tank Program. Right-of-way acquisition is required for the entire site. Site No. 12 was rated "Medium" because complete right-of-way acquisition is required, the site was previously a gas station and no information about the gas station is available. Level II investigations should consist of sampling the soil and groundwater and testing for petroleum products.

Site No. 13 - Tommy's Car Wash is a self service car wash with an automotive oil change service bay and is located west of U.S. 41. The site is not registered as a small quantity hazardous waste generator and FDER does not maintain a file for the site. No right-of-way acquisition is planned at this site. Site No. 13 was rated "Low" because no right-of-way acquisition is required, the site appeared clean and no known environmental violations have occurred.

Site No. 14 - Majik Market is a gas station located at the southeast corner of U.S. 41 and S.R. 54. Contaminated soil and groundwater was reported to FDER and the site is eligible for the Early Detection Incentive (EDI) state cleanup program. Right-of-way acquisition is planned for the entire site. Site No. 14 was rated "Medium" because petroleum contamination is present in the area planned for right-of-way acquisition. Level II investigations should consist of sampling the soil and groundwater and testing for petroleum products.

Site No. 15 - Cox Lumber is a lumber yard located on the northwest corner of U.S. 41 and S.R. 54. This site has two underground storage tanks which contain fuel for the company's vehicles. Contaminated soil was reported to FDER and the site is eligible for EDI state cleanup. Approximately 10 feet of right-of-way acquisition is planned at this site. Site No. 15 was rated "Medium" because petroleum contamination has been reported and right-of-way acquisition is planned. Level II investigations should consist of sampling and testing the soil and groundwater for petroleum products.

Site No. 16 - Handy Food Store is a gas station located on the northeast corner of U.S. 41 and S.R. 54. Contaminated soil was removed from the site in December 1989. No other contamination has been reported and Pasco County determined the site to be a

clean closure. Right-of-way acquisition is planned for the entire site. Site No. 16 was rated "Medium" because complete right-of-way acquisition is planned and the site stores petroleum products. Level II investigations should consist of sampling the soil and groundwater and testing for petroleum products.

Site No. 17 - Bob's Filtered Oil Co. is a gas station, located along the east side of U.S. 41. Groundwater contamination has been detected on-site. No waste oil is generated on-site. No right-of-way acquisition is planned at this site. Site No. 17 was rated "Medium" because petroleum contamination has been detected. Level II investigations should include sampling the soil and groundwater within the right-of-way and testing for petroleum products.

Site No. 18 - Pasco County Sheriff's Substation is a training facility located along the southern side of S.R. 54. This site has one underground storage tank which contains fuel for the sheriff's vehicles. Groundwater contamination was reported to FDER and the site is eligible for EDI state cleanup. Approximately 20 feet of right-of-way acquisition is planned at this site. Site No. 18 was rated "Medium" because petroleum contamination has been reported and right-of-way acquisition is required. Level II investigations should consists of sampling the soil and groundwater in the area of proposed right-of-way and testing for petroleum products.

Site No. 19 - Florida Power Denham Substation is an electric substation located along the northern side of S.R. 54. FDER has no record of environmental contamination at this site. However, polychlorinated biphenyls (PCB's) contamination is sometimes associated with substations because PCB's were previously used in transformers. No right-of-way acquisition is planned at this site. Site No. 19 was rated "Low" because no right-of-way acquisition is required, the site appeared clean and no known environmental violations have occurred.

Site No. 20 - Dipstick Oil Change is a oil change service center located along the north side of S.R. 54. The facility is not registered with FDER's storage tank program, but the facility contains seven above ground storage tanks. However, the facility is registered with FDER as a small quantity hazardous waste generator. Less than five feet of right-of-way acquisition is planned at this site. Site No. 20 was rated "Low" because very little right-of-way acquisition is required, the site appeared clean and no known environmental violations have occurred.

Site No. 21 - Real Cleaners is a dry cleaner located in the Village Lake Shopping Center which is located along the northern side of S.R. 54. The facility is registered with FDER as a small quantity hazardous waste generator. Approximately 120 feet of right-of-way acquisition is planned in front of this establishment. Site No. 21 was rated "Low" because the site is 100 feet away from the proposed right-of-way, the site appeared clean and no known environmental violations have occurred.

Site No. 22 - Amoco #60418 is a gas station located along the southern side of S.R. 54. A July 22, 1992 inspection by the Pasco County Health Unit found no evidence of fuel leaks or spills. The station is also registered as a small quantity hazardous waste generator. Less than five feet of right-of-way acquisition is planned at this site. Site No. 22 was rated "Low" because very little right-of-way acquisition is required and no known environmental violations have occurred.

Site No. 23 - Lake Padgett Cleaners is a dry cleaner located in the Myrtle Lake Village along the north side of S.R. 54. The facility is not registered as a small quantity hazardous waste generator and FDER does not maintain a file on the facility. Right-of-way acquisition is planned for the entire facility. Site No. 23 was rated "Medium" because complete right-of-way acquisition is required and the facility performs dry cleaning. Level II investigations should include sampling the soil and groundwater and testing for petroleum solvent compounds according to EPA Method 601.

Site No. 24 - Carpets Plus is a former Convenience Food Store gas station located along the northeast corner of S.R. 54 and Collier Parkway. Clean closure requirements for the storage tanks were met June 22, 1992. Complete right-of-way acquisition is planned at this site. Site No. 24 was rated "Medium" because complete right-of-way acquisition is planned and the site formerly stored fuel. Level II investigations should include sampling the soil and groundwater and testing for petroleum products.

Site No. 25 - Chevron #200268 is a gas station located along the south of S.R. 54. A January 19, 1993 inspection by the Pasco County Health Unit found no evidence of fuel leaks or spills. No right-of-way acquisition is planned at this site. Site No. 25 was rated "Low" because no right-of-way acquisition is required and no environmental violations have been reported.

Site No. 26 - Majik Cleaners is a dry cleaner located in the Willow Bend Shopping Center located south of S.R. 54. The facility is not registered as a small quantity hazardous waste generator and FDER does not maintain a file on the facility. No right-of-way acquisition is planned at this site. Site No. 26 was rated "Low" because no right-of-way acquisition is required, the site appeared clean and no known environmental violations have occurred.

Site No. 27 - Consumer Car Care is an automotive service center located in the Willow Bend Shopping center located south of S.R. 54. The site is not registered as a small quantity hazardous waste generator and FDER does not maintain a file for the site. No right-of-way acquisition is required at the site. Site No. 27 was rated "Low" because no right-of-way acquisition is required, the site appeared clean and no known environmental violations have occurred.

Site No. 28 - 7-Eleven Food Store is a gas station at the Southeast corner of S.R. 54 and Livingston Ave. Groundwater contamination was reported to FDER and the site is eligible for EDI state cleanup. No right-of-way acquisition is planned at this site. Site No. 28 was rated "Medium" because petroleum contamination has been reported. Level II investigations should include sampling the soil and groundwater in the existing right-of-way and testing for petroleum compounds.

Site No. 29 - Crystal Cleaners is a dry cleaner located in Turtle Lake Plaza on the south side of S.R. 54. The site is not registered as a small quantity hazardous waste generator and FDER does not maintain a file for the site. No dry cleaning is performed on-site. No right-of-way acquisition is required at the site. Site No. 29 was rated "Low" because no right-of-way acquisition is required and no dry cleaning solvents are stored on-site.

Site No. 30 - Cumberland Farms is a gas station located at the southwest corner of S.R. 54 and Foggy Ridge Parkway. A February 14, 1992 inspection by the Pasco County Health Unit found no violations of FDER's storage tank regulations and no evidence of fuel leaks or spills. Site No. 30 was rated "Low" because no right-of-way acquisition is required and no environmental violations have been reported.

According to FDOT guidelines, Level II hazardous material investigations are recommended at all "Medium" and "High" rated sites in order to verify the existence of soil or groundwater contamination which could impact the roadway project. These Level II investigations should be conducted prior to roadway right-of-way acquisition and project construction.

Initially, the Level II investigations should consist of an updated review of FDER files to review the current status of any known and/or any new contamination at these sites. Following the regulatory file update, subsurface investigations are recommended. These subsurface investigations should be conducted within the areas designated for right-of-way acquisition or utility relocation.

Specifically, Level II investigations should consist of field collection of soil and groundwater samples from each site and an analysis for the presence of petroleum contamination at locations of underground storage tanks containing petroleum products. At sites were petroleum products are not the expected source of contamination, any sampling and analytical work to be conducted should be determined on a site-specific basis. At sites where contamination is detected, further field investigations should be conducted to determine the extent of the contamination, identify the source, and estimate the cost of remediation.

The findings in this report section are based upon preliminary information only and are not intended to replace more detailed studies such as subsurface soil or groundwater investigations. Rather, this information is intended as a guide for identifying potential hazardous material sites along the North Tampa Parkway Study.

Finally, it should be noted that potential hazardous materials sites may extend beyond those identified in this preliminary survey because of limited historical and regulatory information, illegal dumping practices, and the lack of compliance with the FDER stationary tank registration and hazardous waste generator programs.

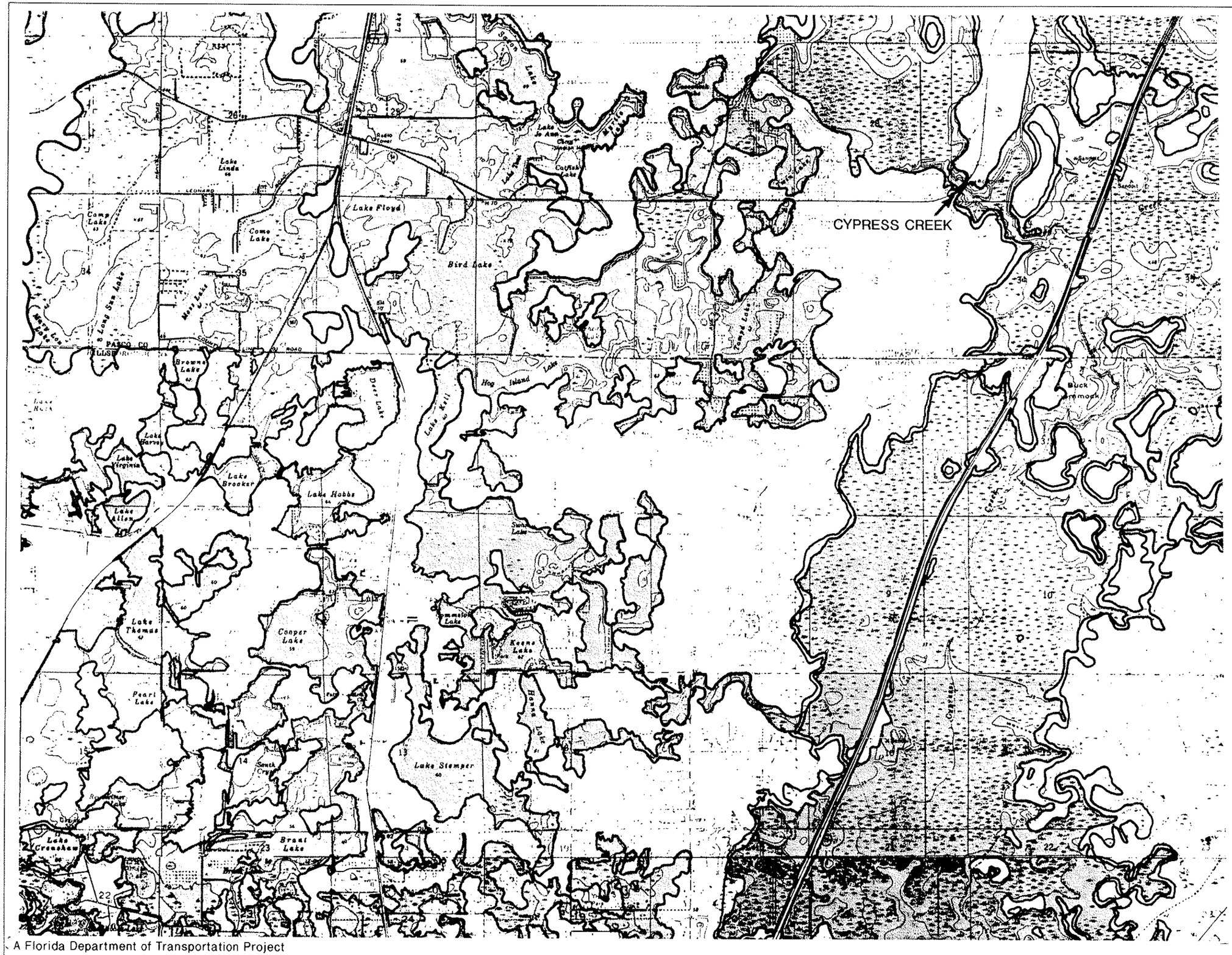
4.3.9 Wild and Scenic Rivers

The Department of Interior maintains a National Inventory of river segments which qualify for inclusion in the National Wild and Scenic River System. No such segment exists within the vicinity of the proposed project.

4.3.10 Floodplains and Floodways

The study area is characterized by low-lying areas in which the 100-year floodplain is associated with lakes and large wetland areas, as well as Cypress Creek located in the eastern portion of the project area.

From the FEMA Flood Insurance Rate Maps (FIRM), FEMA Floodway Maps (see Exhibit 4.7), and Flood Insurance Studies for Pasco and Hillsborough Counties, flood zone boundaries, and designations were determined. An explanation of the flood zone designations is presented in Table 4.16.



LEGEND

- Zone A
- Zone B
- Zone C

* Source: FEMA FIRM Maps

FLOODPLAIN MAP

EXHIBIT 4.7

A Florida Department of Transportation Project

NORTH TAMPA PARKWAY STUDY THE GREINER TEAM

There are no designated floodways within the study area. Cypress Creek has a designated floodway within Hillsborough County, which is located east of the study area. Within Pasco County, Cypress Creek is designated as a Zone A floodplain area.

Cypress Creek, the main tributary of the Hillsborough River, has a drainage area of approximately 164 square miles. It originates in south-central Pasco County and flows southerly through numerous swamps to join the Hillsborough River approximately one mile below the lower Hillsborough Flood Detention Area in Hillsborough County.

It is anticipated that the Preferred Alternative will include two bridges over Cypress Creek. At Cypress Creek and S.R. 54, the base flood (100-year) elevation was estimated to be approximately 57 feet N.G.V.D.

The majority of the floodplain areas within the study area are located within FEMA 100-year Flood Zone "A," and are associated with lakes and wetland areas with minimal or restricted outfalls. The study area is considered outside the influence of tidal storm surge.

Impacts of the proposed project encroachments on floodplains have been documented by FDOT for other roadway projects for S.R. 54, Dale Mabry Highway, and U.S. 41, as required by FHPM 6-7-3-2.

TABLE 4.16

FEMA FLOOD ZONE DESIGNATIONS
North Tampa Parkway

Descriptions	Description
"A"	Areas of 100-year flood, base flood elevations, and flood hazard factors not determined.
"A9"	Area of 100-year flood, base flood elevation, and flood hazard factors determined.
"B"	Area between limits of the 100-year and 500-year flood; or certain areas subject to 100-year flooding with depths less than one foot.
"C"	Areas of Minimal Flooding.

Source: FEMA Flood Insurance Rate Maps and Flood Insurance Study for Hillsborough and Pasco Counties.

The majority of the floodplain areas within the project limits provide natural benefits which include flood storage, water quality enhancement, and wildlife habitat. Development of final designs will include coordination with federal, state, and local agencies to ensure project consistency with all applicable floodway and floodplain regulations and to minimize impacts to floodways and floodplains.

Measures to minimize floodplain impacts associated with the project may include utilizing modified roadway cross-sections or retaining walls to minimize floodplain encroachments; utilizing bridges, where practical, to minimize fill requirements at floodplain crossings; and providing compensating floodplain storage volume for encroachment into the floodplain. Measures to restore and preserve the natural and beneficial floodplain values that are impacted may include floodplain volume compensation, stormwater treatment, and peak attenuation, floodplain/wetland enhancement or mitigation.

Impacts of encroachments on floodplains for the preferred alternative have been estimated and are shown in Table 4.15 (see Section 4.3.4). Floodplain compensation area acreages are also shown in Table 4.13 and on the Preferred Alternative schematic plans.

4.3.11 Coastal Zone Consistency

The proposed project is located within Hillsborough and Pasco counties, which are Florida coastal counties. As such, they fall within the boundaries of the coastal zone as defined in The Florida Coastal Management Program. However, the proposed project is not located within coastal areas of either county and is consistent with the management program.

4.3.12 Threatened and Endangered Species

The study area has been evaluated for the potential presence of threatened and endangered species which may be impacted by the proposed project. Consultation with the U.S. Fish and Wildlife Service (USFWS) and the Florida Game and Freshwater Fish Commission (FGFWFC) was initiated to identify threatened and endangered species which may inhabit the study area. Additional research included utilization of the FDOT's computer list of threatened and endangered species for Pasco County, a review of the Rare and Endangered Biota of Florida published series, and several field reviews of the study area. Table 4.17 is a list of threatened, endangered, and species of special concern which may inhabit the study area. This list was compiled from agency correspondence, literature research, and field observation by Greiner personnel. The following discussion describes the preferred habitat for each potentially occurring listed species.

Mammals

The Florida mouse is a burrow dweller, often making its nest in gopher tortoise burrows. The Florida mouse can be found in high, sandy, ridge habitat and scrub palmetto prairies. Although suitable gopher tortoise habitat exists within the study area, no burrows were found during field reviews.

Birds

The snowy egret, little blue heron, sandhill crane, and wood stork all require wetland habitat for foraging and breeding. The numerous lakes, open water ponds, and freshwater marshes provide suitable habitat for all of these species. In addition,

TABLE 4.17

POTENTIALLY OCCURRING THREATENED AND ENDANGERED SPECIES
North Tampa Parkway

		Designated Status[1] USFWS[2]	FGFWFC[3]
MAMMALS			
Peromyscus floridanus	(Florida mouse)	C^2	SSC
AVIAN			
Florida caerulea	(little blue heron)	---	SSC
Grus canadensis	(sandhill crane)	---	T
Mycteria americana	(wood stork)	E	E
Haliaeetus leucocephalus	(bald eagle)	E	T
Aimophila aestivalis	(Bachman's sparrow)	C2	SSC
Aphelcoma coerulescens	(Florida Scrub jay)	T	T
Picoides borealis	(Red-cockaded woodpecker)	E	T
Egretta thula	(Snowy egret)	---	SSC
AMPHIBIANS AND REPTILES			
Alligator mississipiensis	(American alligator)	T(S/A)	SSC
Rana areolata aesopus	(Florida gopher frog)	C^2	SSC
Gopherus polyphemus	(Gopher tortoise)	T	SSC
Drymarchon corais couperi	(Eastern indigo snake)	T	T
Pituophis melanoleucus mugitus	(Florida pine snake)	C^2	SSC
Stilosoma extenuatum	(Short-tailed snake)	C^2	T

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1 E: Endangered
T: Threatened
T(S/A): Threatened due to similarity in appearance
C^2: A candidate for listing, with some evidence of vulnerability, but for which not enough data exist to support listing.
SSC: Species of Special Concern

Compiled from Official Lists of Endangered and Potentially Endangered Fauna and Flora in Florida, August 1, 1990).

[2]United States Fish and Wildlife Service
[3]Florida Game and Freshwater Fish Commission

sandhill cranes were observed within the study area on several occasions. However, due to the presence of large and higher quality wetland systems outside of proposed construction area, no impacts to the above listed species are expected.

Consultation with the FGFWFC indicate the presence of an active bald eagle nesting territory within the vicinity of the study area. In addition, the FGFWFC has received several reports of eagle sitings and unconfirmed reports of active eagle nests within the study area (see Appendix B). However, no nests were found during field reviews and no recorded nests are present within or adjacent to the proposed project area. No impacts to this species is anticipated due to the proposed project.

The Florida scrub jay and Bachman's sparrow utilize scrub habitat dominated by bluejack oak (Quercus incana), Chapman oak (Q. chapmannii), sand live oak (Q. Virginiana var. geminate), and saw palmetto (Serenoa repens). It is unlikely that these species are present due to the lack of preferred habitat within the study area.

The red-cockaded woodpecker occupies mature pine forest communities where they dig their nests in live longleaf or loblolly pine trees. A stand of longleaf pine exists north of S.R. 54 and east of wetland Site 17. The tree sizes and lack of visual red-cockaded woodpecker indicators indicate that this stand is not being utilized by this species.

Amphibians and Reptiles

The USFWS designates the American alligator as threatened due to its similarity in appearance to the crocodile. Area residents have reported sitings of the alligator inhabiting open water areas.

The gopher tortoise, Florida gopher frog, eastern indigo snake, and Florida pine snake occupy various upland habitats including sand pine scrub, upland hardwood hammocks, pine flatwoods, and oak hammocks. The gopher frog and eastern indigo snake typically live in gopher tortoise burrows. Gopher tortoise burrows have not been observed within the study area. The short-tailed snake inhabits sandy, upland ridges, longleaf pine-turkey oak habitats and xeric oak hammocks.

4.3.13 Prime and Unique Farmland

The U.S. Department of Agriculture (USDA) defines prime farmland as land that is best suited to producing food, feed, forage, fiber, and oilseed crops. Land classified as "prime farmland" may currently be utilized for some other land use, with the exception of urban land or water areas. According to the Pasco County Soil Survey, less than one half percent of the County's acreage meets the soil requirements for prime farmlands. The Micanopy fine sand, 2 to 5 percent slopes soil phase, is classified as prime farmland. The Hillsborough Soil Survey does not discuss the occurrence of prime or unique farmland in the county.

The study area does not contain any prime or unique farmland in Pasco County. The USDA Soil Conservation Service for both Hillsborough and Pasco Counties was contacted and they stated that there are no prime or unique farmlands in Hillsborough nor Pasco Counties within the project study limits. Unique farmlands in these two counties are defined as functioning citrus groves. Citrus groves along S.R. 54 and Dale Mabry Highway were field-verified and found to be non-functioning.

4.3.14 Construction Impacts

Project construction may create specific additional impacts resulting solely from construction operations and limited exclusively to the construction period. These impacts are short term and temporary in nature. Construction impacts are distinct in that their degree of adversity steadily diminishes as work progresses and usually disappears within a short time after the project is completed.

The following list indicates the impact which would be expected to result from construction and the measures planned to mitigate their adverse effects:

* Noise from construction operations will increase ambient acoustic levels. Grading and scraping operations are the noisiest activities with equipment generating noise levels as high as 70-95 dBA within 50 feet of their operations. Impacts from trucks hauling fill will be minimized by use of borrow materials from stormwater and mitigation areas adjacent to the roadway. Distance will rapidly attenuate noise levels so noise experienced at area residences will result in only a slight increase in ambient background conditions.

* Construction practices such as staging and stockpiling operations will result in disruption of the resident wildlife population. The clearing of habitats will displace wildlife which will be forced to relocate to adjacent areas. Stockpiling areas will be abandoned after construction and may ultimately provide wildlife habitat. Further, the noise of construction operations will temporarily cause resident wildlife to vacate habitat adjacent to the actual construction area. Consequently, this will be the period of maximum disruption, when competition among species would be greatest. However, the proposed project area represents a minor portion of the total openspace area and is adjacent to large areas of similar habitat types, so suitable undisturbed habitat will be available for displaced individuals.

* A temporary increase in water turbidity in drainage ditches will likely occur during the period when excavated areas are exposed; prior to paving or the planting of cover. Typical controls such as straw or baled hay barriers or turbidity curtains will be provided to limit sediment transport. Further, an effort will be made to schedule construction operations to minimize the exposure of excavated areas and revegetate them as soon as possible after grading.

* A temporary degradation of air quality will result from construction equipment emissions, fugitive dust pollution from excavated areas and burning of cleared vegetative material. Particulate pollution will be minimized by treating excavated areas with water or dust particulates and not allowing burning during unfavorable weather conditions.

* Project specifications will incorporate the provisions listed in FDOT Design Standards for Roadway and Traffic, dated 1990, and Standard Specifications for Road and Bridge Construction, dated 1991.

In summary, construction impacts are not anticipated to be significant, providing Best Management Practices are complied with.

5.0 COMMENTS AND COORDINATION

5.1 INTRODUCTION

A Public Involvement Program has been developed and carried out as an integral part of this project. The purpose of this program is to establish and maintain communication with the public at large, individuals and agencies concerned with the project and its potential impacts. To ensure open communication, agency and public input, the Department provided an early notification package to state and federal agencies as well as other interested parties defining the project. In an effort to resolve all issues identified, the Department has conducted an extensive interagency coordination and consultation effort and a public participation process. This section of the Report details the Department's program to fully identify, address and resolve all project related issues identified through the public involvement program.

5.2 ADVANCE NOTIFICATION

The Florida Department of Transportation forwarded an Advance Notification Package (A-95) to federal, state, and local agencies having permitting, environmental or other interest in the North Tampa Parkway Study area. The following agencies received the Advance Notification Package. An asterisk indicates those agencies that responded to the Advance Notification:

* Federal Highway Administration
National Marine Fisheries-Area Supervisor
U.S. Department of the Interior-U.S. Geological Survey
U.S. Department of the Interior-Bureau of Land Management
U.S. Department of Housing and Urban Development
U.S. Environmental protection Agency
U.S. Department of the Interior-U.S. Fish and Wildlife Service-Field Office

National Marine Fisheries Service
U.S. Army Corps of engineers
U.S. Department of the Interior-National Park Service
Federal Emergency Management Agency
National Oceanic and Atmospheric Administration
Federal Aviation Administration-District Office Department of Energy
U.S. Department of Health and Human Services-Centers for Disease Control
U.S. Department of the Interior-Bureau of Indian Affairs
Commander (oan) - Seventh Coast Guard District
Marine Fisheries Commission
* Florida Department of Natural Resources-State Land Management
* Regional Planning Council
Water Management District
Federal-Aid Program Coordinator
Chief Office of Environment
* Florida Department of Environmental Regulation
* Florida Department of State, Division of Historical Resources

The following narrative summarizes the responses received to the Advance Notification Package.

1. **Tampa Bay Regional Planning Council**

Comments: Such a facility is envisioned in the Transportation Elements of the "Future of Hillsborough, a Comprehensive Plan for Unincorporated Hillsborough County"; therefore, the project is consistent with and furthers the provisions of the Plan. The Planning Commission staff recommends approval of this project.

2. **Florida Department of Environmental Regulation**

Comments: Environmental permits may be required for the eventual construction of this project. Projects located in or adjacent to wetlands or other sensitive habitats should be carefully designed to minimize potential adverse impacts on water quality and wetland habitats. Special consideration should be given to threatened or endangered species.

Prior to the identification of potential corridors, the applicant is encouraged to establish wetland avoidance areas within the study area. The analysis should include wetland impact evaluations for all proposed alternatives. The analysis should include size, type and quality of the wetlands effected. The environmental document should also state the relationship of this project to the proposed Northwest Hillsborough Expressway project or any other major transportation project.

3. **Florida Department of State, Division of Historical Resources**

Comments: Therefore, conditioned upon the Florida Department of Transportation undertaking the site reviews, and appropriately avoiding or mitigating project impact to any identified significant archaeological or historic sites, the proposed project will have no effect on any sites listed, or eligible for listing in the National Register. If these conditions are met the project will also be consistent with the historic preservation aspects of Florida's coastal zone program.

4. **State of Florida, Department of Natural Resources**

Comments: It does not appear, at this time, that any state owned upland resource will be impacted. If the project traverses any sovereignty submerged lands, and easement from the Board of Trustees of the Internal Improvement Trust Fund will be required. Any portion of the project that traverses sovereignty submerged lands should be designed to have minimal impacts to the submerged and wetland communities.

5.3 PUBLIC MEETINGS

5.3.1 Kick-Off Meeting

A Kick-off meeting was held on March 20, 1990 at Gaither High School to receive comments and suggestions from the public and to inform the public of the project's progress. Approximately 89 citizens attended the meeting.

5.3.2 Corridor Public Meeting

A Preliminary Corridor Public Meeting was held June 5, 1990 at the Maniscalco Elementary School in Lutz. The informal meeting allowed the public to review and comment on the alternative corridors being evaluated. Approximately 562 citizens attended the meeting. The Corridor Public Meeting Comments Summary Working Paper (June 1990) includes a transcript and all written comments submitted by the public at the meeting and/or during the comment period.

5.3.3 Alternatives Public Meetings

An Alternatives Public Meeting was held on October 18, 1990 at the Maniscalco Elementary School in Lutz. The public was shown the selected viable alternatives on 1" = 200' scale maps, showing right-of-way and property lines. Other displays shown included impacts to proposed wetlands and floodplains, access to local roads and community services, and the traffic projections for the area. The informal meeting allowed the public to review and comment on the selected viable alternatives. Approximately 183 citizens attended the meeting. An Alternatives Public Meeting Comments Summary Working Paper was prepared following the meeting and published in November 1990.

A second Alternatives Public Meeting was held on January 10, 1991 at the Land O' Lakes High School in Land O' Lakes, Florida. The purpose of the meeting was to provide the public with an opportunity to review and comment on the six (6) alternatives being evaluated. Approximately 1,087 citizens attended the meeting. An Alternatives Public Workshop Comments Summary Working Paper was prepared following the meeting and published in January 1991.

5.4 CONCLUDING STATEMENT

In February 1991 the Florida Department of Transportation selected the No-Parkway Alternative as the Preferred Alternative. This Alternative was chosen due to comments received from the local citizens requesting upgrades for current north-south routes. This, coupled with approved FDOT plans for upgrading S.R. 54, U.S. 41, and Dale Mabry Highway, citizens not favoring another east-west road in their area, and the environmental impacts and cost factors resulted in this decision.

To incorporate the No-Parkway Alternative improvements into the previously approved documents covering Dale Mabry Highway, U.S. 41, and S.R. 54 the Department has prepared this Environmental Summary Report.

APPENDIX A

APPENDIX A

LIST OF OBSERVED FLORA
North Tampa Parkway

TREES

Acer rubrum	Red maple
Casuarina litorea	Australian pine
Gordonia lasianthus	Lobolly bay
Ilex cassine	Dahoon holly
Liquidambar styraciflua	Sweetgum
Magnolia virginiana	Sweetbay
Nyssa sylvatica var. biflora	Swamp tupelo
Persea borbonia	Redbay
Persea palustris	Swamp bay
Pinus elliotti	Slash pine
Pinus palustris	Longleaf pine
Quereus laevis	Turkey oak
Quercus laurifolia	Laurel oak
Quecus virginiana	Live oak
Ricinus communis	Castor bean
Schinus terebinthifolius	Brazilian pepper
Taxodium distichum	Bald cypress
Ulmus americana	American elm

SHRUBS

Baccharis halimiflora	Saltbush
Callicarpa americana	American beauty bush
Cephalanthus occidentalis	Buttonbush
Ilex glabra	Gallberry
Ludwigia peruviana	Primrose willow
Myrica cerifera	Wax myrtle
Phytolacca americana	Pokeberry
Sambucus canadensis	Elderberry
Serenoa repens	Saw palmetto
Urena lobata	Ceaser weed

HERBACEOUS

Alternathera philoxeroides	Alligator-weed
Ampelopsis arborea	Pepper Vine
Andropogon virginicus	Broomsedge
Aster sp.	Aster
Befaria racemosa	Tarflower
Bidens bipinnata	Spanish needles
Blechnum serrulatum	Swamp fern
Cenchrus echinatus	Sand spur
Centella asiatica	Coinwort
Colocasia antiquaonoum	Elephant Ear
Commelina erecta	Day flower
Cyperus odoratus	Flat-sedge
Diodia virginiana	Buttonweed

APPENDIX A

LIST OF OBSERVED FLORA
North Tampa Parkway
Continued)

HERBACEOUS (con't)

Dioscorea bulbifera	Air potato
Eriocaulon compressum	Hat pin
Eupatorium capillifolium	Dog fennel
Galium tinctorium	Bedstraw
Ipomea trichocarpa	Morning glory
Juncus effusus	Soft rush
Lachnanthes caroliniana	bloodroot
Lantana sp.	Lantana
Momordica charantia	Wild balsam apple
Osmunda cinnamomea	Cinnamon fern
Osmunda regalis	Royal fern
Panicum purpurascens	Para grass
Panicum hemitomon	Maidencane
Panicum repens	Torpedo grass
Parthenocissus quinquefolia	Virgina creeper
Polygonum sp.	Smartweed
Pontederia cordata	Pickerelweed
Pteridium aquilinum	Bracken fern
Rhexia virginica	Meadow beauty
Rhynchospora sp.	Beak-rush
Rubus betulifolius	Blackberry
Sabatia sp.	Marsh Pink
Sagittaria lancifolia	Arrowhead
Solidango sp.	Goldenrod
Smilax bona-nox	Catbriar
Toxidendron radicans	Poison Ivy
Typha latifolia	Cattail
Urena lobata	Ceaser weed
Vitas munsoniana	Muscadine grape
Zyris sp.	Yellow-eyed grass