

Federal Highway Administration
Region Four

ADMINISTRATIVE ACTION
FINDING OF NO SIGNIFICANT IMPACT

U.S. Department of Transportation
Federal Highway Administration

and

Florida Department of Transportation

| | |
|------------------------|------------|
| State Project Number | 14120-1518 |
| Federal Project Number | F-270-1(2) |
| Work Program Number | 7115879 |

State Road 52 from State Road 55 (U.S. 19) to State Road 93
(Interstate 75) in Pasco County, Florida

The Proposed Action Consists of Upgrading State Road 52 to a
Multilane Divided Highway for a Length of Approximately 23.3 Miles,
and Replacing a Low Level Bridge over Bear Creek, Located
Approximately 1.5 Miles East of U.S. 19

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

7/13/88
Date

Dennis B. Lube
for Division Administrator
Federal Highway Administration

The Federal Highway Administration (FHWA) has determined that this project will not have a significant negative impact on the human environment. This finding of no significant impact is based on the attached Environmental Assessment, which has been independently evaluated by the

FHWA and determined to adequately and accurately discuss the environmental issues and impacts of the proposed project. It provides sufficient evidence and analysis for determining that an environmental impact statement is not required. The FHWA takes full responsibility for the accuracy, scope, and content of the attached Environmental Assessment.

The location of the project is a 23.3-mile section of State Road (SR) 52 from SR 55 (U.S. 19) to SR 93 (I-75) in central Pasco County on the west coast of the State of Florida. The proposed action is to upgrade this section of SR 52 from the existing 2-lane roadway to a multilane, divided highway. A 6-lane, divided urban cross section is proposed from U.S. 19 to County Road (CR) 587 (Moon Lake Road), and a 4-lane rural cross section is proposed from Moon Lake Road to I-75. The bridge over Bear Creek, located approximately 1.5 miles east of U.S. 19, will be replaced as part of this project.

The proposed improvements are consistent with the findings of the West Pasco County Area Transportation Study (WPCATS). The most recent reevaluation of this study, the 1995 Transportation Plan, indicated the need for a 6-lane facility between Hicks Road and Moon Lake Road, and a 4-lane facility between Moon Lake Road and I-75. The need for this project is based on the following factors: transportation demand (based on existing and projected traffic volumes), safety considerations, and emergency services.

Transportation demand on SR 52 is expected to increase substantially. From U.S. 19 to CR 1, the traffic volume in 1985 was 21,880; this figure is projected to increase to 43,800 in 1990 and 60,300 in 2010. Traffic projections indicate that by 2010, SR 52 will be operating at an unacceptable level of service (LOS), LOS E, throughout the length of the project. An upgrading of the existing 4-lane facility to 6 lanes is necessary to improve transportation conditions on SR 52. See Section 2.3 of the Environmental Assessment accompanying this report for more detailed discussion.

Safety is also an important consideration. At the intersections of SR 52 and U.S. 19, Moon Lake Road, and U.S. 41, accident rates recorded from 1978 to 1985 exceeded the statewide average. Most of the recorded accidents were left-turn or rear-end collisions. Increased roadway capacity and the provision of left-turn lanes to remove left turning vehicles from through travel lanes will decrease the accident rate along SR 52. This is discussed in detail in Section 2.5 of the Environmental Assessment.

Emergency services will also improve as a result of this project. Because SR 52 is the most direct access from the heavily developed western portion of Pasco County, it is the severe-weather evacuation route to the east for residents of west Pasco County and neighboring areas. Emergency vehicles, which also rely on this direct route, are affected by traffic congestion and blind spots along the road. The proposed road improvements will improve emergency response times and will facilitate evacuation. Emergency services are discussed in detail in Section 2.9 of the Environmental Assessment.

As discussed above, the benefits this project will offer to the public will include increased safety, improved emergency services, and an alleviation of current and potential traffic congestion. Analysis of existing conditions and the suggested improvements justify the implementation of the proposed project.

The build alternatives considered included alignments using right-of-way acquisition totally from the north side for the entire length of the project, totally from the south side for the entire project length, centered on the existing right-of-way, or acquisition from a combination of the north and south sides. Construction and utility relocation costs would be approximately equal with each alignment. It was determined that the combined alignment would best optimize the goals of least right-of-way cost, least number of relocations, minimum environmental impact,

and best roadway geometrics. Selection of the proposed alternative alignments is discussed in greater detail in Section 3.0 of the Environmental Assessment accompanying this report.

This project will result in the displacement of four residences and six businesses. The business relocations do not include any nonprofit organizations, farms, or community/recreational facilities. None of the persons to be affected by residential relocations are of school age, handicapped, disabled, or receiving any social services. There is sufficient existing residential and commercial space to accommodate displacees, and it is not felt that these relocations will have a disruptive effect on the community. Relocation impacts are discussed in Section 4.4 of the accompanying Environmental Assessment.

The FHWA, in compliance with Section 106 of the National Historical Preservation Act and in consultation with the State Historic Preservation Officer (SHPO), has determined that the proposed action will not affect any 4(f) or Section 106 properties. No properties listed or eligible for listing on the National Register of Historic Places will be impacted, as noted in Section 4.7 of the Environmental Assessment.

This project is in conformance with the State Implementation Plan (SIP) and it will not cause violations of air quality standards nor interference with any transportation control measures. This conclusion is discussed in detail in Section 4.5 of the Environmental Assessment. Construction activities may cause minor short-term air quality impacts, such as dust from earthwork or smoke from open burning; these impacts will be minimized by adherence to all state and local regulations and to the FDOT Standard Specifications for Road and Bridge Construction. Because the increased capacity will allow increased traffic flow, it can be anticipated that air quality will improve as a result of the project.

A noise-impact analysis was conducted, and it indicated that the project will result in increased future noise levels at some residential sites

along the project corridor. Due to the projected increases in traffic, noise levels would also increase if the No Build Alternative were chosen, but to a lesser degree. None of the noise attenuation methods considered were found to be practical. The expected increases in noise levels associated with the proposed improvements were, therefore, determined to be unavoidable. While there is a potential for additional noise impacts during construction, this noise will be minimized by strict adherence to controls listed in FDOT's Standard Specifications for Road and Bridge Construction. Section 4.6 of the Environmental Assessment discusses noise impacts in greater detail.

In compliance with Executive Order 11988, the proposed project was evaluated to determine potential impacts on the base floodplain. It was determined that construction of the 23.3-mile project will result in a maximum potential encroachment on approximately 55.7 acres of base floodplain. There is no practical alternative to construction within the floodplain. There will be no longitudinal encroachments or involvement with any designated floodways. The proposed alternative, the combined alignment, uses selective placement of new lanes relative to the existing roadway at major floodplain sites and, therefore, significantly minimizes encroachment. In addition, because floodplain areas generally correspond with wetlands in the area, measures taken to minimize wetlands encroachment will serve to minimize floodplain involvement as well. Selective clearing and grubbing during construction will further mitigate encroachment, as will the proposed creation of wetlands. For these reasons it has been determined that the proposed project does not constitute a significant base floodplain encroachment. See Section 5.0 of the Environmental Assessment for documentation of communication with governmental offices regarding wetland and floodplain involvement.

In compliance with Executive Order 11990, the project was thoroughly evaluated to determine potential impacts on area wetlands. Wetland involvement is discussed in Section 4.8 of the Environmental Assessment. Wetlands are abundant in this part of Pasco County, and complete

avoidance of wetland was impossible for all build alternatives. The preferred alignment impacts less wetland area than the other three alignments considered. Although the exact acreages and limits of wetland involvement will not be defined until the detailed design stage, preliminary figures indicate that the preferred alignment will unavoidably impact a maximum of 42.95 acres of wetlands at 78 locations. Wetland involvement will be minimized through selective placement of new lanes and through use of the existing SR 52 alignment, because this area has already been disturbed by previous roadway construction. During construction, selective clearing and grubbing and strict adherence to FDOT's Standard Specifications for Road and Bridge Construction will also help minimize impacts.

Based on the above considerations, it is determined that there is no practical alternative to wetland involvement. The proposed action includes all practicable measures to minimize any harm to wetlands that could result from such use. In addition, to minimize wetland involvement, mitigation for affected areas is recommended. Of the possible compensatory measures, wetland recreation is best suited to the specific project conditions. It is proposed that a minimum of 25.89 acres of wetlands be created, particularly at sites located adjacent to existing wetlands (see Section 4.8.5, Mitigation for Wetland Losses).

Final drainage design will be in compliance with Chapter 17-25, FAC. Preliminary studies indicate that stormwater treatment will consist predominantly of detention and/or retention areas with filtration provided in the ditches and swales along SR 52. Water quality is discussed in Section 4.11 of the Environmental Assessment. No adverse effects on either surficial or deep ground water aquifers are anticipated. During construction, Best Management Practices will be used for erosion control and water quality considerations and, if found to be necessary, any additional stormwater treatment measures will be funded by the state.

In compliance with the Endangered Species Act of 1973 and amendments thereto, the proposed improvements were evaluated for impacts on floral and faunal species classified by the U.S. Fish and Wildlife Service (FWS) as threatened or endangered. It has been determined by FHWA, after consultation with FWS, that the project as proposed will have no effect on any threatened or endangered species. See Section 5.0 for documentation of coordination with appropriate agencies concerning threatened and endangered species.

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. See Section 4.4 of the Environmental Assessment.

The Office of Planning and Budget, Office of the Governor, has determined that this project is consistent with the Florida Coastal Zone Management Plan. See Section 4.13 of the Environmental Assessment.

The project was evaluated for potential hazardous waste involvement in the area where additional right-of-way will be taken. No large regionally important sites were found. Seven sites were identified with underground fuel tanks or other areas of known or possible contamination within the proposed right-of-way (see Section 4.16, Hazardous Wastes). Appropriate action will be taken to initiate resolution of contamination problems prior to right-of-way acquisition. Pasco County and the Soil Conservation Service has had no report of contaminated wells or other contamination in the project corridor.

A Public Involvement Program was conducted in conjunction with the study. The program is discussed in Section 5.0 of the Environmental Assessment. A public information workshop, held on June 19, 1986, from 2:00 PM to 7:00 PM, was attended by 156 people. A public hearing, held on December 15, 1987, from 4:00 PM to 7:00 PM, was attended by 138 people. Both meetings were held in the cafetorium of Moon Lake Elementary School, 12019 Tree Breeze Drive, near Port Richey, Florida. Attendees at both

12019 Tree Breeze Drive, near Port Richey, Florida. Attendees at both meetings were generally in favor of the project, and desired expedient implementation of at least the western portion.

The Environmental Assessment was approved for public availability on October 19, 1987. The approved Environmental Assessment addresses all of the viable alternatives that were studied during project development. The environmental effects of all alternatives under consideration were evaluated when the assessment was prepared. Even though the document was made available to the public before the public hearing, the finding of no significant impact was made after the consideration of all comments received as a result of public availability and the public hearing.

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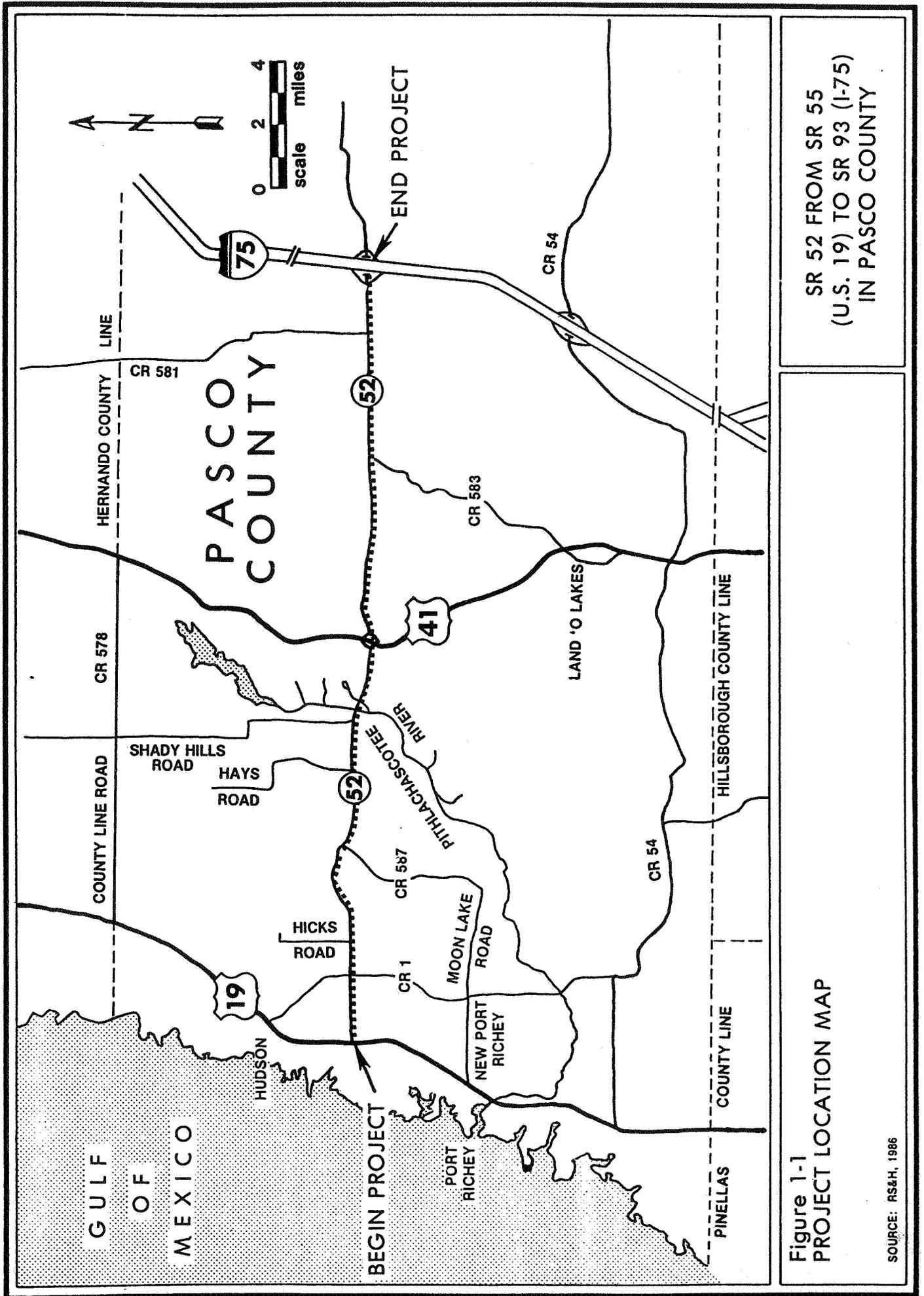
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1.0 DESCRIPTION OF THE PROPOSED ACTION

This project considers improvements to a section of State Road (SR) 52 from SR 55 (U.S. 19) to SR 93 (I-75) in central Pasco County on Florida's west coast (see Figure 1-1). The proposed action is to upgrade this 23.3-mile section of SR 52 from the existing 2-lane roadway to a multilane, divided highway. A 6-lane, divided urban cross section is proposed from U.S. 19 to County Road (CR) 587 (Moon Lake Road), and a 4-lane rural cross section is proposed from Moon Lake Road to I-75. The bridge over Bear Creek, located approximately 1.5 miles east of U.S. 19, will be replaced as part of this project. Other culverts and box culverts located within the project limits will be replaced or widened as warranted. These highway improvements will provide adequate capacity through the 2010 design year.

The intersection of U.S. 19 and the interchange of I-75 with SR 52 were determined to be outside the scope of this project. The U.S. 19 and SR 52 intersection is part of a separate study concerning improvements to U.S. 19 north and south of SR 52. The improvements to this intersection are not included in the Florida Department of Transportation (FDOT) current 5-year work program. The I-75 interchange with SR 52 was previously improved to a multilane facility under I-75 and will connect with the improvements proposed for this project.



SR 52 FROM SR 55
(U.S. 19) TO SR 93 (I-75)
IN PASCO COUNTY

Figure 1-1
PROJECT LOCATION MAP

SOURCE: RS&H, 1986



2.0 EXISTING CONDITIONS AND NEED

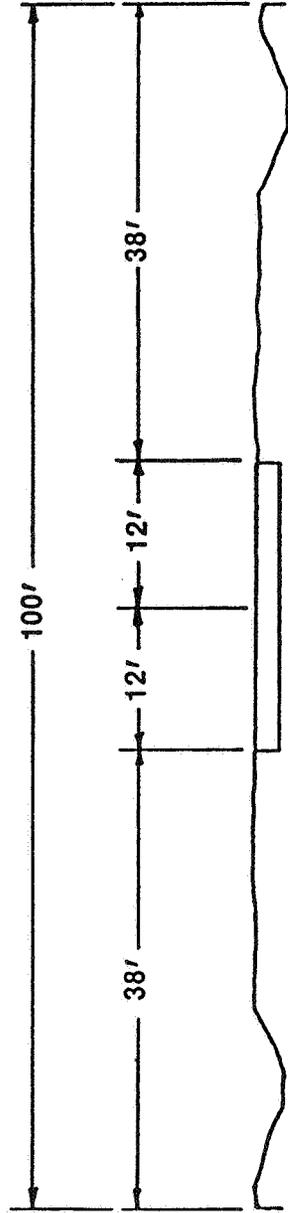
2.1 EXISTING CONDITIONS

SR 52 is a 2-lane, undivided highway with 24-foot-wide pavement between U.S. 19 and U.S. 41 and 20-foot-wide pavement between U.S. 41 and I-75. The cross sections of the existing roadway are of rural design with the pavement generally centered within the 100 feet of existing right-of-way (see Figure 2.1-1). SR 52 has been widened at intersections of major north-south routes and at entrances to large developments to provide additional turn lanes. The land adjacent to SR 52 from U.S. 19 to Moon Lake Road has developed an urban character with a significant amount of residential, office, and commercial development. From Moon Lake Road to I-75, the area surrounding the existing right-of-way is generally open land with minor amounts of residential and commercial development. Wetlands are common along this section of SR 52.

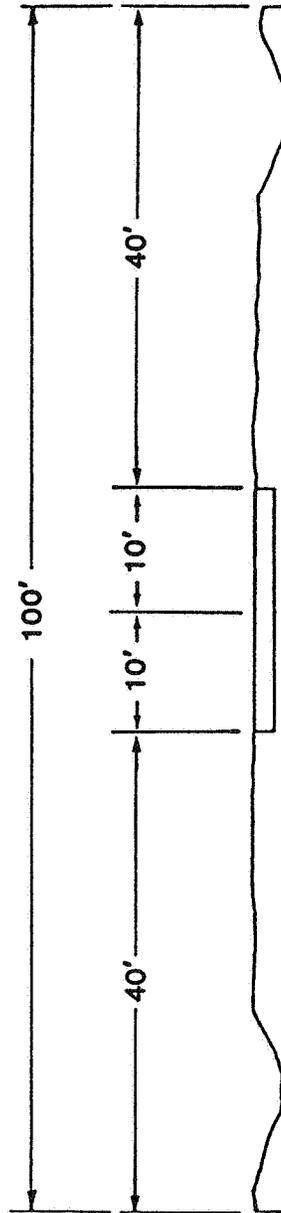
2.2 PLANNING BASIS FOR THE PROPOSED ACTION

The Federal Aid Highway Act of 1962 requires an ongoing transportation planning process in urbanized areas in order to receive federal funds for transportation improvements. Pursuant to this Act, which calls for a continuing, cooperative, comprehensive transportation planning process, Pasco County has developed the West Pasco County Area Transportation Study (WPCATS). The most recent WPCATS reevaluation is the 1995 Transportation Plan which indicates a need for a 6-lane facility between U.S. 19 and Hicks Road. The proposed action is consistent with the adopted transportation plan and with Pasco County's long-range transportation goals for a 6-lane facility between Hicks Road and Moon Lake Road and a 4-lane facility between Moon Lake Road and I-75 [see the Pasco County Metropolitan Planning Organization's (MPO) letter regarding Transportation Plan Consistency in the Appendix]. The need for these facilities is based on projected traffic increases.

EXISTING 2-LANE UNDIVIDED ROADWAY



(U.S. 19 TO U.S. 41)



(U.S. 41 TO I-75)

FIGURE 2.1-1
EXISTING CROSS SECTIONS

SR 52 FROM SR 55
(U.S. 19) TO SR 93 (I-75)
IN PASCO COUNTY

SOURCE: RS&H, 1986

2.3 TRANSPORTATION DEMAND

The projection of traffic demand within the project limits was the subject of a traffic report previously prepared for FDOT in 1984. Baseline traffic data were estimated from land use and growth data supplied by Pasco County, as well as 24-hour machine counts. These data were input to the Quick Response System (QRS) computer program to develop traffic projections for SR 52.

The existing and projected average daily two-way traffic volumes at locations along SR 52 for the 1985, 1990, 2000, and the 2010 design years are shown in Table 2.3-1.

Unacceptable operating conditions, Level of Service E (LOS E), currently exist during the peak hour on SR 52 from U.S. 19 through the CR 1 intersection to the vicinity of Illinois Avenue. The existing traffic signal at CR 1 operates at LOS E during the peak hour. By 1990 all signalized intersections from U.S. 19 to CR 587 are expected to be operating at LOS E during the peak hour. The 2010 traffic projections indicate that SR 52 will be operating at LOS E from U.S. 19 to I-75, the entire length of the project. LOS E is considered unacceptable because it represents operations at low operating speeds, with volumes at or near highway capacity. Flow is unstable, and stoppages may be of momentary duration.

2.4 SOCIAL DEMANDS AND ECONOMIC DEVELOPMENT

Along SR 52, there is a mixture of commercial, residential, and undeveloped land uses (see Section 4.1, Land Use). From U.S. 19 to Moon Lake Road, the land adjacent to SR 52 has become highly urbanized, consisting primarily of commercial and service-related businesses (see Sheets A and B of Figure 4.1-1). Included are retail shopping centers, small offices, medical clinics, banks, recreational facilities, and other related development. Further removed from the roadway, the land surrounding this section of SR 52 is rapidly being developed into

Table 2.3-1. Existing and Projected Average Daily Two-Way Traffic Volumes Along SR 52

| Locations | 1985 | 1990 | 2000 | 2010 |
|------------------------------------|--------|--------|--------|--------|
| <u>Urban Area</u> | | | | |
| U.S. 19 to CR 1 | 21,880 | 43,800 | 51,400 | 60,300 |
| CR 1 to CR 587 (Moon Lake Road) | 22,550 | 36,400 | 44,500 | 52,400 |
| <u>Rural Area</u> | | | | |
| CR 587 to Shady Hills | 9,300 | 20,200 | 24,500 | 28,800 |
| Shady Hills to U.S. 41 | 8,910 | 18,200 | 22,000 | 25,700 |
| U.S. 41 to CR 583 | 4,430 | 12,200 | 14,900 | 17,600 |
| CR 583 to I-75 | 5,600 | 10,300 | 12,700 | 15,100 |

Source: RS&H, 1986.

residential uses. This rapid development is expected to continue and result in substantial traffic increases on SR 52. Some specific developments that will contribute to increased traffic on SR 52 include:

- Beacon Woods East (4,483 dwelling units and 33.5 acres of commercial use),
- Pointe West (1,760 dwelling units),
- Meadow Oaks (955 dwelling units),
- Crews Lakes (2,100 dwelling units),
- Golden Acres (561 dwelling units), and
- Mablebridge (1,800 dwelling units and 150 acres of golf course).

From Moon Lake Road to I-75, the land adjacent to SR 52 consists predominantly of agricultural lands and wetlands with only minor amounts of residential and commercial land uses (see Sheets C and D of Figure 4.1-1). Projections indicate that this section will also experience continued growth in the future, which will also contribute to traffic increases.

2.5 ACCIDENT ANALYSIS

SR 52 accident data supplied by FDOT for the years 1978 through 1985 for the area within the project boundaries were reviewed. Table 2.5-1 shows for each year the number of accidents by type, accident rate, number of fatalities and injuries, and estimated economic loss.

Over 50 percent of the accidents occurred in the 3-mile segment at the western end of the project running from U.S. 19 to Hicks Road. The majority of these accidents consisted of left-turn and rear-end collisions. It is anticipated that these types of accidents will be reduced by increasing the capacity of the roadway and by providing left-turn lanes to remove left-turning vehicles from the through-travel lanes.

SR 52 accident rates were compared with the statewide average. The rate for the entire length of the project was below the statewide average for

Table 2.5-1. Accident History for SR 52 from U.S. 19 to I-75 (23.3 Miles)

| Year | Number of Accidents | | | Rate Per Million Vehicle Miles | Number of Fatalities | Number of Injuries | Economic Loss* |
|------|---------------------|-------------|----------------|--------------------------------------|-------------------------|-----------------------|-------------------|
| | Left Turn | Rear End | Other Types | | | | |
| 1978 | 46 | 33 | 71 | 1.14 | 7 | 90 | \$2,212,000 |
| 1979 | 45 | 33 | 97 | 1.25 | 3 | 113 | 1,611,000 |
| 1980 | 51 | 52 | 81 | 1.21 | 2 | 135 | 1,580,000 |
| 1981 | 31 | 50 | 76 | 1.10 | 2 | 87 | 1,197,000 |
| 1982 | 44 | 50 | 95 | 1.22 | 3 | 124 | 1,706,000 |
| 1983 | 22 | 48 | 99 | 1.08 | 6 | 70 | 2,219,000 |
| 1984 | 21 | 37 | 84 | 1.09 | 1 | 162 | 1,830,600 |
| 1985 | 17 | 53 | 85 | 1.13 | 1 | 154 | 1,764,200 |

* Values for Economic Loss: Fatality = \$200,000; Injury = \$8,000; Property Damage = \$1,000.
(National Safety Council, 1982).

Sources: Florida Department of Transportation Accident Records, 1978-1985.
RS&H, 1987.

each year (1978 to 1985) reviewed. Accident rates at the following intersections, however, did exceed the statewide average: SR 52 with U.S. 19, CR 1, Moon Lake Road, and U.S. 41. The proposed Build Alternative will help reduce the potential for accidents at these locations.

The remainder of SR 52, within the project limits, has experienced a relatively low number of accidents. This is due to low traffic volumes, few intersections, and a generally straight alignment. No significant accident pattern was identified in this review. The recommended improvements will enhance the flow of traffic on SR 52 and should reduce some of the rear-end and left-turn accidents previously experienced on this road.

2.6 MODAL INTERRELATIONSHIPS

The primary transportation mode within the project limits is by automobile. Currently there are no regularly scheduled mass transit services in the SR 52 corridor. At this time, Pasco County has no plans to develop transit service within this corridor.

2.7 NONMOTORIZED MODE OF TRANSPORTATION

In recent years, nonmotorized modes have become viable means of transportation. Therefore, pedestrian and bicycle facilities were considered during the development of the proposed highway improvements.

Although no bicyclists were observed using SR 52 during field reviews, an interest in bicycles in the area is indicated by the presence of a bicycle shop along SR 52. Currently, SR 52 does not have any special design features to safely accommodate bicycles, and the majority of SR 52 is without sidewalks. Therefore, bicyclists and pedestrians must share the roadway with motorized vehicles or use the grass shoulders.

The proposed highway design accommodates bicycles and pedestrians in the urban section (between U.S. 19 and Moon Lake Road). The outer lanes of the proposed roadway are 14 feet wide in this section. This area

includes an additional 2 feet of pavement for bicycle use. In addition, this section includes 5-foot sidewalks on both sides of the roadway.

In the rural section (Moon Lake Road to I-75), 4 feet of the proposed 10-foot outside shoulders will be paved to accommodate bicycle traffic. Since the rural section is generally undeveloped, sidewalks were not included in the proposed improvements.

Accommodations for bicycles and pedestrians that have been incorporated into the proposed SR 52 design are consistent with Pasco County policy, which states that these forms of transportation will be considered in all federally funded road improvement projects (see the The Pasco County MPO's letter regarding bicycle coordination in the Appendix). The proposed design is also consistent with the State of Florida minimum regulations pertaining to bicycles. These improvements to SR 52 should provide safe bicycle and pedestrian usage and increase the potential use for both in the region.

2.8 DEFICIENCIES OF THE EXISTING SYSTEM

The existing 2-lane cross sections for SR 52 is indicated in Figure 2.1-1. The current traffic conditions (as described in Section 2.3, Transportation Demand) are at an unacceptable level of service between U.S. 19 and Illinois Avenue during peak hour on SR 52. The projected demand on all of SR 52 within the project limits will exceed the capacity of the existing 2-lane road by the 2010 design year.

In addition, the horizontal curvature at the SR 52/U.S. 41 intersection of 6 degrees was greater than the 4-degree 15-minute curve recommended in the Manual of Uniform Minimum Standards for Design, Construction, and Maintenance of Streets and Highways (FDOT, 1984a). This curve results in a poor alignment for SR 52 at the U.S. 41 intersection. No other deficiencies in horizontal or vertical alignment have been identified.

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2.9 EMERGENCY SERVICES

SR 52 is a major east-west arterial in Pasco County that connects the gulf coastal areas, which are largely unprotected from severe weather, with more secure areas to the east. This provides an evacuation route for residents located in Port Richey, New Port Richey, Hudson, Bayonet Point, and neighboring developments in Pasco County. According to Mr. Amador Gonzalo, Director of the Pasco County Emergency Services Department (see letter in the Appendix), traffic congestion on SR 52 during periods of heavy traffic causes delays in providing emergency service. In addition, the Director indicated that SR 52 has many curves where passing is dangerous due to blind spots, and that these road improvements will greatly enhance emergency response times and facilitate evacuation.

2.10 SYSTEM LINKAGE

SR 52 begins at U.S. 19 and continues eastward to U.S. 301 in Dade City, a distance of approximately 32 miles. This project covers the section from U.S. 19 to I-75, a distance of 23.3 miles. The significant north-south roads that connect with SR 52 within the project limits are identified by location and classification in Table 2.10-1. As indicated in this table, there are a number of north-south roads which intersect SR 52. The number of roads oriented east-west in Pasco County, however, is limited. SR 52 provides the most direct access from the heavily developed western portion of Pasco County east to I-75 and on to Dade City. As previously indicated, County Line Road to the north and CR 54 to the south are other major east-west roads in Pasco County. They lack the continuity and direct access that is provided by SR 52. The importance of SR 52 to the highway system will continue to increase as the county develops in the future.

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Table 2.10-1. North-South Roadways Along SR 52 from U.S. 19 to I-75

| Classification | Roadway | Location |
|-------------------------|---|---|
| Interstate | I-75 | Eastern Project Limit |
| U.S. Highways | U.S. 19 U.S. 41 | Western Project Limit 12 miles east of U.S. 19, 11 miles west of I-75 |
| Urban, Major Collectors | CR 1 CR 587 (Moon Lake Road) | 2 miles east of U.S. 19 5.5 miles east of U.S. 19 |
| Rural, Major Collectors | CR 583 CR 581 | 6 miles west of I-75 2 miles west of I-75 |
| Urban, Minor Collectors | Majestic Boulevard LaMadera Boulevard Illinois Avenue Hicks Road Shadow Ridge Boulevard | 0.7 miles east of U.S. 19 1.3 miles east of U.S. 19 2.5 miles east of U.S. 19 3 miles east of U.S. 19 5 miles east of U.S. 19 |
| Rural, Minor Collectors | Hays Road Shady Hills Road | 9 miles east of U.S. 19 10.5 miles east of U.S. 19 |

Source: RS&H, 1986.



3.0 ALTERNATIVES CONSIDERED

3.1 ALTERNATIVE CORRIDOR CONSIDERATIONS

As can be seen in Figure 1-1, SR 52 roughly bisects Pasco County in an east-west direction and provides the most direct connection between U.S. 19 and I-75. CR 578 (County Line Road) runs along the northern border of the county and connects U.S. 19 with U.S. 41. CR 578 is located approximately 7 miles north of SR 52 and does not provide a direct connection to I-75. CR 54, located approximately 9 miles south of SR 52, provides the only other east-west continuous connection between U.S. 19 and I-75 in Pasco County. This route is considerably more circuitous than SR 52 and is far enough away to constitute its own corridor. Purchase of the right-of-way necessary to create an entirely new corridor would be prohibitively expensive. In addition, a new corridor would have to pass through existing built-up areas. This would result in a considerable amount of business and residential relocations and would disrupt existing neighborhoods. Based on the above review, it has been concluded that there are no viable corridors other than SR 52 to carry the projected traffic.

3.2 NO-BUILD ALTERNATIVE

The No-Build Alternative would allow the existing facility to remain without substantial improvement. The existing roadway on SR 52 has two lanes for through traffic, one in each direction, with widenings for turn lanes at a number of intersections. The advantages associated with this alternative are that no capital outlay would be required for construction and right-of-way acquisition; the displacement of residents and businesses would not be required; and existing development and environmentally sensitive areas would not be disrupted during the construction period. The main disadvantage is that the existing number of lanes is not adequate to serve the projected traffic at an acceptable level of service. Traffic volumes on the section between U.S. 19 and CR 1 already exceed 21,800 vehicles per day and are projected to exceed 60,000 vehicles per day by the 2010 design year (see Table 2.3-1). A considerable growth in traffic is expected throughout the SR 52

corridor. With this level of traffic demand and the lack of alternate routes for use by the motoring public, SR 52 will become extremely congested. This will create long delays, increase the potential for accidents, and decrease emergency service response time. Based upon these factors, the proposed Build action has been developed as a design alternative; however, the No-Build Alternative will continue to be considered as a valid alternative until after the public hearing when a final recommendation will be made.

3.3 POSTPONING THE IMPROVEMENTS

Another potential alternative is to postpone any improvements to SR 52. Portions of the existing roadway are already extremely congested. The congestion will worsen as the area surrounding SR 52 develops. In addition, future development along SR 52 is likely to encroach on the recommended right-of-way line. Therefore, delaying improvement of SR 52 would result in an increased number of relocations, higher construction right-of-way costs, and added fuel consumption due to increased delays. Postponing improvements is therefore not considered a viable alternative.

3.4 TRAFFIC OPERATION IMPROVEMENTS

Upgrading of the existing 2-lane roadway by providing wide shoulders and increasing the number of turn lanes at the major intersections would provide a minor capacity increase. This would not meet the projected traffic demand for this facility. For this reason, upgrading the existing facility with these traffic operations improvements is not considered a viable alternative.

3.5 MASS TRANSIT

Local mass transit facilities are not currently available along the SR 52 corridor. This area has relatively low land use densities and, as a result, has widely scattered origins and destinations for the trips on it. This lack of development concentration would make it difficult for mass transit to capture more than 4 percent of the trips along SR 52.

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Additionally, Pasco County has no plans at this time to develop transit service within this corridor. Mass transit will not adequately serve to decrease the transportation demand in the near future and, therefore, cannot be a viable alternative.

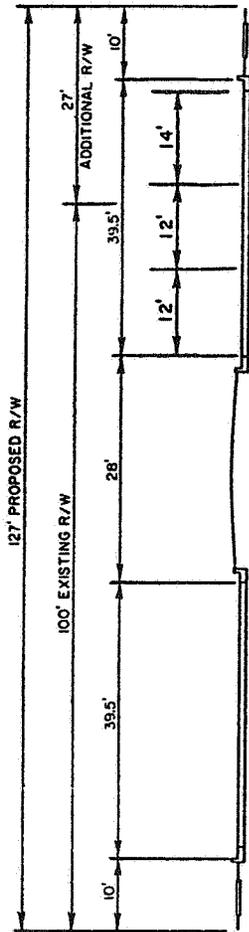
3.6 PROPOSED DESIGN CONCEPTS

The design alternatives were developed to provide an acceptable level of service for the expected traffic demand on SR 52 through the 2010 design year. To account for differences in traffic demand and the fact that the western urban section has significantly higher land costs than the eastern end, the following alternatives were considered.

3.6.1 Urban Alternative

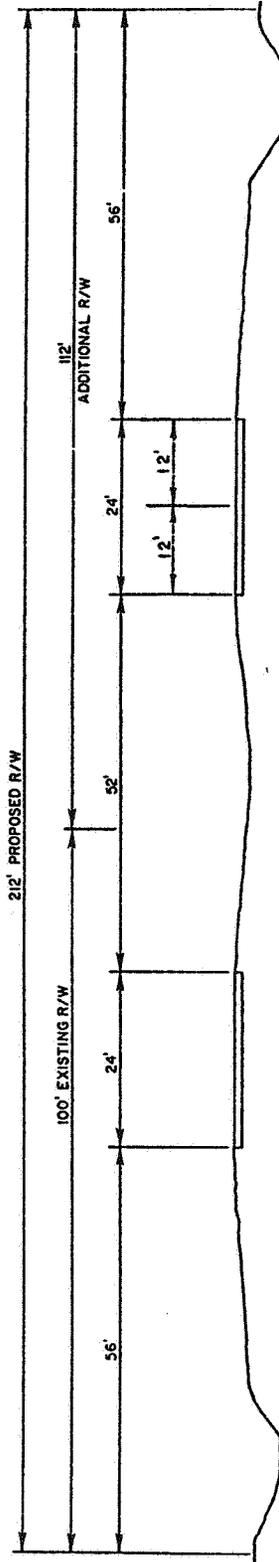
From U.S. 19 to Moon Lake Road, SR 52 has an urban character with a considerable amount of commercial land use. This intense development results in high land values and correspondingly high right-of-way acquisition costs. Thus, a 127-foot urban cross section will be considerably less expensive than a 212-foot rural cross section and is therefore proposed to be used within these limits. Six lanes for through traffic (three in each direction) are required to handle projected traffic demands.

The typical urban cross section provides two 12-foot-wide lanes on the inside and a 14-foot-wide outer lane in each direction as shown in Figure 3.6-1. The 14-foot-wide outer lane is provided to accommodate bicycle traffic. The center median dividing strip will be 28 feet wide to allow room for dual left-turn lanes at intersections with high turning volumes. The 28-foot-wide median will also allow turn lanes for opposite directions of travel to be constructed "back to back" if needed. Since there is considerable land remaining to be developed in the urban section, the identification of all locations that will require dual left-turn lanes or "back to back" turn lanes could not accurately be determined. It was therefore considered desirable to develop the 28-foot-wide median throughout the urban section to keep the through



TYPICAL URBAN SECTION

(U.S. 19 TO MOON LAKE ROAD)



TYPICAL RURAL SECTION

(MOON LAKE ROAD TO I-75)

**FIGURE 3.6-1
PROPOSED TYPICAL CROSS SECTIONS**

**SR 52 FROM SR 55
(U.S. 19) TO SR 93 (I-75)
IN PASCO COUNTY**

SOURCE: RS&H, 1986

lanes from frequently shifting alignment. The total right-of-way required for the urban cross section is 127 feet in width. The urban pavement would be constructed using curbs and gutters, with provision of underground drainage to handle stormwater runoff. This urban cross section would be used for a distance of approximately 6 miles. Following improvement, all of the signalized intersections within the section proposed for the 6-lane urban cross section will operate at an acceptable LOS D or better in the peak hour through the 2010 design year.

3.6.2 Rural Alternative

SR 52 from Moon Lake Road to I-75 is sparsely developed at this time. The land costs are considerably lower than in the section to the west; therefore, rural cross sections become more economical to build than urban cross sections. The projected traffic demand declines east of Moon Lake Road. For this reason, only four lanes for through traffic will be required in this segment by the 2010 design year.

The typical rural cross section provides a 4-lane divided pavement with two 12-foot-wide lanes for each direction of traffic (see Figure 3.6-1). A 52-foot-wide median is proposed for this cross section. The rural section will extend from CR 587 to I-75, a distance of approximately 17 miles. A 56-foot-wide margin from the edge of the pavement to the right-of-way line on each side of the roadway is provided. This will allow room for 10-foot-wide shoulders, 4 feet of which will be paved for bicycle use, and 46 feet for surface drainage swales. The total right-of-way width needed for this cross section is 212 feet. Following improvement to a 4-lane divided rural cross section, all of the intersections within this segment of the project will operate at LOS C or better through the 2010 design year.

3.6.3 Controlled Access Alternative

The possibility of a controlled access road in the rural section was also considered. The projected traffic demand was not sufficient to

justify the added expense of constructing separate access roads beside the limited-access route. This alternative was, therefore, dropped from further consideration.

3.6.4 Design Considerations

Design Speeds and Degree of Curvature--The design speeds used in this study are 45 mph for the urban section and 70 mph for the rural section. These design speeds are generally set above the expected posted speed. It is expected that the posted speed limit in the urban section will be 40 mph. It is expected that the rural section will be posted at an existing legal maximum of 55 mph. A 70-mph design speed has been used to obtain safe operating characteristics. The maximum degree of horizontal curvature allowed for the urban section is 6 degrees using a 0.05-foot/foot superelevation rate, while the maximum allowed for the rural section is 3 degrees 30 minutes using a maximum superelevation rate of 0.10 foot/foot.

Railroad Grade Crossing--There is one railroad-grade crossing of SR 52 within the project limits. The CSX Transportation (formerly Seaboard Coast Line Railroad) crosses SR 52 west of U.S. 41. According to FDOT guidelines, construction of railroad-grade crossings are considered when train/motor vehicle conflicts exceed 20 trains per day and 5,000 vehicles per lane per day. There are currently two train crossings per day on Tuesdays, Thursdays, and Saturdays as a train crosses from Brooksville to Tampa and returns. This section of SR 52 is expected to carry 25,700 vehicles per day by 2010. Since there is an average of less than one train per day using the crossing, the train/motor vehicle conflict is not sufficient to warrant construction of a railroad-grade separation. An improved at-grade crossing will be included with the rural-design cross section at this location.

Potential to Save the Existing Pavement--The potential to save the existing pavement for use with the improved roadway has been reviewed. An urban cross section is recommended from U.S. 19 to Moon Lake Road.

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The existing pavement was constructed as a rural cross section, providing open drainage and very little grade. As a result, the existing pavement would not drain properly if it were to be converted to an urban cross section. The rural portions of SR 52 have been reviewed for possible resurfacing and use in the rural cross section. The FDOT district pavement design engineer has evaluated the existing base and surface. Due to low soil support provided by the existing embankment and 6-inch limerock base, the district pavement design engineer has recommended that the roadway be reconstructed. Therefore, new pavement will have to be constructed for the entire length of SR 52.

3.7 ALTERNATIVE ALIGNMENTS

3.7.1 Alignments Considered

North Alignment--With this alignment, all of the additional right-of-way required would be obtained along the north side of the road. This would be an additional 27 feet in the urban section and 112 feet in the rural section.

South Alignment--This alignment would require the same amount of additional right-of-way as the north alignment, but it would be acquired from the south side only.

Centered Alignment--This alignment would utilize equal amounts of right-of-way on each side of the existing roadway. The urban section would require 13.5 feet from each side of the road, while the rural section would take an additional 56 feet from each side.

Combined Alignment--A combined alignment would shift between north, centered, and south alignments as needed to minimize negative impacts and maximize benefits.

3.7.2 Selection Criteria for the Proposed Alignment

The proposed alignment was selected using the following goals:

1. Minimize road construction costs,

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2. Minimize right-of-way acquisition costs,
3. Minimize the number of relocations,
4. Minimize environmental impacts,
5. Improve roadway geometrics, and
6. Minimize utility relocation costs.

Road Construction Costs--The urban section will require reconstruction of the existing roadway and placement of new pavement with curb and gutter sections and underground drainage. This will be required for each alternative; therefore, there is no difference in construction cost for any of the alternatives in the urban section. Similarly, the rural cross section will require entirely new pavement regardless of the alternative selected. Road construction costs, therefore, are not a determining factor in the selection of the preferred alignment.

Cost estimates have been prepared for this new road construction using FDOT long-range estimates which were prepared on May 1, 1986. The urban cross section would be constructed for a distance of 6.11 miles of 6-lane pavement at an estimated cost of \$13,148,400. The rural 4-lane cross section would be used for 17.23 miles and would cost \$26,185,300.

Right-of-Way Costs--Right-of-way cost estimates were obtained for the north, south, and centered alignments using the recommended right-of-way widths discussed earlier. The alignments included acquisition of all of the needed right-of-way north of the existing right-of-way, total acquisition to the south of the existing right-of-way, and centered on the existing centerline. The right-of-way cost estimates obtained from FDOT include costs for the purchase of the right-of-way including severance, support costs, administrative settlement, court award and legal settlements, and relocation costs, including costs for signs.

Number of Relocations--The number of relocations, both for business and residential use, were obtained for the three right-of-way acquisition alternatives and are discussed in detail in Section 3.7.3, Proposed Alignment.

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Environmental Impacts--The rural section of SR 52 passes through a number of wetland areas. Determination of the preferred alignment considered the impact of the recommended right-of-way on the adjacent environmentally sensitive areas (i.e., wetlands).

Roadway Geometrics--At a number of locations, improvements in roadway geometrics were a factor in the selection of the preferred alignment. The maximum degree of curvature used in the preferred alignment is 3 degrees 30 minutes for both the urban and rural sections.

Utilities--A number of utilities are located within the SR 52 right-of-way, with the greatest number located in the urbanized western end of the project. The Withlacoochee River Electric Company (WREC) has overhead electric lines running the entire length of the project. Poles for this utility vary from the north side of the road to the south side at a number of locations. Florida Power has an overhead line that runs from U.S. 19 to east of Plaza Drive. Storer Cable Television has a cable on the WREC poles that follow a south-side alignment for most of the length from U.S. 19 to 0.5 mile east of Moon Lake Road, CR 587. The Pasco County Water Department has a water line that is located between 38 and 42 feet south of the centerline of SR 52 from U.S. 19 to Moon Lake Road. General Telephone Company has an overhead line running from U.S. 19 to 0.3 mile west of Hicks Road on the north side of SR 52. The telephone company also has a number of buried cables within the road right-of-way. SR 52 from U.S. 19 to Moon Lake Road has between one and eleven buried cables spread within the right-of-way north of the existing pavement. From approximately 0.4 mile east of U.S. 19 to Moon Lake Road there are one to two buried cables located south of the road. All of the utilities are located within the road right-of-way with the exception of five WREC poles located just outside the south right-of-way line in the vicinity of CR 1. The utilities located within the right-of-way are scattered north and south of the existing pavement.

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Most of the buried utilities will require relocation or adjustment no matter which alignment is selected, and no significant differences in costs for relocation of utilities following the north, south, or centered alignments were identified.

3.7.3 Proposed Alignment

The four alignment alternatives were compared in light of the selection criteria outlined in Section 3.7.2. It was determined that construction and utility relocation costs would be virtually the same no matter which alternative is selected. Neither the north, south, or centered alignment could provide a combination of the least right-of-way cost, least number of relocations, minimum environmental impact, and best roadway geometrics. In fact, there were many conflicts between these goals. Therefore, the combined alignment was chosen as the most prudent Build Alternative because it optimizes the goals listed above. The process used to select the proposed combined alignment is discussed in the following paragraphs.

U.S. 19 to CR 587, Moon Lake Road--Urban Cross Section--This section of SR 52 contains the highest densities of urban development. Much of the road frontage has been developed into commercial, office, and residential uses. As a result, there are very few environmentally sensitive areas within the urban limits. Selection of the preferred route, therefore, centers on minimizing right-of-way costs and relocations. Since there are a number of curves in the alignment of this road, the logical place to transition from a north to centered or south alignment is in one of these curves. Efforts have also been made to flatten these curves, where possible, to improve roadway geometrics.

Table 3.7-1 provides a comparison of right-of-way costs, number of relocations, relative environmental impacts by alignment, and indicates the preferred alignment. The preferred alignment for SR 52 from U.S. 19 to La Madera Boulevard is to acquire additional right-of-way needed along the south side. This alignment is less expensive than either of

Table 3.7-1. Evaluation of Alignments for SR 52

| Location | Segment Length | North | | | Centered | | | South | | | Preferred | | |
|--|----------------|------------|----------------|--------------|------------|----------------|--------------|------------|----------------|--------------|------------|----------------|--------------|
| | | R/W (\$) | Bus/Res Reloc. | Env. (Acres) | R/W (\$) | Bus/Res Reloc. | Env. (Acres) | R/W (\$) | Bus/Res Reloc. | Env. (Acres) | R/W (\$) | Bus/Res Reloc. | Env. (Acres) |
| U.S. 19 to LaMadera Blvd. | 1.29 | 2,439,900 | 1/1 | 0.00 | 3,068,600 | 1/0 | 0.00 | 2,213,000 | 0/0 | 0.00 | 2,213,000 | 0/0 | 0.00 |
| LaMadera Blvd. to Illinois | 1.19 | 2,084,900 | 2/0 | 0.00 | 3,014,200 | 2/0 | 0.00 | 2,287,000 | 0/0 | 0.00 | 2,287,000† | 0/0 | 0.00 |
| Illinois to Bear Creek Dr. | 1.48 | 2,158,500 | 0/0 | 1.14 | 2,559,400 | 0/0 | 0.82 | 1,806,200 | 0/0 | 0.51 | 1,806,200 | 0/0 | 0.51 |
| Bear Creek Dr. to 0.2 Mile East of Croctaw Ridge | 0.4 | 1,130,300* | 0/0 | 0.00 | 1,362,800 | 0/0 | 0.00 | 1,003,700 | 0/0 | 0.00 | 1,003,700 | 0/0 | 0.00 |
| 0.2 Mile East of Croctaw Ridge to 0.2 Mile West of Sugar Creek | 1.19 | 1,754,500 | 0/0 | 0.00 | 1,616,400 | 0/0 | 0.28 | 802,000 | 0/0 | 0.55 | 802,000 | 0/0 | 0.55 |
| 0.2 Mile West of Sugar Creek to Moon Lake Road | 0.56 | 171,000 | 0/0 | 0.12 | 196,400 | 0/0 | 0.57 | 132,000 | 0/0 | 0.91 | 132,000 | 0/0 | 0.91 |
| TOTAL URBAN SECTION | 6.11 | 9,739,100 | 3/1 | 1.26 | 11,817,800 | 3/0 | 1.67 | 8,243,900 | 0/0 | 1.97 | 8,243,900 | 0/0 | 1.97 |
| Moon Lake Road to 0.3 Mile East of Hayes Road | 2.42 | 1,278,000 | 0/0 | 5.16 | 1,593,800 | 0/0 | 4.24 | 1,266,000 | 0/0 | 5.50 | 1,266,000 | 0/0 | 5.50 |
| 0.3 Mile East of Hayes Road to 0.5 Mile East of Marcott Way | 0.74 | 269,000 | 0/0 | 0.75 | 373,300 | 0/0 | 0.71 | 340,500 | 0/0 | 1.26 | 269,000 | 0/0 | 0.75 |
| 0.5 Mile East of Marcott Way to 0.3 Mile East of SCL Railroad | 2.47 | 1,870,000 | 2/4 | 4.60 | 3,145,800 | 5/12 | 3.51 | 2,690,900 | 2/17 | 4.06 | 1,870,000 | 2/4 | 4.60 |
| 0.3 Mile East of SCL Railroad to 0.2 Mile West of U.S. 41 | 0.41 | 821,600 | 6/6 | 0.06 | 555,600 | 1/3 | 0.25 | 325,600 | 0/0 | 0.51 | 304,500 | 0/0 | 0.20 |
| 0.2 Mile West of U.S. 41 to 0.35 Mile East of U.S. 41 | 0.55 | 499,500 | 4/0 | 0.56 | 549,600 | 2/0 | 0.55 | 600,500 | 6/0 | 0.78 | 597,500 | 4/0 | 0.98 |
| 0.35 Mile East of U.S. 41 to 1.15 Miles East of U.S. 41 | 0.8 | 998,300 | 0/0 | 3.51 | 849,300 | 0/0 | 3.87 | 519,000 | 0/0 | 4.25 | 519,000 | 0/0 | 3.16 |
| 1.15 Miles East of U.S. 41 to 0.4 Mile East of Pasco Trails Blvd. | 1.34 | 507,000 | 0/0 | 7.08 | 613,700 | 0/0 | 7.59 | 470,000 | 0/0 | 8.72 | 507,000 | 0/0 | 5.80 |
| 0.4 Mile East of Pasco Trails Blvd. to 2 Miles East of Pasco Trails Blvd. | 1.6 | 580,000 | 0/0 | 3.12 | 726,400 | 0/0 | 2.87 | 552,000 | 0/0 | 3.23 | 552,000 | 0/0 | 2.43 |
| 2 Miles East of Pasco Trails Blvd. to 2.5 Miles East of Pasco Trails Blvd. | 0.5 | 263,000 | 0/0 | 4.35 | 316,600 | 0/0 | 3.82 | 246,000 | 0/0 | 3.04 | 246,000 | 0/0 | 2.54 |
| 2.5 Miles East of Pasco Trails Blvd. to I-75 | 6.4 | 4,167,500 | 2/14 | 21.97 | 5,269,400 | 1/14 | 16.27 | 2,807,000 | 0/1 | 13.03 | 2,807,000 | 0/0 | 13.03 |
| TOTAL RURAL SECTION | 17.23 | 11,253,900 | 14/24 | 51.16 | 13,993,500 | 9/29 | 43.68 | 9,817,500 | 8/17 | 44.38 | 8,938,000 | 6/4 | 41.16 |
| PROJECT TOTAL | 23.24 | 20,993,000 | 17/25 | 52.42 | 25,811,300 | 12/29 | 45.35 | 18,061,400 | 8/17 | 46.35 | 17,181,900 | 6/4 | 43.13 |

* Includes transition cost for acquisition on both sides of R/W (see text).

† South Alignment preferred due to eagles' nest on north side of SR 52 at La Madera Boulevard.

Source: RSH, 1987.

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the other alternatives and requires no relocations. From La Madera Boulevard to Illinois Road the south alignment has been selected. An eagle's nest is located approximately 350 feet north of the centerline of SR 52 in the vicinity of La Madera Boulevard. In order to reduce impacts on this eagle's nest, a south alignment at this location is preferred. The alignment is kept to the south for the segment leading to Illinois Road because there is no suitable place to transition to the north in this segment. This alignment will require no business or residential relocations, while a north alignment would have required two business relocations. From Illinois Road to Bear Creek Drive, the south alignment is the favored route due to lower costs and less wetland involvement.

The potential to move the alignment to the north from Bear Creek Drive to 0.2 mile east of Choctaw Ridge was investigated. There are no relocations for either the south or north alignment and no significant environmental impacts. The north alignment would cost \$1,130,300, while the south would cost \$1,003,700. The north alignment cost includes the right-of-way cost for a north-only alignment and a transition from the south alignment. This would require purchase of right-of-way from both sides of the existing right-of-way thereby increasing the number of parcels that would be acquired. It is estimated that the eight additional parcels would add \$152,000 in support cost, administrative settlement, court award, legal settlement, and appraisal fees to the \$978,300 cost for the north-only alignment. The total cost for the north alignment would then be approximately \$1,130,300, considerably more than the south alignment. The south alignment is therefore preferred.

From 0.2 mile east of Choctaw Ridge to 0.2 mile west of Sugar Creek, the south alignment is preferred due to significantly lower right-of-way costs. From 0.2 mile west of Sugar Creek to CR 587, Moon Lake Road, the south alignment has again been selected due to lower right-of-way costs. There is a minor amount of environmentally sensitive land within both of

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these sections. There is a total of 1.42 acres of wetlands affected by the south alignment, 0.12 acre affected by the north alignment, and 0.85 acre affected by a center alignment. The wetland impacts were not considered a significant enough factor to shift the road from a southern alignment.

CR 587 to I-75--Rural Cross Section--The rural cross section begins at Moon Lake Road and extends to the eastern project terminus at I-75. From Moon Lake Road to 0.3 mile east of Hayes Road, the south alignment has been recommended to improve roadway geometrics and lower right-of-way costs. The south alignment involves slightly more wetland than the other alternatives; however, the difference was not considered sufficiently significant to shift the alignment from the south. A subalter-nate considered straightening the alignment between two reverse curves located 0.15 mile and 0.77 mile east of Moon Lake Road. The straightened alignment would impact an additional 1.13 acres of wetlands and is also estimated to cost an additional \$97,000 more than the south alignment. Since the curves on the south alignment are within the design parameters for the rural cross section and there would be greater environmental impacts and higher costs to straighten the road, it has been recommended that the south alignment be followed.

From 0.3 mile east of Hayes Road to 0.5 mile east of Murcott Way consideration was given to determining the best location to shift the alignment to the north, in order to connect with the best alignment to the east. It was determined that a shift to the north in this segment would be the best alignment since it would only impact one wetland system, while a centered or south alignment would have impacted wetland systems on both sides of the road.

From 0.5 mile east of Murcott Way to 0.3 mile east of the Seaboard Coast Line Railroad (SCLRR), the north alignment has been recommended due to significantly lower right-of-way acquisition costs and fewer relocations of businesses and residents. The northern alignment will impact 0.34 to

1.26 more acres of wetlands than the other alignments; however, the difference is not considered a significant enough factor to increase the number of relocations associated with the other alignments. The preferred alignment shifts back to the south from 0.3 mile east of the SCLRR to 0.2 mile west of U.S. 41 to minimize right-of-way costs and eliminate the need to relocate any businesses or residences. Wetland involvement for all three alignments was minimal.

The alignment at U.S. 41 and SR 52 is included in the segment from 0.2 mile west to 0.35 mile east of U.S. 41. This alignment has some special considerations. The existing curve on SR 52 at this location is 6 degrees. This is sharper than the 3-degree-30-minute maximum allowed for the 70-mph design speed. In addition, studies are currently underway to determine needed improvements to U.S. 41 north and south of SR 52. The study to the north uses a basic right-of-way width of 206 feet which will provide two 12-foot-wide travel lanes in each direction separated by a 46-foot-wide median. The study to the south uses a basic right-of-way width of 200 feet, which will provide two 12-foot-wide travel lanes in each direction separated by a 40-foot-wide median. There is a new shopping center in the southeast quadrant of this intersection. In order to minimize right-of-way acquisition costs and to improve geometrics for SR 52, the curve on SR 52 has been flattened to 1 degree 15 minutes. Additional right-of-way required for U.S. 41 is recommended to be acquired to the west of the centerline. A 206-foot-wide right-of-way is recommended through the SR 52 intersection for U.S. 41. This will match the right-of-way to the north and can be transitioned to 200 feet south of SR 52. From 0.35 mile to 1.15 miles east of U.S. 41 the preferred alignment is along the south side due to lower right-of-way costs. The proposed alignment for this section will impact more wetlands (0.2 to 0.43 acre) than the north, south, or center alignments. However, the increase in wetland impacts was considered an unavoidable consequence of improving roadway geometrics.

11/17/87

The section of SR 52 from 1.15 miles east of U.S. 41 to 0.4 mile east of Pasco Trails Boulevard has extensive wetland involvement. The cypress swamp system along the southern alignment of SR 52 was avoided due to the system's expansive and somewhat pristine nature. Cypress swamps function as recharge, stormwater retention, and water purification systems. Cypress swamps also provide a prime habitat for a diverse assemblage of wildlife species, including state and federally listed endangered and threatened animals. Therefore, since a smaller area of the overall wetland system will be altered through improvements along the northern alternative, this alternative is preferred.

From 0.4 mile to 2 miles east of Pasco Trails Boulevard the preferred alignment begins in the center and transitions to the south to minimize environmental impact. The preferred alignment will impact less wetlands (0.44 to 0.88 acre) than the north, south, or center alignments. The section from 2.0 to 2.5 miles east of Pasco Trails Boulevard crosses between two wetlands on either side of the existing right-of-way. The south alignment was selected due to lower wetland impact and to keep the impacts that do result confined to one side of the road. The preferred alignment will impact less wetlands (0.50 acre to 1.81 acres) than the north, south, or center alignments. From 2.5 miles east of Pasco Trails Boulevard to I-75, the preferred alignment follows the south alignment due to lower right-of-way costs, a lower number of relocations, and less environmental impacts. Wetland impacts associated with the southern alignment were 3.24 to 8.94 acres less than the north and center alignments.

Proposed Combined Alignment--As identified above, an alignment using right-of-way acquisition totally from the north side for the entire length of the project, from the south side for the entire length of the project, or centered on the existing right-of-way would not maximize the selection criteria. The configuration of the proposed combined alignment is summarized in Table 3.7-2.

Table 3.7-2. Configuration of the Proposed Alignment for SR 52

| Location | Segment Length | Alignment |
|--|----------------|-----------|
| U.S. 19 to LaMadera Blvd. | 1.29 | South |
| LaMadera Blvd. to Illinois | 1.19 | South |
| Illinois to Bear Creek Drive | 1.48 | South |
| Bear Creek Dr. to 0.2 Mile East of Choctaw Ridge | 0.4 | South |
| 0.2 Mile East of Choctaw Ridge to 0.2 Mile West of Sugar Creek | 1.19 | South |
| 0.2 Mile West of Sugar Creek to Moon Lake Road | <u>0.56</u> | South |
| TOTAL URBAN SECTION | 6.11 | |
| Moon Lake Road to 0.3 Mile East of Hayes Road | 2.42 | South |
| 0.3 Mile East of Haynes Road to 0.5 Mile East of Murcott Way | 0.74 | North |
| 0.5 Mile East of Murcott Way to 0.3 Mile East of SCL Railroad | 2.47 | North |
| 0.3 Mile East of SCL Railroad to 0.2 Mile West of U.S. 41 | 0.41 | South |
| 0.2 Mile West of U.S. 41 to 0.35 Mile East of U.S. 41 | 0.55 | South |
| 0.35 Mile East of U.S. 41 to 1.15 Miles East of U.S. 41 | 0.8 | South |
| 1.15 Miles East of U.S. 41 to 0.4 Mile East of Pasco Trails Blvd. | 1.34 | North |
| 0.4 Mile East of Pasco Trails Blvd. to 2 Miles East of Pasco Trails Blvd. | 1.6 | South |
| 2 Miles East of Pasco Trails Blvd. to 2.5 Miles East of Pasco Trails Blvd. | 0.5 | South |
| 2.5 Miles East of Pasco Trails Blvd. to I-75 | <u>6.4</u> | South |
| TOTAL RURAL SECTION | 17.23 | |
| PROJECT TOTAL | 23.34 | |

Source: RS&H, 1986.

2/05/88

Table 3.7-3 shows the proposed alignment for the urban section on SR 52 from U.S. 19 to CR 587. It is estimated to have a right-of-way cost of \$8,243,900 and a construction cost of \$13,148,400. There would be no business or residential relocations within the 6.11-mile urban section, and only 1.97 acres of wetlands would be impacted by the proposed alignment.

As indicated in Table 3.7-3, the proposed alignment for the rural section on SR 52 from CR 587 to I-75 has an estimated right-of-way cost of \$8,938,000 and a construction cost of \$26,185,300. There would be a total of six businesses and four residential relocations over the 17.23-mile length of the rural section. It is also estimated that 41.16 acres of wetland areas would be affected.

Table 3.7-3. Estimated Cost of the Proposed Alignment for SR 52 from U.S. 19 to I-75

| Segment | Length | Right-of-Way Cost | Construction Cost | Total Cost | Business/Residential Relocations | Wetland Areas Affected (Acres) |
|------------------------------------|--------------|---------------------|---------------------|---------------------|----------------------------------|--------------------------------|
| U.S. 19 to CR 587 Urban Section | 6.11 | \$ 8,243,900 | \$13,148,400 | \$21,392,300 | 0/0 | 1.97 |
| CR 587 to I-75 Rural Section | <u>17.23</u> | <u>\$ 8,938,000</u> | <u>\$26,185,300</u> | <u>\$35,123,300</u> | <u>6/4</u> | <u>41.16</u> |
| U.S. 19 to I-75 PROJECT TOTAL | 23.34 | \$17,181,900 | \$39,333,700 | \$56,515,600 | 6/4 | 43.13 |

Source: RS&H, 1987.



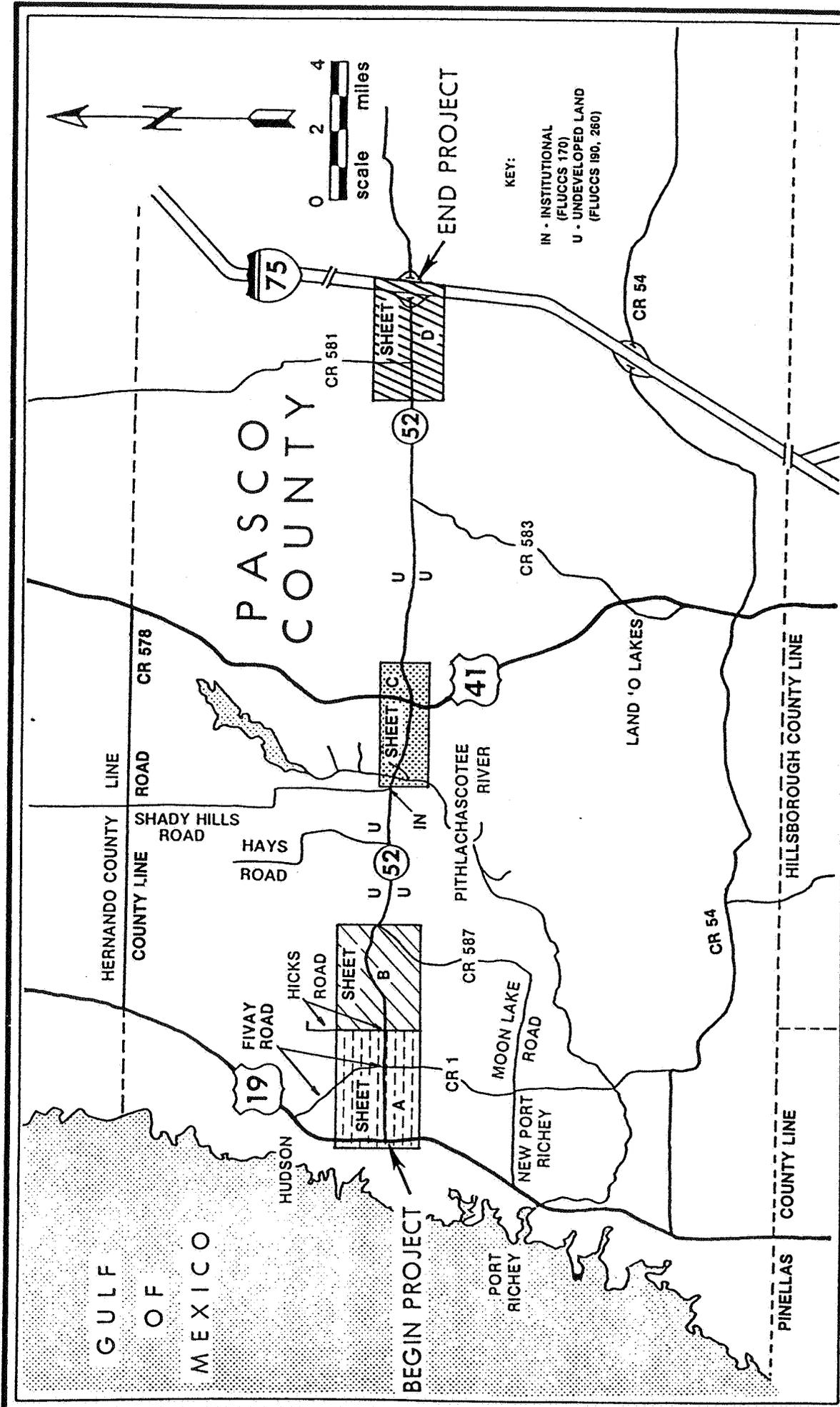
4.0 IMPACTS

4.1 LAND USE

Figure 4.1-1 illustrates existing land use within 200 feet of the present centerline of SR 52. Between U.S. 19 and Moon Lake Road (Sheets A and B of Figure 4.1-1), the predominant land use is commercial, with areas of single-family, multifamily, and mobile homes interspersed and located behind the commercial areas. SR 52 provides access to major residential developments such as Ponderosa Park, Bay Point Village, and Bear Creek as well as to the many strip shopping commercial developments along SR 52.

Between Moon Lake Road and I-75 (Sheets C and D of Figure 4.1-1), land is predominantly undeveloped, with several large areas under agricultural uses (pastures) and lesser areas of residential, commercial, and light industrial usage. The areas of commercial and residential land uses are located within 1 mile of the intersections of U.S. Highway 41 (Gowers Corner), CR 581 (Pasco), and I-75. Access to new residential developments such as Pasco Trails and Meadow Oaks is provided by SR 52.

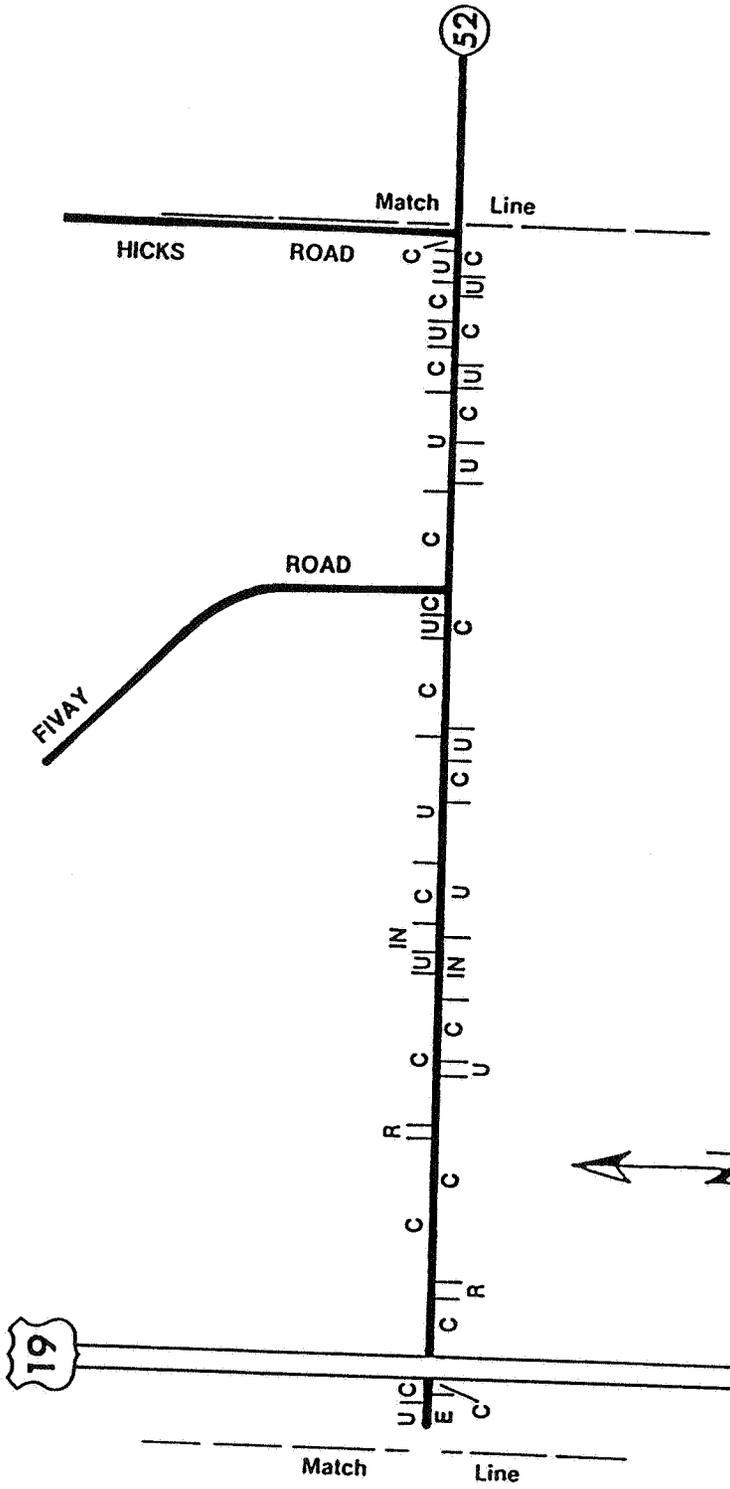
According to the Future Land Use Element of the Pasco County Comprehensive Plan (1982), the county plans to pattern future land uses after the existing land use and zoning patterns. The Comprehensive Plan intends to guide urban development and provide public facilities and services where feasible to achieve optimum land use relationships with the natural environment and existing land uses. Zoning district designations in the project area range from agricultural to various residential and commercial designations. Between U.S. 19 and Moon Lake Road, the majority of the frontage along SR 52 is zoned for general commercial use, with access driveways leading to areas designated for single-family residential and single-family mobile home districts behind the commercial frontage. Between Moon Lake Road and I-75, most of the frontage is designated for agricultural use, with residential, commercial, light industrial, and planned unit development designations in the vicinity of the intersections of U.S. 41, CR 581, Moon Lake Road, and I-75.



SR 52 FROM SR 55
 (U.S. 19) TO SR 93 (I-75)
 IN PASCO COUNTY

Figure 4.1-1
 EXISTING LAND USE

SOURCE: FDOT, 1985; RS&H, 1986



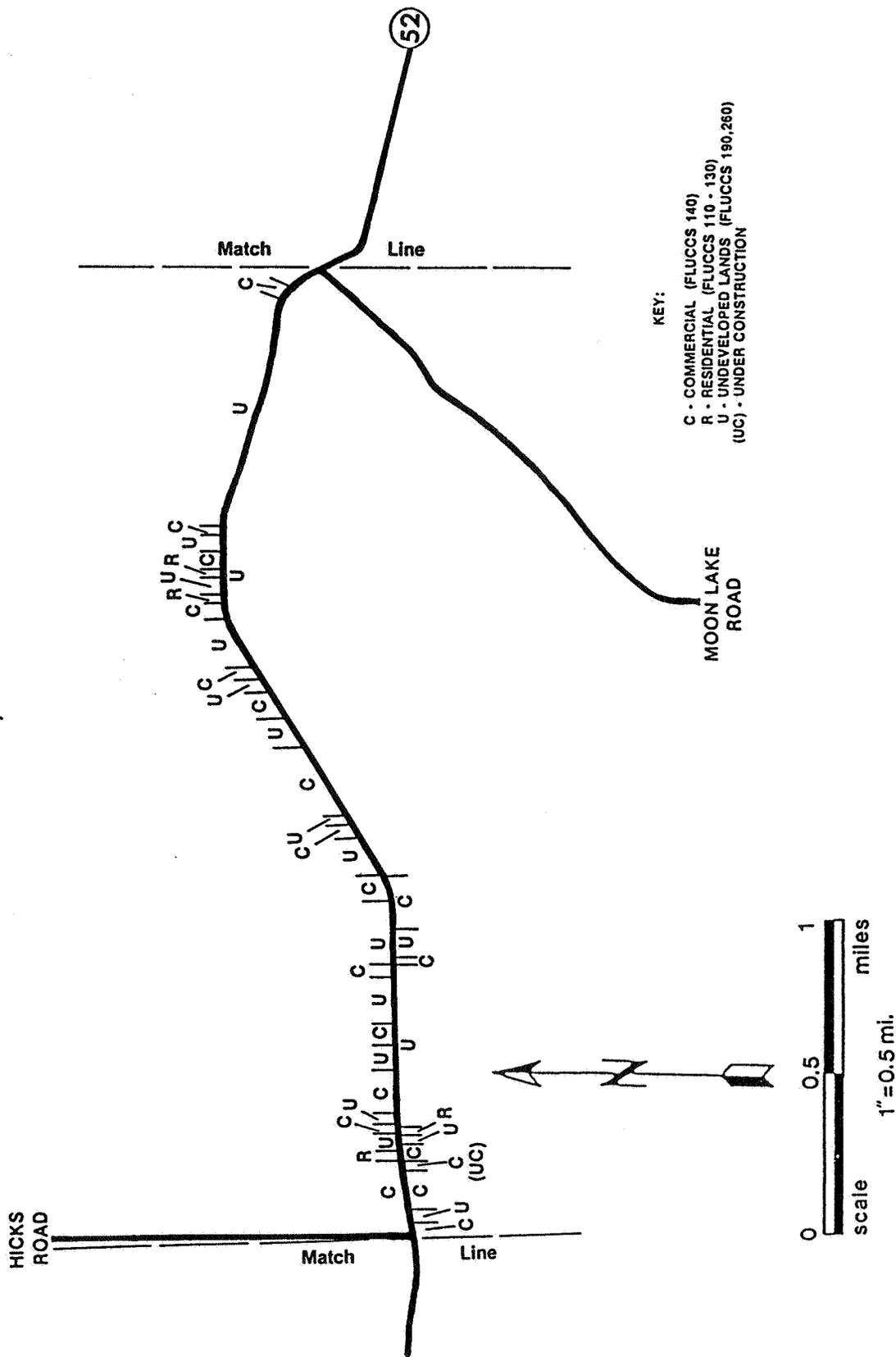
KEY:

- C - COMMERCIAL (FLUCCS 140)
- E - UTILITIES (FLUCCS 830)
- IN - INSTITUTIONAL (FLUCCS 170)
- R - RESIDENTIAL (FLUCCS 110 - 130)
- U - UNDEVELOPED LAND (FLUCCS 190, 260)

SR 52 FROM SR 55
(U.S. 19) TO SR 93 (I-75)
IN PASCO COUNTY

Figure 4.1-1
SHEET A
EXISTING LAND USE

SOURCE: FDOT, 1985; RS&H, 1986

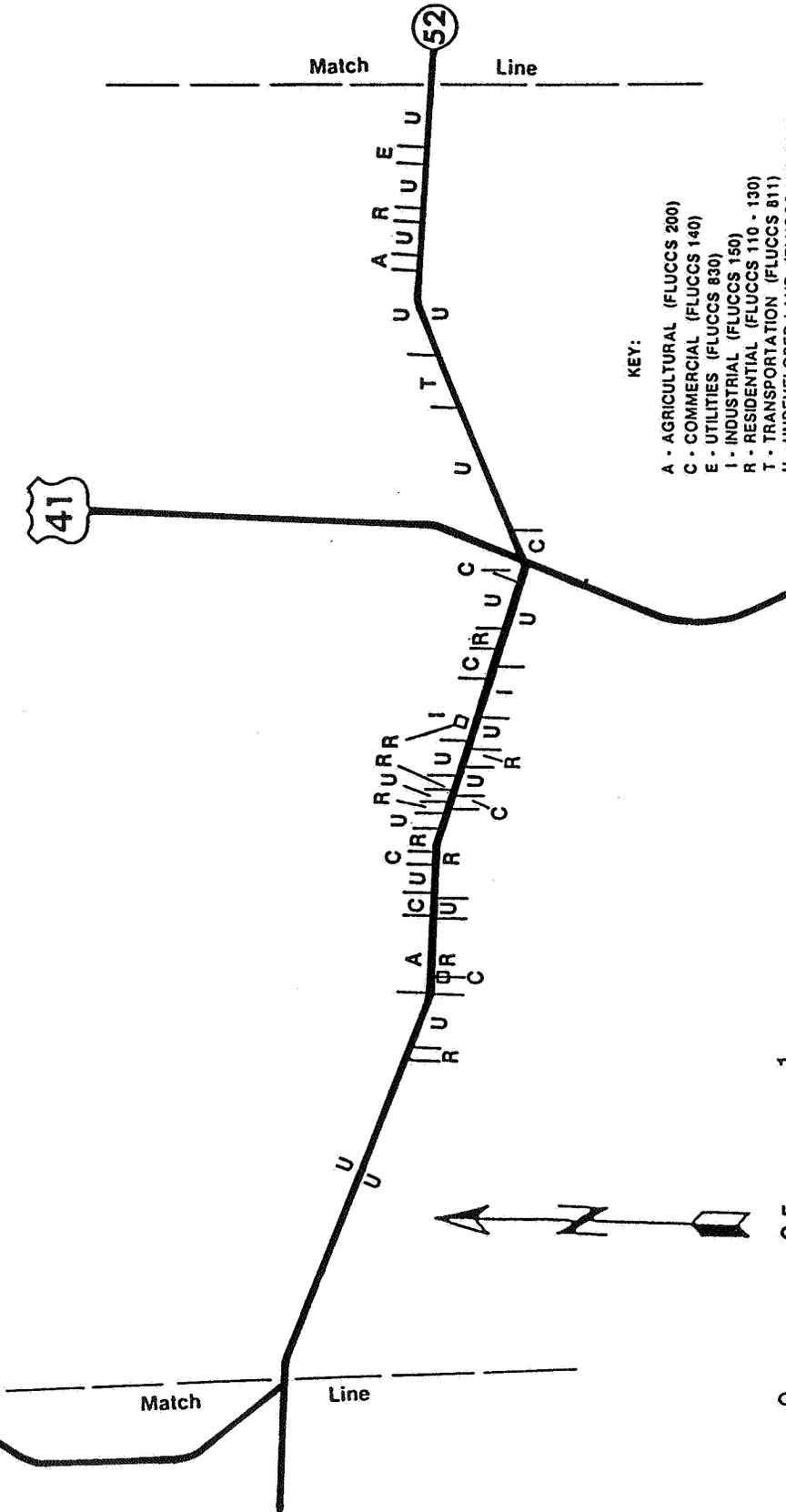


SR 52 FROM SR 55
(U.S. 19) TO SR 93 (I-75)
IN PASCO COUNTY

Figure 4.1-1
SHEET B
EXISTING LAND USE

SOURCE: FDOT, 1985; RS&H, 1986

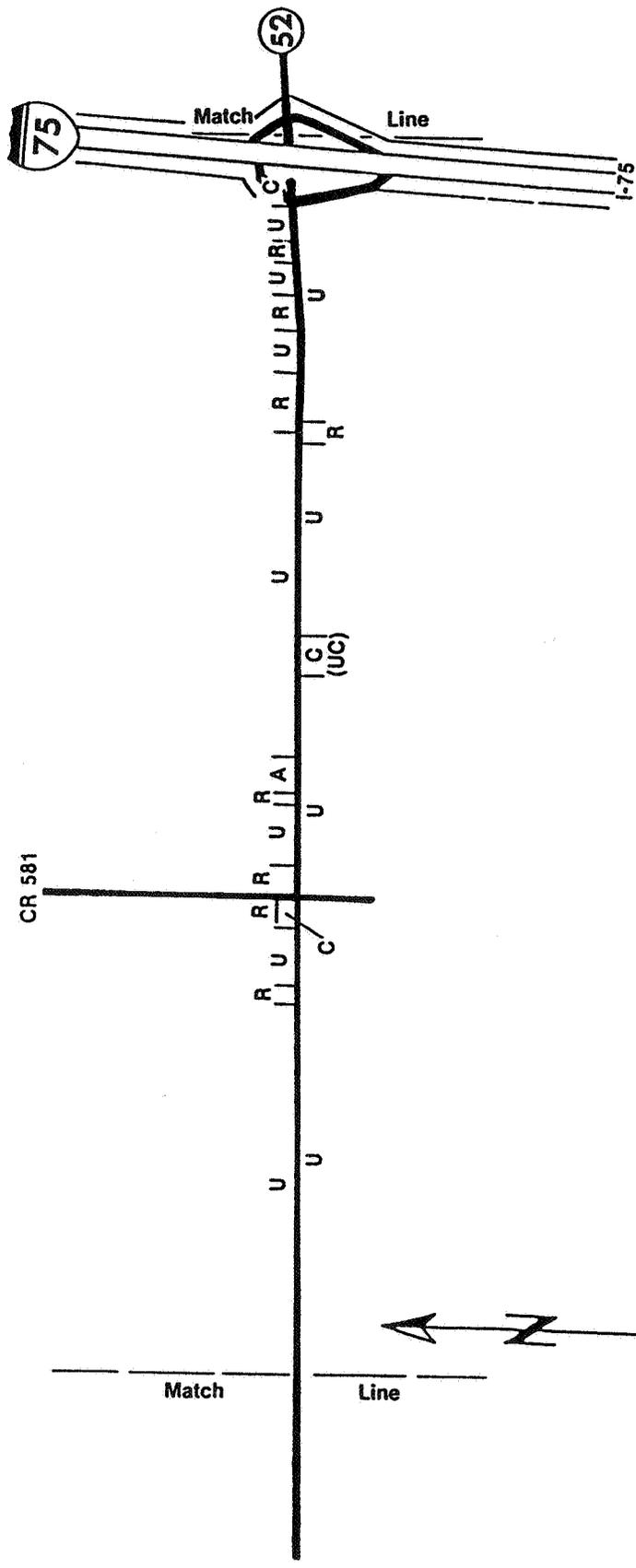
SHADY HILLS ROAD



SR 52 FROM SR 55
(U.S. 19) TO SR 93 (I-75)
IN PASCO COUNTY

Figure 4.1-1
SHEET C
EXISTING LAND USE

SOURCE: FOOT, 1985; RS&H, 1986



KEY:

- A - AGRICULTURE (FLUCCS 200)
- C - COMMERCIAL (FLUCCS 140)
- R - RESIDENTIAL (FLUCCS 110 - 130)
- U - UNDEVELOPED LAND (FLUCCS 190, 260)
- (UC) - UNDER CONSTRUCTION

Figure 4.1-1
SHEET D
EXISTING LAND USE

SOURCE: FDOT, 1985; RS&H, 1986

SR 52 FROM SR 55
(U.S. 19) TO SR 93 (I-75)
IN PASCO COUNTY

The construction of the proposed roadway will have minimal impacts on land use and zoning. Right-of-way acquisition is limited to 27 feet in the urban section and 112 feet in the rural section. A total of only four residences and six businesses will be relocated (described in Section 4.14, Relocation Impacts). Impacts of the proposed project on existing land use patterns are anticipated to be minimal. The proposed upgrading will increase accessibility to the land adjacent to SR 52 and its crossroads, thereby potentially hastening development. Impacts on future land use patterns, however, are expected to be minimal and will be kept within the goals established in the Pasco County Comprehensive Plan.

4.2 BIOLOGICAL COMMUNITIES

The project corridor was surveyed for biological communities and significant vegetation unique to the area. Five upland and three wetland communities were identified. They are:

Upland communities

Turkey oak-longleaf pine sandhill,
Pine flatwoods,
Oak scrub,
Oak hammock, and
Grassland/Palmetto rangeland.

Wetland communities

Cypress swamp,
Mixed hardwood swamp, and
Freshwater marsh/Shallow pond.

4.2.1 Community Descriptions

The eight biological communities differ in floral and faunal components. The approximate acreage occurring within the proposed right-of-way, the general distribution along the project corridor, and the characteristic flora are described below for each community type. Numerous wildlife

species will find suitable habitat in these communities. Common wildlife species are listed in Table 4.2-1. Wildlife species listed by the State of Florida or by the U.S. Fish and Wildlife Service (FWS) as endangered, threatened, or of special concern are listed in Table 4.2-2 and Section 4.3, Endangered and Threatened Species, respectively. Twenty-six species of wildlife were observed within the project corridor. This includes 19 common wildlife species and seven listed by the State of Florida or FWS as endangered, threatened, or of special concern (see Tables 4.2-1 and 4.2-2, respectively).

Turkey Oak-Longleaf Pine Sandhill--Approximately 12.5 acres of sandhill community occur within the proposed right-of-way. The sandhill communities are scattered between CR 1 and CR 583.

Plant species in the sandhill community are adapted to the well drained sandy soils and xeric conditions in these areas. Turkey oak (Quercus laevis) dominates the sandhill communities along the project corridor. Longleaf pine (Pinus palustris), sand live oak (Quercus geminata), and wild persimmon (Diospyros virginiana) are scattered throughout the community. Longleaf pines probably dominated these communities in the recent past but were removed by logging activities, and its regrowth was subsequently suppressed by lack of frequent fires. Shrub and herb understory layers are open to moderately dense in the sandhill communities. The herb layer contains numerous sandy areas completely devoid of vegetation. The variability in understory cover is probably a result of historic differences in the frequencies of fire, clearing, and grazing activity in individual stands. The common understory plants include:

Shrub layer

| | |
|--------------|---------------------------|
| Running oak | <u>Quercus pumila</u> |
| Gopher apple | <u>Licania michauxii</u> |
| Blackberries | <u>Rubus</u> spp. |
| Pawpaw | <u>Asimina reticulata</u> |
| Saw palmetto | <u>Serenoa repens</u> |
| Sparkleberry | <u>Vaccinium arboreum</u> |

Table 4.2-1. Common Wildlife Species Expected to Occur or Observed Along SR 52 by Habitat Types

| Species Common Name | Scientific Name | Sandhill | Pine Flatwood | Scrub Oak | Oak Hammock | Grassland/ Palmetto Rangeland | Cypress Swamp | Mixed Hardwood Swamp | Freshwater Swamp/ Shallow Pond |
|---------------------------|---------------------------------|----------|------------------|--------------|----------------|-------------------------------------|------------------|----------------------------|-----------------------------------|
| <u>Birds</u> | | | | | | | | | |
| American Robin* | <u>Turdus migratorius</u> | X | X | | | X | | X | |
| Anhinga | <u>Anhinga anhinga</u> | | | | | | X | | X |
| Bachman's Sparrow | <u>Aimophila aestivalis</u> | | X | X | | | | | |
| Barred Owl | <u>Strix varia</u> | | | | | | | | |
| Black-Crowned Night Heron | <u>Nycticorax nycticorax</u> | | | | | | X | X | |
| Black Vulture* | <u>Coragyps atratus</u> | X | | | | X | | | X |
| Blue-Gray Gnatcatcher | <u>Poliophtila caerulea</u> | X | X | X | | | X | X | |
| Blue Jay* | <u>Cyanocitta cristata</u> | X | | | X | | X | | |
| Blue-Winged Teal | <u>Anas discors</u> | | | | | | | | X |
| Boat-Tailed Grackle* | <u>Quiscalus major</u> | | | | | X | | X | |
| Bobwhite Quail | <u>Colinus virginianus</u> | X | X | X | | X | | | X |
| Brown-Headed Nuthatch | <u>Sitta pusilla</u> | X | X | | | | | | |
| Brown Thrasher | <u>Toxostoma rufum</u> | X | | | | | | | |
| Cardinal | <u>Cardinalis cardinalis</u> | | | | X | | | | |
| Carolina Wren | <u>Thryothorus ludovicianus</u> | | | X | X | | | | |
| Cattle Egret* | <u>Ardeotis ibis</u> | | | | X | | X | | |
| Common Crow | <u>Corvus brachyrhynchos</u> | | X | | | X | | | X |
| Common Grackle | <u>Quiscalus quiscula</u> | | X | | | X | X | X | X |
| Common Nighthawk | <u>Chordeiles minor</u> | | X | | | X | | | X |
| Common Yellowthroat | <u>Geothlypis trichas</u> | | X | | | X | | | |
| Coot | <u>Fulica americana</u> | | | | | | | | |
| Florida Duck | <u>Anas fulvigula</u> | | | | | | | | X |
| Great Blue Heron* | <u>Ardea herodias</u> | | | | | | | | X |
| Great Egret* | <u>Casmerodius albus</u> | | | | | | X | X | X |
| Ground Dove | <u>Columbina passerina</u> | | | | | X | X | | X |
| Killdeer | <u>Charadrius vociferus</u> | | | | | X | | | |
| Kingfisher* | <u>Ceryle alcyon</u> | | | | | | | | X |
| Louisiana Heron | <u>Egretta tricolor</u> | | | | | | | | X |
| Marsh Hawk | <u>Circus cyaneus</u> | | | | | X | | | X |

Table 4.2-1. Common Wildlife Species Expected to Occur or Observed Along SR 52 by Habitat Types (Continued, Page 2 of 4)

| Species Common Name | Scientific Name | Sandhill | Pine Flatwood | Scrub Oak | Oak Hammock | Grassland/ Palmetto Rangeland | Cypress Swamp | Mixed Hardwood Swamp | Freshwater Swamp/ Shall Low Pond |
|-------------------------|-----------------------------------|----------|------------------|--------------|----------------|-------------------------------------|------------------|----------------------------|-------------------------------------|
| <u>Birds (cont'd)</u> | | | | | | | | | |
| Meadowlark* | <u>Sturnella magna</u> | | X | | | | | | |
| Mockingbird* | <u>Mimus polyglottos</u> | | X | | | X | | X | |
| Mourning Dove* | <u>Zenaida macroura</u> | X | X | | | X | | X | |
| Osprey* | <u>Pandion haliaetus</u> | | | | | | | | X |
| Pileated Woodpecker | <u>Dryocopus pileatus</u> | X | X | | X | | X | X | |
| Pine Warbler | <u>Dendroica pinus</u> | | X | | | | | | |
| Prothonotary Warbler | <u>Dendroica virens</u> | | | | | | X | | |
| Purple Gallinule | <u>Porphyryla martinica</u> | | | | | | | X | |
| Red-Bellied Woodpecker | <u>Melanerpes carolinus</u> | X | X | | X | | | X | |
| Red-Headed Woodpecker | <u>Melanerpes erythrocephalus</u> | | | | X | | | X | |
| Red-Shouldered Hawk* | <u>Buteo lineatus</u> | | | | | | | | X |
| Red-Winged Blackbird* | <u>Agelaius phoeniceus</u> | | | | | X | | | X |
| Rufous-Sided Towhee | <u>Pipilo erythrophthalmus</u> | X | X | | X | | X | X | X |
| Snowy Egret | <u>Egretta thula</u> | | | | | | | | X |
| Summer Tanager | <u>Piranga rubra rubra</u> | X | | | | | | | X |
| Tufted Titmouse* | <u>Parus bicolor</u> | | X | | | | | | X |
| Turkey Vulture* | <u>Cathartes aura</u> | | | | | X | | X | |
| Whip-Poor-Will | <u>Caprimulgus vociferus</u> | | X | | | X | | X | |
| White Ibis* | <u>Eudocimus albus</u> | | | | | | X | | X |
| Wood Duck | <u>Aix sponsa</u> | | | | | | X | | |
| Yellow-Throated Warbler | <u>Dendroica dominica</u> | | X | | X | | | | |
| <u>Mammals</u> | | | | | | | | | |
| Bobcat | <u>Lynx rufus</u> | | | | | | | | |
| Cotton Mouse | <u>Peromyscus gossypinus</u> | | X | | X | | | | |
| Eastern Cottontail | <u>Sylvilagus floridanus</u> | X | X | | X | X | X | X | X |
| Eastern Mole | <u>Scalopus aquaticus</u> | | X | | X | | | | |
| Florida Mouse | <u>Peromyscus floridanus</u> | X | | | X | | | | |
| Golden Mouse | <u>Peromyscus nuttalli</u> | | | | | | | | |
| Gray Fox | <u>Urocyon cinereoargenteus</u> | X | | | X | | | | |

Table 4.2-1. Common Wildlife Species Expected to Occur or Observed Along SR 52 by Habitat Types (Continued, Page 3 of 4)

| Species Common Name | Scientific Name | Sandhill | Pine Flatwood | Scrub Oak | Oak Hammock | Grassland/ Palmetto Rangeland | Cypress Swamp | Mixed Hardwood Swamp | Freshwater Swamp/ Shallow Pond |
|----------------------------|-------------------------------------|----------|------------------|--------------|----------------|-------------------------------------|------------------|----------------------------|-----------------------------------|
| <u>Mammals (cont'd)</u> | | | | | | | | | |
| Gray Squirrel | <u>Sciurus carolinensis</u> | | | | X | | X | X | |
| Hispid Cotton Rat | <u>Sigmodon hispidus</u> | X | X | | | X | | | X |
| Least Shrew | <u>Cryptotis parva</u> | | | X | | X | | | |
| Marsh Rabbit | <u>Sylvilagus palustris</u> | | | | X | | | | X |
| Nine-Banded Armadillo* | <u>Dasypus novemcinctus</u> | X | X | X | | X | | | |
| Oldfield Mouse | <u>Peromyscus polionotus</u> | | | X | | | | | |
| Otter | <u>Lutra canadensis</u> | | | | | | | | |
| Raccoon* | <u>Procyon lotor</u> | | X | | X | | X | X | X |
| Rice Rat | <u>Orzomyz palustris</u> | | | | | | X | X | X |
| Southeastern Myotis | <u>Myotis austroriparius</u> | | | | | | | X | |
| Southeastern Pocket Gopher | <u>Geomys pinetis</u> | X | | | | | | | |
| Striped Skunk | <u>Mephitis mephitis</u> | | | | | | | | |
| Virginia Opossum | <u>Didelphis virginiana</u> | | X | X | X | | | X | |
| White-Tailed Deer | <u>Odocoileus virginianus</u> | | X | X | X | X | | X | X |
| <u>Amphibians</u> | | | | | | | | | |
| Cricket Frog | <u>Acris gryllus</u> | | X | | | | | | |
| Dusky Salamander | <u>Desmognathus fuscus</u> | | | | | | X | X | X |
| Eastern Spadefoot Toad | <u>Scaphiopus holbrookii</u> | | | X | X | | X | X | |
| Florida Chorus Frog | <u>Pseudacris nigrita verrucosa</u> | | X | | | X | | | |
| Greater Siren | <u>Siren lacertina</u> | | | | | | | | |
| Green Treefrog | <u>Hyla cinerea</u> | | X | | | | X | X | X |
| Oak Toad | <u>Bufo quercicus</u> | | X | | X | | X | X | |
| Pig Frog | <u>Rana grylio</u> | | | | | | | | |
| Pine Woods Treefrog | <u>Hyla femoralis</u> | X | | | | | X | | X |
| Southern Toad | <u>Bufo terrestris</u> | X | X | X | X | | X | | X |
| Squirrel Treefrog | <u>Hyla squirella</u> | X | X | X | X | X | X | X | X |

Table 4.2-1. Common Wildlife Species Expected to Occur or Observed Along SR 52 by Habitat Types (Continued, Page 4 of 4)

| Species Common Name | Scientific Name | Sandhill | Pine Flatwood | Scrub Oak | Oak Hamock | Grassland/ Palmetto Rangeland | Cypress Swamp | Mixed Hardwood Swamp | Freshwater Swamp/ Shal Low Pond |
|------------------------|--------------------------------------|----------|------------------|--------------|---------------|-------------------------------------|------------------|----------------------------|------------------------------------|
| <u>Reptiles</u> | | | | | | | | | |
| Black Racer | <u>Coluber constrictor</u> | X | X | X | X | X | X | X | X |
| Brown Water Snake | <u>Nerodia taxispilota</u> | | | | | | X | X | X |
| Chicken Turtle | <u>Dierochelys reticularia</u> | X | | | | | | | X |
| Eastern Fence Lizard | <u>Sceloporus undulatus</u> | | X | X | | | | | |
| Five-Lined Skink | <u>Eumeces inexpectatus</u> | | X | X | | | X | X | |
| Florida Water Snake | <u>Nerodia fasciata pictiventris</u> | | | | | | X | X | X |
| Green Anole | <u>Anolis carolinensis</u> | | X | X | X | | X | X | |
| Ground Skink | <u>Scincella lateralis</u> | X | X | X | | | X | X | |
| Pygmy Rattlesnake | <u>Sistrurus miliaris barouri</u> | | X | | | | | | X |
| Six-Lined Racer Runner | <u>Chemidophorus sexlineatus</u> | X | X | X | | | | | X |
| Southern Leopard Frog | <u>Rana utricularia</u> | | | | | X | X | X | X |
| Southern Ribbon Snake | <u>Thamnophis sauritus sackeni</u> | | | | | | X | X | X |

* Observed along SR 52.

Source: RS&H, 1986.

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Table 4.2-2. Species Listed as Endangered, Threatened, or of Special Concern by the State of Florida That Might Occur or Were Observed Within the SR 52 Project Corridor

| Species | State Status | Sardhill | Pine Flatwood | Scrub Oak | Oak Hammock | Crossland/ Palmetto Rangeland | Cypress Swamp | Mixed Hardwood Swamp | Freshwater Marsh/ Shallow Pond |
|----------------------------|--------------|----------|---------------|-----------|-------------|-------------------------------|---------------|----------------------|--------------------------------|
| <u>MAMMALS</u> | | | | | | | | | |
| Florida Panther | Et | X | X | X | X | X | X | X | X |
| Florida Panther | Et | X | X | X | X | X | X | X | X |
| Florida Mouse | SSC | X | X | X | X | X | X | X | X |
| Sherman's Fox Squirrel* | SSC | X | X | X | X | X | X | X | X |
| Sciurus niger shermani | SSC | X | X | X | X | X | X | X | X |
| <u>BIRDS</u> | | | | | | | | | |
| Florida Scrub Jay | T | | | X | | | | | |
| Aphelocoma coerulescens | T | | | X | | | | | |
| coerulescens | T | | | X | | | | | |
| Limpkin | SSC | | | | | | X | X | |
| Ivory-Billed Woodpecker | Et | | | | X | | X | X | |
| Little Blue Heron | SSC | | | | X | | X | X | |
| Egretta caerulea | SSC | | | | X | | X | X | |
| Snowy Egret | SSC | | | | X | | X | X | |
| Egretta thula | SSC | | | | X | | X | X | |
| Louisiana Heron | SSC | | | | X | | X | X | |
| Egretta tricolor | SSC | | | | X | | X | X | |
| Arctic Peregrine Falcon | E** | | | | | X | | | |
| Falco peregrinus tundrius | E** | | | | | X | | | |
| Southeastern Kestrel* | T | | X | | | X | | | |
| Falco sparverius paulus | T | | X | | | X | | | |
| Florida Sandhill Crane* | T | | X | | | X | | | |
| Grus canadensis pratensis | T | | X | | | X | | | |
| Southern Bald Eagle* | T† | | X | | X | X | | | |
| Haliaeetus leucocephalus | T† | | X | | X | X | | | |
| leucocephalus | T† | | X | | X | X | | | |
| Wood Stork* | Et | | | | | | X | X | |
| Mycteria americana | Et | | | | | | X | X | |
| Red-Crowned Woodpecker | T† | | | | | | X | X | |
| Picoides borealis | T† | | | | | | X | X | |
| Bachman's Warbler | Et | | | | X | | | X | |
| Vermivora bachmanii | Et | | | | X | | | X | |
| <u>AMPHIBIANS/REPTILES</u> | | | | | | | | | |
| American Alligator* | SSO** | | | | | | X | X | X |
| Alligator mississippiensis | SSO** | | | | | | X | X | X |
| Eastern Indigo Snake | T** | | X | | | | X | X | X |
| Drymarchon corais couperi | T** | | X | | | | X | X | X |
| Florida Pine Snake | SSC | | X | | | X | X | X | X |
| Pituophis melanoleucus | SSC | | X | | | X | X | X | X |
| magitus | SSC | | X | | | X | X | X | X |
| Gopher Frog | SSC | | X | | | | | | X |
| Rana areolata | SSC | | X | | | | | | X |
| Gopher Tortoise* | SSC | | X | | | | | | X |
| Gopherus polyphemus | SSC | | X | | | | | | X |
| Short-Tailed Snake | T | | X | | | | | | X |
| Stilosoma extenuatum | T | | X | | | | | | X |

* Observed Along SR 52.

† Listed by FWS as Endangered.

** Listed by FWS as Threatened.

E = Endangered.

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Herbaceous layer

| | |
|-----------------|-----------------------------|
| Wiregrass | <u>Aristida stricta</u> |
| Deer's tongue | <u>Trilisa odoratissima</u> |
| Elephant's-foot | <u>Elephantopus</u> spp. |
| Asters | <u>Aster</u> spp. |
| Bracken fern | <u>Pteridium aquilinum</u> |

Pine Flatwoods--Several phases of pine forest occur within the project corridor (i.e., longleaf pine flatwoods, slash pine flatwoods, and slash pine plantations). Approximately 31 acres of pine flatwoods and 23 acres of slash pine plantations are within the proposed right-of-way. Most pine flatwoods occur between CR 583 and I-75 and between CR 587 and Sandy Hills Road. The slash pine plantations occur between U.S. 41 and CR 585.

Longleaf pine flatwoods, the most prevalent, occur on the drier sites which are typically transitional areas between the longleaf pine-turkey oak sandhills and the wetter slash pine flatwoods. Slash pines (Pinus elliotii) are dominant on wetter sites and also have been planted in areas originally dominated by longleaf pines. An occasional laurel oak (Quercus laurifolia) is also found within these pine flatwood communities.

The vegetative appearance of pine flatwoods along the project corridor is determined from the frequency and intensity of recent fires and past logging activities. Typically, in the absence of fire, longleaf pine flatwoods succeed to a xeric community dominated by oaks. Slash pine flatwoods, without fire, succeed to either mesic hardwoods hammocks in drier areas or bayheads in wetter areas.

The vegetative appearance of slash pine plantations is also influenced by the density of the planted trees. The dense canopy reduces the understory cover in these plantations. Consequently the understory is more open than in pine flatwoods. In addition, there is a dense layer of pine needles on the ground surface.

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The common understory plants in these three phases of pine forest include:

Shrub layer

Saw palmetto

Gallberry

Running oak

Myrtle oak

Wax myrtle

Fetterbush

Blueberries

Pawpaw

Serenoa repens

Ilex glabra

Quercus pumila

Quercus myrtifolia

Myrica cerifera

Lyonia lucida

Vaccinium spp.

Asimina reticulata

Herbaceous layer

Wiregrass

Panic grasses

Broomsedge

Aristida stricta

Panicum spp.

Andropogon virginicus

Oak Scrub--Approximately 24 acres of oak scrub community occurs within the proposed right-of-way. Most of the oak scrub community involved occurs between CR 587 and Pithlachascotee River.

As with the sandhill communities, the oak scrub areas are xeric with well-drained sandy soils. Composition of oak scrub stands varies along the project route from nearly 100 percent oaks to a combination of oaks and longleaf pines. Sand live oak (Quercus geminata) is the dominant oak species, but myrtle oak (Quercus myrtifolia) and Chapman's oak (Quercus chapmanii) also occur. These communities range from dense stands of shrub size oaks to mature oak stands with open understories. Oak scrub communities in this area probably developed from successional shifts of turkey oak-longleaf pine sandhills or sand pine scrub communities brought about by the absence of fire or the occurrence of intensive logging of longleaf pine trees.

The oak scrub understory strata includes many of the same plant species as in the sandhill communities, but plant diversity is usually greater.

Common understory plants include:

Shrub layer

| | |
|-----------------|-----------------------------|
| Dwarf live oak | <u>Quercus minima</u> |
| Saw palmetto | <u>Serenoa repens</u> |
| Rusty lyonia | <u>Lyonia ferruginea</u> |
| Winged sumac | <u>Rhus copallina</u> |
| Queen's delight | <u>Stillingia sylvatica</u> |
| Gopher apple | <u>Licania michauxii</u> |
| Shiny blueberry | <u>Vaccinium myrsinites</u> |

Herbaceous layer

| | |
|-------------|------------------------------|
| Wiregrass | <u>Aristida stricta</u> |
| Broomsedge | <u>Andropogon virginicus</u> |
| Milkworts | <u>Polygala spp.</u> |
| Rattleboxes | <u>Crotalaria spp.</u> |
| Greenbrier | <u>Smilax auriculata</u> |

Oak Hammock--Portions of seven oak hammocks occur within the proposed right-of-way representing a total involvement of approximately 4 acres. These stands occur in pastures or old fields between U.S. 41 and CR 581. Oaks were probably left to provide shade and shelter for livestock.

Laurel oak and live oak (Quercus virginiana) are the dominant species of the canopy layer with longleaf pine also common in some stands. The subcanopy includes water oak (Quercus nigra) and small longleaf pine. The tree canopy varies but is typically dense. The understory layers are open to dense and include wiregrass, saw palmetto, ragweed (Ambrosia artemisiifolia), and rabbit tobacco (Gnaphalium obtusifolium).

Predominant vines are greenbriers (Smilax spp.) and muscadine grape (Vitis munsoniana). Stands within maintained pastures contain similar understory plant species listed for the grassland/rangeland communities.

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Common understory species also include:

Shrub Layer

Beauty-berry

Callicarpa americana

Coralbean

Erythrina herbacea

Gallberry

Ilex glabra

Herbaceous layer

Poison ivy

Toxicodendron radicans

Dichanthelium grasses

Dichanthelium spp.

Thelypteris ferns

Thelypteris spp.

Grassland/Palmetto Range--Grasslands represent approximately 59 percent (240 of 405 acres) of the proposed right-of-way limits. Grasslands are divided into roadside ruderal, improved pasture, and rangeland communities. Roadside ruderal represents the largest portion of grasslands (160 acres). Palmetto rangeland and pasture occupy another 11 and 69 acres, respectively.

Roadside ruderal occurs along most of SR 52. Native grass, such as carpet grass (Axonopus spp.), introduced grasses such as bahia grass (Paspalum notatum), bermuda grass (Cynodon dactylon), and numerous herbs occur along the maintained right-of-way. Common herbaceous plants include:

Caesar's weed

Urena lobata

Carpetweed

Lippia nodiflora

Sandspurs

Genchrus spp.

Ragweed

Ambrosia artemisiifolia

Begger-ticks

Bidens alba

Southern Gaura

Gaura angustifolia

Palmetto rangeland and improved pastures occur mainly between CR 587 and I-75. Extensive areas of pine flatwoods were cleared of trees and converted into pastures or rangelands along SR 52. Little upland forest remains within the project corridor between CR 583 and I-75.

Improved pastures/fields generally consist of grasses such as crab grass (Digitaria spp.), bahia grass, or white clover (Trifolium repens).

Rangelands include abandoned pastures (old fields) and unimproved areas that are generally managed to promote grasses by controlled burning and tree removal. The composition of rangelands are dependent upon the actual management techniques, present and past grazing intensity, and/or water availability.

The composition and physiognomy ranges from open fields of native grasses, saw palmetto, and an occasional live oak tree to a dense stand of shrubs (saw palmetto, wax myrtle, gallberry, and fetterbush) with scattered pine trees. Understory plant species are similar to the pine flatwoods and are listed in the pine flatwood community description.

In addition to the previously described plants, a variety of remnant shrub species occur along fence lines and ecotones surrounding roadside ruderal, pastures, and rangeland. Sand live oak and turkey oak are common in drier sites, while saw palmetto and fetterbush are widespread on wetter soils.

Cypress Swamp--Portions of 31 cypress swamps, a total of approximately 15.6 acres, occur within the proposed right-of-way. Most of these cypress swamps occur between CR 587 and CR 581.

The cypress swamps are dominated by bald (Taxodium distichum) or pond cypress (Taxodium ascendens). They vary from relatively dense to open stands and are found in three general configurations along the length of the project which are: 1) isolated pond cypress stands, ranging from 0.5 to 162 acres; 2) large continuous floodplain stands of bald cypress, such as the strands associated with Bear and Buckhorn Creeks; and 3) bald cypress fringes, which are usually less than 100 feet wide and found along the margins of lakes, ponds, and marshes.

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In addition to cypress, red maple (Acer rubrum), black gum (Nyssa sylvatica), and Carolina willow (Salix caroliniana) occur in varying amounts. In the project corridor, these other species are more prevalent in cypress stands associated with creeks and less prevalent in isolated stands of cypress, regardless of the stand size. The percent understory cover is variable due to the influence of canopy cover, water regime, and cattle grazing. The dominant understory plants include:

Shrub layer

| | |
|-------------|----------------------------------|
| Buttonbush | <u>Cephalanthus occidentalis</u> |
| Wax myrtle | <u>Myrica cerifera</u> |
| Bamboobrier | <u>Smilax laurifolia</u> |

Herbaceous layer

| | |
|-----------------|---------------------------|
| Cinnamon fern | <u>Osmunda cinnamomea</u> |
| Royal fern | <u>Osmunda regalis</u> |
| Pickerelweed | <u>Pontederia cordata</u> |
| Sphagnum mosses | <u>Sphagnum spp.</u> |
| Maidencane | <u>Panicum hemitomom</u> |
| Sawgrass | <u>Cladium jamaicense</u> |
| Cattail | <u>Typha spp.</u> |

Mixed Hardwood Swamp--Portions of 14 mixed hardwoods swamps, a total of approximately 12.8 acres, occur in the proposed right-of-way. Mixed hardwood swamps are associated with Cypress Creek, the Pithlachascotee River, and their unnamed tributaries and floodplains.

Hardwood swamps occur between semipermanently flooded cypress swamps and well-drained upland forests. The hardwood swamps occur on soils that are seasonally submerged or saturated and on sites where the cypress have been logged. Red maple and bald cypress are the dominant canopy trees, but other tree species are also present in varying amounts. These include laurel oak, sweet bay (Magnolia virginiana), and black gum. The understory is generally open or sparse due to the canopy closure. However, a dense understory occurs along the edges of the

hardwood swamps that were previously bisected by SR 52. Understory plants consist of immature hardwood species mentioned above and also include:

Shrub layer

| | |
|-----------------|----------------------------------|
| Buttonbush | <u>Cephalanthus occidentalis</u> |
| Wax myrtle | <u>Myrica cerifera</u> |
| Dahoon holly | <u>Ilex cassine</u> |
| Carolina willow | <u>Salix caroliniana</u> |

Herbaceous layer

| | |
|---------------|---------------------------|
| Cinnamon fern | <u>Osmunda cinnamomea</u> |
| Royal fern | <u>Osmunda regalis</u> |
| Lizard's tail | <u>Saururus cernuus</u> |
| Sedges | <u>Cyperus</u> spp. |
| Rushes | <u>Juncus</u> spp. |
| Panic grasses | <u>Panicum</u> spp. |

Freshwater Marsh/Shallow Pond--Portions of 33 freshwater marsh and shallow ponds, approximately 14.4 acres, occur within the project corridor. Most of the marshes and ponds occur between CR 587 and the Pithlachascotee River and between U.S. 41 and CR 581.

There is considerable variation within this community type. Characteristics of individual marsh/pond areas are determined predominantly by hydroperiod and frequency of burning. The period of inundation varies from temporarily flooded after a rainfall event to permanently flooded. In general, they are shallow, nonforested wetlands with gradually sloping shorelines. Associated vegetation typically exhibits a zonation of species. A highly diverse transitional area usually exists between the normal low-water stage dominated by wetland species and the extreme high-water contour that is delineated by the upland species.

Along SR 52, the freshwater marsh/shallow pond communities include:

- 1) seasonally wet areas (wet prairies), usually dominated by smartweed

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(Polygonum hydropiperoides) and soft rush (Juncus effusus);

2) semipermanently to permanently inundated areas dominated by maidencane, pickerelweed, soft rush, or a mixture of the three species;

3) shrub marshes dominated by Carolina willow, cattail and wax myrtle; and 4) the littoral zone of ponds and open shallow creek channels which contain plant species similar to those associated with marshes.

However, the deep water areas of ponds contain only rooted, floating plants, such as fragrant white water lily (Nymphaea odorata) and hearts (Nymphoides aquatica), and submergents, such as Florida elodea (Hydrilla verticillata).

The common freshwater marsh/shallow pond vegetation includes:

Shrub layer

Carolina willow

Buttonbush

St. John's-worts

Primrose willow

Salix caroliniana

Cephalanthus occidentalis

Hypericum spp.

Ludwigia peruviana

Herbaceous layer

Pickerelweed

Maidencane

Cattails

Arrowhead

Soft rush

Carpet grasses

Sawgrass

Sand cordgrass

Beak rushes

Coinwort

Dog fennel

Club rushes

Bladderworts

Fragrant white water lily

Smartweed

Pontederia cordata

Panicum hemitomon

Typha spp.

Sagittaria graminea

Juncus effusus

Axonopus spp.

Cladium jamaicense

Spartina bakeri

Rhynchospora spp.

Centella asiatica

Eupatorium capillifolium

Eleocharis spp.

Utricularia spp.

Nymphaea odorata

Polygonum hydropiperoides

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4.2.2 Community Impacts

Floral--Impacts to biological communities include the clearing of the vegetation within the proposed right-of-way for the expansion of the roadway and clear recovery area, and filling and dredging of these areas during the construction of the roadway section. Approximately 377.3 acres representing eight biological communities occur within the proposed right-of-way. The maximum involvement of these eight community types is as follows:

| <u>Upland communities</u> | <u>Acres</u> |
|-----------------------------------|--------------|
| Turkey oak-longleaf pine sandhill | 12.5 |
| Pine flatwoods | |
| Longleaf pine flatwoods | 21.0 |
| Slash pine flatwoods | 10.0 |
| Slash pine plantations | 23.0 |
| Oak scrub | 24.0 |
| Oak hammock | 4.0 |
| Grassland/Palmetto rangeland | |
| Roadside ruderal | 160.0 |
| Improved pasture/fields | 69.0 |
| Palmetto rangeland | 11.0 |
| Total | 334.5 |
| <u>Wetland communities</u> | |
| Cypress swamp | 15.6 |
| Mixed hardwood swamp | 12.8 |
| Freshwater marsh/Shallow pond | 14.4 |
| Total | 42.8 |

The proposed project will slightly reduce the abundance of the upland community types in the region. However, no significant regional impacts to the upland community types will result from the proposed highway improvements. At this time these upland community types are not

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regionally unique or scarce. The majority of uplands within the proposed right-of-way (229 of 334 acres) that will be impacted will be grasslands (roadside ruderal, pastures, and fields) which are man-induced and maintained communities. The implementation of the proposed rural typical section with roadside ditches/swales and grass medians will result in the reestablishment of much of the roadside ruderal habitat. The remaining 105 acres of upland habitat are divided between oak scrub, oak hammock, sandhill, and the three phases of pine flatwoods. The habitat loss for these community types ranges from 4 to 24 acres and is distributed over the entire 23.3-mile project. The majority of loss occurs in the 17.3-mile rural section of the project between Moon Lake Road and I-75. The habitat losses are considered minimal when compared to overall abundance of similar habitat in the region.

The impacts to the wetland communities (freshwater marshes/shallow ponds, cypress swamps, and mixed hardwood swamps) were significantly minimized by selective location of the proposed new laneage. An estimated 43.1 acres of wetland communities fall within the proposed right-of-way limits. Not all of the wetlands within the right-of-way will need to be destroyed. Losses will be minimized by selectively clearing and grubbing the individual wetlands. In addition, a portion of the drainage ditches/swales resulting from the project will provide new wetland habitat (seasonal marshes). The extent to which these additional measures will be possible cannot be determined until final design. A more detailed discussion of impacts to these wetland communities and individual wetlands is found in Section 4.8, Wetlands Involvement.

Wildlife Populations--No significant adverse regional impacts to nonendangered wildlife populations in the region are expected from the proposed highway improvements. Impacts to wildlife in the area will consist of a minor reduction in abundance as a result of the loss of habitat adjacent to the roadway. Habitat loss occurs over the entire 23.3-mile project as a thin strip ranging in width from 27 feet in the

urban section to 112 feet in the rural section. The majority of habitat loss occurs in the 17.3-mile rural section as previously mentioned. The total habitat loss is considered insignificant when compared to the amount available in the region. In addition, the more mobile wildlife species (birds, snakes, and larger mammals) which are displaced may find suitable habitat in adjacent areas if carrying capacities are not already exceeded. No important wildlife population centers have been identified within the project corridor.

Sensitive Wildlife Species--Impacts to wildlife species listed by FWS are discussed in Section 4.3, Endangered and Threatened Species. Impacts to wildlife species listed exclusively by the State of Florida that may possibly use areas within the project corridor are described below. The project corridor is known to be within the existing or historical range of 22 species listed by the state and federal governments that might find suitable habitat within the project corridor. Of the 22 listed species, 13 species (7 birds, 3 snakes, 2 mammals, and 1 amphibian) are exclusively listed by the State of Florida (see Table 4.2-2). Four of these species, Sherman's fox squirrel, Florida sandhill crane, southeastern kestrel (sparrow hawk), and gopher tortoise, were observed along SR 52 between U.S. 19 and I-75.

A Sherman's fox squirrel was found dead along SR 52, approximately 0.25 mile west of U.S. 41. Longleaf pine flatwoods occurred on both sides of the road where the squirrel was found. Fox squirrels typically prefer to inhabit longleaf pine-turkey oak communities but they also occur in reduced numbers in turkey oak forests and on the margins of pine flatwoods and cypress ponds. Since the preferred longleaf pine-turkey oak habitat does not occur within the project corridor and there is an abundance of marginal habitat, no significant impacts on fox squirrel populations in the region are anticipated from the road improvement.

A pair of sandhill cranes were observed in a cattle pasture north of SR 52 about 0.75 mile east of U.S. 41. Florida sandhill cranes

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typically prefer wet prairies, low-lying improved cattle pastures, and sparsely vegetated marshes for feeding and nesting. Nesting areas were not noted during field surveys or previously reported in the literature regarding the project area. Significant impacts on sandhill cranes are not anticipated, although some of the foraging areas will be reduced slightly by road construction. The crane's preferred habitat is quite abundant in the region west of U.S. 41 and will continue to exist after the proposed improvement is implemented.

Several kestrels were seen east of CR 583 perched on telephone wires and flying over slash pine flatwoods. Southeastern kestrels utilize grassland and open pine flatwoods for nesting and feeding. No kestrel nests were observed during any of the field surveys. Significant impacts on kestrels are not anticipated to result from road improvements because of the abundance of nesting and foraging habitat in the region.

Gopher tortoises occupy xeric community types with well-drained soils. In these communities, the tortoise excavates semipermanent burrows and feeds on various herbs and grasses. Tortoise burrows are important components in these xeric communities because their burrows have been known to provide habitat for at least 36 faunal species. Four of the 36 species are potentially endangered species (indigo snake, gopher frog, pine snake, and Florida mouse). A gopher tortoise and four active and four inactive burrows were observed in turkey oak-longleaf pine communities within the proposed right-of-way. It is expected that tortoises occur in virtually all turkey oak-longleaf pine and oak scrub stands along SR 52. The number actually affected by the roadway improvements cannot be determined at this time because the number of tortoises and burrow locations within the project limits is subject to change before construction begins. Prior to construction, young gopher tortoises may initiate new burrows, and adults may die or be removed by humans. Since gopher tortoises live in burrows and are relatively slow-moving animals, they are most likely to be injured or killed during the clearing activities. To lessen the impact to the tortoises in the

area, a thorough field survey will be conducted prior to clearing activities. If numerous active burrows are found within the proposed right-of-way, a coordinated effort with wildlife agencies or organizations will be made to relocate tortoises. If the above recommendations are followed, significant regional impacts to the gopher tortoise population are not anticipated.

Other state-listed species which occur in xeric communities and possibly occur within the project corridor include the Florida mouse, Florida scrub jay, gopher frog, Florida pine snake, and short-tailed snake. These species, their signs, and/or nests were not observed within the project corridor. Significant adverse impacts to these species are not anticipated considering the relative abundance of xeric communities in the region, the small amount of habitat loss, and the disturbed nature of the habitat being impacted. To lessen the impacts on the pine snake and short-tailed snake, the contractor will be advised of the State of Florida's listed status and the legal protection of these snakes. They will be instructed that snakes encountered during construction must be relocated unharmed.

Four state-listed bird species (limpkin, little blue heron, snowy egret, and Louisiana heron) probably use the freshwater marshes and shallow ponds within the project corridor for foraging. No nesting rookeries were observed during field surveys or have been reported in the vicinity of SR 52. Loss of some possible feeding areas will occur; however, no significant impacts are expected to these species due to the proposed wetland mitigation described in Section 4.8.5. In addition, alternative feeding areas for these species (marshes and shallow ponds) are available and abundant in the region.

4.3 ENDANGERED AND THREATENED SPECIES

In compliance with the Endangered Species Act of 1973 and amendments thereto, the proposed improvements have been evaluated for impacts on threatened and endangered species. This project is not located in an

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area designated as critical habitat by the U.S. Department of Interior. No federally endangered or threatened plant species occur within the project corridor or Pasco County. However, the project area lies within the historic range of nine wildlife species classified as endangered or threatened by FWS. They are:

Endangered species

| | |
|-------------------------|---|
| Wood stork | <u>Mycteria americana</u> |
| Southern bald eagle | <u>Haliaeetus leucocephalus leucocephalus</u> |
| Red-cockaded woodpecker | <u>Picoides borealis</u> |
| Ivory-billed woodpecker | <u>Campephilus principalis</u> |
| Bachman's warbler | <u>Vermivora bachmanii</u> |
| Florida panther | <u>Felis concolor coryi</u> |

Threatened species

| | |
|-------------------------|-----------------------------------|
| Arctic peregrine falcon | <u>Falco peregrinus tundrius</u> |
| Eastern indigo snake | <u>Drymarchon corais couperi</u> |
| American alligator | <u>Alligator mississippiensis</u> |

The southern bald eagle, the wood stork, and the American alligator were observed within the project corridor. However, the alligator is not potentially endangered in Florida. It is listed because of its similarity of appearance to alligator populations which are endangered in other states and to other listed crocodiles [e.g. American crocodile (Crocodylus acutus)]. Enforcement personnel would have problems distinguishing between listed and unlisted populations. Alligators are commonly found in semipermanent and permanent wetlands in Florida. No nests or important population centers were located in the wetland areas along SR 52; therefore, no adverse impacts are expected to occur to this species.

A pair of southern bald eagles were seen north of the project corridor in March and April of 1986, perched beside a nest. The eagle's nest is approximately 350 feet north of the center line of SR 52 and approximately 2 miles from the gulf coast. The nest is in the top of a

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large cypress tree located approximately 300 feet from the western edge of a 24-acre cypress swamp. Approximately 60 percent of the area within a 0.5-mile radius of the nest is now developed. During subsequent field inspections in June and July of 1986, the pair of eagles was not observed. During the March and April field inspections, fledglings were not observed at the nest. However, a Pasco County Audubon Society member reported at least one fledging in the nest in 1986. The Florida Game and Fresh Water Fish Commission (FGFWFC) indicated that the nest had been used by eagles in 1980, 1984, and 1985, but not in 1981 or 1982. FGFWFC had no information pertaining to the use of the eagle's nest in 1983.

No other eagles or nests were observed along the project corridor. According to information provided by FGFWFC, no other eagle nests occur within 0.5 mile of the project corridor. The closest nest is located approximately 2 miles to the south of SR 52/U.S. 19.

The current threats to Florida's bald eagle population are destruction of nesting habitat, degradation of aquatic feeding sites, and disturbance of nesting eagles by man. There are no old-growth forests being cleared, and there is an insignificant loss of potential feeding sites (open water from lakes and ponds) along the corridor when compared to the availability in the region. Considering the above, significant impacts to future nest sites and feeding areas are not expected as a result of the road improvements.

To limit disturbances to nesting eagles, the FWS management guidelines for bald eagles recommend restricting activity within the nesting territory. The nesting territory is divided into two protective zones, the primary and secondary management zones, which are composed of a 750- and 1,500-foot radius from the nest tree, respectively. They advise that no construction activities should be undertaken in the primary zone. In the secondary zone, only limited activities should be undertaken and should be restricted to the nonnesting season. They do,

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however, provide for reduction in the primary zone when a particular pair of bald eagles is determined to be tolerant of close human activities.

The closest portion of existing SR 52, the northern edge of the cleared north right-of-way, is only 310 feet from the nest. In this case, however, a reduction in the primary zone is justified because the eagles have exhibited a tolerance to human activities. These eagles have returned to this nesting site for the last 3 years (4 of the last 7 years), despite the increasing urban development surrounding the nest and its proximity to SR 52. Commercial and residential development occurs within 400 to 500 feet of the nest. Also, an average of more than 12,000 vehicles per day passed within 375 feet of the nest on SR 52 in 1985. Since the observed eagles have demonstrated a tolerance to increased human activity, including vehicular traffic and development, it is assumed that this tolerance will continue.

The proposed roadway design and alignment in this area maximizes the distance between the roadway and the eagles' nest. The proposed urban typical section minimizes the amount of additional right-of-way required to 27 feet. This additional width will be acquired from the south side of SR 52. Upon completion of the project, the centerline of the new road will be 13.5 feet further south. This will move some of the vehicular traffic farther away from the nest, but the edge of the pavement and some vehicular traffic will also be moved 20.5 feet closer to the nest. The pavement encroachment towards the eagles' nest, however, occurs within the 32-foot existing cleared right-of-way. Additional clearing of lands north of the right-of-way, towards the nest, will not be necessary. Based on the previous discussions, the disturbance resulting from the closer pavement and vehicular traffic is expected to be minimal. In addition, the proposed roadway design, which includes a curb, will deter vehicles from pulling off and stopping in the vicinity of the eagles' nest.

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Construction-related activities, such as land clearing and leveling, and the removal of old pavement, will result in increased noise and dust levels which could adversely impact the eagles. To minimize any adverse effects, construction within 1,450 feet of either side of La Madera Boulevard will be confined to the eagles' nonnesting season (approximately May 15 to October 1).

During preliminary coordination, FWS and FCGWFC concurred with the assessment of the tolerance of these eagles and the planned efforts to minimize adverse impacts. Therefore, based on the discussion of eagles from the preceding paragraphs and FWS and FCGWFC concurrence, no significant adverse impacts to eagles are anticipated from the proposed project.

Fourteen wood storks were observed along SR 52 between U.S. 19 and I-75 during a field investigation in March of 1986: six were flying over SR 52, seven were seen foraging in a wet prairie, and one was observed in a shallow pond in a cattle pasture. No rookeries were observed or are known to exist within 1000 feet of the proposed alignment. However, since 3 of the 20 nesting colonies in Florida occur in Pasco County east of I-75, the region's marshes, shallow ponds, and cypress swamps are commonly used for foraging by wood storks between February and July. Such wetlands are preferred feeding sites for wood storks which feed primarily on small fish. The decline in the wood stork population has been attributed to the loss and degradation of wetland feeding sites. Changes in natural water regimes by man has reduced the abundance and availability of small fish in some areas.

The proposed improvements will not significantly impact the wood stork population. Although the project will slightly reduce the available wood stork feeding sites in the region, the relative amount of wetlands to be impacted is relatively small compared to the availability in the region. The proposed creation of wetlands described in Section 4.8-5 will help mitigate this loss. In addition, priority will be given during final design to maintenance of the natural drainage and, whenever possible, to reestablishment of previously disrupted patterns in wetlands.

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Although no eastern indigo snakes were observed along the project corridor, they are expected to occur. Indigo snakes are known to inhabit a variety of habitats occurring in the project area which include sandhills, cypress and mixed hardwood swamps, and pine flatwoods. They are also known to use gopher tortoise burrows for dens and egg laying. Tortoise burrows have been observed in the sandhills and other well-drained sandy soil habitats (i.e., oak scrub and palmetto range) within the proposed right-of-way. There has been a decline in the indigo snake population, which has been attributed to overcollecting for the pet trade and to habitat losses, especially the xeric habitats, due to farming, housing developments, and pastures (Florida Committee on Rare and Endangered Plants and Animals, 1976).

To minimize the impacts to the indigo snake, a special provision will be included in the contract to advise the contractor of the probable presence of this species and its protected status. If an indigo snake is sighted during construction, the contractor will be required to cease any operation(s) which might cause the snake to be harmed. If the snake does not move offsite, FCGWFC will be called to relocate the snake.

No significant adverse impacts to indigo snakes are anticipated considering their mobility, rarity, and the special provision for protecting individuals sighted.

No Arctic peregrine falcons were observed during project field reviews, but they may potentially fly over or rest within the project corridor during their migration through Florida. However, the project corridor is not an important staging area, and the project will impact only a small area that they would potentially utilize. In addition, there are considerable alternative sites for resting during migration.

As with the peregrine falcon, the SR 52 corridor is within the historic range of the Bachman's warbler during its migration. No individuals of this species, however, have been sighted in Florida since before 1965. Therefore, no adverse impacts are anticipated from the project on either the warbler or peregrine.

The Florida panther, ivory-billed woodpecker, and red-cockaded woodpecker were not observed and are unlikely to occur in the project corridor. The Florida panther has been verified only in South Florida in recent times. It is estimated that less than 30 individuals remain in the wild in South Florida. The ivory-billed woodpecker has not been sighted in recent times in the United States (it was possibly sighted in Texas in 1967). The ivory-billed woodpecker typically inhabits mature bottom land hardwood forest which does not occur within the project corridor. Red-cockaded woodpecker colonies are scattered throughout Florida; however, no colonies are presently known within the project corridor or in the general area. Red-cockaded woodpeckers inhabit over-mature pine stands. Cavity trees are usually infected with red-heart (Phellinus pini) disease. Signs of red-heart disease and over-mature pine stands were not observed within the project corridor. Based on these observations and circumstances, it is concluded that no adverse impacts to the panther, ivory-billed woodpecker, or red-cockaded woodpecker will result from the proposed project.

4.4 FARMLANDS

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

4.5 AIR QUALITY IMPACTS

In accordance with 23 CFR 770, an assessment of the probable impact of the proposed action on local air quality was conducted. The methodology utilized conforms to FDOT's Guidelines for Microscale Analysis of Air Quality Near Highways in Florida. The TEXIN algorithm was used to determine projected carbon monoxide (CO) concentrations. This computer model combines: 1) traffic analysis at an intersection; 2) MOBILE2, which provides vehicle CO emission factors based on projected traffic characteristics; and 3) CALINE3, a finite line source dispersion model which processes data on roadway orientation and design, vehicle emission factors, traffic, and meteorological information to calculate the concentration of roadway-induced CO at specific receptors. All

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projections were made using the worst probable meteorological conditions that could be expected to result in the maximum possible 1- and 8-hour average concentrations at the selected receptor points. These conditions include an atmospheric stability class of D (neutral), a wind speed of 2 mph, an ambient air temperature of 52°F, and the worst wind angle for each receptor location. Since it is not probable that these severe conditions would continue over an entire 8-hour period, a persistence factor of 0.6 was used in determining 8-hour CO concentrations to reflect the likely variability in weather conditions over time. In addition, the average hourly traffic volume during the peak 8-hour period was assumed to be 75 percent of the peak-hour volume. Due to the lack of empirical data regarding background CO concentrations in the area, a value of 1.5 parts per million (ppm) was assumed for both 1- and 8-hour calculations. This value has been shown to be representative in similar suburban areas. A complete listing of input data is presented in the separate air quality report which was prepared in conjunction with this Environmental Assessment (EA).

Based on an evaluation of traffic data, it was determined that the intersections of CR 1 and U.S. 19 with SR 52 would be expected to experience the most severe air quality conditions. Therefore, detailed evaluation of CO concentrations was limited to these areas.

The closest parking lots to each intersection were chosen as sites for the worst-case receptors, because no more-sensitive sites were located in proximity to the roadway. One receptor was placed in each quadrant of the intersection on the corner of the parking lot nearest the intersection. Table 4.5-1 gives the distance from each receptor to the nearest roadway edge.

CO concentrations were calculated for the existing facilities (1985), for the first year of operation (1990) Build/No-Build Alternatives, and for design year (2010) Build/No-Build Alternatives. The Build

Table 4.5-1. Receptor Locations for Air Quality Analysis

Intersection of SR 52 and U.S. 19 for the No-Build Alternative

Receptor 1: 20 feet north of SR 52; 50 feet east of U.S. 19.

Receptor 2: 25 feet south of SR 52; 35 feet east of U.S. 19.

Receptor 3: 30 feet south of SR 52; 40 feet west of U.S. 19.

Receptor 4: 30 feet north of SR 52; 45 feet west of U.S. 19.

Intersection of SR 52 and U.S. 19 for the Build Alternative

Receptor 1: same as no-build alternative.

Receptor 2: 15 feet south of SR 52; 35 feet east of U.S. 19.

Receptor 3: same as no-build alternative.

Receptor 4: same as no-build alternative.

Intersection of SR 52 and CR 1 for the No-Build Alternative

Receptor 1: 40 feet north of SR 52; 30 feet east of CR 1.

Receptor 2: 60 feet south of SR 52; 25 feet east of CR 1.

Receptor 3: 30 feet south of SR 52; 25 feet west of CR 1.

Intersection of SR 52 and CR 1 for the Build Alternative

Receptor 1: 30 feet north of SR 52; 15 feet east of CR 1.

Receptor 2: 15 feet south of SR 52; 10 feet east of CR 1.

Receptor 3: 15 feet south of SR 52; 10 feet west of CR 1.

Source: RS&H, 1986.

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Alternative includes the recommended intersection improvements for CR 1 and U.S. 19 in addition to the widening of SR 52.

The results of the air quality analysis (Tables 4.5-2 and 4.5-3) indicate that the proposed action will not result in a violation of the National Ambient Air Quality Standards (NAAQS) for maximum 1-hour (35 ppm) and 8-hour (9 ppm) CO concentrations. The maximum 1- and 8-hour concentrations projected for the Build Alternative at the SR 52/CR 1 intersection are 10.7 and 5.6 ppm, respectively. The maximum 1- and 8-hour concentrations projected for the Build Alternative at the SR 52/U.S. 19 intersection are 10.2 and 5.4 ppm, respectively. The 1990 and 2010 Build Alternative projections are lower than the projections for the No-Build Alternative due to improved traffic flow. The improved traffic flow at the intersections results in less excess emissions caused by idling, acceleration, and deceleration.

Although there is an NAAQS for airborne lead, monitoring by the Florida Department of Environmental Regulation (DER) has shown no recent violations of the standard in Florida. In addition, increasingly stringent Environmental Protection Agency (EPA) regulations governing lead concentrations in gasoline are resulting in significantly lower measured lead levels in Florida. Therefore, motor vehicle lead emissions from the study area will not have a significant effect on the environment, regardless of the alternative chosen.

This project is in 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. This project is in conformance with the SIP because it will not cause violations of air quality standards and will not interfere with any transportation control measures.

Construction activities may cause minor short-term air quality impacts in the form of dust from earthwork and unpaved roads and smoke from open burning. These impacts will be minimized by adherence to all state and

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Table 4.5-2. 1-Hour and 8-Hour Projected CO Concentrations (ppm) at the SR 52/CR 1 Intersection

| Year | Receptor | Worst-Case Wind Angle† | Concentrations (ppm)* | |
|------------------------|----------|---------------------------|-----------------------|--------|
| | | | 1-Hour | 8-Hour |
| <u>Without Project</u> | | | | |
| 1985 | 1 | 195 | 10.3 | 5.5 |
| | 2 | 335 | 8.5 | 4.7 |
| | 3 | 25 | 9.3 | 5.0 |
| 1990 | 1 | 195 | 10.3 | 5.5 |
| | 2 | 325 | 7.9 | 4.4 |
| | 3 | 75 | 10.5 | 5.6 |
| 2010 | 1 | 195 | 14.1 | 7.2 |
| | 2 | 290 | 11.6 | 6.0 |
| | 3 | 75 | 14.6 | 7.4 |
| <u>With Project</u> | | | | |
| 1990 | 1 | 200 | 9.9 | 5.3 |
| | 2 | 300 | 10.1 | 5.3 |
| | 3 | 45 | 9.5 | 5.1 |
| 2010 | 1 | 200 | 10.6 | 5.7 |
| | 2 | 310 | 10.7 | 5.6 |
| | 3 | 75 | 10.5 | 5.6 |

* 1-hour and 8-hour concentrations include a background of 1.5 ppm.

† Wind angles are in degrees from north.

Source: RS&H, 1986.

Table 4.5-3. 1-Hour and 8-Hour Projected CO Concentrations (ppm) at the SR 52/U.S. 19 Intersection

| Year | Receptor | Worst-Case Wind Angle† | Concentrations (ppm)* | |
|------------------------|----------|---------------------------|-----------------------|--------|
| | | | 1-Hour | 8-Hour |
| <u>Without Project</u> | | | | |
| 1985 | 1 | 225 | 12.6 | 6.5 |
| | 2 | 315 | 12.9 | 6.6 |
| | 3 | 75 | 11.9 | 6.2 |
| | 4 | 105 | 12.1 | 6.3 |
| 1990 | 1 | 105 | 12.0 | 6.2 |
| | 2 | 75 | 12.9 | 6.6 |
| | 3 | 80 | 12.9 | 6.6 |
| | 4 | 100 | 12.8 | 6.6 |
| 2010 | 1 | 105 | 14.3 | 7.3 |
| | 2 | 75 | 15.3 | 7.7 |
| | 3 | 80 | 14.4 | 7.3 |
| | 4 | 100 | 14.7 | 7.4 |
| <u>With Project</u> | | | | |
| 1990 | 1 | 220 | 8.9 | 4.8 |
| | 2 | 335 | 8.8 | 4.8 |
| | 3 | 80 | 10.1 | 5.4 |
| | 4 | 100 | 10.2 | 5.4 |
| 2010 | 1 | 200 | 8.6 | 4.7 |
| | 2 | 340 | 8.5 | 4.7 |
| | 3 | 80 | 9.8 | 5.2 |
| | 4 | 100 | 9.6 | 5.1 |

* 1-hour and 8-hour concentrations include a background of 1.5 ppm.
† Wind angles are in degrees from north.

Source: RS&H, 1986.

local regulations and to the FDOT Standard Specifications for Road and Bridge Construction.

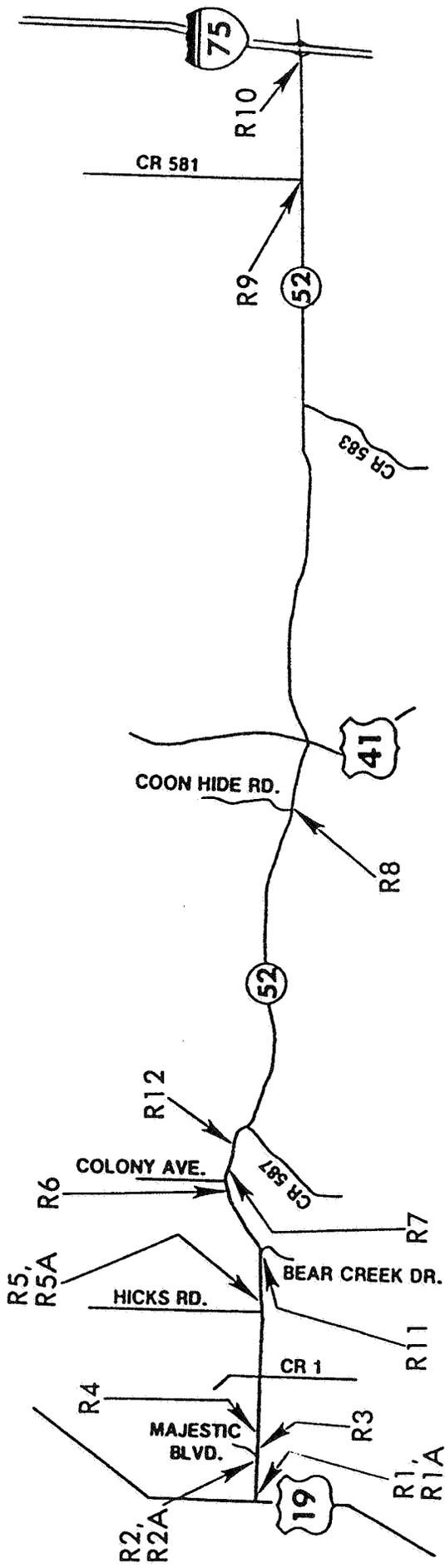
4.6 NOISE IMPACTS

Estimation of the potential noise impacts associated with this improvement was accomplished through the use of the FLAMOD noise prediction model. A Noise Study Report, which contains the detailed methodology and results of the noise impact study conducted as part of this EA, has been prepared and is available from the Bartow District Office of FDOT. The results of this report are summarized below.

Fifteen receptor sites were selected to represent all of the noise-sensitive areas along the project (Figure 4.6-1). Sites 1 through 12 are adjacent to SR 52 and 1A, 2A, and 5A represent second-row houses at sites 1, 2, and 5. The noise receptor sites are described in Table 4.6-1. Computer-projected exterior L_{10} levels at these sites are summarized in Table 4.6-2.

Sites 7 and 1A are not expected to experience noise levels which approach (within 2 dBA) or exceed the Federal Noise Abatement Criteria (NAC) (70 dBA) as a result of this improvement. Also, the noise increase/impact relationship at these two sites is not considered substantial according to FDOT criteria. Therefore, noise attenuation techniques were not considered. The increased noise levels at these sites are due to increased traffic and the closer proximity of the new lanes.

Sites 3, 4, 5A, 8, 9, 10, 11, and 12 approach the noise criteria level in 2010 for the Build scenario. The noise increase/impact relationship at these sites is not considered substantial. However, because the sites approach or exceed the 70-dBA noise criteria level, attenuation techniques were considered. Noise levels increase, except at Site 9, as a result of traffic volume increases and/or closer proximity of the new lanes. Site 9 is expected to experience a slight decrease in noise



R = RECEPTOR SITE

APPROXIMATE SCALE 1 INCH = 2.6 MILES

FIGURE 4.6-1
NOISE RECEPTOR LOCATION MAP

SR 52 FROM SR 55
(U.S. 19) TO SR 93 (I-75)
IN PASCO COUNTY

Table 4.6-1. Noise Receptor Sites

| | |
|--------------------|--|
| Noise Receptor 1: | Residence located south of SR 52; 850 feet east of U.S. 19. Representative of 3 residences. |
| Noise Receptor 1A: | Residence located south of SR 52; 700 feet east of U.S. 19. Represents a second-row residence. |
| Noise Receptor 2: | Residence located north of SR 52; 420 feet west of Majestic Blvd. Representative of 2 residences. |
| Noise Receptor 2A: | Residence located north of SR 52; 420 feet west of Majestic Blvd. Representative of 2 second-row residences. |
| Noise Receptor 3: | St. Marks Presbyterian Church located south of SR 52; 875 feet east of Majestic Blvd. |
| Noise Receptor 4: | Bear Creek Nursing Home located north of SR 52; 1,680 feet east of Majestic Blvd. |
| Noise Receptor 5: | Representative of 2 mobile homes north of SR 52; 1,150 feet east of Hicks Road. |
| Noise Receptor 5A: | Representative of 2 second-row mobile homes north of SR 52; 1,150 feet east of Hicks Road. |
| Noise Receptor 6: | Residence located north of SR 52; 840 feet west of Colony Avenue. Representative of 1 residence and 2 apartment buildings. |
| Noise Receptor 7: | Faith United Methodist Church located south of SR 52; 800 feet east of Colony Avenue. |
| Noise Receptor 8: | Residence located south of SR 52 across from Coon Hide Road. Representative of 15 residences. |
| Noise Receptor 9: | Residence located north of SR 52; 250 feet east of SR 581. Representative of 12 residences. |
| Noise Receptor 10: | Residence located north of SR 52; 1,020 feet west of I-75. Representative of 4 residences. |
| Noise Receptor 11: | Setback line of the proposed Pointe West development south of SR 52; 900 feet west of Bear Creek Drive. |
| Noise Receptor 12: | Setback line of the proposed Sugar Creek development north of SR 52. |

Source: RS&H, 1986.

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Table 4.6-2. Computer-Projected Exterior Noise Levels (L_{10}) at Sensitive Sites for the Build and No-Build Alternatives and FHWA Noise Abatement Criteria (NAC)

| Site | Existing L_{10} (1985) | Future L_{10} | | FHWA NAC |
|------|-----------------------------|-----------------|--------------|-------------|
| | | No Build (2010) | Build (2010) | |
| 1 | 63 | 63 | 73 | 70 |
| 1A* | 53 | 53 | 62 | 70 |
| 2 | 67 | 67 | 76 | 70 |
| 2A* | 63 | 63 | 71 | 70 |
| 3 | 60 | 60 | 68 | 70 |
| 4 | 62 | 62 | 68 | 70 |
| 5 | 65 | 65 | 73 | 70 |
| 5A* | 62 | 62 | 69 | 70 |
| 6 | 64 | 65 | 71 | 70 |
| 7 | 56 | 56 | 63 | 70 |
| 8 | 68 | 69 | 69 | 70 |
| 9 | 70 | 72 | 69 | 70 |
| 10 | 65 | 69 | 69 | 70 |
| 11 | 61 | 62 | 70 | 70 |
| 12 | 68 | 69 | 70 | 70 |

* "A" represents second-row residences at Sites 1, 2, and 5.

Source: RS&H, 1987.

levels (70 dBA to 69 dBA) because the new alignment would shift the lanes farther away from the site. Noise projections for the 2010 Build scenario indicate that Sites 8 and 12 will increase slightly from existing conditions (from 68 dBA to 69 and 70 dBA, respectively). Increases of less than 3 dBA usually are not detectable by the human ear. Sites 3, 4, 5A, 10, and 11 will experience noise levels 4 to 9 dBA higher than the existing levels.

Noise projections also indicate that Sites 1, 2, 2A, 5, and 6 will experience noise levels in excess of the 70 dBA noise criteria in either the 1990 or 2010 Build scenario. The high noise-level projections at these locations are a result of traffic volume increases and/or closer proximity of the new lanes. Site 2A, representing the second row of houses at Site 2, and Site 6 will experience noise levels 7 to 8 dBA higher than existing levels but will only exceed the 70 dBA criteria by 1 dBA in 2010. Sites 1, 2, and 5 will experience noise-level increases of 8 to 10 dBA over existing levels and will exceed the 70 dBA criteria by 3 to 6 dBA.

Federal-Aid Highway Program Manual, Volume 7, Chapter 7, Section 3, (FHPM 7-7-3) states that undeveloped areas in which developments are planned, designed, and programmed before or during the highway planning and design phase are to be treated as developed areas. Based on information from local planning and zoning officials, it has been determined that there are five planned developments adjacent to this roadway segment. Three of these developments will have residential areas set back 500 feet or more from the roadway edge and thus will experience negligible impacts from the proposed action. The remaining two proposed developments, represented by Receptor Sites 11 and 12, will experience only minor impacts by this action. The distance from the roadway edge used in these projections is from the roadway to the setback line of the development, instead of the actual distance to a residential site.

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Therefore, the noise-level projections are conservatively high. Noise impacts at these sites can be reduced by utilizing the isopleths provided below to locate dwellings.

The implementation of several noise attenuation techniques was considered at the 12 noise-sensitive sites that approach or exceed the 70-dBA noise criteria level. This involves Sites 1, 2, 2A, 3, 4, 5, 5A, 6, 8, 9, 10, 11, and 12 (representing 43 residences, a church, a nursing home, 2 apartment buildings, and 2 proposed developments). Noise attenuation techniques were not considered at the remaining two sites (Sites 1A and 7). These two sites will not experience noise levels that exceed the noise criteria level, and the noise increase/impact relationship was not substantial. The methods examined included traffic management, smooth-type pavement, realignment, vegetative barriers, and structural barriers. The imposition of a reduced speed limit or restrictions on heavy truck traffic would deter the utility of SR 52 as a major east-west route between U.S. 19 and I-75. Smooth-type pavement would create unsafe road surface conditions, especially when wet. Vegetative barriers would be ineffective at all sites due to insufficient distance between the receptor site and the roadway.

Structural noise barriers are only marginally effective along a free-access facility such as SR 52. Numerous side streets, driveways, and commercial accesses would result in the need for a large number of openings in the barrier. Openings in a noise barrier seriously degrade its efficiency.

Alignment shifts, based on safe roadway design, were considered as a noise attenuation technique. However, for a shift to be considered effective, the overall noise abatement benefits should outweigh any adverse effects and the costs of the noise abatement measure. Since alignment shifts at Sites 1, 2, 2A, 3, 4, 5, 5A, 8, 9, 10, and 11 would only increase impacts to other sites, they were not considered prudent.

At Sites 6 and 12 an alignment shift of an additional 40 and 55 feet, respectively, to reduce the noise level by 3 dBA would not impact any existing businesses or residences on the opposite side of the road. However, at Site 6 it would cost an additional \$24,800 to acquire the necessary right-of-way (1.9 acres of undeveloped lands, including 0.2 acre of wetlands), and at Site 12 it would cost an additional \$31,400 to acquire the necessary right-of-way (2.4 acres of undeveloped lands, including 0.7 acre of wetlands). Mitigation is not considered prudent at these two sites, since the increase/impact relationship at these sites would not be substantial according to FDOT criteria, and a shift in alignment would result in additional costs and wetland impacts.

None of the attenuation methods considered were found to be practical at any of the sites which approach or are in excess of Federal Highway Administration (FHWA) criteria. It is therefore determined that the noise impacts are an unavoidable consequence of the proposed project.

4.7 HISTORIC AND ARCHAEOLOGICAL RESOURCES IMPACTS

A cultural resources assessment, including background research and a field survey coordinated with the State Historic Preservation Officer (SHPO), was performed for the project. No archaeological or historic sites or properties were identified nor are any expected to be encountered during subsequent project development. FHWA, after consultation with SHPO, has determined that no resources listed or eligible for listing on the National Register of Historic Places would be impacted (see letter from the State Historic Preservation Office in the Appendix).

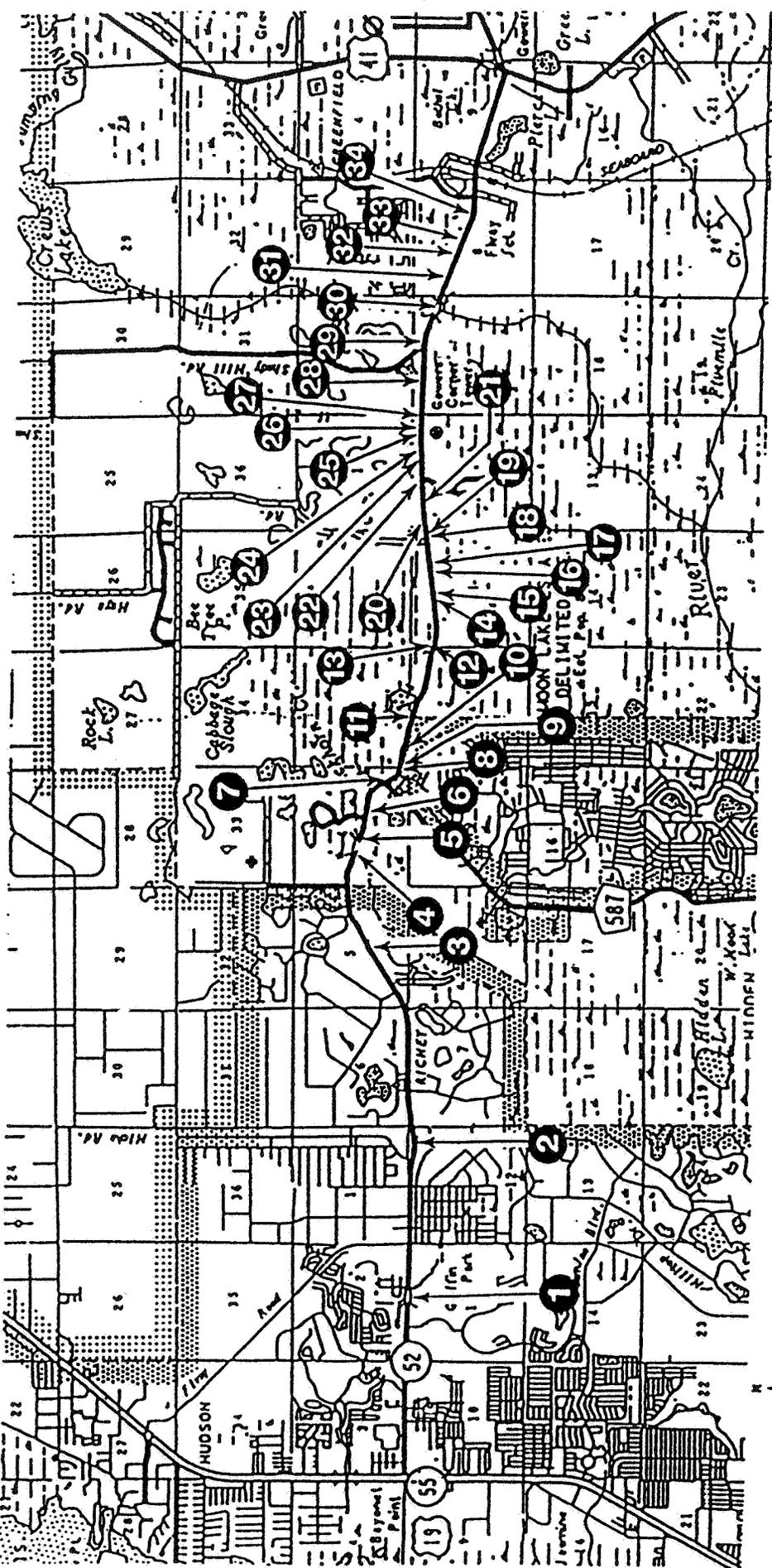
4.8 WETLANDS INVOLVEMENT

In compliance with Executive Order 11990, Protection of Wetlands, the proposed project has been evaluated to determine the potential impacts on wetlands. Along the 20.3-mile length of the project, 78 wetland sites that lie partially or wholly within the proposed right-of-way

were identified: 14 mixed hardwood swamps, which include the Buckhorn Creek, Cypress Creek, and Pithlachascotee River; 30 cypress swamps, including Bear Creek; 33 freshwater marsh/shallow ponds; and a borrow pit. See Figure 4.8-1 for a wetland site location map and Table 4.8-1 for a site-specific summary of wetland involvement (i.e., the area within the proposed right-of-way). A site-specific summary of wetland involvement by FWS wetland classification types is included in tables within Sections 4.8.1 through 4.8.4 (see Tables 4.8-2, 4.8-3, and 4.8-4). These tables also include the total area (i.e., size) of the wetland involved. A total of 42.95 acres of wetland habitat (12.79 acres of mixed hardwood swamps, 15.43 acres of cypress swamps, 14.39 acres of freshwater marsh/ponds, and 0.34 acre of borrow pit) occurs within the proposed right-of-way and may be directly affected by the proposed project. The total wetland involvement and impacts to large wetland systems were minimized by selective placement of the new lanes when there were no other overriding human or economic consequences (see Section 3.7, Alternative Alignments). The preferred alignment impacts less wetland area (2.2 to 9.3 acres) than the other three alignments considered (see Table 3.7-1).

The wetlands within the proposed right-of-way primarily function as fish and wildlife habitat. Additional, major wetland functions include flood control, sediment and pollution control, and ground water recharge. The creeks and larger freshwater marshes and ponds also function as recreational and aesthetic resources (e.g., fishing and canoeing).

The important role of wetlands to fish and wildlife is well recognized and documented [FWS, 1984; U.S. Army Corps of Engineers (COE), 1979; Clark, 1979]. Wetlands of all sizes provide habitat (i.e., food, water, and space) for a great variety of invertebrate and vertebrate animals. Some animals (e.g., fish and crustaceans) are totally dependent upon wetlands, while others (e.g., certain insects and amphibians) depend on wetlands only during particular stages of their life cycles. Most amphibians are dependent upon wetlands for reproduction. Other animals

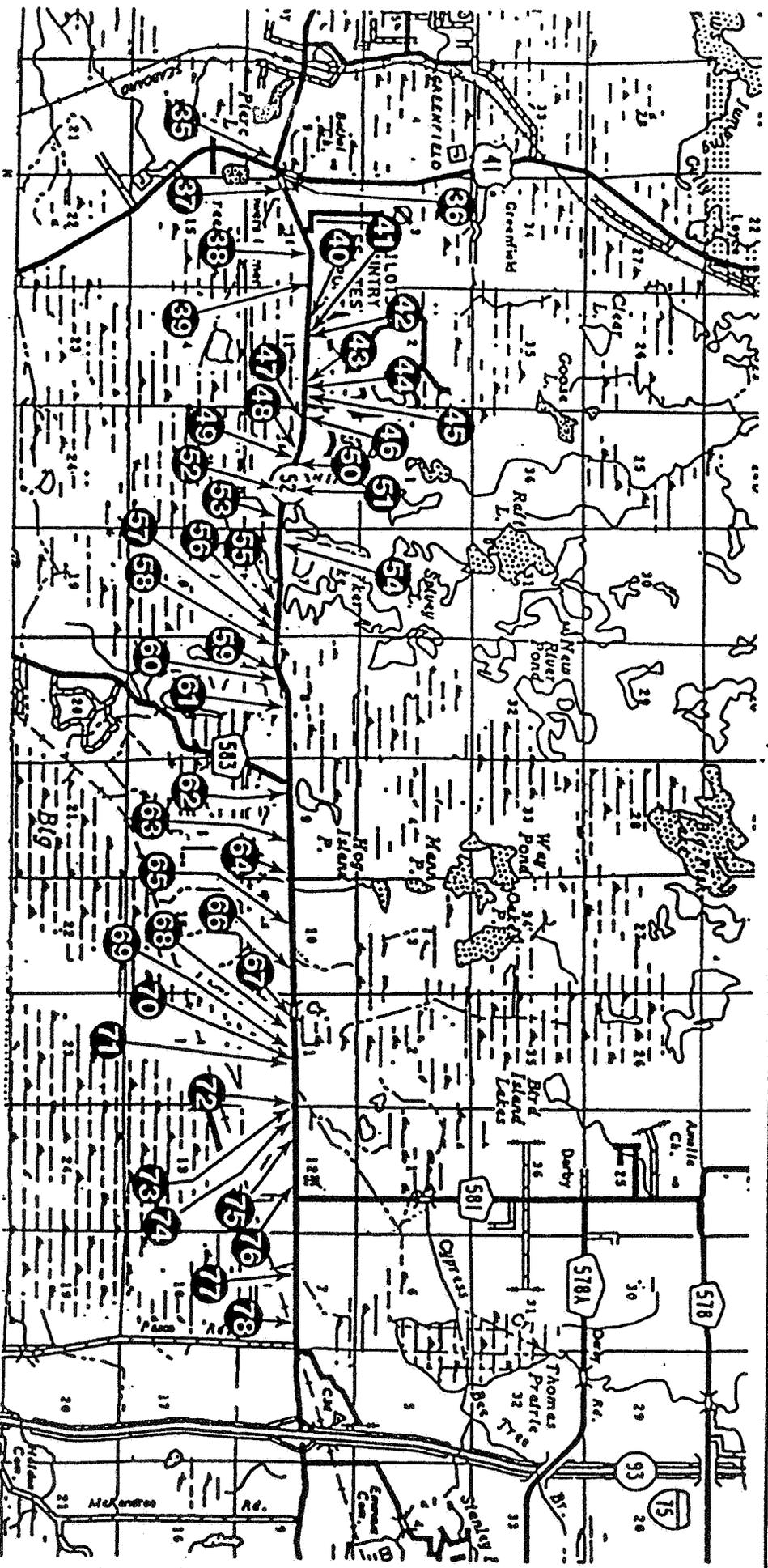


APPROXIMATE SCALE 1 INCH = 1.4 MILES

FIGURE 4.8-1
SHEET A
WETLAND SITE LOCATION MAP

SR 52 FROM SR 55
(U.S. 19) TO SR 93 (I-75)
IN PASCO COUNTY

SOURCE: R.J.L.H. 1986



APPROXIMATE SCALE 1 INCH = 1.4 MILES

FIGURE 4.8-1
SHEET B
WETLAND SITE LOCATION MAP

SOURCE: RSH, 1988

SR 52 FROM SR 55
(U.S. 19) TO SR 93 (I-75)
IN PASCO COUNTY

Table 4-8.1. Wetland and Floodplain Involvement by Site

| Site | Description | Maximum Acreage of Involvement | |
|---------|--|--------------------------------|-------------|
| | | Wetlands | Floodplains |
| F1 | Coastal Floodplain | -- | 0.23 |
| W1-F2 | Cypress Strand/Bear Creek | 0.27 | 1.73 |
| W2-F3 | Freshwater Marsh | 0.24 | 0.24 |
| W3-F4 | Isolated Cypress Swamp | 0.30 | 0.30 |
| W4-F5 | Mixed Hardwood Swamp | 0.25 | 0.25 |
| W5-F6 | Mixed Hardwood Swamp/Buckhorn Creek | 0.04 | 0.04 |
| W6-F7 | Mixed Hardwood Swamp | 0.87 | 0.87 |
| W7-F8 | Mixed Hardwood Swamp | 0.18 | 0.18 |
| W8-F9 | Isolated Cypress Swamp | 0.22 | 1.97 |
| W9-F9 | Mixed Hardwood Swamp | 0.74 | -- |
| W10-F9 | Isolated Cypress Swamp | 0.96 | -- |
| W11-F9 | Isolated Cypress Swamp | 0.05 | -- |
| W12-F10 | Isolated Cypress Swamp | 0.84 | 1.06 |
| W13-F10 | Mixed Hardwood Swamp | 0.22 | -- |
| W14-F11 | Isolated Cypress Swamp | 0.36 | 0.59 |
| W15-F11 | Freshwater Shrub Marsh | 0.23 | -- |
| W16-F12 | Isolated Cypress Swamp | 0.64 | 0.81 |
| W17-F12 | Freshwater Marsh | 0.17 | -- |
| W18-F13 | Isolated Cypress Swamp | 0.50 | 0.89 |
| W19-F13 | Freshwater Marsh | 0.11 | -- |
| W20-F13 | Isolated Cypress Swamp | 0.09 | -- |
| W21-F13 | Cypress Strand | 0.19 | -- |
| W22-F14 | Freshwater Marsh/Shallow Pond | 0.37 | 0.75 |
| W23-F14 | Freshwater Marsh/Shallow Pond | 0.35 | -- |
| W24-F14 | Isolated Cypress Swamp | 0.03 | -- |
| W25-F15 | Freshwater Marsh/Shallow Pond | 0.18 | 0.27 |
| W26-F15 | Cypress Swamp/Shallow Pond | 0.09 | -- |
| W27-F16 | Freshwater Marsh/Shallow Pond | 0.39 | 3.97 |
| W28-F16 | Freshwater Marsh/Shallow Pond | 0.34 | -- |
| W29-F16 | Mixed Hardwood Swamp | 0.51 | -- |
| W30-F17 | Mixed Hardwood Swamp/Pithlachascotee River | 1.01 | 1.54 |
| W31-F18 | Freshwater Shrub Marsh | 0.53 | 0.53 |

Table 4-8.1. Wetland and Floodplain Involvement by Site (Continued, Page 2 of 3)

| Site | Description | Maximum Acreage of Involvement | |
|---------|-------------------------------|--------------------------------|-------------|
| | | Wetlands | Floodplains |
| W32-F19 | Mixed Hardwood Swamp | 0.88 | 1.54 |
| W33-F20 | Cypress Strand | 0.16 | 0.92 |
| W34-F20 | Cypress Strand | 0.51 | --- |
| W35-F21 | Isolated Cypress Swamp | 0.20 | 0.20 |
| W36-F22 | Mixed Hardwood Swamp | 0.20 | 0.98 |
| W37-F22 | Cypress Strand | 0.78 | --- |
| W38-F23 | Mixed Hardwood Swamp | 1.57 | 2.00 |
| W39-F24 | Freshwater Shrub Marsh | 0.17 | 0.17 |
| W40-F25 | Isolated Cypress Swamp | 0.23 | 2.0 |
| W41-F25 | Freshwater Marsh/Shallow Pond | 0.44 | --- |
| W42-F25 | Freshwater Marsh/Shallow Pond | 0.75 | --- |
| W43-F26 | Cypress Strand | 3.38 | 3.47 |
| W44-F27 | Isolated Cypress Swamp | 0.36 | 1.28 |
| W45-F27 | Freshwater Marsh/Shallow Pond | 0.16 | --- |
| W46-F28 | Isolated Cypress Swamp | 0.29 | 0.39 |
| W47-F28 | Freshwater Marsh | 0.10 | --- |
| W48-F29 | Freshwater Marsh/Shallow Pond | 0.14 | 0.76 |
| W49-F29 | Cypress Swamp/Shallow Pond | 0.10 | --- |
| W50-F29 | Freshwater Marsh | 0.51 | --- |
| W51-F30 | Freshwater Marsh/Shallow Pond | 1.55 | 2.37 |
| W52-F30 | Freshwater Marsh | 0.55 | --- |
| W53-F30 | Freshwater Marsh | 0.27 | --- |
| W54-F31 | Freshwater Marsh | 0.11 | 0.11 |
| W55-F32 | Freshwater Marsh/Shallow Pond | 0.09 | 0.09 |
| W56-F33 | Freshwater Marsh/Shallow Pond | 1.52 | 2.29 |
| W57-F33 | Freshwater Marsh | 0.20 | --- |
| W58-F33 | Cypress Swamp/Shallow Pond | 0.57 | --- |
| W59-F34 | Freshwater Marsh/Shallow Pond | 1.43 | 3.00 |
| W60-F34 | Cypress Swamp/Shallow Pond | 1.61 | --- |
| W61-F35 | Freshwater Marsh | 0.61 | 0.61 |
| W62-F36 | Cypress Strand | 0.19 | 0.19 |
| W63-F37 | Mixed Hardwood Swamp | 1.31 | 2.42 |
| W64-F37 | Isolated Cypress Swamp | 0.77 | --- |
| W65-F37 | Isolated Cypress Swamp | 0.34 | --- |

Table 4-8.1. Wetland and Floodplain Involvement by Site (Continued, Page 3 of 3)

| Site | Description | Maximum Acreage of Involvement | |
|---------|------------------------------------|--------------------------------|-------------|
| | | Wetlands | Floodplains |
| W66-F38 | Cypress Strand | 1.49 | 1.49 |
| W67-F39 | Mixed Hardwood Swamp/Cypress Creek | 1.89 | 2.05 |
| W68-F40 | Shallow Pond | 0.25 | 0.25 |
| W69-F41 | Freshwater Marsh | 0.61 | 9.64 |
| W70-F41 | Freshwater Shrub Marsh | 0.55 | -- |
| W71-F41 | Isolated Cypress Swamp | 0.30 | -- |
| W72-F41 | Mixed Hardwood Swamp | 2.50 | -- |
| W73-F41 | Freshwater Marsh | 0.74 | -- |
| W74-F41 | Isolated Cypress Swamp | 0.23 | -- |
| W75-F42 | Freshwater Marsh | 0.66 | 0.66 |
| W76-F43 | Freshwater Marsh | 0.06 | 0.06 |
| W77-F44 | Barrow Pit | 0.34 | 0.34 |
| W78-F45 | Freshwater Shrub Marsh | 0.01 | 0.01 |
| 4-50 | | | |
| TOTAL | | 42.95 | 55.51 |

W = Wetland Site
F = Floodplain Site

Source: RS&H, 1986.

(e.g., wading and migratory birds, mammals, and reptiles) use wetlands for food, water, nesting, and cover requirements. The wetlands along SR 52 are also important in providing food and nesting habitat for state and federally-listed wildlife species. These include the southern bald eagle, sandhill crane, and wood stork. As development (i.e., agricultural, residential, and commercial) continues in the uplands of the project vicinity, these wetlands will become even more important and valuable to regional fish and wildlife.

The floral and faunal components of the mixed hardwood swamp, cypress swamp, and freshwater marsh/shallow ponds communities are described in detail in Section 4.2, Biological Communities.

4.8.1 Mixed Hardwood Swamps

The 14 mixed hardwood swamp sites (W4, W5, W6, W7, W9, W12, W29, W30, W32, W36, W38, W63, W67, and W72) involve a maximum total encroachment of 12.8 acres. Thirteen of these sites are associated with floodplains and drainage basins of creeks and are part of larger stands ranging in approximate size from 7 to 4,117 acres (Table 4.8-2). The other site, W29, is a 0.5-acre, hydrologically isolated swamp. In general, these hardwood swamps are particularly important to fish and wildlife. The high floral diversity within this wetland type provides habitat for many wildlife species. Due to the contiguous nature of these wetlands, they also provide a corridor for fish and wildlife movements between areas.

Twelve of the fourteen sites have been previously impacted from the initial construction of SR 52. However, most of these 12 wetlands have functionally recovered completely (i.e., provide quality habitat for fish and wildlife) from this disturbance. Sites W29 and W7 have not been previously disturbed.

Several FWS wetland classification types (FWS, 1979) are represented within the mixed hardwood swamp category (Table 4.8-2). These wetland types differ in their dominant hardwood tree species composition and

Table 4.8-2. Summary of Wetland Involvement by U.S. Fish and Wildlife Service Wetland Classification Types for the 14 Mixed Hardwood Swamps Along SR 52

| <u>Mixed Hardwood Swamp</u> | | <u>Wetland* Size (Acres)</u> | | <u>U.S. Fish and Wildlife Service Wetland Classification</u> | |
|-----------------------------|---|--------------------------------------|--|--|--|
| <u>Site</u> | <u>Maximum Acreage Of Involvement</u> | | | | |
| W4 | 0.25 | 193.00** | | System: Palustrine | |
| W5/Buckhorn Creek | 0.04 | 193.00 | | Class: Forested | |
| W6 | 0.87 | 193.00** | | Subclass: Deciduous | |
| W7 | 0.18† | 1,818.00†† | | Water Regime: Semipermanently Flooded | |
| W9 | 0.74 | 1,818.00†† | | | |
| W32 | 0.88 | 180.00 | | | |
| W38 | 1.57 | 49.00 | | | |
| W63 | 1.31 | 7.00 | | | |
| W72 | 2.50 | 42.00 | | | |
| TOTAL | 8.34 | 471.00 | | | |
| W30/Pithlachascotee River | 1.01 | 3,381.00 | | System: Palustrine | |
| W67/Cypress Creek | 1.89 | 4,117.00 | | Class: Forested | |
| TOTAL | 2.90 | 7,498.00 | | Subclass: Deciduous | |
| | | | | Water Regime: Seasonally Flooded | |
| W12 | 0.84 | 1,818.00 | | System: Palustrine | |
| W29 | 0.51† | 0.51 | | Class: Forested | |
| W36 | 0.20 | 3,381.00*** | | Subclass: Deciduous/Broad-Leaved Evergreen | |
| | | | | Water Regime: Seasonally Flooded | |
| TOTAL | 1.55 | 1,818.51 | | | |
| GRAND TOTAL | 12.79 | 9,787.51 | | | |

* Wetland size was taken from National Wetland Inventory maps (FWS, 1981) or determined by planimeter from 1:100 aerial photos.
 † Wetland not previously encroached upon by SR 52.

** Not included in total, this site is part of the wetland associated with Site W5.
 †† Not included in total, this site is part of the wetland associated with Site W12.

*** Not included in total, this site is part of the wetland associated with Site W30.

Source: RSSH, 1987.

water regimes. Sites W30 and W67 represent the portions of hardwood swamps within the proposed right-of-way that are associated with the Pitchlascotee River and Cypress Creek, respectively. These sites are classified as follows: System--Palustrine, Class--Forested, Subclass--Deciduous, and Water Regime--Seasonally Flooded.

In the area of SR 52, the Pitchlascotee River (Site W30) is a major intermittent stream with an ill-defined streambed that flows through a 400-foot-wide hardwood swamp dominated by cypress and red maple. The stream flows from north to south, originating from Crews Lake. The northern alignment for the proposed roadway, as described in Section 3.7, Alternative Alignments, was selected at this location because it minimizes wetland encroachment. Approximately 1.01 acres of wetlands on the north side will be involved. Cypress Creek, which also flows generally from north to south, is a tributary of the Hillsborough River. The section of the creek within the proposed right-of-way (Site W67) is in the upper reaches of the Cypress Creek Watershed where there is often no flow and maximum depths rarely exceed 3 feet (Hicks, 1985). The

streambed is ill-defined and runs through a 600- to 700-foot-wide mixed hardwood swamp. A southern alignment was selected because it would minimize wetland encroachment. A maximum of 1.89 acres on the south side of SR 52 will be involved in the road improvements. On the south side of SR 52, within the proposed right-of-way, most of the large cypress trees have been recently removed. The south side is now dominated by red maple and black gum trees and is relatively open. Selective clearing and grubbing will be used to minimize the impacts to Sites W67 and W30.

Hardwood swamp Sites W4, W5, W6, W7, W9, W32, W38, W63, and W72 are dominated by cypress and/or red maple and are semipermanently flooded. A total of approximately 8.34 acres will be involved. These sites are classified as follows: System--Palustrine, Class--Forested, Subclass--Deciduous, and Water Regime--Semipermanently Flooded. The wetland involvement at Site W7 (approximately 0.18 acre) is positioned within

the proposed right-of-way such that selective clearing and grubbing will be used to avoid encroachment at this site. Site W7 borders a large freshwater marsh. Encroachment at Sites W4 and W5 (0.25 and 0.04 acre, respectively) by the proposed southern alignment was considered unavoidable due to overriding economic considerations. An alternative alignment, which would avoid these sites, would cost an additional \$950,000 in right-of-way cost (FDOT, 1986a). Selective clearing and grubbing will be used to minimize encroachment at these sites. The wetland involvement of Sites W6, W9, W32, W38, W63, and W72, ranges from 0.74 to 2.5 acres. While encroachment at these six sites is unavoidable due to the abundance of wetlands on both sides of SR 52, impacts will be minimized by selective clearing and grubbing. Changes in the road alignment to reduce involvement at each of these sites would only shift the encroachment to another wetland.

Hardwood swamp Sites W12, W29, and W36 are seasonally flooded and consist of a mixture of sweetbay, loblolly bay, red maple, and cypress. A total of approximately 1.55 acres are involved at these sites. The sites are classified as follows: System--Palustrine, Class--Forested, Subclass--Deciduous/Broad Leaved Evergreen, and Water Regime--Seasonally Flooded. Encroachment at Sites W12, W29, and W36 will be minimized by selective clearing and grubbing. Impacts to all three of these sites are unavoidable. Site W29, a 0.5-acre, hydrologically isolated swamp, is within the proposed right-of-way. Over 50 percent of this swamp will be filled. Sites W12 and W36 are part of the large floodplains associated with Buckhorn Creek and the Pitchlascotee River, respectively. Involvement will be limited to 0.84 acre at Site W12 and 0.20 acre at Site W36. A shift in the proposed roadway alignment at these sites would increase the total wetland involvement.

The 14 hardwood swamps within the proposed right-of-way are relatively high quality forested wetlands. These include the 12 hardwood swamps previously impacted from the initial construction of SR 52. Impacts to the hardwood swamps within the project corridor were minimized by the

selective placement of the new roadway lanage. The majority of the proposed alignment was chosen based on the least involvement of wetlands and impacts to large wetland systems. Involvement at five sites (W29, W38, W63, W67, and W72) was considered substantial. A substantial wetland involvement within the proposed right-of-way is considered to be one that seriously degrades the utility or integrity of a valuable system and may contribute to a regional decline in abundance of quality, functional wetlands of the region. This reduction would substantially impact local fish and wildlife populations (see the Wetlands Finding section of this document, appended).

Overall, approximately 12.79 acres of hardwood swamps occur within the proposed right-of-way. The 12.79 acres represent 0.1 percent of the total area (9,787 acres) of impacted hardwood swamps. Approximately 60 percent of the total 12.79 acres which lie within the proposed right-of-way limits are anticipated to be filled for the roadway. Selective clearing and grubbing will minimize the encroachment to the remainder. The expected loss of hardwood swamp relative to availability in the region is not regionally significant.

4.8.2 Cypress Swamps

Portions of 30 cypress swamps lie within the proposed right-of-way involving a maximum total encroachment of 15.43 acres. These include isolated cypress stands, cypress strands, and cypress associated with freshwater marshes and/or shallow ponds (Table 4.8-3). No old-growth cypress was observed within the project corridor. The 30 cypress swamps generally provide habitat for many fish and wildlife species. Although cypress swamps typically do not have the high species diversity associated with hardwood swamps, they are very important to the particular fish and wildlife species that do use them. These species include many wading birds, reptiles, and amphibians. Also, the cypress strands are important in providing a corridor for movement of fish and both wetland and nonwetland wildlife between areas. The isolated wetlands in the developed portion of the area (i.e., cattle pastures)

Table 4.8-3. Summary of Wetland Involvement by U.S. Fish and Wildlife Service Wetland Classification Types for the 30 Cypress Swamps Along SR 52.

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| Site Number | Maximum Acreage Of Involvement | Wetland Size* (Acres) | U.S. Fish and Wildlife Service Wetland Classification |
|--|--------------------------------|-----------------------|---|
| CYPRESS SWAMP | | | |
| Isolated Cypress Swamps | | | |
| W3 | 0.30 | 4.50 | |
| W8 | 0.22 | 0.22 | |
| W10 | 0.96 | 2.00 | |
| W11 | 0.05† | 1.00 | |
| W13 | 0.22 | 0.45 | |
| W14 | 0.36 | 0.68 | |
| W16 | 0.64 | 3.50 | |
| W18 | 0.50 | 0.50 | |
| W20 | 0.09 | 8.00 | |
| W24 | 0.03† | 0.03 | |
| W35 | 0.20 | 0.40 | |
| W40 | 0.23 | 0.23 | |
| W44 | 0.36 | 0.36 | |
| W46 | 0.29† | 4.00 | |
| W64 | 0.77 | 0.77 | |
| W65 | 0.34† | 0.50 | |
| W71 | 0.30 | 0.30 | |
| W74 | 0.23† | 0.22 | |
| TOTAL | 6.09 | 27.67 | |
| Cypress Strand | | | |
| W1 | 0.27 | 1,480.00 | |
| W21 | 0.19† | 61.00 | |
| W33 | 0.16† | 180.00** | |
| W34 | 0.51† | 11.00 | |
| W37 | 0.78 | 3,381.00†† | |
| W43 | 3.38 | 152.00 | |
| W62 | 0.19† | 110.00 | |
| W66 | 1.49 | 43.00 | |
| TOTAL | 6.97 | 1,857.00 | |
| Cypress Swamp Surrounding Shallow Ponds | | | |
| W26 | 0.09† | 0.60 | |
| W49 | 0.10† | 0.10 | |
| W58 | 0.57 | 4.00 | |
| W60 | 1.61 | 2.00 | |
| TOTAL | 2.37 | 6.70 | |
| GRAND TOTAL | 15.43 | 1,893.67 | |

* Wetland size was taken from national Wetland Inventory maps (FWS, 1981) or determined by planimeter from 1:100 aerial photos.
 † Wetland not previously encroached upon by SR 52.
 ** Not included in total, this site is part of the wetland associated with Site W32.
 †† Not included in total, this site is part of the wetland associated with Site W30.
 Source: RSEH, 1987.

are also an important refuge for fish and wildlife. Cypress swamps associated with freshwater marshes and/or shallow ponds increase the wildlife diversity normally associated with marshes or ponds by providing a buffer zone and increasing habitat structural diversity. The cypress trees provide convenient nesting and roosting trees for wading birds and birds of prey (e.g., osprey and southern bald eagle), as well as many reptiles, amphibians, and small mammals.

All 30 sites are classified as follows: System--Palustrine, Class--Forested, Subclass--Needle-Leaved Deciduous, and Water Regime--Semi-permanently Flooded.

Eighteen cypress swamp sites (W3, W8, W10, W11, W13, W14, W16, W18, W20, W24, W35, W40, W44, W46, W64, W65, W71, and W74) are part of isolated wetlands ranging in size from 0.03 to 8.0 acres (see Table 4.8-3). Approximately 6.09 acres of hydrologically isolated cypress swamps occur within the proposed right-of-way. It is anticipated that five of these cypress swamp sites within the proposed right-of-way (W11, W13, W20, W24, and W46), with a combined total of 0.68 acre, will not be encroached upon by the proposed widening of SR 52. These wetlands are far enough from the proposed roadway edge that selective clearing and grubbing will be used to avoid impacts to these sites. The wetlands associated with the remaining 12 sites range in size from 0.22 to 4.5 acres. These 12 wetlands generally provide quality habitat for fish and wildlife species. Sites W3, W10, W14, W16, W65, and W74 are natural, hydrologically isolated wetlands. Of these sites, W65 and W74 have not been previously encroached upon. The other seven swamp sites (W8, W18, W35, W44, W40, W64, and W71) have been segmented from larger cypress swamps by the initial construction of SR 52.

At 17 of the 18 sites, selective placement of the proposed laneage has minimized wetland involvement. For the remaining site (W3), alignment was chosen based on significantly lower right-of-way costs. To shift alignment to avoid the 0.3 acre of the 5-acre swamp at this site would

cost an additional \$950,000 (this includes the avoidance of Sites W4 and W5 as discussed in the previous section). Therefore, based on cost, avoidance of this cypress swamp was not considered prudent.

All wetlands associated with Sites W8 and W40 (0.22 and 0.23 acres, respectively) are within the proposed right-of-way and will be filled for the proposed roadway improvements. Sites W18, W4, W64, W71, and W74 are also totally within the proposed right-of-way and are 0.23- to 0.77-acre wetlands. About 50 percent of these sites will be filled for the proposed roadway. Selective clearing and grubbing will be used to minimize impacts to the remaining portion of the wetlands within the proposed right-of-way.

Sites W10, W14, W35, and W65 are swamps ranging in size from 0.5 to 2.0 acres. The involvement for Sites W14, W35, and W65 is between 0.20 and 0.36 acre, whereas the involvement of Site W10 is 0.96 acre. It is anticipated that approximately 25 percent of the total area of these wetlands will be filled for the proposed roadway. The impacts to the remaining wetland areas within the right-of-way will be minimized by selectively clearing and grubbing.

Site W16 is part of a 3.5-acre wetland. Approximately 25 percent of this wetland occurs within the proposed right-of-way, and approximately 10 percent of this total will be filled. The impacts to the remaining portions of the wetlands will be minimized by selective clearing and grubbing.

Cypress strands account for 8 of the 30 cypress wetlands sites (W1, W21, W33, W34, W37, W43, W62, and W66) that the project encroaches upon. These cypress strands range in size from 43.0 to 3,381.0 acres. A total of 6.97 acres is within the proposed right-of-way. The proposed alignment minimizes the wetland acreage involved in the area of these eight sites. These eight wetlands, which provide quality habitat for fish and wildlife species, include four wetlands (W1, W37, W43, and W66)

previously disturbed during the initial construction of SR 52. The involvement at Sites W66 and W43 (1.49 and 3.38 acres, respectively) was considered substantial. The involvement at each of the six remaining sites was minor.

Site W1, Bear Creek, is intermittent, with an ill-defined creekbed which flows through a 1,480-acre cypress swamp. A south alignment was selected to minimize the amount of wetlands involved. An encroachment of 0.27 acre is expected. This includes the previously cleared right-of-way, which is now covered with 10- to 15-foot-tall cypress trees (approximately 0.1 acre) and 0.18 acre of previously undisturbed cypress stand. Site W33 has 0.16 acre within the proposed right-of-way, and is far enough from the roadway laneway that clearing or filling is not anticipated. Site W37, a 3,381-acre cypress stand, had 0.78 acre of wetland involvement. Sites W21, W34, and W62 are associated with wetlands that range in size from 11 to 110 acres. Only the tips of these swamps will be affected. The involvement for these three sites ranges from 0.19 to 0.51 acre. Impacts to all eight sites will be reduced by selective clearing and grubbing.

The remaining 4 of the 30 cypress wetlands (Sites W26, W49, W58, and W60) are cypress stands which surround, or are adjacent to, shallow ponds and freshwater marshes. Sites W26 and W49 are small stands of cypress (0.6 and 0.1 acre, respectively). These cypress stands are part of larger wetlands (3.5 and 6 acres, respectively), that have not been previously encroached upon by the existing SR 52 roadway. A maximum of 0.1 acre of cypress will be impacted at each site. In the area of involvement, the cypress stand which surrounds these sites is only several trees wide and is not considered substantial. Both sites provide habitat for wildlife, as do Sites W58 and W60, which have been previously bisected by SR 52. Sites W58 and W60 are associated with cypress stands which partially surround large freshwater marsh/shallow pond (438 and 96 acres, respectively). At Site W58, the east and west sides of the cypress-ringed marsh were previously bisected by the

roadway. The stand is south of SR 52 and approximately 75 feet wide on the east and west sides. The wetland area within the proposed right-of-way consists of 0.33 acre to the east and 0.24 acre to the west. At Site W60, the cypress is 125 feet wide and parallels the road on the south side of SR 52. This wide strip accounts for approximately 1.61 acres of wetlands. The impacts to this system are considered sufficient to constitute substantial involvement. The total encroachment will be reduced by selective clearing and grubbing for both Sites W60 and W58. Shifts in the proposed alignment would not reduce wetland involvement. Wetland involvements for the alternative alignments at these sites are equal to or slightly greater than those for the proposed alignment.

In summary, the project will result in encroachment (i.e., dredging or filling) upon 24 of the 30 cypress swamps that occur in the project corridor. No old-growth or "specimen" cypress trees will be impacted by the project. Cypress swamp involvement was minimized by selective placement of the proposed new roadway lanage. Selective clearing and grubbing will further minimize the total area of wetland disturbance. The involvement in 7 of the 18 hydrologically isolated cypress swamps will be substantial (see the Wetlands Finding section of this document, appended). The involvement in the remaining 11 of 18 hydrologically isolated cypress swamps will be minimal. The involvement in six of the eight cypress strand sites will also be minimal. The involvement in the remaining two sites, 1.49 and 3.38 acres, will have substantial impacts. The involvement of one of the four cypress swamps surrounding shallow pond sites will also be substantial. The involvement in the remaining three sites will be minimal.

The substantial involvement of 11 cypress swamps, totaling 9.44 acres, will reduce local wildlife populations by direct loss of quality habitat and habitat diversity. The involvement and impacts expected for the remaining cypress swamps are small and should not impact fish and wildlife populations substantially.

Overall, approximately 15.43 acres of cypress swamps occur within the proposed right-of-way. This represents 0.8 percent of the total area (1,893.67 acres) of these swamps. Therefore, the expected total loss of cypress swamp resulting from the project is not considered regionally significant.

4.8.3 Freshwater Marsh/Shallow Ponds

Portions of 33 freshwater marshes/shallow ponds lie within the proposed right-of-way, involving a maximum of 14.4 acres. Several FWS wetland types are represented within this category (Table 4.8-4). The wetland types differ in amounts of open water, dominant plant species, and water regimes. They include seasonally and semipermanently flooded marshes and shrub marshes and permanently flooded shallow ponds. These heterogeneous wetlands provide a variety of fish and wildlife habitat. As a group, they are important within the region. The primary productivity (i.e., base unit of the food chain) in these wetlands is generally higher than in forested wetlands. These wetland types are particularly important to wildlife species adapted to open water areas and/or fluctuating water levels (e.g., certain fishes, ducks, wading birds, turtles, and alligator).

Nine of the 33 freshwater marshes (Sites W2, W50, W52, W53, W54, W57, W61, W73, W76) are seasonally flooded. These freshwater marshes (wet prairies) occur in low-lying areas surrounded by uplands, or in ecotones between uplands and the semipermanently and permanently flooded wetlands. Approximately 3.29 acres of wet prairies occur within the project right-of-way. These sites are classified as follows: System--Palustrine, Class--Emergent, Subclass--Persistent, and Water Regime--Seasonally Flooded. The wetland involvement was minimized by selective placement of the proposed roadway at these sites. Wetlands associated with Sites W2, W53, W61, W73, and W76 have been previously bisected by SR 52, while Sites W50, W52, W54, and W57 have been encroached upon but not bisected. Eight of these nine wetlands (all except W76) have recovered well from this disturbance (i.e., regained their normal

Table 4.8-4. Summary of Wetland Involvement by U.S. Fish and Wildlife Service Wetland Classification Types for the 33 Freshwater Marsh/Shallow Ponds and a Borrow Pit Along SR 52

| Site Number | Maximum Acreage Of Involvement | Wetland Size* (Acres) | U.S. Fish and Wildlife Service Wetland Classification |
|--|--------------------------------|-----------------------|---|
| Freshwater Marsh (Seasonally Flooded) | | | |
| W2 | 0.24 | 0.40 | System: Palustrine |
| W50 | 0.51 | 25.00† | Class: Emergent |
| W52 | 0.55 | 5.00 | Subclass: Persistent |
| W53 | 0.27 | 6.00 | Water Regime: Seasonally Flooded |
| W54 | 0.11 | 405.00 | |
| W57 | 0.20 | 0.40 | |
| W51 | 0.61 | 10.00 | |
| W73 | 0.74 | 0.06 | |
| W76 | 0.06 | 0.06 | |
| TOTAL | | | |
| | 3.29 | 427.60 | |
| Freshwater Marsh (Semi-permanently Flooded) | | | |
| W17 | 0.17 | 0.17 | System: Palustrine |
| W19 | 0.11 | 0.11 | Class: Emergent |
| W47 | 0.10 | 28.00 | Subclass: Persistent |
| W59 | 0.61 | 1.50 | Water Regime: Semi-permanently Flooded |
| W75 | 0.66 | 1.50 | |
| TOTAL | | | |
| | 1.65 | 31.28 | |
| Freshwater Shrub Marsh | | | |
| W15 | 0.23** | 3.50 | System: Palustrine |
| W31 | 0.53** | 1.75 | Class: Shrub |
| W39 | 0.17** | 21.00 | Subclass: Deciduous and |
| W70 | 0.55 | 0.55 | Class: Emergent |
| W78 | 0.01 | 0.01 | Subclass: Persistent |
| TOTAL | | | |
| | 1.49 | 26.81 | Water Regime: Seasonally Flooded/Semi-permanently Flooded |
| Freshwater Marsh/Shallow Pond | | | |
| W22 | 0.37** | 16.00 | System: Palustrine |
| W23 | 0.35** | 16.00†† | Class: Emergent/Open Water |
| W25 | 0.18** | 3.50 | Subclass: Persistent |
| W27 | 0.39 | 0.39 | Water Regime: Permanently Flooded |
| W28 | 0.34** | 9.00 | |
| W41 | 0.44 | 0.44 | |
| W42 | 0.75 | 1.00 | |
| W45 | 0.16 | 0.25 | |
| TOTAL | | | |
| | 2.98 | 30.58 | |
| Shallow Pond (Littoral Zone Vegetated) | | | |
| W48 | 0.14 | 6.00 | System: Palustrine |
| W51 | 1.55 | 25.00 | Class: Aquatic Bed/Open Water |
| W55 | 0.09** | 47.00 | Subclass: Floating-Leaved |
| W56 | 1.52 | 438.00 | Water Regime: Permanently Flooded |
| W59 | 1.43 | 96.00 | |
| TOTAL | | | |
| | 4.73 | 612.00 | |
| W68 | 0.25** | 0.25 | Class: Open Water |
| TOTAL | | | |
| | 0.25** | 0.25 | Special Modifier: Artificial |
| Borrow Pit | | | |
| W77 | 0.34** | 0.45 | System: Lacustrine |
| TOTAL | | | |
| | 0.34** | 0.45 | Special Modifier: Artificial |
| GRAND TOTAL | | | |
| | 14.73 | 1,128.97 | |

* Wetland size was taken from National Wetland Inventory Maps (RWS, 1981) or determined by planimeter from 1:100 aerial photos.

† Wetland not previously encroached upon by SR 52.

†† Not included in total, this site is part of the wetland associated with Site W22.

function and currently provide adequate-to-good quality habitat for fish and wildlife). Site W54 occurs on the edge of a 405-acre marsh and has less than 0.11 acre within the right-of-way. Due to the size and location of this wetland acreage, selective clearing and grubbing operations can be utilized to avoid impacts associated with construction of the proposed roadway. Sites W73 and W76, remnants of wetland areas that were previously bisected by SR 52, are totally within the proposed right-of-way (approximately 0.74 and 0.06 acre, respectively). These sites will be completely filled during the construction of the proposed roadway. Also, most of Sites W2 and W57, which total less than 0.5 acre, occur within the proposed right-of-way. It is anticipated that approximately 50 percent of these sites will be filled for the roadway. Selective clearing and grubbing will be used to minimize impacts to the remaining portion of the wetlands within the proposed right-of-way. The involvement of Sites W50, W52, W53, and W61 (0.51, 0.55, 0.27, and 0.61 acre, respectively) occur on the edge of marshes ranging in size between 5.0 and 25.0 acres. The total area impacted will be reduced by selective clearing and grubbing at these four sites.

Five of the 33 freshwater marsh sites (Sites W17, W19, W47, W69, and W75) are semipermanently flooded and have a combined total of 1.65 acres within the proposed right-of-way. These five sites are classified as follows: System--Palustrine, Class--Emergent, Subclass--Persistent, and Water Regime--Semipermanently Flooded. The proposed alignment minimizes the wetland acreage involved at these five sites. Site 47 has less than 0.1 acre within the proposed right-of-way and is far enough away from the roadway alignment that clearing or filling is not anticipated. Sites W17, W19, W69, and W75 have been previously segmented by SR 52 and, with the exception of W17 and W19, provide quality wildlife habitat. Marshes associated with Site W17 and part of Site W19 resulted from previous clearing of cypress for the existing SR 52 right-of-way. These 0.17- and 0.11-acre marshes occur within the proposed right-of-way and will be filled during the construction of the roadway. At Site W69 and W75, 40 percent of these 1.5-acre marshes occur within the proposed

right-of-way. It is anticipated that one-third of the area in these marshes will be filled for the proposed roadway. Impacts to the remaining portion within the right-of-way for these sites will be minimized by selective clearing and grubbing.

Five of the thirty-three freshwater marshes are shrub marshes that are dominated by willows and/or small cypress. Four of the five marsh sites are seasonally flooded (W15, W39, W70, and W78) and have a combined total of 0.96 acre within the proposed right-of-way. They are classified as follows: System--Palustrine, Class--Scrub-Shrub, Subclass--Deciduous/Class--Emergent, Subclass--Persistent, and Water Regime--Seasonally Flooded. The other shrub marsh, W31, with 0.53 acre of involvement, is similarly classified with the exception of its semi-permanently flooded water regime.

The proposed alignment minimizes the wetland acreage involved at these five sites. Shifts in the proposed alignment would result in an increase in wetland impacts. Two of the five sites (W70 and W78) were previously bisected by SR 52. Site W78 is a 0.01-acre remnant wetland to the south of SR 52 and will be totally eliminated by the proposed project. W78 is not considered quality wildlife habitat, in part, due to its disturbed nature and relatively small size. The shrub marsh at Site W70, which has recovered and does provide quality wildlife habitat, is also totally within the proposed right-of-way. It is anticipated that approximately 60 percent of this 0.55-acre wetland will be filled. Sites W31, W15, and W39 provide quality wildlife habitat and have not been previously disturbed by SR 52. At Site W31, 0.53 acre of a 1.75-acre shrub marsh is involved. Approximately 0.2 acre at this site is anticipated to be filled for the proposed roadway. The involvement at Sites W15 and W39, which range from 0.17 and 0.22 acre, is relatively small compared to the total area of these wetlands (3.5 and 21 acres, respectively). Selective clearing and grubbing will minimize the encroachment at these three sites.

Right of the 33 freshwater marsh/shallow pond sites (W22, W23, W25, W27, W28, W41, W42, and W45) are associated with shallow ponds and have a combined total of 2.98 acres within the proposed right-of-way. These wetlands sites are classified as follows: System--Palustrine, Class--Emergent, Subclass--Persistent/Class--Open Water, and Water Regime--Permanently Flooded. Site W27 is a pickerelweed pond which was previously segmented by SR 52. The remnant 0.39-acre pond occurs within the proposed right-of-way. It is anticipated that 100 percent of this pond may potentially be filled for the proposed roadway. Sites W41, W42, and W45, which were also previously bisected by SR 52, are portions of cypress swamps that have been cleared and/or dredged to create three shallow ponds. These ponds were presumably created to provide water for cattle. Due to the disturbance, Sites W41, W42, and W45 are not considered quality wetlands or wildlife habitat. The involvement at Sites W41 and W42 is 0.44 and 0.75 acre, respectively. Most of the ponds at these sites occur within the proposed right-of-way. It is anticipated that approximately 0.12 and 0.42 acre of Sites W41 and W42 will be filled for the proposed roadway. This includes the central portions of these ponds that are vegetated with maidencane and small cypress trees. The pond at Site W45 has sections which are vegetated with cattails. Approximately 50 percent of this 0.25-acre pond occurs within the proposed right-of-way. It is anticipated that only 0.05 acre of this pond will be filled because of the pond's relative position to the proposed new lanes. At Sites W27, W41, W42, and W45 selective clearing and grubbing will be used to minimize the impacts to the remaining portions of these ponds within the proposed right-of-way. In addition, wetland involvement was minimized by the selective placement of the proposed new laneway at these sites. The proposed alignment encroaches upon the smaller side of the previously bisected swamps. Sites W22, W23, W25, and W28 are natural ponds ranging in size from 3.5 to 16.0 acres that have not been previously disturbed by SR 52 and provide quality wildlife habitat. Most of the involvement at these sites, which ranges from 0.18 to 0.37 acre, occurs within the vegetated areas of these shallow ponds. The dominant plants include St. Johns-

Site W68 is classified as follows: System--Palustrine, Class--Open Water, Water Regime--Permanently Flooded, Special Modifier--Artificial. This site is a 0.25-acre pond within the proposed right-of-way and is in the middle of a cattle pasture. The pond was presumably created to provide water for cattle. A small amount of pickerelweed occurs in this pond. Over 50 percent of the pond will be filled for the roadway. The proposed alignment at this site reduces the involvement of natural wetlands. Due to this wetland's artificial nature, it is not considered a high quality wetland.

Site W68 is classified as follows: System--Palustrine, Class--Open Water, Water Regime--Permanently Flooded, Special Modifier--Artificial. This site is a 0.25-acre pond within the proposed right-of-way and is in the middle of a cattle pasture. The pond was presumably created to provide water for cattle. A small amount of pickerelweed occurs in this pond. Over 50 percent of the pond will be filled for the roadway. The proposed alignment at this site reduces the involvement of natural wetlands. Due to this wetland's artificial nature, it is not considered a high quality wetland.

wetland acreage involved at these four sites.

selective clearing and grubbing. The proposed alignment minimizes the wort, maidencane, and pickerelweed. Encroachment will be minimized by

Six of the 33 freshwater marsh/shallow pond sites (W48, W51, W55, W56, W59, and W68) are associated with ponds representing a total maximum involvement of 4.98 acres. Sites W48, W51, W55, W56, and W59 are classified as follows: System--Palustrine, Class--Aquatic Bed/Open Water, Subclass--Floating-leaved, and Water Regime--Permanently Flooded. Site W55 has 0.09 acre within the proposed right-of-way and is far enough from the roadway lanage that clearing or filling is not anticipated. Sites W48, W51, W56, and W59 are considered high quality wildlife habitat. These sites have recovered from previous disturbances from the original construction of SR 52. Site W48 is associated with a 6-acre pond that has been previously encroached upon by SR 52. Involvement at this site will be limited to 0.14 acre. Encroachment at this site is expected to be slight and will be further minimized by selective clearing and grubbing. Sites W51, W56, and W59 are associated with wetlands ranging from 15 to 438 acres that have been previously segment-ed by SR 52. Each has a maximum involvement of approximately 1.5 acres. It is anticipated that 0.75 acre at each of these sites will be filled for the roadway. Shifts in alignment at these three sites and Site W48 will not reduce wetland involvement. The proposed alignment minimizes wetland involvement at all of these sites.

4.8.4 Borrow Pit
 Site W77, a borrow pit, is manmade. The resulting side slopes are steep with only a narrow border of such pioneering wetland species as maiden-cane, pickerelweed, and wax myrtle. Between 50 and 75 percent of the 0.45-acre borrow pit will be filled. The site is not utilized extensively by wildlife. Due to the upland origin, disturbed nature, and limited amount of associated wetland vegetation of this site, the maximum potential encroachment identified is not considered substantial.

Overall, the proposed project will probably encroach upon 30 of the 33 freshwater marsh/shallow ponds within the proposed right-of-way. A total of approximately 14.39 acres of freshwater marsh/shallow ponds will be involved. The 14.39 acres represent 1.3 percent of the total area (1,128.97 acres) of these wetlands. Therefore, the expected loss of freshwater marsh/shallow ponds resulting from the project is not considered regionally significant. The total wetland involvement and impacts to previously undisturbed marsh/ponds were minimized by selective placement of the proposed alignment. The involvements at 10 of the 33 freshwater marsh/shallow pond sites are considered substantial. Nine of the 19 sites are totally within the proposed alignment. Five of these nine sites, which range in size from 0.01 to 0.76 acre, will be completely filled. Between 11 and 75 percent of the remaining 10 sites, which range in size from 0.25 acre to 1.50 acres, will be filled. However, 8 of these 19 impacted sites are the smaller remnants from the previously bisected wetland. Therefore, the impacts to the larger wetlands were avoided. The involvement at the remaining 11 of the 30 sites that will be encroached upon ranged from 0.17 to 0.61 acre, which was small relative to the size of the wetlands which ranged in size from 3.5 to 405 acres. Selective clearing and grubbing will be used to minimize the encroachment at these marshes and ponds where it is applicable. The involvement of and impacts to 10 of these freshwater marsh/shallow pond sites (8.03 acres) will reduce local fish and wildlife populations by direct loss of quality habitat and habitat diversity.

Site W77 is not considered a high quality wetland. This site is classified as follows: System--Lacustrine, Subsystem--Limnetic, Class--Unconsolidated Bottom, Water Regime--Permanently Flooded, Water Chemistry--Fresh, and Special Modifier--Artificial.

The proposed improvements to SR 52 will result in a maximum wetland involvement of 42.95 acres (12.79 acres of mixed hardwood swamps, 15.43 acres of cypress swamps, and 14.39 acres of freshwater marsh/ponds and 0.34 acre of a borrow pit). The 42.95 acres of wetlands that lie partially or wholly within the proposed right-of-way represent 0.34 percent of the total area (12,810 acres) of the wetlands occurring in the vicinity of the study corridor. The involvement at 53 of 78 wetland sites is considered minor. The involvement at the 25 remaining sites is considered substantial. These wetlands occupy a total of 25.89 acres within the proposed right-of-way.

Wetland impacts have been minimized by utilizing the existing SR 52 alignment, since this area has already been subject to disturbances associated with previous roadway construction. Wetland involvement will also be minimized by selective placement of the proposed roadway where there are no other overriding human or economic factors. In most cases, the alignment was chosen based on minimization of wetland impacts and avoidance of large wetland systems. Most of the other wetland involvement was unavoidable because of the abundance and distribution of wetlands in the region. To minimize total wetland loss, selective clearing and grubbing will be implemented during construction. The remaining portion of involved wetlands will be cleared and filled during the construction of the roadway. It is anticipated that at least 60 percent of the 42.95 acres involved will be filled for the roadway. To minimize regional wetland losses, mitigation for wetlands impacted (see Section 4.8.5, Mitigation for Wetland Losses, and Appendix for Wetlands Finding) will be determined during the permitting and final design phases. The actual proportion to be impacted will not be known until the final design. To minimize short- and long-term impacts due to

construction, activities will be adhered to as described in Section 104 of FDOT's "Standard Specifications for Road and Bridge Construction." Due to cost feasibility, wetland involvement will not be minimized by additional bridging or by extension of existing bridge lengths.

The involvement of 42.95 acres of wetlands is not considered to be regionally significant. However, the involvement with 25 of the 78 wetlands is considered a substantial, unavoidable adverse impact for several reasons. This loss will substantially reduce the amount and diversity of fish and wildlife habitat in the immediate area. As previously mentioned, these wetlands are important habitat for fish and wildlife, and this importance will increase as the uplands in the region are developed. The loss will also reduce the total amount of floodplain available for stormwater and floodwaters (see Section 4.12) and the available area for ground water recharge. In addition, the total wetland loss will also be contributing to the cumulative decline of wetlands in Florida. One-third of Florida's wetlands have been lost since 1955 (Hampson, 1984). Therefore, mitigation is proposed to offset the unavoidable adverse wetland impacts, as requested by FGFWFC and EPA (see letters in Appendix A).

4.8.5 Mitigation for Wetland Losses

Although all reasonable measures were taken during the preliminary design stages to avoid wetland impacts, the proposed improvements to SR 52 will impact a maximum total of 42.95 acres of wetlands at 78 locations. Although formal jurisdictional determinations have not been conducted by the permitting agencies, it is expected that all wetland encroachment sites will require permits from COE and the Southwest Florida Water Management District (SWFWMD). Permits from DER are required only at wetland encroachment areas associated with Waters of the State as defined in Section 403.031, Florida Statutes (FS) (i.e., wetlands contiguous or connected to streams, rivers, lakes, etc.). In this regard, the wetland areas requiring DER permits will be a subset of those areas requiring COE and SWFWMD permits.

The permitting agencies will require mitigative measures to offset the impacts associated with wetland encroachment. The policy of the permitting agencies is to accept mitigation as a last resort, only after the project has been sufficiently demonstrated to be water dependent and/or have no reasonable alternatives to wetland encroachment. As previously stated, the impacts to wetlands have already been minimized to the greatest extent possible by selective placement of the proposed alignment.

Although the exact acreages and limits of wetland involvement will not be defined until the detailed design stage, preliminary figures indicate that a maximum of 42.95 acres of wetlands will be unavoidably impacted at 78 locations. Of this total, 28.22 acres will involve encroachment into forested wetlands and 14.73 acres will involve encroachment into herbaceous wetlands.

Various compensatory measures were considered to offset the wetland impacts of the proposed project. Of the various possible categories, only wetland creation and selective clearing and grubbing were determined to be sufficient and feasible due to specific project conditions. The Wetlands Finding, appended as Appendix B, provides a detailed evaluation of wetland impacts and proposed mitigation at each individual wetland site involved with the proposed action. It was determined that a minimum of 25.89 acres of mitigation (i.e., a 1:1 ratio of wetland replacement through creation) is proposed for substantial wetland impacts associated with the proposed action.

Potential mitigation sites adjacent to SR 52 are abundant between Moon Lake Road and I-75. A small portion of the mitigation for small, isolated, and disturbed wetlands can be accomplished by the creation of drainage swales within proposed right-of-way. The majority of the mitigation areas will be located outside the proposed right-of-way.

Where possible, the mitigation sites will be located adjacent to existing wetlands, especially those systems that will be impacted. The proximity of adjacent wetland sites will provide the newly created sites with a future seed source, thereby aiding their establishment. Mitigation sites will be selected in the design and permitting stage based upon the least ecological impact to existing habitats (e.g., the use of pastures or other altered areas, adjacent to wetlands), and the availability and cost of suitable lands.

The general methodology for wetland mitigation will include excavation of upland areas adjacent to existing wetlands. The final elevation of the created wetlands will be approved by agency biologists experienced in wetland ecology and mitigation. The proposed elevations will be based on hydrological and biological indicators within the existing adjacent wetland systems in order to provide appropriate wetland hydroperiods. Specifics of the mitigation plans (i.e., species composition, size and density of planting material, mulching, monitoring, etc.) can only be determined at the permitting stage.

Although the wetland systems proposed to be impacted are not unique or regionally significant, many are considered high quality wetland systems which provide valuable benefits to fish and wildlife, as well as functioning in flood control, sediment and pollution control, and ground water recharge.

It should be noted that the wetland permitting agencies previously mentioned have not conducted site-specific field assessments of the wetlands involved along SR 52. Therefore, the acreages of wetland involvement and mitigation may change once the permit process is initiated. However, every effort has been made during the EA process to provide as close an approximation of wetlands involvement and reasonable mitigation as possible.

Preliminary comments concerning this project's wetland impacts and proposed mitigation were solicited from SWFWMD, FWS, EPA, COE, and the

Department of Natural Resources (DNR). SR 52 Wetland Involvement and Wetland Finding sections of the EA were sent to these agencies for review and comment. COE and EPA did not provide any comments. The responses from SWFWMD, FWS and DNR are contained in Appendix C and described in Section 5.1, Governmental Agency Responses. Responses generally indicated that permits will be required prior to construction within wetlands and that wetland impacts must be fully mitigated.

4.9 RECREATION/PARKLAND 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.

4.10 OUTSTANDING FLORIDA WATERS

No Outstanding Florida Waters, as defined by Chapter 17-3.041, FAC, will be involved with the proposed alternative.

4.11 WATER QUALITY IMPACTS

Final drainage design will be in compliance with Chapter 17-25, FAC, The Stormwater Rule. Preliminary studies indicate that stormwater treatment will consist predominantly of detention and/or retention with filtration provided in the ditches and swales associated with SR 52. FDOT has initiated preliminary stormwater coordination with the Southwest District Office of DER. Coordination has also been initiated with SWFWMD, which has been delegated by DER to review the proposed method of stormwater treatment for this project. Coordination with both agencies will continue throughout the project's development.

Because of the state of the art in highway stormwater research, it is not possible at this time to determine the impacts of this project's discharge on local freshwater water bodies or the Gulf of Mexico. However, Best Management Practices will be used during the construction phase for erosion control and water quality considerations. Any additional stormwater treatment measures over and above Best Management

Practices found necessary to comply with Chapter 17-25, FAC, will be funded by the state.

No adverse impacts on either surficial or deep ground water aquifers are expected. The majority of transportation-related pollutants never leave the soil of the roadside swales.

4.12 FLOODPLAIN INVOLVEMENT

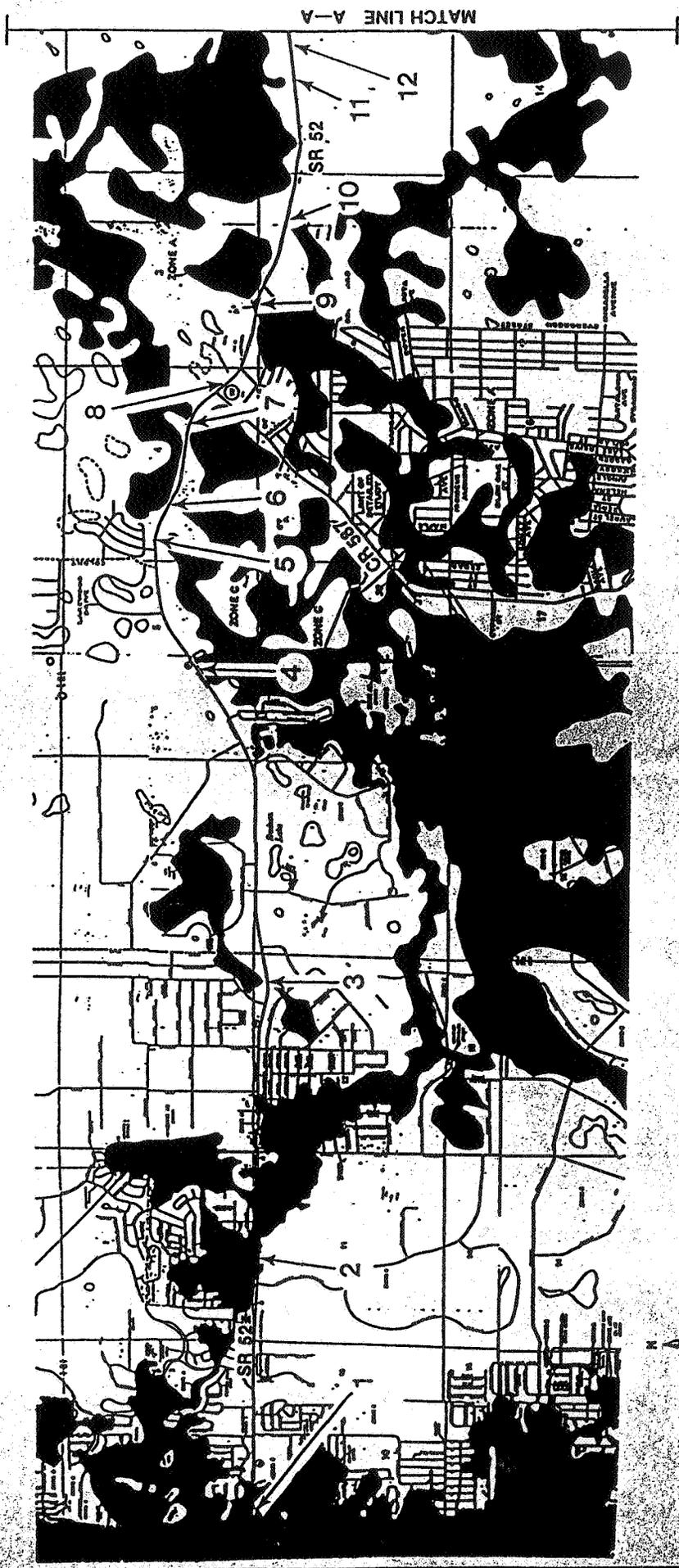
In compliance with Executive Order 11988, "Floodplain Management," the proposed action has been evaluated to determine the extent of potential impacts associated with base floodplain encroachment.

Flood Insurance Rate Maps (FIRM) (Community 120230, Panels 0180C, 0185C, 0225C, 0250C, and 0275C, effective March 15, 1984), United States Department of Interior Geologic Survey (USGS) Quadrangle Maps, FDOT Maintenance Records, aerial photographs, and field reviews were utilized to identify and evaluate base floodplain encroachments.

In accordance with Federal-Aid Highway Program Manual Volume 6, Chapter 7, Section 3, Subsection 2 (FHPM 6-7-3-2), a location hydraulic study was done. A summary of this study is included in the following discussion.

According to the preliminary hydraulic study, the existing drainage structures have been in place and functioning satisfactorily in all but one location since the early sixties. Overtopping of the roadway has been reported at the intersection of SR 52 and Zimmerman Road. The area surrounding this intersection is not designated as base floodplain by flood insurance maps and is not associated with any wetlands. Drainage problems in this area will be studied in detail during final design.

It was determined that the proposed project will encroach upon the base floodplain at 46 locations including the gulf coastal storm surge floodplain, Bear Creek, Buckhorn Creek, Pithlachascotee River, Cypress Creek, and portions of 41 wetlands that lie partially or wholly within the proposed right-of-way. Twenty of these wetland sites are associated with the large contiguous floodplains of the above-mentioned creeks and river and two tributaries (one of the Pithlachascotee River and one of the Cypress Creek). The remaining 21 sites are isolated depressional wetlands. [See Figure 4.12-1 Sheet A-C for a floodplain site location

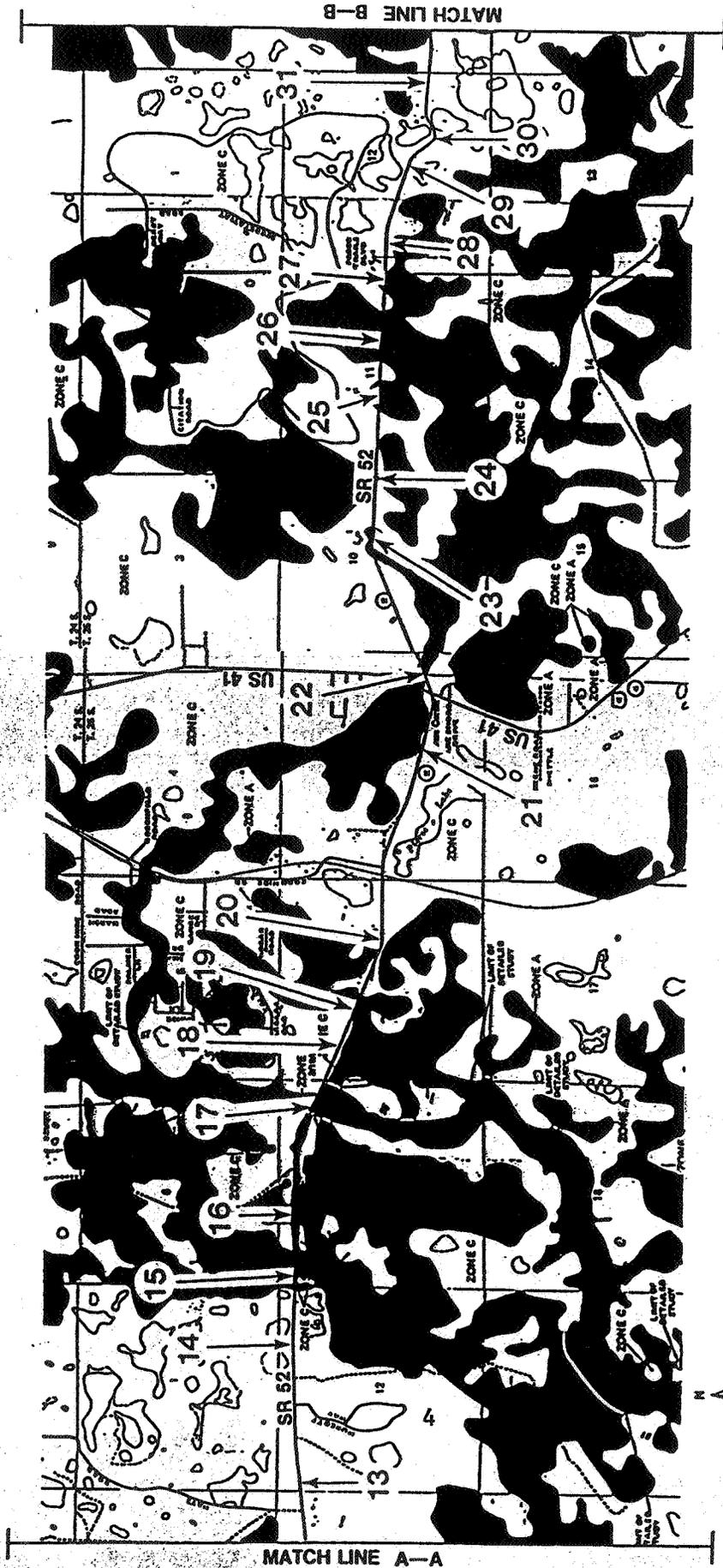


APPROXIMATE SCALE 1 INCH = 0.8 MILE

SR 52 FROM SR 55
(U.S. 19) TO SR 93 (I-75)
IN PASCO COUNTY

FIGURE 4.12-1
SHEET A
FLOODPLAIN SITE LOCATION MAP

SOURCE: RS&H, 1985

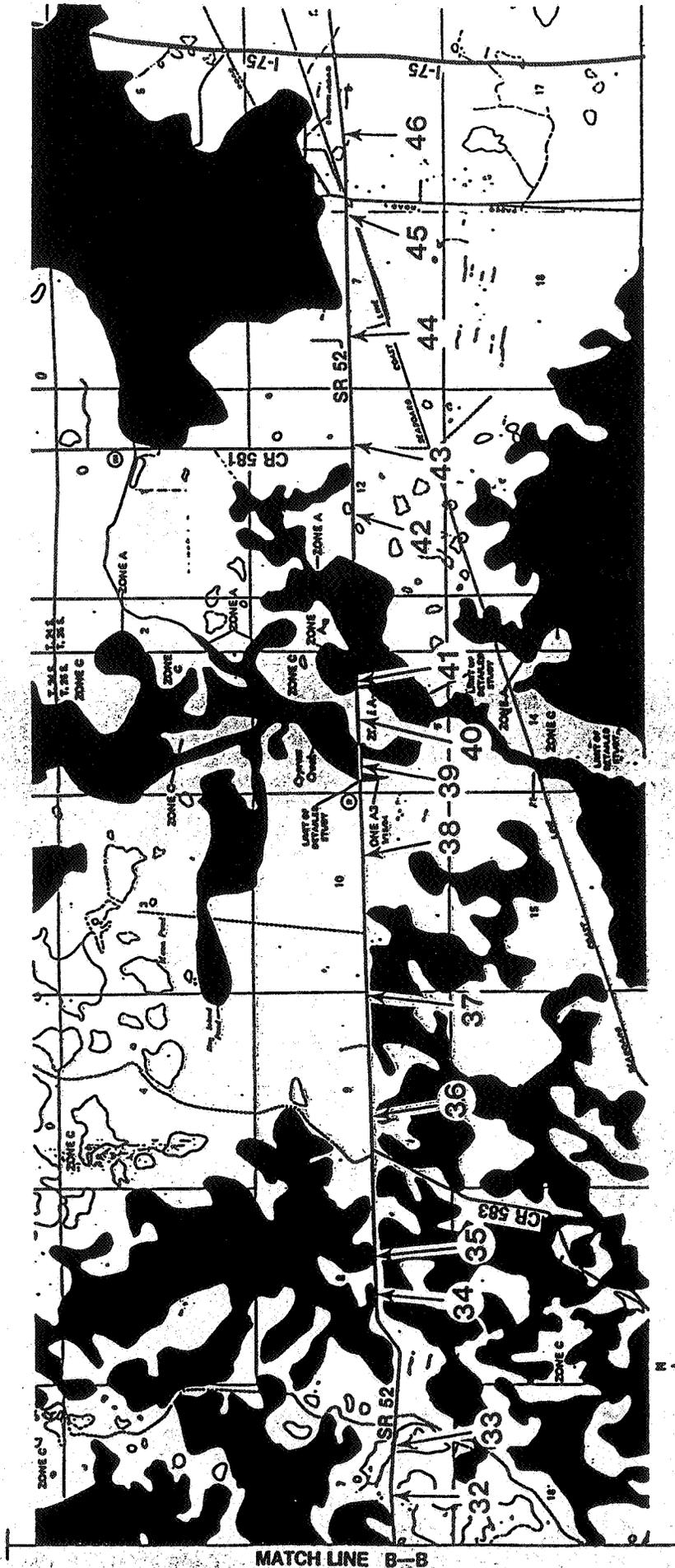


APPROXIMATE SCALE 1 INCH = 0.8 MILE

FIGURE 4.12-1
SHEET B
FLOODPLAIN SITE LOCATION MAP

SOURCE: RSS&H, 1986

SR 52 FROM SR 55
(U.S. 19) TO SR 93 (I-75)
IN PASCO COUNTY



SR 52 FROM SR 55
(U.S. 19) TO SR 93 (I-75)
IN PASCO COUNTY

FIGURE 4.12-1
SHEET C
FLOODPLAIN SITE LOCATION MAP

SOURCE: RSEH, 1986

map and Table 4.8-1 for a site-specific summary of floodplain involvement (i.e., the area within the proposed right-of-way)].

The amount of potential base floodplain encroachment was identified by calculating the amount of additional right-of-way being acquired within these areas. In this manner it was determined that the proposed (23.3-mile project will result in a maximum potential encroachment on approximately 55.7 acres of base floodplain. There are no longitudinal encroachments or involvement with any designated floodways.

As can be seen in Table 4.8-1, floodplain areas along SR 52 generally correspond to wetland areas with the exception of the floodplains associated with the creeks and rivers which are usually larger than the actual wetlands. For this reason, measures presented in Section 4.8 to minimize wetland encroachment will also serve to minimize floodplain involvement. These measures include the placement of the new roadway width to the north or south of or centered on the existing pavement and selective clearing and grubbing wherever possible in a manner that minimizes floodplain/wetland impacts.

The first 375 feet of the project (Site F1) occur within the eastern edge of the gulf coastal storm surge floodplain. Encroachment at Site F1 involves approximately 0.23 acre. The alignment of the existing SR 52 and planned road improvements is perpendicular to the area occupied by this storm surge floodplain. Therefore, while longitudinal shifts cannot be made to avoid the floodplain, this alignment will not block receding flood waters. Two crossdrains (18 and 24 inches in diameter) are currently used to minimize flooding. It is anticipated that drainage connection will be provided under the new facility as well. Considering the peripheral nature and minimal amount of encroachment, the road alignment, and lack of wetland vegetation, this encroachment is not considered significant.

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The floodplain at Site F2, which is part of the large contiguous floodplain of Bear Creek, was previously bisected by SR 52. A 50-foot bridge and two 2- by 2-foot culverts are currently used to convey water beneath SR 52. According to FDOT maintenance records and field reviews, these structures have been functioning adequately; they will, however, be thoroughly reevaluated during final drainage design. Significant increases in backwater at this site do have the potential to impact the residential development to the north of Bear Creek, but there is presently no plan to construct a more restrictive structure. Therefore, there should be no significant risk to this development as a result of increased backwater flooding. This floodplain site will experience a maximum involvement of 1.73 acres of base floodplain. However, only 0.27 acre of wetlands will be involved with the proposed southern alignment. Realignment of the new lanes would not significantly reduce this floodplain encroachment since similar base floodplain encroachment would occur on either side of the existing roadway. However, the alignment to the north would significantly increase wetland involvement. Due to the small amount of encroachment relative to the floodplain in the area, this encroachment is not considered significant.

Encroachment at Site F6, Buckhorn Creek, involves approximately 0.04 acre. The floodplain on the south side of the existing roadway is considerably smaller than that on the north. The proposed placement of the new lanes to the south of the existing roadway would significantly minimize the base floodplain encroachment at this site. A triple 10- by 5-foot box culvert is used to connect the flow of the previously bisected creek. According to FDOT maintenance records and field reviews, the existing box culvert is functioning adequately. There are no plans to construct a more restrictive structure at this location. Therefore, there will be no significant risk of backwater flooding. Considering the small area of encroachment, this encroachment is not considered significant.

Site F-17, Pithlachascotee River, will experience a maximum encroachment of 1.54 acres of base floodplain. The floodplain on the north side of

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the existing roadway is considerably smaller than that on the south. The proposed placement of the new lanes to the north of the existing roadway would significantly minimize the base floodplain encroachment at this site. A triple 10- by 7-foot box culvert is used to connect the flow of the previously bisected creek. As with Buckhorn Creek, the existing structure is adequate according to FDOT maintenance records and field reviews. Since there are no plans to construct a more restrictive structure, there will be no significant risk of backwater flooding. Considering the small area of encroachment relative to the floodplain in the area, this encroachment is not considered significant.

Site F-39, Cypress Creek, will experience a maximum base floodplain encroachment of 2.05 acres. Similar amounts of base floodplain occur on either side of the existing roadway. As with Site F-2, Bear Creek, realignment of the proposed lanes would not reduce the floodplain involvement, but the other alignments would increase the total wetland involvement. Therefore, the southern alignment was selected to minimize the wetland/floodplain encroachment. A quadrangular 12- by 10-foot box culvert is used to connect the flow of the previously bisected creek. The existing structure is functioning adequately according to FDOT maintenance records and field reviews, and there are no plans to construct a more restrictive structure. In addition, since this area is surrounded by cattle pasture, there will be no significant risk from backwater flooding. Considering the small area of encroachment relative to the overall floodplain size and the adequacy of the existing structure, this encroachment is not considered significant.

In addition to the floodplain associated with the actual river and creeks mentioned above, there are 20 floodplain sites associated with the large contiguous wetlands of these waterways. These include floodplain sites associated with Bear Creek (F4, F5, F9, and F10), Buckhorn Creek (F7), Pithlachascotee River (F16, F19, and F20), an unnamed tributary of the Pithlachascotee River (F21, F22, F23, F25, F26, F27, F34, F35, F36, and F37), and an unnamed tributary of Cypress Creek

(F41 and F43). Fifteen of these floodplain sites were previously bisected by SR 52 (F9, F10, F16, F19, F21, F22, F23, F25, F26, F27, F34, F35, F37, F41, and F43). Of these 15 sites, all but F21 and F16 currently have drainage structures to convey floodwaters beneath SR 52. According to FDOT maintenance records and field reviews, the existing structures are adequate. The adequacy of the existing structures, as well as the need for additional structures, at Sites F21 and F16 will be thoroughly evaluated during final drainage design. The large floodplain encroachments at Sites F41, F16, F26, F34, and F37 (9.6, 3.9, 3.5, 3.0, and 2.4 acres, respectively) are unavoidable because the existing and proposed roadway runs perpendicular to the floodplain associated with these sites and similar amounts of floodplain occur on either side of the roadway. Therefore, shifts in alignment would not decrease the total amount of floodplain encroachment.

Floodplains associated with Sites F4, F5, F7, F20, and F36 have been previously encroached upon by SR 52. Previous and proposed encroachments at these sites occur on the edges of these large contiguous floodplains. Previous encroachment was such that the existing drainage structures beneath SR 52 have not been necessary. The need for crossdrains will be thoroughly evaluated during final drainage design. Additional encroachments of these sites range from 0.19 to 0.92 acre. Although selection of a northern alignment could reduce the floodplain involvement at Sites F4, F5, and F7 by a total of 1.42 acres, such a shift in alignment would increase right-of-way costs by a minimum of \$950,000. Due to the relatively small area of floodplain that would be saved and the drastic cost impacts, selection of the north alignment to reduce involvement to these floodplains was not considered prudent. The proposed alignment minimizes the encroachment at Sites F20 and F36. Shifts in alignment would increase floodplain encroachment.

The remaining 21 floodplain sites (F3, F8, F11, F12, F13, F14, F15, F18, F24, F28, F29, F30, F31, F32, F33, F38, F40, F42, F44, F45, and F46) are associated with isolated depressional wetlands. For practical purposes,

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the base floodplain involvement at these particular sites is the same as the wetland involvements, approximately 13.0 acres. Five of these sites (F8, F28, F31, F32, and F46) are positioned within the right-of-way such that encroachment can probably be avoided by selective clearing and grubbing of the wetlands. Currently, none of these five sites have drainage structures beneath SR 52. The need for structures will be thoroughly evaluated during final drainage design.

Floodplain Sites F14, F30, F33, and F45 have been previously bisected or encroached upon by the existing SR 52 roadway and have existing drainage structures (either a 30- or 36-inch concrete pipe) beneath SR 52. FDOT maintenance records do not indicate any functional problems at these structures. The adequacy of these structures will be evaluated during final drainage design. The floodplain involvement, which is only 0.01 acre at Site F45 and 1.49 to 2.3 acres at the remaining sites, was specifically minimized by the proposed alignment. Therefore, shifts in the alignment to avoid these floodplains sites would not reduce floodplain involvement. The total base floodplain involvement at these sites will be further minimized by selective clearing and grubbing of the wetlands.

Floodplain Sites F3, F11, F12, F13, F29, and F42 have also been previously encroached upon or bisected by SR 52 but do not have existing crossdrains beneath the roadway. Because of additional involvement at these six sites, ranging from 0.24 to 0.89 acre, the need for structures will be reevaluated during final drainage design. The total floodplain involvement was minimized by selective placement of the proposed alignment and will be further minimized by selective clearing and grubbing of the wetlands involved at these sites.

Floodplain Sites F15, F18, F24, F40, and F44 have not been previously disturbed by the existing SR 52 roadway. The floodplain involvement at these sites, which was minimized by selective placement of the proposed alignment, ranges from 0.17 to 0.53 acre. The total floodplain

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involvement at these sites will be further minimized by selective clearing and grubbing of the wetlands. The need for crossdrains beneath SR 52 will be evaluated during final drainage design.

The proposed improvement to this 20.3-mile section of SR 52 will result in a maximum base floodplain encroachment of approximately 55.1 acres. Base floodplain encroachment was minimized by utilizing the existing corridor since this area has already been subject to disturbances. The combined alignment, which utilizes the selective placement of the new lanes relative to the existing roadway at major floodplain sites, has significantly minimized encroachment. Base floodplain encroachments and impacts to natural and beneficial floodplain values will further be minimized by utilizing selective clearing and grubbing during construction. Also, the proposed creation of wetlands which is described in Section 4.8.5, Mitigation for Wetland Losses, will help mitigate floodplain loss. Therefore, the proposed project will not have a significant impact on natural floodplain values. In addition, Pasco County is a participant in the National Flood Insurance Program. The County's Flood Drainage Prevention Ordinance forms a basis for regulating the utilization of base floodplain areas in order to prevent incompatible floodplain development.

SR 52 is a major route for emergency vehicles and is designated as an important hurricane evacuation route in the Tampa Bay Region Hurricane Evacuation Plan [Tampa Bay Regional Planning Council (TBRPC), 1984]. This publication identifies the capacity of the existing SR 52 as being a limiting factor in evacuation clearance times, especially under short-response scenarios. The proposed upgrading of the roadway will significantly increase the efficiency with which an evacuation can be accomplished.

Based on this evaluation and proposed wetland mitigation, it has been concluded that the proposed action does not constitute a significant base floodplain encroachment. The proposed wetland mitigation will help

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restore floodplain volumes lost to roadway fills. The design standards specified in FHPM 6-7-3-2 shall be complied with during the final design and construction of the facility.

4.13 COASTAL ZONE CONSISTENCY

The Office of Planning and Budget, Office of the Governor has determined that this project is consistent with the Florida Coastal Zone Management Plan. (See letter in Appendix A.)

4.14 RELOCATION IMPACTS

To minimize the unavoidable effects of right-of-way acquisition and displacement of people, FDOT will carry out a right-of-way and relocation program in accordance with Chapter 339.09, FS, and the Uniform Relocation Assistance and Real Property Acquisition Act of 1970 (Public Law 91-646).

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

No person lawfully occupying real property will be required to move without at least 90 days written notice of the intended vacation date, and no occupant of a residential property will be required to move until decent, safe, and sanitary replacement housing is made available. "Made available" means that the affected person has either by himself obtained and has the right of possession of replacement housing, or that FDOT has offered the person to be relocated decent, safe, and sanitary housing that is within his financial means and available for immediate occupancy.

At least one relocation specialist is assigned to each highway project to carry out the relocation assistance and payments program. A

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relocation specialist will contact each person and business to be relocated to determine individual needs and desires and to provide information, answer questions, and give assistance in finding replacement property. Relocation services and payments are provided without regard to race, color, religion, sex, or national origin.

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

Financial assistance is available to the eligible relocatee to:

- A. Compensate the relocatee for the costs of moving from homes, businesses, and farm operations acquired for a highway project;
- B. Make up the difference, if any, between the amount paid for the acquired dwelling and the cost of an available dwelling on the private market;
- C. Provide reimbursement of expenses such as legal fees and closing costs incurred in buying a replacement dwelling or in selling the acquired property to FDOT; and
- D. Make payment for any increased interest cost resulting from having to get another mortgage at a higher interest rate.

Replacement housing payments, increased interest payments, and closing costs are limited to \$15,000 combined total per relocation.

In the Conceptual Stage Relocation Plan (FDOT, 1986b), it is estimated that four owner-occupied residences, four retail businesses, and two service businesses will be displaced by the project. Figure 4.14-1 illustrates the location of each residence and business to be relocated. Three of the businesses are owner occupied, two are business tenants,

SEABOARD COASTLINE RAILROAD

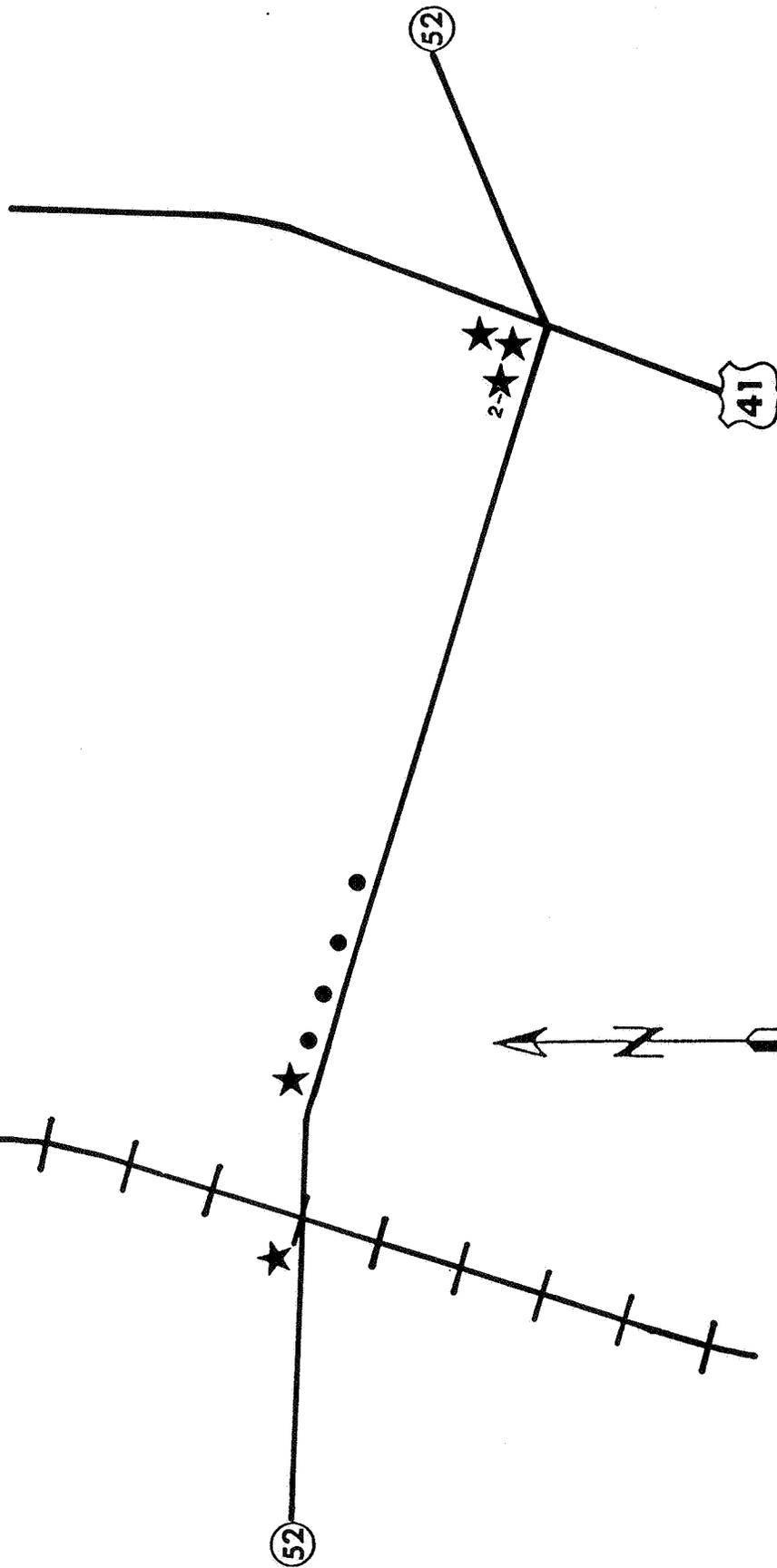


FIGURE 4.14-1
LOCATION OF RESIDENCES AND BUSINESSES TO BE RELOCATED

SR 52 FROM SR 55
(U.S. 19) TO SR 93 (I-75)
IN PASCO COUNTY

SOURCE: FDOT, 1986; RS&H, 1986

and one is business rental of real estate. There are no nonprofit organizations, farms, or community or recreational facilities to be displaced. Estimated relocation costs for displaced signs, residences, and businesses are approximately \$284,000 (FDOT, 1986b). Estimated costs for additional right-of-way that does not include relocations are approximately \$16,971,300 (FDOT, 1986a) and include acquisition of portions of parking lots and driveways.

The Conceptual Stage Relocation Plan divided the proposed project into two neighborhood study areas. Study Area I runs from U.S. 19 to Shadow Ridge Boulevard, and Study Area II runs from Shadow Ridge Boulevard to I-75. Analysis of Study Area I resulted in no displacement of residences or businesses; however, relocation of some signs will be necessary. In Study Area II the total number of residences and businesses to be relocated are four and six, respectively; all are located within the Gowers Corner Community (U.S. 41 and SR 52).

A total of eight persons residing in the four residential units will be displaced. None of these persons are of school age, handicapped, disabled, or receiving any social services. The average annual income of the displaced families is \$9,614.00. The average age of the structures in which these persons reside is 20.5 years.

It has been determined that, within the SR 52 corridor, there is sufficient existing residential and commercial space for sale or lease, and sufficient vacant land available for development, to accommodate the small number of residential and business displacements. In the community of Gowers Corner, vacant land is available for development if the displacees choose to remain in the same market area.

4.15 COMMUNITY IMPACTS

West Pasco County is one of the fastest growing areas in Florida. The total population of the county in 1985 was 223,272 [Bureau of Economic and Business Research (BEBR), 1985], an increase of 17 percent over the

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1980 U.S. Bureau of the Census population statistics (FDOT, 1986b). Present growth trends indicate continued growth in the west and east portion of the county with the interior remaining largely undeveloped. Populations projections for 1990 and 2000 are estimated at 284,600 and 362,600, a 27.5- and 62.4-percent increase over 1985 population statistics, respectively.

Pasco County relies on trade and service industries, which provide 67.0 percent of the county's employment opportunities (BEER, 1985). Construction industry, agriculture, and agriculture manufacturing are also important sources of employment. Pasco County is being viewed by many industrial businesses as a possible area for relocation because of progressive northward movement of the large commercial and industrial areas in Hillsborough and Pinellas Counties. Many of the new industries are seeking to avoid the traffic congestion of the Bay area, and land is more available for sale or lease in Pasco County. In addition, the Pasco County Chamber of Commerce has undertaken intense marketing activities to attract new industries to the county. The transportation link provided by SR 52 is an important aspect of this development.

This project has been developed in accordance with the Civil Rights Act of 1964, as amended by the Civil Rights Act of 1968. The proposed project will not require relocation of school-age children, nonprofit organizations, or minorities. In addition, there will be no displacement of community facilities and services or major commercial areas. Some commercial areas, especially between U.S. 19 and Moon Lake Road will lose portions of the parking areas associated with the business, the result of which could cause possible loss of business. However, the expansion of SR 52 will result in improving traffic flow and a reduction of travel time. This should increase the visibility of many businesses and result in improved sales and services.

The proposed improvements can be implemented with minimal impacts on the local communities (Gowers Corner, Bayonet Point, Pasco) and are not

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expected to disrupt present neighborhood cohesion and uniformity. There is sufficient vacant land for sale or lease in the Gowers Corner area for the six businesses and four residences that are being relocated (mentioned in Section 4.14, Relocation Impacts). Gowers Corner Community is a small, compact community; if these six businesses decide not to relocate or open new businesses in the area, residents would be inconvenienced and the manner in which they have historically conducted some of their business would be changed. Residents would have to travel farther and deal with strangers for certain goods and services.

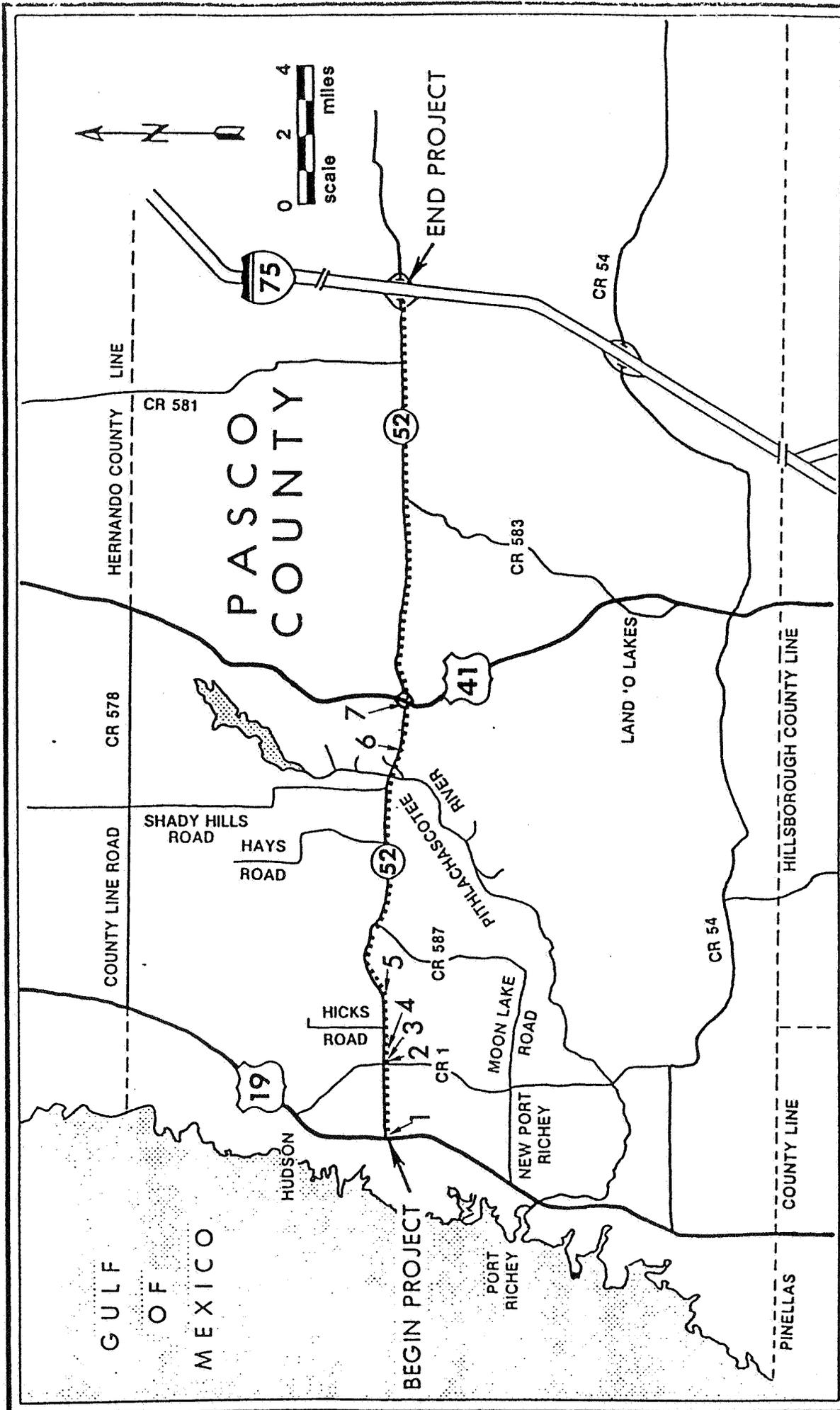
4.16 HAZARDOUS WASTES

The project was evaluated for potential hazardous waste involvement in the areas where additional right-of-way will be taken. No large, regionally important sites were found. The following text addresses those sites where additional right-of-way will encroach upon underground fuel tanks or other areas of known or possible contamination. This is a synopsis of a detailed report available at the Bartow office of FDOT.

Site 1 (Figure 4.16-1) is an auto air conditioning shop in the southeast quadrant of the SR 52/U.S. 19 intersection. It is a former gas station and still sells gasoline and diesel fuel. The proposed right-of-way will encroach upon the pump island and the diesel tank. Because there is no monitoring system installed and the station has been operating since about 1974, ground water samples should be taken well in advance of construction contract letting.

Site 2 is a convenience store/gas station in the southeast quadrant of the SR 52/CR 1 intersection. The proposed right-of-way will encroach upon all three underground tanks. Monitoring wells are in place. Their records should be checked prior to right-of-way appraisal.

Site 3 is two sets of mini-warehouses, immediately east of Site 2. The proposed right-of-way will encroach upon both buildings, including an area of contaminated soil in front of one of the bays. This soil will



SR 52 FROM SR 55
(U.S. 19) TO SR 93 (I-75)
IN PASCO COUNTY

Figure 4.16-1
POTENTIAL HAZARDOUS WASTE SITES

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have to be removed or treated onsite. All the bays in this complex should be checked for contamination and for containers of hazardous substances during the right-of-way phase.

Site 4 is an auto electric shop located roughly 0.4 mile east of CR 1. It operated as a gas station from approximately 1967-1972. The proposed right-of-way will encroach upon the old pump island and possibly all three underground tanks. The likelihood of significant contamination is relatively slight because of the short duration of operation as a gas station. However, ground water samples should be taken well in advance of construction contract letting.

Site 5 is a convenience store/gas station in the southeast quadrant of the SR 52/Bear Creek Drive intersection. The proposed right-of-way will encroach upon the pump island and apparently two of the underground tanks. Monitoring wells are in place. Their records should be checked prior to right-of-way appraisal.

Site 6 consists of a restaurant and an auto salvage yard, located roughly 0.8 mile west of U.S. 41. The restaurant site operated as a gas station for about 20 years until it and the adjoining salvage yard were purchased by their present owner six years ago. The proposed right-of-way will take the front of the salvage yard and nearly all of the restaurant site, encompassing two underground fuel tanks as well as areas of contaminated soil behind the restaurant and in front of the salvage yard. Ground water samples should be taken well in advance of construction. The contaminated soils will have to be removed or treated onsite.

Site 7 is a convenience store/gas station in the northwest quadrant of the SR 52/U.S. 41 intersection. The proposed right-of-way will take the entire site. Monitoring wells are in place and their records should be checked prior to right-of-way appraisal.

Pasco County and SCS were consulted concerning hazardous waste. The county has had no report of contaminated wells or other contamination in the project corridor. SCS indicated only Sites 6 and 7 are located where soils may be highly corrosive to steel tanks.

All of these sites, as well as any additional sites which become established or are discovered in the interim, will be assessed at each of the reevaluation phases. Prior to right-of-way acquisition, appropriate action will be taken to initiate resolution of contamination problems.

4.17 CONSTRUCTION IMPACTS

4.17.1 Water Quality

Potential effects of the construction of bridge and culvert crossings include turbidity and sedimentation. These impacts will be minimized by strict adherence to Section 104 of the FDOT's "Standard Specifications for Road and Bridge Construction." This section requires such measures as revegetation of denuded areas as soon as possible and the use of floating and staked silt barriers as necessary.

4.17.2 Noise

During construction, there is a potential for noise impacts significantly greater than those resulting from normal traffic operations. Construction noise will be minimized by adherence to the controls listed in the 1986 edition of FDOT's Standard Specifications. In addition, all noise-sensitive sites and the following special provisions will be included in the construction contract.

1. The contractor will limit construction activities requiring the use of heavy equipment in the vicinity of residences to the time period between the hours of 7:00 AM and 6:00 PM, unless written permission is obtained from the project engineer.
2. The contractor shall not work on Sundays or legal holidays in the vicinity of noise-sensitive sites except to protect the

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public health and/or safety or by written permission from the project engineer.

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

4.17.3 Air

Slight increases in the pollutant level of particulates may occur during construction. However, this effect will be minimized by FDOT's dust control measures and through adherence to open burning regulations prescribed by DER.

4.17.4 Utilities

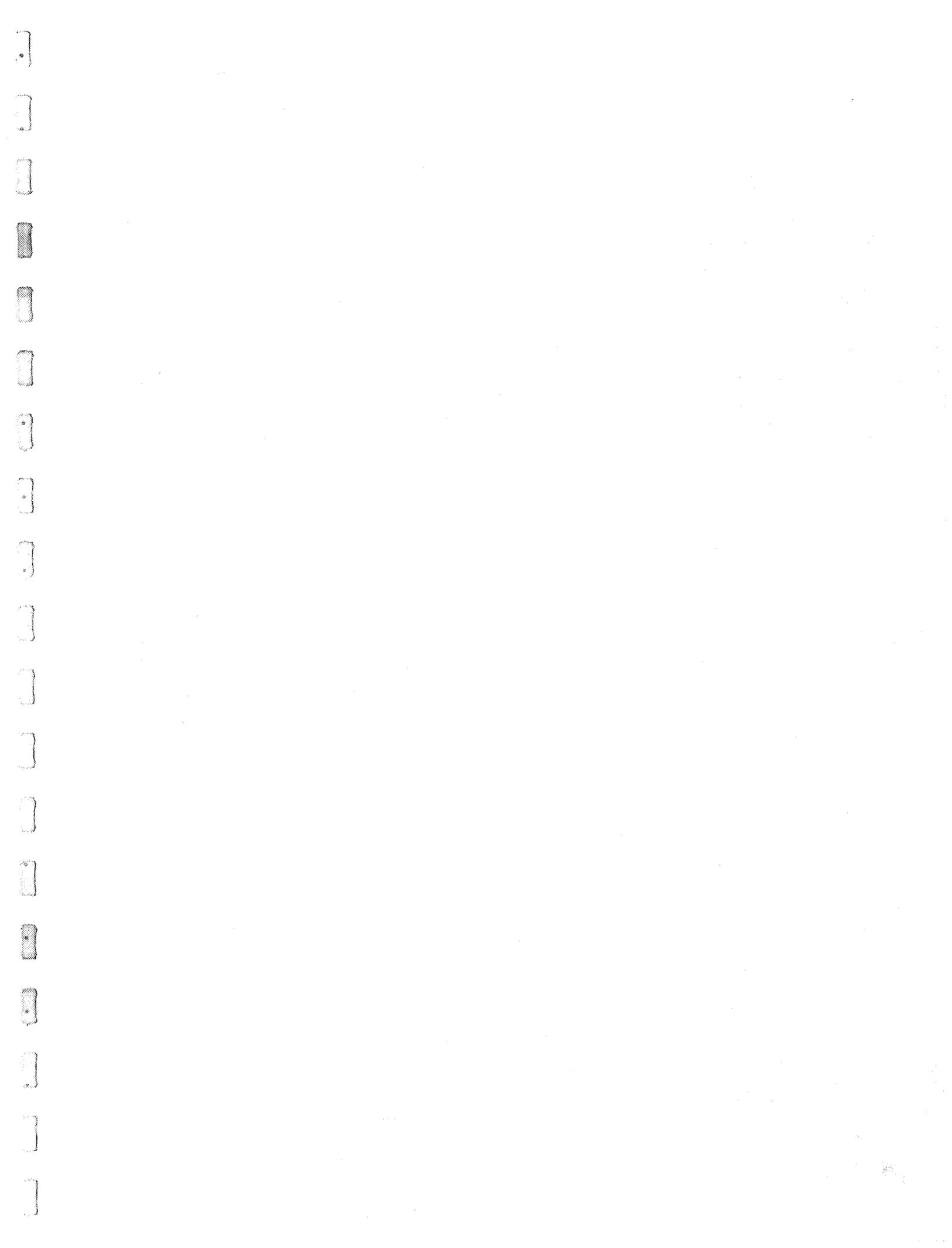
A number of utilities are associated with the SR 52 corridor, with the greatest number located in the urbanized western end of the project. WREC has overhead electric lines running the entire length of the project. Poles for this utility vary from the north side of the road to the south side at a number of locations. Florida Power has an overhead line that runs from U.S. 19 to east of Plaza Drive. Storer Cable Television has a cable on the WREC poles that follows a south-side alignment for most of the length from U.S. 19 to 0.5 mile east of Moon Lake Road, CR 587. The Pasco County Water Department has a waterline that is located between 38 and 42 feet south of the centerline of SR 52 from U.S. 19 to Moon Lake Road. General Telephone Company has an overhead line running from U.S. 19 to 0.3 mile west of Hicks Road on the north side of SR 52. The telephone company also has a number of buried cables within the right-of-way. SR 52 from U.S. 19 to Moon Lake Road has between 1 and 11 buried cables spread within the right-of-way north of the existing pavement. From approximately 0.4 mile east of U.S. 19 to Moon Lake Road, there are buried cables located south of the road. All of the utilities are located within the road right-of-way with the exception of five WREC poles located just outside the south right-of-way line in the vicinity of CR 1. Utility relocation within the existing

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right-of-way is the burden of the utility owner, while those outside the right-of-way would require relocation at FDOT's expense. Early and close coordination with the utility companies prior to construction will provide sufficient lead time for relocation of facilities without incurring adverse operational impacts.

4.17.5 Maintenance of Traffic During Construction

Traffic flow will be maintained on the existing facility during construction. The contractor will be responsible for the maintenance of traffic, including the erection and control of safety devices for the safe and expeditious movement of traffic during construction operations. Access to all businesses and residences will be maintained.



5.0 COMMENTS AND COORDINATION

5.1 GOVERNMENTAL AGENCY RESPONSES

Preliminary comments concerning this project were solicited from numerous governmental agencies through the State Planning and Development Clearinghouse. These include:

- o Tampa Bay Regional Planning Council (TBRPC)*;
- o DER, Intergovernmental Programs Review Section, and Dredge/Fill Section*;
- o FGFWFC*;
- o Florida Department of Natural Resources*;
- o Florida Department of Community Affairs*;
- o Florida Department of State, Division of Archives, History and Records Management (DAHRM)*;
- o SCS*;
- o EPA*;
- o United States Coast Guard (USCG)*;
- o Florida Recreational Trails Council;
- o National Marine Fisheries Service;
- o COE;
- o National Parks Service;
- o U.S. Department of Interior - Housing Urban Development;
- o U.S. Department of Transportation - Federal Aviation Administration;
- o Federal Railroad Administration;
- o FWS; and
- o Marine Fisheries Commission.

The Clearinghouse has indicated that the proposed improvement will be in accord with state plans, projects, programs, and objectives when consideration is given to the comments expressed by the reviewing agencies. Those agencies on the above list which responded to this early notification are indicated with an asterisk.

The Department of Community Affairs and the Department of Natural Resources had no substantive comments and each found the project to be consistent with the goals and objectives of their agency. The responses from all other agencies are summarized below. Copies of the response letters are included in Appendix A.

1. Comment: TBRPC found the proposed project to be consistent with council policy to encourage the maintenance of a LOS C daily capacity. They recommended that FDOT consider geometric and/or signalization

improvements to SR 52 intersections with Little Road, CR 587, U.S. 41 (SR 45), CR 583, and CR 581. It was further recommended that Best Management Practices for water pollution abatement be employed and that all culverts and bridge structures be designed to accommodate a 100-year event.

Disposition: The SR 52/Little Road intersection upgrading is proposed by FDOT, and a separate study is underway for U.S. 41 (SR 45). Recommended improvements for county implementation of the SR 52/CR 587 intersection were included in the SR 52 Traffic Report, which was prepared in conjunction with this project. Improvements will be developed for the intersections of CR 583 and CR 581 when traffic increases warrant.

Water quality impacts will be minimized by strict adherence to Section 104 of FDOT's "Standard Specifications for Road and Bridge Construction." Bridges and culverts will be designed to meet federal and state standards for a state primary facility. This requires capacity for a 50-year event for bridges and a 25-year event for culverts.

2. Comment: DER determined that the portion of the project lying between U.S. 19 and CR 587 was consistent with their authorities in the Florida Coastal Zone Management Program. However, they did not feel that enough information was available at that time to determine the consistency of the portion of the project from CR 587 to I-75. They recommended that an Environmental Impact Statement (EIS) be prepared to evaluate impacts on wetlands, floodplains, air quality, noise, water quality, as well as the need for the project. They suggested that limiting the scope of the project to SR 52 west of CR 587 be considered.

Disposition: FHWA has preliminarily determined that an EA will adequately serve to evaluate and document the anticipated environmental impacts of the proposed improvements to SR 52. If, at a later date, they determine that an EIS would be more appropriate, the EA will be converted to an EIS and circulated as such.

It has been determined that limiting the ultimate improvement of SR 52 to the portion between U.S. 19 and CR 587 would severely compromise the

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roadways function as a major east-west artery. The minimization of encroachment into wetlands and floodplains was a major consideration in development of the proposed Build Alternative. After further review, DER preliminarily determined that the entire project from U.S. 19 to I-75 is consistent with their authorities in the Coastal Zone Management Program.

3. Comment: FGFWFC 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. They further recommended that involvement in wetlands and other wildlife habitat be minimized and unavoidable adverse impacts be appropriately mitigated.

Disposition: Section 4.2 addresses anticipated impacts to wildlife species and other habitat and Section 4.3 addresses endangered species. The minimization of encroachment in wetlands and other wildlife habitat was a major consideration in the development of the proposed Build Alternative. Significant unavoidable adverse impacts will be mitigated.

4. Comment: DAHRM responded that a review of the Florida Master Site File indicated that there are no recorded archaeological or historic sites within the project area. They continued, however, stating that the area had never been subjected to a systematic professional survey and determined that there was a reasonable probability that the proposed project could impact sites potentially eligible for listing on the National Register of Historic Places or otherwise of national, state, or local significance. It was recommended that a comprehensive survey be performed before initiation of clearing or construction activities.

Disposition: A comprehensive professional archaeological and historic survey was conducted in coordination with the SHPO. No archaeological or historic sites or properties were identified.

5. Comment: SCS stated that there are no prime or unique farmlands involved in the proposed project.

Disposition: None required.

6. Comment: EPA stated that, since there was minimal specific information available at the time of the early notification, they could only express general concerns regarding wetlands, water quality, air quality, and noise. They requested that they be contacted when more specific information on these subjects became available.

Disposition: All areas of concern to EPA are addressed in the EA. A copy will be provided for their reference.

7. Comment: USCG stated that they had no permitting jurisdiction within the project corridor.

Disposition: None required.

In addition to those agencies that responded to early notification, FDOT has also initiated stormwater coordination with the Southwest District Office of DER and SWFWMD. Stormwater coordination with both agencies will continue throughout project development.

Also, preliminary coordination with FWS and FGFWFC was initiated to assess potential impacts of the proposed project to a pair of eagles. These eagles have been using a nest which is approximately 310 feet from the existing SR 52 pavement edge. A discussion of the eagles' nest location, the eagles' tolerance to vehicular traffic and human activities, and steps to minimize impacts to this nesting pair of eagles

was included in Section 4.3, Endangered and Threatened Species. Both agencies concurred with the assessment of tolerance and methods to avoid adverse impacts in this section.

Also, preliminary comments concerning this project's wetland impacts were solicited from SWFWMD, FWS, COE, EPA, and DNR. SR 52 Wetlands Involvement and Wetlands Finding sections of the EA were sent to these agencies for review and comment. COE and EPA did not provide any comments. The responses from SWFWMD, FWS, and DNR are summarized below.

Response: SWFWMD stated that a permit would be required for the proposed activities in wetlands. They also stated that a preapplication conference could be arranged by contacting the manager of the Brooksville Permitting Division.

Response: FWS stated that prior to any construction activities, all impacts to wetland areas must be permitted by COE. It is during this permitting phase that FWS reviews these activities for impacts or threatened and endangered species (i.e., Section 7.0, Consultation). Any determination that may effect a listed species, FDOT must request a formal consultation from the Jacksonville Field Station, 3100 University Boulevard South, Suite 120, Jacksonville, Florida. In addition, FWS recommended that all impacted wetlands be fully mitigated.

Response: DNR stated that there are no apparent state-owned submerged lands along the proposed project site. There is one existing easement along the project site. The parcel is leased to the Department of Health and Rehabilitative Services. The parcel is an upland, located in Section 7, Township 25 South, Range 20 East, bordering the right-of-way of SR 52.

Major comments by federal and state agencies in response to the proposed project were related to wetland impacts/mitigation and endangered species impacts. Responses to specific concerns of each agency are

contained in this section. Wetland impacts/mitigation are discussed thoroughly in Section 4.8, Wetlands Involvement, and Summary of Wetland Findings (Appendix B). These sections were mailed to state and federal agencies for their review and comment. The agencies' responses are contained in Appendix C and described in this section. Responses generally indicated that permits will be required prior to construction within wetlands and that wetland impacts be fully mitigated. They also indicated that any endangered or threatened species that may be impacted will require a Section 7 consultation. FDOT will continue to coordinate with environmental permit agencies during the design phase.

5.2 PUBLIC INVOLVEMENT

A public involvement plan for this project was conducted in accordance with the Council on Environmental Quality Regulations, Florida Statutes, and the Project Development and Engineering Guidelines.

A public information workshop on this project was held on June 19, 1986, from 2:00 PM to 7:00 PM in the cafetorium of the Moon Lake Elementary School, 12019 Tree Breeze Drive, New Port Richey, Florida. FDOT representatives were present during the 5-hour period to answer questions and discuss the proposed improvements.

Notification of the workshop was accomplished by letters to property owners whose property lies in whole or in part at least 300 feet from the centerline of the proposal. Letters were also mailed to elected and appointed officials and other interested parties. A quarter-page legal advertisement appeared in the Pasco Times on June 14, 1986.

The meeting was attended by 156 people: 9 public officials or staff, 11 real estate agents, 13 business owners/managers, 4 representatives of civic associations, 4 news media representatives, 1 church pastor, 75 private citizens, and 39 persons who did not identify any affiliation but are assumed to be predominantly private citizens. Four letters regarding the project were received by FDOT during the subsequent 10-day comment period. These letters were responded to in writing by FDOT.

Participants were generally in favor of the upgrading and wanted at least the western portion implemented as soon as possible. Other

comments included the location of median cuts and how they would affect access to particular businesses. Several persons requested traffic signals at specific locations, predominantly in the business section on the western end of the project and at major subdivision entrances. These requests will be considered during detailed design. One resident along SR 52 identified a drainage problem which she believed was associated with roadway runoff. Her written statement will be forwarded to FDOT's design section for serious consideration during the detailed design of SR 52 roadway and drainage plans. A resident of Gulf Highlands requested the consideration of sidewalks from Meadow Drive to U.S. 19. An urban section, including 5-foot-wide sidewalks on each side of the roadway, is proposed from U.S. 19 to Moon Lake Road. A letter was received from WREC, requesting a right-of-way acquisition schedule to help them coordinate their work schedules. All available data were provided to WREC by FDOT. FDOT will continue to coordinate with all utilities to provide sufficient lead time for relocation of facilities.

The public hearing was held on Tuesday, December 15, 1987, between 4:00 PM and 7:00 PM, at Moon Lake Elementary School Cafetorium, 12019 Tree Breeze Drive, New Port Richey, Florida. An "open format" style was used, which included two court reporters to record formal testimony. The hearing was held to inform the public of the preliminary results of the study and to give the public the opportunity to express their views regarding location, design, socioeconomic effects, and environmental impacts associated with the project. FDOT and its consultants were present to discuss the project with the general public. There were approximately 138 people present at the hearing.

Specific questions and comments raised at the public hearing were answered at the hearing, in this report, by letter, or during informal discussion with concerned individuals. Nine persons spoke for the public record at the hearing, and twelve written statements, letters, and exhibits were received within the time period allotted for comments. The

remainder of this section summarizes the substantive comments made resulting from the public hearing.

Comment: The cement median illustrated on plan sheets at the public hearing would block direct access to both directions of travel on SR 52 from particular land uses (businesses, residential areas, and a church). This would inconvenience and potentially reduce customer bases and increase safety hazards due to U-turns. For the above reasons, FDOT is requested to consider a different median design and/or providing median openings at particular locations, including Zimmerman Road, Lumadera Boulevard, Majestic Boulevard, Alpine Drive, Meadow Drive, St. Michael's Church, Southeast Bank or Pasco Terrace Drive, 600 feet east of Hicks Road, Bayonet Point Village, and Brown Derby Restaurant.

Response: Other median designs were evaluated. Other designs were not considered appropriate due to the high traffic volumes projected in future years. Cement medians were considered necessary to maintain traffic flow and to reduce accident rates along SR 52. The request for median openings at particular locations will be forwarded to the design department for consideration. The locations of median openings shown on the plan sheets at the public hearing were preliminary. Median opening locations will be determined during the design phase of the project.

Comment: The width of commercial entrances should be 50 feet not 30 feet.

Response: The width of commercial entrances will be determined during the design phase of the project. The request for wider entrances will be forwarded to the design department for consideration.

Comment: Will the existing traffic signals along SR 52 remain after the proposed improvements?

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Response: Traffic signals will probably be in place after the proposed improvements. If traffic volumes warrant a signal now, it should also warrant one in the future.

Comment: The proposed roadway shown on the aerials at the public hearing does not show westbound left-turn "stacking lanes" at the intersection of Village Square entrance to Beacon Woods/SR 52, nor does it show left-turn "stacking lanes," in either direction, at Bear Creek Drive, South Road of Bayonet Point Village, or West Parkwood Street/SR 52.

Response: Final intersection geometrics will be determined in the design phase of the project. Request for turn lanes at particular intersections will be forwarded to the design department for consideration.

Comment: Several statements indicated an opposition to acquiring right-of-way from the south side of SR 52 at the western end of the project. One of the statements recommended the right-of-way be taken from the less densely populated north side. This statement also questioned: 1) whether the number of relocations/relocation cost presented, which helped to justify the selection of the south side of SR 52 for acquisition of right-of-way, included the many buildings built on the south side of SR 52 since the studies began, and 2) was the relocation cost of utilities on the south side of SR 52, which do not exist on the north side, included in the total cost used to select an alignment alternative. Two of these statements indicated that acquisition of right-of-way from the south side of SR 52 would destroy the value of the remaining portion of the property or would result in a direct loss of recent remodeling costs, which would "cripple the business."

Response: Acquisition of right-of-way from the south side of SR 52 was considered the best of the alternative alignments evaluated. Selection of the south side was based on comparisons of total costs, number of relocations, and environmental impacts between alternative alignments (see Section 3.7, Alternative Alignments). Right-of-way costs are

updated throughout the life of the project, including the design and right-of-way acquisition phases of the project which occur after the public hearing. Any significant changes in cost will result in the reevaluation of the preferred alternative in the final design phase of the project. Utility relocations were not included in the total project cost. These costs are the responsibility of the utility companies. During the right-of-way acquisition phase of the project (see Section 4.14, Relocation Impacts), FDOT evaluates acquisition of right-of-way from property owners on an individual basis to determine appropriate compensation. FDOT will pay for remaining portions of the property rendered unusable due to local zoning regulations. However, in these instances, the property owner retains title to the unusable portion of the property since FDOT does not need it.

Comment: How would the project be financed?

Response: Financing for the proposed improvements to SR 52 would come from two sources: 1) 75 percent from the FHWA Trust Fund, and 2) 25 percent from the Florida Highway Trust Fund.

Comment: How can the public register approval or disapproval for the project and will the project be "put to a vote of the people?"

Response: The public can present comments to FDOT regarding the proposed improvements at the public hearing by an oral or written statement, or by a letter or completed statement form if mailed to Mr. James G. Kennedy, P.E., Deputy Assistant Secretary, 4950 West Kennedy Boulevard, Suite 500, Tampa, Florida, 33609, by December 26, 1987. The project will not be "put to the vote of the people."

Comment: The existing system of traffic lights is inefficient. How long will it take to complete the project? Why has the project been delayed?

4/18/88

Response: Traffic conditions along SR 52 were analyzed to determine what improvements were necessary through the year 2010 to correct problems associated with the existing roadway, including the intersections. When in place, these proposed improvements (see Section 3.6, Proposed Design Concepts) will alleviate the inefficiencies of the existing system. The length of time to complete the project is not available. The project is tentatively planned to be built in four segments. The preliminary engineering, right-of-way acquisition, and construction for the segment from U.S. 19 to Hicks Road will probably be completed in the next 5 years. The construction phases of the remaining segments are not in the FDOT 5-year work program. Pasco County decides what road improvements have the highest priority and should be designed and constructed. Until recently, SR 52 was not a high priority relative to other highway needs of the county. Generally, once the funding for improvements are available for this type of project, it takes 3 to 5 years before the roadway is completed.

Comment: What were the market value and assessed tax value used for wetlands along SR 52 to determine right-of-way costs for the project?

Response: Market values of wetlands which are considered as open lands varied considerably along SR 52. The market values of a particular parcel of open land along SR 52 can be obtained from the right-of-way department. The market values presented at the public hearing were preliminary and will be updated during the right-of-way acquisition phase of the project. Current assessed tax values of particular properties can be obtained from Pasco County Property Tax Appraiser.

Comment: One statement expressed support of the proposed improvements to SR 52.

Response: None.

Comment: Could the utilities be located beneath the bike trail to solve problems associated with relocation of utilities onto private property?

Response: The question on the placement of utilities will be forwarded to the design department for consideration during the final design phase of the project.

Comment: Will stormwater be drained onto properties without the owners permission? Would project engineers meet with property owners and discuss drainage plans? If the project encroaches on existing stormwater retention areas, would FDOT reestablish the retention areas without "harming the rest of the property?"

Response: These questions on stormwater drainage will be forwarded to and considered by the design department during the final design of the project. Detailed drainage plans will be developed during the final design phase of the project and will be available for public comment. Preliminary stormwater drainage assessments are provided in Section 4.12, Floodplain Involvement.

Comment: If the existing access road to a property owner is eliminated, will access be created when SR 52 is widened.

Response: Any property owner adjacent to SR 52 will be provided access in some manner. The details of this access will be determined in the design phase of the project.

Comment: One statement questioned the proposed design and alignment east of Moon Lake Road and also suggested that stormwater drains be extended beyond the commercial lots east of Moon Lake Road, which would reduce the amount of right-of-way acquisition in this area, and suggested that the right-of-way acquisition occur north of SR 52 to straighten the curve at Moon Lake Road/SR 52.

4/18/88

Response: Analysis of the projected traffic volumes indicates a need for a 6-lane facility between U.S. 19 and Moon Lake Road and a 4-lane facility between Moon Lake Road and I-75 (see Section 3.6, Proposed Design Concepts). A 6-lane urban facility was developed for the section from U.S. 19 to Moon Lake Road to minimize right-of-way acquisition. An urban cross section was found to be more economical than building a rural cross section for this particular segment. East of Moon Lake Road, analysis determined that a rural cross section would be more economical in total construction/right-of-way costs. The additional right-of-way for a rural cross section is necessary for surface water drainage, which is provided by the median and ditches adjacent to the roadway. In reviewing right-of-way acquisition costs, it was determined that single side right-of-way purchases would be more economical than purchases from both sides. Purchases of right-of-way from the south side of SR 52 east of Moon Lake Road was proposed due to the wetlands on the north side. Purchases of right-of-way north of SR 52 would have significant wetland impacts. Consequently, the curve at Moon Lake Road/SR 52 was not straightened out. The curvature proposed at Moon Lake Road meets acceptable design criteria and was determined to be the most favorable location for the new alignment. The request to extend stormwater drains east of Moon Lake Road will be forwarded to the design department for consideration during final design.

Comment: Because of the elimination of the property salability, since the announcement of the proposed widening of SR 52 and since property taxes must be paid during this period prior to right-of-way acquisition, what compensation is forthcoming from now until the start of right-of-way acquisition. Also, are there any "strings" attached to the "salability" of the land during this period? What is the earliest land can be purchased in case of hardship? Due to the circumstances, the property owner felt it should be as soon possible.

Response: Prior to the right-of-way acquisition phase of the project, no compensation is forthcoming, except for possible hardship cases. Also,

no strings are attached to the salability of property during this period. Refer to Section 4.14, Relocation Impacts, and the Right-of-Way Acquisition and Relocation Assistance section of the public hearing brochure for FDOT's policy. Property owners need to contact the Acquisition and Relocation Assistance Department of FDOT, 2820 Bypass Road, Tampa, Florida, 1-813-272-3715, to determine their eligibility for a hardship case.



6.0 COMMITMENTS AND RECOMMENDATIONS

6.1 COMMITMENTS

In order to minimize the impacts of this project on the human environment, FDOT is committed to the following measures:

6.1.1 Community Impacts--Sensitive Wildlife Species

Gopher tortoises occupy xeric community types with well-drained soils within the proposed right-of-way (see Section 4.2.2, Community Impacts, Sensitive Wildlife Species). To lessen the impact to the tortoises in the area, a thorough field survey will be conducted prior to clearing activities. If numerous active burrows are found within the proposed right-of-way, a coordinated effort with the Florida Game and Freshwater Fish Commission (FGFWFC) will be made to relocate tortoises.

The Florida pine snake and short-tailed snake live in xeric communities and possibly within the project corridor. To lessen the impacts on the pine snake and the short-tailed snake, the contractor will be advised of the State of Florida's listed status and the legal protection of these snakes. The contractors will be instructed prior to construction activities that any snakes encountered during construction must be relocated unharmed (see Section 4.2.2, Community Impacts, Sensitive Wildlife Species).

6.1.2 Endangered and Threatened Species

The widening of SR 52 will occur within a 750-foot radius of a bald eagle's nest tree (see Section 4.3, Endangered and Threatened Species). To minimize disturbance to nesting bald eagles, the additional 27 feet of right-of-way required will be obtained from the south side of SR 52 and construction within 1,450 feet of either side of La Madera Boulevard will be confined to the eagle's nonnesting season (approximately May 15 to October 1).

Indigo snakes are known to inhabit a variety of habitats found in the project area, including sandhills, cypress and mixed hardwood swamps, and pine flatwoods. To minimize potential impacts, a special provision will be in the contract to advise the contractor of the probable presence and protected status of the indigo snake. If an indigo snake is sighted during construction, the contractor will be required to cease operation(s) which might cause harm to the snake. If the snake does not move offsite, FGFWFC will be called to relocate the snake (see Section 4.3, Endangered and Threatened Species).

6.1.3 Wetland Involvement

To minimize total wetland loss, selective clearing and grubbing will be implemented during construction (see Section 4.8, Wetland Involvement).

Although the exact acreages and limits of wetland involvement will not be defined until the detailed design stage, preliminary figures indicate that the preferred alignment will unavoidably impact a maximum of 42.95 acres of wetlands at 78 locations. To minimize substantial wetland impacts associated with the project, a minimum of 25.89 acres of wetlands will be created (see Section 4.8.5, Mitigation for Wetland Losses and the Wetland Finding section of this document, appended).

6.1.4 Water Quality

FDOT will continue to coordinate with the Southwest District office of DER and SWFWMD throughout the development of the project's stormwater management plan to ensure that the final drainage design will be in compliance with Chapter 17-25, FAC, the Stormwater Rule. (See Section 4.11, Water Quality Impacts).

Best Management Practices will be used during the construction phase for erosion control and water quality considerations (see Section 4.11, Water Quality Impacts).

6.1.5 Floodplain Involvement

Drainage problems at the intersection of SR 52/Zimmerman Road will be studied in detail during final design (see Section 4.12, Floodplain Involvement). Drainage structures along SR 52 will be reevaluated during final drainage design (see Section 4.12, Floodplain Involvement).

6.1.6 Relocation Impacts

To minimize the unavoidable effects of right-of-way acquisition and displacement of people, FDOT will carry out a right-of-way and relocation program in accordance with Chapter 339.09, FS, and the Uniform Relocation Assistance and Real Property Acquisition Act of 1970 (Public Law 91-646) (see Section 4.1.4, Relocation Impacts).

6.1.7 Hazardous Wastes

All hazardous waste sites identified in Section 4.16, Hazardous Waste, as well as any additional sites which become established or are discovered in the interim, will be assessed at each of the reevaluation phases. Prior to right-of-way acquisition, appropriate action will be taken to initiate resolution of contamination problems (see Section 4.1.6, Hazardous Waste).

6.1.8 Maintenance of Traffic During Construction

Traffic flow will be maintained on the existing facility during construction (see Section 4.17.5, Maintenance of Traffic During Construction). Access to all businesses and residences will be maintained (see Section 4.17.5, Maintenance of Traffic During Construction).

6.1.9 Noise

A copy of the final Noise Report will be sent to appropriate local officials for their use in zoning and set-back requirements.

6.1.10 Utilities

Early and close coordination will be initiated with utility companies prior to construction to relocate/renovate facilities.

6.1.11 Nonmotorized Modes of Transportation

Accommodations for bicycles and pedestrians will be incorporated into the proposed SR 52 design. In the urban section (between U.S. 19 and Moon Lake Road), an additional 2 feet of pavement will be included in the outer lanes for bicycle use and 5-foot sidewalks will be constructed on both sides of the roadway for pedestrians. In the rural section (Moon Lake Road to I-75), 4 feet of the proposed 10-foot outside shoulders will be paved to accommodate bicycle traffic. Since the rural section is generally undeveloped, sidewalks were not included in this section.

6.2 RECOMMENDATIONS

As a result of the public hearing, environmental studies, and interagency coordination, the proposed design and alignment alternatives are recommended for Location/Conceptual Design approval. The design alternative proposes upgrading SR 52 from a 2-lane undivided highway to a 6-lane divided highway between U.S. 19 and Moon Lake Road and a 4-lane divided highway between Moon Lake Road and I-75 (see Section 3.6, Proposed Design Concepts, page 3-3 for specific details on the alternative and page 3-4 for the appropriate typical sections). The proposed combined alignment would shift between north, centered, and south alignments to minimize negative impacts and maximize benefits (see Section 3.7.3, Proposed Alignment, for specific details for the combined alignment and Table 3.7-2 for the configuration of this alignment).



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APPENDICES

APPENDIX A
CORRESPONDENCE

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STATE OF FLORIDA

Office of the Governor

THE CAPITOL
TALLAHASSEE 32301



BOB GRAHAM
GOVERNOR

October 17, 1984

Mr. J. C. Kraft, Chief
Bureau of Environment
Department of Transportation
Burns Building MS 37
Tallahassee, Florida 32301

RE: State Project #14120-1518 - Work Program #1115879 - SR 52
Pasco County

SAI: FL8405301272C

Dear Mr. Kraft:

The State Clearinghouse in compliance with Presidential Executive Order #12372, the Governor's Executive Order 85-150, the Coastal Zone Management Act, and the National Environmental Policy Act has coordinated a review of your advanced notification of intent to apply for federal assistance in the amount of \$36,375,000, for the above referenced project.

During the review process we received comments from the Departments of Community Affairs, Environmental Regulation, Game and Fresh Water Fish Commission, Natural Resources, and State. The Departments of Community Affairs and Natural Resources had no substantive comments and found the project is consistent with the goals and objectives of their agency.

The Department of State corresponded directly with you on June 4, 1984, concerning archaeological sites potentially located in the area. They request a professional archaeological and historic survey be performed along the project tract prior to any land clearing or ground disturbing activities. The survey report should be submitted to their office for final review.

The Game and Fresh Water Fish Commission expressed concern regarding potential significant impacts of this project on the fish and wildlife resources and native habitats of the area. They request a thorough inventory and documentation of the natural habitats and wildlife species occurring within the project corridor. Areas which are determined to support endangered or threatened species should be avoided during alignment selection. Unavoidable adverse impacts should be minimized and mitigated to the greatest extent possible.

Mr. J. C. Kraft
Page two

The Department of Environmental Regulation reviewed the project and found the proposed activity will impact wetlands and floodplain areas, particularly in that portion of the project east of C.R. 587. They determined that the project is likely to adversely impact regional aquatic resources. They also determined that there is insufficient information provided in the advanced notification to determine if that portion of the project east of C.R. 587 is consistent with Department of Environmental Regulation's authorities in the Florida Coastal Management Program. Department of Environmental Regulation requests the Department of Transportation to prepare an environmental impact statement addressing 10 topics listed in their letter in order for that agency to make a consistency determination, as well as addressing impacts to aquatic resources. Their letter constitutes the basis for a state objection to the project under the Florida Coastal Management Program.

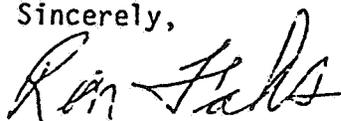
An alternative proposed by Department of Environmental Regulation which would allow the project to be conducted in a manner consistent with the Florida Coastal Management Program would be to limit the scope of the project to only that portion located west of C.R. 587. At this phase or review Department of Environmental Regulation does not have a consistency objection to that portion of the project.

The project will only be in accord with State plans, programs, procedures, and objectives when action has been taken on the requests and comments of our reviewing agencies. Action must also be taken to satisfy Department of Environmental Regulation's consistency objections based on the insufficiency of information provided. The comment letters from the Department of State, Game and Fresh Water Fish Commission, and Department of Environmental Regulation at attached for your attention.

Please append a copy of this letter to your application, and on Item 3a of the SF424 form insert the above referenced State Application Identifier (SAI) number. Completion of these requirements will assure the federal agency of your compliance with the provisions of Florida's Intergovernmental Coordination and Review Process, and will assist the federal agency in preparing the Notification of Grant-In-Aid Action in accordance with Federal Assistance Award Data System (FAADS). Accommodating this request will reduce the chance of unnecessary delays in processing your application.

Thank you for your cooperation.

Sincerely,



Ron Fahs, Director
Intergovernmental Coordination

RF/mt
Enclosure

CC: DER GFWFC
 DOS Wendy Giesy

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
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

June 26, 1984

GOVERNOR'S OFFICE
Planning and Budgeting
Intergovernmental Coord.

JUN 29 1984

RECEIVED

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 8405301272C
Department of Transportation
Pasco 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 May 31, 1984, and offers the following comments.

The Florida Department of Transportation proposal to upgrade 23.3 miles of S.R. 52 from a two-lane highway to a multi-lane divided highway could have significant adverse impacts upon the fish and wildlife resources and native habitats of Pasco County. The biological assessment lists a variety of habitats including pine flatwoods, sandhill scrub, xeric oak scrub, cypress strands and domes, freshwater marshes, wet prairies, and mixed hardwood swamps. Domestic habitats include agricultural, residential, and commercial lands.

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.

Mr. Ron Fahs
Page 2

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

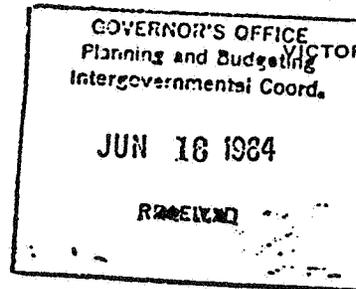
FGB/RF/rs

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

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



June 18, 1984



BOB GRAHAM
GOVERNOR

VICTORIA J. TSCHINKEL
SECRETARY

Mr. Ron Fahs, Director
Intergovernmental Coordination
State Planning and Development
Clearinghouse
Office of the Governor
421 Carlton Building
Tallahassee, Florida 32301

Dear Mr. Fahs:

Re: Department of Transportation, Advance Notification
of Intent to Apply for Federal Assistance to Upgrade
State Road 52 from U.S. 19 to I-75, Pasco County,
Florida, SAI No. FL8405301272C

The Department of Transportation proposes to upgrade approximately 23.3 miles of S.R. 52 to provide a multi-lane divided highway between U.S. 19 and I-75. The Department of Environmental Regulation has reviewed the advance notification and offers the following comments and suggestions.

The proposed construction will require permits from the Department, pursuant to Chapters 253 and 403, Florida Statutes, and water quality certification under Public Law 92-500. Project plans should be coordinated with our Southwest District Office in Tampa.

Based on the traffic counts provided in the advance notification and our environmental review, the project seems to consist of two separate segments. Segment #1 involves improvements to S.R. 52 between U.S. 19 and C.R. 587; segment #2 involves improvements to S.R. 52 between C.R. 587 and I-75. A review of aerial photographs indicates that most of the residential and commercial development of the area is concentrated in the western portion of the highway corridor and that little development exists east of C.R. 587.

Widening S.R. 52 will impact both wetland and floodplain areas, particularly in segment #2 of the project (between C.R. 587 and I-75). Wetlands and floodplains are considered important areas because of their great ecological and economic importance. Some of the more important and cost free functions of floodplains and wetlands include: high biological productivity; providing food, habitat and breeding areas for numerous plant and animal species; maintaining natural drainage patterns and other hydrologic functions; shielding land areas from erosion and storm damage; providing

Mr. Ron Fahs
Page Two
June 18, 1984

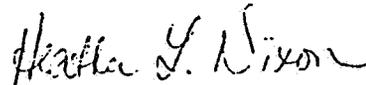
storage areas for storm and flood water; and purifying water through natural soil and vegetation filtration processes. Presidential Executive Orders 11988, Floodplain Management, and 11990, Protection of Wetlands, require federal agencies to restore, preserve and enhance the natural and beneficial values served by floodplains and wetlands. Federal agencies are supposed to minimize the destruction, loss and degradation of such areas when undertaking, financing or assisting construction or other improvements.

As the project will likely adversely impact regional aquatic resources, we request that an environmental impact statement (EIS) be prepared under the guidelines described in the National Environmental Policy Act of 1969. The EIS should address the following topics: (1) impacts of induced development on sensitive lands along the eastern portion of the project, (2) acreages of wetlands and floodplains involved in the project, (3) noise impacts, (4) air quality impacts, (5) water quality impacts, (6) stormwater management design compliance with Chapter 17-25, Florida Administrative Code, (7) the impacts of the loss of floodplains and wetland habitat, (8) justification for the project east of C.R. 587, (9) the need for any more than four lanes, and structural alternatives to roadway widening.

We do not object to proceeding with the environmental evaluation of roadway improvements, including nonstructural alternatives, to the project west of C.R. 587. Therefore, based on the information provided in the advance notification, this portion of the project is consistent with the DER's authorities in the Florida Coastal Management Program. We cannot determine the consistency of the project east of C.R. 587 without more information. We request the DOT to supply the draft EIS addressing the above topics when it is prepared so that we may complete our consistency review. We strongly suggest that the scope of the project be limited to roadway widening between U.S. 19 and C.R. 587 on S.R. 52. The environmental impacts of this smaller project would be considerably lessened and in fact, we feel that possibly only an environmental assessment would be necessary were the scope of the project limited as described above.

We appreciate the opportunity to comment on this advance notification.

Sincerely,



Heather L. Nixon
Environmental Specialist
Intergovernmental Programs
Review Section

HLN/jb

cc: Dr. Richard D. Garrity



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

June 4, 1984

In Reply Refer To:

Louis D. Tesar
Historic Preservation
Supervisor
(904)487-2333

Mr. J.C. Kraft, Chief
Bureau of Environment
Department of Transportation
605 Suwannee Street
Tallahassee, Florida 32301

RE: Cultural Resource Assessment Request
State Project No. 14120-1518; State Road 52 from State
Road 55/U.S. Highway 19 to State Road 93/Interstate 75,
Pasco County, Florida

Dear Mr. Kraft:

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 there are no archaeological or historic sites recorded within the project area. 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. Data from environmentally similar areas in Pasco County indicate that archaeological and historic sites, especially the former, are likely to occur

Mr. J.C. Kraft
June 4, 1984
Page Two

within the subject tract. It is, therefore, the opinion of this office that there is a reasonable probability of project activities impacting archaeological and historic sites and properties potentially eligible for listing on the National Register of Historic Places, of otherwise of national, state or local significance.

Since potentially significant archaeological and historic sites may be present, it is our recommendation that, prior to initiating any land clearing or ground disturbing activities, the project tract should be subjected to a systematic, professional archaeological and historical 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 and historic 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,


George W. Percy
State Historic
Preservation Officer

GWP:Tkp



United States
Department of
Agriculture

Soil
Conservation
Service

401 SE First Avenue, Room 248
Gainesville, FL 32601

RECEIVED

July 2, 1984

JUL 5 1984

Mr. C. L. Irwin, Administrator
Environmental Impact Review
Haydon Burns Building
605 Suwannee Street
Tallahassee, FL 32301-8064

Dear Mr. Irwin:

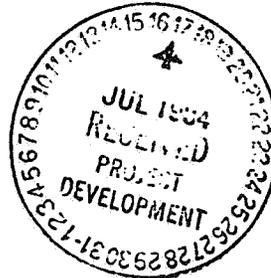
Subject: Advance Notification
State Project Number 14120-1518
Federal Aid Project Number F-270-1(2)
Pasco County, Florida

We have reviewed the above Advance Notification. There are no prime or unique farmlands involved in the proposed project. We have no further comments regarding this proposal.

Thank you for giving us the opportunity to review this document.

Sincerely,

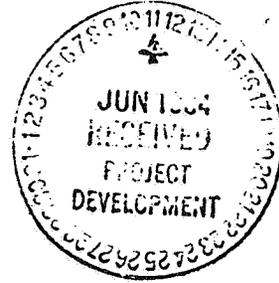

JAMES W. MITCHELL
State Conservationist



cc:
Ron Fahs, State Planning & Development Clearinghouse, Tallahassee

RAA copy to
MEW ←

June 6, 1984



Mr. J. C. Kraft
Chief
Bureau of Environment
Florida Department of Transportation
605 Suwanne Street, MS 37
Tallahassee, Florida 32304

Subject: Tampa Bay Regional Planning Council IC&R Clearinghouse
Review

At its May 29, 1984 meeting, the Tampa Bay Regional Planning Council's Clearinghouse Review Committee approved the enclosed comments and recommendations on the enclosed project(s).

Should additional clarification be necessary, please feel free to contact Ms. Sandra Eberhard of the Council staff.

SE/lk

Enclosure(s)

cc: Wendy Giesy ✓

CLEARINGHOUSE REVIEW

The Florida Department of Transportation (FDOT) has requested review and comment on a proposal to replace 23.3 miles of SR 52, a two lane highway with a multi-lane divided highway from US 19 to Interstate I-75. Location; Pasco County; Agency: FDOT; Funding Request: Federal - \$36,375,000; State - \$12,125,000; Total - \$48,500.00.

Local Comments Requested From:

New Port Richey/West Pasco County Metropolitan Planning Organization: No comments received as of May 25, 1984

Council Comments and Recommendations:

This project has been reviewed for consistency with the Council's adopted growth policy, the Future of the Region. The proposal has been found to be consistent with Council policy to encourage the maintenance of a Level of Service (LOS) C daily capacity.

A significant portion of this 23.2 mile alignment already operates below an acceptable LOS such as the segment of SR 52 between US 19 and CR 587.

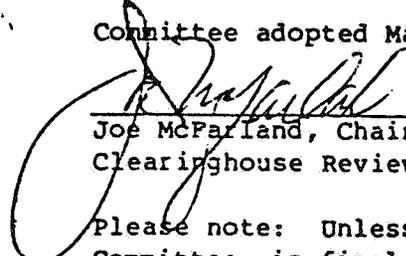
During the design phase of the project, it is recommended that the Florida Department of Transportation (FDOT) consider geometric and/or signalization improvements to SR 52 intersections with Little Road, CR 587, US 41 (SR 45), CR 583 and CR 581.

It is further recommended that best management practices for water pollution abatement be employed by the contractor and that FDOT review the effectiveness of these BMPs. Finally, it is recommended that all culverts and bridge structures be designed to accommodate a 100-year event.

This project is regionally significant and no concerns have been raised during the review which would preclude its approval.

It is therefore recommended that this proposal be approved for funding. Further, it is recommended that any additional comments addressing local concerns be considered prior to approval.

Committee adopted May 29, 1984.



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.

Commander
Seventh Coast Guard District

Federal Bldg.
51 S.W. 1st Ave
Miami, FL 33130
Staff Symbol: (oan)
Phone: (305) 350-4103

16591/FLA
Serial: 591

AUG 6 1984

Florida Department of Transportation
Attn: Mr. J.C. Kraft
605 Suwannee Street, MS 37
Tallahassee, FL 32304

PROPOSED UPGRADING OF STATE ROAD 52 FROM SR 55 (U.S. 19) TO SR 93
(I-75), PASCO COUNTY, FL (STATE PROJECT #14120-1518)

The Coast Guard has no bridge permitting jurisdiction over the project corridor.

Sincerely,

L. R. MONTELLO
Lieutenant Junior Grade
U. S. Coast Guard
Chief, Aids to Navigation Branch, Acting
Seventh Coast Guard District
By direction of the District Commander

Copy: Florida Department of Transportation, Bartow ✓



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

RECEIVED
AUG 2 1984

REGION IV

345 COURTLAND STREET
ATLANTA, GEORGIA 30365

JUL 30 1984
4PM-EA/GM

Mr. C.L. Irwin
Environmental Impact Review
Florida Department of Transportation
605 Suwannee Street
Tallahassee, Florida 32301-8064



UG ✓
EPA

Dear Mr. Irwin:

We have reviewed the following Advance Notification packages:

- 1) Upgrading SR-52 (State #14120-1518, Federal #F-270-1(2), EPA #A-FHW-E40623-FL) in Pasco County.
- 2) Palmetto Expressway SR-826 - PD&E Study (State #87260-1587, Federal #M-6071-(17), EPA #A-FHW-E40624-FL) in Dade County.
- 3) Apollo 11 Boulevard at US 1 to CR511/US 1 intersection in Melbourne, Florida (State #70000-1537, 70000-1538, and 70000-1539, Federal #M-8500(3), M-8500(2), and M-8500(1), EPA #A-FHW-E40613-FL) in Brevard County.
- 4) Upgrading US17/92 (State #77010-1533, Federal #M-8827-(6), EPA #A-FHW-E40614-FL) in Seminole County.
- 5) Modifications to I-95 (State #72020-1465, Federal #IR-95-5 (135)351, EPA #A-FHW-E40605-FL) in Duval County.
- 6) Upgrading SR24 (State #26090-1519, Federal #F-376-1(6), EPA #A-FHW-E40622-FL) in Alachua County.
- 7) SR A-1-A stub construction (State #86030-1513, Federal #M-6857-(1), EPA #A-FHW-E40612-FL) in Broward County.
- 8) Upgrading SR 5/U.S. 1 (State #93040-1527, Federal #F-485-4(25), EPA #E40617-FL) in Palm Beach County.
- 9) Upgrading S.R. 955 (State #87002-1505, Federal #M-6103-(1), EPA #A-FHW-E40618-FL) in Dade County.
- 10) Upgrading SR90/U.S. 41/Tamiami Trail (State #03010-1545, Federal #F-020-1(20), EPA #A-FHW-E40615-FL) in Collier County.
- 11) Upgrading SR45 (State #'s 14010-1514, 08010-1519, 08080-1509, and 02100-1504, Federal #F-888-(27) and F-8889(2), EPA #A-FHW-E50254-FL) in Pasco, Hernando, and Citrus Counties.

All of the above projects involve relatively major highway construction; however, few specific details were available in this material. Hence, we can only offer the same kind of general observations regarding environmental guidelines stipulations that have probably already been provided by your own technical staff. However, as soon as your detailed planning has progressed to the point that specifics are available regarding alignment, design, etc., please contact us at 404-881-7901 for coordination on environmental matters of mutual interest. We are enclosing a copy of "Special Concerns" which outlines some environmental concerns associated with generic highway projects and should be beneficial to your planning process.

If we can be of further assistance, please feel free to contact us.

Sincerely yours,

for R. D. Rogers

Sheppard N. Moore, Chief
Environmental Review Section
Environmental Assessment Branch

Attachment: "Special Concerns"

SPECIAL CONCERNS

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).
- 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).
- 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 ($L_{10}=75\text{dBA}$; $L_{eq}=72\text{ dBA}$) and sensitive residential/institutional receptors (residences, churches, schools, etc.: $L_{10}=70\text{ dBA}$; $L_{eq}=67\text{dBA}$). 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.
- Also of concern are public complaints concerning construction-related noise emissions and state mechanisms to properly address them.



STATE OF FLORIDA

Office of the Governor

THE CAPITOL
TALLAHASSEE 32301

BOB GRAHAM
GOVERNOR

December 4, 1986

WLC
RLC
ZGM

Mr. J. C. Kraft
Chief, Bureau of Environment
Department of Transportation
Burns Building MS 37
Tallahassee, Florida 32301

RE: State Project #14120-1518, SR 52, Pasco County

SAI: FL8405301272C

Dear Mr. Kraft:

This is to clarify and reiterate the state position on the above referenced project at the request of your office. Following a meeting between members of your staff, DER Intergovernmental Coordination, Division of Permitting, and this office in the early fall, this project was reviewed for appropriateness of the state response. This project was not the primary focus of the fall meeting (the Apollo-Hickory Alignment was), but was discussed prior to the meeting in the same context--e.g., appropriateness of the federal consistency response. The two projects are different and the Clearinghouse responses communicating the state position reflect this. In the case of SR 52, DER had ample justification for finding the project inconsistent with the Florida Coastal Management Program, but decided to give DOT comments that would allow a portion of the project to proceed. It is further apparent that a finding of inconsistency for the entire project would have required more extensive negotiations. The Department of Environmental Regulation indicated in recent conversation, however, that they agreed to language finding such a project consistent at the Advance Notification phase, and review of the environmental document for consistency with their statutory authority in the FCMP will be revisited once it is circulated for review.

This is to notify you that funding for highway improvements along the existing alignment is consistent with the Florida Coastal Management Program at the Advanced Notification phase. Subsequent environmental documents will be reviewed for consistency with the FCMP as provided for in 15 CFR 930.39 and the MOU. The subsequent environmental document should provide thorough information regarding the location and extent of any wetlands dredging and

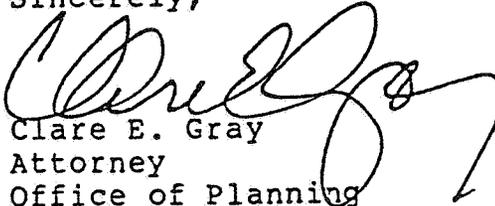


Mr. J. C. Kraft
December 4, 1986
Page Two

filling, borrow sources, dredge and fill activities associated with bridge construction, and stormwater management.

If you have questions or need further assistance in this matter, please contact me at 488-8114.

Sincerely,



Clare E. Gray
Attorney
Office of Planning
and Budgeting

CEG/mem



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

June 4, 1986

In Reply Refer to:

Mr. Michael Wisenbaker
Historic Sites Specialist
(904) 487-2333

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

Re: Cultural Resource Assessment Request Review
Federal Aid Project F-270-1(2), State Project No. 14120-1518
Proposed Upgrading of SR 52 from SR 55 to SR 93 (approx. 23.3
miles) in Pasco County, Florida

Dear Mr. Kraft:

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").

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

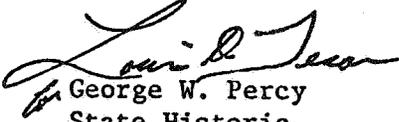
Mr. J. C. Kraft
Page Two
June 4, 1986

with 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 historical resources are appreciated.

Sincerely,


George W. Percy
State Historic
Preservation Officer

GWP/efk



PASCO COUNTY, FLORIDA

PHONE (813) 847-8188

EMERGENCY SERVICES DEPARTMENT
530 SUNSET ROAD
NEW PORT RICHEY, FL 33552

August 20, 1986

Mr. James Mykytka
Environmental Scientist
Reynolds, Smith and Hills
Architects . Engineers . Planners, Inc.
1715 N. Westshore Boulevard
Suite 500
P. O. Box 22003
Tampa, FL 33622-2003

Dear Mr. Mykytka:

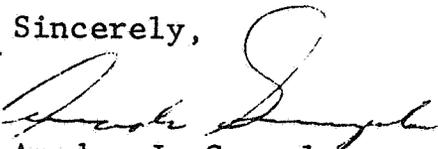
The existing State Road 52 roadway creates delays due to congestion during periods of heavy traffic. State Road 52 has many curves where blind spots for passing are dangerous.

Road construction would naturally create delays due to increased traffic back-ups on the single lane highway.

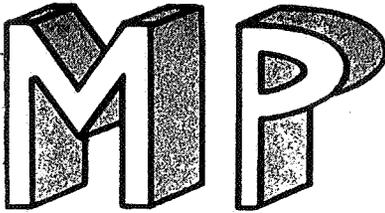
Your proposal would greatly enhance response times and alleviate existing and future growth that will be experienced. State Road 52 is a main artery in Pasco County, and is designated as such during an evacuation.

If you have any further questions or desire additional information, please do not hesitate to contact me.

Sincerely,


Amador J. Gonzalo
Emergency Services Director

AJG/bcj



NEW PORT RICHEY / WEST PASCO
METROPOLITAN PLANNING ORGANIZATION

7530 Little Road • New Port Richey • Florida • 33553
(813) 847•8132

October 9, 1986

Mr. Ray Moses
Project Development Engineer
Florida Dept. of Transportation
Post Office Box 1249
Bartow, FL 33830



RE: Project #14120-1518, S.R. 52 - U.S. 19 to I-75

Dear Mr. Moses:

Per the request from FDOT, we have reviewed the issue of consistency between the MPO adopted plan and the improvement plans for S.R. 52. In 1984, the MPO adopted a 1995 Long-Range Transportation Plan. This ten-year plan was essentially a cost-feasible plan, meaning that a cap delineating a specific dollar amount was identified and projects were selected based on the monies available. Those projects deemed as "priority projects" would be incorporated into the plan up to the established cap. As more money was identified as available, more projects would be incorporated into the plan.

The plan, which is now being updated, reflects the need to multilane S.R. 52 from U.S. 19 to Hicks Road. Projected volumes identify the need to continue the multilaning to Moon Lake Road. The absence of the Hicks Road to Moon Lake Road section merely indicates that there was a lack of monies available in which to incorporate this project into the Long-Range Plan. In other words, if more monies were available, the entire length of S.R. 52 from U.S. 19 to Moon Lake Road would have been identified as a needed improvement in the plan. Due to the time frame (1995) and the geographical limits of the study, those portions of S.R. 52 east of Moon Lake Road are not shown on the plan. However, this absence should not be construed as a lack of need for improvements east of Moon Lake Road. The amount of development now occurring and expected future development in what now is predominantly a rural area will necessitate the multilaning of the facility by the mid-1990's. Please keep in mind that S.R. 52 provides the only viable east/west link from the heavily urbanized portion of West Pasco County to the Interstate System.

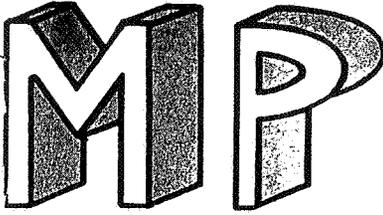
I hope what I have provided will clarify the issue of plan consistency as it relates to improvements being planned for S.R. 52. If you require any further information, please contact me at your convenience.

Sincerely,

James H. Edwards
Transportation Planning
Coordinator

JHE/r10/09/02

cc: James G. Kennedy, Director, FDOT-Tampa, 4950 W. Kennedy Blvd., Suite 404, Tampa, FL 33609



NEW PORT RICHEY / WEST PASCO
METROPOLITAN PLANNING ORGANIZATION

7530 Little Road • New Port Richey • Florida • 33553
(813) 847•8132

October 8, 1986



Mr. Ray Moses
Project Development Engineer
Florida Department of Transportation
P.O. Box 1249
Bartow, Florida 33830

Re: Project #14120-1518/S.R. 52, U.S. 19 to I-75

Dear Mr. Moses:

The purpose of this letter is to define the Pasco County MPO's position in regards to bicycle lane considerations on road improvement projects.

The MPO on March 13, 1986, passed a motion regarding the need to incorporate bicycle lanes on all federally funded intersection improvement projects in Pasco County. Included in this motion was a request that all other federal, state and local projects address the issue of providing bicycle considerations in the design phase of improvement projects. The type of improvement discussed was consistent with the current FDOT policy, which calls for the construction of a 14' outside curb lane for those projects with a curb and gutter design, and a 4' paved shoulder on rural roadway sections.

Based on the previous actions of the MPO, it would be appropriate to incorporate bicycle lanes in the design of the S.R. 52 multi-laning project. This action would be consistent with the MPO desires.

I hope that this information clarifies the MPO's position regarding this issue. If additional information is required, please advise.

Sincerely,

James H. Edwards
Transportation Planning Coordinator

JHE/fa

cc: James G. Kennedy, FDOT-Tampa

APPENDIX B
SUMMARY OF WETLAND FINDINGS

WETLANDS FINDING

INTRODUCTION

In compliance with Executive Order 11990 and Florida Department of Transportation (FDOT) Order 5660.1A, the following report of Wetlands Finding evaluates the impacts on area wetlands from the proposed action. After careful consideration, it has been determined that the Build (Avoidance) Alternatives are not practical measures to minimize harm to wetlands. Impacts to wetlands have been minimized to the greatest extent possible by the selective placement of the proposed alignment. Therefore, since there is no practicable alternative to the proposed action, the objective of this wetland evaluation is to determine what the effects of new construction will have on wetland stability, survival, and quality, and to identify those sites sufficiently impacted by the project that mitigation will be required. Mitigation proposals often include a wide variety of scenarios (i.e., minimization of project standards, preservation, restoration, enhancement, creation, and replacement). However, based upon a thorough examination of the wetlands and wetland impacts involved, the primary mitigation scheme selected was wetland replacement. Wetland replacement generally refers to the creation of new, in-kind wetlands on a minimum 1:1 ratio, followed by management of the newly created system until fully established. Wetland replacement is a popular method of mitigation which if properly conducted, will best compensate for the loss of wetland function and value as closely as possible. When practicable, the replacement wetland is to be offered either connected or contiguous to the impacted wetland in order to maximize the continued viability of the remaining system.

A determination of whether or not mitigation could be provided within or outside the right-of-way limits was performed on a case-by-case basis. Typically, if there was sufficient area within the right-of-way for an in-kind replacement of a marsh/pond wetland, then the creation of new wetlands was proposed along the roadside at borrow pit areas, in the highway median, or at interchange areas (e.g., drainage swales, stormwater retention basins, etc.). However, if a forested wetland

1/07/88

needed replacement, then an area for replacement located outside the right-of-way, within the same watershed, and preferably contiguous to or immediately adjacent to the impacted wetland, was selected. The water quality of each of the wetlands studied along the SR 52 corridor was generally considered good, even though pollution via stormwater runoff was evident. All of the wetlands involved with the proposed action which have been previously altered by the existing roadway system have sufficiently recovered to qualify as productive wetlands. However, these wetlands and the other wetlands which were relatively undisturbed are not considered unique to the region or critical as wildlife habitat for endangered species. None of the wetlands can reestablish themselves unless excavation of contiguous uplands to wetland grade is performed. However, although wetlands can reestablish themselves through this action, vegetation planted and maintained within the newly excavated ground accelerates reestablishment, and best recreates wetland quality matching the original unimpacted state of the impacted wetland.

A variety of factors were taken into consideration when evaluating the impacts to functions and values inherent in each of the wetlands involved. They included primary wetland functions, relative importance of the wetland involved to the total wetland resource of the area, size and productivity, and other important factors such as wetland quality, degree of disturbance, etc. Short- and long-term effects on the wetlands and the significance of any functional loss of wetlands values, such as flood control capacity, wildlife habitat value, were also evaluated.

Short-term effects expected to occur during construction include turbidity associated with runoff, and marginal destruction of vegetation due to heavy machinery. Long-term effects associated with the proposed action consist of the complete loss of a particular acreage of wetland and percentage of the entire ecosystem, due to construction related impacts (i.e., clearing, grubbing, and filling). However, to minimize adverse effects, selective clearing and grubbing practices will be implemented during construction activities.

The following summary provides information of each individual wetland site involved. For a more thorough description of each wetland discussed, see Section 4.8, Wetlands Involvement, of this Environmental Assessment.

WETLAND SITE EVALUATIONS

Wetland Site W1 is a small cypress strand edge associated with the floodplain of Bear Creek. This cypress system was previously disturbed during the initial construction of SR 52. This wetland functions primarily in providing quality fish and wildlife habitat and flood control. Since the project proposes to involve only 0.27 acre (0.02 percent) of an estimated 1,480-acre contiguous wetland system, the proposed impacts are not considered substantial. The short-term impacts of the project on Site W1 would consist of minor vegetation disturbance by heavy equipment activity and slight temporary increases in turbidity from construction site runoff. Other effects would include the permanent loss of 0.27 acre of cypress strand and associated wildlife habitat. However, due to the small degree of impact, the relative regional abundance of this community type, and the expected continued viability of this wetland system, no mitigation is proposed.

Wetland Site W2 is a freshwater marsh. Although this system has been previously bisected by the original construction of SR 52, this wetland functions adequately in providing fish and wildlife habitat and floodwater retention. The project proposes to involve 0.24 acre (60 percent) of an estimated 0.40-acre contiguous wetland system. The proposed impacts will be substantial. The short-term impacts of the project on Site W2 would consist of minor vegetation disturbance and slight increases in turbidity levels. Long-term effects will be the permanent loss of 0.24 acre of wetlands and a reduction in the utility of the remaining system. A 1:1 replacement mitigation is proposed. Mitigation shall be in-kind with replacement of 0.24 acre of marsh to be located as part of the stormwater retention system within the right-of-way.

Wetland Site W3 is an isolated semi-permanently flooded cypress swamp. This swamp is a natural, hydrologically isolated wetland system previously encroached upon by SR 52. This wetland functions primarily in providing fish and wildlife habitat and surface water storage. The

project proposes to involve 0.30 acre (6.7 percent) of an estimated 4.5-acre isolated wetland system. The proposed impacts are not considered substantial. The short-term impacts of the project on Site W3 would consist of moderate temporary increases in surface water turbidity and short-term disturbance of wildlife utilizing the wetland. No substantial long-term impacts are expected to occur. In view of the absence of substantial impacts to the ecology of this system, no mitigation is proposed. The remaining system will retain its primary ecological function.

Wetland Site W4 is part of a 193-acre semi-permanently flooded cypress-maple floodplain swamp associated with Buckhorn Creek. This mixed hardwood swamp has been previously disturbed by the existing roadway in the area of the proposed involvement. This disturbed wetland functions primarily in providing wildlife habitat and floodwater storage and abatement. The project proposes to involve 0.25 acre (0.13 percent) of the 193-acre contiguous wetland ecosystem. The proposed impacts are not considered substantial. The short-term impacts of the project on Site W4 would consist of slight, temporary increases in turbidity from construction site runoff and marginal disturbances to vegetation by heavy construction machinery. No mitigation is proposed. The remaining system will retain its primary ecological functions.

Wetland Site W5/Buckhorn Creek is part of a 193-acre semi-permanently flooded cypress-maple floodplain swamp associated with Buckhorn Creek. This mixed hardwood swamp has been previously disturbed by the existing roadway in the area of the proposed involvement. This disturbed wetland functions primarily in providing wildlife habitat and flood-water storage and abatement. The project proposes to involve 0.04 acre (0.02 percent) of the 193-acre contiguous wetland ecosystem. The proposed impacts are not considered substantial. The short-term impacts of the project on Site W5/Buckhorn Creek would consist of slight, temporary increases in turbidity from construction site runoff and marginal disturbances to vegetation by heavy construction machinery. This wetland

system is expected to continue to be a viable, healthy wetland. It should continue to perform its primary ecological functions and retain its wetland characteristics and integrity. No mitigation is proposed.

Wetland Site W6 is part of a 193-acre semi-permanently flooded cypress-maple floodplain swamp associated with Buckhorn Creek. This mixed hardwood swamp has been previously disturbed by the existing roadway in the area of the proposed involvement. This disturbed wetland functions primarily in providing wildlife habitat and floodwater storage and abatement. The project proposes to involve 0.87 acre (0.45 percent) of the 193-acre contiguous wetland ecosystem. The proposed impacts are not considered substantial. The short-term impacts of the project on Site W6 would consist of slight, temporary increases in turbidity from construction site runoff and marginal disturbances to vegetation by heavy construction machinery. Due to the relatively small degree of impacts to the wetland, no mitigation is proposed. This wetland system is expected to continue to be a viable, healthy wetland. It should continue to perform its primary ecological functions and retain its wetland characteristics and integrity.

Wetland Site W7 is part of a 1,818-acre semi-permanently flooded cypress-maple floodplain swamp associated with Buckhorn Creek. This mixed hardwood swamp is relatively undisturbed. This 1,818-acre wetland functions primarily in providing quality wildlife habitat and floodwater storage and abatement. The project proposes to involve 0.18 acre (0.01 percent) of an estimated 1,818-acre contiguous wetland ecosystem. Impacts of the project to this system would not be substantial. The short-term impacts of the project on Site W7 would consist of slight, temporary increases in turbidity from construction site runoff and marginal disturbances to vegetation by heavy construction machinery. Although the proposed action involves a relatively natural, high quality system, the spatial extent and degree of impacts are negligible. Therefore, mitigation is not proposed. This wetland system is expected to continue to be a viable, healthy wetland. It should continue to

perform its primary ecological functions and retain its wetland characteristics and integrity.

Wetland Site W8 is a small, isolated cypress swamp. The isolated nature of this wetland resulted from segmentation of a larger system during the initial construction of SR 52. Site W8 is located entirely within the proposed right-of-way. This wetland functions primarily in providing limited stormwater retention. The project proposes to involve 0.22 acre (100 percent) of this entire isolated wetland system. The primary impact of the project on Site W8 would consist of the permanent loss of water retention capabilities associated with the 0.22-acre cypress system. The loss is not considered substantial, therefore, no mitigation is proposed. Loss of stormwater retention function will be offset by the addition of stormwater retention in the new roadway design.

Wetland Site W9 is part of a 1,818-acre semi-permanently flooded cypress-maple swamp. This mixed hardwood swamp has been previously disturbed by the existing roadway in the vicinity of the proposed involvement. This wetland functions primarily in providing some limited wildlife habitat and floodwater storage. Since the project proposes to involve 0.74 acre (0.04 percent) of an estimated 1,818-acre contiguous wetland ecosystem, the proposed impacts are not considered substantial. The short-term impacts of the project on Site W9 would consist of slight, temporary increases in turbidity from construction site runoff and marginal disturbances to vegetation by heavy construction machinery. Due to the minor nature and degree of impacts to occur and disturbed nature of the wetland, no mitigation is proposed. This wetland system is expected to continue to be a viable, healthy wetland. It should continue to perform its primary ecological functions and retain its wetland characteristics and integrity.

Wetland Site W10 is a small cypress swamp that is hydrologically isolated. Although previously encroached upon by the roadway, this site is relatively natural and has recovered from previous disturbance. This

wetland functions primarily in providing fish and wildlife habitat and water retention. The project proposes to involve 0.96 acre (48 percent) of an estimated 2-acre, isolated wetland system. Expected impacts are considered substantial. The short-term impacts of the project on Site W10 would consist of substantial disturbance of the water quality, vegetation and wildlife of this system. The long-term impacts would include a reduction in utility of the remaining wetland due to permanent loss of 0.96 acre of a small, isolated cypress swamp. A 1:1 in-kind wetland replacement outside the right-of-way and contiguous to the affected wetland is proposed to offset any unavoidable impacts.

Wetland Site W11 is a small isolated cypress swamp not previously encroached upon by SR 52. This wetland functions primarily in providing limited wildlife habitat and water retention. It is anticipated that this wetland will not be directly encroached upon by the proposed widening of SR 52. The project proposes to involve only 0.05 acre (5 percent) of the estimated 1-acre isolated wetland system via roadway edge operations. Expected impacts are not considered substantial. The short-term impacts of the project on Site W11 would consist of temporary increases in surface water turbidity due to runoff from nearby construction. Some minor disturbance of vegetation may also occur. Selective clearing and grubbing will be employed to minimize the effects of the project. No replacement mitigation measures are proposed. This wetland system is expected to continue to be a viable, healthy wetland. It should continue to perform its primary ecological functions and retain its wetland characteristics and integrity.

Wetland Site W12 is a seasonally-flooded mixed hardwood swamp associated with Buckhorn Creek. This site was previously disturbed by the construction of SR 52. This wetland functions primarily in providing floodwater retention and wildlife habitat. The project proposes to involve only 0.84 acre (0.05 percent) of the estimated 1,818-acre contiguous wetland system. The proposed impacts are not considered substantial. The short-term impacts of the project on Site W12 would result from slight

increases in turbidity and disturbance of marginal vegetation from heavy equipment operation. No mitigation is proposed. This wetland system is expected to continue to be a viable, healthy wetland. It should continue to perform its primary ecological functions and retain its wetland characteristics and integrity.

Wetland Site W13 is a small isolated cypress swamp previously encroached upon by SR 52. This system is far enough from the proposed roadway edge, that no permanent impact to this system is expected if selective clearing and grubbing operations are employed. This wetland functions primarily in providing limited wildlife habitat and stormwater retention. The project proposes to involve 0.22 acre (49 percent) of an estimated 0.45-acre isolated wetland system. Since no destruction of the cypress swamp is proposed, the expected impacts would not be substantial. The short-term impacts of the project on Site W13 would consist of increased turbidity due to runoff from construction activities. No significant long-term impacts are expected. To minimize short-term impacts and avoid permanent impacts, selective clearing and grubbing will be employed and is considered a mitigative measure. No replacement mitigation is proposed. This wetland system is expected to continue to be a viable, healthy wetland. It should continue to perform its primary ecological functions and retain its wetland characteristics and integrity.

Wetland Site W14 is a small, naturally isolated cypress swamp. This system was previously encroached upon by the initial roadway construction of SR 52. This wetland functions primarily in providing fish and wildlife habitat. The project proposes to involve 0.36 acre (52.9 percent) of the estimated 0.68-acre isolated wetland system. The proposed impacts are considered substantial. The short-term impacts of the project on Site W14 would consist of substantial increases in surface water turbidity, disturbance of vegetation, and temporary disturbance of wildlife using this system. Long-term impacts would include the loss of 0.36 acre of cypress swamp and a reduction in wildlife habitat value of the remaining wetland. To mitigate for these impacts, a 1:1 in-kind

replacement mitigation outside the right-of-way and contiguous to the impacted wetland is proposed.

Wetland Site W15 is a freshwater shrub marsh not previously encroached upon by the initial construction of SR 52. This wetland functions primarily in providing quality wildlife habitat and stormwater retention. The project proposes to involve 0.23 acre (6.57 percent) of an estimated 3.5-acre contiguous wetland system. The proposed impacts are not considered substantial. The short-term impacts of the project on Site W15 would consist of minor vegetation disturbance by heavy equipment and temporary increases in turbidity resulting from construction site runoff. Other effects would include the loss of 0.23 acre of freshwater shrub marsh edge/wildlife habitat. However, due to the proportionately small area of impact, the relative regional abundance of this community type, and the expected continued viability of this wetland system, no mitigation is proposed. This wetland system is expected to continue to be a viable, healthy wetland. It should continue to perform its primary ecological functions and retain its wetland characteristics and integrity.

Wetland Site W16 is a naturally isolated cypress swamp previously encroached upon by the existing highway. This wetland functions primarily in providing fish and wildlife habitat. The project proposes to involve 0.64 acre (18.3 percent) of the estimated 3.5-acre, high quality, isolated wetland system. The proposed impacts are considered substantial. The short-term impacts of the project on Site W16 would consist of temporary, but substantial, increases in surface water turbidity associated with construction site runoff, and substantial disturbance of vegetation in marginal areas. Long-term impacts would include a 0.64-acre reduction in the amount of wetlands available for wildlife at this site. Due to the relatively high degree of disturbance and impact to this wetland, 1:1 replacement mitigation is proposed, situated outside the right-of-way and contiguous to the present system.

Wetland Site W17 is a small semi-permanently flooded freshwater marsh. This marsh was created by clearing cypress trees in the initial roadway construction, is disturbed, and lies entirely within the right-of-way. It is proposed to fill this entire small marsh. This wetland functions primarily in providing stormwater retention. The project proposes to involve 0.17 acre (100 percent) of the entire wetland system. The proposed impacts are not considered substantial. The impacts of the project on Site W17 would consist of loss of a 0.17-acre marsh and its associated stormwater retention ability. Loss of stormwater retention function will be offset by the addition of stormwater retention in the new roadway design.

Wetland Site W18 is a small (0.5-acre) isolated cypress swamp previously encroached upon by the construction of SR 52. This wetland functions primarily in providing limited wildlife habitat. The project proposes to involve all (0.5 acre or 100 percent) of this poor quality isolated wetland system. The proposed impacts are not considered substantial. The impact of the project on Site W18 would consist of the loss of minor isolated wetland wildlife habitat of little value. No mitigation is proposed.

Wetland Site W19 is a semi-permanently flooded freshwater marsh within the right-of-way of SR 52. This disturbed system resulted in part from previous clearing of cypress for the roadway. This wetland functions primarily in providing stormwater retention. The project intends to involve all (0.11 acre or 100 percent) of the wetland system. The proposed impacts are not considered substantial. The impacts of the project on Site W19 would consist of the loss of the system and its water retention benefits. No mitigation is proposed. Loss of stormwater retention function will be offset by the addition of stormwater retention in the new roadway design.

Wetland Site W20 is a relatively large (8 acre), isolated cypress swamp previously encroached upon by the construction of SR 52. This system is

sufficiently distant from the proposed roadway edge that clearing of the swamp is not expected. This wetland functions primarily in providing wildlife habitat and water retention. Since the project proposes to involve only 0.09 acre (1.1 percent) of an estimated 8-acre isolated wetland system via disturbances associated with construction along the roadway edge, the proposed impacts are not considered substantial. The short-term impacts of the project on Site W20 would consist primarily of temporarily increased surface water turbidity. No significant long-term effects are expected to occur. Selective clearing and grubbing will be employed to insure that the area of involvement is limited to approximately 0.09 acre. No replacement mitigation is proposed. This wetland system is expected to continue to be a viable, healthy wetland. It should continue to perform its primary ecological functions and retain its wetland characteristics and integrity.

Wetland Site W21 is part of a 61-acre cypress strand. Since the site was not involved in the original construction of SR 52, it is relatively undisturbed. This wetland functions primarily in providing high quality habitat for fish and wildlife. The roadway alignment was selected to minimize encroachment on this wetland system. The project proposes to involve only 0.19 acre (0.3 percent) of the estimated 61-acre contiguous wetland system. The proposed impacts are not considered substantial. The short-term impacts of the project on Site W21 would consist of temporary increases in turbidity and disturbance of marginal vegetation and sensitive wildlife by construction activities. Long-term impacts would be negligible. No mitigation is proposed. This wetland system is expected to continue to be a viable, healthy wetland. It should continue to perform its primary ecological functions and retain its wetland characteristics and integrity.

Wetland Site W22 is a St. Johns-wort freshwater marsh, associated with a large lake. This system has not been previously impacted and provides quality wildlife habitat. The project proposes to involve only 0.37 acre (2.3 percent) of the estimated 16-acre contiguous lake/marsh wetland

system. The proposed impacts are not considered substantial. The short-term impacts of the project on Site W22 would consist of minor increases in turbidity levels from site runoff during construction, which will be minimized by the use of turbidity screens. No significant long-term impacts to the lake ecosystem are expected to occur from the filling of 0.37 acre of this freshwater marsh. Due to the small acreage of encroachment, minor impacts, and the regional abundance of this wetland category, no mitigation is proposed. This wetland system is expected to continue to be a viable, healthy wetland. It should continue to perform its primary ecological functions and retain its wetland characteristics and integrity.

Wetland Site W23 is a marsh shoreline of a natural 16-acre lake. This system has not been previously impacted and provides quality fish and wildlife habitat. The project proposes to involve only 0.35 acre (2.2 percent) of the estimated 16-acre contiguous lake wetland system. The proposed impacts are not considered substantial. The short-term impacts of the project on Site W23 would consist of slight temporary increases in turbidity from construction site runoff, controlled by turbidity screens, and marginal vegetation disturbance by heavy equipment activity. Due to the small area of encroachment, minor impacts, the relative abundance of this community type, and the expected continuation of viability of this wetland system, mitigation is not proposed. This wetland system is expected to continue to be a viable, healthy wetland. It should continue to perform its primary ecological functions and retain its wetland characteristics and integrity.

Wetland Site W24 is an extremely small (0.03 acre) isolated cypress swamp, previously affected by the initial construction of SR 52. This wetland functions primarily in providing extremely limited wildlife habitat. Since the project proposes to involve, but not eliminate 0.03-acre (100 percent) of an estimated 0.03-acre isolated wetland system, the expected impacts are not considered substantial. To ensure that any impacts to this small system are minimal and that no physical

involvement of the 0.03-acre system occurs, selective clearing and grubbing is proposed, where necessary, in areas peripheral to this system. No replacement mitigation is proposed. This wetland system is expected to continue to be a viable, healthy wetland. It should continue to perform its primary ecological functions and retain its wetland characteristics and integrity.

Wetland Site W25 is a shallow pond that has not been previously impacted by SR 52. This system is natural and provides quality wildlife habitat. The project proposes to involve only 0.18 acre (5.14 percent) of the estimated 3.5-acres of the contiguous pond/wetland system. The expected impacts are not considered substantial. The short-term impacts of the project on Site W25 would consist of increases in turbidity levels from construction runoff and some minor disturbance of herbaceous vegetation. Long-term impacts associated with this wetland encroachment will consist of a marginal loss in stormwater storage and fish and wildlife habitat. However, due to the small degree of encroachment and the regional abundance of this wetland type, mitigation is not proposed. This wetland system is expected to continue to be a viable, healthy wetland. It should continue to perform its primary ecological functions and retain its wetland characteristics and integrity.

Wetland Site W26 is a small strand of cypress fringing an interior pond (i.e., a cypress doughnut dome) associated with a larger wetland. This site was not disturbed previously by the initial roadway construction and is a relatively undisturbed system. This wetland functions primarily in providing quality fish and wildlife habitat. The project proposes to involve only 0.09 acre (15 percent) of the estimated 0.6-acre wetland site. The proposed impacts are not considered substantial. The short-term impacts of the project on Site W26 would consist of some disturbance of marginal vegetation, wading birds, and temporary increases in turbidity. Long-term impacts are considered negligible. This wetland system is expected to continue to be a viable, healthy wetland. It should continue to perform its primary ecological functions and retain

its wetland characteristics and integrity. Due to above considerations, no mitigation is proposed.

Wetland Site W27 is a shallow, pickerelweed pond that was previously segmented by the original construction of SR 52. This wetland functions primarily in providing very limited fish and wildlife habitat and stormwater retention. The project proposes to involve filling all (100 percent) of this 0.39-acre wetland system. The proposed impacts are not considered substantial. The impacts of the project on Site W27 would consist of a loss of a very limited value wetland. No mitigation is proposed.

Wetland Site W28 is a natural freshwater marsh/shallow pond. This system was not disturbed by the initial roadway construction, and functions primarily in providing quality fish and wildlife habitat and surface water retention. The project proposes to involve only 0.34 acre (3.8 percent) of the estimated 9-acre isolated wetland system. The proposed impacts are not considered substantial. The short-term impacts of the project on Site W28 would consist of disturbance of wildlife and wildlife habitat, including increased turbidity associated with runoff during construction and filling. Over the long-term, the project is not expected to substantially alter the habitat suitability of this system for fish and wildlife, or other ecological functions. This wetland system is expected to continue to be a viable, healthy wetland. It should continue to perform its primary ecological functions and retain its wetland characteristics and integrity. No mitigation is proposed.

Wetland Site W29 is a seasonally-flooded mixed hardwood swamp which is hydrologically isolated. This site is an undisturbed, small isolated wetland. This wetland functions primarily in providing wildlife habitat and related benefits. The project proposes to involve 0.51 acre (100 percent) of the isolated wetland system, and impacts are considered substantial. The short- and long-term impacts of the project, including the total loss of wildlife habitat benefits on Site W29, would result

from the physical destruction and filling of this system. Therefore, a 1:1 mitigation consisting of in-kind replacement outside of the right-of-way and adjacent to the impacted wetland is proposed.

Wetland Site W30 is a mixed hardwood swamp associated with the Pithlachascotee River floodplain. This wetland functions primarily in providing fish and wildlife habitat/corridors and flood control. These functions would not be substantially impacted by the project. The project proposes to involve 1.01 acres (0.03 percent) of the estimated 3,381-acre contiguous wetland system. The proposed impacts are not considered substantial. The short-term impacts of the proposed project on Site W30 would result from marginal vegetation disturbance by heavy equipment and slight temporary increases in turbidity from construction site runoff. This wetland system is expected to continue to be a viable, healthy wetland. It should continue to perform its primary ecological functions and retain its wetland characteristics and integrity. No mitigation is proposed.

Wetland Site W31 is a freshwater shrub marsh. This marsh was not previously disturbed by the initial construction of SR 52. This wetland functions primarily in providing good quality fish and wildlife habitat. The project proposes to involve 0.53 acre (30.29 percent) of an estimated 1.75-acre contiguous wetland system. Impacts are considered substantial. The short-term impacts of the project on Site W31 would consist of minor vegetation disturbance by heavy equipment and temporary increases in turbidity resulting from construction site runoff. Long-term effects would include the permanent loss of 0.53 acre of freshwater shrub marsh edge and associated wildlife habitat and benefits. A 1:1 in-kind re-creation of freshwater shrub marsh within the right-of-way and contiguous to the impacted wetland is proposed as mitigation.

Wetland Site W32 is a mixed hardwood swamp. This wetland functions primarily in providing fish and wildlife habitat corridors and flood control. The project proposes to involve 0.88 acre (0.5 percent) of an

estimated 180-acre contiguous wetland system. The proposed impacts to the overall system are not considered substantial. The short-term impacts of the proposed project on Site W32 would result from marginal vegetation disturbance by heavy equipment activity and slight temporary increases in turbidity. Long-term effects would consist of the filling of the wetland edge. This wetland system is expected to continue to be a viable, healthy wetland. It should continue to perform its primary ecological functions and retain its wetland characteristics and integrity. No mitigation is proposed.

Wetland Site W33 is a cypress strand. An alignment was selected to minimize encroachment at this site, which is relatively natural and undisturbed. This wetland functions primarily in providing fish and wildlife habitat and limited floodwater retention. The project proposes to involve 0.16 acre (9 percent) of the estimated 180-acre contiguous wetland system. The proposed impacts are not considered substantial. The short-term impacts of the project on Site W33 would result from construction and clearing activities and consist of slight increases in turbidity and disturbance of vegetation adjacent to work areas. This wetland system is expected to continue to be a viable, healthy wetland. It should continue to perform its primary ecological functions and retain its wetland characteristics and integrity. No mitigation is proposed.

Wetland Site W34 involves 0.51 acre of an 11-acre cypress strand. This wetland was not previously encroached upon by the original construction of SR 52 and is relatively undisturbed. This cypress strand functions primarily in providing wildlife habitat and, to a lesser extent, stormwater retention. The project proposes to involve up to 0.51 acre (4.6 percent) of the 11-acre wetland system. The proposed impacts are not considered substantial. Short-term impacts to this system would consist primarily of a temporary increase in turbidity due to runoff and moderate disturbance of vegetation in the margins of construction areas. The long-term impact, permanent loss of a small fraction of this wetland, is not substantial. This wetland system is expected to continue to be a

viable, healthy wetland. It should continue to perform its primary ecological functions and retain its wetland characteristics and integrity. No mitigation is proposed.

Wetland Site W35 is an isolated cypress swamp that was previously divided by the original construction of SR 52. This wetland functions primarily in providing very limited wildlife habitat and flood retention. The project proposes to involve 0.2 acre (50 percent) of the 0.4-acre contiguous wetland system. The proposed impacts would not be substantial. The short-term impacts of the project on Site W35 would consist of minor vegetation disturbance by heavy equipment and localized turbidity increases resulting from construction site runoff. Long-term effects would result from the filling of 0.2 acre of wetland of marginal quality, as required for the proposed roadway. No mitigation is proposed.

Wetland Site W36 is a seasonally-flooded mixed hardwood swamp associated with the Pithlachascotee River floodplain. This site was previously disturbed by roadway construction. This wetland functions primarily in providing floodwater detention, discharge, and quality wildlife habitat. A shift in alignment to further minimize encroachment was not feasible. However, the project would involve only 0.2 acre of an estimated 3,381-acre contiguous wetland system. The proposed impacts are not considered substantial. Short-term impacts of the project on Site W36 would result from construction activities and consist of slight, temporary increases in turbidity and disturbance of marginal vegetation. This wetland system is expected to continue to be a viable, healthy wetland. It should continue to perform its primary ecological functions and retain its wetland characteristics and integrity. No mitigation is proposed.

Wetland Site W37 is part of a larger cypress strand previously disturbed by the original construction of SR 52. This cypress strand functions primarily in providing high quality fish and wildlife habitat, floodwater retention, and surface water storage. The project proposes to involve

only 0.78 acre (0.02 percent) of a 3,381-acre wetland system. The proposed impacts are not considered substantial. Short-term impacts to Site W37 would occur due to construction activities and would consist mainly of temporary increases in turbidity and vegetation disturbance in the immediate vicinity of the construction area. Because of the negligible impacts to this large wetland system, no mitigation is proposed. This wetland system is expected to continue to be a viable, healthy wetland. It should continue to perform its primary ecological functions and retain its wetland characteristics and integrity.

Wetland Site W38 is a mixed hardwood swamp associated with a small tributary that connects to the Pithlachascotee River. Site W38 was previously bisected by SR 52. This important wetland functions primarily in providing quality fish and wildlife habitat/corridors and valuable flood control. The project proposes to involve 1.57 acres (3.2 percent) of an estimated 49-acre contiguous wetland system. Expected impacts are considered substantial. The short-term impacts of the project on Site W38 would result from marginal vegetation disturbance by heavy equipment and a slight temporary increase in turbidity from construction site runoff. Long-term effects would result from the filling of wetlands associated with the installation of larger replacement culverts. Because of the relatively large size of the impact area at this site, and degree of impacts expected, 1:1 mitigation is proposed. Mitigation shall be in-kind replacement outside of the right-of-way and contiguous to the impacted wetland.

Wetland Site W39 is a freshwater shrub marsh. This marsh was not previously disturbed by the initial construction of SR 52. This wetland functions primarily in providing high quality fish and wildlife habitat. The project proposes to involve 0.17 acre (0.81 percent of an estimated 21-acre contiguous wetland system). The proposed impacts are not considered substantial. The short-term impacts of the project on Site W39 would consist of minor vegetation disturbance by heavy equipment and temporary increases in turbidity resulting from construction site runoff.

The long-term integrity and functions of this system will be retained without substantial impacts from the project. Due to the small degree of impact, the relative regional abundance of this community type, and the expected maintenance of viability of this wetland system, no mitigation is proposed.

Wetland Site W40 is an isolated cypress swamp previously split by the original construction of SR 52. This wetland functions primarily in providing poor fish and wildlife habitat and limited floodwater retention. The project proposes to involve all of the 0.23-acre isolated cypress wetland system. The proposed impacts are not considered substantial. No mitigation is proposed.

Wetland Site W41 is a freshwater marsh/shallow pond. This system, originally created by clearing/dredging of cypress strands to provide a cattle pond, was also bisected by SR 52. This system is regarded as moderately disturbed and of low quality. This wetland functions primarily in providing floodwater storage, and very limited wildlife habitat. The project proposes to fill 0.12 acre (27 percent) of an estimated 0.44-acre disturbed wetland system. The overall impacts of the project on Site W41 would consist of the loss of 0.12 acre of this wetland and moderate disturbance to a portion of the remaining system. However, in view of the limited functions and value, small size, artificial nature, and disturbed condition of this system, this impact would not be substantial. No mitigation is proposed.

Wetland Site W42 is a freshwater marsh/shallow pond created by clearing/dredging of cypress, presumably to provide a cattle pond. This system is relatively disturbed, was previously bisected by the highway, and is of low quality as a wetland. This wetland functions primarily in providing stormwater retention. The project proposes to involve 0.75 acre (0.42 acre to be filled) of an estimated 1-acre wetland system. The proposed impacts are not considered substantial in view of the artificial, disturbed nature of this system and its relative unimportance. Impacts

to the remainder of this system will be minimized by selective clearing and grubbing during construction. No replacement mitigation is proposed. Loss of stormwater retention function will be offset by the addition of stormwater retention in the new roadway design.

Wetland Site W43 consists of a portion (3.38 acres) of a 152-acre cypress strand wetland system. This site was previously disturbed by the initial construction of SR 52. Its primary ecological functions are in providing important fish and wildlife habitat and surface water retention. The project intends to involve 3.38 acres of the 152-acre wetland system. The proposed impacts are expected to be substantial. Temporary impacts will include increased turbidity and disturbance of vegetation and wildlife in the vicinity of construction activities. The long-term impact, a permanent loss of 3.38 acres of high quality wetlands, is deemed substantial and requires mitigation to avoid loss of functions and cumulative loss of wetland habitat in the region. Mitigation is proposed to consist of a 1:1 in-kind replacement of 3.4 acres of cypress swamp outside of the existing right-of-way and contiguous to the impacted wetland.

Wetland Site W44 is an isolated 0.36 acre cypress swamp, which originally was disturbed when SR 52 was constructed. This wetland functions primarily in providing flood retention. The project would involve all of the estimated 0.36-acre isolated cypress wetland system. The proposed impacts are not considered substantial. The long-term impact of the project on Site W44 would consist of the loss of minor flood retention value resulting from the complete filling of this wetland. No mitigation is proposed.

Wetland Site W45 is a minor freshwater marsh/pond created by clearing/dredging of a cypress strand. This disturbed wetland system is bisected by SR 52 and is of low quality. This wetland functions primarily in providing stormwater retention. The project proposes to involve 0.16 acre (0.05 to be filled) of an estimated 0.25-acre disturbed wetland

system. The proposed impacts are not considered substantial. The impact of the project on Site W45 would consist primarily of a slight decline in water retention capability, which will be offset by the addition of stormwater retention in the new highway design. Because of the poor quality, limited values, and minor degree and nature of impacts expected to occur to this wetland from the project, no mitigation is proposed.

Wetland Site W46 is an isolated cypress swamp, initially impacted by the original construction of SR 52. This wetland functions primarily in providing fish and wildlife habitat of moderate quality and floodwater retention. The project would involve 0.29 acre (7.25 percent) of the estimated 4-acre wetland system. The proposed impacts are not considered substantial. The short-term impact of the project on Site W46 would consist of minor vegetation disturbance. No long-term effects on the viability or utility of this wetland would occur. This wetland system is expected to continue to be a viable, healthy wetland. It should continue to perform its primary ecological functions and retain its wetland characteristics and integrity. In view of the above, the relatively small area of impact, and the disturbed condition of this impact site, no mitigation is proposed.

Wetland Site W47 is a semi-permanently flooded marsh. This marsh is relatively undisturbed, with only 0.1 acre occurring within the right-of-way. This wetland functions primarily in providing surface water storage and quality wildlife habitat. The project would disturb, but not fill 0.1 acre (0.5 percent) of an estimated 20-acre contiguous persistent, emergent wetland system. The proposed impacts are not considered substantial. The short-term impacts of the project on Site W47 would consist of possible increases in turbidity and marginal disturbance to vegetation and wildlife due to runoff, noise, and visual impacts from construction activities. No substantial long-term impacts are anticipated. Since the overall impacts to this system are regarded as

negligible, no mitigation is proposed. This wetland system is expected to continue to be a viable, healthy wetland. It should continue to perform its primary ecological functions and retain its wetland characteristics and integrity.

Wetland Site W48 is a permanently-flooded shallow pond associated with a 6-acre pond previously encroached upon by SR 52. This site has recovered from this disturbance and provides high quality fish and wildlife habitat. The pond supports aquatic beds with some open water. This wetland functions primarily in providing wildlife habitat and water retention/storage. The project proposes to involve only 0.14 acre (2.3 percent) of an estimated 6-acre wetland system. The proposed impacts are not considered substantial. The short-term impacts of the project on Site W48 would consist of increased turbidity and some temporary disturbance of wildlife feeding due to construction activities. Physical impacts to the remaining system will be minimized by selective clearing and grubbing. No replacement mitigation is proposed for this site in view of the minor involvement and nature of impacts expected to occur. This wetland system is expected to continue to be a viable, healthy wetland. It should continue to perform its primary ecological functions and retain its wetland characteristics and integrity.

Wetland Site W49 is a small cypress stand adjacent to a shallow pond associated with a 6-acre wetland system. This system was not encroached upon previously by the initial construction of SR 52. This wetland functions primarily in providing quality fish and wildlife habitat. The project proposes to involve 0.1 acre of an estimated 6-acre contiguous wetland system. The expected impacts are not considered substantial. The short-term impacts of the project on Site W49 would consist primarily of temporary increases in turbidity from runoff, and minor disturbance to wildlife in the immediate vicinity. No mitigation would be required due to the minor degree of impacts to this wetland system. This wetland system is expected to continue to be a viable, healthy wetland. It

should continue to perform its primary ecological functions and retain its wetland characteristics and integrity.

Wetland Site W50 is a freshwater marsh previously impacted to a small degree by the original construction of SR 52. Currently this system has recovered from this disturbance and provides high quality fish and wildlife habitat and stormwater retention values. The project proposes to involve 0.51 acre (2 percent) of an estimated 25-acre contiguous wetland system. Impacts are not considered substantial. The short-term impacts of the project on Site W50 would consist of marginal vegetation disturbance from heavy equipment and slight temporary increases in turbidity from construction runoff. This wetland system is expected to continue to be a viable, healthy wetland. It should continue to perform its primary ecological functions and retain its wetland characteristics and integrity. Due to the negligible impacts upon this system, mitigation is not proposed.

Wetland Site W51 is a permanently flooded shallow pond. Although previously disturbed by the initial SR 52 construction, this wetland has recovered. This wetland functions primarily in providing high quality fish and wildlife habitat and considerable stormwater retention. The project proposes to involve 1.55 acres (6.2 percent) of the 25-acre contiguous wetland system. The wetland wildlife habitat impacts are anticipated to be substantial. The short-term impact of the project on Site W51 would consist of temporary increases in turbidity resulting from construction site runoff. The long-term effect would include the permanent loss of 1.55 acres of shallow pond and its important fish and wildlife habitat values. The proposed mitigation would include, but not be limited to, a 1:1 in-kind wetland replacement within the proposed right-of-way and contiguous to the impacted wetland.

Wetland Site W52 is a seasonally-flooded freshwater marsh, slightly impacted by the original construction of SR 52. This wetland functions primarily in providing fish and wildlife habitat and flood control.

Since the project proposes to involve 0.55 acre (11 percent) of an estimated 5-acre contiguous wetland system, impacts are not considered substantial. The short-term impacts of the project on Site W52 would consist of minor vegetation removal and increases in turbidity levels during construction. No long-term significant detrimental impacts are expected (i.e., loss of wetland benefits) from the removal of 0.55 acre of this wetland. Due to the negligible permanent impacts associated with this project, mitigation is not proposed. This wetland system is expected to continue to be a viable, healthy wetland. It should continue to perform its primary ecological functions and retain its wetland characteristics and integrity.

Wetland Site W53 is a seasonally-flooded freshwater marsh. This system has been previously impacted by the construction of a secondary roadway. This wetland functions primarily in providing fish and wildlife habitat and flood water retention. The project proposes to involve only 0.27 acre (4.5 percent) of an estimated 6-acre contiguous wetland system. Impacts are not considered substantial. The short-term impact of the project on Site W53 would consist of minor removal of vegetation. Permanent impacts will consist of the loss of benefits provided by the 0.27 acre of wetlands. Due to the small degree of wetland impact, disturbed nature of the subject wetland, and regional abundance of this wetland category, no mitigation is proposed. This wetland system is expected to continue to be a viable, healthy wetland. It should continue to perform its primary ecological functions and retain its wetland characteristics and integrity.

Wetland Site W54 is a seasonally-flooded freshwater marsh associated with the Parker Lake floodplain. This system was slightly impacted during the original construction of SR 52, but has recovered from this disturbance. This wetland functions primarily in providing fish and wildlife habitat and flood attenuation. The project proposes to involve 0.11 acre (0.02 percent) of an estimated 405-acre contiguous wetland system. Expected impacts are not considered substantial. The impacts of

1/07/88

the project on Site W54 would consist of minor clearing and filling of 0.11 acre of wetlands. This wetland system is expected to continue to be a viable, healthy wetland. It should continue to perform its primary ecological functions and retain its wetland characteristics and integrity. No mitigation is proposed.

Wetland Site W55 is a permanently-flooded shallow pond. This site was not previously encroached upon by the initial construction of SR 52. This wetland functions primarily in providing fish and wildlife habitat and stormwater detention. The project proposes to involve 0.09 acre (0.19 percent) of an estimated 47-acre contiguous wetland system. Impacts are not considered substantial. The short-term impacts of the project on Site W55 would consist of slight increases in turbidity from construction site runoff and minor disturbance to vegetation. Long-term effects would include minor loss of fish and wildlife habitat, resulting from the potential filling and clearing of wetland edge necessary to accommodate the proposed roadway. The area of potential impact to this wetland is small, shallow ponds are regionally abundant, and the adjacent wetland is expected to continue as a viable system. Mitigation is not proposed. The wetland system is expected to continue to be a viable, healthy wetland. It should continue to perform its primary ecological functions and retain its wetland characteristics and integrity.

Wetland Site W56 is a freshwater marsh/shallow pond. This site was not previously impacted by the initial construction of SR 52 and is considered a high quality wetland. This wetland functions primarily in providing important fish and wildlife habitat and valuable stormwater detention. The project would involve 1.52 acres (0.35 percent) of the 438-acre contiguous wetland system. Impacts are considered substantial. The short-term impacts of the project on Site W56 would consist of major increases in turbidity from construction site runoff. The long-term effects would include the loss of important fish and wildlife habitat resulting from the destruction of 1.52 acres of freshwater marsh/shallow

pond. A 1:1 in-kind re-creation of freshwater marsh/shallow pond within the proposed right-of-way, and contiguous to the impacted wetland, is proposed as mitigation.

Wetland Site W57 is a small seasonally-flooded freshwater marsh system. Although this system was slightly impacted by the original construction of SR 52, it has currently recovered and provides quality wildlife habitat. The project proposes to involve 0.2 acre (50 percent) of an estimated 0.4-acre connected wetland system. Impacts would be substantial due to the small size and concomitant sensitivity of this system to disturbance. The short-term impacts of the project on Site W57 would consist of the marginal removal of wetland vegetation and increased turbidity levels during construction. Whereas the proposed project will result in a substantial wetland impact by removing 50 percent or more of the useful wildlife habitat system, mitigation is proposed. Mitigation will consist of creation of in-kind wetlands on a 1:1 replacement ratio. It is expected that the mitigation site will be located within the right-of-way and contiguous to the area of encroachment.

Wetland Site W58 is a cypress stand partially surrounding a 438-acre marsh/shallow pond. The east and west sides of the cypress-ringed marsh were previously bisected. This wetland functions primarily in providing wildlife habitat. The project proposes to involve 0.57 acre of an estimated 438-acre contiguous wetland system, and would not substantially reduce available wildlife habitat. Impacts are not considered substantial. The short-term impacts of the project on Site W58 would consist of temporary increases in turbidity and peripheral disturbance to vegetation. Mitigation is not proposed, due to the minor degree of impact to this wetland system. This wetland system is expected to continue to be a viable, healthy wetland. It should continue to perform its primary ecological functions and retain its wetland characteristics and integrity.

Wetland Site W59 is a freshwater marsh/shallow pond not previously impacted by the initial construction of SR 52 and is considered a high quality wetland. This wetland functions primarily in providing very good fish and wildlife habitat and effective stormwater detention. The project proposes to involve 1.43 acres of the 96-acre contiguous wetland system. Impacts are expected to be substantial. The short-term impacts of the project on Site W59 would consist of increases in turbidity from construction site runoff and disturbances of shoreline vegetation. The long-term effects would include the permanent loss of valuable fish and wildlife habitat and marsh edge resulting from the filling of 1.43 acres of freshwater marsh/shallow pond. A 1:1 in-kind re-creation of wetland outside the proposed right-of-way and contiguous to the impacted wetland is proposed as mitigation.

Wetland Site W60 is a cypress strand adjacent to a freshwater marsh/pond. This system, located on the south side of SR 52, was previously disturbed by initial construction of SR 52. This wetland functions primarily in providing stormwater retention/filtration and an important wildlife habitat and buffer zone. The project proposes to involve 1.61 acres of an estimated 96-acre contiguous wetland system. Impacts are considered substantial. The short-term impacts of the project on Site W60 would consist of increases in turbidity of swamp and marsh surface water, and disturbance of wildlife (e.g., wading birds, raptors, and waterfowl). The unavoidable loss of 1.61 acres of the 23-acre cypress fringe, which buffers the marsh/pond from the roadway, is regarded as substantial. Therefore, a 1:1 in-kind replacement mitigation outside the right-of-way and contiguous to the impacted wetland is proposed.

Wetland Site W61 is a seasonally-flooded freshwater marsh associated with the drainage basin of Five Mile Creek. This system has been previously bisected by the original construction of SR 52. This wetland functions primarily in providing fish and wildlife habitat and flood attenuation. The project proposes to involve only 0.61 acre (6.1 percent) of an estimated 10-acre contiguous wetland system. Impacts are

not considered substantial. The short-term impacts of the project on Site W61 would consist of marginal disturbance resulting from heavy equipment operations and slight increases in turbidity during construction. Long-term impacts consist of the loss of up to 0.61 acre of wetlands. This wetland system is expected to continue to be a viable, healthy wetland. It should continue to perform its primary ecological functions and retain its wetland characteristics and integrity. Due to the negligible degree of wetland impacts, no mitigation is proposed.

Wetland Site W62 is part of a 110-acre cypress strand. This site is relatively undisturbed and was not affected by the initial construction of SR 52. This wetland functions primarily in providing wildlife habitat and surface water retention. The project would involve only 0.19 acre (0.17 percent) of the estimated 110-acre contiguous wetland system. The impacts are not considered substantial. The short-term impacts of the project on Site W62 would consist of slight, temporary increases in turbidity and marginal vegetation disturbance. No mitigation is proposed due to the negligible degree of impacts to this system. This wetland system is expected to continue to be a viable, healthy wetland. It should continue to perform its primary ecological functions and retain its wetland characteristics and integrity.

Wetland Site W63 is a mixed hardwood swamp. Wetland site W63 was previously impacted by SR 52. This wetland functions primarily in providing quality fish and wildlife habitat/corridors and flood control. The project proposes to involve 1.31 acres (18.71 percent) of an estimated 7-acre contiguous wetland system. The proposed impacts are expected to be substantial. The short-term impacts of the project on Site W63 would result from marginal vegetation disturbance by heavy equipment and slight temporary increases in turbidity from construction site runoff. Long-term effects would result from the filling of wetland associated with the installation of larger replacement culverts. A 1:1 replacement mitigation is proposed. Mitigation shall be in-kind replacement outside of the right-of-way and connected to the impacted wetland.

Wetland Site W64 is an isolated cypress swamp, previously split from a larger wetland system (on the north side of SR 52) during the initial construction of SR 52. This wetland functions primarily in providing wildlife habitat and floodwater storage. The project proposes to involve all of the 0.77 acre isolated cypress wetland system. The proposed project's impacts are considered substantial. The long-term impacts of the project on Site W64 would consist of the loss of wetland habitat resulting from the filling of the cypress swamp, necessary to accommodate the wider proposed roadway. The proposed mitigation would include but not be limited to 1:1 in-kind wetland replacement outside the proposed replacement right-of-way and adjacent to the impacted wetland.

Wetland Site W65 is a small isolated cypress swamp. This system has not been previously disturbed or encroached upon. This wetland functions primarily in providing wildlife habitat and limited stormwater retention. The project proposes to involve 0.34 acre (68 percent) of a 0.5-acre cypress swamp. Impacts would be substantial. The long-term impacts of the project on Site W65 would consist of the permanent loss of over one-half of this relatively small, sensitive cypress swamp and its associated wildlife habitat and stormwater retention values. The remaining swamp would have greatly reduced utility without mitigation. A 1:1 in-kind re-creation of similar cypress swamp outside the right-of-way and connected to the impacted wetland is proposed as appropriate mitigation.

Wetland Site W66 is a portion of a cypress strand. This system was previously encroached upon by the construction of the roadway. This wetland functions primarily in providing wildlife habitat and water storage. The project proposes to involve 1.49 acres of an estimated 43-acre contiguous wetland system. The expected impacts are considered substantial. The short-term impacts of the project on Site W66 would consist of increased turbidity and disturbance of vegetation adjacent to the construction zone. Long-term impacts would consist of the permanent loss of 1.49 acres of this wetland habitat and its functions and

contribution to the cumulative decline in abundance of wetlands in the immediate region. Mitigation is proposed, and will consist of 1:1 in-kind replacement outside of the existing right-of-way and contiguous to the existing wetland.

Wetland Site W67 is part of a 4,117-acre mixed hardwood swamp associated with the upper reaches of the Cypress Creek watershed. A southern alignment was selected to minimize encroachment. The area to be impacted has been partially cleared of cypress trees, is relatively open, and thus is disturbed. This wetland type provides important functions including wildlife habitat, flood water control and discharge. A relatively large impact area (i.e., 1.89 acres) is planned at this site. Impacts to the system would be substantial. A 1:1 mitigation is proposed. Mitigation, consisting of in-kind replacement outside of the right-of-way and contiguous to the area of involvement, is proposed.

Wetland Site W68 is a freshwater marsh/shallow pond not previously encroached upon by the initial construction of SR 52. This pond was presumably created to provide water for cattle and has vegetation that is considerably disturbed. This wetland functions primarily in providing water for cattle. It provides minimal wildlife habitat. The project proposes to involve all of the 0.25-acre disturbed wetland system. Impacts are not considered substantial. The long-term impact of the project on Site W68 would consist of the loss of poor quality wetland wildlife habitat resulting from the filling of approximately 50 percent of this wetland. No mitigation is proposed.

Wetland Site W69 is a semi-permanently flooded freshwater marsh previously segmented by SR 52. Although previously disturbed, this marsh is now healthy and functional. This wetland functions primarily in providing wildlife habitat and water retention. The project proposes to involve 0.61 acre (40 percent) of this 1.5-acre isolated wetland system. Expected impacts are considered substantial. The short-term impacts of the project on Site W69 would consist of substantial disturbance of

vegetation and wildlife and significant alteration of water quality within the marsh. Long-term impacts expected as a result of this proposed action include a substantial reduction in the overall utility of the system as wildlife habitat and in surface water retention. Thus, a 1:1 in-kind re-creation mitigation within the right-of-way and contiguous to the impacted wetland is proposed.

Wetland Site W70 is a freshwater shrub marsh. This marsh was previously bisected by the initial construction of SR 52. This wetland functions primarily in providing good quality wildlife habitat, and minor stormwater retention. The project proposes to involve all of this 0.55-acre wetland system. Impacts are considered substantial. The long-term impact of the project on Site W70 would consist of the total loss of good quality, wetland wildlife habitat resulting from the filling of 0.55 acre of this freshwater shrub marsh. The proposed mitigation would consist of a 1:1 in-kind wetland replacement within the proposed right-of-way and adjacent to the impacted wetland.

Wetland Site W71 is an isolated cypress swamp associated with a larger swamp. The initial construction of SR 52 previously disturbed this swamp. Site W71 functions primarily in providing good fish and wildlife habitat, and some stormwater retention. The project is proposed to involve the entire 0.3-acre wetland system. The impacts are considered substantial. The long-term impacts of the project on Site W71 would consist of the total loss of good quality fish and wildlife habitat along with its stormwater retention ability, resulting from the filling of the swamp. A 1:1 in-kind replacement of similar cypress swamp outside the right-of-way and adjacent to the impacted wetland is proposed.

Wetland Site W72 is a mixed hardwood swamp. This site was previously impacted by the original construction of SR 52. This wetland functions primarily in providing valuable fish and wildlife habitat/corridors and flood control. The project proposes to involve 2.5 acres (6 percent) of the 42-acre contiguous wetland system. Impacts are considered

substantial. The short-term impacts of the project on Site W72 would consist of marginal vegetation disturbance resulting from heavy equipment operations. Temporary, substantial increases in turbidity would result from construction site runoff. Long-term effects would result from the filling of wetland associated with the installation of larger replacement culverts. The loss of this 2.5 acres of swamp, with its valuable wildlife habitat and related functions, is substantially detrimental to the remaining wetland and will contribute to the cumulative decline in abundance of local wetlands. Therefore, a 1:1 mitigation is proposed. Mitigation shall be in-kind replacement outside of the right-of-way and contiguous to the impacted wetland.

Wetland Site W73 is a freshwater marsh. This system has been previously bisected and isolated by the original construction of SR 52. This wetland functions primarily in providing good marsh wildlife habitat and flood attenuation. The project proposes to fill the entire 0.74-acre wetland system. Impacts are considered substantial. Due to the substantial and permanent impacts (e.g., complete loss of wetland benefits) a 1:1 mitigation is proposed. Mitigation shall be in-kind consisting of 0.74 acre of marsh creation. The proposed mitigation site will be located within the right-of-way and in proximity to the encroachment site.

Wetland Site W74 is an isolated cypress swamp, in excellent condition and not previously encroached upon by the initial construction of SR 52. This wetland functions primarily in providing fish and wildlife habitat for species dependent on small, isolated wetlands. The project proposes to involve all of an estimated 0.23-acre cypress swamp wetland system. Impacts are considered substantial. The impacts of the project on Site W74 would consist of the permanent loss of this isolated wildlife habitat. Mitigation for this loss would include a 1:1 in-kind re-creation of similar cypress swamp outside the right-of-way and adjacent to the potentially impacted wetland.

Wetland Site W75 is a semi-permanently flooded freshwater marsh, previously segmented by the roadway. Currently this system is relatively natural and highly functional. This wetland functions primarily in providing wildlife habitat. The project proposes to involve 0.66 acre (44 percent) of the 1.5-acre isolated wetland system. Impacts are expected to be substantial. The short-term impacts of the project on Site W75 would consist of substantial, extensive degradation of water quality (increased turbidity) within the entire system from runoff and filling activities, as well as serious disturbance of vegetation and wildlife. Permanent impacts expected would consist of the reduction in size and quality of remaining available wildlife habitat and the area available for stormwater retention/treatment. Mitigation is proposed, consisting of a 1:1 re-creation of similar marsh within the right-of-way and contiguous to the impacted wetland.

Wetland Site W76 is a freshwater marsh associated with the Cypress Creek Drainage Basin. This system has been previously impacted by the original construction of SR 52 and by the grazing of cattle. This wetland functions primarily in providing a minor amount of flood attenuation and wildlife habitat. The project proposes to involve 100 percent of an estimated 0.06-acre wetland system. The proposed impacts are not considered substantial, due to the poor quality, limited utility, and associated negligible size of this system. The long-term impacts of the project on Site W76 would consist of removal of this system by filling. No mitigation is proposed.

Wetland Site W77 is a borrow pit. This is a manmade, low quality wetland not utilized extensively by wildlife. The project proposes to involve 0.34 acre (75.5 percent) of the estimated 0.45-acre borrow pit. The proposed impacts are not considered substantial due to the small, low quality, manmade characteristics of this wetland. The long-term impact of the project on Site W77 would consist of the filling of approximately three-fourths of the existing pond. No mitigation is proposed.

Wetland Site W78 is a freshwater shrub marsh. This marsh was previously bisected by the initial construction of SR 52. This wetland functions primarily in providing poor quality wildlife habitat due to its disturbed condition. The project proposes to involve all of an estimated 0.01-acre wetland system. The proposed impacts are not considered substantial. The poor quality and small size of this wetland severely limit the value and functional utility of this system. The long-term impact of the project on Site W78 would consist of the loss of this wetland. No mitigation is proposed.

SUMMARY

Table 1 provides a summary of wetland mitigation. A minimum of 25.89 acres of 1:1 wetland replacement is proposed for substantial wetland impacts associated with this proposed action. To minimize short- and long-term wetland impacts due to construction, activities will be adhered to as described in Section 104 of FDOT's "Standard Specifications for Road and Bridge Construction," 1977.

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

Table 1. Summary of Wetland Replacement Mitigation

| Wetland Site | Acreage/Percent Impact by Wetland Type | | | Right-of-Way Mitigation Acreage | |
|--------------|--|------------------|----------------|---------------------------------|----------------|
| | Mixed Hardwood | Isolated Cypress | Cypress Strand | Freshwater Marsh/Pond | Within Outside |
| W2 | | | | | |
| W10 | | 0.96/48 | | 0.24/60 | 0.24AD |
| W14 | | 0.36/53 | | | 0.96CN |
| W16 | | 0.64/.8 | | | 0.36CN |
| W29 | 0.51/100 | | | | 0.64CN |
| W31 | 1.57/3.2 | | | 0.53/30 | 0.51AD |
| W38 | | | | | 1.57CN |
| W43 | | | 3.38/2.2 | | 3.38CN |
| W51 | | | | 1.55/6.2 | 1.55CN |
| W56 | | | | 1.52/.35 | 1.52CN |
| W57 | | | | 0.20/50 | 0.20CN |
| W59 | | | | 1.43/1.5 | 1.43CN |
| W60 | | | 1.61/1.7 | | 1.61CN |
| W63 | 1.31/19 | | | | 1.31CO |
| W64 | | 0.77/100 | | | 0.77AD |
| W65 | | 0.34/68 | | | 0.34CO |
| W66 | | | 1.49/3.5 | | 1.49CN |
| W67 | 1.89/4.6 | | | | 1.89CN |
| W69 | | | | | |
| W70 | | | | 0.61/40 | 0.61CN |
| W71 | | 0.30/100 | | 0.55/100 | 0.55AD |
| W72 | 2.50/60 | | | | |
| W73 | | | | 0.74/100 | 0.74AD |
| W74 | | 0.23/100 | | | |
| W75 | | | | 0.66/44 | 0.66CN |
| TOTALS | 7.78 | 3.60 | 6.48 | 8.03 | 8.03 |
| | | | | | 17.86 |

* A 1:1 ratio of in-kind replacement mitigation will be provided either outside or within the right-of-way. The replacement wetland will be created contiguous (CN), connected (CO), or adjacent (AD) to the impacted wetland.

Source: RS&H, 1987.

APPENDIX C
PERMIT COORDINATION RESPONSES



United States Department of the Interior
FISH AND WILDLIFE SERVICE

3100 University Blvd. South
Suite 120
Jacksonville, Florida 32216

February 19, 1988

Ms. Caron Henderson
Environmental Specialist
Florida Department of Transportation
P.O. Box 1249
Bartow, Florida 33830

Dear Ms. Henderson:

This is in response to your January 13, 1988 letter requesting comments on the proposed upgrading of SR 52 from US 19 to I-75 in Pasco County, Florida. The total length of this project is 23.3 miles.

According to information provided in your assessment, approximately 42.95 acres of wetlands will be impacted at 78 locations. The following threatened or endangered species may be found in the project area: Bald eagle, wood stork, red-cockaded woodpecker, and eastern indigo snake.

Prior to initiation of any construction activities, all impacts to wetland areas must be permitted by the Army Corps of Engineers under Section 404 of the Clean Water Act. It is at this time that the Fish and Wildlife Service reviews these actions for impacts on threatened or endangered species. This review process is referred to as Section 7 Consultation.

Section 7 of the Endangered Species Act of 1973, as amended, requires Federal agencies to insure that their actions do not jeopardize the continued existence of listed species or destroy or adversely modify critical habitat. It is the responsibility of the Federal agency to determine if its proposed action "may affect" any listed species or destroy or adversely modify critical habitat or if the action is likely to jeopardize the continued existence of proposed species or result in the destruction or adverse modification of proposed critical habitat. If the determination is "may affect" for listed species, the Federal agency must request, in writing, formal consultation from the Jacksonville Field Station, 3100 University Boulevard, South, Suite 120, Jacksonville, FL 32216. In addition, if the proposed

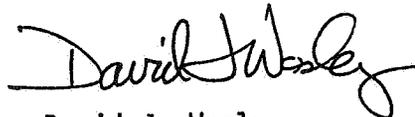
action is likely to jeopardize the continued existence of proposed species or result in the destruction or adverse modification of proposed critical habitat, the Federal agency must confer with this office for assistance in identifying and resolving potential conflicts at an early stage in the planning process.

Attention is also directed to Section 7 (d) of the Act which underscores the requirement that Federal agencies or permit or license applicants shall not make an irreversible or irretrievable commitment of resources during the consultation period which, in effect, would deny the formulation or implementation of reasonable and prudent alternatives regarding their action on listed species.

In regard to impacts on fish and wildlife resources as a result of the proposed project, we initially recommend avoidance of all wetland impacts. However, we understand that in order for this project to be completed impacts to wetlands cannot be avoided and have been minimized to the greatest extent possible by the selective placement of the proposed alignment. We recommend that all impacted areas be fully mitigated. We have enclosed a copy of the Fish and Wildlife Service's mitigation policy to assist in determining wetland mitigation actions.

We appreciate this opportunity to comment. Please contact Ms. Linda Walker in this office at 904/791-2580 (FTS 946-2580) if you have a question or if we can be of further assistance.

Sincerely yours,



David J. Wesley
Field Supervisor

Enclosure



State of Florida
DEPARTMENT OF NATURAL RESOURCES

Marjory Stoneman Douglas Building
3900 Commonwealth Boulevard
Tallahassee, Florida 32399

TOM GARDNER
Executive Director

BOB MARTINEZ
Governor
JIM SMITH
Secretary of State
BOB BUTTERWORTH
Attorney General
GERALD LEWIS
State Comptroller
BILL GUNTER
State Treasurer
DOYLE CONNER
Commissioner of Agriculture
BETTY CASTOR
Commissioner of Education

PLEASE ADDRESS REPLY TO:

February 29, 1988

cm/3/7

Ms. Caron B. Henderson
Environmental Specialist
Florida Department of Transportation
Post Office Box 1249
Bartow, Florida 33830



RE: SPN: 14120-1518
FAP: F-270-1(2)
WPI NUMBER: 7115879
Proposed upgrading of SR 52 from US 19 to I-75, Pasco County

Dear Ms. Henderson:

In response to your letter of January 13, 1988, I requested that the Title & Land Records Section review the above referenced project for sovereignty submerged land and existing easements.

I recently received their response stating that there are no apparent state-owned submerged land along the proposed project site. However, the Trustees own an upland parcel which borders the right of way on S.R. 52 in Section 7, Township 25 South, Range 20 East. The said parcel is leased to the Department of Health and Rehabilitative Services as described in Lease #3402. There are no other existing easements along the project site.

If I can be of any further assistance, please do not hesitate to contact me at the State Lands West Central Florida Field Office, 4520 Oak Fair Boulevard, Tampa, Florida 33610-7347, (813) 623-5561.

Sincerely,

William M. Torres
Submerged Lands Section
Bureau of State Lands Management
Division of State Lands



Southwest Florida Water Management District

MICHAEL ZAGORAC, JR., Chairman, Belleair WALTER H. HARKALA, Vice Chairman, Plant City
ANNE M. BISHOPRIC, Secretary, Sarasota HORACE F. HERNDON, Treasurer, Lake Wales
ROY G. HARRELL, JR., St. Petersburg ROBERT T. BRAMSON, M.D., Tampa
WILLIAM H. WILCOX, Ph.D., Port Charlotte MARY ANN HOGAN, Brooksville CHARLES A. BLACK, Crystal River
GARY W. KUHL, Executive Director DANIEL P. FERNANDEZ, General Counsel
WILLIAM K. HENNESSEY, PETER G. HUBBELL, JERRY I. SIMPSON, Deputy Executive Directors

January 28, 1988



Ms. Caron B. Henderson
Environmental Specialist
Florida Department of Transportation
P.O. Box 1249
Bartow, Florida 33830

Subject: Proposed upgrading of SR 52 from US 19 to I 75,
Pasco County

Dear Ms. Henderson:

We have received and reviewed your submittal for the project referenced above. Pursuant to Chapter 40D-4, Florida Administrative Code, a permit will be required for the proposed activities. You are encouraged to contact Bill Sietman, Manager of our Brooksville Permitting Division, to arrange a pre-application meeting. Specific permitting criteria relating to this project can be discussed at that time.

Sincerely,

H. Clark Hull, Jr.
Senior Environmental Scientist
Resource Regulation Department

HCH:plm
cc: B. Sietman