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FHWA-FL-EIS-86-02-F

FEDERAL HIGHWAY ADMINISTRATION
REGION FOUR

ADMINISTRATIVE ACTION

FINAL ENVIRONMENTAL IMPACT STATEMENT

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

State Project Number 10000-1531
Federal Aid Program M-4047(40)
W.P.I. Number 1113669

NORTHWEST HILLSBOROUGH EXPRESSWAY
Interstate - 275 to S.R. 597 (Dale Mabry Highway)
Hillsborough County, Florida

The proposed action includes adding lanes and improving interchanges on S.R. 60 and Eisenhower Boulevard from I-275 to Hillsborough Avenue and providing a new four lane limited access expressway with interchanges from Hillsborough Avenue to Dale Mabry Highway.

Submitted Pursuant to 42 U.S.C. 4332 (2) (C)

OCT 27 1987
Date

Division Administrator
Federal Highway Administration

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October 27, 1987

IN REPLY REFER TO: HB-FL



Mr. James G. Kennedy
Deputy Assistant Secretary
Florida Department of Transportation
4950 W. Kennedy Boulevard, Suite 500
Tampa, Florida 33609

Dear Mr. Kennedy

Subject: Florida - Federal Project No. M-4047(40)
State Project No. 10000-1531
Northwest Hillsborough Expressway
Final Environmental Impact Statement (FEIS)
FHWA-FL-EIS-86-02-F

The subject FEIS has been approved by our office on October 27, 1987. Enclosed for your use is a signed copy of the document.

Distribution of the FEIS to all appropriate parties should be initiated immediately, including copies to the Environmental Protection Agency (EPA), for publication of availability in the Federal Register. Please provide us a copy of the transmittal letter to EPA.

The project may be advanced in a normal manner after the Record of Decision (ROD) is approved by our office. The ROD can be approved 30 days after the EPA publishes the availability of the FEIS in the Federal Register.

Sincerely yours,

J. R. Skinner
Division Administrator

Enclosure

cc: Mr. W. W. Giddens, Jr., FDOT, w/enclosure

EXECUTIVE SUMMARY

Description

The Northwest Hillsborough Expressway is proposed as a major, high-type, divided, limited access roadway to serve local traffic in the north and northwest areas of Hillsborough County, Florida in the vicinity of Tampa. The route will also form a vital part of a bypass route for I-275, around Tampa Metropolitan area (Figure 1-1). The project is jointly proposed by the Tampa-Hillsborough County Expressway Authority and the Florida Department of Transportation.

The general area for the proposed project begins at I-275 south of the Tampa International Airport and thence proceeds northerly and northeasterly in the northwest quadrant of Hillsborough County to a terminus at Dale Mabry Highway (SR 597) north of Van Dyke Road. The remainder of the overall bypass routing to I-75 will consist of two additional and separate projects. The first would be improvements to Dale Mabry Highway from the terminus of this project northward to County Road (CR) 54 in Pasco County and the second would be the improvement of CR 54 from Dale Mabry eastward to I-75. The latter two roadway projects are currently under study by FDOT and are both included in the FDOT five year work program. The local arterial system, Dale Mabry Highway and CR 54, will provide a dual function, serving the general land use in this rapidly growing area while providing the bypass linkage described above.

Early in the Expressway study process a direct easterly extension of the Northwest Expressway to I-75 was considered in detail. Due to potentially severe environmental impacts and low traffic projections, this easterly extension from Dale Mabry Highway to I-75 was dropped from further consideration. However, the improvements to the existing arterial system described above (Dale Mabry Highway and CR 54) will provide the necessary bypass system linkage. The level of improvements that will be proposed for Dale Mabry Highway and CR 54 north of the proposed Expressway terminus with Dale Mabry Highway will be the same with or without the Northwest Expressway based upon the year 2010 traffic projections (24,000 ADT for the No Build alternative verses 27,000 to 28,000 ADT for the build alternatives, see Figures 3-2, 6-2 and 6-1 respectively).

The Northwest Hillsborough Expressway Recommended Alignment would be approximately 16.9 miles in length. The Expressway between I-275 and Hillsborough Avenue would involve the improvement of Eisenhower Boulevard to six and eight lanes and the addition of auxillary lanes where required in the interchange areas. The

remainder of the project would be a new four lane divided facility with median and paved shoulders. Access to the existing street network would be maintained through the local road system, frontage roads and grade separated interchanges. The proposed roadway would typically require from 180 to 250 feet of right of way.

Within Corridor B, seven basic alternative north-south alignments were studied (see Figures 4-10 thru 4-12). Of the seven north-south alternatives three were retained for further study. Four East-West alternative alignments of the eight identified were retained for further study and four were rejected. A combination of factors including relative socio-economic and environmental impacts, traffic service, project costs, right of way, and relocation factors were used in evaluating the alternatives. In addition, the utilization of local mass transit, the improvement of the local roadway network and the No-Build alternative were considered. None of these latter alternatives could satisfy the needs of which this project was developed.

Reasonable Alternatives

These remaining reasonable alternative alignments identified by location are as follows: Between I-275 and Gunn Highway there is one alternative - the "Eisenhower/West Alignment"; between Gunn Highway and Dale Mabry Highway there are two alternatives - the "Lake LeClare Alignment" and "Railroad Alignment"; and connecting these alignments to Dale Mabry Highway there are two alternatives - the "North Termini" and "South Termini" alignments. These alternatives are shown in Figure 4-13 and are discussed in detail in this document in Section 4.0 (Alternatives Including Proposed Action) and 6.0 (Environmental Consequences). Each was evaluated and compared as to Engineering Factors (design characteristics, length, traffic service, costs and special construction and maintenance problems), see Table 6-4; Community Impact Factors (overall public safety, economic impacts, general social groups, displacements of homes and commercial properties, compatibility with land use and future plans, historic and archaeological preservation, pedestrian and bicycle considerations and visual impacts), see Table 6-6 and Environmental Impact Factors (air quality, noise, wild and scenic rivers, farmlands, floodplain, coastal zone, wetlands, water quality, threatened and endangered species, stream modification and wildlife and construction), see Table 6-11.

Recommended Alignment Alternative

The Recommended Alignment was selected from the reasonable alignment alternatives based on the Engineering, Community and Environmental factors and input from the Corridor Location and Design Public Hearing held on March 4, 1986, see Subsection 8.5, and input from responses to the Draft Environmental Impact Statement, see Subsection 8.6.

The Recommended Alignment alternative as discussed is Subsection 4.3 is comprised of the Eisenhower/West, Lake LeClare and South Termini Alignments. This alignment was selected because it has the best potential of the reasonable alternatives studied for carrying the most traffic to alleviate traffic conjestion in the area, it has the best potential for generating revenues to pay for the project's costs, and is most compatible with Hillsborough County's Growth Management Plan because of location closer in to the existing urban development pattern. Also, it was selected because the Railroad Alignment alternative conflicts with the County's plans for the railroad right-of-way to serve as a local roadway as part of the improved local roadway system.

Modifications to the Eisenhower/West portion of the Recommended Alignment were made in the vicinity of Tampa International Airport based on input received by the Hillsborough County Aviation Authority. The main comments were to reduce the impact on airport property and facilities by moving the roadways to the west between the Courtney Campbell Causeway interchange and the Hillsborough Avenue interchange, and to increase traffic capacity by improving interchanges in the area and by separating the airport traffic from expressway traffic between I-275 and the airport.

Realignment modifications were made to another portion of the Recommended Alignment in the Eisenhower/West area based on agency and public input and changing property development conditions. These modifications were made to revise the interchange geometrics at Waters Avenue, Anderson Road, and Linebaugh Avenue, in order to avoid new commercial development on Linebaugh Avenue; preserve compatible land use development potential north of Waters Avenue and in the northwest quadrant of the intersection of Linebaugh Avenue and Henderson Road; and facilitate future local traffic movement by adding two bridges, one over the proposed extension of Twelve Oaks Boulevard and another over the proposed extension of Sligh Avenue. Hillsborough County has added these two proposed roadway improvements to their local roadway system plan.

Further modifications were made at the request of Hillsborough County for providing a more directional interchange from the south to the west on Linebaugh Avenue to conform with regional transportation plans and for adding ramps to Wilsky Boulevard for access to the north on the Expressway.

In the Lake LeClare Alignment alternative area, ramps were added to the Hutchinson road interchange and at the proposed Gunn Highway Relocation interchange. Hillsborough County plans are for the Gunn Highway Relocation project to begin with the Northwest Hillsborough Expressway and proceed north into Pasco, Pinellas and Hernando Counties. Two other improvements in the Lake LeClare Alignment included a redesign of the Van Dyke Road/Lake Shore Road interchange as suggested by Hillsborough County and realignment of the expressway to the sough side of Lake Holly from the north side to reduce impacts on developing properties.

The environmental consequences are discussed in Section 10.0 and the modifications to the alignment and commitments made in developing the project as a result of the Public Hearing and agency reviews of the Draft Environmental Impact Statement are discussed in Subsections 4.3.2 and 11.4, respectively.

1.0 SUMMARY

1.1 PROPOSED ACTION

The Northwest Hillsborough Expressway is proposed to be a major divided, limited access roadway to serve local traffic in the north and northwest areas of Hillsborough County, Florida in the vicinity of Tampa, as well as be a part of a bypass route for I-275 around the City of Tampa, see Figure 1-1. The bypass route would be comprised of this proposed project and improvements to Dale Mabry Highway thereby connecting the terminus of the Northwest Hillsborough Expressway to County Road (CR) 54 in Pasco County. CR 54 would also be improved from Dale Mabry Highway to I-75. The Dale Mabry and CR 54 portions of the bypass are separate projects presently under study by the Florida Department of Transportation. Figure 1-1 shows the proposed expressway as part of the overall bypass route.

The general area for the proposed project begins at I-275 south of the Tampa International Airport where it proceeds northward to the vicinity of Hutchinson Road and then proceeds northeastward in the northern part of Hillsborough County to a terminus at Dale Mabry Highway (SR 597) north of Van Dyke Road. The length of the Recommended Alignment for the route would be 16.9 miles. The proposed expressway north of Memorial Highway is to be predominantly a four-lane divided facility with median and shoulders. South of Memorial Highway, throughout the continuous interchange areas to I-275, the expressway is wider (6 and 8 lane sections). Access to the existing street network would be maintained through the local road system, frontage roads, and grade separated interchanges. The proposed facility would typically require from 180 to 250 feet of right-of-way.

1.2 OTHER GOVERNMENT ACTIONS AND PERMITS REQUIRED

Permits are required from the Florida Department of Environmental Regulation (FDER) for water quality certification, riverine and canal crossings, and dredge and fill in wetlands. A U.S. Army Corps of Engineers Section 404 permit is required for construction activities within the floodplain areas of tributaries flowing into coastal waters. Permits may be required if construction operations result in the discharge of fill material into isolated wetlands and causes the loss or degradation of wetlands that could affect interstate commerce. A Southwest Florida Water Management District permit is required for the project's surface water management plans. The project crosses Fish Creek, Sweetwater Creek (Channel G) and Rocky Creek (at two locations). U.S. Coast Guard permits will be required for construction activities in tidally influenced waterways such as Fish Creek.

The Tampa Port Authority also requires dredge and fill permits for all activities conducted below mean higher or high water in all tidal wetlands and will issue a public easement for any consumptive use of submerged lands under their jurisdiction. The Hillsborough County Environmental Protection Commission (HCEPC) requires a justification statement for all of the unavoidable wetland impacts.

The Federal Aviation Administration and the Hillsborough County Aviation Authority require coordination due to potential impacts on Tampa International Airport. Coordination meetings are ongoing between these agencies and the Florida Department of Transportation and the Tampa-Hillsborough County Expressway Authority.

In addition, coordination with the Corps of Engineers, U.S. Fish and Wildlife Service, National Marine Fisheries Service, the Environmental Protection Agency aand the Florida Department of Environmental Regulation is required in wetland areas.

1.3 ALTERNATIVES CONSIDERED

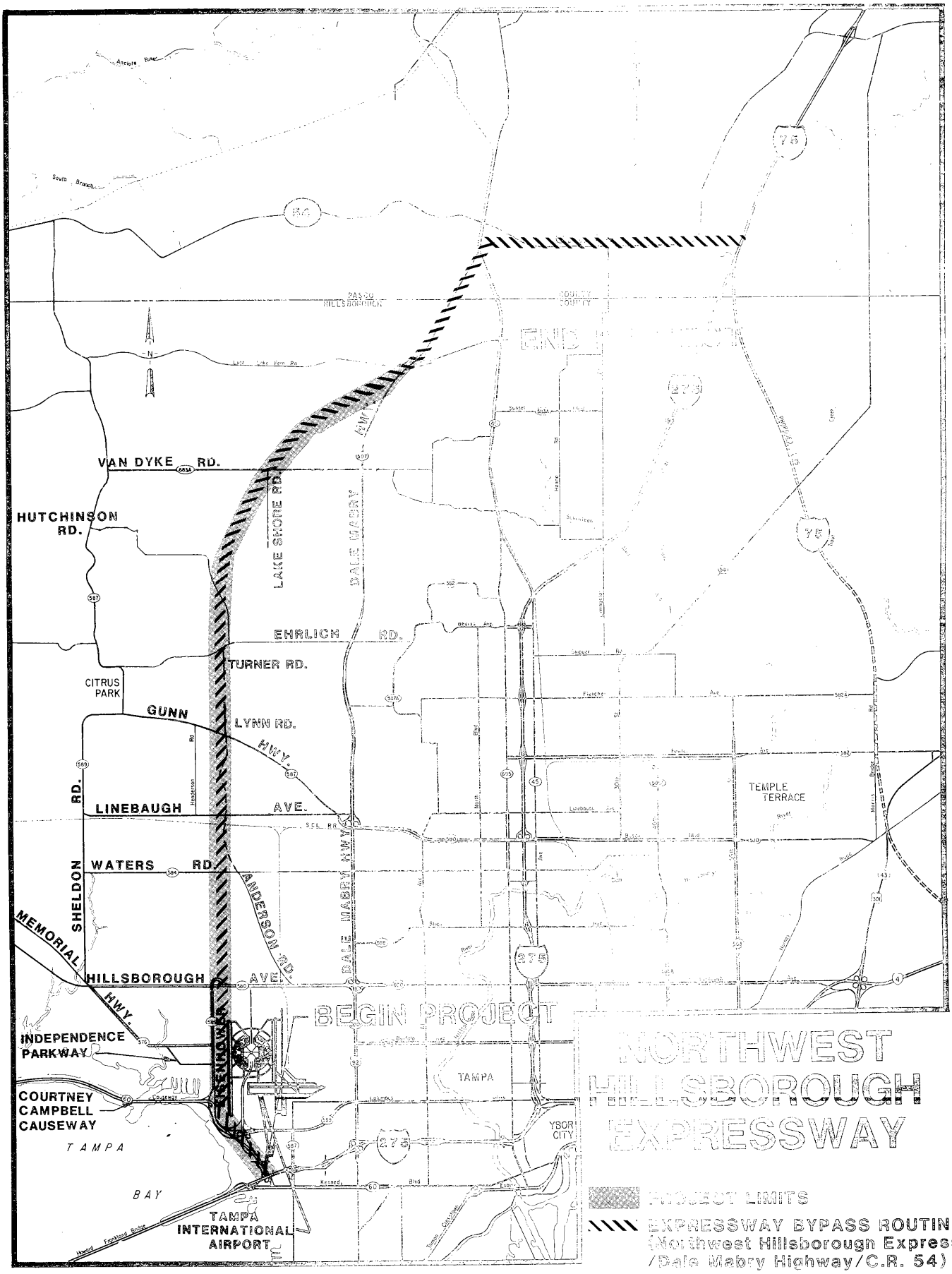
Alternatives considered include "No-Build", mass transit improvement, and upgrading of existing facilities in lieu of the project. Basic project alternatives, as shown in Figure 4-13, include one alternative from Interstate 275 to 3,000 feet south of Gunn Highway (Eisenhower/West) and two alternatives north from 3,000 feet south of Gunn Highway to 4,000 feet west of Dale Mabry Highway (Lake LeClare and Railroad). Two termini alternatives are included as the North Termini and South Termini for the north end of the proposed project.

1.4 RECOMMENDED ALTERNATIVE

The Recommended Alternative as discussed in Subsection 4.3 and shown in Figure 4-15 is comprised of a combination of the Eisenhower/West, Lake LeClare, and South Termini alignments. The environmental consequences of this alternative is described in Section 10.0 with specific recommendations and commitments in Section 11.0.

1.5 REASONS FOR SELECTION OF ALTERNATIVE

The Recommended Alignment was the selected alternative because of its potential for carrying more traffic in the early years of operation generating more revenue to pay for costs of the project. In addition, the Lake LeClare portion of the selected alternative is located closer to existing urban development patterns than the Railroad Alternative thereby better conforming to the Hillsborough County Growth Management Plan. This plan calls for discouraging urban sprawl in the Northwest area of the County. The selection was also based on the fact that Hillsborough County plans to use the Railroad right-of-way for development of a roadway to alleviate local traffic needs as part of the County's arterial road system.



PROJECT LOCATION MAP

FIGURE 1-1

1.6 SIGNIFICANT ENVIRONMENTAL IMPACTS

The Recommended Alignment will cause the relocation of 163 residences, 19 businesses, and 1 public facility. Noise will impact several residential areas. Three prehistoric sites were identified in the vicinity of the proposed project, however the State Historic Preservation Officer has determined that no resources listed, or eligible for listing, on the National Register of Historic Places would be impacted. Wetlands and flood prone areas will be encountered throughout each alternative alignment, requiring mitigative design considerations.

Impacts during construction include air, noise and localized stormwater runoff pollution. Long term operational impacts include increased air pollution and noise in the immediate vicinity of the proposed facility.

The proposed project will provide a new alternative route to existing congested roadways in Northwest Hillsborough County. It will provide for 50,000 average daily trips in the year 2010 for areas north of Hillsborough Avenue and over 150,000 average daily trips south of Independence Parkway.

1.7 WETLAND FINDING

Approximately 59 acres of wetlands in fairly good health are impacted by the project as discussed in detail in Subsection 10.3.3. The alignments for the proposed project were investigated in compliance with Executive Order 11990, "Protection of Wetlands". The wetlands include estuarine, palustrine, rivarine, and lacustrine systems. Many of these have been altered by man's activities; however, others are in their natural state. The majority have one or more qualities attributed to wetlands such as water quality benefits, erosion control, floodwater storage capacity, and wildlife habitats.

Based upon the above consideration, it is determined that there is no practicable alternative to the proposed new costruction in wetlands and the proposed action includes all practicable measures to minimize harm to wetlands which may result from such use.

1.8 FLOODPLAIN FINDING

A floodplain impact analysis was performed for the proposed expressway to meet the requirements of Executive Order 11988, "Floodplain Management". A total of 76.7 acres of floodplains are involved in the project. All alternative alignments studied unavoidably involved encroachment of floodplains. One regulated floodway is located in the vicinity of the proposed expressway at Sweetwater Creek on the Eisenhower/West Alignment. The expressway will cross this floodplain on structure, avoiding the risk of adverse backwater effects and preventing the loss of floodwater storage.

Pursuant to Executive Order 11988, "Floodplain Management", the proposed action was determined to be within the base floodplain. Impacts associated with the encroachment have been evaluated and determined to be minimal. Therefore, the proposed action will not constitute a significant encroachment.

1.9 COASTAL ZONE CONSISTENCY

The entire project will be under the requirements for consistency with the Florida Coastal Zone Management Plan; therefore, this document will be reviewed for the project's compliance.

1.10 CULTURAL RESOURCES

The proposed improvement will not require the use of any park, wildlife refuge, or recreational land as defined in Section 4(f) of the 1966 U.S. Department of Transportation Act, as amended. Therefore, FHWA has determined that Section 4(f) does not apply.

The FHWA after consultation with the SHPO has determined that no sites listed or eligible for listing on the National Register of Historic Places will be impacted by the project. The project therefore has no effect on any such properties.

1.11 ENDANGERED SPECIES

Two species listed by the U.S. Fish and Wildlife Service (USFWS) as endangered might be impacted by the project. The Wood Stork (Mycteria americana) and the Bald Eagle (Haliaeetus leucocephalus) have been sited in the study area, but no known nesting sites occur within the study area. A third endangered species identified by the USFWS that might be found in the study area is the Red-cockaded Woodpecker; however, this species requires mature long leaf pine (Pinus palustris) for nesting and habitat which is not found in the study area.

It has been determined by FHWA, after consultation with the U.S. Fish and Wildlife Service, that the project as proposed will have no effect on any threatened or endangered species.

1.12 FARMLAND

Through coordination with the U.S. Soil Conservation Service, it has been determined that no farmlands as defined by 7CFR658 are located in the project vicinity.

1.13 PROBABLE ADVERSE ENVIRONMENTAL EFFECTS WHICH CANNOT BE AVOIDED

Nine neighborhoods will be impacted, including two that will be split, 163 residences and 19 businesses will be taken or dislocated by the expressway. In addition, five residential subdivisions under development or planned will also be impacted. Relocation assistance will be provided and is addressed in

Subsection 6.2.2.4. Approximately 444 additional acres of right-of-way will be required for the project.

A major relocation of a waterline and possibly a fire station on the Eisenhower/West Alignment will be required.

Noise increase in the surrounding area will occur significantly at three of the 32 receptor locations representing noise sensitive areas along the alignment. In addition, noise generated by construction along the alignment will affect adjacent residences and land uses.

Approximately 59.0 acres of wetlands and 76.7 acres of floodplains will be impacted. One longitudinal floodplains involvement is encounters, located north of Ehrlich Road along Rocky Creek. Mitigation for wetlands is described in Subsection 10.3.3 and for floodplains in Subsection 6.3.5.

Temporary air, noise, water quality, traffic flow, and visual impacts will occur during construction in the vicinity of the project. Extensive impact will occur on maintenance of traffic from the I-275 interchange to Hillsborough Avenue along Eisenhower Boulevard. The foregoing impacts are discussed in detail in Section 6.0.

1.14 IRRETRIEVABLE AND IRREVERSIBLE COMMITMENT OF RESOURCES

Approximately 444 acres of land will be required for right-of-way. Within this area, approximately 59 acres of wetlands and 77 acres of floodplains will be taken or otherwise impacted by the project. Borrow pits and mitigation areas outside the proposed expressway right-of-way will also be required.

Physical resources commited will include construction materials in the form of concrete, steel reinforcement, fill dirt and asphalt.

1.15 FEASIBLE MEASURES TO AVOID OR MINIMIZE POTENTIAL ADVERSE IMPACT

The conceptual Wetland Mitigation Plan for replacement of wetlands, mitigation measures to be taken for floodplain involvement and the Florida Coastal Management Program Compliance requirements will all be considered with appropriate steps taken during preliminary and final design.

A maintenance of traffic plan will be prepared for coordination with the Florida Department of Transportation, Hillsborough County and the City of Tampa during the design phase to minimize adverse traffic conditions during construction.

Hazardous waste sites discovered within the project limits during design or construction activities will be investigated by the Florida Department of Environmental Regulation and appropriate clean up measures taken prior to construction or continuation of work in the area.

Any historic or archaeological remains encountered will cause stoppage of contractor's operations until appropriate action is taken by the State Division of Archives, History and Records Management, Bureau of Sites and Properties.

Esturaine and riverine systems to be impacted will be given special consideration in the design phase as provided for in Subsection 6.3.7.

Best Management Practices will be implemented to protect wildlife.

A Stormwater Management Plan will be developed as a major element of the final design for this project and will be prepared during the preliminary engineering stage.

Best Management Practices will be utilized for control of erosion and for water quality consideration as stated in Subsection 6.3.8.

1.16 SHORT TERM IMPACTS VERSUS LONG TERM ENVIRONMENTAL BENEFITS

Short term impacts associated with the expressway project will exist during construction operations. Inconvenience to motorists will occur. Temporary air pollution from dust and exhaust fumes and noise associated with construction operations cannot be avoided. Every effort will be made to minimize these impacts which are further discussed in Sections 6.0 and 10.0.

1.17 AREAS OF CONTROVERSY

No major controversies are evident as a result of the public hearing process and review of agency comments. The issues raised have been addressed in this Final Environmental Impact Statement and are discussed in detail in Section 8.0.

Controversies identified arising from the proposed project were as follows:

- Impact on residential neighborhoods and communities, both existing and proposed.
- Effects on watershed areas
- Impacts on wetlands
- Impact on the Tampa International Airport
- Using local tax monies for improvement of local roads rather than subsidizing the financial shortfall revenues for the expressway during the first years of operation.
- Location of the expressway further west and north, possibly into adjacent Counties.

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3.0 PURPOSE OF AND NEED FOR ACTION

3.1 GENERAL

The Tampa urban area has shown consistently high growth rates over the last 20 years with an increase in population in Hillsborough County of 63 percent from 397,788 in 1960 to 647,000 in 1980. A high rate of growth is expected to continue with a 100 percent increase from 1980 to the year 2010 when the County's population is projected to reach 1,295,100. The northwestern portion of Hillsborough County is expected to grow even faster during the same period from a population of 101,568 in 1980 to 241,800 in the year 2010, a rate of 138%.[1]

As the Northwest Area has continued to grow, the ground transportation system has not been improved accordingly. All of the major existing east-west routes, Hillsborough Avenue (S.R. 580), Waters Avenue (S.R. 584), Linebaugh Avenue, Gunn Highway (S.R. 587) and Ehrlich Road are presently operating at or over capacity. Also, Dale Mabry Highway (S.R. 597), the major north-south route to the northwest part of the county is operating above capacity and both the morning and afternoon peak periods have increased steadily in duration to nearly three hours. This type of congestion creates unacceptable delays, increases accident rates, and in general degrades the quality of life for all residents affected.

The Florida Department of Transportation and the Hillsborough County Public Works Department have recognized traffic service problems and have programmed improvements for several major arterials in the area (see Section 6.2.1.3 for further discussion). While many of these improvements will enhance traffic flow and levels of service within the study area, the benefits will be localized and segmented. Smaller improvements tend to relocate existing traffic problems to other roadway segments. The primary alternative to improve traffic flow, therefore, is to provide a controlled access facility capable of handling high volume of traffic at reasonable high speeds.

The origin-destination surveys have shown that approximately 50 percent of the traffic on Dale Mabry in the vicinity of Hillsborough Avenue is "through" long distance traffic with neither end of the trip in the immediate area. It is traffic such as this that must be served by a northwest expressway.

1 Source: Population Projections by Jurisdiction and Census Tract. Hillsborough County City-County Planning Commission, December 1984. Projections for the Town and Country and Carrollwood/Lake Keystone planning areas.

3.2 SYSTEM LINKAGE

The existing roadway network does not provide alternative routes around Tampa. This results in forcing southwestbound continuing trips on I-275 through the downtown area. The project would provide a bypass around the Tampa core area by connecting I-75 in the north with I-275 in the southwest via the existing roadways of CR 54 and Dale Mabry Highway and this project, see Figure 1-1. The bypass concept was originally included in the Year 2000 Principal Street and Highway Systems (TUATS) plan of the Metropolitan Planning Organization (MPO), see Figure 3-1.

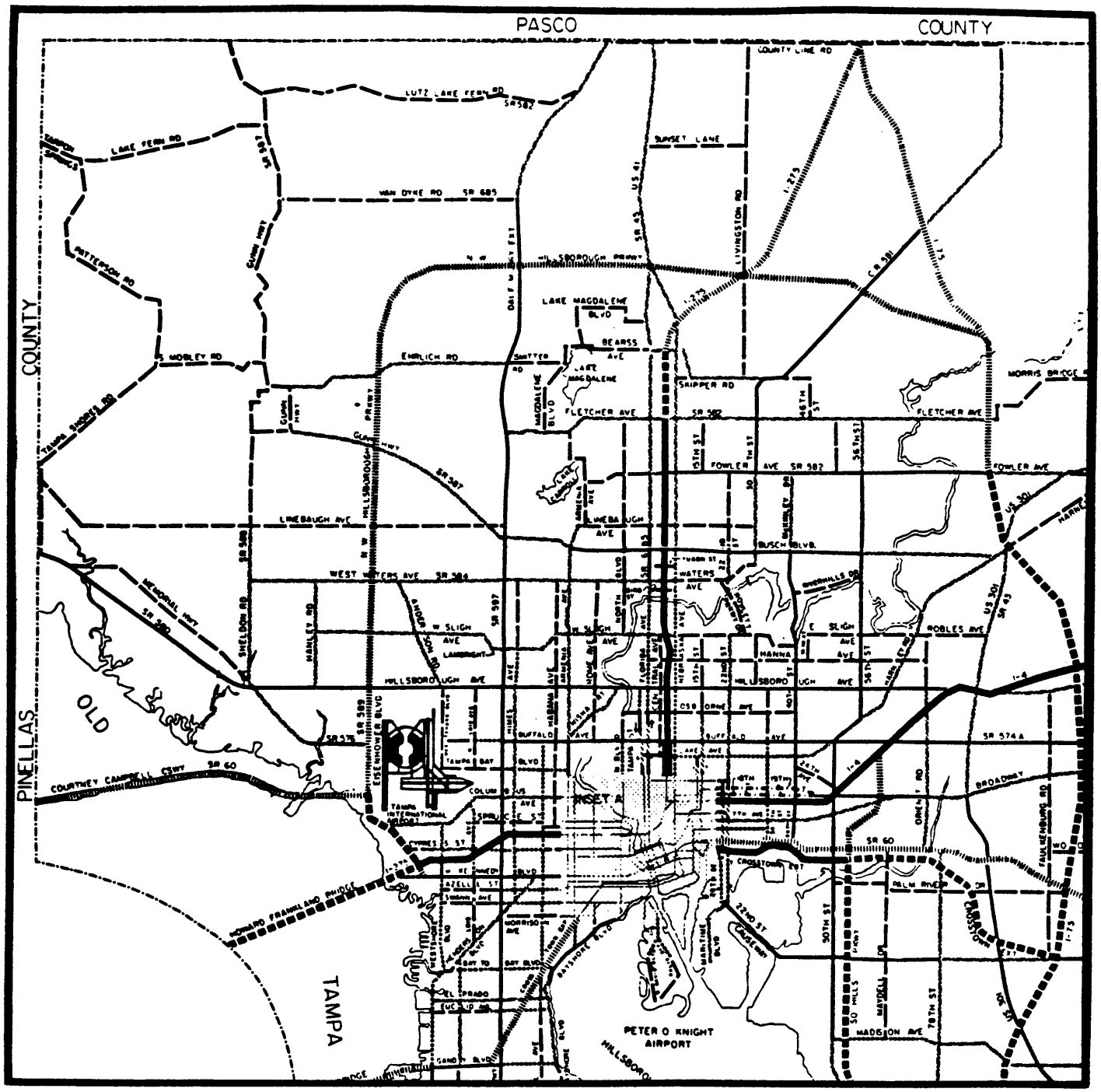
Early in the Expressway study process a direct easterly extension of the Northwest Expressway to I-75 was considered in detail. Due to potentially severe environmental impacts and low traffic projections, this easterly extension from Dale Mabry Highway to I-75 was dropped from further consideration. However, the improvements to the existing arterial system described above (Dale Mabry Highway and CR 54) will provide the necessary bypass system linkage. The level of improvements that will be proposed for Dale Mabry Highway and CR 54 north of the proposed Expressway terminus with Dale Mabry Highway will be the same with or without the Northwest Expressway based upon the year 2010 traffic projections (24,000 ADT for the No Build alternative versus 27,000 to 28,000 ADT for the build alternatives, see Figures 3-2, 6-2 and 6-1, respectively).

The Northwest Hillsborough Expressway would provide a major north-south route that is needed in the study area to relieve Dale Mabry Highway. Dale Mabry is presently experiencing extreme congestion during the peak hours from Busch Boulevard south to I-275. The traffic during this period is principally through commuter traffic traveling between the residential communities in the northwest and the commercial districts in and adjacent to downtown Tampa. Also, the north-south traffic traveling to and from the Tampa International Airport and the St. Petersburg-Clearwater areas has a major impact on Dale Mabry Highway.

The local arterial system, Dale Mabry Highway and CR 54 will provide a dual function, serving the general land use in this rapidly growing area while providing the bypass linkage described above.

3.3 CAPACITY

The northwest area of Hillsborough County has been experiencing severe traffic congestion for many years. There are many reasons for this, the most important of which is rapid population growth in conjunction with an uncohesive and deteriorating roadway network. Improvements to the existing network have not been implemented quickly enough to alleviate the mounting traffic demand of the area.



LEGEND

EXPRESSWAY

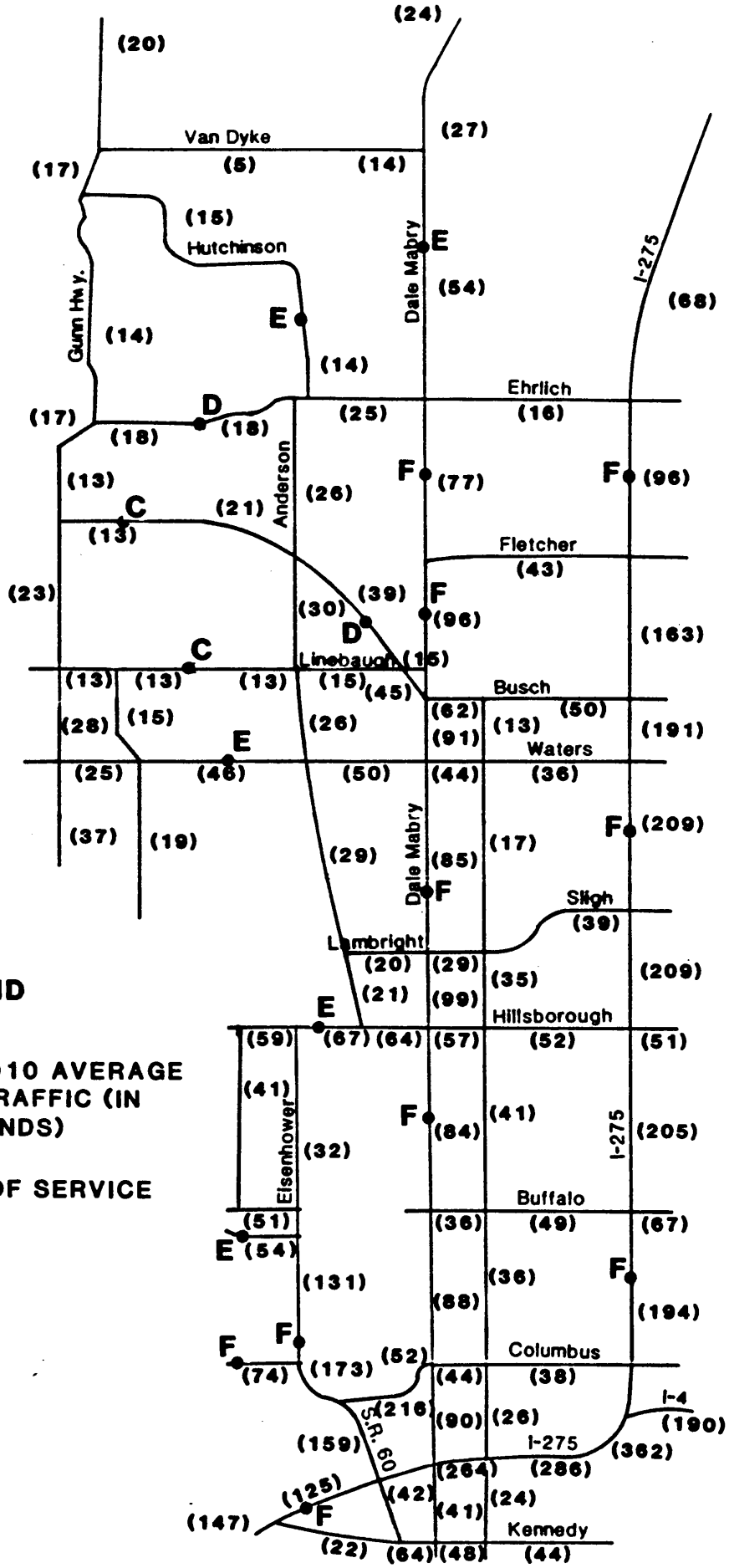
- 4 LANE
- 6 LANE
- 8 LANE
- 10 LANE

ARTERIAL / COLLECTOR

- 6 LANE
- 4 LANE (DIVIDED)
- 4 LANE (UNDIVIDED)
- 2 LANE
- 2 LANE (ONE WAY)
- 3 LANE (ONE WAY)
- 4 LANE (ONE WAY)

YEAR 2000 PRINCIPAL STREET AND HIGHWAY SYSTEMS (TUATS)

FIGURE 3-1



LEGEND

(00) YEAR 2010 AVERAGE DAILY TRAFFIC (IN THOUSANDS)

E LEVEL OF SERVICE (LOS)

EXISTING ROADWAY NETWORK (5 YEAR COMMITTED PROGRAM) (YEAR 2010 TRAFFIC ASSIGNMENTS AND LOS) **FIGURE 3-2**

This has led to major streets in the northwest area which operate at or above capacity. Figure 3-2 shows the existing roadway network and the level of service in the Year 2010 without any high speed facility improvement similar to the one proposed in this document. The level-of-service is a letter designation from A to F which indicates a facility's ability to service traffic with A being the best condition and F the worst condition (See Section 6.1.3 for further discussion).

Projections of ADT for the Year 2010 on the existing roadway network (including the 5 year commited program) indicate LOS F for portions of Dale Mabry and Interstate 275 south of Linebaugh Avenue as well as for Eisenhower Boulevard south of Memorial Highway. (See Figure 3-2.) With inclusion of the Northwest Hillsborough Expressway in the Year 2010 system, traffic on Dale Mabry Highway, Himes Avenue, Anderson Road, Sheldon Road and Hanley Road is reduced thereby providing an improved Level of Service and increase north-south capacity. (See Figures 6-2 and 6-3.) In addition, inclusion of the proposed project results in reduced traffic on east-west roads between Dale Mabry Highway and I-275 along Busch Boulevard, Waters Avenue, and Sligh Avenue, and on portions of Linebaugh Avenue, Gunn Highway, and Ehrlich Road adjacent to Dale Mabry Highway.

3.4 TRANSPORTATION DEMAND

Design volumes projected for the Northwest Expressway vary from a low of 7,000 to 9,000 at its northern termini with Dale Mabry to a high of 130,000 in the vicinity of the Airport Interchange. These projections are based on proposed significant improvements to I-275 and Dale Mabry Highway and major capacity improvements to the remainder of the arterial system depicted by the MPO long range plan.

Traffic volumes which will be generated cannot be adequately served by the existing arterial street system or with the improvements that are being planned for Interstate 275, Dale Mabry Highway, Anderson Road and other north-south facilities in northwestern Hillsborough County. The magnitude of 2010 traffic volumes projected for the Northwest Expressway south of Linebaugh Avenue and along the Eisenhower Boulevard section and the character of projected traffic north of Linebaugh Avenue necessitates the development of a controlled access highway. It is essential to have a balance of all types of roadways (expressways, arterials and local streets) to properly serve the variety of travel needs. To impose the traffic volumes projected for the Northwest Expressway onto existing or proposed arterials would result in overloaded streets with unsafe driving conditions in the design year. Both north-south and east-west streets would have to assume the additional burden.

In addition, improvements to the transportation system referred to above will take many years to complete due to availability of public funds, acceptance by the community and the normal time frames involved in planning, designing and constructing major transportation facilities. Due to this phenomenon, the Northwest Expressway is expected to serve major increases in traffic volumes beyond those projected by the 2010 system assignments due to construction capacity constraints on I-275 and Dale Mabry. Estimates of additional traffic volumes which will divert to the Expressway due to construction activities on other major north-south roadways range up to 20,000 vehicles per day.

3.5 FEDERAL, STATE, OR LOCAL AUTHORITY DIRECTING THE ACTION

The planning and development of the proposed expressway is the responsibility of Tampa-Hillsborough County Expressway Authority as authorized by Florida Statutes, Chapter 348, Part III. The Expressway Authority is comprised of seven members, four of which are appointed by the Governor of Florida. The other three members are from: Mayor, City of Tampa; Hillsborough County Commissioner; and Florida Department of Transportation, Deputy Assistant Secretary.

The Florida Legislature voted to provide funds to the Expressway Authority for the studies of the proposed expressway, which funds are to be administered by the Florida Department of Transportation. The Department participates in these studies and monitors the performance of the Expressway Authority's engineering consultants and traffic and revenue consultants.

The Northwest Hillsborough Expressway conforms with the adopted Year 2000 Principal Street and Highway Plan of the Urban Area Transportation Study (TUATS), see Figure 3-1. The TUATS plan was officially adopted by the Metropolitan Planning Organization (MPO); see their letter (Appendix E); which is comprised of elected and appointed officials representing local governments within Hillsborough County. The proposed expressway is also consistent with the Year 2010 Principal Street and Highway Plan now under consideration for adoption to supercede the Year 2000 Plan and is in the State's Transportation Improvement Program for the urbanized area.

3.6 SOCIAL DEMANDS/ECONOMIC DEVELOPMENT

Significant social and economic factors present in northwest Hillsborough County indicate the need for the proposed expressway.

The area in which the project is to be located has undergone tremendous population growth in the past decade and substantial growth is projected for the next 25 years by the Hillsborough County City-County Planning Commission (HCCCPC). See Subsections 3.1 and 6.2.3.3 for discussion of the growth. Residents aredependent on existing roads with limited capacity for travel to work, schools and shopping. As the area grows, more time is consumed in travel and inadequate roads contribute to traffic safety problems. The expressway is intended to divert much of this traffic from these roads to a safer high capacity facility.

Compatible with the adopted Year 2000 Land Use Plan Element of HCCCPC, light industry and office complexes continue to locate in the area surrounding Tampa International Airport. The continued viability of the airport as an economic generator for Tampa, Hillsborough County, and the region is dependent upon accessibility to the airport and surrounding related land use.

The existing roadway system is not adequately serving the needs of the residents of the northwest portion of the County and employment centers of which Tampa International Airport is the hub. Sections 3.1 through 3.4 indicate the extent of the inadequacies of the system as relate to the need for the proposed expressway.

3.7 MODAL INTERRELATIONSHIPS

The proposed facility is a high type, free flowing roadway. Its major benefit will be to the motoring public of northwestern Hillsborough County and those that wish to bypass downtown Tampa. However, through prudent planning the proposed expressway will beneficially interface with other modes of transporation.

The proposed southern terminus of the Northwest Expressway will pass the Tampa International Airport. By modifying the existing interchanges south and west of the Airport, access between the Airport and the Northwest Expressway will be unobstructed.

Tampa International Airport is recognized as a major aviation facility serving the entire Tampa Bay area. With the improved access the Northwest Expressway will provide to the airport, air travellers from the northern parts of Hillsborough County and from all areas north of Tampa will have quicker and easier access to the Airport. Also, those travellers coming from the north will be able to access the airport without going through the congested I-275 downtown area.

In addition to aviation, other modes of transportation will be served. Areas like Port Tampa and McDill Air Force Base on the Tampa Peninsula will be better served by the proposed expressway. Also, shipping and other commercial interests in Pinellas County will have better access due to the northwest bypass route around the Tampa Central Business District.

The Florida Department of Transportation (FDOT) and the Hillsborough Area Regional Transit Authority (HART) currently have a two year demonstration project in progress to provide express bus service in Northwest Hillsborough County. The demonstration utilizes park and ride lots serving the bus system running along Dale Mabry. The development of the proposed expressway will be compatible with and tend to enhance express bus service by relieving congestion on Dale Mabry Highway and by providing a major new alternate route for additional express bus service in the future. The expressway could eventually be expanded within the proposed right-of-way for HOV lanes.

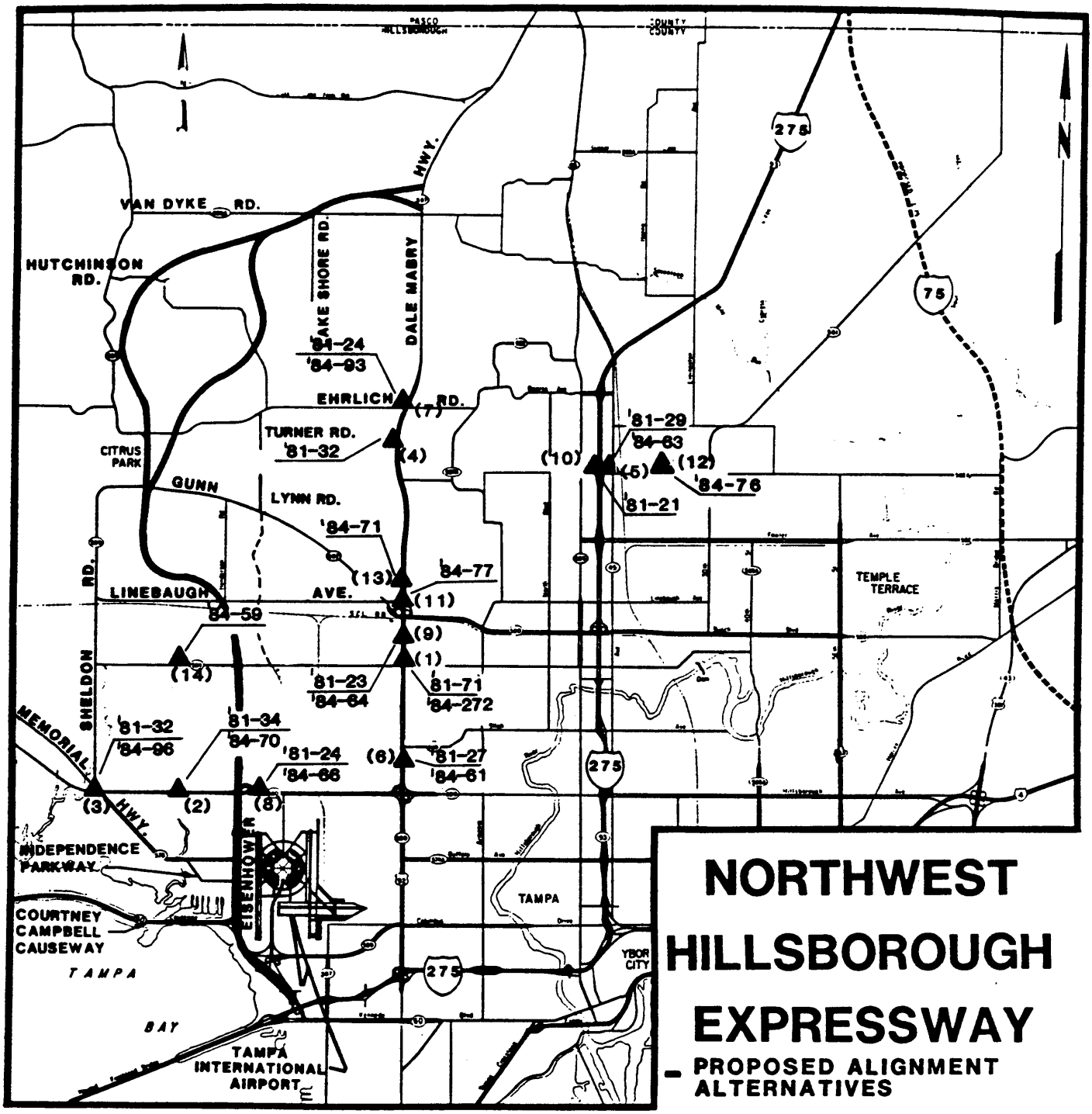
While no rail system is planned at the present time, the design of the proposed expressway would allow for future use of light rail transit within the right-of-way. Alternative modes of transportation are discussed in Section 4.2.4.

The Hillsborough County Comprehensive Bicycle Plan, a policies plan now in preparation by the Hillsborough County City-County Planning Commission for adoption by the Metropolitan Planning Organization (MPO) for the TUATS, identifies existing major thoroughfares for future, as yet unspecified, bicycle improvement projects. The proposed expressway will be designed to allow bicycle traffic to safely flow on those thoroughfares located within the vicinity of the expressway.

3.8 ROADWAY SAFETY

The increased congestion on the roadway network has caused a significant increase in accidents within the study area. The 1981 Accident Profile Report published by Hillsborough County indicated that ten out of the twenty-five "high accident locations" of Hillsborough County are within the study area. By 1984, the report showed an increase to fourteen out of twenty-five locations were in the study area. These "high accident locations" are shown in Figure 3-3 and the accident data is given in Table 3-1.

These high accident rates are indicative of the high volumes on the existing facilities and those facilities' corresponding shortfalls in roadway geometrics and safety features. Hillsborough County and the Florida Department of Transportation have programmed improvements for many of these arterials which should improve safety; however, conflict will continue to exist -- especially at high volume intersections.



NORTHWEST HILLSBOROUGH EXPRESSWAY

– PROPOSED ALIGNMENT ALTERNATIVES

LEGEND

▲ YEAR-TOTAL ACCIDENTS

1981 INCLUDES HILLSBOROUGH COUNTY SHERIFF DEPT. & FHP RECORDS

1984 INCLUDES HILLSBOROUGH COUNTY ROAD DEPARTMENT TRAFFIC RECORDS PROGRAM

(3) LOCATION NUMBER

HIGH ACCIDENT LOCATIONS **FIGURE 3-3**

TABLE 3-1
HIGH ACCIDENT DATA

Numbers	Location/Description	1981 Ranking	1981 Total Accidents*	1981 Persons Injured	1984 Ranking	1984 Total Accidents**	1984 Persons Injured
1	Dale Mabry @ Waters Ave.	1	71	37	1	272	62
2	Hillsborough Ave. @ Hanley Rd.	9	34	24	15	70	N/A
3	Hillsborough Ave. @ Memorial Highway	10	32	9	3	96	17
4	Dale Mabry @ Stall Rd.	12	32	34	NR	NR	NR
5	Fletcher Ave. @ Nebraska Ave.	13	29	17	19	63	N/A
6	Dale Mabry @ Lambright St.	14	27	19	21	61	
7	Dale Mabry @ Ehrlich Rd.	17	24	39	5	93	25
8	Hillsborough Ave. @ Benjamin Rd.	18	24	26	17	66	43
9	Dale Mabry @ Humphrey St.	21	23	7	18	64	N/A
10	Fletcher Ave. @ I-275 NB	24	21	12	NR	NR	NR
11	Dale Mabry @ Linbaugh Ave.	NR	NR	NR	7	77	N/A
12	Fletcher Ave. @ 15th St.	NR	NR	NR	10	76	N/A
13	Dale Mabry @ Lake Caroll Way	NR	NR	NR	14	71	N/A
14	Waters Ave. @ Hanley Rd.	NR	NR	NR	23	59	

*Reported by Hillsborough County Sheriff's Department and Florida Highway Patrol
**From Hillsborough County Road Department/Engineering Unit Traffic Records Program

NR - Not Ranked

N/A - Not Available

On a limited access facility like the proposed Northwest Expressway, safety is greatly increased in proportion to vehicle miles traveled. As stated in the AASHTO publication, A Policy on Geometric Design of Highways and Streets, (1984, pg. 125):

> The most significant design factor contributing to safety is the provision of full access control. The beneficial effect of this element has been documented in reports of the cooperative research study between the FHWA and 39 State highway agencies. One of the principal findings of this study is that the absence of access control invariably increased the accident rate.
>
> The study shows that accidents, injury, and fatality rates on Interstate highways are between 30 and 76 percent of comparable rates of conventional highways existing before the Interstate highways were opened to traffic. No other single design element can claim comparable savings.

The main contributing factors for this increase in safety is the grade separations which alleviates major intersection conflicts and the median separation which lowers the rate of head-on collisions.

With implementation of the proposed project, traffic patterns are expected to shift towards the expressway. This will aid the overall safety of the existing roadway network by redistributing traffic away from high-accident locations. All the major east-west routes should experience better directional splits (traffic in one direction as percentage of total traffic) and Dale Mabry Highway's increase in traffic demand should be lower than if the expressway is not built. Thereby, all traffic would experience less delay and safer operations at all the major intersections in the study area.

4.0 ALTERNATIVES INCLUDING PROPOSED ACTION

4.1 CORRIDOR AND ALIGNMENT ALTERNATIVES

4.1.1 Design Characteristics and Standards

The design of all new roadway facilities will be accomplished utilizing the latest design standards provided by the American Association of State Highway and Transportation Officials (AASHTO) and the Florida Department of Transportation (FDOT). It is proposed that the expressway facility be a multi-lane, divided, limited access roadway.

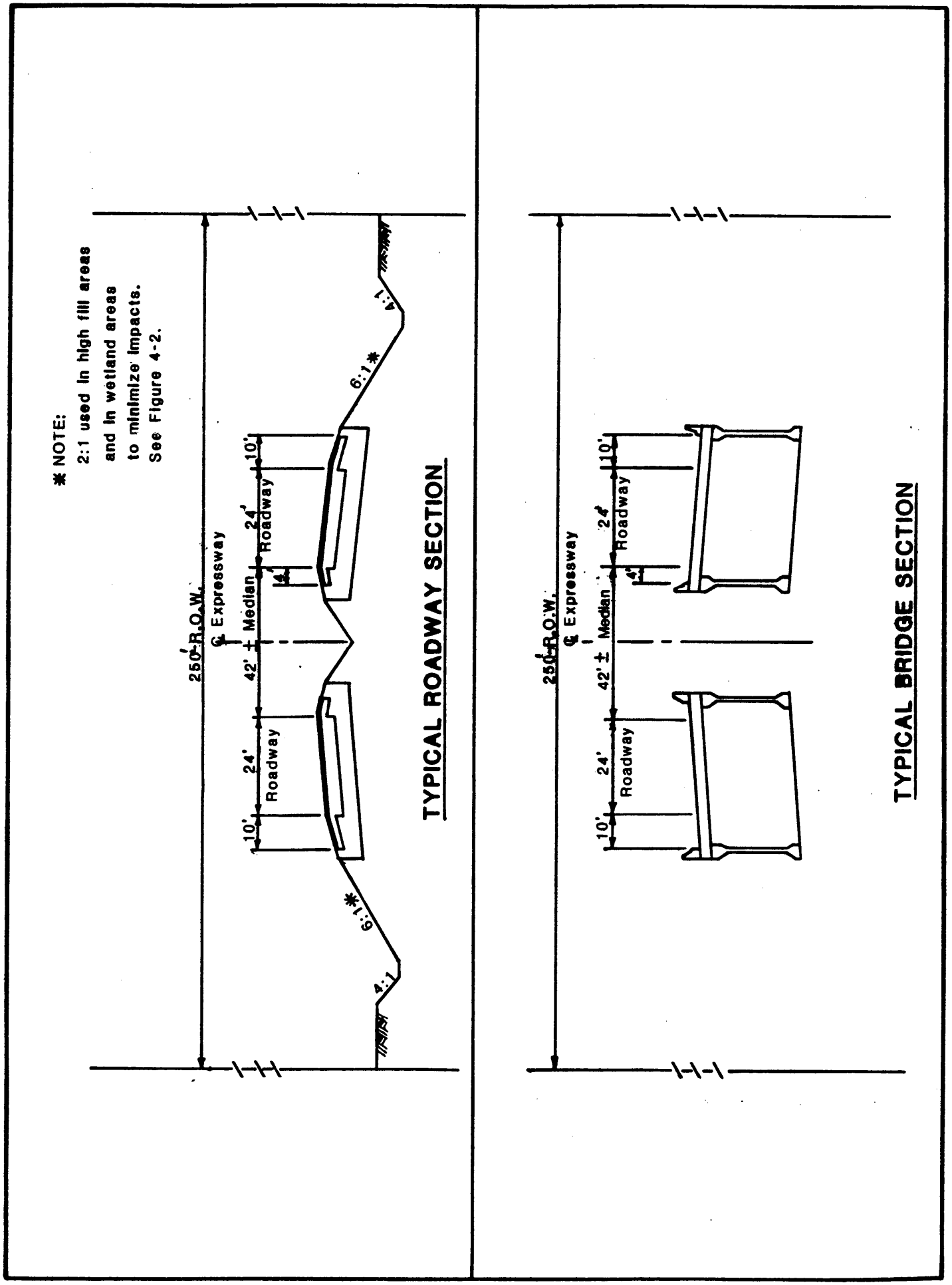
The typical section proposed varies according to the area the expressway traversed. The typical sections used throughout the study for the alignment alternatives discussed in Subsections 4.1.3 Alignment Alternatives Considered But Rejected and 4.1.4 Reasonable Alignment Alternatives are described below.

The basic typical section used for most of the alignments studied is the rural typical section, Figure 4-1. This section would provide two 12 foot lanes in each direction with a 42 foot plus or minus median. In the semi-rural and rural areas where the land is not as intensely developed, the proposed right-of-way would be 250 feet. The typical section in these areas, would provide for open drainage in ditches. In high fill areas and wetland areas the side slopes would be 2:1 with shoulder gutter and guard rail instead of the desireable 6:1, see Figure 4-2.

The 42 foot median in this rural section provides for future widening to six lanes by the addition of two lanes in the median separated by a concrete median barrier wall. There are no immediate plans for widening to six lanes, however high occupancy lanes or additional general use lanes may be needed as the area develops beyond the design year 2010.

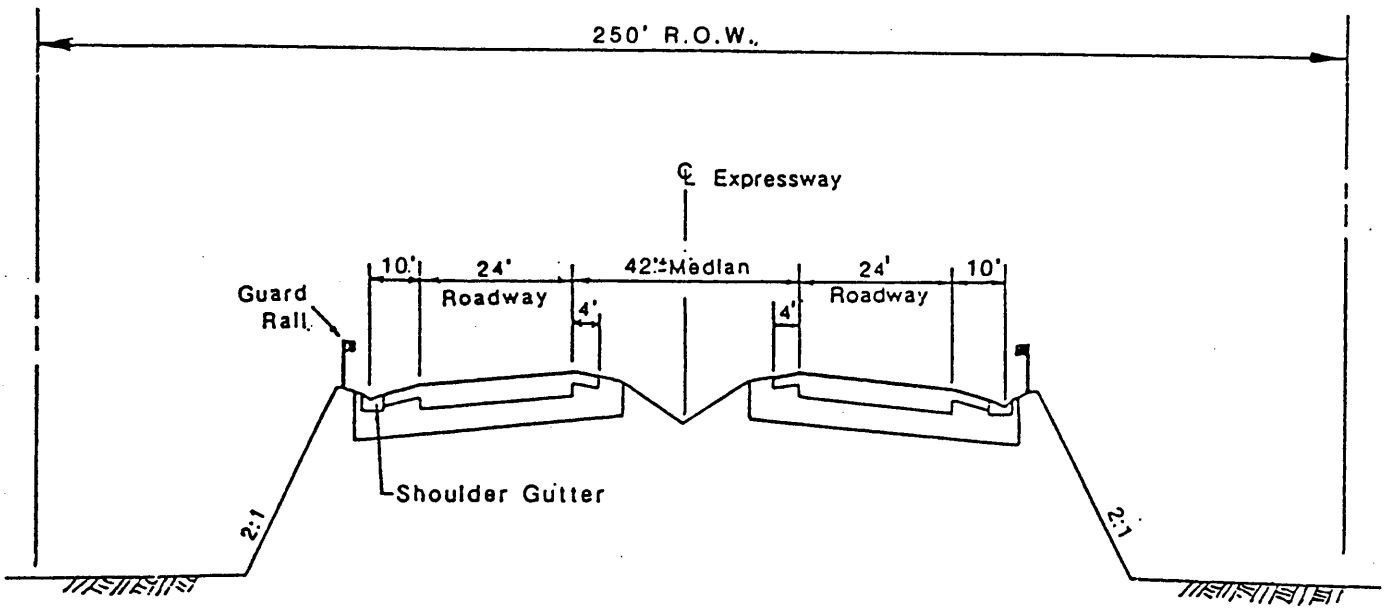
In the urban areas where the land is highly developed and therefore very expensive, the urban typical section, Figure 4-3 is proposed. This section also provides for two 12 foot lanes in each direction with a 42 foot median that could be used for widening to six lanes in the future. A closed drainage system (pipes and inlets) with concrete valley gutter, guardrail and 2:1 side slopes would be utilized throughout to minimize right-of-way purchase requirements. The basic right-of-way width would be 180 foot. For high fill areas, retaining walls would be utilized. In urban areas having extended bridge viaducts, the right-of-way was reduced to a 150 foot width where practical, see Figure 4-3.

In addition to the rural and urban typical sections, three special sections were developed for specific areas of the study.



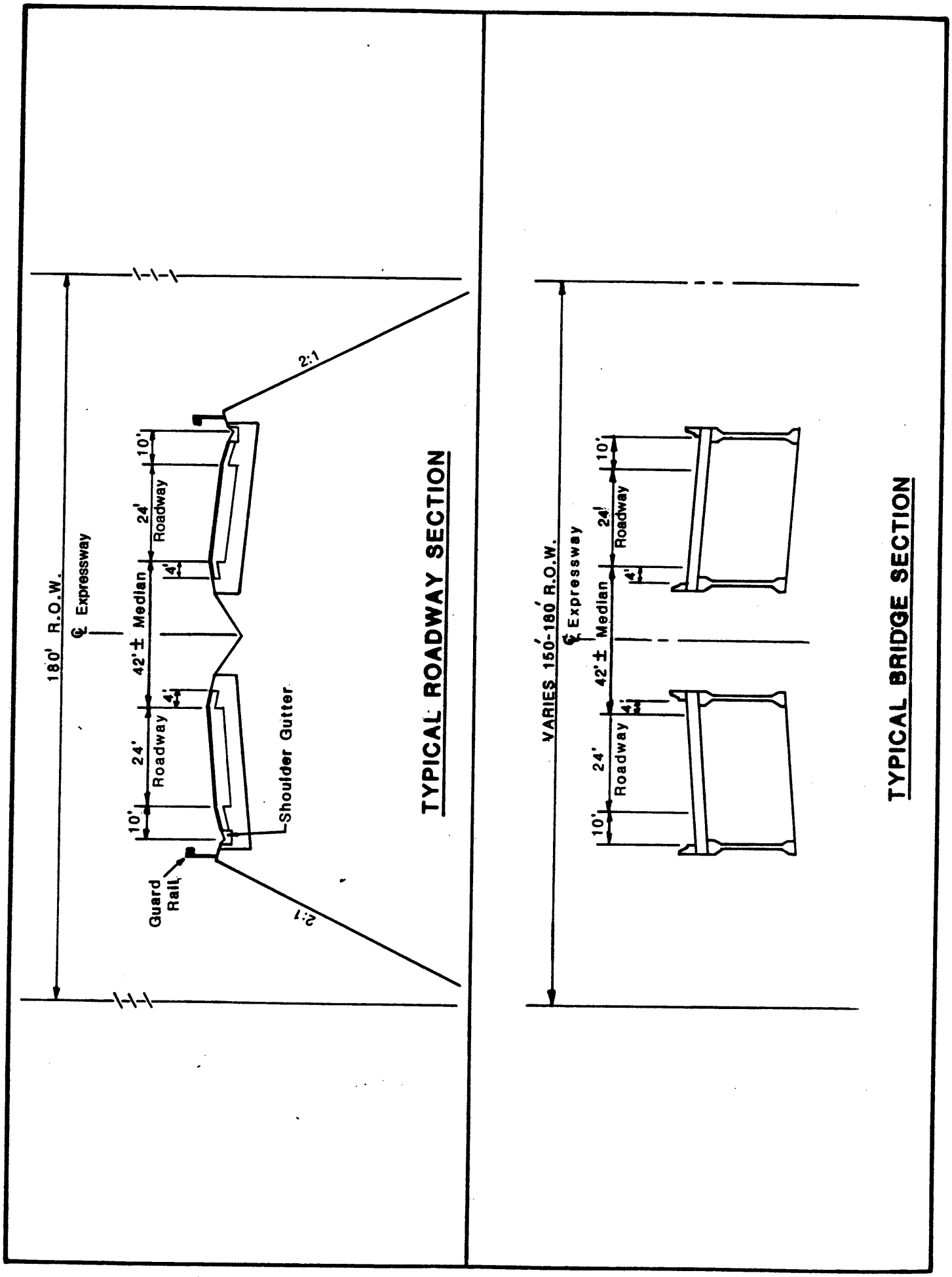
RURAL TYPICAL SECTION

FIGURE 4-1



TYPICAL ROADWAY SECTION

TYPICAL SECTION(WETLAND AREAS) **FIGURE 4-2**



URBAN TYPICAL SECTION

FIGURE 4-3

They include: the proposed Expressway along Dale Mabry Highway (Figure 4-4); improvements to Eisenhower Boulevard to accommodate the proposed Expressway (Figure 4-5); and the proposed Expressway using the existing abandoned railroad right-of-way, most of which is currently owned by Hillsborough County (Figure 4-6).

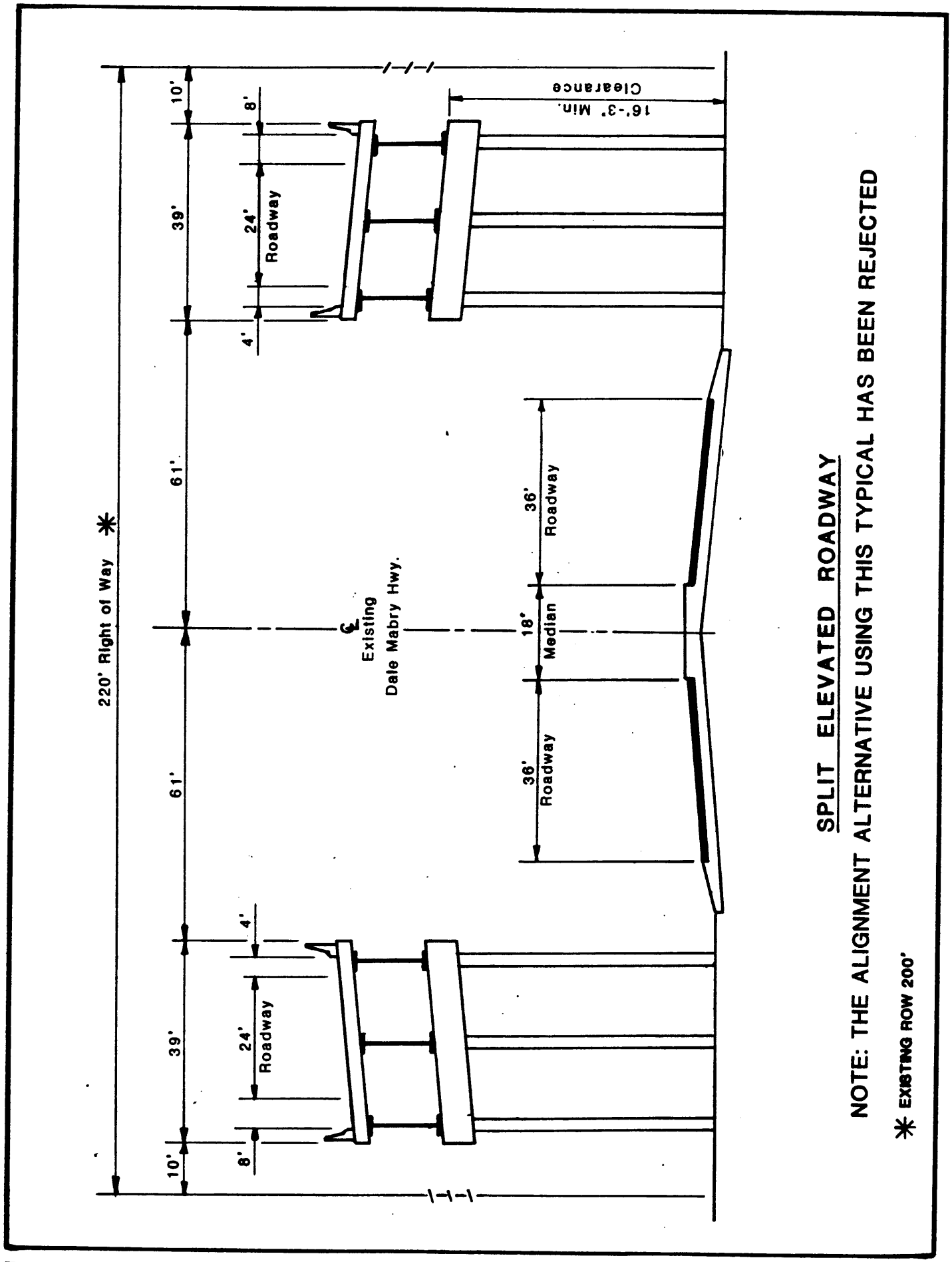
The typical section for the Expressway along Dale Mabry Highway Figure 4-4 shows the northbound and southbound roadways on bridges parallel to the existing Dale Mabry Highway roadway. The northbound roadway would be on the east side of Dale Mabry Highway and the southbound roadway on the west side. This section would have two 12 foot lanes in each direction. The right-of-way was set at 220 foot wide or an additional 20 foot wider than then existing roadway. This typical section is no longer being considered since the alignment alternative using this section has been rejected, see Section 4.1.3.

The typical section for improvements to Eisenhower Boulevard, is the urban section with a narrower median (concrete median barrier with 10 foot inside shoulders) (Figure 4-5). This section provides for a four, six or eight lane expressway with and without frontage roads. The six and eight lane sections are required in the extensive interchange areas along Eisenhower Boulevard for added capacity between entrance and exit ramps. As shown on this section, frontage roads would be provided on each side of the mainline as required. The travel lanes on the Expressway and frontage roads would all be 12 foot wide and the right-of-way required would vary throughout the area depending on interchange configuration and the use of frontage roads.

The typical sections for the area where the proposed Expressway would use a portion of the abandoned railroad right-of-way, Figure 4-6 is the same as the rural typical section described above except for the amount of right-of-way to be acquired. Basically this is a 100 foot wide right-of-way owned by the County. Note there are sections of the abandoned railroad right-of-way that are privately owned. In these privately owned areas, the rural section would also be used.

4.1.2 Corridors

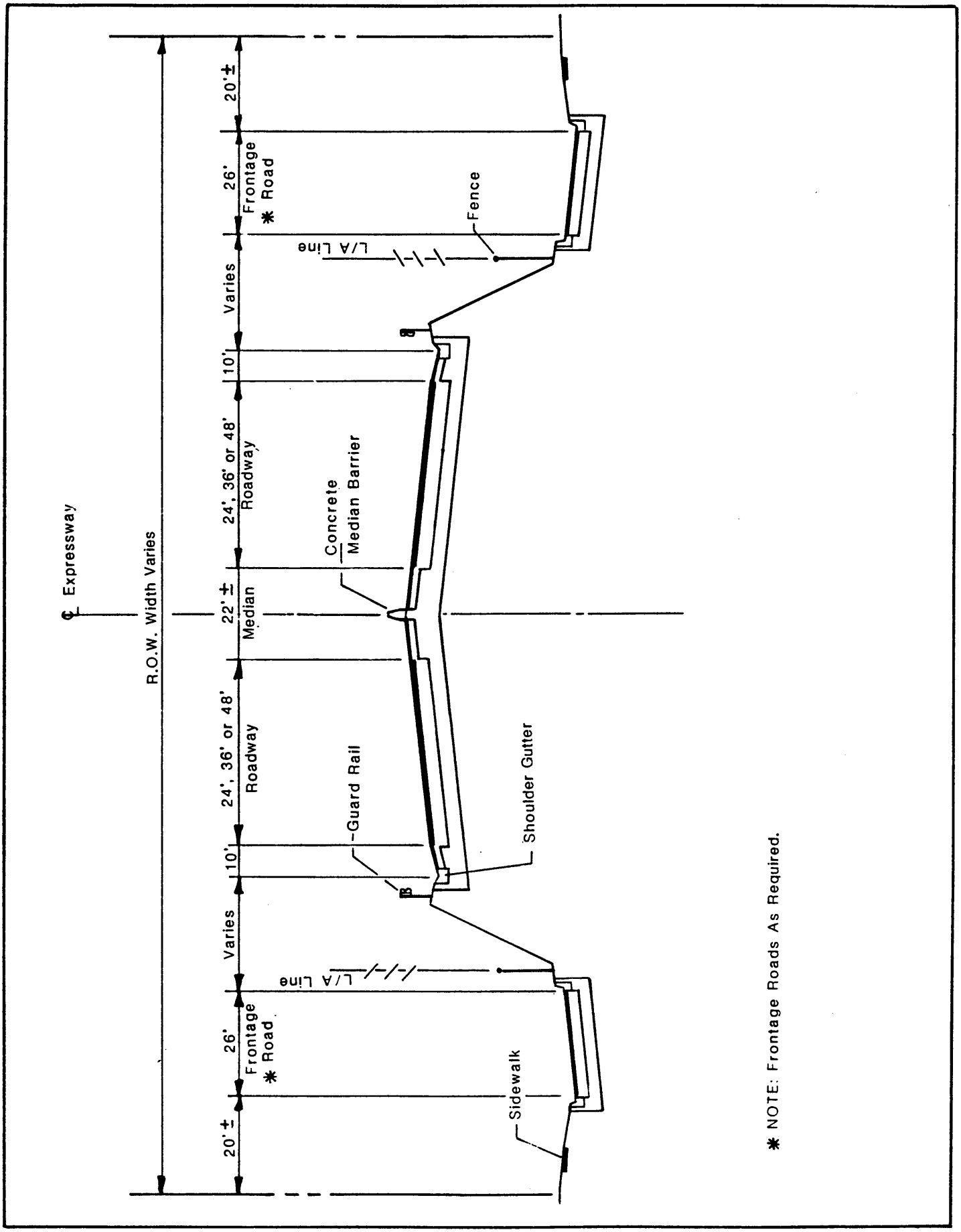
The study area for the proposed expressway was established in and adjacent to Tampa in the northwest portion of Hillsborough County, Florida as shown in Figure 4-7. The study area was based on general guidance provided by the Year 2000 Principal Street and Highway System Map of the Tampa Urban Area Transportation Study (TUATS) Figure 3-1 which showed the Northwest Hillsborough Parkway. The study area represents that area within which potential corridors for the proposed expressway could be developed and areas which could be impacted by the proposed roadway.



TYPICAL SECTION -

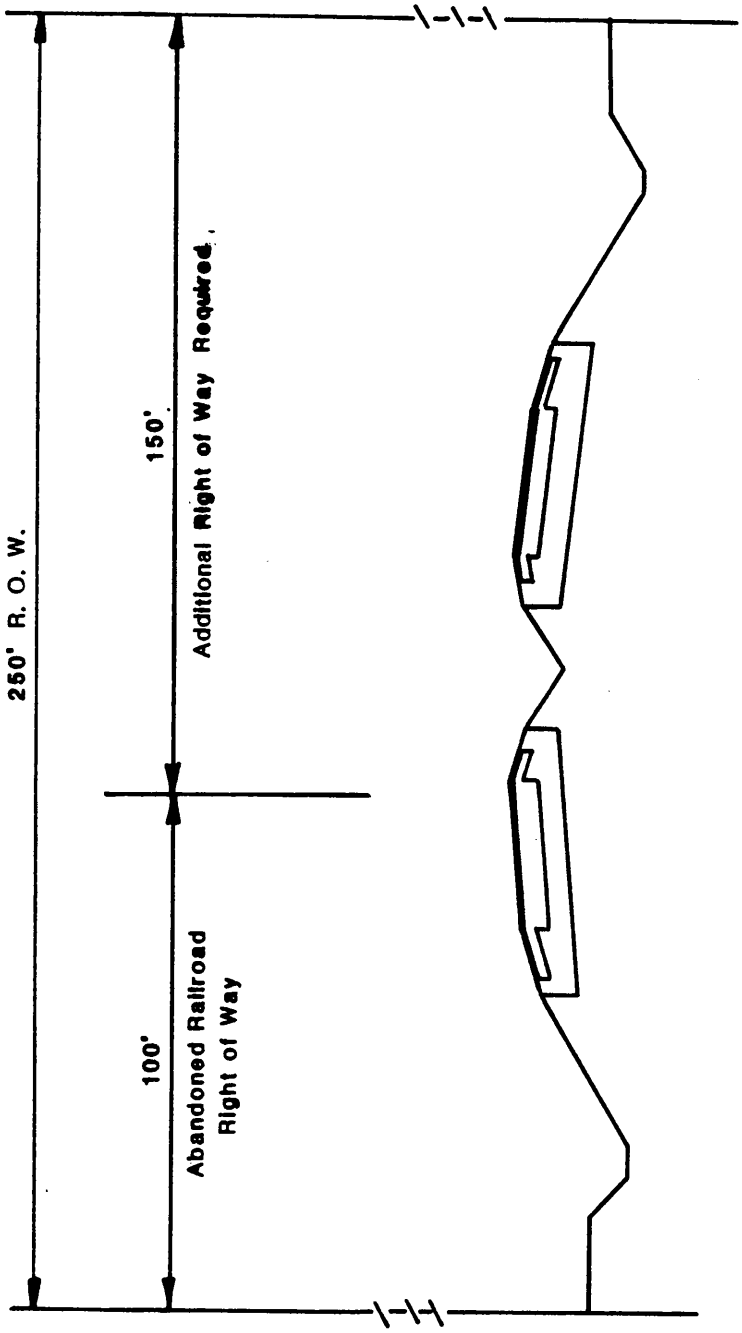
EXPRESSWAY AND DALE MABRY HIGHWAY

FIGURE 4-4



TYPICAL SECTION - 4, 6 OR 8 LANES WITH FRONTAGE ROADS

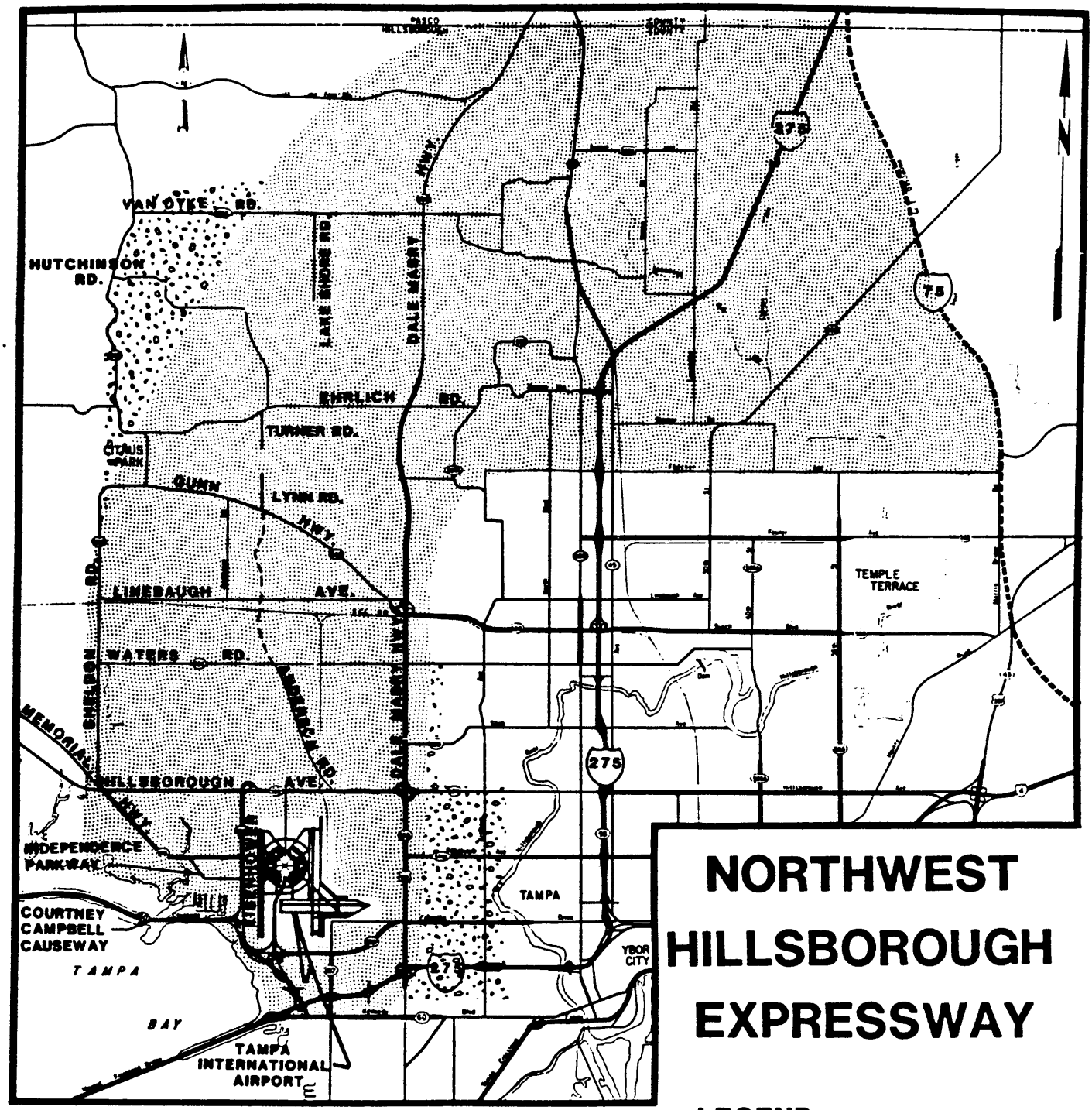
FIGURE 4-5



FOR DETAILS SEE RURAL TYPICAL SECTION FIGURE 4-1

TYPICAL SECTION —
USE OF ABANDONED RAILROAD RIGHT OF WAY

FIGURE 4-6



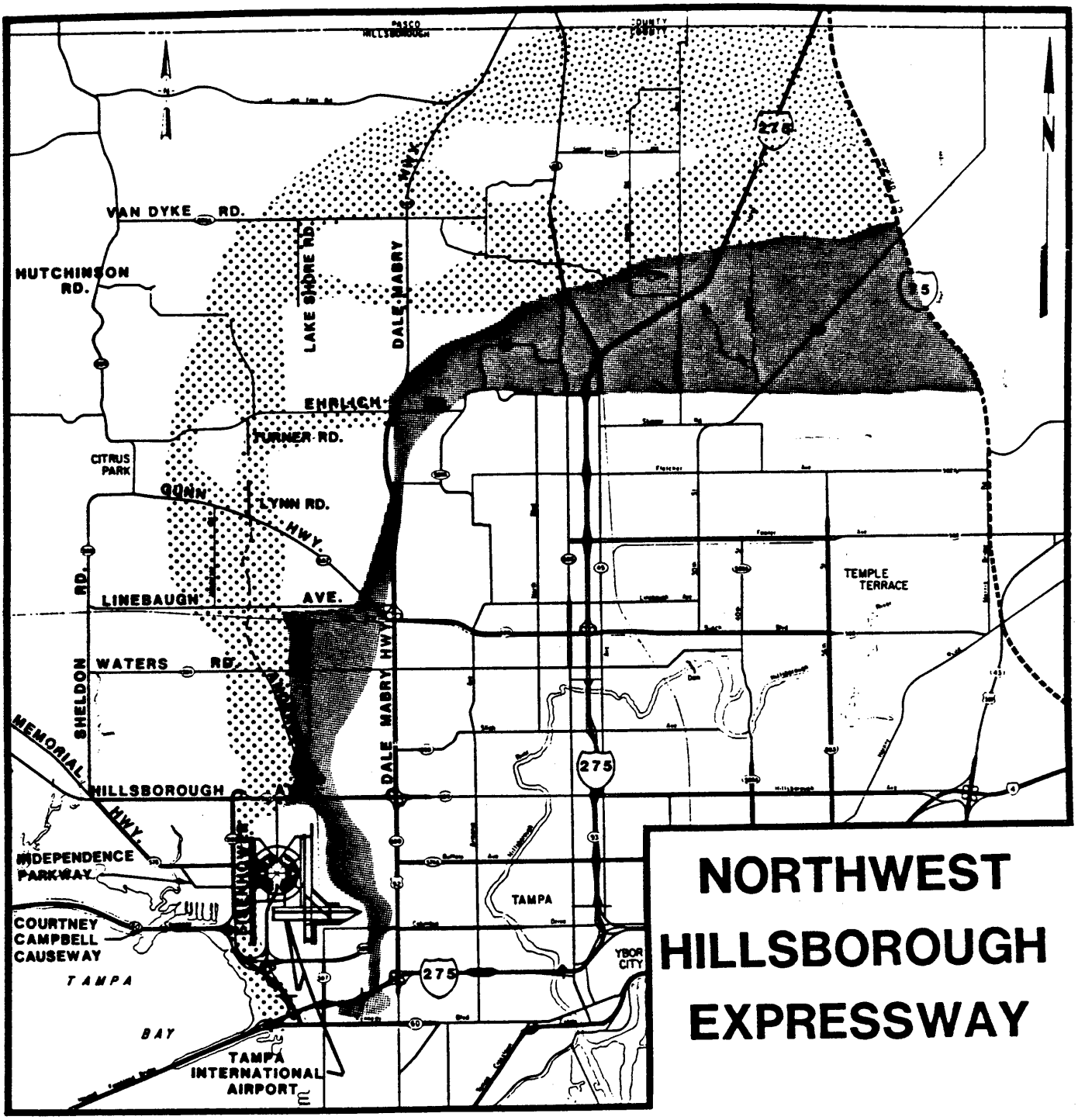
STUDY AREA MAP

FIGURE 4-7

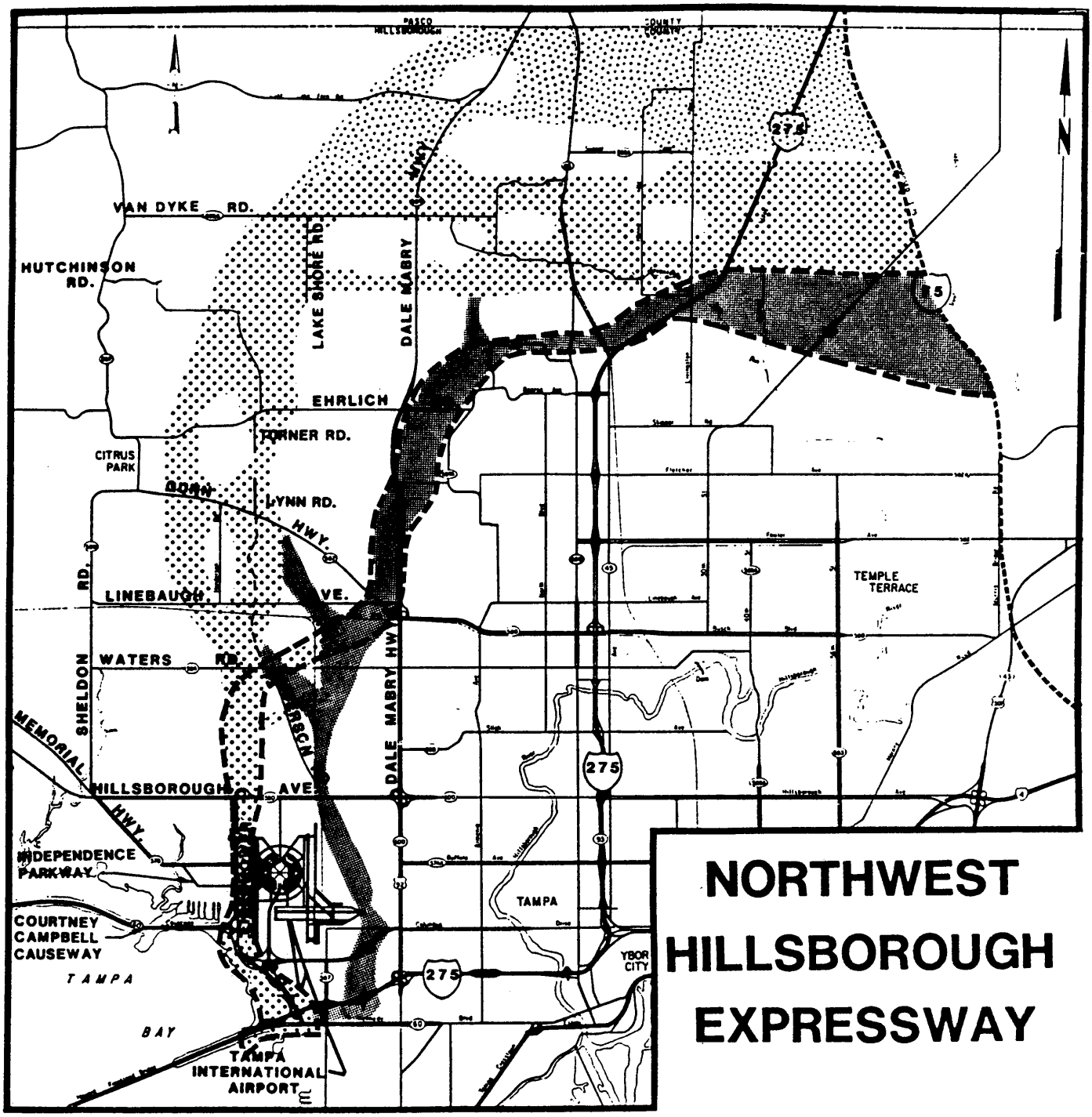
The study area was initially divided into three preliminary study corridors (A, B and C) as presented in Figure 4-8. These corridors represent wide bands of land within which one or more potential alignments could be developed and which would represent a full range of environmental factors. The corridors were defined using aerial photography, field investigation, and existing information of the area. Separation of the study area into corridors was accomplished by dividing the north-south segment into two distinct corridors and the east-west segment into three corridors and joining them as shown in Figure 4-8. The requirement for each corridor was the ability to provide for an expressway entirely within that corridor. Provisions, however, were also made for an expressway proceeding from one corridor into another corridor in order to determine the most viable alternative. The areas outside the corridor and certain areas within or between corridors were eliminated if they included (1) large residential, commercial, and industrial areas which would be adversely impacted by development of the expressway in those areas, (2) large environmentally sensitive areas or recreational areas, (3) large public use facilities, and (4) large wetlands and/or lake areas.

Additional field investigations, updated aerial photography, and public involvement including public workshop comments resulted in a refinement of the preliminary corridors. The study corridors which resulted from the refinement process are shown in Figure 4-9. In addition to Corridors A, B and C mentioned above, Corridor D was added for cost comparison purposes. This corridor comprised the southernmost section of Corridor B connected to the northeast section of Corridor C (connection was between Waters and Linebaugh Avenues). Corridor B was expanded to the west into areas where there was less existing and proposed development and Corridor C was expanded to the east in search of better access to and interchange with I-275.

At the conclusion of the corridor study phase and throughout the study of alignment alternatives, the alignments were basically in Corridor B and a small portion of Corridor C south of Gunn Highway as shown in Figure 4-10, Alignment Alternatives Study Area. The corridor evaluation process entailed the use of representative alignments to quantify the various factors of traffic service, environmental and community impacts and costs for the expressway. The corridor evaluation included the comparison of build alternative corridors to the no-build alternative. Three publications entitled Northwest Hillsborough Expressway Phase 1 - Corridor Report, updated July 1983; Supplement to Phase I - Corridor Report, September 1983; and Expanded Corridor Study, March 1984, all of which were prepared by Howard Needles Tammen and Bergendoff for this study, show in detail the procedures followed and quantification of these comparison factors.



PRELIMINARY STUDY CORRIDORS **FIGURE 4-8**

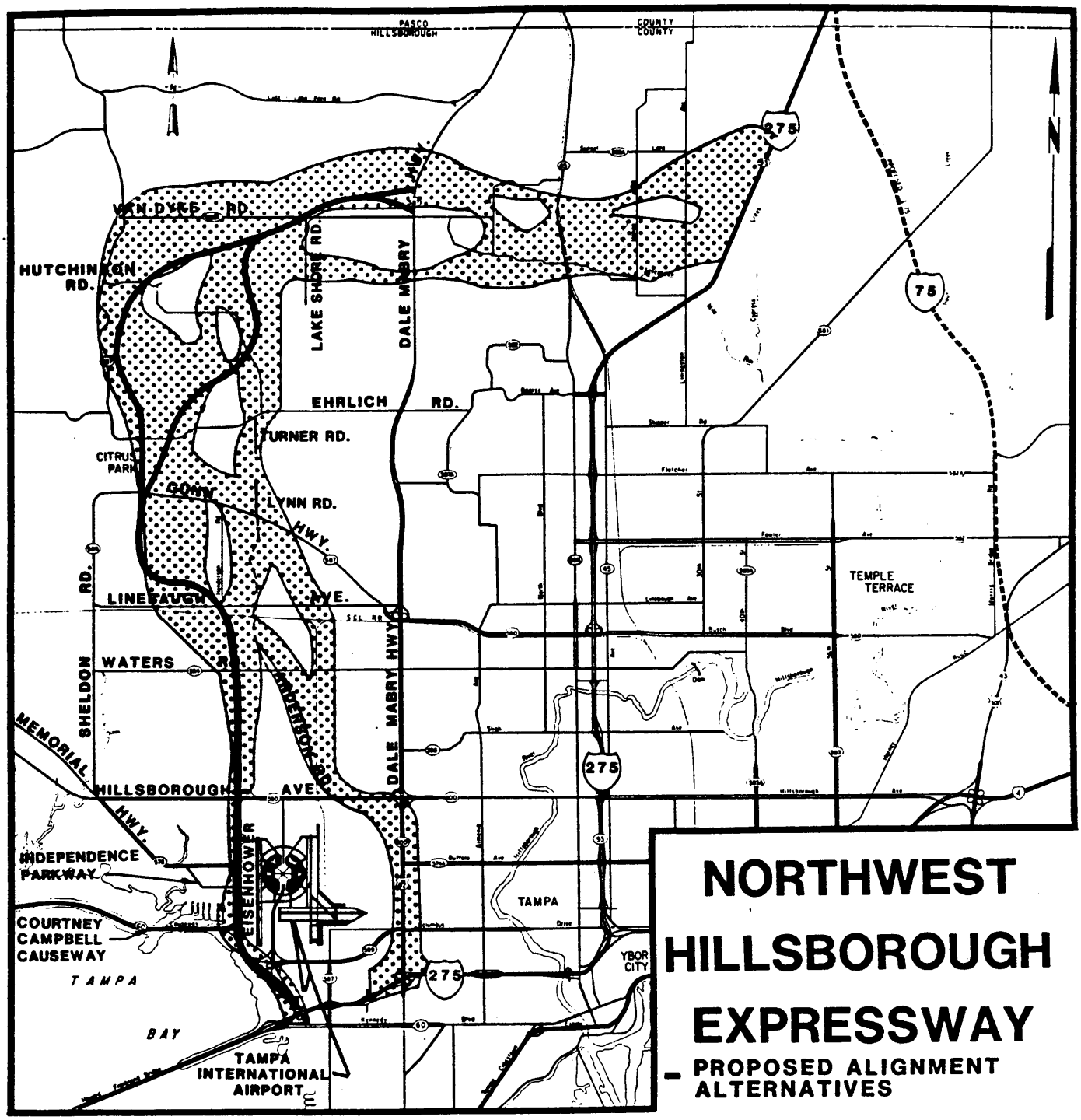


CORRIDORS SHOWN AT
CORRIDOR PUBLIC HEARING

LEGEND

- CORRIDOR A
- CORRIDOR B
- CORRIDOR C
- CORRIDOR D

REFINED STUDY CORRIDORS **FIGURE 4-9**



ALIGNMENT ALTERNATIVES STUDY AREA **FIGURE 4-10**

In arriving at the study limits shown in Figure 4-10, the recommendations made in the Supplement to Phase I - Corridor Report and Expanded Corridor Study were adopted by the Tampa-Hillsborough County Expressway Authority and the Florida Department of Transportation.

The recommendations for delineating the selected study area and reasons therefor briefly stated are:

1. Recommendation: Eliminate Corridors A and D in their entirety and Corridor C from the vicinity of Waters Avenue northward from further consideration.

   Reason: Corridor A had less traffic than Corridor B, substantially more water quality and wetland impacts and was not as compatible in serving growth. Corridor D and the northern portion of Corridor C had substantailly more community impacts than Corridor B.

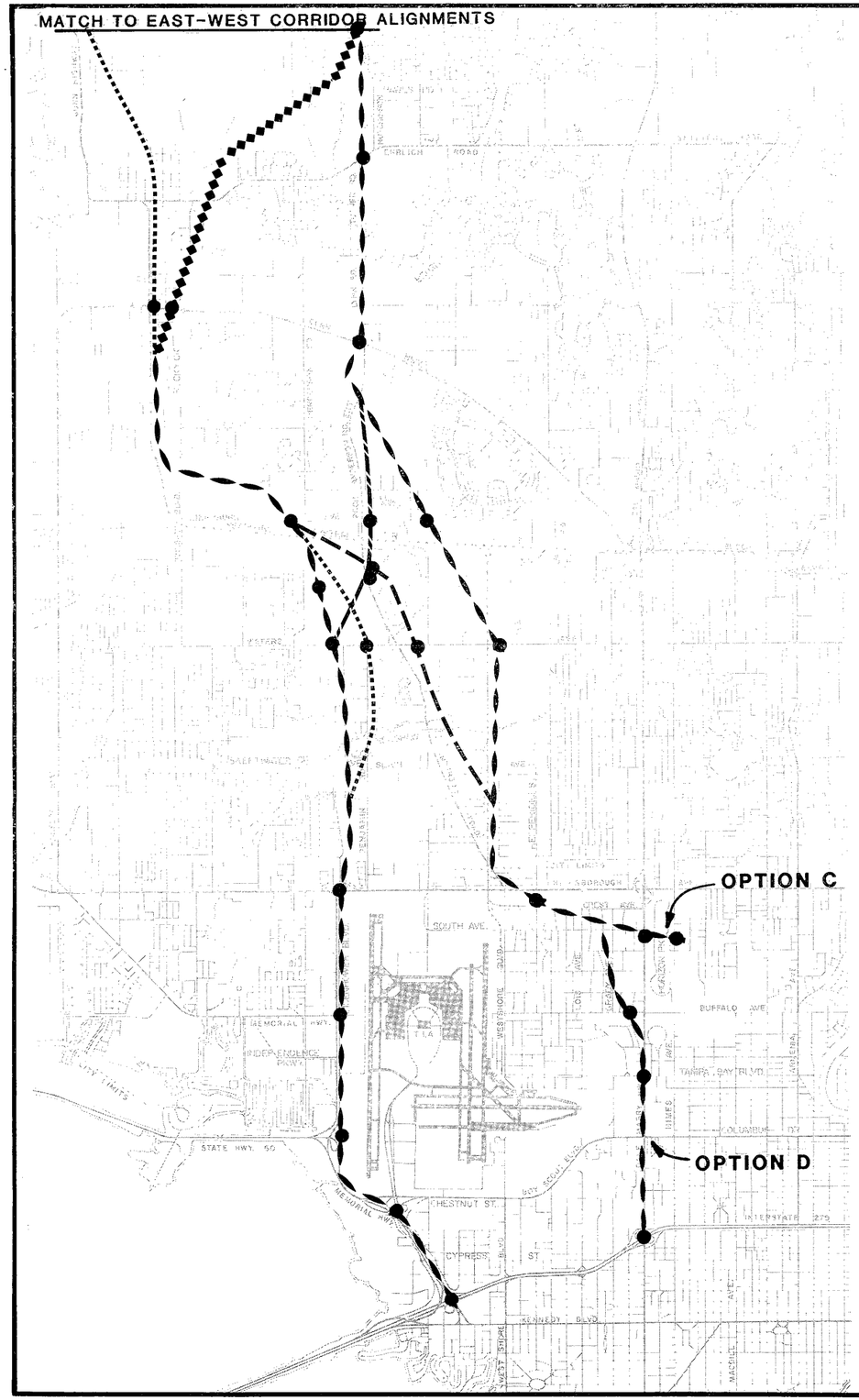
2. Recommendation: On the Northeast, eliminate the section of Corridor B lying between I-275 and I-75.

   Reason: The main floodplain/wetland involvement was for over one and a quarter mile or approximately 50 percent of the length between I-275 and I-75 within Corridor B. This is the Cypress Creek floodplain area. The projected traffic volumes were negligible and therefore would not justify construction of an expressway with an interchange on I-75.

3. Recommendation: Expand Corridor B to the west to include an abandoned railroad right-of-way which could be used as expressway right-of-way. The railroad right-of-way under consideration, is generally from Linebaugh Avenue north to Hutchinson Road.

   Reason: The railroad right-of-way is primarily owned by Hillsborough County and would, therefore, reduce the amount of right-of-way acquisition costs for this section of Expressway. Also, there is less proposed development within this area of the County.

4. Recommendation: Expand Corridor C south of Hillsborough Avenue eastward to include potential Expressway alignment alternatives on Dale Mabry Highway. The area east of Himes Avenue should not be considered for an expressway.



LEGEND

ALIGNMENT ALTERNATIVES CONSIDERED BUT REJECTED

- DALE MABRY / LYNN-TURNER ALIGNMENT
- DALE MABRY / LYNN-TURNER TO EISENHOWER / WEST CROSSOVER
- EISENHOWER / WEST TO DALE MABRY / LYNN-TURNER CROSSOVER
- BENJAMIN ROAD ALIGNMENT
- INTERCHANGE LOCATIONS

REASONABLE ALIGNMENT ALTERNATIVES (ALSO SEE FIGURE 4-13)

- EISENHOWER / WEST ALIGNMENT
- LAKE LECLARE ALIGNMENT
- RAILROAD ALIGNMENT
- INTERCHANGE LOCATIONS

NORTH-SOUTH CORRIDOR ALIGNMENT ALTERNATIVES

FIGURE 4-11



LEGEND

ALIGNMENT ALTERNATIVES CONSIDERED BUT REJECTED

- LAKE BRANDT – NORTH ALIGNMENT
- LAKE BRANDT – SOUTH ALIGNMENT
- LAKE BRANDT – NORTH WITH CROSSOVER TO SOUTH
- LAKE BRANDT – SOUTH WITH CROSSOVER TO NORTH
- INTERCHANGE LOCATIONS

REASONABLE ALIGNMENT ALTERNATIVES
(SEE ALSO FIGURE 4-13)

- LAKE LECLARE ALIGNMENT
- RAILROAD ALIGNMENT
- NORTH TERMINI
- SOUTH TERMIMI
- INTERCHANGE LOCATIONS

EAST-WEST CORRIDOR ALIGNMENT ALTERNATIVES

FIGURE 4-12

Reason: Use of the Dale Mabry corridor would provide a more direct connection to the downtown area and would provide more flexibility in locating an interchange on I-275 or in using major arterial roadways for access to the interstate system. The area east of Himes Avenue was highly developed and would cause extensive community disruption with one additional neighborhood impacted and a substantial amount of additional residential relocations. Also, project costs were approximately $175,000,000 or nearly $25,000,000 more than Dale Mabry's most expensive alternative. Finally, the proposed expressway would traverse an historic district listed on the National Register of Historic Places.

Note that all the alignment alternatives developed (see Figures 4-11 and 4-12) and discussed below in Subsections 4.1.3 Alignment Alternatives Considered But Rejected and 4.1.4 Reasonable Alignment Alternatives lie within the Alignment Alternatives Study Area (Figure 4-10).

4.1.3 Alignment Alternatives Considered But Rejected

The entire selected Alignment Alternatives Study Area was evaluated for its viability to accommodate an expressway alignment. The locations of noteworthy features such as schools, churches, parks, and public buildings were determined. The wetlands and floodprone areas within the corridor were located on aerial photography and the potential impacts of an expressway alignment analyzed. The locations of existing and proposed residential development were obtained and considered in the corridor evaluation. Using these factors, the potential alignments, as shown in Figures 4-11 and 4-12, were developed for detailed analysis.

As these alignments were generated, further study and analysis was performed on each alternative to determine which would provide the best service to the community with the least amount of social and environmental impacts. This analysis included development of project costs (including construction, engineering, administrative, right-of-way and relocation, and escalation costs), traffic service, environmental impacts and social impacts (relocations required and adjacent neighborhoods affected). Throughout the process, each of the alternatives generated for each segment of the corridor were compared to establish the alignment most suited for further study.

Alternative alignments studied and dropped (rejected) from further consideration are discussed in depth in the Engineering Alternatives Report - September, 1984, and the Technical Memorandums "East-West Corridor Evaluation" dated September 11, 1984, see Appendix A, "Railroad Alignment Evaluation" dated

February 1, 1985, see Appendix B and "Benjamin Road Alignment Evaluation", dated May 21, 1985, see Appendix C. The rejected alignments are shown in Figures 4-11 (North-South Corridor Alignments) and 4-12 (East-West Corridor Alignments) and are discussed below.

4.1.3.1 North-South Corridor Alignments (Interstate 275 to Hutchinson Road)

The North-South Corridor extends from Interstate 275 south of the Tampa International Airport to the vicinity of Hutchinson Road. All North-South Corridor Alignments considered are shown in Figure 4-11. There were two basic alignments in the North-South Corridor which were considered as potential alignments for the expressway. They are the Eisenhower/West Alignment in combination with either the Lake LeClare or Railroad Alignment as discussed in Subsection 4.1.4, Reasonable Alignment Alternatives and the Dale Mabry/Lynn-Turner Alignment. There was also a series of crossovers between the southern and northern portions of the North-South Corridor alignments near Waters Avenue which provide for combinations of these two main alignments. The Dale Mabry/Lynn Turner to Eisenhower/West Crossover serves to connect the southeast alignment with the northwest alignment of the corridor. The Eisenhower/West to Dale Mabry/Lynn-Turner Crossover serves to connect the southwest alignment to the northeast alignment in the corridor. Another alignment considered was the Benjamin Road Alignment which is an alternative to a portion of the Eisenhower/West Alignment between Hillsborough and Linebaugh Avenues.

The Dale Mabry/Lynn-Turner Alignment, both crossovers, and the Benjamin Road Alignment alternative are discussed in this subsection as alignment alternatives considered, but rejected.

4.1.3.1.1 Dale Mabry/Lynn-Turner Alignment

The Dale Mabry/Lynn-Turner Alignment, briefly described, is an expressway beginning east of the Airport in the vicinity of Dale Mabry Highway and extending northwestward crossing Linebaugh Avenue, then northward following Lynn and Turner Roads along the east side of Corridor B to an ending point north of Hutchinson Road. The southern part of the alignment was developed with an optional beginning either at I-275, designated as Option D, or at Dale Mabry Highway and Himes Avenue approximately two miles north of I-275, designated as Option C. Option C, being two miles north of I-275, relies on future improvements to Himes Avenue and Dale Mabry Highway to provide the necessary access to I-275.

Dale Mabry/Lynn-Turner Alignment, Option D

The Dale Mabry/Lynn-Turner Alignment, Option D, would begin at Interstate 275 with a major interchange serving both expressway and local access to the interstate system as well as local access to the proposed expressway. The expressway would be elevated on structure with northbound lanes on the east side of Dale Mabry Highway and southbound lanes on the west side, see typical section, Figure 4-4. Interchanges are proposed at Tampa Bay Boulevard and at Buffalo Avenue (provision only for access to and from the north on the expressway). The expressway would then turn west-northwest at South Avenue to an interchange at Hillsborough Avenue between Hesperides Street and West Shore Boulevard. The typical section to be used from west of Dale Mabry Highway to north of Hillsborough Avenue is the urban typical section, Figure 4-3 and north of Hillsborough Avenue to the end at Hutchinson Road is the rural typical section, Figure 4-1.

At the crossing of Hillsborough Avenue, the expressway would curve to stay east of Anderson Road and then parallel the east side of the Seaboard System Railroad track.

In the vicinity of Sligh Avenue, the alignment has the option of turning west to connect to the Eisenhower/West Alignment via a crossover or continuing north. This primary alignment continues northward crossing Waters Avenue just to the east of the railroad track and providing an interchange at that location. North of Waters Avenue, the alignment curves to the northwest crossing railroad tracks at two locations and then continuing to an interchange at Linebaugh Avenue.

The Alignment would then continue northwesterly, bridge the proposed extension of Anderson Road before turning northerly and interchanging with Gunn Highway. The Alignment north of Gunn Highway would bridge Brushy Creek and proceed to an interchange with Ehrlich Road. Lynn Road and Turner Road would be maintained along the east side of the expressway for local access to existing residential areas. On the west side of the expressway, new frontage roads would be provided south to Brushy Creek for local access. The expressway would continue northward bridging Rawls Road and Hutchinson Road, ending immediately north of Hutchinson Road.

Based on the conclusions reached in the Supplement to Northwest Hillsborough Expressway Phase II - Draft Environmental Impact Statement, Engineering Alternatives Report - September 1984, prepared by Howard Needles Tammen and Bergendoff, the Dale Mabry/Lynn-Turner Alignment with Option D or with Option C (discussed below) was not recommended for further consideration. The information summarzied in Table 4-1 is reproduced from the information presented in the Engineering Alternatives Report.

TABLE 4-1

COMPARISON OF ALIGNMENT ALTERNATIVES (1)

ALTERNATIVE	COMPARISON FACTORS														
	ENGINEERING				COMMUNITY							ENVIRONMENTAL		
					Relocations					Cultural Resources		Wetlands Impacted (Acres)		
	Length (Miles)	1984 Project Costs ($000,000)	ROW Required (# of Parcels)	Traffic Service	Res.	Bus.	Non-Profit	TOTAL	Costs ($000,000)	Parks/ Recreation Areas	Arch/ Historic Landmarks	Natural	Man Made	TOTAL
NORTH - SOUTH CORRIDOR ALIGNMENT ALTERNATIVES														
Dale Mabry/ Lynn-Turner Option D	11.0	211.9	388	90% of Eisen/West Volume	184	51	2	237	1.67	Tampa Sports Complex Section 4(f)	None Known	38	16	54
Dale Mabry/ Lynn-Turner Option C	9.0	154.7	344	67% of Eisen/West Volume	124	39	1	164	1.57	Horizon Park Section 4(f)	None Known	38	16	54
Eisenhower/ West	12.2	169.4	209	Highest Volume	116	24	0	140	1.09	None	None Known	26	22	48
EAST - WEST CORRIDOR ALIGNMENT ALTERNATIVES														
LAKE BRANDT-NORTH	10.0	79.0	88	8,000 to 12,000 ADT	32	5	0	37	0.37	None	None Known	40	6	46
LAKE BRANDT-SOUTH	9.4	81.9	136	8,000 to 12,000 ADT	53	5	0	58	0.62	None	None Known	63	4	67

(1) Summarization from Engineering Alternatives Report dated September 1984 prepared by Howard Needles Tammen & Bergendoff

The Dale Mabry/Lynn-Turner Alignment, Option D, was decidedly inferior to the Eisenhower/West Alignment alternative as shown in Table 4-1. This alignment would serve 10 percent less traffic than the Eisenhower/West Alternative. In addition, locating the expressway adjacent to Dale Mabry Highway would only compound the traffic problems along collector roads servicing Dale Mabry Highway. This alignment's total 1984 project cost was $42.5 Million (25%) higher and number of relocations was 97 (69%) higher than the Eisenhower/West Alternative. Contributing factors are the intensely developed right-of-way along Dale Mabry Highway and the large amount of bridge structure required. The amount of wetlands impacted is higher by 6 acres (13%) than the Eisenhower/West Alignment. A Section 4(f) property would be involved, Tampa Sports Authority Complex, in the Dale Mabry/Lynn-Turner Alignment, Option D. Considering the above factors, the Dale Mabry/Lynn-Turner Alignment, Option D was rejected from further consideration.

Dale Mabry/Lynn-Turner Alignment, Option C

The Dale Mabry/Lynn-Turner Alignment, Option C, would be the same as the Option D Alignment north of Crest Avenue. The beginning interchange has been developed with consideration of Dale Mabry Highway and Himes Avenue being converted to a one-way pair between Hillsborough Avenue and I-275. The southbound expressway traffic would exit into a southbound Dale Mabry Highway. Northbound traffic would enter the expressway via a loop ramp from Himes Avenue and cross Horizon Park on a bridge. The alignment would proceed essentially due west and then west northwest to Crest Avenue (Option D). The expressway in this section would bridge Grady Avenue, South Street and Lois Avenue. The typical section used from the beginning of this alternative to north of Hillsborough Avenue is the urban typical section, Figure 4-3 and from Hillsborough Avenue North is the rural typical section, Figure 4-1.

Expressway traffic to and from downtown Tampa or to I-275 would utilize the one-way pair of Dale Mabry Highway and Himes Avenue to access the interstate system. Improvements would be required to these roadways, the degree of which is being studied by the Florida Department of Transportation as part of the Dale Mabry Highway Improvement Study. The Option C Alignment, like the Option D Alignment, can continue northward to Hutchison Road or turn westward using the crossover to the Eisenhower/West Alignment.

Option C was dropped primarily due to the proposed expressway beginning over 2 miles away from Interstate 275 causing a large volume of through trips to use major arterial roadways with numerous intersectons to travel between expressways and due to the crossing of Horizon Park which would require Section 4(f) involvement.

4.1.3.1.2 North-South Corridor Crossovers

As mentioned previously, expressway crossovers were considered to provide combinations of the two main alignments. However, since the Dale Mabry/Lynn-Turner Alignments, Options C and D, were dropped from further consideration, both of the following Alignment crossovers were also rejected. These crossovers were in the area of the project where the rural typical section, Figure 4-1, is used.

Dale Mabry/Lynn-Turner to Eisenhower/West Crossover

The Dale Mabry/Lynn-Turner to Eisenhower/West Crossover begins just south of Sligh Avenue where it curves to the west to cross the Seaboard System Railroad track and Sligh Avenue on a lengthy bridge structure. The expressway continued in a northwesterly direction crossing the extreme eastern end of Crenshaw Street before turning to the north on the east side of Anderson Road and providing room for the Waters Avenue interchange.

North of Waters Avenue, the expressway would parallel the east side of the Anderson Road Extension and then turn to the west and would provide an interchange with Anderson Road.

The expressway would continue in a westerly direction, then turn northward to bridge the railroad track and Linebaugh Avenue west of Henderson Road. North of Linebaugh Avenue, the alignment is the Eisenhower/West Alignment.

Eisenhower/West to Dale Mabry/Lynn-Turner Crossover

The Eisenhower/West to Dale Mabry/Lynn-Turner Crossover begins north of Waters Avenue by curving to the northeast to cross the Anderson Road Extension. An interchange would be provided at Waters Avenue on the south side at the Anderson Road Extension. After crossing Anderson Road, the expressway would curve to the north to cross the railroad and Linebaugh Avenue. An interchange is proposed at Linebaugh Avenue.

North of Linebaugh Avenue, the expressway would continue in a northerly direction to where it is the Dale Mabry/Lynn-Turner Alignment.

4.1.3.1.3 Benjamin Road Alignment - Alternative to Eisenhower/West Alignment (Hillsborough Avenue to Linebaugh Avenue)

The Benjamin Road Alignment was developed to consider an alignment that would have industrial development on the east side and residential development on the west side of the expressway. This alignment is a variation of the Eisenhower/West Alignment

Alternative, see Subsection 4.1.4.1 included in Reasonable Alignment Alternatives for the area from north of Hillsborough Avenue to south of Linebaugh Avenue. The rural typical section, Figure 4-1, is used in this area of the project. A technical memorandum dated May 21, 1985, discussing this alignment alternative is included in this document as Appendix C.

The Benjamin Road Alignment begins north of the Hillsborough Avenue interchange and curves to the east away from the Eisenhower/West Alignment north of Johns Road. The alignment proceeds easterly bridging Flora Avenue and northerly bridging Benjamin Road and Sweetwater Creek (Channel G). The expressway continues north to an interchange with Waters Avenue, then turns northwesterly to connect to the Eisenhower/West Alignment south of the Linebaugh Avenue interchange. Also included in this alignment is an interchange with the Anderson Road extension.

The alignment was dropped from consideration due to the greater expense ($4,100,000 1984 costs) and slightly higher environmental 8.75 versus 8.40 acres of wetlands and community impacts 40 versus 31 relocations.

4.1.3.2 East-West Corridor Alignments (Hutchinson Road to Interstate 275)

The East-West Corridor extends from the vicinity of Hutchinson Road north and east to Dale Mabry Highway, then east to Interstate 275, 3 to 4 miles south of the Pasco County line. The alignments studied within this corridor are shown in Figure 4-12. There were two basic alignments in the East-West Corridor considered as potential alignments for the expressway. These alignments are the Lake Brandt-North Alignment and the Lake Brandt-South Alignment. Crossovers were also considered between the two basic alignments. They begin east of Dale Mabry Highway and end west of Lake Brandt and are designated as Lake Brandt-North w/Crossover to South and Lake Brandt-South w/Crossover to North. Also considered in the East-West Corridor is the northern portion of the Railroad Alignment. The Railroad Alignment and the west end of the Lake Brandt-North Alignment from Hutchinson Road to Dale Mabry Highway (designated as Lake LeClare Alignment and North and South Termini) are still viable alternatives, and are therefore discussed in Subsection 4.1.4, Reasonable Alignment Alternatives. All other East-West alignment alternatives are discussed in this subsection as alignment alternatives considered, but rejected. These east-west alignment alternatives used the rural typical section, Figure 4-1.

As the study and review process continued, the need for an expressway in the East-West Corridor was reconsidered. Upon further study of traffic generation forecasts, social and environmental impacts and related project costs, the Expressway

Authority in response to Technical Memorandum "East-West Corridor Evaluation", dated September 11, 1984, Appendix A, elected to drop the expressway segment between Dale Mabry Highway and I-275 from further consideration and promote improvements to Dale Mabry Highway and County Road 54 in Pasco County. The proposed project along with Dale Mabry Highway and County Road 54 would provide capabilities for a bypass route around the downtown Tampa I-275 expressway.

Low projected traffic volumes 8,000 to 12,000 ADT (see Table 4-1) on the Dale Mabry Highway to I-275 segment of the proposed expressway for either of the East-West alignments and the crossovers was the primary reason for rejection. The expressway segment on the Lake Brandt-South Alignment alternative from Hutchinson Road to Dale Mabry Highway was rejected due to a little more community impact of passing between Lakes LeClare and Helen and greater project costs ($2,900,000 more, 1984 costs). These alignments dropped include the Lake Brandt-North Alignment (Dale Mabry to I-275), all the Lake Brandt-South Alignment and all of both crossovers, as described below.

4.1.3.2.1 Lake Brandt-North Alignment

This segment of the alignment begins at Hutchinson Road and proceeds north, bridging Hatton Road and Lake LeClare Road, then turns easterly interchanging with Lake Shore Road/Van Dyke Road for access to and from the south on the expressway. The alignment then interchanges with Dale Mabry Highway approximately three-quarters mile north of Van Dyke Road. The expressway turns southeasterly to just north of Lake Brandt. The interchange at Nebraska Avenue would be located south of the Nebraska Avenue railroad grade crossing in the southern part of Lutz. The Nebraska Avenue interchange would be on the west side to miss the railroad tracks along the east side. East of Nebraska Avenue, the expressway continues generally east, interchanging with Livingston Avenue and then I-275.

4.1.3.2.2 Lake Brandt-South Alignment

This alignment begins north of Hutchinson Road and proceeds north, then easterly following a more southerly route through the corridor to its termination at I-275. The expressway would curve to the east, bridge Lake Shore Road and turn northward. The expressway would cross Van Dyke Road with an interchange on the south side for access to and from the south on the expressway.

North of Van Dyke Road, the alignment would proceed east on a more southerly route to interchange with Dale Mabry Highway approximately 0.3 mile north of Van Dyke Road. East of Dale Mabry Highway, the expressway turns in a southeasterly direction crossing Van Dyke Road, Simmons Road, and Crenshaw Lake Road south of Lake Brandt. After crossing Crenshaw Lake Road, the expressway turns eastward to align on the northern side of the electrical power easement before interchanging with Nebraska Avenue. The Nebraska Avenue interchange would be on the western side of Nebraska Avenue to miss the railroad tracks on the east side.

East of Nebraska Avenue, the expressway would parallel the northern side of the power easement, bridge Hanna Road, and provide for a half diamond interchange to the west at Livingston Avenue for access to and from the west on the expressway and an interchange at I-275.

4.1.3.2.3 East-West Corridor Crossovers

The East-West Corridor has two crossovers connecting between the Lake Brandt-North and the Lake Brandt-South Alignments. The crossovers occur in the area between Dale Mabry Highway and Lake Brandt.

Lake Brandt-North w/Crossover to South

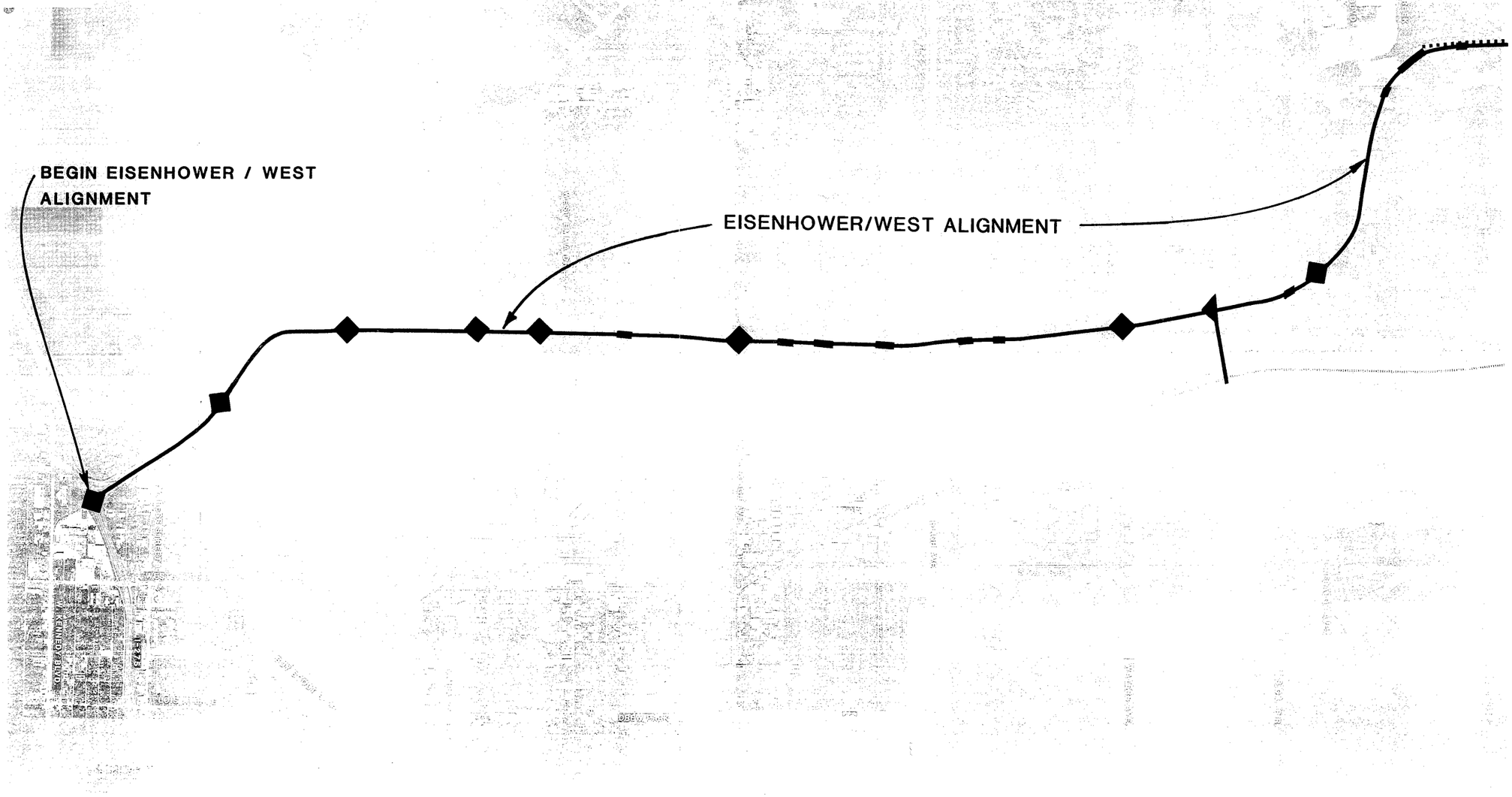
The Lake Brandt-North Alignment with Crossover to the South Alignment would turn sharply south after crossing Dale Mabry Highway and connect into the Lake Brandt-South Alignment south of Lake Brandt to follow that alignment to I-275.

Lake Brandt-South w/Crossover to North

The Lake Brandt-South Alignment with Crossover to the North Alignment crosses Dale Mabry Highway and continues in an easterly direction and connects into the Lake Brandt-North Alignment on the north side of Lake Brandt.

4.1.4 REASONABLE ALIGNMENT ALTERNATIVES

The reasonable alignment alternatives were retained since they had less environmental impacts as summarized in Table 4-1. As mentioned in Subsection 4.1.3, Alignment Alternatives Considered But Rejected, the reasonable alignment alternatives are the Eisenhower/West Alignment in combination with either the Lake LeClare Alignment or the Railroad Alignment. In addition, there are two alternative locations for the north termini of the project at Dale Mabry Highway. They are called the North Termini and South Termini. The beginning and ending points and locations of all the reasonable alternatives are shown on Figure 4-13.



REASONABLE ALIGNMENT ALTERNATIVES

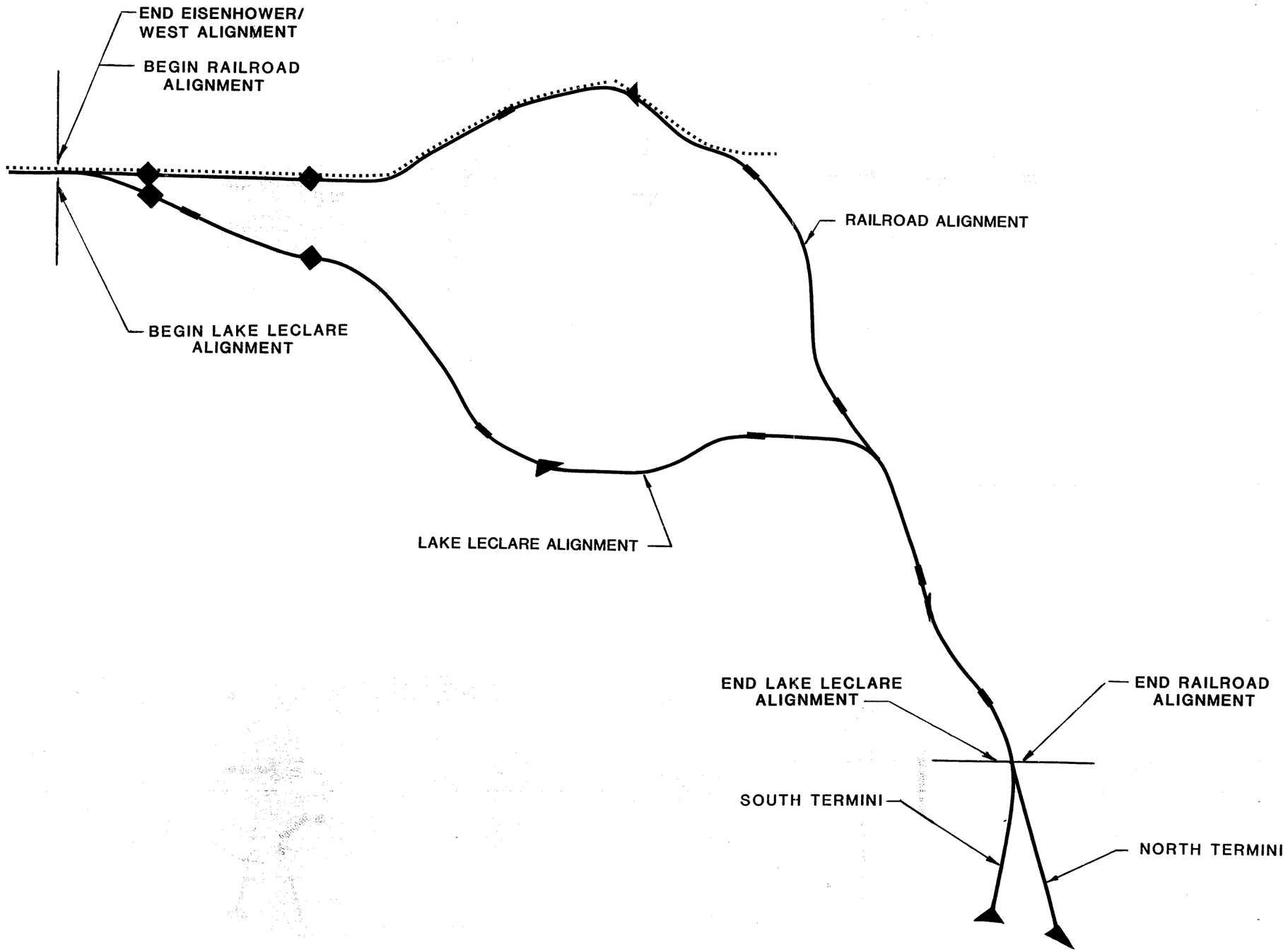

END EISENHOWER/
WEST ALIGNMENT
BEGIN RAILROAD
ALIGNMENT
BEGIN LAKE LECLARE
ALIGNMENT
RAILROAD ALIGNMENT
LAKE LECLARE ALIGNMENT
END LAKE LECLARE
ALIGNMENT
END RAILROAD
ALIGNMENT
SOUTH TERMINI
NORTH TERMINI
LEGEND
ALIGNMENT
ALTERNATIVES
FULL INTERCHANGE
HALF INTERCHANGE
LOCATION OF ABANDONED
RAILROAD RIGHT OF WAY
N

FIGURE 4-13

The factors considered and conclusions reached in analyzing the alignment alternatives including the "No-Build" Alternative are documented in the reports referred to in the previous Subsection 4.1.3. They are: Engineering Alternatives Report - September 1984; Technical Memorandum - "East-West Corridor Evaluation" - September 11, 1984, Appendix A; Technical Memorandum - "Railroad Alignment Evaluation" - February 1, 1985, Appendix B; and Technical Memorandum - "Benjamin Road Alignment Evaluation" - May 21, 1985, Appendix C.

Based upon the recommendations of these and prior reports in conjunction with continuing public input, the alignment alternatives shown in Figure 4-13 are considered viable and are analyzed in detail in Section 6.0 Environmental Consequences. Following is a brief description and discussion of each reasonable alternative.

4.1.4.1 Eisenhower/West Alignment (I-275 to South of Gunn Highway)

The Eisenhower/West Alignment, as shown in Figure 4-10, begins at Interstate 275, follows and upgrades the existing Memorial Highway/Eisenhower Boulevard roadway along the western side of Tampa International Airport, and extends to the vicinity of Gunn Highway.

The proposed improvements between I-275 and Hillsborough Avenue includes new interchanges at Courtney Campbell Causeway (SR 60), Independence Parkway (formerly Gun Club Road), Memorial Highway, and Hillsborough Avenue. The existing Memorial Highway (Eisenhower Boulevard) interchange at I-275 would be greatly improved and the Airport interchange would have only minor modifications to its present configuration. Sections of the expressway south of Courtney Campbell Causeway are proposed to be six and eight lanes with and without frontage roads and would be constructed as shown in the typical section, Figure 4-5.

North of Courtney Campbell Causeway, a frontage road system is included to provide local access. Internal circulation would be provided by mainline overpasses at Independence Parkway and north of West Emma Drive. The mainline expressway would narrow to three lanes in each direction between the Courtney Campbell Causeway and Independence Parkway/Memorial Highway interchanges and to two lanes in each direction north of Memorial Highway to Hillsborough Avenue, see typical section (Figure 4-5). North of Hillsborough Avenue to the end of this alignment alternative the rural typical section, Figure 4-1 was used.

The expressway alignment north of Hillsborough Avenue would continue generally northward with a bridge at Johns Road, Sweetwater Creek (Canal G) and Barry Road with an interchange at Waters Avenue. North of Waters Avenue the alignment would turn slightly to the west and provide for an interchange with the Anderson Road Extension presently under design by Hillsborough County. Access at Anderson Road would be to and from the south on the expressway.

Continuing northwesterly, the alignment would bridge the railroad tracks and interchange with Linebaugh Avenue and then turn in a westerly direction to a bridge over Wilsky Boulevard. At Wilsky Boulevard the alignment turns to a more northerly direction bridging Rocky Creek and then aligning on the abandoned railroad track. The expressway would parallel the track for approximately one-half mile at which point, being approximately 3,000 feet south of Gunn Highway, either one of two alternative alignments, the Lake LeClare Alignment or the Railroad Alignment, would be utilized. This point is the end of the Eisenhower/West Alignment.

4.1.4.2 Lake LeClare Alignment (South of Gunn Highway to Dale Mabry Highway)

Subsequent to the Public Workshops held on August 1 and 2, 1984, and the September 12, 1984 Expressway Authority meeting, several alignment alternatives and variations were generated and studied. Two of these alternatives were recommended for further study as stated in the Technical Memorandum "Railroad Alignment Evaluation", dated February 1, 1985, Appendix B. They are the Lake LeClare Alignment and the Railroad Alignment (discussed in Subsection 4.1.4.3). The Lake LeClare Alignment is in essence a combination of the north end of the old Eisenhower/West Alignment (as it was designated earlier in the study before its northern end was set at 3,000 feet south of Gunn Highway) and the west portion of the Lake Brandt-North Alignment. There was also a location change with the alignment shifted to the west between Hutchinson Road and Van Dyke Road in the vicinity of Lake LeClare. This Alignment starts 3,000 feet south of Gunn Highway at the north end of the present Eisenhower/West Alignment and terminates approximately 4,000 feet west of Dale Mabry Highway. The typical section used for this entire alignment is the rural typical section, Figure 4-1.

From the beginning of the Lake LeClare Alignment south of Gunn Highway, the alignment immediately turns in a northeasterly direction and then interchanges with Gunn Highway.

Immediately north of the interchange, the alignment would again bridge Rocky Creek and then curve more northerly to an interchange at Ehrlich Road. After the Ehrlich Road interchange, the alignment turns back in a northeasterly direction to bridge Bellamy Road and Rawls Road before turning in a northerly

direction at Hutchinson Road. An interchange for access to and from the south on the expressway will be provided at Hutchinson Road.

North of the Hutchinson Road interchange, the alignment continues north crossing Hatton Road and Lake LeClare Road and then turns to the west and then north, west of Lakes LeClare and Helen. Once north of Lake Helen, the expressway turns to the east interchanging with Lake Shore Drive/Van Dyke Road for access to and from the south on the expressway.

North of Van Dyke Road, the alignment turns east to its end at 4,000 feet west of Dale Mabry Highway approximately one-half of a mile north of Van Dyke Road.

4.1.4.3 Railroad Alignment (South of Gunn Highway to Dale Mabry Highway)

The rural typical section, Figure 4-1 is used for this alignment alternative. The Railroad Alignment begins at the same location as the Lake LeClare Alignment where the Eisenhower/West Alignment ends 3,000 feet south of Gunn Highway. From that point, the Railroad Alignment continues northerly utilizing the abandoned railroad right-of-way for the expressway. Interchanges are proposed at Gunn Highway, Ehrlich Road, and Binder Road. The Binder Road interchange would be for access to and from the south on the expressway. Binder Road, approximately 500 feet in length and the intersection of Binder Road and Gunn Highway would be upgraded as part of this project to provide improved access to the expressway. A bridge would be provided at Copeland Road.

The alignment continues along the abandoned railroad right-of-way until reaching and crossing over Mobley Road, then turns northeasterly leaving the abandoned railroad right-of-way, bridging Tobacco Road about one-half mile south of Van Dyke Road. Immediately east of Tobacco Road the alignment continues northeasterly to where it is the same as the Lake LeClare Alignment. It then continues along the Lake LeClare Alignment with an interchange at Lake Shore Road/Van Dyke Road to the end point 4,000 feet west of Dale Mabry Highway.

4.1.4.4 North and South Termini Alignments at Dale Mabry Highway

The North and South Termini Alignment alternatives use the rural typical section Figure 4-1. The South Termini Alignment was developed as an alternative to the North Termini Alignment in order to minimize the impacts on proposed development and to reduce project costs. The alignment for both of these alternatives begins approximately 4,000 feet west of Dale Mabry

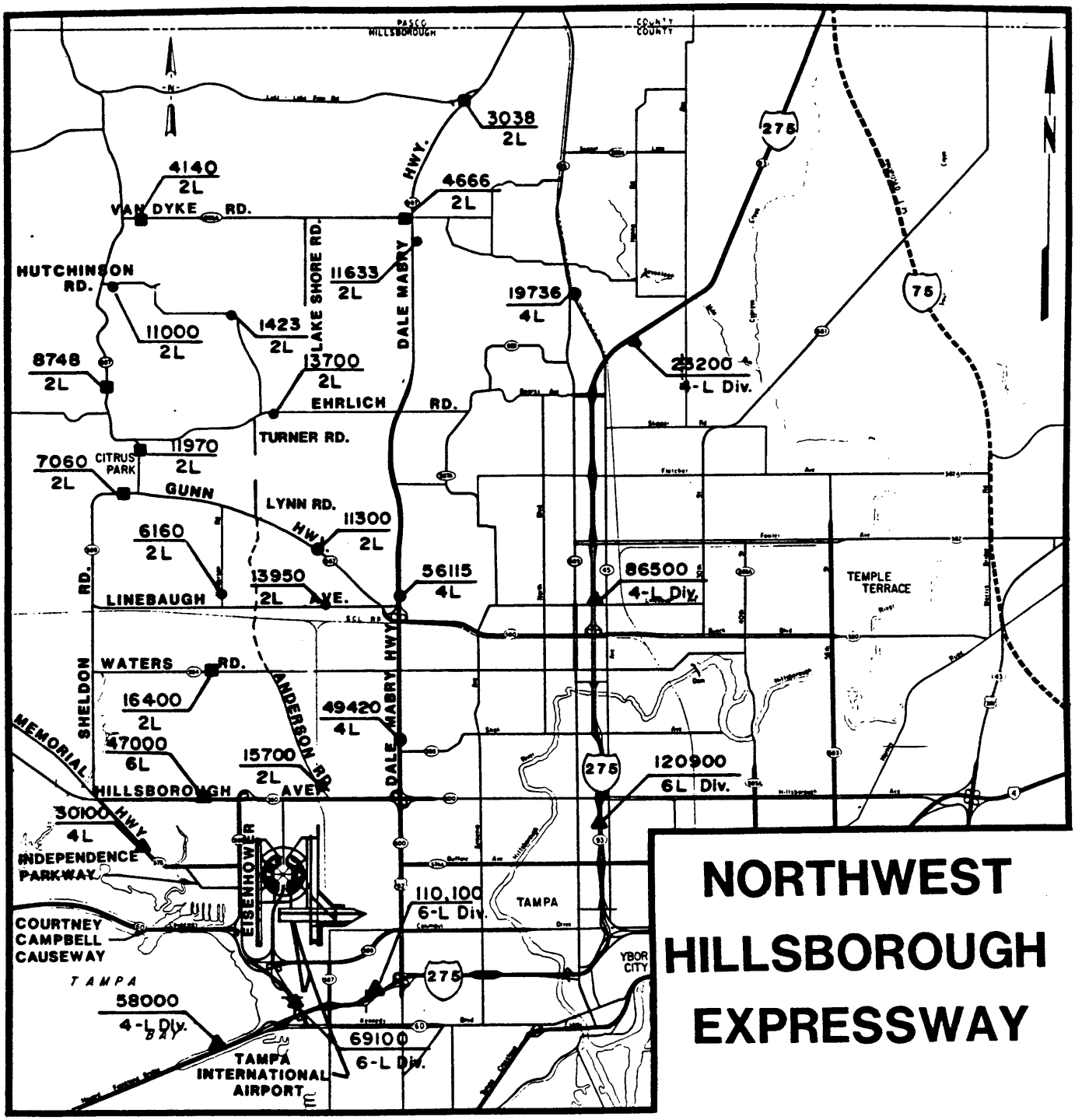
Highway at the connection to either the Lake LeClare or Railroad Alignment. The termination at Dale Mabry Highway is located approximately three quarters or one-half mile north of Van Dyke Road for either the North or South Termini, respectively.

4.2 Alternatives to the Proposed Action

4.2.1 "No Build" Alternative

The "No-Build" alternative is that of including those projects presently shown in the five year work program of Hillsborough County and Florida Department of Transportation and of not providing any other major roadway or transit improvements in the northwest corridor. The primary routes which presently handle the traffic loadings are Dale Mabry Highway and I-275. These routes are heavily congested during peak periods. Figure 4-14 shows current traffic volumes on Dale Mabry Highway, I-275 and many principal roadways in the study area. South of Busch Boulevard, Dale Mabry Highway operates at Levels of Service E and F (stop and go conditions) during peak periods. Indicative of these conditions is that seven of the top twenty-five high accident locations in Hillsborough County are on Dale Mabry Highway. The principal east-west routes, Hillsborough Avenue, Waters Avenue, Linebaugh Avenue, Gunn Highway and Ehrlich Road, which feed Dale Mabry are also operating at or in excess of roadway capacity. While FDOT and Hillsborough County have programmed some roadway improvements which will offer isolated reductions in congestion, the "No-Build" alternative will not provide any means to alleviate the heavy congestion and high accident rates found on most major roadways in northwest Hillsborough County. The major roadway improvements of Hillsborough County and Florida Department of Transportation are discussed in Subsection 4.2.3.

I-275 south of Fowler Avenue into downtown Tampa and west to Dale Mabry Highway is currently operating between Levels of Service D and E (unstable with stoppage conditions). The "No-Build" Alternative will not provide a bypass or alternative route to remove the thru traffic destined for the airport and Pinellas County from traveling via expressways through downtown Tampa. Figure 3-2 shows the existing plus 5 year committed road program Year 2010 traffic assignments and projected level of service for those roadways. I-275, Dale Mabry Highway, Eisenhower Boulevard and Anderson Road, all north-south roadways, will be operating a level of service E and F for many hours during the day. The principal east-west roadways will operate at a level of service D, E and F.



NORTHWEST HILLSBOROUGH EXPRESSWAY

ADT
LANES

▲1983 24 HR. COUNT
●1984 24 HR. COUNT
■1985 24 HR. COUNT

CURRENT TRAFFIC VOLUMES ON EXISTING ROADWAYS

FIGURE 4-14

With the rapid residential and commercial growth in northwest Hillsborough County and minimal transportation capacity improvements being made, severe adverse impacts could be reasonably anticipated. These are the increase of traffic congestion, lengthening of travel times for auto and truck users in the study area, an increase in accident numbers and severity, greater consumption of fuel as vehicles are idled at intersections and rail crossings, and greater localized concentrations of air and noise pollutants from vehicles idling or changing speed.

As noted earlier, the traffic congestion would also inhibit traveling from the northwestern part of the County to the central business district (CBD) and from the north to the airport area and Pinellas County. This could dampen the economic vitality of this regional financial, commercial and governmental center. Failure to provide transportation improvements in the corridor areas is contrary to the objectives of the long range plans for the City of Tampa and for Hillsborough County.

Many of the roadways in the corridor areas are shown in the TUATS 2000 Plan as needing improvements. While Federal, State and local funding to make these improvements is improving with the increased gas taxes, funds were not programmed in local and state five year plans for the existing roadway network to offset the aforementioned adverse impacts.

4.2.2 Transportation Systems Management

The Transportation Systems Management (TSM) concept is an idea which has evolved in recent years to address the maximization of existing facilities. TSM improvements include fringe parking, high occupancy vehicle (HOV) lanes on existing roads, traffic signal timing optimization and other related improvements. At the present time several programs are being implemented in Hillsborough County which should improve effectiveness of the existing system. Improving bus service by the Hillsborough Area Regional Transit Authority (HART), including development of park and ride lots, is underway at this time. Phase I report for identifying improvements for adding high occupancy vehicle (HOV) lanes on the interstate system will be completed in 1985. The bus service project and HOV study is discussed in Alternative Modes of Transportation, Subsection 4.2.4.

The TSM, while improving the effectiveness of the existing roadway and transit system, will not meet present and future need for increased roadway capacity and improved traffic flow in Northwest Hillsborough County as defined by this project.

4.2.3 Major Roadway Improvements

Many roadway improvements are planned for existing facilities in the northwest area. Hillsborough County has the following ten major improvements programmed:

1. Gunn Highway - widening to four lanes from Busch Boulevard to Lynn-Turner Road. Design has been completed. Construction on the portion from Busch Boulevard to Casey Avenue is to begin in 1986. Right-of-way acquisition from Casey Avenue to Lynn-Turner Road is in progress. Widening from Lynn-Turner Road to Sheldon Road is in design but construction has not yet been funded.

2. Anderson Road - extending as a two lane roadway from Waters to Gunn Highway with future widening to four lanes. The two lane project has been funded with construction scheduled to begin in the fall of 1985.

3. Waters Avenue - widening to four lanes from Sheldon Road to Hanley Road and to six lanes from Hanley Road to Dale Mabry Highway. The design of this project is expected to be completed in June 1986 and construction to begin in January 1987 on the Sheldon Road to Hanley Road section.

4. Bearss Avenue/Skipper Road - extension of Bearss Avenue from Nebraska Avenue to Skipper Road and the widening of Skipper Road to 30th Street (CR 581) all to be four lanes. Design is complete and construction was started in February 1985. Construction is scheduled for completion in February 1986. In addition, Bearss Avenue is to be extended to Dale Mabry Highway; this is now under design with construction to begin in early 1987.

5. Ehrlich Road - four laning from Dale Mabry Highway to the new Lynn/Turner Road extension. The design is scheduled for completion in October 1985 for the section between Casey Road and Dale Mabry Highway, with construction beginning soon thereafter, and completed by June 1987. The west section from Casey Road to Lynn-Turner Road scheduled for completion of design in May 1986 with construction to start in June 1986.

6. Lynn-Turner Road - This new two lane road connecting Lynn and Turner Roads between Gunn Highway and Ehrlich Road is under construction with completion scheduled by September 1985.

7. Twelve Oaks Boulevard/Henderson Connector - Design for this two lane road connecting Twelve Oaks Boulevard with Henderson Road was started in August 1985 and is to be completed in July 1986. Construction is to start July 1987 and to be completed in April 1988.

8. Nixon Road - This two lane road is to extend from Waters Avenue to Gunn Highway. The portion from Linebaugh Avenue to Gunn Highway is to be under construction in December 1985 with completion in August 1986. The section between Waters Avenue and Linebaugh Avenue is to begin construction in July 1987 with completion in the Spring of 1988.

9. Hanley Road Extension - This four lane road is to connect Hanley Road to Wilsky Boulevard between Linebaugh Avenue and Waters Avenue. Construction is underway with completion scheduled for November 1985.

10. Himes Avenue - Design for widening to four lanes from Hillsborough Avenue to Busch Boulevard is to be completed in September 1986. Construction is to begin in January 1988 and to be complete in January 1989.

Hillsborough County, in cooperation with the FDOT, has conducted an engineering and environmental feasibility study of the Dale Mabry Highway corridor from Hillsborough Avenue to U.S. 41 (Nebraska Avenue) in Pasco County. This study found that it is feasible to convert Dale Mabry Highway to a six-lane limited access facility with urban interchanges and frontage roads between Hillsborough Avenue and Ehrlich Road. North of Ehrlich Road, Dale Mabry Highway would need to be a six lane divided roadway to Van Dyke Road and a four lane divided roadway to U.S. 41.

The Florida Department of Transportation has included two projects in its five-year construction plan for Hillsborough County which are in the study area. The first project is the widening of the Hillsborough County approach to the Courtney Campbell Causeway from Eisenhower Boulevard to the bridge to provide median islands and left turn lanes. The widening will also include improvement to the interchange of Courtney Campbell Causeway and Eisenhower Boulevard/Memorial Highway. Construction is scheduled to begin within the 1986-1987 fiscal budget. The second project is the improvement of Dale Mabry Highway to six lanes from Hillsborough Avenue to Van Dyke Road. This project is scheduled to begin in 1986.

While these improvements will increase traffic flow and raise levels of service in the study area, they do not meet the needs of this project. Such improvements also tend to relocate existing traffic problems to adjacent roadway segments. The primary alternative to improve traffic flow is to provide a high speed, controlled access facility for accommodating the longer distance trips.

4.2.4 Alternative Modes of Transportation

Alternative modes of transportation which have been studied for the northwest area of Hillsborough County include high speed rail, light rail, and improved bus service. Studies for a 1977 report prepared by the Tampa Bay Rapid Transit District (TBART) showed that only 0.88 to 2.5 percent of the trips generated in the study corridor would utilize an improved transit system.

The Florida Department of Transportation (FDOT) and the Hillsborough Area Regional Transit Authority (HART) have a two-year demonstration project underway to provide twenty-five new buses for express bus service in northwest Hillsborough County. This project is developing three park and ride lots along the Dale Mabry corridor for express bus service to the downtown area. The service has only been in operation since May, 1984 using one lot; therefore, there is not sufficient data to evaluate the benefits of this service.

The FDOT also has a study underway of the Tampa interstate system for high occupancy vehicle (HOV) lanes and park and ride facilities. These services would improve the people moving capabilities of the interstate system and surrounding roadway network by encouraging car pools and use of express buses; however, they will offer only minor relief to the congestion in the northwest area.

As a part of the HOV study, a preliminary overview analysis was performed to determine the potential of a rail transit system replacing the HOV/bus lanes proposed for the interstate highway system. Historically, using the characteristics of American cities with established transit systems, broad-based socio-economic "pre-condition" threshold values have been developed as a guideline for implementation of a busway and/or rail transit system. These conditions are summarized in Table 4-2.

By the design year of the HOV project (2010), the Tampa Urban Area should begin to approach the development levels where it could begin considering a rail transit system. The Tampa Central City population may approach 330,000 and the Central Business District (CBD) employment is expected to be over 80,000. The greater Hillsborough County population will have slightly over 1,000,000 people. However, the bus transit volumes today and those forecast volumes by 1995 and even by the year 2010 do not approach the volumes necessary to convert from a busway to a light rail system.

TABLE 4-2

GENERAL CONDITIONS FOR TRANSIT DEVELOPMENT

DETERMINANT	RAIL	BORDERLINE RAIL OR BUS (1)	BUSWAY
Urban area population	2,000,000	1,000,000	750,000
Central city population	700,000	500,000	400,000
High-density corridor development	Extensive and clearly defined	Limited but defined	Limited but defined
CBD function	Regional	Regional or subregional	Regional or subregional
CBD floor space (sq ft)	50,000,000	25,000,000	20,000,000
CBD employment	100,000	70,000	50,000
Daily CBD destinations per square mile	300,000	150,000	100,000
Daily CBD destinations per corridor	70,000	40,000	30,000

(1) A major regionwide bus system should be effectively operating before investigating conversion to rail.

Even if the socio-economic characteristics begin to favor a rail system, the projected transit usage must also favor a rail system. Studies have been conducted to determine the trade off point in terms of passengers per hour between a busway and a rail system. Although these values are influenced by the amount and type of physical construction, peaking factors, operating speeds, prevailing wage rates, and productivity levels and interest rates, the following general conclusions have been reached:

(1) At 2,000 to 4,000 passengers per hour (about 80 to 100 buses per hour carrying 40 to 50 passengers per bus), buses provide the most economical system on a mile per mile basis.

(2) At about 4,000 to 8,000 passengers per hour, either a bus lane with on-line stations or a light rail system should be considered.

(3) Between 8,000 to 16,000 passengers per hour, a light rail system is generally the most cost effective transit system.

(4) Above 16,000 to 18,000 passengers per hour, heavy rail rapid transit or commuter railroad service with larger vehicles and longer trains are required.

Preliminary forecasts, based on the analysis of the HOV lanes, indicate that for the year 2010 the maximum number of buses during the peak hour in the I-275 North corridor is 60. These buses are expected to carry about 2,400 to 2,700 passengers per hour, which is within the range of a successful busway, but below the required passenger levels of a rail system.

Busways clearly offer the Tampa Urban area initial cost and service advantages. These advantages are as follows:

(1) A relatively small amount of special construction is required to achieve regional express transit.

(2) Contra-flow bus lanes, bus streets, or bus terminals can provide effective downtown distribution, thereby eliminating the costs of below-ground construction.

(3) Utilization of buses for light volume conditions reduces the need for special power distribution, train control, and rail yard facilities.

(4) Busways can be effectively utilized by high-occupancy vehicles during selected periods of the day.

(5) Busways can form the first-stage development of an eventual rail system.

The last point is perhaps the most significant one. As the Tampa Urban Area approaches the 21st century, long-range plans for a regional rail system should become more focused. If the Tampa area continues to grow at or faster than its present pace, the need for an expanded transit system will become stronger. Light rail transit is one of the simplest, most versatile, and most effective fixed guideway modes. It is equally adaptable to tunnels, aerial structures, freeway median strips, medians of boulevards, grades, and paved streets in mixed traffic. The right-of-way width required for double-track light rail including adequate platforms is approximately 40 feet, while only 24 to 36 feet of right-of-way width is required between stations. Light rail transit is also especially adaptable with respect to vertical and horizontal curvature requirements. A light rail vehicle is designed to take a curve with a 42 foot inside radius and can accept a vertical curvature radius of 310 feet on a crest of a hill and 460 feet in a sag. Grades from 4 to 6 percent are common, and some systems have been designed with grades of almost 9 percent. All of these facts point out that the Hillsborough County area expressway system may be able to accommodate a light rail system. However, there are no current plans for such a rail system and the first step of developing a good productive regional bus system must be advanced before the planning and development of a more sophisticated system can occur. Even though an expanded bus system and, eventually, a rail system in Hillsborough County will contribute to meeting existing and future travel demand, they do not meet the needs of this project. The proposed expressway will provide needed right-of-way for future improved transit as part of the total long range transportation system.

4.3 RECOMMENDED ALIGNMENT ALTERNATIVE

4.3.1 Alignment Modifications

Modifications to the alignment, as shown on Figure 4-15, Recommended Alignment, were made in four areas, as follows: 1) improve the interchanges and expressway from I-275 northward to Hillsborough Avenue; 2) realign the expressway from Barry Road (north and westward) to Gardner Road; 3) realign the expressway from west of Bellamy Road (east and northward) to Hutchinson Road; and 4) revise the Van Dyke Road interchange area.

Modifications to the expressway were made to the Eisenhower/West Alignment between I-275 and Hillsborough Avenue to provide added traffic capacity along the mainline and to improve certain interchanges. More specifically, in response to input received from the Hillsborough County Aviation Authority, redesign of the Expressway in the vicinity of Tampa International Airport has affected separation of airport traffic from that of the Eisenhower Boulevard/Northwest Hillsborough Expressway traffic; the interchange for Tampa International Airport has been modified to enhance capacity; a ten lane section of the expressway has been added including two outside auxiliary lanes; the northbound

exit ramps to Independence Parkway has been changed to be a dual ramp; and a single ramp has been added for the northbound exit to Memorial Highway. In addition, the redesign of the interchange at Memorial Highway will result in less right-of-way being required from Airport property.

The area from Hillsborough Avenue to north of Jones Road was realigned to reduce impacts to the airport and businesses in the vicinity. However, this resulted in the relocation of 38 additional residences and 15 fewer businesses, as well as redesign of a drainage canal.

Modifications to the Eisenhower/West Alignment based on public hearing input, changing field conditions and Hillsborough County input included realignment of the expressway between Barry Road, located south of Waters Avenue, and Gardner Road north of Wilksky Boulevard. This realignment was made to improve interchange geometrics at Waters Avenue, Anderson Road and Linebaugh Avenue; to avoid construction of new commercial structures on Linebaugh Avenue; to preserve compatible development potential for property north of Waters Avenue and in the northwest quadrant of the intersection of Linebaugh Avenue and Henderson Road; and to add a bridge for crossing over the proposed extension of Twelve Oaks Boulevard by Hillsborough County.

In addition, the Linebaugh Avenue interchange was modified to comply with regional transportation plans and their future impact on Linebaugh Avenue. South of Barry Road, a bridge was added at the proposed Sligh Avenue extension location to facilitate local traffic.

A modification was made to the Lake LeClare Alignment from the Bellamy Road area to the Hutchinson Road interchange by shifting the expressway from the north side of Lake Holly to the south side, thereby avoiding contiguous waters of the lake and reducing the right-of-ways costs and number of anticipated residential relocatees in developments under construction.

Additional ramps to and from the north were added at Wilsky Boulevard, Hutchinson Road, and at the proposed Gunn Highway Relocation project. Provision for the extension of the expressway to serve Pasco, Pinellas and Hernando Counties was added at Tobacco Road in response to Hillsborough County plans to build this roadway known as the Gunn Highway Relocation. The anticipated additional traffic entering the Northwest Hillsborough Expressway from the north necessitated the addition of ramps on the north side of the Huchinson Road interchange. Also, ramps to the north were added to the Wilksky Boulevard interchange to provide good areawide distribution of through and local traffic.

The Van Dyke Road interchange was redesigned to provide better traffic service and to alleviate impacts on new development presently underway. The interchange was redesigned in response to input received at the public hearing and comments received from Hillsborough County on the Draft Environmental Impact Statement.

Further minor alignment adjustments were made in response to input received from the Florida Game and Fresh Water Fish Commission. These adjustments were made in the Ehrlich Road/Bellamy Road area by shifting the alignment southward, and at the Van Dyke Road interchange with a slight alignment change.

All the above modifications did not change the project limits or interchange locations, except where Hillsborough County's future roadway plans necessitated the addition of interchange ramps. As noted above, ramps were added at Wilsky Boulevard and at Hutchinson Road for the purpose of travel to and from the north and provisions were made for an interchange with the Gunn Highway Relocation project being implemented by the County.

The Eisenhower/West Alignment, in combination with the Lake LeClare Alignment and the South Termini, as shown on Figure 4-13 is the Recommended Alignment as shown on Figure 4-15.

4.3.2 Recommended Alignment

The Recommended Alignment was selected after extensive public and agency coordination, and as a result of comparative evaluation of all alternates in terms of their traffic and engineering factors, and community and environmental impact factors as presented in this document. The Eisenhower/West, Lake LeClare with South Termini Alignment combination as discussed in Sections 10.0 and 11.0 with the modifications cited above is recommended.

In arriving at this final Recommended Alignment, modifications in the alignment were necessitated as a result of comments received from the Draft EIS review and of comments recorded at the Public Hearing.

The Recommended Alignment which includes the Lake LeClare alternative was selected because of its potential for carrying more traffic and generating more revenue to pay for project costs. In addition, the Growth Management Plan of Hillsborough County calls for lower densities of residential development in the outlying areas of the County; in this regard, the Lake LeClare alternative being closer to the existing pattern of development than the outlying Railroad Alignment was somewhat more compatible with the intent of the Growth Management Plan.

The selection was also based on the fact that the abandoned railroad right-of-way proposed for the Railroad Alignment was already being planned by Hillsborough County for a local roadway.

RECOMMENDED ALIGNMENT

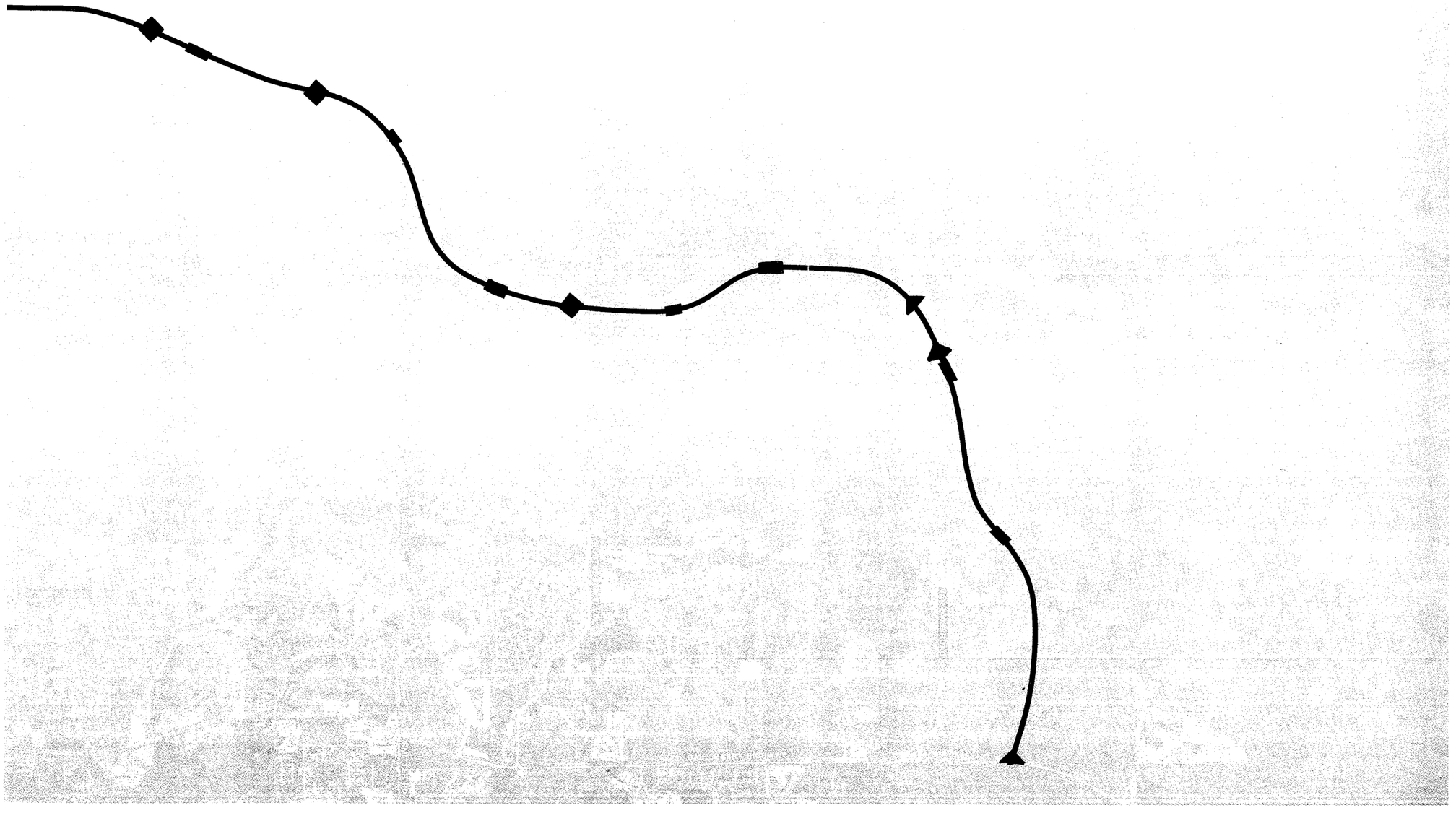

LEGEND
RECOMMENDED ALIGNMENT
FULL INTERCHANGE
HALF INTERCHANGE
N

FIGURE 4-15

5.0 AFFECTED ENVIRONMENT

5.1 SOCIAL AND ECONOMIC SETTING

Northwest Hillsborough County is comprised of both residential and commercial areas which would be affected by the addition of the proposed expressway to the area road network. The potential impact on the residential community has been a key factor in identifying alternative alignments for the proposed roadway.

The expressway corridor passes through and is surrounded by existing and emerging residential subdivisions. The extent of residential development relative to the expressway corridor can be seen in Figure 6-4.

For the most part, these areas can be described as middle class single family residential subdivisions. U.S. Census data for the year 1980 reflects an average median income for the area of $21,357 compared to an average countywide median income of $14,938.

The 1980 population for the Northwest area of 101,568 is projected by the Hillsborough County City-County Planning Commission (HCCCPC) to reach 204,900 by the year 2020. This growth rate exceeds that projected by HCCCPC for the County during each of these periods. Subsection 6.2.3.3 discusses the population growth for the area studied.

The population of the area in and around the corridor is relatively young with an average age of 27.0 years compared to 30.4 years for the County and 34.7 years for the state according to the 1980 U.S. Census of Population. There are relatively fewer persons over 65 in the area (5.6%) as compared to the proportion of the age group for the County as a whole (11.5%). Also, the area has a greater percentage of Caucasians (85.3%) compared to the countywide proportion of (76.7%).

Many of these homes are in subdivisions that have been built within the past ten years. Several subdivisions are continuing to expand while others are in the approval and planning stages. Subsection 6.2.1.1 has a detailed discussion of existing neighborhoods, Subsection 6.2.1.2 discusses proposed developments and 10.2 provides information on the Recommended Alignment.

The land use plan element of the Horizon 2000 Plan, the officially adopted growth management plan for Hillsborough County, indicates the future character of area around the expressway corridor north of Hillsborough Avenue to be low density residential, a trend presently well established. The Horizon 2000 Plan is shown in Figure 6-10.

The portion of the expressway corridor located along Memorial Highway and Eisenhower Boulevard has undergone substantial commercial development during the past five years as discussed in Subsection 6.2.1.2. Tampa International Airport has served as a major economic generator and center for much of the new commercial development occurring in Tampa. More commercial development and light industrial/warehousing activity can be expected to locate on the periphery of the airport to the immediate north and east of the airport in response to economic demand and in accordance with City and County land use plans.

The area in and around the expressway corridor has suffered in recent years from a highway system that has not kept pace with the rapid residential and commercial development occurring. The Year 2010 Principal Street and Highway Plan officially, adopted by Metropolitan Policy Organization (MPO), addresses the long term roadway needs of the area. The proposed Northwest Hillsborough Expressway is an element of this plan. This roadway along with other planned roadway improvements, is intended to meet current and future needs.

Of concern to residents is the potential impact of the expressway on the residential community. Issues raised include potential adverse affects on the value of existing residential homes, increased noise in neighborhoods, disruption of neighborhood cohesiveness, change of character of now semi-rural areas to more urban environments induced by the expressway, and aesthetics.

Community facilities reflect the relatively young family population of the vicinity. There are 19 public and private schools, 9 parks and recreation facilities, and 3 churches in the vicinity of the study area. These are shown in Figure 6-7. Other facilities include two law enforcement facilities and four fire stations which are shown in Figure 6-6.

Through coordination with the Soil Conservation Service, it has been determined that no farmlands, as defined in 7 CFR 658, are located in the project vicinity.

Two parks and recreational facilities are located in the vicinity of the proposed expressway, but not encroached upon by the project. These are discussed in Subsection 6.2.1.7. No other national, state, or local park properties are located in the vicinity, therefore, the proposed project will not use property from such resources and FHWA has determined Section 4(f) does not apply.

5.2 ENVIRONMENTAL SETTING

Results of the air quality assessment for all alternates were determined well within the National Ambient Air Quality Standards of 35 ppm for a one hour exposure and 9 ppm for an eight hour exposure. Section 6.3.1 discusses the conformance of this project to the State Implementation Plan (SIP) in this air quality non-attainment area.

The ambient noise in the area south of Linebaugh Avenue is affected by the operations of Tampa International Airport and, therefore, the proposed expressway will have "no impact" or "minor impact" in this area. North of Linebaugh Avenue, residential areas will be affected by noise from the proposed project to varying degrees ranging from "no impact" to "moderate impact". These impacts and mitigations are discussed in Subsections 6.3.2. and 10.3.4.

The proposed expressway involves floodplains in both low lying coastal areas and in inland upland areas. These areas are traversed by flow ways and historically contiguous wetlands systems. Much of the area is within the base floodplain and avoidance of floodplain involvement is not possible. Development trends in the area suggest that floodplain involvement has occurred and will occur regardless of the proposed project. Locations of floodplains are identified in Figure 6-14.

Tidally influenced coastal wetlands located along Old Tampa Bay north of Interstate 275 are characterized by black mangrove (Avicenna germinans), black needlebrush (Juncus roemerianus), and other wetlands vegetation. Wildlife in this vicinity include Clapper Rails, herons and egrets, Wood Storks, and possibly American alligators.

The northwestern portion of Hillsborough County, in the vicinity of the proposed expressway, is dotted with wetlands and small lakes. In addition, the expressway would cross Fish Creek, Sweetwater Creek, and Rocky Creek. Figures 6-15 and 10-1 show the locations of these areas.

Data on existing water quality of the lakes in the region is limited, although these lakes are presently under study by the Southwest Florida Water Management District. The lakes in the area tend to be shallow and those located near the proposed expressway are likely eutrophic.

Data collected by the Hillsborough County Environmental Protection Commission (HCEPC) since 1973 suggests that Fish, Rocky, and Sweetwater Creeks are Class III waters of the State. Rocky Creek and Sweetwater Creek have shown low dissolved oxygen concentrations of less than 4.0 mg/l. HCEPC data suggests this condition may be caused by the introduction of domestic sewage in the upper portions of the drainage basins and runoff from forested wetlands and agricultural areas.

Endangered species listed by the U.S. Fish and Wildlife Service (USFWS) have been observed in the project area including the Wood Stork (Mycteria americana), and Bald Eagle (Haliaeetus leucocephalus). Another listed species, the Red-cockaded Woodpecker (picoides borealis), has a range which includes the study area.

In addition to these, one additional species listed by the USFWS as threatened is known to occur in the project area. This is the Arctic Peregrine Falcon (Falco perigrinus tundrius), listed by the Florida Game and Fresh Water Fish Commission (FGFWFC) as endangered. The Eastern indigo snake, listed as threatened by the USFWS, is suspected to occur within the project area.

Two species found within the vicinity of the proposed project considered threatened by the FGFWFC are the Least Tern (Sterna antillarum) and Florida Sandhill Crane (Grus canadensis pratensis).

A detailed discussion of endangered species can be found in Subsection 6.3.9.

Following background research, archaeological field survey and systematic testing accomplished within the alignments, five prehistoric sites have been disclosed: 8Hi324, 8Hi80, 8Hi2151 through 8Hi2153. These are shown in Figure 6-13. In addition, five non site loci (isolated finds) were identified. An older home was also noted. No other archaeological or potential historical sites or properties were identified nor are any expected to be encountered during subsequent project development. The Federal Highway Administration, after consultation with the SHPO, has determined that no resources listed, or eligible for listing, on the National Register of Historic Places would be impacted.

6.0 ENVIRONMENTAL CONSEQUENCES

Also see Section 10.0 for environmental consequences of the Recommended Alignment and Section 11.0 for recommendations and commitments.

6.1 TRAFFIC AND ENGINEERING FACTORS

6.1.1 Expressway Roadway Section

The proposed expressway will consist of the Eisenhower/West Alignment in combination with either the Lake LeClare Alignment or Railroad Alignment and the North or South Termini. Subsection 4.1.4, Reasonable Alignment Alternatives, describes in detail these alignment alternatives.

The proposed expressway will principally be a four lane divided limited access roadway north of Memorial Highway. Between I-275 on the south and Memorial Highway, the expressway varies from 8 lane sections to 6 lanes. A complete description of the proposed typical section is discussed in Section 4.1.1 with typical sections shown in Figures 4-1 through 4-6.

The expressway roadway section, in addition to 12 foot lanes of pavement, has outside shoulders of 12 feet and inside shoulders of 8 and 10 feet for the four and six or more lane sections, respectively. The median width varies from a narrow median (22'+) in the I-275 to Memorial Highway area to 42'+ median north of Hillsborough Avenue. The $42'^{+}$ median proposed in the four lane section area has sufficient width to accommodate an additional lane in each direction or accommodate light rail transit, both considered for the future.

6.1.2 Length of Alignments

As shown in Table 6-1, the length of the Eisenhower/West Alignment is 8.62 miles from its beginning at I-275 on the south to a point approximately 3,000 feet south of Gunn Highway where the expressway follows either one of two routes. The easterly route is the Lake LeClare Alignment Alternative which is 8.18 miles long to its terminus at Dale Mabry Highway using the North Termini. The westerly route is the Railroad Alignment Alternative which follows an abandoned Railroad right-of-way and is a little longer, being 8.85 miles to the Dale Mabry Highway terminus using the North Termini. The South Termini Alignment at Dale Mabry Highway with either the Lake LeClare Alignment or Railroad Alignment alternative would be .17 miles shorter.

The length of the alignments from I-275 on the south to Dale Mabry Highway on the north is shown in Table 6-1. The shortest alignment is comprised of the Eisenhower/West Alignment combined with the Lake LeClare Alignment using the South Termini alternative at Dale Mabry Highway, 16.63 miles and the longest alignment is the Eisenhower/West Alignment combined with the Railroad Alignment and North Termini, 17.47 miles.

TABLE 6-1

LENGTH OF ALIGNMENTS
I-275 TO DALE MABRY HIGHWAY

Alignment Combinations	Segment Miles	Total Miles
Eisenhower/West	8.62	
Lake LeClare/North Termini	8.18	
		16.80
Eisenhower/West	8.62	
Railroad/North Termini	8.85	
		17.47
Eisenhower/West	8.62	
Lake LeClare/South Termini	8.01	
		16.63
Eisenhower/West	8.62	
Railroad/South Termini	8.68	
		17.30

6.1.3 Traffic Service and Number of Lanes

Estimates of traffic service have been provided by URS, Coverdale Colpitts and Barr Dunlop & Associates, Inc., traffic and revenue consultants for this project, for use in this evaluation. All estimates are based on existing traffic conditions and patterns and were projected on the premise of providing a high-type free flowing expressway with increased safety and convenience.

The accepted method of designating a facility's ability to serve the public need in a safe and efficient manner is by determining the "Level of Service" (L.O.S.). The Level of Service is a letter designation from A to F as described below.

L.O.S. A. - free flow, low volumes, unrestricted maneuverability due to other vehicles.

L.O.S. B. - stable flow, reasonable freedom of maneuverability.

L.O.S. C - lower zone of stable flow, speed and maneuverability affected by the higher volumes.

L.O.S. D - approaches unstable flow, operating speeds lowered and maneuverability restricted (Design Level of Service for urban expressways).

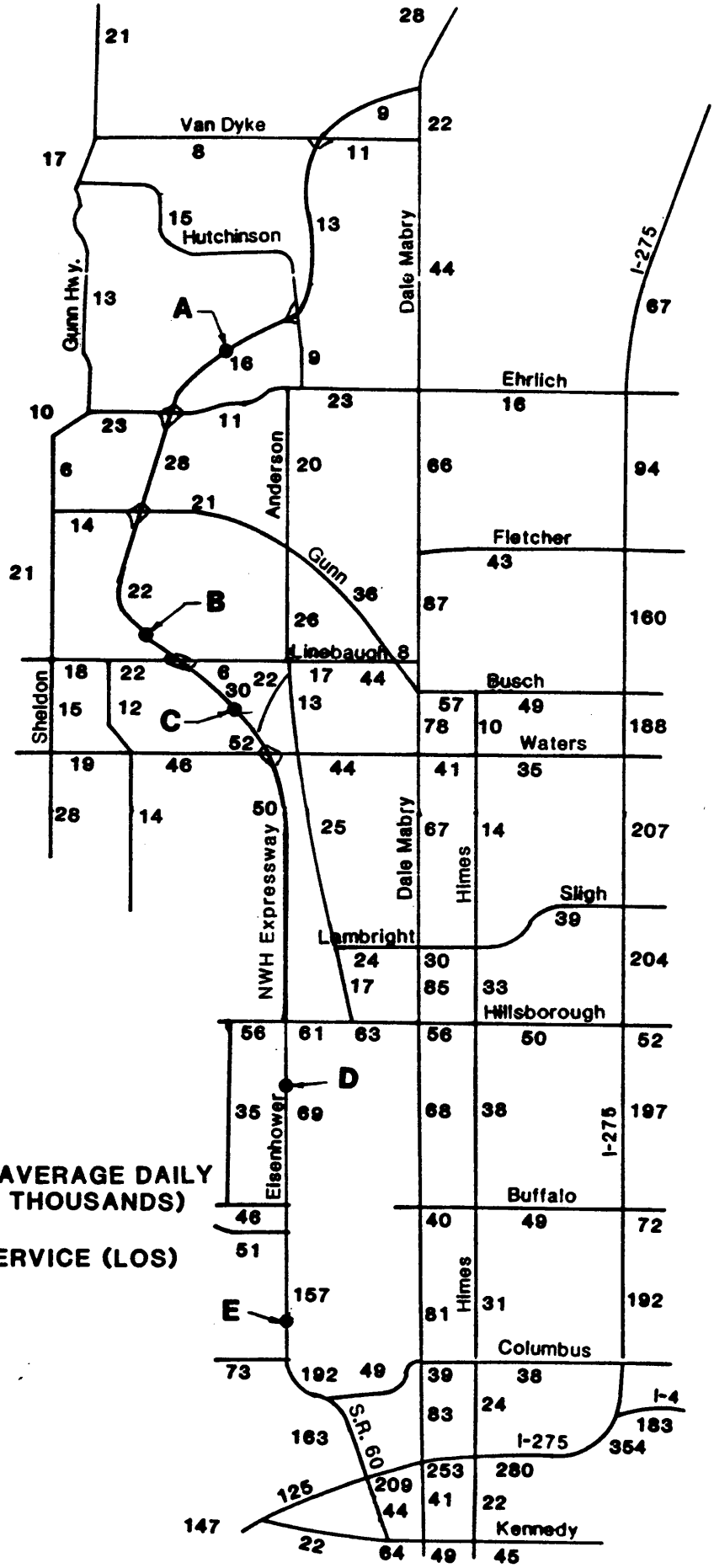
L.O.S. E - unstable flow, operating speeds at 30 m.p.h. or less, approaches capacity of the facility.

L.O.S. F - forced flow, speeds are greatly reduced and stoppages occur, volumes are below capacity.

A free flowing urban, controlled access facility with two-lanes in each direction could be expected to accommodate approximately 33,000 ADT (average daily traffic) at L.O.S. B and approximately 66,000 ADT at capacity (L.O.S. E).

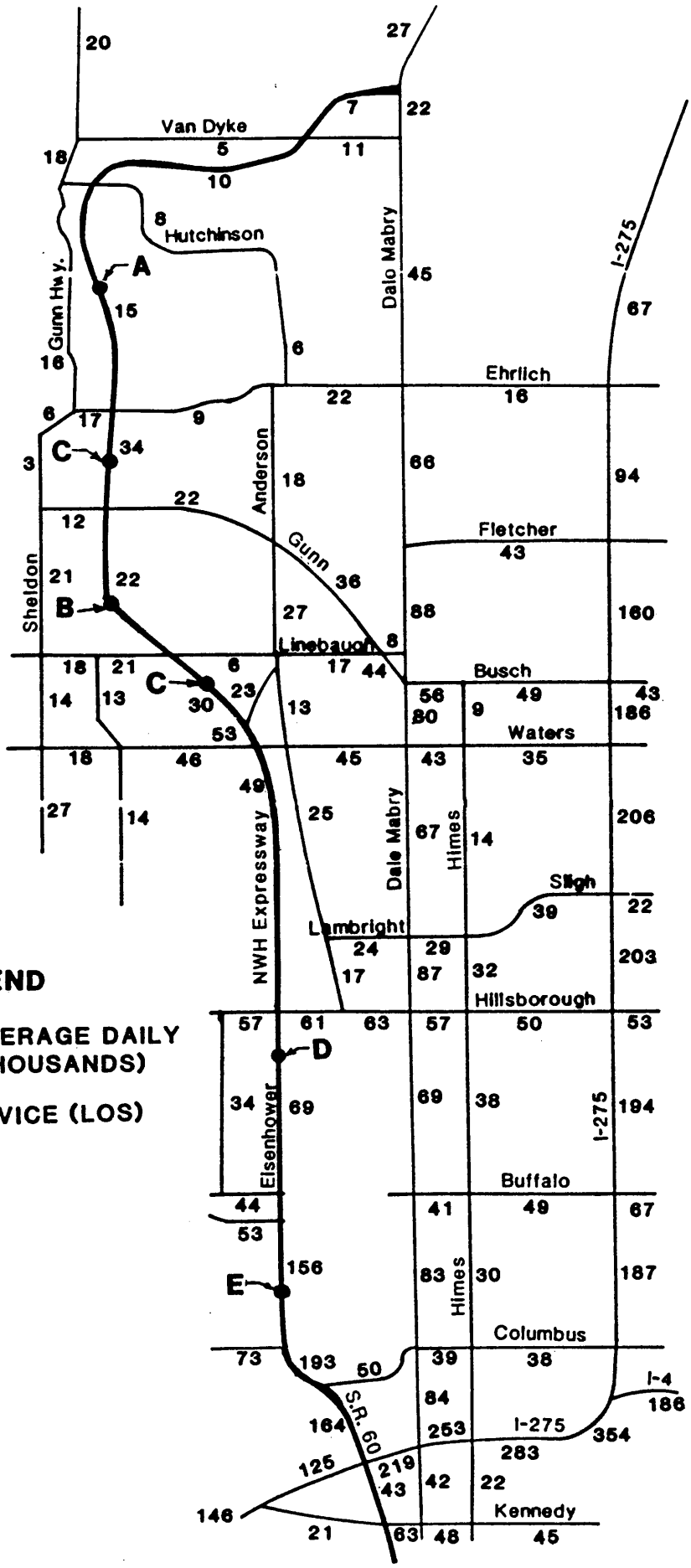
The projected year 2010 traffic volumes derived from the traffic service analysis are shown in Figures 6-1 and 6-2 for the Lake LeClare and Railroad alignment alternatives, respectively. These numbers represent the average daily traffic (ADT) in both directions using existing streets and the proposed expressway.

The section of the expressway between I-275 and the Courtney Campbell Causeway (including the Airport Interchange) are of major concern because of the existing traffic volumes and the importance of this segment as the southern terminus for the proposed Northwest Expressway. For the proposed expressway all segments will operate at L.O.S. D or better with service at or approaching L.O.S. A for the majority of the day.



TRAFFIC DEMAND YEAR 2010 AND LEVELS OF SERVICE
LAKE LECLARE ALIGNMENT

FIGURE 6-1



LEGEND

48 – YEAR 2010 AVERAGE DAILY TRAFFIC (IN THOUSANDS)

B – LEVEL OF SERVICE (LOS)

TRAFFIC DEMAND YEAR 2010 AND LEVELS OF SERVICE
RAILROAD ALIGNMENT

FIGURE 6-2

As the expressway proceeds north of Hillsborough Avenue, the level-of-service goes from D just south of Waters Avenue to B north of Linebaugh Avenue to A at Van Dyke Road. This increase in level-of-service (due to decrease in projected ADT) is expected as the expressway traverses the more undeveloped areas of northern Hillsborough County.

Each of the project alternatives would serve larger volumes than the "No-Build" alternative. As previously discussed in Subsection 4.2.1 and shown in Figure 3-2, many of the roadways in the northwest area have traffic volumes exceeding existing capacity. Without the proposed expressway and major improvements to the County road network, deficiencies in capacity on most of the existing roadways will continue to magnify. By the year 2010, many of the roadways in the northwest area will operate at Levels of Service E (unstable flow) and F (forced flow), presenting severe congestion.

6.1.4 Stage Construction

A project of the magnitude discussed in this report requires large expenditures for right-of-way and construction. Though the traffic generated by the expressway will warrant its full implementation this amount of use may not be realized on all segments for several years after completion of construction. Therefore, staged construction of the expressway may be considered to save on the initial investment yet service the transportation demands of the present and future.

Stage construction would consist of the purchase of all right-of-way required for the project. This is done to reserve that land which would be utilized for future expansion. The full width expressway would be built to a point where traffic projections dictate the need for that type of facility in the year of completion. In the case of the proposed Northwest Expressway, that segment would be from I-275 to the Linebaugh Avenue interchange. From this point north only two lanes of the mainline expressway would be built initially. However, all overpasses and ramps would be fully developed to maintain free flow and to control access. Also certain drainage appurtenances and embankments may be placed to expedite future construction.

Stage construction is a concept which will need to be addressed fully at the time the Expressway Authority begins to identify and quantify the means of financing the facility. The Authority could realize an initial investment savings of approximately 30 percent on construction costs, yet still provide an adequate level-of-service on all segments of the Expressway.

6.1.5 Estimated Project Costs

One of the primary criteria of evaluating alignments is cost comparison. For this project, the estimated capital cost of providing the roadway, hereinafter referred to as project cost, must be evaluated.

Estimates of project costs were made for each of the previously described alignment alternatives using the proposed typical sections shown in Figures 4-1 thru 4-6. Project cost is the summation of the various expenditures anticipated in administering, planning, engineering, acquiring of right-of-way, construction and related incidental items associated with the development of an expressway project. These costs are broken down for each Alignment in Table 6-2.

The estimate of construction cost is based upon quantities taken from preliminary plans. Calculations were made for earthwork, pavement and bridge quantities. Additionally, the linear footage of retaining wall and concrete median barrier were estimated. Current unit prices for these items of work from similar type projects were tabulated. The costs of incidental items were estimated based upon percentages of the major items.

The estimates for right-of-way and relocation costs were prepared by the Florida Department of Transportation. These estimates were made based upon the square footage of taking and using land values supplied by local realtors. The estimates have been adjusted to provide for condemnation proceedings and other contingencies.

Table 6-2 has been developed separating the costs into three segments. First, is the Eisenhower/West Alignment from I-275 on the south to Hillsborough Avenue. Second, is the extension of Eisenhower/West from Hillsborough Avenue to a point approximately 3,000 feet south of Gunn Highway. Third, is the two northern alternatives, the Lake LeClare Alignment to the east and the Railroad Alignment to the west with either the North Termini or South Termini. These northern alternatives begin 3,000 feet south of Gunn Highway and end at Dale Mabry Highway. To arrive at a project cost for the entire length, the two Eisenhower/West Alignment costs are added to either one of the Railroad or Lake LeClare Alignment Alternatives, see Table 6-3 for alignment combinations.

The cost of Eisenhower/West Alignment, south of Hillsborough Avenue, is $73,620,000. The primary costs are due to construction of the proposed six-lane and eight-lane sections, the extensive frontage road system and major reconstruction of all existing interchanges (I-275, Tampa Airport, Spruce Street, Courtney Campbell Causeway, Independence Parkway, Memorial Highway, and Hillsborough Avenue). The cost of right-of-way is comparatively

TABLE 6-2

NORTHWEST HILLSBOROUGH EXPRESSWAY
PROJECT COST
($1000's)

ALTERNATIVE ALIGNMENTS	FROM	TO	1984 CONST COSTS (x1000)	ENGINEER SUR & TEST (15%)	ADMIN. LEGAL,AUD & FINANCE	CONTIN-GENCIES (15%)	FDOT R/W ESTIMATE (x1000)	FDOT RELOC. ESTIMATE (x1000)	1985 PROJECT COSTS (x1000)	1988 COSTS 8% PER YR (x1000)
EISENHOWER	I-275	HILLSBOROUGH	29,000.00	4,350.00	200.00	5,050.00	19,666.00	180.00	58,446.00	$73,624.43
EISENHOWER	HILLSBOROUGH	GUNN HWY	32,064.00	4,809.60	100.00	5,531.04	27,939.00	1,072.00	71,515.64	$90,088.25
LAKE LECLARE W/NOR. TERMINI	GUNN HWY	DALE MABRY	35,572.00	5,335.80	100.00	6,136.17	22,241.00	936.00	70,320.97	$88,583.33
RAILROAD W/NOR. TERMINI	GUNN HWY	DALE MABRY	36,690.00	5,503.50	100.00	6,329.03	17,197.00	931.00	66,750.53	$84,085.64
LAKE LECLARE W/SOU. TERMINI	GUNN HWY	DALE MABRY	35,138.00	5,270.70	100.00	6,061.31	22,141.00	936.00	69,647.01	$87,734.33
RAILROAD W/SOU. TERMINI	GUNN HWY	DALE MABRY	36,256.00	5,438.40	100.00	6,254.16	17,097.00	931.00	66,076.56	$83,236.64

TABLE 6-3

PROJECT COSTS
ALIGNMENT COMBINATIONS

ALIGNMENT COMBINATION	COSTS
Eisenhower/West - Lake LeClare/North Termini	$252,300,000
Eisenhower/West - Railroad/North Termini	$247,800,000
Eisenhower/West - Lake LeClare/South Termini	$251,400,000
Eisenhower/West - Railroad/South Termini	$246,900,000

low due to the utilization of an existing corridor (Eisenhower Boulevard) and the proposed use of existing Tampa International Airport right-of-way on the east side of the project. The right-of-way required along the west side of the airport varies from 50 feet to 120 feet wide.

The northern segment of the Eisenhower/West Alignment, which is estimated to cost $90,090,000, consist of a four lane section. A major portion of the proposed right-of-way cost is accounted for in the acquisition of 32 homes in the Southern Comfort neighborhood just north of Hillsborough Avenue. Also in the same vicinity are several industrial warehouses and other commercial buildings which will need to be acquired.

The Railroad Alignment with North Termini project costs are estimated at $84,090,000, or $4,490,000 less than the Lake LeClare Alignment cost of $88,580,000. The main differences between the two costs are the Railroad Alignment is $5,050,000 less for right-of-way and relocation and $1,480,000 more for construction, engineering and contingency. The Railroad Alignment is longer, therefore more construction and engineering costs are involved; however, with the more extensive use of the abandoned railroad property and the present development occuring within the Lake LeClare Alignment, the right-of-way costs are less. The same differences in project costs also are estimated using the South Termini Alignment alternative.

The alignment combination project costs as shown in Table 6-3 vary from $246,900,000 for the Eisenhower/West-Railroad/South Termini to $252,300,000 for the Eisenhower/West-Lake LeClare/North Termini.

6.1.6 Special Construction and Maintenance Problems

All of the Alternatives will have impacts on the traffic service both during and after construction. During construction, access problems to businesses and residences can be anticipated as well as slow moving traffic in the areas of construction. However, since each corridor is planned to be in a new right-of-way except for the I-275 to Hillsborough Avenue segment, few businesses or residents will experience long term or extensive detouring. After construction, access problems to existing facilities should be minimal since the principal roads will have interchanges and the other key roadways will be overpassed or rerouted.

The Eisenhower/West Alignment south of Hillsborough Avenue has perhaps the greatest potential problem with maintaining traffic on S.R. 60 and Eisenhower Boulevard during construction. Special consideration will have to be given to this area to maintain access to Tampa International Airport, the businesses along Eisenhower Boulevard and the high volume flows on Eisenhower Boulevard to Courtney Campbell Causeway, Independence Parkway, Memorial Highway, and Hillsborough Avenue. The most feasible

approach would be to build the proposed frontage road system, particularly on the west side, transfer the traffic to the frontage roads, then construct the expressway mainline and ramp improvements.

Once north of Hillsborough Avenue, construction will principally be within new right-of-way and should therefore have few localized problems. All maintenance of traffic and construction scheduling will follow normal procedures per FDOT standard construction specifications. This means present access to homes and businesses shall remain open except for short periods of time. Also there will be increased noise and dust levels associated with the construction which will be monitored. Currently, there are measures used to minimize these impacts.

Once construction is complete there will be only minor routine maintenance which is common for projects of this magnitude. The maintenance operations include landscape upkeep and periodic mowing, normal roadway and bridge repairs, and asphaltic overlay of the existing pavement. Building and toll collection equipment maintenance will be required to ensure smooth operations at both the mainline toll plazas and ramp toll booths for that portion of the project (Hillsborough Avenue northward) which is anticipated to be toll financed. It is anticipated that the expressway south of Hillsborough Avenue will be constructed with federal funds, therefore, routine maintenance on roadways and bridges is required.

6.1.7 Summary of Traffic and Engineering Factors

A summary of the comparative evaluation of traffic and engineering factors is shown in Table 6-4. The table has been divided into two segments for comparative purposes, I-275 to 3,000 feet South of Gunn Highway and 3,000 feet south of Gunn Highway to Dale Mabry Highway. The latter section includes both the comparison of the North and South Termini alternatives.

6.2 COMMUNITY IMPACT FACTORS

6.2.1 Social and Economic Impacts

6.2.1.1 Neighborhoods and Communities

The proposed project would pass through or adjacent to a number of neighborhoods for each of the alternative alignments. Figure 6-3 shows the generalized location of neighborhoods in the vicinity of the proposed expressway. The impacts on the neighborhoods affected by each alternative is described below:

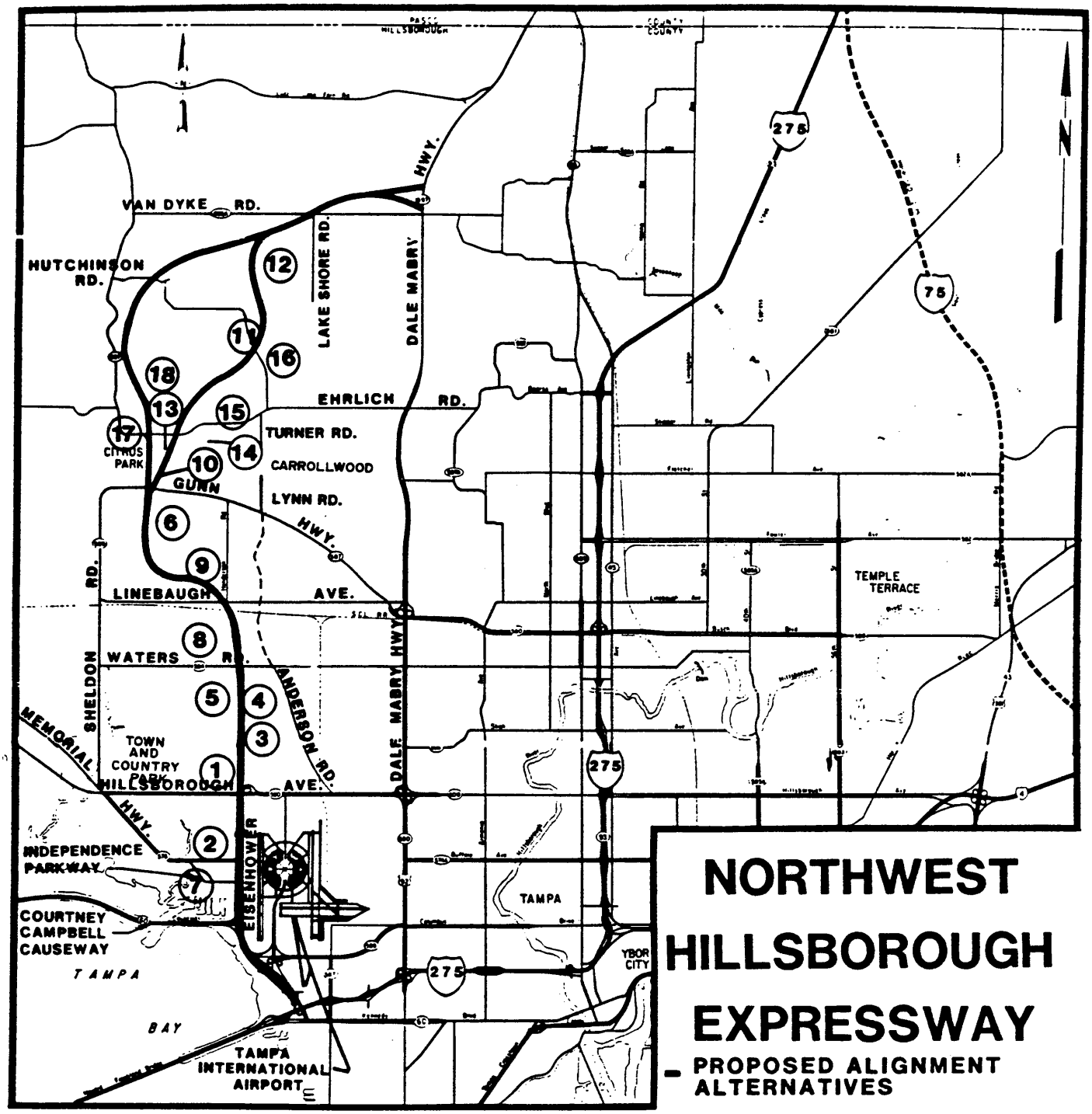
6.2.1.1.1 Eisenhower/West Alignment (I-275 to South of Gunn Highway)

The most severely affected neighborhood is the Southern Comfort Homes residential subdivision located just north of Hillsborough Avenue. The Expressway and frontage road would take thirty-two

TABLE 6 - 4

SUMMARY OF TRAFFIC AND ENGINEERING FACTORS

Factors/Alternative	I-275 to 3,000 Feet South of Gunn Hwy. No Build	I-275 to 3,000 Feet South of Gunn Hwy. Eisenhower/West	3,000 Feet South of Gunn Hwy. to Dale Mabry Hwy. No Build	3,000 Feet South of Gunn Hwy. to Dale Mabry Hwy. Lake LeClare North	3,000 Feet South of Gunn Hwy. to Dale Mabry Hwy. Lake LeClare South	3,000 Feet South of Gunn Hwy. to Dale Mabry Hwy. Railroad North	3,000 Feet South of Gunn Hwy. to Dale Mabry Hwy. Railroad South
Design Characteristics	2,4 and 6 laned roadways highly congested, unrestricted access and interchanges and intersections with major restrictions	4, 6 & 8 laned expressway, limited access with interchanges and frontage roads and interchange improvements	2 and 4 laned rural roadways highly congested, unrestricted access and intersections with major restrictions	4 laned expressway, limited access with interchanges and improvements		some intersection improvements	
Length (Miles)	Similar to expressway routing length	8.62	Similar to expressway routing length	8.18	8.01	8.85	8.68
Traffic Service	Unstable and forced flow on major existing roadways	Improve Traffic flow on major roadway I-275 to Hillsborough Avenue and competing roadways	Unstable and forced flow on major existing roadways	Improve traffic flow on major existing roadways, higher traffic volumes		Improve traffic flow on major existing roadways, lower traffic volumes	
Costs (000)							
Construction	Undetermined amount of costs would be incurred in future	$ 61,064	Undetermined amount of costs would be incurred in future	$35,572	$35,138	$36,690	$36,256
R/W & Reloc.		48,857		23,177	23,077	18,128	18,028
Engineering, etc.		9,460		5,436	5,371	5,604	5,438
Contingincy & Escalation		44,332		24,398	24,148	23,664	23,515
PROJECT COSTS		$163,713		$88,583	$87,734	$84,086	$83,237
Special Construction and Maintenance Problems	Higher maintenance required on existing roadways	Major consideration for maintenance of traffic during construction on Eisenhower Boulevard, no other special construction or maintenance problems	Higher maintenance required on existing roadways	Localized minor maintenance of traffic problems during construction primarily on cross streets, no other special construction or maintenance problems			



LEGEND

1. Southern Comfort Homes
2. Benjamin's Farm Subdivision (Unit No. 8)
3. Barry's Subdivision
4. Sitka/Ann Bullard Road Neighborhoods
5. Twelve Oaks
6. Green Grass Acres Subdivision, Second Addition
7. Dana Shores
8. Deerfield
9. Henderson Road (Units 4 and 5)
10. Mannattan Park
11. Half Moon Lake Estates
12. Lake Helen Area
13. Woodbriar West
14. Carrollwood Lakes
15. Sugarwood
16. Country Place West (Unit II)
17. Citrus Park
18. Peterson Road/Copeland Road

EXISTING NEIGHBORHOOD LOCATION MAP

FIGURE 6-3

homes in the southeastern fringe of this subdivision, although leaving the remainder of the development (over 200 homes) as a cohesive viable neighborhood with no changes in future land use anticipated. The Expressway would not adversely alter accessibility to community facilities for the remaining residents. Upon completion of the project, the neighborhood could be expected to continue to function as it does at the present time.

Benjamin Farm's Subdivision, Unit No. 8, located in the vicinity of Jarvis Street and Eleanor Drive at Eisenhower Boulevard, would be impacted. This older mixed use development has evolved into a predominently commercial area of small businesses with a declining residential presence. The Expressway removes one home and five small businesses on the eastern fringe without causing a change in the overall character of this area.

Eight homes, including three mobile homes, located on the western fringe of Barry's Subdivision would be taken by the Expressway. These are located in the vicinity of Turnmor Drive (4), Flora Avenue (3), and on Barry Lane (1) near the Channel "G" drainage canal. The remainder of the subdivision to the east would not be impacted adversely as to cohesiveness or accessibility to existing or proposed community facilities.

Two pockets of homes located in the semi-rural area of Sitka Road and Ann Ballard Road would be severely impacted. Eleven of the thirty-one homes located in these clusters would be taken for right-of-way. The Expressway would isolate one home from remaining neighboring homes in the Ann Ballard Road area and do the same for three existing homes along Sitka Road.

Along the abandoned railroad in the vicinity of Gardner Road, seven homes would be taken from the Green Grass Acres Subdivision Second Addition. The Expressway will not adversely affect cohesiveness of this area as the railroad right-of-way which predates the subdivision already divides the first and second additions. Gardner Road, the sole improved road connecting these subidivisions, would remain open.

Other neighborhoods located in close proximity to the Expressway, but not affected by takings of properties or by reduction of neighborhood cohesion, include Dana Shores, Deerfield, Twelve Oaks, and Henderson Road (Units 4 and 5). Also, in close proximity are two new developments discussed in the following Subsection 6.2.1.2, "Existing and Proposed Developments".

In summary, six residential neighborhoods would be encroached upon by the proposed project. Two small residential areas, located on Sitka Road and Ann Ballard Road, would be split by the project thereby affecting twenty remaining homes in these neighborhoods. Accessibility to community facilities for these semi-rural neighborhoods would remain as at present. Other neighborhoods

encroached upon, or located near, the Expressway would not be adversely affected as to their cohesiveness or accessibility to community facilities and services.

6.2.1.1.2 Lake LeClare Alignment (South of Gunn Highway to Dale Mabry Highway Including North Termini and South Termini Alternatives)

Neighborhoods encroached upon by the proposed project on the Lake LeClare Alignment include Manhattan Park, Half Moon Lake Estates, and the Storm Road area.

Most severely impacted is the Manhattan Park area which would have thirty-one residences taken. Twenty-three of these are located on the eastern fringe of the Manhattan Park subdivision north of Gunn Highway. The remainder of the subdivision, over 50 residences, would remain an undivided cohesive neighborhood. Other homes taken in this area would be located just south of Gunn Highway, which is semi-rural in nature rather than a formally platted subdivision. Ten of these homes would be separated from the remainder of the Manhattan Park area by the Expressway, but access would remain via Gunn Highway as it is today. The Manhattan Park area would be expected to remain a viable residential community enhanced by improved access via the interchange at Gunn Highway.

The Half Moon Lake Estates area would be impacted by the taking of five homes east of Hutchinson Road leaving the lakeside remainder of this semi-rural subidivision as a cohesive neighborhood. Access of this area to the larger communities of Northwest Hillsborough County would be enhanced by the Hutchinson Road interchange nearby.

In the vicinity of Storm Road west of Tobacco Road three homes would be taken in this large lot, semi-rural area. The Expressway will separate fifteen homes located along Tobacco Road from over forty homes surrounding Lake Helen and Lake Zelma; although, Storm Road, presently the sole roadway linking these areas, will continue to provide access. Lake LeClare Road will be bridged and will therefore provide access between the two separated areas. This separation is not expected to diminish the viability of this community.

The Expressway would be located close to the subdivisions of Woodbriar West, Carollwood Meadows (Unit XI), Sugarwood Grove and Country Place (Unit II), but would not cause takings of properties.

No neighborhoods or communities would be affected by the North Termini and South Termini alternatives.

In summary, the Lake LeClare Alignment splits and severely impacts the Manhattan Park and Half Moon Lake Estates subdivisions and the semi-rural residential area in the vicinity of Storm Road.

6.2.1.1.3 Railroad Alignment (South of Gunn Highway to Dale Mabry Highway Including North Termini and south Termini Alternatives)

The proposed Railroad Alignment encroaches on two residential areas: Citrus Park and the Peterson Road/Copeland Road vicinity.

Citrus Park is a broadly defined unincorporated area comprised not only of a formally platted subdivision of that name, but much of the surrounding area commonly known as Citrus Park. The Expressway would split the Subdivision approximately in half in terms of the number of residential units affected. Eighteen homes in the subdivision would be taken, leaving over 60 homes on either side of the project. Access between these two halves would be reduced from four minor local streets to Ehrlich Road, an arterial highway. Ehrlich Road would also entail the construction of a proposed interchange which diminishes the accessibility between the two areas. In effect, two neighborhoods would be created.

Citrus Park, viewed from a broader geographic and social perspective, is a community rather than a purely residential neighborhood. Because it predates most other development in this part of the County, through the years it has evolved beyond the neighborhood subdivision to a community which includes a community/recreation center, an elementary school, a church, and a number of small businesses.

The Expressway would not take or encroach upon the Citrus Park community serving facilities. The community would remain a cohesive viable area, complete with facilities, to the west of the Expressway. The residents east of the roadway would still have access to the community facilities, as discussed above, with access restricted to Ehrlich Road.

In the general semi-rural area of Peterson Road and Copeland Road twelve homes would be taken. The Expressway splits this area but would not be expected to substantially alter these areas. Access along both roadways would continue to link these homes and small farms.

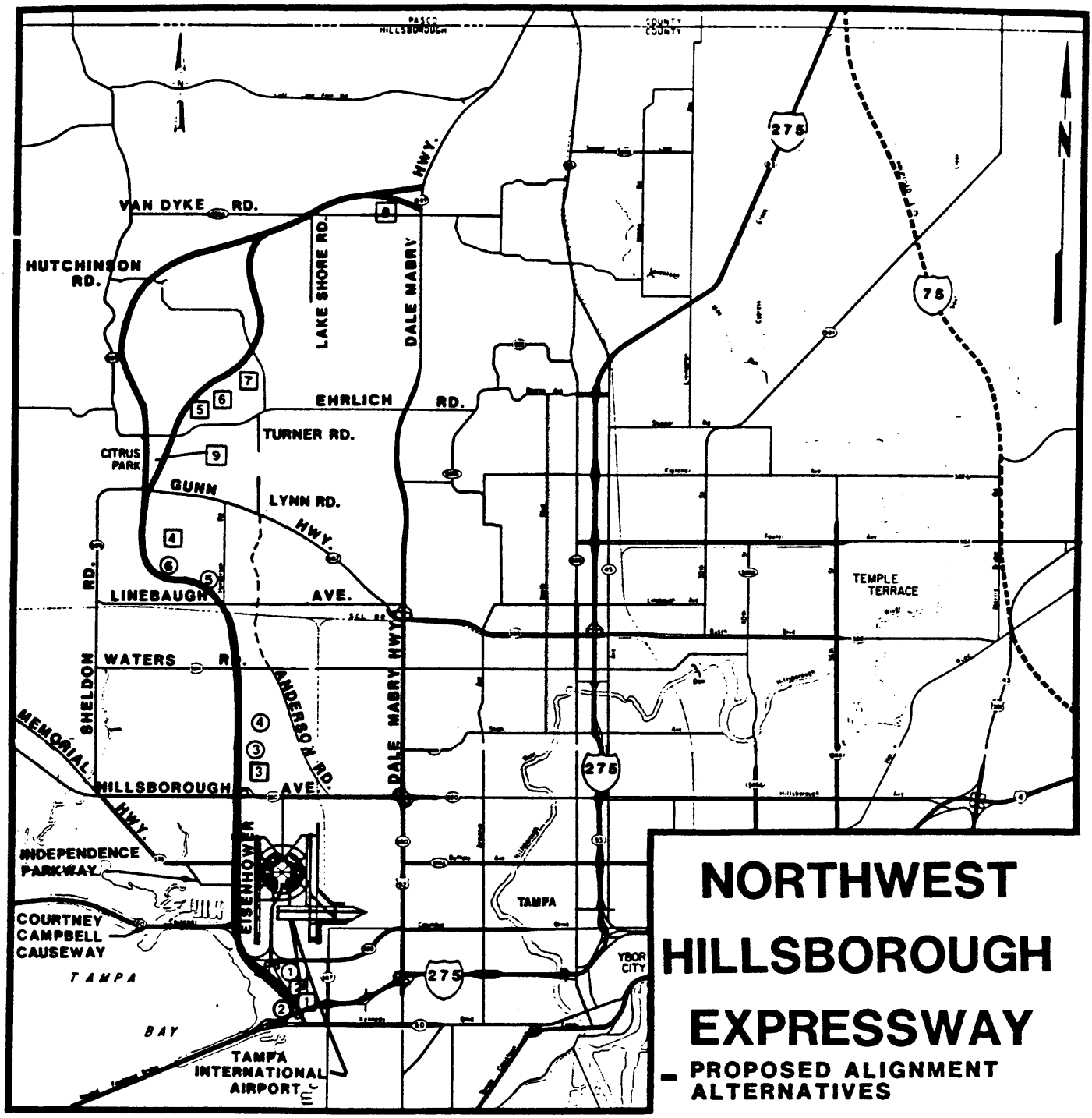
In summary, the Railroad Alignment splits Citrus Park and the Peterson Road/Copeland Road area with severe impact on the Citrus Park subdivision.

6.2.1.2 Existing and Proposed Developments

6.2.1.2.1 Eisenhower/West Alignment (I-275 to South of Gunn Highway)

This portion of the proposed project, south of Gunn Highway, affects numerous existing and proposed new developments in addition to those discussed in "Neighborhoods and Communities," Subsection 6.2.1.1.

The developments discussed in this section are noted on the map entitled, "Existing and Proposed Developments," Figure 6-4.



LEGEND

○ EXISTING

1. Color Corporation of America and the Colony Office Building
2. Corporate Oaks Office Complex
3. Businesses on Johns Road
4. Stuttenburg Paving Co.
5. Airstrip
6. Hillsborough County, Northwest Landfill Site

□ NEW / PROPOSED DEVELOPMENTS

1. Centrepoint Office Building
2. Cypress Commons Office Building
3. Thompson Center
4. Rocky Creek Subdivision
5. Turtle Creek Subdivision
6. Eastbrook Subdivision
7. Mandarin Lakes Subdivision
8. Calusa Trace
9. Citrus Run

EXISTING AND PROPOSED DEVELOPMENTS **FIGURE 6-4**

Along Eisenhower Boulevard, between Interstate 275 and Columbus Drive, the Expressway will require the relocation of a frontage road serving new commercial buildings east of Eisenhower Boulevard. None of the buildings or their parking areas will be taken by the proposed expressway. Alternative access to these properties will be provided through improvements to the existing street system. The Corporate Oaks office complex at Cypress Street on the west side of Eisenhower Boulevard will be impacted by the taking of some parking spaces and landscaped areas.

In addition, the proposed expressway would encroach upon the western edge of Tampa International Airport property owned by the Hillsborough County Aviation Authority. The frontage along Eisenhower Boulevard would be taken to a depth of approximately 80 feet increasing to 120 feet at the proposed interchange at Memorial Highway. This would result in the relocation of a perimeter roadway located on airport property and a fire station.

North of Hillsborough Avenue the Expressway impacts the new 6308 and 6206 Buildings of Thompson Center, a multi-building warehouse/office complex fronting Benjamin Road, by taking circulation and parking areas on the west side of the buildings. Also, a planned 20,000 square foot building would be separated from this complex by the Expressway. In the vicinity of Johns Road two small businesses would be taken, a paving company would be partially taken, and at Waters Avenue two small businesses would be dislocated.

North of Linebaugh the Expressway would pass through a more rural area. Among scattered homes and portions of farms that would be taken is a private airstrip north of Linebaugh Avenue. A portion of the Hillsborough County Northwest Landfill detention pond situated east of the railroad right-of-way would be traversed. Approximately 100 feet of the western edge of the proposed Rocky Creek subdivision would be taken; however, no construction activity has yet occurred on this property.

In summary, the most severe impact occurs between Interstate 275 and Waters Avenue where a parking lot for a new commercial office building will be partially taken; the building will not be displaced. The character, functioning and vitality of the immediate surrounding areas should in no way be diminished by the development of the project. It should be noted that the identified commercial takings, as well as the airport property taking, are necessary for development of this project.

6.2.1.2.2 Lake LeClare Alignment (South of Gunn Highway to Dale Mabry Highway Including North Termini and South Termini Alternatives)

The Lake LeClare Alignment would encroach upon five new and proposed developments.

Along the Lake LeClare Alignment in the vicinity of Bellamy Road north of Ehrlich Road, the subdivisions of Turtle Creek, Eastbrook, and Mandarin Lakes would be encroached upon by the Expressway.

In the planned Turtle Creek Subdivision, 2 homes of this 135 unit single family development would be taken. These homes would be located on the Southeastern fringe adjacent to Bellamy Road. The remainder of the subdivision would not be encroached upon by the Expressway.

The Eastbrook Subdivision, now under construction, would be split by the roadway with 21 homes taken of the planned 97 homes. Approximately 250 feet of frontage road constructed would provide adequate circulation for the portion of the subdivision north of the proposed roadway. In addition, 4 homes, when built, would be taken on the northeast fringe of the subdivision.

In the planned 144 unit Mandarin Lakes Subdivision 36 homes, when built, would be taken by the Expressway.

In the vicinity of Hatton Road the proposed subdivision of Westwind Lakes could be severely impacted. At the time of preparation of this report a subdivision plat has not been filed with Hillsborough County. Along the eastern side of the subdivision a number of homes would likely be taken.

In addition, the proposed 596 acre mixed use development of Calusa Trace at Van Dyke Road and Dale Mabry Highway would be impacted by both the Lake LeClare and the Railroad alternatives, although the preliminary concept plans available at the time of this report would indicate that the project probably could be designed to accommodate the Expressway for either the North Termini or South Termini alternatives.

6.2.1.2.3 Railroad Alignment (South of Gunn Highway to Dale Mabry Highway, Including North Termini and South Termini Alternatives)

The Railroad Alignment would not encroach upon any approved new or proposed subdivisions with the exception of Calusa Trace, discussed above in Subsection 6.2.1.2.3.

6.2.1.3 Travel Patterns and Accessability

The northwest section of Hillsborough County serves primarily as a bedroom community to the more industrial/business based areas to the south and east. This is readily evident upon inspection of existing land use and projections by the Hillsborough County City-County Planning Commission.

This type of intense residential development tends to create heavy peak hour traffic volumes both in the morning and afternoon. The major east-west arterials including Hillsborough Avenue, Waters Avenue, Linebaugh Avenue, Gunn Highway, and Ehrlich Road are stressed over capacity during these times. In addition, the major north-south routes, Dale Mabry Highway and to a lesser extent Sheldon Road, are loaded beyond capacity with commuters trying to go to and from work in the downtown and Westshore areas. These existing travel patterns lead to long delays and unsafe operation. Even with the improvements underway, see Subsection 4.2.3, the major intersections in the area will still cause severe congestion.

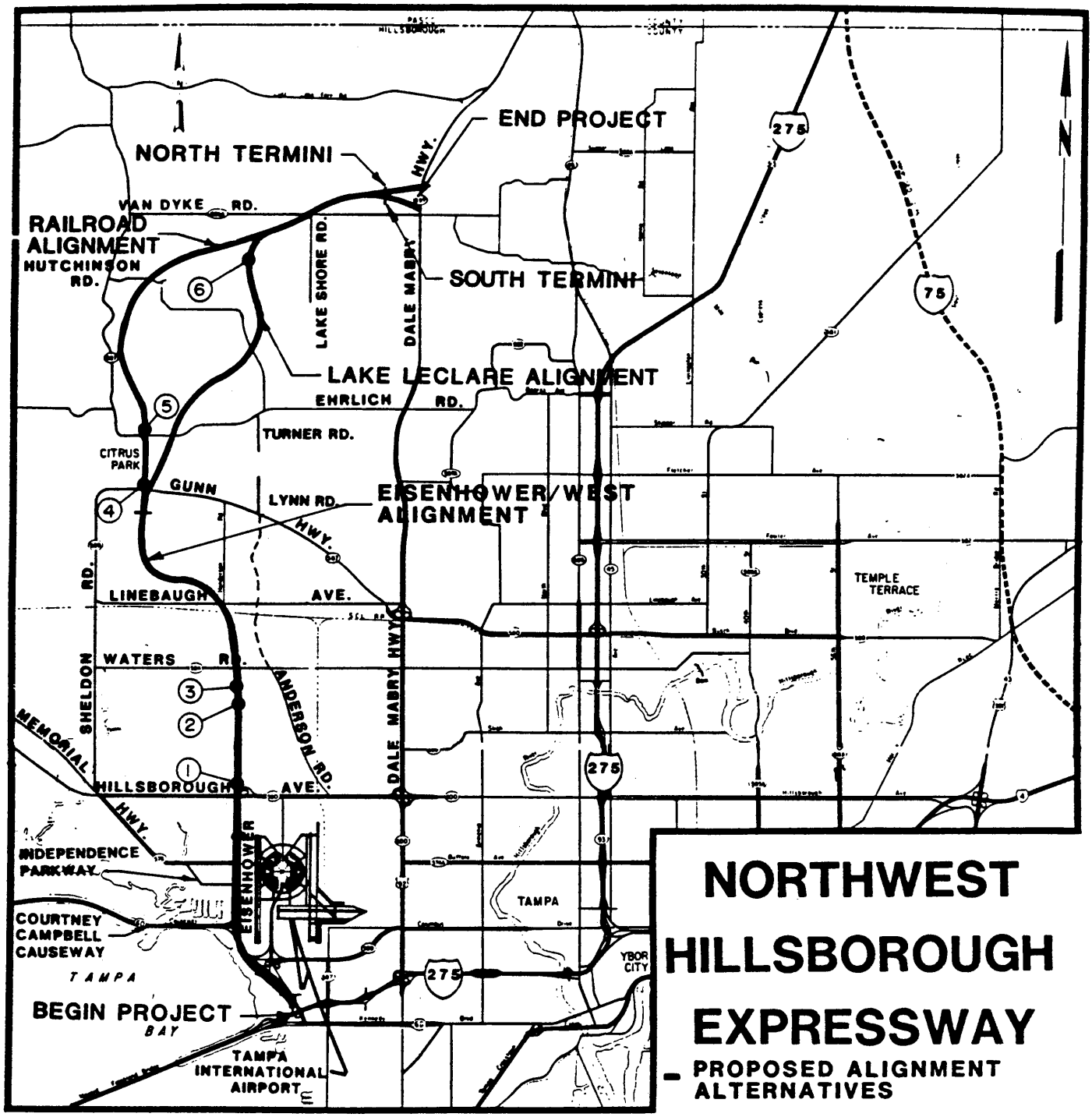
The project would provide an alternate route to those work generation points like the Central Business District downtown and the Westshore office and commercial center, thereby taking traffic off Dale Mabry Highway and Sheldon Road in the north-south direction. In addition, the traffic on the major east-west roads would be redirected as people travel towards the project. Usage of the Expressway would encourage shorter trips on these roads and probably result in a more even directional distribution (percent of cars travelling in one direction). As a side effect, the intersections of these roads with Dale Mabry will become safer as a result of less congestion at these points.

The proposed project is planned to be in a new right-of-way corridor north of Hillsborough Avenue; therefore, existing road closures will be kept to a minimum. The following are a list of roads to be closed and measures which will be taken to mitigate these closures. These roads are shown in Figure 6-5, "Existing Road Closures".

6.2.1.3.1 Eisenhower/West Alignment

1) Southern Comfort Boulevard/Frontage Road (north side of Hillsborough Avenue)
   This road provides access between the Southern Comfort neighborhood on the west and Benjamin Road on the east. This movement may still be made by using Hillsborough Avenue. Also, Johns Road connects Benjamin Road and the Southern Comfort development about 2/3 of a mile north of this point.

2) Ann Ballard Road (north of Barry Road)
   This is a residential road servicing those homes fronting on it. Access is readily available on Barry Road.



NORTHWEST HILLSBOROUGH EXPRESSWAY

– PROPOSED ALIGNMENT ALTERNATIVES

LEGEND

① SOUTHERN COMFORT BLVD./FRONTAGE ROAD
② ANN BALLARD ROAD
③ SITKA ROAD
④ EDGEMERE ROAD
⑤ ALLMARK AND ALVENA STREETS
⑥ STORM ROAD

EXISTING ROAD CLOSURES

FIGURE 6-5

3) Sitka Road
This is a local deadend road providing access to several residents. An alternate route will be constructed on the west side of the Expressway from Sitka Road south to Ann Ballard Road.

6.2.1.3.2 Lake LeClare Alignment

1) Storm Road (east of Tobacco Road)
This is a lightly travelled residential road servicing those homes fronting on it. Access to these homes will be along the existing Storm Road. From the east, Storm Road will continue to be accessed from Lake Shore Road. From the west, access will be from Tobacco Road.

6.2.1.3.3 Railroad Alignment

1) Edgemere Road (north of Gunn Highway - Sheldon Road intersection)
This is a local road providing access from North-South Gunn Highway into the Manhattan Park Subdivision. Access will be restricted to the existing entrance off Pulitzer Road at Gunn Highway.

2) Allmark Street and Alvena Street (north of Ehrlich Road)
These two local residential neighborhood roads are used principally by residents fronting on the road in Citrus Park Subdivision and for access between the east and west areas of the subdivision. An alternative route of access between the east and west sides would be via the arterial roadway of Ehrlich Road/Gunn Highway. The interchange at Ehrlich Road would somewhat impede travel between the two areas.

That portion of the proposed expressway to be constructed within the existing corridor (I-275 to Hillsborough Avenue) will have free access frontage roads to service those homes and businesses adjacent to it. Though some local trips may be longer in distance, this should be offset by the ease of movement created by the greater capacity offered by the project in conjunction with the frontage road system.

6.2.1.4 Public Utilities

The complete range of utility services, including water, electric, sanitary, gas, telephone and telecommunication cables, are encountered throughout each alignment alternative. The local service lines, either overhead or underground, are found principally within existing roadway rights-of-way and generally will easily be relocated nearby. Plans of the proposed alignment alternatives were sent to the utility owners with facilities in the area. Existing and proposed major utilities were identified by the owners with potential conflicts noted. Major transmission lines which will be considered in final design of the proposed expressway were found as discussed below:

In the Eisenhower Boulevard area there are major water lines and buried electric lines which serve the Tampa International Airport. Within the abandoned railroad right-of-way a new West Coast Regional Water Supply Authority water line has recently been installed which will remain approximately 30 feet west of the edge of pavement for either the Lake LeClare or Railroad alignments roadway. The Lake LeClare Alignment alternative parallels this water line approximately 0.8 mile and the Railroad Alignment alternative parallels the water line approximately 2.5 miles. None of the wells will be encroached upon by the expressway.

Crossings under high voltage transmission tower lines will entail relocation of several towers in both the Lake LeClare and Railroad alignments. The number of towers to be relocated depends on the alignment selected and final design of the Expressway.

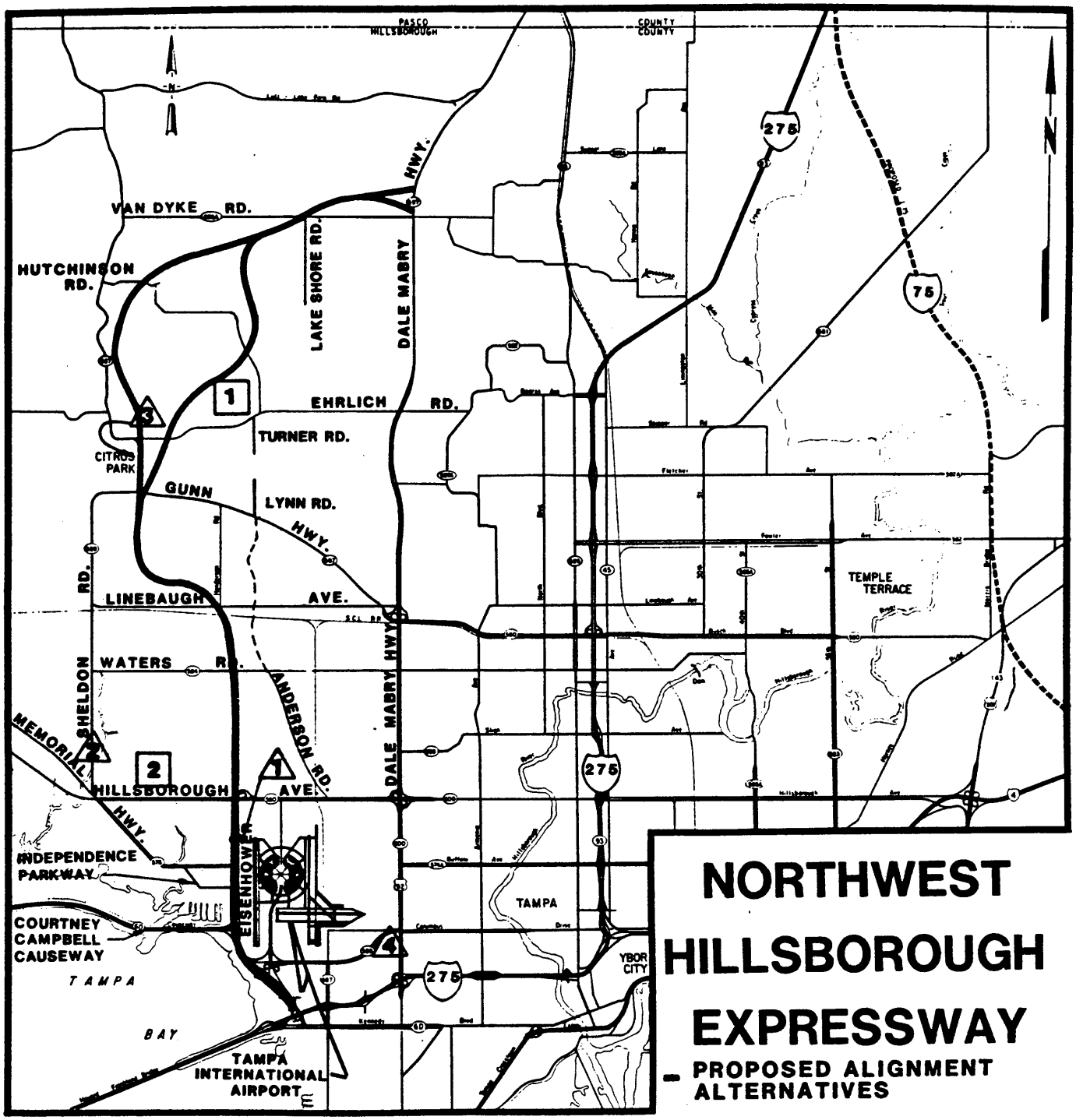
Costs for relocation of utility facilities have been considered in the total project cost estimates.

6.2.1.5 Police, Fire, and Emergency Facilities

A number of police and fire stations are located in the general vicinity of the proposed project. These are shown in Figure 6-6, "Emergency Services Facilities".

The Hillsborough County Sheriff's Department operates a sub-station at 7738 West Hillsborough Avenue. In 1985, the Department will open a sub-station at 15100 Hutchinson Road, just north of Ehrlich Road. Neither facility will be adversely impacted by the project. By using the Expressway, Law enforcement agencies will be benefited by greatly reduced response times to emergency situations. City of Tampa Police Department facilities would not be affected by the Expressway.

One fire station would be relocated because of the project. The Expressway would take the County's West Hillsborough Station located at 4601 Eisenhower Boulevard. This fire station would be replaced without reduction in the level of fire protection service provided. The operations of four other County fire stations would not be adversely affected by the Expressway, nor would the



LEGEND

LAW ENFORCEMENT FACILITIES

1. Town and Country Sub-station (County Sheriff)
2. Hutchinson Road Sub-station (County Sheriff)

FIRE STATIONS

1. West Hillsborough (Cty)
2. Memorial Highway (Cty)
3. Citrus Park (County)
4. Manhatten and Boy Scout Blvd. (City of Tampa)

EMERGENCY SERVICE FACILITIES **FIGURE 6-6**

operations of the nearest City of Tampa fire station to the project. The Expressway would reduce response time in many fire or emergency rescue situations.

At the present time there are no hospitals or emergency treatment centers in the vicinity of the proposed project. The Expressway would serve as a high speed non-stop facility linking the northwest area to hospitals in the City of Tampa. In addition, any traffic drawn to the Expressway away from other roadways in the northwest area, would enhance traffic flow for emergency vehicles on these other roadways.

Much of the highly urbanized coastal areas of Hillsborough and Pinellas Counties are in potential hurricane flood zones delineated in the National Flood Insurance Program, Federal Emergency Management Agency. The proposed Expressway would provide an alternative emergency evacuation route for hurricane induced flooding in these areas. The proposed Expressway, designed to meet 100 year flood conditions, would provide a viable high capacity egress route for the region, when many local streets and roadways near the Coastal area would be under water.

6.2.1.6 Religious, Health, Education and Cemetery Facilities

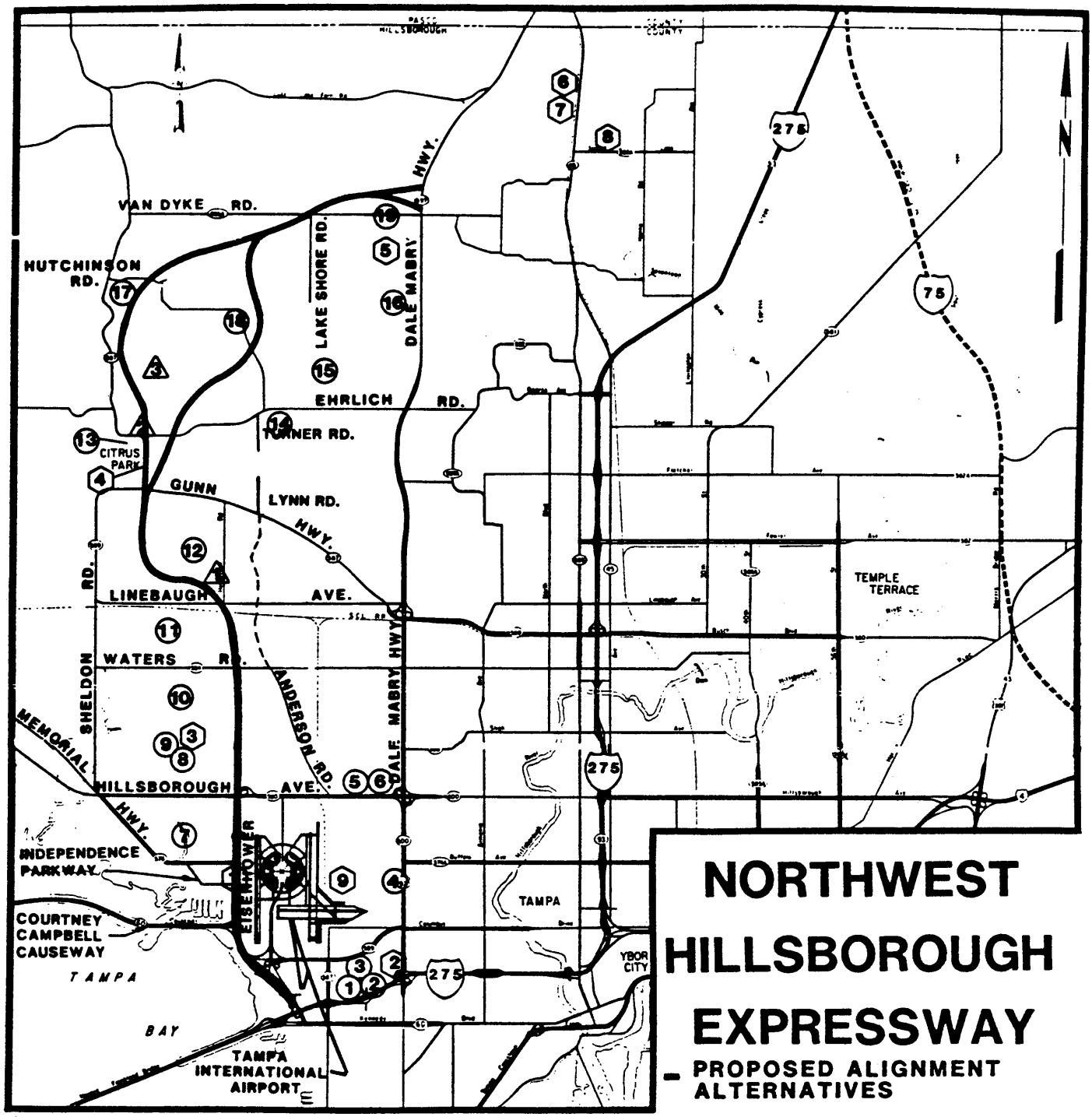
On the Eisenhower/West Alignment, the proposed expressway would not take or adversely impact any religious, health, education or cemetery facilities. Facilities of this nature located near the alignments are shown in Figure 6-7, "Schools, Institutions, Parks and Recreation Facilities".

The Keystone Missionary Baptist Church on Peterson Road would be taken or the structure would have to be relocated because of the Expressway on the Railroad Alignment.

No other such facilities would be taken on the Railroad alignment and none would be taken or adversely impacted on the Lake LeClare Alignment.

An elementary school under construction on Hutchinson Road would not be encroached upon by the Lake LeClare Alignment. Access to the school from the area east of the Expressway would continue via Hutchinson Road with pedestrian facilities provided at the Expressway crossing of this roadway. Similar pedestrian facilities would be provided at Ehrlich Road for access to Citrus Park Elementary School from residences east of the Expressway.

A United Methodist Church is under construction at the southeast corner of the intersection of Lake Shore Road and Van Dyke Road. A portion of the property would be acquired using the proposed interchange design.



NORTHWEST HILLSBOROUGH EXPRESSWAY

- PROPOSED ALIGNMENT ALTERNATIVES

LEGEND

○ SCHOOLS

1. Jefferson High
2. Roland Park Elementary
3. LaVoy Exceptional
4. Hillsborough Comm. Col.
5. Pearce Jr. High
6. Alexander Elementary
7. Dickenson Elementary
8. Town & Country Elem.
9. Webb Jr. High
10. Morgan Woods Elem.
11. Bellamy Elementary
12. Developmental Center Academy (Hearing disabilities - Private)
13. Citrus Park Elementary
14. Jr. High - AA
15. Claywell Elementary
16. Gaither High School
17. Elementary/Jr. High (Proposed)
18. Elementary under const.
19. Elementary (Proposed)

⬡ PARKS AND RECREATION

1. Skyway
2. Forest Hts. Comm. Ctr.
3. Jim Shimberg Park
4. Citrus Park & Comm. Ctr.
5. Lake Park
6. Lutz Athlte Complex
7. Lutz Memorial
8. Rye
9. Cordelia B. Hunt Rec. Ctr.

△ CHURCHES

1. Presbyterian Church of Northwest Tampa
2. First Baptist Church of Citrus Park
3. Keystone M.B. Church

SCHOOLS, INSTITUTIONS, PARKS AND RECREATION FACILITIES

FIGURE 6-7

The Expressway would abut property acquired by the Hillsborough County School Board for the possible future construction of the junior high and elementary school on Mobley Road east of Gunn Highway.

6.2.1.7 Parks and Recreational Facilities

The proposed project would not cause usage of any park or recreational facility properties.

Two park and recreational facilities are located in the immediate vicinity of the proposed alternative alignments, as shown in Figure 6-7, "Schools, Institutions, Parks and Recreational Facilities". Skyway Park, located at Eisenhower Boulevard and Dana Shores Drive, would abut the Expressway frontage road right-of-way, as it presently abuts the Eisenhower Boulevard right-of-way. The Railroad Alignment Alternative would be separated from Citrus Park by Gunn Highway which presently abuts the park. Neither park would be adversely affected by the proposed roadway as to user safety, accessibility, or functionality.

No other national, state or local park properties are located in the vicinity, therefore the proposed project will not use property from such resources and FHWA has determined Section 4(f) does not apply.

6.2.1.8 Highway and Traffic Safety

Generally, the use of a limited access expressway is much safer than the arterial roadways being replaced. The expressway will be designed and constructed in accordance with the safety criteria established for expressways. Improvements at interchanges will be made on the cross streets to provide good traffic control.

Bridges will be constructed over all cross roads and railroad tracks within the project limits except for those streets to be closed as listed in Subsection 6.2.1.3 "Travel Patterns and Accessibility". Major design changes are proposed for interchange ramps and mainline within the Memorial Highway/Eisenhower Boulevard section of the project between I-275 and Hillsborough Avenue. These improvements will greatly enhance the capacity of this segment of the expressway and will alleviate some of the present traffic conflict areas (weaving on mainline and intersection design).

6.2.1.9 Overall Public Safety

The Expressway will improve the speed with which emergency services can be provided to the area. This facility will provide an alternative to existing traffic routes that now have high accident rates, thereby improving overall traffic safety.

In addition, since much of the Bay Crest Park vicinity and other urbanized coastal areas of Tampa, Hillsborough County, and Pinellas Counties are in coastal flood hazard zones, the Expressway will provide an alternative emergency escape route during periods of heavy flooding resulting from a hurricane when many of the local roads and streets would be flooded.

6.2.1.10 Economic Impacts

The construction of the Expressway will have an immediate and direct impact on economic activity and employment. At the peak of construction activity and depending on construction schedules, as many as 200-250 construction workers would likely be employed at the project location. In addition, employment would be generated in local transport companies, suppliers, and technical service firms engaged in the project. No significant variation between Alternative Alignments is foreseen in the levels of employment created. The "No Build" Alternative would not create additional employment.

The Expressway would remove commercial and residential properties from the City and County toll rolls, thereby reducing local ad valorem tax revenues. The Eisenhower West alignment would reduce annual property tax revenue by an estimated $331,000; the Lake LeClare alignment would cause a $114,000 reduction; and the Railroad alignment would reduce such taxes by $88,000. At most, these reductions in taxes represent an insignificant amount of the total property tax billed for 1984 for Hillsborough County.

Off-setting this reduction in tax paying properties is the expectation that the Expressway will generally increase overall property values in the vicinity of each of these alignments because of improved accessability. In addition, the projected continuation of residential and commercial growth of the northwest area will also tend to drive property values higher, with or without the Expressway.

Continued development in the northwest area of the County without improved traffic circulation can be expected to dampen the commercial/industrial potential for development in the vicinity of Tampa International Airport along the Eisenhower/West Alignment. As existing thoroughfares, including Eisenhower Boulevard, continue to receive more traffic, new or expanding businesses will seek other more accessible locations, possibly outside the City and County. The "No-Build" Alternative will also restrict economic growth and employment in this area.

There is no significant difference in economic impact foreseen between the Lake LeClare and the Railroad alignments or the North and South Termini alignments.

6.2.1.11 Generalized Social Groups

Social groups that have been identified in public meetings and through the community involvement program as having concerns about adversely being impacted by the Expressway primarily include Hispanics, Blacks, and elderly citizens.

The U.S. Census of Population and Housing, 1980, discloses that in the Census Tracts through which the alignments pass, there are relatively fewer Blacks and persons over 65 as a percentage of total population of this area than these groups comprise as a portion of the total countywide population. A slightly higher proportion of Hispanics reside in this area than make up the total countywide population. Figure 6-8, "Distribution of Social Groups in Study Area" reflects the percentage of Blacks, Hispanics, and persons over 65 in the study area as compared to Countywide. Table 6-5 shows the Population by Social Groups for the Study Area and County.

There is no indication by visual inspection or available census data that the elderly, Blacks, and Hispanics would be impacted to any greater extent than any other social groups.

6.2.2 Right-of-Way Relocation Impacts

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 for this project. Included in the report is a determination of the probable availability of decent, safe, and sanitary replacement housing. The findings of this report are summarized below. The Conceptual Stage Relocation Plan, prepared by the Florida Department of Transportation, Project 10000-1531, dated April 19, 1985, has been prepared under separate cover to supplement this document.

Right-of-way that would be required, in addition to use of existing right-of-way for each alternative, is as follows: Eisenhower/West - 189 acres; Lake LeClare - 214 acres; Railroad - 198 acres; North Termini - 46 acres; and South Termini - 41 acres.

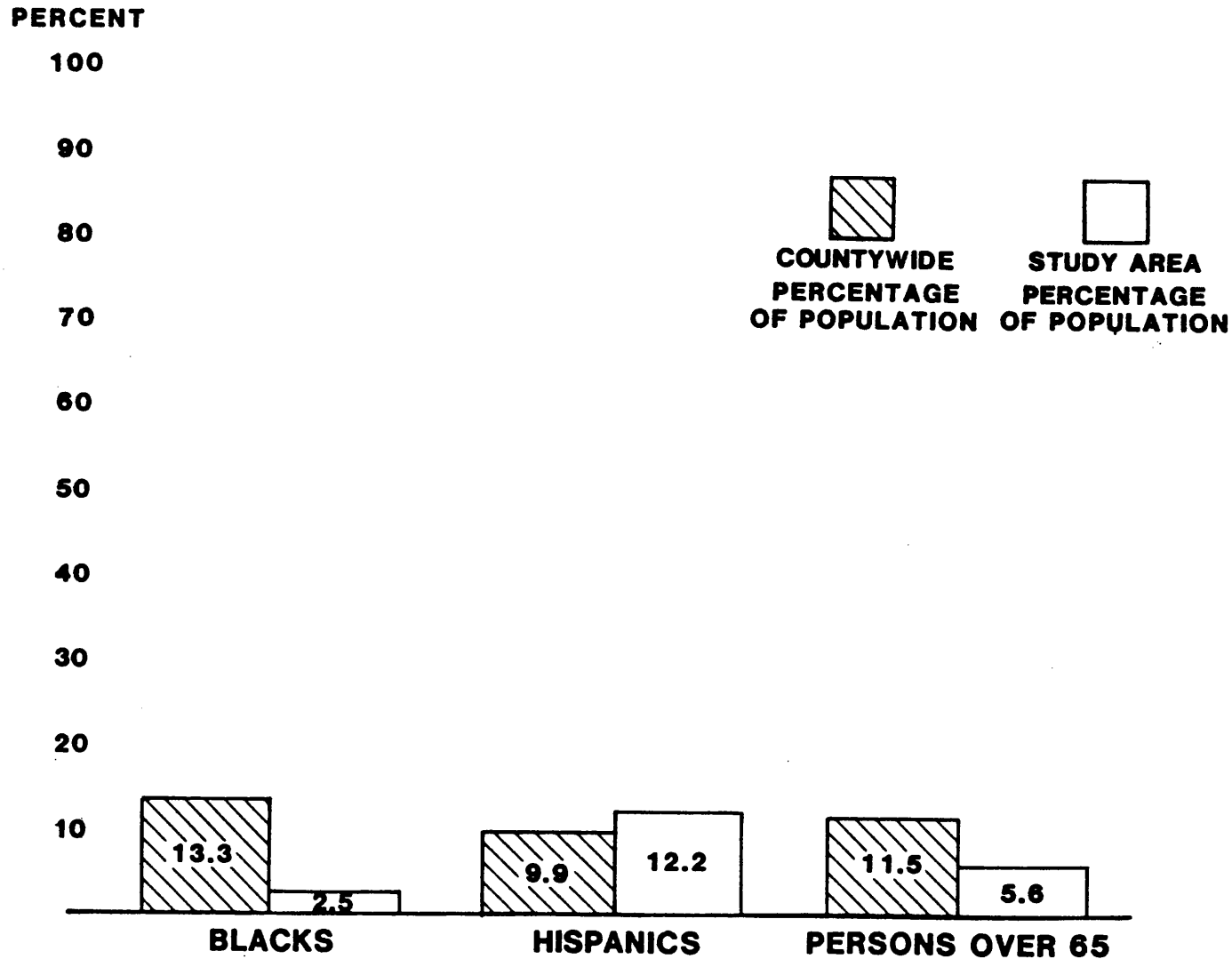
6.2.2.1 Relocation Overview

This project has been developed consistent with Title VI of the Civil Rights Act of 1964. The Hillsborough County City-County Planning Commission has established that through the Growth Management Plan and through analysis of zoning, sufficient land suitable for relocations of displaced businesses will be available

PERCENTAGE OF BLACKS, HISPANICS, AND PERSONS OVER 65 IN THE STUDY AREA

NORTHWEST HILLSBOROUGH EXPRESSWAY

HILLSBOROUGH COUNTY



Source: U.S. Census of Population and Housing, 1980 Census Tracts: 114.01,115 116.02, 116.03, and 116.05

DISTRIBUTION OF SOCIAL GROUPS IN STUDY AREA

FIGURE 6-8

TABLE 6-5

POPULATION BY SOCIAL GROUPS
NORTHWEST HILLSBOROUGH EXPRESSWAY

	Total Population	Blacks & Hispanics	Percent of Population	Over 65 Yrs.	Percent of Population
Study Area	34,287	5,057	14.7	1,931	5.6
County	646,960	150,663	23.3	74,313	11.5

Source: U.S. Census of Population and Housing, 1980.
Census Tracts 114.01, 115, 116.02, 116.03, 116.05

within the metropolitan area. Adequate resources exist in the City of Tampa Department of Housing Inspections and Community Services and the Hillsborough County Office of Community and Economic Development to assist in relocation of displaced businesses. The Hillsborough County fire station relocation would possibly be eligible for federal participation through the functional replacement of public buildings provision. Relocation of this facility is being coordinated with Hillsborough County.

Hillsborough County indicated they are willing to work with the Florida Department of Transportation on developing a time schedule and in determining the location for the replacement facility. The schedule is to pursue relocation at the earliest possible date after design of the expressway is begun so that the fire station operation will not be affected by the roadway construction.

6.2.2.1.1 Eisenhower/West Alignment

The latest U.S. Census indicates that within the immediate study area, there are approximately 6,815 persons of which 4% are Black and 5% are other minorities. Sixty-three families will be impacted by this proposal, approximately three families are of a minority race. There are approximately 1,452 home owners and 712 occupied rental units with 3.42 persons per household. The median age in this project is 26.8 while 22% are school age and 3% are 62 years of age or older. The sixty-three residential displacements will have a moderate impact on this study area mainly because approximately thirty-two (32) of the owner-occupied dwellings will be acquired from one subdivision in the Town and Country area. The seventeen (17) business displacements listed below will have little or no impact on the community.

Business Displacements

Southland Bait Shop	Real Estate Office
Fone System	Scruple Lounge
Auto Service	Texaco
Davis Brake	Travel By Design
Massaro Plumbing	Wood Yard
Art Paving	Pinos/Foreign (car repair)
Tampa Fire Station	4 Real Estate Rentals

In addition to the foregoing named displacements, certain commercial properties will be partially impacted by the taking of some parking and/or landscaping. The Corporate Oaks office complex located on the westside of Eisenhower Boulevard at Cypress Steet will have some parking and landscaping taken by the project. The Thompson Center a warehouse/office complex fronting Benjamin Road north of Hillsborough Avenue, will have parking spaces taken on the west side of the 6206 and 6308 buildings. These projects, while incurring some impact will not be displaced.

The takings and partial takings of the noted commercial properties are essential to the development of the project.

Of the sixty-three (63) residential displacements, fifty-seven or 91% are owner occupants and 9% are residential tenants. No persons are handicapped, disabled or receiving any social or specialized services. The average age of the structures is 25.5 years, the average median income is $19,016.00 a year.

Of the seventeen businesses to be displaced, four or 17% of the businesses in the study area deal with the rental of real property. The displaced businesses serve the study area and it is anticipated that all would relocate within the same area.

6.2.2.1.2 Lake LeClare Alignment

There are approximately 859 residents in this area, 48 (6%) will be displaced, of the non-residential units, 8 will be displaced. Five (5) are rental of real estate.

Within the immediate study area there are approximately 9,473 persons of which 965 are minorities or 10%. Forty-eight families will be impacted by this proposal. Seven percent of the population is 62 years of age or more, while the median age is 30.3 years; 18% of the population are school age children. The number of persons per occupied household is 3.29 and the vacancy rate is 19%. Minorities comprised 10% of the total population within the area and 2% are Black. Seventy-eight percent of all residences inventoried are owner occupied. The median income for the area is $27,248.00 a year. The displacement of forty-eight (48) residential units, eight (8) businesses will have a little impact on the residential community. The businesses in this study area listed below are rental of real estate and small businesses located within the homes.

Business Displacements

Plant Nursery
Welding
Bay Car Repair
5 Real Estate Rentals

There are forty-eight (48) residential displacements which amounts to 16% of all residential units in the study area, 13% were owner-occupants and 3% were tenants.

Approximately 7% of the people inventoried in the area are 62 years of age or older. There are no handicapped or disabled persons nor any persons receiving specialized social/medical services or assistance. The average age of the structures is 15 years. The condition of the structures ranges from good to above average.

The eight (8) businesses in the alignment represent less than 2% of the businesses inventoried. Five deal with the rental of real property. These businesses displaced are located at the residential homesite. All of the businesses displaced will be able to relocate within the immediate area.

6.2.2.1.3 Railroad Alignment

According to the latest U.S. Census, the immediate study area has approximately 10,352 persons of which 1,851 (18%) are minorities and 4% are Blacks. Fifty-eight families will be impacted by this proposal of which approximately eight (8) Black families are involved. Seven percent of the population are school age children. The number of persons per occupied household is 2.76 and the vacancy rate is 5%. Eighty-five percent of all residences within the studied area are occupied. The displacement of fifty-eight (58) residential units, seven (7) businesses listed below, and one (1) non-profit organization will have a moderate impact on the immediate community.

Business Displacements

Plant Nursery	Hogan Corner Store
Plant Nursery	Citrus Park Accounting
Citrus Park Realty	2 Real Estate Rentals
First Missionary Baptist Church	

No persons were viewed as being handicapped, disabled or receiving any social or specialized service. The average age of the structures is 14.2 years and the median income in the area is $23,908.00 a year.

Of the eight businesses to be displaced in the study area, 1 or 12% are non-profit. Two (2) of the eight (25%) deal with the rental of real property. The displaced businesses serve the neighborhood study area and it is anticipated that all would relocate within this area. Very little impact is anticipated with the business displacements, however, the residential displacements will experience some degree of impact due to the number of residential displacements.

6.2.2.1.4 North Termini

There will be no residential or business displacements in this alignment.

6.2.2.1.5 South Termini

There will be no residential or business displacements in this alignment.

6.2.2.2 Resource Overview

Because of the abundance of resources for both owners and tenants a partial list was prepared of what is available at this time (enough to show that resource availability is more than ample).

Many other new subdivisions are being developed in Northwest Hillsborough County and other areas of the Tampa Bay area. As a result, all residential displacees will be able to relocate in the Northwest area.

The displaced businesses were also researched to establish their replacement site needs. No unusual circumstances are observed which would prevent the relocation of any of these businesses. The taking of the commercial properties identified is essential to the development of the project.

There are vacant commercial sites to which many businesses can relocate to, which are in the project area. Many existing commercial buildings for both purchase and rent are available which can be used for a variety of uses. Also, an abundant supply of income property exists, especially for multi-family. It is believed that all displaced businesses and non-profit organizations should be able to relocate within Northwest Hillsborough area, if they so desire.

6.2.2.3 Community Impact

In assessing the impact that this transportation project will have on the local community, certain observations should be highlighted. First, construction of this major proposal will involve moderate disruption of neighborhood ties. Secondly, no major shopping centers, hospitals, schools, or other related establishments will be displaced, further minimizing disruption of the community.

The maximum number of displacements that could occur in either alternate would be a combination of the Eisenhower/West, Railroad and North or South Termini Alignments, this would result in 146 displacements. Competition for resources will not be at such a high level because of the resource availability and the rapid construction in Northwest Hillsborough area. The movement of households and businesses away from the project area and into new locations will occur which will be moderately felt because of the number of displacements generated by the project.

Displacements of commercial establishments will have a lessor impact on the community in any of the alignments selected. The maximum number of business displacements (36) which could occur would be with a combination of Eisenhower/West, Lake LeClare and North or South Termini Alignments. Because of the small impact this major facility will have on the business community, it is felt that all of the businesses can relocate within the project area. There are many vacant buildings for lease and sale to accommodate the displacements. Approximately four (11%) are minority-owned and operated businesses within the project area.

It was noted earlier that approximately eight (8) families are classified as minorities and will be displaced by the Railroad Alignment. Twenty percent (or 114) of the children within the immediate project area are classified as school age. The major characteristic of the immediate project area is young adults to senior citizens. About one-sixth (1/6) of our displacees are elderly, but none receive specialized social/medical services or assistance at this time, however, they may require said services in the future. Senior citizen and related organizations are active throughout the Hillsborough County area and the displacees would remain accessible to these facilities after relocation is complete.

Impact on the Commercial area along Eisenhower Boulevard south of Hillsborough Avenue will be minimal. A frontage road serving commercial properties east of Eisenhower Boulevard between Interstate 275 and Columbus Drive will be relocated, without diminished accessibility to these properties. The Corporate Oaks office complex on the westside of Eisenhower Boulevard at Cypress Street will be affected by the taking of some parking spaces and some landscaping. No displacements will occur and the character and vitality of this area will not be adversely affected.

North of Hillsborough Avenue, the taking of parking spaces at the Thompson Center facing Benjamin Road and the displacement of several small businesses as identified in Section 6.2.1.2.1 will not change the character of the immediate vicinity nor adversely affect the vitality of the surrounding commercial area.

The Northwest Expressway will have positive economic significance on the community. Commercial and industrial development will be greatly enhanced by the development of this much needed facility. Traffic will flow with greater ease and safety, accessibility will be increased, and travel time will be reduced. Completion of the Expressway project will encourage existing businesses to stay in the area and should attract new ones with subsequent employment opportunities. Thus, the many benefits to be derived from the improvement would tend to help offset the inconvenience caused by the displacement homes, businesses, and other land owners.

6.2.2.4 Federal Aid - Acquisition and Relocation Assistance Program

In order to minimize the unavoidable affects of right-of-way acquisition and displacement of people, the Florida Department of Transportation will carry out a Right-of-Way Acquisition and Relocation Assistance Program in accordance with Florida Statutes, Chapter 339.09 (5). The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (Public Law 91-646) establishes guidelines by which these programs are administered.

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.

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.

Financial assistance is available to the eligible owner-occupant to (a) 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, (b) 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 (c) make payment for an 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.

An individual, family, business, farm operation, or non-profit organization is entitled to payment for actual, reasonable moving expenses for a distance of not more than 50 miles, in most cases, provided that he meets the eligibility requirements for an initial or subsequent occupant and the property is subsequently acquired by the Department.

No persons 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 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 had 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.

Coming Your Way is a brochure which describes in detail the Right of Way Acquisition Program. The Relocation Assistance and Payments Program is outlined in the Your Relocation brochure. These booklets are distributed at all public hearings and are made available upon request to any interested persons.

6.2.2.5 Hazardous Waste

The State of Florida has field reviewed the proposed right-of-way and has identified potential hazardous waste locations for the various proposed alternatives. Results of this field survey did not influence the selection of a preferred alternative. The survey identified several known or potential hazardous waste generators, but no permitted storage/treatment/disposal facilities were found near the project alternatives. For the specific alternative selected for implementation, a site assessment will be performed to the degree necessary to determine levels of contamination and, if necessary, evaluate options to cleanup with associated costs. Resolution of problems regarding contamination will be coordinated with appropriate regulatory agencies and prior to right-of-way acquisition appropriate action will be taken, where applicable.

6.2.3 Land Use Impacts

6.2.3.1 Existing Land Use

Northwest Hillsborough County has undergone substantial residential development during the past decade and this trend is continuing. Records compiled by the Hillsborough County City-County Planning Commission show that this area has been the most active area of the County for new subdivision activity in the past several years.[1] This rapid residential growth has caused the infilling with subdivisions of many of the open space lands suitable for alternative Expressway alignments.

The vicinity of the Tampa International Airport has undergone rapid development of new commercial office buildings within the past five years and this trend is continuing, particularly along the Eisenhower/West Alignment.

Existing land uses were analyzed for this report by use of recent aerial photography and field surveys. The generalized existing land use is shown in Figure 6-9.

In establishing the Expressway alignment alternatives, effort was made to avoid conflict with existing residential development commensurate with seeking to provide improved traffic service in the Northwest area of the County. Conflicts with residential development were minimized to the greatest extent possible within the Corridor by seeking alternatives which utilized open space wherever possible.

The Eisenhower/West Alignment is compatible with surrounding commercial land uses and avoids a number of residential subdivisions discussed in Section 6.2.1 of this report.

Both the Railroad Alignment and the Lake LeClare Alignment pass through areas characterized by subdivisions, semi-rural residential, and rural areas. The Railroad Alignment passes through more rural area than the Lake LeClare Alignment. With the completion of new subdivisions now under construction, identified in Subsection 6.2.1.2, the Lake LeClare Alignment will have the greatest conflict with residential land uses.

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1 Subdivision Report: 1983, Hillsborough County City-County Planning Commission.

6.2.3.2 Proposed Land Use

Both the City and the County have adopted Land Use Elements of their Horizon 2000 Growth Management Plans. The portions of these plans in the Northwest area are shown in Figure 6-10, Proposed Land Use - Hillsborough County and in Figure 6-11, Proposed Land Use - City of Tampa.

The future general land use of the area is not expected to be altered with the building of the Expressway. The Expressway could have the effect of accelerating the suburban residential trend already present in the area. This proposed roadway will make the Northwest area more accessible for residential development in relation to such major employment centers as the Tampa International Airport and West Shore areas and downtown Tampa. Improved accessibility provided by the Expressway is but one factor shaping future development. Other important factors include continued growth of the economy and population in Florida and Hillsborough County, residential financing, and environmental and land use regulations.

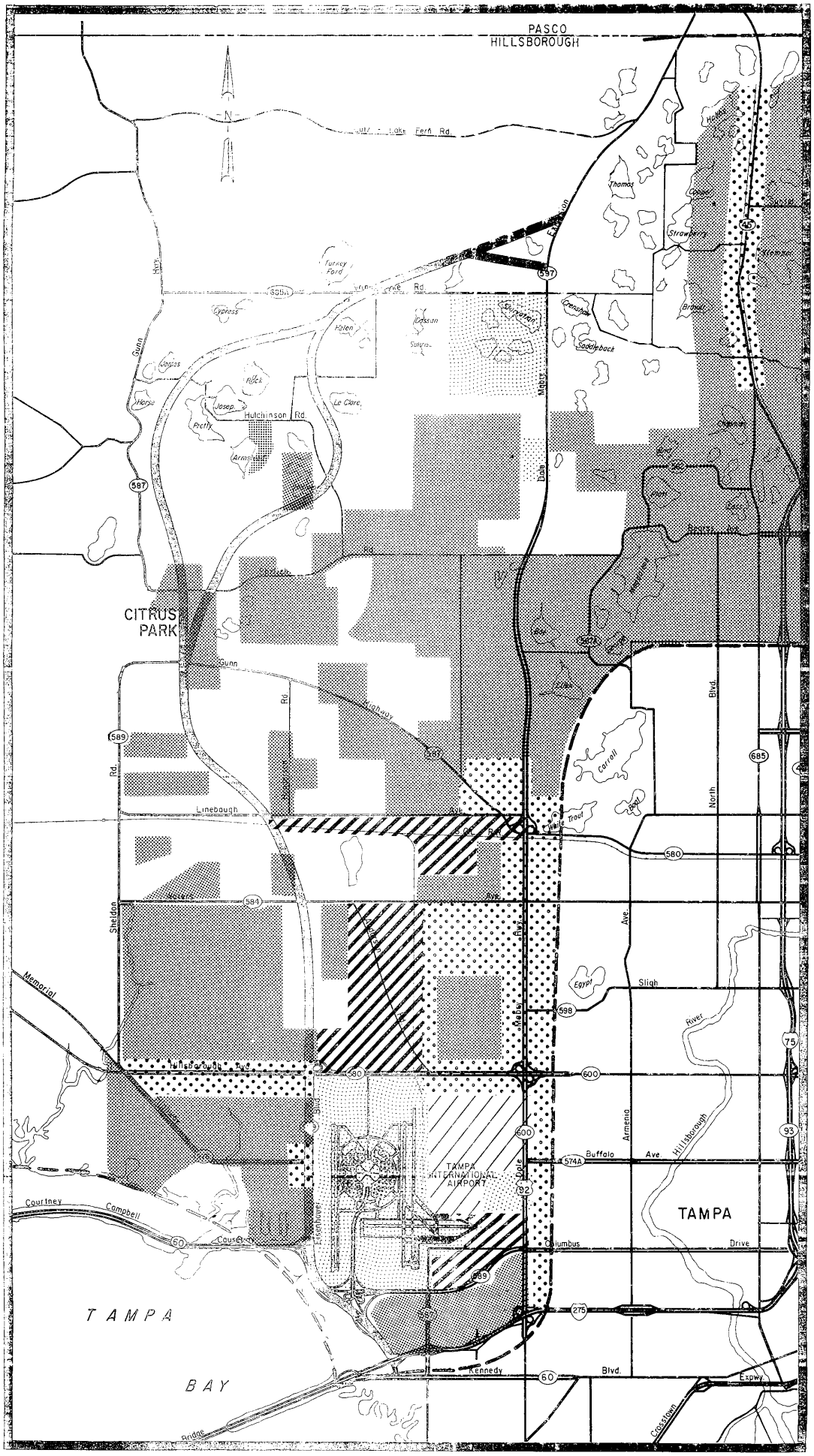
The Lake LeClare Alignment could be considered more compatible with the Land Use Element of the County Plan than the Railroad Alignment since it is located more within designated urbanized areas, thereby less likely to accelerate urban sprawl. The Eisenhower/West Alignment passing through commercial and light industrial areas is compatible with the Land Use Plans of the City and County. The "No-Build" Alternative, does not adequately address the continued deterioration of traffic service to the Northwest area.

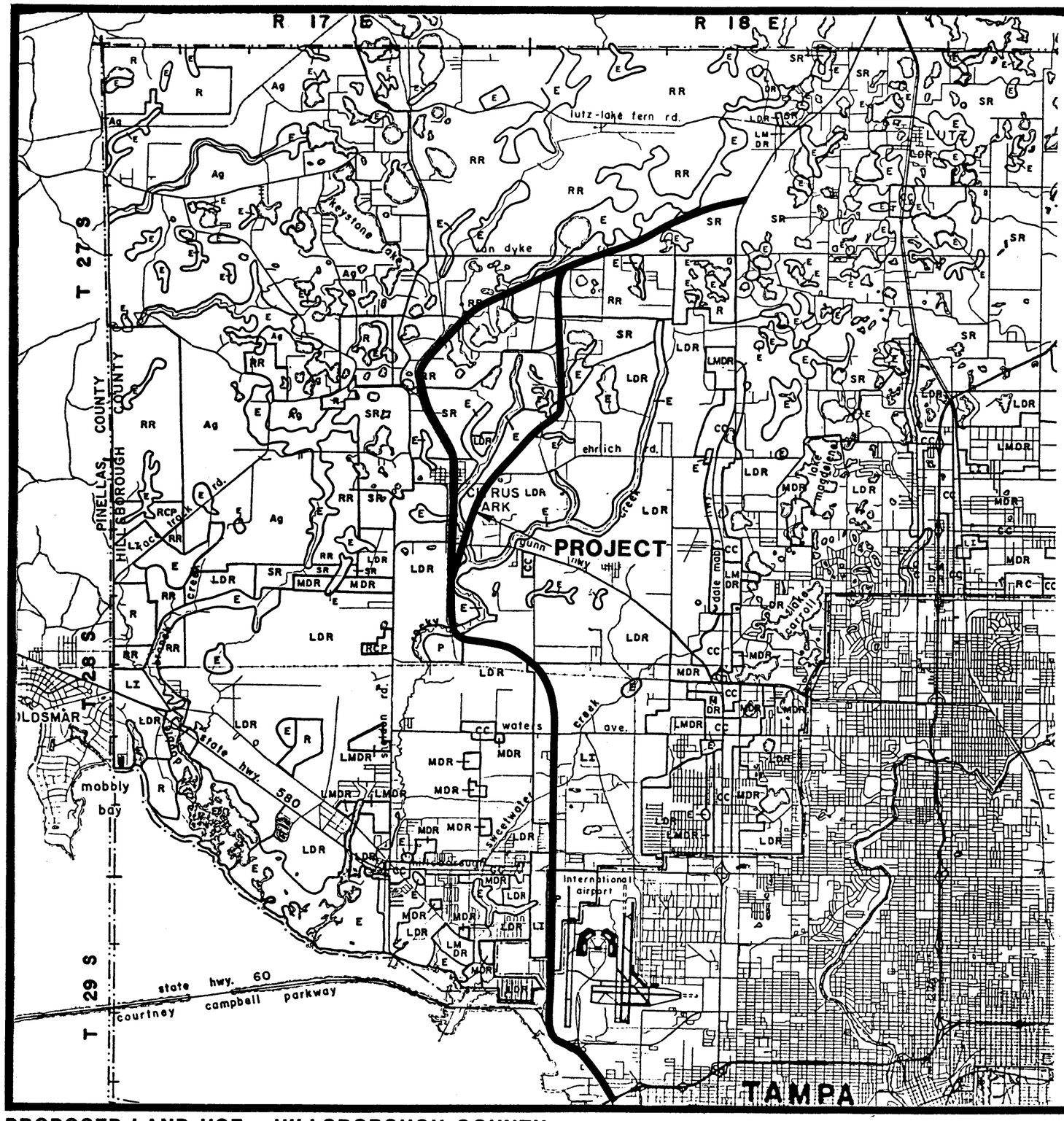
6.2.3.3 Population and Growth Characteristics

Hillsborough County has continued to grow in population at a rapid and sustained rate over the past few decades, increase in population by 132% from 490,300 in 1970 to 647,000 in 1980. (U.S. Census of Population and Housing, 1980). The population has been projected to increase by as much as another 239% by the year 2020, reaching a total of 1,544,000.[1]

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1 Source: Population Projections by Jurisdiction, Planning Area and Census Tract, Hillsborough County City-County Planning Commission, December, 1984, 1984 BEBR high range, page 6.


PASCO
HILLSBOROUGH
CITRUS PARK
TAMPA
TAMPA INTERNATIONAL AIRPORT
TAMPA BAY
Memorial
Courtney Campbell
Causeway
Kennedy Blvd.
Hillsborough Ave.
Linebaugh
Sheldon Rd.
Gunn Rd.
Hutchinson Rd.
Fletcher Ave.
Busch Blvd.
Sligh Ave.
Buffalo Ave.
Columbus Drive
Dale Mabry
Armenia
Hillsborough
Crosstown Expwy.
North Blvd.
Bruce B. Downs
Lake Fern Rd.
Turkey Creek Rd.
Van Dyke Rd.
Cypress
Keene
Josep
Pretty
Le Cure
Carroll
Trout
Egypt
Thomas
Cooper
Strawberry
Broad
Saddleback
Chapman
Bruce
Orange
Lake
Pond
Creek
Ridge
Holly
Gunn
Mary
Dale
Fisenhuver
Blvd.
Rd.
Ave.
587
589
584
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685
598
600
574A
92
93
75
275
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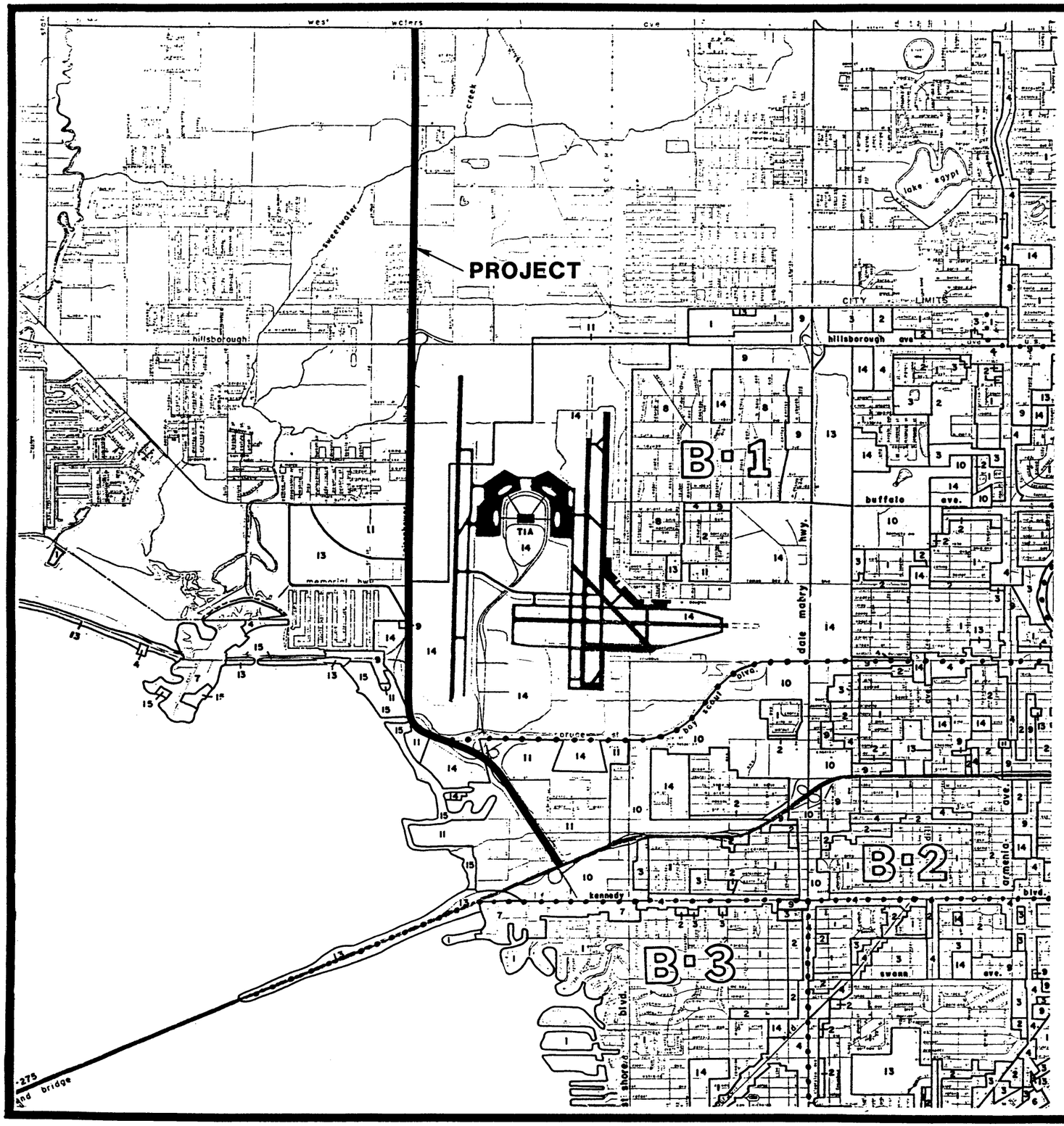


HILLSBOROUGH COUNTY, FLORIDA
LAND USE PLAN MAP

- Ag — AGRICULTURAL (0.2*)
- RR — RURAL RESIDENTIAL (1*)
- SR — SUBURBAN RESIDENTIAL (2*)
- LDR — LOW DENSITY RESIDENTIAL (6*)
- LMDR — LOW-MEDIUM DENSITY RESIDENTIAL (12*)
- MDR — MEDIUM DENSITY RESIDENTIAL (20*)
- CC — COMMUNITY COMMERCIAL
- RC — REGIONAL COMMERCIAL
- RCP — RESEARCH / CORPORATE PARK
- LI — LIGHT INDUSTRIAL
- HI — HEAVY INDUSTRIAL
- R — RECREATION / OPEN SPACE
- P — PUBLIC / SEMI-PUBLIC
- E — ENVIRONMENTALLY SENSITIVE AREAS (SUBJECT TO ONSITE INSPECTION)
- * — PROPOSED POWER PLANT SITE
- * — DWELLING UNITS PER GROSS ACRE
- ━━ — PROPOSED PROJECT ALTERNATIVES

PROPOSED LAND USE - HILLSBOROUGH COUNTY

FIGURE 6-10



TAMPA, FLORIDA
LAND USE PLAN MAP

1. LOW DENSITY RESIDENTIAL (*9 DU/GA)(10 DU/GA)
2. LOW-MEDIUM DENSITY RESIDENTIAL (*16 DU/GA)('20 DU/GA)
3. MEDIUM DENSITY RESIDENTIAL (*24 DU/GA)('29 DU/GA)
4. MEDIUM RESIDENTIAL-OFFICE-RETAIL (*24 DU/GA)('29 DU/GA)
5. MEDIUM-HIGH DENSITY RESIDENTIAL (*35 DU/GA)('40 DU/GA)
6. HIGH DENSITY RESIDENTIAL (*75 DU/GA)('83 DU/GA)
7. HIGH RESIDENTIAL-OFFICE-RETAIL (*75 DU/GA)('83 DU/GA)
8. MIXED USE (*24 DU/GA)('29 DU/GA)
9. COMMUNITY COMMERCIAL (*24 DU/GA)('29 DU/GA)
10. REGIONAL COMMERCIAL (*75 DU/GA)('83 DU/GA)
11. LIGHT INDUSTRIAL
12. HEAVY INDUSTRIAL
13. RECREATION/OPEN SPACE
14. PUBLIC / SEMI-PUBLIC
15. PRESERVATION

PROPOSED PROJECT ALTERNATIVES

(*9 DU/GA) = 9 Dwelling Units Per Gross Acre ; base density
('10DU/GA) = 10 Dwelling Units Per Gross Acre with site plan incentive

PROPOSED LAND USE - CITY OF TAMPA

FIGURE 6-11

In recent years, much of the County's growth has occurred in Northwest Hillsborough County area. During the period 1979 to 1983, 45% of the entire County's 32,524 approved single family residence building permits were located in the Carrollwood/Lake Keystone and Town and Country areas where the Expressway alternatives are located.[2] These areas are shown in Figure 6-12, "Hillsborough County Census Tract Map".

Projections prepared by the Hillsborough County City-County Planning Commission indicate that between 1980 and 2020 the population of Carrollwood/Lake Keystone and Town and Country areas combined will increase by another 246% resulting in another 178,000 residents.[3] This exceeds the percentage increase projected by the Commission for the County as a whole, variously estimated at between 181% and 239% for the same period.

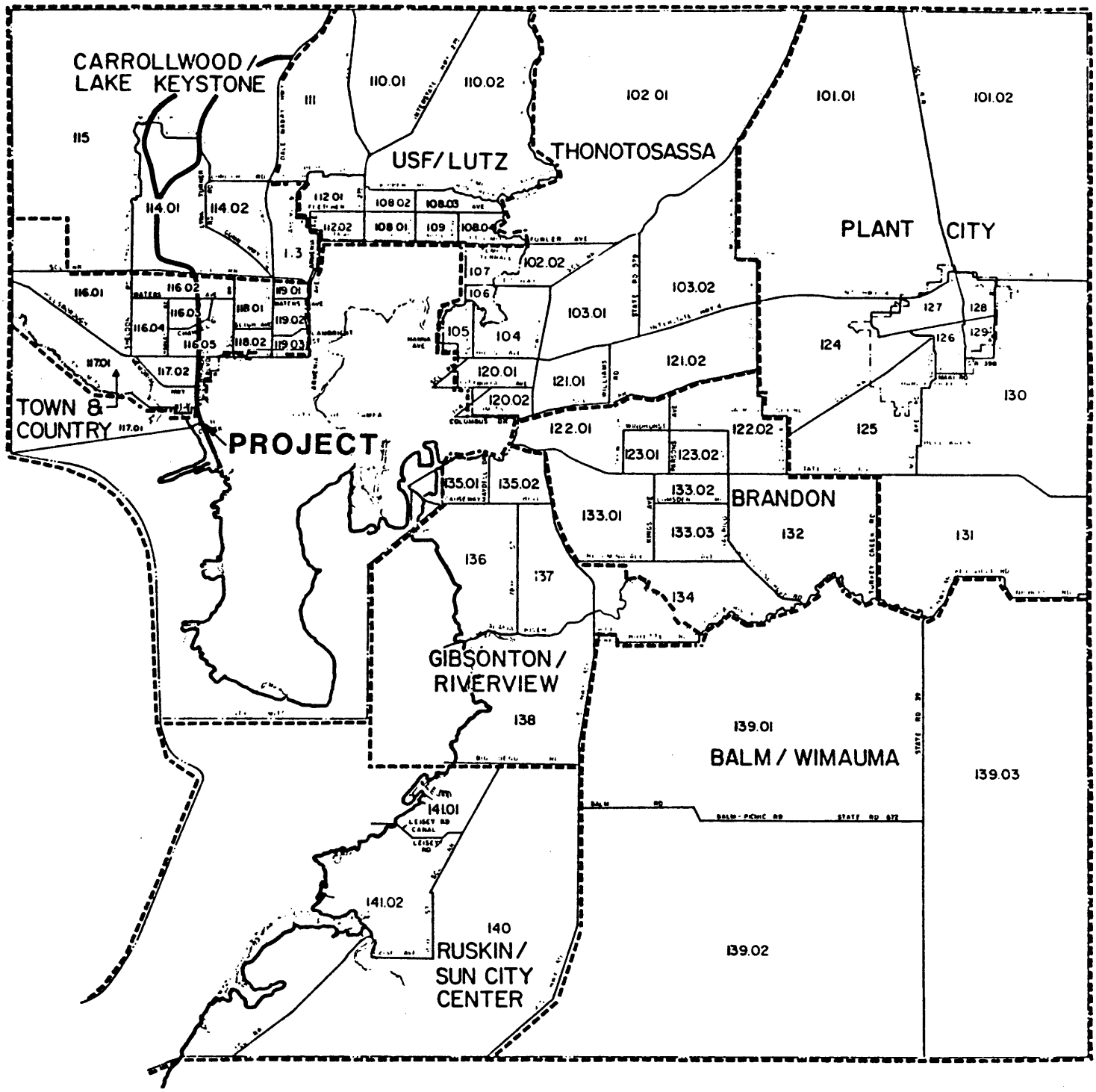
Census data discloses that the average median family income for the Census Tracts comprising the Carrollwood/Lake Keystone and Town and Country areas is $21,357 as compared with $14,938 average for the entire County.

The 1980 Census also reflects that the average median age of the population is 27 years for the Census Tracts comprising the Carrollwood/Lake Keystone and Town and Country areas as compared with 30.4 years Countywide and 34.7 years for the State. Since 1980, this average for the Study Area is likely declining as younger families are moving into the new single family residential subdivisions. Further evidence of a larger influx of working age adults is reflected in the fact that new elementary, junior high, and high schools, discussed in Subsection 6.2.1.6 "Religious, Health, Education, and Cemetery Facilities", are planned or are now under construction in the area.

The tremendous growth in population of working age adults residing in single family homes is a further indication that the Expressway will favorably impact the area as a whole by providing an alternative travel route to the congested existing thoroughfares for commuting and personal trips.

2 Source: Subdivision Report: December 1983, Hillsborough County City-County Planning Commission, April 1984.

3 Population Projections, op. cit.



1980 CENSUS TRACTS

HILLSBOROUGH COUNTY

LEGEND

— CENSUS TRACT LINE

104 CENSUS TRACT NUMBER

— PROPOSED PROJECT ALTERNATIVES

HILLSBOROUGH COUNTY CENSUS TRACT MAP **FIGURE 6-12**

6.2.3.4 Joint Development

The future development of open spaces in areas along the alignments provide opportunities for possible joint development or multiple uses in conjunction with the Expressway. As planning for these properties occurs, the Expressway can be taken into consideration to maximize the compatibility of the roadway with proposed land uses. Each of the alternative alignments can be developed to accommodate a future transit system for bus lanes or for provision of right-of-way for a fixed guideway system.

The alignments offer comparable opportunities for joint development considerations.

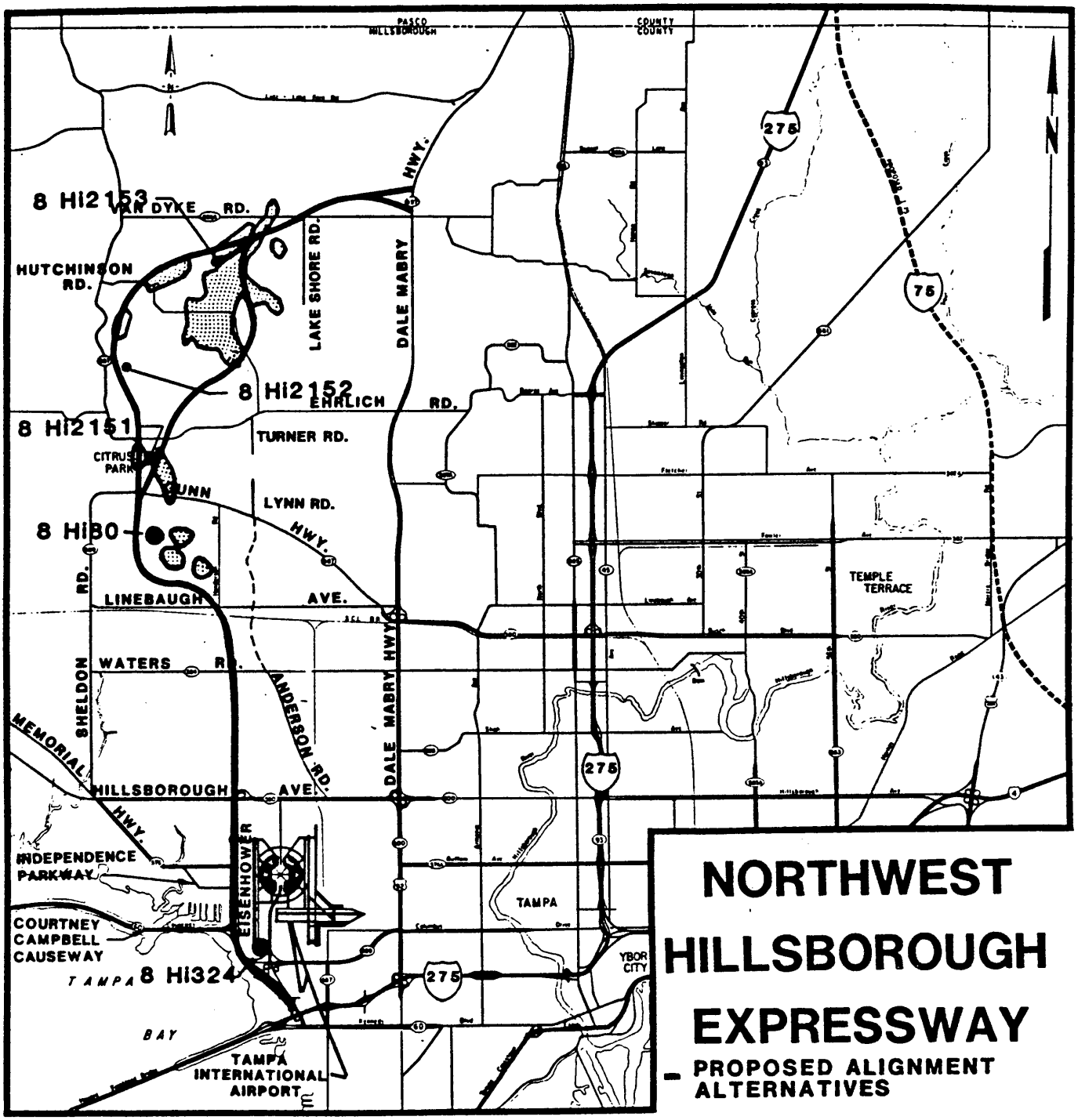
6.2.4 Historic and Archaeological Preservation

The State Historic Preservation Officer (SHPO) has advised by letters dated August 17, 1984 and April 10, 1985 (See Appendix D), that known archaeological sites lie near the Eisenhower/West Alignment. Site 8Hi324, a lithic scatter, lies within the alignment and 8Hi80, a sand mound, lies near this alignment. These sites are shown in Figure 6-13. The SHPO records indicate that these sites have previously been destroyed by construction activities and are deemed to lack sufficient integrity to warrant preservation or mitigation through archaeological excavation.

The letter of August 17, 1984, further identified certain areas in the vicinity of the alternative alignments that are likely to contain archaeological sites. These areas are shown in Figure 6-13, as potential archaeological sites. The letter further advised that the remainder of the study area is deemed unlikely to contain significant, unrecorded archaeological sites.

Following background research, archaeological field survey entailing both ground and surface reconnaissance and systematic testing with shovel was accomplished. Three prehistoric sites; five non site loci, or isolated finds and an older home were discovered. The three sites entered into the Florida Master Site File as 8Hi2151 through 8Hi2153, included two lithic scatters and one artifact scatter. None are adjudged to be significant. These sites are shown in Figure 6-13.

No other archaeological or potential historical sites or properties were identified nor are any expected to be encountered during subsequent project development. The Federal Highway Administration after consultation with the SHPO, letter dated December 18, 1985 (See Appendix F), has determined that no resources listed, or eligible for listing, on the National Register of Historic Places would be impacted.



POTENTIAL ARCHAEOLOGICAL SITES

FIGURE 6-13

Files of the Historic Tampa/Hillsborough County Preservation Board, see Appendix D. W. Carl Shiver, Historic Preservationist letters dated August 22, 1984 and April 15, 1985, disclose no structures of recorded historic or architectural significance in or impacted by the proposed alignments.

6.2.5 Considerations Relating to Pedestrians and Bicyclists

The safety of pedestrians and bicyclists affected by the proposed Expressway is and will continue to be a major concern throughout the project development. Implementation of up-to-date measures now commonly used by the Florida DOT and other governmental and design agencies will ensure protection of both the pedestrian and the bicyclist.

The Hillsborough County Comprehensive Bicycle Plan, a policies plan now in preparation by the Hillsborough County City-County Planning Commission, identifies the following Corridors for potential future unspecified bicycle projects: Hillsborough Avenue, Waters Avenue, Linebaugh Avenue, Ehrlich Road, Van Dyke Road, Sheldon Road. The proposed project will be designed to be compatible with bicycle paths on local roadways.

6.2.6 Visual Impacts

The Expressway will visually encroach on the rural and suburban settings of much of the area through which the alternative alignments pass. Mitigating this to some extent is that the Expressway will be at or near grade throughout much of its course.

On the approaches to bridges over roadways and railroads and at interchanges, the Expressway will be elevated or on sodded embankments.

Where the Expressway is adjacent to residential development, aesthetic considerations of the roadway design would include landscaping, lighting, and screening to minimize possible adverse visual affects.

The least adverse visual impact would occur along the Eisenhower/West alignment while the Railroad and Lake LeClare alignments would provide the greatest contrast with the surrounding areas.

The alignments pass through areas, while not uniquely scenic, are for the most part attractive. The motorist's view from the road overlooking lakes, cypress bayheads and the semi-rural landscape on the Lake LeClare and Railroad alignments would be pleasing.

6.2.7 Summary of Community Impact Factors

A summary of the comparative evaluation of community impact factors is shown in Table 6-6.

TABLE 6 - 6
SUMMARY OF COMMUNITY IMPACT FACTORS

Factors/Alternatives	I-275 to 3,000 Feet South of Gunn Hwy.		3,000 Feet South of Gunn Hwy. to Dale Mabry Highway		
	No Build	Eisenhower/West	No Build	Lake LeClare	Railroad
Neighborhoods and Communities	No neighborhoods impacted	6 neighborhoods impacted, 2 neighborhoods split	No neighborhoods impacted	3 Neighborhoods split	1 Community and 2 neighborhoods split split
Existing and Proposed Developments	No proposed developments would be impacted	5 major new commercial buildings severely impacted and 12 businesses taken or severely impacted	No developements impacted	5 new and proposed developments encroached upon	1 proposed development impacted
Travel Patterns and Accessibility	Deterioration of accessibility to area, increased congestion on Eisenhower Blvd. and arterial roadways	Improved access and traffic flow from I-275 to Gunn Highway	Deterioration of accessibility to adjacent areas, increased congestion on arterial roadways	Greatly improved access to Northewest area of County, relief of congestion on many arterial roadways	
Public Utilities	No immediate relocations required	Major relocation or protection of water line and underground electric line	No immediate relocations required	Protection of water line and relocation of one or two high voltage transmission towers	
Police, Fire, & Emergency Facilities	Reduction in response time as existing roadways become more congested	Relocation of one fire station, improved response time for emergency services and coastal evacuation	Gradual reduction in response time due to traffic congestion	Improved response time to emergencies, no facilities impacted	
Religious, Health, Educational & Cemetary Facilities	No facilities impacted	No facilities impacted	No facilities impacted	Pedestrian access to one elementary school modified.	1 church would be dislocated
Parks, and Recreational Facilities	No impact	No impact	No facilities impacted	No facilities impacted	No facilities impacted
Highway & Traffic Safety	Worsening traffic conditions could adversely affect safety	Improved traffic flow should improve safety	Worsening traffic conditions could adversely affect safety	Improved traffic flow should improve highway safety	
Overall Public Safety	Accidents expected to increase, poor emergency evacuation from coastal areas, delivery of emergency services hindered	Better highway safety, improve evacuation from coastal areas and in delivery of emergency services	Accidents expected to increase, delivery of emergency services hindered	Improved highway safety and in response times of emergency services	

TABLE 6 - 6 (Continued)

SUMMARY OF COMMUNITY IMPACT FACTORS

Factors/Alternatives	I-275 to 3,000 Feet South of Gunn Hwy. No Build	Eisenhower/West	3,000 Feet South of Gunn Hwy. to Dale Mabry Highway No Build	Lake LeClare	Railroad
Economic Impacts	Gradual inaccessability of area will tend to dampen future commercial development	Increased employment during construction and continued viability of commercial development potential	No appreciable impact	Increased employment during construction	
General Social Groups	No impact	No significant impact	No impact	No significant impacts on minorities of the elderly anticipated	
Additional Right-of-Way	None	189 acres	None	214 acres North Termini - 45 acres South Termini - 41 acres	198 acres
Displacements - Homes	No displacements	63 residences	No displacements	48 residences	58 residences
Displacements - Commercial	No displacements	16 businesses	No displacements	8 businesses	7 businesses
Compatability with Use and Consistency with Land Use Plans	Compatible with adopted plans	Compatible with adopted plans	Compatible with adopted plans	Closer to urban development, more compatible with established urban pattern as exists and as in adopted long range Land Use Plan	Closer to urban development, Land less compatible with developed area as exists and as in adopted long range Land Use Plan
Historic and Archaeologic Preservation	No conflicts	No resources listed or eligible for listing on the National Register of Historic Places would be impacted.	No conflicts	No resources listed or eligible for listing on the National Register of Historic Places would be impacted.	
Pedestrian & Bicyclist Considerations	Lack of pedestrian and bicyclist facilities in area	Provision for pedestrian and bicycle facilities will be coordinated with Hillsborough County.	Lack of pedestrian and bicyclist facilities in area	Provision for pedestrian and bicycle facillities will be coordinated with Hillsborough County.	
Visual Impacts	No impact key locations	Landscaping in	No impacts motorist views	Landscaping at key locations, pleasant	

File 7857-11-03 J20/29

6.3 ENVIRONMENTAL IMPACT FACTORS

6.3.1 Air Quality

In accordance with 23 CFR 770, the project was evaluated for air quality impacts. Vehicular carbon monoxide (CO) emission factors were derived by means of EPA's Mobile 3 computer program. The Caline 3 computer program was used to project CO concentrations at specified receptors. This program was developed by the California Department of Transportation in cooperation with the Federal Highway Administration (FHWA). Caline 3 input data included site-related traffic, roadway and meteorological parameters plus the emission factors derived from Mobile 3.

Caline 3 traffic input parameters included vehicular volumes and speeds derived from a level of service "E" capacity analysis using the "Highway Capacity Manual" 1965. Demand volumes and appropriate speeds were used in those cases where traffic demand was less than the capacity of the roadway.

Meteorological parameters included a temperature of 52 degrees F and a wind speed of 1 mps and the worst wind angle. A Pasquill-Gifford stability class of 4(d) was used for peak hour projections. To account for meteorological variability over an eight-hour period, the Caline 3 model multiplies the eight-hour results by a persistence factor of 0.6 (Guidelines for Air Quality Maintenance Planning Analysis, Volume 9: Evaluating Indirect Sources, USEPA (EPA-450/475-001), Jan. 1975, p. 32).

Four possible worst case intersections were modeled. These four intersections are: the I-275 interchange (a completely free-flow interchange), the Independence Drive and Memorial Highway interchanges (tight-diamond interchanges), and the project terminus at Dale Mabry Highway.

The only existing activity adjoining the Memorial Highway interchange which would serve as a valid receptor site is a self-service gas station in the northwest quadrant.

The background CO concentration of 2.0 ppm was derived from Hillsborough County Environmental Protection Commission CO monitoring results.

The worst case intersection was also modeled for the no-build condition. All modeling results are shown in the Table 6-7.

TABLE 6-7

CARBON MONOXIDE RESULTS IN PARTS PER MILLION (PPM)

Receptor*	One Hour		Eight Hour	
	1989	2010	1989	2010
	NO BUILD ALTERNATE			
B	6.0	5.9	3.8	3.8
	EISENHOWER/WEST - LAKE LECLARE ALTERNATE			
B	5.6	6.5	3.6	4.0
	EISENHOWER/WEST - RAILROAD ALTERNATE			
B	5.6	6.3	3.6	3.9

* Description of Air Receptor Sites

Receptor B: A self-service gas station in the northwest quadrant of the Memorial Highway interchange, 62 feet north of Memorial Highway and 90 feet west of Eisenhower Boulevard.

Results for all alternatives and both years are well within the National Ambient Air Quality Standards for 35 ppm for a one hour exposure and 9 ppm for an eight hour exposure. Within the existing alignment section CO concentrations will be slightly higher for the build condition than for the no build condition. This is due to the increased traffic capacity of the proposed facility, which will slightly outweigh the beneficial air quality effect of smoother traffic flow. Of course, the portion on new alignment will receive a greater impact relative to the no build condition since no build levels would be essentially nothing but background CO. However, the total CO concentration for the build condition will be considerably less in the new alignment section than along the existing alignment.

Slight increases in the pollutant level of particulates may occur during construction. This effect will be minimized by adherence to the FDOT's Standard Specifications for Road and Bridge Construction and through adherence to open burning regulations prescribed by the Florida Department of Environmental Regulation.

This project is an area where the State Implementation Plan (SIP) does not contain any transportation control measures, therefore the conformity procedures of 23 CFR 770 do not apply. Based on this air quality analysis it is concluded that this project is consistent with the SIP.

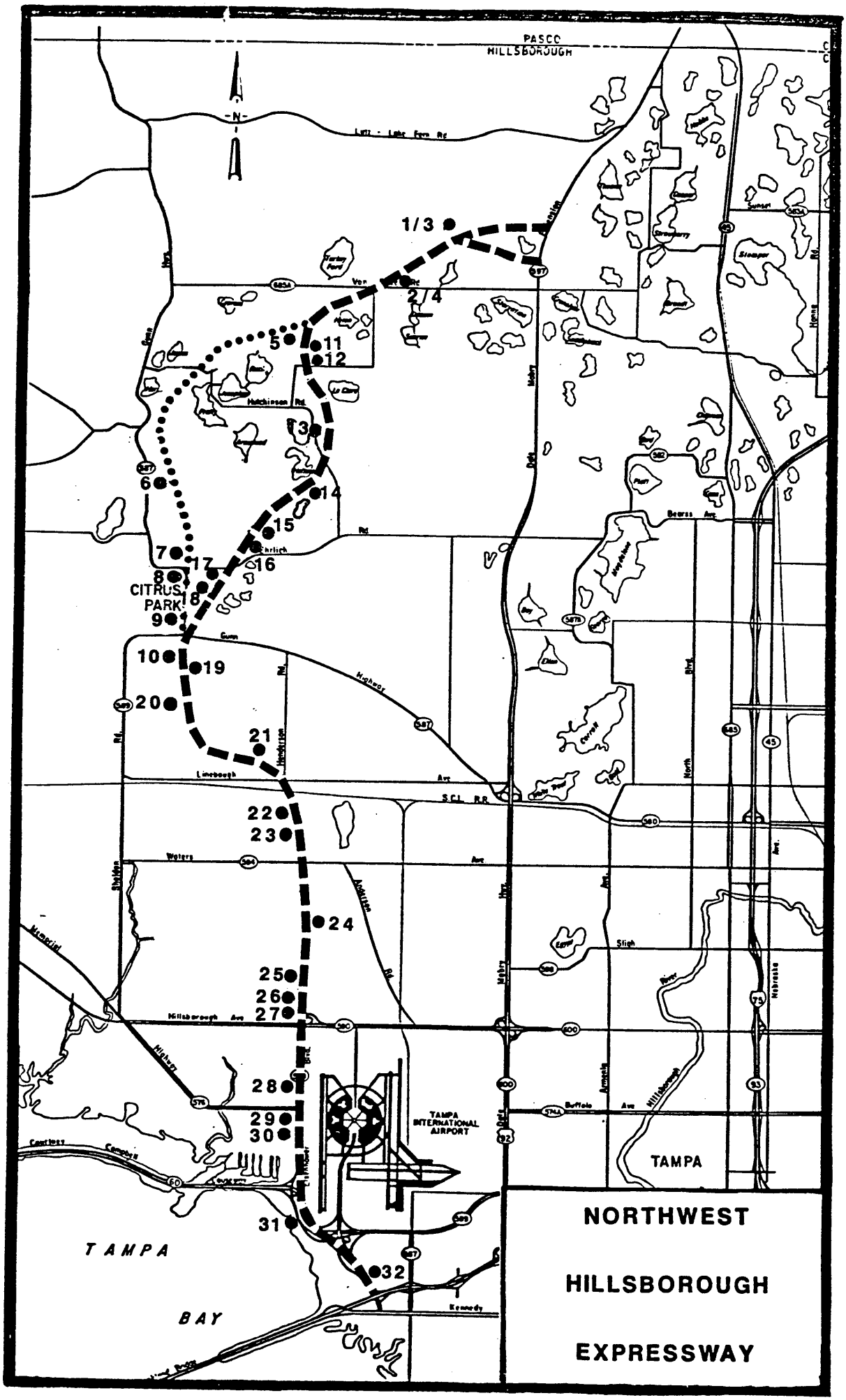
6.3.2 Noise

A separate report for this project entitled Noise Analysis and Study Report, dated August 1985, was prepared by the Florida Department of Transportation and is available from the District 1 Office, FDOT, Bartow, Florida. The following discussion includes summaries from the Noise Analysis and Study Report and, therefore, the Figure and Table numbers referred to therein and included herewith correspond to the content of the original report.

The noise analysis for the Recommended Alignment Alternative is discussed in a supplement (dated September 1986) to the original report and in Subsection 10.3.4.

6.3.2.1 Analysis of Traffic Noise Impacts

Individual sites for acoustical and analysis were selected to determine spot impacts as well as representative conditions of adjoining land use activities. When more than one potentially sensitive site existed in an area, the site which appeared to be impacted most significantly was chosen for analysis as representative for that location. Thirty-two sites were selected to represent all of the noise sensitive areas along the project. Table 1 gives a description of these selected locations. These locations are depicted on a map in Figure 6. The receptors represent a total of 113 houses, 18 mobile homes, 1 business, 1 park, and 1 school.



NOISE RECEPTOR SITES

FIGURE 6

TABLE 1

NOISE RECEPTOR DESCRIPTIONS

1	Isolated Residence	2935' N of Van Dyke Rd. 740' E of Darby Lane
2	Isolated Residence	125' N of Van Dyke Rd. 450' W of Darby Lane
3	Isolated Residence	2935' N of Van Dyke Rd. 740' E of Darby Lane
4	Isolated Residence	125' N of Van Dyke Rd. 450' W of Darby Lane
5	Isolated Residence	2025' N of LeClare Rd. 60' W of Tobacco Rd.
6	Mobile Home--representative of 3 mobile homes and 5 residences	340' N of Peterson Rd. 853' E of Gunn Hwy.
7	Neighborhood Residence--representative of 6 residences	40' N of Allmark St. 20' W of Banberry Ave.
8	Citrus Park Elementary School	1100' S of Ehrlich Rd. 25' W of Gunn Hwy.
9	Mobile Home--representative of 3 mobile homes and 2 residences	1100' N of Sheldon Rd. 227' W of Gunn Hwy.
10	Mobile Home--representative of 2 mobile homes	1222' S of Sheldon Rd. 180' W of abandoned RR
11	Isolated Residence	265' S of Storm Rd. 1172' E of Tobacco Rd.
12	Isolated Residence	55' N of LeClare Rd. 950' E of Tobacco Rd.
13	Isolated Residence	2720' N of Rawls Rd. 260' E of Hutchinson Rd.
14	Isolated Residence	100' N of Rawls Rd. 1620' E of Willow Dale Rd.

NOISE RECEPTOR DESCRIPTIONS (cont'd.)

15	Neighborhood Residence--representative of 4 residences	1315' N of Ehrlich Rd. 690' E of Bellamy Rd.
16	Isolated Residence--representative of 2 residences	910' N of Ehrlich Rd. 450' W of Bellamy Rd.
17	Neighborhood Residence--representative of 9 residences	280' S of Ehrlich Rd. 280' E of Briarthorn Dr.
18	Isolated Residence	1825' S of Ehrlich Rd. 35' E of Briarthorn Dr.
19	Isolated Residence--representative of 3 residences and 2 mobile homes	1830' S of Gunn Hwy. 230' E of abandoned RR
20	Mobile Home--representative of 4 mobile homes	65' N of Gardner Rd. 635' W of Timber Ridge Rd.
21	Isolated Residence--representative of 8 residences	1320' N of Linebaugh Ave. 1830' W of Henderson Rd.
22	Neighborhood Residence--representative of 20 residences	260' N of Martinshire Dr. 10' E of N. Ascot Ct.
23	Neighborhood Residence--representative of 18 residences	1830' N of Waters Ave. 8' W of Twelve Oaks Blvd.
24	Mobile Home-- representative of 3 mobile homes	254' N of Flora Ave. 105' E of Turnmore Dr.
25	Neighborhood Residence--representative of 7 residences	40' S of Hanna St. 40' E of Southern Comfort Blvd.
26	Neighborhood Residence--representative of 5 residences	60' N of W. Larmon St. 105' W of Southern Comfort Blvd.
27	Neighborhood Residence--representative of 15 residences	485' N. of Hillsborough Ave. 40' W of Southern Comfort Blvd.

NOISE RECEPTOR DESCRIPTIONS (cont'd.)

28	Mobile Home--representative of 1 mobile home and 1 business	70' N of Eleanor Dr. 80' W of Eisenhower Blvd.
29	Representative Receptor-- 25' from R-O-W	730' N of Independence Pkwy. 105' W of Eisenhower Blvd.
30	Skyway Park	East end of N tennis court
31	Representative Receptor-- 25' from R-O-W	400' S of Fish Creek Crossing 25' W of R-O-W
32	Representative Receptor-- 25' from R-O-W	616' N of Cypress St. 25' E of R-O-W

6.3.2.1.1 Prediction Methods

Future noise levels at the selected modeling sites were calculated using the Federally approved STAMPLOT computer noise prediction model. This model was applied to 1989 (initial year of operation) and 2010 (design year) traffic volumes for all four alternates; Railroad Alignment - North Terminus, Railroad Alignment - South Terminus, Lake LeClare - North Terminus, and Lake LeClare - South Terminus. An analysis of the "NO-BUILD" alternate is also presented.

All noise levels in this report are expressed in dBA, which is the decible (dB) level measured on the A scale. The A scale most closely approximates the frequency response of the human ear. These noise levels are presented as Leq, which is the equivalent steady - state sound level which in a stated period of time would contain the same acoustic energy as the time-varying sound level during the same period.

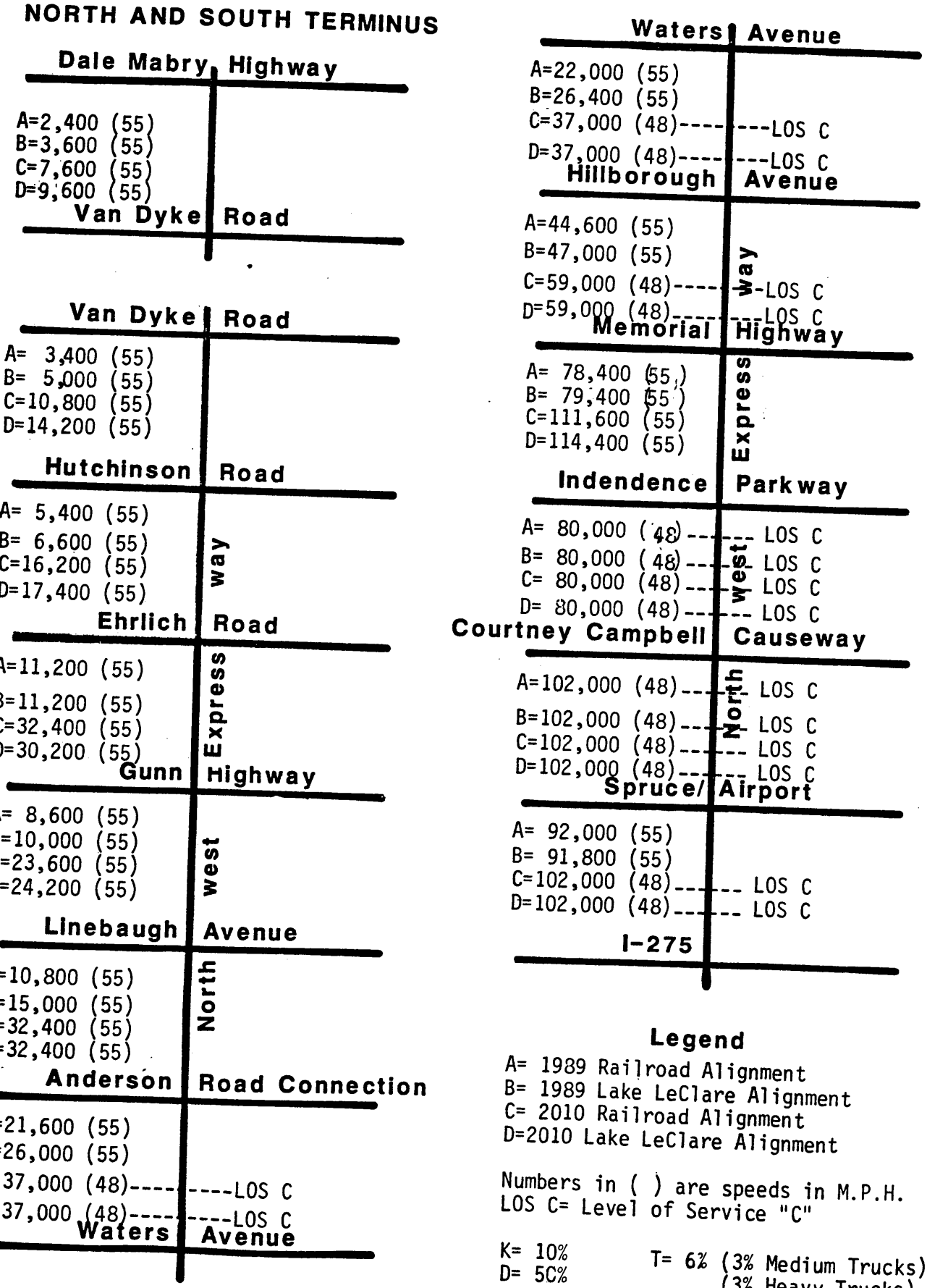
Field measurements were taken in accordance with FHWA guidelines contained in Report No. DP-45-1R, "Sound Procedures for Measuring Highway Noise: Final Report", to validate the model. Measurements taken excluded airport noise contributions. Existing traffic noise levels were sampled using a General Radio Noise Meter Type 1565-B. Calibration checks were performed before and after each sampling period to assure meter accuracy by using a General Radio Sound-level Calibrator Type 1562-A. The model was found to be consistent with collected field test results with projections within one (1) dBA of actual measurements. Therefore, the STAMPLOT model was determined to be valid for future projections of highway traffic noise levels along this project.

Computer input data for the STAMPLOT noise model included traffic volumes and speeds representing Level of Service "C" or demand traffic, whichever was lower. Level of Service "C" is generally acknowledged as being the noisiest, worst case, traffic condition.

Predicted traffic volumes, traffic, mix, and vehicle speeds presented in Figure 9 were utilized in the models. Roadway links were established from intersection to intersection in order to reflect differing traffic parameters.

The Federal Aid Highway Program Manual (FHPM) 7-7-3, "Procedures for Abatement of Highway Traffic Noise", establishes FHWA's guidelines for the use of abatement consistent with appropriate land uses. These guidelines are presented in Table 2, Noise Abatement Criteria. When noise abatement criteria are predicted to be approached or exceeded, FHPM 7-7-3 requires consideration of noise abatement measures which might reduce or eliminate the projected noise impacts. The abatement criterion of 67 dBA (Leq)

A.D.T. TRAFFIC PROJECTIONS



Legend

A= 1989 Railroad Alignment
B= 1989 Lake LeClare Alignment
C= 2010 Railroad Alignment
D=2010 Lake LeClare Alignment

Numbers in ( ) are speeds in M.P.H.
LOS C= Level of Service "C"

K= 10%
D= 50%

T= 6% (3% Medium Trucks)
(3% Heavy Trucks)

NOISE ABATEMENT CRITERIA

Activity Category	L_{eq}	Description of Activity Category
A	57 dBA (Exterior)	Lands on which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose.
B	67 dBA (Exterior)	Picnic areas, recreation areas, playgrounds, active sports areas, parks, residences, motels, hotels, schools, churches, libraries, and hospitals.
C	72 dBA (Exterior)	Developed lands, properties, or activities not included in Categories A or B above.
D	---	Undeveloped lands.
E	52 dBA (Interior)	Residences, motels, hotels, public meeting rooms, schools, churches, libraries, hospitals, and auditoriums.

SOURCE: Department of Transportation, Federal Highway Administration Highway Noise Control Standards and Procedures FHPM 7-7-3.

TABLE 2

for Activity Category B is applicable to all the noise receptors modeled for this proposed project, with the exception of Receptor #28 which, as a representative of 1 commercial use, has abatement criterion of 72, dBA.

Ambient noise levels for the proposed project north of Linebaugh Avenue were based on 1985 field measured noise levels taken at selected sites along the project corridor to assess the impacts at corresponding receptor locations. The data from 6 representative ambient measuring stations were used to formulate the ambient levels presented in Table 3a. These existing noise levels were measured as representative of "general" ambient noise levels in order to assess the relative magnitude of noise increases imposed by the proposed project. These ambient levels were used only as an "indicator" of impacts on this section of new alignment. In order to be conservative, impact ratings for predicted noise levels were based on the lowest ambient level per receptor location.

The noise abatement south of Linebaugh Avenue is dominated by noise levels created by aircraft operations. Airport noise contours generated from a report by the Hillsborough County Airport Authority (HCAA) entitled Tampa International Airport Noise Study, November 1983, are presented in Figure 11. The study concluded that because the background noise levels in the study area were generally low, aircraft noise within the Ldn 65 contour was the most dominant environmental noise factor. Therefore, noise levels were interpolated from the contours in Figure 11 based on receptor locations and used as ambient conditions, as shown in Table 3b, to assess noise impacts. Because of these relatively high ambient noise levels, Table 3b shown an adjusted Leq value for each receptor affected by airport induced noise in order to better assess the additional impacts imposed by highway related activities. Adjusted Leqs were formulated by decibel addition. Ldn values are used as the noise descriptor for the airport noise contours. Ldn is a logarithmic average of sound levels in dBA based upon a 24-hour Equivalent Sound Level (Leq) and is weighted to account for increased noise sensitivity between 10:00 p.m. and 7:00 a.m., with a 10 dBA penalty applied to noise events during the nighttime period. By application of reduced traffic volumes during these same hours to the logarithmic effect that traffic volumes have upon noise levels, it is possible to use the Leq values projected by the STAMPLOT model as the equivalent Ldn levels provided in the Airport Noise Study and to compare the values directly.

Ldn AIRPORT NOISE CONTOURS 1982

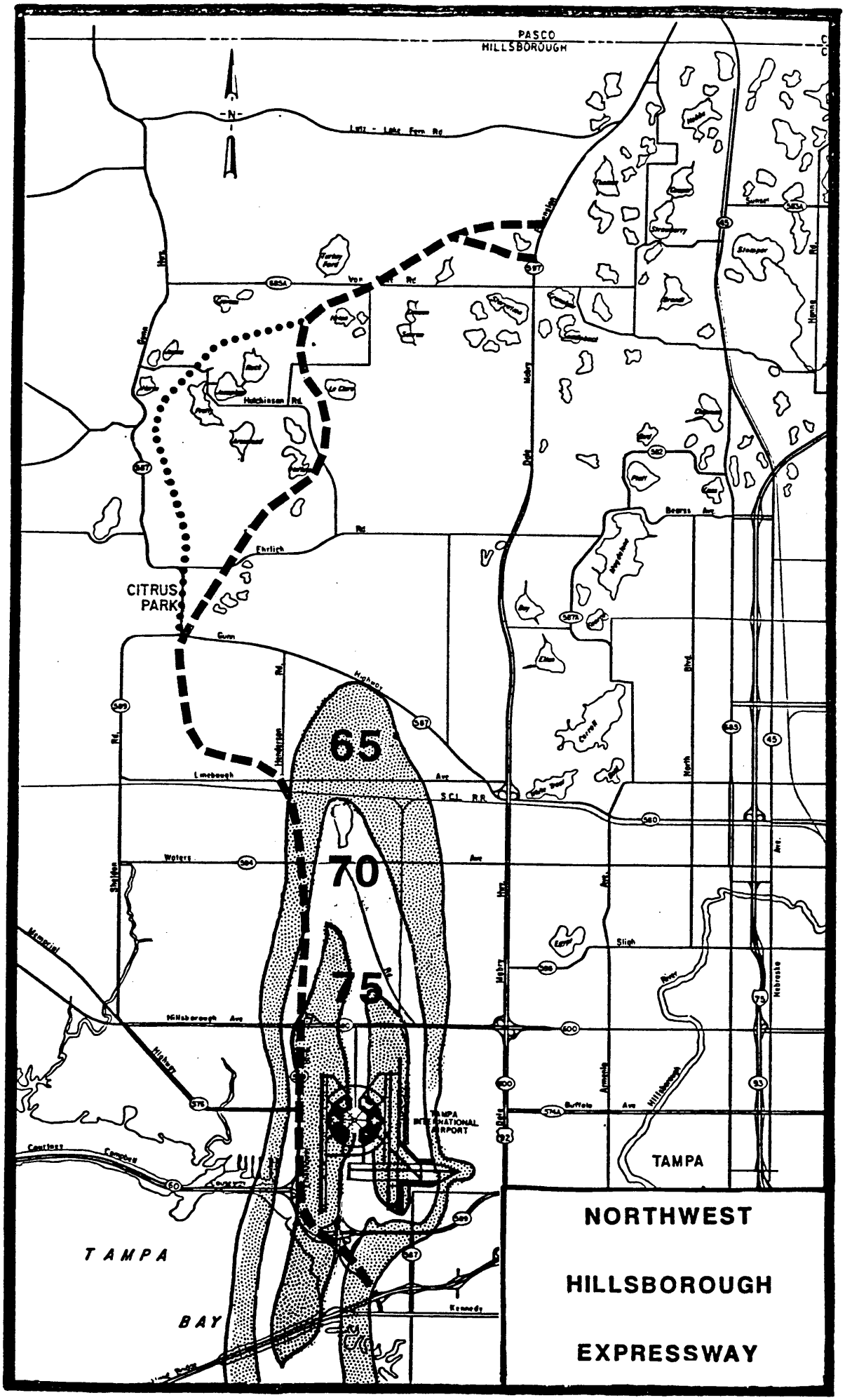


FIGURE 11

Predicted Leq (dBA) Noise Levels

Receptors	Distance from Near Lane (Ft.)	1985 Measured Noise Level	FHWA Criterion	1989 Noise Levels		2010 Noise Levels	
				Railroad	Lake LeClare	Railroad	Lake LeClare
1	760	47-50	67	46	48	51	52
2	193	47-50	67	54	55	59	60
3	610	47-50	67	47	49	52	53
4	187	47-50	67	54	56	59	60
5	50	51-53	67	59	-	64	-
6	65	51-53	67	62	-	67	-
7	120	51-53	67	60	-	65	-
8	230	51-53	67	60	-	64	-
9	180	51-53	67	61	-	66	-
10	232	51-53	67	60	-	64	-
11	130	53-55	67	-	63	-	68
12	95	53-55	67	-	61	-	66
13	69	53-55	67	-	61	-	65
14	125	53-55	67	-	62	-	65
15	385	53-55	67	-	55	-	59
16	195	53-55	67	-	53	-	58
17	180	53-55	67	-	61	-	65
18	110	53-55	67	-	65	-	69
19	155	55-57	67	61	62	66	66
20	100	55-57	67	64	65	68	69
21	215	60-65	67	59	65	64	68
22	655	60-65	67	51	52	56	56
23	842	60-65	67	52	52	53	53

Table 3b

Predicted Leq (dBA) Noise Levels

Receptors	Distance from Near Lane (Ft.)	FHWA Criterion	1985 Noise Level with Airport Contributions	1989 Noise Levels				2010 Noise Levels			
				Railroad	* Railroad Adjusted	Lake LeClare	Lake * LeClare Adjusted	Railroad	* Railroad Adjusted	Lake LeClare	Lake * LeClare Adjusted
24	222	67	72	64	73	65	73	65	73	65	73
25	102	67	72	75	77	76	78	75	77	76	78
26	120	67	73	67	74	68	74	67	74	68	74
27	144	67	73	66	74	67	74	67	74	67	74
28	154	67,72	73	73	76	73	76	73	76	73	76
29	190	72	69	75	76	75	76	76	77	76	77
30	150	67	69	72	74	72	74	72	74	72	74
31	135	72	75	74	78	74	78	74	78	74	78
32	125	72	69	76	77	76	77	75	76	75	76

* Adjusted due to Airport Noise Contribution

6.3.2.1.2 Results of Noise Analysis

Computer output data is presented in Table 3a and 3b. Receptors 5-10 refer exclusively to the Railroad Alignment while receptors 11-18 refer exclusively to the Lake LeClare Alignment. All other receptors are common to both alignments but with varying impacts based on the applied traffic parameters of either the Railroad Alignment or Lake LeClare Alignment.

In regard to planned, designed, and programmed developments, both alignments pass a proposed site for a senior high school at Van Dyke and Tobacco Roads. No noise impacts or criteria exceedances are expected to occur at this location based on the noise contours. Criteria exceedance of 67 dBA Leq will occur within a 62 foot distance from the center of near lane for the Railroad Alignment and within 76 feet for the Lake LeClare Alignment. Both these distances will be within the proposed right-of-way of either alignment.

1. Present vs. "NO-BUILD" Alternative

The "NO-BUILD" alternative includes the existing Eisenhower Boulevard with no modifications. Eisenhower Boulevard is a 4 and 6-lane predominently rural design divided highway. Under a "NO-BUILD" condition, noise levels will increase 4 dBA by the year 2007 on this roadway due to normal traffic growth. This prediction is based on a preliminary noise assessment presented in the Northwest Hillsborough Expressway Phase 1 - Corridor Report, January 1982. Based on the measured existing noise level presented in the report, 70 dBA, this increase of 4 dBA will have a minor noise impact.

2. North Terminus vs. South Terminus

Noise level differences between the north terminus alignment, receptors 1 and 2, and south terminus alignment, receptors 3 and 4, for both the Railroad and Lake LeClare Alignments, 1989 and 2010 predictions, only reflect a variance of 0-1 dBA. No criterion exceedences will be encountered on either alignment or justifying one favorable alignment over the other based solely on noise impacts. Noise levels are 1-2 dBA higher overall for the Lake LeClare Alignment due to differing traffic parameters. Based on ambient noise levels, receptors 1-4 are predicted to experience a minor impact on either alignment in 1989 and 2010 due to increased traffic growth.

3. Railroad Alignment

Exclusive Railroad Alignment receptors 5-10 are predicted to experience minor impact in both 1989 and 2010, with the exception of receptors 6 and 9 in 2010. Receptor 6 will reach criterion level of 67 dBA in 2010 and account for a substantial impact. This receptor is a mobile home representative of 3 mobile homes and 5 residences. Receptor 9, a mobile home representative of 3 mobile homes and 2 residences, will approach criterion within 1 dBA in 2010 and also account for a substantial impact. However, by 2010 the rapid urbanization presently occuring within this area of Tampa urban limits will increase existing ambient noise levels and lessen the relative severity of future traffic noise impacts. All other receptors are below criterion level.

4. Lake LeClare Alignment

Exclusive Lake LeClare alignment receptors 11-18 are predicted to experience minor impact in 1989. The only criterion approachment will occur at receptor 18, which will be within 2 dBA of criterion. In 2010, receptor 12-17 will receive minor impact. Receptor 13 and 14, isolated residences, and 17, a neighborhood residence representative of a residence will approach criterion within 2 dBA. Receptor 12, an isolated residence, will approach within 1 dBA. Receptor 15 and 16 will not approach criterion level. Receptor 11 will exceed criterion by 1 dBA and receptor 18 will exceed by 2 dBA in 2010. Both receptors are isolated residences. Noise impacts will be substantial at both locations due to increased traffic volumes. However, as stated earlier, the present urbanization trend will mask the severity of impacts by 2010.

5. Railroad/Lake LeClare Common Alignment

South of Gunn Highway all receptors, 19-32, are located on common alignment with only traffic parameters differentiating noise impacts.

Predicted noise levels for receptor 19 will be considered a minor impact on both alignments in 1989 and 2010. Receptor 19 will approach criterion by 1 dBA on both alignments in 2010. Receptor 20 will approach criterion by 2 dBA in 1989 on the Lake LeClare Alignment and will exceed criterion in 2010 by 1 dBA on the R.R. Alignment and by 2 dBA on the LeClare Alignment. This is considered a substantial impact.

Receptor 21 is predicted to encounter no-impact and will not approach or exceed criterion on the Railroad Alignment in both years. On the Lake LeClare Alignment, receptor 21 will approach criterion by 2 dBA in 1989 and exceed criterion by 1 dBA in 2010. This will be a minor impact in both years based on ambient levels.

Receptors 22 and 23 will encounter no impact and no criterion exceedences on either alignment for 1989 and 2010.

Receptors 24-32 reflect an adjusted Leq value for predicted noise levels due to the addition of significant airport noise contributions. All these receptors currently have an ambient noise level in excess of FHWA criterion. With these adjusted values, all receptors exceed criterion by 6-11 dBA on both alignments in 1989 and 2010. However, these impacts are not considered substantial based on higher ambient levels of 69-73 dBA from airport operations.

All adjusted Leq noise levels are identical for both alignments with the exceptiton of receptor 25 which is 1 dBA higher on the Lake LeClare Alignment.

Receptor 24, which is representative of 3 mobile homes, will experience a minor impact in 1989 and 2010. Receptors 26, 27, and 30 will encounter a minor impact in both years. Receptors 26 and 27 represent 20 neighborhood residents. Receptor 30 is Skyway Park. Although receptors 25, 28, 29, 31, and 32 are predicted to receive greater noise impacts than receptors 24, 26, 27, and 30, the roadway related impact is still considered minor due to the substantial noise contribution from aircraft operations. Receptors 25 and 28 represent 7 neighborhood residences, 1 mobile home, and 1 business. Due to lack of development along the corresponding roadway links, receptors 29, 31, and 32 are "representative receptors" set at 25 feet from proposed right-of-way.

6.3.2.2 Analysis of Alternative Noise Abatement Measures

In accordance with FHPM 7-7-3, alternative noise abatement measures for reducing or eliminating noise impacts were evaluated. Abatement measures considered included traffic management, change in alignment, land use and zoning, roadside plantings, and structural barriers.

A. Traffic Management

The elimination or restriction of heavy truck traffic would reduce the overall Leq noise levels. However, the restriction of truck traffic on the Expressway would be an impractical alternative as this facility is a proposed major north-south connector serving as a bypass route for I-275 around the City of Tampa.

Lowering the operating speeds would achieve a reduction of noise levels. In order to attain a significant effect, such low travel speeds would be needed that the speed would be unacceptable to roadway users and impractical to enforce. However, as the area develops more urban character, posted speeds may be less than presently assumed for this facility.

B. Change in Alignment

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

Shifting the alignment of the proposed Expressway, if not precluded by other conditions, would generally shift the noise impact from one location to another due to the encroachment of existing land uses on both the east and west sides of the right-of-way.

C. Land Use and Zoning

The proposed action is located in an area that is rapidly suburbanizing. Therefore, to be effective, land use and zoning controls based on the results of this study would have to be initiated in the near future. Land use control measures could include the establishment of noise buffer areas and zoning to restrict land use development to that which is compatible with the Expressway. Land use and zoning controls would have to be initiated by the local planning agencies. To aid this process, FDOT will send a copy of the final noise study report to the local planning agencies.

In urban areas, many residences and commercial establishments are in close proximity to the Expressway Alignment and may have only limited possibilities for land use and zoning controls.

D. Vegetative Barriers

To achieve a substantial reduction in noise levels through use of vegetative barriers requires dense foliage at least 100 feet thick. While sufficient space exists in rural areas for such plantings, relocation of residences and businesses would be required in urban areas. Vegetative barriers would not be much more efficient than a new construction setback line in reducing future noise levels and would not provide abatement in urban areas due to lack of space.

E. Structural Barriers

A substantial reduction in noise levels can be achieved through uses of structural barriers. To be effective, a barrier must be as continuous as possible. Breaks in the barrier for driveways, crossroads and other points of access severely limit noise attenuation. Because the proposed Expressway will be limited access, structural barriers could be effectively utilized along selected roadway sections.

In accordance with FHPM 7-7-3, the Florida Department of Transportation is committed to the construction of feasible noise abatement measures where the potential for severe noise impacts exist and approachment or exceedences of criterion occurs, contingent upon the following conditions:

Detailed noise analyses performed prior to final approval;

Cost-effectiveness analyses;

Community impact regarding desires, types, heights, and locations;

Preferences regarding compatibility with adjacent land uses, particularly as addressed by officials having jurisdiction over such land uses; and

Safety and engineering aspects as related to the roadway user and the adjacent property owner.

It is likely that noise barriers will be constructed if found to be feasible based on the contingencies listed above.

Receptor sites located south of Linebaugh Avenue, with a potential for substantial noise impacts and noise levels in exceedences of FHWA criterion were not considered for noise abatement due to dominant noise contributions. The only sites with substantial roadway related noise impacts are sites 6, 9, 11, 18, and 20.

Based on the noise analysis performed to date, there appear to be no practicable solutions available using structural barriers to mitigate the noise impacts along receptor areas 11 and 18 on the Lake LeClare Alignment. Because these receptors represent isolated residences, noise barriers would not be cost-effective. Therefore, it is likely that noise barriers will be constructed only at sites 6, 9, and 20. Commitments regarding the eaxct abatement measure locations, heights, and type (or approved alternatives) will be made before the construction advertisement is approved.

6.3.2.3 Construction Noise

Noise generated by construction of the proposed action may affect some land uses during the construction period. In addition to the noise control measures contained in FDOT's Standard Specifications for Road and Bridge Construction, 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. 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.

6.3.2.4 Cooperation with Local Officials

The agency responsible for taking measures that are prudent and feasible to assure that the location and design of highways are compatible with existing and planned land uses for this project is the Florida Department of Transportation. The Department will promote compatibility between land development and the operation of the proposed facility. To accomplish this goal, the Department will cooperate with the Metropolitan Planning Organization and with local officials by furnishing:

(1) appropriate generalized future noise levels (for various distances from the highway improvement) for both developed and undeveloped lands or properties in the immediate vicinity of the project,

(2) information that may be useful to local communities to protect future land development from becoming incompatible with anticipated highway noise levels and,

(3) the FHWA policy regarding land use development or changes which are initiated after issuance of FHPM 7-7-3.

Continued coordination with local agencies and officials has been accomplished during the development of this study and a copy of the noise study will be provided to the Hillsborough County Planning Commission to assist them in developing compatible future land use criteria.

6.3.3 Wild and Scenic Rivers

There are no designated wild or scenic rivers in the area impacted by the proposed project.

6.3.4 Farmlands

Through coordination with the Soil Conservation Service, it has been determined that no farmlands as defined by 7 CFR 658 are located in the project vicinity.

6.3.5. Floodplain Impacts

A floodplain impact analysis was performed for the proposed project to meet the requirements of Executive Order 11988, "Floodplain Management". The proposed project is covered by Flood Insurance Rate Map (FIRM) Community No. 120112; Panels 0180, 0185, 0190, 0195, 0327, 0329, 0331, and 0333. The proposed expressway alignment lies within the coastal base floodplain at its southern terminus and crosses or abuts numberous riverine and lake base flood areas throughout the remainder of the proposed project (Fig. 6-14). There is only one crossing, Rocky Creek in Section 14, Township 28S, Range 17E, for which base flood elevations have been determined. Only two lakes, Horse Lake and Pretty Lake, in Section 26, Township 27S, Range 17E, have base flood elevations established. All other base flood limits have been determined by approximate methods. In order to make more meaningful comparisons, floodplain involvement will be discussed by each alternative. The discussions identify major existing storm drainage structures in the vicinity of the proposed alignments which can be used as guidelines for associated expressway drainage structures. Minor culverts and drainage canals have not been addressed at this level of detail because as part of normal roadway design, these can be considered as incidental to the project and will be carried through (or along) the roadway embankment without materially impacting the local drainage situation. Table 6-8 summarizes the approximate acreage of fill in each of the floodplain areas and lists any wetlands involved in each of the floodplain areas.

Assessments of floodplain involvement and impacts in a rapidly developing area such as northwest Hillsborough County are difficult to make on the basis of one particular facility only, however. It is on this premise that the evaluations have been prepared. Site specific evaluations will be carried out during the design stage to insure that cost-effective facilities will be provided to minimize the impacts of the expressway on existing water courses and ponding areas.

Additionally, stormwater management criteria and other permit requirements of regulatory agencies will be followed during the design of the Northwest Expressway.

EISENHOWER/WEST

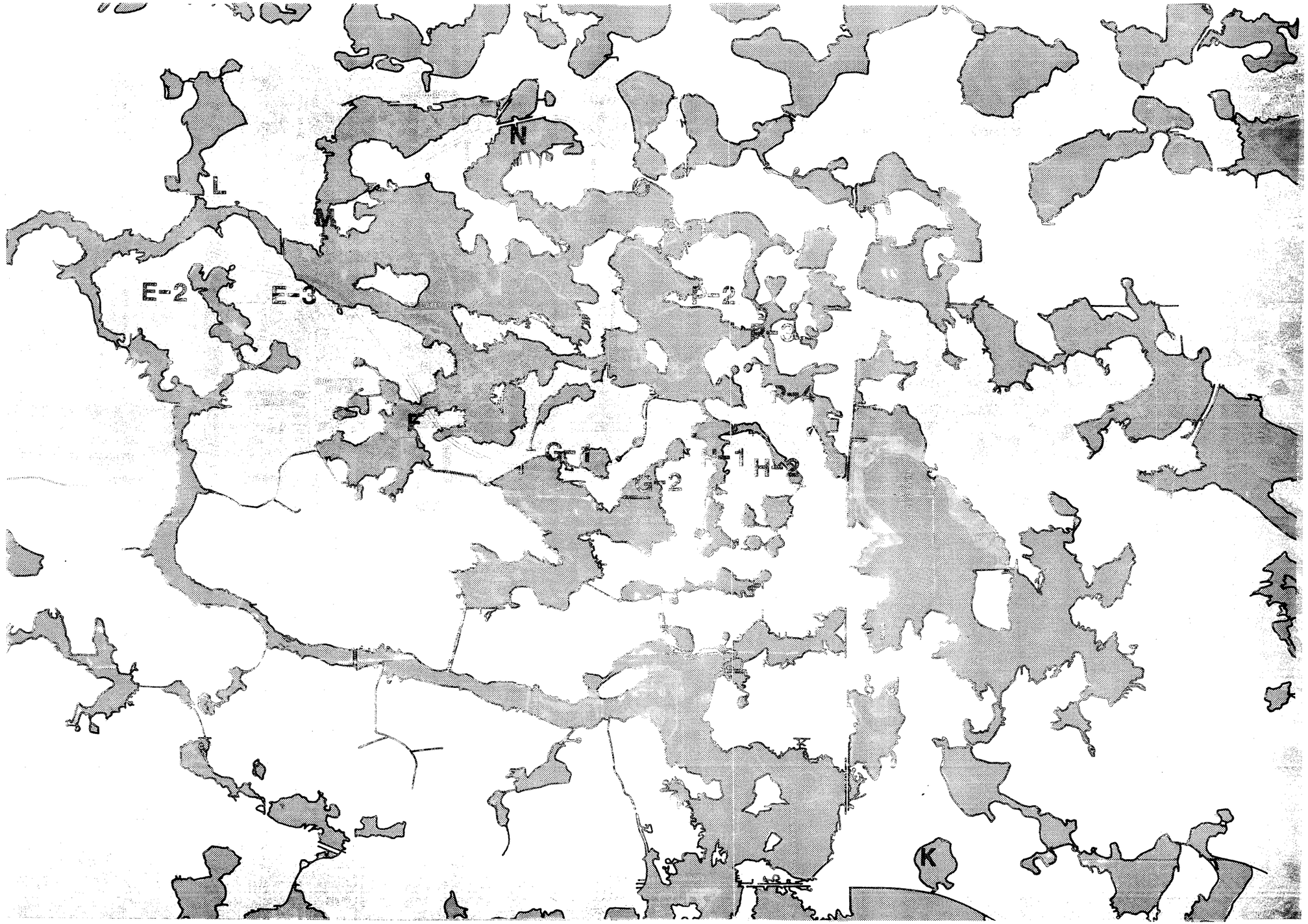

L
M
N
E-2
E-3
F
G-1
G-2
H-1
H-2
K
LEGEND
ALIGNMENT ALTERNATIVES
100 YEAR FLOOD BOUNDARIES
B FLOODPLAIN INVOLVMENT LOCATION

FIGURE 6-14

Table 6-8. Floodplain involvements, including acreage of fill and wetland sites involved.

FLOODPLAIN AREA	ACREAGE OF FILL	CROSSING	WETLAND SITES INVOLVED
A	38.70	transverse	1, 2, 3, 4, 5, 6A, 6B, 7
B	0.17	transverse	12
C	0.17	transverse	13
D	3.10	transverse	18, 19
E1	2.75	transverse	37A
E2	1.72	transverse	37B
E3	6.39	longitudinal	40, 41, 42
F	2.58	transverse	44A, 44B, 45
G1	5.85	transverse	46, 47, 48, 49
G2	1.38	transverse	NA
H1	6.88	transverse	52
H2	0.34	transverse	53
I	4.13	transverse	56A, 56B
J	0.34	transverse	NA
K	1.70	transverse	58, 59
L	1.12	transverse	60
M	6.76	transverse	62, 63
N	3.44	transverse	64
O	3.78	transverse	66
P1	2.58	transverse	68
P2	1.03	longitudinal	69
P3	1.38	transverse	70
P4	0.17	transverse	71

6.3.5.1. Eisenhower/West Alignment (I-275 to 3,000' South of Gunn Highway)

The Eisenhower/West Alignment lies continuously within the base floodplain from its beginning at I-275 on the south to a point approximately 1/4 mile south of Memorial Highway (total 2.1 miles; Area A; Fig 6-14). This area is the coastal zone where the storm surge of a large hurricane might be expected to have impact. Elevation of the base floodplain in this area is 10' NGVD.

This area is presently developed with primarily commercial and industrial establishments, and the proposed alignment follows existing right-of-way. The proposed expressway will require minor modifications to the existing storm drainage systems, although the bridge over Fish Creek (southwest corner of Tampa International Airport) will require widening to accomodate additional lanes of traffic. The impacts to the coastal zone floodplain will be negligible in this section. Risks to existing structures in the coastal zone will not be increased as a result of the project; rather, the project itself may require protection from anticipated wave action during record flood events.

Although largely developed along the expressway alignment, several estuarine wetlands (see Table 6-8) occur within the floodplain in the vicinity of this involvement. Section 6.3.7.1 describes these attributes and mitigation for the anticipated losses.

Proceeding north the Eisenhower/West Alignment crosses two drainage canals which lie within the base floodplain (Fig. 6-14; Areas B and C). The southern canal (Area B) serves the northern portion of Tampa International Airport. The bridge on Eisenhower Boulevard immediately west of the alignment over this canal is approximately 80' in length. Existing storm drainage facilities associated with Eisenhower Boulevard will be incorporated in the expressway collection and treatment/detention facilities. The canal denoted as Area C is crossed immediately north of Hillsborough Avenue. Existing structures in the immediate vicinity include a small bridge (<30' long) on Southern Comfort Boulevard (100±' west) and a 60±' bridge on Benjamin Road (1,050±' east). These canals lie within a developed area and have a narrow floodplain with a paucity of floodplain attributes such as vegetation, wildlife, or water quality benefits. No substantial loss of these attributes is anticipated at either of these involvements. Risks associated with either crossing must be considered negligible because flood levels are confined to existing channels and these crossings will be culverted or bridged.

The next floodplain involvement of the Eisenhower/West Alignment is with the Sweetwater Creek (Channel G) floodplain just north of Sligh Avenue and west of Benjamin Road (Fig. 6-14; Area D). The Sweetwater Creek floodplain is approximately 250' wide at the point of crossing. The Benjamin Road Bridge (Hillsborough County Bridge No. 104212) is situated 1,200±' east of the expressway

crossing and is 91' long. A channel control structure is approximately 350' west of the crossing. The Preliminary Design Report for the Sweetwater Creek Basin indicates that the base flood elevation is approximately elevation 16±' NGVD and it is generally confined to the existing channel in the immediate vicinity of the expressway crossing. The area within the floodplain is presently developed as low density residential. However, light industrial and commercial development are encroaching on the area from the east and a residential development occurs to the west of the proposed alignment. In all likelihood this area of floodplain will be developed in the near future with or without the expressway. Because Hillsborough County is in compliance with the National Flood Insurance Program, the project will not support incompatible development of the floodplain. Although some valuable floodplain vegetation occurs in this vicinity, the proposed alignment crosses an area which is presently grassed, probably in association with channelization of Sweetwater Creek. The only wooded areas within the proposed alignment at the Sweetwater Creek are associated with the residences. The proposed expressway will cross the creek on structure. In doing so, the project will avoid the risk of adverse backwater effects and the loss of vegetational attributes will be negligible.

North of Sweetwater Creek there are no major drainage crossings for approximately 3.1 miles until the crossing of Rocky Creek. A small drainage canal is crossed approximately 1,100' south of the Seaboard Coast Line Railroad (existing railroad bridge is less than 30' in length).

The final floodplain involvement of the Eisenhower/West Alignment occurs where it crosses Rocky Creek north of Linebaugh Avenue just west of Wilsky Blvd. (Fig. 6-14; Area E1). The alignment is immediately east of the abandoned railroad embankment and crosses the 400±' wide base floodplain at right angles. The existing railroad bridge is approximately 125' long and the FIRM indicates that base flood passes through the existing bridge opening. The grade of the existing bridge is approximately elevation 25' NGVD and the base flood elevation is 19'NGVD. The Rocky Creek floodplain is presently vegetated with a diverse forest community dominated by green ash (Fraxinus pennsylvanica). The creek bed itself contains several species of aquatics including Potamogeton sp., Myriophyllum, and some Vallisneria americana. The vegetational community is best characterized as upland/-transitional with the exception of the deeply incised channel. Because the expressway alignment is adjacent to the railroad embankment and the roadway will be bridged over Rocky Creek, impacts to these floodplain attributes should be minimal.

Although the Eisenhower/West Alignment has a considerable length of linear involvement, the present condition of these floodplain areas and design considerations suggest that adverse floodplain impacts should be minimal and the expressway poses no risk.

6.3.5.2. Lake LeClare Alignment (3,000' South of Gunn Highway to Van Dyke Road)

The Lake LeClare Alignment bears slightly east of north as it separates from the Railroad Alignment. As with the Railroad Alignment, most floodplain involvements of the Lake LeClare Alignment may also be wetland impacts. Additional discussion of effects on many floodplain attributes can be found in Section 6.3.7.

As the Lake LeClare Alignment begins north from the vicinity of Gardner Rd., it bends east to cross the Rocky Creek floodplain (Fig. 6-14; Area E2). The base flood is approximately 600' wide at the point of crossing, east of Mt. Vernon Rd. The creek bed is somewhat incised and provides some flow even during the dry season. Existing crossings of Rocky Creek include three 12' CMPs on Gunn Highway (1,200±' downstream, Hillsborough County Bridge No. 104254) and an 80' bridge on Ehrlich Road (3,000±' upstream, Hillsborough County Bridge No. 104206). Gunn Highway is the upper limit of detailed studies on Rocky Creek.

The floodplain community is dominated by black gum (Nyssa sylvatica var. biflora) with laurel oak and bald cypress common. Presently, Hillsborough County is planning for the replacement of the Ehrlich Road bridge over Rocky Creek and the Gunn Highway culverts carry a low rating which would indicate that improvements are imminent for this crossing also. The expressway crossing will be designed in concert with these improvements, reducing the risk of floodwater effects. Impacts to the natural floodplain community will be minimized by limited clearing and crossing the creek on structure. This will allow for preservation of much of the floodplain forest within the proposed right-of-way.

As the Lake LeClare Alignment proceeds north it again encounters the Rocky Creek floodplain (Fig. 6-14; Area E3). Here the proposed alignment runs parallel to the creek approximately 250' to the east near the edge of the base floodplain. The alignment is involved with the base floodplain for approximately 1/4 mile. The estimated base flooding limits in this area are defined by the elevation 40' NGVD contour.

Much of the area of floodplain involvement at this site is presently agricultural land. Cypress (Taxodium distichum) with bays and laurel oak (Magnolia virginiana, Persea palustris, Quercus laurifolia) comprise the remainder of the existing environment. The greatest impact on the floodplain is the potential for loss of floodwater storage capacity and adverse backwater effects. In order to prevent these adverse impacts and associated risks, culverts and detention areas will be provided which will allow the creek to expand into much of the existing floodplain as necessary during high water periods. Otherwise, to avoid the parallel encroachment, the alignment would have to be shifted easterly thus complicating the geometrics of

the proposed Ehrlich Road interchange, requiring additional right-of-way takings. The floodplain vegetation suggests that inundation is an infrequent occurrence throughout much of this involvement area. However, it is likely that sheet flow of runoff to the west may occur in this area. A review of the topography east of the proposed alignment indicates that sheet flow can be expected; however, it will be impacted by existing roadways and a portion of the flow may be expected to flow in a southeasterly direction away from the project.

The natural floodplain community encountered in this involvement is described in section 6.3.7.2 (see wetlands 40, 41, 42). The proposed expressway would impact this natural community; however, procedures outlined in section 6.3.7.2 for the above wetlands should mitigate for the natural community impacts of this involvement.

The next floodplain involvement of the Lake LeClare Alignment is on the northwest corner of Lake Holly (Fig. 6-14; Area F). The area to the west of Lake Holly is presently undergoing development. Impacts of this development are presently unknown. The proposed Lake LeClare Alignment will cross this base floodplain area through the east side of a cypress head which is connected to Lake Holly by canal.

The floodplain vegetation community in this involvement is diverse, due to the variety of hydroregimes surrounding the cypress head and canal transition. In order to minimize impacts to the vegetation providing wildlife habitat and water quality benefits for Lake Holly, the roadway side slopes will be steepened to reduce the area of impact. Adequate culverts will be used to maintain the connection of the cypress dome to Lake Holly, retaining those water quality benefits. Precaution will be taken in roadway design to prevent degradation of the water quality in Lake Holly due to road runoff. During construction, turbidity will be controlled with best management practices to prevent short-term construction impacts and sedimentation. These steps should not only minimize the loss of floodplain vegetation and wildlife, but also prevent any potential floodwater risks.

The next floodplain involvement occurs as the proposed Lake LeClare Alignment heads northeast and crosses Rawls Road (Fig. 6-14; Area F). The existing floodplain consists of residential lawn with a farm pond/borrow pit at the point of floodplain involvement. The base floodplain here is highly altered and the proposed expressway should not result in a loss of natural floodplain attributes. The existing environment offers only floodwater storage capacity which will also be provided with the proposed expressway.

The Lake LeClare Alignment again involves base floodplain as it crosses Hutchinson Rd. just north of Country Lake Rd. (Fig. 6-14; Areas G1 and G2). The existing environment in this area of floodplain is residential housing, open space and retention pond

associated with the Country Lakes subdivision. As the proposed alignment proceeds north it traverses an area of former cypress swamp, presently dominated by wax myrtle (Myrica cerifera), due to ditching in the past. Many of the wax myrtles are 30' tall, indicating that the disturbance is not recent. Another subdivision is presently under development just to the north of the disturbed area on the south of Wilcox Rd.

The proposed alignment will require relocation of the existing north-south drainage canal along the east toe of the expressway embankment. Existing west-to-east drainage will be carried through the embankment in a culvert or series of culverts. Impacts attributable to the expressway will be insignificant when compared to the present disturbed state of the area and ongoing development. Proper roadway design will restore some of the lost attributes through revegetation and providing stormwater retention in this vicinity. These same features will prevent any increased risk from the proposed expressway and may even reduce the possibility of flooding by improving the disturbed drainage in the vicinity.

The proposed Lake LeClare Alignment continues north across Hatton Rd. turning slightly to the west. This bend allows the alignment to pass west of the base floodplain associated with Lake LeClare. The alignment becomes involved with base floodplain again north of LeClare Rd. (Fig. 6-14; Area H1). The vegetational community is dominated by cypress (Taxodium ascendens) with black gum commonly occurring. The approximate base flooding limits are defined by the elevation 50' NGVD contour. Small culverts under Tobacco Road and Storm Road will provide indication of equivalent-sized culverts for the expressway at this crossing and the northerly crossing described below to prevent any risk due to the proposed expressway.

Roadway side slopes will be steepened to 2:1 to minimize the loss of wetland vegetation and wildlife habitat provided by the cypress swamp. Mitigation for impacts to this natural floodplain community are outlined in section 6.3.7.2. As this floodplain/ wetland area runs from Lake Shore Rd. on the east to Tobacco Rd. on the west, few options are available for avoiding floodplain impact in this vicinity.

North of Storm Rd. as the Lake LeClare Alignment turns north-northeast it crosses a narrow band of base floodplain (Fig. 6-14; Area H2). This involvement should result in no adverse impact on floodplain attributes. Most of the vegetation has been cleared and formerly healthy cypress areas have been filled. The existing environment has little if any value as a floodplain and the involvement here poses no risk.

6.3.5.3. Railroad Alignment (3,000' South of Gunn Highway to Van Dyke Road)

Base floodplain involvement of the Railroad Alignment is closely associated with wetland impacts (see Section 6.3.7 and Table 6-7.) In general, these floodplain involvements occur in low lying basins with little to no flow during the normal wet season. Flow rates would be higher during a base flood event, and the design of the expressway drainage system will be carried out accordingly.

The most substantial loss of floodplain attributes for the Railroad Alignment and the Lake LeClare Alignment will be the loss of associated wetlands vegetation which provides water quality benefits and wildlife habitat as well as floodwater storage capacity. As the loss of attributes associated with wetlands vegetation are referred to in the section on Wetlands Impact, discussion here will be limited to those associated with floodwater storage capacity and backwater effects.

Beginning at the south end, the first floodplain involvement of the Railroad Alignment is adjacent to Gunn Hwy., adjacent to a 12' box culvert approximately 1,800' north of Sheldon Road (Fig. 6-14; Area L). Presently, wetlands #60 and #61 drain west to east under Gunn Hwy. to empty into Rocky Creek. At the time of this study (Mar-Apr 85), the creek beds draining into Rocky Creek were dry, but they undoubtedly allow drainage of the wetland area west of Gunn Hwy. during periods of high water. Culverts would be used to maintain these flow ways and prevent isolation of the wetlands west of Gunn Hwy., and avoid the risk of backwater effects. Impacts to the natural floodplain vegetation and communities will be mitigated as outlined in section 6.3.7.3.

Proceeding north the Railroad Alignment becomes involved with base floodplain again as it bends west following the old railroad right-of-way to the west of Banberry Avenue (Fig. 6-14; Area M). Floodplain involvement occurs for approximately 2,000' from Alvena Avenue to north of Antilla Street. Little wetland vegetation occurs in this area of floodplain, but topography suggests that during extreme high water conditions flow from west to east is likely to occur on the south end of this floodplain area. Two 36" culverts approximately 1,000' east of the alignment carry this system under Delvalle Road to Rocky Creek.

The lack of wetland vegetation in much of this area suggests that little floodwater storage capacity would be lost as a result of this alignment. Currently the proposed alignment is occupied in part by the old railroad right-of-way, suggesting that few if any floodplain attributes would be lost in this area and the proposed expressway poses no increased risk.

The next involvement of the Railroad Alignment with base floodplain occurs from approximately 1,300' south of Binder Rd. and continues to Binder Rd. From there the proposed alignment

proceeds northeast along the west edge of the base floodplain for another 1,500' before returning to high ground (Fig. 6-14; Area N). Filling for the proposed expressway will be necessary in the first 1,300', but the next 1,500' impinge on vacant right-of-way to the east of the proposed roadbed.

This area of floodplain involvement is associated with a large cypress swamp (see Table 6-7 for wetlands) just east of the existing railroad right-of-way. The existing right-of-way severs what appears to have been a historical connection between wetland #65 and #64. By providing culverts in several locations throughout this area the proposed expressway will maintain the existing flow patterns and prevent any risk of flooding due to the proposed expressway. The loss of natural floodplain vegetation to due this involvement is discussed in section 6.3.7.3 (see wetland #64).

Proceeding northeast the Railroad Alignment again involves base floodplain approximately 1,800' south of Mobley Rd. just west of the north end of Pretty Lake (Fig. 6-14; Area O, base flood elevation 48' NGVD). The only natural floodplain community is an isolated cypress swamp. As the involvement with the floodplain is only on the eastern edge, and as the floodplain is isolated from other base floodplain, the proposed expressway should cause minimal loss of floodwater storage. Much of the loss in floodwater storage will be replaced by retention areas for highway runoff and/or wetlands mitigation sites in the adjacent expressway right-of-way, reducing the risk of floodwater effects and loss of wetlands vegetation.

The next area where the Railroad Alignment involves base floodplain is 800' north of the terminus of Hutchinson Rd. (Fig. 6-14; Areas P1 and P2). Approximately 50% of this floodplain involvement is presently citrus grove with the remainder consisting of a ditch connecting two lakes and an associated cypress swamp/bay swamp. Estimated base flood elevations in this vicinity are at elevation 50$\pm$' NGVD. To minimize loss of floodwater storage and backwater effects, adequate culverts and retention as necessary will be used to maintain the connection between lakes and mitigate loss of floodwater storage. Slight horizontal shifting of the proposed alignment may be possible to minimize the longitudinal encroachment at Area P2. This shift to the south would result in more complicated geometrics and would require relocation of the local road serving the residences on the north side of Rock Lake. The shift would also result in additional wetlands and floodplain impacts to the east and west of P2 (areas P1 and P3). The floodplain encroachment at P2 is not expected to have substantial risk of adverse backwater effects or result in a substantial loss of floodwater storage. Although some loss of natural floodplain vegetation is expected, mitigation described in section 6.3.7.3 will prevent a long term loss of these attributes.

The next floodplain involvement for the Railroad Alignment occurs north of Rock Lake where Rocky Creek flows south into Rock Lake (Fig. 6-14; Area P3). The expressway crossing of this area will be in part on structure and embankment slopes will be steepened to minimize impacts to the floodplain. The structure will be designed to carry the flow presently contained in the incised channel leading south to Rock Lake. Culverts adjacent to the structure will be provided to prevent the risk of backwater during storm events and maintain normal hydroperiod of the wetland to the north. The remainder of this floodplain involvement area consists of disturbed land adjacent to orange grove. This area is not normally flooded but would provide floodwater storage during extreme storm events. In order to replace lost storage capacity and prevent backwater in this area a wetlands mitigation/retention area will be located in this vicinity. The loss of floodplain vegetation will be mitigated by restoration of the disturbed marsh area adjacent to the proposed expressway.

Continuing north and east to the junction with the Lake LeClare Alignment, the Railroad right-of-way has two additional floodplain involvements (Fig. 6-14; Area P4). Neither is greater than 100' in length and both involve the edge of cypress swamps. Although some loss of flood storage capacity may occur, neither of these involvements should be significant or present any risk. The first involvement abuts the south side of a cypress swamp which drains north, and the other abuts an isolated cypress head, both of which are at elevation 50±' NGVD. Description of the mitigation for the minor impact to the natural floodplain community due to this involvement is included in section 6.3.7.3.

6.3.5.4. Lake LeClare or Railroad Alignment (Van Dyke Rd. to 4,000' West of Dale Mabry Highway)

The only base floodplain involvement of the Lake LeClare or Railroad Alignment between Van Dyke Rd. and Dale Mabry Highway occurs approximately 600' north of Van Dyke Rd. where the approximate base flood elevation is 55' NGVD. The proposed alignment heading east-northeast abuts the large contiguous swamp forest associated with Turkey Ford Lake (Fig. 6-14; Area I).

This floodplain involvement will result in some loss of floodwater storage capacity and will also result in a loss of wildlife habitat. However, considering the size of the Turkey Ford system the impact will not be too severe.

These impacts will be mitigated by the creation of wetlands and/or retention area as necessary which will provide for floodwater storage and provide wildlife habitat. Steepening of roadway side slopes to 2:1 will reduce the area impacted, and roadway drainage will be designed to prevent adverse water quality impacts on the remaining system. These design features will prevent risk of

flooding and prevent long term loss of the natural community. No further involvement of base floodplain is expected for the Lake LeClare or Railroad Alignments.

6.3.5.5. South Termini Alignment (4,000' West of Dale Mabry Highway to Dale Mabry Highway)

The South Termini Alignment has two minor floodplain involvements prior to its end at Dale Mabry Highway (Fig. 6-14; Areas J and K). Design of the proposed expressway drainage system will accomodate stormwater quantities and prevent the risk of backwater from these floodplain encounters. Ongoing development in the area may preclude minor alignment shifts which would avoid these areas. The minor loss of natural vegetation is addressed in Section 6.3.7.3.

6.3.5.6. North Termini Alignment (4,000' West of Dale Mabry Highway to Dale Mabry Highway.

The proposed North Termini Alignment has no floodplain involvement.

6.3.5.7. Summary of Floodplain Impacts

The area of the proposed project involves both low lying coastal areas and inland upland areas traversed by flow ways and historically contiguous wetlands systems. Much of this area is within base floodplains. Within the area of the proposed project, Northwest Hillsborough County, avoidance of floodplain involvement is not possible.

Floodplain involvements of the various alignments are similar with the exception of the longitudinal involvement of the Lake LeClare Alignment adjacent to Rocky Creek just north of Ehrlich Rd. (E3). Design features for this involvement are presented in Sections 6.3.5.2 and 6.3.7.2.

Considering the local topography and hydrology of the area, avoidance of floodplain involvement is impossible with a project of this size. No alignment could avoid floodplain involvement. Current development trends in the area suggest that much floodplain involvement will occur in the project area, with or without the expressway. The impact of the proposed expressway on

flood risk and natural floodplain vegetation is likely to be less than that expected with uncoordinated development of the area.

The proposed project will encroach upon floodplains at 23 locations as shown in Table 6-8. The drainage engineer for the project used contour maps obtained from the Southwest Florida Water Management District and the Flood Insurance Rate Map to determine the amount of floodplain encroachment by calculating the amount of fill anticipated within the roadbed for each location. The proposed project will result in 69.32 acres of encroachment for the Eisenhower/West to Railroad to North Termini Alignment which is the alternative with the least area, and 76.2 acres of encroachment for the Eisenhower/West to Lake LeClare to South Termini which is the alternative with the greatest area (see Figure 6-14). Two longitudinal encroachments were identified: Area E3 adjacent to Rocky Creek north of Ehrlich Rd. on the Lake LeClare Alignment, and Area P2 northwest of Rock Lake on the Railroad Alignment. Design features discussed in Section 6.3.5.2 will prevent adverse backwater effects and a loss of floodwater storage at E3. The involvement at P2 is minimal and should not result in significant adverse backwater effects.

The only involvement of the proposed expressway with a regulated floodway is at Sweetwater Creek on the Eisenhower West Alignment (Area D). The expressway will cross this floodplain on structure, avoiding the risk of adverse backwater effects and preventing the loss of floodwater storage. Therefore, the project will be consistent with the regulatory floodway per discussions with County. The remaining 20 involvements of the proposed expressway alignments with base floodplain are transverse. Area A is the coastal zone floodplain where a hurricane storm surge might be expected. The proposed expressway should not increase the risk to structures in this area. Areas B and C are both canal crossings, with which no significant risks are associated. Two transverse floodplain involvements occur at Rocky Creek (E1 and E2). Both areas will be crossed on structure, preventing any significant flood risk. The remaining areas of floodplain involvement are associated with wetlands areas. Areas H2, J and P4 will require less than $\frac{1}{2}$ acre of fill and are considered very minor with no significant associated risks. The remaining wetlands involvements (Areas F, G1, G2, H1, I, K, L, M, N, O, P1 and P3), although greater in area, should not result in significant adverse effects or increased flood risks, given the design considerations discussed in Sections 6.3.5.2, 6.3.5.3, 6.3.5.4 and 6.3.5.5.

None of the areas involved, including the longitudinal encroachment described above, will have any backwater flooding. The proposed project will be developed and be consistent with the standards specified in Federal Aid Highway Program Manual, Volume 6, Chapter 7, Section 3, Subsection 2. Best management practices will be used in design of the drainage facilities for the proposed project. Therefore, there should be no significant risk in any floodplain area along the proposed project due to increased backwater flooding. Mitigation designed for the loss of natural

floodplain communities described in Sections 6.3.5 and 6.3.7 should prevent the loss of significant natural communities in the vicinity of the project. As Hillsborough County is in compliance with the National Flood Insurance Program, the proposed expressway will not promote incompatible floodplain development.

6.3.6 Coastal Zone Impacts

The Florida Coastal Zone Management Plan (FCZMP), National Oceanic and Atmospheric Administration and Florida Department of Environmental Regulation, 1981) is based upon the coordinated application of 27 existing statutes as required by the Coastal Management Act of 1978 (Ch. 380 F.S. Part II). The boundary of the program is the entire state, thus the entire proposed project falls under the requirement for consistency with the FCZMP. The act further requires compliance with existing dredge and fill rules as they relate to proper application for and approval of filling or excavation in state jurisdictional wetlands, per Ch. 17.4 F.S.

The State Clearinghouse has coordinated review of the Early Notification Package for the proposed project. Correspondence from the Office of the Governor (18 October 1984; see appendix) has provided comments pursuant to the Coastal Zone Management Act and has indicated conceptual compliance. A complete Federal Coastal Zone Management Act consistency review will be conducted during review of the Environmental Impact Statement.

6.3.7. Wetlands Impacts

The alignments for the proposed Northwest Hillsborough Expressway were investigated for wetlands impacts in compliance with Executive Order 11990 "Protection of Wetlands". A total of 73 sites were investigated. Table 6-9 lists the sites by number, providing classification, health and acreage. Locations of these sites are shown in Figure 6-15 and Figure 6-16. Figure 6-16 shows the wetlands site locations superimposed on the floodplain areas.

The wetlands to be traversed by the project include estuarine, palustrine, riverine, and lacustrine systems. Many of these wetlands have been altered by mans' activities; however, others were found in a natural state. The majority of wetlands have one or more of the qualities attributed to wetlands such as water quality benefits, erosion control, floodwater storage capacity, and wildlife habitats.

Field investigations of wetlands were conducted during March and April 1985. The time period was one of drought with water restrictions in force throughout the study area. Although wetlands were still easily identifiable by vegetative characteristics, exact water regimes were difficult to estimate. All available clues such as species composition and dominance, lichen lines, and water marks were used to determine water regime. The dry conditions during the study were represented in the vegetational community by the presence of upland annuals in the fringes of many wetlands.

6.3.7.1. Eisenhower/West Alignment (I-275 to 3,000' South of Gunn Highway)

Wetland involvement of the Eisenhower/West Alignment includes 3 types of systems: estuarine, palustrine, and riverine. Within each of these systems wetland type is further divided on the basis subsystem, class, subclass, water regime and water chemistry. Due to the large number of involvements, the discussion in this amd other sections will center around major types with characters peculiar to individual wetlands pointed out.

There are seven estuarine systems on the Eisenhower/West Alignment which will be impacted by the proposed expressway (Fig. 6-15). Wetlands #2 and #3 are located on the west and east side respectively at the existing Eisenhower Boulevard crossing at Fish Creek. Both wetlands #2 and #3 are subsystem subtidal/intertidal. Wetland #2 is class Forested while #3 is scrub/shrub due to the smaller size of the dominant black mangrove (Avicennia germinans) vegetation. Vegetational communities at #2 and #3 are broad-leaved evergreen that receive irregular tidal inundation.

Table 6-9. Wetlands within the proposed alignments.

SITE	USFWS CLASSIFICATION	FDOT CLASSIFICATION	HEALTH	ACREAGE	ALIGNMENT IMPACTING
1	PEM1C	640	poor	0.10	Eisenhower
2	E1F03P/E2SS3P	612	fair	0.30	"
3	E12SS3P	612	poor	0.07	"
4	E2EM1P/E2SS3P	612-6421	fair	3.24	"
5	E2EM1P3/E2SS3P	642	fair	1.25	"
6A	E2EM1P	742-642	poor	2.32	"
6B	PEMIB	6412	poor	0.11	"
7	E2EMIP3	6412	poor	0.85	"
8	PEM1C	640	fair	0.39	"
9	PEM1C	640	poor	0.86	"
10	PEM1C	640	poor	0.57	"
11	PEM1C	640	fair	0.57	"
12	PEM1C	640	fair	0.14	"
13	PEM1C/R2AB		fair	0.09	"
14	PEM1C/R2AB		poor	0.35	"
15	PEM1C		poor	0.10	"
16	PEM1C	6412	poor	0.22	"
17	PEM1C	6412	fair	1.52	"
18	PEM1A	640	poor	0.13	"
19	R2AB5/PEM1C		fair	0.53	"
20	PFO2C	630	good	4.18	"
21	PFO2C	621	good	2.28	"
22	PFO2C	630	good	3.75	"
23	PFO2C/PEM1C	621	good	2.09	"
24	PFO2C	621	good	2.70	"
25	PFO2A/PEM1C	621-643	good	0.43	"
26	PFO2C	621	good	0.14	"
27	PFO2C	621	good	0.86	"
28	PFO2C/PEM1C	621	fair	0.89	"
29	PFO2C/PEM1C	621	good	0.09	"
30	PFO3C	630	fair	0.22	"
31	PFO1C	439	fair	0.63	"
32	PFO2C	621	good	2.34	"
33	PFO2C/2F	621	good	3.97	"
34	PFO2C	621	fair	0.30	"
35	PFO2C	621	fair	0.56	"
36A	PFO2C	621	fair	2.26	"
36B	POWC	724	poor	2.17	"
37A	R2UB2	615	fair	0.63	"
37B	R2UB2	615	fair	0.53	Lake LeClare
38	PFO2C	621	poor	0.72	"
39	PUB4C	742	poor	0.18	"
40	PFO2C	621	fair	0.31	"
41	PFO3C	611	fair	1.48	"
42	PFO2C	621	fair	0.59	"
43		n/a	n/a	0.16	"
44A	PFO2C	621	good	0.26	"

Table 6-9 continued.

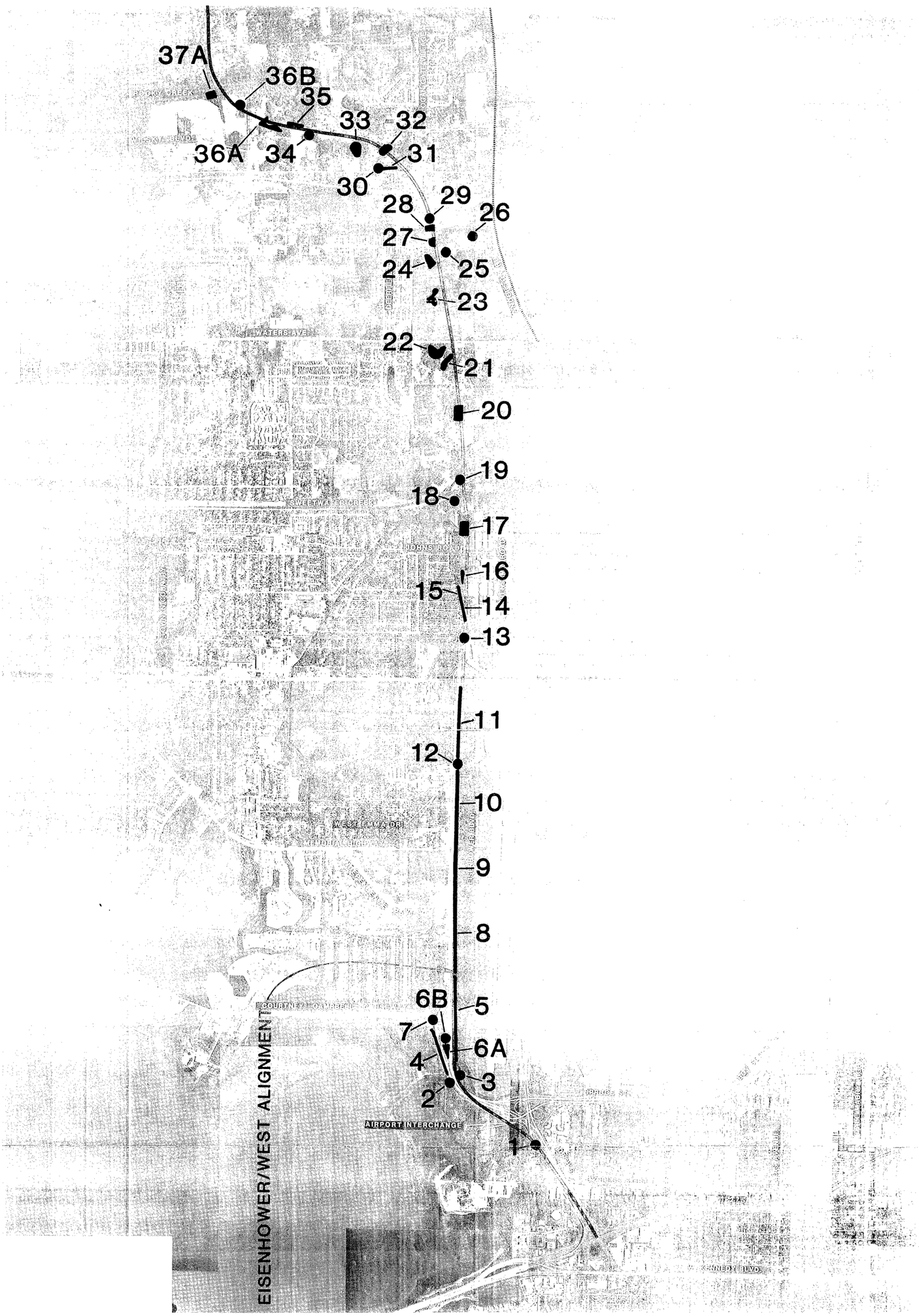
SITE	USFWS CLASSIFICATION	FDOT CLASSIFICATION	HEALTH	ACREAGE	ALIGNMENT IMPACTING
44B	L1AB4/L2AB4		good	0.39	Lake LeClare
45	PUB4H	742	poor	0.71	"
46	PUB4H	742	poor	0.48	"
47		439	n/a	0.16	"
48	PFO2C	621	fair	3.17	"
49	PFO2C	621	good	1.16	"
50	PAB5H	742	poor	0.28	"
51	PAB5H	6444	poor	0.14	"
52	PFO2C	621	good	3.01	"
53	PFO2C	621	poor	0.16	"
54	PFO2C	621	good	0.90	"
55		n/a	n/a	0.62	"
56A	PEM1C	641	fair	0.27	Lake LeClare/ Railroad/So. Termini
56B	PFO2C	621	good	3.19	"
57	PUB4C	742	poor	0.65	Lake LeClare/ Railroad
58	PFO2C	621	fair	0.21	"
59	PFO2C	621	fair	0.70	"
60A	PFO1B	630	fair	2.89	Railroad
60B				0.92	"
61	PFO2C	630	fair	2.45	"
62	PFO4B	411	n/a	1.32	"
63	PFO2C/PFO1B	621	good	0.79	"
64	PFO2C/PFO3B	630	good	2.75	"
65	PFO2C	621	good	0.23	"
66	PFO2C	621	good	1.38	"
67	PFO3C	621	fair	0.23	"
68	PFO2C/PEMIC	630	good	1.92	"
69	PFO2C/PEMIC	621	fair	0.41	"
70	PSS3C/PEMIC		good	1.75	"
71	PFO2CB	621	fair	0.53	"
72	PFO2C	621	poor	0.79	So. Termini
73		n/a	n/a	0.28	"

The proposed Eisenhower/West Alignment will result in a loss of 0.37 acres of wetland at sites #2 and #3 combined. The existing mangrove fringe at these two sites includes marsh elder (Iva frutescens), saltbush (Baccharis halimifolia), with chaff flower (Alternanthera maritima) and seaside paspalum (Paspalum distichum) common in the understory. Although mangrove areas are typically high in productivity, sites #2 and #3 have been heavily impacted by the foot traffic of local fishermen. Moving east or west from wetlands #2 and #3, the remaining wetlands are healthier (i.e., larger, denser mangroves). Wetlands contiguous to #2 and #3 extend approximately 600' to the bay and wetland #5 is contiguous to the Fish Creek system approximately 150' to the east of wetlands #2 and #3. To mitigate the impact of the proposed expressway on wetlands #2 and #3 it is recommended that access to the remaining adjacent system be restricted. This would allow the adjacent remaining system to become more productive, in the absence of heavy pedestrian use, and provide the benefits presently contributed by wetlands #2 and #3.

Wetlands #4, #5, #6A and #7 (Fig. 6-15) are also estuarine, intertidal with emergent persistent vegetation, and with irregular tidal flooding by brackish water. In addition to emergent persistent vegetation, wetlands #4 and #5 also contain numerous black mangroves (Avicennia germinans) and marsh elder (Iva frutescens), giving them a scrub/shrub character. Wetland #6 is a retention pond, the shores of which are vegetated with Fimbristylis castanea, Eleocharis sp. (spike rush), Spartina alterniflora (smooth cordgrass), Solidago sempervirens (goldenrod), A. germinans, and Rhizophora mangle (red mangrove). The mangroves and smooth cordgrass are experimental plantings by the Fla. Dept. of Transportation. Spartina alterniflora is the dominant vegetation in wetland #4, having been planted as mitigation associated with the Bayport development. Wetland #7 differs from #4, #5 and #6A in that road maintenance personnel mow the vegetation periodically to keep the ditch unconstricted.

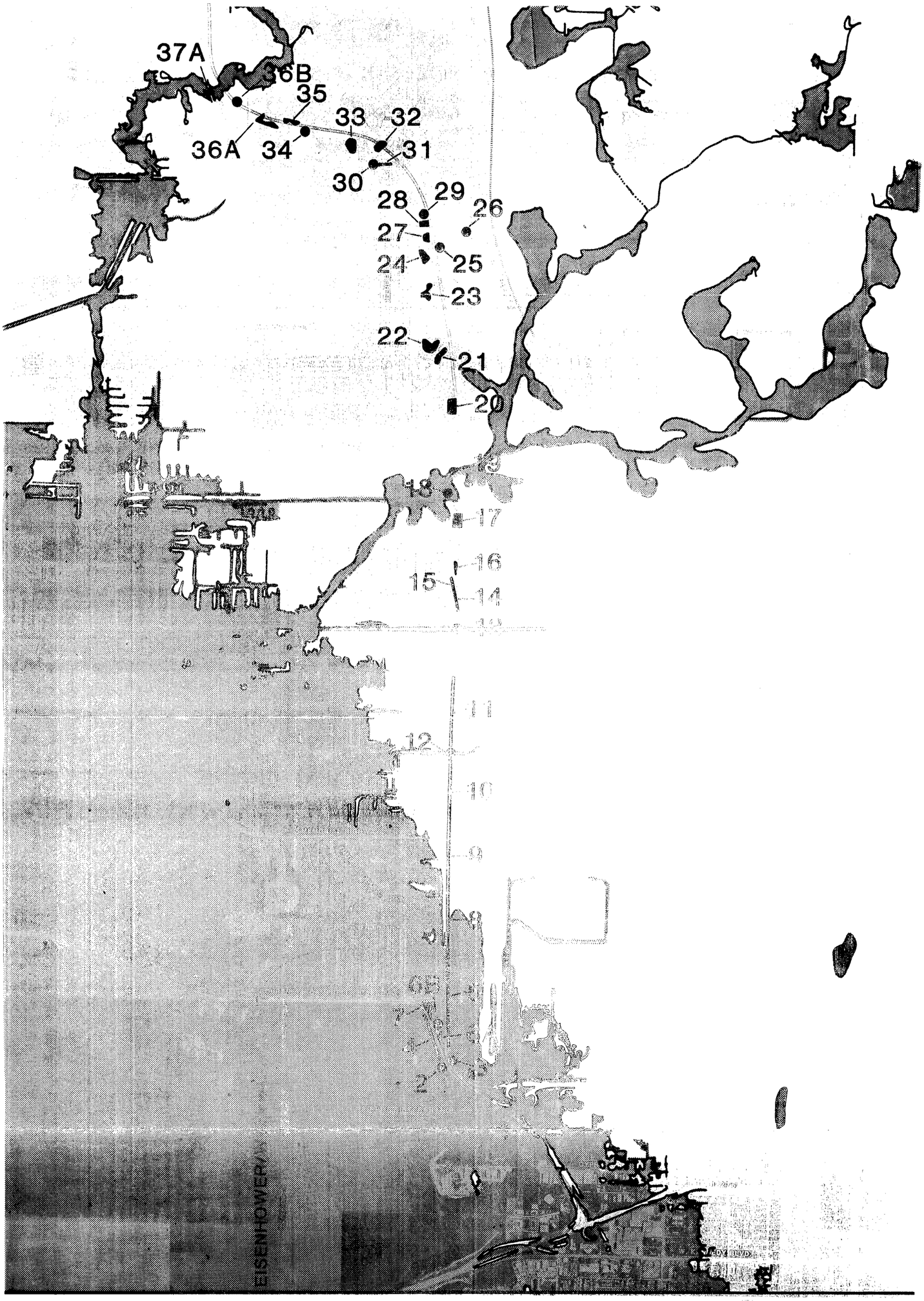
Impact to wetland #4 might result in a loss of 3.24 acres of valuable feeding habitat for shore birds and wading birds. The proposed Eisenhower/West Alignment would potentially impact 4.42 acres of wetlands in #5, #6A and #7. Impacts to #5, #6A and #7 will be mitigated by recreation of these systems as part of the revised drainage plans. Parts of #5, #6A and #7 may be unaltered by the proposed alignment and not require mitigation. Although wetland #4 lies within the proposed right-of-way, the proposed road alignment lies just east of this wetland area and should have minimal impact on the actual wetland area. Care during construction should eliminate the loss and need for mitigation of wetlands at site #4.

Wetlands #1, #6B, #8, #9, #10, #11, #12, #13, #14, #15 and #16 are palustrine, emergent marshes with persistent vegetation and water regimes from temporary to seasonal (Fig. 6-15). Common species in these wetlands include Typha domingensis (southern cattail), Hydrocotyl umbellata (marsh pennywort), Ludwigia spp. Cyperus


37A
36B
35
33
32
36A
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31
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28
29
26
27
24
25
23
22
21
20
19
18
17
16
15
14
13
11
12
10
9
8
6B
5
7
6A
4
3
2
1
AIRPORT INTERCHANGE
EISENHOWER/WEST ALIGNMENT

ALIGNMENT ALTERNATIVES
54 WETLAND SITE LOCATIONS
N
37B
38
39
40
41
42
43
44A, 44B
45
46
47
48
49
50
51
52
53
54
55
55
56A
56B
57
58
59
60
61
62
63
64
65
66
67
68
69
70
71
72
73

FIGURE 6-15


37A
36B
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33
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36A
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18
17
16
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14
11
12
10
9
7
2
EISENHOWER

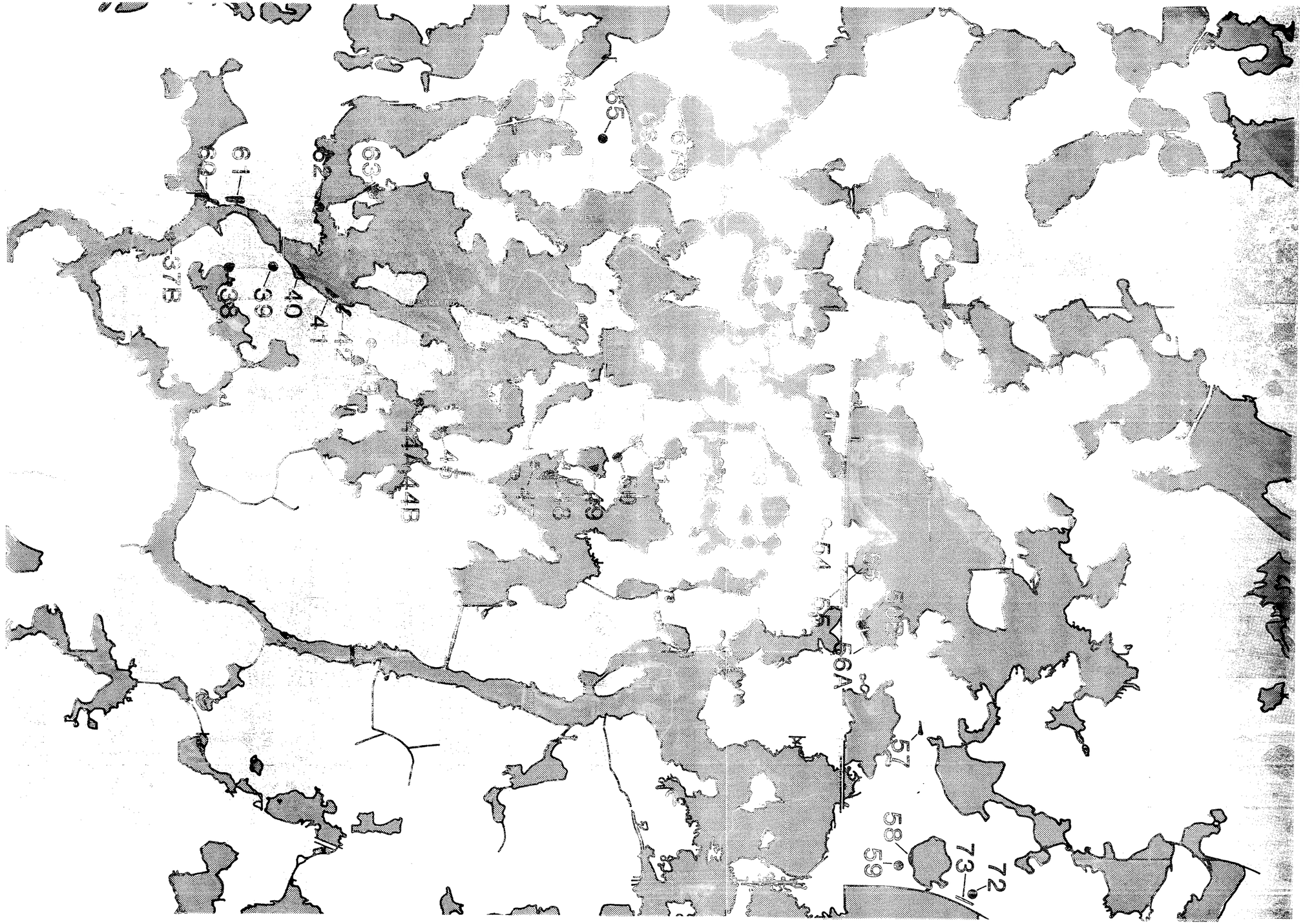

LEGEND
ALIGNMENT ALTERNATIVES
100 YEAR FLOOD BOUNDARIES
54 WETLAND SITE LOCATIONS
60
61
62
63
65
67B
66
68
40
41
44A
44B
54
56A
57
58
59
73
72

FIGURE 6-16

spp., (sedges), Juncus effusus (soft rush), Sagittaria lancifolia (arrowhead), and Panicum repens (torpedo grass) as the most common grass. All of these systems are drainage ditches or swales which receive some highway runoff.

These vegetated drainage ditches provide for stormwater retention, wildlife habitat for birds (mostly Red-winged Blackbirds), and some water quality benefits. However, periodic removal of vegetation from wetlands #1, #6B, #8, #9, #10, #11, #12, #13, #14 and #15 reduces the value of these sites. Design of the drainage system for the proposed expressway should provide for complete replacement of the 3.41 acres lost due to impact on wetlands #1, #6B, #8, #9, #10, #11, #12, #13, #14, #15 and #16. The new drainage system should provide the same environment for wetlands as provided by the present sytem, thereby resulting in no net loss of wetlands value due to impacts on wetlands #1, #6B, #8, #9, #10, #11, #12, #13, #14, #15 and #16.

Wetlands #17 and #18 are also palustrine, emergent marsh with persistent vegetation that are either temporarily or seasonally flooded (Fig. 6-15). Wetland #17 was formerly a shallow borrow pit presently dominated by Typha domingensis (southern cattail) and Ludwigia peruviana with Myrica cerifera (wax myrtle) and Acer rubrum (red maple) also common. Other tree species include Salix caroliniana (Carolina willow) and Quercus laurifolia (laurel oak), with Salvinia rotundifolia (water fern) and Azoela caroliniana (mosquito fern) common on the water surface. Wetland #18 is an irrigation pond with less diversity than wetland #17. Dominant vegetation is Hydrocotyl umbellata (marsh pennywort), Proserpinaea pectinata (mermaid weed) and Lippia nodiflora (creeping Charlie). Lack of diverse vegetation structure at site #18 reduces its value as wildlife habitat, while the diverse vegetation structure at site #17 provides a variety of wildlife habitats. The occurrence of this productive marsh area (wetland #17) in a developed area provides a refuge for some species of wildlife. Few habitats of this type are available in the area. Both systems have been altered by man; however, the 1.52 acres of site #17 to be impacted (37% of total system) are comparable to many natural systems and the loss will be mitigated by creation of emergent marsh. Alignment of this mitigation area within the proposed right-of-way contiguous to the remaining unimpacted portion of the system would provide mitigation for the wetland loss. The loss of 0.13 acre at site #18 (approximately 30% of the total) will not result in a significant loss of wetlands values and no mitigation is expected for this site.

Another wetland type commonly encountered on the proposed Eisenhower/West Alignment is forested, needle-leaved deciduous, with seasonal to semi-permanent water. Wetlands #20, #21, #22, #24, #26, #27, #29, #32, #33, #34, #35 and #36A are all classified as such and total 23.34 acres (Fig. 6-15). In addition to the above-mentioned wetlands, #23 and #29 are classified the same, but also include emergent marsh species such as Lachnanthes caroliniana (redroot, #29) and Typha domingensis (southern

cattail). These cypress swamps are generally in good condition in spite of their location in a developing area.

These wetlands (#20, #21, #22, #23, #24, #26, #27, #29, #32, #33, #34, #35 and #36A) are typically dominated by Taxodium distichum (bald cypress), with Myrica cerifera (wax myrtle), Persea palustris (swamp bay) and Ilex spp. common. Ferns are common groundcover at these sites with Osmunda regalis (royal fern), O. cinnamomea (cinnamon fern), Woodwardia virginica (chain fern) and Blechnum serrulatum (swamp fern) commonly encountered. Several of these sites contain Nyssa sylvatica var. biflora (black gum) and little evidence suggests invasion by exotics.

In general, healthy cypress swamp wetlands similar to sites #20, #21, #22, #23, #24, #26, #27, #29, #32, #33, #34, #35, and #36A provide many benefits to the local environment. The diversity of the systems listed above provide a variety of habitats for avifauna, herpetofauna, and small mammals. Thes sites mentioned above are isolated systems and would not be expected to meet the habitat requirement of larger mammals such as deer. Total area of the impact at the 13 sites is 25.52 acres.

Impacts to some of these wetland sites -- #24, #32, #33 -- will result in a reduction of wildlife habitat and floodwater storage capacity in the vicinity of the project. Impacts to these wetland sites will result in a substantial loss of the existing system for wetlands #24, #32 and #33. Little valuable wetland would remain at these sites. The proposed expressway would take greater than 75% of the total system at each of these sites, leaving only small isolated areas with few wetland attributes. Therefore, wetlands impact at these sites should be mitigated by recreation of wetlands in this area. Consideration will be given to using a single site to mitigate impacts at these three sites (#24, #32, #33). A large recreated site would have more benefits that three small sites, particularly with respect to habitat value.

The loss of wetlands at sites #20, #21, #22, #23 and #36A are each less than 50% of the total system. At sites #20 and #36A, the proposed expressway would bisect the wetlands system. The remaining systems at these sites should remain viable. In order to mitigate for the wetlands losses at sites #20 and #36A, enhancement or addition to the remaining systems is recommended. Sites #21 and #22 are both part of the same system. This system (excluding sites #21 and #22) should remain viable with the proposed project. As with sites #20 and #36A, enhancement and/or additional plantings adjacent to the remaining system would provide appropriate mitigation.

The impact on sites #26, #27, #29, #34 and #35 will result in less than 25% loss of the total systems. The systems remaining at each of these sites should remain viable. As the impacts to these

systems are small in area, enhancement or additional planting contiguous with the remaining systems will provide mitigation.

The proposed Eisenhower/West Alignment will impact 4 additional forested wetlands. Sites #25 and #28 (Fig. 6-15) are characterized by a common occurrence of Taxodium distichum (bald cypress), but transitional species such as Myrica cerifera (wax myrtle) and Quercus laurifolia (laurel oak) are more common than in the sites discussed previously. This indicates that the water regime is closer to temporary than seasonal. The vegetation at site #31 also indicates a shorter period of inundation than at the seasonally flooded wetlands. Quercus laurifolia (laurel oak) and Myrica cerifera (wax myrtle) codominate in the canopy and understory with Osmunda spp. (ferns) common as groundcover. Site #30 is similar with the addition of Taxodium distichum (bald cypress) and Pinus elliotii (slash pine) as occasional members of the overstory.

The condition of sites #25 and #28 is good, with high species richness. Sites #30 and #31 are less diverse; however, they are both still functional systems. Primary loss of wetland value due to impacts on sites #25, #28, #30 and #31 would be loss of wildlife habitat, particularly as bird nesting sites. Revegetation or restoration of man-altered systems in the vicinity will provide mitigation for the 2.17 acres of impact at sites #25, #28, #30 and #31.

The only additional palustrine system to be impacted by the proposed Eisenhower/West Alignment is the open water, permanently flooded site #36B. This site is at present an unvegetated retention pond with little wetland value other than floodwater storage. The 2.17 acre impact at this site should not result in reduction of the wetland resources of the vicinity; however, design considerations will be necessary to prevent loss of the water storage capacity of this site.

Three sites within the proposed Eisenhower/West Alignment are riverine systems. Sites #13 and #19 are classified as lower perennial aquatic bed, but also contain emergent marsh species such as Typha domingensis (southern cattail) and Pontederia cordata (pickerelweed). These two sites are part of Sweetwater Creek which is channelized. Vegetation is concentrated on the creek banks; however, aquatic bed species such as Alternanthera philoxeroides (alligator weed), Ludwigia repens (red ludwigia), Myriophyllum braziliensis (parrot feather), Ceratophyllum demersum (coontail) and green algae are common at both sites.

The canal banks of these channelized portions of Sweetwater Creek (sites #13 and #19) are periodically mowed to remove vegetation, reducing the value of these sites as wildlife habitat. The aquatic vegetation undoubtedly provides cover for fishes, but the impact of 0.62 acres at these two sites is not expected to significantly affect local fish populations. The proposed alignment will cross sites #13 and #19 on structure, which may

allow the aquatic vegetation to persist. The impact at these two sites should be minimal and no mitigation is expected.

The final site to be impacted by the proposed Eisenhower/West Alignment is site #37A (at Rocky Creek; Fig. 6-15). Site #37A is riverine, lower perennial, unconsolidated bottom of sand. Some Vallisneria neotropicalis (tape grass) and Potamogeton sp. (pondweed) occur on the creek bed. The creek floodplain is dominated by Fraxinus pennsylvanica (red ash) with Quercus laurifolia (laurel oak) also contributing to the overstory. Approximately 0.63 acres of this creek floodplain area may be impacted by the proposed Eisenhower/West Alignment. Crossing site #37A on structure should minimize the impact at this site. Loss of wetlands value due to the impact at site #37A will be primarily due to loss of wildlife habitat in the adjacent transitional floodplain forest. Crossing the creek on structure should minimize the impact to site #37A and prevent the need for mitigation.

6.3.7.2. Lake LeClare Alignment (3,000' South of Gunn Highway to Van Dyke Road)

The proposed Lake LeClare Alignment involves a variety of wetlands types including riverine, lacustrine and palustrine systems. The most common type of wetland system within this alignment is the palustrine, forested, needle-leaved deciduous with seasonal inundation or cypress swamp.

Wetland site #37B at Rocky Creek is the only riverine system which would be impacted by the proposed Lake LeClare Alignment (Fig. 6-15). This system is lower perennial, unconsolidated bed of sand. The site consists of the creek bed and associated transitional floodplain forest. Ceratopteris sp. (water horn fern) and Hygrophila polysperma occur on the creek bed; Lemna valdiviana (duckweed) and Salvinia rotundifolia (water fern) are occasional on the water surface. The floodplain forest is dominated by Nyssa sylvatica var. biflora (black gum) with Taxodium distichum (bald cypress) and Quercus laurifolia (laurel oak) common in the overstory. Several species contribute to groundcover with no real dominant, including Osmunda cinnamomea (cinnamon fern) and Blechnum serrulatum (swamp fern).

This site provides a variety of wildlife habitats due to the high vegetational diversity and association with the creek. Panfish in the creek, small mammals, birds and herpetofauna on the floodplain can all be expected to utilize this site. Filtration of runoff as it passes throught the floodplain forest undoubtedly provides water quality benefits.

In order to preserve the beneficial attributes of site #37B the proposed Lake LeClare Alignment will cross the creek on

structure. Clearing of the floodplain will be limited to the area necessary for construction of the structured crossing, thereby minimizing the adverse impacts on this 0.53 acre site. Design consideration will control highway runoff to prevent water quality impacts.

Sites #38, #40, #42, #44A, #48, #49, #52 and #54 are all palustrine, forested with needle-leaved deciduous vegetation that is seasonally inundated (Fig. 6-15). Sites. #40 and #42 are associated and contiguous with the Rocky Creek floodplain and sites #38, #44A and #49 are associated with drainage into small lakes which are common in this area. Sites. #48 and #52 are portions of larger cypress swamp wetlands while site #54 is isolated in the middle of a pasture. Site #38 is the only one of these in poor condition, probably due to its bisection by a power easement and fire damage.

The overstory at each of these sites (#38, #40, #42, #44A, #48, #49, #52, #54) is dominated by Taxodium distichum or T. ascendens (cypress) with Persea palustris (swamp bay), Magnolia virginiana (sweet bay), Nyssa sylvatica var. biflora (black gum) and Quercus laurifolia (laurel oak) common to many of the sites. Understory species commonly include Myrica cerifera (wax myrtle), Cephalanthus occidentalis (buttonbush) and Ilex cassine (dahoon holly). Osmunda cinnamomea (cinnamon fern), O. regalis (royal fern), Blechnum serrulatum (swamp fern) and Panicum spp. (grass) are common groundcover. The epiphytes Tillandsia recurvata (ball moss) and T. usneoides (Spanish moss) are also common throughout.

Each of these cypress swamp wetlands provides habitat for wildlife including Wood Ducks and other avifauna, small mammals, and herpetofauna. Although sites #48 and #52 are part of large contiguous tracts, the advance of development in the area makes it unlikely that any large mammals are present. Sightings of Florida Sandhill Cranes in the vicinity of wetlands sites #52 and #54 suggest that swamp margins in this area may be used as nesting sites by these birds.

The impact at wetlands #48 and #52 will affect small portions (5% and 15% respectively) of the entire systems, which should remain viable following construction. The impact at site #52 will bisect the existing system. Culverts will be used to maintain the hydric connection and maintain viability of the two remaining parts. The impact at site #48 will be on the edge of the remaining system. Loss of wetlands vegetation at sites #48 and #52 may be mitigated by enhancing (through drainage changes) the remaining fair quality wetland adjacent to site #48 and/or by creating additional wetland (though excavation to wetland elevation, and planting if necessary after one year) adjacent to the system associated with site #52.

Those sites contiguous with lakes or Rocky Creek (#38, #40, #42, #44A and #49) provide water quality benefits by treating runoff prior to its entering the receiving body. All of these systems also provide storage of stormwater. The proposed Lake LeClare

Alignment, would impact 10.12 acres of cypress swamp. In order to mitigate the loss of wetlands benefits due to the impact of the Lake LeClare Alignment on sites #38, #40, #42, #44A and #49, several steps will be taken. Precaution in design and construction will be taken to prevent degradation of water quality in the associated receiving water bodies. These precautions will include, but not be limited to, proper design of retention areas and the use of turbidity constraints during filling and excavating.

The loss of wetlands vegetation at sites #38, #40 and #42 will be mitigated by creation of wetlands. The wetlands systems associated with these sites should remain viable with the proposed expressway. Sites #38 and #40 are both associated with Rocky Creek, while the impacts at site #42 will leave 1.2 acres of isolated cypress head. It is recommended that the mitigation for loss of vegetation at these sites be combined and located in the vicinity of Rocky Creek.

The impacts of the proposed Lake LeClare Alignment on wetland sites #44A and #49 result in a small loss (less than 10%) of the existing systems, which will remain viable if the precautions mentioned above (two paragraphs) are followed. At site #44A culverts will be used to prevent isolation of the remaining wetland from its outfall into Lake Holly. Mitigation for vegetation/habitat losses will be provided adjacent to the remaining systems.

Two additional palustrine forested wetlands systems will be impacted by the Lake LeClare Alignment. Site #41 is broad-leaved evergreen, seasonally flooded, and site #53 is needle-leaved deciduous, only temporarily flooded. Site #53 was formerly a healthy cypress swamp; however, filling (most likely by the adjacent home owner) has eliminated the understory completely. The 0.16 acre loss of wetland at site #53 will not affect the wetland resources of the area and no mitigation is planned.

Wetland site #41 is dominated by Persea palustris (swamp bay), with Taxodium distichum (bald cypress) and Quercus laurifolia (laurel oak) also contributing to the overstory. Osmunda cinnamomea (cinnamon fern) and Serenoa repens (saw palmetto) are the dominant groundcover, with Myrica cerifera (wax myrtle) and Baccharis halimifolia (saltbush) common in the understory.

The health of the wetland system at site #41 is good, and this site provides valuable wildlife habitat and water quality benefits; 1.48 acres may be impacted at site #41. Although this site is only a small part of the Rocky Creek floodplain forest, mitigation should include those elements mentioned above in connection with sites #38, #40 and #42.

Five additional palustrine systems are likely to be impacted by the Lake LeClare Alignment. Sites #39, #45 and #46 have unconsolidated bottoms of organic material. Vegetation at these sites is limited to a littoral fringe and the water regime is seasonal to permanently flooded. These wetland sites might best be characterized as cattle ponds or unvegetated borrow pits. All three are isolated and the 1.37 acres impacted should have no effect on the wetlands resources of the area. No mitigation is recommended.

The other two palustrine sites, #50 and #51, are aquatic bed with floating vegetation, Salvinia rotundifolia (water fern) and Lemna sp. (duckweed). Both sites are situated in an orange grove and periodically used as burn ditches by grove workers. Both are highly disturbed isolated systems with little beneficial value as wetlands. The loss of sites #50 and #51 should have little impact on the wetland resources of the area. Both are part of the same 5.0 acre system which can be restored to provide mitigation for impacts to these sites.

Site #44B is the only lacustrine system within the study area. It is both limnetic and littoral with floating leaved vegetation. Although the area of site #44B within the Lake LeClare Alignment is only 0.39 acre, much more of the limnetic system might be impacted by the proposed alignment. Site #44B connects vegetatively to site #44A with a hydric connection during periods of high water. This site provides both water quality benefits and increases the diversity of wildlife habitats associated with Lake Holly. In order to minimize impacts to sites #44A and #44B and Lake Holly, culverts will be used to maintain the connection between these systems. Proper design of roadway drainage and retention areas will be necessary to prevent adverse water quality effects on site #44B and the rest of Lake Holly. Wetlands created as part of the proposed expressway drainage system should replace much of the lost habitat (0.65 acre). During construction, best management practices for the control of turbidity will be used to reduce the possibility of adversely affecting the remainder of Lake Holly.

Three additional sites were considered within the proposed Lake LeClare Alignment for potential wetland impacts. Site #43, formerly a willow pond, is no longer present due to site preparation for the Mandarin Lakes Estates subdivision. Sites #47 and #55 were found to be dominated by upland vegetation and should not be considered as wetlands.

6.3.7.3. Railroad Alignment (3,000' South of Gunn Highway to Van Dyke Road)

The majority of wetlands sites within the proposed Railroad Alignment are palustrine forested with needle-leaved deciduous vegetation and seasonally flooded (sites #61, #63, #64, #65, #66,

#68, #69 and #71). These sites are typically dominated by Taxodium distichum (bald cypress) with one or more additional overstory species such as Persea palustris (swamp bay) or Nyssa sylvatica var. biflora (black gum). Understory species at these sites commonly include Myrica cerifera (wax myrtle), Cephalanthus occidentalis (buttonbush), Ilex cassine (dahoon holly) and Lyonia lucida (fetterbush). Ground cover is frequently dominated by ferns, particularly Osmunda regalis (royal fern), O. cinnamomea (cinnamon fern) and Blechnum serrulatum (swamp fern).

Emergent marsh vegetation is found in association with sites #68 and #69, most commonly Pontederia cordata (pickerelweed), Lachnanthes caroliniana (redroot), and some Nymphea odorata (pond lily). All these sites (#61, #63, #64, #65, #66, #68, #69 and #71) are in fair to good health and contribute significantly to wildlife habitats and improved water quality due to vegetative filtration. They also provide for stormwater retention and are part of the base floodplain (see Section 6.3.5).

A total of 13.64 acres will be impacted by the proposed Railroad Alignment at these sites (#61, #63, #64, #65, #66, #68, #69, #71). At sites #65 and #69, the proposed expressway would abut the edge of the existing wetlands community but should not affect a large portion of the wetlands at these sites. At sites #61, #63, #64, #66, and #69 the proposed Railroad Alignment would have a greater impact at each site, but only the impact at site #63 is greater than 10% of the remaining system.

It is recommended that mitigation for loss of vegetation at sites #68, #69 and #71 be combined. The mitigation should include the creation of cypress and/or bay head areas which will be contiguous with to Rocky Creek system. Mitigation for wetlands losses at sites #61, #64, #65 and #66 should also consist of wetlands creation, this to be located adjacent to the remaining systems near the site of impact. Exact locations and configuration will be determined through coordination with regulatory agencies. It is suggested that mitigation for losses at site #63 be combined with one or more of the above areas.

Three additional palustrine forested wetlands systems occur within the proposed Railroad Alignment. Site #67 is broad-leaved evergreen dominated by Persea palustris (swamp bay). Site #60 is broad-leaved deciduous dominated by Acer rubrum (red maple), and site #62 is needle-leaved evergreen best characterized as upland pine flatwood. Site #62 has saturated soils while sites #60 and #67 are more likely seasonally inundated. Sites #60 and #67 are both in fair health, providing wildlife habitat, floodwater storage and water quality benefits associated with wetlands systems. Loss of wetlands attributes at site #60 and #67 will be mitigated by improving drainage and hydroperiod of the remaining system associated with site #60. This will include culverting to maintain the connection of this system to Rocky Creek.

The final wetland site which will be impacted by the Railroad Alignment is site #70. This site is palustrine scrub/shrub vegetated with broad-leaved evergreens and is temporarily to seasonally flooded. Site #70 is situated at the base of a large, somewhat disturbed, emergent marsh which provides drainage into the north end of Rock Lake. The primary benefit of this site may be to provide filtration of surface runoff prior to its emptying into Rock Lake, although some wildlife habitat is also provided, especially for wading birds.

In order to reduce the adverse impacts of the proposed Railroad Alignment to site #70, the expressway will cross this area on structure as necessary (see section 6.3.5.3) to prevent blockage of the flow into Rock Lake and reduce the wetland area impacted. Drainage considerations will prevent the degradation of water quality. The area of impact at site #70 will be less than the 1.75 acres included within the right-of-way. Mitigation for impacts at this site will include restoration of disturbed areas within the adjacent wetland.

6.3.7.4. Lake LeClare or Railroad Alignment (Van Dyke Road to 4,000' West of Dale Mabry Highway)

Between Van Dyke Road to 4,000' west of Dale Mabry Highway, the proposed Lake LeClare and Railroad Alignments are the same. In this area the alignments will impact three wetlands, all of which are palustrine systems.

One of these sites (#56B) is palustrine, forested with needle-leaved deciduous vegetation that is seasonally inundated. Site #56B is part of the large contiguous swamp forest which connects to Turkey Ford Lake. Site #56B is in good health.

Wetland site #56B is dominated by Taxodium ascendens (pond cypress). Persea palustris (swamp bay) contributes to the overstory, and Cephalanthus occidentalis (buttonbush) and Myrica cerifera (wax myrtle) comprise the understory at all three sites. Groundcover at site #56B is dominated by Blechnum serrulatum (swamp fern) with Osmunda regalis (royal fern) and Panicum sp. (grass) also common.

Due to its diverse vegetation and association with the large Turkey Ford system, site #56B is expected to provide habitat to a wide variety of wildlife. Deer and turkey have been observed in the vicinity, and more common birds and mammals are expected to use the area as well. The 3.19 acres to be impacted by the proposed alignments at site #56B are a small portion of the total Turkey Ford system, but do represent a valuable wetland resource.

In order to reduce the area of impact at site #56B, roadway side slopes will be steepened to 2:1. Even with this reduction in

impact, a loss of wildlife habitat will occur. Revegetation will help to provide wildlife habitats, and will also contribute to floodwater storage and water quality improvements. Design consideration will control highway runoff to prevent degradation of the remaining natural Turkey Ford system.

Two additional wetland sites occur on the Railroad/Lake LeClare Alignment in this area. Site #56A is a palustrine, emergent marsh with persistent vegetation and seasonal inundation. Only a berm separates this system from the Turkey Ford swamp. Typha latifolia (cattail) is the dominant vegetation with Nuphar luteum (spatterdock), Eleocharis sp. (spike rush), Juncus scirpoides (rush) all common. A small area dominated by Taxodium ascendens (pond cypress) abuts the pond on the south. This emergent marsh system provides certain habitats not available in the adjacent swamp forest system. Although originally man-made, this system (#56A) contributes to the wetlands resources of the area.

The proposed alignments will impact 0.27 acre at site #56A. Connecting the unimpacted portion of this system to the Turkey Ford swamp system would provide mitigation by allowing greater regulatory protection of the remaining system. It might also be expected to provide additional water quality benefits and wildlife habitat by vegetation of this connection.

The final wetland involvement of these proposed alignments is site #57. This palustrine system with unconsolidated bottom of organics is seasonally flooded. Best characterized as a sparsely vegetated farm pond, this site contributes little to the wetland resources of the area. Present plans by the property owner are to expand site #57 into a borrow pit. The loss of 0.65 acre at site #57 is not considered significant and no mitigation is recommended.

6.3.7.5. North Termini Alignment (4,000' West of Dale Mabry Highway to Dale Mabry Highway)

The proposed North Termini Alignment is expected to impact four sites which were investigated as wetlands. Site #73 was determined not to be wetland as it is presently dominated by Paspalum notatum (Bahia grass). Two of the sites to be impacted by this alignment are #56A and 56B, which are also impacted by the Railroad/Lake LeClare Alignment and are discussed in Section 6.3.7.4.

The only wetland site unique to the proposed North Termini Alignment is site #72. Like sites #58 and #59 on the South Termini Alignment, site #72 has recently burned. The vegetative species composition is also similar. In its present condition, the 0.79 acre at site #72 is not expected to contribute significantly to the wetlands resources of the area.

6.3.7.6. South Termini Alignment (4,000' West of Dale Mabry Highway to Dale Mabry Highway)

Two wetland sites, #58 and #59, occur within the proposed South Termini Alignment. Both are isolated cypress heads which have recently been burned. Impact at site #58 would affect 10% of the natural system while impact at site #59 would affect 70% of the system.

Fire has adversely impacted these sites repeatedly in the recent past. As such, much of the understory in these systems is lacking. Lack of vegetative cover, except for overstory, makes sites #58 and #59 relatively poor habitat compared to other nearby wetland systems. The impacts of the proposed expressway on these two sites is not expected to be significant. Enhancement (understory planting) of the remaining systems is recommended as mitigation for wetlands losses at these sites.

6.3.7.7. Summary of Wetlands Impacts

The proposed Northwest Hillsborough Expressway contains much wetlands involvement. Considering the general location of the alignments, wetlands involvement is unavoidable. Preliminary studies allowed alignment choices which avoided many of the most valuable wetlands within the study corridor, but could not avoid involvement completely. The "no build" alternative is the only one that avoids wetland involvement.

Total wetlands involvement of the entire project will be appoximately 65 acres. Table 6-9 summarizes the acreage of involvement for each of the complete alignment combinations. Of the 65 acres of wetland involvement, about 10% are part of existing highway drainage. Mitigation for these wetlands impacts will be easily provided by the drainage system for the proposed expressway. The drainage system for the proposed expressway will include much more wetlands area than the existing highway drainage being impacted, and portions of this excess will be used to mitigate wetland losses in natural systems impacted by the proposed expressway.

A comparison of the various alignment possiblities suggests that no significant difference in wetland involvement exists. Although the Lake LeClare Alignment has less acreage involvement than the Railroad Alignment, the Lake LeClare involvement in the vicinity of Lake Holly (sites #44A and #44B) is likely to be more significant than the acreage would indicate. All other involvements of these alignments are likely to have similar impacts.

Another consideration in determining the wetlands impacts of various alignments is the potential for additional impacts

TABLE 6-10
SUMMARY OF WETLANDS INVOLVEMENTS

ALIGNMENT	ACRES OF INVOLVEMENT
Eisenhower/West to Lake LeClare to North Termini	64.79
Eisenhower/West to Lake LeClare to South Termini	64.63
Eisenhower/West to Railroad to North Termini	66.63
Eisenhower/West to Railroad to South Termini	66.79
No Build	0

associated with development along the expressway corridor. Rapid development in the vicinity of the Eisenhower/West and Lake LeClare Alignments is presently occurring. Current development trends suggest that even without the expressway, development will occur along each of the alignments in the near future. The present permitting practices of state and local agencies are preventing most significant wetlands impacts due to development. Permitting requirements typically call for 2:1 or 1:1 creation of wetland for fill of wetland.

Mitigation for wetlands impacts will take many forms including wetlands areas created as part of the proposed expressway drainage and/or stormwater facilities, enhancement of currently stressed systems in the vicinity of the project (includes drainage/flooding improvement), and wetlands creation from upland. It is suggested that creation of wetlands include excavation, placement of organic soils, and planting of native wetland species. Other measures which will minimize impacts include crossing select wetlands on structure, steepening roadway side slopes, and making minor alignment shifts where possible to avoid wetland involvement.

The text outlines appropriate mitigation for the anticipated impacts at each of the wetland sites. It is expected that the proposed project will result in a net loss of forested wetlands. Wetlands creation outlined in the above sections should minimize this loss. The construction of the proposed expressway drainage/-stormwater system will no doubt lead to a net gain in emergent marsh systems.

During final design the recommendations discussed here will be refined in conjunction with state and local regulatory agencies to include those elements required to obtain the necessary dredge and fill permits. Detailed survey information including elevations, ordinary high water and normal pool of wetlands adjacent to proposed mitigation areas will be necessary to finalize mitigation plans.

Based upon the above considerations, it is determined that there is no practicable alternative to the proposed new construction in wetlands and that the proposed action includes all practicable measures to minimize harm to wetlands which may result from such use.

6.3.8 Water Quality Impacts

The northwestern portion of Hillsborough County in the vicinity of the proposed expressway is dotted with wetlands and small lakes. Without proper controls in design and construction, runoff from the proposed facility might be expected to influence water quality of adjacent waters. In addition to the wetlands and lakes in the area, the proposed expressway will cross Fish Creek, Sweetwater Creek, and Rocky Creek.

Few data on existing water quality of the lakes in the region are available. The Southwest Florida Water Management District (SWFWMD) is presently conducting a study which should provide water quality data on Rocky and Brushy Creeks and the lakes in the associated drainage basins.

The Hillsborough County Environmental Protection Commission (HCEPC) has collected water quality data on Fish, Rocky, and Sweetwater Creeks since 1973. Their sampling stations are at Eisenhower Blvd., Hillsborough Ave., and Memorial Blvd. respectively. Their data suggest that although all three creeks are designated Class III waters of the state, periodic violations of the Class III water quality standards occur at both Rocky and Sweetwater Creek. Typically, the dissolved oxygen concentrations at the HCEPC sampling stations are less than 4.0 mg/l at both Rocky and Sweetwater Creek.

In attempting to explain the low dissolved oxygen levels at Rocky and Sweetwater Creek, the HCEPC data suggest that the introduction of domestic sewage in the upper portions of these creek drainage basins contributes to the low dissolved oxygen levels. Additionally, runoff from forested wetlands and agricultural areas are often high in organics, contributing further to reduced oxygen levels.

Another recent study of Sweetwater Creek by SWFWMD suggests that at Anderson Rd., Waters Ave. and Linebaugh Ave. the creek has acceptable dissolved oxygen levels. In conjunction with HCEPC data, this suggests that the Hillsborough Northwest Sewage Treatment Plant may contribute significantly to biological oxygen demand (BOD) in Sweetwater Creek.

Although few water quality data are available for lakes, observation allows some prediction of water quality characteristics in the vicinity of the proposed expressway. The lakes in the vicinity of the project vary from clear water lakes similar to Rock Lake near the north end of the Railroad Alignment to lakes heavily influenced by tannin-containing swamp runoff such as Pretty Lake. In general, as with most shallow Florida lakes, the lakes in the vicinity of the proposed expressway are most likely eutrophic. Those receiving runoff from agricultural or heavily developed areas might be highly eutrophic. Observation of algal blooms at Lake Barbara and Lake Holly suggest that this

might be the case. Both of these lakes are small and bordered by a horse farm and chicken farm respectively.

Given the existing water quality conditions in the vicinity of the proposed Northwest Hillsborough Expressway, precautions will be taken to ensure that no additional adverse effects on water quality due to the proposed project occur.

During construction, Best Management Practices will be used to prevent erosion and avoid adverse water quality effects. This will include, but not be limited to, the use of turbidity barriers. Particular precaution will be taken during construction at all creek crossings and in the vicinity of Lake Holly, Lake LeClare, and Lake Helen if the Lake LeClare Alignment is chosen; or in the vicinity of Pretty Lake and Rock Lake if the Railroad Alignment is chosen.

Another potential source of adverse water quality effects is the closed Hillsborough County Landfill at Linebaugh Avenue and Wilsky Boulevard. The Eisenhower West alignment passes through the northwest corner of the landfill property. Discussion with Bill Holsonback of the Hillsborough County Solid Waste Department indicates that the landfill contains household waste, but no known toxic materials. In addition, all solid waste has been sealed with a Florida bentonite clay layer to prevent leaching from the disposal area of the landfill which is located several hundred feet west of the proposed alignment. Given the contents, location and design of this Hillsborough County landfill, no adverse water quality impacts would be expected from this potential source due to construction of the proposed expressway.

Because of the "state of the art" in highway stormwater research, it is not possible at this time to determine the impacts of highway stormwater runoff on the wetlands and lakes within the proposed project area. However, the appropriate Best Management Practices will be used during the construction phase for erosion control and water quality consideration. Conceptual approval has been requested from the Southwest Water Management District and the Florida Dept. of Environmental Regulation, but has not yet been received. Any requirements of the Southwest Water Management District or the Dept. of Environmental Regulation necessary to satisfy the FAC 17-25 above and beyond best management practices will be state-funded.

6.3.9. Threatened or Endangered Species

Field investigations were conducted within the vicinity of the proposed project to determine if any species listed by the U.S. Fish and Wildlife Service (USFWS) or the Florida Game and Fresh Water Fish Commission (FGFWFC) as endangered or threatened might be impacted by the proposed project.

Two endangered and 3 threatened (USFWS) species were observed within the project area, and one more endangered species might occur within the study area. In addition to these six species considered for protection by USFWS, FGFWFC lists two more species found within the proposed project area as threatened.

6.3.9.1. Endangered Species - USFWS

Within the study area for the proposed project two species listed by the USFWS as endangered are known to occur. These are the Wood Stork (Mycteria americana) and the Bald Eagle (Haliaeetus leucocephalus). A third species, also listed by USFWS as endangered, whose range includes the study area, is the Red-cockaded Woodpecker (Picoides borealis).

The Wood Stork, which is also listed by the FGFWFC as endangered, was seen using a variety of wetland habitats within the project vicinity. It is likely that the Wood Stork forages in many of the wetland habitats within the study area. Sightings have been recorded in the vicinity of Fish Creek near the south end of the project (Wetlands #4), in the ditch adjacent to Tampa International Airport (Wetlands #5, 8), and in several of the cypress domes and swamp forests near the northern end of the proposed project (Wetlands #44, 48, 49, 56).

Wood Stork use of wetlands is most likely for foraging, although some roosting undoubtedly occurs between feeding episodes. Estuarine wetlands on the south end of the project are used year round as tidal fluctuations create water depth conditions conducive to successful foraging by Wood Storks, particularly in tidal swales and ditches. In the palustrine wetlands, from Hillsborough Ave. north, Wood Stork use is more likely seasonal as the water depth in the cypress swamps, marshes and hardwood swamp forests are influenced by seasonal rainfall and drought. Wood Storks would be most apt to use these freshwater wetlands for foraging as periods of drought concentrate the food resources during the winter and spring.

No Wood Stork nesting sites were found within the vicinity of the project. Confirmation that no known Wood Stork nesting sites occur in northwestern Hillsborough County was obtained from the Wildlife Research Laboratory of FGFWFC (J. Rodgers, pers.

comm.). The proposed project will not adversely affect critical habitat or populations of Wood Storks.

The Bald Eagle, listed by USFWS as endangered and by FGFWFC as threatened, has also been observed within the study area. Sightings of adult Bald Eagles overhead have been made in the vicinity of Van Dyke Rd. at the north end of the proposed project, and a single juvenile was observed in a cow pasture between Ehrlich Rd. and Rawls Rd. just west of Hutchinson Rd.

No known nests of Bald Eagles occur within the study area and it is likely that the birds travel into the study corridor to forage occasionally. The nearest known Bald Eagle nest is located approximately $4\frac{1}{2}$ miles west of the proposed project near the county line, west of Double Branch Creek (Don Wood, FGFWFC, pers. comm.). Most likely feeding areas include the many small lakes found in the vicinity of the study corridor. As there are no known nest sites within the area and the proposed project should not affect lake fish and wildlife, no adverse effects on Bald Eagle populations or habitat are expected.

The only additional species listed by USFWS as endangered (threatened, FDFWFC) that might be found within the study area is the Red-cockaded Woodpecker. Typically, the Red-cockaded Woodpecker requires mature long leaf pine (Pinus palustris) forest for nesting and feeding habitat. As the study area for the proposed project lacks this habitat, it is unlikely that the Red-cockaded Woodpecker occurs within the limits of the proposed project. As such, the project will not impact the habitat or populations of the Red-cockaded Woodpecker.

6.3.9.2. Threatened Species - USFWS

One species listed by USFWS as threatened is known to occur in the project area. This is the Arctic Peregrine Falcon (Falco peregrinus tundrius, listed by FGFWFC as endangered). In addition to this species, the Eastern indigo snake (Drymarchon carais couperi, listed by USFWS and FGFWFC as threatened) may also be present within the project area.

The Arctic Peregrine Falcon is a winter resident in the Tampa Bay area. Although most reported sightings are made in coastal areas, one Arctic Peregrine Falcon was observed in March 1985 approximately one-half mile north of Ehrlich Rd. and one-half mile west of Hutchinson Rd. It is likely that the individual seen was a migrant beginning the flight north to nesting grounds in the Arctic. The sighting made during the course of this study is considered uncommon, and it is not expected that the proposed project would have any influence on the population status of the Arctic Peregrine Falcon.

Although the Eastern indigo snake was not seen during the course of this study, it is suspected to occur within the project area. Although sometimes found in association with gopher tortoise (Gopherus polyphemus) burrows in xeric habitats, the Eastern indigo snake would most likely inhabit moist woods within the study area.

In order to prevent adverse impacts to the indigo snake during construction, contractors' personnel will be advised of the potential presence of the indigo snake. Construction personnel will also be advised of its threatened status and the need to avoid actions that would jeopardize indigo snakes. Procedures for the handling of any indigo snakes encountered during construction will be included in the design specifications. Although the proposed project would result in some loss of habitat (see section 6.3.6, Wetlands) for the Eastern indigo snake, it is not expected to have a significant impact on the regional population of this snake.

6.3.9.3. Threatened Species - FGFWFC

Two species found within the vicinity of the proposed project are not considered in the list of Endangered or Threatened species provided by the USFWS, but are considered by FGFWFC as threatened. These are the Least Tern (Sterna antillarum) and Florida Sandhill Crane (Grus canadensis pratensis).

The Least Tern is apt to be found foraging for small bait fish in lakes and estuarine waters. As such it is expected within the vicinity of the proposed project. However, it is generally acknowledged that human exploitation early in the century and a lack of suitable nesting sites, free from disturbance, are responsible for the threatened status of the Least Tern. As the proposed project does not contain appropriate nesting habitat (open flat beach of coarse sand and shell), it should have no impact on Least Terns.

The Florida Sandhill Crane is found in open low lying areas, such as wet prairies and open land associated with marshy lake margins. During this study, four adult Florida Sandhill Cranes were seen in a pasture south of Van Dyke Rd. between Tobacco and Lake Shore Rds. Cranes were also heard from a cypress swamp (Wetland #52) adjacent to pasture. Additional observations of cranes have been made during the past year in the pasture north of Van Dyke Rd. between Turkey Ford Lake and N. Dale Mabry Highway.

Typically the Florida Sandhill Crane avoids densely populated or heavily utilized areas. The area around Van Dyke Rd., particularly in the vicinity of Turkey Ford Lake, is presently undergoing development. This encroaching development is likely to cause displacement of the Florida Sandhill Cranes observed in this

study. Additional proposed development of adjacent pasture lands in the vicinity will continue to reduce the available habitat of the Florida Sandhill Crane in the area. The impact, if any, of the proposed project on the anticipated displacement of the Florida Sandhill Cranes would be a slight decrease in the time necessary for displacement. If the proposed developments are completed before expressway construction the proposed project should have no effect on Florida Sandhill Cranes.

6.3.9.4. Summary of Impacts on Endangered and/or Threatened Species

Although several species listed by the USFWS and/or FGFWFC as endangered and/or threatened are known or expected to occur within the area of the proposed project, the expressway will not result in the loss of critical habitat or affect the local populations of these species.

6.3.10 Stream Modification and Wildlife

The present alignment of Eisenhower Blvd. is paralleled to the east by a drainage canal which delivers runoff from Tampa International Airport into a canal draining to the west under Eisenhower Blvd. and to Fish Creek to the south (Wetlands #5, 8, 9, 10, 11). The proposed project will result in the displacement of this drainage system to the east by approximately 200 feet.

The vegetation within Wetlands #8, 9, 10 and 11 has recently been removed by the Florida Dept. of Transportation to prevent flow restriction. This is a common practice with canal drainage systems to ensure proper drainage. As such the value of these wetlands to wildlife is temporary at best. These wetlands do provide for storage of stormwater, and between excavations the wetland vegetation provides for some improvement in water quality before the drainage enters Old Tampa Bay.

The southernmost section of this drainage canal system (Wetland #5) differs from other sections in that it is not periodically cleared of vegetation. This section is tidally influenced and has abundant growth of Avicennia germinans (black mangrove), Juncus roemerianus (black needlerush), Typha domingensis (southern cattail), Limonium caroliniana (sea lavender), Fimbristylis castanea (rush), Iva frutescens (marsh elder), and Baccharis halimifolia. The wetlands vegetation in this portion of the drainage canal provides water quality benefits and habitat for wildlife. Wildlife using this portion of the ditch include Clapper Rails, herons and egrets, Wood Storks, and possibly American alligators. This shallow vegetated portion of the ditch may also be used as a nursery area by estuarine fishes.

In order to prevent adverse impacts to water quality or reduction of wildlife habitat, the relocated drainage canal will be revegetated in its tidal reaches. The relocated drainage canal will be of the same proportions as the present canal, thereby replicating the water quality and habitat values of the present system.

Although the proposed expressway will cross several other creeks (Fish Creek, Sweetwater Creek and Rocky Creek), no stream modification or wildlife impacts are anticipated. Any impacts expected from these bridge crossings are discussed in Section 6.3.7, Wetland Impacts.

6.3.11 Construction Impacts

Construction activities for the proposed expressway will have air, noise, water quality, traffic flow and visual impacts for those residents and travelers within the immediate vicinity of the project. The air quality impact will be temporary and will primarily be in the form of emissions from diesel powered construction equipment and dust from embankment and haul road areas. Noise and vibrations will be from the heavy equipment movement and construction activities such as pile driving and vibratory compaction of embankments. Noise control measures should include those contained in FDOT's Standard Specifications for Road and Bridge Construction and those recommended in Subsection 6.3.2.3.

Water quality impacts will be controlled through best management practices for erosion and sedimentation control techniques as specified in the FDOT Standard Specifications for Road and Bridge Construction.

Maintenance of traffic and sequence of construction will be controlled so as to minimize traffic delays throughout the project. Access to all businesses and residences will be maintained to the extent practical through controlled construction scheduling. In the Eisenhower Boulevard area from I-275 to Hillsborough Avenue, the present traffic congestion may become worse during stages of construction where narrow lanes may be necessary. Traffic delays will be controlled to the extent possible where many construction operations are in progress at the same time. The contractor will be required to maintain two lanes of traffic in each direction on Eisenhower Boulevard at all times and to comply with the best management practices of the FDOT. Also, present interchange movements will be maintained through use of detour ramps. No other locations will require temporary roads or bridges.

For the resident living along the expressway right-of-way some of the materials stored may be displeasing visually.

Construction of the roadway and bridges requires excavation of unsuitable material (muck), placement of embankments and use of materials such as limerock, asphaltic concrete and portland cement concrete. Demucking is anticipated at most of the wetland sites and would be controlled by Section 120 of the FDOT Standard Specifications. Disposal would be on site in detention areas or off site. The removal of structures and debris will be in accordance with local and state regulation agencies permitting this operation. The Contractor is responsible for his methods of controlling pollution on haul roads, in borrow pits, other materials pits and areas used for disposal of waste materials from the project. Temporary erosion control features as specified in the standard specifications will consist of temporary grassing, sodding, mulching, sandbagging, slope drains, sediment basins, sediment checks, artificial coverings and berms.

6.3.12 Energy

Energy consumption for the proposed expressway was estimated using the Florida Department of Tranportation's FENERGY computer program. The amount of energy consumed by the travelling public and used for construction and maintenance was computed for relevant segments of roadways on the existing arterial network both with and without the proposed expressway. A comparison of the energy needed for each situation shows that the expressway alternative will save approximately 426 Billion BTU's or 9 barrels of oil per day in the ensuing years to the year 2010.

6.3.13 Summary of Environmental Impact Factors

A summary of the comparative evaluation of environmental impact factors is shown in Table 6-11.

TABLE 6 - 11

SUMMARY OF ENVIRONMENTAL IMPACT FACTORS

Factors/Alternative	I-275 to 3,000 Feet South of Gunn Hwy.		3,000 Feet South of Gunn Hwy. to Dale Mabry Hwy.		
	No Build	Eisenhower/West	No Build	Lake LeClare	Railroad
Air Quality	No Impact	No significant impact	No impact	No significant impact	
Noise	No significant impact	Significant impact at 1 of the 14 representative receptors	No significant impact	Significant impact at 2 of the 18 representative receptors	
Wild and Scenic Rivers	None	None	None	None	
Farmlands	None	No significant impact	None	No significant impact	
Floodplains	No impact	45 acres impact - Much in 100 year storm surge area on existing roadway. No substantial additional impact.	No impact	Approx. 29 acres impact. One longitudinal involvement. Little different than anticipated development impacts.	Approx. 26 acres impact. Little different than anticipated development impacts.
Coastal Zone	No impact	No significant additional impact to existing conditions	No impact	No impact	
Wetlands	No impact	Approx. 44 acres impacted of wetlands in fair to good health. Mitigation is proposed.	No impact	Approx. 20 acres impacted of wetlands in fair to good health. Mitigation is proposed.	Approx. 22 acres impacted of wetlands in fair to good health Mitigation is proposed.
Water Quality	No impact	Some impact, but no more severe than from current development trends	No impact	Some impact, but no more severe than from current development trends	
Threatened and Endangered Species	No impact	No substantial impact to threatened or endangered species or other critical habitats.	No impact	No substantial impact to threatened or endangered species or other critical habitats.	
Stream Modification and Wildlife	No impact	Displacement of 200 feet of canal from Tampa Int'l. Airport to Fish Creek with some impact.	No impact	No stream modifications or wildlife impacts anticipated	
Construction	No impact	Temporary air, noise, water quality, traffic flow, and visual impacts. Extensive impact on maintenance of traffic along Eisenhower Boulevard	No impact	Temporary air, noise, water quality, traffic flow, and visual impacts	

7.0 LIST OF PREPARERS

7.1 STATE

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Mr. C. L. Irwin - Environmental Administrator
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Mr. Benito Cunill III - Public Transportation Specialist
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Mr. W. D. Browning - Archeologist
M.S. degree in Anthropology; 13 years experience in archeological review. Archeological site survey and document review.

Mr. James G. Kennedy - Deputy District Engineer (Tampa Bay Area)
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Mr. Richard L. Combs - District Environmental Coordinator
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Mr. Kevin Doyle - Environmental Specialist
B.S. degree in Environmental Science; 1 year experience in environmental monitoring, 2 years experience in project development. Air and noise impact analysis.

Mr. Raymond L. Nottingham - Environmental Specialist
B.A. degree in Biological Science; 3 years experience in environmental monitoring, 8 years experience in project development. Preparation of environmental portion of document.

7.2 CONSULTANTS

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Mr. Dale E. Patten - Chief Transportation Engineer
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Mr. Jack R. Freeman - Traffic Engineer
B.S. degree in Civil Engineering; 10 years experience in traffic and transportation engineering. Corridor analysis document preparation.

Mr. George R. Huffman - Urban Planner
B.A. degree in Political Science; Masters Degree in Regional Planning; 18 years experience in transportation planning and community impact analysis. Community impact analysis. Document preparation.

Mr. J. Warren Myers - Chief Environmentalist
Masters Degree - Biology; 14 years experience in impact analysis for highways and other major public works projects. Environmental review. Document preparation.

MANGROVE SYSTEMS, INC.

Mr. George J. Churchill - Senior Scientist
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Mr. Roy Robert Lewis III - Principal Ecologist
M.A. Zoology; 25 years experience in environmental ecology and assessment. Document preparation.

7.3 FEDERAL HIGHWAY ADMINISTRATION

Mr. Dennis Luhrs - District Engineer
B.S. Degree in Civil Engineering; 11 years experience in highway engineering. Supervisory Highway Engineer responsible for the administration of the Federal-Aid Highway program for the Bartow District.

Mr. Greg Scheiss - Area Engineer
B.S. degree in Civil Engineering; 11 years experience in highway engineering. Highway engineer responsible for the administration of the Federal-Aid Highway program for five (5) counties in the Bartow District.

Mr. George E. Rice - Environmental coordinator
B.S. degree in Civil Engineering; 16 years experience in highway engineering. Highway engineer responsible for the coordination of environmental studies for Federal-Aid Highway projects throughout the State of Florida.

8.0 COMMENTS AND COORDINATION

8.1 PUBLIC PARTICIPATION PROGRAM

8.1.1 Corridor Study Phase

A public participation program consistent with the requirements of Florida's Action Plan is being conducted as part of the development of the Northwest Hillsborough Expressway. This program was initiated on April 6, 1981 with a meeting for governmental officials with mass media notification and coverage. An Expressway Study Group comprised of thirty-one members of the community, was formed to serve as a sounding board for the consultant team's findings and proposals. Meetings of the Study Group were held on June 1, and August 4, 1981.

A major aspect of the public participation program has been a series of public Informational Workshops. During the Corridor Study phase, workshops were held within the following six major subareas of the overall study area: Bay Crest (June 30, 1981), Tampa International Airport Area (July 1, 1981), Northdale/Keystone (July 2, 1981), Town and Country (July 8, 1981), Carrollwood (July 9, 1981), and Northlake/ Lutz (July 10, 1981). These workshops were held to inform the public and officials of the Project through exhibits and briefings and to listen to concerns and suggestions. The workshops were advertised by publication of notices in the Tampa Tribune and by notification to and coverage by the mass media.

As an additional effort to inform the public of the expressway study, a newsletter was published on a half page of the Northside and Northwest editions of the Tampa Tribune on June 25, 1981. The newsletter, Issue No. 1, provided a map of the study area, explained the purpose, scope, and schedule of the study, and identified the Expressway Study Group and consultants. Circulation was estimated by the newspaper to be approximately 80,000. On August 12, 1983, Issue No. 2 of the newsletter was published in the Tampa Tribune which identified the corridors under study and again explained the purpose, scope and schedule of the study. An invitation was extended to the public to attend the public hearing on the corridors, August 15, 1983.

Eight presentations were made to civic associations at their request. In addition, the consultant answered inquiries from the public by letter, telephone, and in person at their Tampa office. Upon request, individuals and representatives of organizations were placed on a mailing list for subsequent notification of public meetings and for distribution of the newsletter.

8.1.2 Preliminary Engineering and Draft EIS Preparation Phase

The public participation program has been developed to be a continuing effort throughout all phases of the study through public informational meetings, Study Group meetings, periodic publication of the newsletter, meetings with interested organizations and groups, and formal public hearings.

On July 22, 1984, Alignment Alternatives were publicly presented in the Tampa Tribune. This was followed by Issue No. 3 of the newsletter which identified the alternative alignments under consideration, invited the public to attend public workshops, and reiterated the overall study scope and schedule.

Public informational workshops were held on August 1, 1984, at Curtis Hixon Hall and on August 2, 1984 in the North Dale Mabry area. These workshops were held to inform the public of the alignment alternatives being considered through exhibits and briefings and to listen to concerns and suggestions. The workshops were advertised by publication of notices in the Tampa Tribune and by notification to and coverage by the mass media.

Presentations were made to a number of civic groups subsequent to these workshops to present information and to receive comments.

8.2 CORRIDOR PUBLIC HEARING

A Corridor Public Hearing in compliance with State Statute 334.211 was conducted for the Northwest Hillsborough Expressway by the Tampa-Hillsborough County Expressway Authority and the Florida Department of Transportation at the Curtis Hixon Hall, 600 Ashley Street, Tampa, Florida at 7:00 p.m. on August 15, 1983. The purpose of the public hearing was to advise the public of the corridors under consideration for the location of the expressway and to solicit their comments prior to the selection of the preferable corridor for further study.

8.2.1 Conduct of the Public Hearing

The Tampa-Hillsborough County Expressway Authority and the Florida Department of Transportation advertised the Corridor Public Hearing on five separate occasions in the Tampa Tribune. The dates of advertisement were as follows:

July 16 and August 1, 1983 - Legal Advertisement
July 29 and August 7, 1983 - Quarter page Advertisement
August 12, 1983 - Notice in "Expressway Newsletter", Issue 2

In addition, letters of notification of the hearing were mailed to property owners living within 300 feet of the representative alignment centerline prepared for each corridor and to governmental elected and appointed officials. In total, 9,120 letters were mailed during the week of July 18 thru 22, 1983.

As stated in the notices, copies of the Phase I - Corridor Report and aerial mapping depicting corridor locations were placed at the following locations for public inspection:

(1) Lutz Branch Library
(2) North Tampa Branch Library
(3) Westgate Branch Library
(4) Citrus Park/Keystone Library
(5) Special Collections Department, USF Library
(6) Information Desk, Hillsborough County Courthouse
(7) HNTB Tampa Office

Florida Department of Transportation representatives and consultants were present at the hearing site at 2:00 p.m. to answer questions and discuss the project. At 7:00 p.m., the formal hearing presentation began. The hearing was divided into three parts: (1) engineering presentation, (2) intermission, and (3) public testimony. It was estimated that over 2,500 people attended the hearing and approximately 500 people came during the earlier question and answer period.

8.2.2 Public Hearing Testimony and Written Statements

The principal portion of the public hearing was the public testimony. During this part of the hearing, forty-six individuals addressed the record with one of these individuals speaking twice. Additionally, nineteen written statements and seven petitions were received. Of the nineteen written statements, eleven were presented orally at the hearing. Six petitions were opposed to Corridors C and D and the eastern portion of Corridor B and contained 493 individual signatures plus signatures from representatives of eight homeowners associations. The other petition contained 151 signatures opposing all alternatives for the expressway.

To summarize the positions of the speakers, twenty-three individuals spoke opposing all corridors and a new expressway in general. Their principal concerns were communitiy disruption and residential relocation, the idea of another toll road which would possibly have deficit funding, and the need to improve local roads. There was another group of seven speakers who opposed all proposed expressway corridors for the same general reasons previously stated. This group however suggested that a beltway or expressway be considered further to the west and north possibly into Pinellas and Pasco Counties.

Thirteen individuals spoke opposing Corridors C and D and the eastern portion of Corridor B. These individuals typically acknowledged that some level of new transportation improvement is needed. They were opposed to these corridors as being the most disruptive to their communities and as having a high number of relocatees.

Three other individuals spoke with one favoring the expressway. Another spoke opposing Corridors A and B and desiring that the expressway be further west of Corridor B. The other individual was against placing the expressway through lower income housing.

Eight written statements were received at the hearing that were not orally presented. These included two statements totally against the project, four statements opposing Corridors C and D and the eastern portion of B, and two letters from governmental agencies responding to the Phase I - Corridor Report.

8.2.3 Summary of Written Correspondence Received Following the Public Hearing

For a ten day period following the Corridor Public Hearing, written correspondence was received which became a part of the official transcript of the hearing. A total of 896 letters and 2,059 signatures on petitions were received in addition to the written statements presented at the Public Hearing. The following categories of comments have been briefly summarized to describe the positions of the writers and the major issues raised regarding the expressway.

(1) Opposed to the Expressway Regardless of the Location

Opposition to any expressway was stated in 282 letters and represented by 1,470 signatures on petitions. Major reasons given for opposition included concern for adverse impacts on communities, neighborhoods, and, to a lesser extent, on the natural environment. A second reason given was a belief that the expressway would not sufficiently relieve local traffic on the existing roadways since it would not be located to meet local travel demand for trips downtown and other major destinations. The expressway was perceived as a road to serve travelers to the airport and others who are bypassing Tampa.

There was a general belief expressed that a toll expressway would not pay for itself. The experience to date on the Tampa South Crosstown Expressway was cited as evidence. A new tollway was considered by some to be another expressway that would require heavy subsidies at the expense of local roadway improvements. These writers expressed the opinion that the overriding need is for improvement to existing roads, particularly Dale Mabry Highway. Several writers suggested double decking this road. In addition to improving existing roads and adding new local roads, major improvement to mass transit as a solution was mentioned by several writers.

Among those opposed to the expressway were some writers who were of the opinion that the Tampa-Hillsborough County Expressway Authority, because of its limited jurisdiction, is not in a position to effectively and comprehensively address transportation needs. Some expressed the viewpoint that consideration should be given to abolishing the Authority.

(2) Favor Expressway Further North and West or a Beltline

A second category of letters, 231 in all, expressed opposition to the corridors as presented and to the expressway as conceived. This category was comprised of two basic groups. The first group, while opposed to Corridors A, B, C, and D, offered that a roadway located west of Sheldon Road and aligned in such a way as to miss urban development, should be considered. A second group favored a beltway that encircles the Tampa area, including portions of Pasco County and possibly Pinellas County. Examples cited were interstate highway (freeway) circumferential loops around various major U.S. cities that were federally subsidized. The writers believe this would better meet future needs and avoid urban impacts.

Both groups were comprised of writers who were against the development of more toll roads because of the present deficit problems on the Tampa South Crosstown Expressway. Included in this category were writers of the opinion that the Tampa-Hillsborough County Expressway Authority should be replaced by an Authority with broader geographic authority. These writers also stated that local roads need improving on a priority basis to serve local traveling needs.

(3) Opposed To Corridors C and D and the Eastern Portion of Corridor B

A total of 333 letters and 492 signatures on petitions were received from people opposed to Corridors C, D, and the eastern portion of B. These persons were primarily concerned about the impact of the expressway on various neighborhoods, particularly the ones in which they reside. Many of these correspondents were dubious of another toll road paying for itself and were opposed to the requirement for heavy subsidies at the expense of improvements to the existing local roadway network. While a number of neighborhoods were named, Carrollwood Village, Carver City, and Forrest Heights were most frequently mentioned.

(4) Opposed to Corridors A and B

A total of 22 letters and 69 signatures on petitions were received from people opposed to Corridors A and B. These letters expressed concern for disruption to the community of Lutz from the expressway dividing the area and altering the general rural way of life. Other concerns were impacts on the natural environment including impacts on the quality of lakes and the natural setting of flora and fauna. Those persons against Corridor B expressed that an expressway could have adverse impacts on neighborhoods and residential developments.

Many of the writers expressed concern that the expressway would not significantly help in meeting local traffic needs and that improvements to local roads are needed. Again, concern was expressed that the expressway would utilize funds that could be used for local road improvements.

(5) Favor Corridor A

One letter was received which stated preference for Corridor A as the best corridor to meet future needs with least disruption to the existing population.

(6) Favor Corridors A and B

Nineteen letters and 28 signatures on petitions were received which stated a preference for Corridors A and B because of the least impact on the existing population in the area. As in previous categories of comments, concerns were expressed as to whether or not the facility would relieve traffic on major roads, would be capable of paying for itself, and would serve the local populations rather than merely providing a bypass for unwanted, non-local, through traffic.

(7) Favor the Expressway

Eight letters were received which favored the expressway without preference for a specific corridor. They expressed the opinion that the project is overdue and needs to be built to relieve present traffic congestion and meet future demands.

8.2.4 Responses to Major Issues and Concerns of the Public

In reviewing the public hearing testimony and written correspondence which is part of the public hearing record, a number of major issues and concerns were brought forth by the public. The purpose of this section is to provide a compilation of these issues and concerns and to respond to each of them.

(1) ISSUE/CONCERN: The expressway will not relieve local traffic congestion since it does not go towards downtown or does not serve to alleviate traffic going to major generators such as Tampa Stadium, Tampa Bay Center, MacDill Air Force Base, and commercial areas along Dale Mabry Highway. The east-west traffic on major roads would also not be relieved.

RESPONSE: The proposed expressway will provide an alternative route for many trips thereby reducing the number of vehicles that would use existing roadways. The expressway is intended to provide a route for both through traffic and local commuters who travel to Downtown Tampa and other points south such as West Shore and West Kennedy Boulevard. The expressway, while it may be longer in travel distance, will be used by some commuters because it will save travel time and attendant costs. This should cause a noticeable reduction in traffic for many of the major roadways in the northwest quadrant during peak periods. The reduced congestion should also provide improved local accessibility to local commercial areas.

East-west roadways would also benefit from improved traffic flow due to less directional peaking. Traffic on roadways such as Waters Avenue, Linebaugh Avenue, Gunn Highway, and Ehrlich Avenue should realize more of a directional split between Dale Mabry Highway and the expressway during peak periods, which will improve capacity. Additionally, east-west roadways east of Dale Mabry Highway accessing I-275 should realize some reduction due to the expressway.

(2) ISSUE/CONCERN: The expressway will not pay for itself and would probably require a large subsidy from Hillsborough County local gas revenues. Therefore, it would take money away from improvements needed now for major local roads in Northwest Hillsborough County.

RESPONSE: Financing of the expressway will be investigated as part of the Phase II study. As the project is developed, the sources of funding will be identified. The expressway may be wholly or partially funded by toll revenue bonds. Construction of a toll expressway may in fact eliminate the need for certain other local road improvements. It is expected that some of these improvements can be postponed, if not eliminated, because the expressway will otherwise meet the needs that prompted such improvements.

It should be noted that even if a toll road runs a deficit in its first decade of operation, it still encumbers less tax dollars than a totally government financed project. As surplus funds become available, any tax dollars used for initial support are repaid by tolls. Government funded projects are never repaid.

(3) ISSUE/CONCERN: The traffic problem can be basically solved by improving Dale Mabry Highway. Double decking is perceived as one solution.

RESPONSE: The traffic problem in Northwest Hillsborough County cannot be solved by adding or improving a single facility. Population forecasts by the Hillsborough County City-County Planning Commission and a recent study completed by Hillsborough County have indicated that providing substantial improvements to Dale Mabry Highway and other local roads will still require additional major new facilities to accommodate traffic demands for the year 2000 and beyond. In addition, improvements to local arterial roads are needed.

Double decking of Dale Mabry Highway, while appealing from the standpoint of not requiring substantial amounts of new right-of-way except at access points, nevertheless has severe problems. The bridge or deck structure and necessary frontage road development would be more expensive to build than a new expressway. Commercial businesses along Dale Mabry Highway would probably suffer severe economic impact during the years required for construction. Additionally, there are no programmed funds for improving Dale Mabry Highway to the degree required to efficiently and safely handle anticipated traffic volumes. For a project such as doubledecking, staging or phasing construction over a period of time is not practical. Therefore, sufficient funding would be required to construct the project to its ultimate level of improvements.

Finally, continued new development west of Dale Mabry Highway will require a major north-south road in that vicinity to meet future traffic demands and to relieve congested major highways as well as local arterial roads.

(4) ISSUE/CONCERN: Mass transit has not been adequately considered. Perhaps a monorail would be a good alternative.

RESPONSE: The Tampa Urban Area Transportation Study has examined the long range transportation needs for the area and their plans reflect an expanded role for transit in the area as funding is available. The Hillsborough Area Regional Transit Authority (HART) has been providing an expanded express bus fleet to the Northwest Hillsborough area. Even with major improvements to the existing transit system, the vast majority of trips will still be made by automobile and relief of the road system by the addition of new and improved roads will be required to meet future needs.

A monorail or other rail system for Hillsborough County was comprehensively studied within the past several years as part of the Tampa Bay Area Rapid Transit District Study. The study concluded that a rail system was not financially feasible in that funds required for capital investment and for operating the system were too great to be justifiable.

(5) ISSUE/CONCERN: The corridors presented create major impacts on existing neighborhoods.

RESPONSE: The corridors include a substantial amount of residential and commercial development, both existing and newer developments, that were not present when the Phase I study was initiated in 1981. The phase II study will examine the selected corridor in detail to attempt to locate alternative roadway alignments in such a way as to minimize the impact on existing neighborhoods.

(6) ISSUE/CONCERN: The data on land use, as evidenced by the aerial maps on display at the Hearing, are out of date. Therefore, the number of displacements and the right-of-way costs for the project are significantly understated.

RESPONSE: The aerial maps displayed at the Public Hearing were compiled in 1980, but were the only maps of their size available for display purposes at the Hearing. More current aerial maps (May, 1981 and December, 1982) were used for data collection and analysis in the Phase I study and its update. In addition, extensive field investigations were made, county subdivision records were checked, and new development plans were reviewed during the course of the study and its update. It should be noted that proposed developments continued to be approved subsequent to the identification of corridors, making updating a continuous process.

Costs for right-of-way were not based on aerial photographs, rather they were based on review of affected properties as listed on the County's tax rolls and through field investigation. The county's assessed value was not used, but only the information on ownerships was used.

(7) ISSUE/CONCERN: The roadway as proposed is too late. It is a reaction instead of a planning effort. Too much development has occurred that would have to be disrupted. If an expressway must be built, move it west of Sheldon Road and Citrus Park and north along the Pasco County line or further north. If necessary, create a new multi-County Authority to do this.

RESPONSE: The roadway is not too late to meet future traffic demands. The facility is not considered a solution in itself to the Northwest Hillsborough County traffic problems, rather it is considered as part of the system-wide solution to a complex problem.

It has been suggested that by moving the expressway west of Sheldon Road and Citrus Park and north to the County line, the controversy over impacts on neighborhoods and communities could be lessened. This solution has two basic problems. First, the roadway would be further removed from present parallel arterial roadways thereby providing little relief to those highways or roads. Second, because the roadway as conceived would rely on toll revenue to pay for its construction, a roadway that far west would not generate as much traffic or revenue in the early years of operation.

The concept of a beltway that would encircle Tampa further west and north into Pinellas and Pasco Counties has also been suggested. A beltway might aid in providing a portion of an adequate long term system for the three counties, but would not provide the traffic relief needed in the near term in the Northwest Hillsborough County area. (Also see RESPONSE 14.)

(8) ISSUE/CONCERN: An interstate beltway (non-toll) is suggested. It would be located in Pasco County in the north and possibly as far west as Pinellas County outside existing urban areas.

RESPONSE: A beltway similar to those around Atlanta, Dallas, and Washington, D.C. has been suggested as another alternative. The referenced beltways were built with 90 percent federal funds as part of the Interstate Highway System. Interstate funding is not available for the Northwest Hillsborough Expressway as this program is being phased out. In fact, the lack of new interstate funds and road users' taxes in general have led to a rebirth of bond financed, toll road projects as a viable alternative means for providing new major roadway projects.

A regional beltline could be considered for the long term future as a supplement to the proposed highway system, not as a substitute for the Northwest Hillsborough Expressway. A multi-County Authority could be considered should the need for such a road be established in the future.

(9) ISSUE/CONCERN: Too much damage will be done to the natural environment and the community of Lutz will be divided if Corridors A and/or B are selected.

RESPONSE: The Phase II study specifically examines the impacts on the natural environment and on the communities and neighborhoods. One of the objectives of the Phase II study is to identify specific roadway alignments so that a detailed analysis can be made of potential impacts to supplement the generalized preliminary estimates made in Phase I for broad corridors.

During the Phase II study, special emphasis is placed on studying the traffic volume that the section of roadway between Dale Mabry Highway and I-275 would serve and the resultant benefits to the downtown interstate system. These will be compared to the roadway cost and its environmental and community impacts.

(10) ISSUE/CONCERN: The public does not want another "South Crosstown Expressway" which has a current multi-million dollar drain on Hillsborough County gas revenues. The Crosstown Expressway is an example of a toll road that simply costs too much to ride and is not used.

RESPONSE: The South Crosstown Expressway is currently requiring heavy subsidies from the Hillsborough County gasoline tax revenues. The current deficit situation is expected to change to surplus, although not as rapidly as projections had indicated. As anticipated in the traffic projection, more traffic will be drawn to the Crosstown when the connection to Interstate 75 Bypass is opened and when the Brandon/Bloomingdale areas develop as were anticipated prior to the recent economic slowdown.

It has been historically true that toll roads are slow in generating revenue in the early years, but often exceed projections after this initial period. This should be true for the Tampa South Crosstown Expressway. Even without the connection to the Interstate 75 Bypass or substantial growth in eastern Hillsborough County, current revenues have increased 25 percent over the last year.

In years ahead, the expressway will not only provide needed traffic relief from the east to downtown, but is expected to create a surplus of funds that will be used to repay the County for any gas tax revenues used. Given continuing inflationary pressures, the roadway was built at a good price and at a good time.

(11) ISSUE/CONCERN: Why not take the $200 to $250 million proposed for this expressway and use it to improve existing roads in the County such as Dale Mabry Highway, Gunn Highway, Sheldon Road, and others?

RESPONSE: The funds to be used on the construction of the Northwest Hillsborough Expressway are to come principally from the sale of revenue bonds that are to be repaid from tolls. These funds are not available for local road improvements since there is no practical way to collect tolls on local roads to repay the bonds.

(12) ISSUE/CONCERN: A report and resolution dated June 21, 1982 by the Hillsborough County City-County Planning Commission stated that the project was not financially feasible at that time and recommended investigations of alternative transportation facilities to serve the travel demands of Northwest Hillsborough County.

RESPONSE: Investigations of alternative means of solving transportation problems is a continuing process of the Tampa Urban Area Transportation Study, the Metropolitan Planning Organization, and the Florida Department of Transportation (FDOT). Since there is the possibility that the proposed expressway is feasible because of changes in interest rates, continued growth in the area, and worsening traffic conditions, it was decided by the Tampa Hillsborough County Expressway Authority and the Florida Department of Transportation to conduct the Phase II study. This study will enable them to make a determination based on detailed study rather than on preliminary Phase I results. In the meantime, the FDOT and Hillsborough County have been pursuing other projects to alleviate the worsening traffic conditions in the Northwest area. These include major improvements to Interstate 275, Dale Mabry Highway, and improvements to local area roads.

(13) ISSUE/CONCERN: It was suggested that during the corridor selection process, the Community Impact Factor should be the most important factor. This would place the greatest emphasis on the disruption to the homes and businesses that may be taken.

RESPONSE: In the Phase I - Corridor Report, the Community Impact Factor was discussed addressing such issues as residential and business displacements, impacts to public and semi-public facilities, impacts to neighborhood cohesion, and the capability of serving growth patterns. Each of these factors are important and significantly affect the project. The report also addressed Traffic Service and Engineering Factors, and Environmental Impact Factors. The factors under Traffic Service and Engineering Factors typically addressed the traffic volume served, project costs, and financing capability of the project. The Environmental Impact Factors addressed such issues as air quality, water quality, wetlands, and noise impacts.

Based upon the technical and public input information accumulated during the study process, it was found that the Traffic Service and Engineering Factors and the Community Impact Factors should be of equal concern. This is bacause there is at least one factor in each category that could seriously affect the project feasibility. While the Environmental Impact Factors are important, the study indicated that for each corridor the environmental impact could be mitigated and no single environmental factor would inhibit the development of an alignment within the corridors. Therefore, the Environmental Impact Factors were not rated as high as the Community Impact Factors and the Traffic Service and Engineering Factors.

(14) ISSUE/CONCERN: The Tampa-Hillsborough County Expressway Authority, bacause of its limited jurisdiction, is not in a position to effectively and comprehensively address transportation needs of Hillsborough County.

RESPONSE: The transportation planning process is a comprehensive process involving federal, state, and local governments. Locally in Hillsborough County, the planning process is the Tampa Urban Area Transportation Study (TUATS) under the technical supervision of the Hillsborough County City-County Planning Commission. The local approving authority of the transportation plans for the County is the Metropolitan Planning Organization (MPO).

The Northwest Hillsborough Expressway was placed in the initial TUATS adopted in 1971. This project has been reviewed during each subsequent update of the TUATS and still remains in the plan as a potential project for Northwest Hillsborough County. These studies have shown that in addition to the expressway, the widening of many local roadways to include Dale Mabry Highway, I-275, Waters Avenue, Gunn Highway, and others will be needed to accommodate year 2000 and beyond traffic volumes. The study also recommends a significantly improved express bus transit service for the region to offset additional roadway improvements.

The Tampa-Hillsborough County Expressway Authority was "created for the purposes and shall have power to construct, reconstruct, improve, extend, repair, maintain, and operate the expressway system" (Florida Statute 348.53). By law, the Expressway Authority is not directly involved in the transportation planning process. The Authority has the duly constituted responsibility for those major expressway projects that are included in the TUATS plan and approved by the MPO but that are not fundable through road user taxes.

(15) ISSUE/CONCERN: To the west of Corridor B is an abandoned railroad grade which runs north/south paralleling the western edge of the corridor. In view of the residential growth to the east, why can the corridor not be expanded to incorporate this potential alignment?

RESPONSE: The corridors presented in the Phase I - Corridor Report, Update and the Corridor Public Hearing are not final and may be revised based upon public input. The public hearing is conducted at this early stage of the project to receive such input and to adjust the study process as necessary.

During the one and one-half year period between the initial Phase I report and commencement of its update, considerable residential development had occurred in northeast Hillsborough County and within Corridor B. This growth has caused areas which were vacant and desirable for an expressway alignment to be filled with new housing and become less desirable. Therefore, the development of a potential alignment along the abandoned railroad right-of-way is a viable consideration and Corridor B has been widened to the west to incorporate the area including the railroad. The corridor has been widened approximately 1,000 to 1,500 feet from the vicinity of Linebaugh Avenue to south of Hutchinson Road.

8.3 EARLY NOTIFICATION PACKAGE

As part of the effort during Phase II to ensure that the various governmental agencies having review and permit authority were informed of the Northwest Hillsborough Expressway Project, an early notification was sent to the State A-95 Coordinator of the State Planning and Development Clearinghouse. A list of those agencies to whom letters were sent are shown in Table 9-1. The early notification letters of comment received from the various agencies are noted in Table 9-1 with an asterisk. The letters are included in Appendix D.

The Florida Department of Environmental Regulation stated that the environmental impacts from the proposed project could not be determined at the time of their reply since the early notification package contains only general information about the project. Based on the magnitude of the project, the agency recommended that an Environmental Impact Statement be prepared to assess the impact of the project on aquatic resources, air quality, noise, storm-water management, and dredge and fill activities. They recommended that any roadway improvements minimize impacts to wetlands, streams, lakes, and flood prone areas. They also recommended that fill in floodplains and flood prone areas be avoided.

The Florida Department of State, Division of Archives, History, and Records Management indicated that there are three recorded archaeological sites within the study area. The Division deemed that these sites lack sufficient integrity to warrant preservation or mitigation through archaeological excavation. The Division indicated that historic structures and other archaeological sites are likely to occur within portions of the study area. The Division recommended that plans and location maps for the final selected expressway right-of-way and its alternatives be submitted to the Division of Archives, History, and Records Management for review. They further recommended that if project activities will impact areas deemed likely to contain potentially significant archaeological and/or historic sites and properties, then a systematic, professional archaeological and/or historical survey should be conducted prior to any land clearing or ground disturbing activities.

The Florida Game and Fresh Water Fish Commission recommended a thorough inventory and documentation of the natural habitats and wildlife species occurring within the project corridor with particular attention to species listed by the Commission as endangered, threatened, or of special concern. The Commission further recommended that during alignment selection, wetlands and uplands which support endangered or threatened species be avoided. Bridging, right-of-way width reduction, and culverting should be implemented as necessary to minimize adverse impacts on wetland vegetation and hydrology. If unavoidable adverse impacts are anticipated, the Commission recommended that appropriate mitigatory measures be presented in the environmental assessment.

TABLE 8-1

ADVANCE NOTIFICATION LETTERS

MAILING LIST AND RESPONSES RECEIVED

(Asterisk (*) Denotes Response Received - See Appendix D)

Executive Office of the Governor*
Federal Highway Administration
Environmental Protection Agency
U.S. Fish & Wildlife Service
National Marine Fisheries Service
Area Supervisor - National Marine Fisheries
Department of the Army
National Park Service
State Conservationist
Assistant Director of Operations - H.U.D.
Department of Transportation - Federal Aviation Administration
Department of the Interior - Fish & Wildlife Service
Marine Fisheries Commission
Commander (oan) - Seventh Coast Guard District
Florida Department of Environmental Regulation*
Department of State, Division of Archives, History and Records Management*
Department of State, Historic Tampa/Hillsborough County Preservation Board*
Florida Game and Fresh Water Fish Commission*
Tampa Bay Regional Planning Council*
City of Tampa*
Hillsborough County Environmental Protection Commission*
Hillsborough County City-County Planning Commission*
Tampa Bay Regional Planning Council*
Lutz Civic Association*
Southwest Florida Water Management District*
United States Environmental Protection Agency*

The Tampa Bay Regional Planning Council offered extensive comments on the Northwest Hillsborough Expressway Project. The Council indicated that the consistency of the proposed project with Council policy and with Florida's Coastal Zone Management Program could not be determined until the Location and Design Study and further biological assessments are submitted for review. The Council stated that while another facility is needed to reduce congestion on the overburdened road network in northwest Hillsborough County, the issues raised in their review should be addressed during the Location and Design Study. The Council also stated that the design study and biological assessments should be provided to them for review. These issues are provided in their letter in the Appendix G.

The Southwest Florida Water Management District stated that when specific project alignments for the proposed expressway have been identified, they will be better able to evaluate the project's potential impacts and indicate where permits may be required. The District recommended that an alternative be selected which will minimize construction in wetlands which provide temporary storage of floodwaters. The District recommended consideration of operation and maintenance requirements of water control structures on various water bodies in northwest Hillsborough County and consideration of potential effects of the proposed expressway on District adopted water management levels for numerous lakes in northwest Hillsborough County. The District also stated that the final expressway alignment should be planned so that the facility will not contribute to the degradation of surface water quality of lakes and streams.

The Governor's Natural Resources Policy Unit recommended that an Environmental Impact Statement pursuant to the National Environmental Policy Act and its implementing rules be prepared for the Northwest Hillsborough Expressway Project. A complete economic justification, cost, and financing program should also be submitted.

The City of Tampa expressed concern about the proposed project as related to the general environmental impact of additional highway construction on Tampa Bay and the wetlands of that area.

The Hillsborough County Environmental Protection Commission commented that when more detailed plans are submitted, they will review the project for potential wetland destruction and stormwater pollution.

The Hillsborough County City-County Planning Commission stated that they had no comments at the present time, but would submit comments after reviewing the Environmental Impact Statement and the Traffic and Revenues Study.

The Lutz Civic Association expressed concern that the proposed expressway would have negative impacts on the Community of Lutz and would not serve the transportation needs of their community and Hillsborough County.

The State Clearinghouse commented that a complete federal Coastal Zone Management Act consistency review will be conducted during review of the Environmental Impact Statement should any federal funds be included in the financing package for the expressway.

8.4 SCOPING MEETING

An Environmental Scoping Meeting was held on April 17, 1984 to meet with Federal, State, and local agencies in an open forum to determine the significant environmental issues related to the proposed Northwest Hillsborough Expressway. Representatives of the following agencies and organizations attended the meeting.

(1) Environmental Protection Agency
(2) U.S. Army Corps of Engineers
(3) Florida Department of Transportation
(4) Florida Department of Environmental Regulation
(5) Florida Division of Forestry
(6) Hillsborough County Planning Commission
(7) Hillsborough County Historian
(8) Hillsborough County Engineering Department
(9) Hillsborough County Expressway Authority
(10) Hillsborough County Aviation Authority
(11) Tampa Bay Regional Planning Council
(12) City of Tampa
(13) Tampa President's Board
(14) Howard Needles Tammen & Bergendoff (HNTB)
(15) Mangrove Systems, Inc.
(16) Biological Resources Associates, Inc.

An overview of the proposed Northwest Hillsborough Expressway Project and a proposed schedule was presented at the Scoping Meeting. The various agencies requested that they be provided a period of four to six weeks to review the Environmental Impact Statement (EIS). Mangrove Systems, Inc. discussed wetlands and rare and endangered species. The Florida Department of Environmental Regulation inquired whether mitigation would be addressed in the EIS and the response was that any required mitigation measures would be presented in the environmental document. Information on coastal zone consistency was requested from the Florida Department of Transportation. It was discussed that there would be extensive floodplain involvement in the northwest area and that this involvement would be addressed in accordance with the floodplain executive order. During the remainder of the meeting, air quality, noise quality, and socioeconomic issues were discussed.

8.5 CORRIDOR LOCATION AND DESIGN PUBLIC HEARING

A second and final public hearing was held jointly by the Tampa-Hillsborough County Expressway Authority and Hillsborough County City-County Planning Commission in cooperation with the Florida Department of Transportation.

8.5.1 Conduct of the Public Hearing

The Public Hearing was advertised in the Tampa Tribune through legal notices published on February 2, and 18, 1986. In addition Newsletter No. 3 was published on February 28, 1986 with a notice of the Public Hearing included. Letters of notification were also mailed to property owners living or conducting business within 300 feet of the alternative alignments centerline.

The Draft Environmental Impact Statement, plans and other pertinent information developed by the Tampa-Hillsborough County Expressway Authority were on display for public inspection and copying at the following locations:

1) North Tampa Branch Library
2) Westgate Branch Library
3) Citrus Park/Keystone Branch Library
4) Howard Needles Tammen & Bergendoff, Tampa Office
5) Hillsborough County Courthouse
6) Tampa-Hillsborough County Expressway Authority

The informal portion of the hearing was conducted on Tuesday, March 4, 1986, from 11:00 a.m. until 7:00 p.m. in the Curtis Hixon Convention Hall, 600 Ashley Drive, Tampa, Florida. Exhibits were on display during this entire session and all related engineering and environmental reports were available for scrutinization. In addition, seven slide presentations were given between 11:30 a.m. and 5:30 p.m. explaining the justification and impact of the project.

The formal hearing presentation commenced at 7:00 p.m. and continued until all persons who had previously expressed a written desire to speak had been heard. Before the hearing presentation was closed, an invitation was extended for anyone to speak who had failed to file a written request and it was reiterated that the public hearing would remain officially open for 10 days to receive further written comments on the project.

8.5.2 Public Hearing Testimony and Written Statements

Four court reporters were available during the informal hearing session to record documented statements. There were 114 statements transcribed in this manner. Regular correspondence consisted of 189 letters from private citizens and business establishments. Twenty-three citizens expressed a written desire to speak and 21 of those made statements.

Summarily, 323 individuals responded to the public hearing with 186 indicating support for the project and 137 indicating opposition or strong disfavor.

The responses have been categorized by form of communication and general nature and content of the response, whether positive or negative.

Of the 21 speakers at the formal public hearing, six supported the project with certain qualifying remarks regarding route location and related community impact. Fifteen were opposed for various reasons, the principal being that available funding should be diverted into the existing arterial street and highway system and not expressways. Other variations were of the "No-Build" option.

Four court reporters recorded responses from 114 persons attending the informal hearing. Of these, 70, or approximately 61 percent, gave favorable responses, 42 being wholly supportive and 28 supporting the Railroad alternative only in lieu of the Lake LeCLare Alignment. The 44 persons not supporting the project were categorized into four general areas; four feared the expressway negated planned land use concepts and consequently would deplete land values; one did not accept the results of the traffic projections and resultant system analysis; two stated that not enough alternatives were considered, and, 37 were unequivocally and categorically opposed to expressways.

Of the 189 persons who responded by mail, 111 or about 59 percent supported the need for the Northwest Expressway. Of those opposed, seven voiced support for "No Build"; eight were opposed for land value depletion and land use disruption reasons; seven took issue with the traffic projections; one stated the need for a complete beltway around Greater Tampa instead of the proposed Northwest Hillsborough Expressway; five objected to the number of alternatives considered as insufficient; four favored a "double-decking" of Dale Mabry in lieu of the expressway, and 46 individuals were unqualifiedly opposed to the project.

8.5.3 Responses to Major Issues and Concerns of the Public

In reviewing the public hearing testimony and written correspondence which is part of the public hearing record, a number of major issues and concerns were brought forth by the public. The purpose of this section is to provide a compilation of these issues and concerns and to respond to each of them.

The issues and concerns brought out in this public hearing, many of which were previously expressed by the public at the hearing held on August 15, 1983, are:

(1) ISSUE/CONCERN: The expressway should be located further west and north to serve as a beltway around the area. The expressway could be located in Pinellas and Pasco Counties. The expressway does not go anywhere. The expressway should be designed in a northwest to southeast direction for better access from the northwest area to downtown Tampa.

RESPONSE: A regional beltway should not be considered a substitute for the proposed Northwest Hillsborough Expressway. The area served would be very different and the relative benefit to local roadways would not be effectively realized. In the future both facilities may be a part of the areawide transportation plan.

The expressway is part of a system of roadways and therefore will serve the area it traverses, as well as the traffic passing through the area.

Alternative routes for the expressway in a more northwest to southeast direction were considered. See the Dale Mabry Alignment alternatives discussed in Subsection 4.1.3. These alternatives had less traffic, cost more and required more relocations as shown in the study. Also see Subsection 8.2.4, Issue/Concern No. (8).

(2) ISSUE/CONCERN: The expressway will not collect sufficient tolls to pay all costs for the project and could therefore require Federal, State and/or County funding. Use of Federal, State or County tax dollars would mean less funds available for other needed transportation improvements within the northwest area and throughout the County. The expressway will cost too much or is not cost effective. The Tampa South Crosstown Expressway was used as an example of an expressway not being financially feasible.

RESPONSE: Financing of all roadway improvements in the area is constantly being reevaluated in order to use the federal, state and county funding sources as efficiently as practical. The possibility of collecting tolls adds one more funding source and while the revenue collected may not pay for the entire expressway it will greatly reduce the funding needed from tax sources of the governmental agencies.

The cost estimates prepared for this project reflect current prices escalated to the median year 1988 for construction, engineering and right of way. This project is less expensive for the benefits realized (i.e. traffic services) than the improvements that would be required on existing roadways.

In order to construct the Tampa South Crosstown Expressway today without bond funds, using only tax monies, it would cost $225 million. The County has used only a fraction of that amount for paying off the bonds. The usage on the Crosstown Expressway is increasing at approximately 15% per year and should start paying

for all the yearly bond interest, and principal requirements in three years. Over those three years the County will have to pay out a total of only $10 to $12 million.

Also see Subsection 8.2.4, Issues/Concern Nos. (2) and (10).

(3) ISSUE/CONCERN: Proposed toll schedule is too high, very few drivers will use the facility to pay tolls.

RESPONSE: The proposed toll schedule was developed by the Authority's traffic consultants and is based on current costs for operating a vehicle. The average toll schedule for the Tampa South Crosstown Expressway is 6.2 cents per mile and projected average for the Northwest Hillsborough Expressway is 6.5 cents. The public in the past has generally responded that it would not pay tolls to use expressways, however, experience with similar projects has shown that the public eventually does use these expressway facilities.

(4) ISSUE/CONCERN: Improve the arterial roadway network by constructing new segments where needed and widening existing roads. A grid system of roadways was recommended. Consider regulating truck traffic by indicating no trucks are permitted to operate in the area from 7 AM to 9 PM and 4 PM to 6 PM.

RESPONSE: An expressway that can accommodate larger volumes of traffic and is safer at greater speeds is a complement to the arterial roadway network. Many of the roadways on the arterial network are also scheduled for needed improvements. These improvements would have to be more extensive without the proposed expressway. The expressway would provide relief to drivers using the existing roadways, and to a larger extent when those roadways are being improved and would be a significant relief to the many drivers using the expressway on a regular basis. Also see Subsection 8.2.5, Issue/Concern No. (1).

(5) ISSUE/CONCERN: Improve Dale Mabry Highway instead of providing the Northwest Hillsborough Expressway by widening the roadway, adding interchanges and double decking the existing roadway where traffic is projected to be high.

RESPONSE: Improvements to Dale Mabry Highway are presently in the planning, design and construction stages; however, the regional transportation plan shows a need for the proposed expressway as an addition to Dale Mabry Highway upgrading. The studies of Dale Mabry Highway are considering all available options, which include widening, interchanges and double decking. Also see Subsection 8.2.4, Issue/Concern No. (3).

(6) ISSUE/CONCERN: The traffic projections are either too high, or too low. There will not be a reduction of traffic on Dale Mabry Highway or other arterial roadways in the area once the Northwest Hillsborough Expressway is in operation. The expressway needs to connect to I-275 on the north to satisfy

traffic demand. Plans should be made now for future traffic needs, present location of proposed expressway shows a lack of planning.

The traffic will increase at interchange locations and encourage more traffic on many local subdivision roads.

RESPONSE: The traffic projections are as current and accurate as possible. They are derived from the latest Tampa Urban Area Transportation Study traffic assignments being used by the Florida Department of Transportation and the Hillsborough County City-County Planning Commission.

Traffic on Dale Mabry and the other arterial roadways will decrease some in most areas and increase some on feeder roads to the expressway interchanges. That is to say, the traffic patterns would be greatly altered with the expressway added to the transportation system.

Connecting the expressway to I-275 on the north would serve a number of "bypass" trips, however, the disruption to the community and environment did not warrant an expressway between Dale Mabry Highway and I-275. The "bypass" trips would use improved arterial roadways.

The Tampa Bay Area Regional Planning Council and the Hillsborough County City-County Planning Commission are continuously studying and updating their plans for a viable transportation system. The proposed expressway is a vital link within that system and should be implemented as soon as practical. With the proposed expressway in place, transportation projects can and will connect to meet future traffic needs.

Generally, the amount of traffic at any given point with the expressway in the transportation network should be less on local roads in the area and somewhat more on roadways immediately adjacent to the expressway. The direction of traffic movement on a local road by commuting expressway users may also change from east to west in the morning to west to east and reversed in the evening as commuters travel to and from the expressway rather than the alternative local north-south arterial roadways they have been using.

(7) ISSUE/CONCERN: Realignment of the expressway was recommended between Hillsborough Avenue and Johns Road, between Waters Avenue and Linebaugh Avenue; in the Gunn Highway area; the Lake Holly area; and the Van Dyke Road area. Additional lanes were recommended along Eisenhower Boulevard. Additional interchanges were recommended for easier access. On the north end of the Railroad Alignment, alternative extensions to the north and west were recommended for future connections to Pasco, Pinellas and Hernando Counties. The South Termini was recommended since it would be closer to Van Dyke Road.

RESPONSE: In response to these type of comments received during the public hearing process and the comments by the governmental agencies on the Draft Environmental Impact Statement, the proposed expressway was realigned in several areas, interchanges redesigned and ramps added.

The area of the expressway from I-275 to Hillsborough Avenue, designated Eisenhower Boulevard was changed to provide added traffic capacity on ramps and along the mainline.

The area from Hillsborough Avenue to north of Johns Road was realigned to reduce impacts to the airport and businesses in the area. Also, the canal realignment caused further westward movement of the expressway alignment and frontage road. This will result in 70 residential relocations in the Southern Comfort Homes area as compared to the 32 residences and potential of 15 businesses in the original alignment.

Between Barry Road, which is south of Waters Avenue, and Gardner Road north of Wilsky Boulevard the expressway was realigned. The main reasons for the realignment included adverse interchange geometrics at Waters Avenue, Anderson Road and Linebaugh Avenue, construction of businesses in the path of the expressway at Linebaugh Avenue, development potential for property north of Waters Avenue and in the northwest quadrant of the Linebaugh Avenue and Henderson Road intersection, and the proposed extension of Twelve Oaks Boulevard by Hillsborough County.

The comment regarding the Gunn Highway area was for the Railroad Alignment and does not affect the selected Lake LeClare Alignment.

The Lake LeClare Alignment skirted the north end of Lake Holly and passed through areas where residential development was proposed and is now occurring. The expressway was realigned to the south of Lake Holly where potential savings in right of way costs and reduction in relocatees are anticipated. The construction and associated engineering costs would be increased.

The Van Dyke Road interchange was redesigned to provide better traffic service and alleviate impacts to developing properties. The overall costs did not appreciably change.

The interchanges were located at all major arterial roadway crossings. Since the public hearing, and in response to Hillsborough County's review comments of the Draft Environmental Impact Statement, additional ramps to and from the north were added at Wilsky Boulevard, Hutchinson Road and Tobacco Road (Gunn Highway Relocation Project).

An extension of the expressway to serve Pasco, Pinellas and Hernando Counties was added at Tabacco Road. While this extension is not on the Railroad Alignment it would serve the same function. Hillsborough County is constructing the extension (designated Gunn Highway Relocation) and would tie it into the proposed expressway

on the south and Pasco Counties section of the roadway to the north. The section of roadway in Pasco County connects to the North Suncoast Corridor roadway to be located from south to north in Pasco, Hernando and Citrus Counties. The North Suncoast Corridor is currently in the planning stages.

The South Termini was selected since it was more compatible with proposed development and with the County's transportation plans.

(8) ISSUE/CONCERN: Design of the expressway should consider effects on property (good access/egress and amount of taking); effect on relocation of the water line in the Railroad alignment; effect on water recharge areas particularly north of Van Dyke Road; need to regulate construction vehicles using local roads causing excessive deterioration; and safety of pedestrian traffic at interchanges.

RESPONSE: The design of the expressway will comply with current standards of the American Association of State Highway and Transportation Officials (AASHTO) and the Florida Department of Transportation (FDOT) as stipulated in Subsection 4.1.1. Their policies also address the design considerations of providing frontage roads for access/egress to properties, relocation of all utilities, interchange design and spacing and the coordination of construction activities such as heavy equipment using City, County and State roads.

Every effort will be made to provide good access to all properties thereby reducing severance damages paid to the residences or business affected.

The water line in the Railroad Right of Way will not be affected since the Lake LeClare Alignment has been selected for the project. All other utility adjustments will be coordinated with the respective owners for appropriate protection or relocation.

The environmental permitting agencies regulate the construction activities in and adjacent to the wetlands and floodplain areas. North of Van Dyke Road the expressway will have detention/retention areas for stormwater discharge. In addition mitigation of impacts on the wetlands will be provide as stipulated in Subsection 10.3.3.

Use of construction equipment on roads leading to the project is coordinated with the affected governmental entity having jurisdiction. The contractor is responsible for damages to those roadways and in many instances, repairing and repaving is a requirement.

Crosswalk striping and sidewalks will be provided in accordance with City and County requirements. Pedestrian signals will be installed, where appropriate.

(9) ISSUE/CONCERN: Environmental issues and concerns are drainage into lakes and streams, effect on wetlands and wildlife, loss

of stormwater detention areas and increase of noise and air pollution levels.

RESPONSE: Each of these issues is covered in Sections 6.0 and 10.0 of this document. All projects such as this expressway are tightly controlled by the permitting agencies having jurisdiction in order to minimize the impacts. Where appropriate, mitigation is provided for such items as drainage into lakes, loss of wetlands and flood-plain areas due to removal and filling and increased noise. See Section 11.0 for the recommendations and commitments for constructing the Recommended Alignment (Subsection 4.3) .

Retention/detention ponds with control features for filtering and treating stormwater will be constructed for control of drainage into lakes and streams. Replacement of wetlands is proposed as one means of mitigation. These replacement areas will also be a forage area for wildlife and therefore will reduce the impact. Stormwater detention areas will be provided wherever a loss in area is anticipated. At locations where noise levels will increase, abatement measures have been analyzed and provided in accordance with current requirements of FHPM 7-7-3. It has been determined that the air quality for the northwest area of Hillsborough County will not be significantly changed by adding the expressway to the transportation network.

(10) ISSUE/CONCERN: Community impact issues and concerns are disruption of neighborhoods and communities. Taking of residences will cause relocations within a racially integrated neighborhood along the Railroad Alignment. Businesses either taken or remaining near the expressway will be damaged by loss of good access and loss of business. Other concerns are: relocation of a Baptist Church in the Railroad Alignment, decline of property values, more growth encouraged, beneficial to developers, pleasant surroundings infringed upon, safety of children threatened due to increased traffic on local roads and at interchanges, separation of children residences from schools they are attending, and increase in crime in the area.

RESPONSE: The effect of the expressway on the community for each of the alignment alternatives is addressed in Subsections 6.2 and 10.2. These sections of the report delineate numbers of relocations and character of the affected neighborhoods. The loss of good access to businesses and the potential loss of business is a major consideration in design of the expressway. The businesses to be relocated will be paid in accordance with the relocation policy of the Florida Department of Transportation presented at the public hearing. Also, see Response to Issue/Concern No. (8) above concerning access/egress to businesses that will remain adjacent to the expressway.

The racially integrated residences and the Baptist church would have been unavoidably impacted if the Railroad Alignment alternative had been selected as the Recommended Alignment.

The effect on property values cannot be delineated; however, it is expected that overall property values will be greater as a result of improving accessibility to the area by constructing the expressway. Properties near the expressway and not in interchange areas would be expected to increase at a slower rate than those further away or in immediate interchange areas.

The northwest area of Hillsborough County already has substantial growth trends underway and development patterns established. Traffic projections are based on the proposed development reflected in the County's year 2010 land use plan with or without the expressway. The build out or total amount of development that is to take place in this area should not change as a result of constructing the expressway. Developers will be aided somewhat by the expressway providing better access to the area. Developers and their buyers and tenants will not have to wait for the local arterial roadways to be improved before having good longer distance trip access.

The construction of an expressway does cause aesthetic changes considered. Tree removal will be minimized as much as practical to maintain the visual character of the area.

The expressway interchange ramps will be designed for pedestrian and bicycle traffic as well as for vehicular traffic. With the expressway in service, many of the through vehicles will not be on the local arterial roadway, thereby improving safety conditions at other locations including major intersections.

The new school, Northwest Elementary, is located on the west side of the proposed expressway at the intersection of Hatton Road and Hutchinson Road and many of the school children are located in County Place on the east side of the expressway. A bridge on the expressway is planned at Hatton Road so children may safely pass under the expressway. Children using Country Lake Drive and Hutchinson Road will have ramps to cross on Hutchinson Road. There is no documentation of the relationship between the rate of crime with construction of an expressway. Any change in the rate of crime could be attributed to the nature of urbanization occurring in the area rather than to the presence of the expressway.

(11) ISSUE/CONCERN: Right of way costs do not reflect current development taking place particularly on the Lake LeClare Alignment. The aerials are out of date and do not show present development activities within the proposed expressway right of way. Purchase price and interest rates for a new home will be substantially higher than the present home and therefore not affordable for many displaced residences.

RESPONSE: This was a concern expressed at the August 15, 1983 public hearing. The costs are not based on aerial photographs, they are prepared from review of the properties in the field as shown on the County's tax records and maps. In addition, plats are

obtained for properties that are currently being developed and an estimate of costs for acquiring and relocating owners of the developed property is added to the right of way costs. A set of 1985 aerials was obtained from the City of Tampa and Hillsborough County and used at the Public Hearing to show the proposed Expressway right of way acquisition limits. Since these aerials were more recent than the study aerials, the effect of constructing this expressway was portrayed on the newer developments depicted.

The relocation policy of the Florida Department of Transportation Relocation Assistance Program considers the differential in prices of replacement houses versus acquired residences. In addition, the potential adjustment in interest rates is considered. The Right of Way Federal Aid Policies were provided in hand outs to those attending the public hearing.

(12) ISSUE/CONCERN: Mass transit or a people mover for transporting people in the northwest area would be a good alternative to an expressway.

RESPONSE: This issue was addressed in Subsection 4.2.4. A light rail system is not feasible at this time; however, it should be considered in future planning for the Northwest area. The light rail system could be accommodated within the proposed Northwest Hillsborough Expressway right of way as has been considered in the Tampa Urban Area Transportation Study. Also see Subsection 8.2.4, Issue/Concern (4).

(13) ISSUE/CONCERN: The Railroad Alignment alternative should be selected since it costs less, better provides for future traffic, and would be less disruptive to the community.

RESPONSE: This was the sentiment expressed by many of the respondents to the public hearing process and reflected in the Environmental Impact Statement. The cost is approximately $4,500,000 less for the Railroad Alignment or less than 2 percent of the total cost. Cost is one consideration in selecting an alignment. Whether the Railroad Alignment will better provide for future traffic (after the year 2010) than the Lake LeClare Alignment is subjective, since both alignments are in close proximity to each other.

Both alignments have nearly the same amount of community disruption; therefore, this item cannot be the determining factor in selecting an alignment. See Issue/Concern No. (14) and Response therefore for further discussion on comparisons of the Railroad and Lake LeClare Alignment alternatives.

The basis for selection of the Recommended Alignment is discussed in Sections 10.0 and 11.0.

(14) ISSUE/CONCERN: The Lake LeClare Alignment alternative should be selected since it has less wetland involvement, fewer relocations and is closer to development.

RESPONSE: See response to Issue/Concern No. (13) above. This also was the sentiment of many of the respondents to the public hearing process.

The wetland involvement is slightly less for the Lake LeClare Alignment (2 acres) and is one factor for selecting an alignment.

The number of relocations between these two alignment areas is changing as development is taking place. Presently, development is occurring on the Lake LeClare Alignment at a fast rate and could at the time of acquisition of right of way be higher than the Railroad Alignment. The Lake LeClare Alignment is closer to present development than the Railroad alignment.

All the factors mentioned in Issue/Concern Nos. (13) and (14) were considered in the decision to select the Lake LeClare Alignment alternative. Several factors for selecting the Lake LeClare Alignment were projected traffic and revenue generation potential, the current County Land Use Plan and recognition of the County's plan to construct a road within the abandoned Railroad right of way.

(15) ISSUE/CONCERN: The expressway is long overdue, growth will continue with or without the expressway. A complete transportation system is needed to facilitate traffic flow within the area. Currently there are many traffic jams and bottle neck areas. There is a need to improve the roadway system for better access of emergency vehicles.

RESPONSE: This is a summary of the many reasons why respondents favored the construction of the expressway. All the points mentioned have been considered in assessing the need for the project. See in particular Section 3.0, Purpose of and Need for Action.

8.6 SUMMARY OF FEDERAL, STATE AND LOCAL AGENCY COMMENTS

Major comments made by Federal, State and Local agencies in response to the Draft Environmental Impact Statement were generally: (1) effect on airport, (2) wetlands and mitigation, (3) air and noise impacts, (4) hazardous waste and (5) secondary impacts. Response by each agency and disposition for each response is contained in Appendix G.

9.0 LIST OF AGENCIES, ORGANIZATIONS, AND PERSONS TO WHOM COPIES OF THE STATEMENT ARE SENT.

Department Environmental Officer
Office of Management Analysis and Systems
Department of Health and Human Services

Director
Office of Economic Analysis
Federal Railroad Administration

Regional Director
Federal Aviation Administration

U.S. Geological Survey

Field Supervisor
U.S. Department of Interior
Fish and Wildlife Service

Regional Director
Federal Emergency Management Administration

National Marine Fisheries Service
U.S. Department of Commerce

Chief
Ecology and Conservation Division
National Oceanic and Atmospheric Administration

Director
Office of Cultural Resource Preservation
Advisory Council on Historic Preservation

Director
Office of Environmental Compliance
Department of Energy

Area - Supervisor
National Marine Fisheries
Environmental Assessment Branch

Marine Fisheries Commission

Associate General Counsel for
Insurance and Mitigation
Federal Emergency Management Agency

District Engineer (Regulatory Branch)
U.S. Army Engineer

Regional Administrator
Environmental Protection Agency

Director
Environmental Project Review
Department of the Interior

Environmental Officer
Department of Housing & Urban Development

Area Manager
Jacksonville Area Office
U.S. Fish & Wildlife Service

State Conservationist
Department of Agriculture
Soil Conservation Service

Director
Intergovernmental Coordination
State Planning & Development Clearinghouse
Executive Office of the Governor

Federal Aviation Administration
District Office

Commander (oan)
Seventh Coast Guard District

Regional Forester
Southern Region
U.S. Department of Agriculture

Director
Office of Federal Activities

Documents Librarian
The Libraries
Colorado State University

Environmental Affairs Group
Environmental Health Services Division

Department of State
Division of Archives, History and
Records Management

Florida Game & Fresh Water Fish Commission

Florida Department of Environmental Regulation

Florida Division of Forestry

Southwest Florida Water Management District

Tampa Bay Regional Planning Council

Hillsborough County Aviation Authority

Hillsborough County
- Board of County Commissioners
- City-County Planning Commission
- Public Works Division
- Parks and Recreation Department
- Office of Development Coordination
- Zoning Office
- Road Department
- Utilities Division
- Environmental Protection Commission

Hillsborough County School Board

Historic Tampa/Hillsborough County Preservation Board

Tampa-Hillsborough County Expressway Authority

City of Tampa
- City Council
- Public Works Department
- Traffic Engineering

Lutz Branch Library

North Tampa Branch Library

Westgate Branch Library

Citrus Park/Keystone Library

Special Collections Department, USF Library

10.0 RECOMMENDED ALIGNMENT ALTERNATIVE - ENVIRONMENTAL CONSEQUENCES

The environmental consequences of the Recommended Alignment alternative are included in this section to show the factors that are different from those recorded in Section 6.0, Environmental Consequences for the Reasonable Alignment Alternatives. The Recommended Alignment, which is the Eisenhower/West, Lake LeClare with South Termini Alignment, modified in several areas, is described in Section 4.3, Recommended Alignment Alternative. The alignment modifications do not result in any significant changes to the impacts discussed in Section 6.0.

10.1 TRAFFIC AND ENGINEERING FACTORS

The Recommended Alignment has the same expressway roadway sections as that presented in Subsection 6.1.1. The length of the Recommended Alignment is 16.90 miles or a little over a quarter mile longer than the 16.63 mile Eisenhower/West, Lake LeClare with South Termini Alignment.

Traffic service and the number of lanes remain the same as presented in Subsection 6.1.3 for the expressway north of Hillsborough Avenue, however, through lanes were added in the complex interchange area from I-275 northward to Hillsborough Avenue. The added lanes will provide improved traffic flow and, therefore, increase the Level of Service from E to C and D for the year 2010 all along the Memorial Highway/Eisenhower Boulevard segment of the expressway.

The project costs were increased primarily due to the revised design throughout the section from I-275 to Hillsborough Avenue with minor increases in construction and engineering related costs as a result of added bridges at the proposed Sligh Avenue extension, Twelve Oak Boulevard to Henderson Avenue proposed connector roadway and at the proposed Gunn Highway Relocation Interchange. The project cost is now projected to be $266,400,000 for the Recommended Alignment, as shown in Table 10-1.

10.2 COMMUNITY IMPACT FACTORS

The adjustments reflected in the Recommended Alignment were made in three areas to in part account for development activity occurring since the initial alignments were delineated. In the area between Hillsborough Avenue and Johns Road, the alignment shift avoided dislocation of existing and recent additions to an office/warehouse complex fronting Benjamin Road. In the area between Waters and Linebaugh Avenues, the alignment shift was better for a proposed development east of Twelve Oaks Boulevard and new businesses on the south side of Linebaugh Avenue west of Henderson Road. In a third portion of the alignment, located between Bellamy and Rawls Roads and south of Lake Holly, a shift was made which avoided passing directly through the new residential developments of Eastbrook and Mandarin Lakes.

TABLE 10-1
PROJECT COSTS
RECOMMENDED ALIGNMENT

1985 CONSTRUCTION	$	108,000,000
ENGINEERING, SURVEYING & TESTING		16,200,000
ADMINISTRATION, LEGAL & FINANCING		400,000
CONTINGENCIES		18,700,000
RIGHT OF WAY		66,000,000
RELOCATION		2,200,000
ESCALATION		54,900,000
TOTAL 1988 PROJECT COSTS	$	266,400,000

The Recommended Alignment would pass through or adjacent to a number of neighborhoods. In the area from I-275 to South of Linebaugh Avenue, Southern Comfort Homes would have 70 homes taken by the expressway on the southeastern fringe, rather than the 32 identified for the Eisenhower/West Alignment in Subsection 6.2.1.1.1. The increased number of takings was due to adjustments in the alignment suggested by the Hillsborough County Aviation Authority to avoid conflicts with present and proposed operations of Tampa International Airport. See Appendix G responses F-2 and L-1. The remaining homes, approximately 200, would continue to function as a cohesive viable neighborhood with no further changes in land use anticipated. Access to community facilities will not be diminished by the project and the neighborhood could be expected to function as it does at present.

In the western fringe of Barry's Subdivision, nine homes, including four mobile homes, would be taken by the project. These are located in the vicinity of Turnmoor Drive.

Between Ann Ballard Road and Waters Avenue, thirteen residences would be taken by project right of way needs. These takings would involve nine single family homes and four mobile homes. The neighborhood along Patterson Road would be split, leaving three to five homes along Sitka Road isolated from remaining homes located east of Patterson Road.

Linebaugh Avenue area to the vicinity of Gardner Road, eighteen homes would be taken, including four mobile homes. The expressway would impact this semi-rural area, but would not involve the splitting of cohesive neighborhoods.

In the Manhatten Park area off Gunn Highway, thirty-seven homes would be taken, including eighteen mobile homes. The homes would be on the eastern fringe of the community leaving over fifty homes remaining as a cohesive neighborhood west of the proposed project. In addition, six small businesses, a day school and a horse farm would be dislocated in this vicinity by the project.

In the vicinity of Ehrlich Road, seven homes and an animal hospital would be taken. The alignment would not encroach upon any established subdivisions. The newly developed Eastbrook Subdivision at Bellamy Road, north of Ehrlich Road, would be impacted. A portion of the development which has paved streets, but no houses built at this time, would be taken along with a portion of a plant nursery.

Four homes would be taken in the Half Moon Lake Drive area on Hutchinson Road, as well as four homes along Rawls Road. These residences are in semi-rural settings, and their takings would not split neighborhoods or subdivisions. Although the alignment in this area would abut twenty-one homes in the recently developed Country Place subdivision, no disruption of the neighborhood will result from the project.

Chantilly Springs, a planned subdivision on Hutchinson Road in the vicinity of Hatton Road, would be severely impacted when developed. Up to fifteen single family homes could be taken, should the property be developed from its present undisturbed condition.

Between Hatton Road and Van Dyke Road, this expressway alignment could result in the taking of three single family homes, an apartment dwelling unit and a plant nursery in an area semi-rural in nature.

In summary, the alignment would take fifty-six existing residences between the vicinity of Gunn Highway and the project terminus at Dale Mabry Highway. The Manhatten Park subdivision, with thirty-seven homes taken, would be severely impacted and the semi-rural areas of Half Moon Lake, Storm Road and Tobacco Road impacted with takings.

The total residential takings for this alignment from I-275 to Dale Mabry would be one hundred sixty-three (163). Nineteen (19) businesses would be displaced.

Business Displacements

Allied Discount Tires, Eisenhower Boulevard
Fenced Storage area, Courtney Campbell Causeway
Bait House, Courtney Campbell Causeway
Chamann's Bar, Courtney Campbell Causeway
Southern Machine Tool, Johns Road
Three small businesses, north of Johns Road,
Warehouse on a farm, Johns Road area
Dog Kennel, Waters Avenue,
Art Stolten Paving Company,
Unidentified Multipurpose building, on Wilsky Road
Green Acres Country Day School
Horse Farm on Holloway Road,
Animal Hospital, Ehrlich Road
Hardware, Gunn Highway
Picture Framing, Gunn Highway
Barber, Gunn Highway
Pet Grooming, Gunn Highway.

10.3 ENVIRONMENTAL IMPACT FACTORS

10.3.1 Floodplain Impacts

The Recommended Alignment has essentially the same floodplain impacts as the Eisenhower/West, Lake LeClare with South Termini Alignment. The impacts are discussed in detail in Section 6.3.5. The only difference in floodplain involvement is located in the Lake LeClare segment where the Recommended Alignment curves to pass south of Lake Holly instead of to the north (Floodplain Area F), see Figure 6-14. The involvement at Floodplain Area F will remain transverse, however a slightly greater area of fill will be required for the Recommended Alignment (Recommended Alignment Area

F is 3.10 acres; Lake LeClare is 2.58 acres). The Recommended Alignment alternative will avoid the open water portion of Floodplain Area F that would be impacted by the Lake LeClare Alignment.

The proposed Recommended Alignment will contain a total of 76.7 acres of floodplain encroachment. The proposed expressway will have only one involvement (Sweetwater Creek crossing) with a regulated floodway. No adverse backwater effects or loss of floodwater storage will occur at the Sweetwater Creek crossing. As discussed in Section 6.3.5.7 considerable floodplain involvement is unavoidable with a project of this size at any location in Northwest Hillsborough County. The methods which will be used to mitigate the floodplain involvements are presented throughout Section 6.3.5.

10.3.2 Wetlands, Water Quality, Threatened and/or Endangered Species, Streams and Wildlife Impacts

The Recommended Alignment wetland impacts are similar to those of the Eisenhower/West Lake LeClare with South Termini Alignment as presented in Section 6.3.7 (See Table 10-2; Wetlands 1-5, 6A, 6B, 7-11, 15-20, 21-26, 27, 29, 36B, 37A, 37B, 38-41, 46, 48-55, 56A, 56B, and 58). Wetland locations are shown in Figure 10-1. The nature of these wetlands and the impacts anticipated are discussed in Sections 6.3.7.1, 6.3.7.2 and 6.3.7.4. At wetlands sites 36A, 42, 57 and 59 either alignment location will result in adverse impacts, however, at sites 36A and 42 the Recommended Alignment would result in greater impact than the original Eisenhower/West and Lake LeClare Alignments, respectively; however, the reverse is true for wetlands 57 and 59 in the North Termini Alignment area. The nature of the impact and the character of the wetlands are the same for each of these four involvements as described in Sections 6.3.7.1 and 6.3.7.4, however, the acreage of involvement is changed (See Table 10-2).

In several areas the Recommended Alignment described in Section 4.3 is a realignment of the Eisenhower/West, Lake LeClare Alignment. The alignment shifts result in no impact of the Recommended Alignment on seventeen wetland sites 21-26, 28, 30, 31-35, 43, 44A, 44B and 45; however, due to these shifts an additional twenty-one wetlands not previously involved are impacted (See Table 10-2). Overall the Recommended Alignment resulted in 4.85 acres less wetland involvement, a reduction from 63.81 acres to 58.96 acres.

In order to characterize these new wetlands, field investigations were conducted in September, 1986. These investigations included determination of plant species composition, health of the wetland system, hydroperiod (inferred) from vegetative characteristics and observation of wildlife utilization. In all cases the wetlands were found to be similar to others previously described in Section 6.3.7.

TABLE 10-2
CLASSIFICATION, RELATIVE HEALTH, AND ACREAGE
OF WETLAND AREAS IMPACTED BY BOTH THE ORIGINAL ALIGNMENT
(EISENHOWER/WEST, LAKE LECLARE WITH SOUTH TERMINI ALIGNMENT)
AND THE RECOMMENDED ALIGNMENT

SITE	USFWS CLASSIFICATION	FDOT CLASSIFICATION	HEALTH	EISENHOWER/ LK LECLARE ALIGNMENT (Acreage)	RECOMMENDED ALIGNMENT (Acreage)
1	PEMIC	604	POOR	0.10	0.11
2	E2FO3P/E2SS3P	612	FAIR	0.30	0.30
3	E2SS3P	612	POOR	0.07	0.07
4	E2EMIP/E2SS3P	612-6421	FAIR	3.24	3.24
5	E2EMIP3/E2SS3P	642	FAIR	1.25	1.25
6A	E2EMIP	742-642	POOR	2.32	2.32
6B	PEMIB	6412	POOR	0.11	0.11
7	E2EMIP3	6412	POOR	0.85	0.85
8	PEMIC	640	FAIR	0.39	0.39
9	PEMIC	640	POOR	0.86	0.86
10	PEMIC	640	POOR	0.57	0.57
11	PEMIC	640	POOR	0.57	0.57
12	PEMIC	640	FAIR	0.14	0.12
13	PEMIC/R2AB		FAIR	0.09	0.12
14	PEMIC/R2AB		POOR	0.35	0.32
15	PEMIC		POOR	0.10	0.10
16	PEMIC	6412	POOR	0.22	0.22
17	PEMIC	6412	FAIR	1.52	1.43
18	PEMIA	640	POOR	0.13	0.13
19	R2AB5/PEMIC		FAIR	0.53	0.53
20	PF02C	630	GOOD	4.18	3.68
21	PF02C	621	GOOD	2.28	0.00
21A	PF02C	621	FAIR	0.00	0.44
22	PF02C SS	630	GOOD	3.75	0.00
22A	P 1F EM	616-641	POOR	0.00	0.69
23	PF02C/PEMIC	621-643	GOOD	2.09	0.00
23A	PF02C	621	FAIR	0.00	0.26
24	PF02C	621	GOOD	2.70	0.00
24A	PF02C	621	GOOD	0.00	1.04
25	PF02C/PEMIC	621-643	GOOD	0.43	0.00
25A	PF02C	621	GOOD	0.00	0.65
26	PF02C	621	GOOD	0.14	0.00
27	PF02C	621	FAIR	0.86	0.82
28	PF02C/PEMIC	621	FAIR	0.89	0.00
28A	PF02C	621	GOOD	0.00	0.64
29	PF02C/PEMIC	621	GOOD	0.90	0.90
29A	PF02C	621	FAIR	0.00	0.35
29B	POWH	524	FAIR	0.00	0.05
29C	PF02/1C	621-617	FAIR	0.00	5.97
30	PF03C	630	FAIR	0.22	0.00

SITE	USFWS CLASSIFICATION	FDOT CLASSIFICATION	HEALTH	EISENHOWER/ LK LECLARE ALIGNMENT (Acreage)	RECOMMENDED ALIGNMENT (Acreage)
30A	PFO2C	621	POOR	0.00	1.52
31	PFO1C	439	FAIR	0.63	0.00
31A	PFO2C	621	POOR	0.00	0.19
32	PFO2C	621	GOOD	2.34	0.00
33	PFO2C/2F	621	GOOD	3.97	0.00
34	PFO2C	621	FAIR	0.30	0.00
35	PFO2C	621	FAIR	0.56	0.00
35A	PFO2C	621	FAIR	0.00	0.49
36A	PFO2C	621	FAIR	0.63	1.58
36B	PFO2C	621	POOR	2.17	2.76
37A	R2UB2	615	FAIR	0.63	0.48
37B	R2UB2	615	FAIR	0.53	0.53
38	PFO2C	621	POOR	0.72	0.72
39	PUB4C	742	POOR	0.18	0.18
40	PFO2C	621	FAIR	0.31	0.31
41	PFO3C	611	FAIR	1.48	1.48
42	PFO2C	621	FAIR	0.59	1.44
43		N/A	N/A	0.16	0.00
43A	POWH	742	POOR	0.00	0.47
44A	PFO2C	621	GOOD	0.26	0.00
44B	LIAB4/L2AB4		GOOD	0.39	0.00
44C	PFO2C/PEMIF	621-641	POOR	0.00	0.66
44D	PFO2C	621	FAIR	0.00	1.17
44E	POWE/PERMIF	510/641	POOR	0.00	0.30
45	PUB4H	742	POOR	0.71	0.00
46	PUB4H	742	POOR	0.48	0.48
47		439	N/A	0.16	0.16
48	PFO2C	621	FAIR	3.17	3.17
49	PFO2C	621	GOOD	1.16	1.16
50	PAB5H	742	POOR	0.28	0.28
51	PAB5H	6444	POOR	0.14	0.14
52	PFO2C	621	GOOD	3.01	3.01
53	PFO2C	621	POOR	0.16	0.16
53A	POWH		POOR	0.00	0.19
54	PFO2C	621	GOOD	0.90	1.32
54A	PFO2C	621	FAIR	0.00	1.17
55		N/A	N/A	0.62	0.42
56A	PEMIC	641	AFAIR	0.27	0.19
56B	PFO2C	621	GOOD	3.19	2.67
56C	PFO2C	621	FAIR	0.00	0.13
56D	PFO2C	621	FAIR	0.00	0.06
57	PUB4C	742	POOR	0.65	0.18
57A	PFO2C	621	GOOD	0.00	0.26
58	PFO2C	621	FAIR	0.21	0.13
59	PFO2C	621	FAIR	0.70	0.30
		T O T A L		63.81	58.96

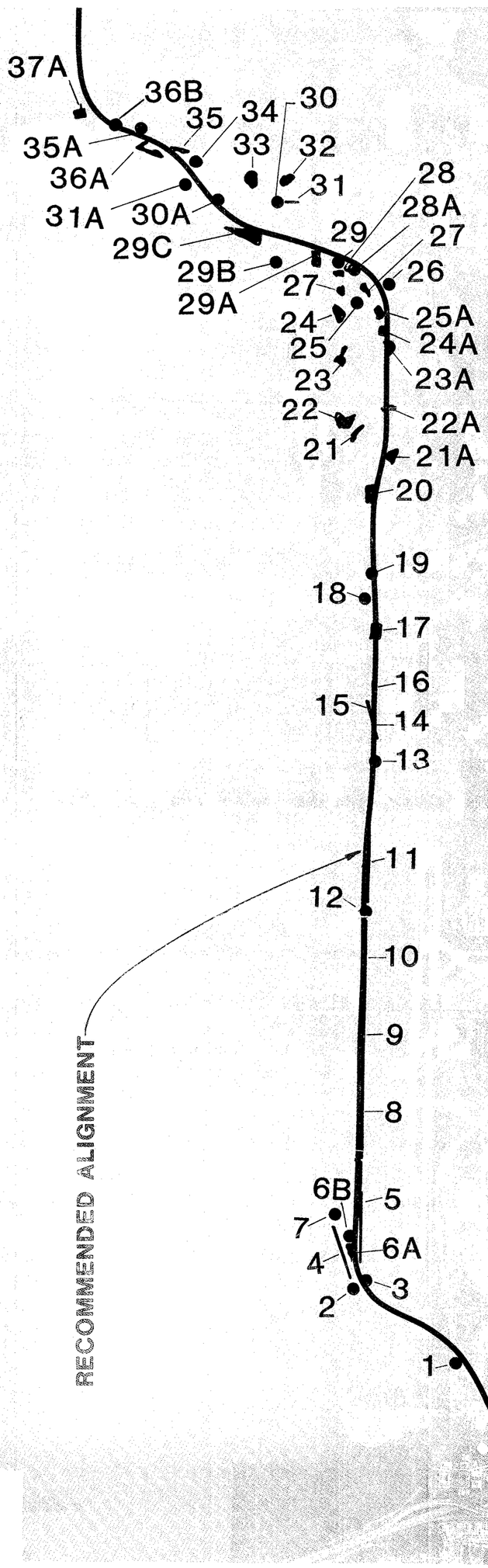
Wetland sites 21A, 22A, 23A, 24A, 25A, 28A, 29A, 30A, 31A and 35A are each cypress swamps similar to wetlands 20-24, 27, 32-34, and 36A. The impacts of the Recommended Alignment on these wetlands (21A, 22A etc.) will be similar to the anticipated impacts on wetlands 20-24, 27, 32-34, and 36A described in Section 6.3.7.1. Wetland sites 44C, 44D, 54A, 56C, 56D and 57A are also cypress swamps, however, these systems are most similar to sites 38, 40, 42, 44A, 48, 49, 52 and 54 described in Section 6.3.7.2. As with the above mentioned sites, the impacts to wetlands 44C, 44D, 54A, 56C, 56D and 57A will result in a loss of wildlife habitat, floodwater storage and water quality benefits. Adverse water quality impacts will be most severe where the Recommended Alignment impacts wetland 44D on the south side of Lake Holly. However, the impact of the Recommended Alignment on the water quality of Lake Holly should be less severe than that anticipated with the previous Lake LeClare alignment which crossed the contiguous waters of Lake Holly.

Wetland sites 29B, 43A, 44E and 53A to be impacted by the Recommended Alignment are best described as farm ponds. They are similar in character to sites 39, 45 and 46 described in Section 6.3.7.2 and their loss will not significantly affect the wetland resources of the area.

The most substantial wetland involvement of the Recommended Alignment occurs at site 29C. This site is dominated by cypress, but also includes several hardwood species including Quercus laurifolia (laurel oak), Quercus nigra (water oak), Magnolia virginiana (sweet bay), Acer rubrum (red maple) and Fraxinus caroliniana (ash). The diverse vegetative community provides a variety of wildlife habitats which will be lost due to the proposed expressway impacts. The presence of a ditch within site 29C indicates that dewatering has affected the health of this site, however, the 5.97 acres of impact at this site will result in a substantial loss of wetlands benefits in the vicinity of site 29C.

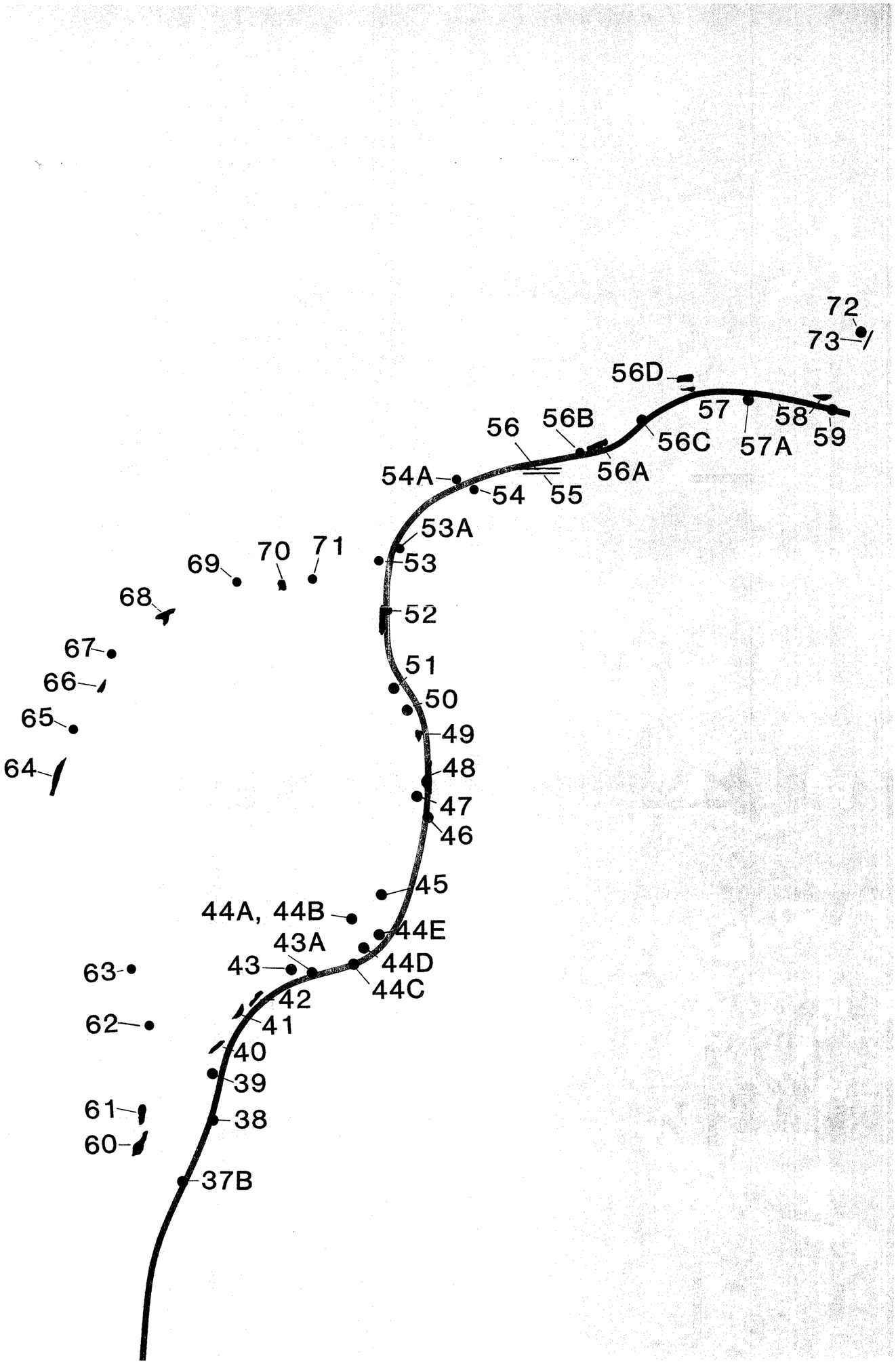
Although the Recommended Alignment has substantial wetland involvement the shifts from the Eisenhower/West, Lake LeClare Alignment have resulted in less wetlands involvement than previously anticipated. The 59.0 acres of total wetland involvement of the Recommended Alignment is nearly 10% less than the involvement of the Eisenhower/West, Lake Leclare with South Termini Alignment. In terms of wetlands involvement the Recommended Alignment is the most desirable alternative considered. The area of wetlands involvement is estimated a little high and is therefore expected to be further reduced prior to construction with proper design.

The anticipated impacts of the Recommended Alignment on water quality are nearly the same as on those reported in Section 6.3.8 for the Eisenhower/West, Lake LeClare with South Termini Alignment. The only difference is the potential reduction of adverse water quality impacts to Lake Holly where the Recommended Alignment is shifted to the south of the lake and no longer abuts the open water



WETLAND SITES RECOMMENDED ALIGNMENT

FIGURE 10-1


72
73
56D
57
58
56
56B
56C
57A
59
56A
54A
54
55
53A
70
71
69
53
68
52
67
51
66
50
65
49
64
48
47
46
45
44A, 44B
44E
43A
44D
43
63
44C
42
62
41
40
39
61
38
60
37B

portion of the lake. The impact on threatened and endangered species will be similar to that reported in Section 6.3.9 and on steam modification and wildlife will be essentially the same as those described in Section 6.3.10. The Coastal Zone impacts will also be essentially the same as that presented in Section 6.3.6.

10.3.3 Conceptual Mitigation Plan for Wetlands Impacts

The wetlands impacts of the proposed Northwest Hillsborough Expressway are described in Sections 6.3.7 and 10.3.2. These impacts estimated for the entire right of way width and project length result in approximately 59 acres of wetland involvement. As the proposed project proceeds to detailed design it is anticipated that these involved wetlands will be reduced in many areas by as much as 60% due to consideration of such design features as 2:1 roadway side slopes with guardrails (width approximately 40% of ROW; Figure 4-2) discontinuing roadside ditches in the vicinity of wetlands areas (width approximately 60% of ROW; Figure 4-1), and by minor shifts in roadway alignment (within ROW and in some areas shifts in ROW). The presentation of these impacts in this document thus far represents a worst case situation that will be improved upon by more detailed study during the design phase of the project.

In order to provide assurance that these worst case wetlands impacts may be mitigated, areas were identified and reviewed in the field to determine their utility for various mitigation activities, particularly wetlands creation. Twenty-four such areas were identified for review and are shown in Figure 10-2.

Mitigation for impacts to tidal wetlands may be provided in Areas A through H (totaling 7.13 acres). Use of these areas would require excavation and an improvement of existing tidal connections and the planting of tidal wetlands vegetation. Smooth cordgrass (Spartina alterniflora) and black mangroves (Avicennia germinans) on 3 foot centers could be used as shown schematically in Figure 10-3. The smooth cord grass would provide rapid vegetative cover and productivity. The black mangroves will provide additional habitat as they mature. As all the tidal wetlands areas which may be impacted by the proposed Northwest Hillsborough Expressway are currently impacted to one degree or another and the technology for creation of these systems has been demonstrated to be successful, a 1:1 ratio of created wetlands to impacted tidal wetlands is proposed. Additional mitigation may be provided by enhancement of existing tidal wetlands and/or restriction of access to existing tidal wetlands to prevent further damage and allow natural recovery. The 7.13 acres identified for mitigation by wetlands creation in conjunction with enhancement of existing tidal wetlands should provide sufficient mitigation for the 8.14 acres worst case impacts to tidal wetlands.

The remaining mitigation areas reviewed (Figure 10-2; Table 10-3) would provide 90.34 acres of area to be used for the creation of palustine emergent marsh and/or forested wetlands. Of this 90+ acres nearly 27 acres would require special design considerations

to assure hydroperiod (Areas L and Q) which would have to be provided by incorporation into roadway drainage design and/or use of clay confining layers. Another 2.10 acres may not be appropriate for use (Area K) due to the presence of large oaks which provide valuable habitat in the existing upland community. Field review of the remaining 61.43 acres of mitigation area (Areas I, J, M, N, NN, O, V and W) indicates that their association with existing wetlands areas makes then the most appropriate areas for use as wetlands creation sites. Hydroperiod for these areas can be assured by their association with adjacent systems and augmented as necessary with additional input contributed via drainage design considerations.

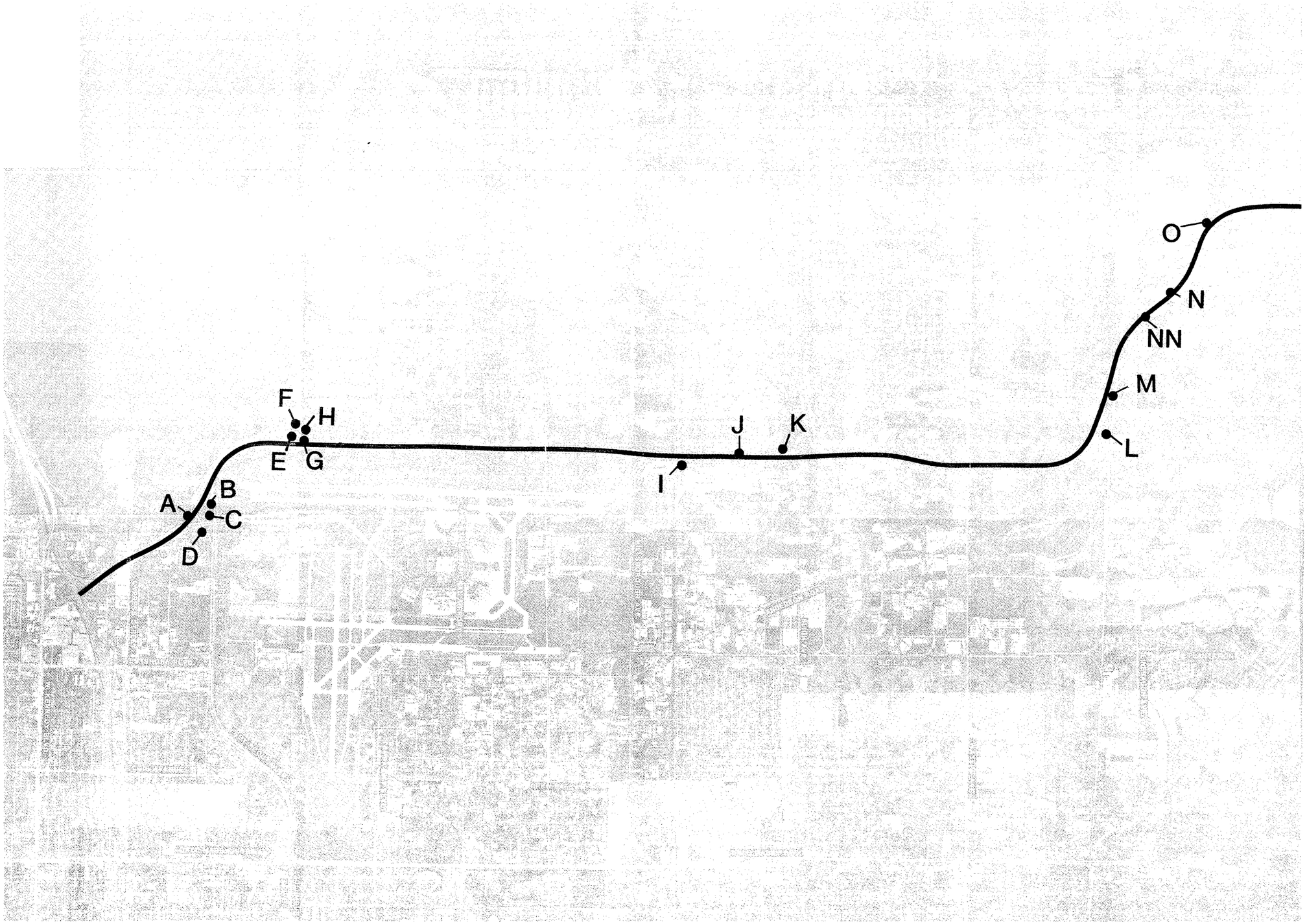
The worst case wetlands impacts of the Recommended Alignment will result in the loss of 50.66 acres of palustrine wetlands; (1.07 acres farm pond, 7.02 acres of emergent marsh, 1.54 acres of floodplain forest and 41.03 acres of cypress swamp).

All of the emergent marsh systems and borrow pits to be impacted by the Recommended Alignment are manmade (i.e. roadside ditches and excavated ponds). Construction of the proposed Expressway will require retention ponds, borrow pits and roadside ditches which should be allowed to vegetate thereby providing similar habitat, water quality benefits and flood storage capacity to that provided by the existing emergent marsh communities.

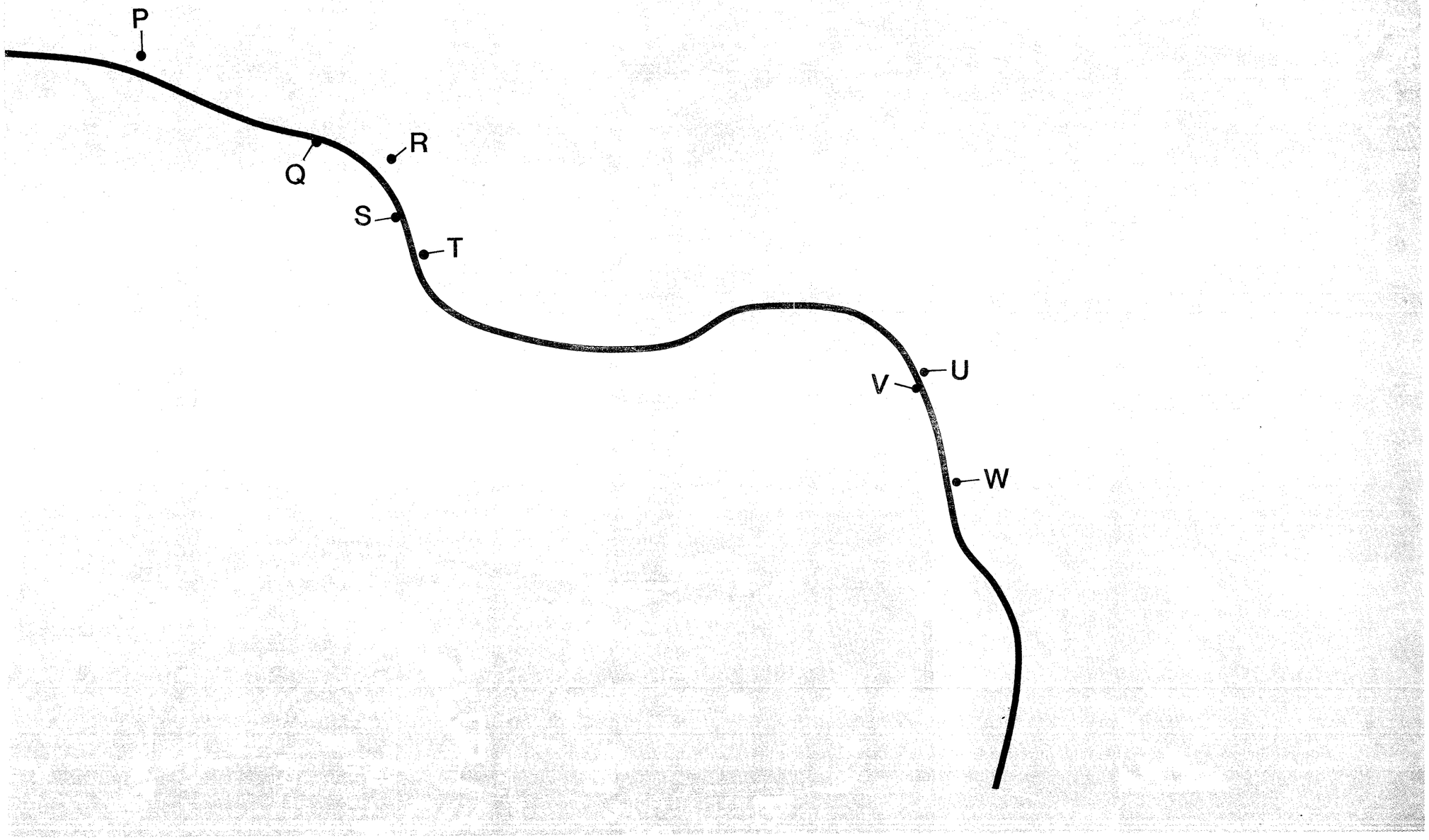
The impact of the proposed Northwest Hillsborough Expressway on cypress swamps will require more extensive mitigative measures including restoration of hydroperiod in existing cypress swamps, creation of cypress wetlands and preservation of upland areas associated with cypress swamps. These upland preserve areas will provide for a greater diversity of habitats at completion of the proposed Expressway than would be available if only wetland creation was used as mitigation.

Creation of cypress swamp wetlands is not a simple technology. Prior to specific mitigation design detailed information on topography, groundwater and surface water levels, soil types and Expressway drainage plans will be required. The success of cypress swamp creation in the past has been mixed, therefore a 2:1 ratio of creation to impact is proposed to mitigate for cypress swamp impacts of the proposed Expressway.

The most desirable of the potential mitigation areas for cypress swamp creation, are areas W (adjacent to Turkey Ford) and area T (adjacent to Lake Holly). These two areas total 26.34 acres and would provide large cypress swamp areas adjacent to existing systems which will increase their value as wildlife habitat once mature. Areas M (9.11 acres) and N (10.28 acres) provide similar large areas farther south along the project. These four areas total 45.73 acres of mitigation area, sufficient to offset the 22.86 acres of impact. Additional mitigation areas listed on Table 10-2 which can easily be used total 15.7 acres. Using all of these areas will provide mitigation for 30.7 acres of cypress swamp



POTENTIAL MITIGATION AREAS



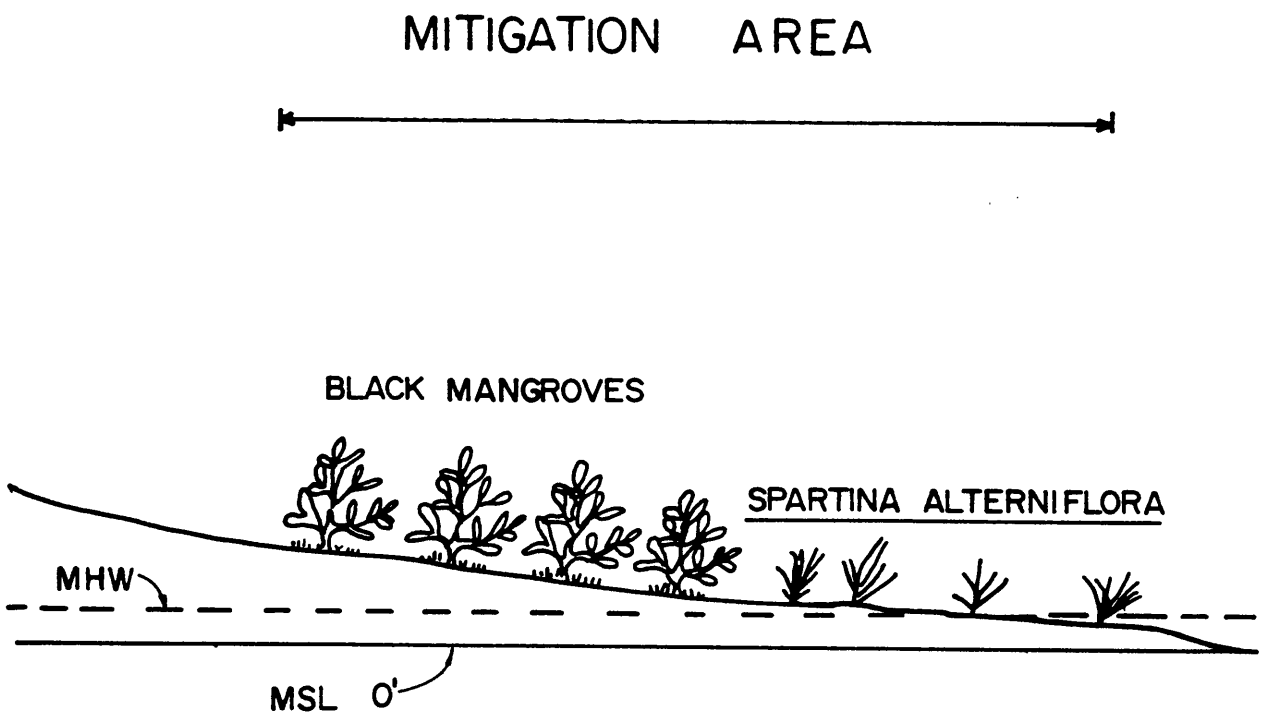
LEGEND

RECOMMENDED ALIGNMENT

A LOCATION OF POSSIBLE MITIGATION AREAS

N

FIGURE 10-2



TIDAL WETLANDS MITIGATION **FIGURE 10-3**

TABLE 10-3
PROPOSED MITIGATION AREAS

AREA DESIGNATION	MAXIMUM USABLE ACREAGE	TYPE OF MITIGATION	COMMENTS
A	1.40	TIDAL	NEEDS IMPROVED TIDAL CONNECTION
B	1.01	TIDAL	----
C	0.72	TIDAL	----
D	0.71	TIDAL	----
E	0.41	TIDAL	----
F	0.74	TIDAL	----
G	1.45	TIDAL	----
H	0.69	TIDAL	----
I	0.66	FORESTED/EMERGENT	DEEPLY INCISED CANAL
J	2.34	FORESTED/EMERGENT	----
K	2.10	FORESTED/EMERGENT	WOULD IMPACT EXISTING LARGE LIVE OAKS
L	25.73	FORESTED/EMERGENT	MAY NEED RELIABLE WATER SUPPLY
M	9.11	FORESTED/EMERGENT	----
N	10.28	FORESTED/EMERGENT	----
NN	0.96	FORESTED/EMERGENT	----
O	1.46	FORESTED/EMERGENT	DEEPLY INCISED CREEK BED
P	0.99	FORESTED/EMERGENT	----
Q	1.18	FORESTED/EMERGENT	MAY NEED RELIABLE WATER SUPPLY
R	2.14	FORESTED/EMERGENT	----
S	4.72	FORESTED/EMERGENT	----
T	5.20	FORESTED/EMERGENT	----
U	0.23	FORESTED/EMERGENT	----
V	2.10	FORESTED/EMERGENT	----
W	21.14	FORESTED/EMERGENT	----
TOTAL:	7.13 ac	TIDAL	
	90.34 ac	FORESTED/EMERGENT	

wetland or 60% of the worst case impacts. Once detail design is completed this area could be sufficient to provide the 2:1 mitigation for all cypress swamp impacts due to construction of the proposed Expressway.

In order to create cypress swamp from the mitigation areas the sites will be excavated and a hydrologic connection made with the adjacent systems. A typical schematic section of the mitigation area is shown in Figure 10-4. The depth of the excavation will be based on the seasonal high water of the adjacent wetland system. The areas will be over excavated so that 6-12 inches of organic mulch can be placed to provide a seed source and suitable substrata for the growth of wetlands plants. The finish grade of the mitigation areas will vary between seasonal high water and 1.5′ below seasonal high water. Trees species to be included are cypress (Taxodium ascendenus), black gum (Nyssa sylvatica) in the lower areas with dahoon holly (Ilex cassine), sweet bay (Magnolia virginiana) and swamp bay (Persea palustris) and buttonbush (Cephalanthus occidentalis) in the higher area. Spacing of these plantings will be dependent on the size of the plants at installation (i.e. 3 gallon on 6′ centers; 7 gallon on 10′ centers) and will be determined by agency coordination during permitting. Initially the understory should be planted with emergent species such as arrowhead (Sagittaria lancifolia), pickerelweed (Pontederia cordata), soft rush (Juncus effusus) and cordgrass (Spartina bakeri). Material for the mitigation plantings (including mulch) should be salvage from wetland areas to be impacted where ever possible.

These mitigation areas will be monitored for survival, growth and to prevent the invasion by exotic or undesirable species for a period of five years. Exact monitoring conditions will be determined by regulatory requirements. If properly constructed and monitored these mitigation areas should restore the values lost due to impacts once established.

Although a conceptual mitigation plan has been developed and presented herein for the proposed Northwest Hillsborough Expressway a specific mitigation plan based on actual involvement in each wetland area will be developed prior to construction as a part of the permit process. Various regulatory agencies will be involved in the construction approval, dredge and fill permitting, surface water management and stormwater permitting for the project including the Hillsborough County Environmental Protection Commission, Tampa Port Authority, Florida Department of Environmental Regulation, United States Army Corps of Engineers, and Southwest Florida Water Management District.

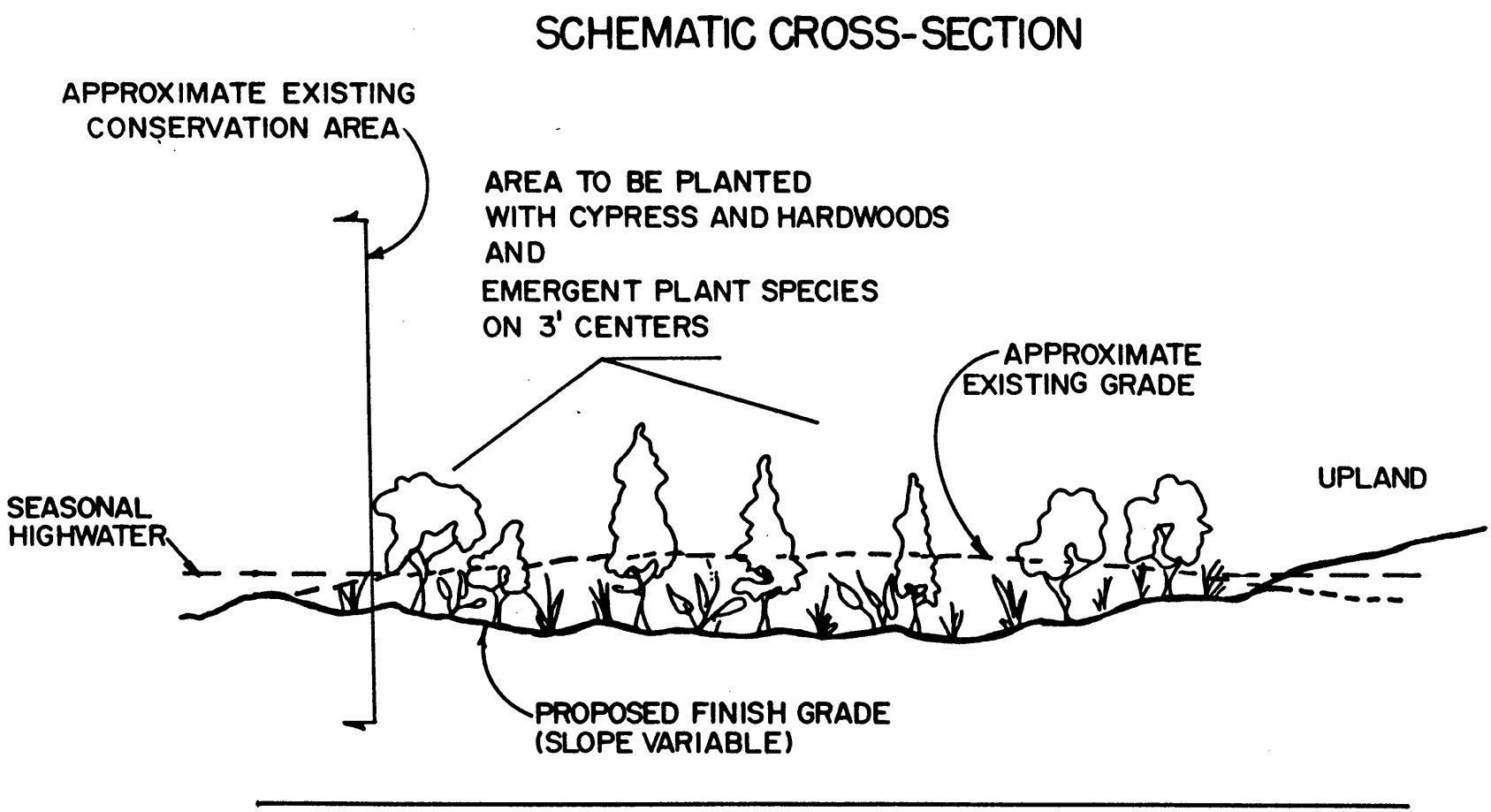

SCHEMATIC CROSS-SECTION
APPROXIMATE EXISTING CONSERVATION AREA
AREA TO BE PLANTED WITH CYPRESS AND HARDWOODS AND EMERGENT PLANT SPECIES ON 3' CENTERS
APPROXIMATE EXISTING GRADE
UPLAND
SEASONAL HIGHWATER
PROPOSED FINISH GRADE (SLOPE VARIABLE)
EXCAVATE AND BACKFILL WITH 6"-12" ORGANIC SOILS TO FINISH GRADE

FIGURE 10-4

The Hillsborough County Environmental Protection Commission (HCEPC) will review construction plans under County Ordinance for measures to avoid and minimize impacts where possible and to determine the appropriateness of proposed mitigation where wetlands impacts cannot be avoided. They will require a justification statement for all of the unavoidable wetlands impacts. HCEPC has jurisdiction over all wetlands which may be impacted by the project.

The Tampa Port Authority will require dredge and fill permits for all activities conducted below mean higher or high water in all tidal wetlands. Additionally, the Port Authority will have to issue a public easement for any consumptive use of submerged lands under their jurisdiction.

The Florida Department of Environmental Regulation (FDER) will be involved in the review of stormwater discharge (Chapter 17-25) and dredge and fill permits (Chapter 17-12). Their review will consider water quality impacts, fish and wildlife habitat, measures taken to avoid and/or minimize impacts and the appropriateness of the proposed mitigation where impacts cannot be avoided. The FDER is currently preparing mitigation rules which will outline the types of mitigation acceptable for various wetlands impacts. The FDER has jurisdiction over all wetlands in the vicinity of the project which are contiguous to states waters or which have multiple owners.

The US Army Corps of Engineers (US COE) will have dredge and fill jurisdiction over all wetlands potentially affected by the proposed Expressway. Review criteria are similar to those of FDER and will be conducted by the US COE, National Marine Fisheries Service, US Fish and Wildlife Service and US EPA. With a project of this magnitude all agencies involved in the US COE review will have to concur prior to US COE dredge and fill permit issuance.

The Southwest Florida Water Management District will review the surface water management plan for the proposed Expressway prior to issuance of a surface water management permit, necessary before construction begins. Their review will consider water quality and quantity impacts, and wetlands impacts on the resources of the District. Although the District currently has jurisdiction over all the wetlands in the vicinity of the proposed project, ongoing rulemaking may result in the exemption of small isolated wetlands from consideration of habitat values.

The regulatory agencies which will be involved in review of the wetlands impacts of the proposed project will require detailed design and/or construction plans prior to their permit review and issuance. These plans will have to include specific information regarding proposed mitigation including size, location, methods of assuring hydroperiod and plant species composition and numbers for wetlands creation sites. As detailed roadway design is not currently available and regulatory agency policy is continually evolving it is impractical to develop a specific mitigation plan acceptable for permitting at this time. As part of the permit

process when more detailed plans for the project are available it is anticipated that discussions of design consideration, including mitigation plans, will be conducted with each of the agencies listed above so that a single mitigation plan will be coordinated to satisfy all agency concerns.

10.3.4 Noise

A supplement to the Noise Analysis and Study Report, dated August 1985, was prepared by the Florida Department of Transportation and is available from the District 1 Office, FDOT, Bartow, Florida. The document is entitled Supplemental Noise Analysis and Study Report, dated September 1986. The following discussion includes summaries from the supplemental report and, therefore, the Figure and Table numbers referred to therein and included in this report correspond to the content of the original report.

10.3.4.1 Noise Sensitive Sites

The potential impact of the proposed Recommended Alignment on noise sensitive sites was reevaluated due to minor shifts in alignment. Because of this shifting, some of the original noise sensitive sites which were chosen for analyses are now displaced. One receiver, Receptor #21, is no longer considered a valid receptor because of the shift in alignment away from its location. In these instances, the next closest receptors along this altered alignment, which would expect to experience the greatest noise impacts, were chosen for analyses. The remaining original receivers, which still are valid noise sensitive sites, may or may not reflect a change in decibel impact based on their proximity to alignment changes. Table 1 gives a description of all receptors chosen for analyses and their location. Numeric descriptors for receptors represent the same receptor presented in the original Noise Study Report. Alphanumeric descriptors for receptors represent new receptors which will be impacted or receptors adjacent to original receptors which are now being displaced. For example, Receptor 14A represents an adjacent receptor to the original Receptor 14 which is now to be displaced by a minor alignment shift. Receptors modeled in the original report which are being displaced include receptors 14, 18, 25, 26, and 27.

The noise receptor sites depicted on the map in the original Noise Study Report can still be referenced for alphanumerically described receptors since they are located in the immediate vicinity of the original numerically described receptors.

Receptors 29, 31 and 32 have dropped from further analyses since they were arbitrary representative receptors set at 25 feet from the right-of-way line and based on information to date, no noise sensitive sites are expected to be constructed at their locations.

10.3.4.2 Results of Noise Analysis

Computer output data is presented in Tables 2 and 2a. Table 2a exhibits receptor noise impacts influenced by airport operations from the Tampa International Airport. Wherever possible, in order to establish ambient conditions, computer predicted 1985 noise levels are presented (Receptors 4, 17, 17A, 28 and 30) where modeled receptors lie adjacent to the existing alignment or adjacent to an existing roadway within the project corridor. All other receptors, which do not receive significant noise contributions from an adjacent roadway, exhibit ambient levels based on 1985 field measured noises levels to represent "general" ambient conditions.

Abatement criteria for these receptors are presented in Figure 1. Receptors which warrant abatement consideration based on noise level increases in 2010 above existing 1985 noise levels (Receptors 13, 15, 17, 18A, 19, 20 and 20A) were considered for structural barrier feasibility. Also, receivers which either appraoched or exceeded FHWA abatement criterion of 67 dBA in 2010 (Receptors 24, 24A, 24B, 25A, 26A 27A, 28 and 30) but are predicted to experience only a 0-4 dBA noise level increase from the proposed Expressway were considered for structural barrier feasibility.

Of these receivers to be analyzed, Receptors 13, 19, 24A and 24B are isolated residences. Since structural barriers are rarely cost effective for individual receivers, the receptor with the greatest impact, Receptor 13, was chosen for initial feasibility. Receptor 13 is predicted to exceed criterion by 1 dB in 2010 and experience a noise level increase of 13 dB. Since this receiver had the gratest potential for beneficial noise abatement and cost effectiveness, initial barrier feasibility was limited to this receiver.

Of the receivers influenced by airport noise levels, Receptors 24, 25A, 26A, 27A, 28 and 30, none were chosen for barrier design. The existing noise levels at these receivers were substantially high enough, 72-74 dB, that they would negate any significant abatement benefits derived from a structural barrier designed to lessen roadway contributions. Based on airport noise contribution, the best insertion loss obtainable would be 3 dB at Receptor 30 and this would not warrant the construction of a barrier wall.

10.3.4.3 Structural Barriers

Structural barrier feasibility was investigated for receivers represented by Receptors 13, 15, 17, 18A, 20 and 20A. All barrier walls investigated were modeled to be constructed of concrete and cost estimates presented are based on approximate 1985 cost figures.

Table 1

Noise Receptor Descriptions

3	Isolated Residence	2935' N. of Van Dyke Road 740' E of Darby Lane
4	Isolated Residence	125' N of Van Dyke Road 450' W of Darby Lane
11	Isolated Residence	265' S of Storm Road 1172' E of Tobacco Rd.
12	Isolated Residence	55' N of LeClare Road 950' E of Tobacco Rd.
13	Isolated Residence	2720' N of Rawls Road 260' E of Hutchinson Rd.
14A	Isolated Residences	2850' E of Ballamy Road 2400' N of Ehrlich Road
15	Neighborhood Residence representative of 7 residences	1315' N of Ehrlich Road 690' E of Bellamy Road
16	Isolated Residence-- representative of 2 residences	910' N of Ehrlich Road 450' W of Bellamy Road
17	Neighborhood Residence-- representative of 5 residences	280' S of Ehrlich Road 280' E of Briarthorn Dr.
17A	Neighborhood Residences representative of 3 residences	160' S of Ehrlich Road 990' E of Briarthorn Dr.
18A	Neighborhood Residences representative of 3 residences and 2 mobile homes	480' N of Gunn Highway 180' of Pulitzer Road
18B	Neighborhood Residence- representative of 9 residences	1280' S of Ehrlich Road 135' E of Briarthorn Dr.
19	Isolated Residence	1830' S of Gunn Highway 230' E of abandoned RR

20	Mobile Home--representative of 4 mobile homes and 3 residences	65' N of Gardner Road 635' W of Timber Ridge Rd.
20A	Mobile Home-representative of 4 mobile homes	430' N of Gardner Road 360' W of Timber Ridge Rd.
21A	Mobile Home-representative of 2 mobile homes	1270' N of Linebaugh Ave. 650' E of Wilsky Road
22	Neighborhood Residence--representative of 20 residences	260' N of Martinshire Dr. 10' E of N. Ascott Ct.
23	Neighborhood Residence--representative of 18 residences	1830' N of Waters Ave. 8' W of Twelve Oaks Blvd.
24	Mobile Home-- representative of 2 mobile homes	254' N of Flora Ave. 105' E of Turnmore Drive
24A	Isolated Residence	850' S of Waters 390' E of Patterson Road
24B	Isolated Residence	100' S of Sitha Road 35' W of Patterson Road
25A	Neighborhood Residence--representative of 6 residences	805' S of Johns Road 110' E of Southern Comfort Blvd.
26A	Neighborhood Residence--representative of 9 residences	60' N of Larman Street 175' W of Southern Comfort Blvd.
27A	Neighborhood Residences--representative of 4 residences	800' N of Hillsborough Ave. 185' W of Southern Comfort Blvd.
28	Mobile Home - representative of 1 Mobile Home and 1 business	70' N of Eleanor Dr. 80' W of Eisenhower Blvd.
30	SKYWAY PARK	East End of Tennis Court

TABLE 2

Predicted Leg (dBA) Noise Levels

Receptor	Distance From Near Lane (Ft.)	1985 Measured Noise level	Computer 1985 Pred. Noise level	1989 Noise level	2010 Noise level	FHWA Criterion
3	610	47-50		49	53	67
4	172		58	56	60	67
11	127	53-55		60	64	67
12	181	55-57		57	62	67
13	130	55-57		63	68	67
14A	163	53-55		60	64	67
15	130	53-55		65	69	67
16	155	53-55		60	64	67
17	100		56	68	72	67
17A	460		59	59	63	67
18A	195	55-57		65	69	67
18B	190	53-55		58	63	67
19	110	53-55		64	67	67
20	105	55-57		67	71	67
20A	55	55-57		70	73	67
21A	404	60-65		52	56	67
22	700	60-65		61	64	67
23	1840	60-65		50	51	67

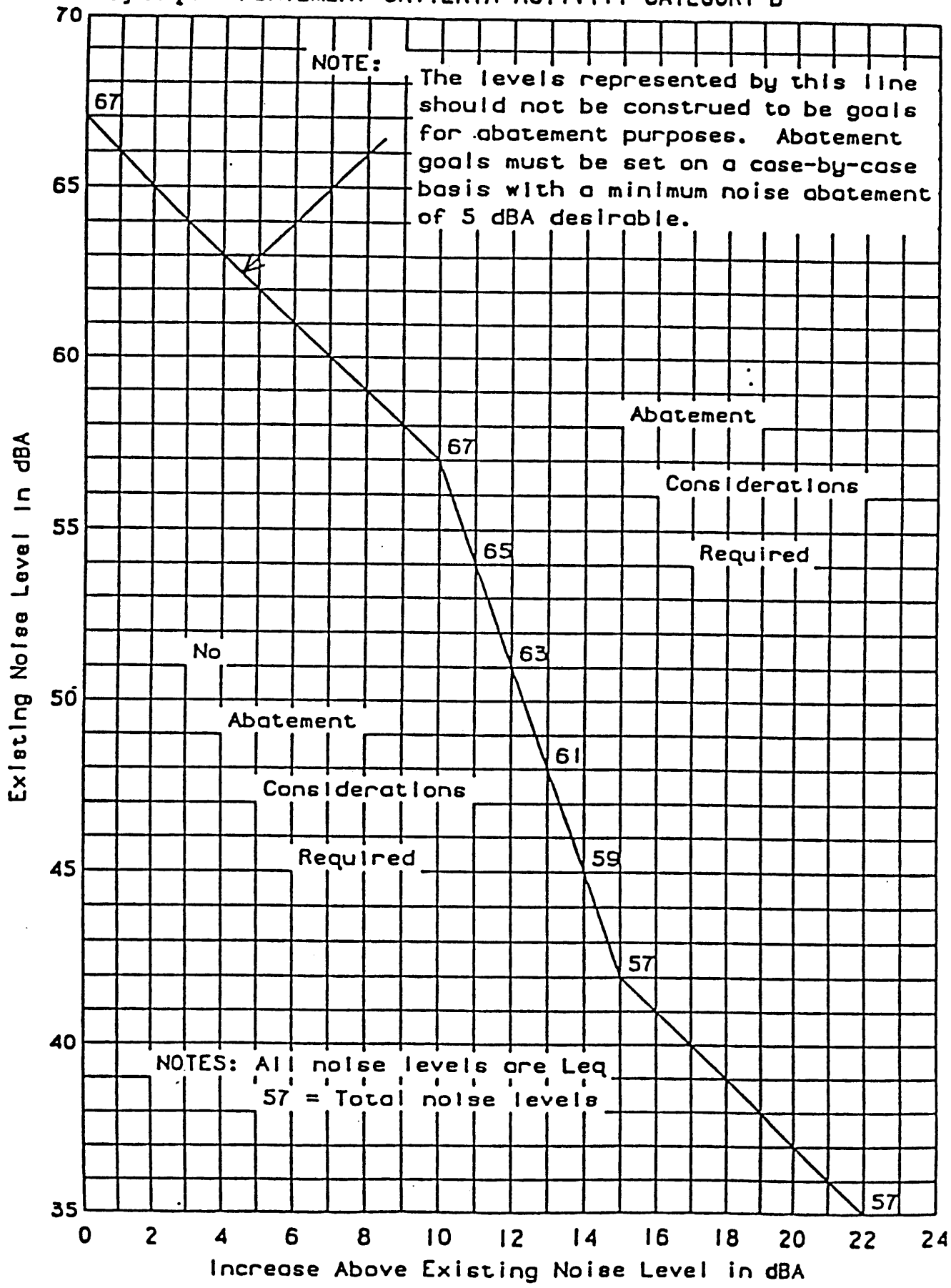
TABLE 2A

Predicted Leq (dBA) Noise Levels

Receptor	Distance from near lane	Airport Contour noise level	1985 Computer predicted noise level	1989 Noise level	ADJ*	2010 Noise level	ADJ*	FHWA Criterion
24	190	72		69	74	69	74	67
24A	130	69		67	71	67	71	67
24B	55	68		70	72	70	72	67
25A	70	72		70	74	70	74	67
26A	140	73		67	74	67	74	67
27A	203	74		61	74	61	74	67
28	130	73	67	69	74	69	74	67, 72
30	140	74	68	74	77	74	77	67

*Adjusted due to Airport Noise Contribution

Figure 1: ABATEMENT CRITERIA ACTIVITY CATEGORY B



Barrier Cost Summary

Receptor	Total # Receiver Requiring Abatement Consideration	Cost	Cost/Receiver
13	1	$ 50,000	$50,000
15	5	$172,500	$34,500
17	5	$162,000	$32,400
18A	5	$135,000	$27,000
20	6	$172,000	$28,700
20A	4	$138,000	$34,500

Cost effectiveness for barrier feasibility were based on the following formula:

$$\text{Cost Effectiveness} = \frac{\text{Cost of Abatement}}{\text{Number of Dwelling Units}} = \frac{\$25,000}{\text{Dwelling Unit}}$$

Barriers at this time do not appear to be cost effective for receivers located at Receptors 13, 15, 17, 18A, 20 and 20A. The receivers at these locations are either too spread out for feasible barrier design or, as in the case of Receptor 17, effective barrier design conflicts with the configuration of the roadway.

Based on the noise analyses performed to date there appear to be no apparent solutions available to mitigate the noise impacts at the locations identified, if any exist.

11.0 RECOMMENDATIONS AND COMMITMENTS

The Northwest Hillsborough Expressway Recommended Alignment has been developed in accordance with current federal and state policies and procedures governing the development of transportation facilities. This process produced a considerable amount of technical data concerning the traffic service, engineering, social and environmental consequences of the alternatives considered. Through an extensive public and agency involvement program, pursuant to Florida's Action Plan, valuable input was obtained. After careful evaluation of all the information generated on this project and the input of the public and agencies, the following recommendations are made concerning the expressway location, design features and mitigative measures for environmental impacts.

11.1 RECOMMENDED ALIGNMENT LOCATION

The Eisenhower/West, Lake LeClare with Southern Termini alignment combination is the Recommended Alignment alternative. Modifications in several areas of the Eisenhower/West and Lake LeClare alignments were made in establishing the location of the Recommended Alignment alternative. Subsection 4.3 describes the alignment as recommended herein.

The Recommended Alignment was selected based on the potential for carrying more traffic and generating more revenue to pay for construction than the other alternatives identified in detail in Section 4.1.4, Reasonable Alignment Alternatives. In addition, the Recommended Alignment is more compatible with Hillsborough County's Growth Management Plan in that this alignment passes closer to existing urban development than the Railroad Alignment alternative which passes through more outlying lower density areas. The selection was also based on the Railroad Alignment being in conflict with Hillsborough County's plans to use the Railroad right-of-way for a roadway as part of the County's local road system.

The alignment as shown in Figure 4-15 begins at interstate I-275 on the south and follows the existing Memorial Highway/Eisenhower Boulevard roadways to Hillsborough Avenue. The alignment in this area consists of nearly continuous interchanges (I-275, Spruce Street/Airport, Courtney Campbell, Independence Parkway, Memorial Boulevard and Hillsborough Avenue) to the south and west of Tampa International Airport. Starting at the Hillsborough Avenue interchange the alignment proceeds north to an interchange with the Anderson Road extension with an intermediate interchange at Waters Avenue. North of the Anderson Road extension the alignment curves to the West interchanging with Linebaugh Avenue and Wilsky Boulevard before turning north along the abandoned railroad right of way. South of Gunn Highway the alignment curves northeastward

interchanging with Gunn Highway and Ehrlich Road before curving more eastward passing by Lake Holly on the south. The alignment then curves northward to an interchange with Hutchinson Road and another with the proposed Gunn Highway Relocation project. The alignment then curves to the east with an interchange at Van Dyke Road and termini at Dale Mabry Highway one half mile north of Van Dyke Road.

11.2 RECOMMENDED DESIGN FEATURES

The proposed expressway roadway section will vary considerable throughout the project south of Hillsborough Avenue. The mainline expressway will have sections of six lanes and eight lanes (with auxiliary lanes) around the south end of the Airport. In addition frontage roads are planned for the section from Independence Parkway to Hillsborough Avenue. The median would be 22 feet in width.

North of Hillsborough Avenue the expressway would have a four lane roadway with a 42 foot median.

Ten foot paved shoulders will be provided on the right and on the left where there are six or more lanes. Four foot paved shoulders will be provided in the median of the four lane roadway section. Right of way will vary with a minimum practical established south of Hillsborough Avenue and a more uniform width of 250 feet for the project north of Hillsborough Avenue. Additional areas of right of way will be required at interchanges and toll plazas.

Special light standards and sign structures are proposed along the airport property to negate interference of these features with airport clear zones and specialized equipment operations such as radar surveillance.

Additional modifications were made to the recommended design features based on information developed through the public hearing process and public agency comments. These modifications identified in Section 4.3.1 include improvements to interchanges and adding lanes in the vicinity of Tampa International Airport to provide added traffic capacity and to separate expressway and airport traffic; realigments north of Hillsborough Avenue to improve circulation at interchanges and intersections; adjustment of the alignment to avoid impacting continguous waters of Lake Holley; provision for direct access to the proposed intercounty road (Gunn Highway Relocation); to improve circulation at Wilsky Boulevard, Hutchinson Road and Lake Shore and Van Dyke roads; and to reduce environmental impact as proposed by the Florida Game and Fresh Water Fish Commission by alignment shifts at the Van Dyke Road Interchange and in the Ehrlich/Bellamy Road vicinty.

11.3 WETLANDS MITIGATION

Mitigation for impacts on wetlands include reducing the impact areas by using special design features and developing replacement areas. Design features such as using 2:1 side slopes in wetland areas, shifting the roadway alignment away from the wetland and discontinuing roadside ditches through the area will be employed. Mitigation areas have been identified that would be suitable for wetland creation. See Subsection 10.3.3.

11.4 OTHER COMMITMENTS

Maintenance of traffic throughout the project and in particular along Memorial Highway/Eisenhower Boulevard will be given special consideration. Good access to major traffic generators such as Tampa International Airport, to businesses and residences spotted along the project will be a requirement of the contractor's operation.

Any hazardous waste site discovered during design or construction will be investigated by the State of Florida, Department of Environmental Regulation and appropriate clean up measures taken prior to continuation of work in the area. See Subsection 6.2.2.5 and Response F-5-4 in Appendix G for discussion on hazardous waste.

Any historic or archaeological remains encountered will cause stoppage of contractors operations until the proper action is taken by the State Division of Archives, History and Records Management, Bureau of Historic Sites and Properties.

Construction noise will be controlled as specified in Subsection 6.3.2.3.

For control of erosion and water quality considerations the contractor, will use "Best Management Practices" as stated in Subsection 6.3.8.

The development of a stormwater management plan will be a major element of the final design of this project. The plan will be developed during the preliminary engineering stage of the final design contracts and provided to the Florida Department of Environmental Regulation (FDER) and to the Southwest Florida Water Management District (SWFWMD) for conceptual approval. Permits will be obtained from the SWFWMD, FDER and the U.S. Army Corps of Engineers to approve and monitor stormwater and dredge and fill activities.

Permit activities involving wetlands will be coordinated with the U.S. Corps of Engineer, U.S. Fish and Wildlife Service, National Marine Fisheries Service, the Environmental Protection Agency, in addition to the Florida Department of Environmental Regulation.

Floodplain involvement and impacts will be mitigated through site specific evaluations during preliminary and final design to minimize impacts on existing water courses and ponding areas, as discussed in Subsection 6.3.5.

Adverse impacts to the natural floodplain in the vicinity of Rocky Creek will be minimized by limited clearing and crossing the stream on structure to allow preservation of the forest within the right-of-way. Culverts and detention areas will be provided to minimize loss of storage capacity and adverse backwater effects.

Floodplain involvement and impacts will be mitigated by site specific evaluations during the design stage to minimize the impacts of the expressway on existing water courses and ponding areas. As discussed in depth in Section 6.3.5, Floodplain Impacts, the assessments of floodplain involvement are difficult to make on the basis of a single facility in such a rapidly developing area. Stormwater management criteria and other permit requirements of regulatory agencies will be followed during the design of the expressway.

Existing storm drainage facilities associated with Eisenhower Boulevard will be incorporated in the expressway collection and treatment/detention facilities.

Impacts to the natural floodplain community will be minimized by limited clearing and crossings of Rocky Creek on structures to allow for preservation of much of the floodplain forest within the proposed right-of-way. Culverts and detention areas will be provided to minimize potential loss of storage capacity and adverse backwater effects. These will allow the creek to expand into much of the existing floodplain as necessary during high water periods.

In order to minimize the impacts to the floodplain vegetation providing wildlife habitat and water quality benefits for Lake Holly, the roadway side slopes will be steepened to reduce the area of impact. Adequate culverts will be used to maintain the water connection of the cypress dome to Lake Holley. Precaution will be taken in roadway design to prevent degredation of the water quality to the runoff from the roadway. During construction, turbidity will be controlled with Best Management Practices to present short-term construction impacts and sedimentation.

Small culverts under Tobacco Road and Storm Road will provide indication of equivalent sized culverts for the expressway at this crossing to prevent any risk to the vegetative community due to the expressway. Roadway slopes will be steepened to 2:1 to minimize the loss of wetland vegetation and wildlife habitat provided by the cypress swamps. Mitigation for impacts to this natural floodplain community are outlined in Section 6.3.7.2.

Those estuarine systems located upstream of the expressway will be provided with conveyance to prevent their detachment from the estuary.

Riverine systems to be impacted by the expressway are to be channelized prior to their confluence with the estuary. The expressway will make the two crossings of the upper portions of Rocky Creek on structure to minimize loss of productivity. Because of adjacent development activities to riverine systems other productive floodplain wetlands already have been filled.

Geotechnical investigations will be conducted in areas densely pitted with sinkholes and sinkhole lakes. Should sinkhole activity be confirmed within the proposed right-of-way, the alignment will be shifted away from the sinkhole. If this proves impractical, design alternatives to crossing the sinkhole will be implemented.

Merchantable timber will be utilized to the maximum degree possible. Sound practices concurred in by the Florida Department of Agriculture and Consumer Services will be specified. Best Management Practices will be used to prevent erosion and avoid water quality effects and will be implemented to protect wildlife.

A traffic and revenue report to secure local and state support will be prepared in order to obtain financial support for much of the project costs.

Detailed preliminary engineering analyses and other design concepts to improve the alignment and interchanges will be investigated and coordinated with the local and state agencies prior to implementing final design. The design of all signing, lighting, pavement markings, signalization and toll plazas for the expressway will be accomplished in close coordination with the affected City, County, and State agencies. A signing master plan will be developed for the expressway.

Continuing coordination will be conducted with the Hillsborough County Aviation Authority (HCAA) and the Federal Aviation Administration (FAA), regarding the relationship of the expressway to Tampa International Airport through the preliminary and final design process. An agreement pertaining to the approach Light System design and costs will be entered into by the appropriate agencies prior to design work by the FAA.

In the review process the HCAA will be given the opportunity to comment on the plans as they are developed affecting Tampa International Airport. Final expressway design will be needed by an obstruction to air navigation study to ascertain potential penetration of FAR Part 77 imaginary surfaces by proposed structures including the Runway 9 approach surface and Runway 18R-36L transition surfaces. If required, low level light standards will be utilized in lieu of the conventional standards. Alternative lighting and sign structures will be investigated in order to minimize impacts to the airport. Protecting the primary and secondary radar will be a part of final design. Considerations will include verification that the additional right-of-way required does not infringe on the primary radar area of sterilization and

that any potential area of interference with the secondary radar would be coordinated with the HCAA and the FAA Air Traffic and Airways Facilities Division. Specially designed luminaire shields will be utilized and coordinated with HCAA for expressway lighting in the vicinity of the airport where required to direct the light away from the pilot's line of vision on final approach.

In cooperation with Hillsborough County, right-of-way reservation maps will be filed as soon as the alignment has been adequately finalized. Further, realizing that the expressway will increase the traffic on connector roads, the project will include improvements at these intersections to facilitate the flow of traffic, but large scale improvements will have to be considered separate from this project. Moreover, FDOT/FHWA can improve only State or Federal roads.

APPENDICES

APPENDIX A

NORTHWEST HILLSBOROUGH EXPRESSWAY ENGINEERING
& ENVIRONMENTAL FEASIBILITY STUDY,
TECHNICAL MEMORANDUM,
EAST-WEST CORRIDOR EVALUATION,
DATED SEPTEMBER 11, 1984

HOWARD NEEDLES TAMMEN & BERGENDOFF

September 11, 1984

Mr. Theodore C. Taub, Chairman
Tampa-Hillsborough County Expressway
Authority
P.O. Box 1110
Tampa, Florida 33601

Re: Northwest Hillsborough Expressway
Engineering & Environmental Feasibility Study
State Project No. 10000-1531
Budget Item No. 113669
Technical Memorandum

Dear Mr. Taub:

Attached you will find a technical memorandum addressing the viability of an expressway alignment in the Lutz area between Dale Mabry Highway and I-275. We have conducted this evaluation to determine if an expressway facility within the area is warranted.

This evaluation has shown that low volumes projected for the expressway to the year 2010 do not justify an expressway type improvement between Dale Mabry Highway and I-275. This traffic could best be handled by local road improvements with less community and environmental impacts.

Therefore, it is our recommendation to the Tampa-Hillsborough County Expressway Authority and Florida Department of Transportation that all alignment considerations between Dale Mabry Highway and I-275 be eliminated from further consideration in the Northwest Hillsborough Expressway studies.

Engineers Planners **6000 Lake Ellenor Drive, Suite 100, Orlando, Florida 32809, 305 859-8380 Harry D. Bertossa, Associate**

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We plan to present this memorandum and the Draft Engineering Alternatives Report to the Authority at tomorrow's meeting.

Very truly yours,

HOWARD NEEDLES TAMMEN & BERGENDOFF

Harry D. Bertossa, P.E.

HDB/JRF/pf

Copies to:
Expressway Authority Members
Mr. James G. Kennedy, FDOT/Bartow
URS/Coverdale & Colpitts
Barr Dunlop & Associates
File 7857-11-01

HNTB

HOWARD NEEDLES TAMMEN & BERGENDOFF

TECHNICAL MEMORANDUM

NORTHWEST HILLSBOROUGH EXPRESSWAY
EAST-WEST CORRIDOR EVALUATION
September 11, 1984

I. PURPOSE

The purpose of this memorandum is to consider the viability of alignments within the eastern end of the East-West Corridor. The area under consideration herein is generally in the southern portion of Lutz bounded by Dale Mabry Highway on the west and I-275 on the east.

This evaluation is primarily in response to the traffic assignments for this segment being low. This segment of the East-West Corridor would serve the bypass traffic and offer some improvement for local traffic while causing community disruption and increased environmental impacts. This concern was voiced at the Corridor Public Hearing conducted in August 1983 and again at the public workshops on August 1 and 2, 1984. The recommendation adopted by the Authority in September 1983 after the corridor hearing was:

> In recommending Corridor P, it is realized that the east-west section between Dale Mabry Highway and I-275 will principally serve the thru, longer distance trip and the local trip to a lesser degree. During the Phase II study,

special emphasis will be placed on studying the traffic volume the roadway will serve and the potential benefits to the downtown interstate system. These will be compared to the roadway cost and its environmental and community impacts. It may prove that this section of the environmental and community impacts outweigh the traffic services benefits received.

This technical memorandum will consider the pricipal factors of project cost, traffic service provided by the expressway -- both as a bypass and for local service, and significant environmental and community considerations. As a result of this evaluation, a recommendation is made herein to the TampaHillsborough County Expressway Authority and the Florida Department of Transportation on whether this segment should be studied in further detail in the Draft Environmental Impact Statement or dropped from further consideration.

II. DESCRIPTION OF IMPROVEMENT

The type of transportation improvement under consideration is a four-laned limited access expressway which will be financed by revenue bonds. The area isolated for this evaluation is just one part of a total transportation facility intended to provide a bypass route around the northern and western portions of Tampa. The expressway would also provide a new major east-west roadway across the northern

portion of the County.

A. Alignments Studied

Within the area of concern, two basic alignments with two cross-overs have been developed and evaluated. The description and evaluation of the following alignments are presented in detail in the Draft Engineering Alternative Report published July 1984; therefore, the details will not be discussed in this memorandum.

1. Lake Brandt - North
2. Lake Brandt - North with Southern Crossover
3. Lake Brandt - South
4. Lake Brandt - South with Northern Crossover

The length of the alignments from Dale Mabry Highway to I-275 ranges from 5.27 miles to 5.53 miles.

B. Service Provided

The Northwest Hillsborough Expressway is proposed as a limited access roadway; that is, access to the roadway can only be gained via an interchange ramp. The locations of these interchanges are Dale Mabry Highway, Nebraska Avenue, Livingston Avenue and I-275. Each of the interchanges will accommodate all travel directions.

The mainline roadway is ultimately proposed to be four laned divided. This four laning can be either provided initially or

staged. The staged option investigated is to provide a two lane limited access roadway. The two lane roadway would be developed with interchange access, the full width right-of-way and all necessary major drainage for the four laned roadway in the initial construction.

C. Need for Improvement

The Northwest Hillsborough Expressway is needed for several reasons as cited in the Phase I - Corridor Report. These were that the existing roadway network, both arterial and interstate roadways, is rapidly approaching extreme congestion with operating levels of E (unstable flow with stoppages) and F (forced flow) on many roadways during peak hour periods. Continued growth in the northwest portion of the County will magnify this congestion in future years. While the FDOT and Hillsborough County have programmed and/or are studying major improvements to the network, analysis has shown that the Northwest Hillsborough Expressway will be needed to meet the future traffic demands even if the improvements are made.

Another factor showing the need for the Expressway is the increased accident rates in the northwest portion of the County, principally resulting from the increased roadway congestion.

The final factor is the need for a bypass around the northern and western portions of Tampa. This factor is a critical issue in the

evaluation of the need for an expressway segment between Dale Mabry Highway and I-275. Should the project be completed as presently proposed having a limited access expressway from I-275 in the vicinity of Tampa International Airport to I-275 on the north, a full bypass route would be provided to avoid the downtown area. Additionally, the project will provide a needed east-west route in the northern part of the County between Dale Mabry Highway and I-275. Presently, east-west trips must utilize the existing local collector system which is fragmented.

D. No-Build Options

This section addresses the consideration of not building the expressway from Dale Mabry Highway to I-275 in northern Hillsborough County. The proposed expressway would terminate at Dale Mabry Highway, thus minimizing its use as a bypass route.

Access to the expressway from the northeast for bypassing traffic would best be gained by exiting I-75 at CR54 westward to US41 and then southward into Dale Mabry Highway. The FDOT could improve this access by providing a new CR54 interchange into I-75 approximately one-and-a-half miles north of the Pasco County line and upgrading CR54 westward to US41. Such improvements would enhance travel time over using the existing network.

The no-build alternative would not provide a primary east-west

route in the northern part of the County to service local traffic. However, the traffic projections made by the URS/Coverdale & Colpitt's Report indicates that this demand would be quite small for an expressway and could be handled by improvements to the local roadway network.

III. ENGINEERING AND ENVIRONMENTAL CONSIDERATIONS

The principal factors evaluated in the Draft Engineering Alternatives Report and discussed earlier in this memorandum are considered in the evaluation. Those are project costs, relocations and wetland impacts.

A. Project Costs

The project costs presented in this memorandum are the same as those presented in the Draft Engineering Alternatives Report modified to specifically address the section between Dale Mabry Highway and I-275. Project cost is the summation of the various expenditures anticipated in administering, planning, engineering, acquiring of right-of-way, construction, and related incidental items associated with the development of an expressway project.

The estimate presented in Table 1 gives each of the alignment alternatives and shows costs for an initial two lane and an initial four lane roadway. The estimates for the two lane roadway

TABLE 1

NORTHWEST HILLSBOROUGH EXPRESSWAY

PROJECT COSTS

TWO LANE ESTIMATE

ALTERNATIVE ALIGNMENT	FROM	TO	LENGTH (MI.)	1984 CONST. COSTS	ENGR. SURVEYS AND TESTING (15%)	ADMIN. LEGAL AUDIT & FINANCING	CONTIN-GENCIES (15%)	FDOT ROW ESTIMATE	FDOT RELOCATE ESTIMATE	1984 PROJ. COSTS	1987 PROJ. COSTS (8%/YR.)
Lake Brandt-North	Dale Mabry Hwy.	I-275	5.53	16,691,000	2,504,000	100,000	2,894,000	13,400,000	272,000	35,861,000	45,175,000
Lake Brandt-North w/Southern Crossover	Dale Mabry Hwy.	I-275	5.49	16,287,000	2,443,000	100,000	2,825,000	13,840,000	294,800	35,790,000	45,085,000
Lake Brandt-South	Dale Mabry Hwy.	I-275	5.27	18,425,000	2,764,000	100,000	3,193,000	13,540,000	416,900	38,439,000	48,422,000
Lake Brandt-South w/Northern Crossover	Dale Mabry Hwy.	I-275	5.53	19,333,000	2,900,000	100,000	3,350,000	14,640,000	400,400	40,723,000	51,299,000

FOUR LANE ESTIMATE

Lake Brandt-North	Dale Mabry Hwy.	I-275	5.53	25,590,000	3,839,000	100,000	4,430,000	13,400,000	272,000	47,631,000	60,001,000
Lake Brandt-North w/Southern Crossover	Dale Mabry Hwy.	I-275	5.49	24,877,000	3,732,000	100,000	4,306,400	13,840,000	294,800	47,150,000	59,395,000
Lake Brandt-South	Dale Mabry Hwy.	I-275	5.27	27,499,000	4,125,000	100,000	4,759,000	13,540,000	416,900	50,440,000	63,540,000
Lake Brandt-South w/Northern Crossover	Dale Mabry Hwy.	I-275	5.53	29,086,000	4,363,000	100,000	5,032,000	14,640,000	400,400	53,621,000	67,547,000

alignment include the full right-of-way width, complete major drainage and some earthwork for future widening.

B. Business and Residential Relocations

A summary of the numbers of business and residential relocations and costs is presented in Table 2. The section between Dale Mabry Highway and I-275 represents approximately 25% of the total length of project. Within this section are located between 16% and 21% (varies with alignment) of the residential relocations and 11% to 13% of the business relocations. While these percentages appear low, the area is principally rural residential with many homes located in one acre or larger tracts. Some of these homes have been resided in by families over several generation

C. Wetland Impacts

The area between Dale Mabry Highway and I-275, while only 25% of the entire project length, contains the greatest intensity of wetlands. Table 3 lists the acreage of wetlands impacted by each of the alignment alternatives. In comparing these acreages to the total wetlands impacts for a full length alignment, it is estimated that between 41% and 56% (dependent upon alignment) of the natural wetlands impacted are within this section. By evaluating the total wetlands (natural and man-made), it is estimated that between 33% and 46% of the total wetlands impacted are within this area.

TABLE 2

RELOCATION IMPACTS

Alignment Alternatives	Numbers of Relocations Resid.	Business	Non-Profit	Total	Costs
Lake Brandt - North	24	4	0	28	$272,000
Lake Brandt - North w/Southern Crossover	30	3	0	33	$294,800
Lake Brandt - South	34	3	0	37	$416,900
Lake Brandt - South w/Northern Crossover	35	3	0	38	$400,400

A-11

TABLE 3

WETLANDS IMPACTED

Alternative Alignment	Acres Impacted			Percent of Total Alignment		
	Natural	Man-Made	Total	Natural	Man-Made	Total
Lake Brandt - North	27.30	3.69	30.99	41%	13%	33%
Lake Brandt - North w/Southern Crossover	36.13	3.39	39.52	48%	13%	39%
Lake Brandt - South	49.98	3.34	53.32	56%	13%	46%
Lake Brandt - South w/Northern Crossover	46.10	2.44	48.54	54%	9%	43%

IV. TRAFFIC CONSIDERATIONS

The Draft Traffic and Revenue Study submitted by the traffic consultants (URS/Coverdale and Colpitts) contained mainline projections for 1988 and 2010. These projections indicated relatively light traffic could be expected between Dale Mabry Highway and I-275 in 1988. The mainline is expected to have 3,850 average daily traffic (ADT) between I-275 and US41 and 5,320 ADT between US41 and Dale Mabry Highway. Some increase can be expected by the year 2010, but still for an expressway facility the volumes are relatively light. The section between I-275 and US41 is expected to increase to 8,130 ADT and the US41 to Dale Mabry Highway section to 12,500 ADT.

In studying the trafffic flow in the year 2010, nearly 8,000 ADT can be expected to enter the expressway from I-275. This volume is expected to increase to over 12,000 west of US41. Such indicates that a good percentage of the expressway traffic west of US41 is local. It appears that the split would be approximately 60% bypass and 40% local. While this split indicates that the expressway would provide a service to the local residents, the volume is small (approximately 5,000 ADT) and can be provided by an improved local road network.

The interchange of the expressway with I-275 would require an interchange justification study to be reviewed and approved by the Federal Highway Administrative (FHWA). This study would contain a full analysis of the new interchange with the benefits and costs to the motoring public being the primary issue. It is our opinion that

the low volume through the interchange would not provide for a positive benefit/cost analysis thereby making approval by FHWA doubtful.

Should the expressway not be built, this traffic would use other routes. It is expected that over one-half of the bypass traffic (3,000 to 5,000 ADT) would follow the interstate thru downtown. Considering the major renovations proposed for the Tampa Interstate System, the small volumes would not have any operational effects on the system. The remaining traffic would utilize the existing roadway network having little impact.

In final analysis, the low volumes proposed between Dale Mabry Highway and I-275 do not warrant an expressway type facility even at the year 2010. The bypass volumes are low and could be easily handled by an improved interstate system and use of CR54 and Dale Mabry Highway to the expressway. The local traffic from the Lutz area could still access the expressway by going west on local roadways to Dale Mabry Highway.

V. RECOMMENDATION

We recommend the expressway segment between Dale Mabry Highway and I-275 be dropped from further consideration. The basis for this recommendation is that the low traffic volume projected for each year up to the year 2010 does not warrant an expressway type improvement.

However, we encourage the County and State to consider proposed improvements to east-west arterial routes in northern Hillsborough County, as the traffic studies show a travel desire from US41 to Dale Mabry Highway and westward.

As shown in the memorandum, there are also advantages to be derived of reducing the community and wetland impacts.

J19/26

APPENDIX B

NORTHWEST HILLSBOROUGH EXPRESSWAY,
TECHNICAL MEMORANDUM,
RAILROAD ALIGNMENT EVALUATION,
DATED FEBRUARY 1, 1985

HOWARD NEEDLES TAMMEN & BERGENDOFF

January 31, 1985

Mr. Frank Valenti, Chairman
THCEA
Room 223, County Courthouse
Post Office Box 1110
Tampa, Florida 33601

Re: Northwest Hillsborough Expressway
Technical Memorandum
Railroad Alignment Evaluation
State Project No. 10000-1531
Budget Item No. 113669

Dear Mr. Valenti:

Enclosed is a Technical Memorandum addressing the desirability of including the Railroad Alignment in the study process for the project's Environmental Impact Statement. This evaluation has shown that the principal factors of project costs, traffic service, wetland impacts and community impacts could be considered close enough to include the Railroad Alignment, along with the Lake LeClare Alignment and No Build alternatives.

Our recommendation for adding the Railroad Alignment to the study will be presented at the February 4, 1985, Authority meeting.

Very truly yours,

HOWARD NEEDLES TAMMEN & BERGENDOFF

Dale E. Patten

Dale E. Patten, P.E.

DEP/mh

Encl.

Copies to: Expressway Authority Members
Ms. Mary J. Hall
Mr. James G. Kennedy, P.E.
URS/Coverdale & Colpitts
Barr Dunlop & Associates
File 7857-11-01 J20/18

Engineers Planners 6000 Lake Ellenor Drive, Suite 100, Orlando, Florida 32809, 305 859-8380 Harry D. Bertossa, Associate

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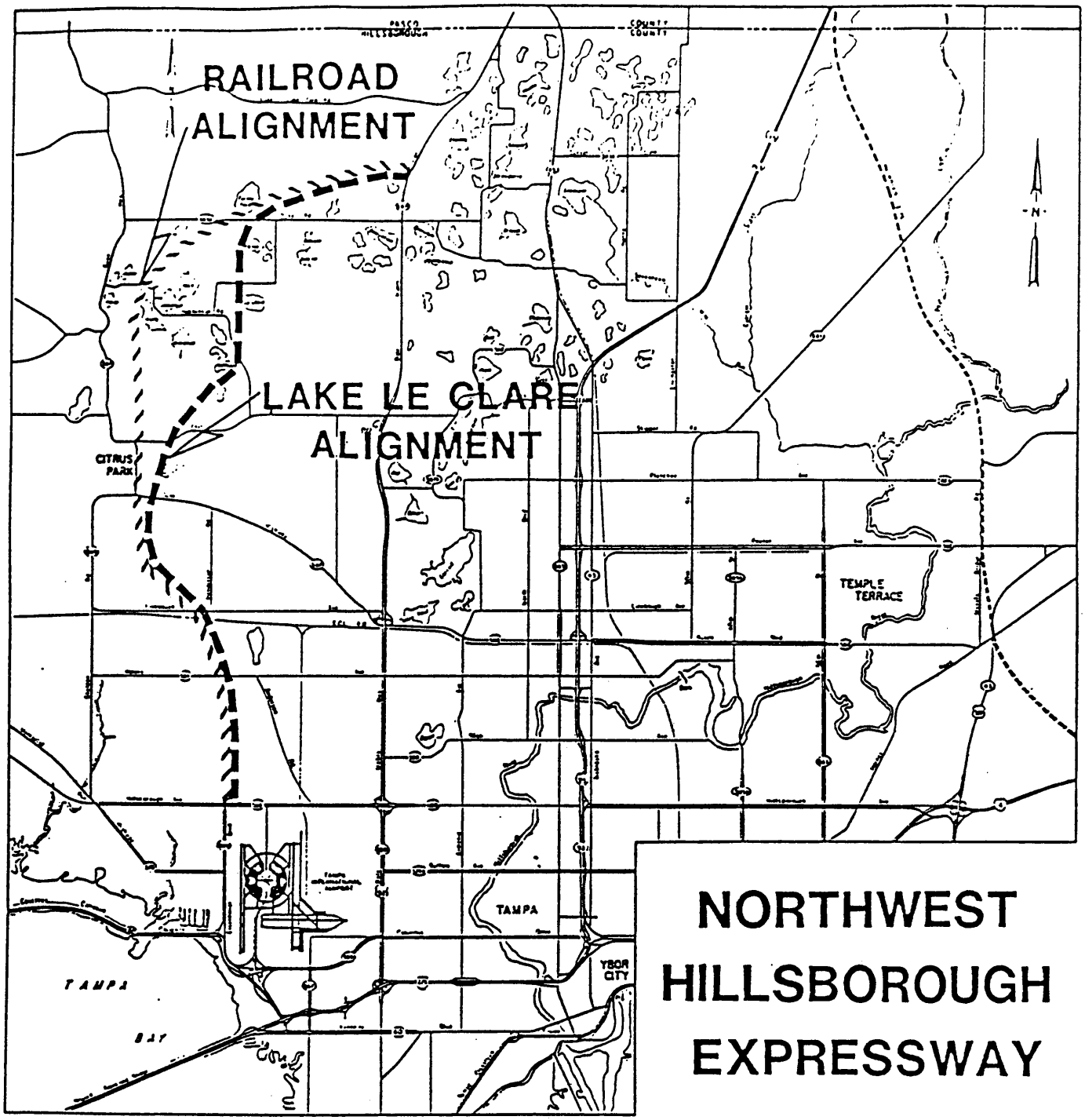
TECHNICAL MEMORANDUM

NORTHWEST HILLSBOROUGH EXPRESSWAY
RAILROAD ALIGNMENT EVALUATION
February 1, 1985

I. PURPOSE

The purpose of this memorandum is to evaluate and compare an alternative roadway alignment from south of Gunn Highway to a termination at Dale Mabry Highway. See Exhibit 1 for location of Project. The alternative alignment under consideration, hereinafter called the Railroad Alignment, generally follows the abandoned railroad right-of-way from a point south of Gunn Highway to Mobley Road which is one mile south of Van Dyke Road. The alignment then curves eastward and is the same as the approved alignment (Lake LeClare Alignment) from Tobacco Road at Van Dyke Road to Dale Mabry Highway. This evaluation was developed in response to the areawide interest shown during, and subsequent to, the August 1 and 2, 1984 public meetings and to the September 12, 1984 Authority meeting. At the September 12 Authority meeting the Eisenhower-West alignment, which is now referred to as the Lake LeClare Alignment (for the segment north from Hillsborough Avenue to Dale Mabry Highway), was approved for detailed study.

The principal factors of project costs and wetland impacts, community impacts, and traffic service are discussed herein. Since both the Lake LeClare Alignment and the Railroad Alignment are the same from a point between Linebaugh Avenue and Gunn Highway south to Hillsborough Avenue, the evaluations made in this memorandum address only that segment north to Dale Mabry Highway.



NORTHWEST HILLSBOROUGH EXPRESSWAY

EXHIBIT 1
LOCATION MAP

HOWARD NEEDLES TAMMEN & BERGENDOFF HNTB

As a result of this study, a recommendation is included herein to the Tampa-Hillsborough County Expressway Authority and the Florida Department of Transportation to include the Railroad Alignment alternative in detail in the Environmental Impact Statement.

II. DESCRIPTION OF ALTERNATIVE ALIGNMENTS

A. General

The alignments are either the Lake LeClare or the Railroad for the transportation improvement project under consideration and comprising a four lane limited access expressway financed in part by revenue bonds. The segment for this evaluation is just one part of a total transportation facility intended to serve the western and northern portions of the Tampa Metropolitan Area. It would form one part of a high speed expressway/loop arterial roadway around the Tampa CBD. The total transportation system consists of: improvements to Memorial Highway and Eisenhower Boulevard from I-275 to Hillsborough Avenue; construction of a new limited access expressway from Hillsborough Avenue to Dale Mabry Highway immediately north of Van Dyke Road (this segment includes that part of the alignment considered herein); improvements to Dale Mabry Highway from the expressway to SR 54; and improvements to SR 54 from Dale Mabry to I-275 (north), including the interchange requirements at I-275.

B. Lake LeClare Alignment

The Lake LeClare alignment begins at the Eisenhower Boulevard/Hillsborough Avenue interchange and proceeds generally north to the railroad south of Linebaugh Avenue. The alignment then curves westward across and interchanging with Linebaugh, then northward to where the expressway occupies the abandoned railroad right-of-way. The alignment follows the railroad right-of-way for a short distance, then curves northeast interchanging with Gunn Highway, Ehrlich Road, and Hutchinson Road. The alignment then proceeds northward, passing Lake LeClare on the west side, then northeast interchanging with Van Dyke Road east at Lakeshore Road. The alignment then proceeds generally eastward to an interchange with Dale Mabry Highway, one-half mile north of Van Dyke Road. Note, all the interchanges mentioned above provide entrance and exit ramps for both directions except for the Hutchinson Road and Van Dyke Road interchanges which provide entrance and exit ramps to and from the south only. This alignment is approximately 13.0 miles in length.

C. Railroad Alignment

The Railroad alignment also begins at the Hillsborough Avenue interchange and is the same as the Lake LeClare alignment until the Lake LeClare alignment veers northeast away from the abandoned railroad right-of-way. The Railroad alignment continues to follow the abandoned railroad right-of-way for approximately 4 miles before it curves to the northeast to again become the same alignment as the Lake LeClare alignment between Tobacco Road and Dale Mabry Highway. There will be a full interchange at Gunn Highway and one at Ehrlich Road and a half interchange serving the South only at Binder Road for that portion of the alignment that is different than the Lake LeClare alignment. The proposed Railroad alignment is approximately 13.8 miles for the entire length from Hillsborough Avenue to Dale Mabry Highway or 0.8 miles longer than the Lake LeClare alignment.

III. ALTERNATIVE ALIGNMENT EVALUATION FACTORS

The Railroad Alignment from 4,000 feet south of Gunn Highway to Dale Mabry Highway is evaluated herein and compared to the Lake LeClare Alignment for the same limits. Their respective lengths are approximately 9.1 miles and 8.3 miles. The proposed expressway will be a four lane limited access roadway with 250 feet wide right-of-way. Bridges over principal local roads will be provided in addition to the bridges for the interchanges listed above. Exhibits 2 and 4 show the comparison between alignments for the factors mentioned earlier and evaluated below.

A. Project Costs

The project costs shown in Exhibit 2 are computed on the same basis as those presented in the Engineering Alternatives Report. They include administration, planning and engineering, construction, contingency and right-of-way acquisition costs. The costs have been escalated to represent the actual expenditures as they are incurred in accordance with the proposed timeframe; see Exhibit 3. The Railroad Alignment project costs are estimated at $83,500,000, or $500,000 more than the Lake LeClare Alignment cost of $83,000,000. The main differences between the two costs are the Railroad Alignment is $1,400,000 less for right-of-way and $1,900,000 more for construction, engineering and contingency. The Railroad Alignment is longer, therefore more construction and engineering costs are involved; however, with the more extensive use of the abandoned railroad property the right-of-way costs are less.

EXHIBIT 2

COMPARISON OF ALIGNMENTS
FROM SOUTH OF GUNN HIGHWAY TO DALE MABRY HIGHWAY

	Alternative Alignment	
	Railroad	Lake LeClare
Length (miles)	9.1	8.3
PROJECT COSTS		
Construction	$46,300,000	$44,800,000
Engineering	6,900,000	6,700,000
Administrative	200,000	200,000
Contingency	8,000,000	7,800,000
R/W & Relocation	22,100,000	23,500,000
TOTAL	$83,500,000	$83,000,000
WETLAND IMPACTS (Acres)		
Natural	16.675	11.595
Man-made	1.584	0.856
COMMUNITY IMPACTS		
Neighborhoods Affected	4	4
Parcels Taken	197	104
Relocations (1984)		
Residential	78	50
Other	13	7

NORTHWEST HILLSBOROUGH EXPRESSWAY
PROJECT SCHEDULE

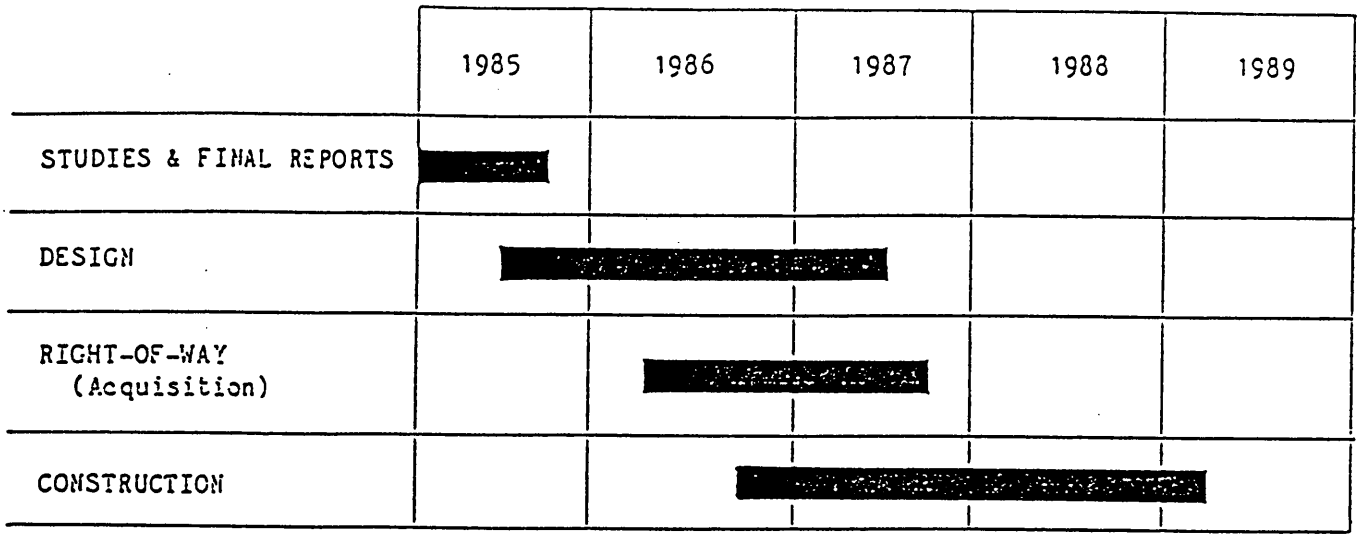


EXHIBIT 3

B. Wetland Impacts

There are some differences in both the natural and man-made wetlands as impacted by the two alignments as shown in Exhibit 2. The amount of wetlands involved within a given project limits is a good indication of the total environmental considerations for that project.

The Railroad Alignment affects 16.675 acres of natural wetlands and 1.584 acres of man-made wetlands for a total of 18.259 acres of wetlands impacted. The Lake LeClare Alignment affects 11.595 acres of natural wetlands and 0.856 acres of man-made wetlands, for a total of 12.451 acres of wetlands. The net difference is, therefore, 5.808 acres or approximately 47% more for the Railroad Alignment.

C. Community Impacts

There are four neighborhoods within close proximity or directly impacted by each of the alignments. The Railroad Alignment affects Citrus Park, Woodbriar West, an area north of Citrus Park, and an area west of Lake Helen. The Lake LeClare Alignment affects Woodbriar West, Carrollwood Meadows, Sugarwood Grove, and the area south and west of Lake Helen and Lake LeClare. The Railroad Alignment would need to acquire approximately twice as many parcels and would require 60% more relocations. Included in the Railroad Alignment relocations is one church. All other relocations for both alternatives are limited to residence and businesses.

D. Traffic Service

Preliminary indications from the traffic consultants are that the projected traffic volumes on the total facility would be greater for the Lake LeClare Alignment than the Railroad Alignment (see Exhibit 4). For example, the Waters to Hillsborough Avenue 1989 mainline traffic would be 25,960 based on the LeClare Alignment and 25,030 for the Railroad Alignment. The traffic projections for the year 2010 are 49,500 and 47,700, respectively.

IV. RECOMMENDATION

We recommend that the Railroad Alignment be included as one alternative in the Environmental Impact Statement.

EXHIBIT 4

TRAFFIC PROJECTIONS

1988-1989 AADT

Location	Lake LeClare	Railroad
Waters Ave. (So. on Mainline)	25,960	25,030
Waters Ave. (No. Ramps)	530	400
Linebaugh (No. Ramps)	40	30
Ehrlich (So. Ramps)	6,280	6,280
Hutchinson (So. Ramps)	3,770	---
Binder (So. Ramps)	---	3,140
Van Dyke (So. Ramps)	1,180	1,180
Dale Mabry (So. Ramps)	2,800	2,500

File 7857-11-00 J20/17

APPENDIX C

NORTHWEST HILLSBOROUGH EXPRESSWAY,
TECHNICAL MEMORANDUM,
BENJAMIN ROAD ALIGNMENT EVALUATION
DATED MAY 21, 1985

HOWARD NEEDLES TAMMEN & BERGENDOFF

June 17, 1985

Mr. Frank Valenti
Chairman, THCEA
501 East Kennedy Boulevard
Suite 602
Tampa, Florida 33602

Re: Northwest Hillsborough Expressway
Technical Memorandum
Benjamin Road Alignment
State Project No. 10000-1531
Budget Item No. 113669

Dear Mr. Valenti:

Enclosed is Technical Memorandum for comparing the Eisenhower/West Alignment with an alignment (herein referred to as the Benjamin Road Alignment) proposed by the public at the workshops held in August, 1984. This is for the Authority's and Department's information and will be included in the Environmental Impact Statement as an Appendix.

The Benjamin Road Alignment is not being considered as a viable alignment since it is not significantly better than, and the costs are greater than, the Eisenhower/West Alignment. As noted in the memorandum, there are a few more relocations with the Benjamin Road Alignment and the wetlands are nearly the same.

Very truly yours,

HOWARD NEEDLES TAMMEN & BERGENDOFF

Dale E. Patten

Dale E. Patten, P.E.

DEP/mh

Encl.

Copies to:
Ms. Mary J. Hall - w/encl.
Mr. James G. Kennedy - w/encl.
File 7857-11-01 J20/27

Engineers Planners **6000 Lake Ellenor Drive, Suite 100, Orlando, Florida 32809, 305 859-8380** **Harry D. Bertossa, Associate**

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TECHNICAL MEMORANDUM

NORTHWEST HILLSBOROUGH EXPRESSWAY
BENJAMIN ROAD ALIGNMENT EVALUATION
May 21, 1985

I. PURPOSE

The purpose of this memorandum is to evaluate and compare roadway alignment alternatives from south of Johns Road bridge on the south to the Seaboard Systems Railroad bridge (immediately south of Linebaugh Avenue) on the north. The two alternatives shown in Exhibit 1 are: (1) a segment of the Eisenhower/West alignment, and (2) the Benjamin Road alignment.

This evaluation of the previously approved Eisenhower/West alignment and the new Benjamin Road alignment was developed to consider an alignment further east. The Benjamin Road alignment was prepared in detail and shown to the public for comment at the March 26, 1985 public meeting. Subsequent to the public meeting, we proceeded with this evaluation of the two alignment alternatives.

The principal factors of project costs, wetland impacts, community impacts, and traffic service are discussed herein.

II. DESCRIPTION OF ALTERNATIVE ALIGNMENTS

A. General

The alternatives under consideration in this Technical Memorandum are either the Eisenhower/West or the Benjamin Road alignments. This segment of the expressway is one part of a total transportation facility (four laned limited access expressway) intended to serve the western and northern portions of the Tampa Metropolitan Area.

B. Eisenhower/West Alignment

This segment of the Eisenhower/West alignment begins 1,300 feet south of the Johns Road bridge and proceeds generally north to its end 200 feet north of the railroad bridge which is south of Linebaugh Avenue. The alignment crosses on bridge Channel G of Sweetwater Creek and Barry Road. There is an interchange proposed at Waters Avenue with ramp access for both northbound and southbound traffic. The alignment is approximately 2.46 miles in length.

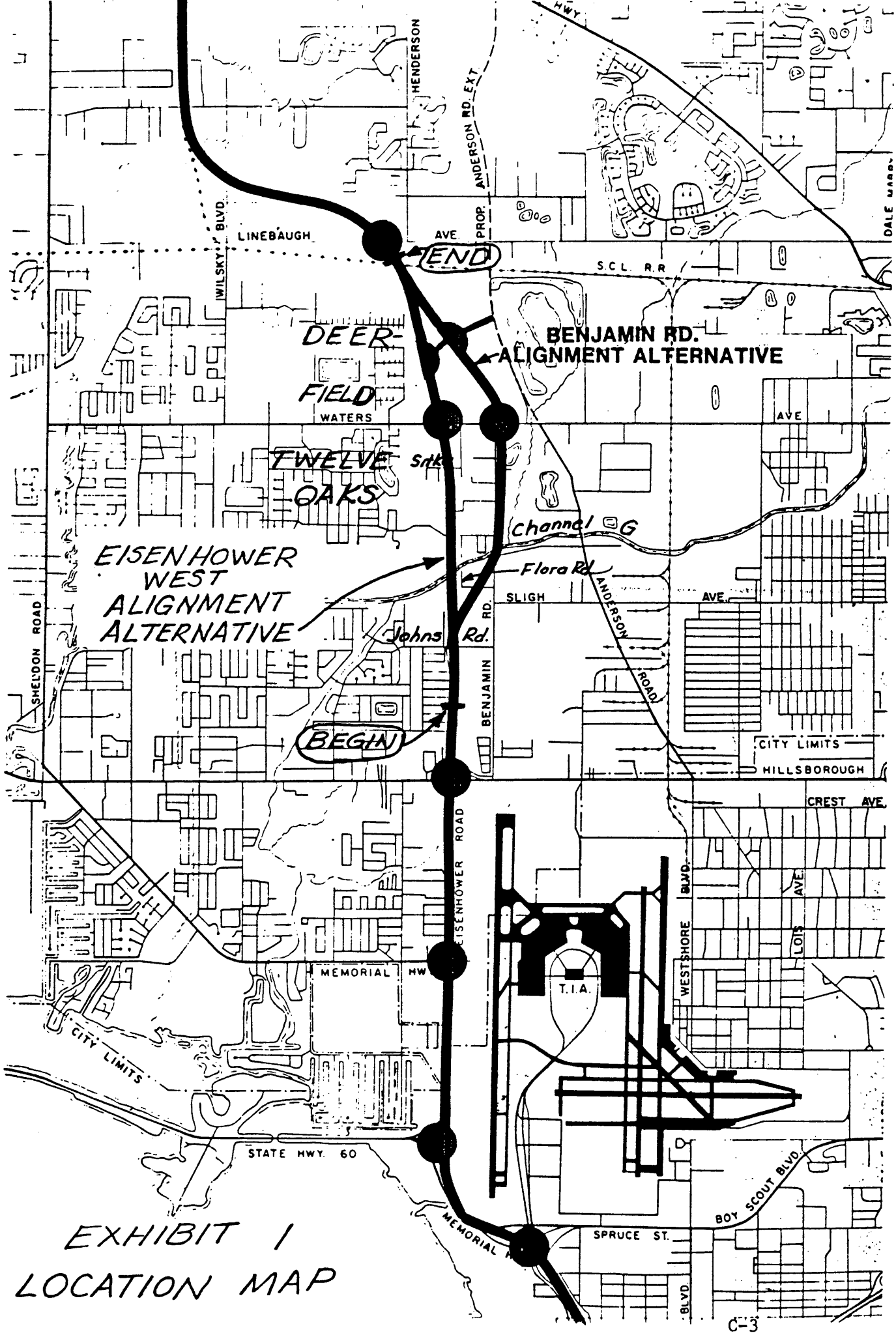


EXHIBIT 1
LOCATION MAP

C. Benjamin Road Alignment

The Benjamin Road alignment also begins south of the Johns Road bridge; however, the alignment curves to the east until the bridge crossing of Channel G and Benjamin Road where the alignment then proceeds northerly to the interchange at Waters Avenue. Between Johns Road and Benjamin Road the expressway also crosses Flora Avenue on bridge so as to provide access to properties otherwise landlocked on the west side of the proposed expressway. From the Waters Avenue interchange the alignment proceeds northwesterly to the north side of the Seaboard Systems Railroad bridge. The Waters Avenue interchange is similar in design to the Eisenhower/West proposed interchange and provides access for northbound and southbound traffic. The alignment is approximately 2.59 miles in length or 0.13 miles longer than the Eisenhower/West alignment.

III. ALTERNATIVE ALIGNMENT EVALUATION FACTORS

As mentioned previously, the principal factors of project costs, wetland impacts, community impacts, and traffic service are evaluated and discussed below. A summary of these factors are presented in Exhibit 2.

A. Project Costs

The project costs shown in Exhibit 2 are computed on the same basis as those presented in prior estimates of all other alternatives. They include construction, planning and engineering, right-of-way acquisition, relocation, and contingency. The costs have been escalated to represent the actual expenditures as they are incurred in accordance with the proposed timeframe; see Exhibit 3.

For the Benjamin Road alignment alternative the costs for each of the items are greater. The construction difference is primarily due to a longer bridge crossing at Channel G where it also crosses Benjamin Road and increased length of project (0.13 miles). Engineering and contingency are directly related to construction costs and are therefore proportionately larger. Right-of-way and relocation costs are greater, as shown in Exhibit 4, primarily for the area located 600 feet north of Barry Road to Waters Avenue. The acquisition differential is a little over $2,000,000. There are thirteen additional properties to be acquired for the Benjamin Road alignment and nine more relocations; however, the actual relocation costs are estimated to be slightly less ($11,800). The Benjamin Road alignment at Waters Avenue interchange involves taking of more expensive business property.

EXHIBIT 2

COMPARISON OF ALIGNMENTS
FROM SOUTH OF JOHNS ROAD TO
NORTH OF SEABOARD SYSTEMS RAILROAD

	Alignment Alternatives	
	Eisenhower/West	Benjamin Road
Length (miles)	2.46	2.59
PROJECT COSTS		
Construction	$14,200,000	$15,700,000
Engineering	2,100,000	2,400,000
Administrative	--	--
Contingency	2,500,000	2,700,000
R/W & Relocation	12,500,000	14,600,000
Escalation	8,100,000	9,200,000
TOTAL	$39,400,000	$44,600,000
WETLAND IMPACTS		
Acres	8.40	8.76
COMMUNITY IMPACTS		
Neighborhoods Affected	3*	3
Parcels Taken	32	39
Relocations (1984)		
Residential	24	22
Other	7	18
Total	31	40
TRAFFIC SERVICE		
Travel distance increase for 40,000 to 46,000 ADT in the year 2010	--	5,200 to 5,980 miles per day

* Note two new multifamily developments would also be affected.

NORTHWEST HILLSBOROUGH EXPRESSWAY
PROJECT SCHEDULE

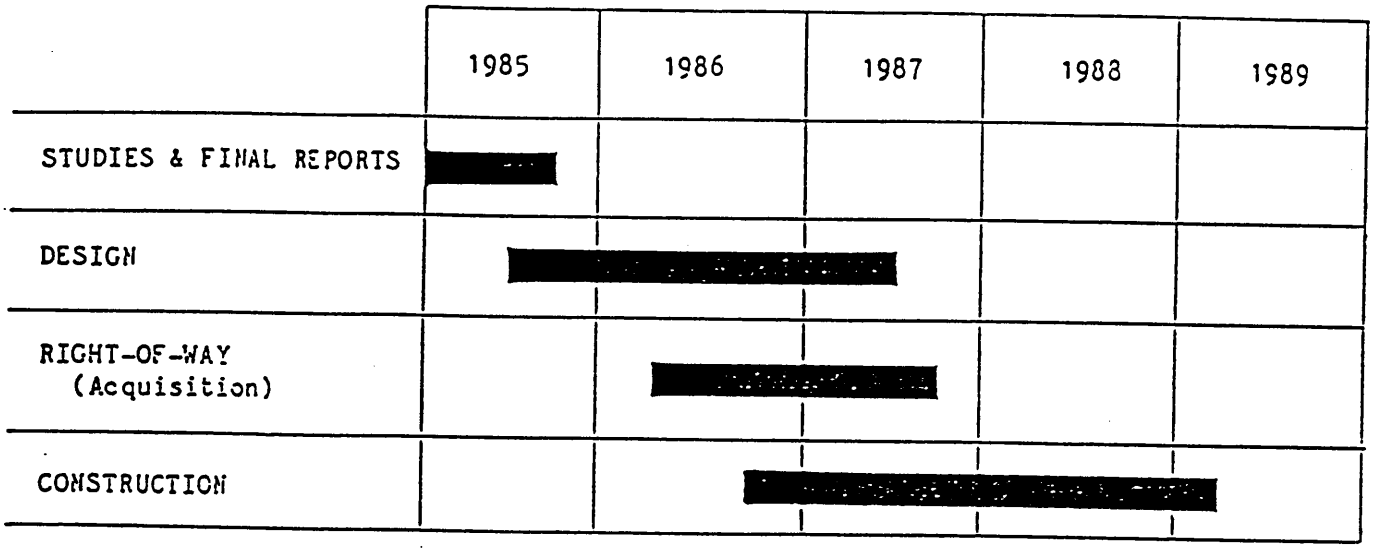


EXHIBIT 3

EXHIBIT 4

COMPARISON OF
RIGHT-OF-WAY AND
RELOCATION

	Eisenhower/West				Benjamin Road			
	No. of Parcels	Acquisition Costs	No. of Relocations	Relocation Costs	No. of Parcels	Acquisition Costs	No. of Relocations	Relocation Costs
So. of Johns Rd. to 600 Ft. No. of Barry Road	18	$ 4,436,000	18	$132,500	16	$ 4,404,000	18	$115,500
600 Ft. No. of Barry Road to Waters Avenue	12	4,497,000	12	144,000	18	6,477,000	18	129,200
Waters Avenue to No. of Railroad	2	3,322,000	1	10,000	5	3,492,000	4	30,000
TOTAL	32	12,255,000	31	286,500	39	14,373,000	40	274,700

File 7857-11-03 J20/25

B. Wetland Impacts

The amount of wetlands involved within a given project's limits is a good indication of all other environmental considerations for that project. Within the limits of the two alignment alternatives considered herein, the wetland involvement is nearly the same, 8.76 acres for Benjamin Road alignment and 8.40 acres for the Eisenhower/West alignment.

C. Community Impacts

There is one community directly affected by the project and two other communities affected by virtue of their close proximity to the proposed alignment. In addition, there are two new multifamily developments under construction adjacent to the Eisenhower/West alignment which would be impacted.

Eisenhower West Alignment

The Eisenhower West alignment passes along the western side of the Flora Avenue residential area south of Channel G and the Turnmor Drive, Barry Road, Ann Ballard Road, Bridal Path Lane, Sitka Road, and Peterson Road (hereby designated the Benjamin Road residential area) north of Channel G.

Approximately 32 parcels would be acquired with 31 relocations. Four residences on Sitka Road would be isolated West of the expressway from the much larger area to the east of the expressway. A frontage road would have to be constructed to maintain access to the four residents.

The two communities indirectly affected by the expressway are Twelve Oaks and Deerfield subdivisions located south and north of Waters Avenue, respectively. The principal affect would be visual asthetics, increased noise, and to a lesser extent the close proximity of the proposed interchange to the development entrances off Waters Avenue. The two new developments mentioned above would also have a more direct impact of noise and visual.

Benjamin Road Alignment

The Benjamin Road alignment passes to the east of the Flora Avenue residential area south of Channel G and the Benjamin Road area north of Channel G. This location is considered desirable since the community would remain together except for those properties to be acquired and two residents south of the water tank. Access to the Flora Avenue area would be maintained with a bridge crossing of Flora Avenue or possibly a small bridge over Channel G at Patterson Road. There would be approximately 39 parcels acquired with 40 relocations. A frontage road would have to be constructed on the east side of the expressway south of Waters Avenue to maintain access to the existing water tank.

The same two communities of Twelve Oaks and Deerfield would be indirectly affected by this alignment alternative. For the Twelve Oaks residential area, the visual and noise affects and interchange location would be a little better. For the Deerfield residential area, the visual and noise affects would be improved to a lesser extent with no change in the northern area. The interchange improvement due to moving it approximately 1,350 feet east would be the same benefit for both of these communities.

D. Traffic Service

The traffic service would be slightly better for the Eisenhower/West alignment since the projected year 2010 traffic of 40,000 to 46,000 vehicles per day would travel 0.13 miles less. This amounts to 5,200 miles to 5,980 miles a day, less total travel on the expressway.

IV. RECOMMENDATION

We recommend the Benjamin Road Alignment alternative be dropped from further consideration since the benefits to the overall community are less. The visual and noise impacts to Twelve Oaks and Deerfield, if found to warrant mitigation, could be improved with a barrier on the west side of the expressway.

APPENDIX D

EARLY NOTIFICATION PACKAGE - LETTERS OF COMMENTS

Number	Date	Agency	Page No.
1	October 18, 1984	Office of the Governor	D-1
2	August 22, 1984	Department of Environmental Regulation	D-7
3	August 17, 1984	Florida Department of State - Division of Archives, History and Records Management	D-9
4	April 10, 1985	Florida Department of State - Division of Archives, History and Records Management	D-21
5	August 22, 1984	Florida Department of State - Historic Tampa/Hillsborough County Preservation Board	D-24
6	April 15, 1985	Florida Department of State - Historic Tampa/Hillsborough County Preservation Board	D-25
7	August 28, 1984	Florida Game and Fresh Water Fish Commission	D-29
8	August 27, 1984	Tampa Bay Regional Planning Council	D-45
9	August 10, 1984	City of Tampa	D-49
10	August 7, 1984	Hillsborough County Environmental Protection Commission Memo	D-50
11	August 9, 1984	Hillsborough County City - County Planning Commission Memo	D-51
12	September 5, 1984	Tampa Bay Regional Planning Council Memo	D-52
13	August 24, 1984	Lutz Civic Association	D-54
14	September 15, 1983	Southwest Florida Water Management District	D-55
15	August 9, 1984	State of Florida - Department of Environmental Regulation	D-58
16	September 18, 1984	United States Environmental Protection Agency	D-59

STATE OF FLORIDA

Office of the Governor

THE CAPITOL

TALLAHASSEE 32301

BOB GRAHAM
GOVERNOR

October 18, 1984



Mr. J.C. Kraft, Chief
Bureau of the Environment
Department of Transportation
Burns Building, MS-37
Tallahassee, Florida 32301

RE: State Project #10000-1521, Northwest Hillsborough Expressway, Hillsborough County

SAI: FL8407260101C

Dear Mr. Kraft:

The State Clearinghouse has coordinated a review of your project notification for the above referenced project. Although the SF424 Form does not indicate federal fund involvement, it is our understanding from reviewing Ms. Giesy's letter of July 18, that federal funds will be sought by DOT for the portion of the project south of Hillsborough Avenue. In view of potential federal financing for that portion, the following comments and attached agency letters, pursuant to Presidential Executive Order #12372, the National Environmental Policy Act and the Coastal Zone Management Act, are provided to the Florida DOT and the Hillsborough County Expressway Authority for action.

During review of this project, we received comments from the Department of Environmental Regulation, Department of State, the Game and Fresh Water Fish Commission, the Southwest Florida Water Management District, Tampa Bay Regional Planning Council and the Governor's Natural Resources Policy Unit. The Departments of Community Affairs, Natural Resources, Commerce, General Services and Health and Rehabilitative Services have no substantive comments at this time. Comments are also included from the Governor's Natural Resources Policy Unit.

The Department of Environmental Regulation states that the environmental impacts from the proposed project cannot be determined due to the limited information in the advanced notification. Based on the magnitude of the project, they recommend that an Environmental Impact Statement pursuant to

the National Environmental Policy Act be prepared to assess the impact of the project on aquatic resources, air quality, noise, stormwater management and dredge and fill activities. They further recommend that any roadway improvements minimize impacts to wetlands, streams, lakes and flood prone areas. Such impacts can be reduced by bridging, steeper side slopes and eliminating or reducing median width. Finally, they recommend avoidance of filling in floodplains and flood prone areas and states that any federal funding assistance to the proposed study is not inconsistent with their statutory authorities in the Florida Coastal Management Program. However, this determination is not intended to bias future consistency review of the project at subsequent stages of environmental studies, design and funding. Future consistency decisions will be predicated, in part, on an adequate responsiveness to the recommendations in their reviews.

The Department of State indicated that there are three archaeological sites recorded within the study area and that archaeological sites are likely to occur in portions of the study area shaded in green on the maps attached to their letter. They recommend that plans and location maps for the final expressway right-of-way and any alternates be submitted for review by the Division of Archives, History and Records Management. Further, they recommend that if project activities impact areas deemed likely to contain potentially significant archaeological and/or historic sites and properties, that a systematic, professional archaeological and historical survey be conducted prior to any land clearing or ground disturbing activities.

The Game and Fresh Water Fish Commission recommends a thorough inventory and documentation of the natural habitats and wildlife species occurring within the project corridor with particular attention to species listed by the Commission as endangered, threatened, or of special concern. Further, the Commission recommends that during alignment selection, wetlands and uplands which support endangered or threatened species be avoided. Bridging, right-of-way width reduction, and extensive culverting should be implemented as necessary to minimize adverse impacts on wetland vegetation and hydrology. Finally, the Commission recommends that if unavoidable adverse environmental impacts are anticipated, appropriate mitigatory measures should be presented in the environmental assessment.

Tampa Bay Regional Planning Council comments are extensive and include a strong comment from the Lutz Civic Association. The Council indicates that the consistency of the proposed project with Council Policy and the Florida Coastal Management Program cannot be determined until the Location and Design Study and further biological assessments are submitted for review. The Council cites several issues which need to be addressed during review of location and design studies. These issues include:

*Protection of water bodies (seventeen mile run/ Cypress Creek) and cypress domes within the proposed corridor from encroachment by the highway, and the effects of stormwater runoff.

*Clarification of funding sources and fiscal impacts on other county and city transportation projects.

*Urbanization of former agricultural lands, dismemberment of established communities, condemnation and relocation of residences and commercial activities.

*Effectiveness of the Northwest Hillsborough Expressway (NHE) as a regional transportation facility to improve accessibility, not only for Northwest Hillsborough County but also Pinellas and Pasco Counties.

*Projected cost of the facility compared to its ability to attract vehicle trips away from overburdened roadways in the County, and the effect of such cost on delaying important capacity improvement projects in the surrounding area (e.g. Dale Mabry, Waters Avenue, Hillsborough Avenue, Himes Avenue, etc.).

*The effect of redirected trips on collector or arterial facilities connecting with the proposed facility and the potential for deterioration of acceptable levels of service on existing collectors and arterials resulting from the construction of the NHE.

Finally, the Tampa Bay Regional Planning Council recommends that, while another facility is needed to reduce congestion on the overburdened road network in Northwest Hillsborough County, the issues cited above be addressed and any additional comments addressing local concerns be considered during the subsequent studies and biological assessments for the project.

The Southwest Florida Water Management District states that when specific project alignments for the proposed expressway have been identified, they will be better able to evaluate the project's potential impacts and indicate where permits are required. They recommend that selection of an alternative minimize construction in wetlands which provide temporary storage of floodwaters. Permits may be required for the Management and Storage of Stormwater (MSSW) or Works of the District (W.O.D.) for all corridors. In Corridor A, a permit may be required for the Cypress Swamp area near I-75 and in the vicinity of the I-75 bypass. A W.O.D. permit may be required for Corridor B near Sweetwater Creek, Brushy Creek, Rocky Creek, the Cypress Creek Swamp and associated tributaries. For Corridor C, W.O.D. permits may be required for Sweetwater Creek (at two locations), Thirteenmile Creek, Cypress Creek Swamp and their associated tributaries. Further, any and all wells abandoned as a result of the project will require permits from the Wastewater Management District pursuant to Chapter 40D-3, F.A.C. and Chapter 17-21, F.A.C. The Wastewater Management District further indicates that they propose to purchase lands within the Cypress Creek and Trout Creek floodplains through the State's Save Our Rivers program; portions of these lands lie directly in each one of the expressway's study corridors, and they request that such proposed purchases be considered in the final selection and design of the expressway alignment. Also, the District recommends consideration of operation and maintenance access to water control structures on various water bodies in northwest Hillsborough County and consideration of potential negative effects of the proposed expressway on District adopted water management levels for numerous lakes in northwest Hillsborough County. Last, the District states that final expressway alignment should be planned so that the facility will not contribute to the degradation of surface water quality of lakes and streams.

In view of the magnitude and scope of the proposed project, the Governor's Natural Resources Policy Unit recommends that an Environmental Impact Statement, pursuant to the National Environmental Policy Act and its implementing rules, be prepared for this project. The Environmental Impact Statement should include a cost/benefit assessment and should describe in detail potential harmful environmental impacts, proposed mitigatory measures to counter unavoidable environmental damage, and more importantly, should propose construction and alignment alternatives that minimize potential damage to the important aquatic and biological resources in the proposed project alignment. In addition, a complete economic justification, cost and financing program should be submitted. This should address the costs and financing alternatives proposed for the expressway and should describe in detail, the impact of such costs on potential delays for other essential capacity improvements needed in Northwest Hillsborough County. This study should address potential use, analysis of the effects of redirected trips on collectors and arterials, whether the expressway will take travelers where they want to go and should compare projected revenues and financing alternatives to actual experience gained from the operation of the Crosstown Expressway.

A complete federal Coastal Zone Management Act consistency review will be conducted during review of the Environmental Impact Statement submitted for this project should any federal funds be included in the financing package for the expressway. The consistency determination will include an assessment of the degree to which comments of State agencies, the regional planning council and the water management district are satisfied. Should any agency determine that the project is inconsistent with the statutory authorities included in the Florida Coastal Management Program, pursuant to the provisions of 15 CFR 930, Subpart F, the conflict resolution provisions of the Florida Coastal Management Program Federal Consistency Procedures Manual will be implemented.

This project will only be in accord with State plans, policies, procedures and objectives when action is taken on the above requirements and concerns of our reviewing agencies.

We have enclosed all letters of comment for your files. Thank you for providing us the opportunity to review your road construction project.

Sincerely,

John T. Herndon

John T. Herndon, Director
Office of Planning & Budgeting

JTH/nd

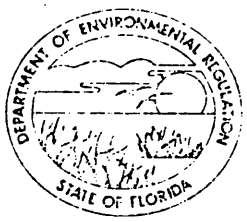
Enclosures

cc: DER
DOS
GFWFC
SWFWMD
TBRPC
Walt Kolb
Wendy Giesy

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

August 22, 1984

Mr. Ron Fahs, Director
Intergovernmental Coordination
State Planning and Development
Clearinghouse
Office of the Governor
421 Carlton Building
Tallahassee, Florida 32301

Dear Ron:

Re: Florida Department of Transportation and the Tampa-Hillsborough County Expressway Authority Proposed Construction of a Limited Access Highway for Northwest Hillsborough County, Florida, SAI No. FL8407260101C

It is impossible to determine specific environmental impacts of the above referenced project since the early notification package contains only general information about the study corridor. Nevertheless, based on the magnitude of the project and its expected impact or the State's aquatic resources we recommend that an Environmental Impact Statement be prepared under the guidance of the National Environmental Policy Act. Of primary interest to this department will be dredge and fill activities, noise impacts, air quality and stormwater management associated with the roadway improvements. Accordingly, we recommend that any roadway improvements minimize impacts to wetlands, streams, lakes, and flood prone areas. Impacts to these valuable resources can be reduced by bridging, steeper side slopes and eliminating or reducing the median width.

Fill in floodplains and flood prone areas should be avoided since fill reduces natural storage capacity and results in increased flood heights or flooding in areas normally not inundated. Moreover, filling in floodplains or flood prone areas often requires dredging in streams and other natural drainage features to provide for "compensating volume". These activities often result in degraded water quality as stormwater runoff is shunted downstream without receiving adequate treatment.

We encourage ongoing coordination with our Southwest Florida District Office in Tampa since the roadway improvements will require permits from the department pursuant to Chapters 253 and 403, Florida Statutes and under Public Law 92-500.

Protecting Florida and Your Quality of Life

Federal assistance to the proposed study to determine the feasibility of roadway construction is not considered inconsistent with this department's statutory authority in Florida's Coastal Management Program. This consistency decision is not intended to bias future consistency reviews of these projects at subsequent stages of environmental assessment, design and funding. Future consistency decisions will be predicated, in part, on an adequate responsiveness to recommendations offered in this review and subsequent reviews.

Sincerely,

John B. Outland
Intergovernmental Programs
Review Section

JBO/jb

cc: Richard D. Garrity, DER/Tampa

FLORIDA DEPARTMENT OF STATE
George Firestone
Secretary of State

DIVISION OF ARCHIVES,
HISTORY AND RECORDS MANAGEMENT
The Capitol, Tallahassee, Florida 32301-8020
(904) 488-1480

August 17, 1984

In Reply Refer to:

Mr. Frederick P. Gaske
Historic Sites Specialist
(904) 487-2333

Mr. George R. Huffman
Howard, Needles, Tammen & Bergendoff
6000 Lake Ellenor Drive, Suite 100
Orlando, Florida 32809

RE: Your Letter of July 3, 1984
Cultural Resource Assessment Request
State Project No. 10000-1531; Revised Study Area for
Proposed Northwest Hillsborough Expressway, Tampa,
Hillsborough County, Florida

Dear Mr. Huffman:

In accordance with the procedures contained in 36 C.F.R., Part 800 ("Procedures for the Protection of Historic and Cultural Properties"), we have reviewed the above referenced project for possible impact to archaeological and historical sites or properties listed, or eligible for listing, in the National Register of Historic Places. The authorities for these procedures are the National Historic Preservation Act of 1966 (Public Law 89-665) as amended by P.L. 91-243, P.L. 93-54, P.L. 94-422, P.L. 94-458 and P.L. 96-515, and Presidential Executive Order 11593 ("Protection and Enhancement of the Cultural Environment").

A review of the Florida Master Site File indicates that three archaeological sites, 8Hi70, 8Hi80 and 8Hi324, are recorded within the study area (see enclosures). Sites 8Hi70 and 8Hi80 are defined as sand mounds, and site 8Hi324 is defined as a lithic scatter. None of these sites have been assigned to a particular cultural period, and all three are reported as having been destroyed by construction activities. As a result, sites 8Hi70, 8Hi80 and 8Hi324 are deemed to lack sufficient integrity to warrant preservation or mitigation through archaeological excavation.

FLORIDA State of the Arts

However, the lack of additional recorded archaeological and historic sites in the study area is not considered significant because the area has never been subjected to a systematic, professional survey to locate such sites. Data from environmentally similar areas in Hillsborough County indicate that archaeological sites are likely to occur in the portions of the study area shaded in green on the attached maps. Due to disturbance from construction activities and location, the remainder of the study area is deemed unlikely to contain significant, unrecorded archaeological sites. Additionally, our map files indicate that historic structures may be located throughout the study area.

On the basis of the above information, it is the opinion of this office that, depending upon the location finally selected for the proposed expressway, there is a reasonable probability of project activities impacting archaeological and historic sites and properties potentially eligible for listing in the National Register of Historic Places, or otherwise of national, state or local significance. It is, therefore, the recommendation of this office that plans and location maps for the final selected expressway right-of-way corridor and its alternates be submitted for review by this office.

If project activities will impact areas deemed likely to contain potentially significant archaeological and/or historic sites and properties, it will be our recommendation that, prior to initiating any land clearing or ground disturbing activities, these areas be subjected to a systematic, professional archaeological and/or historical survey. The purpose of this survey will be to locate and assess the significance of cultural resources present. Resultant survey reports should be forwarded to this agency in order to complete the process of reviewing the impact to this project on archaeological and historic resources. If avoidance of significant cultural resources located during the recommended survey is not possible, it will be our recommendation that project impact to them be mitigated through a systematic data recovery program.

For information concerning the types and locations of historic structures which may be encountered during project activities, we suggest that you contact the Historic Tampa/Hillsborough County Preservation Board. Their address and phone number are:

452 West Kennedy Boulevard
Tampa, Florida 33606
(813) 272-3843

If you have any questions concerning our comments, please do not hesitate to contact us.

Your interest and cooperation in helping to protect Florida's archaeological and historical resources are appreciated.

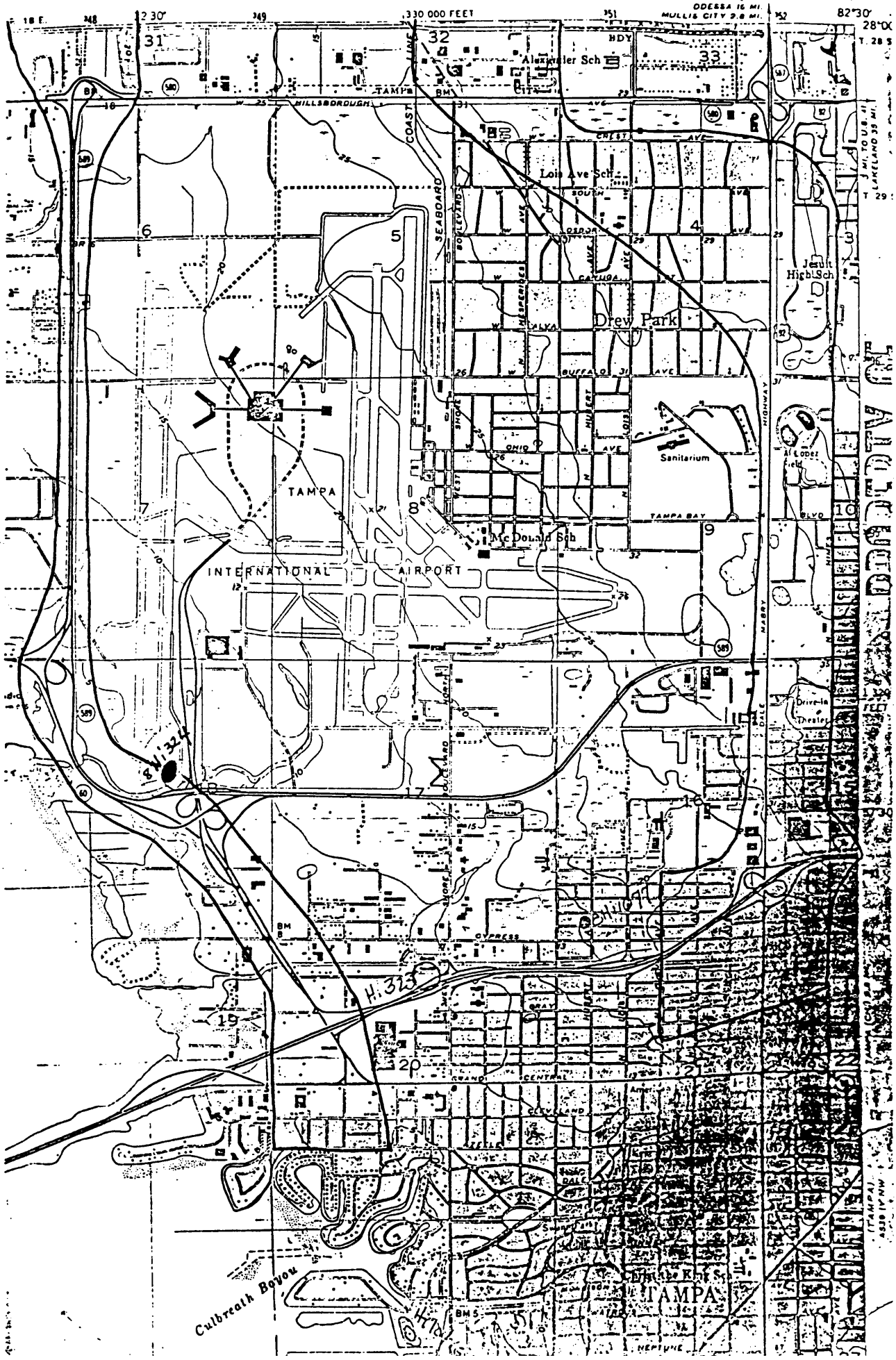
Sincerely,

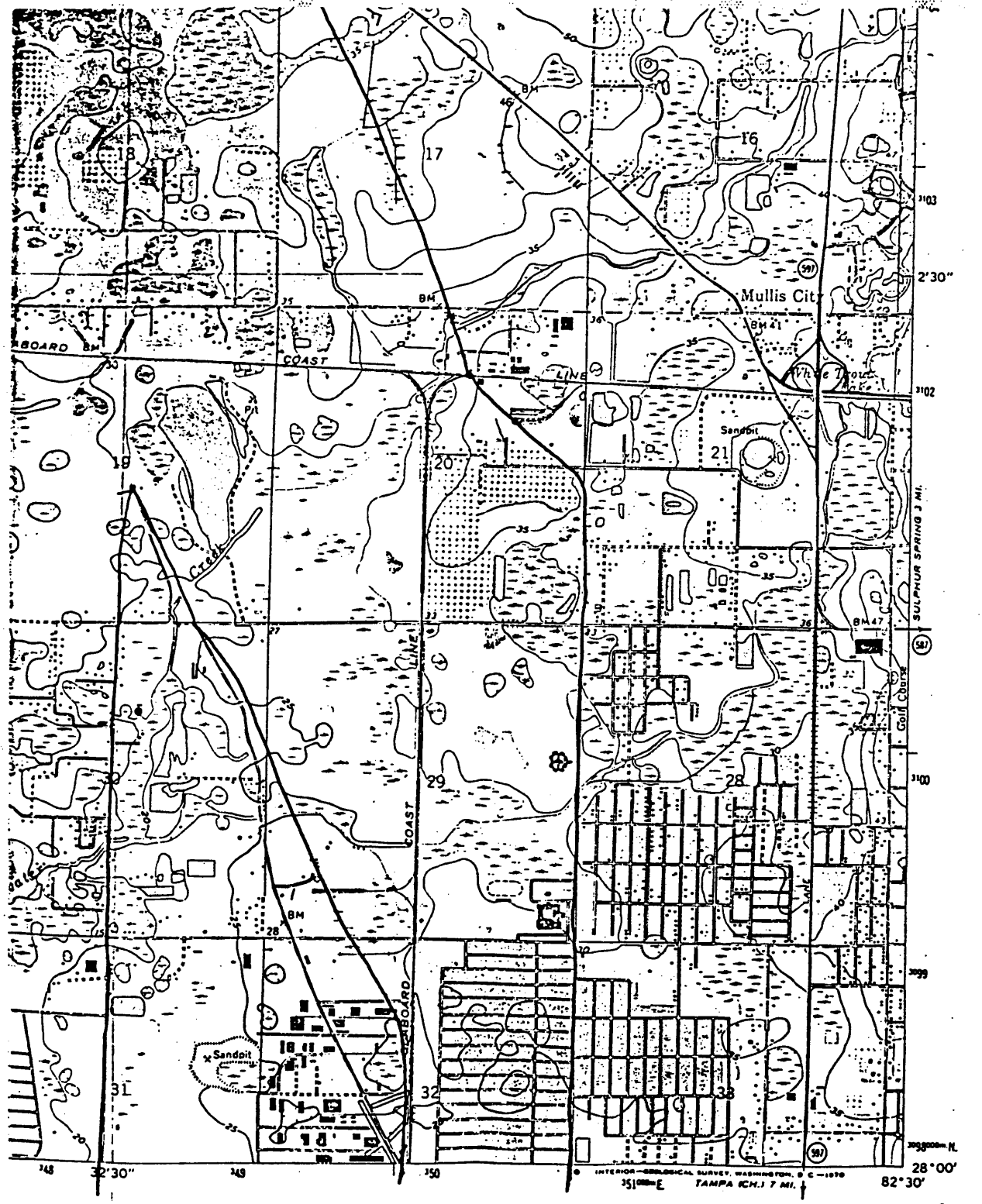
George W. Percy
State Historic
Preservation Officer

GWP/Gkp

Enclosures

cc: Stephanie Ferrell
J.C. Kraft
C.W. Monts de Oca
J.G. Kennedy


GANDY BRIDGE QUADRANGLE
FLORIDA
7.5 MINUTE SERIES (TOPOGRAPHIC)
ODESSA 15 MI
MULLIS CITY 2.8 MI
82°30'
28°00'
T. 28 S
T. 29
330 000 FEET
2 30'
348
349
351
352
18 E.
31
32
33
HDY
Alexander Sch
TAMPA
BM
CIT
HILLSBOROUGH
AVE
COAST LINE
SEABOARD
BOULEVARD
CREST
Lois Ave Sch
SOUTH
OSBORN
CATALINA
HESPERIDES
ALVA
BUFFALO
OHIO
WEST
MURRAY
DALE
HABANA
HIGHWAY
Jesuit High Sch
Drew Park
Sanitarium
Al Lopez Field
TAMPA BAY
BLVD
McDonald Sub
INTERNATIONAL AIRPORT
TAMPA
Culbreath Bayou
H.324
H.325
H.574
CYPRESS
GRAND CENTRAL
NEPTUNE
Driver-In Theater
(TAMPA)
1958 IV NW



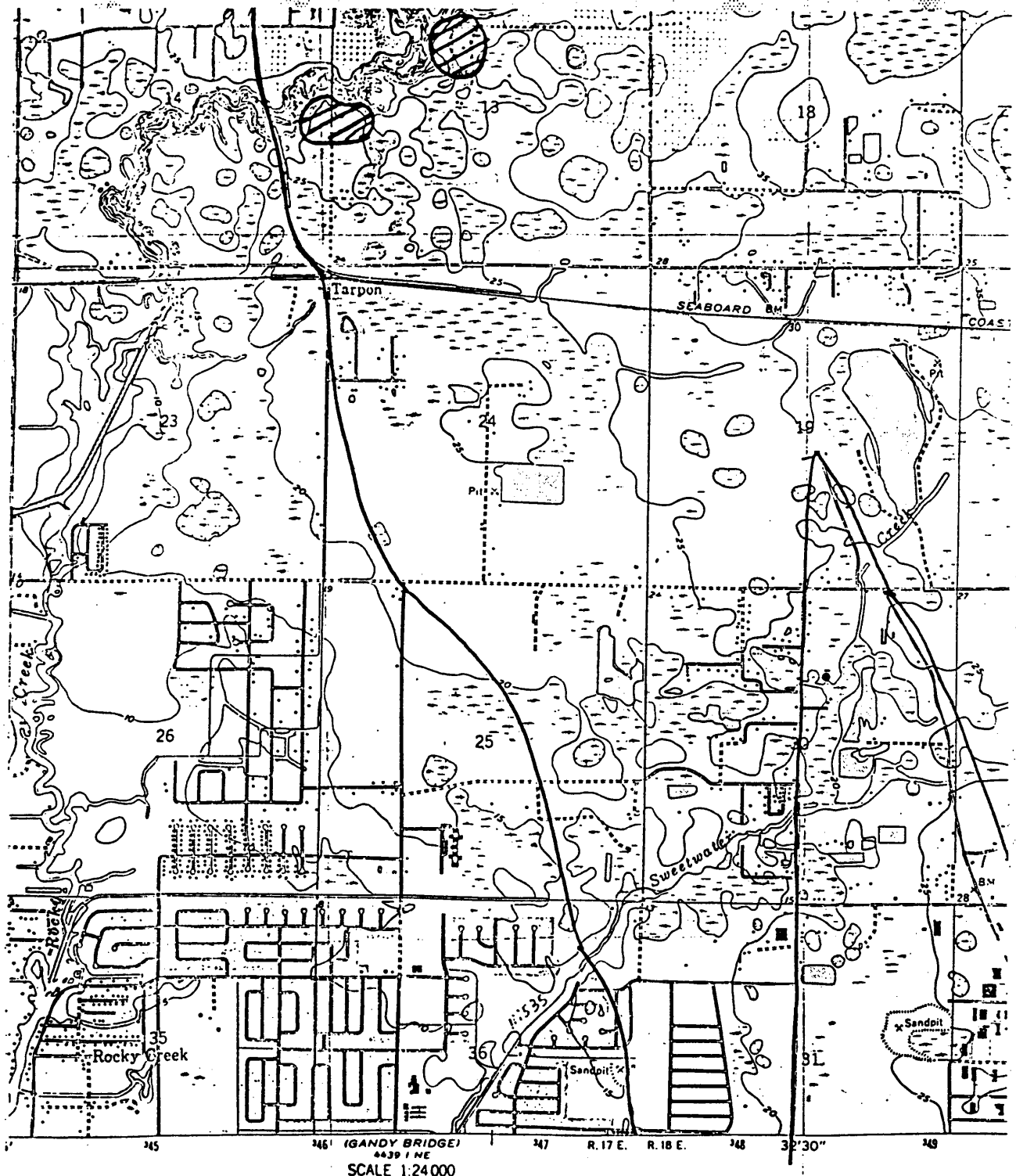
1 MILE

Citrus Park Quadrangle

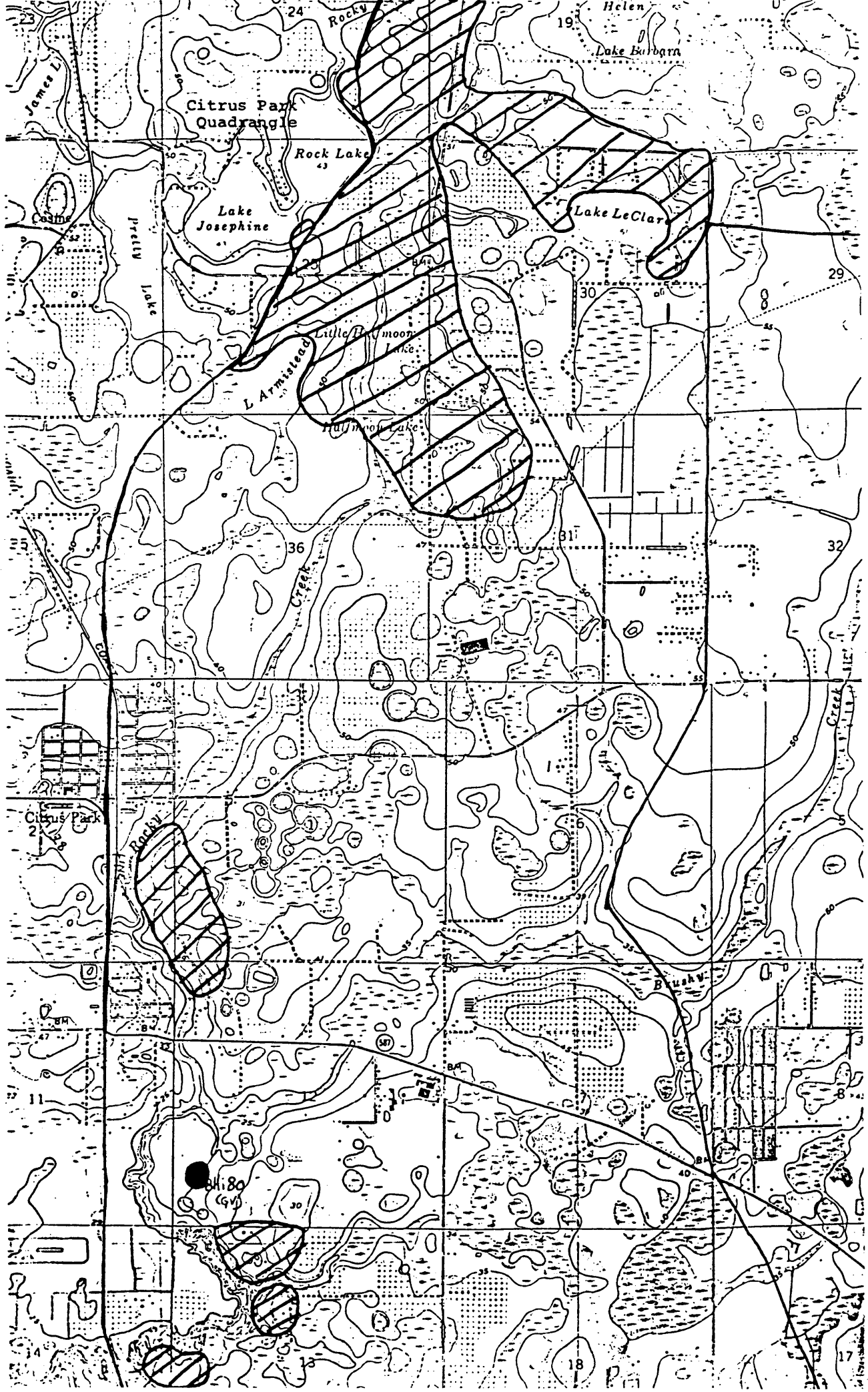
ROAD CLASSIFICATION

Heavy-duty ——— Light-duty ———

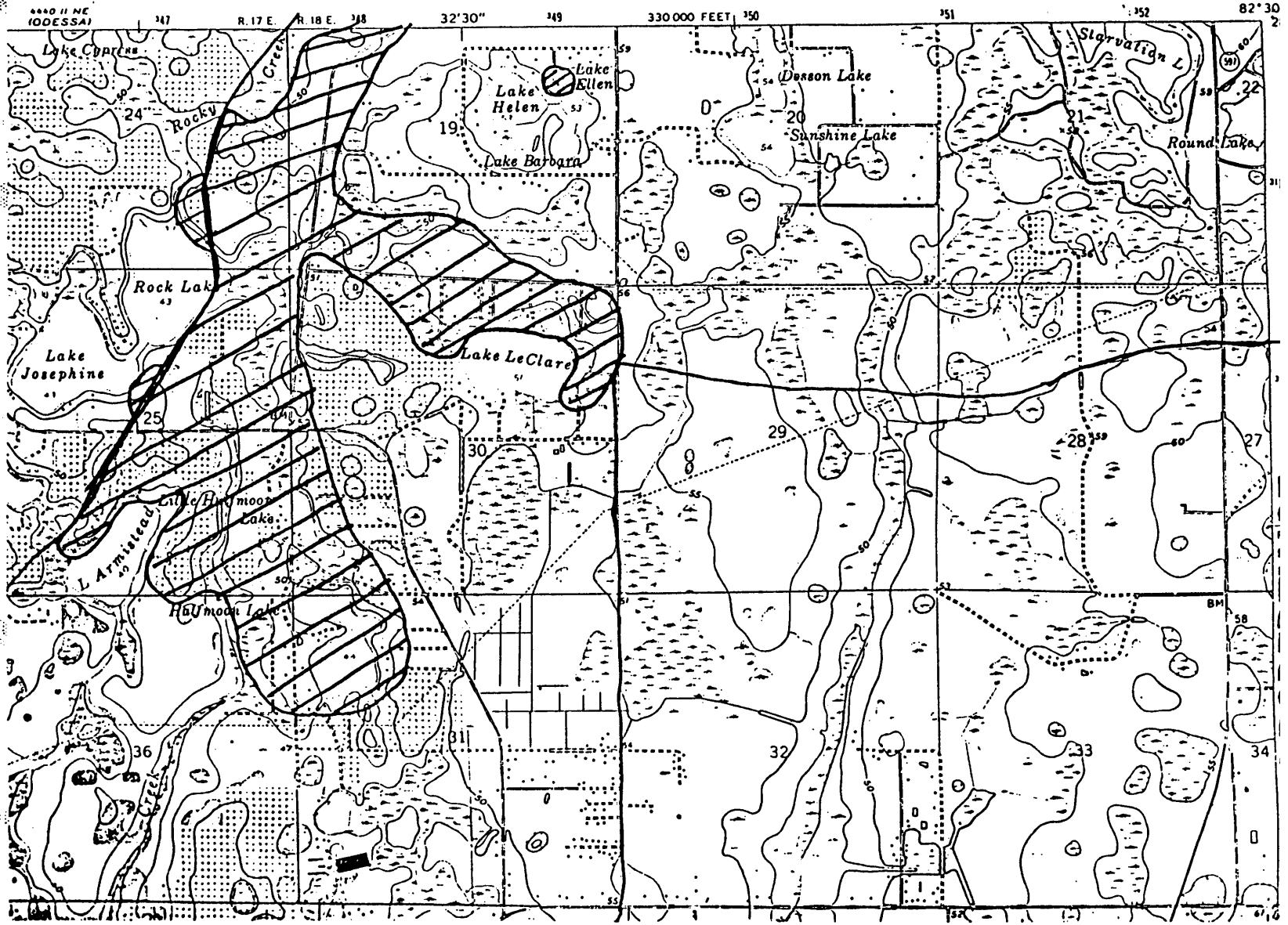
(TAMPA) 4539 IV NW



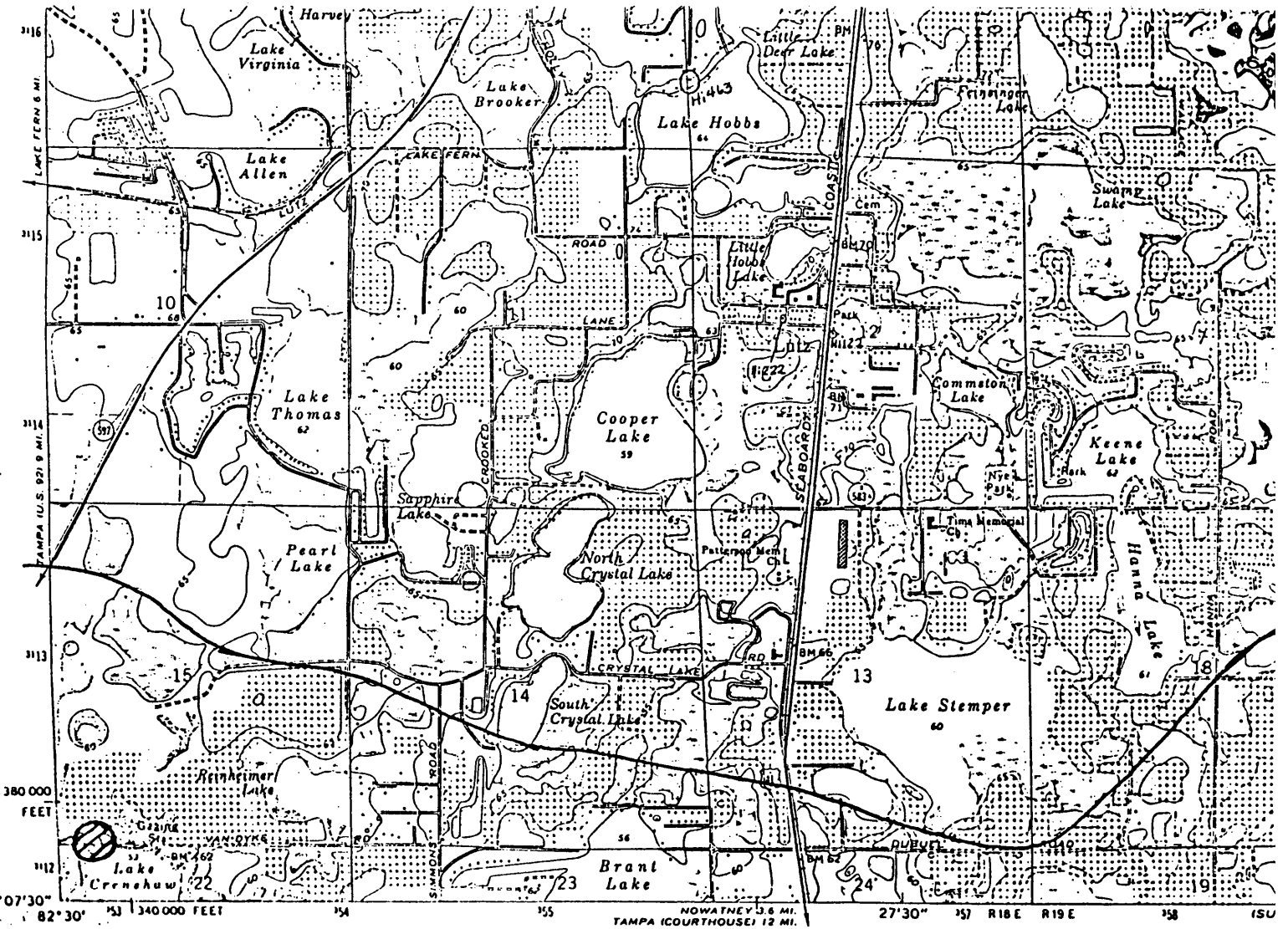
Citrus Park
Quadrangle


Citrus Park
Quadrangle
Rock Lake
Lake
Josephine
Lake LeClare
Lake Barbara
Helen
Lake
Parsley
Cosme
James L
Rocky
Creek
Brushy
Creek
Citrus Park
2
36
31
32
30
29
19
24
11
13
18
17
8
6
1
BM
BM
BM

CITRUS PARK QUADRANGLE
FLORIDA—HILLSBOROUGH CO.
7.5 MINUTE SERIES (TOPOGRAPHIC)



Odessa Quadrangle
ROAD CLASSIFICATION
Primary highway
Light duty road, hard or
Turkey Ford Lake
Van Dyke Lake
Starnaton Lake
Brooker Creek
Lake Fern
Marsh Rd
Whirley Road
Van Dyke Rd
Angeline Road
Sierra Pine
Hwy 580
4 MI. TO U.S. 41
LUTZ 3 MI.
TAMPA 11 MI.
INTERIOR—GEOLOGICAL SURVEY, RESTON, VIRGINIA—1973
1 MILE
1000-METER GRID BASED ON FLORIDA COORDINATE SYSTEM, WEST ZONE
CONTOUR INTERVAL 10 FEET
DOTTED LINES REPRESENT 5-FOOT CONTOURS
DATUM IS MEAN SEA LEVEL
R 17 E
R 18 E
T 27 S
T 28 S
82° 30'
28° 07' 30"
14 000



Mapped, edited, and published by the Geological Survey

Control by USGS, NOS/NOAA, and Florida Department of Transportation

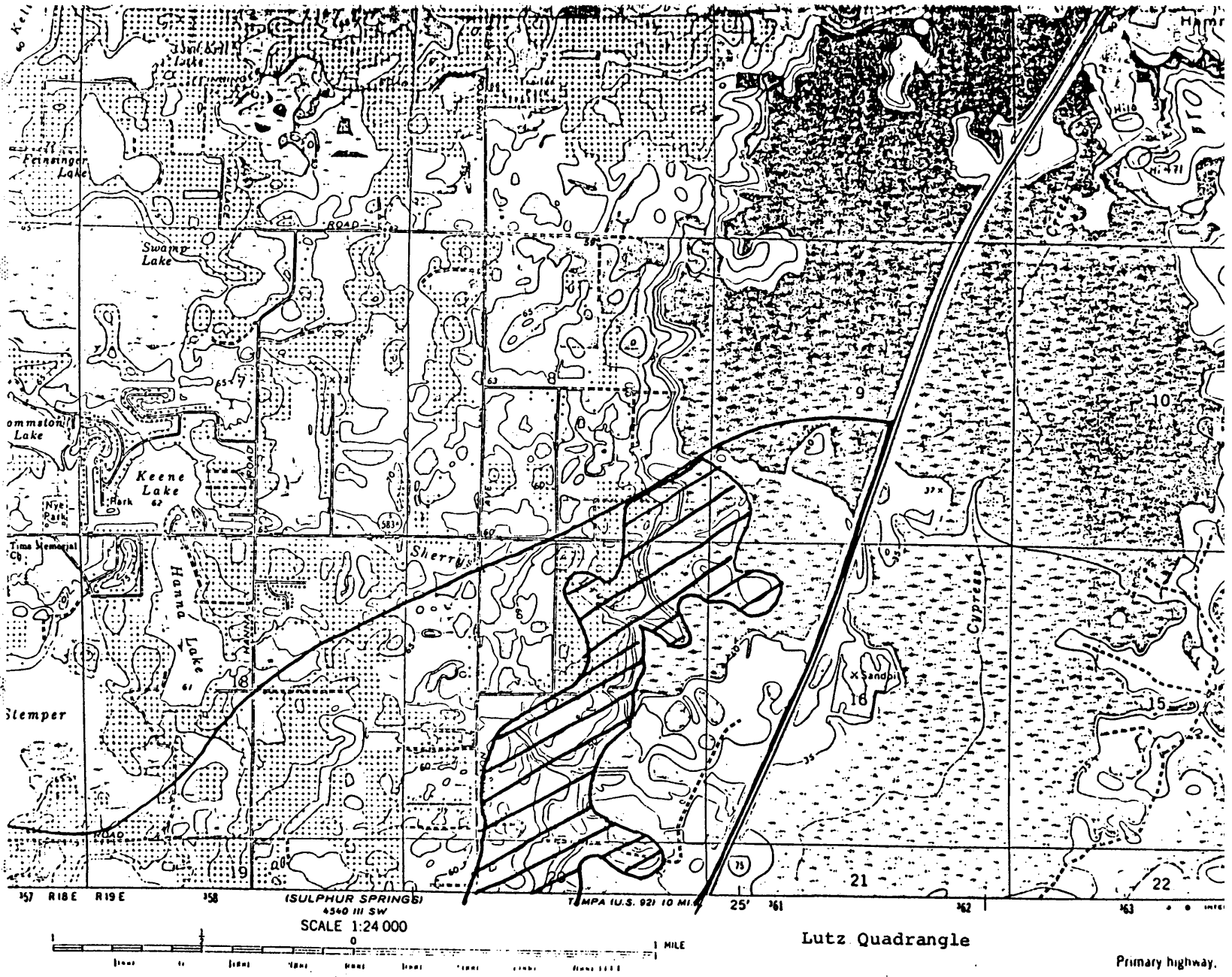
Topography by photogrammetric methods from aerial photographs taken December 1971. Field checked 1974

Surfaces Army Map Service map dated 1943

Projection and 10,000 foot grid ticks: Florida coordinate system,

Lutz Quadrangle

CONTOI
NATIONAL GEOD

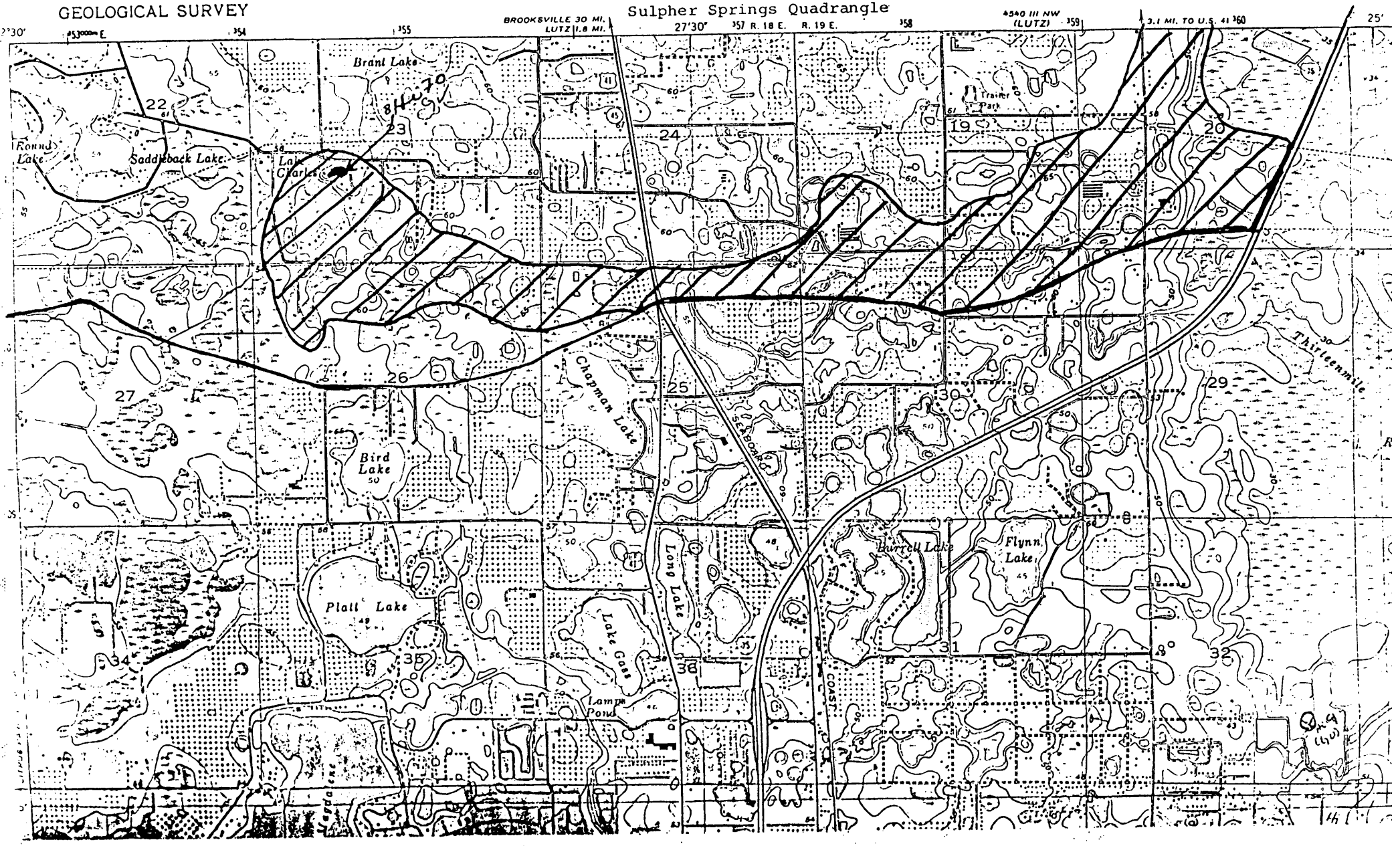


Lutz Quadrangle

Primary highway.

DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

Sulpher Springs Quadrangle



FLORIDA DEPARTMENT OF STATE
George Firestone
Secretary of State

DIVISION OF ARCHIVES,
HISTORY AND RECORDS MANAGEMENT
The Capitol, Tallahassee, Florida 32301-8020
(904) 488-1480

April 10, 1985

In Reply Refer to:

Mike Wisenbaker
Historic Sites Specialist
(904) 487-2333

ACTION | INFO | FILE NO 1857 | NOTED | Answered
JLT
HDB
PH
JDP
CJS
MBM
PIA

RECEIVED
APR 22 1985
ORLANDO
HNTB

Mr. Dale E. Patten
Howard Needles Tammen Bergendoff
6000 Lake Ellenor Drive, Suite 100
Orlando, Florida 32809

RE: Your Letter of March 14, 1985
Cultural Resource Assessment Request
Northwest Hillsborough Expressway,
Hillsborough County, Florida

Dear Mr. Patten:

In accordance with the procedures contained in 36 C.F.R., Part 800 ("Procedures for the Protection of Historic and Cultural Properties"), we have reviewed the above referenced project for possible impact to archaeological and historical sites and properties listed, or eligible for listing in the National Register of Historic Places. The authorities for these procedures are the National Historic Preservation Act of 1966 (Public Law 89-665) as amended by P.L. 91-243, P.L. 93-54, P.L. 94-422, P.L. 94-458 and P.L. 96-515, and Presidential Executive Order 11593 ("Protection and Enhancement of the Cultural Environment").

A review of the Florida Master Site File indicates that no archaeological or historic sites are recorded within the newly-added Railroad Corridor Alignment (our recommendations on the previous corridor alignments remain the same as stated in our letters of August 17, 1984 and July 24, 1981). However, the lack of sites is not considered significant because the area has never been subjected to a systematic, professional survey to locate such sites, especially prehistoric sites which are likely to occur along the portion of the corridor shaded green on the map. Data from environmentally similar areas in Hillsborough County indicate that archaeological sites are likely to occur in the portion of the corridor shaded green, while the remainder of the corridor is deemed unlikely to contain such sites. It is, therefore, the opinion of this office that there is a reasonable probability of project activities impacting archaeological and historical sites and properties potentially eligible for listing in the National Register of Historic Places, or otherwise of national, state or local significance.

Since potentially significant archaeological sites may be present, it is our recommendation that, prior to initiating any land clearing or ground disturbing activities within the area shaded green on the enclosed map, it should be subjected to a systematic, professional archaeological survey. The purpose of this survey will be to locate and assess the significance of cultural resources present. The resultant survey report should be forwarded to this agency in order to complete the process of reviewing the impact of this project on archaeological resources.

If you have any questions concerning our comments, please do not hesitate to contact us.

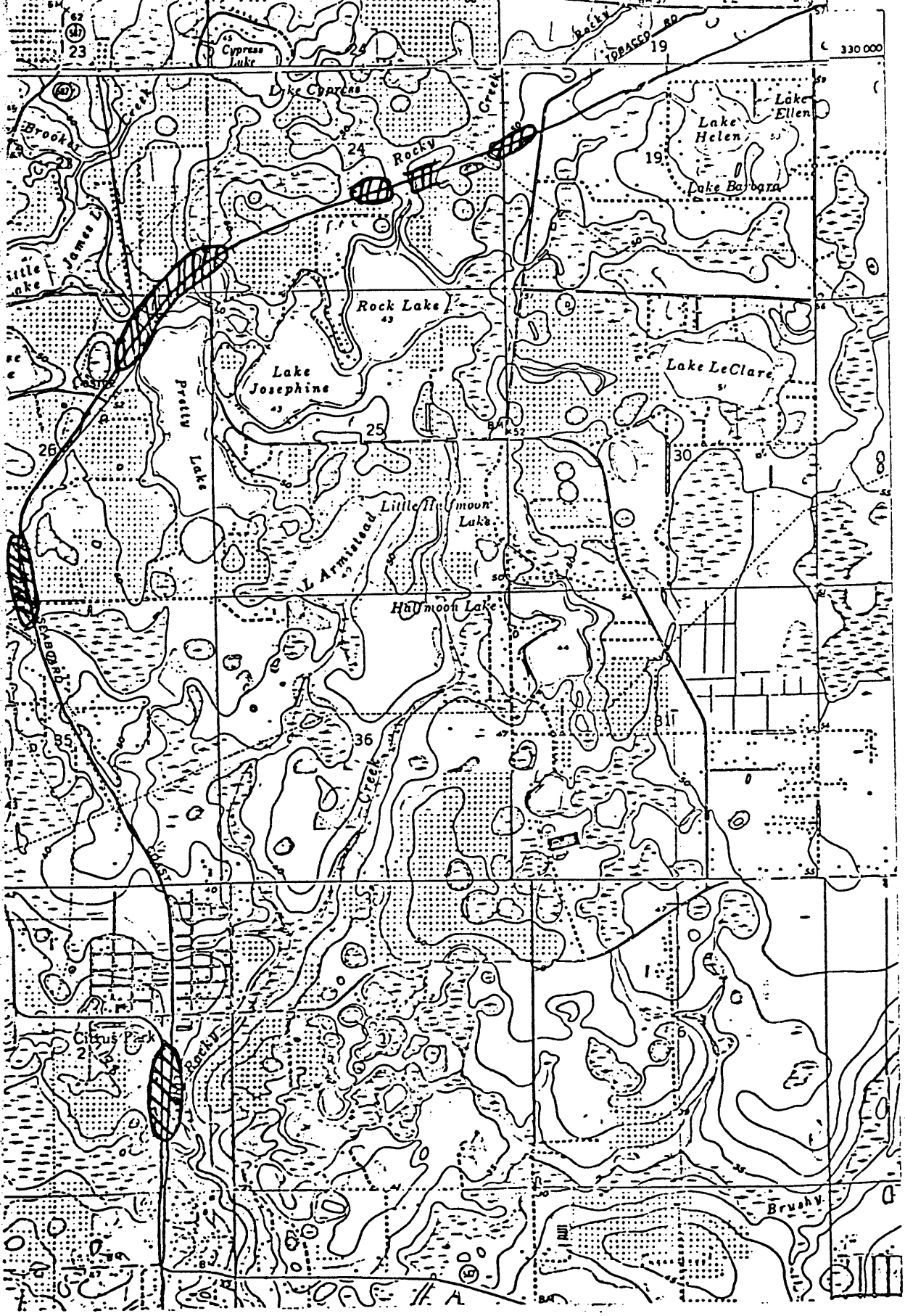
Your interest and cooperation in helping to protect Florida's archaeological and historical resources are appreciated.

Sincerely,

for George W. Percy
State Historic
Preservation Officer

GWP/Wkp

cc: J.C. Kraft


Cypress Lake
Lake Cypress
Rocky Creek
TOBACCO RD
330 000
Lake Ellen
Lake Helen
Lake Barbara
Brooks Creek
James L
Rock Lake
Lake Josephine
Lake LeClare
Pretty Lake
Little Hillsmoon Lake
L Armistead
Hillsmoon Lake
SEABOARD RD
Citrus Park
Rocky
Brushy
24
25
26
30
36
19
23

FLORIDA DEPARTMENT OF STATE
George Firestone
Secretary of State

HISTORIC TAMPA/HILLSBOROUGH COUNTY PRESERVATION BOARD

August 22, 1984

Mr. George Huffman
Howard Needles Tammen & Bergendoff
6000 Lake Ellenor Drive, Suite 100
Orlando, Florida 32809

Re: Proposed Northwest Hillsborough Expressway, Corridor "B"

Dear Mr. Huffman:

We have examined the alignments for Corridor "B" for the proposed Northwest Hillsborough Expressway and have not located any significant historic structures or neighborhoods that could be adversely affected by the construction of this roadway. This determination was made based on the results of two surveys conducted by our office in 1979: "The Cultural Resources of the Unincorporated Portions of Hillsborough County," and "The Man-made Environment in Tampa and Hillsborough County" (unpublished).

These surveys, however, do not address significant archaeological sites which may or may not be found in the corridor. For more information about this issue, please contact the Division of Archives, History and Records Management in Tallahassee.

If I can be of further assistance to you in this matter, please do not hesitate to call me.

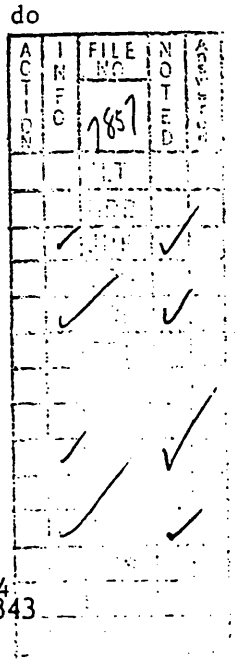
Sincerely,

W. Carl Shiver

W. Carl Shiver
Historic Preservationist

WCS:lm

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AUG 24 1984
ORLANDO
H N T & B



FLORIDA DEPARTMENT OF STATE
George Firestone
Secretary of State

HISTORIC TAMPA/HILLSBOROUGH COUNTY PRESERVATION BOARD

April 15, 1985

Mr. Dale E. Patten
Howard Needles Tammen and
Bergendoff
6000 Lake Ellenor Drive
Suite 100
Orlando, Florida 32809

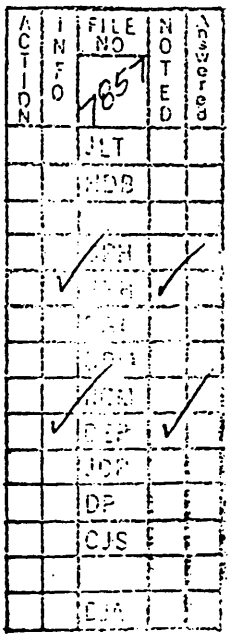
Re: Hillsborough County Northwest Expressway,
Historic Sites in Proposed Route

Dear Mr. Patten:

In response to our telephone conversation on April 15, 1985, I have examined the proposed route of the Northwest Expressway shown in the map provided by your office and found no known National Register elegible historic sites to be impacted. In fact, not even any locally significant sites were found in this corridor by surveys undertaken by the Preservation Board. The nearest sites in the northern part of the corridor are located in Citrus Park and Lutz and do not appear to be affected by the planned road construction. These sites are listed below:

1. Citrus Park School
2. Mobley House (Citrus Park)
3. 108 1st Avenue N. W. (Lutz)
4. Free House (Lutz)
5. Old Lutz Elementary School

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I also received some inquiries by a Mrs. Claudia Clemmons in the Citrus Park area about the "Citrus Park Negro Elementary School" reputedly erected in 1918. Included with this letter is one from Mrs. Clemmons describing the site. I visited the site, and in my opinion the building did not appear to meet the criteria (visually) for the National Register. I referred the matter, however, to the Florida Division of Archives. The school

is located near the intersection of Gunn Highway and Racetrack Road.

Although it is not impossible that an undiscovered significant architectural or historical site could be found in the area, it appears unlikely. I hope this letter satisfies your needs. If not, please do not hesitate to call me.

Sincerely,

W. Carl Shiver
Historic Preservationist

WCS:lm

HISTORY OF CITRUS PARK COLORED
NEGRO ELEMENTARY SCHOOL

In 1918 the Citrus Park Colored/Negro Elementary School had its beginning in Mt. Pleasant A.M.E. Church. It was located in a cemetery facing Tony Lewis's Property on Gunn Highway.

The late Mrs. Barbara A. Allen, a pioneer citizen of Citrus Park-Cosme-Keystone area donated one acre of land for a school. She also served as one of its "FIRST" teachers.

The builders were Tony Lewis, David Allen, Sr. and others from the community. The school had one door, four windows and was painted red. Later years, extra footage were added to accomodate the growing community.

On the 20th of December 1923, Rev. Charlie Walker moved his family to Citrus Park. There was no school for Black Children in this Northwest Community. They were prohibited from attending nearby Citrus Park School.

Rev. Walker went down to the School Board and told them what he wanted. School officials kept him waiting that day and told him to come back the next day. That was Monday, the same thing happened Tuesday and Wednesday. Thursday the Superintendent of Black Schools called him into his office. The Superintendent said she kept him waiting to see if he really wanted a school.

Thirteen children were enrolled in school with Miss Leona Allen serving as teacher. She remained for two terms, before returning to school to further her education.

The thirteen children were: LeGrand, Clyde, and David Allen, Jr., Rosa, Thomas and George Lewis, Amanda Lewis, Alphonso, Mable and Beatrice Lewis, James, Muriel and Inez Walker.

The school closed for a year because of no teacher appointment and few students. Rev. C.W. Walker and Mrs. Barbara Allen traveled in his truck throughout the County to St. Petersburg and Lakeland in search of a teacher. They finally found Miss Eugenia Verde Ballard to serve as its next teacher and enough students to keep it open.

Other teachers were: Mrs. Eunice Roundtree, Mrs. Edith Footman, Miss Ruby Clarke, Miss Vernease Hadley, Mrs. Corene Prince-Hardy and Mrs. Eliza Davis.

Mrs. Jadie B. James, Mrs. Mable Walker and Mr. Raleigh Allen, Sr. served as substitute teachers.

During Mrs. Davis' tenure, Hillsborough County School Board closed the school in the late 40's and the students were transferred to various schools in Tampa.

NO MORE ROTE LEARNING OF THE ABC's BABY RAY, DICK AND JANE. SINGING OF TABLES, PLAYIN' BALL, LUNCH BASKETS, PUMPIN' WATER AND GETTIN' THOSE PALMETTO SWITCHES.

Good memories of "The Schoolhouse" will linger in our hearts because we all loved and cherished it so much.

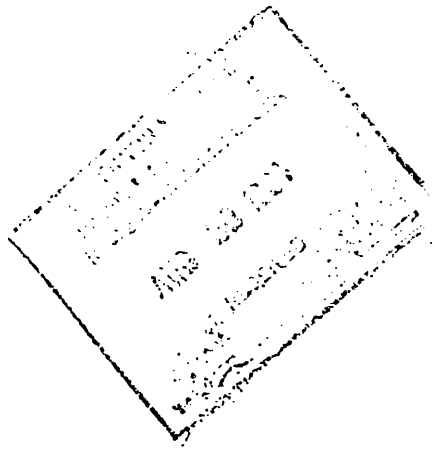
written in 1983

FLORIDA GAME AND FRESH WATER FISH COMMISSION

C. TOM RAINEY D.V.M. Chairman, Miami
THOMAS L. HIRES SR. Vice-Chairman, Lake Wales
WILLIAM G. BOSTICK JR. Winter Haven
J.H. BAROCO Pensacola
MRS. GILBERT W. HUMPHREY Mayo

ROBERT M. BRANTLY, Executive Director
F.G. BANKS, Assistant Executive Director





August 28, 1984

Mr. Ron Fahs, Director of
Intergovernmental Coordination
State Planning and Development
Clearinghouse
Office of Planning and Budgeting
Executive Office of the Governor
The Capitol
Tallahassee, Florida 32301

Re: SAI FL 8407260101C
Department of Transportation
Hillsborough County

Dear Mr. Fahs:

The Office of Environmental Services of the Florida Game and Fresh Water Fish Commission has reviewed the referenced request for comments pursuant to Intergovernmental Coordination and Federal Consistency Project Review, dated August 2, 1984, and offers the following comments.

The Florida Department of Transportation proposal to construct a new 20-22 mile limited access highway in northern Hillsborough County could have significant adverse impacts upon the fish and wildlife resources and native habitats of the project corridor. Although much of the corridor has been converted to agricultural or residential uses, the tract contains significant areas of pine flatwoods, cypress and hardwood swamps, marshes, and lakes.

We recommend thorough inventory and documentation of the natural habitats and wildlife species occurring within the project corridor, with particular attention to species listed by the Commission as endangered, threatened, or of special concern (document enclosed). During alignment selection, wetlands and those uplands which support endangered or threatened species should be avoided if possible. Bridging, right-of-way width reduction, and extensive culverting should be implemented as necessary to minimize adverse impacts upon wetland vegetation and hydrology. If unavoidable adverse environmental impacts are anticipated, appropriate mitigatory measures should be presented in the environmental assessment.

We appreciate the opportunity to comment on this early notification package, and look forward to reviewing the project environmental assessment. Please call me if we can be of further assistance.

Sincerely,

F. G. Banks
Assistant Executive Director

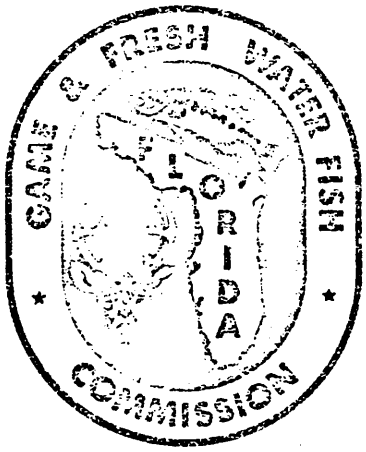
FGB/RF/rs

Enclosure

Endangered and Potentially Endangered Fauna and Flora in Florida

OFFICIAL LISTS

20 April 1984



Florida Game and Fresh Water Fish Commission

Compiled by Don A. Wood, Endangered Species Coordinator,
Florida Game and Fresh Water Fish Commission

Species	Designated Status[1] FGFWFC[2]	USFWS[3]	CITES[4]
Fishes			
Shortnose sturgeon (*Acipenser brevirostrum*)	E	E	I
Atlantic sturgeon (*Acipenser oxyrhynchus*)	SCC	UR	II
Common snook (*Centropomus undecimalis*)	SCC		
Key silverside (*Menidia conchorum*)	E		
Bluestripe shiner (*Notropis callitaenia*)	T	UR	
Blackmouth shiner (*Notropis* undescribed species)	T		
Lake Eustis pupfish (*Cyprinodon variegatus hubbsi*)	SSC		
Saltmarsh topminnow (*Fundulus jenkinsi*)	SSC		
Rivulus (*Rivulus marmoratus*)	SSC		
Okaloosa darter (*Etheostoma okaloosae*)	E	E	
Harlequin darter (*Etheostoma histrio*)	SSC		
Southern tessellated darter (*Etheostoma olmstedi maculaticeps*)	SSC		
Crystal darter (*Ammocrypta asprella*)	T	UR	
Key blenny (*Starksia starcki*)	SSC		
Shoal bass (*Micropterus* undescribed species)	SSC		
Suwannee bass (*Micropterus notius*)	SSC		
Subtotals	E—3 T—3 SSC—10	E—2 T—0 UR—3	I—1 II—1
Amphibians and Reptiles			
Pine Barrens treefrog (*Hyla andersonii*)	SSC		
Gopher frog (*Rana areolata*)	SSC	UR	
Gulf hammock dwarf siren (*Pseudobranchus striatus lustricolus*)		UR	
Flatwoods salamander (*Ambystoma cingulatum*)		UR	
Georgia blind salamander (*Haideotriton wallacei*)		UR	
American crocodile (*Crocodylus acutus*)	E	E	I
American alligator (*Alligator mississippiensis*)	SSC	T	II
Leatherback turtle (*Dermochelys coriacea*)	E	E	I
Atlantic green turtle (*Chelonia mydas mydas*)	E	E	I
Atlantic hawksbill turtle (*Eretmochelys imbricata imbricata*)	E	E	I
Atlantic ridley turtle (*Lepidochelys kempi*)	E	E	I
Atlantic loggerhead turtle (*Caretta caretta caretta*)	T	T	I
Alligator snapping turtle (*Macroclemys temminckii*)		UR	
Key mud turtle (*Kinosternon bauri bauri*)	E	UR	
Barbour's map turtle (*Graptemys barbouri*)	SSC	UR	
Suwannee cooter (*Chrysemys concinna suwanniensis*)	SSC	UR	
Gopher turtle (*Gopherus polyphemus*)	SSC	UR	II
Florida key mole skink (*Eumeces egregius egregius*)	SSC	UR	
Blue-tailed mole skink (*Eumeces egregius lividus*)	T	UR	
Sand skink (*Neoseps reynoldsi*)	T	UR	
Florida pine snake (*Pituophis melanoleucus mugitus*)		UR	
Atlantic salt marsh water snake (*Nerodia fasciata taeniata*)	E	T	
Short-tailed snake (*Stilosoma extenuatum*)	T	UR	
Big Pine Key ringneck snake (*Diadophis punctatus acricus*)	T	UR	
Red rat snake (*Elaphe guttata guttata*)—lower Keys population only	SSC		
Florida brown snake (*Storeria dekayi victa*)—lower Keys population only	T		
Miami black-headed snake (*Tantilla oolitica*)	T	UR	
Eastern indigo snake (*Drymarchon corais couperi*)	T	T	
Florida ribbon snake (*Thamnophis sauritus sackeni*)—lower Keys population only	T		
Subtotals	E—7 T—9 SSC—8	E—5 T—4 UR—16	I—6 II—2

2

Species	Designated Status[1] FGFWFC[2]	USFWS[3]	CITES[4]
Birds			
Eastern brown pelican (*Pelecanus occidentalis carolinensis*)	T	E	
Wood stork (*Mycteria americana*)	E	E	
Golden eagle (*Aquila chrysaetos*)			II
Bald eagle (*Haliaeetus leucocephalus*)	T	E	I
Swainson's hawk (*Buteo swainsoni*)		UR	
Osprey (*Pandion haliaetus*)			II
Snail kite (*Rostrhamus sociabilis*)	E	E	
Swallow-tailed kite (*Elanoides forficatus*)		UR	
Marsh hawk *or* American harrier (*Circus cyaneus*)			II
Southeastern kestrel (*Falco sparverius paulus*)	T	UR	II
Eastern kestrel (*Falco sparverius sparverius*)			II
Pigeon hawk *or* merlin (*Falco columbarius*)			II
Arctic peregrine falcon (*Falco peregrinus tundrius*)	E	T	I
Crested caracara (*Polyborus plancus*)	T	UR	
Burrowing owl (*Athene cunicularia*)	SSC		
Southeastern snowy plover (*Charadrius alexandrinus tenuirostris*)	E	UR	
Piping plover (*Charadrius melodus*)		UR	
Florida sandhill crane (*Grus canadensis pratensis*)	T		II
American oystercatcher (*Haematopus palliatus*)	SSC		
Little blue heron (*Egretta caerulea*)	SSC		
Snowy egret (*Egretta thula*)	SSC		
Reddish egret (*Egretta rufescens*)	SSC	UR	
Tricolored heron *or* Louisiana heron (*Egretta tricolor*)	SSC		
Roseate spoonbill (*Ajaia ajaja*)	SSC		
Limpkin (*Aramus guarauna*)	SSC		
Mangrove clapper rail (*Rallus longirostris insularum*)		UR	
Roseate tern (*Sterna dougallii*)	T	UR	
Least tern (*Sterna antillarum*)	T		
White-crowned pigeon (*Columba leucocephala*)	T	UR	
Ivory-billed woodpecker (*Campephilus principalis*)	E	E	
Red-cockaded woodpecker (*Picoides borealis*)	T	E	
Florida scrub jay (*Aphelocoma coerulescens coerulescens*)	T	UR	
Migrant loggerhead shrike (*Lanius ludovicianus migrans*)		UR	
Marian's marsh wren (*Cistothorus palustris marianae*)	SSC		
Worthington's marsh wren (*Cistothorus palustris griseus*)	SSC		
Bachman's warbler (*Vermivora bachmanii*)	E	E	
Kirtland's warbler (*Dendroica kirtlandii*)	E	E	
Stoddard's yellow-throated warbler (*Dendroica dominica stoddardi*)		UR	
Dusky seaside sparrow (*Ammodramus maritimus nigriscens*)	E	E	
Cape Sable seaside sparrow (*Ammodramus maritimus mirabilis*)	E	E	
Scott's seaside sparrow (*Ammodramus maritimus peninsulae*)	SSC		
Wakulla seaside sparrow (*Ammodramus maritimus juncicola*)	SSC	UR	
Smyrna seaside sparrow (*Ammodramus maritimus pelonota*)		UR	
Florida grasshopper sparrow (*Ammodramus savannarum floridanus*)	E	UR	
Bachman's sparrow (*Aimophila aestivalis*)		UR	
Subtotals	E—10 T—10 SSC—12	E—10 T—1 UR—17	I—2 II—7
Mammals			
Gray bat (*Myotis grisescens*)	E	E	
Indiana bat (*Myotis sodalis*)	E	E	
Sherman's short-tailed shrew (*Blarina brevicauda shermani*)		UR	
Homosassa shrew (*Sorex longirostris eionis*)		UR	
Eastern chipmunk (*Tamias striatus*)	SSC		
Mangrove fox squirrel (*Sciurus niger avicennia*)	T	UR	
Sherman's fox squirrel (*Sciurus niger shermani*)	SSC	UR	
Goff's pocket gopher (*Geomys pinetis goffi*)	E	UR	
Silver rice rat (*Oryzomys argentatus*)	E	UR	
Sanibel Island rice rat (*Oryzomys palustris sanibeli*)		UR	
Pallid beach mouse (*Peromyscus polionotus decoloratus*)	E	UR	

Species	Designated Status[1] FGFWFC[2]	USFWS[3]	CITES[4]
Choctawhatchee beach mouse (*Peromyscus polionotus allophrys*)	T	UR	
Perdido Bay beach mouse (*Peromyscus polionotus trissyllepsis*)	T	UR	
Florida mouse (*Peromyscus floridanus*)	T	UR	
Key Largo cotton mouse (*Peromyscus gossypinus allapaticola*)	E	E	
Chadwick Beach cotton mouse (*Peromyscus gossypinus restrictus*)	SSC		
Key Largo woodrat (*Neotoma floridana smalli*)	E	E	
Florida black bear (*Ursus americanus floridanus*)—except in Baker and Columbia counties and Apalachicola National Forest	T	UR	
Key Vaca raccoon (*Procyon lotor auspicatus*)	T	UR	
Everglades mink (*Mustela vison evergladensis*)	T	UR	
River otter (*Lutra canadensis*)			II
Florida panther (*Felis concolor coryi*)	E	E	I
Bobcat (*Lynx rufus*)			II
West Indian manatee (*Trichechus manatus latirostris*)	E	E	I
Key deer (*Odocoileus virginianus clavium*)	T	E	
Right whale (*Balaena glacialis*)	E	E	I
Finback whale (*Balaenoptera physalus*)	E	E	II
Sei whale (*Balaenoptera borealis*)	E	E	II
Humpback whale (*Megaptera novaeangliae*)	E	E	I
Sperm whale (*Physeter catodon*)	E	E	
Subtotals	E—14 T—8 SSC—3	E—12 T—0 UR—14	I—4 II—4
Invertebrates			
Stock Island tree snail (*Orthalicus reses*)	T	T	
Schaus' swallowtail butterfly (*Heraclides aristodemus ponceanus*)	E	E	
Bahama swallowtail butterfly (*Heraclides andraemon bonhotei*)		T	
Atala butterfly (*Eumaeus atala florida*)		UR	
Oklawaha sponge (*Dorsilia palmeri*)		UR	
Kissimmee sponge (*Ephydatia subtilis*)		UR	
Subtotals	E—1 T—1 SSC—0	E—1 T—2 UR—3	I—0 II—0
TOTALS	E—35 T—31 SSC—33 99	E—30 T—7 UR—53 135	I—13 II—14 27

[1]E=Endangered; T=Threatened; SSC=Species of Special Concern; UR=Under Review (for possible listing); I=included in Appendix I; II=included in Appendix II.

[2]Florida Game and Fresh Water Fish Commission: Section 39-27.03-05, FAC (official State of Florida animal list).

[3]United States Fish and Wildlife Service: List of Endangered and Threatened Wildlife and Plants. 50 CFR 17.11-12 (official United States list).

[4]Convention on International Trade in Endangered Species of Wild Fauna and Flora.

SCIENTIFIC NAME	COMMON NAME	DESIGNATED STATUS[1] USEWS[2]	CITES[3]	FDA[4]
[illegible] wrightii	Paurotis palm *or* Everglades palm			T
[illegible] asperum	Golden leather fern			T
[illegible] lanceolatum	Giant leather fern			T
[illegible] pilosa-veneris	Venus-hair fern			T
[illegible] tenerum	Fragrant maidenhair fern			T
[illegible] tenerum	Maidenhair fern (unnamed)			T
[illegible] purpurea var. carteri	Carter's large purple false foxglove	UR		
[illegible] tenuifolia	Narrow-leaved false foxglove	UR		
[illegible] incisa	Incised groove bur *or* harvest lice	UR		
[illegible] arctatus	Pinewoods bluestem	UR		
[illegible] virginiana	Wild pine			T
[illegible] polypodioides	Pine fern			T
[illegible] canadensis	Wild columbine *or* southern columbine	UR		
[illegible] blodgettii	Blodgett's wild-mercury	UR		
[illegible] floridana	Florida three-awned grass	UR		
[illegible] laxiflora	Southern three-awned grass	UR		
[illegible] fimbriosa	Dutchman's pipe			T
[illegible] curtissii	Curtis milkweed			T
[illegible] viridula	Southern milkweed	UR		
[illegible] pulchra	Pink pawpaw *or* dwarf pawpaw			E
[illegible] triloba	Four-petal pawpaw *or* opposum pawpaw	UR		E
[illegible] spectabilis	Spleenwort (unnamed)			T
[illegible] auriculata	Auricled spleenwort			E
[illegible] resiliens	Spleenwort (unnamed)			T
[illegible] pinnatifida	Slender spleenwort			T
[illegible] heterodontum	Spleenwort (unnamed)			T
[illegible] heterosthenes	Wagner's spleenwort	UR		T
[illegible] ebenoides	Ebony spleenwort			T
[illegible] plenum	Double spleenwort	UR		T
[illegible] resiliens	Dwarf spleenwort *or* chervil spleenwort			T
[illegible] resiliens	Little ebony spleenwort			T
[illegible] serratum	Bird's nest spleenwort *or* wild birdnest fern			T
[illegible] serrulatum	Spleenwort (unnamed)			T
[illegible] trichomanes-dentatum	Spleenwort (unnamed)			T
[illegible] verecundum	Spleenwort (unnamed)			T
[illegible] apalachicolensis	Apalachicola River aster	UR		
[illegible] concolor	Pale-violet aster	NT		
[illegible] plumosus	Plumose aster	UR		
[illegible] reticulatus	Pinewoods aster	UR		
Athyrium asplenioides	Southern lady fern			T
[illegible] floridana	Mosquito fern			T
[illegible] alleizans	Pineland wild indigo	UR		
[illegible] hirsuta	Hairy wild indigo	UR		
[illegible] megacarpa	Apalachicola wild indigo	UR		
[illegible] pratensis	Streamside wild indigo	UR		
[illegible] lanceolata	Coastal plain wild indigo	UR		
[illegible] coralliocola	Orchid (unnamed)		II	T
[illegible] occidentale	Sinkhole fern			E
[illegible] flava	Orchid (unnamed)		II	T
[illegible] purpurea	Pine pink		II	T
Bonamia grandiflora	Florida bonamia *or* large-flowered bonamia	UR		
[illegible] hiternatum	Southern grape fern			T
[illegible] dissectum	Grape fern (unnamed)			T
[illegible] lanarioides	Winter grape fern			T

SCIENTIFIC NAME	COMMON NAME	DESIGNATED STATUS[1] USFWS[2]	CITES[3]	FDA[4]
Botrychium virginianum	Rattlesnake fern			T
Brassia caudata	Long-tailed spider orchid	UR	II	T
Brickellia cordifolia	Flyr's nemesis *or* Flyr's brickell-bush	UR		
Brickellia eupatorioides var. floridana	Florida thoroughwort brickell-bush *or* Florida boneset	UR		
Bulbophyllum pachyrhachis	Rat-tail orchid		II	T
Cacalia diversifolia	Variable-leaved Indian plantain	UR		
Calamintha ashei	Ashe's savory *or* Ashe's basil	UR		
Calamintha dentatum	Toothed savory *or* toothed basil	UR		
Calamovilfa curtissii	Curtiss' reedgrass	UR		
Calopogan barbatus	Bearded grass pink		II	T
Calopogon multiflorus	Many-flowered grass pink		II	T
Calopogon pallidus	Pale grass pink		II	T
Calopogon pulchellus	Grass pink (unnamed)		II	T
Calopogon tuberosus	Grass pink (unnamed)		II	T
Calycanthus floridus	Strawberry bush			T
Campanula robinsiae	Robins' bellflower *or* Brooksville bellflower	UR		
Campylocentrum pachyrrhizum	Leafless orchid		II	T
Campyloneurum angustifolium	Narrow strap fern			E
Campyloneurum costatum	Strap fern (unnamed)			T
Campyloneurum latum	Strap fern (unnamed)			T
Campyloneurum phyllitidis	Strap fern (unnamed)			T
Canna petusa	Maraca *or* tattered canna	UR		
Carex baltzelli	Baltzell's sedge	UR		
Carex chapmanii	Chapman's sedge	UR		
Cassia keyensis	Big pine partridge pea *or* Florida keys senna	UR		E
Catesbaea parviflora	Small-flowered lily-thorn			E
Catopsis berteroniana	Powdery catopsis			E
Catopsis floribunda	Air plant (unnamed)			T
Catopsis nutans	Nodding catopsis			E
Centrosema arenicola	Sand butterfly pea	UR		
Ceratophyllum floridanum	Florida hornwort	NT		
Ceratopteris pteridoides	Water-horn fern (unnamed)			T
Ceratopteris thalictroides	Water-horn fern (unnamed)			T
Cereus eriophorus var. fragrans	Fragrant wool-bearing cereus	UR	II	T
Cereus gracilis	Prickly-apple	UR	II	E
Cereus pentagonus	Dildoe cactus		II	T
Cereus robinii	Tree cactus	UR	II	E
Cereus undatus	Night-blooming cereus		II	T
Chamaesyce cumulicola	Sand dune spurge	UR		
Chamaesyce deltoidea deltoidea	Wedge spurge	UR		
Chamaesyce deltoidea serpyllum	Wild thyme spurge	UR		
Chamaesyce garberi	Garber's spurge	UR		
Chamaesyce porteriana var. keyensis	Porter's hairy podded spurge	UR		
Chamaesyce porteriana var. scoparia	Porter's broom spurge	UR		
Cheilanthes microphylla	Southern lip fern			T
Chionanthus pygmaea	Pigmy fringetree	UR		E
Chrysophyllum olivaeforme	Satinleaf			T
Chrysopsis cruiseana	Cruise's golden aster	UR		
Chrysopsis floridana	Florida golden aster	UR		
Cienfuegosia heterophylla	Yellow hibiscus			T
Cleistes divaricata	Rosebud orchid *or* spreading pogonia		II	T
Clematis micrantha	Old-man's beard *or* virgin's bower	UR		
Clitoria fragrans	Pigeon-wing butterflypea *or* sweet-scented butterflypea	UR		
Clusia flava	Yellow balsam-apple	UR		
Clusia rosea	Balsam-apple (unnamed)			E
Coccothrinax argentata	Silver thatch palm			E
Cocos nucifera	Coconut palm			T
Coelorachis tuberculosa	Florida jointtail *or* piedmont joint grass	UR		
Commelina gigas	Climbing dayflower	UR		T

SCIENTIFIC NAME	COMMON NAME	DESIGNATED STATUS		
		USFWS[2]	CITES[3]	FDA[4]
Conradina brevifiora	Short-leaved rosemary	UR		
Conradina glabra	Apalachicola rosemary *or* panhandle rosemary	UR		
Conradina grandiflora	Large-flowered rosemary	UR		
Corallorhiza odontorhiza	Autumn coralroot		II	T
Corallorhiza wisteriana	Spring coralroot *or* Wister's coralroot		II	T
Cordia sebestena	Geiger tree			T
Cornus alternifolia	Pagoda dogwood			T
Cranichis muscosa	Orchid (unnamed)		II	T
Croomia pauciflora	Few-flowered croomia	UR		
Croton elliottii	Elliott's croton	UR		
Croton glandulosa var. simpsonii	Simpson's glandular croton	NT		
Ctenitis sloanei	Comb fern (unnamed)			T
Ctenitis submarginalis	Comb fern (unnamed)			T
Ctenium floridanum	Florida orange-grass	UR		
Cucurbita okeechobeensis	Okeechobee gourd *or* Indian pumpkin	UR		E
Cupania glabra	Cupania			E
Cuphea aspera	Tropical waxweed	UR		
Cyrtopodium andersonii	Orchid (unnamed)			T
Cyrtopodium punctatum	Cowhorn orchid *or* cigar orchid			E
Deeringothamnus pulchellus	Slim-petal pawpaw	UR		
Deeringothamnus rugelii	Yellow squirrel-banana *or* Rugel's pawpaw	UR		
Dennstaedtia bipinnata	Cuplet fern *or* hay-scented fern			E
Dicerandra frutescens	Scrub balm	UR		
Dicerandra immaculata	Spotless-petaled dicerandra	UR		
Dicranopteris flexuosa	Net fern			T
Digitaria floridana	Florida crabgrass	UR		
Digitaria gracillima	Crabgrass (unnamed)	UR		
Disitaria pauciflora	Finger grass (unnamed)	UR		
Dryopteris ludoviciana	Florida shield fern			T
Elytraria carolinensis var. angustifolia	Narrow-leaved Carolina scalystem	UR		
Encyclia boothiana	Dollar orchid *or* dogtooth orchid	UR	II	E
Encyclia cochleata	Shell orchid		II	T
Encyclia pygmaea	Dwarf epidendrum		II	T
Encyclia tampensis	Butterfly orchid		II	T
Epidendrum acunae	Acuna's epidendrum		II	T
Epidendrum anceps	Orchid (unnamed)		II	T
Epidendrum canopseum	Greenfly orchid		II	T
Epidendrum difforme	Unbelled epidendrum		II	T
Epidendrum nocturnum	Night-scent orchid *or* night-smelling epidendrum		II	T
Epidendrum rigidum	Rigid epidendrum		II	T
Epidendrum strobiliferum	Orchid (unnamed)		II	T
Epigaea repens	Trailing arbutus			E
Equisetum hymale	Scouring rush			T
Eragrostis tracyi	Sanibel Island lovegrass	UR		
Eriochloa michauxii var. simpsonii	Longleaf cup grass *or* Simpson's cup grass	UR		
Eryngium cuneifolium	Wedge-leaved button snakeroot	UR		
Erythrodes querceticola	Low erythrodes		II	T
Erythronium americanum	Dogtooth lily			T
Eugenia confusa	Redberry ironwood			T
Eugenia simpsonii	Simpson ironwood			T
Eulophia alta	Wild coco		II	T
Eulophia ecristata	False coco	UR	II	T
Euphorbia austrina	Pineland spurge	UR		
Euphorbia discoidalis	Appalachicola spurge	UR		
Euphorbia exserta	Exserted fruited spurge	UR		
Euphorbia telephioides	Telephus spurge	UR		
Forestiera segregata var. pinetorum	Pinewood privet *or* Florida privet	UR		
Galactia pinetorum	Small's milkpea	UR		
Galeandra beyrichii	Orchid (unnamed)		II	T

SCIENTIFIC NAME	COMMON NAME	DESIGNATED STATUS		
		USFWS[2]	CITES[3]	FDA[4]
Garberia fruticosa	Garberia			T
Gentiana pennelliana	Wiregrass gentian	UR		
Goniophlebium triseriale	Polypody fern (unnamed)			T
Govenia utriculata	Orchid (unnamed)		II	T
Guaiacum sanctum	Lignum-vitae		II	E
Guzmania monostachia	Fuch's bromeliad			E
Gymnopogon floridanus	Florida beardgrass *or* Chapman skeletongrass	UR		
Habenaria distans	Orchid (unnamed)		II	T
Habenaria nivea	Bog torch		II	T
Habenaria odontopetala	Orchid (unnamed)		II	T
Habenaria quinqueseta	Michaux's orchid *or* long-horned orchid		II	T
Habenaria repens	Water spider orchid *or* creeping orchid		II	T
Harperocallis flava	Harper's beauty	E		
Harrisella filiformis	Orchid (unnamed)		II	T
Harrisella porrecta	Orchid (unnamed)		II	T
Hartwrightia floridana	Florida hartwrightia	UR		
Hedeoma graveolens	Mock pennyroyal	UR		
Hedyotis nigricans var. pulvinata	Diamondflowers *or* mat-forming narrow-leaved bluet	UR		
Helianthus carnosus	Lakeside sunflower	UR		
Helianthus debilis vestitus	Hairy cucumber-leaf sunflower	UR		
Heliotropium polyphyllum var. horizontale	Prostrate many-leaved turnsole *or* heliotrope	UR		
Heterotheca flexuosa	Bent golden aster	UR		
Hexalectris spicata	Crested coralroot		II	T
Hippomane mancinella	Manchineel			T
Hymenocallis coronaria	Stream-bank spider lily	UR		
Hymenocallis latifolia	Broad-leaved spider lily	UR		
Hypericum cumulicola	Highlands scrub hypericum	UR		
Hypericum edsonianum	Edison's St. John's-wort *or* St. Peter's-wort	UR		
Hypericum lissophloeus	Smooth-barked St. John's-wort	UR		
Hypolepis repens	Flakelet fern			T
Ilex ambigua	Carolina holly *or* sand holly			T
Ilex amelanchier	Serviceberry holly	UR		
Ilex decidua	Possumhaw			T
Ilex krugiana	Krug's holly			T
Ilex montana	Mountain winterberry			T
Ilex opaca var. arenicola	Scrub holly *or* sand-loving American holly	UR		
Ilex verticillata	Common winterberry			T
Illicium floridanum	Anise (unnamed)			T
Illicium parviflorum	Yellow anise tree *or* star anise	UR		T
Ionopsis utricularioides	Delicate ionopsis		II	E
Isoetes chapmanii	Chapman's quillwort			T
Isoetes engelmannii	Engelmann's quillwort			T
Isoetes flaccida	Florida quillwort			T
Isotria verticillata	Whorled pogonia		II	T
Jacquemontia curtissii	Pineland clustervine *or* Curtiss' clustervine	UR		
Jacquemontia reclinata	Beach clustervine *or* reclined clustervine	UR		
Justicia cooleyi	Cooley's water-willow	UR		
Justicia crassifolia	Thick-leaved water-willow	UR		
Kosteletzkya smilacifolia	Southern seashore mallow *or* saltmarsh mallow	UR		
Lechea cernua	Nodding pinweed	UR		
Lechea divaricata	Pine pinweed	UR		
Lechea lakelae	Lakela's pinweed	UR		
Leitneria floridana	Florida corkwood	UR		T
Leochilus labiatus	Orchid (unnamed)		II	T
Lepanthopsis melanantha	Harris' tiny orchid	UR	II	T
Liatris ohlingerae	Florida gayfeather	UR		

SCIENTIFIC NAME	COMMON NAME	DESIGNATED STATUS[1] USFWS[2]	CITES[3]	FDA[4]
Liatris provincialis	Godfrey's blazing star *or* Godfrey's gayfeather	UR		
Lilaeopsis carolinensis	Parsley (unnamed)	UR		
Lilium iridollae	Panhandle lily	UR		
Limonium carolinianum var. angustatum	Narrow-leaved sea lavender	NT		
Lindera melissifolia	Swamp spicebush *or* Jove's fruit	UR		
Linum arenicola	Sand flax	UR		
Linum carteri var. carteri	Carter's small-flowered flax	UR		
Linum carteri var. smallii	Carter's large-flowered flax	UR		
Linum sulcatum var. harperi	Harper's grooved yellow flax	UR		
Linum westii	West's flax	UR		
Liparis elata	Tall liparis orchid		II	T
Listera australis	Southern twayblade		II	T
Lomariopsis kunzeana	Holly fern			T
Lupinus tracyi	Tracy's lupine	UR		
Lupinus westianus	Gulfcoast lupine *or* panhandle lupine	UR		
Lycopodium alopecuroides	Foxtail club moss			T
Lycopodium appressum	Southern club moss			T
Lycopodium carolinianum	Slender club moss			T
Lycopodium cernuum	Nodding club moss			T
Lycopodium dichotomum	Hanging club moss *or* coneless club moss			T
Lycopodium prostratum	Prostrate club moss *or* Harper's club moss			T
Lygopodium microphyllum	Climbing fern (unnamed)			T
Lygopodium palmatum	Climbing fern (unnamed)			T
Lythrum curtissii	Curtiss' lythrum	UR		
Lythrum flagellare	Lowland lythrum	UR		
Macbridea alba	White birds-in-a-nest	UR		
Macradenia lutescens	Trinidad macradenia		II	T
Magnolia ashei	Ashe's magnolia	UR		E
Magnolia pyramidata	Pyramidal magnolia			E
Malaxis spicata	Florida malaxis		II	T
Malaxis unifolia	Green adder's mouth		II	T
Marshallia mohrii	Mohr's barbara's buttons	UR		
Marsilea mucronata	Hairy pepperwort *or* hairy waterclover			T
Matelea alabamensis	Alabama milkweed	UR		
Matelea floridana	Florida milkweed	UR		
Maxillaria crassifolia	Hidden orchid		II	T
Melanthera parvifolia	Small-leaved melanthera	UR		
Microgramma heterophylla	Polypody fern (unnamed)			T
Minuartia godfreyi	Pink (unnamed)	UR		
Monotropa brittonii	Indian pipes *or* Britton's pinesap	UR		
Monotropsis reynoldsiae	Pigmy pipes	UR		
Myrcianthes fragrans var. simpsonii	Simpson's stopper *or* twinberry	UR		
Myriophyllum laxum	Piedmont water milfoil	UR		
Nemastylis floridana	Fall-flowering pleatleaf *or* celestial lily	UR		
Nephrolepis biserrata	Boston fern (unnamed)			T
Nolina atopocarpa	Florida beargrass	UR		
Nolina brittoniana	Britton's beargrass	UR		
Nuphar luteum ulvaceum	West Florida cow lily	UR		
Oncidium carthagenense	Coot Bay dancing lady *or* spread-eagle oncidium	UR	II	T
Oncidium floridanum	Florida oncidium		II	T
Oncidium luridum	Mule-ear orchid *or* dingy-flowered oncidium		II	T
Ocidium variegatum	Dancing-lady orchid *or* Florida variegated oncidium		II	T
Onoclea sensibilis	Sensitive fern *or* bead fern			T
Ophioglossum crotalophoroides	Bulbous adder's tongue			T
Ophioglossum engalmannii	Limestone adder's tongue			T
Ophioglossum nudicaule	Adder's tongue fern (unnamed)			T
Ophioglossum palmatum	Adder's tongue fern (unnamed)			T

SCIENTIFIC NAME	COMMON NAME	DESIGNATED STATUS[1]		
		USEWS[2]	CITES[3]	FDA[4]
Ophioglossum petiolatum	Adder's tongue fern (unnamed)			T
Ophioglossum vulgatum	Adder's tongue fern (unnamed)			T
Opuntia compressa	Prickly pear cactus (unnamed)		II	T
Opuntia cubensis	Prickly pear cactus (unnamed)		II	T
Opuntia spinosissima	Semaphore cactus	UR	II	T
Opuntia stricta	Prickly pear cactus (unnamed)		II	T
Opuntia triacantha	Three-spined prickly pear	UR	II	T
Osmunda cinnamomea	Cinnamon fern			T
Osmunda regalis var. spectabilis	Royal fern			T
Oxypolis greenmanii	Giant water dropwort *or* giant water cowbane	UR		
Paltonium lanceolatum	Ribbon fern			T
Panicum nudicaule	Naked-stemmed panic grass	UR		
Panicum pinetorum	Pineland panic grass	UR		
Parnassia caroliniana	Coastal parnassia *or* Carolina grass-of-parnassus	UR		
Parnassia grandifolia	Grass-of-parnassus			E
Paronychia chartacea	Paper-like nailwort	UR		
Paronychia rugelii var. interior	Rugel's interior nailwort *or* sand squares	NT		
Pavonia spinifex	Yellow hibiscus			T
Pellaea atropupurea	Cliff brake fern			T
Peperomia floridana	Everglades peperomia	UR		T
Peperomia glabella	Cypress peperomia			T
Peperomia humilis	Pepper (unnamed)			T
Peperomia obtusifolia	Florida peperomia			T
Peperomia simplex	Pale-green peperomia			T
Peperomia spathulifolia	Spatulate peperomia			T
Pereskia aculeata	Lemon vine			T
Persea borbonia var. humilis	Dwarf redbay *or* redbay persea	UR	II	T
Persicaria paludicola	Everglades knotweed	NT		
Phlebodium aureum	Golden polypody			T
Phyllanthus liebmannianus	Pinewood dainties *or* Florida leaf flower	UR		
Phyllanthus pentaphyllus floridanus	Florida five-petaled leaf flower	UR		
Physalis viscosa var. elliotii	Elliot's sticky ground cherry	UR		
Physostegia leptophyllum	Slender-leaved false dragonhead	UR		
Pinckneya pubens	Hairy fevertree			T
Pinguicula planifolia	Chapman's butterwort	UR		
Pisonia floridana	Rock Key devil's claws	UR		
Platanthera blephariglottis	Large white fringed orchid		II	T
Platanthera ciliaris	Yellow fringed orchid		II	T
Platanthera clavellata	Little club-spur orchid *or* small green wood orchid		II	T
Platanthera cristata	Golden fringed orchid *or* crested fringed orchid		II	T
Platanthera flava	Southern tubercled orchid *or* gypsy-spikes		II	T
Platanthera integra	Yellow fringeless orchid *or* orange rein-orchid	UR	II	T
Platanthera nivea	Snowy orchid *or* bog torch		II	T
Pleopeltis revoluta	Star-scale fern			T
Pleurothallis gelida	Orchid (unnamed)		II	T
Pogonia ophioglossoides	Rose pogonia		II	T
Polygala boykinii var. sparsifolia	Boykin's few-leaved milkwort	UR		
Polygala lewtonii	Lewton's milkwort	UR		
Polygala smallii	Tiny milkwort *or* Small's milkwort	UR		
Polygonella ciliata var. basiramia	Hairy jointweed	UR		
Polygonella macrophylla	Large-leaved jointweed	UR		
Polygonella myriophylla	Small's jointweed *or* woody wireweed	UR		
Polymnia laevigata	Tennessee leaf cup	UR		
Polypodium dispersum	Polypody fern (unnamed)			T
Polypodium plumula	Polypody fern (unnamed)			T
Polypodium ptilodon	Polypody fern (unnamed)			T
Polyrrhiza lindenii	Ghost orchid *or* palm polly		II	E

SCIENTIFIC NAME	COMMON NAME	DESIGNATED STATUS[1] USFWS[2]	CITES[3]	FDA[4]
Epidendrum conchreta	Orchid (unnamed)		II	T
Epidendrum extinctorium	Pale-flowered polystachya		II	T
Epidendrum flavescens	Orchid (unnamed)		II	T
Eremochloa acrostichoides	Christmas fern			T
Eriocaulon racemosum	Shadow witch		II	T
Eriocaulon floridanus	Florida pondweed	UR		
Eulophia alta	Orchid (unnamed)		II	T
Eurya cerasifolia	Scrub plum	UR		
Gaussia sargentii	Buccaneer palm *or* Sargent's cherry palm			T
Helminthostachys zeylanica	Whisk fern *or* fork fern			T
Hemionitis palmata	Bracken fern			T
Hymenophyllum cruentum	Cretan brake fern			T
Hymenophyllum polyanthos	Ladder brake fern			T
Hymenophyllum tripartitum	Giant brake fern			T
Hymenophyllum undulatum	Brake fern (unnamed)			T
Hymenocallis maritima	Beach star	UR		
Hymenocallis palmetto	Snake orchid		II	T
Hypoxis juncea	Needle palm			T
Hypoxis parviflora	Small-flowered meadowbeauty		UR	
Hypoxis salicifolia	Panhandle meadowbeauty	UR		
Ilex amelanchier	Mistletoe cactus	UR	II	T
Ilex austrinum	Orange azalea *or* Florida azalea			E
Ilex chapmanii	Chapman's rhododendron	E		E
Ilex decidua	Swamp honeysuckle			T
Ilex glabra	Brown-haired snoutbean	UR		
Ilex opaca	Georgia beak rush	UR		
Ilex vomitoria	Pineland beak rush	UR		
Illicium floridanum	Miccosukee gooseberry *or* Florida gooseberry	UR		E
Indigofera caroliniana	Florida royal palm	UR		E
Iris hexagona	St. John's-susan	UR		
Iris virginica	Pinnate-lobed brown-eyed coneflower	UR		
Isoetes flaccida	Scrub palmetto			T
Isoetes hyemalis	Dwarf palmetto *or* blue stem			T
Isoetes riparia	Florida willow	UR		
Isoetes tegetiformans	Blodgett's sage	UR		
Itea virginica	Water spangles			T
Juncus megacephalus	White-top pitcherplant			E
Juncus scirpoides	Red-flowered pitcherplant			E
Juncus validus	Scaevola			E
Juniperus silicicola	Riparium autumngrass	UR		
Kalmia latifolia	Florida autumngrass *or* little bluestem	NT		
Kalmia latifolia	Tropical curly-grass fern *or* ray fern	UR		
Kalmia latifolia	Florida skullcap or helmet-flowers	UR		
Kalmia latifolia	Meadow spikemoss			T
Kalmia latifolia	Sand spikemoss			T
Kalmia latifolia	Armored spikemoss			T
Kalmia latifolia	Spikemoss (unnamed)			T
Kalmia latifolia	Spikemoss (unnamed)			T
Kalmia latifolia	Spikemoss (unnamed)			T
Kosteletzkya pentacarpos	Red-margined mallow	UR		
Kosteletzkya virginica	Fringed campion	UR		
Lachnanthes caroliniana	Florida water parsnip	UR		
Lantana depressa	Rugel's Bahama horse nettle *or* Rugel's cankerberry	UR		
Lantana involucrata	Florida horse-nettle	UR		
Lechea cernua	Parsley fern			T
Lechea divaricata	Bartram's ixia	UR		T
Lechea divaricata	Gentian pinkroot	UR		
Lechea divaricata	Florida pinkroot	UR		

SCIENTIFIC NAME	COMMON NAME	DESIGNATED STATUS		
		USFWS[1]	CITES[2]	FDA[3]
Spiranthes brevilabris var. brevilabris	Texas ladies' tresses		II	T
Spiranthes brevilabris var. floridana	Florida ladies'-tresses		II	T
Spiranthes cernua var. odorata	Fragrant ladies' tresses		II	T
Spiranthes costaricensis	Ladies'-tresses (unnamed)		II	T
Spiranthes cranichoides	Ladies'-tresses (unnamed)		II	T
Spiranthes elata	Tall neottia		II	T
Spiranthes gracilis	Slender ladies' tresses		II	T
Spiranthes laciniata	Lace-lip ladies'-tresses *or* lace-lip spiral orchid		II	T
Spiranthes lanceolata var. lanceolata	Leafless beaked orchid		II	T
Spiranthes lanceolata var. luteoalba	Ladies'-tresses (unnamed)		II	T
Spiranthes lanceolata var. paludicola	Red-flowered ladies'-tresses	UR	II	T
Spiranthes longilabris	Long-lip ladies'-tresses		II	T
Spiranthes orchioides	Scarlet ladies'-tresses		II	T
Spiranthes ovalis	Oval ladies'-tresses		II	T
Spiranthes polyantha	Florida keys ladies'-tresses	UR	II	T
Spiranthes praecox	Giant ladies'-tresses *or* grass-leaved ladies'-tresses		II	T
Spiranthes tortilis	Southern ladies'-tresses		II	T
Spiranthes tuberosa	Little ladies'-tresses *or* little pearl twist		II	T
Spiranthes vernalis	Spring ladies'-tresses		II	T
Stachys lythroides	Tallahassee hedge-nettle	UR		
Stillingia sylvatica tenuis	Slender queen's delight	UR		
Strumpfia martima	Pride-of-big-pine			E
Suriana maritima	Bay cedar			E
Swietenia mahogany	West Indian mahogany			T
Taxus floridana	Florida yew	UR		E
Tectaria amesiana	Ames' halberd fern	UR		T
Tectaria coriandrifolia	Hattie Bauer halberd fern *or* hairy halberd fern			T
Tectaria heracleifolia	Halberd fern (unnamed)			T
Tectaria incisa	Halberd fern (unnamed)			T
Tectaria lobata	Halberd fern (unnamed)			T
Tephrosia angustissima	Narrow-leaved hoary pea	UR		
Tephrosia mohrii	Pineland hoary pea	UR		
Tetramicra canaliculata	Orchid (unnamed)		II	T
Tetrazygia bicolor	Tetrazygia			T
Thalictrum cooleyi	Cooley's meadowrue	UR		
Thelypteris augescens	Aspidium fern (unnamed)			T
Thelypteris dentata	Downy shield fern			T
Thelypteris hexagonoptera	Southern beech fern			T
Thelypteris hispidula	Aspidium fern (unnamed)			T
Thelypteris interrupta	Aspidium fern (unnamed)			T
Thelypteris kunthii	Aspidium fern (unnamed)			T
Thelypteris ovata	Aspidium fern (unnamed)			T
Thelypteris palustris	Marsh fern			T
Thelypteris quadrangularis	Aspidium fern (unnamed)			T
Thelypteris reptans	Creeping fern			T
Thelypteris resinifera	Aspidium fern (unnamed)			T
Thelypteris reticulata	Aspidium fern (unnamed)			T
Thelypteris sclerophylla	Aspidium fern (unnamed)			T
Thelypteris serrata	Aspidium fern (unnamed)			T
Thelypteris tetragona	Aspidium fern (unnamed)			T

SCIENTIFIC NAME	COMMON NAME	DESIGNATED STATUS[1] USFWS[2]	CITES[3]	FDA[4]
[illegible]	Florida thatch palm			T
[illegible]	Brittle thatch palm			T
[illegible]	Wild pine *or* air plant (unnamed)			T
[illegible]	Wild pine *or* air plant (unnamed)			T
Tillandsia circinata	Wild pine *or* air plant (unnamed)			T
Tillandsia fasciculata	Wild pine *or* air plant (unnamed)			E
Tillandsia flexuosa	Twisted air plant			T
Tillandsia paucifolia	Wild pine *or* air plant (unnamed)			T
Tillandsia polystachia	Wild pine *or* air plant (unnamed)			T
Tillandsia pruinosa	Fuzzy-wuzzy air plant			T
Tillandsia setacea	Wild pine *or* air plant (unnamed)			T
Tillandsia simulata	Wild pine *or* air plant (unnamed)			T
Tillandsia utriculata	Wild pine *or* air plant (unnamed)			T
Tillandsia valenzuelana	Wild pine *or* air plant (unnamed)			T
Tipularia discolor	Crane-fly orchid		II	T
Torreya taxifolia	Florida torreya	E		E
Tournefortia gnaphalodes	Sea lavender			E
Tragia saxicola	Florida keys noseburn	UR		
Trichomanes holopterum	Filmy fern (unnamed)			T
Trichomanes krausii	Filmy fern (unnamed)			T
Trichomanes lineolatum	Filmy fern (unnamed)			T
Trichomanes petersii	Filmy fern (unnamed)			T
Trichomanes punctatum	Filmy fern (unnamed)			T
Trillium lancifolium	Lance-leaved wake-robin			E
Triphora craigheadii	Craighead's nodding-caps *or* Craighead's pogonia	UR	II	T
Triphora cubensis	Nodding caps (unnamed)		II	T
Triphora gentianoides	Nodding-caps (unnamed)		II	T
Triphora latifolia	Broad-leaved nodding-caps *or* broad-leaved pogonia	UR	II	T
Triphora rickettii	Nodding-capes (unnamed)		II	T
Triphora trianthophora	Nodding pogonia *or* three-birds orchid		II	T
Tripsacum floridanum	Florida gramagrass	UR		
Trismeria trifoliata	Braken fern (unnamed)			T
Tropidia polystachya	Young-palm orchid		II	T
Vanilla barbellata	Worm-vine orchid *or* link vine		II	T
Vanilla dilloniana	Leafless vanilla		II	T
Vanilla inodora	Scentless vanilla		II	T
Vanilla mexicana	Vanilla (unnamed)		II	T
Vanilla phaeantha	Leafy vanilla *or* oblong-leaved vanilla		II	T
Vanilla planifolia	Commercial vanilla		II	T
Verbena maritima	Coastal vervain	UR		
Verbena tampensis	Tampa vervain	UR		
Verbesina chapmanii	Chapman's crownbeard	UR		
Verbesina heterophylla	Variable-leaf crownbeard	UR		
Vicia ocalensis	Ocala vetch	UR		
Vittaria lineata	Shoestring fern			T
Warea amplexifolia	Clasping warea	UR		
Warea carteri	Carter's warea	UR		
Woodsia obtusa	Blunt-lobed woodsia			T
Woodwardia areolata	Netted chain fern			T
Woodwardia virginica	Virginia chain fern			T

SCIENTIFIC NAME	COMMON NAME	DESIGNATED STATUS[1]		
		USFWS[2]	CITES[3]	FDA[4]
Xyris drummondii	Drummond's yellow-eyed grass	UR		
Xyris isoetifolia	Quillwort yellow-eyed grass	UR		
Xyris longisepala	Karst pond yellow-eyed grass or Kral's yellow-eyed grass	UR		
Xyris scabrifolia	Harper's yellow-eyed grass	UR		
Zamia floridana	Florida coontie		II	T
Zamia integrifolia	Florida arrowroot		II	T
Zamia umbrosa	East coast coontie		II	T
Zephyranthes (all white species)	Rain lilies			T
Zephyranthes simpsonii	Rain zephyr lily			E
Zeuxine strateumatica	Orchid (unnamed)		II	T
Zizia latifolia	Bristol golden alexanders	UR		
TOTALS		E—3 T—0 UR—209 NT—7 219	I—0 II—121 121	E—41 T—284 325

[1]E=Endangered; NT=Non-valid Taxon (ineligible for federal listing); T=Threatened; UR=Under Review (for possible listing); I=Included in Appendix I (of CITES); II=Included in Appendix II (of CITES).

[2]United States Fish and Wildlife Service: List of Endangered and Threatened Wildlife and Plants, 50 CFR 17.12, 1982 (official United States list).

[3]Convention on International Trade in Endangered Species of Wild Fauna and Flora.

[4]Florida Department of Agriculture and Consumer Services: Preservation of Native Flora of Florida Act, Section 581.185, Florida Statutes (official State of Florida list).

tampa bay regional planning council

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C mmissioner Charles Roberts

August 27, 1984

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

Dear Mr. Kraft:

Subject: IC&R Review #156-84; Northwest Hillsborough Expressway (State Project #10000-1531)

The enclosed agenda item regarding the above referenced matter was considered and approved by the Clearinghouse Review Committee of the Tampa Bay Regional Planning Council at its August 27, 1984 meeting.

Please contact the Council staff if further information regarding this item is desired.

Sincerely,

Joe McFarland
Chairman
Clearinghouse Review Committee

JM/ lk

Enclosure

cc: Wendy J. Giesy
Ron Fahs

CLEARINGHOUSE REVIEW

The Florida Department of Transportation (FDOT) has requested review and comment on an early notification package regarding the Location and Design Study for the Northwest Hillsborough Expressway. This project would involve construction of a new 20-22 mile limited access highway in northwest Hillsborough County. The project would be constructed by the Tampa-Hillsborough County Expressway Authority and the Florida Department of Transportation, and would be funded by revenue bonds for the portion north of Hillsborough Avenue and jointly funded by revenue bonds (Federal Highway Administation and FDOT funds) for the portion south of Hillsborough Avenue. Construction of the project is not currently scheduled by the FDOT, however, the estimated cost of the Location and Design Study is $883,832.00. Location: Hillsborough County and City of Tampa.

Local Comments Requested From:

City of Tampa Housing, Inspections and Zoning: See attached memorandum dated August 10, 1984.
Hillsborough County Environmental Protection Commission: See attached memorandum dated August 7, 1984.
Hillsborough County Department of Development Coordination: See attached memorandum dated August 9, 1984.

Council Comments and Recommendations:

The information content of this early notification package is limited, thus reducing the clarity of project plans. Furthermore, consistency with Council policy and with Florida's Coastal Zone Management Plan can not be determined until the Location and Design Study and further biological assessments are submitted for review.

The study corridor in which the actual alignment of the Northwest Hillsborough Expressway (NHE) will be located extends approximately 20 to 22 miles beginning at I-275 (SR 93) running west toward Gunn Highway in the vicinity of Van Dyke Road and then turns south toward Waters Avenue where it runs essentially parallel with Anderson Road and eventually forks north of Hillsborough Avenue (SR 580) and continues south along the alignments of Eisenhower Boulevard (SR 589) and Dale Mabry Highway (SR 600, US 92); both legs eventually connect to I-275 (SR 93) (see attached map).

There are numerous water bodies and cypress domes within the proposed corridor. Protection of these features from encroachment by the highway and the deleterious effects of storm water run-off will be an issue during the review of the actual design study. Also, Seventeen Mile Run traverses the proposed corridor. This water body joins with Cypress Creek and eventually with the Hillsborough River. Design features which protect the quality of this water body will be an issue of concern during the review of the design study.

Clarification of funding sources and fiscal impacts on other county and city transportation projects will be an area of regional concern on which specifics will need to be provided in the study.

The study area is characterized by urbanization of former agricultural lands. The dismemberment of established communities, the condemnation of and relocation of residences and commercial activities will be an issue of concern during the review of the location and design study.

The NHE's effectiveness as a regional transportation facility which will improve accessibility, not only for Northwest Hillsborough County, but also Pinellas and Pasco Counties will be an issue of concern during the review of the location and design study.

Expressway and other high capacity facilities often create demands for intense development in areas which, earlier, offer limited potential, thus adding to the dilemma of urban sprawl and its negative effects on public facilities. The facility's impact on land use planning in the Northwest Hillsborough area will be an issue of concern during the review of the location and design study.

Revenues necessary to construct and maintain the NHE will be significant. In previous reports estimates of $350 million were given. While this expressway has been envisioned as a toll facility, it is assumed that other categories of funds shall serve as the principal source of construction and maintenance revenue. It has been noted in recent transportation improvement programs that many important capacity improvement projects have been delayed due to shortages of funds. Thus, the facility's projected cost balanced with its ability to attract vehicle trips away from overburdened roadways will become an issue of concern during the review of the location and design study.

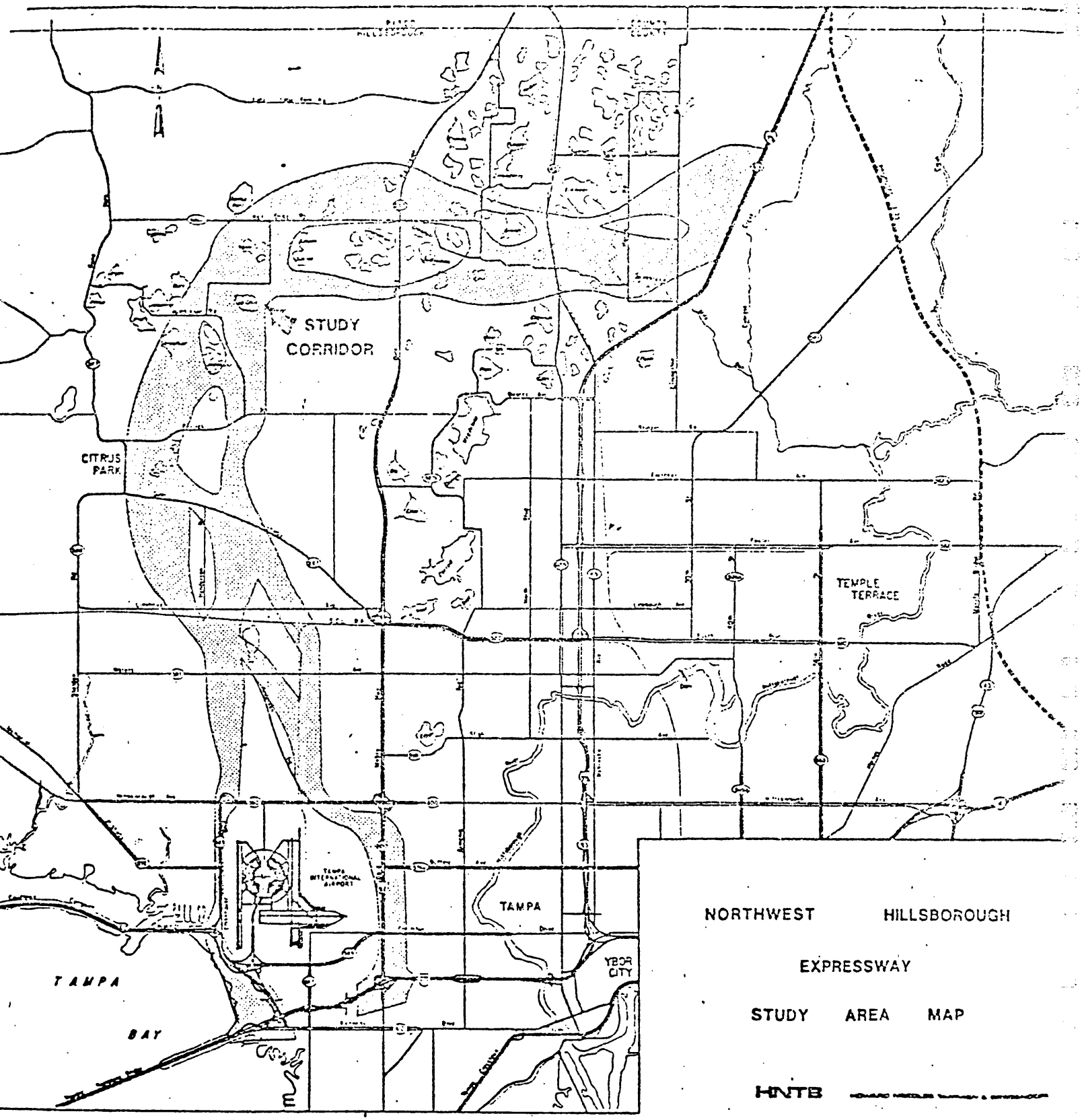
Finally, it should be noted that new high capacity facilities exert influence to redirect trips onto collector or arterial facilities which connect with it. Such trip diversion could deteriorate acceptable levels of service beyond that acceptable level. Therefore, the chosen alignment's influence to divert trips on existing collectors and arterials and the effect of these diverted trips will become issues of concern during the review of the location and design study.

It is evident that another facility is needed to reduce congestion on the overburdened road network in Northwest Hillsborough. It is therefore recommended that the [illegible] study and additional biological assessments be provided for review. However, it is also recommended that at a minimum the issues raised in this review be addressed during the course of the Location and Design Study. Further, it is recommended that any additional comments addressing local concerns be considered prior to approval.

Committee adopted August 27, 1984.

Mr. Joe McFarland, Chairman
Clearinghouse Review Committee

Please note: Unless otherwise notified, action by the Clearinghouse Review Committee is final. Please append a copy to your application to indicate compliance with clearinghouse requirements. The committee's comments constitute compliance with Florida's Intergovernmental Coordination and Review process only.



NORTHWEST HILLSBOROUGH

EXPRESSWAY

STUDY AREA MAP

HNTB

CITY OF TAMPA, FLORIDA

To: Reg Alford

From: Joe Murdoch JDM

Subject: Northwest Hillsborough Expressway Date: Aug. 10, 1984

I have reviewed the transmittal concerning the proposed Northwest Hillsborough Expressway. My concerns about the project relate to the general environmental impact of the additional highway construction on Tampa Bay and the wetlands of the area. As is noted in the transmittal you sent, the proposed corridor contains wetland areas including a portion of the watershed for Rocky Creek. This creates the potential for contamination of the Creek and, ultimately, contamination of Tampa Bay. I would urge the responsible authorities to consider any modificaitons of the alignment of the proposed highway which would avoid wetland areas.

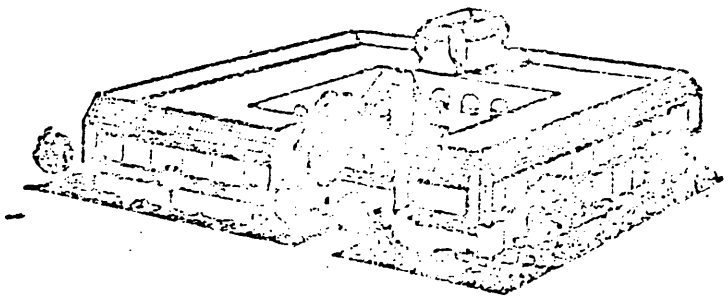
Specifically, the southeast portion of the proposed corridor lies within the City limits and would utilize the City stomwater system. East of Dale Mabry, the system drains toward the Hillsborough River and the water quality of the River and the capacity of the existing system would be a consideration.

I would like to review the specific alignment of the proposed expressway when it is available. Please call me if you have any questions.

JDM/dw:5/53

cc Mike Salmon
Steve Tindale
Chris Barquin

HILLSBOROUGH COUNTY
ENVIRONMENTAL PROTECTION
COMMISSION
E. L. BING
RODNEY COLSON
MATT JETTON
JOHN R. PAULK
JAN KAMINIS PLATT



ROGER P. STEWART
DIRECTOR

1900 - 9th AVE
TAMPA, FLORIDA 33605

TELEPHONE (813) 272-5960

MEMORANDUM

August 7, 1984

To: Sandra Eberhard, I C & R Coordinator
Tampa Bay Regional Planning Council

From: Rick Wilkins, Environmental Program Manager
Hillsborough County Environmental Protection Commission

Subject: Clearinghouse Review, I C & R #156-84;
Northwest Hillsborough Expressway (State Project #10000-1531).

The EPC staff has reviewed the "early notifiction package" for the above project and concurs with the preliminary survey of the area.

When more detailed plans are submitted, the EPC staff will review the project for potential wetland destruction and stormwater pollution. At this point, however, the plans are too general and preliminary to make a meaningful review.

RW/lw

RJW

WESTERN UNION BLDG.
P.O. BOX 1110
TAMPA, FL 33601
TEL (813) 272-5940

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HILLSBOROUGH COUNTY CITY-COUNTY PLANNING COMMISSION

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MEMORANDUM

TO: Reginald Alford, Development Coordination Dept.

FROM: James W. Stutzman, Section Chief, TLU/John Martin, TUATS

DATE: August 9, 1984

RE: Northwest Expressway Comments

The Planning Commission staff has no comments at this time but will submit comments after reviewing the EIS and Traffic and Revenues Study when submitted.

JS/lc

TO: Mr. J.C. Kraft

FROM: Sandra Eberhard, IC&R Coordinator SE

SUBJECT: IC&R Review #156-84; Northwest Hillsborough Expressway (State Project #10000-1531) (SAI# FL8407260101C), Hillsborough County and City of Tampa

DATE: September 5, 1984

Enclosed are additional comments which should receive your consideration on the above referenced IC&R review.

SE/lk

Enclosure

cc: Wendy J. Giesy
Ron Fahs ✓

GOVERNOR'S OFFICE
Planning and Budgeting
Intergovernmental Coord.
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Carrollwood News
A Jefferson-Pilot Publication

NW council calls for funds to widen Dale Mabry Hwy.

By MIRIAM GOODSPEED

An alarmed Northwest Council of Civic Associations last week voted to send letters to state and county officials requesting they immediately allocate funding for the widening of Dale Mabry Highway.

Letters urging passage of the funding will be sent to the state legislature and to the board of county commissioners. The letter to the commissioners will also oppose backing bonds and allocating gas tax money for the proposed Northwest Expressway.

Although Dale Mabry is scheduled to be widened to six lanes beginning in 1985, the Florida Department of Transportation has not yet gotten the funding for it, according to Ed Copeland, assistant county administrator in the division of public works.

In a transportation update to the council, Copeland explained that, according to his information, DOT planned to get the money by "trading" funds with other counties.

"They always felt that two to three years from now funds would be there, although they aren't there right now," said Copeland, "Hopefully, they will be."

He added that the estimated $16.5 million widening project was a state program, not county, and he suggested council members take up the funding problem with their legislature.

A major planning problem in the county is communication, he said. Not only is there a lack of communication between the DOT and the county public works department, but there is even a breakdown between various sections of the department.

"We have one group building roads while another issues building permits and no one is cognizant of each other."

This, he explained, was part of another problem — long forgotten zonings, such as the one on Wilsky Boulevard where an apartment complex sprang up before his department was even aware of it. The apartment's swimming pool lies directly in the path of a planned road.

This is not the first time such a thing has happened, he said, and it creates problems with necessary rights of way. When the county finally gets around to acquiring those rights, "we pay a small fortune for them."

Copeland also had some good news. There are, he said, four signal lights ready to go in. The light at the corner of Casey Road and Gunn Highway "is only waiting for TECO to turn on the juice." Among the rest are those scheduled on Busch Boulevard at Twin Lakes Drive and at Himes Avenue. The construction work at the Twin Lakes intersection is "mostly completed" and the new intersection at Himes Avenue will open "in a few weeks."

He called the future "bright" for county roads but added that cranking up planning "is not a piece of cake." The present county commission board is pushing to pass impact fees before they leave office,

(Continued on Page 2)

Funds for Dale Mabry

(Continued from Page 1)

and part of the impact fees would go to transportation.

Copeland said needed monies are coming from the gas tax and a bond program. There is between $10 and $15 million in the bond program, "a few more dollars than we estimated." An additional $2 million from the gas tax "will flow back to us by the next fiscal year."

When the gas tax passed last June, there were no plans as to how to use t money, "and it's taking time to devel them." It also takes time for t designers to plan the road improvemer because they are working on more th one project at once.

"Private business is good right no and they are also working for them."

Because of relatively low pay, t county is losing many of its best people private business, he said, and this lack an adequate staff also creates time lag

Lutz Civic Association

P. O. BOX 1

LUTZ, FLORIDA, 33549

DEDICATED TO GROWTH AND IMPROVEMENT OF OUR COMMUNITY

TBRPC Clearinghouse Review Committee:

I would like to present the views of the Lutz Civic Association and the Lutz Community with regard to the proposed northwest expressway.

More than 300 people attended our last meeting. They were overwhelming in their position that the expressway would do harm to the community and that it would not serve the transportation needs of our area or of the county. Following are key factors which have brought us to this conclusion:

--According to 1982 counts, we have at least 30 major thoroughfares in the county which are operating at or above capacity, including Waters at 158%, Dale Mabry at 143%, US 41 at 130%, Route 580/Memorial Highway at 128%, and Hillsborough Avenue at 146%. The expressway addresses a small portion of the problem and does not effectively solve any.

--The expressway would cost too much and would not pay for itself. In general, it would not take people where they need to go and would suffer the same ridership problems as the Crosstown. Crosstown deficits are currently running at $6-7 million per year. With debt service at 2-1/2 to 3 times that of the Crosstown, the deficit potential is enormous.

--The expressway is diverting public and government attention and delaying the real work which must be done. This compounds the real problems.

--High costs and deficits will drain money away from needed projects. This has been demonstrated by the Crosstown.

--The expressway would destroy homes and neighborhoods and do harm to the environment. We see no offsetting benefit to these human and environmental costs.

We recommend most strongly that the expressway be removed from future consideration and plans. We are opposed to the use of county, state, or other public monies to finance construction, operation, planning, or further studies. We urge the committee and our elected representatives to support these recommendations and to help us get on with the work that must be done to improve our transportation system.

Marylou Miller

Marylou Miller, President
August 24, 1984

2379 BROAD STREET, BROOKSVILLE, FLORIDA 33512-9712
PHONE (904) 796-7211 SUNCOM 684-1011

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COMPTROLLER'S OFFICE
Planning and Budgeting
SEP 8 1983
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September 15, 1983

Mr. Theodore C. Taub, Chairman
Tampa-Hillsborough County Expressway Authority
Post Office Box 1110
Tampa, FL 33601

SUBJECT: Northwest Hillsborough Expressway Phase 1 - Corridor Report, FDOT Project No.: 10000-1531; Updated: July 1983

Dear Mr. Taub:

The staff of the Southwest Florida Water Management District (SWFWMD) has reviewed the above referenced report. The study corridors presented within the subject report encompass a significant amount of land area in Northwest Hillsborough County, and offer a wide range of possible alignments for the proposed expressway. Due to this fact, staff has not attempted to conduct a detailed analysis of your current project plans. When one or more specific alignments for the proposed expressway have been identified, staff will be better able to evaluate the project's potential impacts and indicate where permits may be required.

However, to assist you in choosing the specific expressway alignment(s) for more detailed analysis, the following comments are submitted at this time for your consideration.

1. From a floodplain management viewpoint, the District encourages the selection of an alternative that will minimize construction in wetlands, which provide temporary storage of floodwaters. This is particularly important in Northwest Hillsborough County where rapid growth is likely to increase the stormwater runoff and reduce the surface storage capacity of the region.

2. We would like to inform you that we are nearing completion of a report entitled "Floodplain Information on Rocky and Brushy Creeks". When this information becomes available, we hope that it will be considered during the planning and design of this project.

3. The Preliminary Design Report for the Sweetwater Creek Watershed Project, a joint District-Hillsborough County project, has recently been completed. We hope that information contained in this report also will be considered during the planning and design of this project.

4. As mentioned on page 82 of the report, an alignment developed in any of the corridors could require a District permit. To elaborate:

   a. All corridors - A Management and Storage of Surface Waters (MSSW) permit, as specified in Chapter 40D-4, Florida Administrative Code (F.A.C.), may be required for an alignment chosen within any of the corridors if construction of the expressway acts as a dam or results in diverting water from an area exceeding forty acres. District staff will have to review the specific alignment plans to determine this.

   b. Corridor A - One area that may require a permit, either a MSSW, or a Works of the District (WOD) permit (as specified in Chapter 40D-6, F.A.C.), is the Cypress Creek Swamp area near I-75 and in the vicinity of the I-75 by-pass, further east.

   c. Corridor B - This corridor potentially includes the following Works of the District: Sweetwater Creek, Brushy Creek, Rocky Creek, and the Cypress Creek Swamp, and their associated tributaries. Permits would be required for construction in or crossing of these Works of the District.

   d. Corridor C - This corridor includes the following Works of the District: Sweetwater Creek (at two locations), Thirteenmile Creek, and Cypress Creek Swamp, and their associated tributaries. Permits would be required for construction in or crossing of these Works of the District.

   e. Corridor D - Involves the same WOD's as Corridor C.

5. Not specifically addressed within the report was the potential for District regulatory involvement for the abandonment of water wells. Any and all wells that are abandoned as a result of the project, will require a permit and will have to be abandoned in accordance with Chapter 40D-3, F.A.C., Regulation of Wells, and Chapter 17-21, F.A.C., Rules and Regulation Governing Water Wells in Florida.

6. The District has proposed to purchase lands within the Cypress Creek and Trout Creek floodplains under the State's "Save Our Rivers" program. Portions of the lands proposed for purchase lie partially within each one of the expressway's final study corridors. The primary purpose of purchasing these lands is to protect the flood storage - flood conveyance functions of the floodplain. This proposed purchase should be considered in the final selection and design of a more specific expressway alignment(s).

7. The District owns and/or operates a number of water control structures on various water bodies located in northwest Hillsborough County. Selection and design of a more specific expressway alignment(s) should take into consideration the operation and maintenance requirements of these facilities, including maintaining access to the same.

8. The District Governing Board has adopted management levels for numerous lakes within northwest Hillsborough County. Final alignment and design of the proposed expressway should be coordinated such that the expressway will not affect these lakes from fluctuating within their management levels.

9. The final expressway alignment should be planned so that the facility will not contribute to the degradation of surface water quality of lakes and streams.

We hope these comments will prove useful in the selection of more specific expressway alignments to be considered for further detailed analysis. District staff would welcome discussing these or any other relevant issues of concern with the Authority members or staff, the DOT, or the project consultants.

Please be advised that the staff comments stated above have not been presented to the District Governing Board. This review does not stand in lieu of normal permitting procedures, nor does it necessarily represent the position or opinion of the Governing Board.

Thank you for this opportunity to comment; and if I may be of further assistance, please contact me.

Sincerely,

Richard S. Owen

RICHARD S. OWEN, Planner
Planning & Performance Evaluation

RSO:kag

cc: Hillsborough River Basin Board Members
Northwest Hillsborough River Basin Board Members
bcc: L. R. Cannon Bruce Wirth
Bob Gordon
Mike Holtkamp

State of Florida
DEPARTMENT OF ENVIRONMENTAL REGULATION

INTEROFFICE MEMORANDUM

For Routing To District Offices And/Or To Other Than The Addressee

To: _____ Locn.: _____
To: _____ Locn.: _____
To: _____ Locn.: _____
From: _____ Date: _____
Reply Optional [ ] Reply Required [ ] Info. Only [ ]
Date Due: _____ Date Due: _____

TO: Suzanne Walker

FROM: Allan Hooker AH

DATE: August 9, 1984

SUBJECT: DOT Project Number 10000-1531;
T.P.I. Number 113669;
Northwest Hillsborough Expressway

Given the broad scope of the proposed corridor it would be premature for the Dredge and Fill Section to make specific comments about the Expressway's impact on wetlands and overall permissibility.

Project application review will include wetland type and nature to be affected, productive habitat considerations, mitigation quantity and quality, navigation where applicable, elevational data, and means of water quality assurances.

Stormwater treatment as per 17-25, Florida Administrative Code, will be reviewed by the Department also.

AH/ls
cc: Wendy Giesy

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

SEP 18 1984

4PM-EA/CMH

Mr. C.L. Irwin, Administrator
Environmental Impact Review
Florida Department of Transportation
Hayden Burns Building
605 Suwannee Street
Tallahassee, Florida 32301-8064

SUBJECT: State Project No. 10000-1531
Northwest Hillsborough Expressway
Hillsborough County, Florida
EPA Log Number A-FHW-E40650-FL

Dear: Mr. Irwin:

We have reviewed your "Advance Notification" regarding the above referenced proposed Northwest Hillsborough Expressway in Hillsborough County, Florida which is to be primarily constructed on new location. EPA also attended the Environmental Scoping meeting on April 17, 1984, in Tampa and met with the Florida Department of Transportation (DOT) and various consultants that presumably will assist in preparing the probable Draft/Final Environmental Impact Statement (DEIS/FEIS). Because of the still preliminary nature of the proposed project, it is difficult to make substantive comments at this time. However, based on the Advance Notification and the Scoping meeting, we are able to offer some generic comments and recommendations as well as some more specific comments.

As you are aware, generic highway projects have the potential for causing ecological problems. In general, project environmental impacts should be avoided/minimized and unavoidable impacts should be feasibly mitigated. For generic highway projects, EPA is primarily concerned with the potential for adverse effects on wetlands, water quality, air quality, and noise. We also encourage your coordination with other agencies for their review of other relevant environmental or non-environmental parameters.

EPA generally prefers upgrading an existing highway alignment as opposed to construction of alignment on new location such as the proposed Northwest Hillsborough Expressway. Although upgrading an existing alignment is not without impact (e.g., displacements), it is often less disruptive than a new alignment in a strict environmental sense (e.g., habitat loss). We encourage your coordination with EPA and other appropriate review agencies such as the U.S. Fish and Wildlife Service and the Soil Conservation Service concerning corridor and alignment alternatives on new location and additional right-of-way acreage.

We recommend consideration of environmental impacts, non-environmental aspects (e.g., safety, traffic flow), societal impacts (e.g., displacements), historical factors, archaeological aspects, and other considerations in selecting an alignment.

As recommended in the Scoping Meeting, EPA would prefer (and still does) the selection of Corridor C or D (near Tampa), as opposed to A or B (further north of Tampa) in a strict environmental sense, because of the increased potential for wetland disturbance further north of Tampa. However, we do wish to recognize the impact of displacements, which would be more numerous for alignments within Corridor C or D closer to Tampa and that Corridor B has been selected in a Public Hearing. If alignments in Corridor B will be pursued, EPA would expect selection of an alignment that would avoid wetlands whenever safe and feasible. Wetland loss, which was roughly estimated in the Scoping Meeting at up to 40 acres, should be minimized with unavoidable losses being mitigated. EPA would be willing to work with the Florida DOT and consultants regarding methods of mitigation. Wetlands should also be bridged, as opposed to filled, whenever possible. All wetland and floodplain construction, as you know, must be consistent with Executive Order 11988 and 11990 concerning floodplain and wetland development, respectively, and may require a Section 404 permit from the U.S. Army Corps of Engineers. EPA also reviews these permit applications. A U.S. Coast Guard permit may also be necessary for tidal or commercially navigable waters as well as waters susceptible to commercial navigation.

As indicated in the Scoping Meeting, all expressway stream crossings must be identified. This should be done for all alignments. The environmental consequences for highway stream crossings can be minimized. This requires that effective Best Management Practices such as erosion control (silt curtains, hay bales, early revegetation, etc.) will be instituted/maintained and supervised, that bridges will be made long enough to adequately span the stream/wetland/floodplain and not impede flow, that any fill for approaches will be minimized, that side slopes adjacent to waterways or any wetlands will be steep (2:1) but protected by guardrails or other safety barriers, that site-specific aspects of the crossings will be considered, that the project is not of a significant magnitude, and that no stream channelization is implemented. The local fisheries potential of affected streams should be determined and presented. Construction should also preferably proceed during low-flow conditions.

Secondary development impacts associated with new alignments are also of concern, especially if they affect wetlands, water quality, and other environmental parameters. It is expected that secondary impacts could potentially affect wetlands and water quality if an alignment within Corridor B would be implemented.

To facilitate your planning, we have enclosed a generalized list of "Special Concerns" that we feel are important for generic highway projects. (This list of concerns is an updated version of the one presented to the Florida DOT in the Scoping Meeting.) Listed are concerns involving wetlands/water quality (e.g., compliance with Executive Order 11988 and 11990; erosion control; limited filling; no channelization), air quality (e.g., compliance with NAAQS, SIP, PSD; carbon monoxide and ozone levels), and noise (compliance with noise abatement criteria; determination of ambient/predicted noise levels and noise increases along the entire project corridor). Construction impacts (e.g., erosion equipment noise) are also important and should be minimized.

We appreciate your early coordination on this project. As more information is provided, we would be pleased to update this preliminary review from an EPA environmental standpoint. We would be interested in reviewing subsequent NEPA documents such as an Environmental Assessment (EA), Finding of No Significant Impact (FONSI), and/or a Draft and Final Environmental Impact Statement (DEIS/FEIS). If pursued, we assume that this proposed project will ultimately become elevated to the DEIS/FEIS level.

Sincerely yours,

A. Michael Lucas

for Sheppard N. Moore, Chief
Environmental Review Section
Environmental Assessment Branch

Attachment: "Special Concerns"

cc: J.C. Kraft, Chief
Bureau of Environment
Florida DOT
605 Suwannee Street, MS37
Tallahassee, Florida 32304

Wendy J. Giesy
District Environmental Administrator
Florida DOT
P.O. Box 1249
Bartow, Florida 33830

The following list is a generalized synopsis of special concerns relevant to generic highway projects.

Wetlands/Water Quality

- Protection of wetlands pursuant to the Section 404 Guidelines of the Clean Water Act.
- Avoiding/minimizing wetland activities such as:
  - * channel realignments
  - * dredging and filling
  - * flow alterations causing wetland drainage or flooding
  - * erosion and siltation
  - * habitat loss
  - * disturbance of rare and endangered species
- Conformance with Executive Order 11988 ("Floodplain Management") and Executive Order 11990 ("Protection of Wetlands"), if federal funds are involved.
- Avoidance of environmental impacts and feasible mitigation for unavoidable impacts (e.g., wetland creation and restoration).
- Construction impacts (e.g., erosion)
- Public complaints concerning construction-related wetland alteration and state mechanisms to properly address them.

Air Quality

- Conformance with National Ambient Air Quality Standards (NAAQS) of the Clean Air Act to determine whether a site is located in an attainment, non-attainment, or unclassifiable area.
- Conformance with the State Implementation Plan (SIP)
- Conformance with the Prevention of Significant Deterioration (PSD) regulations.
- Conformance with EPA and state modeling guidance.
- Existing and predicted levels of various relevant air-quality parameters such as carbon monoxide (CO).
- Construction impacts (e.g., construction machinery; open burning)
- Public complaints concerning construction-related fugitive emissions and state mechanisms to properly address them.

Noise

- Conformance of on-site existing (ambient) and project predicted noise levels with noise abatement criteria for commercial/institutional receptors (L_{10}=75dBA; Leq=72 dBA) and sensitive residential/institutional receptors (residences, churches, schools, etc.: L_{10}=70 dBA; Leq=67dBA). Preferred descriptors for existing, predicted, and noise abatement levels are $L_{eq(1)}$ or L_{10}. The hour (1) of the $L_{eq\ (1)}$ descriptor should be defined (e.g., peak rush hour). $L_{eq(24)}$ values are also helpful in association with $L_{eq(1)}$ data.

- Preferrably, determinations for predicted noise levels should be made for all noise receptors along the entire highway corridor (as opposed to just specific sites along the corridor) affected by the project and should be compared with existing (ambient) noise levels. The number of affected noise receptors should be arranged into the following groups:

  * receptors receiving an increase of 5-10 dBA
  * receptors receiving an increase of 11-15 dBA
  * receptors receiving an increase of over 15 dBA
  * receptors receiving an increase above the noise abatement criteria.

  These groups in turn should be organized by kinds of receptors (commercial/industrial versus residential/institutional), although a grand total of affected receptors should also be calculated. Overlaps within the above four groups should be indicated to avoid duplication which would result in an inaccurate total number of affected receptors (e.g., a receptor could experience a 5-10 dBA increase and could also be above the noise abatement criterion for that kind of receptor).

- Project-related noise level elevations: all project-generated noise increases above the existing site noise level are considered important, particularly if above abatement levels and/or if long termed. An increase of 5dBA is considered important and a 10dBA increase is considered significant, even if the final elevated noise levels are below abatement criteria. Feasible mitigation for project-generated increases above the abatement criteria should be accomplished and feasible mitigation for increases of 10 dBA or more (below the abatement criteria) should be considered.

- Additional helpful information includes the existing and project predicted percentage of trucks using the old/new highway.

- Construction impacts (e.g., construction machinery, pile driving, blasting)

- Also of concern are public complaints concerning construction-related noise emissions and state mechanisms to properly address them.

APPENDIX E

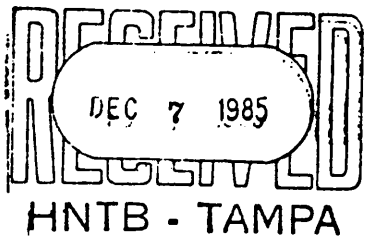
TAMPA URBAN AREA
METROPOLITAN PLANNING ORGANIZATION
LETTER DATED DECEMBER 3, 1985

403 NORTH MORGAN STREET
P.O. BOX 1110
TAMPA FL 33601
(813) 272-5940

WILLIAM MERIWETHER
CHAIRMAN
JOSEPH J. KUBICKI
ADMINISTRATOR

MPO TAMPA URBAN AREA
METROPOLITAN PLANNING ORGANIZATION

December 3, 1985



Mr. Jim Kennedy, District Director
for Tampa Bay
Florida Department of Transportation
c/o HARTline
4305 E. 21st Avenue
Tampa, FL 33605

Dear Jim:

In response to our discussion last week concerning the history and current status of the Northwest Expressway and the Metropolitan Planning Organization's Long Range Transportation Plan, I would like to provide the following.

On August 24, 1981, the MPO adopted its Long Range Transportation Plan with a future design year of 2000. This plan reflected the development of an expressway facility through the northwest area of the County as one way of addressing the transportation needs of that area. Although arterial facility traffic solutions were evaluated, the MPO decided that the most prudent approach to the development of traffic facilities in this area was through the development of an expressway facility which would be toll financed. As such, a northwest expressway extending from I-275 to I-75 was shown on the plan for purposes of more detailed studies by the State and Tampa/Hillsborough County Expressway Authority.

In early 1985, the MPO began a routine review of the Long Range Plan and update to the year 2010. As a part of the development of this plan, we have had the benefit of the detailed planning studies of the Expressway Authority and improved socio-economic and land development information for the northwest area. As a result, we have prepared and have received MPO approval for final testing of a road plan which maintains the Northwest Expressway between Dale Mabry Highway (SR 597) and I-275, but replaces that portion of the proposed expressway between SR 597 and I-75 with an at-grade arterial highway. This proposal is consistent with the detailed studies of the Expressway Authority and is supported through network analysis and future traffic projections of the MPO.

The MPO and its staff fully support the activities of the Expressway Authority and the State to date in the evaluation of this project and looks forward to the completion of the detailed financial studies as an essential element of the projects ultimate feasibility. The MPO

will again review the project at the time of the completion of the financial feasibility analysis to determine its effect, if any, on the road funding program and the financial feasibility of the adopted Long Range Plan.

If I can be of any further assistance in clarifying the position of the MPO and its past actions, please feel free to contact me.

Sincerely,

Joseph J. Kubicki,
Staff Administrator

JJK:lf

cc: Ray Speer
MPO Members
Dale Patton

APPENDIX F

FLORIDA DEPARTMENT OF STATE
DIVISION OF ARCHIVES
HISTORY AND RECORDS MANAGEMENT
LETTER DATED DECEMBER 18, 1985

FLORIDA DEPARTMENT OF STATE
George Firestone
Secretary of State
DIVISION OF ARCHIVES,
HISTORY AND RECORDS MANAGEMENT
The Capitol, Tallahassee, Florida 32301-8020
(904) 488-1480

December 18, 1985

In Reply Refer to:

Mike Wisenbaker
Historic Sites Specialist
(904) 487-2333

Mr. P.E. Carpenter
Federal Highway Administration
227 N. Bronough St., Room 2015
Tallahassee, Florida 32301

RE: Your Letter and Attachment of December 2, 1985
Cultural Resource Assessment Review Request,
"Cultural Resource Assessment Survey of the
Proposed Northwest Hillsborough Expressway,
Hillsborough County, Florida.

Dear Mr. Carpenter:

In accordance with the procedures contained in 36 C.F.R., Part 800 ("Procedures for the Protection of Historic and Cultural Properties"), we have reviewed the above referenced project for possible impact to archaeological and historical sites and properties listed, or eligible for listing, in the National Register of Historic Places. The authorities for these procedures are the National Historic Preservation Act of 1966 (Public Law 89-665) as amended by P.L. 91-243, P.L. 93-54, P.L. 94-422, P.L. 94-422, P.L. 94-458 and P.L. 96-515, and Presidential Executive Order 11593 ("Protection and Enhancement of the Cultural Environment").

We have reviewed the results of the above cited survey which was directed by Joan Deming of Archaeological Consultants, Inc. On the basis of the information contained in the survey report, we concur with Ms. Deming that prehistoric sites 8Hi2151-2153, as well as the five identified non-site loci, are not eligible for listing in the National Register of HIstoric Places.

It is, therefore, the opinion of this office that the Northwest Hillsborough Expressway will have not effect on sites eligible, or potentially eligible, for listing in the National Register of Historic Places. Thus, the project may proceed without any further involvement from this office.

If you have any questions concerning our comments, please do not hesitate to contact us.

Your interest and cooperation in helping to protect Florida's archaeological and historic resources are appreciated.

Sincerely,

George W Percy
State Historic
Preservation Officer

GWP/Wmw

APPENDIX G
RESPONSES TO DRAFT ENVIRONMENTAL IMPACT STATEMENT
WITH DISPOSITIONS

Letter Code Number	Date	Agency	Page No. Agency Response	Page No. Disposition
FEDERAL				
F-1	Feb. 21, 1986	United States Department of the Army, Jacksonville District, Corps of Engineers	G-1	G-66
F-2	April 4, 1986	U.S. Department of Transportation, Federal Aviation Administration, Orlando Airports District Office	G-2	G-66
F-3	Feb. 20, 1986	U.S. Department of Transportation, United States Coast Guard, Commander, Seventh Coast Guard District	G-4	G-66
F-4	March 25, 1986	United States Department of Commerce, National Oceanic and Atmospheric Administration, National Marine Fisheries Service	G-5	G-66
F-5	April 4, 1986	United States Environmental Protection Agency, Region IV	G-7	G-67
F-6	April 10, 1986	United States Department of the Interior, Office of Environmental Project Review, Southeast Region	G-18	G-69
STATE				
S-1	March 6, 1986	State of Florida, Florida Department of Agriculture & Consumer Service	G-20	G-69
S-2	Feb. 28, 1986	Florida Department of State, Division of Archives, History and Records Management	G-21	G-69
S-3	March 4, 1986	State of Florida, Department of Health and Rehabilitative Services	G-22	G-69
S-4	March 31, 1986	State of Florida, Department of Commerce, Division of Economic Development	G-23	G-69

Letter Code Number	Date	Agency	Page No. Agency Response	Page No. Disposition
STATE				
S-5	March 18, 1986	Florida Game and Fresh Water Fish Commission	G-25	G-69
S-6	April 4, 1986	State of Florida, Department of Environmental Regulation	G-29	G-69
S-7	May 6, 1986	State of Florida, Office of the Governor	G-35	G-70
LOCAL				
L-1	March 14, 1986	Hillsborough County Aviation Authority	G-37	G-71
L-2	March 13, 1986	Tampa Urban Area Metropolitan Planning Organization	G-48	G-72
L-3	March 21, 1986	County of Hillsborough, DDC	G-49	G-72
L-4	March 27, 1986	Tampa Bay Regional Planning Council	G-51	G-72
L-5	March 25, 1986	Hillsborough County Environmental Protection Commission	G-55	G-72
L-6	April 10, 1986	Southwest Florida Water Management District	G-58	G-73
L-7	May 20, 1986	County of Hillsborough, County Engineer	G-59	G-73

DEPARTMENT OF THE ARMY
JACKSONVILLE DISTRICT, CORPS OF ENGINEERS
P. O. BOX 4970
JACKSONVILLE, FLORIDA 32232-0019

February 21, 1986

FEB 26 1986

REPLY TO
ATTENTION OF
Environmental Resources Branch
Planning Division

Rec'd
TPA Bay
3/5/86

Mr. J. C. Kraft, Chief
Bureau of Environment
Florida Department of Transportation
605 Suwannee Street, Mail Station 37
Tallahassee, Florida 32301

Dear Mr. Kraft:

In accordance with the request of the Florida Department of Transportation of February 4, 1986, we have reviewed the Draft Environmental Impact Statement on the Northwest Hillsborough Expressway, State Job Number 10000-1531, Federal Aid Number M-4047(40), Work Program Item 1113669, Hillsborough County, Florida.

We appreciate the opportunity afforded us for review of the document. The following comment is provided for your consideration.

In reference to Page 1-5 of the DEIS, a list of other Federal actions required because of the proposed action is cited. It should be noted that U.S. Army Corps of Engineers permits may be required if construction operations result in the discharge of fill material into isolated wetlands and causes the loss or degradation of wetlands that could affect interstate commerce. **1.**

Sincerely,

A. J. Salem

A. J. Salem
Chief, Planning Division

Copy Furnished:

Commander, U.S. Army Corps of Engineers (DAEN-CWP-P)
Commander, South Atlantic Division (SADPD-R)

KDOT

U.S. Department of Transportation
Federal Aviation Administration

Orlando Airports District Office
4100 Tradecenter Street
Orlando, Florida 32812

APR 4 1986

RECEIVED
APR 7 1986
OF AVIATION

Mr. C. L. Irwin, Administrator
Environmental Impact Review
Florida Department of Transportation
Haydon Burns Building
605 Suwannee Street
Tallahassee, Florida 32301-8064

RECEIVED
APR 9 1986

Subject: Draft Environmental Impact Statement
Work Program Item 1113669
State Job Number 10000-1531
Federal Aid Number M-4047 (40)
Hillsborough County, Florida

Dear Mr. Irwin:

The draft environmental impact statement has been reviewed, and our comments are as follow.

1. 1. It is recommended that you work closely with the Hillsborough County Aviation Authority regarding any possible impact on the Tampa International Airport.

2. 2. The Eisenhower West alignment appears to have the potential for impacting the Instrument Landing System on Runway 36L and perhaps the approach to Runway 9 and the departures on Runway 18R and 27 at Tampa International Airport. Unless we have precise engineering data, we cannot make a positive statement.

3. 3. The environmental documents indicate the use of airport property for highway right-of-way for the proposed Eisenhower West alignment. The airport property is currently obligated for airport use under agreements with the Federal Government. The use of airport property for highway right-of-way will require prior release of the property from existing agreements by the Federal Aviation Administration. We cannot make a positive commitment to approve release of the property until we have precise engineering data for further review.

4. 4. The environmental documents indicate that the cost of highway right-of-way is comparatively low due to the utilization of an existing corridor (Eisenhower Boulevard) and the proposed use of existing Tampa International Airport right-of-way on the east side of the project. One condition, among others, for our approval to release the property from existing agreements will be that fair market value be obtained for property needed for highway right-of-way.

F-2

50 Years of Air Traffic Control Excellence

5. The construction should not be allowed to create a hazard to air navigation with regard to the Tampa International Airport. 5.

6. Any light standards to be located in proximity to the Tampa International Airport should be shielded to prevent interference with pilot vision. 6.

7. The proposed routing of the roadway for the Eisenhower West alignment will impact the Approach Light System (ALS) serving Runway 36L at Tampa International Airport. A reimbursable agreement between the FAA and the Florida Department of Transportation will be required to cover the costs incurred by the FAA as a result of the roadway work. 7.

The reimbursable process normally takes from eight to twelve months and should be planned for accordingly. A signed reimbursable agreement will be required prior to beginning any design work for the ALS relocation.

Let me know if you have any questions concerning these comments.

Sincerely,

Tommy J. Pickering

Tommy J. Pickering
Airport Planning and
Development Specialist

cc:
Mr. William J. Connors, Jr.
Mr. Stewart Mast
FDOT, District No. 1, Bartow

U.S. Department of Transportation
United States Coast Guard

Commander
Seventh Coast Guard District

Federal Bldg.
51 S.W. 1st Ave
Miami, FL 33130-1681
Staff Symbol: (oan)
Phone: (305) 536-4103

Rec'd Tpa Bay 3/5/86

16591/FL
Serial: 0254

FEB 2 0 1986

Federal Highway Administration
Attn: Mr. C. L. Irwin, Administrator
Environmental Impact Review
605 Suwannee Street
Tallahassee, FL 32301-8064

Dear Mr. Irwin:

This responds to your letter of February 4, 1986 requesting our review and comments to the Northwest Hillsborough Expressway Draft Environmental Impact Statement (DEIS) (FED Aid #M-4047(40)).

Since the proposed project will not require any Coast Guard bridge permit action, I am returning the copies of the DEIS without any comments.

Sincerely,

A. CATTALINI
Captain, U. S. Coast Guard
Chief, Aids to Navigation Branch
Seventh Coast Guard District
By direction of the District Commander

Copy: Federal Highway Administration, Tallahassee; Attn: Mr. P. E. Carpenter
Federal Highway Administration, Tallahassee; Attn: Mr. E. Rice
Florida Department of Transportation, Tampa; Attn: Mr. J. G. Kennedy
Florida Department of Transportation, Bartow; Attn: Mr. W. Lasseter

F-3

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
Washington, D.C. 20230

OFFICE OF THE ADMINISTRATOR

March 25, 1986

RECEIVED
MAR 28 1986

Mr. J. C. Kraft
Chief, Bureau of Environment
Florida Department of Transportation
605 Suwannee Street
Tallahassee, FL 32301

Dear Mr. Kraft:

This is in reference to your draft environmental impact statment for Northwest Hillsborough Expressway, Hillsborough County, Florida. Enclosed are comments from the National Oceanic and Atmospheric Administration.

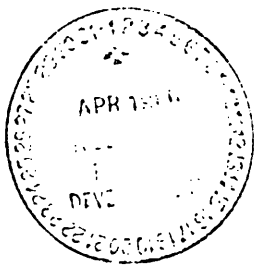
We hope our comments will assist you. Thank you for giving us an opportunity to review the document.

Sincerely,

David Cottingham

David Cottingham
Ecology and Conservation Division

Enclosure



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE

Southeast Regional Office
9450 Koger Boulevard
St. Petersburg, FL 33702

March 21, 1986

F/SER113:MT
(904) 234-2492

Mr. J. C. Kraft
Chief, Bureau of Environment
Florida Department of Transportation
605 Suwannee Street
Tallahassee, FL 32301

Dear Mr. Kraft:

Reference is made to the Draft Environmental Impact Statement (DEIS) for the Northwest Hillsborough Expressway, Hillsborough County, Florida (State Job Number 1000-1531).

We have reviewed the document. In our opinion, the document does not adequately address the impact to fishery resources.

1. Estuarine, riverine, and many palustrine wetland systems directly contribute to estuarine productivity. Estuarine productivity includes habitat for fish and invertebrate species. detritus production, nutrient cycling, and water quality enhancement. The DEIS should address this matter relative to the project's impact.

2. Also, it is not clear as to what mitigation is being provided. We recommend that a mitigation plan be developed and incorporated into a supplement to the DEIS or into the FEIS. This mitigation plan should include specifics with regard to size, location, species to be established, and survival assurance.

We are available to work with you on this matter. If you have any questions, please call our Panama City Area Office at (904) 234-2492.

Sincerely yours,

Richard J. Hoogland
Assistant Regional Director
Habitat Conservation Division

F-4

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

By Express Mail 4/7/86

APR 4 1986

4PM-EA/CMH

Mr. J.C. Kraft, Chief
Bureau of Environment
Florida Department of Transportation
605 Suwannee Street
Tallahassee, Florida 32301

SUBJECT: Northwest Hillsborough Expressway, Interstate 275 to S.R. 597 (Dale Mabry Highway), Hillsborough County, Florida

EPA Log Number D-FHW-E40691-FL (formerly in FHW-E40650-FL series)

Dear Mr. Kraft:

Pursuant to Section 309 of the Clean Air Act and Section 102(2)(C) of the National Environmental Policy Act (NEPA), the U.S. Environmental Protection Agency (EPA) has reviewed the Draft Environmental Impact Statement (DEIS) for the above-referenced proposed project. Our review has emphasized potential adverse effects to wetlands, floodplains, water quality, noise levels, air quality, and hazardous waste problems attributable to the proposed project. Secondary impacts, project need, and alternative analysis aspects were also addressed. EPA has previously participated in an early coordination scoping meeting in Tampa on April 17, 1984. We have also provided comments dated September 18, 1984, for the "Advance Notification" package of the proposed project.

EPA rates this DEIS an "EC-2" (Environmental Concerns; Insufficient Information). Our rating is based primarily on the projected wetland losses (approximately 65-67 acres), noise impacts, and air quality concerns. The Final Environmental Impact Statement (FEIS) should therefore provide information in several areas, including:

- A wetland mitigation plan coordinated with EPA and other resource agencies such as the Florida Department of Environmental Regulation (FDER), and a commitment by the Federal Highway Administration/ Florida Department of Transportation (FHWA/FDOT) to implement such a plan; **1.**
- A more complete no-build analysis for noise impacts; **2.**

F-5

2.
- Methods to feasibly mitigate noise levels (including preliminary designs and costs) for receptors substantially elevated (10 dBA and greater) above existing noise levels and/or that have predicted resultant levels approaching, equaling, or exceeding their FHWA Noise Abatement Criteria guidelines, with a commitment to feasibly mitigate at specific sites;
- If noise mitigation is not considered feasible by FHWA/FDOT for some of the sites impacted as described above, a more thorough discussion as to the basis for such a decision is requested;

3.
- A total hydrocarbon (HC) pollutant burden analysis for the build and no-build alternatives and an intersectional air quality analysis using a queuing model; and

4.
- Site assessments for any hazardous waste sites identified within the rights-of-way of the build alternatives.

These and our other areas of concern are further discussed in the enclosed "Detailed Comments."

Given the Railroad and LeClare Lake Alignment alternatives, EPA prefers the Lake LeClare Alignment. Although predicted noise impacts appear to be greater for the Lake LeClare Alignment, the direct and secondary wetland impacts will likely be less. EPA presently has no particular environmental preference for the North Termini or South Termini alternative segments.

We were pleased to review the DEIS and look forward to receiving and reviewing the FEIS. We also would be pleased to discuss your planned responses to our comments prior to your issuance of the prospective FEIS. Should you have questions, you may wish to call Chris Hoberg (404-347-7901 or FTS 257-7901) of my staff.

Sincerely yours,

Sheppard N. Moore

Sheppard N. Moore, Chief
NEPA Review Staff
Environmental Assessment Branch

Enclosure: "Detailed Comments"

cc: See attached

F-5

cc:

Mr. P.E. Carpenter, P.E.
Division Administrator
Federal Highway Administration
227 N. Bronough Street
Room 2015
Tallahassee, Florida 32302

Mr. Joseph D. Carroll, Jr.
Field Supervisor
U.S. Fish and Wildlife Service
Ecological Services
P.O. Box 2676
Press-Journal Building
1323 21st Street
Vero Beach, Florida 32960

Mr. Richard Hoogland, Chief
Environmental Assessment Branch
National Marine Fisheries Service
SE Regional Office
9450 Koger Boulevard
St. Petersburg, Florida 33702

Mr. James G. Kennedy, P.E.
Deputy District Engineer (Tampa Bay)
Florida Department of Transportation
4305 East 21st Avenue
Tampa, Florida 33605

Mr. James W. Mitchell
State Conservationist
U.S. Department of Agriculture
Soil Conservation Service
401 S.E., 1st Avenue
Gainesville, Florida 32602

Colonel Charles T. Myers, III
District Engineer
U.S. Army Corps of Engineers
Jacksonville District
P.O. Box 4970
Jacksonville, Florida 32232

Mr. Howard Rhodes, P.E., Director
Division of Environmental Programs
Florida Department of
Environmental Regulation
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32301-8241

Mr. Bill Van Luchene
Federal Highway Administration
Regional Office
1720 Peachtree Road, N.W.
Suite 300
Atlanta, Georgia 30367

DETAILED COMMENTS

Wetlands/Floodplains/Water Quality

This proposed project must be consistent with Executive Order 11988 and 11990 concerned with development in floodplain and wetland areas, respectively. It must also be consistent with Section 404(b) of the Clean Water Act.

The proposed alternative alignments would impact between approximately 65 and 67 acres of wetlands (Table 6-10) (approximately 80 acres of wetlands have been identified in the corridor area in the DEIS study). We note that the DEIS (pg. 1-5) lists "Impacts on Wetlands" as one of the project "Areas of Controversy." The proposed project involves wetland impacts in several highway segments.

The Eisenhower/West Alignment of the proposed project would impact approximately 44 acres of wetlands, including 8 acres of saline wetlands, 5.5 acres of herbaceous marsh, and 30.5 acres of primarily hardwood swamp. Tidal mangrove habitat and wetland hardwood habitat should be feasibly avoided and filling should be minimized. Unavoidable losses in this segment should be mitigated by (1) in-kind, 1:1 creation of tidal mangrove habitat near the area of impact and as close to Tampa Bay as possible; (2) enhancement of the saline mangrove habitat by increasing the flushing to the remaining black mangrove wetlands at higher elevation, and (3) in-kind, 1:1 creation of wetland hardwood habitat along Rocky Creek.

1.

The Railroad Alignment of the proposed project would impact approximately 17.5 acres of freshwater marsh and swamp. Based on the DEIS, no riverine wetlands will be impacted. The alternative segment to the Railroad Alignment is the Lake LeClare Alignment which would impact approximately 13 acres of wetlands. The majority of these wetlands are palustrine (one lacustrine system) and are in closer proximity to Tampa's urban extent. Of the two alternative alignments, EPA prefers the Lake LeClare Alignment since (1) there are less wetland acreages impacted, (2) understory wetland vegetation at site #60 of the Railroad Alignment appear wetter than those listed for the Lake LeClare Alignment, and (3) wetlands of the Lake LeClare Alignment are located closer to urbanized Tampa and appear to be more disturbed than those of the Railroad Alignment.

Approximately 5.5 acres of wetlands would be impacted along the segment of the proposed project designated as the Railroad/Lake LeClare Alignment. Wetlands associated with the Turkey Ford Pond system are valuable, functional wetlands. Impacts should be minimized through maximizing side slopes (2:1) to minimize the use of roadway fill. Unavoidably lost wetlands should be replaced on site, preferably within the Rocky Creek system. Wetlands outside the Turkey Ford Pond system are described in the DEIS as sparsely vegetated stock pond wetlands and as such are isolated and should be of lesser functional value.

The final segment of the proposed project is divided into two alternative alignments, the North Termini and the South Termini. Based on the DEIS, wetlands located along these alignments have previously been disturbed. However, we recommend that the remaining wetlands along this segment be included in the surface water management system of the proposed project and should not be further drained through existing systems serving Dale Mabry Highway. EPA has no particular environmental preference for the North or South Termini alternative segments, so that selection could primarily involve non-wetland aspects such as public cost and safety.

Minimizing wetland and floodplain impact for the presented segments should include avoidance of identified areas and mitigation through wetland creation, enhancement, and/or restoration of unavoidably lost areas. Wetland replacement sites should be located along the proposed route, within or outside the right-of-way (ROW), in areas that will function as wetlands with a minimum of maintenance. Generally, palustrine and lacustrine systems associated with highway construction in an urban area exhibit signs of disturbance with concurrent loss of function. Riverine systems appear to maintain form and functin with less maintenance if fringing wetlands and waterflows are maintained or increased. For these reasons, EPA recommends replacing all functional wetlands eliminated by highway construction on an acre for acre basis along Rocky Creek. Wetland replacement design should be based on obtaining the most wetland functions possible per unit area and modeled after undisturbed creek systems. As to determining what constitutes a functional wetland (e.g., water quality, flood storage, and/or habitat functions), we believe that this is best determined in the field by local state and federal employees familiar with the state 403 or federal 404 program. EPA representatives are available to assist in such determinations. Additionally, with detailed preliminary construction plans, it may be possible to avoid much of the wetlands identified as functional through minor modifications (e.g., increase the side slopes as proposed for wetland site #56B or slight shifts in alignment, i.e., fine-tuning at the field level), before expensive final design drawings and surveys are made. 1.

EPA requests that a wetland mitigation plan coordinated with EPA and other resource agencies such as the FDER be provided in the FEIS. Also, if not already completed, we suggest that the FDOT contact the U.S. Army Corps of Engineers so that a wetland jurisdictional determination can be made at the discretion of the Jacksonville District. EPA believes such jurisdictional determinations should be conducted for all alternatives. Results should be provided in the FEIS.

Best Management Practices (BMP's) regarding erosion control must also be implemented, maintained, and supervised. BMP's include early revegetation, use of staked hay bales and silt

fences, and limiting the amount of erodible acreage present at any one time. Erosion control is particularly important near areas of wetlands, lakes, and other water bodies (e.g., at stream crossings). EPA also recommends that:

- Bridges will be designed to adequately span the floodplain and not impede flow;
- The use of fill will be minimized for bridge approaches where floodplains or wetlands are affected;
- Side slopes adjacent to waterways/floodplains will be designed at a 2:1 slope whenever feasible;
- Stream channelization will be avoided;
- Bridge construction will be conducted during low-flow conditions; and
- Wetlands will not be used as stockpile areas during prospective construction.

1.

The DEIS indicates that the project area has numerous wetlands and small lakes, and that Fish Creek, Sweetwater Creek, and Rocky Creek will be crossed. Additional information should be provided in the FEIS regarding local aquatic communities, especially potential freshwater and estuarine fisheries, and expected expressway impacts on these communities. If special habitat areas (e.g., spawning or foraging areas) exist at proposed stream crossings, crossing sites should be moved downstream to avoid these areas.

Noise

We offer the following comments regarding potential noise impacts attributable to the proposed project:

- EPA assumes that the "Federally approved STAMPLOT computer noise prediction model" (pg. 6-61) is specifically approved by FHWA. If not, an FHWA-approved model should be used.

(1)

- Page 6-61 states that existing noise measurements "excluded airport noise contributions." However, Table 3b (pg. 6-67) indicates an inclusion of airport noise for existing levels (1985). (It would have been helpful if both sets of data for existing levels, with and without airport noise contributions, had been presented to determine the relative effect of airport noise). In general, if the airport noise was representative of the area, as it likely was, we agree with the DEIS that it should have been included in the existing and predicted levels shown in Table 3b. An estimation of airport noise frequency would be useful in the FEIS.

2.

(2)

- It is unclear why differences between the Railroad and Lake LeClare Alignments exist for receptor #25 (Table 3b) since these two alternatives are on common alignment at this receptor site. (3)

- The Level of Service (LOS) values presented on page 6-62 are helpful in assessing noise impact and roadway need. A more complete listing of the base and design years by alignment for all roadways presented should be considered for the FEIS. (4)

- The existing noise levels were measured in 1985, which we assume to be the base year. However, portions of the DEIS reference 1989 (apparently as the base year). This apparent inconsistency should be addressed and corrected in the FEIS. (5)

- We note that several receptor sites on Table 3a and 3b either approach, equal, or exceed the FHWA Noise Abatement Criteria (NAC) guidelines for residential receptors (67 dBA Leq) or are elevated 10 dBA or greater above existing levels (EPA believes a 10 dBA or greater elevation is "substantial" and an elevation of 15 dBA or greater is "severe"). For the Railroad Alignment for the design year (2010), we note that 3 receptor sites approach (65-66 dBA Leq) their NAC, 11 equal or exceed it, and 10 are elevated 10 dBA or more. Twenty-four receptor sites are therefore impacted by either an increase of 10 dBA or more and/or a resultant level of 67 dBA or more. For the Lake LeClare Alignment, 5 receptor sites approach their NAC, 13 equal or exceed their NAC, and 12 are elevated by 10 dBA or more. Thirty receptor sites are therefore impacted by either an increase of 10 dBA or more and/or a resultant level of 67 dBA Leq or more. Based on these observations, the Lake LeClare Alignment appears to have a greater predicted noise impact. (6)

- Since receptor sites 1-32 listed in Table 3a and 3b represent several actual receptors, the noise impact in terms of impacts on individual receptors is greater than outlined above. Although Table 1 of the DEIS indicates the number of receptors represented per receptor site, EPA requests that a summary table be provided in the FEIS that lists the number and kinds of receptors elevated 5-9 dBA, 10-14 dBA, and 15 dBA and greater, with those receptors elevated above their NAC indicated. This should be provided for each alternative, build and no-build, and for all receptors along each alignment. We believe that this would result in a clearer impact analysis that can be easily interpreted by the readers of the FEIS. (7)

2.

- As indicated above, a no-build analysis should be provided in the FEIS presenting all receptors affected for the base and design year. We note that general no-build noise data are presented on page 6-68. We request that this be supplemented in the FEIS to include receptor data for an alignment that presently serves traffic needs in the general direction of the proposed expressway. (8) Common receptors for the build and no-build alternatives should be used wherever possible. For consistency and comparison purposes, we would also prefer that the design year of 2010 be used, as it was in Table 3a and 3b, as opposed to 2007, as it was on page 6-68, although differences may not be great.

- Noise abatement can be difficult to implement. The DEIS, for example, indicates that a 3-4 dBA reduction can not be achieved for shifts in alignment unless the attenuation distance to the receptor is doubled. (9) A substantial reduction (presumably 5 dBA) can not be achieved with vegetation unless 100 feet of dense foilage is present. EPA requests, however, that if such conditions present themselves, even in only a few rural segments of the alignment, that they should be considered. Two or more methods of abatement should also be considered in combination when less ROW is available (e.g., some alignment shifting in combination with some landscape vegetation).

2.

- It appears that barrier walls and berms are most frequently used for noise abatement by FHWA. Their use should be further explored for the proposed project. (10) Preliminary barrier designs and costs should be presented in the FEIS (preferably in the DEIS), with a commitment or intent to implement at specified sites being provided.

- We do not believe that barriers should necessarily be limited to sites 6, 9, and 20 as suggested on page 6-72. Because EPA believes that noise elevations of 10 dBA or more are "substantial," numerous receptors/ receptor sites so elevated (Table 3a and 3b) should also be considered for abatement (sites 2, 4, 5, 7, 8, (11) 10, and 19 for the Railroad Alignment and sites 2, 4, 11, 12, 13, 14, 15, 16, 17, 18, and 19 for the Lake LeClare Alignment). Those that approach, equal, or exceed their NAC guideline should likewise be considered (sites 7 and 19; sites 11, 12, 13, 14, 17, 18, 19, and 21). The FDOT should also state in the FEIS what threshold level of elevation (+10 dBA, +15 dBA, or other level) above existing levels it considers a "substantial" increase.

- Receptor sites 24-32 are apparently influenced by airport noise. If highway noise contributions result in resultant levels some 10 dBA below that caused by airport noise, roadway noise would not influence the combined level using decibel addition. A smaller noise differential would also not cause a large overall increase. The frequency of the airport noise is important, however. If there are reasonably long periods where the roadway is the dominant noise and increases the existing levels substantially or causes a resultant level approaching, equaling, or exceeding the receptor NAC, roadway noise abatement should be considered. Sites 24-32 should be candidates for such abatement for the Railroad and Lake LeClare Alignments. (12) **2.**

- As indicated earlier, a comparison of non-airport-influenced base and design year data with airport-influenced base and design year data would help assess the importance of the airport versus the roadway relative to contributions to the overall noise level. This should be addressed in the FEIS. (13)

Air Quality

EPA offers the following comments:

- Because Hillsborough County is still classified as non-attainment for ozone, a total hydrocarbon (HC) pollutant burden analysis is necessary for the impacted area, with and without the proposed project (build and no-build alternatives). The HC analysis should be provided in the FEIS. (1)

- The carbon monoxide (CO) analysis is acceptable to EPA for the simple line source analysis. Use of Class D stability is acceptable since the proposed area is urban. However, an intersectional analysis using a queuing model would better represent the true impact of the proposed project and should be provided in the FEIS. An intersection located where traffic exits the proposed expressway and causes traffic to back up (e.g., on Hillsborough Avenue) should be selected for the intersectional analysis. EPA does not recommend that the "Volume 9" procedure necessarily be the model of choice. Since the proposed area is not non-attainment for CO, we recommend the Caline 3 revision that has been modified for queuing. If a copy of this model is not available to FHWA/FDOT, Mr. Tom Hansen of the EPA/Region IV Air Programs Branch should be contacted for a copy (404-347-4298). **3.** (2)

Hazardous Waste

The DEIS indicates on page 6-37 that "potential hazardous waste locations for the various proposed alternatives" have been identified. EPA is not specifically aware of any hazardous waste sites located along the proposed ROW. When the FDOT/FHWA identifies any, EPA would like to review the information and
4. site assessments for all alternatives, particularly the preferred alternative.

Resolution of problems identified regarding any hazardous waste sites within the alternative ROW's should be coordinated with the Waste Management Division of EPA/Region IV through Mr. Dick Green of the Emergency and Remedial Response Branch (404-347-2234). However, the selected alternative will ideally avoid any hazardous waste sites within the ROW.

Geology

The presence or absence of karst geologic features within the
5. proposed project corridor and alignment should be addressed. Discussion should be included in the "Affected Environment" section and, if an impact, in the "Environmental Consequences" section. Mitigation for unavoidable crossings of karst areas should be proposed in the FEIS.

Secondary Impacts

Because numerous wetland and lake sites exist in the proposed project area, EPA is concerned about potential secondary
6. development impacts. Limiting the number of interchanges should therefore be considered by FHWA/FDOT. We also request that the FDER monitor potential erosion and water quality problems associated with non-federal construction. Wetland impacts will presumably be controlled through the state and federal permit review process (e.g., Section 404 of the Clean Water Act).

Alternative Analysis

At the early coordination scoping meeting on April 17, 1984, in Tampa and in our "Advance Notification" letter dated September
7. 18, 1984, EPA indicated a preference for Corridor C or D. Alignments within these corridors would reduce wetland losses since Corridor C and D lie closer to Tampa in an area more urbanized than Corridor B. From a wetland perspective, EPA still prefers Corridor C. However, we recognize that other environmental and non-environmental factors, such as probable higher noise impacts in Corridor C and D compared to B, must also be considered. Nevertheless, if Corridor B is pursued by FHWA/FDOT, unavoidable impacts such as wetland losses must be feasibly mitigated.

EPA typically prefers road improvements that expand existing alignments as opposed to alternatives on new alignment. Although not without impacts (e.g., displacements; noise) such improvements often have less direct environmental impact (e.g., habitat loss) on relatively undisturbed environments. We note that the proposed project is both a road improvement and a creation of new alignment. From a strict environmental perspective, the road improvement sections are preferred by EPA.

Given the Railroad and LeClare Lake Alignment alternatives, EPA prefers the LeClare Lake Alignment. Although predicted noise impacts appear to be greater for the Lake LeClare Alignment, the direct and secondary wetland impacts will likely be less due to the relative quality of the wetlands and proximity to urbanized Tampa. EPA presently has no particular environmental preference for the North or South Termini alternative segments. **7.**

Need

As mentioned above in our "Noise" comments in these "Detailed Comments," a more complete listing of the LOS values for existing roadways listed in Figure 9 (pg. 6-62) would be useful in assessing noise impacts and project need. Values for both the base and design year are therefore requested in the FEIS. A decision regarding the year of the base year (1985 vs. 1989) should also be made. **2.**

In addition to this no-build information, the FEIS should state the predicted Vehicles Per Day (VPD) and LOS values for the design year of the proposed expressway and the designed capacity of the facility (e.g., 50,000 VPD at LOS C).

Other Comments

EPA provided comments dated September 18, 1984 on the "Advance Notification" package for the proposed project. However, the DEIS does not include these comments and page 8-15 does not indicate receipt of EPA comments. If received, we request inclusion or, as a minimum, acknowledgement of our earlier comments in the FEIS. **8.**

United States Department of the Interior
OFFICE OF ENVIRONMENTAL PROJECT REVIEW
Southeast Region / Suite 1360/024
Richard B. Russell Federal Building
75 Spring Street, S.W. / Atlanta, Ga. 30303
Telephone 404/221-4524 - FTS: 242-4524

APR 10 1986

RECEIVE
APR 14 1986

ER-86/246

Mr. P. E. Carpenter, P.E.
Division Administrator
Federal Highway Administration
227 N. Bronough Street, Room 2015
Tallahassee, Florida 32302

Dear Mr. Carpenter:

As requested in your agency's letter of February 4, 1986, we have reviewed the draft environmental impact statement (DEIS) for the proposed Northwest Hillsborough Expressway, Hillsborough County, Florida, and have the following comments.

General Comments

The DEIS adequately describes and discusses environmental impacts of concern to the Department of the Interior.

1. The U.S. Fish and Wildlife Service (Service) is concerned about the potential impacts on wetlands and associated fish and wildlife resources (approximately 65 to 67 acres associated with each of the various alternatives). Bridging, right-of-way width reduction, and culverts should be used as practical to minimize adverse impacts to wetland resources. Any damages to wetlands that cannot be reasonably avoided should be compensated.

Since the project will require a Section 404 permit (Clean Water Act) from the U.S. Army Corps of Engineers, the Service will have an opportunity to provide additional comments and recommendations under the Fish and Wildlife Coordination Act. Accordingly, comments included herein do not preclude additional evaluation of this proposed project by the Service during its review of a Section 404 permit application. During its review, the Service may concur with the proposed action, either with or without recommendations or specific stipulations, or may recommend that the permit not be issued, unless specific recommendations are implemented. Additional information on the fish and wildlife aspects of a Section 404 permit can be obtained by contacting Mr. Joseph D. Carroll, Jr., Field Supervisor, Division

of Ecological Services, U.S. Fish and Wildlife Service, 1323-21st Street, Vero Beach, Florida 32960, telephone 305/562-3909 or FTS 350-7276.

Thank you for the opportunity to comment on this DEIS.

Sincerely yours,

James H. Lee
Regional Environmental Officer

cc: Mr. J. C. Kraft, Chief
Bureau of Environment
Florida Department of Transportation
605 Suwannee Street, Mail Station 37
Tallahassee, Florida 32301

F-6

STATE OF FLORIDA

FLORIDA DEPARTMENT OF AGRICULTURE & CONSUMER SERVICES

DOYLE CONNER, COMMISSIONER * 3125 CONNER BLVD. TALLAHASSEE 32301

RECEIVED
MAR 11 1986

March 6, 1986

MEMORANDUM

REC'D BAY TPA 4/15/86

TO: Walt Kolb

FROM: Bob McDonald, Chief, FREP Bureau

SUBJECT: DEIS Northwest Hillsborough Expressway
Interstate - 275 to S.R. 597

Here are our comments that you request.

1. Since some merchantable timber is involved, either through being located directly along the corridor route or might be inundated when wetland mitigation practices are incorporated, we encourage the utilization of all merchantable timber lost through either of the above activities and encourage the appropriate agencies to contact our local forester for assistance.

We also encourage:

- use of nonstructural methods in flood control practices, and
- use of sound BMP's during all forestry related activities.

We plan to attend the proposed interagency meeting during the week of March 10, 1986.

S-1

FLORIDA DEPARTMENT OF STATE
George Firestone
Secretary of State

DIVISION OF ARCHIVES,
HISTORY AND RECORDS MANAGEMENT
The Capitol, Tallahassee, Florida 32301-8020
(904) 488-1480

February 28, 1986

In Reply Refer to:

Mike Wisenbaker
Historic Sites Specialist
(904) 487-2333

Mr. Walter Kolb
Officer of the Govenor
The Capitol
Tallahassee, Florida 32301

RE: Your Memorandum of February 13, 1986
Cultural Resource Assessment Request
DEIS Northwest Hillsborough Expressway Interstate 275 to SR 597
(Dale Mabry Highway) Hillsborough County, Florida

Dear Mr. Kolb:

In accordance with the procedures contained in 36 C.F.R., Part 800 ("Procedures for the Protection of Historic and Cultural Properties"), we have reviewed the above referenced project for possible impact to archaeological and historical sites or properties listed, or eligible for listing in the National Register of Historic Places. The authorities for these procedures are the National Historic Preservation Act of 1966 (Public Law 89-665) as amended by P.L. 91-243, P.L. 93-54, P.L. 94-422, P.L. 94-458 and P.L. 96-515, and Presidential Executive Order 11593 ("Protection and Enhancement of the Cultural Enivronment").

We have previously reviewed all phases of this project as is indicated on page 6-49 of the Draft Environmental Impact Statement. For this reason, we have no additional comments to make regarding the project.

If you have any questions concerning our comments, please do not hesitate to contact us.

Your interest and cooperation in helping to protect Florida's archaeological and historical resources are appreciated.

Sincerely,

George W. Percy
State Historic Preservation Officer

GWP/efk

S-2

STATE OF FLORIDA
DEPARTMENT OF HEALTH AND REHABILITATIVE SERVICES

RECEIVED
MAR 5 1986

March 4, 1986

Mr. J. C. Kraft, Chief
Bureau of Environment
Florida Department of Transportation
605 Suwannee Street, Mail Station 37
Tallahassee, Florida 32301

Rec'd 3/10/86 Tpa Bay

Dear Mr. Kraft:

After review of your Draft Environmental Impact Statement, this office feels that no adverse impacts on the public's health are expected from the implementation of this project. Therefore, we have no objection to its approval.

Sincerely,

Eanix Poole
Administrator
Environmental Health Program

EP/lg

1317 WINEWOOD BLVD. • TALLAHASSEE, FL 32301

BOB GRAHAM, GOVERNOR

S-3

STATE OF FLORIDA DEPARTMENT OF COMMERCE
Division of Economic Development

March 31, 1986

Mr. Walter O. Kolb
Executive Office of the Governor
Room 404, Carlton Building
Tallahassee, Florida 32301

Dear Mr. Kolb:

We have reviewed the Draft Environmental Impact Statement for the proposed Northwest Hillsborough Expressway, and participated in the interagency meeting pertaining to it, held on March 20, 1986.

The Department supports the Northwest Hillsborough Expressway. The area North of Tampa International airport has historically fostered distribution and light manufacturing facilities. High technology firms, such as General Dynamics and Critikon have, located there. In recent years, office complexes and mixed use developments have predominated. It is anticipated that more high rise office buildings will be developed as competitive pressures continue to increase the cost of this land.

The Northwest Hillsborough Expressway will serve both existing industry and future developments. The area is currently experiencing overloading of roads, particularly on Dale Mabry Highway, and the increasing number of office complexes will generate even more traffic. The expressway is a vital part of the transportation network needed to sustain the orderly economic development of the area.

The expressway is also needed to serve the Westshore Development. The Westshore Development Association is currently working on an application as an Area Wide Development of Regional Impact (DRI). Association management has indicated the expressway will be cited as a vital piece of infrastructure in that DRI.

S-4

COLLINS BUILDING TALLAHASSEE, FLORIDA 32301 TELEX 810/9313655 DEPCOMEDTAS

This project is consistent with the goals and policies of the Department.

Sincerely,

Wynnelle Wilson
Economist Supervisor

WW/dc

S-4

FLORIDA GAME AND FRESH WATER FISH COMMISSION

THOMAS L. HIRES, SR. Chairman, Lake Wales
WILLIAM G. BOSTICK, JR. Vice-Chairman, Winter Haven
C. TOM RAINEY, D.V.M. Miami
J.H. BAROCO Pensacola
MRS. GILBERT W. HUMPHREY Miccosukee

ROBERT M. BRANTLY, Executive Director
F.G. BANKS, Assistant Executive Director

FARRIS BRYANT BUILDING
620 South Meridian Street
Tallahassee, Florida 32301
(904) 488-1960

MAR 1986

March 18, 1986

Mr. Walter O. Kolb
Executive Office of the Governor
The Capitol
Tallahassee, Florida 32301

Re: SAI F18602060806EC, Northwest Hillsborough Expressway, Hillsborough County

Dear Mr. Kolb:

The Office of Environmental Services of the Florida Game and Fresh Water Fish Commission has reviewed the referenced request for comments pursuant to Intergovernmental Coordination and Federal Consistency Project Review, dated 13 February 1986, and offers the following comments.

The Tampa-Hillsborough County Expressway Authority and the Florida Department of Transporation jointly propose to construct approximately 17 miles of divided, limited access expressway from I-295 south of the Tampa International Airport, to SR 597 north of Van Dyke Road in northwest Hillsborough County. Basic construction includes improving Eisenhower Blvd. from 6 to 8 lanes, and the creation of a new 4-lane expressway aligned either north along an abandoned railroad right-of-way (railroad option) or north-northeast adjacent to Lake LaClare (Lake LaClare option), and intersecting SR 597 at one of two locations labeled the North Termini or the South Termini.

Land use within the area proposed for this construction is primarily mixed low density residential, improved pasture, and citrus groves. Native habitats within the alignments include oak hammocks and cypress forest associated with the Rocky Creek floodplain, cypress domes, bayheads, and pine/palmetto rangeland.

The expressway construction would fill approximately 65 acres of wetland habitat, with less than 2 acres of potential wetland impact difference among the four possible alignments. Proposed wetland mitigation includes creation or restoration of 20 acres, and hydrologic enhancement via drainage changes for 30 acres of existing wetlands.

This project's primary impact on wildlife would result from the loss of forested floodplain and depression wetlands, which provide cover, nesting, feeding, and roosting habitat for a variety of animals.

Species impacted by expressway construction may include several listed by the Commission as endangered (E), threatened (T), or of special concern (SSC); specifically, the wood stork (E), Florida sandhill crane (T), eastern indigo snake (T), American alligator (SSC), snowy egret (SSC), tricolor heron (SSC), limpkin (SSC), burrowing owl (SSC), little blue heron (SSC), and Sherman's fox squirrel (SSC). Secondary impacts of highway construction would result from development encouraged by enhanced access to this rural area, with inevitable loss of wildlife habitat. Residential development within existing pasture and rangeland would displace sandhill crane and burrowing owl habitat.

1. We recommend use of the Eisenhower/West Lake LaClare to North Termini alignment, with some realignment to avoid wetlands (see Figures 1 and 2). This option would generate fewer secondary impacts because the surrounding area is more developed, and, with realignment, would avoid over 15 acres of wetlands (wetland sites 39, 41, 42, 46, 48 through 54, 56A, and 56B). This would reduce wetland impacts to approximately 49 acres. Wetland mitigation should include enhancing the remaining wetlands and creation of new forested wetlands at a ratio of created to lost habitat of at least 1:1. One or two large mitigation sites equal to the acreage impacted would be preferable to numerous isolated 1- to 2-acre mitigation sites. Potential large mitigation sites may be found north of Van Dyke Road within the Turkey Ford Lake drainage area.

Please call me if we can be of further assistance.

Sincerely,

F. G. Banks
Assistant Executive Director

FGB/DP/rs

S-5

S-5

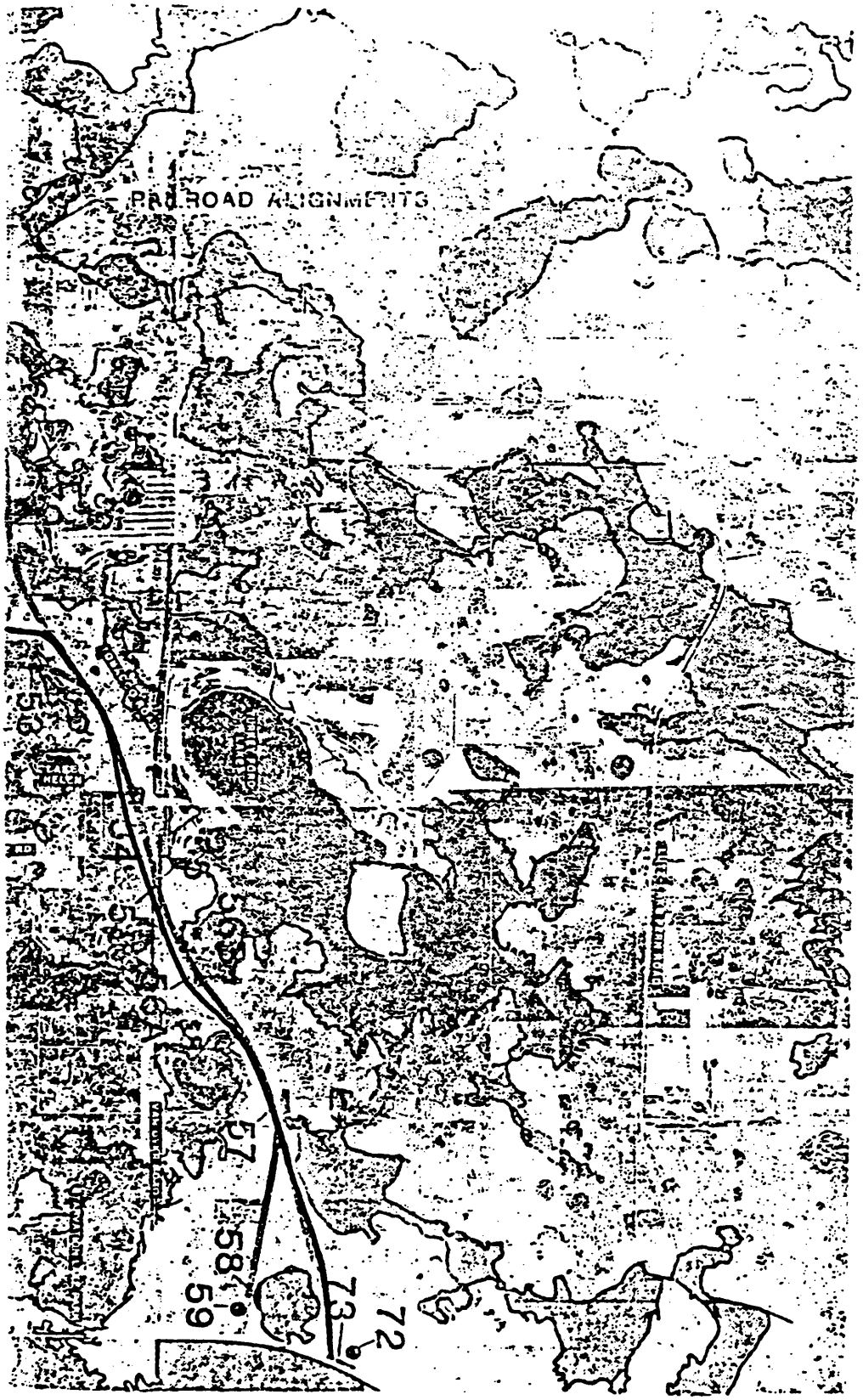


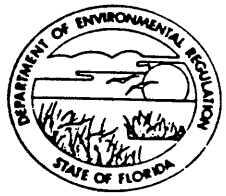
Figure 2

FIGURE 6-16

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

April 4, 1986

Mr. Walter Kolb
Senior Governmental Analyst
Office of Planning and Budgeting
Office of the Governor
404 Carlton Building
Tallahassee, Florida 32301

Dear Walt:

Re: DEIS - Northwest Hillsborough Expressway Interstate 275 to SR 597 (Dale Mabry Highway) Hillsborough County, Florida

The Intergovernmental Programs Review Section of the Department of Environmental Regulation has reviewed the referenced DEIS and offers the following comments.

The project will require permits from this department pursuant to Chapter 403, Florida Statutes, and water quality certification under Public Law 92-500. The DOT's preferred alternative is the Eisenhower/West Alignment coupled with either the Lake LeClare Alignment or the Railroad Alignment. The expressway will terminate at Dale Mabry Highway either by the North Termini or the South Termini. The expressway is planned as a limited access roadway with alignments in developed, semi-developed and undeveloped areas. The proposed project is approximately 17 miles in length, utilizing 2 twelve foot lanes in each direction separated by a 42 foot median with paved shoulders. Right-of-way acquisition needed in the urban areas (developed) will be approximately 180 feet while 250 feet ROW acquisition is desired for the rural areas (undeveloped).

The Eisenhower/West Alignment will include upgrading the existing Memorial/Eisenhower Boulevard roadways. There are four new interchanges planned in the Eisenhower/West Alignment section. Portions of the Eisenhower/West Alignment and the majority (if not all) of the remaining sections (Lake LeClare Alignment, Railroad Alignment, North Termini, South Termini) will warrant new construction. The following table is taken from the DEIS and gives a comparative analysis between the mileage of the preferred alternative alignments.

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Protecting Florida and Your Quality of Life

	Alignment	Length (miles)
1.	Eisenhower/West Align. to Lake LeClare Align. to North Termini	16.80
2.	Eisenhower/West Align. to Railroad Align. to North Termini	17.47
3.	Eisenhower/West Align. Lake LeClark Align. to South Termini	16.63
4.	Eisenhower/West Align. to Railroad Align. to South Termini	17.30

Hillsborough County is one of the fastest growing areas, in terms of population increases, in the state. As stated in the DEIS, the northwest section of Hillsborough County experiences severe traffic congestion during peak hours. The Level of Service ratings for arterial systems in the project area without the proposed expressway was projected for the year 2010 and ranged from a high of LOS "C" to a low of LOS "F". This may be somewhat misleading since the projection is for 24 years but only incorporates transportation improvement projects for the next five years. Also, the projection should be based on viable and attainable alternate modes of transportation (i.e. rail systems, mass transit improvements, etc.) that can be functionally implemented by the year 2010.

As discussed in the Modal Interrelationships Section (Section 3.7), the use of park and ride lots, express service, etc. is environmentally, economically and socially commendable. We recommend the light rail system plans become a viable alternative transportation mode in the near future.

The proposed expressway would impact approximately 69.32 acres to 76.2 acres of floodplains which includes 65± acres of wetlands. The Eisenhower/West to Railroad to North Termini will impact 69.32 acres of floodplains/wetlands whereas the Eisenhower/West to Lake LeClare to South Termini will impact 76.2 acres of floodplains/wetlands. Floodplains provide for natural hydrological flow patterns that recharge wetland ecosystems, naturally filter stormwater runoff, recharge aquifers, provide stormwater storage capacity, etc. Such extensive elimination of floodplains/wetlands warrants mitigation because of the mandates of Executive Orders 11988 and 11990. Federal agencies are instructed to avoid impacts to these areas and mitigate unavoidable losses. Such mitigation should be 1:1; 1:1 mitigation will be required for jurisdictional wetlands.

Of the 65± acres of wetlands, 10% of these wetlands are part of an existing highway drainage system. Mitigation for these approximate 6.5 acres will be provided by the new drainage system of the proposed expressway. The 65± acres were rated on a general scale which ranged from poor to good. The criteria on which these ratings are based were not explained or discussed in the DEIS. Therefore, we are uncertain that we agree with the validity of the listed acreage figures. The FEIS should explain why the wetland sites listed in Table 6-9 were assigned particular ratings.

Using the figures provided, our analysis of the Lake LeClare alignment and the Railroad alignment results in the following comparison:

Lake LeClare Alignment - Wetland Impacts

Total Acres Impacted	Sub-Total Acres Impacted with Poor Rating	Sub-Total Acres Impacted with Fair Rating	Sub-Total Acres Impacted with Good Rating
14.47	2.67	6.08	5.72

Sub-total Acres Impacted (Fair & Good)	% of Total Acres Impacted Rated as Fair to Good
11.8	81.5

Railroad Alignment - Wetland Impacts

Total Acres Impacted	Sub-Total Acres Impacted with Poor Rating	Sub-Total Acres Impacted with Fair Rating	Sub-Total Acres Impacted with Good Rating
16.25	-0-	7.43	8.82

Sub-Total Acres Impacted (Fair & Good)	% of Total Acres Impacted Rated as Fair to Good
16.25	100

The Railroad Alignment would impact the greatest amount of wetlands rated Fair to Good. The DEIS stated the impacts on wetlands in Lake

Holly resulting from the Lake LeClare Alignment would be significant (Wetlands Site #44A, 44B). These two wetland ecosystems are characterized as a palustine system, forested with needle leaved-deciduous vegetation and a lacustrine (limnetic and littoral) system, respectively. The remaining alignments and their respective potential wetland impacts are as follows:

Eisenhower/West Alignment Total Acres Rated As Fair to Good	36.35
Lake LeClare/Railroad Alignment Total Acres Rated as Fair to Good	.91
South Termini Total Acres Rated as Fair To Good	.91
North Termini Total Acres Rated as Fair to Good	3.46

Based on the quality and quantity of wetlands impacts proposed by the alternative alignments, we recommend the FEIS further investigate the Eisenhower/West to Lake LeClare to Lake LeClare/Railroad to South Termini alignment as a priority. This alignment would impact approximately 52.64 acres of wetlands rated from fair to good. A slight alignment modification in the vicinity of Lake Holly and/or bridging through this section would greatly reduce these losses. We believe this figure can be further significantly reduced by decreasing the median width, unnecessarily wide at 42 feet. It is unacceptable to destroy wetlands because there might be a desire to add lanes in 25 years. Hopefully, less growth and better transportation systems will occur by that time so that the traditional road building solution to congestion won't be desired. The FEIS should present amended acreage computations based on these recommended modifications.

Where wetlands alterations cannot be avoided, 1:1 mitigation is the minimum expected for jurisdictional wetlands. This mitigation should be consolidated rather than dispersed. The mitigation plan should reestablish wetlands and recharge and restore natural hydrological patterns to hydrologically stressed wetland areas. The restoration project should be designated as state owned lands and be protected under a conservation easement. The DEIS mentioned that the proposed expressway will impact a restoration project by Bayport Development. It is highly counter-productive and wasteful (environmentally and economically) to expend money, energy and time to restore a wetland system only to irreversibly impact that same system in a few years.

S-6

Any dredge and fill activity in jurisdictional wetlands will require permits pursuant to Chapter 17-4 and 17-12, Florida Administrative Code (F.A.C.). Any mangrove alteration (Rhizophora, Avicennia, and Laguncularia) may require permits pursuant to Chapter 17-27, F.A.C. Mangrove impacts should be minimized and mitigated by restoration to ensure their environmental significance is not diminished.

Water quality standards pursuant to Chapter 17-3, F.A.C., for any water bodies impacted by the construction should be maintained throughout the construction phase. The section of Tampa Bay adjacent to the southern section of the proposed expressway is classified as Class II Waters - Shellfish Propogation and Harvesting according to Chapter 17-3, F.A.C., and should not be impacted by the construction. FDOT's Best Management Practices should be strictly enforced to assure no water quality degradation.

The project will increase/cause additional stormwater runoff which will require treatment before being discharged to the waters of the State. The DEIS did not describe or illustrate the stormwater management system. This should be included in the FEIS with an emphasis on nonstructural designs incorporating upland retention and shallow, vegetated conveyances. The Southwest Florida Water Management District's conceptual approval of the proposed stormwater management system should also be provided in the FEIS.

The listed Endangered and Threatened Species found in the project area may actually benefit from a restoration project as discussed in the wetlands impact section in these comments. As development pressures engulf the intermittent wetland ecosystems scattered throughout the project area, a large, consolidated, protected and enhanced wetland ecosystem would provide habitat quality, quantity and longevity for these species. FDOT's Best Management Practices for protecting threatened/endangered species should be implemented to ensure these species will have the opportunity to re-colonize adjacent habitats.

The FEIS should identify any past or present hazardous waste sites in the project area. Agency coordination is imperative at this point to correctly identify and impose clean-up procedures of these sites to alleviate delays and corridor modifications. We recommend early coordination with our Southwest District Office in Tampa regarding all environmental concerns and permits.

In summary, we recommend the following environmental concerns be addressed in the FEIS:

1. Incorporate alternative modes of transportation for future planning (i.e. rail systems, enhancing mass transit, park-n-ride lots, etc.).] 1.

2. Mitigate 1:1 for floodplains impacted.] 2.

S-6

3. 3. Reduce wetland losses through recommended alignment modifications and reducing the median width.

4. 4. Mitigation for jurisdictional wetland loss as a 1:1, consolidated, enhanced, protected restoration project.

5. 5. Minimize mangrove alterations.

6. 6. Maintain water quality standards throughout construction phase.

7. 7. Provide a written and visual description of the stormwater management plan as well as evidence of SWFWMD's conceptual approval.

8. 8. FDOT's Best Management Practices implemented to protect wildlife.

9. 9. Identify hazardous waste sites in the project area and take corrective actions.

10. 10. Fully investigate the feasibility of constructing the Eisenhower/West to Lake LeClare to Lake LeClare/Railroad to South Termini Alignment.

A determination of the project's consistency with the DER's authorities in the Florida Coastal Management Program will be possible on review of the requested information. This evaluation and consistency determination will be made at the FEIS stage and based largely on the adequacy of its consideration of the above recommendations. We appreciate the opportunity to comment on this DEIS and participate in the interagency meeting.

Sincerely,

Stephen J. Fox, Director
Division of Environmental
Permitting

SJF/mbb

cc: Dr. Richard D. Garrity, DER/Tampa

S-6

STATE OF FLORIDA

Office of the Governor

THE CAPITOL
TALLAHASSEE 32301

BOB GRAHAM
GOVERNOR

RECEIVED
MAY 7 - 1986
ORLANDO
H N T & B

RECEIVED
MAY 6 1986
TAMPA-HILLSBOROUGH COUNTY
EXPRESSWAY AUTHORITY

cc: John Martin HCEPC
Dale Patten HNTB

Mr. J. C. Kraft, Chief
Bureau of Environment
Florida Department of Transportation
605 Suwannee Street, M.S. 37
Tallahassee, Florida 32301

ACTION	INFO	FILE NO	NOTED	ANSWERED
		JLT		
		HDB		
		JOR		
		BEB		
		PRB		
		PH		
		FWH		
		GFH		
		DSI		
		[illegible]		
		DEP		
		DOP		
		RMS		
		CJS		
		L G		

Dear Mr. Kraft:

As requested by the Tampa-Hillsborough County Expressway Authority and your Department, this Office reviewed and coordinated a review of the Draft Environmental Impact Statement (8602060806CE) Northwest Hillsborough Expressway. As part of our review process we obtained comments on this proposal from the Departments of Agriculture and Consumer Services, Commerce, Environmental Regulation, State, Game and Fresh Water Fish Commission, Southwest Florida Water Management District, Tampa Bay Regional Planning Council, Hillsborough County and Tampa Urban Area Metropolitan Planning Organization. For your consideration we have enclosed their comments and request that they be considered as part of this response.

The draft statement analyzes a proposed expressway project from Interstate 275 near the Tampa International Airport to a terminus at Dale Mabry Highway north of Van Dyke Road. The expressway would be approximately 17 miles in length, and may cost $250,000,000. It is projected that by 2010 the average day traffic on the expressway could be 27,000 vehicles.

Based upon the information given at our interagency meeting in Tallahassee and data presented in the draft statement, it appears that a project relieving traffic congestion and accommodating future population growth is needed. However, the Department of Transportation must confirm this finding and determine its consistency with the State Comprehensive Plan and State Transportation Plan. To justify the Expressway project, studies addressing economic and financial impacts must be completed. They need to clearly demonstrate feasibility and need in order to secure state support. The Department of Environmental

1.

2.

S-7

An Affirmative Action Equal Opportunity Employer

2. Regulation, Game and Fresh Water Fish Commission, Water Management District and Regional Planning Council have expressed concerns regarding environmental and wetland impacts. We suggest that these concerns be fully evaluated and addressed in the Final EIS. The selected project alternative should have minimal environmental impacts and mitigate all wetland loss at a 1:1 ratio or better. The Expressway Authority should be advised that the project's consistency with the Florida Coastal Management Program and compliance with state and regional permitting authorities will be evaluated on the information and response presented in the final document.

We appreciate the opportunity to comment on this document and the Authority's participation in our interagency meeting.

Sincerely,

Glenn W. Robertson, Jr., Director
Office of Planning & Budgeting

GWR/dwe

Enclosures

cc: Ray Speer
F. G. Banks
Steve Fox
George Percy
Bob McDonald
Wynelle Wilson
Richard Owen
Sheila D. Turner

HILLSBOROUGH COUNTY AVIATION AUTHORITY

March 14, 1986

RECEIVED

MAR 18 1986

Office of the Director

Recd Tpa Bay
3/24/86

Mr. J. C. Kraft, Chief
Bureau of Environment
Florida Dept. of Transportation
605 Suwannee Street
Tallahassee, Florida 32301

Dear Mr. Kraft:

This is to advise that the potential impact of the proposed alignment of the Northwest Expressway at Tampa International Airport is now under consideration by the Hillsborough County Aviation Authority. Our Airport consultant, consulting engineers, staff and legal counsel will undertake an in-depth study and review of your proposal. Furthermore there are other agencies and organizations who will be directly affected by this proposal, and their analyses will be of importance to the Aviation Authority.

This airport is one of the most conveniently located facilities of its kind in this country. Because of this location, however, there have been certain physical limitations, one of which is a scarcity of property. For this reason we carefully master plan the airport and frequently update this master plan. The potential loss of any property can cause serious problems, present as well as future, regarding the full utilization of the airport.

Property loss, planning and expansion are only several of the many potential areas of concern. In the spirit of cooperation, we will update you from time to time with reports of the studies and reviews referred to in the first paragraph. For example we enclose a letter dated March 11, 1986 from Greiner Engineering Sciences, Inc., our consulting engineer. We urge you to investigate and specifically address the six areas of potential impact referred to therein.

Tampa International Airport Peter O. Knight Airport Plant City Airport
Post Office Box 22287 Tampa, FL 33622 813/883-3400 • Telex 522613 ITS INC TPA / 441898 ITS INC TPA UI (Via ITT)

L-1

It is suggested that you coordinate your activities with William J. Connors, Jr., Director of Planning and Development, Hillsborough County Aviation Authority.

Very truly yours,

George J. Bean
Director of Aviation

Enclosure

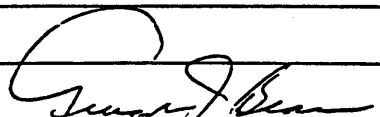
cc: Mr. William H. Harper, Chairman
Tampa-Hillsborough Expressway Authority

L-1

STATEMENT
Official Transcript of Public Hearing Proceedings
March 4, 1986 to March 14, 1986
Northwest Hillsborough Expressway
State Project Number 10000-1531

Letter and enclosure attached.

(More Space on other side)



(NAME) George J. Bean

Hillsborough Co. Aviation Authority
(ADDRESS)

P.O. Box 22287

Tampa, FL 33622

NOTE: Please sign and place into box marked Statements or mail to Mr. William H. Harper, Chairman, Tampa-Hillsborough Expressway Authority, Room 620, 412 East Madison Street, Tampa, Florida 33602 or to Mr. C.W. Monts De Oca, P.E., Deputy Assistant Secretary, Florida Department of Transportation, ATTN: C.W. Lasseter, P.E., P.O. Box 1249, Bartow, Florida, 33830, by March 14, 1986. All Statements are part of the public record and are available for viewing by the public and the media.

L-1

Greiner

Greiner Engineering, Inc.
5601 Mariner Street
P.O. Box 23646
Tampa, Florida 33630
(813) 879-1711
TWX: (810) 876-4144 Cable: GREINCO

T9900.01
March 11, 1986

Mr. William J. Connors, Jr.
Director of Planning and Development
Hillsborough County Aviation Authority
Post Office Box 22287
Tampa, Florida 33622

Dear Mr. Connors:

Reference: **Potential Impacts and Considerations of Proposed Tampa-Hillsborough Northwest Expressway on Tampa International Airport**

We have reviewed the revised preliminary alignments of upgraded Memorial Highway/Eisenhower Boulevard shown on the aerial photos south and west of Tampa International Airport (T.I.A.) and have identified six (6) areas of potential impact that should be thoroughly investigated by the Expressway Authority prior to formal action by the Hillsborough County Aviation Authority (H.C.A.A.). Our comments on each area are briefly summarized below:

1. **Site Access** - A review of the Environmental Assessment for the Northwest Highway provided the anticipated year 2010 traffic demand on the proposed roadway system. Traffic demand in the vicinity of the Airport ranged from 163,000 vehicles per day (vpd) between I-275 and the Airport Interchange to 192,000 vpd between the Airport Interchange and the Causeway Interchange.

   These projected volumes will far exceed the design capacity of the proposed roadway system in this area. There are three areas of main concern:

1. A. N.B. Memorial Highway between the I-275 S.B. off ramp and the Airport Interchange. The proposed design has a major weave between traffic exiting I-275 S.B. destined for the Northwest Expressway and traffic destined for the Airport from Kennedy. With the projected volume of 163,000 vpd, the proposed four lane section would operate at LOS E or worse. One means of improving this situation would be to physically separate the I-275 off ramp from the Memorial Highway traffic as was done for the southbound direction.

B. Memorial Highway between the Airport Interchange and the Causeway Interchange in both directions. The projected volume for this segment is 192,000 vpd. This segment involves weaves on curves in both directions. The proposed eight lane section in this area would not provide adequate capacity for 192,000 vpd even if there was no weave. Possible solutions for improving this condition might be the provision of additional lanes or some type of physical separation of the weaving volumes. **2.**

C. The N.B. off ramp immediately north of the Causeway Interchange. This ramp feeds the dual left turns for both Independence Parkway and Memorial Highway. To prevent backup to the south, this ramp should be a dual off ramp with a lane drop instead of a one lane ramp as shown. **3.**

The levels of service for the roadways in the vicinity of the Airport Interchange are not shown in the Environmental Report. The demand volumes for 2010 indicate that capacity problems will exist in this area with the proposed design. In addition to the problem areas identified, the area around the Airport should be studied in detail to determine lane requirements on the ramps and the mainline as well as alternate means of allievating weaving conditions. **4.**

The roadway as designed would provide short term capacity improvements around the airport if the Northwest Expressway were not built. However, the proposed system in the vicinity of the Airport will be inadequate to supply capacity for the year 2010 projected traffic.

Access to air cargo will be served by the interchange of the expressway with Hillsborough Avenue. Provision of signs on the expressway should make the air cargo area easily accessible.

Should the Northwest Expressway route be designed, it will be important to review the proposed signing plans to insure that the airport access system and Air Cargo Facility is properly signed, thereby maintaining or improving the current level of access. **5.**

2. **Right-of-Way** - The alignment reviewed in August 1984 had severe right-of-way impacts on airport property in the vicinity of the Memorial Highway interchange on the west side of the airport. The new plan lessens these impacts considerably because of new interchange design. However, there is still one area of concern **6.**

in this same location. The proposed right-of-way widens out to approximately 120 feet adjacent to Memorial Highway in order to accommodate the on-ramp from the frontage road to the expressway immediately north of Memorial Boulevard. Using retaining walls, moving ramp slightly, or treating the ramp similar to the ramp directly across the expressway should result in the need for less right-of-way from the airport. Such options should be explored by the expressway engineer.

6.

3. **Airspace** - We note that the 3 and 4 level interchanges proposed in August, 1984 on Eisenhower Boulevard between Courtney Campbell Causeway and Hillsborough Avenue have been changed to two levels. This is improved from the previous proposal. Assuming a 25'± elevation difference per interchange level, plus some form of highway field lighting, there still appears to be a potential conflict with the F.A.R. Part 77 imaginary surfaces as it pertains to this approach area to Runway 9. More detailed study on the proposed expressway improvements must be conducted to assure that Approach and Transitional Surfaces to Runway 9 are not obstructed. High mast lighting in certain areas would certainly be prohibited.

7.

4. **Surveillance Radar** - The existing ASR site is located between Eisenhower Boulevard and Runway 18R-36L. It was relocated to its present site approximately nine years ago because of obstacle encroachments on the southeast quadrant of the airport. The proposed expressway interchanges on Eisenhower Boulevard may create "shadows" for the existing ASR. This may decrease radar coverage in the northwest, west and southwest quadrants of T.I.A.'s terminal airspace and should be investigated with the Air Traffic and Airway Facilities Divisions of the FAA to determine the impacts and alternatives prior to any position by the H.C.A.A. It is paramount that this air traffic surveillance and control be maintained to today's level of service as air traffic increases in the future throughout the Tampa Bay Area.

8.

5. **Noise** - The taking of up to 150'± of woods and brush land on the west edge of the airport would result in a little, if any, loss of sound attenuation ability (it is noted that changes from the August, 1984 proposal resulted in less taking of Airport land). However, the assumed elevated design of the expressway

9.

interchanges and ramps would probably offset any losses by acting as a noise berm. Depending on final design elevations, the expressway could offer increased benefits for noise reduction west of the airport. It also appears that the existing aircraft noise barrier on the northwest corner of the airport would no longer be needed, since the expressway would remove most of the originally protected residents and the interchange at Hillsborough Avenue would act as a barrier for the few remaining residences northwest of the airport. 9.

6. **Lighting** - Light tresspass near airports has been an unusual phenomenon to predict. However, there have been incidents where experienced pilots have been disoriented due to off-airport lighting. The proposed expressway is aligned with Runway 18R-36L and has the potential for trespassing on airport operations if not designed properly. We recommend close coordination and approval be obtained from the Federal Aviation Administration (FAA), Air Transport Association, and Air Line Pilots Association (ALPA) before final design of interchange and expressway flood lighting is approved by the the H.C.C.A. 10.

Although some improvements have been recognized from the August, 1984 proposal, there still remain outstanding concerns that if not properly investigated and specifically addressed could have an adverse impact on T.I.A. Operations. However, we feel that solutions can be found to solve these concerns in which the expressway would not adversely impact safe airport operations in the future.

Very truly yours,

GREINER ENGINEERING SCIENCES, INC.

Norman D. Witteveen, P.E.
Assistant Vice President
Chief Airport Engineer

NDW:sab

xc: Mr. Sam Militello
Mr. L. Frank Harris
Mr. T.W. Hawkes
Mr. S. McGucken

6.1.3 Traffic Service and Number of Lanes

Estimates of traffic service have been provided by URS, Coverdale Colpitts and Barr Dunlop & Associates, Inc., traffic and revenue consultants for this project, for use in this evaluation. All estimates are based on existing traffic conditions and patterns and were projected on the premise of providing a high-type free flowing expressway with increased safety and convenience.

The accepted method of designating a facility's ability to serve the public need in a safe and efficient manner is by determining the "Level of Service" (L.O.S.). The Level of Service is a letter designation from A to F as described below.

L.O.S. A. - free flow, low volumes, unrestricted maneuverability due to other vehicles.

L.O.S. B. - stable flow, reasonable freedom of maneuverability.

L.O.S. C - lower zone of stable flow, speed and maneuverability affected by the higher volumes.

L.O.S. D - approaches unstable flow, operating speeds lowered and maneuverability restricted (Design Level of Service for urban expressways).

L.O.S. E - unstable flow, operating speeds at 30 m.p.h. or less, approaches capacity of the facility.

L.O.S. F - forced flow, speeds are greatly reduced and stoppages occur, volumes are below capacity.

A free flowing urban, controlled access facility with two-lanes in each direction could be expected to accommodate approximately 33,000 ADT (average daily traffic) at L.O.S. B and approximately 66,000 ADT at capacity (L.O.S. E).

The projected year 2010 traffic volumes derived from the traffic service analysis are shown in Figures 6-1 and 6-2 for the Lake LeClare and Railroad alignment alternatives, respectively. These numbers represent the average daily traffic (ADT) in both directions using existing streets and the proposed expressway.

The section of the expressway between I-275 and the Courtney Campbell Causeway (including the Airport Interchange) are of major concern because of the existing traffic volumes and the importance of this segment as the southern terminus for the proposed Northwest Expressway. For the proposed expressway all segments will operate at L.O.S. D or better with service at or approaching L.O.S. A for the majority of the day.

As the expressway proceeds north of Hillsborough Avenue, the level-of-service goes from D just south of Waters Avenue to B north of Linebaugh Avenue to A at Van Dyke Road. This increase in level-of-service (due to decrease in projected ADT) is expected as the expressway traverses the more undeveloped areas of northern Hillsborough County.

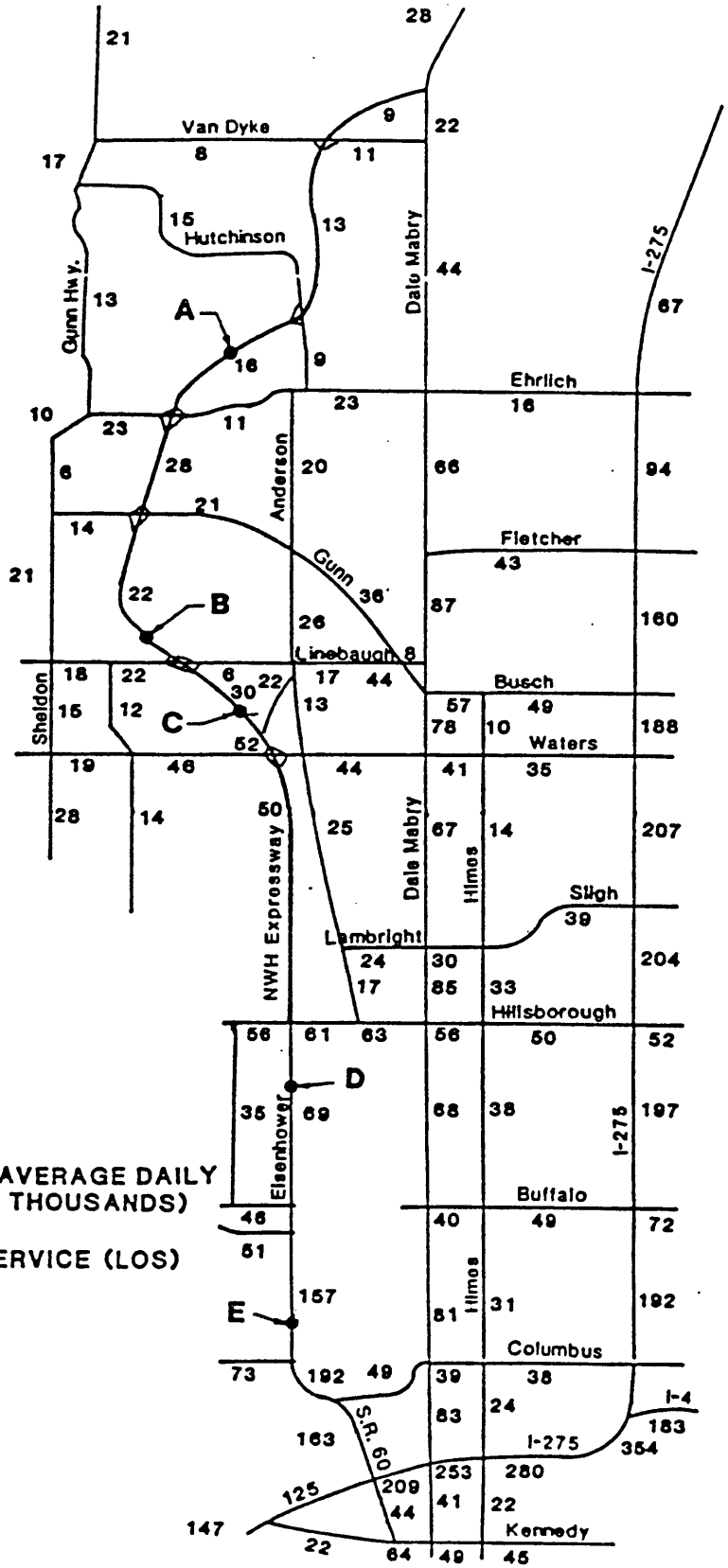
Each of the project alternatives would serve larger volumes than the "No-Build" alternative. As previously discussed in Subsection 4.2.1 and shown in Figure 3-2, many of the roadways in the northwest area have traffic volumes exceeding existing capacity. Without the proposed expressway and major improvements to the County road network, deficiencies in capacity on most of the existing roadways will continue to magnify. By the year 2010, many of the roadways in the northwest area will operate at Levels of Service E (unstable flow) and F (forced flow), presenting severe congestion.

6.1.4 Stage Construction

A project of the magnitude discussed in this report requires large expenditures for right-of-way and construction. Though the traffic generated by the expressway will warrant its full implementation this amount of use may not be realized on all segments for several years after completion of construction. Therefore, staged construction of the expressway may be considered to save on the initial investment yet service the transportation demands of the present and future.

Stage construction would consist of the purchase of all right-of-way required for the project. This is done to reserve that land which would be utilized for future expansion. The full width expressway would be built to a point where traffic projections dictate the need for that type of facility in the year of completion. In the case of the proposed Northwest Expressway, that segment would be from I-275 to the Linebaugh Avenue interchange. From this point north only two lanes of the mainline expressway would be built initially. However, all overpasses and ramps would be fully developed to maintain free flow and to control access. Also certain drainage appurtenances and embankments may be placed to expedite future construction.

Stage construction is a concept which will need to be addressed fully at the time the Expressway Authority begins to identify and quantify the means of financing the facility. The Authority could realize an initial investment savings of approximately 30 percent on construction costs, yet still provide an adequate level-of-service on all segments of the Expressway.



LEGEND

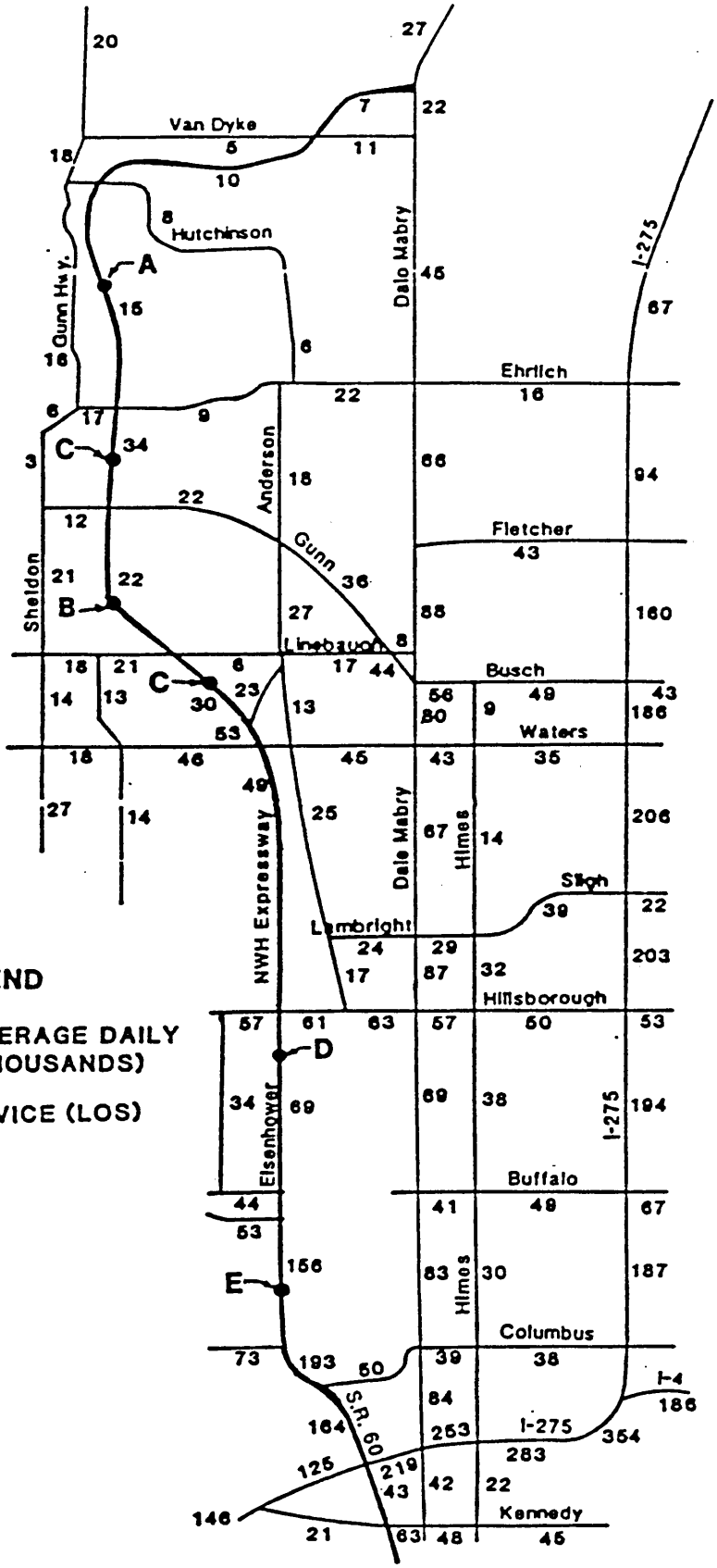
47 - YEAR 2010 AVERAGE DAILY TRAFFIC (IN THOUSANDS)

B - LEVEL OF SERVICE (LOS)

TRAFFIC DEMAND YEAR 2010 AND LEVELS OF SERVICE
LAKE LECLARE ALIGNMENT

L-1

FIGURE 6-1



LEGEND

48-YEAR 2010 AVERAGE DAILY TRAFFIC (IN THOUSANDS)

B-LEVEL OF SERVICE (LOS)

TRAFFIC DEMAND YEAR 2010 AND LEVELS OF SERVICE
RAILROAD ALIGNMENT

L-1

FIGURE 6-2

COMMISSIONER PAM IORIO
CHAIRMAN

JOSEPH J. KUBICKI
EXECUTIVE DIRECTOR

TAMPA URBAN AREA
METROPOLITAN PLANNING ORGANIZATION

403 NORTH MORGAN STREET
TAMPA FLORIDA 33601
(813) 272-5940

MEMORANDUM

TO: Sheila Turner

FROM: Joe Kubicki JK

DATE: March 13, 1986

SUBJECT: Clearinghouse Review, IC&R #27-86, Northwest Expressway EIS

The above referenced project is included on the Tampa Urban Area Metropolitan Planning Organization's currently adopted 2000 Transportation Plan, as well as the 2010 Transportation Plan which is anticipated for adoption on March 18, 1986. Further review of this project will be undertaken by the Planning Commission and MPO at the time the detailed financial analysis becomes available and will consist of a formal recommendation to the Expressway Authority regarding a preferred alignment, or possibily, the no-build alternative. It is also conceivable that only a portion of the project will be recommended to move forward. Both the MPO and Planning Commission will, of course, consider environmental impacts and particularly, effects on the land use patterns in the Northwest, in making their decision.

If you need any additional information, please contact me.

JK/JM/lf

L-2

COUNTY OF HILLSBOROUGH

MEMORANDUM

Date March 21, 1986

To Sheila D. Turner, Project Manager IC&R Review, TBRPC

From Laura B. Belflower, Principal Planner, DDC

Subject: IC&R #29-86, IC&R #30-86, and Draft of Environmental Impact Statement for Northwest Hillsborough Expressway

IC&R #29-86; Florida Transportation Plan Draft, Statewide

DDC Staff Commentary - No comment at this time. Hillsborough County Engineering Department has not had sufficient time to review the draft and also has no comment at this time.

IC&R #30-86; Courtney Campbell Causeway

DDC Staff Commentary - No comment at this time. See Hillsborough County Environmental Protection Commission, memorandum dated March 11, 1986, sent to Peter Clark, TBRPC.

Draft of Environmental Impact Statement for Northwest Hillsborough Expressway.

DDC Staff Commentary - DDC Staff recognizes the considerable amount of information provided in the draft. It should be noted that the DDC continues to recieve land use rezoning applications for development which are close to or within the areas proposed as alignment alternatives for the Northwest Expressway. While not all applications are approved by the Board of County Commissioners, some developments are approved which in the future may be impacted by construction of the Northwest Expressway. Additionally, it is unknown whether Development of Regional Impacts (DRI's) which are located within approximately three miles of Dale Mabry Highway and the proposed Northwest Expressway alternatives have been assessed in this study. Thirteen DRI's are located in this vicinity. Of these, four abut the corridor and one is severed by it. Only four DRI's are built or are under construction. Therefore, most impacts are pending. Office uses predominate at these sites and most are located in the Westshore area of Tampa. Three DRI's are large residential developments which will impact the roadway. Of these three, only one is in place. Please see attachment for further information on the thirteen potentially significant DRI's. 1.

L-3

DRI #	NAME	LOCATION	STATUS
48	Thomas Ranch	Northwest of Sheldon Rd and Linebaugh Avenue	Final Review
115	Woodland Corp. Center	Southwest quadrant of Waters & Manhattan Avenue	D.O. Filed
112	Colonial Penn	Northwest quadrant of Eisenhower Blvd and Memorial Highway	D.O. Filed
104	International Plaza	Northside of Boy Scout Blvd between Westshore Blvd and Columbus Dr.	D.O. Filed
113	Lake Tower Place	Southwest quadrant of Boy Scout Blvd & Grady Avenue	D.O. Filed
87	Urban Centre	Southwest quadrant of Dale Mabry Highway & West Kennedy Blvd.	P.D.A.
150	Calusa Trace	Northwest quadrant of Dale Mabry Highway and Van Dyke Road	D.O. Filed
17	Carrollwood Village	Southwest quadrant of Dale Mabry Highway & Erlich Road	P.D.A.
105	Sunforest	West side of Memorial Highway at east end of Courtney Campbell Highway near Cypress Street	Awaiting ADA
141	Westshore Areawide	North & South of I-275 between Westshore Blvd and Lois Avenue	D.O. Filed
109	Island Center	Rocky Point Island at east end of Courtney Campbell Causeway	Awaiting D.O.
110	Babcock	North end of Rocky Point Island and north of Courtney Campbell Causeway	P.D.A.
122	Lifsey/Rocky Point	Five parcels of Rocky Point Island & West of Island	

tampa bay regional planning council

9455 Koger Boulevard
St. Petersburg, FL 33702-2491
(813) 577-5151/Tampa 224-9380
Suncom 586-3217

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Commissioner
Westwood H. Fletcher, Jr.
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City of Palmetto
Mayor W D. Bell

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Commissioner Sylvia Young

Pinellas County
Mr. Conrad Banspach, Jr.
Ms. Beth Frierson
Mr. David H. Knowlton
Reverend Preston Leonard

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Councilman William Vannatta

City of Safety Harbor
Mayor Alton Dettmer

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City of St. Petersburg Beach
Commissioner Bruno Falkenstein

City of Sarasota
Commissioner Kerry Kirschner

City of Tampa
Councilman Thomas Vann

City of Tarpon Springs
Commissioner
Anthony C. Samarkos

City of Temple Terrace

March 27, 1986

RECEIVED
MAR [illegible] 1986
[illegible]

Mr. Walter O. Kolb
State of Florida
Office of the Governor
The Capitol
Tallahassee, FL 32301

Dear Mr. Kolb:

Subject: IC&R #27-86; DEIS Northwest Hillsborough Expressway
I-275 to SR 597 (Dale Mabry Highway),
Hillsborough County.

Pursuant to your request for review and comment regarding the Northwest Hillsborough Expressway, enclosed are the recommendations to be considered for approval by the Tampa Bay Regional Planning Council's Clearinghouse Review Committee on March 31, 1986. Upon adoption, a final draft will be transmitted.

Please feel free to contact me if I can be of any further assistance at (813) 577-5151.

Sincerely,

Sheila D. Turner
Project Manager
Intergovernmental Coordination & Review

SDT/hh
Enc.

L-4

CLEARINGHOUSE REVIEW

SAI #FL8602060806GE

IC&R #27-86; Draft Environmental Impact Statement for Northwest Expressway.
Reference: IC&R #156-84.

Background

The State Department of Intergovernmental Coordination has requested review and comment on the Environmental Impact Statement (EIS) completed for the proposed Northwest Hillsborough Expressway from Interstate 275 to S.R. 597 (Dale Mabry). The proposed Florida Department of Transportation and Tampa-Hillsborough County Expressway Authority project consists of a major high-type, divided, limited access roadway to serve local traffic in the north and northwest areas of Hillsborough County. Location: Hillsborough County and City of Tampa; Agency: Florida Department of Transportation.

The Environmental Impact Statement (EIS) has been reviewed for consistency with the Council's adopted growth policy, the Future of the Region.

- This proposal has been found to be consistent with Council policies 2.703, 3.102, 3.302 and 3.501, regarding construction of the region's transportation system and the manner in which related dredge and fill activities are to be carried out when likely to affect water quality and wildlife protection.

LOCAL COMMENTS REQUESTED FROM:

Tampa Urban Area Transit Study (TUATS) MPO
Hillsborough County Department of Development Coordination (HCDDC)
Hillsborough County City-County Planning Commission (HCCCPC)

COMMENTS RECEIVED FROM:

- TUATS-MPO and HCCCPC: Comments transmitted March 13, 1986 (attached).
  HCDDC: Comments transmitted March 21, 1986 (attached).

Applicant Proposal

1. The applicant proposes the construction of a new 17-mile, limited access highway in northwest Hillsborough County. The Expressway between I-275 and Memorial Highway would involve the improvements of Eisenhower Boulevard to six and eight lanes and the addition of lanes where required in the interchange areas. The remainder of the project would be a new four-lane divided facility with median and paved shoulders.

2. Access to the existing street network would be maintained through the local road system, frontage roads and grade separated interchanges. The proposed roadway would typically require from 180-250 feet of right-of-way.

3. Total wetlands involved for the entire project is approximately 65 to 67 acres, depending upon the final alignment.

4. Mitigation for wetland impacts includes the creation of wetlands as part of the proposed expressway drainage and/or stormwater facility, enhancement of currently stressed systems in the vicinity of the project (includes drainage/flooding improvement), and wetland creation from uplands.

Council Policy

The methods that have been proposed to address the environmental aspects of constructing the Northwest Hillsborough Expressway have been found to be consistent with the following Council policies:

2.703 - Dredge and fill activities shall be carried out in a manner least harmful to the surrounding environment.

3.102 - Water quality impacts should be considered in all land use and development decisions. Comprehensive and functional plans should include mechanisms and procedures to abate and mitigate water quality problems.

3.302 - The most energy efficient means economically feasible shall be utilized in the construction of the region's transportation systems.

3.501 - Special protective efforts regarding the preservation of rare, endangered or threatened species and habitat required to support these species in the region are encouraged.

Narrative

The grant request for this proposal was reviewed by the Clearinghouse Review Committee (#156-84). Environmental concerns identified during the initial review have been considered and resolved by acceptable expressway alignment, wetland mitigation policy and Best Management Practices for stormwater treatment.

Recommendation

Therefore it is recommended that this Environmental Impact Statement (EIS) be approved.

Further, it is recommended that any additional comments addressing local concerns be considered prior to approval.

Committee adopted March 31, 1986.

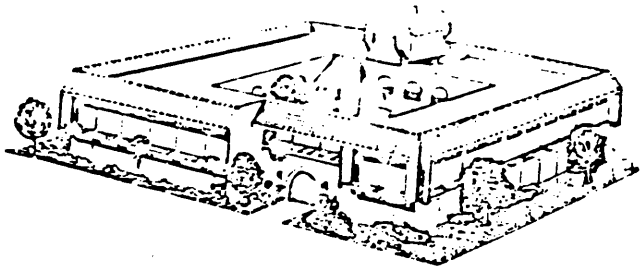
William D. Vannatta, Chairman
Clearinghouse Review Committee

Please note: Unless otherwise notified, action by the Clearinghouse Review Committee is final. Please append a copy to your application to indicate compliance with clearinghouse requirements. The committee's comments constitute compliance with Florida's Intergovernmental Coordination and Review process only.

L-4

HILLSBOROUGH COUNTY
ENVIRONMENTAL PROTECTION
COMMISSION

RODNEY COLSON
RON GLICKMAN
PAM IORIO
RUBIN E. PADGETT
JAN KAMINIS PLATT
JAMES D. SELVEY
PICKENS C. TALLEY II



ROGER P. STEWART
DIRECTOR

1900 - 9TH AVE
TAMPA, FLORIDA 33605

TELEPHONE (813) 272-5960

March 25, 1986

RECEIVED
APR 4 1986

Mr. J. C. Kraft
Chief, Bureau of Environment
Florida Department of Transportation
605 Suwannee Street
Tallahassee, FL 32301



Dear Mr. Kraft:

The staff of the Hillsborough County Environmental Protection Commission has reviewed the Draft Environmental Impact Statement (EIS) concerning the Northwest Hillsborough Expressway (State Project Number 10000-1531; Federal Aid Program M-4047(40); W.P.I. Number 1113669) with regard to the area within our purview.

As this is a draft EIS, this review, by necessity, must be restricted to the conceptual design of the project. We do not wish to comment on the feasibility of the project, but rather we address: (1) The projected impacts to the wetlands and their mitigation; (2) The projected impacts of noise pollution; (3) The projected impacts of air pollution.

Regarding the wetlands to be impacted, any activity interfering with the integrity of the wetlands will be reviewed by the criteria set forth in the Hillsborough County Wetlands Rule (Chapter 1-11, Rules of the Hillsborough County Environmental Protection Commission). Accordingly, we acknowledge the conceptual plans for development and mitigation of the wetlands as presented. However, because the location and sizes of the impacted wetlands are approximations, we reserve final judgment pending field inspection and delineation, by our staff, of each wetland area within our jurisdiction. Subsequent to the delineation, we would require an official survey of each area to ascertain the actual size of the area to be impacted and thus the size and type of mitigation that we would require. **1.**

Regarding air and noise pollution, the information submitted for review was for the most part conclusions and summaries. A qualitative review was not possible, since methodology and data were not available for review. The comments are, by circumstance, therefore general in nature.

The results of the carbon monoxide modeling would appear to indicate little air quality impact from the expressway. The summary of the modeling provided is very general and condensed. It is not advisable to comment on the specific adequacy of the carbon monoxide impact review without more information. Some general comments are provided: **2.**

1. It is stated that "four worst case" intersections were modeled. That statement is not questioned, since those intersections, as identified, approach "worst case" already. However, no mention is made of the intersections with Ehrlich Road, Gunn Highway, Linebaugh Avenue, Waters Avenue, and Hillsborough Avenues. Were traffic counts and ADT projections made in the course of the analysis? What is the impact of the proposed expressway on traffic volume on these roads? It is presented that the expressway will be a traffic flow improvement. Is this substantiated by analysis, or would the attraction of the project simply add more burden on the east-west collector system in place? If so, does the project include measures to mitigate effects on the existing road network and improve traffic flow generally?

(1)

2.

2. Reference is made that the project is in an area where the State Implementation Plan (SIP) does not contain any Transportation Control Measures (TCM). On the other hand, quite the opposite may be the case. The County in its entirety is classified as a Non-Attainment Area (NAA) for the pollutant ozone. TCMs in place County-wide include carpool programs, park-and-ride lots, mass-transit improvements, bicycle planning, and traffic flow improvement projects such as signalization modernization. It may be the case that procedures of 23 CFR 770 do apply.

(2)

Paragraph 6.3.2 addressed noise impacts from the expressway. Information within the submitted report was summarized from a separate noise study done in 1985. Staff telephoned DOT-District 1, and requested a copy of that study for review. Until then, we offer the following general comments.

3.

The choice of sound level meter used in the study is questionable. We at EPC have retired the GRC model 1565B sound level meter in favor of newer, more reliable instruments. Additionally, for this type of analysis, a sound level analyzer (such as Metrosonics 604) and octave band analysis may be more appropriate. Reference to L_{eq} is used throughout. What time period was used in establishing L_{eq}? Impacts from noise are expected to be a major issue with this project. Some of the modeled receptors indicated a rise in L_{eq} approaching 10 dB. One would conclude a noise abatement plan will be required if this project becomes a reality.

Thank you for the opportunity to comment. If we may be of further assistance please contact us.

Yours truly,

Stuart L. Santos, Ph.D.
Chief Environmental Scientist
Hillsborough County Environmental
Protection Commission

SLS/rr

cc: IC&R Coordinator,
Tampa Bay Regional Planning Council

L-5

SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT

2379 BROAD STREET, BROOKSVILLE, FLORIDA 33512-9712
PHONE (904) 796-7211 SUNCOM 684-0111

BRUCE A. SAMSON, *Chairman, Tampa* · Kim C. STUBBS, JR., *Vice Chairman, Cape Coral*
MARY A. KUPPE, *Secretary, Sarasota* · RONALD B. LAMBERT, *Treasurer, Dunedin*
WALTER H. HARKALA, *Assistant Secretary, Plant City* · MICHAEL ZAGORAC, JR., *Assistant Treasurer, Belleair*
JAMES P. TAFT, *Crystal River* · HORACE F. HERNDON, *Lake Wales* · ROY C. HARRELL, *St. Petersburg*

GARY W. KUHL, *Executive Director* · DANIEL P. FERNANDEZ, *General Counsel*
WILLIAM K. HENNESSEY, *Deputy Executive Director* · PETER G. HUBBELL, *Deputy Executive Director*

April 10, 1986

Mr. Walter Kolb
Office of the Governor
The Capitol
Tallahassee, FL 32301

RE: DEIS Northwest Hillsborough Expressway Interstate

Dear Mr. Kolb:

The staff of the Southwest Florida Water Management District has reviewed the above referenced DEIS. Based upon this review, and the interagency meeting held on March 20, 1986, comments are submitted for your consideration.

In general, those comments presented in our September 15, 1983 letter to Mr. Taub, then Chairman of the Expressway Authority, still hold true. A copy of this letter is contained in the DEIS on pages D-55 through 57.

To reiterate some of these comments, a Management and Storage of Surface Waters Permit, pursuant to Rules 40D-4 and 40D-40, F.A.C., will be required for the project. In addition, a Stormwater Permit, pursuant to Rule 17-25, F.A.C., will be required for the project. Contrary to some of the discussion at the March 20 meeting, there is no record that a conceptual approval has been applied for, nor has any form of conceptual approval been given by the District for this project. During that meeting, much of the discussion focused on wetlands mitigation. It should be noted that pursuant to our Rule 40D-4, the District may require specific wetland mitigation.

In reference to Section 6.3.5, Floodplain Impacts, a Stormwater Management Master Plan for the Rocky Creek Watershed is currently being prepared. This report should be completed by July 1986. Flood elevations for the primary drainage system and major lakes are being determined as a result of this study. As a part of the study, a computer model is being developed of the watershed. Hydraulic performance criteria for the Rocky Creek Bridge crossings can be developed from this computer model.

Thank you for this opportunity to comment. I apologize for the tardiness of our response. Should you have any questions, please feel free to contact me.

Sincerely,

Richard S. Owen

RICHARD S. OWEN
Planning Director

RSO:pam

CONSERVE WATER TODAY FOR TOMORROW

COUNTY OF HILLSBOROUGH

RECEIVED
MAY 21 1986
TAMPA-HILLSBOROUGH COUNTY
EXPRESSWAY AUTHORITY

MEMORANDUM

Date May 20, 1986

To Ray Speer, Executive Director, Expressway Authority

From Tommy Denton, P.E., County Engineer TD

Subject: Proposed Northwest Expressway

Joe Rossie, Joe Zambito and I have reviewed the Lake LeClare Alignment and offer the following comments for consideration:

LC 7	Northbound Expressway south of Hillsborough to northbound Benjamin Road needs to be improved. Consideration should be given to providing a northbound ramp to Benjamin Road to run along the northern boundary of the airport to the Hillsborough/Benjamin intersection. This will eliminate the weave problem presently existing, which is made worse by the eastward relocation of the Hillsborough Avenue overpass. See Attachment A.	1.
LC 10	An overpass is required for the future four-lane extension of Sligh Avenue.	2.
LC 12	Directional ramps should be provided at the Anderson/Ramps Intersection. See Attachment B.	3.
LC 13	An overpass is required for the future two-lane extension of Twelve Oaks Boulevard to Henderson Road.	4.
LC 14	Eastbound Linebaugh Avenue to southbound Expressway needs a directional ramp due to large volumes anticipated upon completion of Linebaugh Extension. Northbound Expressway off ramp to westbound Linebaugh requires larger radius at Linebaugh.	5.
LC 15, 16	Expressway should be moved east to eliminate the conflict with the road the County will construct in the County owned former railroad right-of-way.	6.

Continued on Page 2.....

L-7

Re: Proposed Northwest Expressway

7. LC 16 At the Gunn Highway Interchange, the design should be compatible with the Hillsborough County Gunn Highway plans. The Gunn/ Sheldon intersection should be improved concurrently in order to accomodate the additional traffic drawn to the intersection. Access to Holloway Road seems to be restricted by the median. How do you get to Holloway Road from the east? Holloway Road appears to be the only access to approximately 57 acres of developable land.

8. LC 17 The design of the Ehrlich Road interchange should be coordinated with the future Hillsborough County Ehrlich Road widening plans. Access to Briarthorn Drive, which serves approximately 75 to 80 dwelling units seems to be restricted to and from the east. Access road to vacant parcel in the southeast quadrant should intersect Ehrlich Road at 90°, rather than the skewed angle shown.

9. LC 19 At the Hutchinson Interchange, the design should be coordinated with the Hutchinson Road Relocation plans. A full interchange is desirable. The on ramp for northbound Hutchinson onto the southbound Expressway begins under the bridge. If signalization should become necessary, it would be difficult to place the signal heads.

10. LC 20 Hatton Road should be relocated to line up with Wilcox Road and the Expressway bridge located accordingly.

11. LC 21 An interchange should be provided to serve the Tobacco Road Relocated. See Attachment C. At the Lake Shore Road/Van Dyke intersection, it is suggested that one of the sketches shown on Attachment D be utilized.

12. LC 22 Is the bridge over Van Dyke road of sufficient length for the future Van Dyke widening to four-lane divided? Will the bridge piers allow sufficient sight distance for the northbound traffic on Marsh Road to enter Van Dyke Road safely?

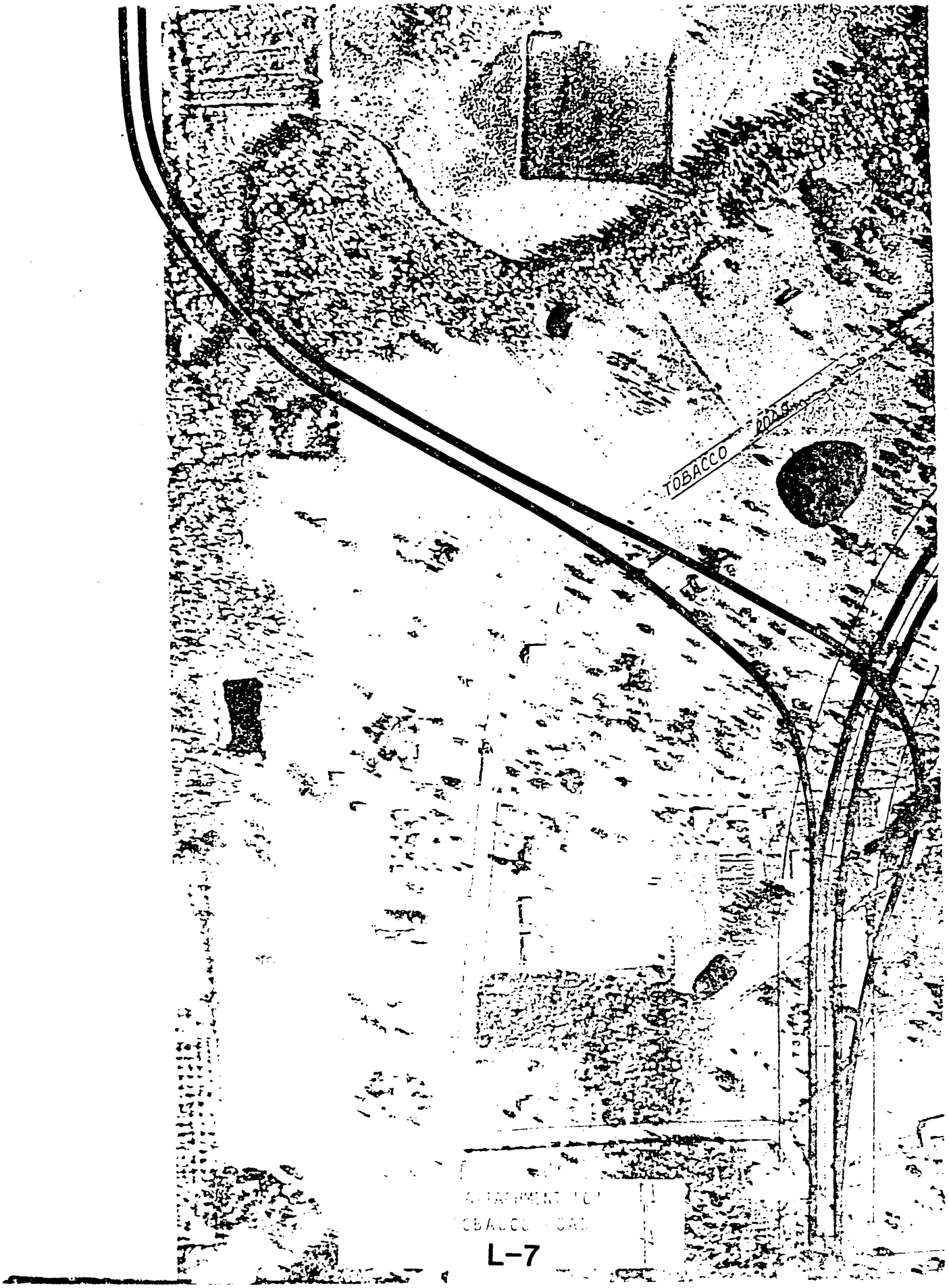
TD:mc

Attachments

cc:

ATTACHMENT "A"
BENJAMIN/HILLSBOROUGH

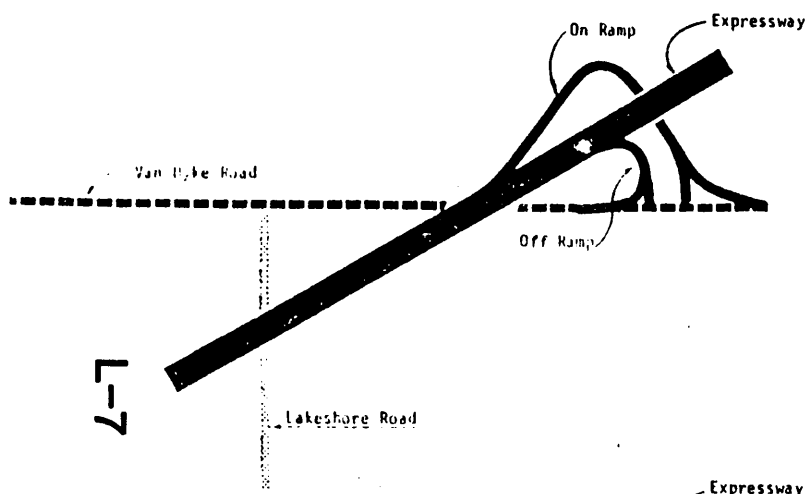

ATTACHMENT "B"
ANDERSON ROAD
L-7
N

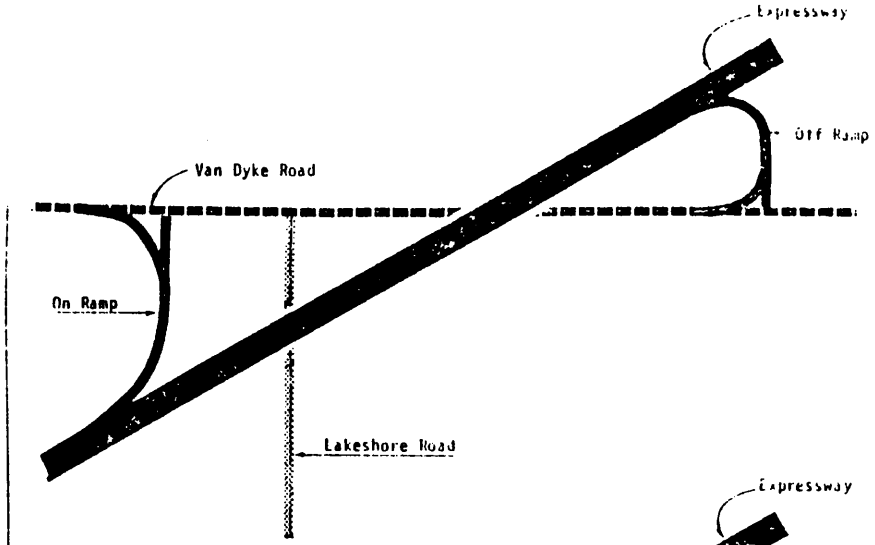


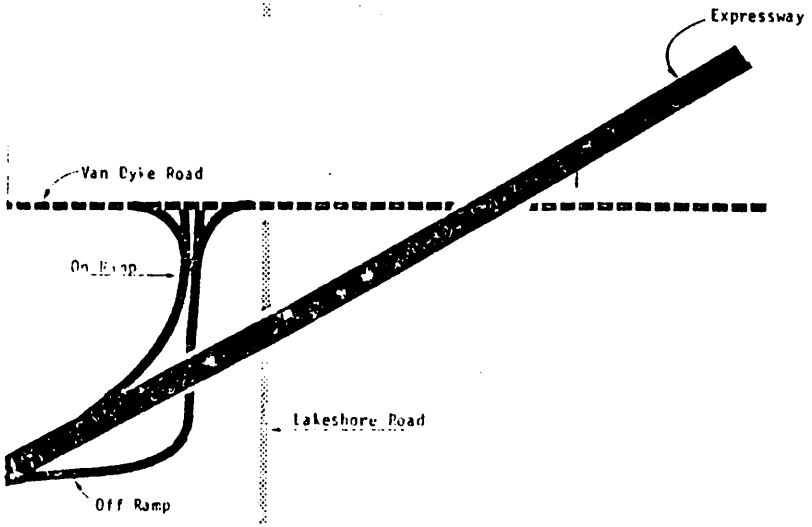
L-7

ATTACHMENT "D"

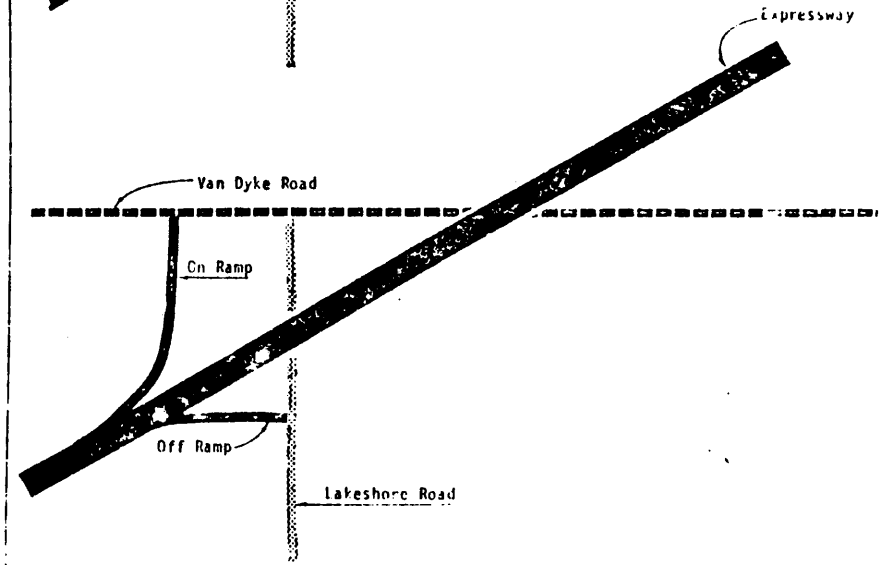
VAN DYKE ROAD







No Scale



No Scale

DISPOSITIONS TO

DRAFT ENVIRONMENTAL IMPACT STATEMENT

AGENCY RESPONSES

See Cover Page to Appendix G
For Agency Responses and
Dispositions Letter Code
Number and Page Nos.

DISPOSITIONS

FEDERAL

F-1-1. We are aware that as of December 1985 the USCOE has jurisdiction over all wetlands (including isolated) within the vicinity of the proposed expressway. We anticipate coordinating permit activities in wetlands with the USCOE, U.S. Fish and Wildlife, National Marine Fisheries Service and EPA during processing of permits when design details are available to accurately assess impacts and therefore appropriate mitigation.

A sentence was added to Subsection 1.6 in recognition that the U.S. Army Corps of Engineers may require a permit for discharge of fill material into isolated wetlands.

F-2-1. On July 22, 1986 and August 20, 1986, meetings were held with the Hillsborough County Aviation Authority (HCAA), FAA and the consultants to the HCAA to review the latest airport planning. Continuing coordination is anticipated throughout the preliminary and final design process.

F-2-2. See response and disposition F-2-1 and L-1-1 thru L-1-10.

F-2-3. The appropriate engineering design data will be provided to the HCAA and FAA early in the plans preparation phase in order to facilitate obtaining their concurrence.

F-2-4. The current right-of-way costs have allowances for purchase of the airport property. See response and disposition L-1-6.

F-2-5. See responses and dispositions F-2-1 and L-1-7.

F-2-6. See response and disposition L-1-10.

F-2-7. An agreement pertaining to impact to the Approach Light System and costs therefore will be entered into by the appropriate agencies prior to design work by the FAA.

F-3 No disposition required.

F-4-1. Wetland systems in general are among the most productive known. Their productivity often exceeds that found in agricultural areas. Many factors contribute to decreased productivity in wetland systems including dewatering, harvesting larger trees for lumber and other disturbances which result in a reduction of vegetation cover.

The esturine systems to be impacted by the proposed expressway are all man-made systems. They occur adjacent to an existing expressway and the proposed expressway should not result in a significant decrease in their contribution to the esturine system. Those systems upstream of the expressway will be provided with conveyance to prevent their detachment from the estuary.

The riverine systems to be impacted by the expressway are all channelized prior to their confluence with the estuary. Due to development activities adjacent to these riverine systems, productive floodplain wetlands have been filled. The only exception is the upper portions of Rocky Creek where the expressway will make two crossings both mainly on structure to minimize any loss of productivity.

Although some of the palistrine systems which may be impacted by the expressway are associated with drainage basins (primarily Rocky Creek), the majority are isolated cypress heads which provide no input to the detrital based food chain of the estuary. The impacts to these systems should have a negligible effect on the productivity of the Tampa Bay estuary.

F-4-2. A conceptual mitigation plan has been developed and included in Subsection 10.3.3.

F-5-1. See response and disposition F-4-2.

F-5-2. (1) FHWA approved model.

(2) The reason existing noise measurements "excluded airport noise contributions" (Subsection 6.3.2.1.1, page 6-61) was because the content of that paragraph was referencing model validation. Table 3b (Subsection 6.3.2.1.1, page 6-67) includes airport noise for existing levels (1985) because it is the dominant noise source within the referenced contours. Additional data for existing noise levels without airport contributions are presented in the Supplemental Noise Study Report.

(3) Although Receptor #25 is on common alignment, there are varying noise impacts based on the applied traffic parameters of either the Railroad or Lake LeClare alignment. Explained on page 34 of Noise Study Report.

(4) Base and Design year traffic by alignment for all roadway segments is presented on the chart on Subsection 6.3.2.11, page 6-62. Additional 1985 (existing traffic) volumes for affected receivers are presented in the Supplemental Noise Study Report. Additional traffic data for roadways in the vicinity of the project are presented in Figures 3-2, 4-14, 6-1, and 6-2.

(5) 1985 - existing conditions.

(6) - (13) Addressed in Supplemental Noise Study Report.

F-5-3 (1) Because ozone is an area-wide pollutant it should be evaluated on an area-wide basis. This is an MPO function. This project is part of the MPO - approved network, which has been determined to contribute to an overall improvement in ozone levels.

(2) The speeds included in the input data for the Caline III analysis were selected to account for the queuing effect.

F-5-4. The Florida Department of Environmental Regulation (FDER) conducted the hazardous waste survey to identify "all known and potential hazardous waste facilities within 500' of the proposed expressway routes." Within the Recommended Alignment alternative only one potential hazardous waste site, Allied Tires at 3302 Eisenhower Boulevard, was identified. In that, this site lies in the section adjacent to Tampa International Airport, an alignment shift to avoid the site would require additional property taking from the Airport.

The concluding remarks of the FDER survey were "Our survey identified several known or potential hazardous waste generators, but no permitted storage/treatment/disposal facilities exist near the proposed routes. The surface impoundment at Trak Microwave and the underground gas storage tanks appear to present the only areas of concern." Neither Trak Microwave nor any identified underground storage tanks will be affected by the Recommended Alignment.

F-5-5. The northwest region of Hillsborough County has a long history of karst geologic features. In a report entitled "Sinkhole Development Resulting from Ground-Water Withdrawal in the Tampa Area, Florida", prepared by the U.S. Geological Survey, it is stated that "The area ... north of Tampa is densely pitted with natural sinkholes and sinkhole lakes ...". The report further states that "numerous small, circular cypress swamps that dot the landscape are a characteristic feature of the study area. Locally called cypress heads because of their characteristic dome shape, these swamps occupy shallow sinkholes".

The proposed expressway will cross several small circular swamps which generally meet the descriptions stated above. During the design stage of the project, geotechnical investigations will be conducted in such areas to determine if sinkhole activity has occurred. Should sinkhole activity be confirmed, then attempts will be made to shift the alignment away from the sinkhole. If this proves to be impractical, then the geotechnical firm will recommend engineering design alternatives to crossing the sinkhole.

F-5-6. It is acknowledged that the construction of the Northwest Hillsborough Expressway will encourage secondary development to occur at possibly a faster rate. However, access to the expressway will only be via interchanges which have been strategically located at major roadway crossings. The interchange locations are with roadways identified on the Tampa Urban Area Year 2010 Long Range Transportation Plan as needing future widening to 4 or 6 lanes with the exception of Hutchinson Road. Therefore, this expressway will relieve the major arterial roadway network of many of the north-south longer distance trips and, thereby, improve traffic flow in the region. Future interchanges for the expressway would require a full interchange justification report to evaluate the benefits and impacts.

The construction of the expressway will require permits from Southwest Florida Water Management District, FDER and U.S. Army

Corps of Engineers to approve and monitor stormwater and dredge and fill activities.

F-5-7. The Lake LeClare Alignment is the Recommended Alignment alternative.

F-5-8. The EPA letter, dated September 18, 1984, has been added to Appendix D.

F-6-1. See response and disposition F-4-2.

STATE

S-1-1. Merchantable timber will be utilized to the maximum degree possible.

Sound practices concurred in by the Florida Department of Agriculture and Consumer Services will be specified.

S-2 No disposition required.

S-3 No disposition required.

S-4 No disposition required.

S-5-1. The Recommended Alignment, see Subsection 4.3, is the Eisenhower/West, Lake LeClare to South Termini alignment. This is generally compatible with that recommended by the Florida Game and Fresh Water Fish Commission. In establishing the final alignment, some realignment occurred in areas suggested by the Commission. This was done in the Ehrlich Road/Bellamy Road area by shifting the alignment southward. However, the realignment at the Hutchinson Road crossing could not be accomplished due to a new public school presently under construction in that area. At the Van Dyke Road interchange, a slight alignment change was made to accommodate the interchange redesign.

Also see response and disposition F-4-2.

S-6-1. The Northwest Hillsborough Expressway forms an integral part of the regional transportation system which has been proposed by the "Year 2010 Long Range Transportation Plan for Hillsborough County". This Long Range Plan, which has been developed by the Tampa Urban Area Metropolitan Planning Organization, provides "the cornerstone for the comprehensive planning and development of highway and public transit improvements within the urbanized area. The Long Range Plan has been tailored to meet future county-wide travel needs, by providing a balance between interstate, arterial, bus and rail transit systems." The expressway is part of the long range plan and is shown to be needed in addition to the bus and rail transit systems. See Section 4.2.4 for discussion on potential for implementing light rail in the future.

S-6-2. See response and disposition F-4-2.

S-6-3. The alignment modification recommended in the vicinity of Lake Holly resulted in a shift of the alignment southward to avoid the contiguous waters of the lake.

The reduction of median width is not desirable in recognizing the potential for future roadway widening for possibly HOV lanes or for light rail. The increased median width in the meantime does reduce the probability of accidents in the median area. The FDOT "Manual of Uniform Minimum Standards for Design, Construction and Maintenance for Streets and Highways -- 1986 Edition" recommends that the minimum freeway width for a design speed of 60 mph and over should be 60 feet. While this width is being used in other areas across the State, the Northwest Hillsborough Expressway median was reduced to approximately 42 feet to reduce impacts to wetlands and properties as well as reduce right-of-way and construction costs. This width is still consistent with the minimum 40 foot width specified for rural highways having a design speed of 55 mph and above.

While the principal reason for providing the 42 foot median is to meet FDOT/FHWA design criteria, this median will provide sufficient width for future expansion to six lanes should future traffic volumes warrant such widening or for HOV lanes or light rail.

S-6-4. See response and disposition F-4-2 and Subsection 10.3.3.

S-6-5. Very few mangrove alternatives are anticipated. Only the thin fringe of mangroves adjacent to Fish Creek may be impacted.

S-6-6. Subsection 6.3.11 discussed that Best Management Practices will be used to prevent erosion and avoid water quality effects.

S-6-7. The development of the stormwater management plan will be the major element of the final design of this project. This plan will be developed during the preliminary engineering stage of the final design contracts and provided to FDER and SWFWMD for conceptual approval.

Upon completion of the drainage design at the 60% plan stage, permit applications for stormwater discharge and dredge and fill will be made to the appropriate review agencies as stated in Subsection 10.3.3.

S-6-8. Best Management Practices will be implemented to protect wildlife.

S-6-9. See response and disposition F-5-4.

S-6-10. The Eisenhower/West, Lake LeClare to South Termini Alignment is the Recommended Alignment alternative.

S-7-1. The Tampa Urban Area Metropolitan Planning Organization has shown a need for the Northwest Hillsborough Expressway to relieve traffic

congestion and accommodate future population growth by including this roadway in the adopted Year 2010 Long Range Transportation Plan. This need has been reconfirmed in the studies to date.

The expressway is consistent with the State Comprehensive Plan and the State Transportation Plan.

The Expressway Authority will submit a complete traffic and revenue report to secure state support.

S-7-2. The comments made by the referenced agencies have been previously addressed in this document. Subsection 10.3.3 fully discusses the mitigation plan, the Florida Coastal Management Program compliance and the permitting requirements.

LOCAL

L-1-1. The separation of the airport traffic from the Eisenhower Boulevard/Northwest Hillsborough Expressway traffic has been accomplished in the current design of the interchange.

L-1-2. The referenced section of roadway has been redesigned to be a ten lane section (two outside lanes are auxillary lanes).

L-1-3. The northbound exit ramp to Independence Parkway has been changed to be a dual ramp plus a single lane ramp has been added for the northbound exit to Memorial Highway.

L-1-4. The expressway in the vicinity of the Airport Interchange has undergone considerable redesign to enhance capacity. This redesign has brought the daily level of service for this area to be Level D or better in the Year 2010. Detailed preliminary engineering analysis and other design concepts to improve this interchange area will be investigated prior to implementing final design.

L-1-5. Consulting engineers will design all signing, lighting, pavement markings, signalization and toll plazas for the expressway in close coordination with the affected City, County and State agencies for the expressway. The engineers will develop the signing master plan for the expressway. In the review process, the airport will be given the opportunity to comment on the plans as they are developed.

L-1-6. This concern has been addressed in the recent redesign of the interchange at Memorial Highway and has been carried northward to the Hillsborough Avenue interchange. The most recent redesigns will result in less right of way being required from airport property. At the Hillsborough Avenue interchange, the redesign included moving the right of way limit by over 150 feet westward to reduce the right of way need from the airport. Meetings are being held with the Hillsborough County Aviation Authority to coordinate the future airport plans and accommodation of the expressway.

L-1-7. Final expressway design will be preceded by an obstruction to air navigation study to ascertain potential penetration of FAR Part 77 imaginary surfaces by proposed structures including the Runway 9 approach surface and Runway 18R-36L transition surfaces. If required, low level light standards will be utilized in lieu of the conventional standards. Alternative lighting and sign structures will be investigated in order to minimize impacts to the airport.

L-1-8. The ASR secondary radar coverage could be derogated by encroachment of obstacles presenting appreciably extensive metallic surfaces. Nevertheless, moving vehicles, light standards, non-metallic fence and other associated highway improvement appurtenances are not the usual obstacles known to present surfaces that induce false targets. Protecting the primary and secondary radar will be a part of final design. Considerations will include verification that the additional right of way required does not infringe on the primary radar area of sterilization and that any potential area of interference with the secondary radar would be coordinated with the Hillsborough County Aviation Authority and the FAA Air Traffic and Airways Facilities Division.

L-1-9. The proposed Eisenhower Boulevard/Northwest Hillsborough Expressway improvements may enhance the quality of the existing noise buffer area. Forestry is not known to function as an appreciable noise buffer.

L-1-10. We recognize that lighted facilities near airports, especially expressway and arterial highway lighting, can result in a hazardous and misleading phenomenon. Specially designed luminaire shields are available to direct the light away from the pilot's line-of-vision on final approach. These shields will be utilized where required. The design will be coordinated with the Hillsborough County Aviation Authority.

L-2 No disposition required.

L-3-1. As part of the Northwest Hillsborough Expressway Study close coordination with Hillsborough County has been maintained to obtain information regarding all development ongoing in the northwest region. This information was utilized in both traffic projections and the evaluation of proposed alignments.

It is recognized that development is continuing in the expressway alignment area. Right of way reservation maps will be filed as soon as the alignment has been adequately finalized.

L-4 No disposition required.

L-5-1. See response and disposition F-4-2.

L-5-2. (1) Traffic counts and ADT projections for all the major intersections were used in the analysis in order to determine which intersections would have the highest traffic volumes. These were the intersections which were modeled, with the assumption that the lower-volume intersections would produce lower emissions.

The proposed expressway will naturally increase traffic on connector roads. This project will include improvements at these intersections to facilitate the flow of traffic, but large-scale improvements will have to be considered separate from this project. Moreover, FDOT/FHWA can improve only State or Federal roads.

Planning measures to improve area-wide traffic flow is a function of the MPO, not FDOT/FHWA.

(2) The wording in reference to the SIP should be changed to the following:

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

L-5-3. The sound level meter used in the study is approved by FHWA for roadway noise.

L-6-1. We are aware that a Management and Storage of Surface Waters Permit, as well as a Stormwater Permit, will be required for this project. These permits will be closely coordinated with the District during the preliminary drainage design of the expressway.

L-7-1. The proposed interchange at the expressway and Hillsborough Avenue will be signalizated, thereby eliminating the weave problem.

L-7-2. A bridge has been added at the proposed Sligh Avenue location.

L-7-3. Improvements in the interchange geometry were made in the Recommended Alignment; however, a true directional interchange will not be provided at this time. In the future, when traffic flow warrants and construction funds are available, a fly over could be provided.

L-7-4. A bridge has been added at the proposed Twelve Oaks Boulevard to Henderson Road (future County) roadway.

L-7-5. The interchange location and design was modified to comply with regional transportation plans and their future impact on Linebaugh Avenue. Ramps to the north were also added at Wilsky Boulevard to provide good areawide distribution of through and local traffic.

L-7-6. A typical section providing for both the proposed local County roadway and the expressway was developed in a July 1, 1986 coordination meeting with the County. The expressway Recommended Alignment plans reflect the agreed upon typical section.

L-7-7. The Gunn Highway interchange, including adjacent intersections and frontage roads, will be designed to coordinate and comply with plans of Hillsborough County. Details for access to Holloway Road will be a part of the overall design considerations.

L-7-8. The interchange design at Ehrlich Road will be coordinated with the County. Good access to Briarthorn Drive will be a consideration.

L-7-9. The Hutchinson Road interchange was redesigned to include ramps to the north in anticipation of the connection of the expressway to a future County project (Gunn Highway Relocation). Considerations, such as ramp intersection design on Hutchinson Road and signal placement, will be a part of final design.

L-7-10. Hatton Road location and design considerations will be coordinated with the County. Realigned Hatton Road is shown on the Recommended Alignment with the bridge moved to the south.

L-7-11. An interchange has been added for future connection to Gunn Highway Relocation (Tobacco Road Relocated). The design is in accordance with County planning.

The interchange at Lake Shore Road and Van Dyke Road was redesigned and is a part of the Recommended Alignment.

L-7-12. The bridge over Van Dyke Road was set to accommodate future widening to Van Dyke Road to four lanes divided. The interchange was redesigned (see response and disposition L-7-11).