#23

Federal Highway Administration
Region Four

ADMINISTRATIVE ACTION
ENVIRONMENTAL ASSESSMENT

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

State Project Number 10160-1511
Federal Aid Project Number F-295-1(7)
Budget Item Number 113380
State Road 597 (Dale Mabry Highway) from Broad Street to State Road 580 (Busch Boulevard) including Interchange at Waters Avenue
Hillsborough County, Florida

The proposed action involves the construction of an urban interchange at Dale Mabry Highway and Waters Avenue including associated frontage roads.

Submitted pursuant to 42 U.S.C. 4332(2)(c) and 23 U.S.C. 128

Approved for public availability

11-24-82
Date

Division Administrator
for Federal Highway Administration

CONTENTS

LIST OF FIGURES

LIST OF TABLES

I. DESCRIPTION OF THE PROPOSED ACTION

The Florida Department of Transportation proposes to upgrade the intersection of State Road 597 (Dale Mabry Highway) and County Road 584 (Waters Avenue), located in the northwest part of Hillsborough County (Figure 1), from an at-grade facility to a grade separated interchange. The purpose of the proposed action is to provide a transportation facility capable of maintaining improved levels of service for the present and future traffic volumes anticipated to occur at the intersection of these two routes.

The limits of the proposed action include approximately 1.5 miles of Dale Mabry Highway from the vicinity of Broad Street to the vicinity of SR 580 (Busch Boulevard), and approximately 0.5 miles of Waters Avenue from the vicinity of Grady Drive to the vicinity of Himes Avenue.

General design features associated with the proposed action include: multi-laning, urban design roadway sections, grade separated interchange, frontage roads, operational improvements, geometric improvements and access control.

DALE MABRY HIGHWAY LOOKING SOUTH FROM WATERS AVENUE

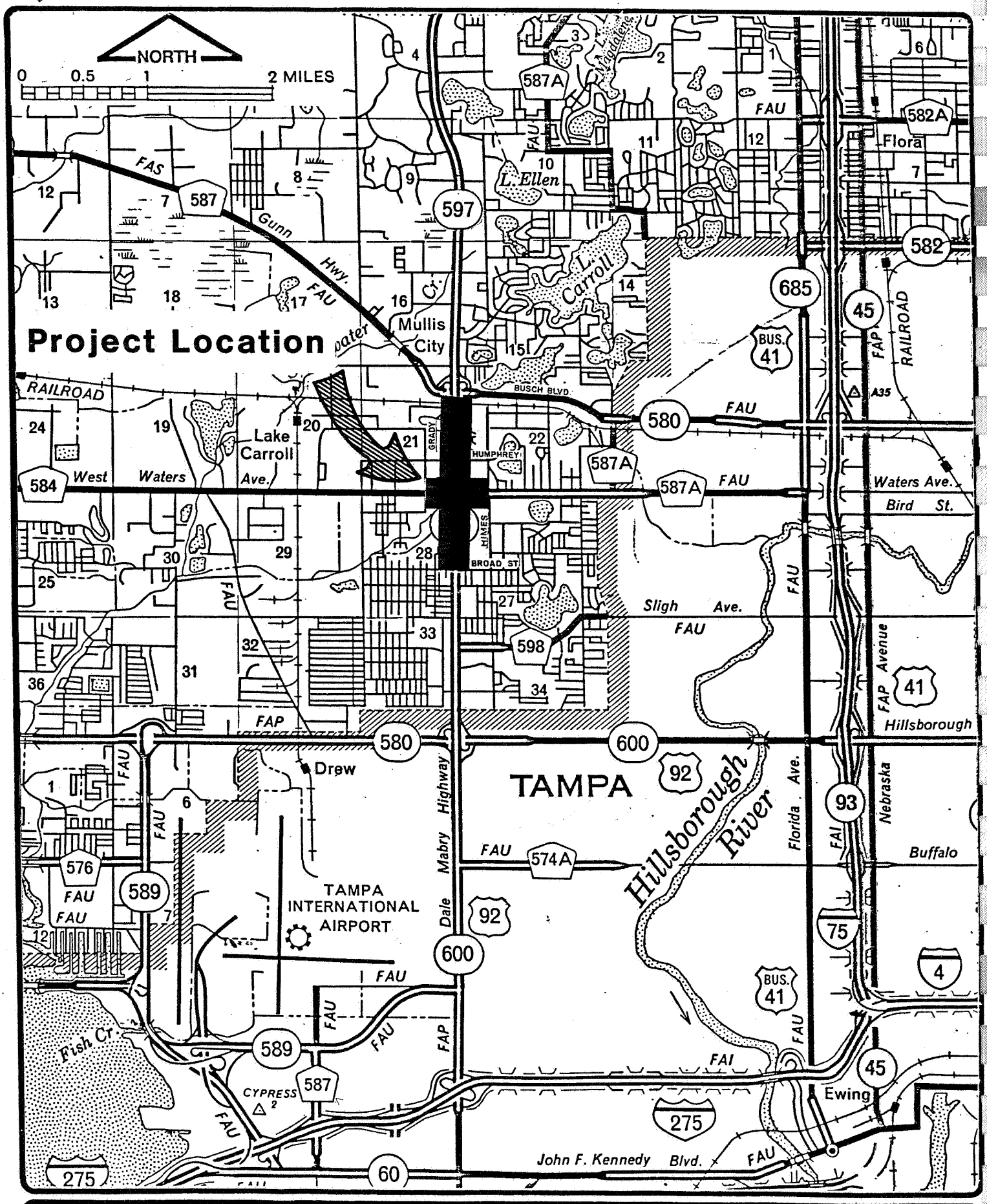


FIGURE I - PROJECT LOCATION

DALE MABRY HIGHWAY

II. NEED

PLANNING BASIS FOR THE PROPOSED ACTION

The Federal Aid Highway Act of 1962 requires an ongoing transportation planning process in urbanized areas in order to receive federal funds for transportation improvements. Pursuant to this Act, which calls for a continuing, cooperative, comprehensive transportation planning process, Hillsborough County has completed the Tampa Urban Area Transportation Study (TUATS)[1]. This study is periodically reevaluated to determine future travel demands in the County, and to develop highway and transit improvements that will satisfy this demand. The most recent TUATS reevaluation is the Tampa Urban Area Transportation Study Year 2000 Plan which indicates a need for a six-lane arterial with partial access control for Dale Mabry Highway while Waters Avenue is shown as a four-lane divided arterial.

The four (4) lane divided highway with frontage roads, presently being proposed, will provide higher traffic capacity on the roadway and at the interchange than the partially controlled six lane section which is depicted in the present adopted Transportation Plan. The proposed improvement has not appreciably changed the character of the proposed improvement from that of the concept proposed in the adopted transportation plan. The current conceptual design is capable of accommodating the projected future traffic demand. Therefore, the proposed action is consistent with the transportation plan adopted by the Tampa MPO.

TRANSPORTATION DEMANDS

Transportation forecasts dated September 16, 1981, as derived from network Y00A5A of TUATS estimate that in 1981, approximately 68,000 vehicles per day entered the intersection of Dale Mabry Highway and Waters Avenue (Figure 2). This demand is forecast to increase to over 118,000 vehicles per day at a rate of approximately 6.5 percent per year through the year 1990, assuming no major capacity increases are provided on parallel road facilities. Conversely, if the ultimate street system identified in the urban area transportation study is implemented by 1990, a portion of the Dale Mabry Highway and Waters Avenue demand will be diverted to new and upgraded parallel facilities. With the ultimate street system, the forecast 1990 traffic entering the intersection is approximately 40,000 vehicles per day, or about 60 percent of the 1981 demand. However, from 1990 to the year 2007 this demand on the ultimate system is projected to increase at a rate of 5.5 percent per year, yielding a year 2007 demand of approximately 98,000 daily vehicles entering the intersection. This indicates that the future traffic demand at the intersection of Dale Mabry Highway and Waters Avenue will almost double by the year 1990 if parallel roadway capacity is not provided, and will increase by almost 43 percent if all planned parallel improvements are implemented over the next twenty years.

This increased traffic is consistent with the traffic trend established in Florida over the last ten years. While certain areas in the country have shown decreases in the Annual Vehicle Miles of Travel, the contrary has occurred in Florida. The VMT for Florida has increased steadily in the last ten years. A review of the Annual Certification of VMT for Florida reveals an increase in traffic for every year except the 1973-74 period when traffic remained constant. Based on this historical record even in other "gas shortage" years and the expanding population in Florida (2nd fastest growing state in the country) it appears reasonable that traffic projections in Florida should continue to show substantial increases in traffic. This problem is compounded even more in Florida because Florida has five of the top twenty-five fastest growing urbanized areas in the country.

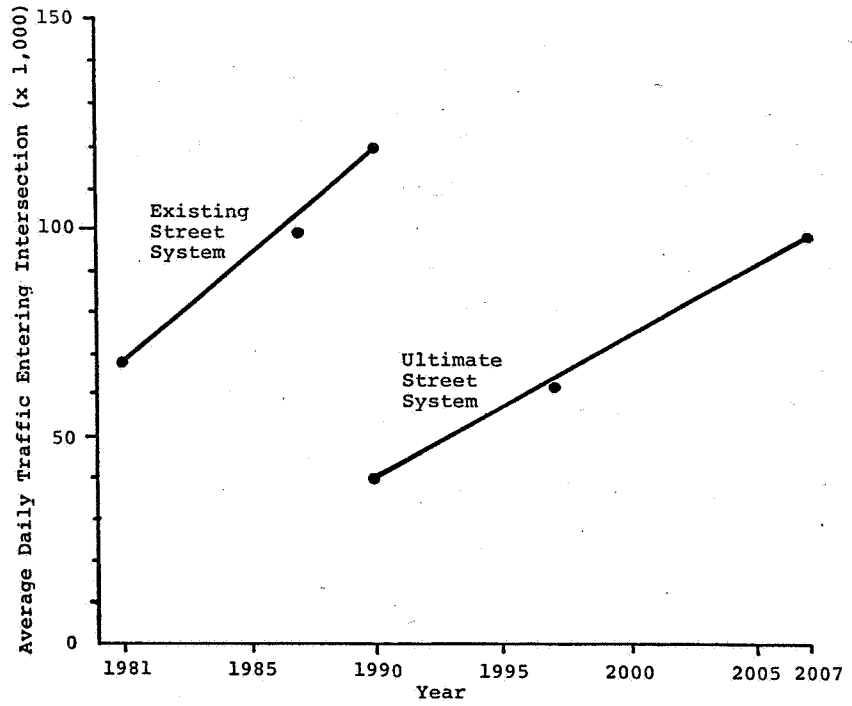


FIGURE 2 TRAFFIC FORECASTS

In addition to the large transportation demand, there will be major turning movements continuing at the intersection. As shown in Figure 3, the north leg of Dale Mabry Highway is projected to have approximately 69,200 vehicles per day by the design year 2007. Approximately 47,600 vehicles are through movements on Dale Mabry Highway, and about 21,600 vehicles are turning volumes from Waters Avenue. Conversely, the south leg is projected to have approximately 53,800 vehicles per day with considerably less volume coming from Waters Avenue (approximately 6,200 vehicles). Moreover, an analysis of the traffic pattern and order of magnitude identifies that the major facility is Dale Mabry Highway. This facility has a total volume and a through movement volume that is roughly twice the volume of Waters Avenue.

SYSTEM LINKAGE

Dale Mabry Highway, a State Primary Roadway on the Federal Aid Primary System, is the only continuous north/south route through western Hillsborough County serving metropolitan Tampa. Approximately 1.7 miles north of the Tampa City limits it intersects with

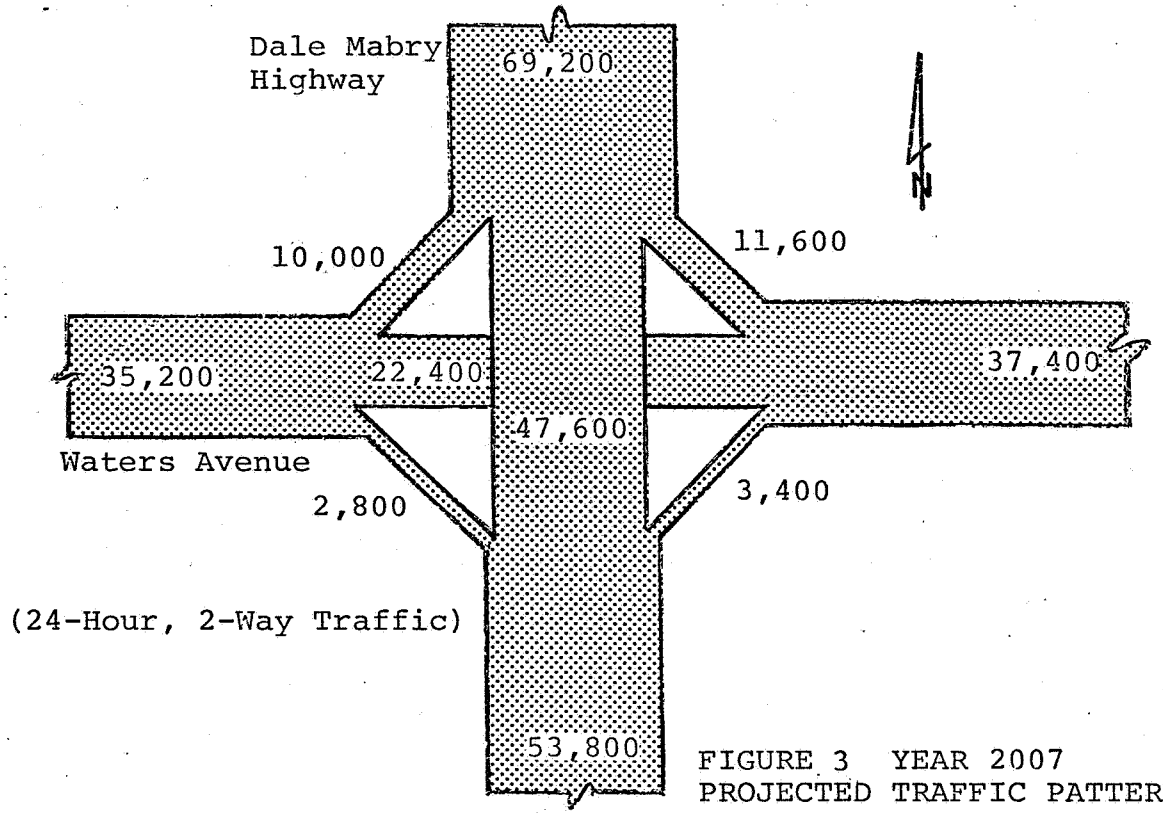


FIGURE 3 YEAR 2007
PROJECTED TRAFFIC PATTERN

Waters Avenue, a major east/ west arterial on the Federal Aid Urban System. Because of the absence of adequate parallel roadway facilities, Dale Mabry Highway must accommodate a high volume of north/-south traffic through this part of the County and is considered the most important surface arterial in Hillsborough County. In addition to Waters Avenue, Dale Mabry Highway also connects to the following major arterials in the project area:

Route	Classification	System
S.R. 60 (J.F.K. Blvd.)	Urban Principal Arterial	Federal Aid Urban
S.R. 589 (Boy Scout Blvd.)	Urban Minor Arterial	Federal Aid Urban
S.R. 574A (Buffalo Ave.)	Urban Minor Arterial	Federal Aid Urban
S.R.600 (Hillsborough Ave.)	Urban Principal Arterial	Federal Aid Primary
S.R. 580 (Busch Blvd.)	Urban Minor Arterial	Federal Aid Urban
Interstate 275	Urban Interstate	Federal Aid Interstate

SOCIO-ECONOMIC DEMANDS

The large transportation demand forecast at the intersection of Dale Mabry Highway and Waters Avenue is reinforced by demographic and planning statistics for northwest Hillsborough County.* These

* The Hillsborough County City-County Planning Commission's Planning area designation for northwest Hillsborough County is "Carrollwood/Lake Keystone" which generally encompasses that area north of Busch Boulevard and west of Armenia Avenue.

statistics point to the fact that northwest Hillsborough County is, and will continue to be one of the fastest growing areas of the County. Specific trends are as follows:

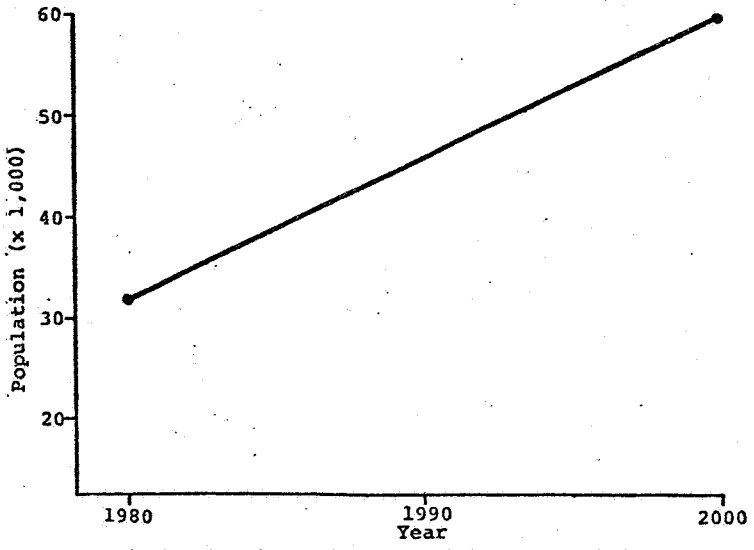


FIGURE 4 POPULATION GROWTH IN NORTHWEST HILLSBOROUGH COUNTY

- Growth in population indicated an increase of approximately 140 percent between 1970 and 1980.(2)

- Over the last several years the Carrollwood/Lake Keystone Planning Area led the County in subdivision activity, measured by both the number of subdivisions and amount of land. Since 1978 almost 45 percent of the lots planned and 40 percent of the land area planned for subdivision activity has been in the Carrollwood/Lake Keystone Planning Area.(3)

- The population of northwest Hillsborough County is projected to increase from approximately 32,000 in 1980 to approximately 60,000 in the year 2000 (4) as depicted in Figure 4.

DEFICIENCIES OF THE EXISTING FACILITY

Approximately 68,000 vehicles per day were estimated to enter the intersection of Dale Mabry Highway and Waters Avenue during 1981. Forced traffic flow results from this large demand during the morning and afternoon and results in the following estimated traffic conditions:

1) The average delay per vehicle is estimated to be over five minutes during the AM and PM peak hour periods.
2) Traffic queues of over 300 vehicles occur on Dale Mabry Highway.
3) Peak hour traffic demands are almost twice the capacity of the intersection.

SAFETY

Traffic accident data as recorded for the years 1974 through 1978 were reviewed for the project area. Over this five-year period there were approximately 400 accidents resulting in 313 persons injured and 4 fatalities. The predominant accident modes were rear end and left-turn collisions. Statistical accident data for the five-year period is summarized in Table 1.

Table 1 - ACCIDENT DATA RECORDED BETWEEN 1974 AND 1978

Accidents	403
Fatalities	4
Injuries	313
Property Damage	218
Economic Loss	$2,611,600

$$\frac{\text{Actual Accidents}}{\text{Expected Accidents}} = \frac{403}{370^*} = 1.09$$

* Based on Statewide Average Accident Rate for similar type facilities.

The ratio of the accident rate for the existing facility to the statewide average for similar type facilities is 1.09, or the actual roadway experience is about 9 percent above the statewide average.

EMERGENCY SERVICE

Correspondence with local fire, police and emergency medical services indicates that the proposed action would have a positive impact on the provision of these services. Local emergency medical vehicles use the existing intersection for approximately 33 vehicle trips daily, and the fire department uses Dale Mabry Highway as a major response artery. The Sheriff's Office indicates that the existing traffic congestion in the project area increases emergency response time and necessitates police traffic control.

III. ALTERNATIVES CONSIDERED

NO-PROJECT ALTERNATIVES

No Improvement Alternate

Vehicles entering the Dale Mabry Highway and Waters Avenue intersection are projected to increase to almost 98,000 vehicles per day by the year 2007. Maximum capacity of the intersecting roadways without experiencing forced flow conditions is approximately 37,000 vehicles per day, resulting in a diversion to parallel routes of approximately 61,000 vehicles per day. If traffic on these two roadways cannot be diverted to parallel facilities, the length of time of forced flow conditions will increase, with associated increases in delays to motorists. In addition, increased traffic congestion would result in increased user costs, and an unreliable emergency service route.

Upgrading the Dale Mabry Highway and Waters Avenue intersection to a grade-separated facility would provide the following benefits:

1) Reduce delays to motorists;
2) Provide a facility which improves the level of traffic service;
3) Provide an improved emergency service route;
4) Reduce fuel consumption; and
5) Improve driver safety and comfort.

Conversely, if the project is not constructed, there would be no displacement of businesses, right-of-way would not have to be acquired, construction funds would not be expended, construction impacts would not occur and the visual environment would remain constant. However, these beneficial attributes of not implementing the proposed action would occur only in the immediate study area and would be at the expense of increased adverse impacts resulting from compensating road improvements in other communities. Without adequate transportation service in the project corridor it is reasonable to assume that development of northwest Hillsborough County would be curtailed, with an overall reduction of the socio-economic attributes of the community. However, the No-Improvement Alternate is a feasible alternative and will be considered through the Public Hearing for the project.

Postponing the Action

Postponing the construction of a grade-separated interchange at this intersection would, depending on the length of postponement have impacts similar to the no improvement alternate. In addition, the continued development along these roadways could encroach on

the project area, increasing costs for future right-of-way acquisition and increasing community disruption.

Postponing the action may also jeopardize the future economic feasibility of the project. Based on current escalation costs, project cost would increase exponentially with respect to the time of delay. Current rises in construction costs could double the cost of the project within the first seven years that the project is postponed.

Upgrading the Existing Facility

Traffic capacity analyses indicate that upgrading the existing at-grade intersection will not provide acceptable traffic service for projected traffic demands. However, a detailed traffic operations study of the subject intersection was undertaken to determine what improvements could be economically, efficiently and expeditiously implemented to alleviate existing traffic congestion.(5) The alternatives considered included improved signal timing, additional turning lanes, prohibition of turns and widening of the west leg of Waters Avenue. As a result of an evaluation of the alternatives, a short-range improvement program was recommended including the following temporary improvements at the intersection of Waters Avenue and Dale Mabry Highway:

1) Provide dual left-turn lanes for eastbound and westbound traffic.
2) Lengthen northbound left and right-turn storage lanes.
3) Lengthen southbound right-turn storage lane.
4) Increase signal phase maximums within the controller to allow a 150-second cycle.

Implementation of these recommendations would increase the maximum capacity of the intersection to an estimated 55,000 vehicles per day which, when considering the demand placed on the intersection would reduce congestion, however, forced flow traffic conditions would still exist. If Waters Avenue and Dale Mabry Highway were both upgraded to six-lane roadways and double left turn and exclusive right turn lanes were provided on all approaches, the intersection would still exceed capacity by a factor of approximately 1.4 in the design year 2007. Long term relief will require major local improvements and substantial upgrading of the transportation network in northwest Hillsborough County.

TRANSIT AS AN ALTERNATIVE MODE

The Tampa Urban Area Transportation Study (TUATS) has estimated that 3.4 percent of all person trips in Hillsborough County will be made by mass transit by the year 2000. This projection indicates that transit usage would not be sufficient to serve as an alter-

native to upgrading and improving the intersection of Dale Mabry Highway and Waters Avenue. However, transportation system management (TSM) improvements such as park-n-ride lots and ride sharing should be encouraged along this corridor.

ALTERNATE CORRIDORS

The Tampa Urban Area Transportation Study (TUATS) Network Y00A5A identifies an extensive transportation system to serve an approved land use plan for the year 2000. Dale Mabry Highway and Waters Avenue as well as each of the existing major parallel roadways are identified as needing future widening along with the construction of the Northwest Expressway. Therefore, significant traffic diversion from Dale Mabry Highway and Waters Avenue to parallel facilities is either not attainable due to patterns of travel, or because of the inability of parallel roadways to accommodate additional forecast growth. This dictates that major roadway improvements be made along both the Waters Avenue and Dale Mabry Highway corridors as well as at their intersection.

PROJECT ALTERNATIVE

To determine the transportation improvement for Dale Mabry Highway and Waters Avenue which will be in the best overall public interest, various improvement concepts were evaluated. This section discusses the viable build alternative and why various other alternatives were eliminated as non-viable. Alternatives considered were a range of interchange and frontage road configurations. The criteria which were used for comparative evaluation include: land use and community impacts; environmental consequences; traffic service; and access.

Land development in the vicinity of Dale Mabry Highway and Waters Avenue is characterized as urban (Figure 8). Along these two roadways the predominant pattern is continuous strip commercial with scattered high density residential. Little undeveloped land is available outside the existing rights-of-way. Consequently, to minimize community impacts, viable alternatives should minimize right-of-way acquisition. In addition, viable alternatives should provide an improved level of traffic service for the present and future traffic volumes, reasonable access to adjacent land uses and minimize impacts on the environment.

Viable Build Alternate

After detailed analysis of plausible alternatives, a viable build alternative was developed as shown in Figure 5. This alternate is an urban interchange with Dale Mabry Highway elevated over Waters Avenue and has the following characteristics.

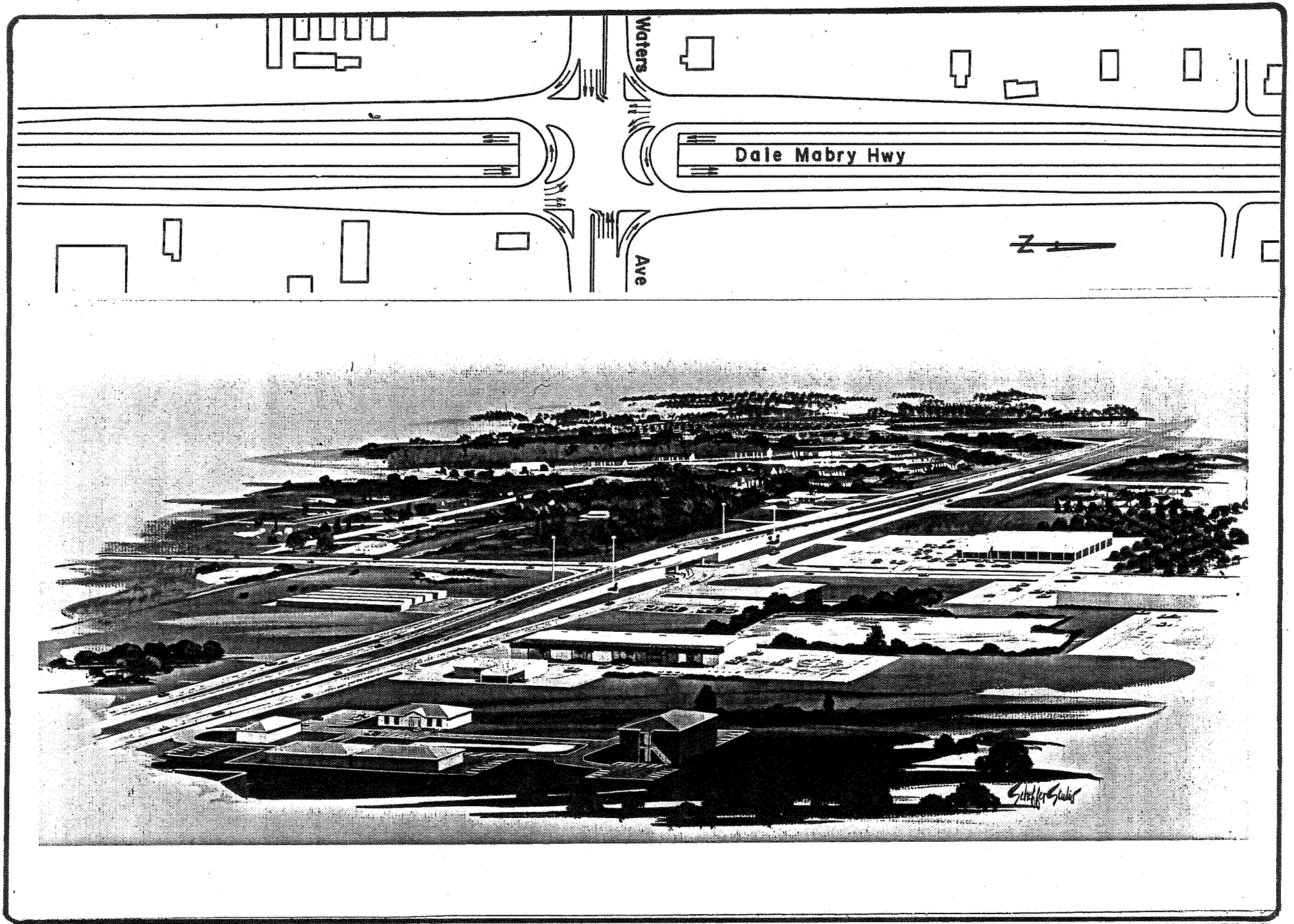


FIGURE 5 - BUILD ALTERNATIVE

- Exclusive U-turn movements will be provided for Dale Mabry Highway traffic;
- One-way frontage roads will be provided along Dale Mabry Highway;
- The frontage roads will continue through the intersection of Waters Avenue to provide maximum land use access and the frontage road will continue under the Busch Boulevard overpass for continuity;
- Double left turns, two through lanes and exclusive right turns will be provided for all four approaches for maximum intersection capacity;
- The interchange concept can be expanded to provide two-lane on and off ramps within the proposed right-of-way; auxiliary traffic lanes between Busch Boulevard and Waters Avenue will be provided to increase merge and weaving capacities;
- An additional lane will be added to the northbound Busch Boulevard Bridge to provide the required auxiliary lane.
- Sidewalks will be provided on the frontage road and along Waters Avenue in the interchange area;
- Flexibility in the design of the proposed interchange will allow the upgrading of intersecting roadways at minimum cost.
- Retaining walls to minimize right-of-way requirements.

The reader should note that the conceptual design features presented in this study are only developed sufficiently to convey a representative idea of the type of future improvement that is needed for this proposed interchange.

Alternatives Considered but Not Shown

Cloverleaf - A variety of cloverleaf and partial cloverleaf design concepts are available for consideration. However, each quadrant that contains a loop of the cloverleaf would require approximately 10 acres of total right-of-way. Therefore, a major disadvantage of a cloverleaf interchange is that it would require from 10 to 40 acres of right-of-way from the developed intersection area; 60 to 560 percent more right-of-way than that required for an urban interchange. Moreover, access from the adjacent land uses to the cloverleaf and frontage road circulation would have to be severely restricted, thereby further impacting the existing developments in the immediate area. Because of the significant community impacts, high right-of-way costs, and access circulation restrictions, it is not recommended that a cloverleaf design be considered for this highly developed intersection area.

Conventional Diamond Interchange - Compared to an urban interchange, conventional diamond interchanges require approximately 40 percent additional right-of-way. This is considered a major disadvantage due to increased community impacts and costs. In addition, the capacity of a conventional diamond interchange provides no advantage compared to an urban interchange. Therefore, a conventional diamond interchange is not recommended for this location.

Frontage Roads - Grade separation in itself will dictate some degree of access control due to inaccessibility to elevated road segments. In addition, to preserve the capacity of the overpass and to reduce conflicts in the interchange area, additional access control should be considered. This leads to a need to provide secondary street access in the interchange area in the form of frontage roads to allow reasonable land use access. Because of the surrounding urbanized area, any frontage road should be continuous and functional while minimizing required right-of-way.

Two way frontage roads were considered, but would require their intersection at side streets to be located approximately 300 feet from the main roadway. This would increase the right-of-way requirement in prime commercial areas as well as cause the need for additional traffic impeding signalization in the interchange area. Moreover, in the areas of the on and off ramps, the two way operation should be modified to functionally operate without vehicular restrictions and conflicts. Because of these impacts, costs and operational problems a two-way frontage road system is not recommended for the project area.

Elevated Roadway - Traffic on Dale Mabry Highway and Waters Avenue was analyzed to determine which roadway should be elevated to provide maximum service to the motorists while minimizing impacts to adjacent land uses. Figure 3 indicates that elevating Dale Mabry Highway with ramp signals on Waters Avenue would allow almost twice as many vehicles to flow freely through the interchange area compared to elevating Waters Avenue. In addition, the predominantly 200 foot wide right-of-way along Dale Mabry Highway compared to the approximate 100 foot right-of-way along Waters Avenue would allow Dale Mabry Highway to be elevated with parallel frontage roads with less total impacts to the adjacent land uses.

ENGINEERING ANALYSIS OF THE BUILD ALTERNATE

Using the results of not building the proposed action as the basis for comparison, the effects of the proposed action are presented to determine their relative advantages and disadvantages.

Design Characteristics

The existing at-grade intersection has two through lanes plus exclusive left and right turn lanes on Dale Mabry Highway. Waters Avenue has dual left turn lanes and exclusive right turn lanes for each approach. Two lanes exist for eastbound traffic and one lane westbound movements.

The proposed urban interchange would involve a four-lane Dale Mabry Highway overpassing Waters Avenue (Figures 5 and 6). Frontage roads would run parallel to Dale Mabry Highway to serve adjacent land uses. The interchange would be a controlled access facility with ramps providing frontage road connection to Dale Mabry Highway. Within the interchange area Waters Avenue would be a four lane divided facility with exclusive turn lanes.

Traffic Service

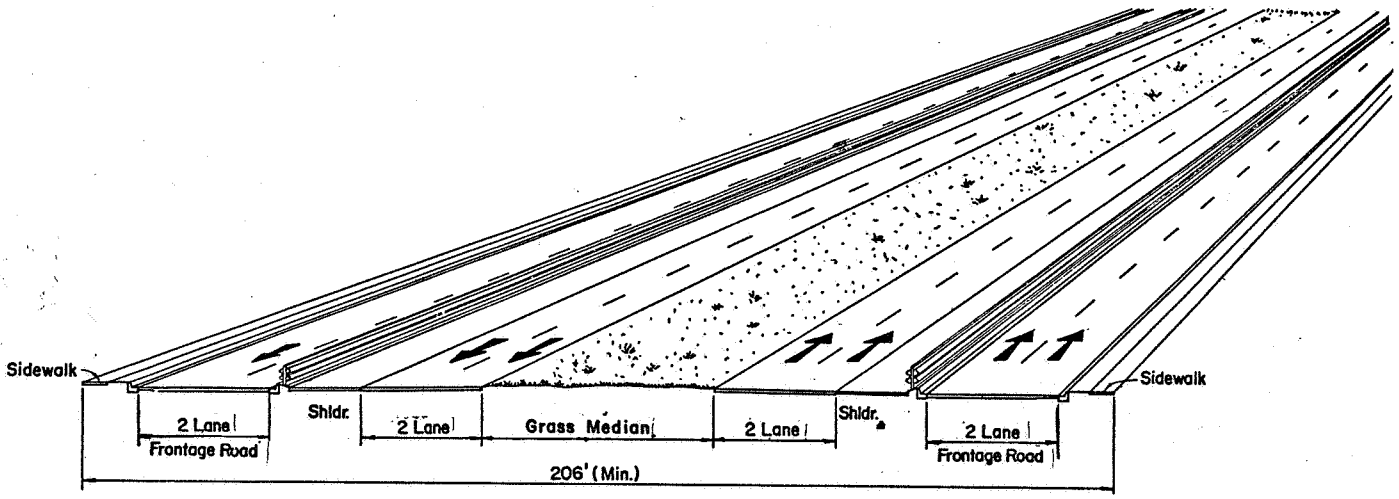
In 1981, roughly 68,000 vehicles per day were estimated to enter the intersection of Dale Mabry Highway and Waters Avenue under forced flow traffic conditions during the street peak hours. This transportation demand has been forecast to increase by about 20 percent by 1987 and continue to increase to over 118,000 vehicles per day entering the intersection by 1990 if parallel capacity is not provided to Dale Mabry Highway and Waters Avenue. The proposed four-lane, fully controlled access facility can reasonably be expected to serve 10,000 vehicles per day more than the six-lane arterial with frontage roads contained in the adopted plan. Therefore, the geometrics proposed for Dale Mabry Highway and Waters Avenue are estimated to be able to serve the maximum demand as projected by TUATS.

Maintenance of Traffic During Construction

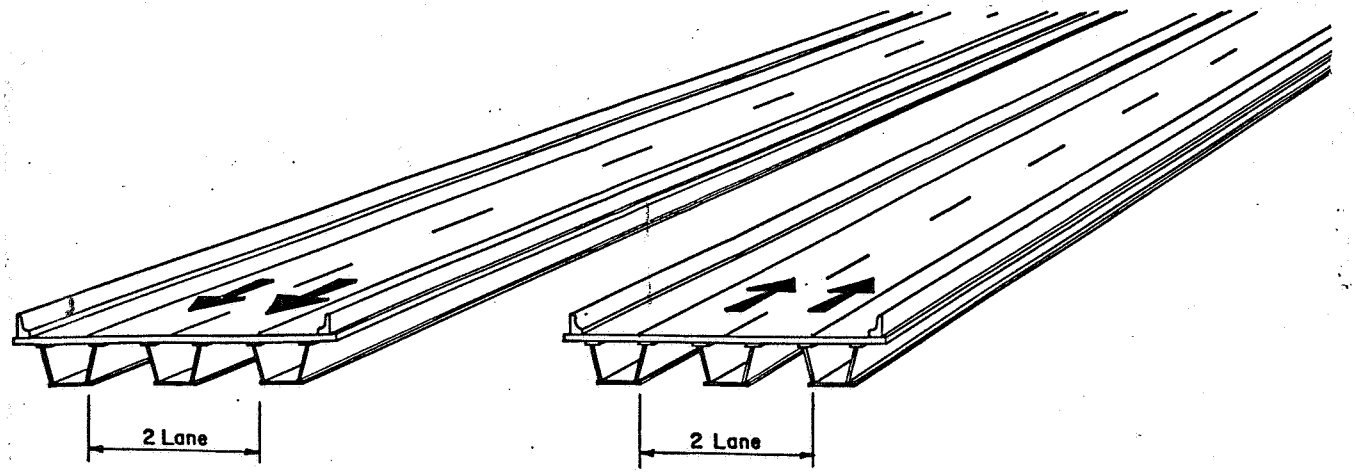
To allow for continuous traffic service along Dale Mabry Highway and Waters Avenue during construction a detailed traffic maintenance plan was developed. As shown in Figure 7 traffic would be maintained on existing lanes of Dale Mabry Highway and Waters Avenue during construction of the ramp-frontage roads and outer lanes of Waters Avenue (Phase I). For Phase II, traffic will be diverted to the newly constructed ramp-frontage roads from Dale Mabry Highway and from Waters Avenue by use of temporary traffic signals and pavement markings. Through traffic on Waters Avenue will be maintained by using existing lanes and temporarily constructed traffic lanes located under the end spans of the proposed bridge to accommodate installation of the bridge girders and associated concrete placement. Phase III involves traffic operation of the complete facility.

Right-Of-Way Requirements

The Build Alternative will require the acquisition of approximately 6.0 acres of additional right-of-way and displace an estimated two businesses. Right-of-way takings will occur along both sides of



TYPICAL URBAN SECTION
DALE MABRY HIGHWAY

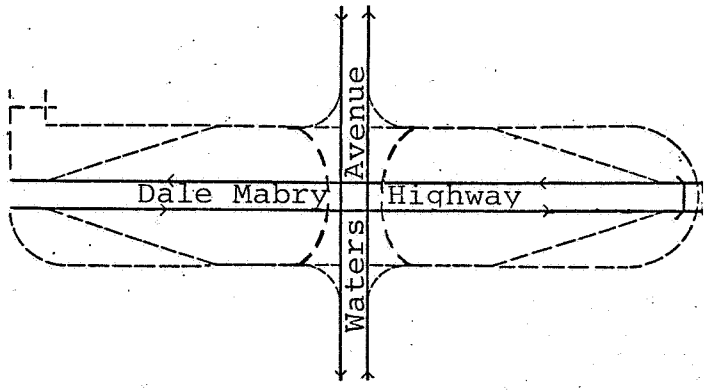


TYPICAL BRIDGE SECTION
DALE MABRY HIGHWAY

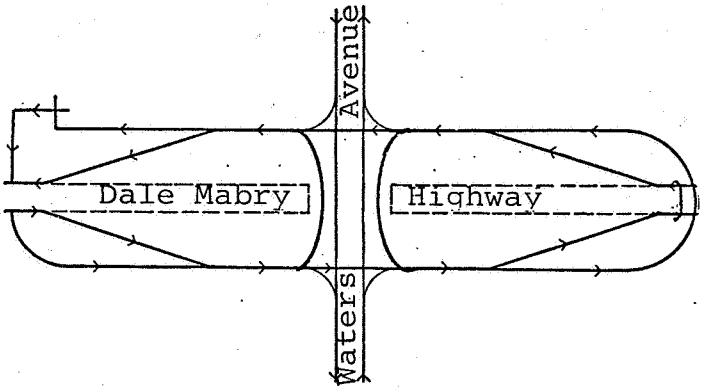
FIGURE 6 - TYPICAL SECTIONS

DALE MABRY HIGHWAY

PHASE I



PHASE II A



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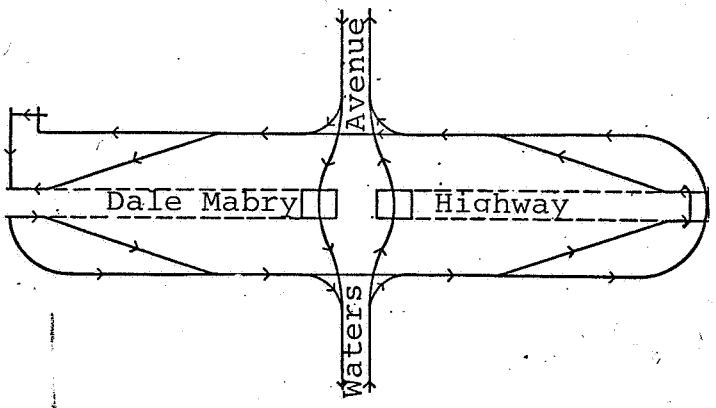


PHASE III

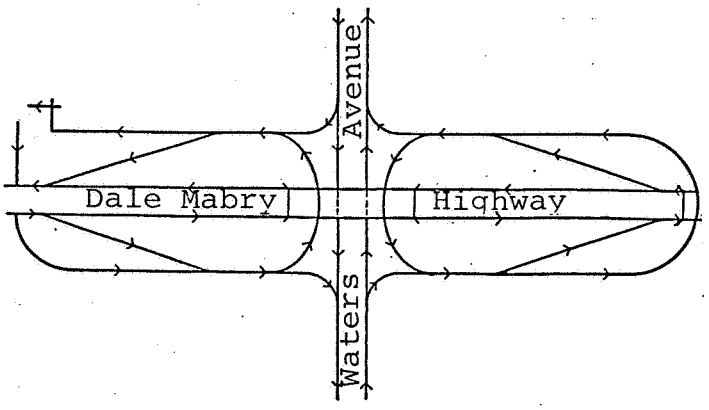


FIGURE 7- MAINTENANCE OF TRAFFIC

N.T.S.

DALE MABRY HIGHWAY

the existing rights-of-way of Dale Mabry Highway and Waters Avenue, except for north of Humphrey Street where the taking is predominately on the east side.

Costs

The proposed project would cost an estimated $15.7 million in 1982 dollars (Table 2). The No Build Alternative would not involve the expenditure of funds.

Table 2 - ESTIMATED COSTS
(1982 Dollars)

Roadway	$ 6,050,000
Retaining Wall	1,980,000
Dale Mabry Hwy/Waters Avenue Structure	2,750,000
Dale Mabry Hwy/Busch Boulevard Structure	990,000
Right-of-way	3,960,000
TOTAL	$15,730,000

IV. IMPACTS

SOCIAL AND ECONOMIC IMPACTS

Land Use

Dale Mabry Highway is heavily developed on both the east and west sides with commercial operations (Figure 8). Retail and wholesale businesses of varying size and nature established along the route in the project area include restaurants, automobile sales and gas stations in addition to some office development. The short section of Waters Avenue within the project area is also primarily commercially developed. It is anticipated that the current trend of strip commercial development along Dale Mabry Highway in the project area will continue.

Although minor improvements are proposed north of Busch Boulevard, the grade separation and railroad tracks at Busch Boulevard and Dale Mabry Highway are an identifiable man-made northern boundary for the project neighborhood. The Good Samaritan Hospital, a church and a church school, on the east side of Dale Mabry Highway represent a break in the commercial land use pattern and thus denote the southern boundary of the neighborhood. Along Waters Avenue the neighborhood study area can be delineated on the east by Himes Avenue and on the west by Grady Avenue. These north-south roadways represent logical boundary points for the type of land use encountered.

Displacements and Relocation Assistance

In accordance with Volume 7, Chapter 5, Paragraph 1, of the Federal-Aid Highway Program Manual, the District Right-of-Way Administrator has compiled a report entitled, "Conceptual Stage Relocation Plan", for the purpose of determining the number of individuals, families, businesses and non-profit organizations to be relocated by the proposed action. Included in the report is a determination of the probable availability of relocation resources.

A field survey of the project was conducted on November 10, 1981 by members of the Relocation Assistance Staff. Affected businesses and other facilities were identified. All potential displacees were surveyed the week of November 16th. There will be two businesses and no residences displaced by this project. In addition, numerous on premise signs will be displaced by the project.

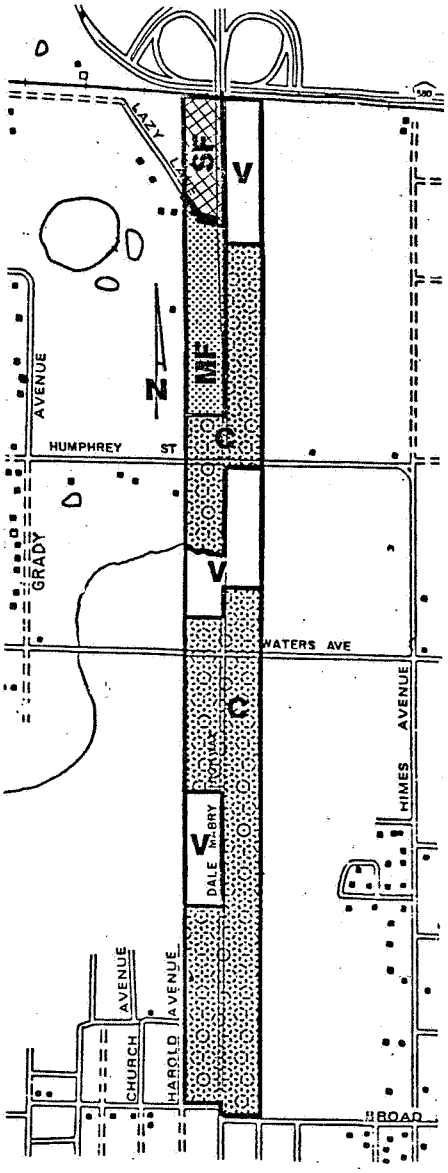
Business site resources were gathered from local real estate listing (MLS), classified ads in local papers, and from area realtors. Analysis indicates that there are sufficient resources available in the City of Tampa and/or Hillsborough County to accommodate the

businesses affected by this project. In the unlikely event that the successful relocation of either of the businesses could not be affected, ongoing businesses which are for sale, are in ample supply. This last resort alternative would allow the affected business owner to continue his independent commercial enterprise as opposed to seeking salaried employment. The on-premise signs would be moved back on remaining property. All outdoor advertising signs in this area are conforming and would also be relocated to remainder property.

In order to minimize the unavoidable effects of right-of-way acquisitions and displacement of people, the Florida Department of Transportation will carry out a Right-of-Way and Relocation Program in accordance with Florida Statute, Chapter 337.09 (4), and the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (Public Law 91-646).

The Department of Transportation provides advance notification of impending right-of-way acquisition. Before acquiring right-of-way, all properties are appraised on the basis of comparable sales and land use values in the area. Owners of property to be acquired will be offered and paid fair market value for their property rights.

No person lawfully occupying real property will be required to move without at least 90 days written notice of the intended vacation date, and no occupant of a residential property will be required



SF - Single Family Residential
MF - Multi Family Residential
C - Commercial
V - Vacant

FIGURE 8 - EXISTING LAND USE

to move until decent, safe and sanitary replacement housing is "made available." "Made available" means that the affected person has either by himself obtained and has the right of possession of replacement housing, or that the Department of Transportation has offered the relocatee decent, safe and sanitary housing which is within his financial means and available for immediate occupancy.

At least one relocation agent is assigned to each highway project to carry out the relocation assistance and payments program. A relocation agent will contact each person to be relocated to determine individual needs and desires, and to provide information, answer questions, and give help in finding replacement property. Relocation services and payments are provided without regard to race, color, religion, sex or national origin.

All tenants and owner occupant displacees will receive an explanation regarding options available to them, such as: (1) various methods of claiming reimbursement for moving expenses, (2) rental of replacement housing, either private or publicly subsidized, (3) purchase of replacement housing, or (4) moving owner-occupied housing to another location.

Financial assistance is available to the eligible relocatee to: (a) compensate the relocatee for the costs of moving from homes, businesses and farm operations acquired for a highway project, (b) make up the difference, if any, between the amount paid for the acquired dwelling and the cost of an available dwelling on the private market, (c) provide reimbursement of expenses such as legal fees and other closing costs incurred in buying a replacement dwelling or in selling the acquired property to the Department of Transportation, and (d) make payment for any increased interest cost resulting from having to get another mortgage at a higher interest rate. Replacement housing payments, increased interest payments, and closing costs are limited to $15,000 combined total. A displaced tenant may be eligible to receive a payment, not to exceed $4,000 to rent a replacement dwelling or room, or to use as a down payment, including closing costs on the purchase of a replacement dwelling.

Brochures which describe in detail the Right-of-Way Acquisition Program and the Relocation Assistance and Payments Programs (entitled Coming Your Way and Your Relocation respectively) are distributed at all public hearings and are made available upon request to any interested persons.

Community Impact

The small amount of business displacement which would occur is not expected to have any adverse affect on either the local neighborhood or the Tampa-Hillsborough County urban area in general. The

two businesses which may be displaced represent 6% of the retail establishments in the project neighborhood and 4% of the total commercial and professional establishments. The businesses would likely be replaced in the project neighborhood area provided consumer demand is sufficient. In any event, other ongoing businesses in this area are capable of providing similar services. There are no community or public facilities such as hospitals, parks, or shopping centers being displaced by this project. Further, since this project is an improvement of an existing roadway, no separation of neighborhood from community facilities will occur.

Public Services and Facilities

The construction of an urban interchange at Dale Mabry Highway and Waters Avenue would provide improved levels of traffic service for present and future traffic volumes. Accessibility to public facilities for area residents should be improved and emergency service response times minimized.

Utilities

The project area is served by numerous utilities which are generally located within, or cross the existing rights-of-way of Dale Mabry Highway and Waters Avenue. Where utility conflicts exist with the proposed transportation improvement, normal utility relocation will be required. The cost of utility relocation within public rights-of-way is the burden of the utility owner. Coordination with area utility companies indicates the following installations in the project area:

- The City of Tampa Water Department has a 20 inch water line running east and west from Dale Mabry Highway along the south side of Waters Avenue. Tying into this line and running south along the east side of Dale Mabry Highway is a 12 inch line.

- The Tampa Electric Company has a 13,000 volt distribution pole line mostly along the east side of Dale Mabry Highway for the entire project length.

- Peoples Gas System has a transmission pressure main which runs along the west side of Dale Mabry Highway from Humphrey Street approximately 900 feet south, then crosses to the east side and continues south to Waters Avenue where it turns east and runs along the north side. In addition, a gas line crosses Dale Mabry Highway east/west at Broad Street.

- The City of Tampa Sewer Department has force mains which are located within or cross the existing right-of-way at numerous locations.

Economic Impact

The land or parcels which are acquired for the proposed action would be purchased at current fair market value; the impact being the removal of these properties from the tax base and the loss of the subsequent annual property tax revenues. Due to the relatively small amount of right-of-way needed for the proposed action, this impact to the tax base of Hillsborough County will be insignificant. The tax base impact is estimated to be only .01 percent of the total property tax revenues.

To the extent that goods and services are purchased locally and a predominantly local labor force is employed during construction, the proposed action should have a minor positive impact on the local economy.

CULTURAL RESOURCE IMPACTS

Historic and Archeological Resources

A cultural resources assessment, including a field survey, was performed for the project. No archeological, architectural, or historic sites or properties were encountered during this assessment and the results were sent to the State Historic Preservation Officer (SHPO). After consultation, the SHPO determined that no cultural resources listed or eligible for listing in the National Register of Historic Places will be effected by the project. (See Appendix)

Parks and Recreation Areas

In accordance with Section 4(f) of the Department of Transportation Act of 1966, the project area was examined for its proximity to parks and recreation areas which could be directly or indirectly impacted. No parks or recreation areas are located in the area of the proposed action, therefore no adverse impacts to Section 4(f) lands are anticipated.

NATURAL RESOURCE IMPACTS

Subsurface Conditions

Preliminary subsurface investigations were conducted to evaluate subsurface conditions with respect to the proposed action[6]. Investigations included widely spaced soil and auger borings in the vicinity of Dale Mabry Highway and Waters Avenue. Results indicated the existence of some extensive areas of unsuitable organic soil. Specifically, these areas include:

1) The west side of Dale Mabry Highway from approximately 300 feet south of Waters Avenue to approximately 700 feet north of Waters Avenue. (Corresponds generally to wetland Site #2.)

2) The east side of Dale Mabry Highway from approximately 600 feet north of Waters Avenue to 1200 feet north of Waters Avenue. (Contains part of wetland Site #3.)

3) Both the north and south sides of Waters Avenue from Dale Mabry Highway to approximately 1000 feet west. (Does not include any wetland sites.)

Within these areas unsuitable organic soils were found to extend to depths as great as 10 to 23 feet. Consequently, roadway construction in these areas will require extensive demucking to completely remove and replace the unsuitable organic soils with suitable and properly compacted backfill. Fill material will come from approved upland areas. It is anticipated that normal construction practices will be followed which will not require dewatering.

Biologic Communities

The major biological communities in the vicinity of the proposed study area consist of the following: freshwater marsh, wetland mixed forest, freshwater swamp, inland slough, and pine flatwoods. These diverse systems have the potential to support a varied and abundant wildlife, however, due to extensive disturbance and alterations of habitats, most areas are rather devoid of animal life.

The freshwater marsh and swamp areas in close proximity to the project area are dominated by red maple. Other tree and shrub species occurring include Florida elder, wax myrtle, dahoon holly and fetterbush. Ground cover vegetation includes muscadine grape, chain fern broomsedge, and various other herbs and grasses.

Wetland mixed forest areas within the study limits remain as isolated pockets adjacent to intensely developed commercial parcels. The dominant vegetation includes black gum, primrose willow and swamp fern. Pond cypress, Carolina willow, saltbush, and buttonbush are also common to the area.

The wildlife observed in these areas include eastern gray squirrel, cotton rat, green heron, mocking bird, various frogs and mosquito fish. Due to the extensive urban development surrounding the forest areas, it is doubtful that larger animals are present in significant numbers.

Pine flatwoods are found surrounding the freshwater swamp, but have been subject to some clearing from nearby construction and past agricultural activities.

Wetlands

On-site surveys of wetland communities were conducted during December, 1981. Potential areas of concern were delineated on the basis of aerial photography and groundtruthing. Six wetland sites were identified within the study area which would be impacted by the proposed improvement. (Figure 9)

Site Nos. 1A and 1B - These two wetland sites are both located along Channel H; 1A is located where Waters Avenue crosses the channel and 1B is located where Dale Mabry Highway crosses it. Channel H is within the upper reaches of Sweetwater Creek and is classified as a Riverine System. The water depth ranges from 3" to 6" at Site 1B to 8" to 20" at Site 1A. At Site 1A, Channel H flows under Waters Avenue through a twin concrete box culvert. At Site 1B, the channel connects to the drainage ditch which parallels the west side of Dale Mabry Highway. The width of the channel is approximately 30 feet at Site 1A and 10 feet at 1B.

Dominant overstory vegetation observed at Site #1A included wax myrtle (Myrica cerifera), Carolina willow (Salix caroliniana), saltbush (Andropogon virginicus) and blackberry (Rubus trivialis). At Site #1B common species included primrose willow (Ludwigia peruviana), broomsedge and elodea (Hydrilla verticillata).

Site No. 2 - This wetland is a freshwater swamp located along the west side of Dale Mabry Highway approximately 350 to 850 feet north of Waters Avenue. Site No. 2 is classified as a Palustrine System (freshwater swamp) surrounded by a non-forested vegetated freshwater marsh. The total area of the site is approximately 11.4 acres.

The dominant species at this site include an overstory of red maple (Acer rubrum), an understory of Florida elder (Sambucus simpsonii) and groundcover of Muscadine grape (Vitis roundifolia).

Site No. 3 - This wetland site is located on the east side of Dale Mabry Highway approximately 600 to 1,300 feet north of Waters Avenue. The area is classified as a Riverine System (inland slough) and consists of about 8.5 acres. Local drainage networks have degraded the system by facilitating dewatering of the system. An outlet is located at the north end of the site directing the water west under Dale Mabry Highway to the roadside drainage ditch.

Dominant species at Site #3 are an overstory of Carolina willow, an understory of primrose willow and swamp fern (Blechnum serrulatum) as ground cover.

Site No. 4 - This wetland is located on the east side of Dale Mabry Highway approximately 3,700 feet north of Waters Avenue. The area is classified as a Palustrine system (freshwater swamp) bordered by disturbed pine flatwoods on the west. The total area of the site is approximately 65 acres.

The wide variety of species found at this site include red maple and lobolly bay (Gordonia lasianthus) as overstory, dahoon holly (Ilex cassine) as dominant understory and species as ground cover dominated by smart weed (Polygonum hydropiperoides) maidencane (Panicum hemitomon), pennywort (Hydrocotyle umbellata), muscadine grape, blackberry, and sedge (Cyperus polystachyos).

Site No. 5 - This wetland area is located on the east side of Dale Mabry Highway approximately 2,850 feet south of Waters Avenue. The area is classified as a Palustrine System (wetland mixed forest) draining into the roadside ditch in a northerly direction. Water quality at Site No. 5 is relatively poor. Turbidity and color were high at the time of inspection. An algal bloom was prevalent in the eastern section of the swamp. Duck weed was also prevalent, covering approximately 30 percent of the open water. Local development and associated drainage have altered the hydrology of the system relative to periods of inundation and groundwater table fluctuations.

Common overstory species at the site include black gum (Nyssa sylvatica), pond cypress (Taxodium ascendens), red bay (Persea

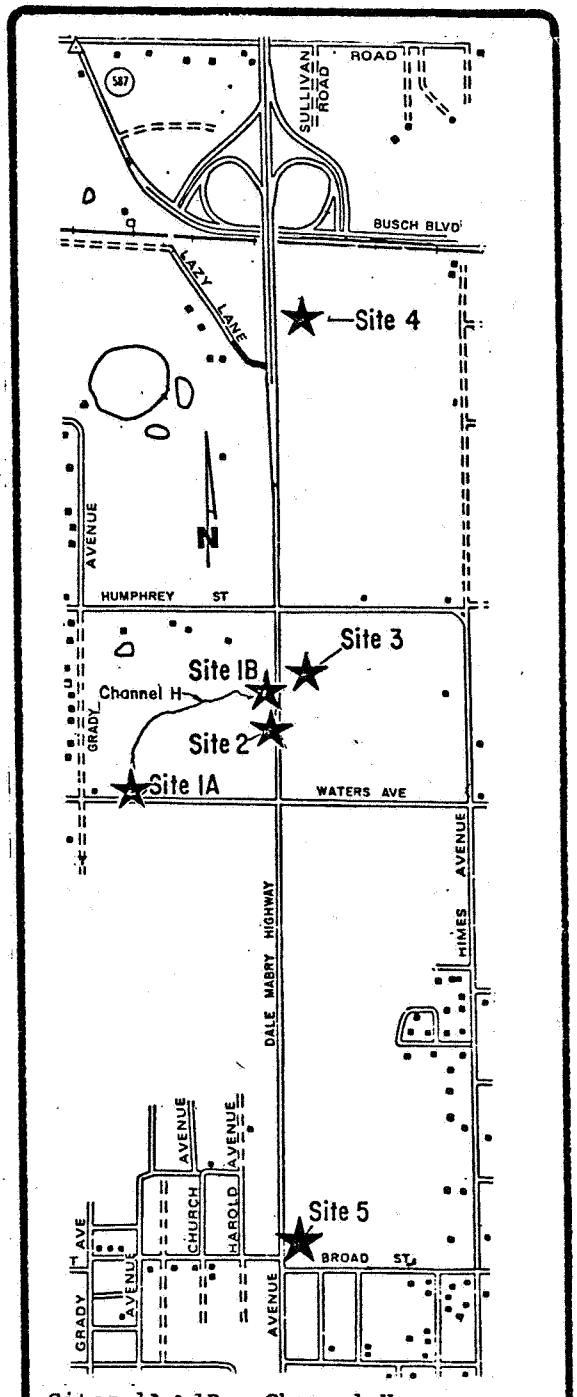


FIGURE 9 - WETLANDS SITES

borbonia) and carolina willow. The dominant understory is primrose willow and dominant groundcover is swamp fern.

The six (6) wetland areas identified will be directly affected by the proposed project. These impacts are summarized in Table 3 which indicates that a maximum of 1.24 acres of wetlands will be removed by the proposed project. Alternate alignments would not avoid or significantly lessen this impact.

TABLE 3 - WETLAND IMPACTS

Wetland	Impact (Acres)
Site # 1A	0.05
Site # 1B	0.01
Site # 2	0.12
Site # 3	0.05
Site # 4	0.88
Site # 5	0.13
Total	1.24

Anticipated construction in wetland areas would involve: reconstructing existing culverts to extend to proposed right-of-way lines, construction of frontage roads paralleling Dale Mabry Highway, and the widening of Waters Avenue and Dale Mabry Highway, and construction of an interchange, and demucking as previously mentioned.

Sites 1A and 1B are drainage ditches. Because of the disturbed nature of each site neither are considered unique. Impacts to Sites 1A and 1B are considered insignificant due to the small areas involved and the diminished value of each site. Therefore no mitigation is recommended.

Impacts at Sites 2 to 5 will involve filling of wetland fringe areas. Site 2, a small freshwater swamp, has been altered by man's activities. The site does provide minimal area for the removal of nutrients from area runoff waters, but does not provide unique or critical habitat. Consequently, the impact is not considered significant and no mitigation is recommended.

Sites 3 and 4 are parts of larger systems, being fringe areas not containing mature species. While the sites do provide value in removing nutrients from runoff waters, the systems are stressed. Impacts at Site 4 will occur in an area previously utilized as a borrow pit and subject to extensive alteration. Therefore no mitigation is recommended.

The approximate 0.13 acre impact at Site 5 is in a fringe area which has experienced previous manipulation. No mature cypress trees would be impacted by the proposed action at this site. The value of the wetland has been diminished by local development and associated drainage. Therefore no mitigation is recommended.

Other associated impacts from construction at wetland sites include sedimentation, leaching, and increased turbidity during the construction phase. Chapter 17-3 of the Florida Administrative Code requires that the contractor take sufficient precautions to prevent run-off of fuels, oils, and other polluting materials into water supplies and surface waters of the state. Erosion control measures as specified in the Section 104 of FDOT Standard Specifications for Road and Bridge Construction implemented during the construction phase will minimize erosion and sediment loads. Upon completion of the project, appropriate vegetation will be cultivated along the right-of- way to ensure slope stability.

Drainage

To determine the potential extent of backwater flooding resulting from the proposed action, an analysis was conducted by a drainage engineer. Data concerning local drainage patterns, structures, and high water records were collected and evaluated. Review of Florida Department of Transportation drainage maps and United States Geological Survey Data reports for southwest Florida indicated the following drainage pattern (See Figure 10):

1) White Trout Lake (2.1 $mi.^2$ total combined drainage basin) discharges under Busch Boulevard through a spillway. This runoff then flows into a swampy area east of Dale Mabry Highway.
2) A drainage basin which lies immediately southwest of the Busch Boulevard/Dale Mabry Highway interchange discharges (west to east) under Dale Mabry Highway through a 36 inch reinforced concrete pipe.
3) The total combined runoff from the above basins flows southward along the east side of Dale Mabry Highway through a large swampy area to Humphrey Street. At Humphrey Street, a 10 foot by 4 foot box culvert crosses Dale Mabry Highway. Discharge from the Humphrey box culvert is conveyed along the west side of Dale Mabry Highway to Channel H via twin 48 inch corrugated metal pipes.
4) Channel H flows southwest from Dale Mabry Highway and crosses Waters Avenue via a twin 8 foot by 5 foot concrete box culvert. Channel H continues to flow south from the twin box culvert until it reaches the main channel of Sweetwater Creek. The two

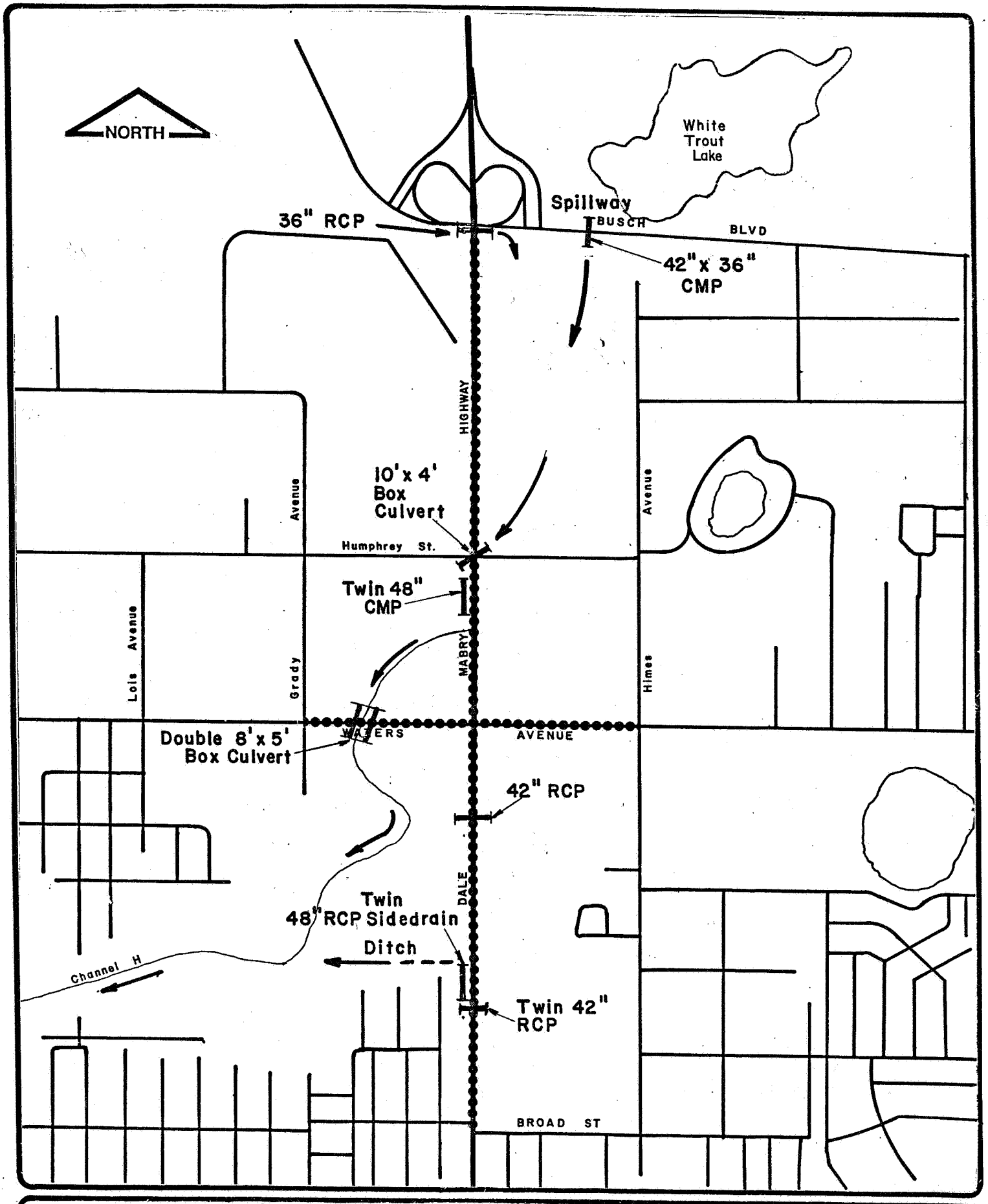


FIGURE 10 - GENERALIZED DRAINAGE PATTERNS AND STRUCTURES DALE MABRY HIGHWAY

channels combine at a point west of Anderson Road and continue to flow southwest to Tampa Bay.

5) South of Waters Avenue, the predominant drainage pattern is east to west. Within the limits of the proposed project, discharge from a medium sized drainage basin on the east side of Dale Mabry Highway with a significant amount of commercial development is conveyed under the highway via two separate culverts, one of which is a single 42 inch reinforced concrete pipe, and the other is a twin 42 inch reinforced concrete pipe conveyance. The discharge from these two culverts flows west from Dale Mabry Highway across a swampy area, and then joins Channel H at a point approximately one-half mile downstream of Waters Avenue.

If, at the time of design, the drainage structures located within project limits are deemed to be adequate structurally and hydraulically, they will be extended to meet clear recovery criteria. Any alteration of these structures, whether by extension or replacement, will constitute an encroachment on the base floodplain. Extension would result in no measurable increase in headwater and would not, therefore, adversely impact the floodplain. Should replacement be called for, every care will be taken to insure that both upstream and downstream floodplain areas will not be adversely impacted by the replacement.

The greatest storm of record, since the construction of Dale Mabry Highway and its respective drainage structures in the mid 1950's occurred on May 8, 1979. Based on measured rainfall and antecedent moisture conditions flow through the crossdrains in the project area corresponded to a storm having a recurrence interval somewhat greater than 15 years.* Maintenance personnel have no record of problems with the Dale Mabry Highway crossdrain south of Busch Boulevard, the crossdrain at Humphrey Street, or the conveyances at Waters Avenue and Channel H. However, the area south of Waters Avenue experienced a period of water in excess of that which should be anticipated. Although the water was confined to the highway right-of-way, the ditches were filled to overflowing. While the problems would appear to be minor, special attention will be given this location. Whether this can be attributed to an obstruction downstream, inadequate sidedrains, increased runoff due to development, excessive rainfall or any combination of these, will be determined during the design process. There are some areas that are presently undeveloped upstream of these two crossdrains. Fortunately, these areas are adjacent to the roadway. Regulation governing increased discharge as a result of development should

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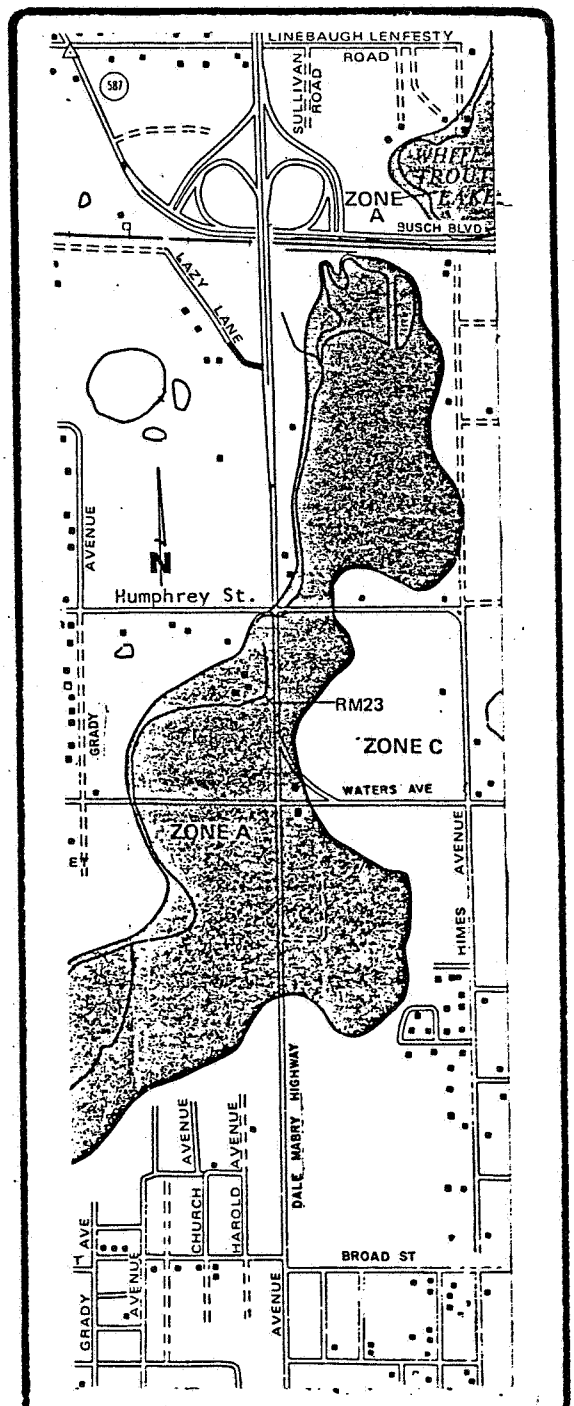
* Various local and federal authorities which were contacted assigned recurrence intervals for this storm ranging from "somewhat in excess of 15 years" to "greater than a 100 year event." There is no viable method of determining an absolute recurrence interval.

minimize adverse impacts when development occurs. A comprehensive drainage study will be made as part of the final design including a detailed analysis of the 1979 storm. The determination of hydraulic adequacy or inadequacy will be used to evaluate the options of extending or resizing. Either option will be accomplished so as not to have measurable impact on the existing conditions within the floodplain.

Floodplain Impact

In compliance with Executive Order 11988, Floodplain Management, the proposed action has been evaluated to determine potential impacts on the base floodplain. Federal Insurance Administration, Flood Insurance Rate Map 195B for community 120112 indicates that the proposed action will traverse the 100-year floodplain (Zone A). As depicted in Figure 11, this crossing extends from approximately 2,800 feet north/south along Dale Mabry Highway and for approximately 1,200 feet east/west along Waters Avenue. This longitudinal encroachment occurs because the alignment of the proposed improvement follows the alignment of the existing facility, which traverses low areas in the upper reaches of Sweetwater Creek. Alternate alignments would not avoid or significantly lessen longitudinal encroachment of the base floodplain without abandoning the existing facility. The proposed action does not traverse any designated or proposed floodways.



Source: U.S. Department of Housing and Urban Development, Flood Insurance Rate Maps

Zone A: Areas of 100-year flood; base flood elevations and flood hazard factors not determined.

FIGURE 11 - FLOODPLAINS

In the vicinity of the proposed action, the base flood elevation is approximately 36 feet NGVD as determined by the Southwest Florida Water Management District. Conceptual engineering plans for the proposed interchange indicate that it will be constructed at or above this elevation. Correspondence with the Hillsborough County Department of Fire Control and Emergency Operations has determined that Dale Mabry Highway is a major, south to north, hurricane evacuation route. In addition, it is a major response artery for emergency service vehicles (police, fire, ambulance). The proposed action will not result in the interruption of this evacuation route either permanently or temporarily.

The proposed action will result in the encroachment (filling) of approximately 1.5 acre of floodplain due to construction of the Dale Mabry Highway improvements. In addition, an encroachment of 10.8 acres (19.2 acre feet) of floodplain would result if the frontage roads were constructed at or above floodplain elevation. This floodplain displacement is out of a total drainage basin of approximately 5 square miles with an indeterminate storage capacity. The storage capacity varies depending on water surface elevations in the lakes and antecedent rainfall conditions, especially for the swampy areas within the drainage basin.

The proposed construction would not result in significant adverse impacts on natural and beneficial floodplain values because no destruction of highly valuable or unique biotic habitat will occur. Small areas of several wetlands will be impacted, however, field review by the U. S. Fish and Wildlife Service indicates that these areas (within the floodplain) are stressed and of limited value. Minor construction related impacts will occur. These will be effectively minimized by strict adherence to Section 104 of the Florida Department of Transportation Standard Specifications for Road and Bridge Construction, as well as local codes and ordinances.

The proposed action could be expected to accelerate development in northwest Hillsborough County due to improved accessibility. A certain amount of this development will probably occur within the limits of the base floodplain. However, rapid development is occurring unabated in this part of the County and the proposed improvement would only marginally affect this trend. In addition, Hillsborough County is a participant in the National Flood Insurance Program. The Hillsborough County Commission has mandated that the lower level of all structures shall be located above the base flood elevation and has granted appropriate authority to the County permitting officials to enforce this requirement, thereby controlling incompatible floodplain development.

Based on this evaluation, it has been concluded that the proposed action does not constitute a significant base floodplain encroachment.

The design standards specified in Federal-Aid Highway Program Manual Volume 6, Chapter 7, Section 3, Subsection 2, (7) shall be complied with during the final design and construction of this facility.

Threatened and Endangered Species

For the purposes of this study, threatened and endangered species were identified from both federal and state listings. The project area was field reviewed by a biologist to evaluate possible impacts on protected species.

The project area contains habitat within which one might expect to find the indigo snake (Drymarchon corais couperi) which is classified as a threatened species. No protected species or evidence of such was observed in the vicinity of the proposed project, therefore, no impact to such species will occur. No area of designated critical habitat by the U. S. Department of Interior will be affected by this proposed improvement.

Coastal Zone Impact

As required by 15 CFR Part 930, this project was reviewed by the Florida Department of Environmental Regulation and was determined to be consistent with Florida's Coastal Zone Management Program. A copy of the consistency letter is included in the appendix.

PHYSICAL ENVIRONMENTAL IMPACTS

Air Quality Impacts

This section outlines the existing air quality in the vicinity of the proposed project and discusses the environmental consequences of the project in relation to national, state and local Ambient Air Quality Standards (AAQS). The analysis was performed in accordance with 23 CFR 770.

Dispersion analysis was conducted only for carbon monoxide which is a standard procedure for highway air quality analyses. Due to the low quantities of sulfur oxides and particulate matter emitted from internal combustion engines, these pollutants were not considered in this analysis. Hydrocarbons and nitrogen oxides react with each other and with other atmospheric pollutants in the presence of sunlight making it extremely difficult to predict concentrations of these pollutants due to the number of reactions and variables involved. Therefore, dispersion analysis of these pollutants were not conducted.

Hillsborough County is part of the West Central Florida Air Quality Control Region (Identification Number 052). This area is under the jurisdiction of the United States Environmental Protection Agency (U.S. EPA), Region IV Atlanta, Georgia. In addition to Federal regulations (Table 4), air quality for this area is subject to the standards of the State of Florida Department of Environmental Regulation (FDER). The AAQS of FDER are the same as the National AAQS except for SO_2 which is more stringent. The local agency in Hillsborough County with jurisdiction over air pollution matters is the Hillsborough County Environmental Protection Commission (HCEPC). HECPC's AAQS are the same as the FDER standards.

Compliance with the AAQS can be verified through EPA attainment designations. Since the 1977 amendments to the Clean Air Act, as amended 42 U.S.C. 7609 et. seq., local and state air pollution control agencies must define borders and nonattainment areas for any air pollutant with a corresponding AAQS. A "nonattainment area" is an area that for any pollutant, as shown by monitoring data, or calculated by air quality monitoring, exceeds any national AAQS for such pollutant. These area designations are listed in the March 3, 1978 Federal Register, 43 F.R. 8962, and subsequent promulgations.

This project is in an air quality nonattainment area which has transportation control measures in the State Implementation Plan which was approved by the Environmental Protection Agency on May 14, 1981. The Transportation Plan was reviewed by the Federal Highway Administration on June 4, 1980, and the Plan was determined to conform to the SIP. The Transportation Improvement Program was determined to conform to the SIP on August 27, 1981. This project was included in the Plan and the TIP, both conforming to the SIP. Therefore, pursuant to 23 CFR 770, this project conforms to the SIP.

Existing Conditions - In Hillsborough County, air quality monitoring is conducted by HCEPC at numerous locations and the results are published in an annual report. The latest publication "Environmental Quality 1979" presents the following monitoring data for northwest Hillsborough County.

Concentrations of ozone were measured at four stations from 1974 to 1979; none in close proximity to the proposed project. Trends indicate that,

> "...ozone standards may be exceeded more than once a day at any one sampling station and may also be exceeded at one or more sampling stations on the same day ..."(8)

In addition, ozone levels dropped each year during this period; probably a result of more stringent automobile exhaust emission standards.

TABLE 4

NATIONAL AMBIENT AIR QUALITY STANDARDS

POLLUTANT	AVERAGING TIME	PRIMARY STANDARD[1]		SECONDARY STANDARD[2]	
Sulfur Dioxide	Annual Arithmetic Mean	80 $\mu g/m^3$	(0.03 ppm)	60 $\mu g/m^3$	(0.02 ppm)
	Twenty-four Hour Average[3]	365 $\mu g/m^3$	(0.14 ppm)	260 $\mu g/m^3$	(0.10 ppm)
	Three-hour Average[3]			1300 $\mu g/m^3$	(0.50 ppm)
Particulate Matter	Annual Geometric Mean	75 $\mu g/m^3$		60 $\mu g/m^3$	
	Twenty-four Hour Average[3]	260 $\mu g/m^3$		150 $\mu g/m^3$	
Carbon Monoxide	Eight-hour Average[3]	10 mg/m^3	(9 ppm)	10 mg/m^3	(9 ppm)
	One-hour Average[3]	40 mg/m^3	(35 ppm)	40 mg/m^3	(35 ppm)
Ozone	One-hour Average[3]	240 $\mu g/m^3$	(0.12 ppm)	240 $\mu g/m^3$	(0.12 ppm)
Hydrocarbons	Three-hour Average (6 - 9 a.m.)[3]	160 $\mu g/m^3$	(0.24 ppm)	160 $\mu g/m^3$	(0.24 ppm)
Nitrogen Dioxide	Annual Arithmetic Mean	100 $\mu g/m^3$	(0.05 ppm)	100 $\mu g/m^3$	(0.05 ppm)

[1] Primary standards are designed to protect public health.

[2] Secondary standards are designed to protect against effects on soil, water, vegetation, materials, animals, weather, visibility, and personal comfort and well-being.

[3] Not to be exceeded more than once per year.

Carbon monoxide was monitored continuously at two stations during 1979. Station No. 110 located at Buffalo Avenue and Dale Mabry Highway recorded no violation of AAQS. The maximum one-hour CO level recorded during 1979 was 10.8 parts per million (ppm) or thirty-one percent of the standard. The maximum eight-hour concentration was 5.5 ppm or sixty-one percent of the standard.

Concentrations of nitrogen dioxide were measured at six locations during 1979. Analysis by the HCEPC indicates that Dale Mabry Highway was one of the areas of highest NO_2 pollution (20-35 parts per billion). The Federal and Florida health standard for NO_2 is an annual average of 50 parts per billion.

Study Methodology and Results - The air quality assessment involves analysis of total carbon monoxide and hydrocarbon emissions at the proposed project site. In addition, comments on lead are presented. Hydrocarbon emissions were calculated as a general guideline to the potential of ozone production.

It was determined that the immediate area around the intersection of Dale Mabry Highway and Waters Avenue would be most representative of "worst case" air quality impacts. Therefore, analysis was limited to the vicinity of this intersection.

To evaluate the potential air quality impacts with and without the proposed action, the Build and No Build Alternatives were assessed. The Build Alternate is the proposed urban interchange and the No Build Alternate is the existing at-grade intersection. Both these alternatives were evaluated to the design year 2007 to determine air quality conditions in 1981 (existing), 1987 (year the Build Alternate is anticipated to be open to traffic), and 2007 (20 years hence).

Carbon Monoxide - The air quality analysis for this project was prepared utilizing procedures established by the Florida Department of Transportation. Assessment was made on a microscale level, i.e., the area adjacent to the roadway where concentrations of vehicular emitted pollutants are relatively high and contribute noticeably to ambient levels. The site selected as the receptor in this analysis was a point located on the right-of-way line for the Build Alternative in the southeast quadrant of the intersection (Figure 12). This receptor location was considered a "worst case" receptor because no other location would be expected to experience more severe roadway induced air quality impacts as a result of the proposed improvement. This is attributable to high traffic volumes, low traffic speeds associated with the intersection and the proximity of the receptor to the mixing cell.

A Gaussian line source diffusion computer model was used to estimate the one-hour and eight-hour CO concentrations within the pro-

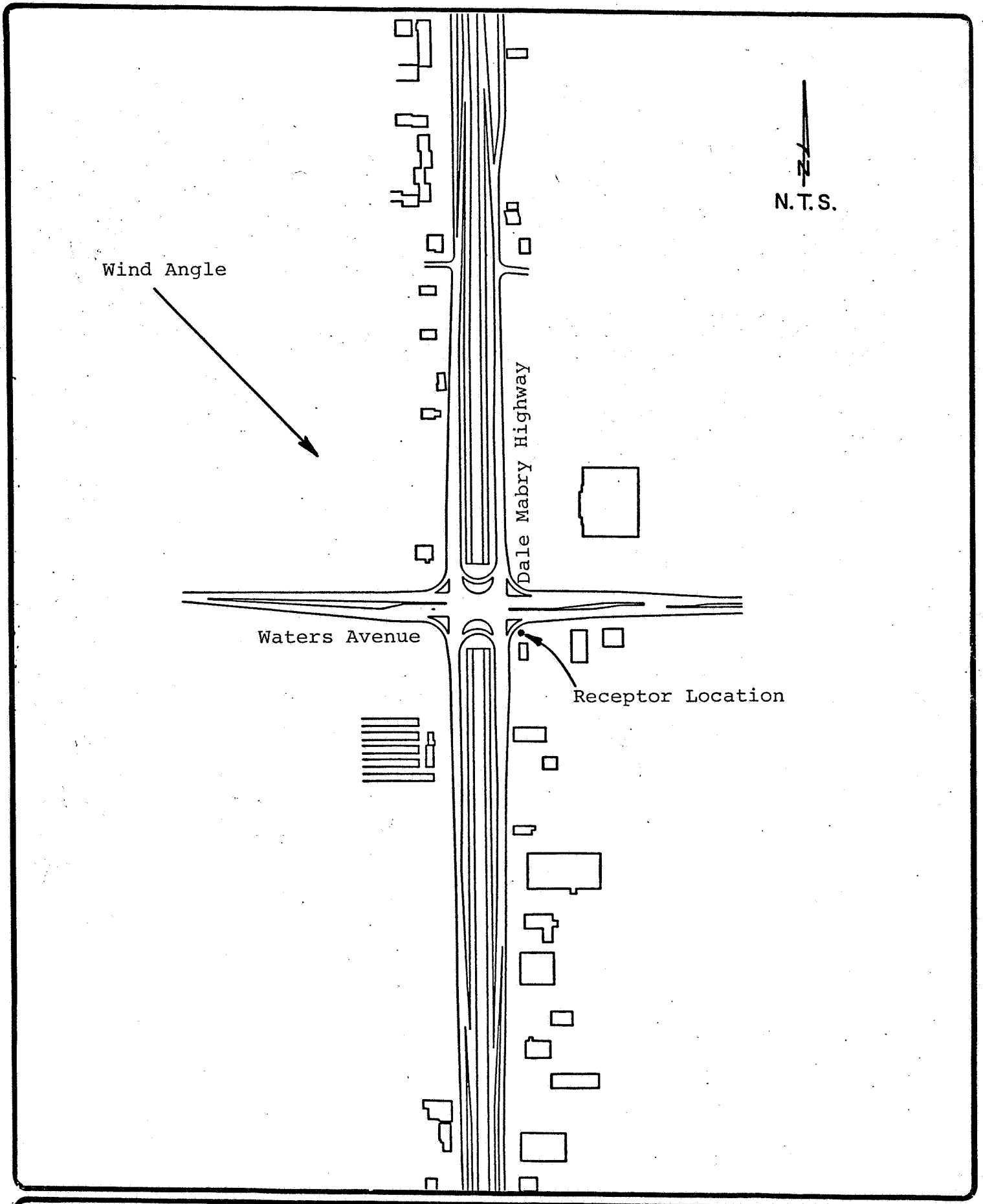


FIGURE 12 AIR QUALITY RECEPTOR LOCATION
DALE MABRY HIGHWAY

ject area for 1981, 1987 and 2007. The model utilized was developed by the California Department of Transportation and is referred to as CALINE-3 (9). The CALINE-3 model requires CO emission factors in order for it to compute CO concentrations. The emission factors utilized were computed using the Florida Department of Transportation's version of the U.S. EPA's mobile source emission factor program - MOBILE 1 (September 1979 version) (10). Meteorological, traffic, and site geometric data used in MOBILE 1 were considered to be representative of worst case conditions. A complete listing of input data is presented in the Air Quality Report prepared in conjunction with this environmental document.

Carbon monoxide background levels of 2.5 ppm and 1.8 ppm were assumed for the peak hour and eight hour average CO calculations. The 2.5 ppm level was the 90th percentile concentration reported from a CO monitoring station at the intersection of Dale Mabry Highway and Buffalo Avenue in Tampa. This 1979 data was reported in ENVIRONMENTAL QUALITY 1979 by the Hillsborough County Environmental Protection Commission and is considered representative due to similar traffic volumes and speed at the monitoring site and the modelling receptor location. The eight hour background CO level was obtained by using 75 percent of the peak hour level.

The results of the CO analysis are presented in Table 5. In comparing these results to the National AAQS of 35 ppm (maximum one hour concentration) and 9 ppm (maximum eight hour concentration), both of which are not to be exceeded more than once per year, indicates no violations of the standards. The maximum CO concentrations predicted were 6.9 ppm (one hour) and 5.1 ppm (eight hour), both occurring under the 1987 Build Alternative.

TABLE 5 - MAXIMUM 1-HOUR AND 8-HOUR CO CONCENTRATIONS (PPM)

	No Build		Build	
	One Hour	Eight Hour	One Hour	Eight Hour
1981	6.3	4.8	--	--
1987	4.2	3.2	6.9	5.1
2007	3.6	2.7	5.1	3.8

Comparison of the No Build and Build Alternatives indicates that for future years, peak concentrations occur under the Build Alternative. This minor deleterious effect on local air quality is attributable to the significant increases in traffic volumes served by the Build Alternative. The impact is not considered significant and no sensitive receptors are located in close proximity to the proposed action.

Hydrocarbons - The total pollutant burden of hydrocarbons in tons per year was estimated for the No Build and Build conditions. The emission factors utilized were computed using the MOBILE 1 emission program.

Results indicate that the Build Alternative emissions are a slight increase over the pollutant burdens which would be experienced under the No Build project alternative. Table 6 indicates a decrease in hydrocarbon emissions over the next twenty-five years. This is attributable primarily to more stringent federal exhaust emission standards that apply to all new motor vehicles.

TABLE 6 - POLLUTANT BURDEN ANALYSIS

Eight Hour Average
Hydrocarbon Emissions (Tons/Year)

	No Build	Build
1981	41	--
1987	17	22
2007	15	17

Lead - There is a National Ambient Air Quality Standard for airborne lead, but this project will not cause violation of the standard. No Florida urbanized areas are listed by EPA as exceeding the present lead standard in 1975, and the average lead content of gasoline will be reduced by 94 percent between 1975 and the first year of operation of this project with further reduction after the first year. Therefore, lead from this project will not have a significant effect on the environment.

Construction Air Quality - During project construction, temporary increases in air pollution will occur. Various operations will be conducted which will release or have the potential to release quantities of fugitive dust into the atmosphere including:

- Mobilization;
- Clearing and grubbing;
- Utility relocation;
- Drainage work;
- Bridge work, pile driving;
- Subgrade work;
- Grading;
- Base work;
- Surface work; and
- Clean-up

These operations will require the use of heavy construction equipment and machinery including graders, front-end loaders, trucks, pile drivers, air compressors, pumps and heavy rollers. This heavy equipment usage will also contribute additional combustion-related pollutants to the atmosphere.

These minor, temporary air quality impacts will be minimized by strict adherence to Section 102 of the Florida Department of Transportation Standard Specifications for Road and Bridge Construction.(11)

Noise Impacts

A noise assessment study has been conducted for this Type I-A project. The purpose was to identify noise impacts and, where necessary to investigate measures to minimize impacts associated with the construction and operation of an urban interchange at Waters Avenue and Dale Mabry Highway. The procedures used are those established in 23 CFR 772.

Noise Analysis Sites - Recognized noise sensitive areas or areas that could be adversely affected by high noise levels include schools, churches, parks, residences, hospitals, libraries and other similar land uses or activities. Identification of such activities was accomplished by examination of aerial photographs and field reviews. Based on this evaluation individual sites for acoustical analysis were selected to determine spot impacts as well as representative conditions for different land use activities. Table 7 gives a description of the selected locations. These locations are shown on Figure 13. Through meetings and correspondence with local elected and appointed officials, as well as public informational meetings, a knowledge of planned, designed and programmed developments in the area of the proposed action was obtained. This information was utilized in the selection of representative sites.

Table 7 - Noise Analysis Locations

Site Number	Approximate Offset from Near Lane Centerline (Feet)				Description
	Existing Roadway	Build Alternative			
		SB Frontage Rd	Mainline	NB Frontage Rd	
1	100	50	100	200	Commercial
2	135	250	135	90	Office
3	100	170	100	30	Commercial
4	135	100	135	280	Multi-family Residential

To predict the potential noise impacts from the development of an urban interchange at Waters Avenue and Dale Mabry Highway four sites were selected for analysis. Noise prediction modeling was performed for Site #1 (restaurant) and Site #2 (bank) because these sites are considered representative of commercial uses which would

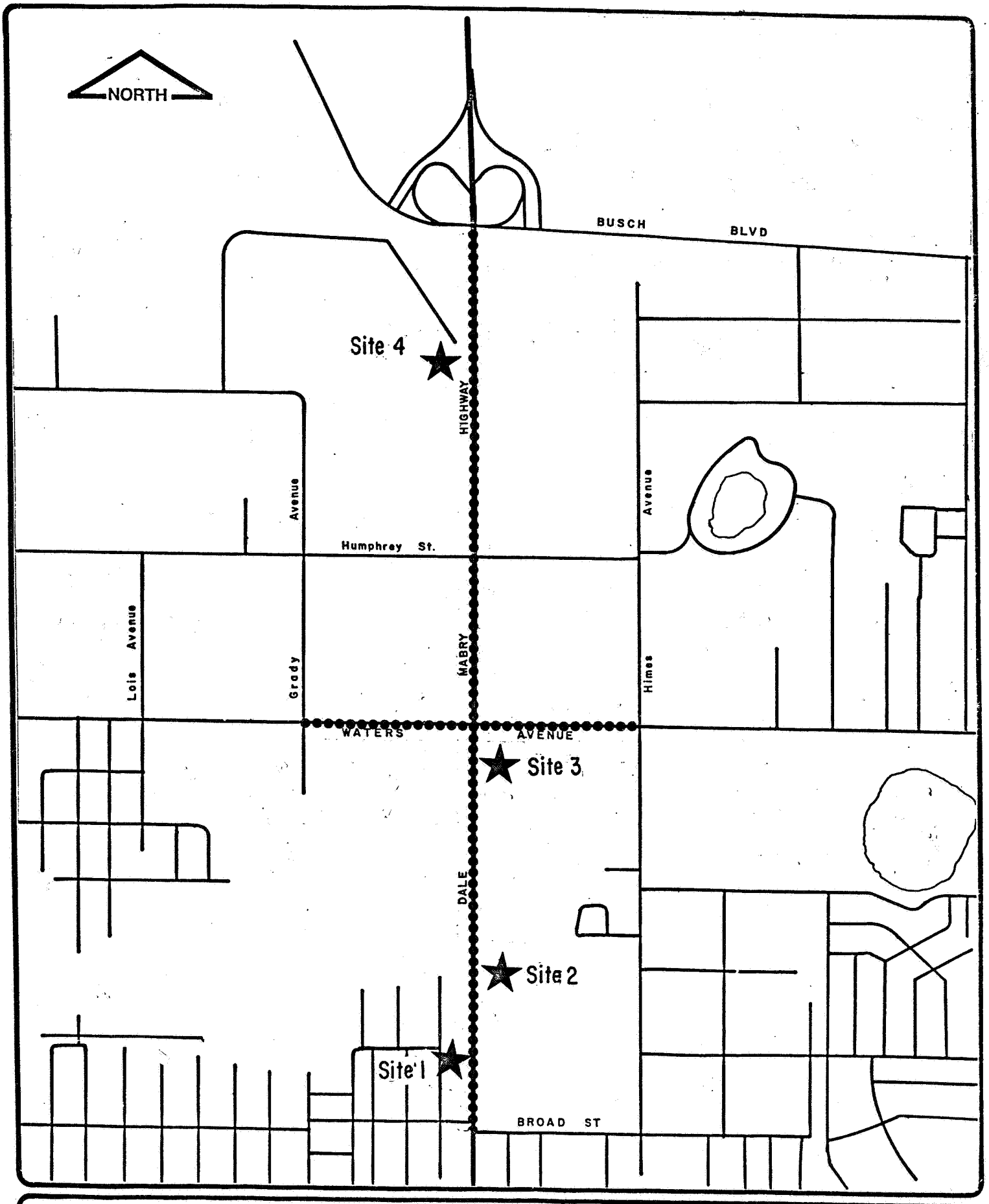


FIGURE 13 - NOISE ANALYSIS LOCATIONS

DALE MABRY HIGHWAY

be adjacent to at-grade sections of the interchange in the southern project area. Site #3 was modeled as being representative of commercial uses next to elevated sections of the project. Site #4 (apartment) is representative of the multi-family residential uses (noise sensitive) in the northern project area, and representative of other uses adjacent to northern at-grade sections of the proposed project.

Prediction Methods - Noise levels at the selected modeling sites were predicted by a computer program (PPLENV20) based on a model described in NCHRP Reports 117 (National Cooperative Highway Research Program, 1971) and 144 (National Cooperative Highway Research Program, 1973), with modifications approved by the FHWA for use in Florida. (12,13) All noise levels are given in decibels as $L_{10}(h)$, defined as the A-weighted sound pressure level which is exceeded 10 percent of the time during a 1-hour period, consistent with FHWA criteria.

Worst-case conditions were assumed by using the lesser of the peak-hour volume or volume at level of service C, thus maximizing the combination of speed and traffic volume.

Results - Overall predicted $L_{10}(h)$ values are presented in Table 8 and FHWA criteria in Table 9. Impacts were defined by differences between existing noise levels and levels predicted for future alternatives. Acoustic impacts were categorized as follows:

Slight - less than 4dBA
Moderate - 4-10 dBA
Significant - greater than 10 dBA or exceeds FHWA design noise levels.

Table 8 - Noise Receptor Locations and Predicted L_{10} (h) dBA Noise Levels

Site #	Description	1981 Existing Conditions (No-Build Alternative	2007 No-Build Alternative	2007 Build Alternative	FHWA Design Noise Levels
1	Commercial	69	69	72	75
2	Office	66	66	72	75
3	Commercial	71	71	70	75
4	Multi-family Residential	67	67	69	70

Present (1981) vs. No-Build Alternative (2007) - Predicted existing noise levels range from 66 dBA at Site #2 to 71 dBA at Site #3. For the No-Build Alternative noise levels are projected to remain the same at Sites #1, 2, and 4, and decrease by one dBA at Site #3. Noise levels for present and future no-build conditions are not predicted to exceed FHWA design criteria at any modeling site.

Present (1981) vs. Build Alternative (2007) - Acoustic impacts resulting from comparison of existing conditions to future build conditions range up to a maximum 7 dBA increase (slight to moderate impacts). No sites exceeded FHWA design noise levels.

No-Build Alternative (2007) vs. Build Alternative (2007) - A comparative analysis of future noise levels under the no-build and build conditions yields approximately the same results as presented above. This is due to the fact that 1981 and 2007 no build noise levels are almost identical. Impacts are again categorized as slight to moderate with no sites exceeding FHWA design noise levels.

Abatement - In accordance with 23 CFR 772 alternative noise abatement measures for reducing or eliminating noise impacts were evaluated. Abatement measures considered included traffic management, change in alignment, land use control, zoning controls and vegetative and structural barriers.

The elimination or restriction of truck traffic was evaluated as a possible traffic management measure. Because of low heavy truck volumes (two percent of vehicular mix) along Dale Mabry Highway in the area of the proposed action and moderate truck operating speeds (40-50 mph), the effect of this measure on the reduction of overall projected L_{10} noise levels was found to be 1-3 dBA. While this measure would reduce or negate the noise impacts, it is considered impracticable. Dale Mabry Highway is the only existing or planned major north/south route in this part of Hillsborough County; no viable alternate truck routes exist in the area.

To achieve a 3-4 dBA reduction the distance between the source and receiver must be doubled. Consequently, slight shifts alignment generally would result in only negligible reductions in noise levels.

Shifting the alignment of the proposed interchange at Waters Avenue was evaluated. Due to the encroachment of existing land uses on both the east and west sides of the right-of-way, shifting the alignment would generally shift the noise impact from one location to another.

The proposed action is located in a suburban area where most of the land adjacent to Dale Mabry Highway has been developed. Therefore,

TABLE 9 - DESIGN NOISE LEVEL/ACTIVITY RELATIONSHIPS*

Activity Category	Design Noise Levels - dBA $L_{10}(h)$	Description of Activity Category
A	60 (Exterior)	Tracts of land in which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose. Such areas could include amphitheaters, particular parks or portions of parks, open spaces, or historic districts which are dedicated or recognized by appropriate local officials for activities requiring special qualities of serenity and quiet.
B	70 (Exterior)	Picnic areas, recreation areas, playgrounds, active sports areas, and parks which are not included in Category A and residences, motels, hotels, public meeting rooms, schools, churches, libraries, and hospitals.
C	75 (Exterior)	Developed lands, properties, or activities not included in Categories A and B above.
D	---	For requirements on undeveloped lands.
E	55 (Interior)	Residences, motels, hotels, public meeting rooms, schools, churches, libraries, hospitals, and auditoriums.

* Federal Highway Administration, Federal-Aid Highway Program Manual, Vol. 7, Ch. 7, Sec. 3.

the possibilities of land use and zoning controls are rather limited. However, for the few vacant parcels, control measures could include the establishment of noise buffer areas and zoning to restrict land use development to that which is compatible with a controlled-access roadway. Land use and zoning controls would have to be initiated by the local planning agencies.

To achieve a significant reduction in noise levels through use of vegetative barriers requires at least 100 feet of dense foliage. This measure is not possible in the area of the proposed action.

A significant reduction in noise levels can be achieved through use of structural barriers. To be effective, a barrier must be as continuous as possible; breaks in the barrier for driveways, cross-roads and other points of access severely limit noise attenuation. For this reason barriers would not be effective in the vicinity of the proposed action.

Noise generated by construction of the proposed action may affect some land uses during the construction period. The multi-family uses along the west side of Dale Mabry Highway north of Waters Avenue would be the most affected. Other land uses in the project area are service/commercial uses.

It is recommended that the construction noise be attenuated to the extent practical by incorporating the following measures into the special provisions of the construction contract:

1. The contractor will limit construction activities requiring the use of heavy or noisy equipment to the time period between the hours of 7:00 a.m. to 6:00 p.m., unless written permission is obtained from the engineer.

2. The contractor shall not work on Sundays or legal holidays unless written permission is obtained from the engineer.

3. The contractor shall have, on the job site, adequate materials for the construction of noise deflectors or screens. These materials are to be used as directed by the engineer for practical noise attenuation.

4. The contractor shall establish haul-routes which will direct vehicles away from developed areas when feasible and ensure noise emanating from hauling operations is kept to a minimum. The engineer will be advised in writing of all proposed haul routes.

5. The contractor shall operate only factory recommended exhaust mufflers on internal combustion engines.

6. The contractor shall institute adequate equipment maintenance procedures to ensure the elimination of unnecessary noise caused by loose body parts on all construction equipment.

7. Special care shall be taken by the contractor when working in the vicinity of residences, schools and churches along the project to keep construction noise to a minimum.

8. In the event the above restrictions are not adequate to keep construction noise to an acceptable level (as determined by the engineer), he may direct the use of other controls and abatement measures.

9. The contractor shall be informed of the noise sensitive sites as identified in this report, as well as the contractor's responsibility for complying with local, state, and federal noise regulations and ordinances.

Water Quality Impacts

The proposed action will utilize a closed drainage system to minimize right-of-way requirements and community impacts. This closed system is not expected to significantly alter local drainage patterns. Stormwater outfalls would be located near outfall sites of the existing open system.

The impacts of the proposed projects on surface water quality of the site environs will essentially be limited to the adverse effects of erosion during construction. The adverse effects of construction, however, are considered temporary and minimal. The project is not expected to have a significant impact on groundwaters, recharge or public water supplies. This will be affected by adherence to Chapters 17-3 and 17-25 of the Florida Administrative Code.

Because of the "state of the art" in highway stormwater research, it is not possible at this time to determine the significance of the discharge on Channel H. However, the Best Management Practices will be used during the construction phase for erosion control and water quality consideration.

V. COMMENTS AND COORDINATION

The public involvement process implemented with this study was conducted in accordance with Council on Environmental Quality regulations, Federal Highway Administration regulations, and Florida Statues.

During the process of developing alternatives for the improvement of the Dale Mabry Highway/Waters Avenue intersection, a public informational workshop was held on a weekday from 11 am to 7 pm in a meeting room at a motel in close proximity to the project location.

Publicity for the meeting was accomplished with mailed notices sent to local elected and appointed officials and to all property owners in the immediate project area. The notices emphasized that the viable build alternate would be on display, and emphasized the importance of public input during the engineering and environmental study process. A news release was prepared and forwarded to local newspapers.

Approximately 200 persons attended this public informational workshop to view the viable build alternate and other graphics depicting elements of the study process, as well as discuss the project. Representatives of the Florida Department of Transportation explained the viable build alternate, the study process, and the engineering and environmental data gathered to date. The following comments were received from the public:

1. Many individuals expressed concern with the circuitous travel created by the viable build alternate.

2. Loss of direct access to Dale Mabry Highway was of great concern to a number of business owners.

3. General questions were received concerning interim improvements to the intersection.

4. Several questions were raised concerning the entire Dale Mabry Highway corridor, particularly whether or not improving the Waters Avenue intersection would shift the problem to another location.

5. Several individuals stated that an interchange was not needed and that traffic problems could be solved by placing more lanes on Dale Mabry Highway and Waters Avenue.

6. A large number of persons at the meeting questioned if funding was available for the viable build alternate.

7. In general owners of businesses which would be placed on a frontage road were displeased with the viable build alternate, while residents of suburban areas north of the project were pleased.

Agencies having permit and/or review authority were transmitted a permit coordination report regarding the project, providing relevant engineering and environmental information. These agencies included the State of Florida Department of Environmental Regulation, the Southwest Florida Water Management District, and the U.S. Army Corps of Engineers. Correspondence from the various agencies is included in the Appendix.

The following governmental and public agencies have been contacted either through the public involvement process or the A-95 review process.

Federal

U.S. Environmental Protection Agency*
U.S. Department of Housing and Urban Development
U.S. Department of the Interior, Fish and Wildlife Service*
Federal Railroad Administration
NOAA - National Marine Fisheries Service
Department of the Army
U.S. Department of Agriculture

State

Department of Environmental Regulation
Southwest Florida Water Management District
Game and Freshwater Fish Commission
Department of State
Bureau of Comprehensive Planning
Department of Land and Water Management
Department of Agriculture and Consumer Services
Department of Natural Resources*

Local and Regional Agencies

Tampa Bay Regional Planning Commission
Recreation Trails Council

Pertinent correspondence from these agencies has been included in the appendix to this report. Comments are summarized and answered below.

1. Comment (US EPA): The project could have potential large term

* Agencies who responded to A-95 notification.

adverse impact on wetland areas. It is suggested that the following impact reduction measures be included in the project: (1) reduce the highway median width when traversing wetland areas and (2) incorporate erosion control measures into the project.

Disposition: The project will unavoidably impact approximately 1.2 acres of wetlands. All effective design measures which could reduce the impact will be investigated during the design process. Erosion control measures will be strictly adhered to during construction.

2. Comment (DNR): There are several parcels of Murphy Act land in the subject area.

Disposition: During the right-of-way acquisition process Murphy Act lands will become known and handled appropriately.

Comments from U.S. Fish and Wildlife Service:

1. Comment: Wetland sites 1A and 1B are drainage ditches and the only concern of the Service would be that the conveyance capacity of the culvert be maintained.

Disposition: The capacity of the culvert will be maintained.

2. Comment: Wetland Site 3 is stressed and provides values in removing nutrients from the area runoff waters. The filling of this area will eliminate that function. The overall value of the area is limited but a value does exist. Consideration should be given to improving the area possibly by the creation of a small shallow pond near the road and a riser on the culvert to prevent the overdrainage of the area.

Disposition: Based on preliminary engineering design, it is estimated that impacts at Site 3 will not exceed 0.05 acre with a maximum lateral encroachment of 10 feet. No mitigation is recommended. (See Wetlands Section.)

3. Comment: This area consists of small willows, red maples, wax myrtles and other trees. A borrow pit in the area is vegetated primarily by cattails. This area has been infringed upon by numerous apartment houses and commercial buildings. The area would function to remove nutrients from any of the runoff waters in the area. This is a valuable function in densely populated areas and is to the benefit of the people as well as the fish and wildlife resources. Filling in this area would be a concern of the Service and should be held to a minimum. If filling is to take place, then mitigation should be explored. This would be similar to that recommended on Site 3: construction of a shallow pond and the placement of a riser at the discharge point.

Disposition: Site 4 functions similar to Site 3 by removing nutrients. The area has been previously disturbed and cannot be avoided. Therefore no mitigation is recommended. (See Wetland Section.)

4. Comment: Site 5 is vegetated by mature cypress with an open understory and the construction of a shallow pond would only destroy more cypress. Filling in this area should be eliminated and expansion be accomplished on the west side of the road. If filling is required, then the mitigation for this destruction should be accomplished in the area of Sites 3 and 4.

Disposition: No shallow pond will be constructed at this site. The approximate 0.13 acres of wetland to be displaced does not contain cypress trees. No mitigation is recommended. (See Wetlands Section.)

5. Comment: (SWFWMD) A permit will be required for modification of Channel H at Site 1A and 1B, but if the existing or better conveyance is provided by the Department, we will have no objections.

Disposition: Existing or better conveyance will be provided based on detailed drainage studies during the design phase.

REFERENCES

References

1. Tampa Urban Area Transportation Study, Year 2000 Plan, prepared by Hillsborough County Planning Commission for the Metropolitan Planning Organization.

2. Division of Planning Research and Analysis, Hillsborough County, City-County Planning Commission, 1980 Planning Area Census Counts, Hillsborough County.

3. Division of Planning Research and Analysis, Hillsborough County City-County Planning Commission, Subdivision Report, June, 1981.

4. Hillsborough County City-County Planning Commission, Population and Housing Estimates, April 1, 1970 - April 1, 1980, December, 1980.

5. Diaz.Seckinger & Associates, Traffic Operations Study Intersection of Dale Mabry Highway and Waters Avenue October, 1980, prepared for Hillsborough County, Florida.

6. Orofino and Company, Consulting Engineers, Preliminary Subsurface Investigation, Dale Mabry-Waters Interchange, Hillsborough County, Florida.

7. U.S. Department of Transportation, Federal Highway Administration, Federal-Aid Highway Program Manual, Volume 6, Chapter 7, Section 3 Subsection 2, "Location and Hydraulic Design of Encroahments on Flood Plains". November 15, 1979.

8. Hillsborough County Environmental Protection Commission, Richard G. Wilkens editor, Environmental Quality 1979, page 77.

9. California Department of Transportation, Report No. FHWA/CA/TL -79/23, CALINE 3-A Versatile Dispersion Model For Predicting Air Pollutant Levels Near Highways and Arterial Streets, November, 1979.

10. U.S. Environmental Protection Agency, Mobile 1: Mobile Source Emission Model, September, 1979.

11. Florida Department of Transportation, Standard Specifications for Road and Bridge Construction (latest edition).

12. Highway Research Board, National Cooperative Highway Research Program Report 117, Highway Noise - A Design Guide For Highway Engineers, 1971.

13. Highway Research Board, National Cooperative Highway Research Program Report 144, Highway Noise - A Field Evaluation of Traffic Noise Reduction Measures, 1973.

APPENDIX

FLORIDA DEPARTMENT OF STATE
George Firestone
Secretary of State

DIVISION OF ARCHIVES, HISTORY
AND RECORDS MANAGEMENT
L. Ross Morrell, Director
(904) 488-1480

July 15, 1981

In reply refer to:

Mr. Louis Tesar
Historic Sites Specialist
(904) 487-2333

Mr. J. C. Kraft, Chief
Bureau of Environment
Florida Department of Transportation
Burns Building
Tallahassee, Florida 32304

Re: State Project No. 10160-1511, SR597 (Dale Mabry Highway) from SR600 (Hillsborough Avenue) to U.S. 41 and SR584 (Waters Avenue) from SR589 to SR597, including Interchange Hillsborough County. F.A.P. # (Not Assigned); BI #113380

Dear Mr. Kraft:

We have reviewed the results of a field survey of the above referenced project, performed by Mr. William Browning, an archaeologist employed by the Florida Department of Transportation, and coordinated by our office. No sites listed, or eligible for listing, in the National Register of Historic Places, or otherwise of national, state or local significance were encountered during the survey. Therefore, it is the determination of this office that this project will have no effect on any such resources, and that the project may proceed without further involvement with this agency.

On behalf of Secretary of State George Firestone, thank you for the opportunity to comment on this matter.

Sincerely,

George W. Percy
Deputy State Historic
Preservation Officer

GWP:Beh

cc: P. E. Carpenter
C. W. Monts de Oca
J. G. Kennedy
R. M. Johnson
Bill Browning

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IV
345 COURTLAND STREET
ATLANTA, GEORGIA 30365

RECEIVED
DEC 28 1981

December 22, 1981

Mr. J. C. Kraft
Bureau of Environment
Department of Transportation
605 Suwannee Street
Tallahassee, Florida 32304

10160-1511

Dear Mr. Kraft:

We have reviewed the advance information on the proposed improvements to Dale Mabry Highway involving the construction of a grade seperation interchange with Waters Avenue in Hillsborough County. Our review suggests that the project could have potential large term adverse impact on wetlands area adjacent to the project. In this regard we suggest the following impact reduction measures be included in the project: (1) reduce the highway median width when traversing wetland areas and (2) incorporating of erosion control measures into the project.

If we can be of further assistance, feel free to call on us.

Sincerely yours,

Sheppard N. Moore

Sheppard N. Moore
Acting Chief, EIS Section

ate of Florida

Department of Natural Resources Interoffice Memorandum

December 30, 1981

TO: Art Wilde, Contracts & Capital Outlay Coordinator
Office of the Executive Director

THRU: Ted Forsgren, Chief
Bureau of State Lands Management

FROM: Dan Meisel, Title Section Administrator
Bureau of State Lands Management

SUBJECT: SAI #FL8112140641 DOT - Hillsborough County

A review of the records within the Bureau of State Lands Management indicates that there are several parcels of Murphy Act land in the subject area.

DSM/lmf

P.O. Box 2676
Vero Beach, Florida 32960

January 11, 1982

Mr. J. C. Kraft
Chief, Bureau of Environment
Florida Department of Transportation
608 Suwannee Street, MS-37
Tallahassee, Florida 32304

Dear Sir:

The Fish and Wildlife Service has reviewed the Advance Notification Package (State Project Number 10160-1511, Hillsborough County) dated December 8, 1981, for widening North Dale Mabry Highway.

A Fish and Wildlife Service biologist conducted an onsite inspection of the general roadway on January 6, 1982. The area is extensively developed with the majority of the wetlands stressed and some distance from the edge of the existing roads. The Advance Notification package stated that about 2 acres of wetlands would be impacted but there was no indication as to how or where. The wetlands noted on the location are generally of little concern. The wetlands noted as sites 1A and 1B are drainage ditches and the only concern of the Service would be that the conveyance capacity of the culvert be maintained.

The wetland at site 2 is a small isolated area vegetated with willows and vines. This area is stressed and appears to have been isolated from any water flow. The Service has no comments on the filling of this area.

Site 3 is east of site 2 and a shrubby wetland vegetated with willow, bay, wax myrtle, and primrose willow. The site appears to have been cut off from the sheet flow of the flood plain by the existing roads. Culverts provide water connections from this site to the east. The area is stressed and provides values in removing nutrients from the area runoff waters. The filling of this area will eliminate that function. The overall value of the area is limited but a value does exist. Consideration should be given to improving the area if construction would impact the wetlands. This improvement could be the creation of a small shallow pond near the road and a riser on the culvert to prevent the overdrainage of the area. This would provide benefits to the fish and wildlife resources, water quality, water quantity, and beautification of the area.

Site 4 is a large wetland area that is set almost 200 feet off S.R. 597. The impact on this area is not readily evident from the Advance Notification package. This area consists of small willows, red maples, wax myrtles and other trees. A borrow pit in the area is vegetated primarily by cattails. This area has been infringed upon by numerous apartment houses and commercial buildings. The area would function to remove nutrients from any of the runoff waters in the area. This is a valuable function in densely populated areas and is to the benefit of the people as well as the fish and wildlife resources. Filling in this area would be a concern of the Service and should be held to a minimum. If filling is to take place, then mitigation should be explored. This would be similar to that recommended on site 3: construction of a shallow pond and the placement of a riser at the discharge point.

The last wetland, site 5, is a stand of cypress on the east side of S.R. 597. This area has standing water and an open understory. This indicates that there is not adequate drying for the area to be invaded by mesic and/or xeric shrubs. The size of the area and the isolation from the main flood plain limits its value to the local area. Filling of the area could not be mitigated as with the wetlands of sites 3 and 4. This area is vegetated by mature cypress with an open understory and the construction of a shallow pond would only destroy more cypress. Filling in this area should be eliminated and expansion be accomplished on the west side of the road. If filling is required then the mitigation for this destruction should be accomplished in the area of sites 3 and 4.

These are preliminary comments on the information provided in the Advance Notification package. When more specific information is available, we would be pleased to evaluate the project. Again, we are not concerned with sites 1 and 2, but believe that mitigation should be performed for sites 3, 4 and 5. This mitigation would be minor and with little added expense to the project.

Sincerely yours,

Joseph D. Carroll, Jr.
Field Supervisor

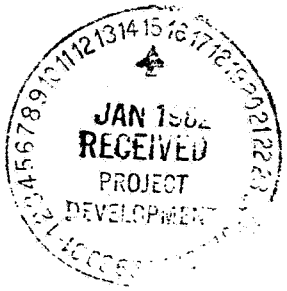
cc:
AO, Jacksonville, Fla.
DOT, Bartow, Fla.

TAMPA PORT AUTHORITY

Serving America's Seventh Largest Port

WUGwy
URW
MEW

January 13, 1982



Mr. James R. Wilt, Jr.
District Permit Coordinator
Florida Department of Transportation
Post Office Box 1249
Bartow, Florida 33830

Reference: State Project Number 10160-1511
Dale Mabry Highway at Waters Avenue

Dear Jim:

I have reviewed the Permit Coordination Report concerning the above-cited proposed project. There do not appear to be any tidally influenced waters in the vicinity of this project. Therefore, it appears that no permit from this Authority will be required for any phase of this work.

Sincerely,

William K. Fehring (bw)

William K. Fehring, Ph.D.
Director of Environmental Affairs

WKF:bw

GEORGE B. HOWELL MARITIME CENTER

POST OFFICE BOX 2192 • 811 WYNKOOP ROAD • TAMPA, FLORIDA 33601 • 813/248-1924 • TELEX 52441

STATE OF FLORIDA

Office of the Governor

THE CAPITOL

TALLAHASSEE 32304

BOB GRAHAM
GOVERNOR

January 13, 1982

Mr. J. C. Kraft, Chief
Bureau of Environment
Department of Transportation
Burns Building
Tallahassee, Florida 32301

RE: State Project # 10160-1511 - BI # 113380 - Hillsborough County
Dale Mabry & Waters

SAI: FL8112140641

Dear Mr. Kraft:

The State Planning and Development Clearinghouse, in compliance with U. S. Office of Management and Budget Circular A-95, has provided a review of your notification of intent to apply for federal assistance in the amount of $10,500,000.

The project is in accord with State plans, policies, procedures, and programs based on comments received from our reviewing agencies. However, comments are outstanding from the Department of Environmental Regulation. Those comments, if any, will be forwarded upon receipt in this office.

Please append a copy of this letter to your application, and on Item 3a of the SF 424 form insert the above referenced State Application Identifier (SAI) number. Completion of these requirements will assure the federal agency of your compliance with the provisions of U. S. Office of Management and Budget Circular A-95, and will assist the federal agencies in preparing the Notification of Grant-In-Aid Action in accordance with U. S. Treasury Circular 1082. Accommodating these requests will reduce the chance of unnecessary delays in processing your applications.

Thank you for your cooperation.

Sincerely,

Ron Fahs

Ron Fahs, Director
Intergovernmental Coordination

RF/mt
Enclosure
CC: Ms. Wendy Giesy
Department of Transportation
P.O. Box 1249
Bartow, Florida 33830

Southwest Florida Water Management District

5060 U.S. HIGHWAY 41, SOUTH — BROOKSVILLE, FLORIDA 33512
PHONE (904) 796-7211

January 15, 1982

Mr. James R. Wilt, Jr.
District Permit Coordinator
Florida Department of Transportation
Bartow, FL 33830

Re: Dale Mabry and Waters Avenue Improvements, Hillsborough County
State Project No. 10160-1511, Budget Item No. 113380

Dear Mr. Wilt:

The proposed improvements of the Dale Mabry and Waters Avenue intersection will require some modification of Channel H at sites 1A and 1B.

A permit will be required for such modification but if the existing or better conveyance is provided by the Department we will have no objections.

Sincerely,

OLIVER R. DEWITT
Surface Permits Coordinator
Resource Regulation Department

ORD:eab

cc: L. M. Blain
J. E. Curren

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IV
345 COURTLAND STREET
ATLANTA, GEORGIA 30365

March 4, 1982

RECEIVED
MAR 10 1982

10160-1511

Mr. J. C. Kraft
Bureau of Environment
Department of Transportation
605 Suwannee Street
Tallahassee, Florida 32304

Dear Mr. Kraft:

We have reviewed the advanced information on the proposed improvements to the intersection of Dale Mabry Highway and Waters Avenue in Hillsborough County. Our review of this information suggests the project has the potential for significant wetland impacts. However, we do not believe the quality of the wetlands impacted are such that if wetland mitigation and erosion control measures are incorporated into the project there will be any undue complications during the 404 permit process.

If we can be of further assistance, feel free to call on us.

Sincerely yours,

Sheppard N. Moore

Sheppard N. Moore
Acting Chief, EIS Section

STATE OF FLORIDA

DEPARTMENT OF ENVIRONMENTAL REGULATION

TWIN TOWERS OFFICE BUILDING
2600 BLAIR STONE ROAD
TALLAHASSEE, FLORIDA 32301-8241

BOB GRAHAM
GOVERNOR

VICTORIA J. TSCHINKEL
SECRETARY

July 8, 1982

Mr. P. E. Carpenter
Division Administrator
U. S. Department of Transportation
Federal Highway Administration
Region Four
Post Office Box 1079
Tallahassee, Florida 32302

Dear Mr. Carpenter:

The department has reviewed your ongoing project submittal of January 28, 1982, for consistency with Florida's Coastal Zone Program as required under Subpart F of 15 CFR Part 930. We have determined that all of the attached projects are consistent with Florida's Coastal Zone Management Program. Previous correspondence between FDOT and FDER have found 13 federal-aid projects to be consistent. As some of these projects are in various planning stages, they will undergo future review as required by federal regulations. Two additional projects, 99004-1522 and 78040-1528, have been exempted from a consistency review due to final FHWA approval prior to October 1, 1981. While we find SR 951 consistent, we still have concerns which will be expressed in forthcoming correspondence.

In arriving at these consistency determinations, my staff expended considerable effort in a review of each project. They have compiled a large number of comments that will aid FDOT in future project development and will better ensure that the projects are environmentally acceptable. These comments have been included in several letters to you with copies to FDOT. By copy of this letter, I am requesting that the Secretary of Transportation strongly consider these comments as these projects move forward.

Future correspondence in regard to consistency will be directed to FDOT and we hope to soon establish procedures to better facilitate this process.

Sincerely,

Victoria J. Tschinkel

Victoria J. Tschinkel,
Secretary

VJT/ml
Attachment

cc: Mr. Paul Pappas
Mr. Ron Fahs
Mr. Jake Kraft
Mr. Dave Worley
Mr. Walt Kolb

Project Description	Project No.	Date of A-9
Upgrading US 1 (SR 5) from 4-L to 6-L or 8-L facility from SR 968 (NE 123 St.) to Dade/Broward County line, Dade County	SJN 87030-1533 FAP F-485-2(10) BI 612833	8-31-81
Widening of 2-L section of US 1 (SR 5) to a 4-L roadway from SR S-905 to Monroe/Dade line, Monroe County	SJN 90060-1543 FAP F-485-1(9) BI 616783	5-21-79
Widening US 1 (SR 5) from 2-L to 4-L from Monroe/Dade County line to Card Sound Road, Dade County	SJN 87010-1505 FAP F-485-2(7) BI 613184	5-21-79
Widening SR 76 from 2-L to 4-L from SR 76A to Monterey Road, Martin County	SJN 89060-1514 FAP RS-4854(3) BI 416129	12-23-77
Widening SR 710 from 2-L to 4-L from Military Trail to SR 5, Palm Beach County	SJN 93310-1506 FAP M-6560-(1) BI 418041	10-10-78
Widening SR 706 from 2-L to 4-L from Turnpike to SR 5, Palm Beach County	SJN 93190-1508 FAP RS-4844(1) BI 418178	10-26-78
Widening SR 710 from 2-L to 4-L from SR 706 to Military Trail, Palm Beach County	SJN 93310-1510 FAP F-130-1(6) BI 418243	9-24-79
Adding additional lanes to existing 4-L US 1 from Martin County line to 17th St., Vero Beach, Florida	SJN 99004-1521 FAP F-485-5(7) BI 410004	8-25-80
Intersection improvement US 1 from Martin County line to Indian River line	SJN 94010- FAP F-485-5(5) BI 419254	1-3-79
I-95 HOV Study, 6-L to 8-L, Interchanges in Broward County	SJN 99004-1522 FAP F-195-1(235)16 BI 410035	1-28-78
I-95 HOV lanes, 6-L to 8-L, from Danie Boulevard to M.P. 15.5, Broward County	SJN 86070-1472 FAP I-95-1(256)27 BI 440820	N.A.
SR 820 from 2-L to 4 or 6 lanes from I-75 to SR 7, Broward County	SJN 86040-1518 FAP F-036-1(8) BI 410299	1-13-77
SR 951 from 2-L to 4-L from SR 92 to US 41, Collier County	SJN 03030-1505 FAP F-325-1(1) BI 412031	7-13-78

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Project Description	Project No.	Date of A-95
SR 43 from 2-L to 6-L from Gibsonton Road to SR 60, Hillsborough County	SJN 10010-1508 FAP F-311-1(9) BI 113256	5-15-79
SR 60, 4-L to 6-L, from SR 43 to Knight Avenue	SJN 10110-1549 FAP F-200-1(5) BI 113330	11-12-81
and		
SR-60, 4-L to 6-L, from SR 45 to SR 43, Hillsborough County	SJN 10110-1550 FAP M-1812-(6) BI 113658	11-12-81
Dale Mabry at Waters, 4-L to 6-L, from CR 587 and CR 584 to SR 580 Interchange, Hillsborough County	SJN 10160-1511 FAP F-295-1(7) BI 113380	12-8-81
SR 582, 2-L to 4-L, from CR 582B to SR 43, Hillsborough County	SJN 10290-1508 FAP M-1918(2) BI 113269	9-6-77
SR 574, 2-L to 4-L, from 585 to SR 43	SJN 10340-1501 FAP M-1870(2) BI 113197	9-3-81
and		
SR 574, 2-L to 4-L, from SR 43 to SR 574, Hillsborough County	SJN 10340-1502 FAP F-208-1(1) BI 113257	9-3-81
Replace existing bridge over Turkey Creek on Yukon Road, Hillsborough County	SJN 10513-1925 FAP BRZ-0001(3) BI 123340	7-8-80
Upgrade Edison Bridge from 2-L to 4-L from SR 80 to SR 78A, Lee County	SJN 12001-1511 FAP BRM-0671(2) BI 114459	12-10-79
SR 80, 2-L to 4-L, from SR 45 to I-75, Lee County	SJN 12020-1532 FAP F-100-1(3) BI 114444	12-3-80
SR 78, 2-L to 4-L, from CR 765 to SR 31, Lee County	SJN 12060-1519 FAP F-106-1(1) BI 114427	9-17-79
New bridge at Madison Street, Bridge #140064, Pasco County	SJN 14714-3901 FAP SOS-0001(62) BI 125813	11-2-79
SR 60, 4-L to 6-L, from SR 55 to CR 593, Pinellas County	SJN 15040-1517 FAP M-1456(3) BI 116543	4-25-80

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Project Description	Project No.	Date of A-
Replace Bridge #154255 at 49th Street, Pinellas County	SJN 15665-1601 FAP BRZ-0001(6) BI 126588	7-11-80
Sunshine Skyway Pier Protection, Hillsborough and Manatee Counties	SJN 15170-1412 FAP I-275-7(189)438 BI 147819	9-24-81
Apalachicola River/Bay Bridges replacement, Franklin County	SJN 49010-1533 FAP BRF-422-3(3) BI 312614	5-3-78
and		
	SJN 49010-1536 FAP BRF-422-3(6) BI 312627	5-3-78
Blackwater River Bridge, US 98, bridge replacement, Santa Rosa County	SJN 58010-1524 FAP BRF-480-1(6) BI 317984	11-25-81
Highland View, US 98, bridge replacement, Gulf County	SJN 51010-1521 FAP F-422-3(5) BI 313731	4-30-79
SR 13, 2-L to 4-L, from SR 9A (I-295) in Duval County to Race Track Road in St. Johns County	SJN 72160-1540 FAP F-415-2(5) BI 214476	11-18-81
	and	
	SJN 78070-1514 FAP F-415-1(3) BI 516825	11-18-81
Bridge of Lions, SR A1A, St. Augustine, St. Johns County	SJN 78040-1537 FAP BRF-491-2(3) BI 516826	6-2-81
SR A1A, Port Orange Causeway, 2-L to 4-L, excluding bridges	SJN 79180-1508 FAP M-8094(1) BI 518961	10-10-77
and		
Port Orange Bridge, SR A1A, Volusia County	SJN 79180-1902 FAP BRM-8094(2) BI 518855	10-10-77
SR 518, Eau Gallie Causeway, 2-L to 4-L, excluding bridge	SJN 70120-1522 FAP M-8546(8) BI 510043	8-29-79
and		

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Project Description	Project No.	Date of A-95
SR 518, Eau Gallie Causeway Bridges, Brevard County	SJN 70120-1513 FAP BRM-8546(3) BI 510183	8-29-79
Goat Creek Bridge Replacement (Bridge No. 704023) in Valkaria, Brevard County	SJN 70000-1614 FAP BRZ-0005(14) BI 520010	7-29-80
SR 44, 2-L to 4-L, from SR 55 to E. C/L. Crystal River, Citrus County	SJN 02050-1516 FAP F-324-1(13) BI 511539	12-12-77
SR 44, 2-L to 4-L, from CR 581 to SR 45, Citrus County	SJN 02050-1517 FAP F-324-1(4) BI 511540	12-12-77
SR 45, 2-L to 4-L, from SR 44 to SR 44E., Citrus County	SJN 02010-1516 FAP F-324-1(5) BI 511544	12-12-77
SR 45, 2-L to 4-L, Withlacoochee River Bridge Replacement, Citrus County	SJN 02010-2517 FAP BRF-301-5(1) BI 511549	11-10-77
SR A1A, 2-L to 4-L, from SR 312 to existing 4 land, St. Johns County	SJN 78040-1528 FAP F-491-2(2) BI 516831	12-12-74
Bishop Estate Road bridge replacement (Bridge No. 784034), St. Johns County	SJN 78000-1604 FAP BRZ-0005(22) BI 526829	8-12-80
SR 600, 4-L to 6-L, from I-95 to Clyde Morris, Volusia County	SJN 79060-1514 FAP F-344-1(4) BI 518907	2-17-77
SR 430, intersection improvement (Mason Avenue) at SR 5 in Volusia County	SJN 79220-1501 FAP M-8170(2) BI 519037	1-23-81
CR 40A Bridge Pioneer Trail bridge replacement (Bridge Nos. 794109, 10, 11) in Volusia County	SJN 79550-1605 FAP BRZ-0005(7) BI 528811	5-18-79
Main Street, Rose Bay bridge replacement (Bridge No. 794028), Volusia County	SJN 79000-1619 FAP BRZ-0005(30) BI 528814	8-18-80
CR 444, Maytown Road bridge replacement (Bridge Nos. 794039, 40, 41), Volusia County	SJN 79504-1602 FAP BRZ-0005(26) BI 528833	4-28-80

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Project Description	Project No.	Date of A-9
High Bridge Road bridge replacement (Bridge No. 794026), Volusia County	SJN 79000-1616 FAP BRZ-0005(26) BI 528835	8-18-80
CR 444, Mayton Road bridge replacement (Bridge Nos. 794043, 44), Volusia County	SJN 79504-1603 FAP BRZ-0005(27) BI 528839	7-18-80