PRELIMINARY ENGINEERING REPORT

S.R. 693 (66th Street)
From Bryan Dairy Road
to Ulmerton Road

Pinellas County, Florida

State Project Number: 15060-1510
W.P.I. Number: 7117072

FINAL REPORT

March 1993

STATE OF FLORIDA

DEPT. OF TRANSPORTATION

Donald J. Skelton
10/20/93

PRELIMINARY ENGINEERING REPORT

S.R 693 (66th Street)
From Bryan Dairy Road
to Ulmerton Road
Pinellas County, Florida

State Project Number: 15060-1516
W.P.I. Number: 7117063
F.A.P. Number: SA-185-1(66)

FINAL REPORT

March 1993

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SECTION 1.0
ABSTRACT

The Florida Department of Transportation (FDOT) is conducting a study to document the development, analysis and comparison of alternatives for proposed improvements to S.R. 693 (66th Street North) between Bryan Dairy Road and Ulmerton Road in Pinellas County, Florida.

This report documents the information necessary to establish the need for the project and determines how to implement the proposed improvements. This study satisfies the requirements of the Federal Highway Administration (FHWA) in order to receive federal funding for the project.

Engineering and environmental data were collected to aid in the alternatives evaluation. Once sufficient data were available, design criteria were set and alternatives were developed. Alternatives were compared to determine which would have the least impacts and provide the necessary improvements.

The appendices provide pertinent reports and other documentary information defined or used in this study.

SECTION 2.0
INTRODUCTION

2.1 Purpose

Existing S.R. 693 (66th Street) accommodates north/south travel in Central Pinellas County. Growth in this area is expected to steadily increase based on the projected growth of population and employment. The 66th Street corridor offers the opportunity for expansion to serve this projected demand.

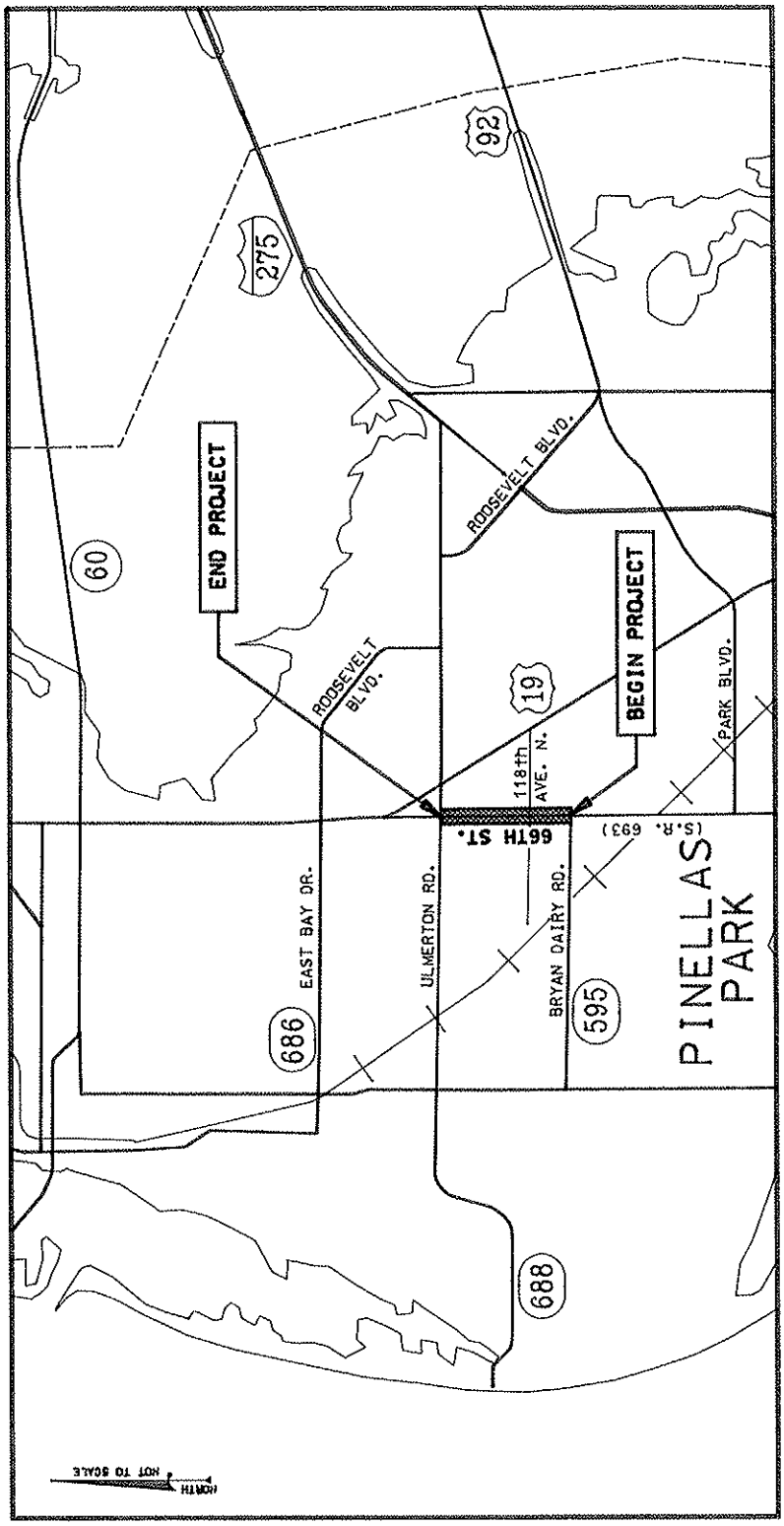
This report documents existing characteristics and conditions of the alignment along with the need for an improved facility. Improvement alternatives are identified, described and evaluated.

This report has been developed to document the comparative analysis of alternatives for the improvements to 66th Street (S.R. 693) from north of Bryan Dairy Road to Ulmerton Road (S.R. 688). Many design parameters and various comparative aspects of the project area were considered in developing alternatives. These are identified and defined in this report. The analysis of alternatives with respect to these parameters will provide the information necessary to determine the most viable project alternative. A Public Hearing was held prior to finalizing the analysis to obtain community input. This meeting is also documented in this report.

2.2 Project Description

S.R. 693 (66th Street) is a primary north/south arterial. The project is approximately 1.5 miles and extends from Bryan Dairy Road (C.R. 296) to Ulmerton Road (S.R. 688). See Figure 2-1. Traffic projections indicate that a six lane facility is required for the roadway to operate at an acceptable level of service in the project's design year, 2010. Intermediate median openings between intersections will be provided to allow turning movements for the residents and businesses in the area consistent with the Department's access management rules.

Due to the development along the corridor, another important consideration was to develop the proposed improvements within the existing FDOT right of way. This will minimize impacts to the adjacent project area and the project cost.



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66th STREET (S.R. 693)
PROJECT LOCATION MAP

DATE: MARCH 1993
S.P.N.: 15060-1510
W.P.I.: 7117072
FIGURE 2-1

SECTION 3.0
NEED FOR IMPROVEMENT

Since transportation is one of the most vital community assets, proper planning to assure that the roadway systems are adequate and functional is essential. This project is a direct result of the planning process. This roadway is shown to be improved as a link to other systems in the Pinellas County Year 2010 Long Range Transportation Plan. The improvement for 66th Street will provide a needed north/south link from southern Pinellas County to Ulmerton Road (a major east/west facility). 66th Street also extends north to U.S. 19 for access to northern Pinellas County. Pinellas County is planning to improve Bryan Dairy Road and provide an interchange at 66th Street. The improvement to 66th Street will be compatible with the County's proposal and will aid in maintaining an acceptable Level of Service (LOS) through the 2010 design year.

3.1 Deficiencies

Currently, 66th Street is functioning as an urban minor arterial, connecting Bryan Dairy Road & Ulmerton Road north of Pinellas Park. Current traffic counts and analyses indicate this section of 66th Street is functioning at Level of Service (LOS) F. The majority of this deterioration is attributed to the delays experienced at Ulmerton Road and Bryan Dairy Road. Applying projected traffic data to the existing facility indicates that the same segment will continue to deteriorate to the year 2010 without any improvements.

Future traffic volumes have been developed through modeling of the infrastructure system. This modeling was accomplished using current and accepted methods. Pinellas County Metropolitan Planning Organization (MPO) has developed a model using the Florida Standard Urban Transportation Model Structure (FSUTMS). The projected volumes indicate the need for a six lane facility for the design year 2010. Under normal planning guidelines, transportation facilities in urban areas are to be designed to accommodate peak hour LOS D.

66th Street and Park Boulevard to the south are major thoroughfares through the Pinellas Park area. 66th Street south of the project limits is a six-lane divided facility. The intersection of 66th Street and Bryan Dairy Road is to be improved by Pinellas County in the near future with a proposed interchange. The Department has also completed a study for Ulmerton Road. This study showed the need for an interchange at the 66th Street/Ulmerton Road intersection. The 66th Street improvement will complement these improvements by providing improved north/south travel.

3.2 Safety

As traffic volumes increase on the existing roadway, law enforcement, fire and emergency vehicles will be impeded in their attempts to travel to emergencies, and a greater frequency of accidents may be anticipated. Increased capacity through widening of 66th Street will help improve the safety level as the area continues to grow. Pinellas Park Fire Department Station No. 34 is located just south of Bryan Dairy Road on 66th Street.

3.3 Consistency with Transportation Plan

The adopted Pinellas County Metropolitan Planning Organization 2010 Long Range Plan shows 66th Street improved to a six lane facility. This widening improvement will also correspond with Pinellas County's proposed improvements along Bryan Dairy Road as noted earlier.

3.4 Social/Economic Demand

Based on growth and projected development, Pinellas County develops a Land Use Plan for the entire county. This Plan is used to help determine the roadway improvements that will be necessary to accommodate the projected growth. The improvements proposed with this project were determined necessary by the plan.

Currently, the area around 66th Street is primarily commercial and industrial with some residential. Due to improvements along other adjacent facilities, it is anticipated that traffic to this area will increase. Growth in the area may result in heavier use of recreational facilities in the area and an increase in bicycle and pedestrian activity.

SECTION 4.0
EXISTING CONDITIONS

The following project information records conditions at the time of data gathering and site survey (May 1992 through August 1992). Periodic field reviews have been made since this time to ensure field conditions have not changed significantly.

4.1 Existing Roadway Characteristics

This section will describe the existing facility and its characteristics.

4.1.1 Functional Classification

66th Street is classified as an urban minor arterial highway using the AASHTO functional classifications. This type of roadway provide intracommunity continuity and distributes travel to larger areas.

Classifications of the other roads in the study area are:

114th Avenue	Urban Local
116th Avenue	Urban Local
118th Avenue	Urban Local
121st Avenue	Urban Local
Henderson Road	Urban Local
125th Avenue	Urban Local
126th Avenue	Urban Collector

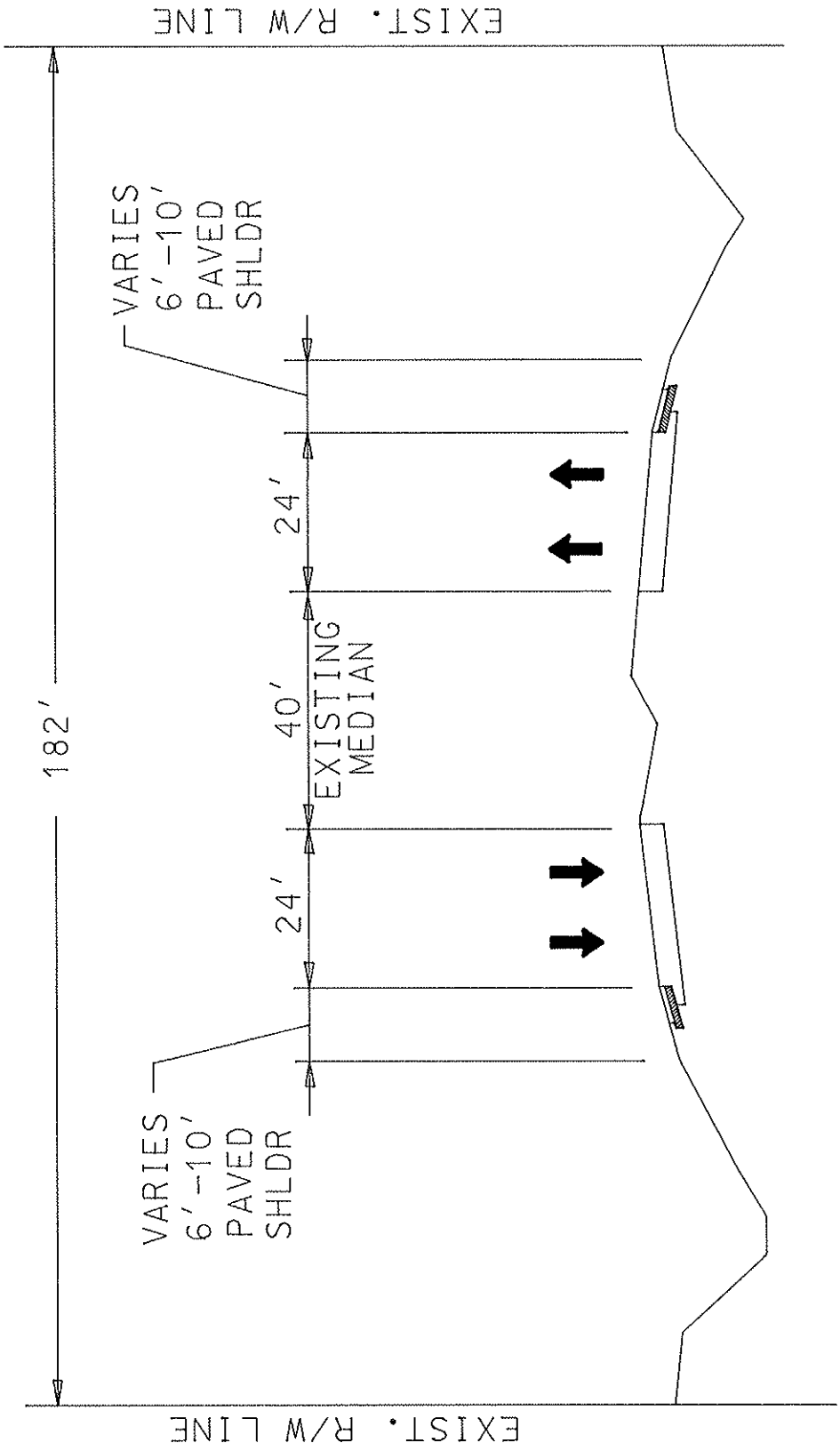
4.1.2 Typical Section

66th Street has only one typical section through the study area, see Figure 4-1. 66th Street currently consists of a four lane divided rural roadway. The roadway width increases due to frequent additions of left turn lanes and right turn lanes/tapers throughout the project. The existing roadway has 6 to 10 foot asphalt shoulders and a grass median which is curbed at median openings. Existing runoff is accommodated with roadside ditches which parallel this facility.

The roadway is generally centered within the existing right-of-way which ranges from 182 feet to 190 feet (south to north).

4.1.3 Pedestrian and Bicycle Facilities

There are existing sidewalks along 66th Street, from Bryan Dairy Road to 118th Avenue on the east side and from 118th Avenue to 121st Avenue on the west side. There are no designated bicycle lanes on the 66th Street corridor, however, the existing paved shoulders can be utilized by bicyclists.



STATE OF FLORIDA

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66th STREET (S.R. 693)
EXISTING TYPICAL SECTION

DATE: MARCH 1993
S.P.N.: 15060-1510
W.P.I.: 7117072
FIGURE 4-1

4.1.4 Right-of-Way

The existing 66th Street right-of-way is 182 feet wide, with the alignment generally centered, from 800 feet north of Bryan Dairy Road to 1,500 feet south of Ulmerton Road. The right-of-way then becomes 190 feet in width, 94 feet from the centerline on the west and 106 feet from the centerline on the east and continues through Ulmerton Road.

4.1.5 Horizontal Alignment

The 66th Street alignment from Bryan Dairy Road to Ulmerton Road is a tangent section. All of the side streets are perpendicular at their intersections with 66th Street.

4.1.6 Vertical Alignment

The vertical alignment along 66th Street in the study area is generally flat tangents (less than 1% grade) from Bryan Dairy Road (elevation 13.5 +/-) to Ulmerton Road (elevation 20.0 +/-).

4.1.7 Drainage

Stormwater runoff from 66th Street sheetflows directly into roadside ditches. On the west side of 66th Street from 126th Avenue to Bryan Dairy Road the flow travels south discharging into the Cross Bayou Canal. Between 126th Avenue and Ulmerton Road, the flow varies. On the west side of 66th Street, the flow drains to a 24" cross drain at M.P. 11.554. From 126th Avenue to the cross drain the flow is to the north. From the cross drain to Ulmerton Road, the flow is to the south, the cross drain carries the flow to the east. On the east side of 66th Street, the flow from 126th Avenue to the cross drain at M.P. 11.554 is to the north. From the cross drain to Ulmerton Road, the flow is split. Half the area flows back south to the cross drain with the other half flowing north to the drainage system along Ulmerton Road. This cross drain carries the flow into the open ditch system located on the east side of 66th Street. On the east side of 66th Street from 126th Avenue to 118th Avenue the flow travels south where it enters the drainage system located on 118th Avenue which discharges into the Cross Bayou Canal. From 118th Avenue to Bryan Dairy Road the flow travels north and enters the same system located at 118th Avenue.

The seasonal high groundwater along 66th Street ranges from one and one-half feet to two and one-half feet below existing grade, based on boring information provided by Williams & Associates. The geotechnical report is contained in Appendix A.

4.1.8 Geotechnical Data

The Pinellas County soil survey indicates that the soil is predominantly clean fine sands. The soil unit is Myakka Fine Sand (29). Some exceptions were found at various locations which included some soils containing a high amount of organic matter. The depths of these soils varies widely throughout the project alignment.

4.1.9 Accident Data

Accident data for 66th Street between Bryan Dairy Road and Ulmerton Road was reviewed for years 1987 to 1991. Table 4-1 gives a summary of the accident information for the years reviewed.

The majority of all accidents (greater than 50%) occurred during daylight hours with rear end and left turning accidents being the most frequent types. Over the five year time period, there have been five fatalities. Although there was a frequency of accidents at signalized intersections, more than 50% occurred mid-block. This is mainly attributed to the urban nature of the corridor (frequent median openings and driveways).

TABLE 4-1
ACCIDENT DATA SUMMARY

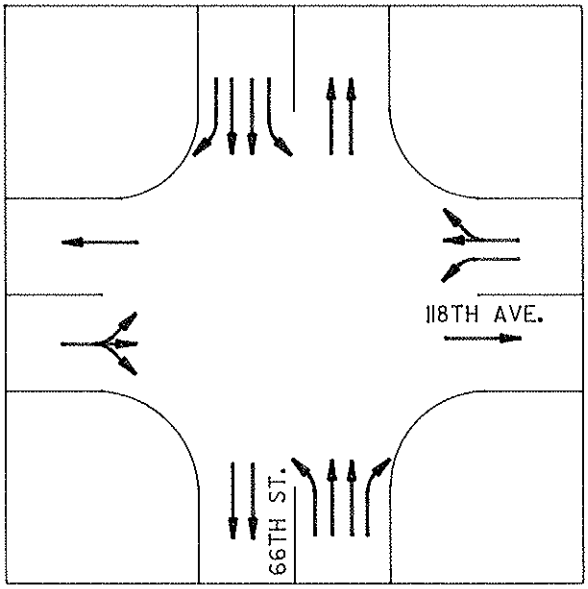
Year	Total No. of Crashes	Fatalities	Types of Accidents				Location of Accidents	
			Left Turn	Angle	Rear Ends	Other	Intersection (Signalized)	Mid-Block and other
1987	53	0	15	14	14	10	25	28
1988	73	0	18	10	27	18	30	43
1989	81	2	20	14	26	21	44	37
1990	70	2	24	5	18	23	35	35
1991	73	1	29	3	20	21	32	41
Totals	350	5	106	46	105	93	166	184

4.1.10 Traffic Signals, Locations and Intersection Design

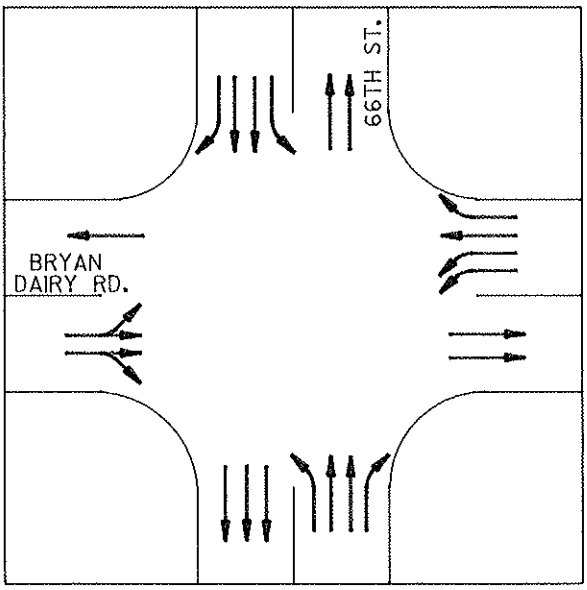
The 66th Street study corridor has four existing traffic signals located at the intersections of Ulmerton Road, 126th Avenue, 118th Avenue, and Bryan Dairy Road. The existing intersection geometries are shown in Figures 4-2 and 4-3.

4.1.11 Lighting

No Highway lighting is present along 66th Street from Bryan Dairy Road to Ulmerton Road.

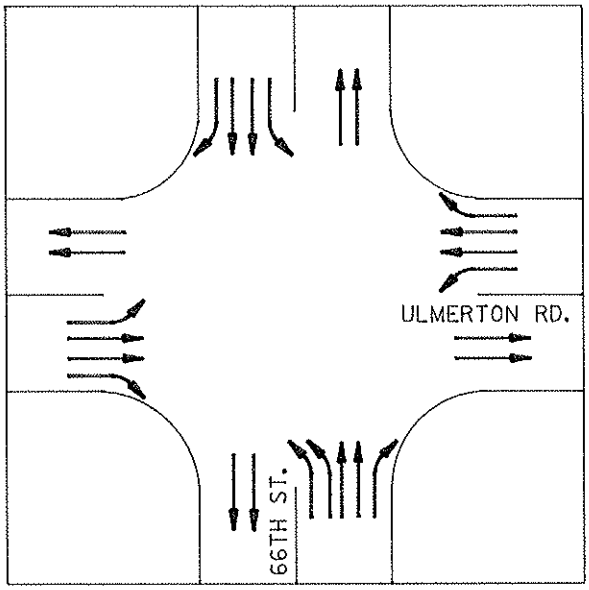


66TH STREET @ 118TH AVENUE

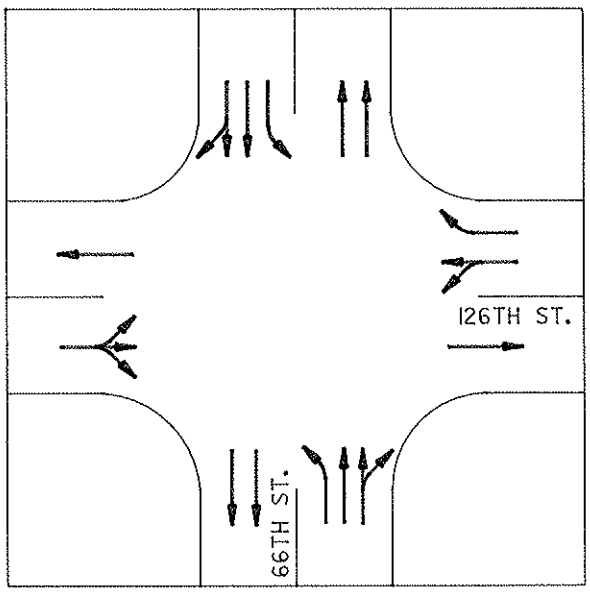


66TH STREET @ BRYAN DAIRY ROAD

STATE OF FLORIDA DEPT. OF TRANSPORTATION	66th STREET (S.R. 693) EXISTING INTERSECTION GEOMETRY	DATE: MARCH 1993 S.P.N.: 15060-1510 W.P.I.: 7117072 FIGURE 4-2



66TH STREET @ ULMERTON ROAD



66TH STREET @ 126TH AVENUE

STATE OF FLORIDA DEPT. OF TRANSPORTATION	66th STREET (S.R. 693) EXISTING INTERSECTION GEOMETRY	DATE: MARCH 1993 S.P.N.: 15060-1510 W.P.I.: 7117072 FIGURE 4-3

4.1.12 Utilities

An early assessment of the existing utilities has been performed by coordinating with the relevant utility companies. Controlled aerial base maps of the project area were distributed to the utility companies. Each utility company indicated the locations of their facilities on these base maps. This information will be submitted for use during the final design phase. The majority of the underground utilities are adjacent to the existing alignment and relatively close to the existing edge of pavement. These utilities consist of water mains (twelve inches), force mains (six inches), gravity sewer, petroleum (ten inches), gas main (three inches), and telephone (six four-inch conduits).

Aerial utilities exist along the alignment on both sides of the roadway. These utilities consist of Florida Power Company lines, cable television lines and telephone lines. Utility adjustments will be required for each utility within the existing right-of-way where unavoidable conflicts exist between utility lines and the proposed roadway. Relocation design will be coordinated during the final design phase.

4.1.13 Pavement Condition

The existing pavement is in good condition with plans to mill and resurface the existing lanes.

4.2 Existing Bridges

The 66th Street Corridor contains no bridges.

4.3 Existing Environmental Characteristics

This section will discuss the existing environmental data.

4.3.1 Land Use

Current land uses in the study corridor include commercial, light industrial, scattered residential and strip shopping centers. The Bryan Dairy Road intersection includes strip shopping centers and a mobile home park. The 118th Avenue and 66th Street intersection has a residential community, convenience store, and other small businesses. Located at 126th Avenue are two vacant lots, a strip mall and a small business.

The Ulmerton Road intersection contains an auto related repair facility, a shopping center, a financial institution, and a vacant lot.

The current zoning along the 66th Street alignment is classified as light industrial. On the west side of 66th Street between 118th Avenue and 126th Avenue there is a small area zoned high density residential.

The future land use plan, shown in Figure 4-4, indicates that the majority of the land is to be used for general commercial and light industrial with the above noted area remaining as high density residential.

4.3.2 Cultural Features and Community Services

A field review and a review of tax maps were conducted to locate community services and cultural features.

There are no major medical facilities located along the project corridor. There are no fire stations located within the project limits. The fire protection service comes from the Pinellas Park Fire Department Station No. 34 located at 94th Avenue and 66th Street (south of the project's terminus). No churches or schools are located directly adjacent to 66th Street. Morgan E. Fitzgerald Elementary School and Pinellas Park High School are located east of 66th Street on 118th Avenue. There are no cemeteries or public buildings within the corridor.

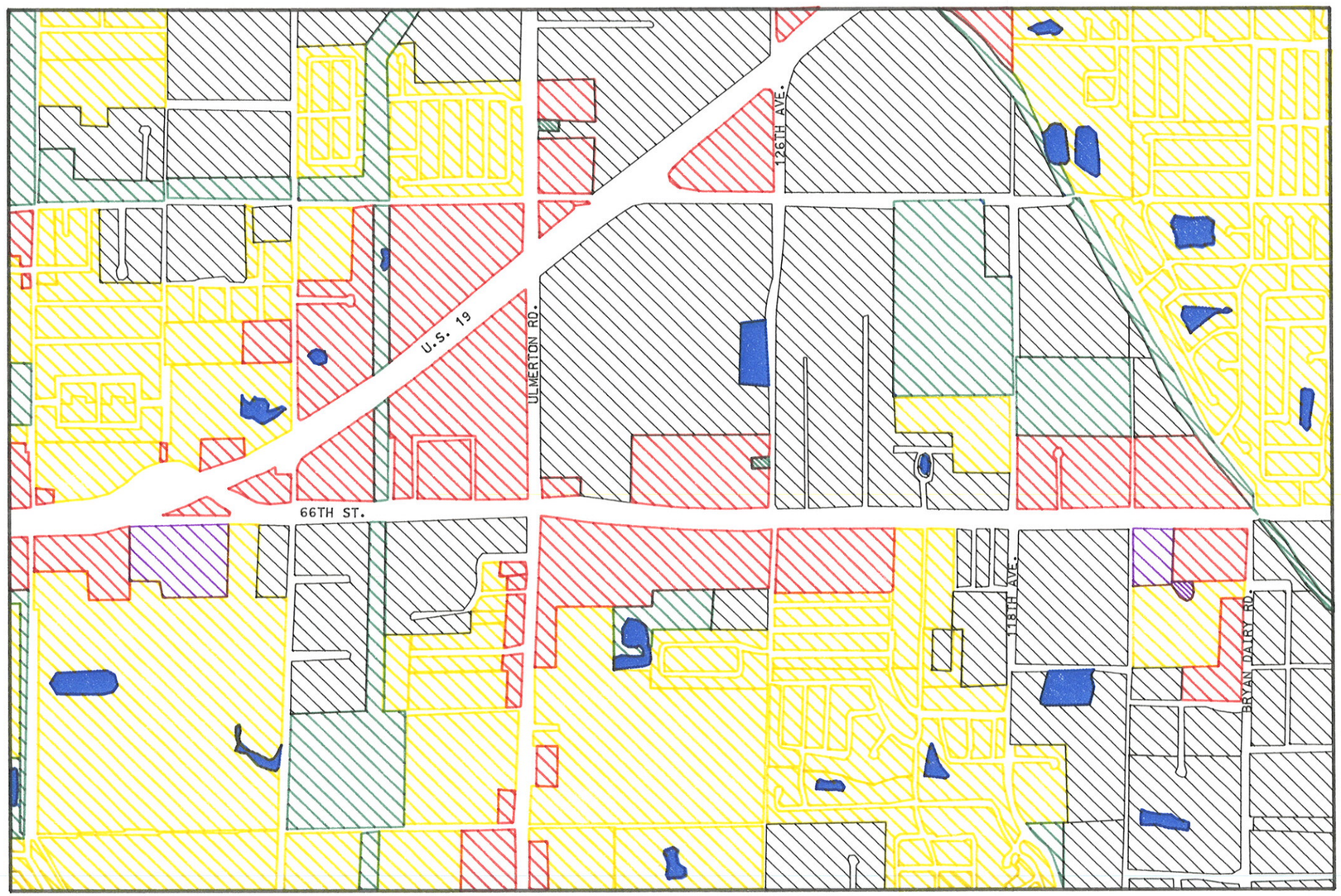
4.3.3 Natural and Biological Features

66th Street was originally constructed in an area of Pinellas County containing wetlands. The wetlands within the project limits are associated with existing cross drains, existing drainage ditches, and natural drainage.

Wetland vegetation located in the project limits included Cat-tail (Typha spp.), Pennywort (Hydrocotyle umellata), and Maidencane (Panicum hemitomon).

NORTH

NOT TO SCALE



LEGEND

- RESIDENTIAL
- MIXED USE (RESIDENTIAL/OFFICE/RETAIL)
- COMMERCIAL
- INDUSTRIAL
- PUBLIC
- WATER/DRAINAGE

STATE OF FLORIDA
DEPT. OF TRANSPORTATION

REVISIONS		
DATE	BY	DESCRIPTION

66th STREET (S.R. 693)
BRYAN DAIRY ROAD TO ULMERTON ROAD

FIGURE 4-4
FUTURE LAND USE MAP -
PINELLAS COUNTY

DATE: MARCH 1998
S.P.N.: 15060-1510
W.P.I.: 7117072

SECTION 5.0
DESIGN CRITERIA

The objective of this study is to develop viable alternatives based on standard engineering practice to provide appropriate LOS D or higher, commensurate with the social, economic and environmental impacts involved. For this corridor, the additional constraint of improving within the existing right-of-way was imposed to minimize impacts.

Guidelines establishing the roadway geometric layout were developed and these provide the basis for establishing comparable alternative alignments.

In developing the project design criteria, consideration was given to the lane requirements provided by the Traffic Technical Memorandum identified in Chapter 6 of this report. Consideration was also given to the existing and future cross sections of adjacent and intersecting roadways, the characteristics of the terrain in the project area, and to the proposed widening projects within the study area. Consideration was also given to the overall aesthetics and basic functions of the proposed facility.

The recommended design criteria are presented in Table 5-1. These criteria were derived from the FDOT Manual of Uniform Minimum Standards for Design, Construction and Maintenance of Streets and Highways (1989), and the 1990 AASHTO Policy on Geometric Design of Highways and Streets. Table 5-1 lists the guidelines for the development of alignment alternatives, and the values or parameters presented represent the minimum and desirable levels. In all cases, the alternatives were determined using the desirable values.

TABLE 5-1
RECOMMENDED DESIGN CRITERIA

PARAMETER	MAINLINE
Design Speed (MPH)	45 Minimum
Through Lane Widths (Bicycle) Turning Lane Widths	12' 12'
Shoulder Widths - Roadway Inside Outside	 10' 10' (4' paved)
Median Width - Urban Rural	19.5' 22.0'
Vertical Alignment Grades - Maximum Minimum Minimum K Values Crest Vertical Curve Sag Vertical Curve Grade Break Without Curve (Max.)	 3.0% 0.3% 120/80 90/70 0.6%
Horizontal Alignment Degree of Curve Urban Rural Maximum Superelevation Urban Rural	 6 degrees 8 degrees 15' .05 .10
Sight Distance for Approach to Stops	400/475

SECTION 6.0
TRAFFIC

The Traffic Technical Memorandum (dated March 1993) is referenced throughout this section. This project document includes detailed analysis for traffic volumes and should be referred to as needed.

6.1 Existing Conditions

The traffic study limits for this study begin at the Bryan Dairy Road intersection, and continue north to Ulmerton Road. The typical section is a four lane divided roadway from Bryan Dairy Road to Ulmerton Road with frequent left turns provided at median openings and signalized intersections.

The Department and Pinellas County have recently completed traffic studies for Ulmerton Road and Bryan Dairy Road, respectively. These studies have been reviewed and approved by the Department and Pinellas County MPO. These two intersections are present at each end of the 66th Street project. The Traffic Memorandum prepared by Greiner, Inc. for Ulmerton Road (dated December 1988) included analysis of the intersection of Ulmerton Road and 66th Street. The Project Traffic Report prepared by Reynolds, Smith and Hills, Inc. for Bryan Dairy Road (CR 296) included the analysis of the intersection of Bryan Dairy Road and 66th Street. The PD&E Study for Ulmerton Road has been completed and was approved by the Federal Highway Administration in October of 1992. The Bryan Dairy Road study was completed and is currently under design by Pinellas County. Since these two studies precede the 66th Street study, this study will use the analyses and intersection design as developed in these documents, as appropriate.

The existing (1991) traffic data was gathered from several sources. The Department and the City of Pinellas Park took intersection volume and turning movement counts at the signalized intersections. This information was compiled to analyze the turning movements and peak hours for the four signalized intersections.

6.2 Multimodal Transportation System Considerations

The 66th Street area is served by the PSTA buses. There are no other plans for multimodal transportation systems considered in this area. Buses will be accommodated in the proposed improvements.

6.3 Traffic Analysis Assumptions

The process of developing project traffic consisted of the following steps:

1. Review and analysis of existing study information within the project area
2. The development of mainline Annual Average Daily Traffic (AADT)
3. Determination of the daily turning movements
4. K, D and T factors from Traffic Technical Memorandum
5. Review of approved and planned future developments in the study area and the proposed traffic generators
6. Development of design hour traffic

6.4 Existing Traffic Volumes

Existing traffic volumes within the study limits vary between 24,860 and 39,160 vehicles per day (Figure 6-1). Pedestrian and bicycle counts were performed within the study area, revealing little or no pedestrian or bicycle activity in the area.

6.5 Traffic Volume Projections

Figure 6-1 also shows the 2010 projected traffic volumes. These volumes range from 42,500 to 59,250 and show a demand for a six lane typical section. Based on analysis with HCS, this project section would operate at a Level of Service D in the design year 2010.

Figures 6-2 and 6-3 indicate the recommended intersection geometries for 66th Street at the major cross streets (signalized intersections).

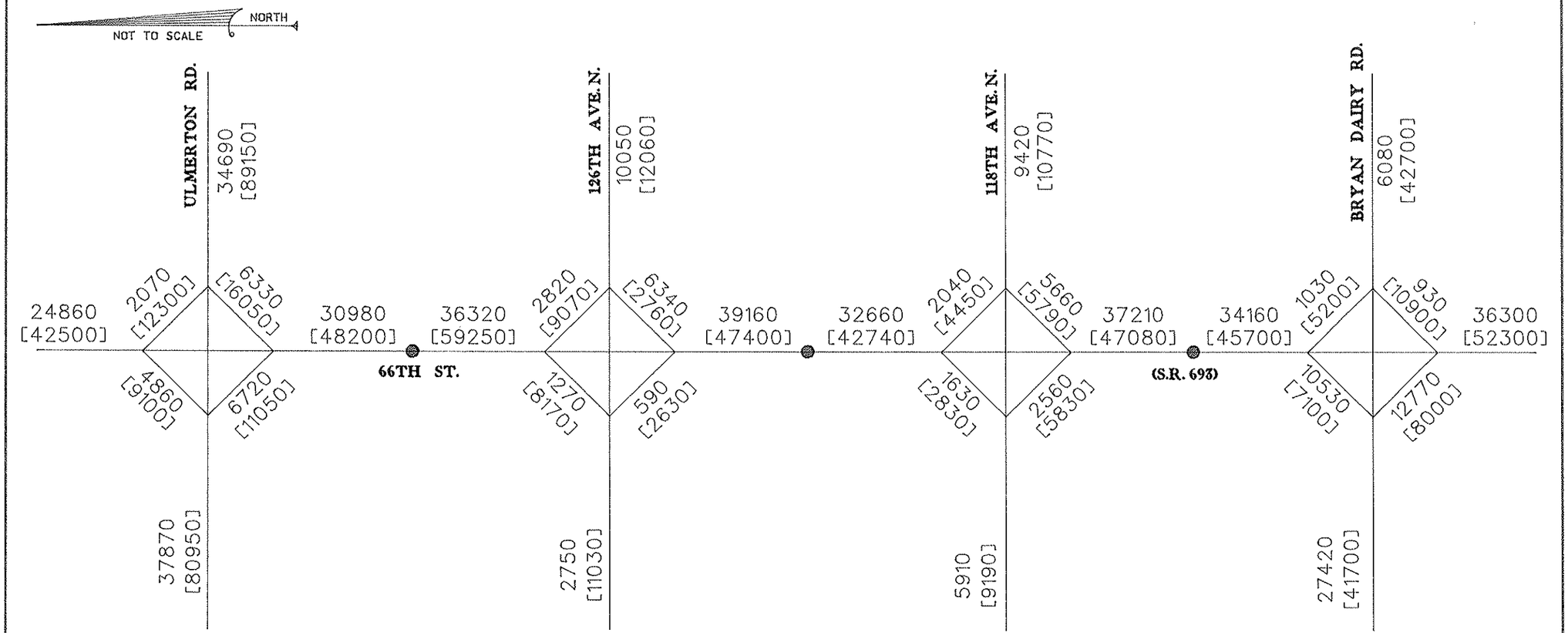
6.6 Level of Service

With the existing four lane typical section, the 66th Street alignment would continue to operate at a LOS F to the year 2010. The delay experienced by the motorist will increase as the traffic volumes increase. Based on an arterial analysis using the HCS, 66th Street will operate at a LOS D in the design year 2010 with the six lane improvement. An LOS D in the peak hour is considered acceptable for intersections in urban areas of Florida.

Table 6-1 gives the Level of Service for major intersections along the study corridor. This is based on the projected delay for the design year 2010. This table gives the existing and build levels of service. The No Build alternative is not shown since the LOS will only deteriorate with the addition of traffic.

TABLE 6-1
INTERSECTION LEVELS OF SERVICE

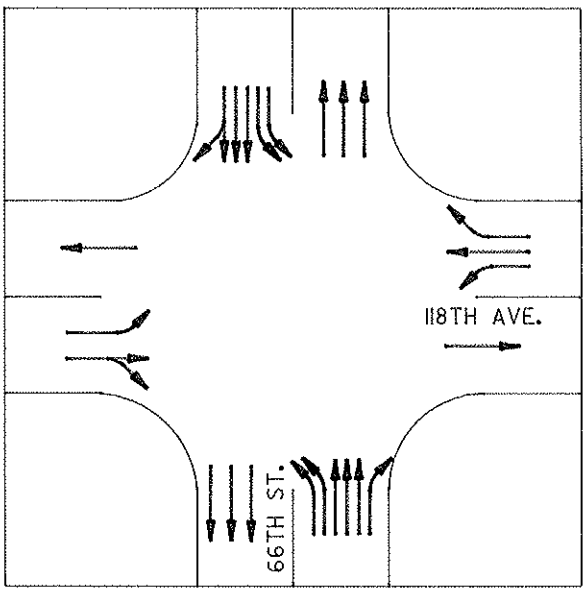
Intersection	Existing LOS	LOS with Improvements
Bryan Dairy/66th	F	D
118th Avenue/66th	F	D
126th Avenue/66th	F	D
Ulmerton Road/66th	F	D



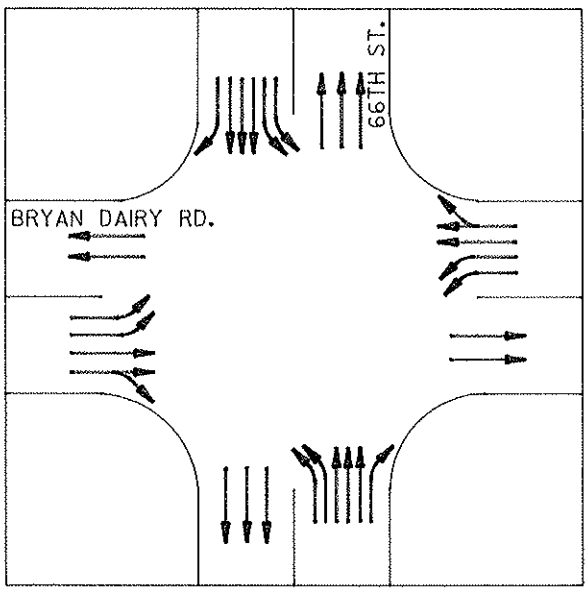
AVERAGE ANNUAL DAILY TRAFFIC
VOLUMES FOR THE YEARS:

1991
[2010]

STATE OF FLORIDA DEPT. OF TRANSPORTATION	REVISIONS DATE / BY / DESCRIPTION	66th STREET (S.R. 693) BRYAN DAIRY ROAD TO ULMERTON ROAD	FIGURE 6-1 1991 (EXISTING YEAR) AND 2010 (DESIGN YEAR) TRAFFIC VOLUMES	DATE: FEB. 26, 1998 S.P.N.: 15060-1510 W.P.I.: 7117072

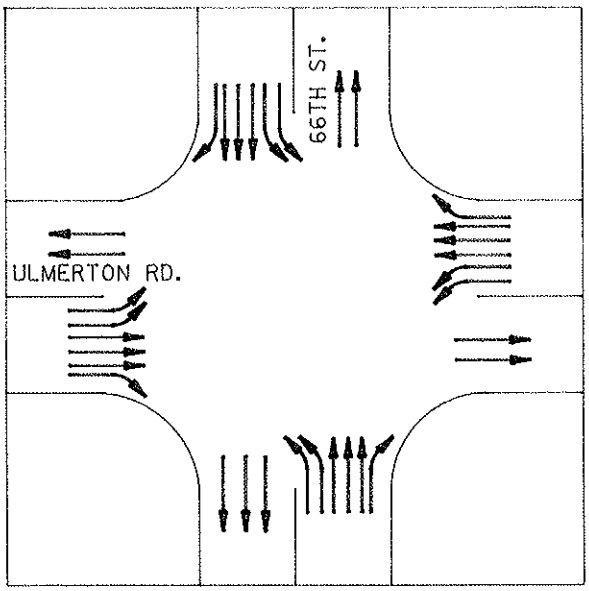


66TH STREET @ 118TH AVENUE

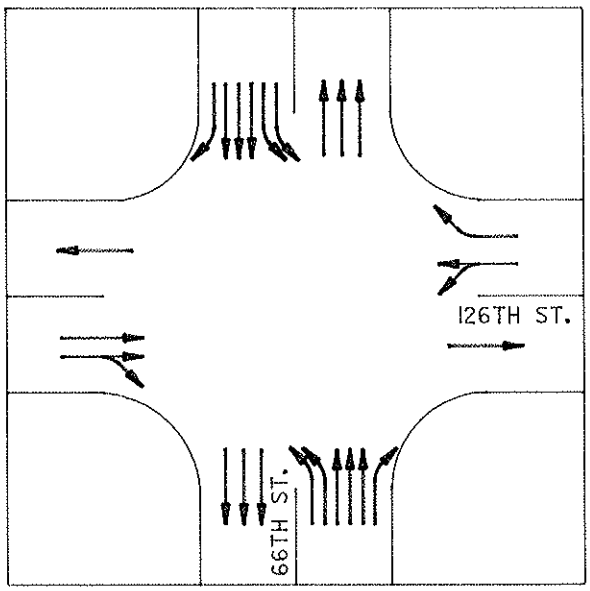


66TH STREET @ BRYAN DAIRY ROAD

STATE OF FLORIDA DEPT. OF TRANSPORTATION	66th STREET (S.R. 693) PROPOSED INTERSECTION GEOMETRY	DATE: MARCH 1993 S.P.N.: 15060-1510 W.P.I.: 7117072 FIGURE 6-2



66TH STREET @ ULMERTON ROAD



66TH STREET @ 126TH AVENUE

STATE OF FLORIDA DEPT. OF TRANSPORTATION	66th STREET (S.R. 693) PROPOSED INTERSECTION GEOMETRY	DATE: MARCH 1993 S.P.N.: 15060-1510 W.P.I.: 7117072 FIGURE 6-3

SECTION 7.0
CORRIDOR ANALYSIS

A corridor analysis was performed for the study area. A review of the project location and existing features within the study area would cause a corridor relocation to be too disruptive to the existing community. The residential area to the west of the existing 66th Street alignment would prohibit a corridor location in this direction. The light industrial and residential areas would prohibit a corridor location to the east. A major consideration was that the existing right-of-way is adequate to allow for the six lane improvement. Therefore, the only viable corridor would be along the existing 66th Street alignment.

SECTION 8.0
ALTERNATIVE ALIGNMENT ANALYSIS

8.1 No Project Alternative

As discussed in Section 5.0, there are no parallel locations for this corridor. There are also no parallel or alternate facilities that can adequately serve the travel patterns for 66th Street. It is expected that this pattern will continue, and that no new facilities will be constructed in the region that could serve the future traffic volumes for this segment of 66th Street.

The No Project alternative consists of canceling the project or postponing improvements to 66th Street until after the design year 2010. Certain advantages and disadvantages would be associated with the implementation of the No Build alternative.

The advantages of the No Project alternative include:

* No new construction cost
* No disruption to the existing land uses due to construction activities
* No disruption to traffic due to construction activities
* No environmental degradation or disruption of wildlife

The disadvantages of the No Project alternative include:

* Unacceptable levels of service on the existing roadway network
* Increased traffic congestion causing increased road user costs due to travel delay
* Deterioration of air quality caused by traffic congestion and delays
* Further deterioration of the existing safety deficiencies due to the traffic increases; increase of economic losses due to increase in vehicle collisions
* Deterioration in the emergency service response time
* Decreased economic development
* Increase roadway maintenance costs

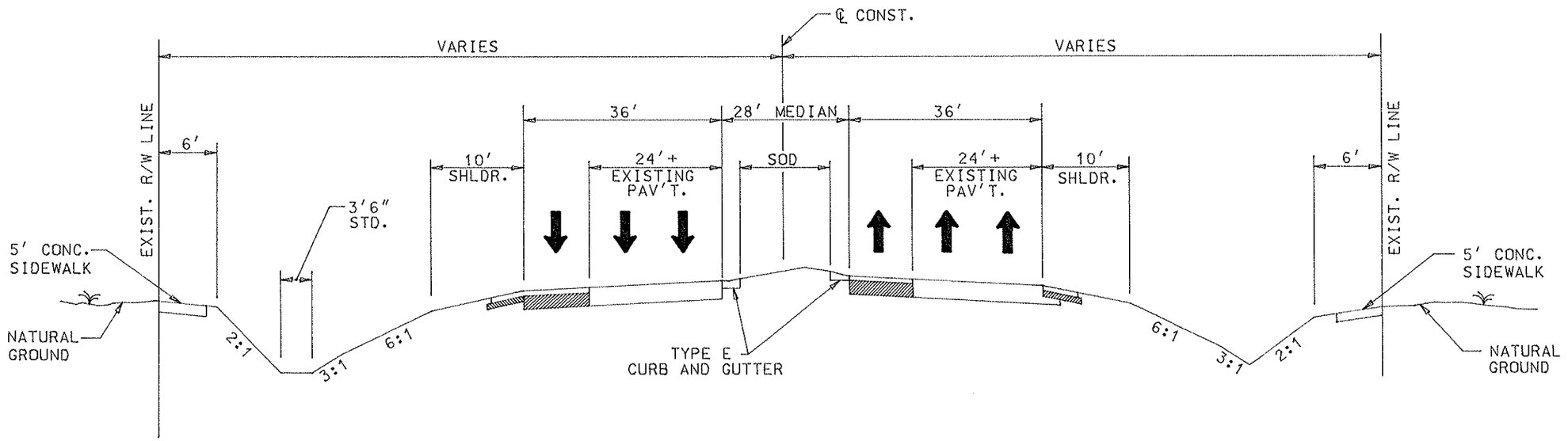
Postponement of the project may jeopardize its future economic feasibility due to the current escalation of construction costs.

8.2 Study Alternatives

With the constraint of implementing this improvement within existing right-of-way, the alternatives reviewed were variations of a six lane typical section. The study alternative (typical section) carried forth to the public hearing is shown in Figure 8-1.

8.3 Alternatives Evaluation Matrix

Figure 8-2 displays information regarding the proposed improvement versus the No Project alternative.



STATE OF FLORIDA DEPT. OF TRANSPORTATION	REVISIONS DATE / BY / DESCRIPTION	66th STREET (S.R. 693) BRYAN DAIRY ROAD TO ULMERTON ROAD	FIGURE 8-1 PROPOSED TYPICAL SECTION	DATE: MARCH 1993 S.P.N.: 15060-1510 W.P.I.: 7117072

	PROJECT LENGTH	COST ESTIMATE				RELOCATIONS			WETLAND IMPACTS
	(MILES)	DESIGN	CONST.	R-O-W	TOTAL	RES.	BUS.	TOTAL	(ACRES)
ALT. 1	1.3	$230,000	$2,287,000	0	$2,517,000	0	0	0	2.2
NO-BUILD	1.3	0	0	0	0	0	0	0	0

STATE OF FLORIDA

DEPT. OF TRANSPORTATION

66th STREET (S.R. 693)
EVALUATION MATRIX

DATE: MARCH 1993
S.P.N.: 15060-1510
W.P.I.: 7117072
FIGURE 8-2

8.4 Preferred Alternative

Based upon the anticipated need for the project, the future traffic demands and the lack of right-of-way cost, Alternative I is considered the preferred alternative. This alternative would consist of the addition of one through travel lane in each direction while the existing lanes will be resurfaced.

SECTION 9.0
PRELIMINARY DESIGN ANALYSIS

After selection of the preferred alternative and typical section, the study process must define the parameters which will be used to implement the needed improvement.

9.1 Design Traffic Volumes - Peak Hour

The directional design hour traffic volumes are presented for the signalized intersections in Figures 9-1, 9-2, 9-3 and 9-4. The peak hour volumes were derived by applying K=9.0%, D=55% and T(design)=2.3% to daily volumes for the existing and 2010 design year.

9.2 Typical Section

The preferred typical section is shown in Figure 8-1. This typical section will provide the six lane improvement determined necessary for this study.

9.3 Intersection Concepts and Signal Analysis

The existing intersections were analyzed for their levels of service for existing and No Project conditions. The build alternative introduced the projected 2010 traffic onto the roadway network and improved the intersections until an acceptable LOS was achieved. Figures 6-2 and 6-3 show the recommended intersection lane geometry for each signalized intersection to accommodate the proposed traffic. For the design year 2010, the recommended geometry will provide LOS D for the intersection.

9.4 Alignment and Right-of-way Needs

Alternative I as previously stated will maintain the existing alignment and will not require any additional right-of-way for the improvement.

9.5 Relocation

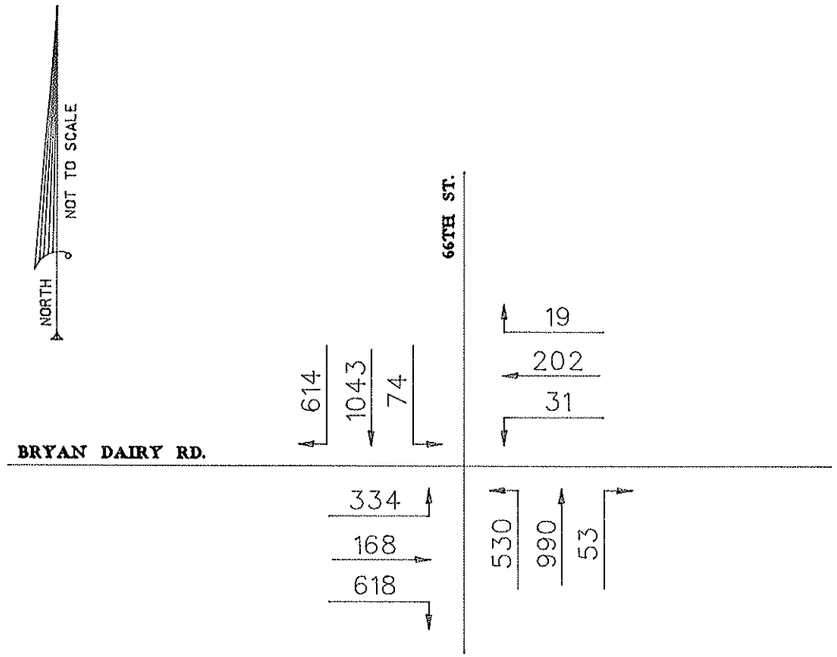
Alternative I will not require any relocations.

9.6 Construction Costs

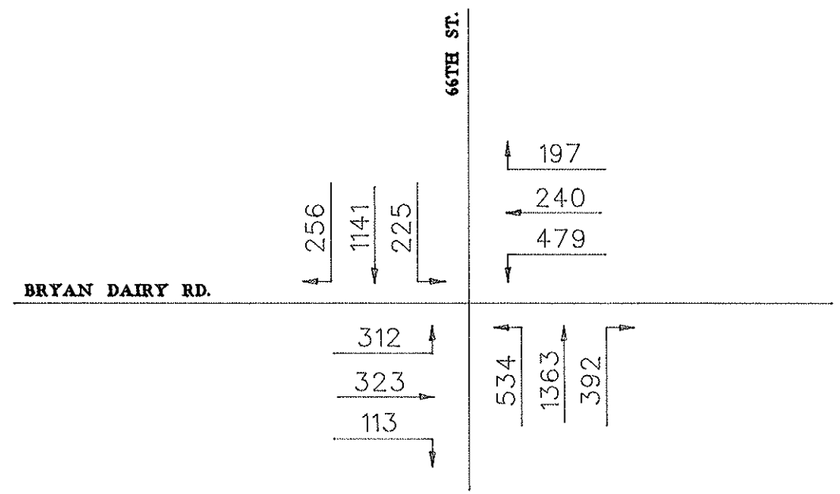
The construction cost of this project is estimate at $2,287,000. This cost includes the cost to construct an additional through lane in each direction, add paved shoulders, install median curb and gutter and resurface the existing lanes.

9.7 Preliminary Engineering Cost

The estimated cost for the preliminary engineering for this project is $230,000. This is taken as 10% of the construction cost.

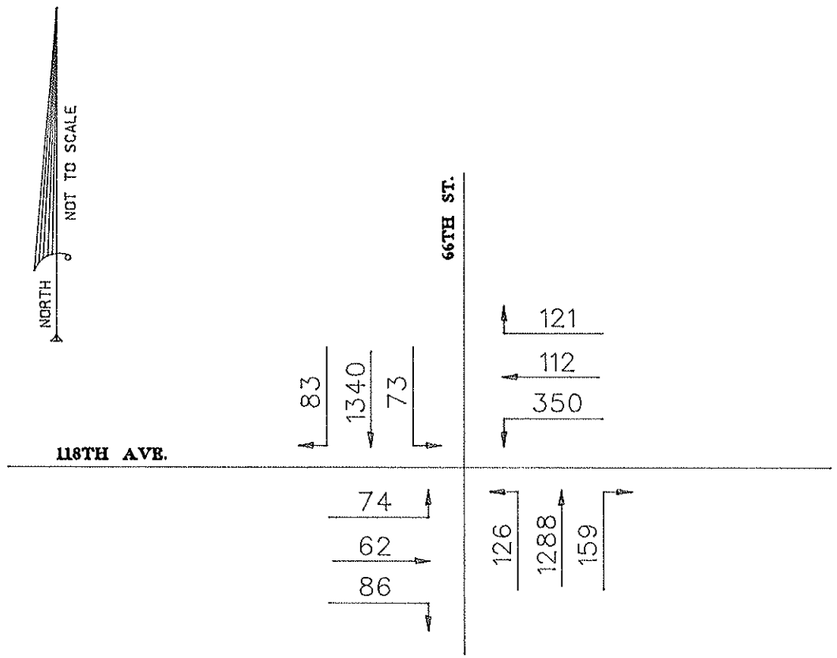


1991 PEAK HOUR VOLUMES

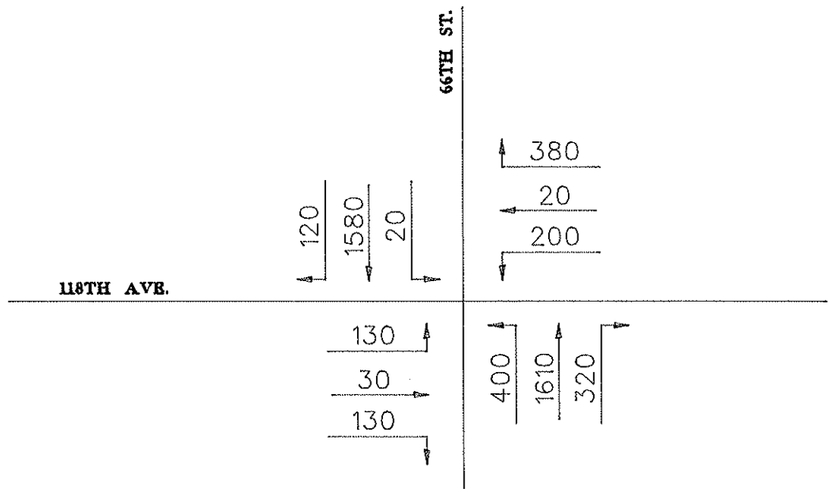


2010 PEAK HOUR VOLUMES
(AT GRADE VOLUMES ONLY)

STATE OF FLORIDA DEPT. OF TRANSPORTATION	REVISIONS DATE / BY / DESCRIPTION	66th STREET (S.R. 693) BRYAN DAIRY ROAD TO ULMERTON ROAD	FIGURE 9-1 1991 & 2010 PEAK HOUR VOLUMES - BRYAN DAIRY RD. AT 66TH ST. (S.R. 693)	DATE: MARCH 1, 1993 S.P.N.: 15060-1510 W.P.I.: 7117072

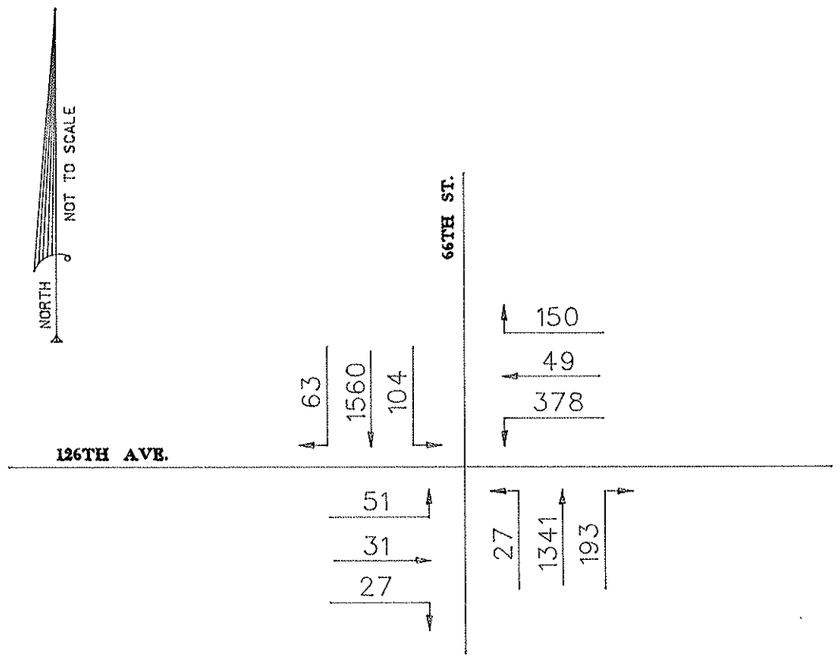


1991 PEAK HOUR VOLUMES

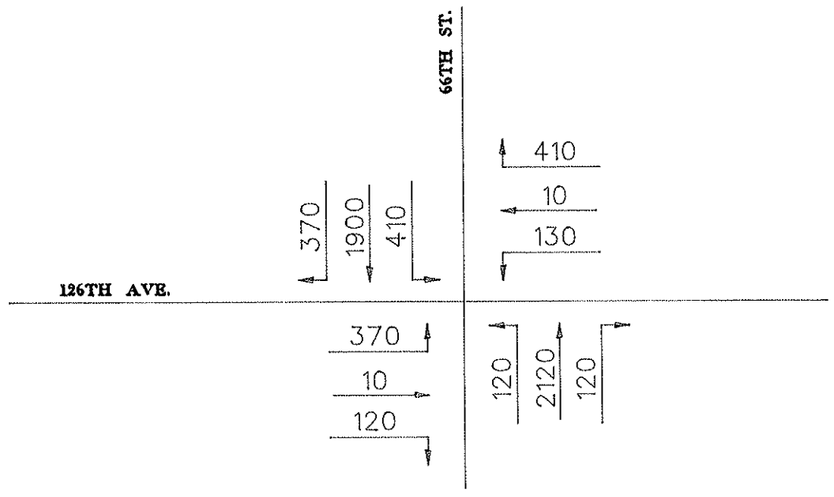


2010 PEAK HOUR VOLUMES

STATE OF FLORIDA DEPT. OF TRANSPORTATION	REVISIONS DATE / BY / DESCRIPTION	66th STREET (S.R. 693) BRYAN DAIRY ROAD TO ULMERTON ROAD	FIGURE 9-2 1991 & 2010 PEAK HOUR VOLUMES - 118TH AVE. AT 66TH ST. (S.R. 693)	DATE: MARCH 1, 1993 S.P.N.: 15060-1510 W.P.I.: 7117072

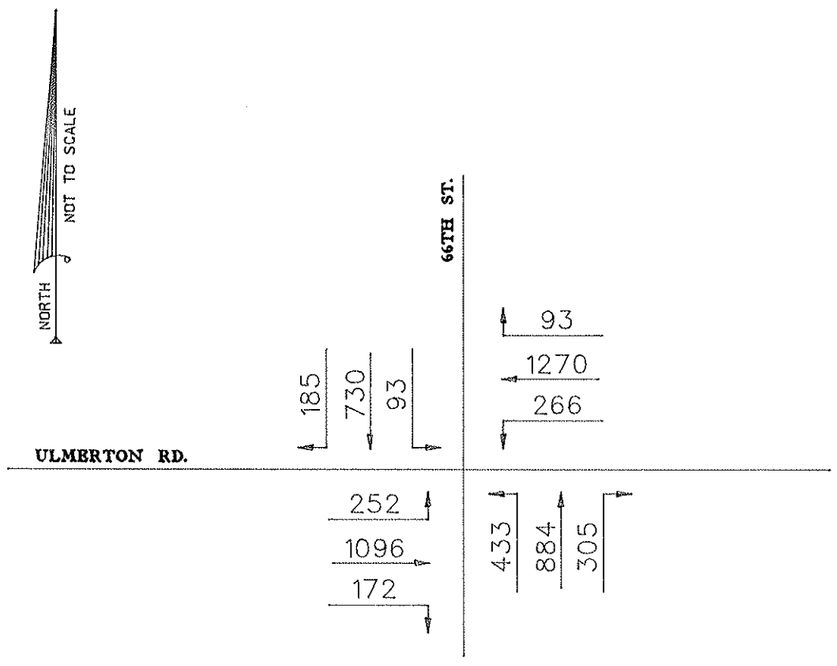


1991 PEAK HOUR VOLUMES

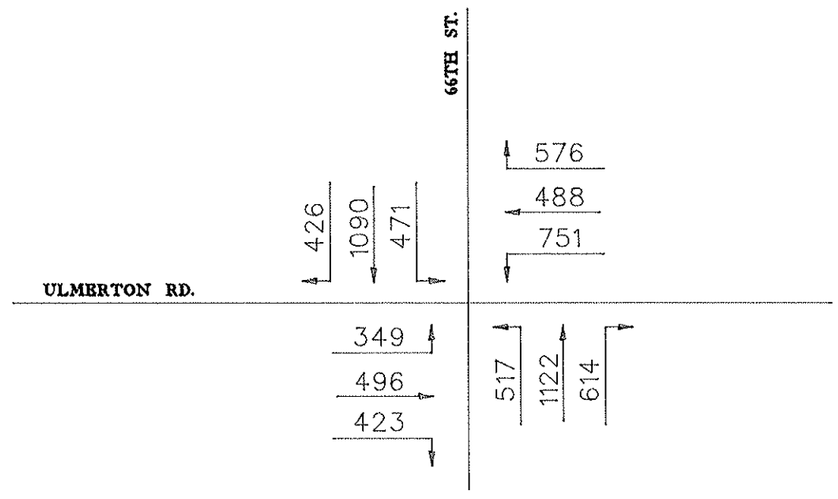


2010 PEAK HOUR VOLUMES

STATE OF FLORIDA DEPT. OF TRANSPORTATION	REVISIONS DATE / BY / DESCRIPTION	66th STREET (S.R. 693) BRYAN DAIRY ROAD TO ULMERTON ROAD	FIGURE 9-3 1991 & 2010 PEAK HOUR VOLUMES - 126TH AVE. AT 66TH ST. (S.R. 693)	DATE: MARCH 1, 1993 S.P.N.: 15060-1510 W.P.I.: 7117072



1991 PEAK HOUR VOLUMES



2010 PEAK HOUR VOLUMES

STATE OF FLORIDA DEPT. OF TRANSPORTATION	REVISIONS DATE / BY / DESCRIPTION	66th STREET (S.R. 693) BRYAN DAIRY ROAD TO ULMERTON ROAD	FIGURE 9-4 1991 & 2010 PEAK HOUR VOLUMES - ULMERTON RD. AT 66TH ST. (S.R. 693)	DATE: MARCH 1, 1998 S.P.N.: 15060-1510 W.P.I.: 7117072

9.8 Pedestrian and Bicycle Facilities

The typical section will account for pedestrians by placing a 5 foot sidewalk at the back of the right-of-way line. Bicyclists will be able to use the 4 foot paved shoulder. The addition of these facilities will allow safer environments for pedestrians and bicyclists.

9.9 Safety

The improvements to 66th Street will produce a safe and efficient facility. The additional roadway capacity should result in less congestion and motorist delay. With improvements planned at each end of this project, the improvement to 66th Street should enhance the safety of these facilities. The addition of lanes on 66th Street will be compatible with the improvements at Ulmerton Road and Bryan Dairy Road to ensure less weaving and merging of traffic due to an addition of through lanes. This addition should help reduce the number of rear end accidents. Revised signal timings should help reduce the frequency of left turning accidents. The median locations should be reviewed during final design to determine if any safety measures can be taken to reduce the conflict points and thus the angle accidents.

These improvements will also allow for faster response times for emergency vehicles since the delay along the corridor will be reduced.

9.10 Economic and Community Development

As previously discussed in Section 4.0, the 2010 Long Range Highway Plan for Pinellas County shows the need for 66th Street to be improved to accommodate the proposed growth in this area. The proposed improvements will accommodate these projected needs.

The improved facility, in conjunction with the Ulmerton Road and Bryan Dairy Road improvements, is also expected to serve proposed development and growth in the region with improved connections and reduction of delays. These factors will enhance the attractiveness of this facility for travel and growth.

There are no historical or archaeological resources within the project limits (See Appendix B). There are no existing or proposed publicly owned lands within the project limits.

Since the proposed improvements are to an existing roadway, no splitting or isolation of neighborhoods will occur. The quality of life should be enhanced with additional pedestrian and bicycle facilities.

9.11 Environmental Impacts

The wetland impacts associated with this project are impacts to existing ditches and drainage structures. The total impacts are 2.2 acres. The project's impact on wetlands is considered minimal since the encroachments will occur in areas that are manmade and are regularly mowed and maintained for water conveyance purposes.

This project has been evaluated for impacts on threatened and endangered species. There are no known threatened or endangered species within the project corridor and a finding of "No Effect" was granted by the US Fish and Wildlife Service (See Appendix B).

9.12 Utility Impacts

The existing utilities previously mentioned will have to be relocated, however, there will be accommodations within the existing right-of-way for the relocation. Each utility owner will be responsible for the required relocation. These relocations will be coordinated during the final design phase.

9.13 Traffic Control Plan

The contract requirements for maintenance of traffic and construction phasing should be structured to reflect an urban setting, therefore, a special emphasis needs to be placed on minimizing impacts to adjacent property owners and traffic during construction.

Alternative I would be constructed while maintaining two lanes of traffic, as feasible.

* For Northbound: Initial construction of the paved shoulder would allow for two travel lanes to be open as the third lane and curb and gutter are added in the median. Once the third lane is complete, traffic would be maintained on one lane while the center lane is resurfaced. Traffic would then be shifted to the two inside lanes while the outside lane is resurfaced.

* For Southbound: Two lanes would be maintained while the third lane and paved shoulder are added on the outside. Traffic would be shifted to the outer two lanes while the inside lane is resurfaced and the curb and gutter is added. Traffic would then be shifted to the outer lane while the center lane is resurfaced.

9.14 Results of Public Involvement Program

An Advanced Notification package was submitted to the State Clearinghouse for review and comment. Comments were received from the agencies listed below.

* US Department of Commerce - National Oceanic and Atmospheric Administration
* Office of the Governor - State Clearinghouse
* Florida Department of Environmental Regulation
* Florida Department of State - Division of Historical Resources
* Florida Department of Natural Resources

The majority of the comments received were regarding the anticipated permits required for this project (See Appendix B).

A public hearing was held for this project on October 13, 1992 to present Alternative I and the No Project Alternative. All affected property owners within 300 feet of the centerline of the project were notified of this hearing. An advertisement was also published in the Tampa Tribune and St. Petersburg Times to notify other interested parties. Since no right-of-way is required for the improvements, there was no controversy regarding the alignment. One comment was received for the public record regarding a turn lane. The transcript of the public hearing is included in Appendix C. The comment period was held open for 10 days following the hearing and no written comments were received. The project concept plans as presented at the public hearing are included in Appendix C.

9.15 Drainage

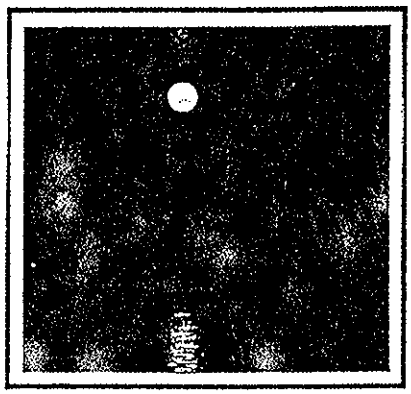
The proposed improvements will include the extension of existing drainage structures. The existing drainage patterns will not be altered with this project. The drainage ditches will be replaced to handle the roadway runoff for the improvements.

APPENDICES

APPENDIX A

WILLIAMS AND ASSOCIATES GEOTECHNICAL REPORT

FILE 7117063.16



WILLIAMS
& ASSOCIATES

EXCELLENCE IN ENGINEERING

Revised Report of Geotechnical Exploration

S.R. 693 (66th Street) from Bryan Dairy Road to 142nd Avenue

28 February 1992

Prepared For
Florida Department of Transportation

WILLIAMS
& ASSOCIATES
EXCELLENCE IN ENGINEERING

28 February 1992

Florida Department of Transportation, District VII
4950 West Kennedy Boulevard, Suite 500
Tampa, Florida 33609

Attention: Mr. Brenton Hamil, P.E.
District VII, Geotechnical Engineer

Subject: Contract State Project Number 99007-1534
District-Wide Geotechnical Services
W.P.A. No. 7110055

Report of Geotechnical Exploration
Services State Project Number 15060-1517
S.R. 593 (66th Street) from Bryan Dairy Road to
142nd Avenue, Pond Evaluation
W.P.A. Number 7117063
Assignment 21
WA Project Number 9373021

Gentlemen:

Williams & Associates has completed the geotechnical exploration outlined in the Department's Scope of Services letter, dated 17 December 1991 for the proposed retention ponds at the above referenced project. Authorization for this exploration was provided in the Department's letter dated 13 January 1992. A portion of these results were previously reported on 14 February 1992.

Eleven hand auger borings to a depth of 8 to 10 feet and eleven double ring infiltration tests with seasonal high water table estimates were performed at various station numbers requested on your Scope of Services letter. The approximate test locations are shown on the attached site drawings.

Soils encountered were generally clean fine sands (A-3). Exceptions are as shown below:

Location	Depth	Soil Types
Station 105+40, west	2.0'- 3.0'	A-2-6
Station 105+40, west	8.0'- 9.0'	A-2-6
Station 135+00, west	0.0'- 1.0'	A-8
Station 452+00, 500' west	9.0'- 10.0'	A-2-4
Station 472+00, east	4.5'- 6.0'	A-2-4
Station 472+00, east	6.0'- 8.5'	A-2-6
Station 488+00, east	6.0'- 8.0'	A-2-4

Groundwater varied from 4.8 feet to 7.0 feet below the top of the existing bank. Infiltration rates were relatively low. The rates ranged from a low of no measurable infiltration at 5 locations throughout the investigating area, to a high of 8 inches per hour at Station 154+00, west side.

The SCS Soil Classification for these soils is Myakka fine sands. These soils generally have a relatively shallow seasonal high water table (approximately 1 foot) and are poorly drained. The results of our hand auger borings and double ring infiltration tests indicate a possible lowering of the "historical" seasonal high water levels due to construction, ditches, and other alterations to drainage in the area. We estimate that actual seasonal high water levels would vary between 1.5 and 2.5' below the existing bank. Our results, along with a description of our test procedures, are attached for your use.

Should you have any questions regarding the information in this report please contact our office.

Sincerely,

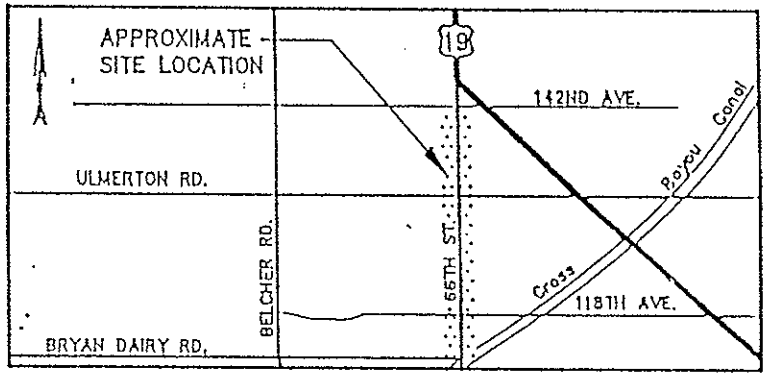
WILLIAMS & ASSOCIATES
A Division of Geotechnical Enterprises, Inc.

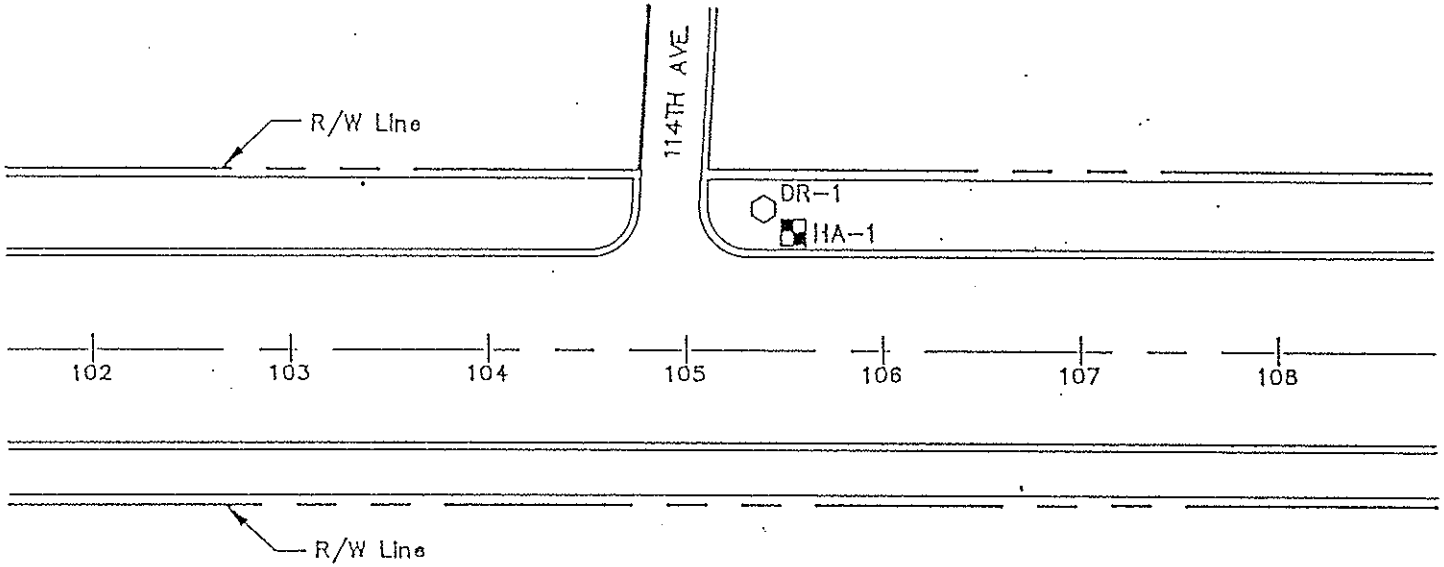
Monica L. Fowler
Staff Geologist

Keith D. Bennett, P.E.
Senior Geotechnical Engineer
Florida Registration Number 33075

Submittals: (3) Addressee
MLF\KDB\shr\feb92\9373021.rpt

APPENDIX





LEGEND

HA-1 — HAND AUGER BORING LOCATION AND I.D. NUMBER

DR-1 — DOUBLE RING INFILTRATION TEST LOCATION AND I.D. NUMBER

WILLIAMS & ASSOCIATES
A Division of Geotechnical Enterprises, Inc.
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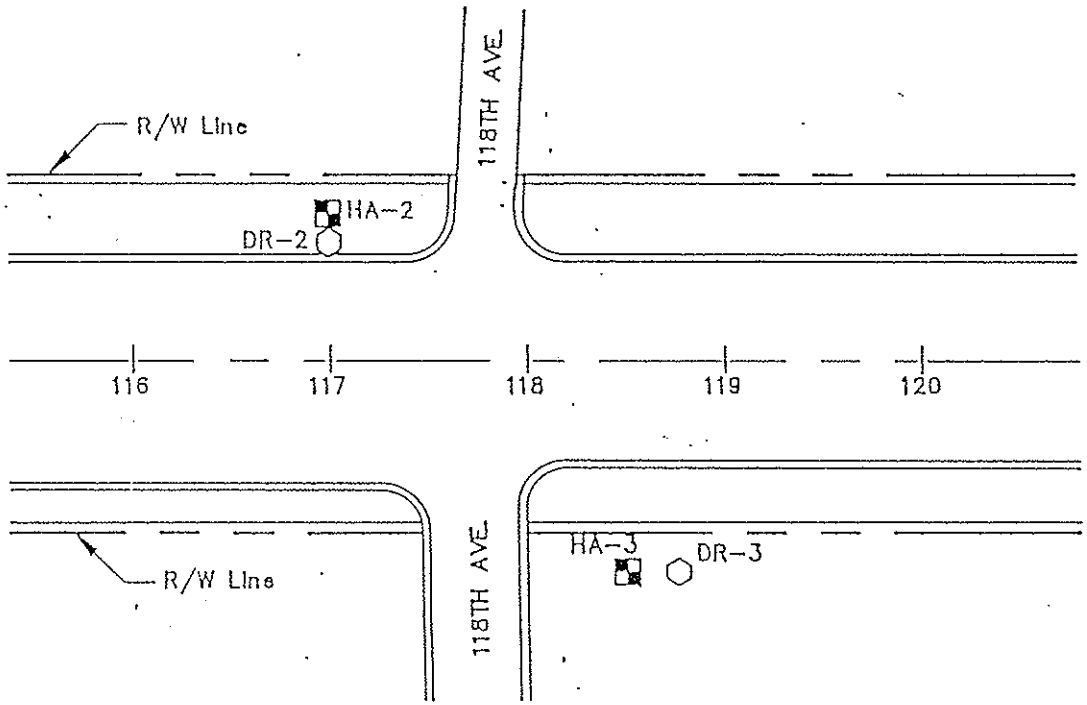
Tampa, Florida (813) 228-7020
Brooksville, Florida (904) 799-8268

FLORIDA DEPARTMENT OF TRANSPORTATION
S.R. 693-66TH ST.(BRYAN DAIRY RD. TO 142ND AVE.)
PINELLAS COUNTY, FLORIDA

FIELD EXPLORATION PLAN

Drawn By: PJG	Date: 2/06/92	Scale: 1" = 100'
Checked By: MLF	Report No. 9373021	Figure No. 1

2/06/92 FIELD1



LEGEND

HA-2
HAND AUGER BORING LOCATION AND I.D. NUMBER

DR-2
DOUBLE RING INFILTRATION TEST LOCATION AND I.D. NUMBER

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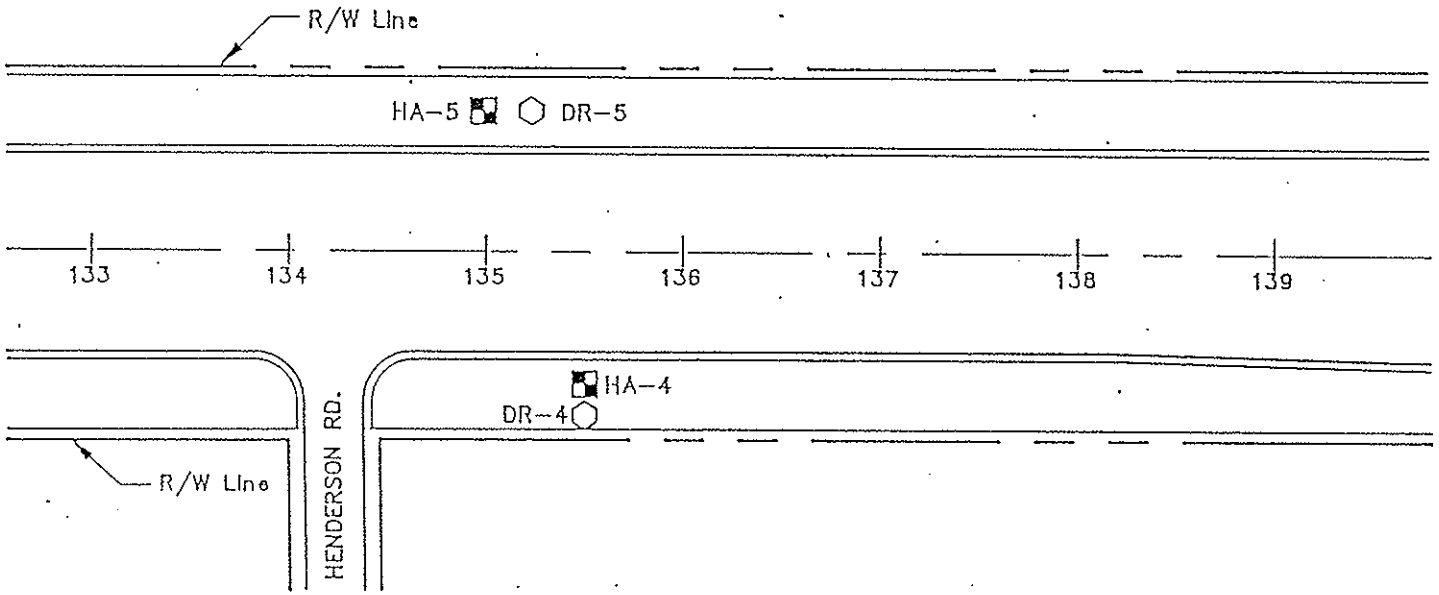
FLORIDA DEPARTMENT OF TRANSPORTATION
S.R. 693-66TH ST.(BRYAN DAIRY RD. TO 142ND AVE.)
PINELLAS COUNTY, FLORIDA

FIELD EXPLORATION PLAN

Drawn By: PJG	Date: 2/06/92	Scale: 1" = 100'
Checked By: MLF	Report No. 9373021	Figure No. 2

2/06/92 FIELD2



LEGEND

HA-4 — HAND AUGER BORING LOCATION AND I.D. NUMBER

DR-4 — DOUBLE RING INFILTRATION TEST LOCATION AND I.D. NUMBER

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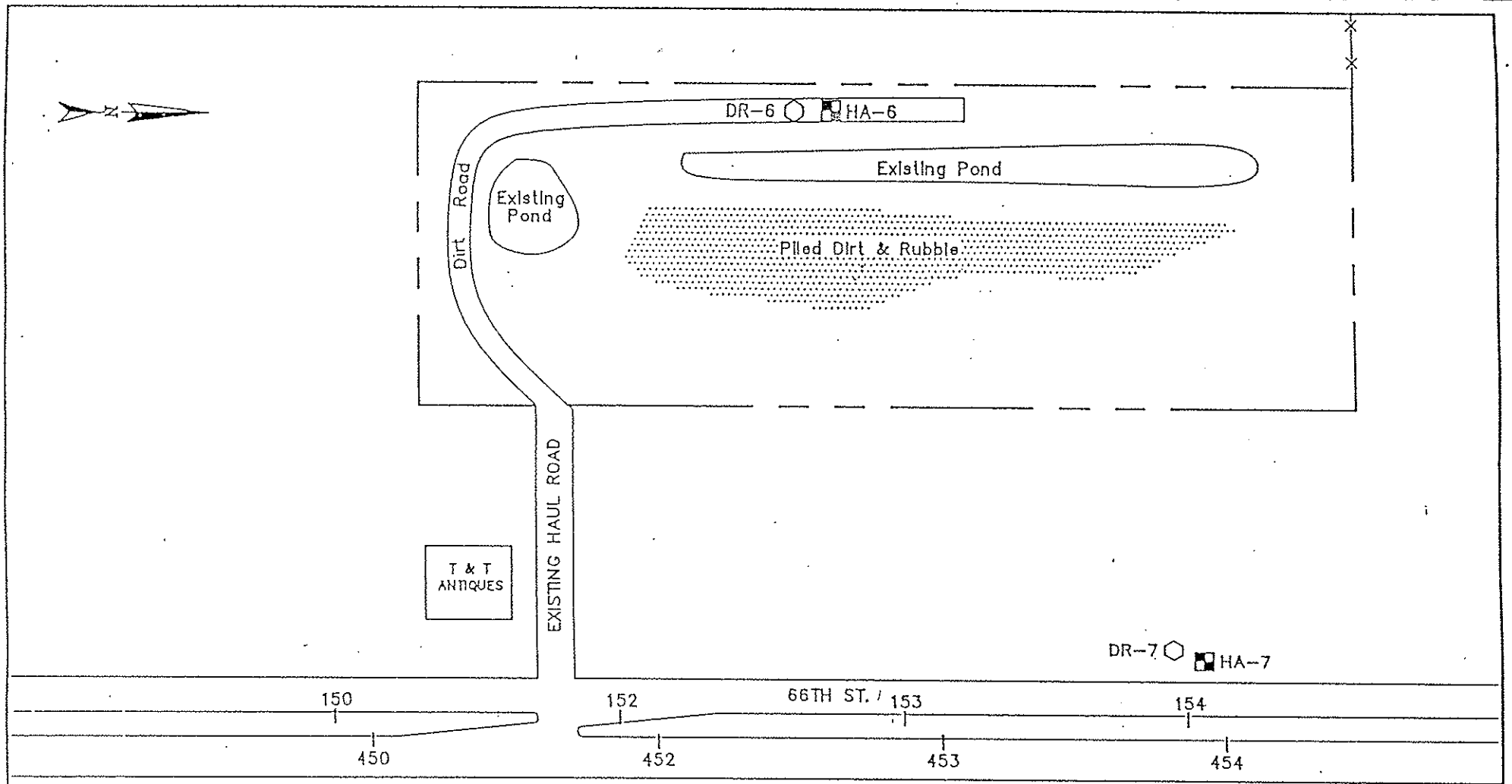
FLORIDA DEPARTMENT OF TRANSPORTATION
S.R. 693-66TH ST.(BRYAN DAIRY RD. TO 142ND AVE.)
PINELLAS COUNTY, FLORIDA

FIELD EXPLORATION PLAN

Drawn By: PJG	Date: 2/06/92	Scale: 1" = 100'
Checked By: MLF	Report No. 9373021	Figure No. 3

2/06/92 FIELD3



LEGEND

HA-6 — HAND AUGER BORING LOCATION AND I.D. NUMBER

DR-6 — DOUBLE RING INFILTRATION TEST LOCATION AND I.D. NUMBER

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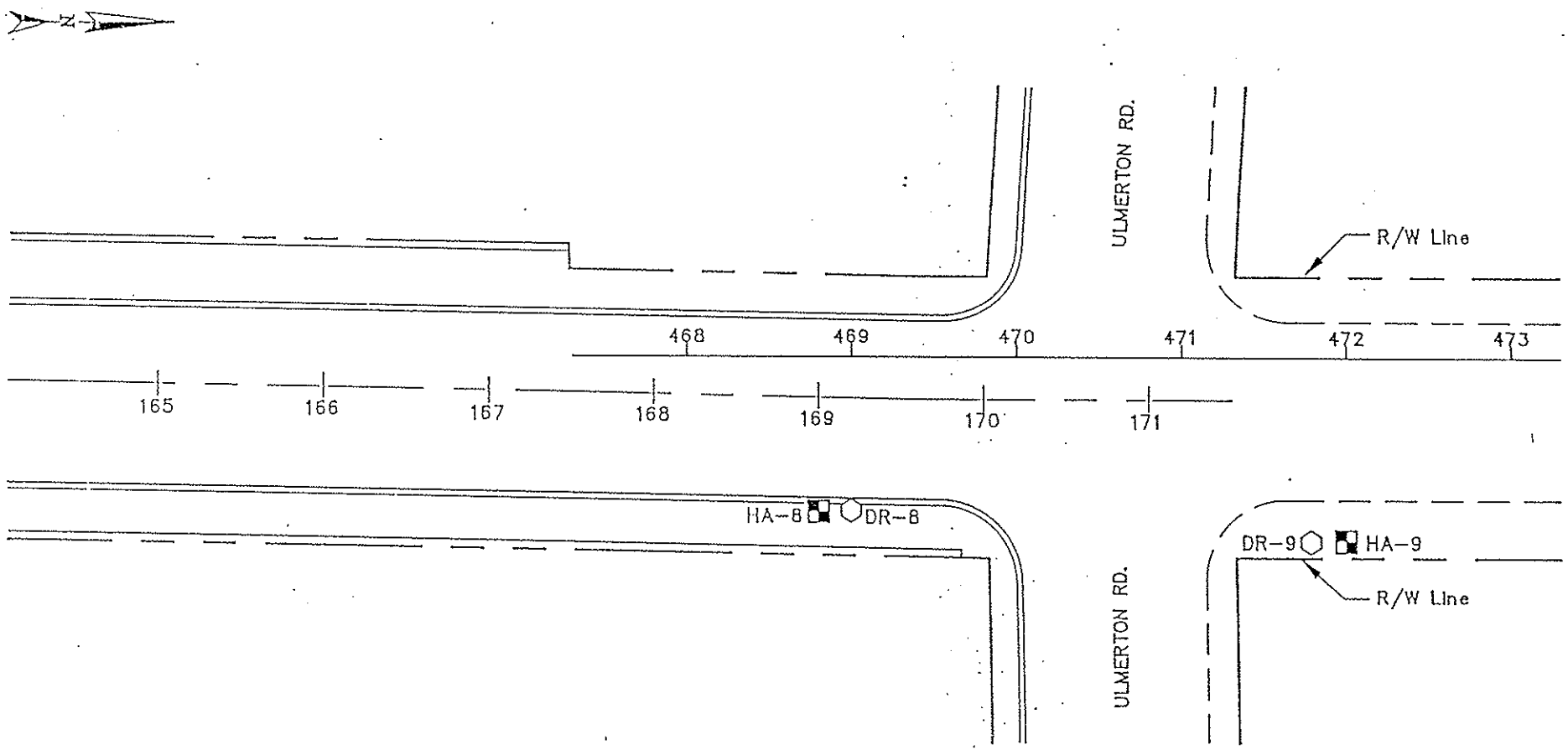
FLORIDA DEPARTMENT OF TRANSPORTATION
S.R. 693-66TH ST.(BRYAN DAIRY RD. TO 142ND AVE.)
PINELLAS COUNTY, FLORIDA

FIELD EXPLORATION PLAN

Drawn By:	PJG	Date:	2/06/92	Scale:	N.T.S.
Checked By:	MLF	Report No.	9373021	Figure No.	4

2/06 92 FIELD4



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HA-8 — HAND AUGER BORING LOCATION AND I.D. NUMBER

DR-8 — DOUBLE RING INFILTRATION TEST LOCATION AND I.D. NUMBER

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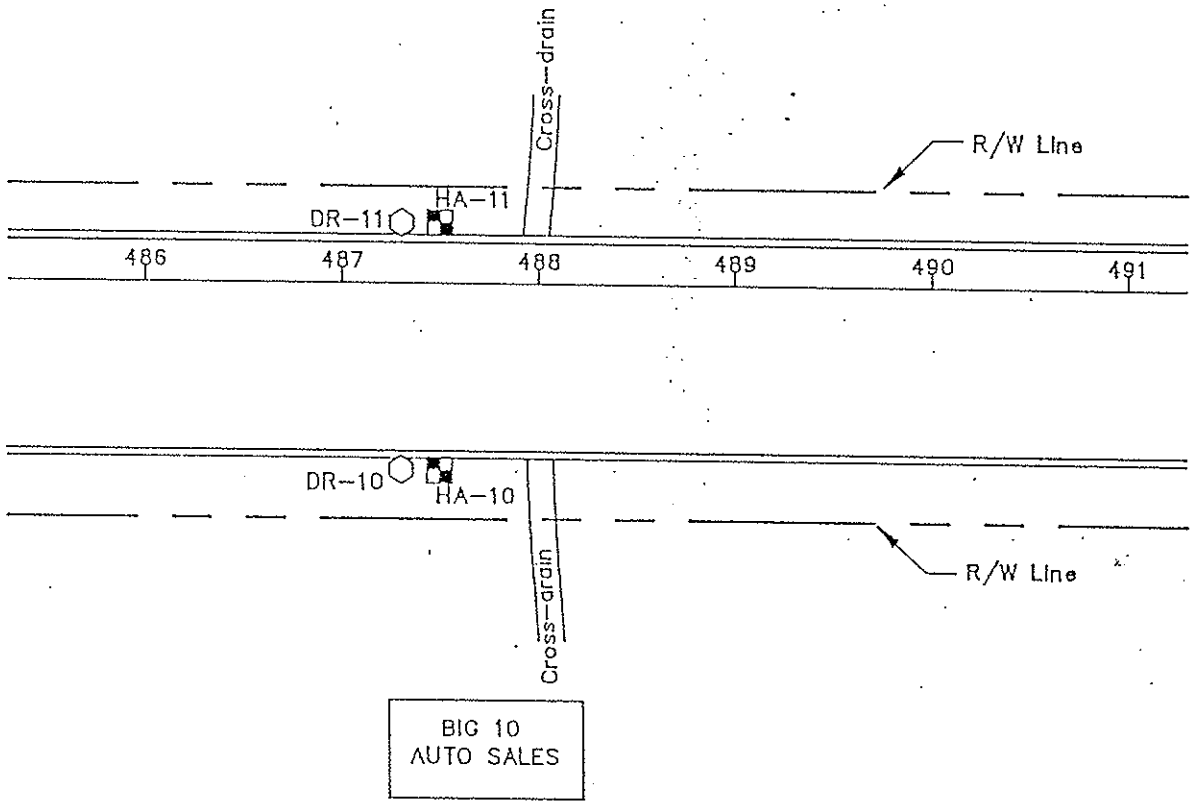
FLORIDA DEPARTMENT OF TRANSPORTATION
S.R. 693-66TH ST.(BRYAN DAIRY RD. TO 142ND AVE.)
PINELLAS COUNTY, FLORIDA

FIELD EXPLORATION PLAN

Drawn By: PJG	Date: 2/07/92	Scale: 1" = 100'
Checked By: MLF	Report No. 9373021	Figure No. 5

2/07/92 FIELD5



LEGEND

HA-10
— HAND AUGER BORING LOCATION AND I.D. NUMBER

DR-10
— DOUBLE RING INFILTRATION TEST LOCATION AND I.D. NUMBER

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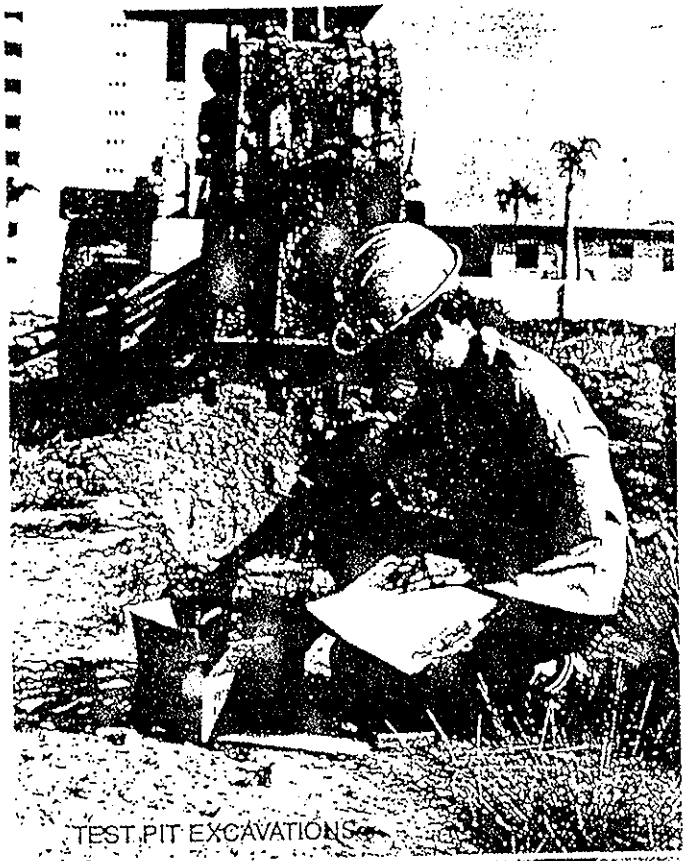
FLORIDA DEPARTMENT OF TRANSPORTATION
S.R. 693-66TH ST.(BRYAN DAIRY RD. TO 142ND AVE.)
PINELLAS COUNTY, FLORIDA

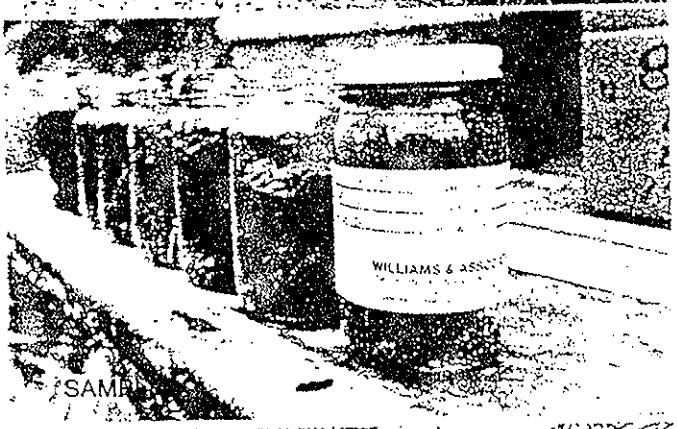
FIELD EXPLORATION PLAN

Drawn By: PJG	Date: 2/07/92	Scale: N.T.S.
Checked By: MLF	Report No. 9373021	Figure No. 6

2/07/92 FIELD6



TEST PIT EXCAVATIONS



SAMPLE

SAMPLE CLASSIFICATION

TEST PIT AND STANDARD HAND AUGER INVESTIGATIVE PROCEDURES

There are various procedures available for developing necessary soils information. Williams & Associates employs the most economical methods of investigation relative to the suspected problem.

The logs detailed in the appendix of this report are an interpretation of information obtained by either hand auger or test pit operations, as noted.

TEST PIT OPERATIONS

Test pits expose a large cross-section of the below-ground profile. This exploration method is especially helpful when it is necessary to define the limits of a deleterious stratum, such as highly organic materials or rubble. Information is obtained using small tractor-mounted backhoe equipment, generally outfitted with an 18-inch wide bucket. Soil strata are classified visually in the field. Strata thicknesses and depths below the ground area are measured and recorded. Bulk samples of soil strata of particular interest may be retrieved as part of the investigation.

HAND AUGER BORINGS

Auger borings often provide the simplest method of soil investigation and sampling. They may be used for any purpose where shallow subsurface data are required. They are also valuable in connection with groundwater level determinations and for defining changes in soil strata at shallow depths.

Soil strata are classified visually in the field based on samples brought to ground surface with the use of hand auger equipment measuring approximately 3 inches in diameter. Depths of auger investigations are usually limited by groundwater conditions and soil characteristics. In sandy soils, for instance, penetration is generally limited to groundwater table level. Samples from strata of special interest are sealed in containers, labeled and returned to the laboratory for visual examination and testing, if necessary.

GROUNDWATER TABLES

Groundwater levels relative to foundation placement are generally pertinent to successful local Florida construction. The enclosed data sheets represent water tables measured at the time of our investigation. These levels may vary significantly due to prevailing climatic conditions and should be rechecked periodically if critical to any below-ground structural plans.

SAMPLE DISPOSAL

Laboratory soil samples will be disposed of upon completion of tests unless otherwise agreed.

shr\feb92\9373021.dri

WILLIAMS & ASSOCIATES
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FAX: (813) 530-1571

DOUBLE RING INFILTROMETER (ASTM D-3385)

CLIENT: Florida Department of Transportation
PROJECT: SR 693, 66th Street from Bryan Dairy Road to 142nd Avenue

PROJECT NUMBER: 9373021
PERFORMED BY: F. Dyer
DATE PERFORMED: 01/28/1992

DEPTH (FT) FROM - TO	SOIL DESCRIPTION
Location:	Station 105+40, west side; auger performed on top of bank, infiltration test performed within 3' ditch
0.0 - 2.0	Brown slightly shelly fine sand (A-3)
2.0 - 3.0	Grayish brown clayey fine sand (A-2-6)
3.0 - 8.0	Grayish brown shelly fine sand (A-3)
8.0 - 9.0	Grayish brown clayey fine sand (A-2-6)
9.0 - 10.0	Mottled brown and light brown fine sand (A-3)

Groundwater level at time of auger, (below existing bank surface): 5.0'
Seasonal High Groundwater Level*: Approximately 2.5' ± 6" below existing bank
Infiltration Rate: 5 in/hr.
Depth Performed: Approximately 18" below bottom of existing ditch

* The soils are "Myakka fine sands" for SCS identification purposes.

Double Ring Infiltrometer Test - The double ring infiltrometer test was performed in the field in general accordance with the procedures outlined in ASTM D-3385, "Infiltration Rate of Soils in Field using Double Ring Infiltrometers". Testing consisted of initially clearing all surface vegetation and topsoil from within the test area. The outer ring, which is approximately 24 inches in diameter, was then driven to a depth of 6 inches below the exposed ground surface. The inner ring, approximately 12 inches in diameter, was then centrally located within the outer ring and driven to a depth of 2 inches. The two rings were then simultaneously filled with water to a height of 4 inches above the exposed ground surface test soils. The water level was maintained at this height throughout the test period, with the required amount of water added to maintain this level in both rings recorded at time intervals of five minutes. After reaching a stabilized inflow of water, the test was continued for a period of approximately 30 minutes.

The infiltration rate for (1) the inner ring, (2) the annular space between the rings, the (3) both rings combined is determined by dividing (a) the water volume used (within each specific area) during the stabilized flow period of the test, by (b) the specific area and (c) the time interval. Infiltration rates are generally converted to units of inches per hour. The infiltration rate for the inner ring, if different than the infiltration rates of either the annular area between the rings or the combined area of both rings, according to ASTM, should be used as the infiltration rate for the soils.

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DOUBLE RING
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CI
PT: Florida Department of Transportation
SR 693, 66th Street from Bryan Dairy Road to 142nd Avenue

PROJECT NUMBE
PERFORMED BY:
DATE PERFORME

H (FT)
M - TO

SOIL DESCRIPTION

cation: Station 117+00, west side: auger and infiltration test performed wit

.0 - 2.0	Dark brown fine sand (A-3)
2.0 - 4.0	Grayish brown fine sand (A-3)
4.0 - 8.0	Grayish brown slightly clayey fine sand (A-3)

Groundwater level at time of auger, (below existing ditch bottom): 2.0'
Seasonal High Groundwater Level*: Approximately 2.5' ± 6" below existing b
Infiltration Rate: None
Depth Performed: Approximately 18" below bottom of existing ditch

* The soils are "Myakka fine sands" for SCS identification purposes.

Double Ring Infiltrometer Test - The double ring infiltrometer test was performed in the field in general accor the procedures outlined in ASTM D-3385, "Infiltration Rate of Soils in Field using Double Ring Infiltrometers consisted of initially clearing all surface vegetation and topsoil from within the test area. The outer rin approximately 24 inches in diameter, was then driven to a depth of 6 inches below the exposed ground surface. ring, approximately 12 inches in diameter, was then centrally located within the outer ring and driven to a d inches. The two rings were then simultaneously filled with water to a height of 4 inches above the exposed grou test soils. The water level was maintained at this height throughout the test period, with the required amount added to maintain this level in both rings recorded at time intervals of five minutes. After reaching a stabilized water, the test was continued for a period of approximately 30 minutes.

The infiltration rate for (1) the inner ring, (2) the annular space between the rings, the (3) both rings com determined by dividing (a) the water volume used (within each specific area) during the stabilized flow period of by (b) the specific area and (c) the time interval. Infiltration rates are generally converted to units of inches p The infiltration rate for the inner ring, if different than the infiltration rates of either the annular area between t or the combined area of both rings, according to ASTM, should be used as the infiltration rate for the soils.

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DOUBLE RING INFILTROMETER (ASTM D-3385)

CLIENT: Florida Department of Transportation
PROJECT: SR 693, 66th Street from Bryan Dairy Road to 142nd Avenue

PROJECT NUMBER: 9373021
PERFORMED BY: F. Dyer
DATE PERFORMED: 01/28/1992

DEPTH (FT) FROM - TO	SOIL DESCRIPTION
Location:	Station 118+50, east side; auger and infiltration test performed on bank
0.0 - 2.5	Brown fine sand with minor roots (A-3)
2.5 - 4.0	Mottled brown and light brown sand (A-3)
4.0 - 6.0	Mottled brown and dark reddish brown fine sand (A-3)
6.0 - 9.0	Brown fine sand (A-3)

Groundwater level at time of auger, (below existing bank surface): 5.0'
Seasonal High Groundwater Level*: Approximately 2.5' ± 6" below existing bank
Infiltration Rate: 7 in/hr.
Depth Performed: Approximately 18" below top of bank

* The soils are "Myakka fine sands" for SCS identification purposes.

Double Ring Infiltrometer Test - The double ring infiltrometer test was performed in the field in general accordance with the procedures outlined in ASTM D-3385, "Infiltration Rate of Soils in Field using Double Ring Infiltrometers". Testing consisted of initially clearing all surface vegetation and topsoil from within the test area. The outer ring, which is approximately 24 inches in diameter, was then driven to a depth of 6 inches below the exposed ground surface. The inner ring, approximately 12 inches in diameter, was then centrally located within the outer ring and driven to a depth of 2 inches. The two rings were then simultaneously filled with water to a height of 4 inches above the exposed ground surface test soils. The water level was maintained at this height throughout the test period, with the required amount of water added to maintain this level in both rings recorded at time intervals of five minutes. After reaching a stabilized inflow of water, the test was continued for a period of approximately 30 minutes.

The infiltration rate for (1) the inner ring, (2) the annular space between the rings, the (3) both rings combined is determined by dividing (a) the water volume used (within each specific area) during the stabilized flow period of the test, by (b) the specific area and (c) the time interval. Infiltration rates are generally converted to units of inches per hour. The infiltration rate for the inner ring, if different than the infiltration rates of either the annular area between the rings or the combined area of both rings, according to ASTM, should be used as the infiltration rate for the soils.

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DOUBLE RING INFILTROMETER (ASTM D-3385)

CLIENT: Florida Department of Transportation
PROJECT: SR 693, 66th Street from Bryan Dairy Road to 142nd Avenue

PROJECT NUMBER: 9373021
PERFORMED BY: F. Dyer
DATE PERFORMED: 01/28/1992

DEPTH (FT) FROM - TO	SOIL DESCRIPTION
Location:	Station 135+00, west side; auger and infiltration test performed within 2' ditch
0.0 - 1.0	Grayish brown fine sand with minor roots (A-3)
1.0 - 2.0	Dark reddish brown silty fine sand with finely divided organic matter (A-8)
2.0 - 3.0	Reddish brown slightly silty fine sand (A-3)
3.0 - 3.5	Dark brown fine sand (A-3)
3.5 - 4.0	Reddish brown fine sand (A-3)
4.0 - 7.0	Light brown fine sand (A-3)
7.0 - 9.0	Light grayish brown fine sand (A-3)

Groundwater level at time of auger, (below existing ditch bottom): 4.0'
Seasonal High Groundwater Level*: Approximately 2.5' ± 6" below existing bank
Infiltration Rate: None
Depth Performed: Approximately 18" below existing ditch

* The soils are "Myakka fine sands" for SCS identification purposes.

Double Ring Infiltrometer Test - The double ring infiltrometer test was performed in the field in general accordance with the procedures outlined in ASTM D-3385, "Infiltration Rate of Soils in Field using Double Ring Infiltrometers". Testing consisted of initially clearing all surface vegetation and topsoil from within the test area. The outer ring, which is approximately 24 inches in diameter, was then driven to a depth of 6 inches below the exposed ground surface. The inner ring, approximately 12 inches in diameter, was then centrally located within the outer ring and driven to a depth of 2 inches. The two rings were then simultaneously filled with water to a height of 4 inches above the exposed ground surface test soils. The water level was maintained at this height throughout the test period, with the required amount of water added to maintain this level in both rings recorded at time intervals of five minutes. After reaching a stabilized inflow of water, the test was continued for a period of approximately 30 minutes.

The infiltration rate for (1) the inner ring, (2) the annular space between the rings, the (3) both rings combined is determined by dividing (a) the water volume used (within each specific area) during the stabilized flow period of the test, by (b) the specific area and (c) the time interval. Infiltration rates are generally converted to units of inches per hour. The infiltration rate for the inner ring, if different than the infiltration rates of either the annular area between the rings or the combined area of both rings, according to ASTM, should be used as the infiltration rate for the soils.

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DOUBLE RING INFILTROMETER

(ASTM D-3385)

CLIENT: Florida Department of Transportation
PROJECT: SR 693, 66th Street from Bryan Dairy Road to 142nd Avenue

PROJECT NUMBER: 9373021
PERFORMED BY: F. Dyer
DATE PERFORMED: 01/28/1992

DEPTH (FT) FROM - TO	SOIL DESCRIPTION
Location:	Station 135+50, east side, auger performed at bottom of 4' ditch, infiltration test performed on bank
0.0 - 2.0	Dark brown fine sand (A-3)
2.0 - 3.0	Dark reddish brown slightly silty fine sand (A-3)
3.0 - 9.0	Light grayish brown fine sand (A-3)

Groundwater level at time of auger, (below existing ditch bottom): 3.0'
Seasonal High Groundwater Level*: Approximately 2.5' ± 6" below existing bank
Infiltration Rate: 6 in/hr.
Depth Performed: Approximately 18" below top of bank

* The soils are "Myakka fine sands" for SCS identification purposes.

Double Ring Infiltrometer Test - The double ring infiltrometer test was performed in the field in general accordance with the procedures outlined in ASTM D-3385, "Infiltration Rate of Soils in Field using Double Ring Infiltrometers". Testing consisted of initially clearing all surface vegetation and topsoil from within the test area. The outer ring, which is approximately 24 inches in diameter, was then driven to a depth of 6 inches below the exposed ground surface. The inner ring, approximately 12 inches in diameter, was then centrally located within the outer ring and driven to a depth of 2 inches. The two rings were then simultaneously filled with water to a height of 4 inches above the exposed ground surface test soils. The water level was maintained at this height throughout the test period, with the required amount of water added to maintain this level in both rings recorded at time intervals of five minutes. After reaching a stabilized inflow of water, the test was continued for a period of approximately 30 minutes.

The infiltration rate for (1) the inner ring, (2) the annular space between the rings, the (3) both rings combined is determined by dividing (a) the water volume used (within each specific area) during the stabilized flow period of the test, by (b) the specific area and (c) the time interval. Infiltration rates are generally converted to units of inches per hour. The infiltration rate for the inner ring, if different than the infiltration rates of either the annular area between the rings or the combined area of both rings, according to ASTM, should be used as the infiltration rate for the soils.

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DOUBLE RING INFILTROMETER (ASTM D-3385)

CLIENT: Florida Department of Transportation
PROJECT: SR 693, 66th Street from Bryan Dairy Road to 142nd Avenue

PROJECT NUMBER: 9373021
PERFORMED BY: F. Dyer
DATE PERFORMED: 01/28/1992

DEPTH (FT) FROM - TO	SOIL DESCRIPTION
Location:	Station 154+00, east side; auger and infiltration test performed on bank
0.0 - 1.0	Dark brown fine sand with minor roots (A-3)
1.0 - 2.0	Brown fine sand with limerock fragments (A-3)
2.0 - 3.0	Dark grayish brown fine sand with minor limerock fragments (A-3)
3.0 - 4.0	Gray fine sand (A-3)
4.0 - 6.0	Dark brown fine sand (A-3)
6.0 - 7.0	Reddish brown fine sand (A-3)
7.0 - 9.0	Light brown fine sand (A-3)

Groundwater level at time of auger, (below existing bank surface): 6.0'
Seasonal High Groundwater Level*: Approximately 2.5' ± 6" below existing bank
Infiltration Rate: 8 in/hr.
Depth Performed: Approximately 18" below top of bank

* The soils are "Myakka fine sands" for SCS identification purposes.

Double Ring Infiltrometer Test - The double ring infiltrometer test was performed in the field in general accordance with the procedures outlined in ASTM D-3385, "Infiltration Rate of Soils in Field using Double Ring Infiltrometers". Testing consisted of initially clearing all surface vegetation and topsoil from within the test area. The outer ring, which is approximately 24 inches in diameter, was then driven to a depth of 6 inches below the exposed ground surface. The inner ring, approximately 12 inches in diameter, was then centrally located within the outer ring and driven to a depth of 2 inches. The two rings were then simultaneously filled with water to a height of 4 inches above the exposed ground surface test soils. The water level was maintained at this height throughout the test period, with the required amount of water added to maintain this level in both rings recorded at time intervals of five minutes. After reaching a stabilized inflow of water, the test was continued for a period of approximately 30 minutes.

The infiltration rate for (1) the inner ring, (2) the annular space between the rings, the (3) both rings combined is determined by dividing (a) the water volume used (within each specific area) during the stabilized flow period of the test, by (b) the specific area and (c) the time interval. Infiltration rates are generally converted to units of inches per hour. The infiltration rate for the inner ring, if different than the infiltration rates of either the annular area between the rings or the combined area of both rings, according to ASTM, should be used as the infiltration rate for the soils.

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DOUBLE RING INFILTROMETER (ASTM D-3385)

CLIENT: Florida Department of Transportation
PROJECT: SR 693, 66th Street from Bryan Dairy Road to 142nd Avenue

PROJECT NUMBER: 9373021
PERFORMED BY: F. Dyer
DATE PERFORMED: 01/29/1992

DEPTH (FT) FROM - TO	SOIL DESCRIPTION
Location:	Station 452+00, 500' west side; auger and infiltration test performed on bank
0.0 - 1.0	Mottled brown and light gray fine sand with minor roots (A-3)
1.0 - 2.5	Dark reddish brown slightly silty fine sand (A-3)
2.5 - 4.0	Brown fine sand (A-3)
4.0 - 5.0	Light grayish brown fine sand with minor roots (A-3)
5.0 - 9.0	Light gray shelly fine sand (A-3)
9.0 - 10.0	Black silty fine sand with minor finely divided organic matter (A-2-4)

Groundwater level at time of auger, (below existing bank surface): 4.0'
Seasonal High Groundwater Level*: Approximately 2.0' ± 6" below existing bank
Infiltration Rate: 2 in/hr.
Depth Performed: Approximately 18" below top of bank

* The soils are "Myakka fine sands" for SCS identification purposes.

Double Ring Infiltrometer Test - The double ring infiltrometer test was performed in the field in general accordance with the procedures outlined in ASTM D-3385, "Infiltration Rate of Soils in Field using Double Ring Infiltrometers". Testing consisted of initially clearing all surface vegetation and topsoil from within the test area. The outer ring, which is approximately 24 inches in diameter, was then driven to a depth of 6 inches below the exposed ground surface. The inner ring, approximately 12 inches in diameter, was then centrally located within the outer ring and driven to a depth of 2 inches. The two rings were then simultaneously filled with water to a height of 4 inches above the exposed ground surface test soils. The water level was maintained at this height throughout the test period, with the required amount of water added to maintain this level in both rings recorded at time intervals of five minutes. After reaching a stabilized inflow of water, the test was continued for a period of approximately 30 minutes.

The infiltration rate for (1) the inner ring, (2) the annular space between the rings, the (3) both rings combined is determined by dividing (a) the water volume used (within each specific area) during the stabilized flow period of the test, by (b) the specific area and (c) the time interval. Infiltration rates are generally converted to units of inches per hour. The infiltration rate for the inner ring, if different than the infiltration rates of either the annular area between the rings or the combined area of both rings, according to ASTM, should be used as the infiltration rate for the soils.

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DOUBLE RING INFILTROMETER

(ASTM D-3385)

CLIENT: Florida Department of Transportation
PROJECT: SR 693, 66th Street from Bryan Dairy Road to 142nd Avenue

PROJECT NUMBER: 9373021
PERFORMED BY: F. Dyer
DATE PERFORMED: 01/29/1992

DEPTH (FT) FROM - TO	SOIL DESCRIPTION
Location:	Station 169+00, east side; auger and infiltration test performed on bank
0.0 - 3.0	Brown fine sand with limerock fragments (A-3)
3.0 - 4.0	Mottled gray and reddish brown fine sand (A-3)
4.0 - 6.0	Mottled light gray and dark gray fine sand (A-3)
6.0 - 7.0	Grayish brown fine sand (A-3)
7.0 - 9.0	Dark brown fine sand (A-3)

Groundwater level at time of auger, (below existing bank surface): 4.8'
Seasonal High Groundwater Level*: Approximately 2.5' ± 6" below existing bank
Infiltration Rate: None
Depth Performed: Approximately 18" below top of bank

* The soils are "Myakka fine sands" for SCS identification purposes.

Double Ring Infiltrometer Test - The double ring infiltrometer test was performed in the field in general accordance with the procedures outlined in ASTM D-3385, "Infiltration Rate of Soils in Field using Double Ring Infiltrometers". Testing consisted of initially clearing all surface vegetation and topsoil from within the test area. The outer ring, which is approximately 24 inches in diameter, was then driven to a depth of 6 inches below the exposed ground surface. The inner ring, approximately 12 inches in diameter, was then centrally located within the outer ring and driven to a depth of 2 inches. The two rings were then simultaneously filled with water to a height of 4 inches above the exposed ground surface test soils. The water level was maintained at this height throughout the test period, with the required amount of water added to maintain this level in both rings recorded at time intervals of five minutes. After reaching a stabilized inflow of water, the test was continued for a period of approximately 30 minutes.

The infiltration rate for (1) the inner ring, (2) the annular space between the rings, the (3) both rings combined is determined by dividing (a) the water volume used (within each specific area) during the stabilized flow period of the test, by (b) the specific area and (c) the time interval. Infiltration rates are generally converted to units of inches per hour. The infiltration rate for the inner ring, if different than the infiltration rates of either the annular area between the rings or the combined area of both rings, according to ASTM, should be used as the infiltration rate for the soils.

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DOUBLE RING INFILTROMETER (ASTM D-3385)

CLIENT: Florida Department of Transportation
PROJECT: SR 693, 66th Street from Bryan Dairy Road to 142nd Avenue

PROJECT NUMBER: 9373021
PERFORMED BY: F. Dyer
DATE PERFORMED: 01/29/1992

DEPTH (FT) FROM - TO	SOIL DESCRIPTION
Location:	Station 472+00, east side; auger and infiltration test performed on bank
0.0 - 2.0	Brown fine sand with limerock fragments (A-3)
2.0 - 3.0	Gray fine sand (A-3)
3.0 - 4.5	Tan fine sand (A-3)
4.5 - 6.0	Tan silty fine sand (A-2-4)
6.0 - 8.5	Gray clayey fine sand (A-2-6)

Groundwater level at time of auger, (below existing bank surface): 4.0'
Seasonal High Groundwater Level*: Approximately 1.5' $\pm$ 6" below existing bank
Infiltration Rate: 2 in/hr
Depth Performed: Approximately 18" below top of bank

* The soils are "Myakka fine sands" for SCS identification purposes.

Double Ring Infiltrometer Test - The double ring infiltrometer test was performed in the field in general accordance with the procedures outlined in ASTM D-3385, "Infiltration Rate of Soils in Field using Double Ring Infiltrometers". Testing consisted of initially clearing all surface vegetation and topsoil from within the test area. The outer ring, which is approximately 24 inches in diameter, was then driven to a depth of 6 inches below the exposed ground surface. The inner ring, approximately 12 inches in diameter, was then centrally located within the outer ring and driven to a depth of 2 inches. The two rings were then simultaneously filled with water to a height of 4 inches above the exposed ground surface test soils. The water level was maintained at this height throughout the test period, with the required amount of water added to maintain this level in both rings recorded at time intervals of five minutes. After reaching a stabilized inflow of water, the test was continued for a period of approximately 30 minutes.

The infiltration rate for (1) the inner ring, (2) the annular space between the rings, the (3) both rings combined is determined by dividing (a) the water volume used (within each specific area) during the stabilized flow period of the test, by (b) the specific area and (c) the time interval. Infiltration rates are generally converted to units of inches per hour. The infiltration rate for the inner ring, if different than the infiltration rates of either the annular area between the rings or the combined area of both rings, according to ASTM, should be used as the infiltration rate for the soils.

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DOUBLE RING INFILTROMETER (ASTM D-3385)

CLIENT: Florida Department of Transportation
PROJECT: SR 693, 66th Street from Bryan Dairy Road to 142nd Avenue

PROJECT NUMBER: 9373021
PERFORMED BY: F. Dyer
DATE PERFORMED: 01/29/1992

DEPTH (FT) FROM - TO	SOIL DESCRIPTION
Location:	Station 488+00, east side; auger and infiltration test performed on bank
0.0 - 2.5	Brown fine sand with minor roots (A-3)
2.5 - 4.0	Mottled light brown and dark brown fine sand(A-3)
4.0 - 5.0	Brown fine sand (A-3)
5.0 - 6.0	Dark grayish brown fine sand (A-3)
6.0 - 7.0	Dark grayish brown silty fine sand (A-2-4)
7.0 - 8.0	Brown clayey fine sand (A-2-4)
8.0 - 9.5	Light brown fine sand (A-3)

Groundwater level at time of auger, (below existing bank surface): 5.0'
Seasonal High Groundwater Level*: Approximately 2.0' $\pm$ 6" below existing bank
Infiltration Rate: None
Depth Performed: Approximately 18" below top of bank

* The soils are "Myakka fine sands" for SCS identification purposes.

Double Ring Infiltrometer Test - The double ring infiltrometer test was performed in the field in general accordance with the procedures outlined in ASTM D-3385, "Infiltration Rate of Soils in Field using Double Ring Infiltrometers". Testing consisted of initially clearing all surface vegetation and topsoil from within the test area. The outer ring, which is approximately 24 inches in diameter, was then driven to a depth of 6 inches below the exposed ground surface. The inner ring, approximately 12 inches in diameter, was then centrally located within the outer ring and driven to a depth of 2 inches. The two rings were then simultaneously filled with water to a height of 4 inches above the exposed ground surface test soils. The water level was maintained at this height throughout the test period, with the required amount of water added to maintain this level in both rings recorded at time intervals of five minutes. After reaching a stabilized inflow of water, the test was continued for a period of approximately 30 minutes.

The infiltration rate for (1) the inner ring, (2) the annular space between the rings, the (3) both rings combined is determined by dividing (a) the water volume used (within each specific area) during the stabilized flow period of the test, by (b) the specific area and (c) the time interval. Infiltration rates are generally converted to units of inches per hour. The infiltration rate for the inner ring, if different than the infiltration rates of either the annular area between the rings or the combined area of both rings, according to ASTM, should be used as the infiltration rate for the soils.

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DOUBLE RING INFILTROMETER

(ASTM D-3385)

CLIENT: Florida Department of Transportation
PROJECT: SR 693, 66th Street from Bryan Dairy Road to 142nd Avenue

PROJECT NUMBER: 9373021
PERFORMED BY: F. Dyer
DATE PERFORMED: 01/29/1992

DEPTH (FT) FROM - TO	SOIL DESCRIPTION
Location:	Station 488+00, west side; auger and infiltration test performed on bank
0.0 - 4.0	Brown fine sand with minor roots (A-3)
4.0 - 6.0	Mottled brown and tan fine sand(A-3)
6.0 - 8.0	Brown slightly clayey fine sand (A-3)
8.0 - 10.0	Grayish brown shelly fine sand (A-3)

Groundwater level at time of auger, (below existing bank surface): 6.3'
Seasonal High Groundwater Level*: Approximately 2.0' ± 6" below existing bank
Infiltration Rate: None
Depth Performed: Approximately 18" below top of bank

* The soils are "Myakka fine sands" for SCS identification purposes.

Double Ring Infiltrometer Test - The double ring infiltrometer test was performed in the field in general accordance with the procedures outlined in ASTM D-3385, "Infiltration Rate of Soils in Field using Double Ring Infiltrometers". Testing consisted of initially clearing all surface vegetation and topsoil from within the test area. The outer ring, which is approximately 24 inches in diameter, was then driven to a depth of 6 inches below the exposed ground surface. The inner ring, approximately 12 inches in diameter, was then centrally located within the outer ring and driven to a depth of 2 inches. The two rings were then simultaneously filled with water to a height of 4 inches above the exposed ground surface test soils. The water level was maintained at this height throughout the test period, with the required amount of water added to maintain this level in both rings recorded at time intervals of five minutes. After reaching a stabilized inflow of water, the test was continued for a period of approximately 30 minutes.

The infiltration rate for (1) the inner ring, (2) the annular space between the rings, the (3) both rings combined is determined by dividing (a) the water volume used (within each specific area) during the stabilized flow period of the test, by (b) the specific area and (c) the time interval. Infiltration rates are generally converted to units of inches per hour. The infiltration rate for the inner ring, if different than the infiltration rates of either the annular area between the rings or the combined area of both rings, according to ASTM, should be used as the infiltration rate for the soils.

IMPORTANT INFORMATION
ABOUT YOUR
GEOTECHNICAL ENGINEERING REPORT

More construction problems are caused by site subsurface conditions than any other factor. As troublesome as subsurface problems can be, their frequency and extent have been lessened considerably in recent years, thanks to the Association of Soil and Foundation Engineers (ASFE).

When ASFE was founded in 1969, subsurface problems were frequently being resolved through lawsuits. In fact, the situation had grown to such alarming proportions that consulting geotechnical engineers had the worst professional liability record of all design professionals. By 1980, ASFE-*member consulting soil and foundation engineers had the best professional liability record.* This dramatic turn-about can be attributed directly to client acceptance of problem-solving programs and materials developed by ASFE for its members' application. *This acceptance was gained because clients perceived the ASFE approach to be in their own best interests.* Disputes benefit only those who earn their living from others' disagreements.

The following suggestions and observations are offered to help you reduce the geotechnical-related delays, cost-overruns and other costly headaches that can occur during a construction project.

A GEOTECHNICAL ENGINEERING REPORT IS BASED ON A UNIQUE SET OF PROJECT-SPECIFIC FACTORS

A geotechnical engineering report is based on a subsurface exploration plan designed to incorporate a unique set of project-specific factors. These typically include: the general nature of the structure involved, its size and configuration; the location of the structure on the site and its orientation; physical concomitants such as access roads, parking lots, and underground utilities, and the level of additional risk which the client assumed by virtue of limitations imposed upon the exploratory program. To help avoid costly problems, consult the geotechnical engineer to determine how any factors which change subsequent to the date of his report may affect his recommendations.

Unless your consulting geotechnical engineer indicates otherwise, *your geotechnical engineering report should not be used:*

- When the nature of the proposed structure is changed, for example, if an office building will be erected instead of a parking garage, or if a refrigerated warehouse will be built instead of an unrefrigerated one;
- when the size or configuration of the proposed structure is altered;
- when the location or orientation of the proposed structure is modified;
- when there is a change of ownership, or
- for application to an adjacent site.

A geotechnical engineer cannot accept responsibility for problems which may develop if he is not consulted after factors considered in his report's development have changed.

MOST GEOTECHNICAL "FINDINGS" ARE PROFESSIONAL ESTIMATES

Site exploration identifies actual subsurface conditions only at those points where samples are taken, when they are taken. Data derived through sampling and subsequent laboratory testing are extrapolated by the geotechnical engineer who then renders an opinion about overall subsurface conditions, their likely reaction to proposed construction activity, and appropriate foundation design. Even under optimal circumstances actual conditions may differ from those opined to exist, because no geotechnical engineer, no matter how qualified, and no subsurface exploration program, no matter how comprehensive, can reveal what is hidden by earth, rock and time. For example, the actual interface between materials may be far more gradual or abrupt than the report indicates, and actual conditions in areas not sampled may differ from predictions. *Nothing can be done to prevent the unanticipated, but steps can be taken to help minimize their impact.* For this reason, *most experienced owners retain their geotechnical consultant through the construction stage,* to identify variances, conduct additional tests which may be needed, and to recommend solutions to problems encountered on site.

SUBSURFACE CONDITIONS CAN CHANGE

Subsurface conditions may be modified by constantly-changing natural forces. Because a geotechnical engineering report is based on conditions which existed at the time of subsurface exploration, *construction decisions should not be based on a geotechnical engineering report whose adequacy may have been affected by time.* Speak with the geotechnical consultant to learn if additional tests are advisable before construction starts.

Construction operations at or adjacent to the site and natural events such as floods, earthquakes or groundwater fluctuations may also affect subsurface conditions and, thus, the continuing adequacy of a geotechnical report. The geotechnical engineer should be kept apprised of any such events, and should be consulted to determine if additional tests are necessary.

A GEOTECHNICAL ENGINEERING REPORT IS SUBJECT TO MISINTERPRETATION

Costly problems can occur when other design professionals develop their plans based on misinterpretations of a geotechnical engineering report. To help avoid these problems, the geotechnical engineer should be retained to work with other appropriate design professionals to explain relevant geotechnical findings and to review the adequacy

of their plans and specifications relative to geotechnical issues.

BORING LOGS SHOULD NOT BE SEPARATED FROM THE ENGINEERING REPORT

Final boring logs are developed by the geotechnical engineer based upon his interpretation of field logs (assembled by site personnel) and laboratory evaluation of field samples. Only final boring logs customarily are included in geotechnical engineering reports. *These logs should not under any circumstances be redrawn* for inclusion in architectural or other design drawings, because drafters may commit errors or omissions in the transfer process. Although photographic reproduction eliminates this problem, it does nothing to minimize the possibility of contractors misinterpretating the logs during bid preparation. When this occurs, delays, disputes and unanticipated costs are the all-too-frequent result.

To minimize the likelihood of boring log misinterpretation, *give contractors ready access to the complete geotechnical engineering report*. Those who do not provide such access may proceed under the *mistaken* impression that simply disclaiming responsibility for the accuracy of subsurface information always insulates them from attendant liability. Providing the best available information to contractors helps prevent costly construction problems and the adversarial attitudes which aggravate them to disproportionate scale.

READ RESPONSIBILITY CLAUSES CLOSELY

Because geotechnical engineering is based extensively on judgement and opinion, it is far less exact than other design disciplines. This situation has resulted in wholly unwarranted claims being lodged against geotechnical consultants. To help prevent this problem, geotechnical engineers have developed model clauses for use in written transmittals. These are *not* exculpatory clauses designed to foist the geotechnical engineer's liabilities onto someone else. Rather, they are definitive clauses which identify where the geotechnical engineer's responsibilities begin and end. Their use helps all parties involved recognize their individual responsibilities and take appropriate action. Some of these definitive clauses are likely to appear in your geotechnical engineering report, and you are encouraged to read them closely. Your geotechnical engineer will be pleased to give full and frank answers to your questions.

OTHER STEPS YOU CAN TAKE TO REDUCE RISK

Your consulting geotechnical engineer will be pleased to discuss other techniques which can be employed to mitigate risk. In addition, the Association of Soil and Foundation Engineers has developed a variety of materials which may be beneficial. Contact ASFE for a complimentary copy of its publications directory.

Published by

ASFE

ASSOCIATION OF SOIL AND FOUNDATION ENGINEERS

8811 Colesville Road/Suite 225
Silver Spring, Maryland 20910
301/565-2733

APPENDIX B

CORRESPONDENCE

~~7117063.17~~
~~7117072.17~~
7117063.

FEB 4 1992

FLORIDA DEPARTMENT OF STATE
Jim Smith
Secretary of State

DIVISION OF HISTORICAL RESOURCES
R.A. Gray Building
500 South Bronough
Tallahassee, Florida 32399-0250
Director's Office (904) 488-1480
Telecopier Number (FAX) (904) 488-3353

January 22, 1992

Mr. C. Leroy Irwin
Environmental Office
Department of Transportation
Hayden Burns Building, MS# 37
605 Suwannee Street
Tallahassee, Florida 32399-0450

In Reply Refer To:
Susan Hammersten
Historic Sites
Specialist
(904) 487-2333
Project File No. 920140

RE: Cultural Resource Assessment Review Request
Cultural Resource Assessment Survey for the Upgrading
of a Segment of SR 693, in Pinellas County, Florida
SPN: 15060-1517 WPIN: 7117063 FAPN: M-1427-(11)

Dear Mr. Irwin:

In accordance with the procedures contained in 36 C.F.R., Part 800, as well as the provisions contained in Section 267.061, Florida Statutes, we have reviewed the results of the field survey of the above referenced project performed by George Ballo, Archaeologist, Florida Department of Transportation, Environmental Office, and find them to be complete and sufficient. We note that no sites listed, or eligible for listing, in the National Register of Historic Places, were discovered during the survey. It is the determination of this office, therefore, that this project will have no effect on any such resources, and that the project may proceed without further involvement with our agency.

If you have any questions concerning our comments, please do not hesitate to contact us. Your interest in protecting Florida's archaeological and historic resources is appreciated.

Sincerely,

Suzanne P. Walker

for George W. Percy, Director
Division of Historical Resources
and
State Historic Preservation Officer

GWP/Hsh

LH → File 7117063.15

Project Development ... MAR 15 1993

United States Department of the Interior

FISH AND WILDLIFE SERVICE
P.O. BOX 2676
VERO BEACH, FLORIDA 32961-2676

March 11, 1993

Mr. Richard E. Adair
Environmental Administrator
Florida Department of Transportation
PD&E Department, MS 7-500
11201 N. Malcolm McKinley Dr.
Tampa, FL 33612-6403

Dear Mr. Adair:

This is in response to your letter dated February 19, 1993, requesting our evaluation concerning the impact of a proposed road widening project on federally-listed threatened or endangered species. Project plans propose to widen SR 693 (66th Street) between Bryan Dairy Road and SR 688 (Ulmerton Road), Pinellas County, Florida.

The length of the project is about 1.5 miles and the proposed improvements involve the addition of two lanes within the existing right-of-way.

Based on our general knowledge of the area, a check of our Geographic Information Systems (GIS) database, the urbanized nature of the surrounding land, combined with the results of your field surveys indicates that no federally-listed threatened or endangered species occur within the project boundaries. Therefore, the Service concurs with your determination that the proposed project will have "no effect" on federally protected threatened or endangered species.

If you have further questions on this matter, please contact Bruce Birnhak of my staff (407-562-3909).

Sincerely yours,

Robert T. Pace
Acting Field Supervisor

cc:
FWS, Jacksonville, FL

FILE 7117063.10

Project Development District 7 JUL 17 1992

STATE OF FLORIDA

Office of the Governor

THE CAPITOL
TALLAHASSEE, FLORIDA 32399-0001

LAWTON CHILES
GOVERNOR

July 13, 1992

Mr. David A. Twiddy, Jr., P.E.
District PD&E Engineer
Department of Transportation
4950 West Kennedy Boulevard
Suite 409
Tampa, Florida 33609

RE: Advance Notification - State Project 15060-1517 - Work Program Item 7117063 - State Road 693 (66th Street) from Bryan Dairy Road to State Road 688 (Ulmerton Road) - Pinellas County, Florida

SAI: FL9206080976C

Dear Mr. Twiddy:

The Florida State Clearinghouse, pursuant to Presidential Executive Order 12372, Gubernatorial Executive Order 83-150, section 216.212, Florida Statutes, the Coastal Zone Management Act Reauthorization Amendments of 1990 and the National Environmental Policy Act, has coordinated a review of the above referenced project.

Pursuant to Presidential Executive Order 12372, the project will be in accord with State plans, programs, procedures and objectives; and approved for submission to the federal funding agency when consideration is given to the enclosed agency comments.

The Department of Environmental Regulation (DER) indicates that permits may be required prior to start of construction. Sound development practices should be maintained during all phases of construction and early coordination with DER's district office in the project area may help to eliminate problems in the permitting process. Please refer to the enclosed DER comments.

Based on the comments from our reviewing agencies, funding for the proposed action is consistent with the Florida Coastal Management Program (FCMP) advanced notification stage. Subsequent environmental documents will be reviewed to determine continued consistency with the FCMP as provided for in 15 CFR 930.95. These documents should provide thorough information

regarding the location and extent of wetlands dredging and filling, borrow sources, dredging or filling associated with bridge construction and stormwater management. Continued concurrence with this project will be based, in part, on adequate resolution of issues identified during earlier reviews. Any environmental assessments prepared for this project should be submitted to the Florida State Clearinghouse for interagency review.

Pursuant to section 215.195, Florida Statutes, State agencies are required, upon federal grant approval, to deposit the amount of reimbursement of allocable statewide overhead into the State-Federal Relations Trust Fund. The deposits should be placed in SAMAS account code 31 20 269001 31100000 00 0015 00 00. If you have any questions regarding this matter, please contact your OPB budget analyst or Jean Whitten at (904)488-8114.

Please attach a copy of this letter and any enclosures to your application facesheet or cover form and forward to the federal funding agency. (If applicable, enter the State Application Identifier (SAI#) number, shown above, in box 3A of Standard Form 424 or where appropriate on other cover form.) This action will assure the federal agency of your compliance with Florida's review requirements, help ensure notification of federal agency action under the Federal Assistance Award Data System (FAADS) and reduce the chance of unnecessary delays in processing your application by the federal agency.

Sincerely,

Janice L. Alcott

Janice L. Alcott, Director
State Clearinghouse

JLA/bl

Enclosure(s)

cc: Department of Environmental Regulation
Department of State

Florida Department of Environmental Regulation

Southwest District • 4520 Oak Fair Boulevard • Tampa, Florida 33610-7347
Lawton Chiles, Governor 813-620-6100 Carol M. Browner, Secretary

Director
c/o Barbara Leighty
State Clearinghouse
Office of Planning and Budgeting
Executive Office of the Governor
The Capitol
Tallahassee, Florida 32399-0001

JUL 8 1992

STATE CLEARINGHOUSE

re:SAI# FL 9206080976C
Transportation Improvement
Ulmerton Rd.,Bryan Dairy
Pinellas County

DER-TAMPA OFFICE

The documents provided do not provide the detail of the transportation alignments, design, construction methodology necessary to identify potential environmental impacts. Details related to DER jurisdictional waterbodies, stormwater treatment design or ecological conditions of the region are not available. Several of the proposed road corridors slated for improvement are adjacent to DER wetland jurisdiction and currently contain wetland acreages within existing right of ways.

Bridge and culvert improvements must take into consideration shoaling and erosion potential, navigational concerns as well as environmental considerations. Activities involving new impervious areas must comply with stormwater treatment requirements pursuant to 17-25 FAC. All proposed wetland encroachments must be designed in order to minimize impacts to the greatest extent possible. It is highly recommended that all significant road improvement corridors have DER formal wetland jurisdictional determinations conducted at an early stage of design.

Reviewer Bob Stetler

Bob Stetler, Water Management Administrator
Water Management Division
7-7-92

FLORIDA DEPARTMENT OF STATE
Jim Smith
Secretary of State
DIVISION OF HISTORICAL RESOURCES
R.A. Gray Building
500 South Bronough
Tallahassee, Florida 32399-0250
Director's Office (904) 488-1480
Telecopier Number (FAX) (904) 488-3353

June 19, 1992

Ms. Janice L. Alcott, Director
State Planning and Development
Clearinghouse
Office of Planning and Budgeting
The Capitol
Tallahassee, Florida 32399-0001

In Reply Refer To:
Denise M. Breit
Historic Sites
Specialist
(904) 487-2333
Project File No. 921749

RE: Cultural Resource Assessment Request
SAI# FL9206080976C
Florida Department of Transportation
Advance Notification
SPN: 15060-1517
WPN: 7117063
Pinellas County, Florida

Dear Ms. Alcott:

In accordance with the provisions of Florida's Coastal Zone Management Act and Chapter 267, Florida Statutes, as well as the procedures contained in 36 C.F.R., Part 800 ("Protection of Historic Properties"), we have reviewed the referenced project(s) for possible impact to historic properties listed, or eligible for listing, in the National Register of Historic Places, or otherwise of historic or architectural value.

We have reviewed the Advanced Notification for the Florida Department of Transportation (FDOT) project referenced above. A review of our files indicated that the project area has been subjected to a cultural resource assessment survey. No archaeological or historical sites or properties were recorded as a result of this survey. Therefore, it is the opinion of this office that the proposed project will have no effect on historic properties listed, or eligible for listing, in the National Register of Historic Places, or otherwise of historical or architectural value. The project is also consistent with the historic preservation aspects of Florida's Coastal Management Program and may proceed.

If you have any questions concerning our comments, please do not hesitate to contact us. Your interest in protecting Florida's historic properties is appreciated.

Sincerely,

Laura A. Kammerer

for George W. Percy, Director
Division of Historical Resources
and
State Historic Preservation Officer

GWP/Bdb
xc: C. Leroy Irwin

Project Development District 7 JUN 1 5 1992

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Southeast Regional Office
9450 Koger Boulevard
St. Petersburg, Florida 33702

FILE 7117063.1

June 11, 1992

Mr. David A. Twiddy, Jr., P.E.
Project Development & Environment Engineer
Florida Department of Transportation
4950 W. Kennedy Boulevard, Suite 409
Tampa, Florida 33609

Dear Mr. Twiddy,

The National Marine Fisheries Service (NMFS) has reviewed the Advance Notification regarding the State Road 693 project, Work Program Item Number 7117063, State Project Number 15060-1517, in Pinellas County, Florida. Although we can not conduct an on-site investigation of the project area at this time, it appears from the information provided that the proposed project will not affect resources for which the NMFS is responsible. Therefore, we have no comment to provide at this time regarding the proposed project. We appreciate the opportunity to review this project. If we can be of further assistance please contact Mr. David N. Dale of our Panama City Branch Office at 904/234-5061.

Sincerely,

Edwin J. Kappna

for Andreas Mager, Jr.
Assistant Regional Director
Habitat Conservation Division

copy to:
F/SEO2
Mr. C.L. Irwin, Manager
Environmental Management Office
Florida Department of Transportation, M.S. 37
605 Suwannee Street
Tallahassee, FL 32399-0450

FILE 7117063.18

Project Development District 7 JUL 14 1992

FLORIDA DEPARTMENT OF NATURAL RESOURCES

Marjory Stoneman Douglas Building
3900 Commonwealth Boulevard
Tallahassee, Florida 32399

June 26, 1992

Mr. David A. Twiddy
Florida Department of Transportation
4950 W. Kennedy Boulevard, Suite 409
Tampa, Florida 33609

Dear Mr. Twiddy:

RE: Advance Notification
WPI Nos: 7117063
SPN: 15060-1517
FACN: M-1427-(11)
SR 693 (66th Street) from Bryan Dairy Road
to SR 688 (Ulmerton Road).
Pinellas County

Thank you for your recent advance notification regarding the above captioned project. The Department of Natural Resources, Division of State Lands requires consent in the form of an easement for public right of way on sovereignty submerged lands pursuant to Chapter 18-21, F.A.C.

Upon receipt of the Joint DER/ACOE application for this project, our Title and Lands Record Section will identify any activity occurring on state-owned lands. A Completeness summary will be sent to you requesting any additional information required to complete your file.

If you have any questions, please feel free to contact me at the State Lands West Central Florida District Office, 8402 Laurel Fair Circle, Suite 212, Tampa, Florida 33610-7364. (813) 620-6161.

Sincerely,

Todd Vande Berg, Planning Manager
DSL West Central Florida District Office

TV/er

ADVANCED NOTIFICATION PACKAGE

7117063.13

FLORIDA DEPARTMENT OF TRANSPORTATION

LAWTON CHILES
GOVERNOR

BEN G. WATTS
SECRETARY

4950 W. Kennedy Blvd., Suite 409
Tampa, FL 33609
June 3, 1992

Director
Florida State Clearinghouse
Executive Office of the Governor
Office of Planning and Budgeting
The Capitol
Tallahassee, Florida 32399-001

RE: Advance Notification
Work Program Item Number: 7117063
State Project Number: 15060-1517
Federal-Aid Project Number: M-1427-(11)
SR 693 (66th Street) from Bryan Dairy Road
to SR 688 (Ulmerton Road)
Pinellas County

Dear Sir:

The attached Advance Notification Package is forwarded to your office for processing through appropriate State agencies in accordance with Executive Order 83-150. Distribution to local and Federal agencies is being made as noted.

Although more specific comments will be solicited during the permit coordination process, we request that permitting and permit reviewing agencies review the attached information and furnish us with whatever general comments they consider pertinent at this time.

This is a Federal-Aid action and the Florida Department of Transportation, in consultation with the Federal Highway Administration, will determine what degree of environmental documentation will be necessary. The determination will be based upon in-house environmental evaluations and comments received through coordination with other agencies. Please provide a consistency review for this project in accordance with the State's Coastal Zone Management Program.

We are looking forward to receiving your comments on the project within 45 days. Should additional review time be required, a written request for an extension of time must be submitted to our office within the initial 45-day comment period.

cc:

Federal Highway Administration, Division Administrator
Federal Emergency Management Agency - Natural Hazards Branch, Chief
Federal Railroad Administration - Office of Economic Analysis, Director
U.S. Department of Interior - Bureau of Land Management, Eastern States Office
U.S. Department of Housing and Urban Development, Regional Environmental Officer
U.S. Department of Interior - U.S. Geological Survey Chief
U.S. Environmental Protection Agency - Region IV, Regional Administrator
U.S. Department of Interior - Fish and Wildlife Service, Field Supervisor
U.S. Army Corps of Engineers - Regulatory Branch, District Engineer
U.S. Dept. of Commerce - Nat'l. Marine Fisheries Service - Habitat Conservation Division
U.S. Department of Interior - National Park Service - Southeast Regional Office
U.S. Department of Commerce - National Oceanic and Atmospheric Administration
U.S. Dept. of Health and Human Services - Center for Environ'l. Health and Injury Control
Florida Department of Natural Resources - Marine Fisheries Commission
Florida Dept. of Natural Resources - Office of Land Use Planning and Biological Services
Florida Department of Natural Resources - West Central Florida Field Office
Tampa Bay Regional Planning Council, Executive Director
Southwest Florida Water Management District, Executive Director
Florida Department of Environmental Regulation - Southwest District Office
Federal - Aid Program Coordinator (MS-35)
Manager, Environmental Management Office (MS-37)

Your comments should be addressed to:

Mr. David A . Twiddy, Jr., P.E.
District PD&E Engineer
Florida Department of Transportation
4950 W. Kennedy Blvd., Suite 409
Tampa, Florida 33609

With a Copy to:

Mr. C. L. Irwin, Manager
Environmental Management Office
Florida Department of Transportation
605 Suwannee Street, M.S. 37
Tallahassee, Florida 32399-0450

Your expeditious handling of this notice will be appreciated.

Sincerely,

David A. Twiddy, Jr., P.E.
District Seven PD&E Engineer

DAT/GR/gr

Attachment

FORM 508-03
10/91

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION
ADVANCE NOTIFICATION FACT SHEET

1. Need for Project: The existing SR 693 four-lane, rural cross section, divided facility will not sufficiently service future traffic demand. Furthermore, the adopted Pinellas County Metropolitan Planning Organization 2010 Long Range Highway Plan calls for a six-lane divided, urban cross section, facility.

2. Description of the Project: The existing SR 693 will be upgraded to a six-lane divided, urban cross section, facility. Existing right-of-way varies from approximately 182 feet to 200 feet. The upgrading of the existing facility will be accommodated within existing right-of-way. For location and project limits, see attached location map. The total length of the existing roadway proposed for upgrading is 1.6 miles.

3. Environmental Information:

a. Land Use: The study area is predominately commercial and light industrial with scattered residential and shopping centers. Several hazardous waste sites are known to exist within the study area.

b. Wetlands: The wetlands involved within the project limits are associated with cross drains, drainage ditches, and natural drainage. Wetland vegetation observed includes Cattail (Typha spp.), Pennywort (Hydrocotyle Umellata), and Maidenance (Panicum Hemitomon).

c. Floodplains: According to federal insurance rate maps for Community Panels 120251, 0001E, 125139 and 0138C, the proposed project's southern terminus extends 500 feet into the 100 year floodplain.

d. Endangered Species: A field survey of the proposed project corridor revealed no evidence of federally listed endangered or threatened species. There is no designated critical habitat in the vicinity of this project.

e. Outstanding Florida Waters: There will be no involvement with waters listed under FAC Chapter 17.03041.

f. Aquatic Preserves: There will be no involvement with waters within a State Aquatic Preserve.

g. Coastal Zone Consistency Determination Required? _X_ Yes ___ No

h. Cultural Resources: A Cultural Resource Survey has been conducted. No evidence of historical and archaeological resources were detected.

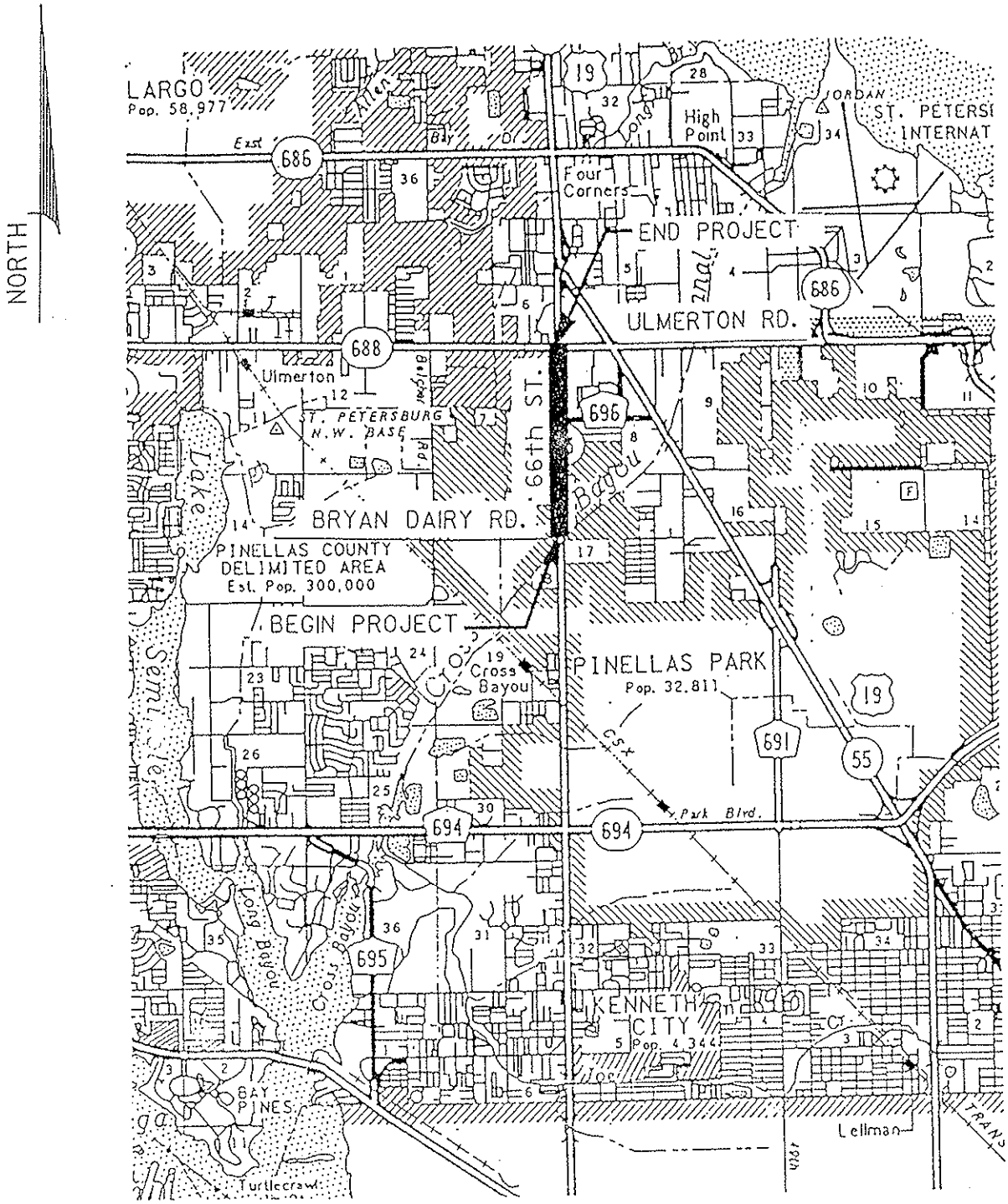
i. Coastal Barrier Resources: The project does not involve coastal barrier resources as identified in Executive Order 81-105.

j. Other Comments: Potential impacts to air, noise and water quality will be investigated.

4. Navigable Waterway Crossing? ___ Yes _X_ No

5. List Permits Required:

U.S. Army Corp of Engineers
Southwest Florida Water Management District
Florida Department of Environmental Regulation



STATE OF FLORIDA

DEPT. OF TRANSPORTATION

LOCATION MAP

66th ST. (S.R. 693) FROM BRIAN DAIRY RD. TO ULMERTON RD. (S.R. 688)

S.P.N.: 15060-1517

W.P.I.: 7117063

F.A.P.: M-1427-(11)

Federal Assistance Multi-Purpose Facesheet
Addendum for State Agencies Only

(Pursuant to Section 216.212, Florida Statutes)

GENERAL INSTRUCTIONS

At least sixty (60) days prior to the anticipated filing date, submit ten (10) completed copies of the Federal Assistance Multi-Purpose Facesheet, Standard Form 424, with Addendum, additional project narratives if necessary, and project location map if applicable, to the Intergovernmental Coordination Unit, Executive Office of the Governor, The Capitol, Tallahassee, Florida 32301. In addition, five (5) completed copies should be submitted to the appropriate Regional and/or Metropolitan Clearinghouse if the project is local in nature. Allow forty-five (45) days for processing and an additional fifteen (15) days if a full application is requested to be reviewed. The form must be completely filled out before the review can begin. If any section is not applicable, designate with "N/A". If any further elaboration is required on any item, attach additional sheets, with reference to item number. If you have any additional questions, call the Intergovernmental Coordination Unit at (904) 488-8114 or SUNCOM 278-8114.

1. Budget Entity Title :

2. State Program Structure No. and Title :

3. Project Included in : (a) Legislative Budget Request Yes ☐ FY _____ No ☐

(b) Approved Budget Yes ☐ No ☐ (c) Governor's Budget Yes ☐ No ☐

4. Project Included in Federally Required "State Plan" :

Yes ☐ No ☐ Agency :

5. Legal Authority :

6. A-95 Review :

Yes ☒ No ☐

7. Change in Plan Operation :

Yes ☐ No ☐

8. Commit State Funding : Yes ☐ No ☐

FUND CODE	AMOUNT

9. New Position Required :

Yes ☐ No ☐ Number _____

10. Matching Requirements :

Federal 70 % State 30 % Local, Other _____ %

Total Proposed Funding
Multi-Year Projects
(Dates)

From 3/93 To 3/95

Federal	1,597,657
Applicant	
State	689,414
Local	
Other	
Total	2,187,071

11. Indirect Cost Proposal (Overhead) :

Department and/or Division Overhead	$ _____	Amount _____	%
Statewide Allocated Overhead	_____	Amount _____	%
Total	_____	Amount _____	%

If 'No', explain : _____

13. Type of State Match :

Cash ☐ In-Kind ☐

Explain : _____

Item 1 - Enter the title of the budget entity as defined by Section 216.011(1)(d), F.S., and as included in the General Appropriations Act for the current fiscal year.

Item 2 - Enter the number and title of the appropriate state reporting level program component as currently approved by the Office of Planning and Budgeting.

Item 3 - Mark appropriate block :

a - If 'Yes', enter the fiscal year of the Legislative Budget Request in which the project is included.

b - This item is applicable only to the state's current fiscal year.

c - This item is applicable only after publication of the Governor's Budget for the particular fiscal year for which project funds are requested.

Item 4 - Mark appropriate block : If 'Yes', enter the federal agency for which the plan is prepared.

Item 5 - Enter the section of the Florida Statutes or Laws of Florida which authorizes the state agency to carry out the activities proposed in this project.

Item 6 - Mark appropriate block to indicate if OMB Circular A-95 review is required.

Item 7 - Mark appropriate block : Does the project alter the plan of operation from that included in the approved budget for the budget entity ?

Item 8 - Mark appropriate block : Does the project proposal commit the state to assume funding after federal funding expires ?

Item 9 - Enter the number of new positions (above that included in the appropriations for the new budget entity) required to carry out the project.

Item 10 - Indicate, in percentage terms, the federal/state/local matching requirements specified by federal law or regulation. If non-federal match is not required in such specific terms, explain the basis for the distribution of funding.

Item 11 - If the application should include overhead for which you are to receive reimbursement from the federal grantor agency in accordance with FMC 74-4, OASC-10, or other federal provisions, enter the amounts included in the approved indirect cost rate for : (1) intra-agency, - department and/or - unit overhead ; (2) statewide overhead.

The amount allocated to the project for central state governmental services must be based on Florida's Approved Statewide Cost Allocation Plan for the project period.

If none is claimed, check the "No" block : If 'No', an explanation must be given or the application will be returned without action.

Item 12 - Enter the dates the total project will cover if more than one (1) year. This item applies only to multi-year projects. Information required in Section 1, Item 13 of Standard Form 424 provides information for projects with a duration of one (1) year or less. Complete that funding information here as required for Item 13, Form 424.

On occasion, local match is derived from state funds allocated to local units. If this is the case, so indicate and specify the sources of funding.

Item 13 - In the case of state cash match, indicate the appropriation from which such match is to be provided. For in-kind match, explain the types of expenditures to be utilized.

OMB Approval No. 0348-0043

APPLICATION FOR FEDERAL ASSISTANCE

1. TYPE OF SUBMISSION: Application ☐ Construction ☐ Non-Construction; Preapplication ☐ Construction ☐ Non-Construction	2. DATE SUBMITTED: 6/3/92	Applicant Identifier: 7117063
	3. DATE RECEIVED BY STATE	State Application Identifier
	4. DATE RECEIVED BY FEDERAL AGENCY	Federal Identifier

5. APPLICANT INFORMATION

Legal Name: Florida Dept. of Transportation

Address (give city, county, state, and zip code): 605 Suwannee Street, Tallahassee - Leon, Florida 32399-0450

Organizational Unit: Office of Design

Name and telephone number of the person to be contacted on matters involving this application (give area code): David A. Twiddy, Jr (813)871-7740

6. EMPLOYER IDENTIFICATION NUMBER (EIN): 5 9 — 6 0 0 1 8 7 4

7. TYPE OF APPLICANT: (enter appropriate letter in box) A

A. State; B. County; C. Municipal; D. Township; E. Interstate; F. Intermunicipal; G. Special District; H. Independent School District; I. State Controlled Institution of Higher Learning; J. Private University; K. Indian Tribe; L. Individual; M. Profit Organization; N. Other (Specify): _____

8. TYPE OF APPLICATION: ☒ New ☐ Continuation ☐ Revision

If Revision, enter appropriate letter(s) in box(es): ☐ ☐

A. Increase Award; B. Decrease Award; C. Increase Duration; D. Decrease Duration; Other (Specify) _____

9. NAME OF FEDERAL AGENCY: U.S. Department of Transportation

10. CATALOG OF FEDERAL DOMESTIC ASSISTANCE NUMBER: 2 0 . 2 0 5

TITLE: Highway Reasearch Planning & Construction

11. DESCRIPTIVE TITLE OF APPLICANT'S PROJECT: 15060-1517 7117063

12. AREAS AFFECTED BY PROJECT (cities, counties, states, etc.): Pinellas

13. PROPOSED PROJECT: Start Date	Ending Date	14. CONGRESSIONAL DISTRICTS OF: a. Applicant	b. Project
3/93	3/95		Districts 8 and 9

15. ESTIMATED FUNDING:	
a. Federal	$ 1,597,657 .00
b. Applicant	$ .00
c. State	$ 689,414 .00
d. Local	$ .00
e. Other	$ .00
f. Program Income	$ .00
g. TOTAL	$ 2,287,071 .00

16. IS APPLICATION SUBJECT TO REVIEW BY STATE EXECUTIVE ORDER 12372 PROCESS?

a. YES. PREAPPLICATION / APPLICATION WAS MADE AVAILABLE TO THE STATE EXECUTIVE ORDER 12372 PROCESS FOR REVIEW ON: DATE _____

b. NO. ☐ PROGRAM IS NOT COVERED BY E.O. 12372 ☐ OR PROGRAM HAS NOT BEEN SELECTED BY STATE FOR REVIEW

17. IS THE APPLICANT DELINQUENT ON ANY FEDERAL DEBT? ☐ Yes If "Yes", attach an explanation. ☐ No

18. TO THE BEST OF MY KNOWLEDGE AND BELIEF, ALL DATA IN THIS APPLICATION / PREAPPLICATION ARE TRUE AND CORRECT. THE DOCUMENT HAS BEEN DULY AUTHORIZED BY THE GOVERNING BODY OF THE APPLICANT AND THE APPLICANT WILL COMPLY WITH THE ATTACHED ASSURANCES IF THE ASSISTANCE IS AWARDED.

a. Typed Name of Authorized Representative	b. Title	c. Telephone Number
David A. Twiddy, Jr., P.E.	District PD&E Engineer	(813)871-7740
d. Signature of Authorized Representative		e. Date Signed: 6/3/92

Previous Editions Not Usable

Standard Form 424 (REV 4-88)
Prescribed by OMB Circular A-102

APPENDIX C

PUBLIC HEARING TRANSCRIPT

ORIGINAL

FLORIDA DEPARTMENT OF TRANSPORTATION
DISTRICT SEVEN
66TH STREET (SR 693) PUBLIC HEARING

PUBLIC HEARING AGENDA

HEARING OFFICER: Mr. Michael Coleman

DATE: Tuesday, October 13, 1992

TIME: 4:00 p.m. - 7:00 p.m.

PLACE: Holiday Inn (Galleries A and B)
St. Petersburg-Clearwater
International Airport
3535 Ulmerton Road
Clearwater, Florida

REPORTED BY: DEBORAH J. GUEST
NOTARY PUBLIC, CSR, RPR, CP

I N D E X

(WHEREUPON, the following statements were had and taken.)

MR. COLEMAN: Good evening. Welcome to the public hearing on the proposed improvements to State Road 693, also known as 66th Street.

My name is Michael Coleman. I am the Assistant Project Development and Environmental Engineer for District Seven of the Florida Department of Transportation.

Today is Tuesday, October 13th, 1992, and it is approximately 6:10 p.m. This public hearing is being conducted by the Florida Department of Transportation. It is being held in Galleries A and B of the Holiday Inn located at 3535 Ulmerton Road in Pinellas County, Florida, from 4:00 p.m. to 7:00 p.m. and concerns the following project:

State Project Number 15060-1517

Work Program Number 7117063

A court reporter is present to officially provide a verbatim transcript of these proceedings. This project involves the proposed improvements to State Road 693, which is 66th Street, from Bryan Dairy Road to State Road 688, which is Ulmerton Road.

This public hearing is being held in accordance with applicable Florida statutes. In keeping with Florida statutory requirement and Department policy, this hearing was advertised in the September 18, 1992 edition of the "Florida Administrative Weekly".

The Administrative Weekly is the official forum for announcing public agency actions. Additionally, the hearing announcement was made in the "Tampa Tribune". This hearing will also fulfill the requirements for implementation of the executive orders related to "protection of wetlands" and "floodplain management". The public hearing was also advertised in the "St. Pete Times".

The opportunity for early public review and comment is offered for projects proposed to be located in wetlands and floodplains. This project will have these involvements.

We are here tonight to present to you and explain the engineering and environmental work accomplished to date for the project, and to give you an opportunity to publicly and officially comment on these concepts. Please understand that

the plans displayed on the maps here this evening are not finalized construction plans.

We bring plans to public hearings while they are still in a conceptual stage in order to seek public opinion and to solicit local knowledge of value and concerns as they relate to these transportation plans. This gives interested persons like you an opportunity to become fully aware of highway improvement proposals and state your comments so that they may be considered before the project reaches the final design phase.

When you came in this evening, you were offered a brochure containing information about the project.

Your comments tonight may be made in one of four different ways: Number 1, orally to the court reporter in a one-to-one setting; Number 2, written comments on forms provided and submitted to the court reporter; Number 3, orally during this portion of the public hearing; or, Number 4, written comments submitted to Mr. David Twiddy, Jr., P.E., District Project Development and Environmental Engineer, Florida Department of Transportation, PD&E Department, Mail Station

7-500, 11201 North McKinley Drive, Tampa, Florida, 33612-6403, following the hearing.

These comments must be postmarked by October 23rd, 1992. Comments submitted in any of the four ways will be included in the official transcript of the public hearing proceedings.

Each of these different means of commenting will receive equal consideration. An oral comment carries the same weight as a written comment.

After October 23rd, 1992, the Department will take those comments and all the engineering and environmental work that has been accomplished and make a final decision regarding proposed improvements.

This package will then be sent to the Federal Highway Administration for final review and concurrence to ensure that it is a viable project and that it has been accomplished in accordance with all applicable state and federal rules and regulations.

At this time, anyone who has filled out a comment card and wishes to speak on the record will be called to the microphone.

I would like to point out that this

formal portion of the public hearing is not a question and answer period, but rather an opportunity for you to make oral comments for the public hearing record.

Questions can be addressed by the Department of Transportation representatives you see wearing name tags in a one-on-one setting.

The public card, please. And the winner is Mr. Thomas Ando who will make a comment, 12570 66th Street North.

MR. ANDO: We are a business owner along 66th Street, and one concern that we have is the need for a redesign of the lighting.

I don't know if there is any signalization on this project, but there's frequent accidents at that corner. So, I would like to recommend that there be some kind of a -- something done with it, to add a left turn signal at the intersection, coming -- running east and west on 126th.

Whether or not that is possible because of the DOT right-of-way, I don't know. But I would like to have that considered.

MR. COLEMAN: Is that it?

MR. ANDO: Yes. And I would like to

get the work, too.

MR. COLEMAN: Oh, okay.

MR. ANDO: I do cold milling, so --

MR. COLEMAN: Does anyone else need a comment card to fill out?

(No response.)

MR. COLEMAN: Seeing that nobody else wants to comment, I am going to close the public hearing at this time.

The transcript of the oral proceeding of this hearing and copies of, or references to, written statements or exhibits, together with copies or references to materials made available before the hearing will be available for public inspection in the Florida Department of Transportation, PDE'S office, located at 11201 North McKinley Drive, Tampa, Florida, 33612-6403.

If anyone wishes to submit written statements or other exhibits in place of or in addition to oral statements, they may do so. Written statements and exhibits will be accepted and recorded as part of this hearing if mailed by October 23rd, 1992. Mail these statements to the address located in the handout.

The Department of Transportation

thanks you for your participation in tonight's public hearing.

It is approximately 6:15 p.m., and I hereby close the hearing. Thank you and good night.

STATE OF FLORIDA)

COUNTY OF HILLSBOROUGH)

I, DEBORAH J. GUEST, Registered Professional Reporter and Notary Public in and for the State of Florida at large, hereby certify that the witness named herein appeared before me for the taking of the foregoing public hearing, and was by me first duly sworn to tell the whole truth.

I FURTHER CERTIFY that the public hearing was recorded in Stenotypy and electronically by me and that the foregoing pages constitute a true and correct transcription of my recordings thereof.

I FURTHER CERTIFY that I am neither an attorney nor of counsel for the parties to this cause nor a relative or employee of any attorney or party connected with this litigation and that I have no interest in the outcome of this action.

WITNESS my hand and seal this 27th day of October, 1992 at Tampa, Hillsborough County, Florida.

Deborah J. Guest

My Commission Expires
August 4, 1994
TRANSCRIPT ORDERED: 10-13-92

66th STREET (S.R. 693)

FROM BRYAN DAIRY RD. TO ULMERTON RD. (S.R. 688)

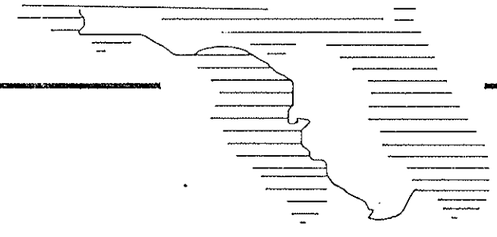
PROJECT DEVELOPMENT AND ENVIRONMENT STUDY

CONCEPTUAL DESIGN PLANS

WORK PROJECT INDEX NO. 7117063

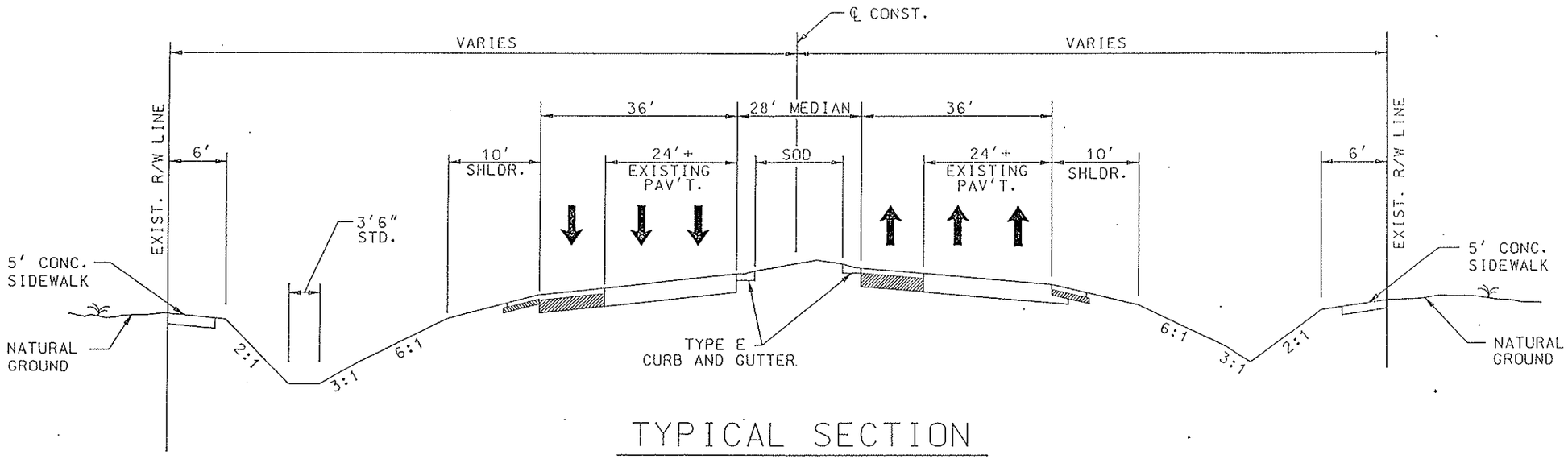
STATE PROJECT NO. 15060-1517

OCTOBER 1992



FLORIDA DEPARTMENT OF TRANSPORTATION

11201 N. MALCOLM McKINLEY, TAMPA, FLORIDA 33612-6403



TYPICAL SECTION

BRYAN DAIRY RD. TO ULMERTON RD. (S.R. 688)

STATE OF FLORIDA
DEPT. OF TRANSPORTATION

REVISIONS		
DATE	BY	DESCRIPTION

66th STREET (S.R. 693)
FROM BRYAN DAIRY ROAD TO ULMERTON ROAD (S.R. 688)

PROPOSED TYPICAL SECTION

DATE: SEPTEMBER 15, 1992
S.P.N.: 15060-1517
W.P.I.: 7117063

SHEET NO. 2 OF 5

NORTH
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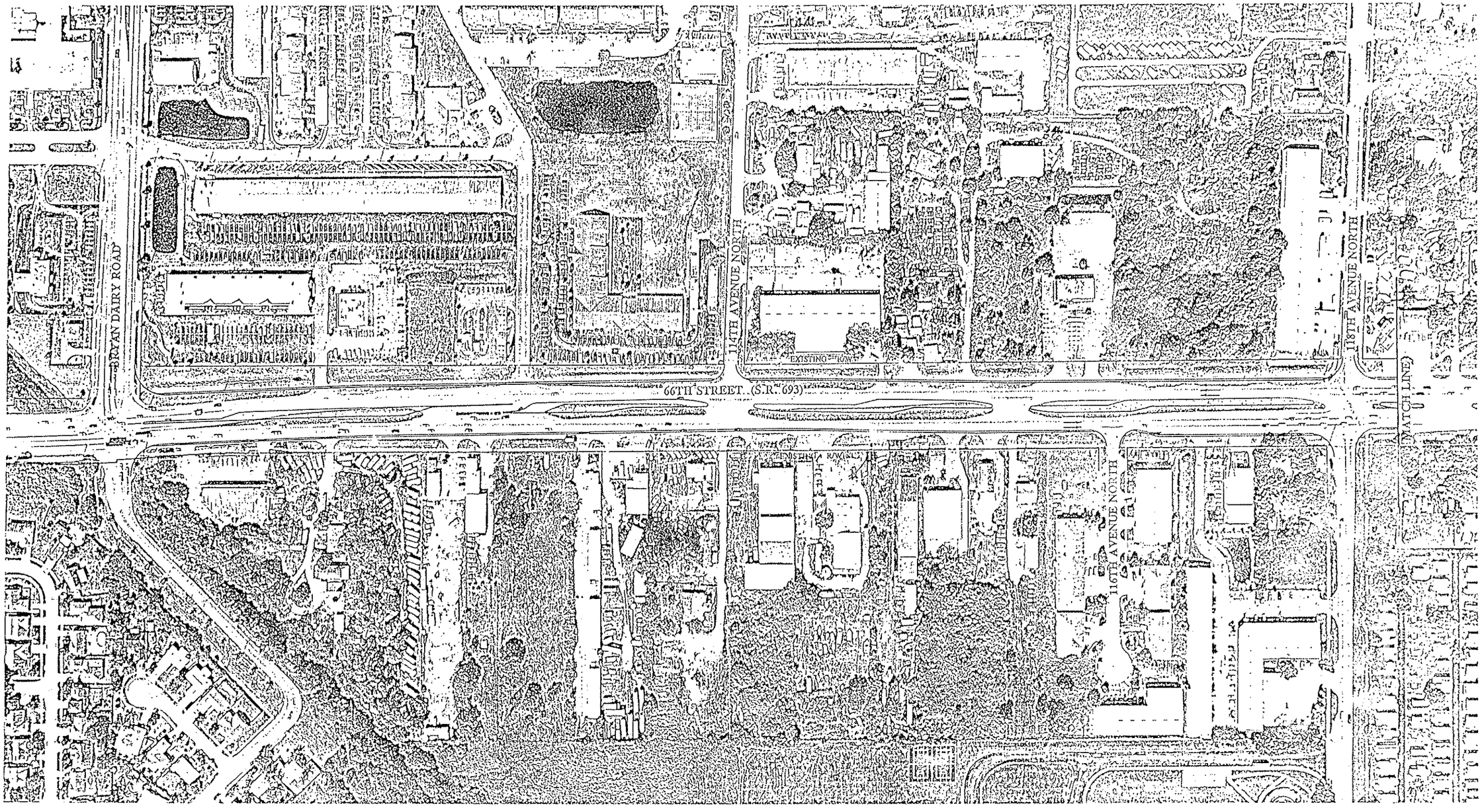

STATE OF FLORIDA
DEPT. OF TRANSPORTATION

REVISIONS		
DATE	BY	DESCRIPTION

66th STREET (S.R. 693)
FROM BRYAN DAIRY ROAD TO ULMERTON ROAD (S.R. 688)

CONCEPT DESIGN PLANS

DATE: SEPTEMBER 15, 1992
S.P.N.: 15060-1517
W.P.I.: 7117063

SHEET NO. 3 OF 5

NORTH
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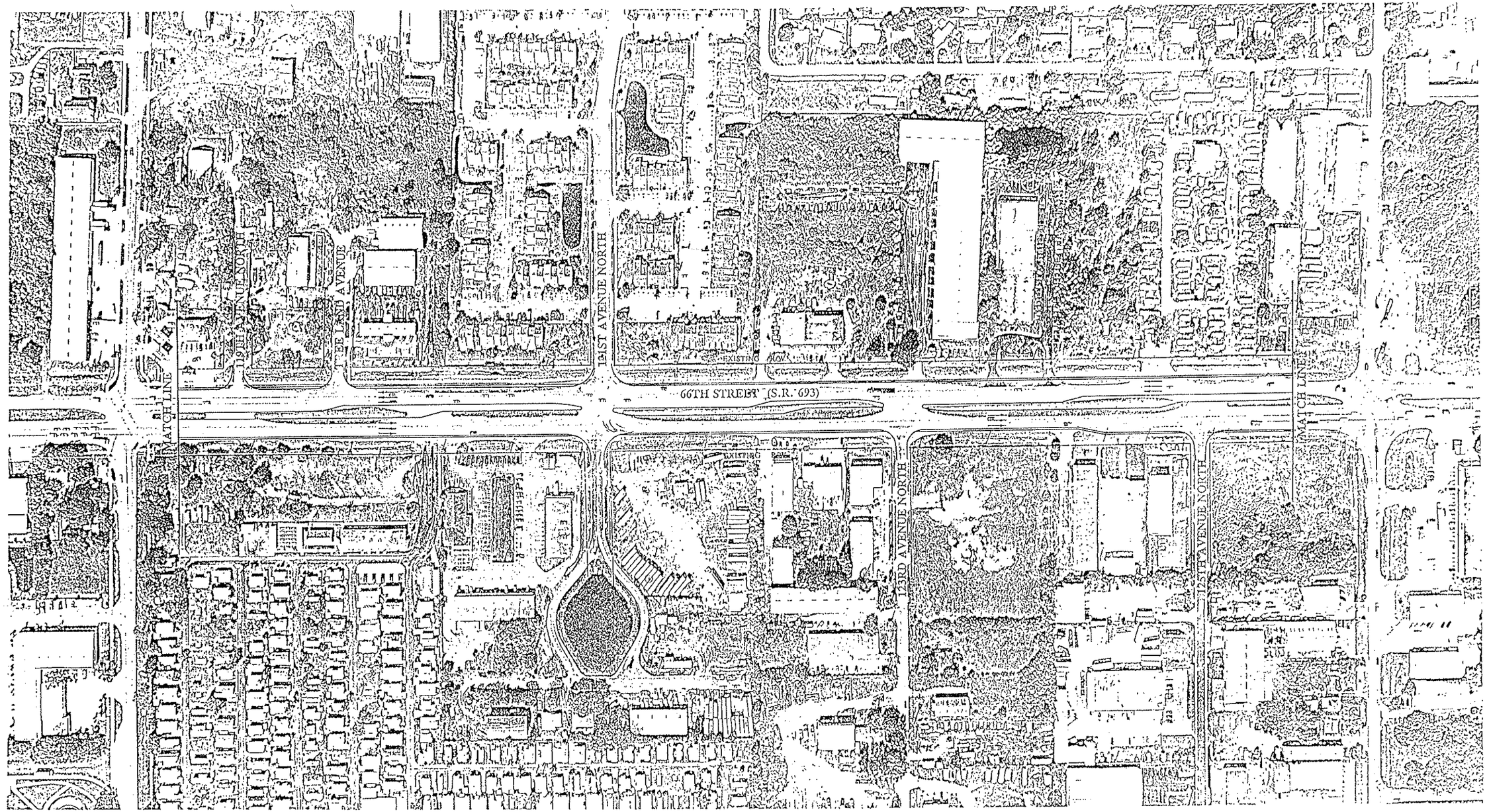

STATE OF FLORIDA DEPT. OF TRANSPORTATION	REVISIONS DATE / BY / DESCRIPTION	66th STREET (S.R. 693) FROM BRYAN DAIRY ROAD TO ULMERTON ROAD (S.R. 688)	CONCEPT DESIGN PLANS	DATE: SEPTEMBER 15, 1992 S.P.N.: 15060-1517 W.P.I.: 7117063 SHEET NO. 4 OF 5

NORTH
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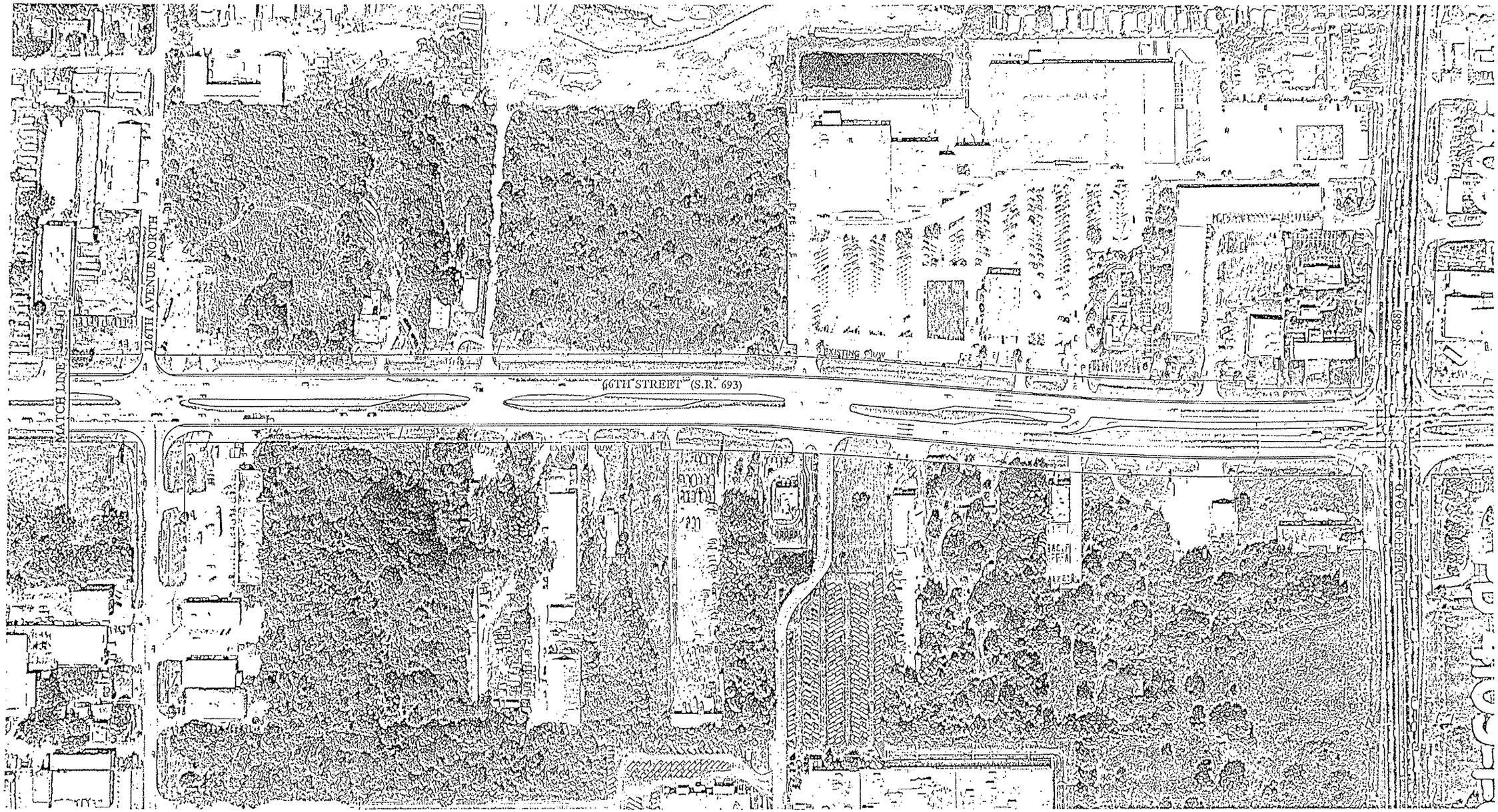

STATE OF FLORIDA
DEPT. OF TRANSPORTATION

REVISIONS		
DATE	BY	DESCRIPTION

66th STREET (S.R. 693)

FROM BRYAN DAIRY ROAD TO ULMERTON ROAD (S.R. 688)

CONCEPT DESIGN PLANS

DATE: SEPTEMBER 15, 1992
S.P.N.: 15060-1517
W.P.I.: 7117063

SHEET NO. 5 OF 5