FINAL
PRELIMINARY ENGINEERING REPORT

PROJECT DEVELOPMENT AND ENVIRONMENT STUDY
US 19 (SR 55)
FROM SOUTH OF US 98 TO CR 488
CITRUS COUNTY, FLORIDA

Work Program Item Segment No: 405822 1
Federal-Aid Program No: 1852 007 P

The proposed project involves improving US 19 (SR 55) to a six-lane divided facility from US 98 to Turkey Oak Drive, and improvements to the CR 488 intersection in Citrus County. The total length of the project is approximately 18.8 miles.

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May 2004

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SECTION 1
SUMMARY

1.1 RECOMMENDATIONS

The Recommended Alternative for this Project Development and Environment (PD&E) Study is described as follows:

Segment 1 (South of US 98 to West Green Acres Street)

The Recommended Alternative for Segment 1 includes widening of the existing four-lane roadway to a six-lane divided rural roadway with a 42-foot (ft) depressed grass median. Southbound US 19 is widened to the outside to accommodate an additional 12-ft travel lane and an 8-ft shoulder, of which 5 feet (ft) is paved. The existing southbound inside travel lane will require asphalt overbuild to remove the crown in the existing pavement. An 8-ft paved shoulder is also added within the median.

Northbound US 19 is widened to the inside to allow for an additional 12-ft travel lane and an 8-ft paved shoulder. The existing 4-ft paved shoulder on the outside of northbound US 19 is widened to 5 ft to accommodate bicyclists. Guardrail is provided along the edge of the paved shoulder on one side of the median only.

A 12-ft multi-use path and 5-ft sidewalk are provided along the existing western and eastern right-of-way (ROW) lines, respectively. Pedestrian signals and cross walks are also included at each signalized intersection. A pedestrian overpass is proposed over US 19 just south of US 98. The proposed pavement widening for this segment allows the typical section to remain within existing ROW while meeting all current design criteria. Additional ROW is required for stormwater management facilities. The proposed design speed for this alternative is 70 miles per hour (mph). Refer to Figure 8-4 in Section 8 of this report for the recommended typical section.

Segment 2 (West Green Acres Street to West Jump Court)

The Recommended Alternative for Segment 2 includes two proposed typical sections. The proposed typical section from West Green Acres Street to West Yulee Drive (CR 490) and from West Elkhorn Drive to West Jump Court consists of a six-lane divided urban typical section with a 30-ft raised median. This typical section contains three 12-ft travel lanes and a 4-ft bike lane in each direction separated by a 30-ft raised median. A 12-ft multi-use path and 5-ft sidewalk are provided along the existing western and eastern ROW lines, respectively, from West Green Acres Street to West Yulee Drive (CR 490). From West Elkhorn Drive to West Jump Court, a 5-ft sidewalk is provided along both sides of the roadway adjacent to the ROW line. This typical section utilizes a centered alignment and is accommodated within the existing ROW. Additional ROW will be required for stormwater management facilities. The proposed design speed for this typical section is 50 mph. Refer to Figure 8-5 in Section 8 of this report for the recommended typical section.

The recommended typical section from West Yulee Drive (CR 490) to West Elkhorn Drive contains two 11-ft travel lanes, one 12-ft outside travel lane, and a 4-ft bike lane in each direction separated by a 20-ft raised median. Sidewalks 5 ft in width are also provided along both sides roadway, separated from the curb by a grass buffer strip. The proposed design speed for this typical section is 50 mph. Refer to Figure 8-6 in Section 8 of this report for the recommended typical section.

This typical section utilizes a centered alignment from West Yulee Drive (CR 490) to south of West Grover Cleveland Boulevard/West Halls River Road (CR 490A), thereby fitting within existing ROW and avoiding ROW acquisition from the Homosassa Springs Wildlife State Park. However, the alignment shifts to the west just north of the park to accommodate dual left-turn lanes at West Halls River Road (CR 490A) and an exclusive northbound right-turn lane at West Homosassa Trail. The Recommended Alternative continues with a western alignment until reaching West Homosassa Trail intersection, where it begins to shift back to a centered alignment. The Recommended Alternative results in ROW acquisition of approximately 10 ft along the west side of US 19. Additional ROW will be required for stormwater management facilities.

Segment 3 (West Jump Court to West Fort Island Trail (CR 44))

The Recommended Alternative for Segment 3 consists of a six-lane divided urban typical section with three 12-ft travel lanes and a 4-ft bike lane in each direction separated by a 30-ft raised median. Sidewalks, 5 ft in width, are provided along both sides of the roadway, separated from the curb by a grass buffer strip. The proposed design speed for this typical section is 50 mph. Refer to Figure 8-8 in Section 8 of this report for the recommended typical section.

This typical section utilizes a centered alignment for most of Segment 3. However, in order to accommodate the Crystal River Airport runway expansion, the alignment was shifted to the west to avoid infringing upon the visual approach path. The shift in alignment can be accommodated within existing ROW. Additional ROW will be required for stormwater management facilities.

Segment 4 (West Fort Island Trail (CR 44) to NE 1st Terrace)

The Recommended Alternative for Segment 4 consists of reconstructing the existing median from a two-way left-turn lane to a 17-ft raised median. In areas where left turn lanes are proposed, the raised median will be reduced to a 4-ft traffic separator with a single 12-ft exclusive left-turn lane. This alternative also includes milling and resurfacing of the existing roadway to allow for three 12-ft travel lanes in each direction. Multi-use paths, 12 ft in width, are proposed along both sides of the roadway, adjacent to the ROW line to accommodate pedestrians and bicyclists. The proposed design speed for this alternative is 40 mph. Refer to Figure 8-13 in Section 8 of this report for the recommended typical section.

Segment 5 (NE 1st Terrace to Turkey Oak Drive)

The Recommended Alternative for Segment 5 consists of a six-lane divided urban typical section with three 12-ft travel lanes in each direction separated by a 16-ft raised median. This typical section contains two 11-ft travel lanes and one 12-ft outside travel lane in

each direction. Sidewalks, 6 ft in width, are provided along both sides of the roadway adjacent to the back of curb. A pedestrian overpass is proposed over US 19 at the Crystal River bike path. Due to the heavily commercialized land use in this segment and the addition of a narrow raised median, a design speed of 40 mph is proposed for this alternative. Refer to Figure 8-14 in Section 8 of this report for the recommended typical section.

This typical section utilizes a best-fit alignment and is contained within the existing 100 ft of ROW for a portion of this segment. The Crystal River State Buffer Preserve occupies a small parcel on the east side of US 19 approximately 400 ft north of NW 7th Avenue. The proposed alignment is centered within the existing ROW through this area to avoid impacting this parcel. However, due to the curved geometry in this area, tying into existing ground within the ROW on the west side may not be feasible. Therefore, a gravity wall may be necessary on the west side through the curved geometry section. In order to accommodate the gravity wall, the median width may have to be reduced to 15 ft where needed.

Segment 6 (Turkey Oak Drive North Dunnellon Road (CR 488))

The Recommended Alternative for Segment 6 consists of Transportation System Management (TSM) improvements. The improvements include the following:

- Extending the northbound and southbound turn-lanes at North Dunnellon Road (CR 488),
- Adding an exclusive right-turn lane along westbound North Dunnellon Road (CR 488),
- Signalizing the intersection of US 19 and North Dunnellon Road (CR 488) if warranted,
- Replacing the flashing signal with a full signal at Seven Rivers Community Hospital entrance if warranted,
- Upgrading existing traffic signals to mast arms at Seven Rivers Community Hospital and West Powerline Street. Pedestrian signals and cross walks will also be included at each signalized intersection.

The estimated cost of the Recommended Alternative is summarized in Table 1-1 below:

Table 1-1
Recommended Alternative Cost Matrix

Evaluation Factors	Segment						
	1	2	3	4	5	6	Total
	Alt 1	Alt 7	Alt 1	TSM 2	Alt 4	TSM	
SEGMENT LENGTH (miles)	4.86	2.07	4.65	0.86	2.05	4.31	**18.80**
ESTIMATED PROJECT COSTS (Present value in million $)							
Engineering design [2]	$2.62	$1.69	$3.70	$0.24	$1.80	$0.16	**$10.21**
ROW acquisition [1]	$13.86[3]	$25.72	$17.57	$0.00	$29.28	$0.00	**$86.43**
Construction (Roadway)	$16.16	$11.27	$24.65	$1.61	$10.80	$1.08	**$65.57**
Construction (Pedestrian Overpass)	$1.31	$0.00	$0.00	$0.00	$1.22	$0.00	**$2.53**
Construction engineering & Inspection [2]	$2.62	$1.69	$3.70	$0.24	$1.80	$0.16	**$10.21**
TOTAL COST	**$36.57**	**$40.37**	**$49.62**	**$2.09**	**$44.90**	**$1.40**	**$174.95**

(1) Includes estimated pond areas (2) 15% of Construction Cost (3) Includes stormwater management facilities only

To minimize the impacts of this project on local residents and business owners, and optimize the effectiveness of the improvements, the following recommendations were made during the PD&E Study process:

1. Conventional lighting should be evaluated in Segment 1 for feasibility during the design phase.

2. During the design phase, coordination should be on going with local governments with regards to landscape opportunities along the project corridor.

3. During the design phase, coordination should continue with the City of Crystal River regarding bicycle accommodations within the city limits. No provisions for bicyclists were developed for the Recommended Alternative in Segment 5 due to significant ROW impacts that would result. However, alternative bike routes can

be accommodated with minor upgrades to existing side streets, incorporating the proposed pedestrian overpass at the Crystal River bike path.

1.2 COMMITMENTS

The Florida Department of Transportation (FDOT) is committed to the following measures:

1. As a result of coordination during the PD&E Study, the FDOT has committed to coordinate with the Citrus County School Transportation Department during this project's design and construction phases in order to allow the schools to adjust any bus routes or stops to minimize their delay during construction.

2. To assure the protection of the Eastern indigo snake during construction , the FDOT will incorporate the "Construction Precautions for the Eastern Indigo Snake" guidelines into the final project design and will require that the construction contractor abide strictly to the guidelines during construction. The guidelines include the following:

   A. To minimize impacts to individual Eastern indigo snakes encountered during construction, a special provision will be included in the construction contract to advise the contractor of the potential presence of this species and its protected status:

      (1) If an Eastern indigo snake is sighted during construction, the contractor will be required to cease all operation(s) which may cause harm to the snake;
      (2) If the snake does not move away from the construction area, the contractor will contact a state or federal biologist to capture and relocate the snake to suitable habitat, either adjacent to the project corridor or off site to an acceptable donor site;
      (3) If an Eastern indigo snake is killed or found dead within the construction area, the snake should be frozen and the Jacksonville U. S. Fish and Wildlife Service (USFWS) Field Office, (904) 232-2580, via the FDOT Modal Planning and Development Office, will be notified immediately at (813) 975-6457; and
      (4) In addition, educational signs with pictures shall be posted throughout the project prior to initiation of construction.

3. Any impacted wetland supporting hydrology appropriate for forage during the nesting period, which also occurs within a wood stork Core Foraging Area (CFA), shall be mitigated for within that CFA. Since this effort is directed by a recent change to USFWS policy, the FDOT commits to coordinating with the USFWS to assure all mitigation measures are followed accordingly.
4. To guard against any potential manatee attempts to cross under US 19 at the Bicentennial Park drainage culvert, the FDOT will require the construction contractor to implement manatee construction precaution guidelines in this area.

Suitable habitat for the manatee is located within the limits of this project and the Water Management District permit contains specific conditions in regard to manatee protection. The contractor will be held responsible for any manatees harmed, harassed, or killed as a result of project construction.

Take the following precautions to protect the manatee:

(1) Advise construction personnel of the manatees, of its endangered status, and of the need to any actions that would jeopardize the existence of manatees.
(2) Advise all work crews that there are civil and criminal penalties for harming, harassing, or killing manatees.
(3) Instruct appropriate work shift personnel in the appearance, habits, biology, migratory patterns, and preservation of the manatee. At least one of these trained personnel shall be on-site during construction activities to maintain a constant surveillance for manatees, assure the cessation of activities (such as dredging, excessive turbidity, and construction barge activity) that may endanger manatees, and assure that uninhibited passage for the animal is provided. Instruct all work crews associated with the project of manatees and the need to avoid collisions with manatees.
(4) Post signs in the waterway to safeguard manatees in the project area. Specific warning sign and design placement is a condition of the Water Management District.

The contractor shall abide by the following permit conditions:

(1) Reporting of manatee activity is required:

- Post the Manatee Hotline Number (1-800-342-5367) at on-site telephones to be used for information or help in dealing with manatee problems. Telephone reports must be made immediately to the Florida Marine Patrol (Manatee Hotline Number) and the USFWS (Vero Beach – South Florida Field Office: 561-562-3909) in the event of any injury, collision with, or killing of manatees.
- Keep a log detailing sightings, collisions or other contact with manatees as events occur during construction. When work is completed, forward this data to Florida Department of Environmental Protection (FDEP), Marine Research Institute, Office of Protected Species Research, 100 Eighth Avenue, SE, St. Petersburg, FL 33701-5095; and the USFWS, 6620 South Point Drive, South, Suite 310, Jacksonville, FL 32216-0758 Attn: Bob Turner.

(2) Operate all vessels associated with the project at "no wake/idle" speed at all times.

(3) Cease all construction activity in open water when a manatee is sighted within 300 ft of the project area. Construction may not resume until the manatee has departed the area.

(4) No construction debris shall be disposed of into the water.

SECTION 2
INTRODUCTION

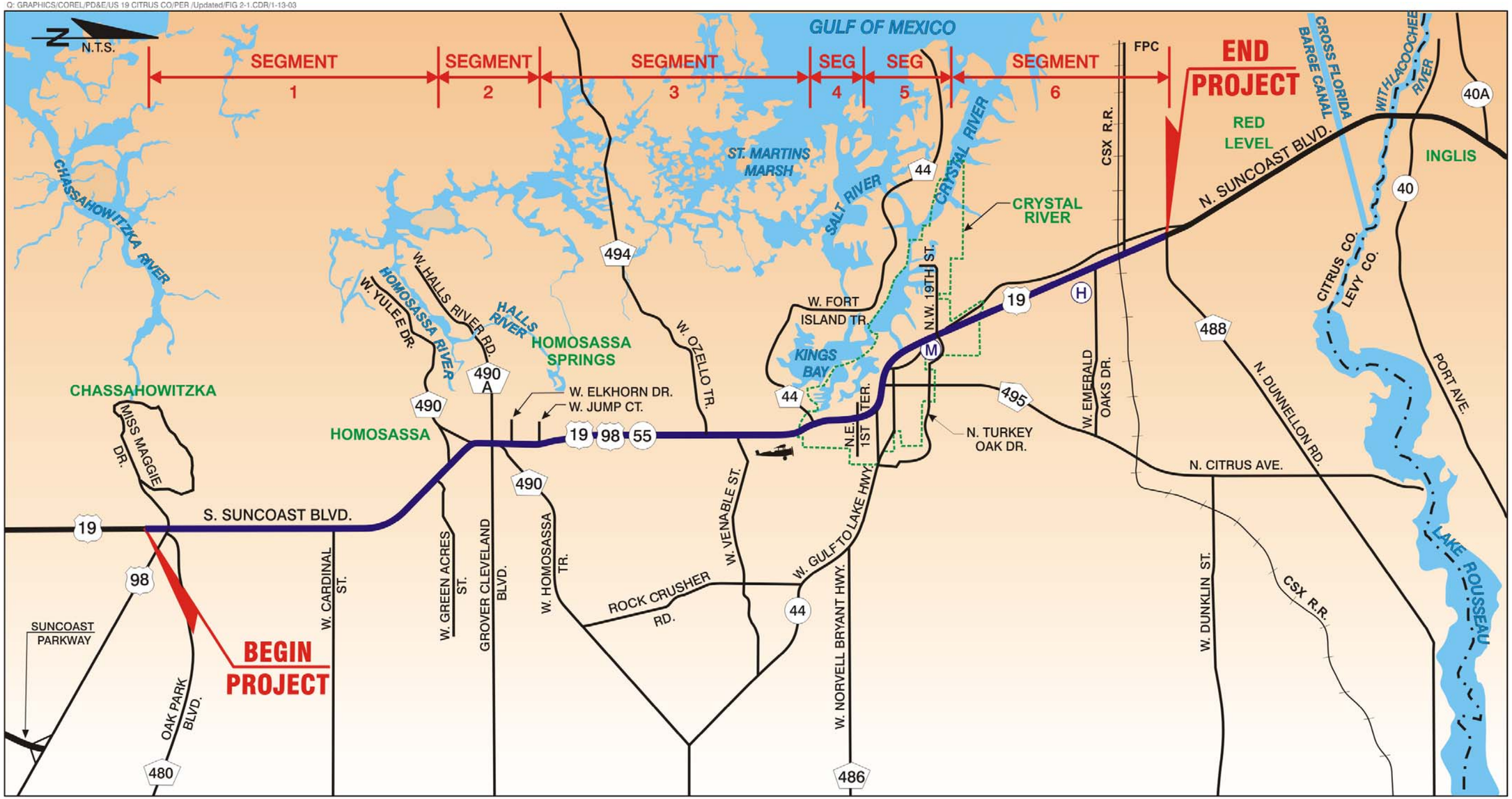
The FDOT conducted a PD&E Study for improvement alternatives along US 19 (SR 55) from south of US 98 (milepost 1.730) to North Dunnellon Road (CR 488) (milepost 20.742) in Citrus County, Florida. The project location map (Figure 2-1) illustrates the location and limits of the PD&E Study.

2.1 PURPOSE

The purpose of the PD&E Study was to provide documented environmental and engineering analyses to assist the FDOT and the Federal Highway Administration (FHWA) in reaching a decision on the type, location and conceptual design of the necessary improvements, in order to accommodate future traffic demand in a safe and efficient manner. The PD&E Study also satisfied the requirements of the National Environmental Policy Act (NEPA) and other Federal requirements in order to qualify the project for federal-aid funding of future development phases of the project.

This Study documents the need for the improvements, and presents the procedures utilized to develop and evaluate various improvement alternatives. Information relating to the engineering and environmental characteristics essential for alternatives and analytical decisions were collected. Design criteria have been established and preliminary alternatives have been developed. The comparison of alternatives was based on a variety of parameters utilizing a matrix format. This process identified the alternative that would have minimal impacts, while providing the necessary improvements. **The design year for the analysis is 2025.**

Q: GRAPHICS/COREL/PD&E/US 19 CITRUS CO/PER /Updated/FIG 2-1.CDR/1-13-03



LEGEND

- US 19 Project Limits
- Crystal River Airport
- Crystal River City Limits
- (H) Seven Rivers Community Hospital
- (M) Crystal River Mall

US 19 (SR 55)
PD&E STUDY
From South of US 98 to CR 488
Citrus County, Florida

PROJECT LOCATION MAP

WPI SEG NO: 405822 1
FAP: 1852 007 P

FIGURE 2-1

2.2 PROJECT DESCRIPTION

The PD&E Study limits encompass the portion of US 19 from south of US 98 to North Dunnellon Road (CR 488) in western Citrus County (Sections 1, 12, 13, 24, and 25 of Township 20 South, Range 17 East; Sections 3, 10, 15, 22, 26, 27, 34, and 35 of Township 19 South, Range 17 East; Sections 5, 6, 8, 17, 20, 21, 22, 27, 28, and 34 of Township 18 South, Range 17 East; Sections 30 and 31 of Township 17 South, Range 17 East; and Section 25 of Township 17 South, Range 16 East). The total length of the Study is approximately 18.8 miles (mi). US 19 is primarily a north/south rural principal arterial which follows the West Coast of Florida. Within the project limits, US 19 is part of the National Highway System (NHS) and the Florida Intrastate Highway System (FIHS). The facility serves as a major evacuation route for residents in Citrus County.

For the purposes of evaluating improvement alternatives, the project was divided into six segments based on the existing and future land use, projected traffic volumes for the design year 2025, existing typical sections and available existing ROW. The project segments are as follows:

Segment 1: South of US 98 to West Green Acres Street; 4.86 mi
Segment 2: West Green Acres Street to West Jump Court; 2.07 mi
Segment 3: West Jump Court to West Fort Island Trail (CR 44); 4.65 mi
Segment 4: West Fort Island Trail (CR 44) to NE 1st Terrace; 0.86 mi
Segment 5: NE 1st Terrace to Turkey Oak Drive; 2.05 mi
Segment 6: Turkey Oak Drive to North Dunnellon Road (CR 488); 4.31 mi

SECTION 3
NEED FOR IMPROVEMENT

The need for improvement for the proposed project has been established based on the evaluation of the following:

- Current quality of traffic operations in the study area;
- The expected future quality of traffic operations along US 19 under the No-Build Alternative;
- Traffic safety statistics for the period between 1995 and 1999;
- Consistency with local government comprehensive plans; and
- The projected socioeconomic growth within the study corridor.

3.1 TRANSPORTATION DEFICIENCIES

Capacity analyses were conducted to identify the intersections that presently or will in the future operate at a deficient level of service (LOS) if no improvements are constructed. The LOS standard specified by FDOT for future traffic conditions at intersections along US 19 is LOS B for rural sections and LOS C for communities located along the corridor (i.e., Homosassa Springs and Crystal River). This effort is documented in the Final Traffic Report: Volume 1 - Existing Conditions[1] and Final Traffic Report: Volume 2 - Future Conditions[2] prepared for this PD&E Study.

There are currently 15 signalized and four unsignalized intersections under study along the corridor. The intersections are as follows:

Signalized Intersections

- West Cardinal Street
- West Yulee Drive (CR 490)

- West Halls River Road (CR 490A)/West Grover Cleveland Boulevard
- West Homosassa Trail (CR 490)
- West Ozello Trail (CR 494)
- West Venable Street
- Crystal River Plaza
- SE 8th Avenue/West Fort Island Trail (CR 44)
- SE Kings Bay Drive
- SR 44/NE 4th Street
- NE 3rd Avenue
- North Citrus Avenue (CR 495)
- NW 6th Avenue
- NW 19th Street/Turkey Oak Drive
- West Power Line Street

In addition, a signal was installed in February 2003 at the Cypress Boulevard entrance to Sugarmill Woods. Since the installation of this signal occurred near the end of this PD&E Study, this signalized intersection was not included in the capacity analysis.

Unsignalized Intersections

- US 98/West Miss Maggie Drive
- Crystal River Mall
- Seven Rivers Community Hospital
- North Dunnellon Road (CR 488)

The existing intersection geometries are shown in Figure 3-1.

LEGEND

- Signalized intersection
- Flashing signal intersection
- Unsignalized intersection

US 19 (SR 55)
PD&E STUDY
From South of US 98 to CR 488
Citrus County, Florida

EXISTING (2001) INTERSECTION GEOMETRIES

WPI SEG NO: 405822 1
FAP: 1852 007 P

FIGURE 3-1

Q: GRAPHICS/COREL/PD&E/US 19 CITRUS CO/TRAFFIC / EXIST CONDITIONS /FIG 2-4.CDR/4/1/02

3.1.1 Summary of Deficiencies

The results of the capacity analysis of the existing (2001) traffic conditions performed for US 19 revealed that three of the fifteen signalized intersections are operating below the acceptable standard during the PM peak hour. The intersections are located in the Homosassa Springs and Crystal River city limits where the LOS standard is C. The three intersections are:

- West Halls River Road (CR 490A)/West Grover Cleveland Boulevard, LOS D during the PM peak hour;
- West Homosassa Trail (CR 490), LOS D during the PM peak hour; and
- SR 44/NE 4th Street, LOS D during the PM peak hour.

In addition, three of the four unsignalized intersections being evaluated along the corridor have at least one turning movement that is failing during peak hour conditions. The North Dunnellon Road (CR 488) intersection is the only intersection that showed no failing movements. At the US 98/West Miss Maggie Drive, Crystal River Mall and Seven Rivers Community Hospital intersections, left turns from US 19 onto the cross streets are operating at acceptable LOS during peak hour conditions. However, left turns from the cross streets onto US 19 experience delays. At the US 98/West Miss Maggie Drive and Crystal River Mall intersections, the delay for left turns from the cross streets exceeds 100 seconds per vehicle.

The existing lane geometries and signal phasing were considered in determining LOS along roadway segments between signalized intersections. Based on these results, the corridor is not currently meeting LOS standards along segments of US 19 in Homosassa Springs (West Yulee Drive to West Homosassa Trail [CR 490] both northbound and southbound), between West Venable Street and Crystal River Plaza (both northbound and southbound) and in Crystal River (SE Kings Bay Drive to North Citrus Avenue [CR 495] northbound and NE 3rd Avenue to SR 44/NE 4th Street southbound).

Given an expected increase in future traffic volumes; future conditions are expected to worsen along the corridor under the No-Build Alternative. The results of the capacity analyses conducted for the design year 2025 reveal that several signalized intersections in the Homosassa Springs and Crystal River areas are expected to operate at LOS D or F during the PM peak hour under the No-Build Alternative. These intersections include:

- West Yulee Drive (CR 490)
- West Halls River Road (CR 490A)/West Grover Cleveland Boulevard
- West Homosassa Trail (CR 490)
- SE 8th Avenue/West Fort Island Trail (CR 44)
- SR 44/NE 4th Street
- NE 3rd Avenue

In addition, a review of the LOS conditions reveals that portions of the corridor are expected to operate below the acceptable standard during the PM peak hour for the design year 2025. The overall LOS for the roadway segments from West Cardinal Street to North Citrus Avenue (CR 495) are expected to operate at a LOS F for both northbound and southbound directions. The LOS for individual segments cannot be reported due to excessive delays for a number of intersections along the corridor.

3.2 SAFETY

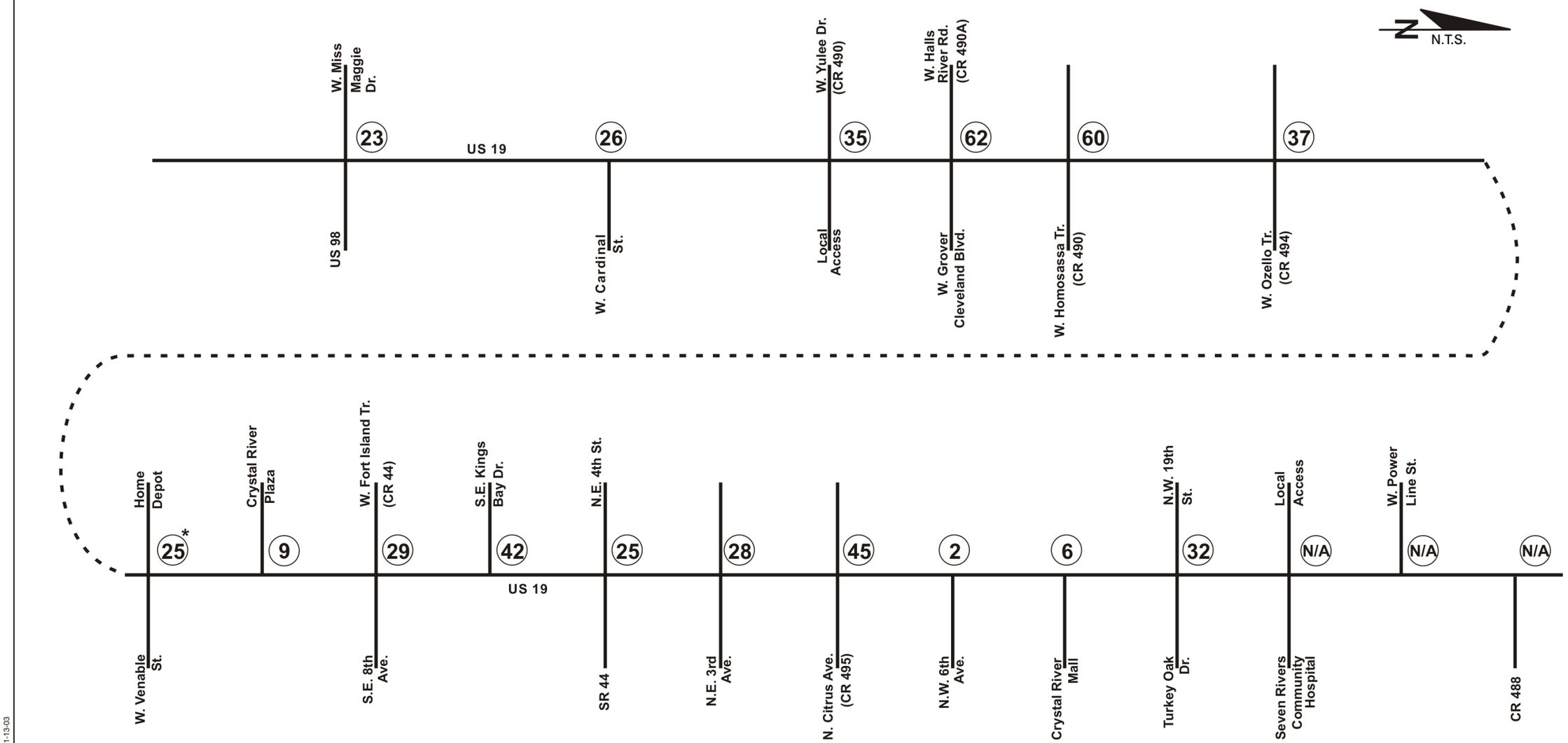
To evaluate the safety of traffic operations in the study area, crash records for the five-year period between 1995 and 1999 were obtained for the following intersections and roadway segments located within the area. Crash data was collected for the 19 spot locations being evaluated as part of this study:

- US 19/US 98/West Miss Maggie Drive
- US 19/West Cardinal Street
- US 19/West Yulee Drive (CR 490)
- US 19/West Halls River Road (CR 490A)/West Grover Cleveland Boulevard
- US 19/West Homosassa Trail (CR 490)

- US 19/West Ozello Trail (CR 494)
- US 19/West Venable Street
- US 19/Crystal River Plaza
- US 19/SE 8th Avenue/West Fort Island Trail (CR 44)
- US 19/SE Kings Bay Drive
- US 19/SR 44/NE 4th Street
- US 19/NE 3rd Avenue
- US 19/North Citrus Avenue (CR 495)
- US 19/NW 6th Avenue
- US 19/Crystal River Mall
- US 19/NW 19th Street/Turkey Oak Drive
- US 19/Seven Rivers Community Hospital
- US 19/West Power Line Street
- US 19/North Dunnellon Road (CR 488)

Information on the total number of crashes subdivided by the number of fatalities, the number of injury crashes and the number of property damage only crashes were identified from the database. In addition, the estimate of economic loss resulting from the crashes, as estimated in the FDOT database, was identified. Figure 3-2 summarizes the total number of crashes that occurred at the spot locations from 1995 to 1999.

As part of the analysis of crash data, safety ratios were also collected for spot locations within the study corridor. Safety ratios above 1.000 indicate that spot locations experience vehicle collisions above average; therefore, traffic safety at these locations may need to be improved. The following subsections describe the results from the crash data analysis for spot locations within the study corridor.



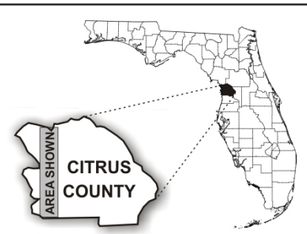
LEGEND

(3) Total number of crashes for spot locations

N/A Denotes locations with no crash data

***** Intersection has been reconfigured since 1999 due to the recent Home Depot

Note: Crashes within 0.10 mile of an intersection were assigned to the intersection.



US 19 (SR 55)

PD&E STUDY

From South of US 98 to CR 488

Citrus County, Florida

NUMBER OF CRASHES 1995-1999

WPI SEG NO: 405822 1
FAP: 1852 007 P

FIGURE 3-2

G: COREL/PD&E/US 19 CITRUS CO/PER/Updated/FIG 3-2.CDR/1-13-03

3.2.1 Spot (Intersection) Locations

According to the FDOT Highway Safety Improvement Program Guideline, Topic No. 500-000-100c[3], the definition for a spot location is 0.1 mi or less. These limits ensured that all crashes associated with the spot locations along US 19 were included in the analyses. This distance typically incorporates the turn lanes and the associated queuing effect of intersection traffic operations. Accident data was collected for the 19 spot locations being evaluated as part of this study.

It should be noted that data was not available for the intersections of US 19/Crystal River Plaza (1997), US 19/NW 6th Avenue (1996, 1997, and 1999), US 19/Crystal River Mall (1999), US 19/Seven Rivers Community Hospital (1995 to 1999), US 19/West Power Line Street (1995 to 1999) and US 19/North Dunnellon Road (CR 488) (1995 to 1999).

The majority of the crashes occurred at the US 19/West Halls River Road (CR 490A)/ West Grover Cleveland Boulevard spot location during the five-year period. There were 62 crashes reported at this location between 1995 and 1999. As a result of these crashes, there were no fatalities, 69 injuries, and 17 incidents of property damage reported. In addition, the estimate of economic loss resulting from the crashes, as estimated in the FDOT database, was $4,619,000.

As mentioned above, an area that experiences safety ratios greater than 1.000 indicates that the location experiences vehicle collisions above average; therefore, traffic safety at these locations may need to be improved. Historically, safety ratios equal to or greater than 1.000, based on the five years under study, have occurred for one or more years at the following intersections along the corridor:

- US 19/US 98/West Miss Maggie Drive
- US 19/West Cardinal Street
- US 19/West Ozello Trail (CR 494)
- US 19/SE 8th Avenue/West Fort Island Trail (CR 44)

- US 19/SE Kings Bay Drive
- US 19/SR 44/NE 4th Street
- US 19/NE 3rd Avenue
- US 19/North Citrus Avenue (CR 495)
- US 19/NW 19th Street/Turkey Oak Drive

In addition, safety ratios exceeding 1.000 have occurred at the following intersections more than once between 1995 and 1999:

- US 19/West Yulee Drive (CR 490) (1995 to 1997)
- US 19/West Halls River Road (CR 490A)/West Grover Cleveland Boulevard (1995 to 1998)
- US 19/West Homosassa Trail (CR 490) (1995 to 1998)
- US 19/West Venable Street (1996, 1997, 1999)
- US 19/Crystal River Plaza (1995, 1996)

The planned growth in Citrus County will increase the traffic demand along the US 19 corridor. As the traffic volumes and congestion continue to increase, the number of crashes can be expected to increase as well. Capacity improvements that were considered as part of this PD&E Study included widening US 19 to six lanes. In addition, the planned access management improvements would remove some conflicting traffic movements from the roadway, therefore, greatly enhancing the corridor's capacity and safety while reducing the potential for crashes.

3.3 EVACUATION

The Citrus County Comprehensive Plan 1995 – 2020[4] includes an evacuation network for Citrus County as part of a transportation model for hurricane evacuation in the Withlacoochee region. This plan designates US 19 as an evacuation route within this network. The City of Crystal River Comprehensive Plan[5] states "the hurricane

evacuation time of nine hours for the City of Crystal River will be maintained or improved throughout the planning period."

The Progress Energy (formerly Florida Power Corporation [FPC]) Crystal River Nuclear Plant, in conjunction with state and county governments, law enforcement and fire departments, has developed a comprehensive emergency management plan whereby county and state officials are notified within 15 minutes of an emergency at the Nuclear Plant. Citrus County officials may decide that protective actions are necessary, including evacuation of a six-zone area within a 10-mi radius of the Nuclear Plant. The emergency plan includes public notification by a siren, public address system, emergency vehicle loudspeakers, radio and television broadcasts, and door-to-door notification. US 19 plays a major role in the evacuation plan for persons located both north and south of the Nuclear Plant.

3.4 CONSISTENCY WITH TRANSPORTATION PLAN

The Citrus County Comprehensive Plan 1995-2020 designates US 19 as a six-lane principal arterial. The alternatives considered for the US 19 corridor are consistent with this plan. The Traffic Circulation Element of the City of Crystal River Comprehensive Plan states "roadway improvements will be needed on the arterials to maintain acceptable levels of service. US 19 will need to be upgraded to six lanes by 1995 to maintain LOS C or better." Also, the Goals, Objectives, and Policies for Traffic states "Goal 1: There will be a safe, convenient and efficient traffic circulation system throughout the City of Crystal River. Objective 1: The City will continue to monitor level of service for roads in Crystal River and should deficiencies be identified, develop plans for correcting such deficiencies in a timely manner. Policy C: The City will coordinate with FDOT to ensure that state roads which impact the City have an adequate level of service and that needed improvements are provided to maintain the adopted level of service." Therefore, the alternatives considered for the US 19 corridor are also consistent with this Plan.

The alternatives considered for the US 19 corridor are also consistent with the FIHS Modal Plan, Needs Plan Element[6]. This plan includes projects that improve safety, provide connectivity and add new capacity to relieve congestion along FIHS facilities. The FIHS Modal Plan, Needs Plan Element indicates capacity improvements are needed for US 19 by 2010.

3.5 SOCIAL AND ECONOMIC DEMANDS

Citrus County, with 583.6 square miles (sq mi) of land area, is the 47th largest county in the state. Its moderately sized land area and growing population have made Citrus County the 26th most densely populated county in Florida. Presently, Citrus County has approximately 202 persons per sq mi. According to the 2000 Census counts listed in the 2001 Florida Statistical Abstract[7], the County's population was 118,085, which represents a 26.3 percent increase over the 1990 population of 93,513, while the State of Florida as a whole grew 23.5 percent over the same period. Projected permanent population for 2020, based on the 2001 Florida Statistical Abstract projections, is 165,400, which represents a 40.1 percent increase over 2000. The Citrus County Comprehensive Plan states "population growth is largely attributed to relocation of retirees; it is not entirely driven by people of retirement age. Many people in the labor force, both skilled and unskilled, have moved into the County seeking employment. Many retirees also choose to re-enter the work force." Approximately 32.2 percent of the population is 65 years of age or older. The purchase price for homes in Citrus County was $92,851 in 2000, making it the 39th highest in the state. This and other socioeconomic information is presented in Table 3-1.

Table 3-1
Citrus County Socioeconomic Information

Statistic	Value
Population – 1990	93,513
Population – 2000	118,085
Projected population – 2020	165,400
% Increase in population – 1990-2000	26.3%
% Increase in population – 2000-2020	40.1%
Median age	52.6
% 65 and older	32.2%
% Agricultural area	13.17%
Persons per household	2.20
Average house purchase price (2000)	$92,851
Per capita income (1994)	$17,295

Source: 2001 Florida Statistical Abstract
1997 Census of Agriculture: State and County Data, Florida[8]

3.6 REFERENCES

1. Final Traffic Report: Volume 1 - Existing Conditions; US 19 from South of US 98 to CR 488; PBS&J; Tampa, Florida; May 2004.

2. Final Traffic Report: Volume 2 - Future Conditions; From South of US 98 to CR 488; PBS&J; Tampa, Florida; May 2004.

3. Highway Safety Improvement Program Guideline, Topic No. 500-000-100c; Florida Department of Transportation, Safety Office; Tallahassee, Florida; Effective Date November 4, 1991.

4. Citrus County Comprehensive Plan 1995-2020; Citrus County Department of Development Services; Lecanto, Florida; Revisions through December 14, 1999, Amended November 18, 2003.

5. City of Crystal River Comprehensive Plan; Crystal River, Florida; Adopted March 1998, Amended March 31, 2003.

6. FIHS Modal Plan, Needs Plan Element; Florida Department of Transportation, Systems Planning Office; March 2000.

7. 2001 Florida Statistical Abstract: Bureau of Economic and Business Research; University of Florida, College of Business Administration; Gainesville, Florida; 2001.

8. 2001 Florida Statistical Abstract 1997 Census of Agriculture: State and County Data; Florida.

SECTION 4
EXISTING CONDITIONS

4.1 EXISTING ROADWAY CHARACTERISTICS

4.1.1 Functional Classification

The US 19 Study corridor is functionally classified as a rural principal arterial from south of US 98 to North Dunnellon Road (CR 488).

4.1.2 Typical Sections

For the purposes of evaluating improvement alternatives, the project was divided into six segments based on the existing and future land use, projected traffic volumes for the design year 2025, existing typical sections and available ROW. The project segments are as follows:

Segment 1: South of US 98 to West Green Acres Street; 4.86 mi
Segment 2: West Green Acres Street to West Jump Court; 2.07 mi
Segment 3: West Jump Court to West Fort Island Trail (CR 44); 4.65 mi
Segment 4: West Fort Island Trail (CR 44) to NE 1st Terrace; 0.86 mi
Segment 5: NE 1st Terrace to Turkey Oak Drive; 2.05 mi
Segment 6: Turkey Oak Drive to North Dunnellon Road (CR 488); 4.31 mi

The US 19 corridor contains seven different typical sections within the project limits. The existing typical sections for each segment are described as follows:

4.1.2.1 Segment 1

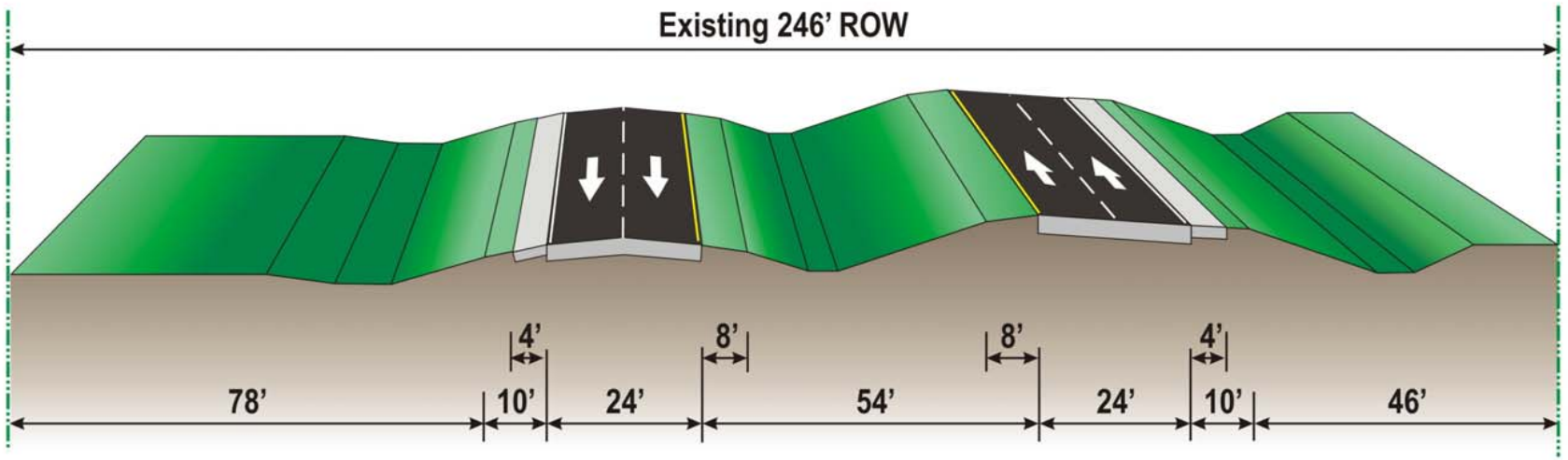
The limits of Segment 1 are from south of US 98 to West Green Acres Street. As shown in Figure 4-1, the existing typical section along US 19 is a divided four-lane rural roadway with a 54-ft depressed grass median. This section contains two 12-ft travel lanes in each direction with 8-ft grassed shoulders on the inside and 10-ft outside shoulders of which 4 ft is paved. No sidewalk is provided in this area. The existing southbound travel lanes are crowned at the center since US 19 was originally constructed as an undivided two-lane roadway. The existing northbound travel lanes were later constructed in the 1970s at a higher elevation than the existing southbound travel lanes. The northbound pavement was constructed with both travel lanes containing a 0.02 ft/ft downward cross slope to the outside. Open drainage ditches parallel both sides of the roadway. The existing ROW width for this section is 246 ft. The existing land use in this section is residential, commercial, public/semi-public, conservation and open areas with upland forest. The existing (2001) Annual Average Daily Traffic (AADT) for this section ranges from 11,800 vehicles per day (vpd) to 23,600 vpd, as shown in the Final Traffic Report: Volume 1 - Existing Conditions[1]. The existing posted speed limit in this section varies from 55 mph to 60 mph.

4.1.2.2 Segment 2

The limits of Segment 2 are from West Green Acres Street to West Jump Court. There are three different existing typical sections within Segment 2 along US 19. The first typical section, as shown in Figure 4-2, is from West Green Acres Street to West Yulee Drive (CR 490). This typical section is the same as that described for Segment 1. The existing land use in this section is mostly commercial with some residential, public/semi-public, conservation, and open areas containing wetlands or upland forests. The existing AADT for this section is approximately 28,000 vpd, as shown in the Final Traffic Report: Volume 1 - Existing Conditions. The existing posted speed limit in this section varies from 45 mph to 55 mph.

Q: GRAPHICS/COREL/PD&E/US 19 CITRUS CO/PER/FIG 4-1.CDR 8-19-02

EXISTING TYPICAL SECTION



SOUTH OF US 98 TO WEST GREEN ACRES STREET (SEGMENT 1)

US 19 (SR 55)
PD&E STUDY
From South of US 98 to CR 488
Citrus County, Florida

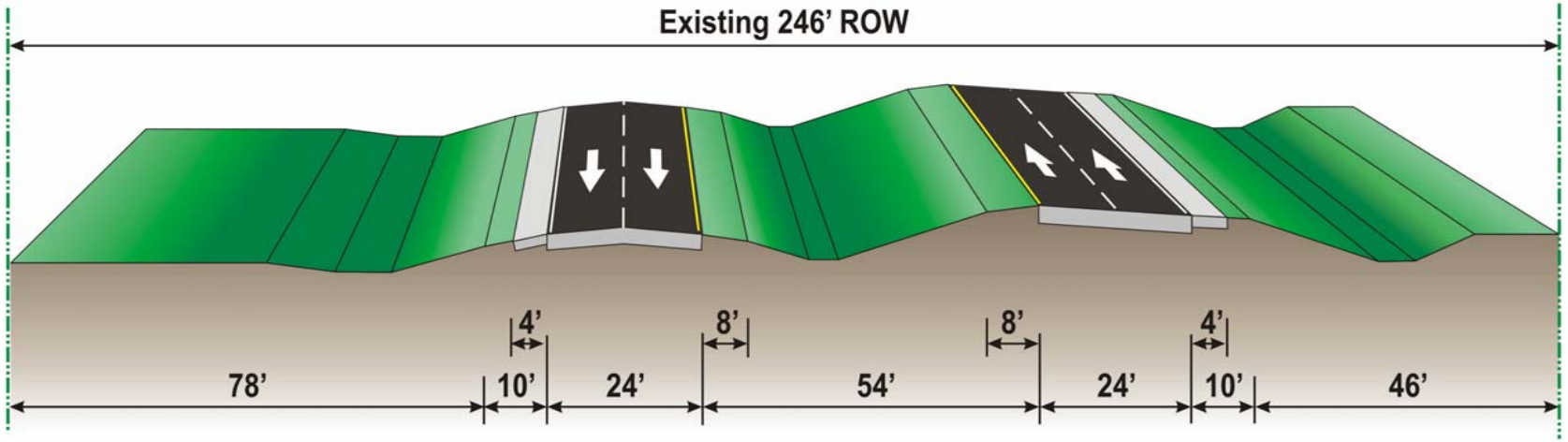
EXISTING TYPICAL SECTION

WPI SEG NO: 405822 1
FAP: 1852 007 P

FIGURE 4-1

Q: GRAPHICS/COREL/PD&E/US 19 CITRUS CO/PER/FIG 4-2.CDR 8-19-02

EXISTING TYPICAL SECTION



WEST GREEN ACRES STREET TO WEST YULEE DRIVE (CR 490)
(PORTION OF SEGMENT 2)

US 19 (SR 55)
PD&E STUDY
From South of US 98 to CR 488
Citrus County, Florida

EXISTING TYPICAL SECTION

WPI SEG NO: 405822 1
FAP: 1852 007 P

FIGURE 4-2

As shown in Figure 4-3, the existing typical section along US 19 from West Yulee Drive (CR 490) to West Elkhorn Drive is a five-lane undivided urban roadway with Type F curb and gutter on both sides of the roadway. This section contains one 12-ft travel lane and one 13.5-ft travel lane in each direction separated by a 14-ft two-way left turn lane. A 5-ft sidewalk is provided in each direction separated from the curb by an open drainage ditch. The existing ROW width is 120 ft. The existing land use in this section is mostly commercial with some residential, public/semi-public, conservation, and open areas containing wetlands or upland forests. The existing AADT for this section ranges from 27,300 vpd to 31,100 vpd, as shown in the Final Traffic Report: Volume 1 - Existing Conditions. The existing posted speed limit in this section is 45 mph.

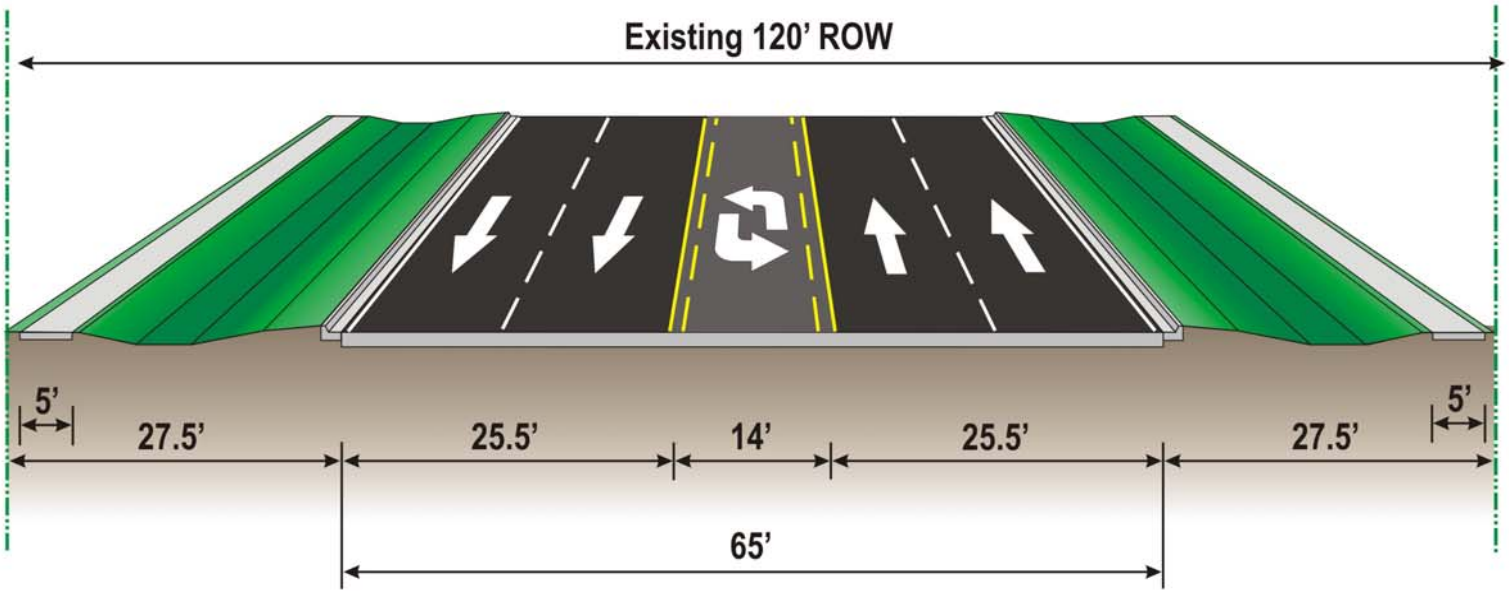
As shown in Figure 4-4, the existing typical section along US 19 from West Elkhorn Drive to West Jump Court is a divided four-lane rural roadway with a 30-ft grass median. This section contains two 12-ft travel lanes in each direction with 8-ft grassed shoulders on the inside and 10-ft outside shoulders of which 4 ft is paved. No sidewalk is provided in this area. The existing ROW width is 160 ft. The existing land use in this section is mostly commercial with some residential, public/semi-public, conservation, and open areas containing wetlands or upland forests. The existing AADT for this section is 27,300 vpd, as shown in the Final Traffic Report: Volume 1 - Existing Conditions. The existing posted speed limit in this section is 45 mph.

4.1.2.3 Segment 3

The limits of Segment 3 are from West Jump Court to West Fort Island Trail (CR 44). The existing typical section shown in Figure 4-5 is the same as the typical section described for Figure 4-4 in Segment 2, with exception to the ROW width. The existing ROW width for this segment is 200 ft. The existing land use in this section includes residential, commercial, public/semi-public, transportation and isolated industrial uses. The existing AADT for this section ranges from 27,300 vpd to 30,100 vpd, as shown in the Final Traffic Report: Volume 1 - Existing Conditions. The existing posted speed limit in this section varies from 45 mph to 55 mph.

Q: GRAPHICS/COREL/PD&E/US 19 CITRUS CO/PER/FIG 4-3.CDR/ 8-19-02

EXISTING TYPICAL SECTION



WEST YULEE DRIVE (CR 490) TO WEST ELKHORN DRIVE
(PORTION OF SEGMENT 2)

US 19 (SR 55)
PD&E STUDY
From South of US 98 to CR 488
Citrus County, Florida

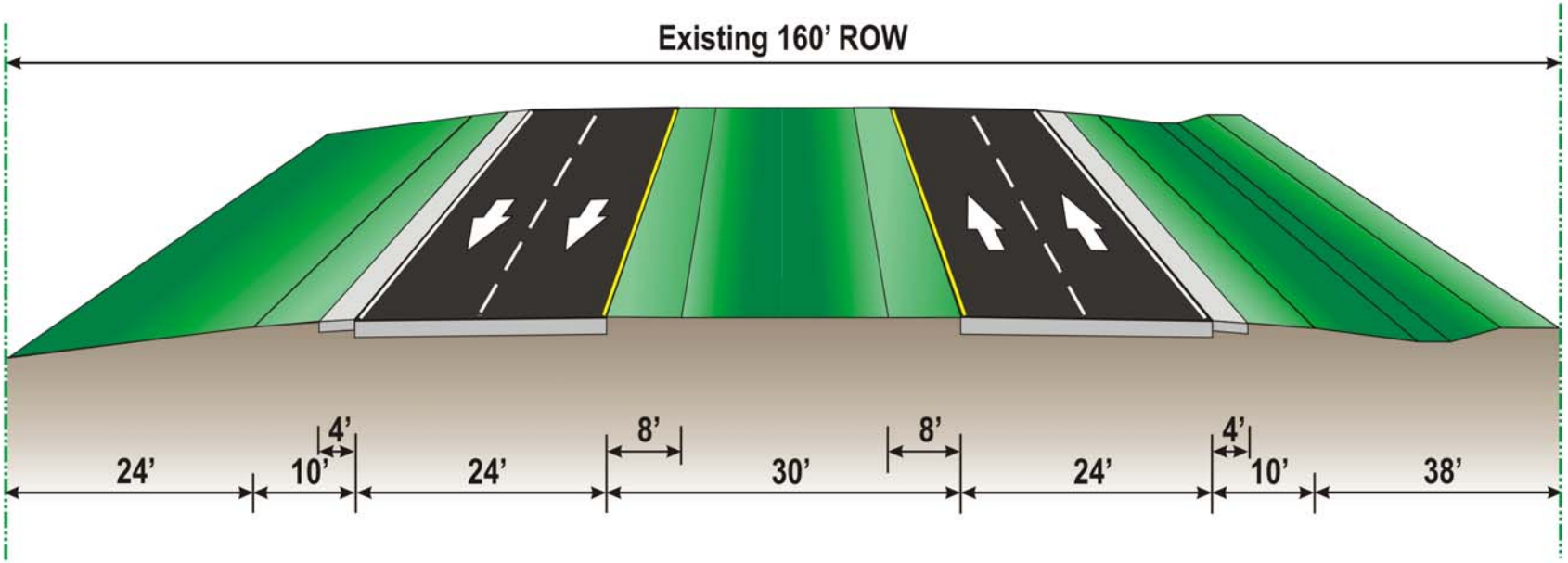
EXISTING TYPICAL SECTION

WPI SEG NO: 405822 1
FAP: 1852 007 P

FIGURE 4-3

G: COREL/PD&E/US 19 CITRUS CO/PER/FIG 4-4.CDR/10-21-02

EXISTING TYPICAL SECTION



WEST ELKHORN DRIVE TO WEST JUMP COURT
(PORTION OF SEGMENT 2)

US 19 (SR 55)
PD&E STUDY
From South of US 98 to CR 488
Citrus County, Florida

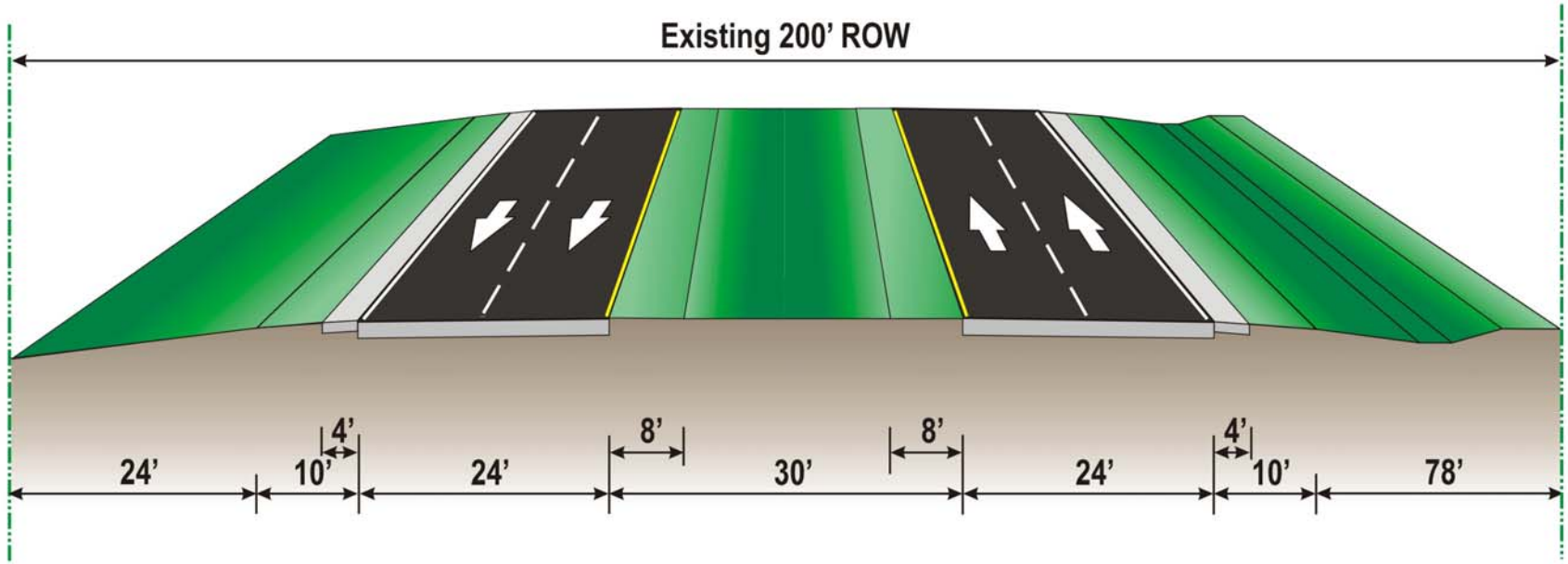
EXISTING TYPICAL SECTION

WPI SEG NO: 405822 1
FAP: 1852 007 P

FIGURE 4-4

Q: GRAPHICS/COREL/PD&E/US 19 CITRUS CO/PER/FIG 4-5.CDR/ 8-19-02

EXISTING TYPICAL SECTION



WEST JUMP COURT TO WEST FORT ISLAND TRAIL (CR 44) (SEGMENT 3)

US 19 (SR 55)
PD&E STUDY
From South of US 98 to CR 488
Citrus County, Florida

EXISTING TYPICAL SECTION

WPI SEG NO: 405822 1
FAP: 1852 007 P

FIGURE 4-5

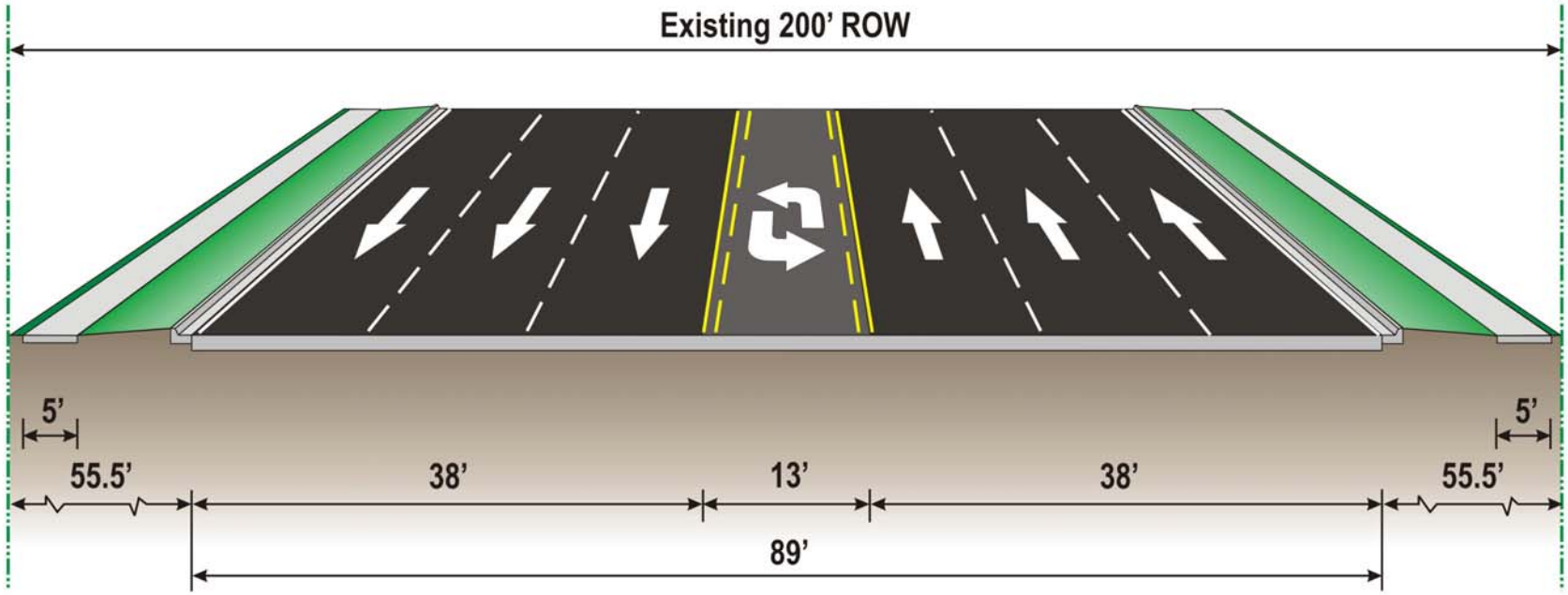
4.1.2.4 Segment 4

The limits of Segment 4 are from West Fort Island Trail (CR 44) to NE 1st Terrace. As shown in Figure 4-6, the existing typical section along US 19 is a seven-lane undivided urban roadway with Type F curb and gutter on both sides of the roadway. This section contains two 12-ft travel lanes and one 14-ft travel lane in each direction separated by a 13-ft, two-way left turn lane. A 5-ft sidewalk is provided on both sides of the roadway separated from the curb by a grass buffer strip. The existing ROW width for this section is 200 ft. The existing land use in this section is comprised mostly of commercial land use with limited residential and public/semi-public uses. The existing AADT for this section ranges from 29,600 vpd to 32,200 vpd, as shown in the Final Traffic Report: Volume 1 - Existing Conditions. The existing posted speed limit in this section varies from 40 mph to 45 mph.

4.1.2.5 Segment 5

The limits of Segment 5 are from NE 1st Terrace to Turkey Oak Drive. There are three different existing typical sections within Segment 5 along US 19. The first typical section, as shown in Figure 4-7, is from NE 1st Terrace to SR 44 and is a seven-lane undivided urban roadway with Type F curb and gutter on both sides of the roadway. This section contains two 11-ft travel lanes and one 13-ft travel lane in each direction separated by a 14-ft, two-way left turn lane. There are portions of this section where a 6-ft sidewalk is provided adjacent to the curb on both sides of the roadway. However, for the majority of this section, no sidewalk is provided. The existing ROW width for this section is 100 ft. The existing land use in this section includes commercial, public/semi-public, utility, conservation, wetlands or low intensity coastal lakes and limited residential. The existing AADT for this section is 32,200 vpd, as shown in the Final Traffic Report: Volume 1 - Existing Conditions. The existing posted speed limit in this section is 40 mph.

EXISTING TYPICAL SECTION



WEST FORT ISLAND TRAIL (CR 44) TO NE 1ST TERRACE (SEGMENT 4)

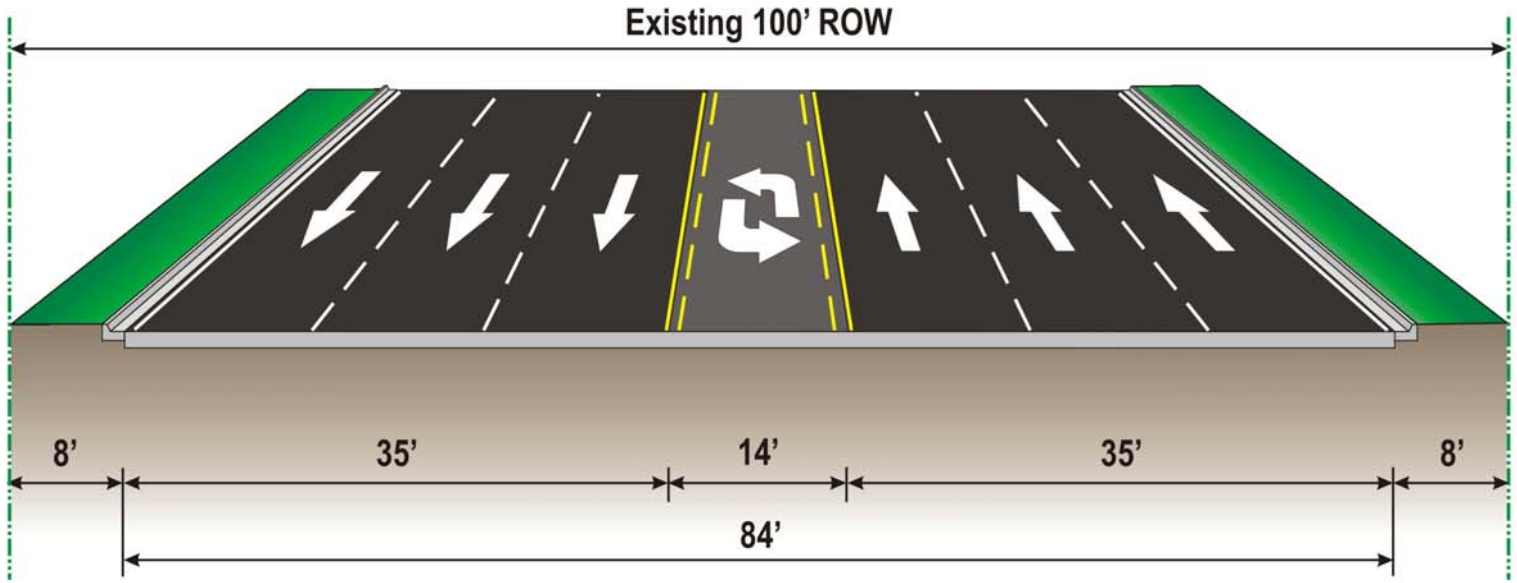
US 19 (SR 55)
PD&E STUDY
From South of US 98 to CR 488
Citrus County, Florida

EXISTING TYPICAL SECTION

WPI SEG NO: 405822 1
FAP: 1852 007 P

FIGURE 4-6

EXISTING TYPICAL SECTION



NE 1ST TERRACE TO SR 44 (PORTION OF SEGMENT 5)

US 19 (SR 55)
PD&E STUDY
From South of US 98 to CR 488
Citrus County, Florida

EXISTING TYPICAL SECTION

WPI SEG NO: 405822 1
FAP: 1852 007 P

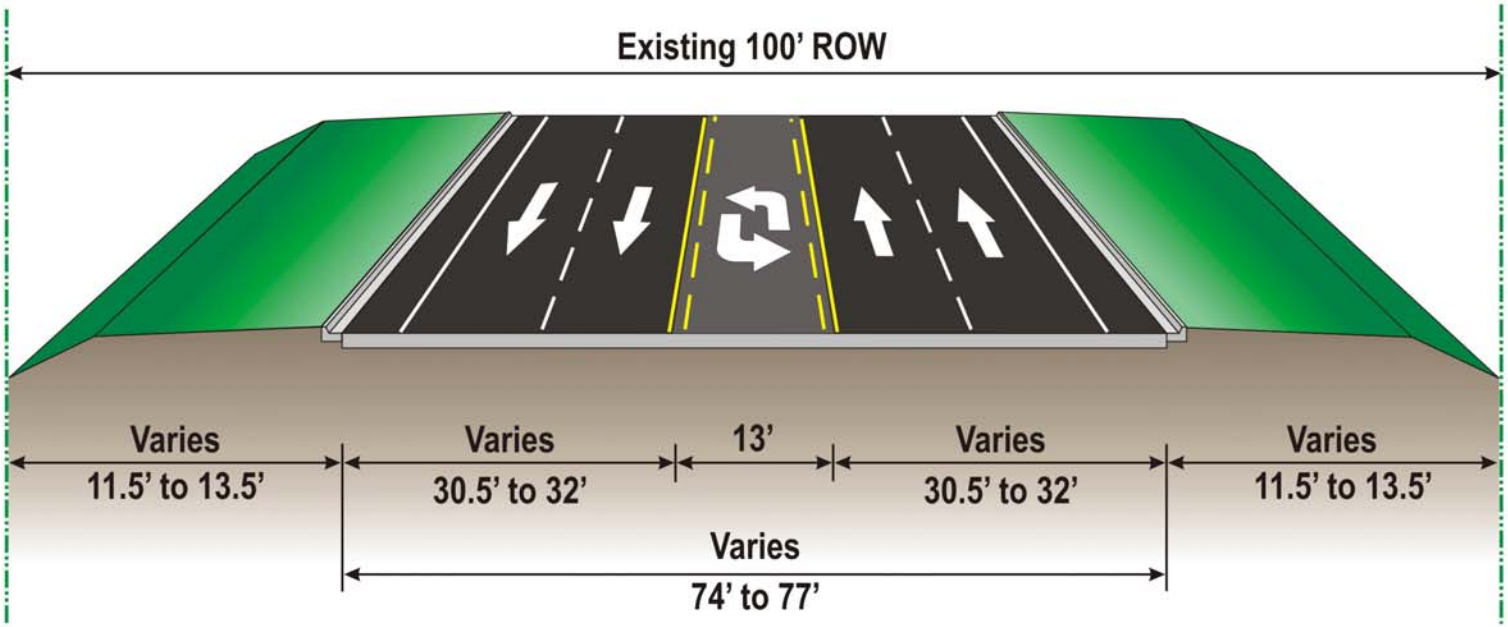
FIGURE 4-7

As shown in Figure 4-8, the existing typical section along US 19 from SR 44 to the Crystal River Mall (Station 865+00) is a five-lane undivided urban roadway with Type F curb and gutter on both sides of the roadway. This section contains two travel lanes in each direction that vary in width from 11-ft to 12-ft each separated by a 13-ft, two-way left turn lane. This section also contains additional pavement on the outside of the travel lanes that is currently striped as a shoulder. The striped shoulder varies in width from 6.5 ft to 9 ft. The overall pavement width varies from 74 ft to 77 ft for this section of US 19. No sidewalk is provided in this area. The existing ROW width is 100 ft. The existing land use in this section includes commercial, public/semi-public, utility, conservation, wetlands or low intensity coastal lakes and limited residential. The existing AADT for this section ranges from 19,600 vpd to 29,500 vpd, as shown in the Final Traffic Report: Volume 1 - Existing Conditions. The existing posted speed limit in this section varies from 40 mph to 45 mph.

The existing roadway from the Crystal River Mall (Station 865+00) to Turkey Oak Drive is a divided roadway, which transitions from the urban five-lane typical section shown in Figure 4-8 to a four-lane divided rural roadway with a 40-ft depressed grass median (see Figure 4-9). Since this section of roadway is not typical, no figure is provided. This section contains two 12-ft travel lanes in each direction and a northbound auxiliary right turn lane. This area contains curb and gutter as well as 4-ft paved shoulders and open drainage ditches. Sidewalk is provided only on the east side of US 19 in this area. The existing ROW width is 200 ft. The existing AADT for this section is 19,600 vpd, as shown in the Final Traffic Report: Volume 1 - Existing Conditions. The existing posted speed limit in this section is 45 mph.

Q: GRAPHICS/COREL/PD&E/US 19 CITRUS CO/PER/FIG 4-8.CDR/ 8-19-02

EXISTING TYPICAL SECTION



SR 44 TO CRYSTAL RIVER MALL (STA. 865+00)
(PORTION OF SEGMENT 5)

US 19 (SR 55)
PD&E STUDY
From South of US 98 to CR 488
Citrus County, Florida

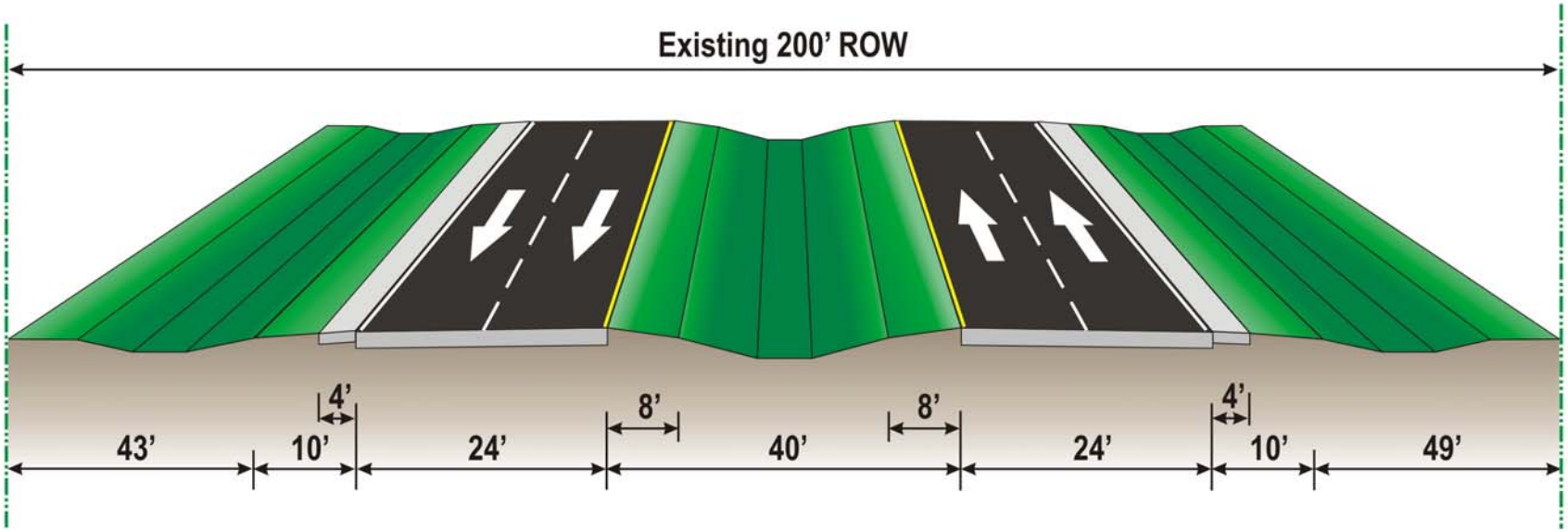
EXISTING TYPICAL SECTION

WPI SEG NO: 405822 1
FAP: 1852 007 P

FIGURE 4-8

Q: GRAPHICS/COREL/PD&E/US 19 CITRUS CO/PER/FIG 4-9.CDR/ 8-19-02

EXISTING TYPICAL SECTION



CRYSTAL RIVER MALL (STA. 865+00) TO CR 488 (SEGMENT 6)

US 19 (SR 55)
PD&E STUDY
From South of US 98 to CR 488
Citrus County, Florida

EXISTING TYPICAL SECTION

WPI SEG NO: 405822 1
FAP: 1852 007 P

FIGURE 4-9

4.1.2.6 Segment 6

The limits of Segment 6 are from Turkey Oak Drive to North Dunnellon Road (CR 488). As shown in Figure 4-9, the existing typical section along US 19 is a divided four-lane rural roadway with a 40-ft depressed grass median. This section contains two 12-ft travel lanes in each direction with 8-ft grassed shoulders on the inside and 10-ft outside shoulders of which 4 ft is paved. This section also contains open drainage ditches that parallel both sides of the roadway. No sidewalk is provided in this area. The existing ROW width is 200 ft. The existing land use in this section includes residential, public/semi-public, commercial, industrial, transportation, utility, extractive, agricultural, and open land containing upland, wetland or low intensity coastal lakes. The existing AADT for this section ranges from 11,100 vpd to 17,300 vpd, as shown in the Final Traffic Report: Volume 1 - Existing Conditions. North of CR 488, the existing AADT is 9,800 vpd. The existing posted speed limit in this section varies from 45 mph to 60 mph.

4.1.3 Pedestrian and Bicycle Facilities

The existing pedestrian facilities along the US 19 corridor are limited. Sidewalks are provided in the following locations:

- From West Halls River Road (CR 490A) to West Elkhorn Drive (both sides)
- From Godfrey Lane to West Fort Island Trail (CR 44) (east side only)
- From West Fort Island Trail (CR 44) to NW 6th Street (both sides)
- From NW 6th Street to NW 7th Avenue (west side only)

The existing designated bicycle facilities surrounding, within, or adjacent to the US 19 corridor are limited to the following locations:

- Crystal River bike path
- Off-road facilities at Homosassa Tract of the Withlacoochee State Forest and Crystal River State Buffer Preserve
- Suncoast Parkway Trail

There are no designated bicycle facilities along the US 19 roadway although paved outside shoulders, provided intermittently along the corridor, can accommodate bicyclists at the following locations:

- South of US 98 to West Yulee Drive (CR 490);
- West Elkhorn Drive to West Fort Island Trail (CR 44); and
- Crystal River Mall to North Dunnellon Road (CR 488).

4.1.4 Right-of-Way

The existing ROW for US 19 generally varies in width from 100 ft to 246 ft, with isolated areas varying up to 260 ft. Table 4-1 summarizes the existing ROW widths within the project limits on each side of the baseline survey. In some areas, the existing roadway is not centered within the existing ROW. Refer to the Recommended Alternative Concept Plans located in Appendix C for stationing.

Table 4-1
Existing ROW Data

West Side of Baseline Survey			East Side of Baseline Survey			
Station to Station		Width of ROW	Station to Station		Width of ROW	Total Width of ROW
103+00	178+50	100 ft	103+00	178+50	146 ft	246 ft
178+50	190+50	100 ft	178+50	190+50	150 ft	250 ft
190+50	215+50	100 ft	190+50	215+50	146 ft	246 ft
215+50	222+50	100 ft	215+50	222+50	155 ft	255 ft
222+50	228+50	100 ft	222+50	228+50	160 ft	260 ft
228+50	261+93	100 ft	228+50	261+93	146 ft	246 ft
261+93	272+50	100 ft	261+93	272+50	155 ft	255 ft
272+50	409+07	100 ft	272+50	409+07	146 ft	246 ft
409+07	418+07	100 ft	409+07	418+07	146 – 100 ft	246 – 200 ft
418+07	419+75	100 ft	418+07	419+75	100 ft	200 ft
419+75	442+06	60 ft	419+75	442+06	60 ft	120 ft
442+06	459+12	100 ft	442+06	459+12	60 ft	160 ft
459+12	465+85	100 ft	459+12	465+85	60 – 100 ft	160 – 200 ft
465+85	613+59	100 ft	465+85	613+59	100 ft	200 ft
613+59	618+93	120 ft	613+59	618+93	100 ft	220 ft
618+93	711+50	100 ft	618+93	711+50	100 ft	200 ft
711+50	714+74	120 ft	711+50	714+74	100 ft	220 ft
714+74	18+06	100 ft	714+74	18+06	100 ft	200 ft
18+06	23+05	100 ft	18+06	23+05	50 – 101.2 ft	150 – 201.2 ft
23+05	49+02	50 ft	23+05	49+02	50 ft	100 ft
49+02	800+84	50 ft	49+02	800+84	75 ft	125 ft
800+84	862+68	50 ft	800+84	862+68	50 ft	100 ft
862+68	863+45	50 ft	862+68	863+45	70 ft	120 ft
863+45	1135+00	130 ft	863+45	1135+00	70 ft	200 ft

4.1.5 Horizontal Alignment

The existing horizontal alignment was surveyed as part of this PD&E Study; therefore, some of the baseline survey data does not match original FDOT design plans, as-built plans and ROW maps. The alignment contains 12 Points of Intersection (PIs), or points where the alignment changes direction. The PIs incorporate curves where the Deflection Angles (Δ) are significant. When the Deflection Angle is very small, no curves are necessary. The Degree of Curvature (D) is defined as the angle subtended by a 100 ft arc. US 19 within the project limits contains three station equations, nine horizontal curves, and three PIs without curvature within the project limits. Table 4-2 summarizes the existing horizontal alignment characteristics of each. A GEOPAK printout of the baseline survey is shown in Appendix A.

Table 4-2
Existing Horizontal Alignment Characteristics

PI Station	Deflection Angle (Δ) and Direction	Degree of Curvature (D)	Curve Radius (R)	Curve Length (L)
116+18.28	00° 00’ 42.00” left	No Curve		
222+29.85	00° 00’ 47.07” right	No Curve		
311+37.90	44° 59’ 16.38” left	1° 59’ 59.65”	2,864.93 ft	2,249.50 ft
370+49.96	00° 01’ 19.84” left	No Curve		
413+88.11	45° 00’ 39.43” right	5° 00’ 00”	1,145.92 ft	900.22 ft
466+32.28	14° 19’ 20.11” left	1° 00’ 00”	5,729.58 ft	1,432.23 ft
501+28.80	14° 19’ 56.33” right	1° 00’ 00”	5,729.58 ft	1,433.23 ft
687+12.02	18° 49’ 49.75” left	1° 00’ 00”	5,729.58 ft	1,883.05 ft
734+35.02	18° 02’ 38.16” right	1° 00’ 00”	5,729.58 ft	1,804.39 ft
42+01.94	89° 36’ 23.07” left	3° 00’ 00”	1,909.86 ft	2,986.88 ft
830+28.49	67° 10’ 58.13” right	2° 09’ 59.53”	2,644.58 ft	3,100.93 ft
1121+09.86	06° 54’ 21.77” left	0° 20’ 00”	17,188.80 ft	2,071.82 ft

The three station equations along the baseline survey are as follows:

- Station 435+68.57 back = Station 425+73.19 ahead
- Station 746+51.03 back = Station 9+86.12 ahead
- Station 52.92.04 back = Station 799+52.35 ahead

Note that the area from Station 425+73.19 to 435+68.57 contains duplicate stations. When referring to these stations, the words "back" or "ahead" will be used to identify that the station is back or ahead of the station equation.

4.1.6 Vertical Alignment

The existing vertical alignment was obtained from as-built plans provided by the FDOT. The elevations along the roadway centerline range from a low point of 5.25 ft above sea level near North Citrus Avenue (CR 495) to a high point of 18.5 ft above sea level near the south end of the study corridor. A profile grade primarily consists of tangent sections with sag and crest vertical curves.

4.1.7 Drainage

A Final Location Hydraulic Report[2] (LHR) has been prepared as part of this PD&E Study. The findings of the LHR are incorporated by reference into this Preliminary Engineering Report (PER).

4.1.8 Geotechnical Data

A Final Geotechnical Report[3] has been prepared as part of this PD&E Study. The findings of the report are incorporated by reference into this PER.

4.1.9 Crash Data

Section 3.2 of this report summarizes traffic crash records for the five-year period between 1995 and 1999. Appendix E of the Final Traffic Report: Volume 1 - Existing

Conditions presents detailed information for each of the 19 intersections evaluated along the corridor.

4.1.10 Intersections and Signalization

The existing lane geometries of the intersections within the project limits are illustrated schematically in the Final Traffic Report: Volume 1 - Existing Conditions. Currently, 15 signalized intersections are located within the US 19 study corridor. In addition, three intersections are controlled with a flashing signal. The signalized intersections and the corresponding cycle lengths are provided in Table 4-3, with coordinated signal systems shaded. All of the signals located along US 19 from US 98 to West Powerline Street are maintained by Citrus County.

Table 4-3
Signalized Intersections and Cycle Lengths

Intersection Name	Existing Cycle Length	
	AM (Sec.)	PM (Sec.)
US 98	Flashing	
West Cardinal Street	80	80
West Yulee Drive (CR 490)	120	120
West Halls River Road (CR 490A)	120	120
West Homosassa Trail (CR 490)	120	120
West Ozello Trail (CR 494)	120	120
West Venable Street	80	80
Crystal River Plaza	80	80
SE 8th Avenue (CR 44)	90	90
SE Kings Bay Drive	80	85
SR 44/NE 4th Street	80	120
NE 3rd Avenue	80	85
North Citrus Avenue (CR 495)	80	85
NW 6th Avenue	120	120
Crystal River Mall	Flashing	
Turkey Oak Drive / NW 19th Street	65	65
Seven Rivers Community Hospital	Flashing	
West Powerline Street	65	65

The signalized intersections with coordinated signal systems are shaded

4.1.11 Railroad Crossings

One operational railroad crossing is located within the project limits at West Powerline Street (Station 1063+00, MP 19.945). The crossing is well marked with overhead signs, lighting and pavement markings and is owned and maintained by Progress Energy. All train traffic is freight only, primarily coal for the Crystal River Power Plant. The crossing has an estimated frequency of two trains per day with an approximate travel speed of 10 mph.

4.1.12 Transit

The Citrus County Public Transit System (CCPTS) operates as a demand response para-transit bus system. The service will pick up passengers at any location throughout the County and transport them to their planned destination(s). A 24-hour advance reservation is required from a passenger in order for CCPTS to schedule the drivers' routes. Therefore, there are no specific routes along US 19.

4.1.13 Lighting

Conventional street lighting is currently present along both sides of the study corridor from SE 8th Avenue (CR 44) to north of Turkey Oak Drive and is maintained by local governmental agencies. Street lighting is not currently provided for the remainder of the project.

4.1.14 Utilities

In order to evaluate the potential surface and subsurface utility conflicts associated with the proposed project, information was obtained concerning the location and characteristics of the existing utilities within the US 19 corridor. Each utility owner was contacted via letter requesting they identify the type and location of any existing or proposed utilities within the project corridor. The following utility organizations with

potential facilities within the Study corridor have responded to requests for existing and proposed facility information:

- Sprint Florida Inc. (Telephone)
- BellSouth Communications
- Level 3 Communications
- Williams Communication, LLC
- Homosassa Special Water District
- City of Crystal River
- Citrus County Utilities
- Ozello Water Association
- Progress Energy (Florida Power Corporation)
- Withlacoochee River Electric Coop.
- Central Florida Gas
- Bright House (formerly Time Warner Communications)

A Utility Assessment Package[4] has been prepared for this PD&E Study. The type, location and ownership of existing and proposed utilities, along with cost estimates for relocation of the existing utilities within the project corridor, are summarized in this report.

4.1.15 Pavement Condition

A flexible pavement condition survey was conducted by FDOT in 2001 for the project corridor. The pavement program provides ratings based on cracking, rideability and rutting conditions. A scale of one to ten is used in rating the pavement condition of a roadway, with a rating of six or less considered deficient. Table 4-4 identifies the pavement condition ratings for US 19.

Table 4-4
Pavement Condition Rating

Location	Milepost	Stations	Cracking Rating	Ride Rating	Rutting Rating
US 19, R-2	1.730 – 7.737	102+00 to 419+17	3.5	8.3	9.0
US 19, R-2	7.737 – 8.463	419+17 to 447+55*	9.0	7.4	7.0
US 19, R-2	8.463 – 13.539	447+55 to 715+56	3.5	8.2	9.0
US 19, R-3	13.539 – 14.631	715+56 to 36+57*	10.0	8.2	10.0
US 19, R-2	14.631 – 15.041	36+57 to 804+82*	8.5	7.4	9.0
US 19, R-2	15.041 – 15.613	804+82 to 835+02	6.5	7.9	8.0
US 19, R-2	15.613 – 20.742	835+02 to 1105+83	10.0	8.9	9.0
US 19, L-2	1.730 – 7.737	102+00 to 419+17	10.0	8.8	9.0
US 19, L-2	7.737 – 8.463	419+17 to 447+55*	10.0	8.6	9.0
US 19, L-2	8.463 – 13.539	447+55 to 715+56	8.0	7.3	9.0
US 19, L-3	13.539 – 14.631	715+56 to 36+57*	8.5	7.7	9.0
US 19, L-2	14.631 – 15.531	36+57 to 830+69*	10.0	8.8	10.0
US 19, L-2	15.531 – 16.125	830+69 to 862+06	4.5	6.7	8.0
US 19, L-2	16.125 – 20.742	862+06 to 1105+83	8.5	8.8	9.0

* Station equation occurs between station limits

4.2 EXISTING BRIDGES

There are no existing bridges or bridge culverts within the project limits.

4.3 ENVIRONMENTAL CHARACTERISTICS

4.3.1 Land Use Data

4.3.1.1 Existing Land Use

US 19 bisects Homosassa, Homosassa Springs, the City of Crystal River, and unincorporated areas of Citrus County. The existing land use within the US 19 corridor consists of residential, commercial, public/semi-public (including community facilities),

conservation and open areas containing upland forests and wetlands in both rural and urban settings. There are also limited industrial, transportation and extractive uses. The existing land use is shown in Figure 4-10.

4.3.1.2 Future Land Use

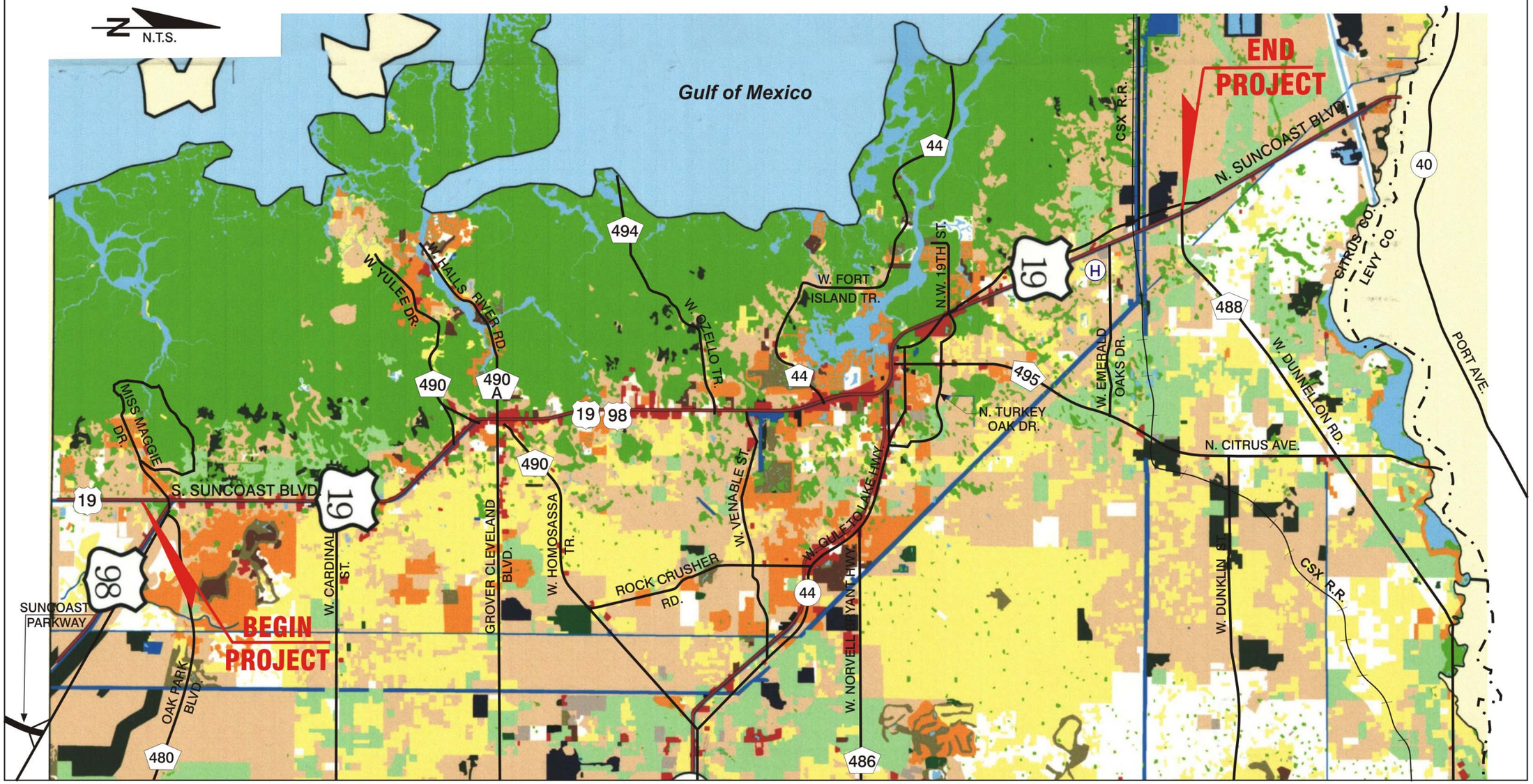
The Citrus County Comprehensive Plan 1995-2020[5] was developed to provide guidance for future planning. The Citrus County Comprehensive Plan states, "Citrus County has been one of the six fastest growing counties in Florida since 1980, and growth is expected to continue. The character of Citrus County is changing from sparsely developed rural environmental based on agricultural employment, to more populous suburban area with an increasing non-agricultural labor force. Residential, commercial, industrial, public/semi-public and agricultural land use acreage will change depending upon population growth, economic conditions and governmental decisions."

The designated land uses on the Citrus County Comprehensive Plan's 2020 Future Land Use Map, (Figure 4-11) indicate that future land uses will show an increase in residential, commercial, industrial, transportation, communication, utility, public/semi-public, recreation and open space. In addition, the Progress Energy (Florida Power) Complex – Crystal River Power Plant has a substantial amount of acreage designated for future expansion or additions to the power plant.

According to the Citrus County Comprehensive Plan, the Future Land Use Map does not depict any "Low Intensity Coastal Lakes" future land use designations adjacent to the projects proposed ROW nor even nearby. Conservation land use needs cannot be projected since additions are based on factors other than increase in population. The determination of land to be purchased for conservation purposes is based on the objectives of an agency's acquisition program.

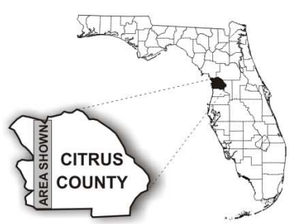
The improvements to US 19, from south of US 98 to Turkey Oak Drive, are consistent with the Citrus County Comprehensive Plan. Improvements north of Turkey Oaks Drive are limited to intersection improvements at CR 488 and signal upgrade. Any ROW

G: GRAPHICS/COREL/PD&E/US 19 CITRUS CO/ PER/Updated/FIG 4-10.CDR 1-13-03



LEGEND

- Citrus Roads Existing Landuse
- Agriculture
- Barren Land
- Commercial and Services
- Extractive
- Industrial
- Institutional
- Open Land
- Rangeland
- Recreational
- Residential High Density
- Residential Low Density < 2 Dwelling Units
- Residential Med Density 2 > 5 Dwelling Unit
- Transportation, Communication and Utilities
- Upland Forest
- Water
- Wetlands
- Other Counties



US 19 (SR 55)
PD&E STUDY
From South of US 98 to CR 488
Citrus County, Florida

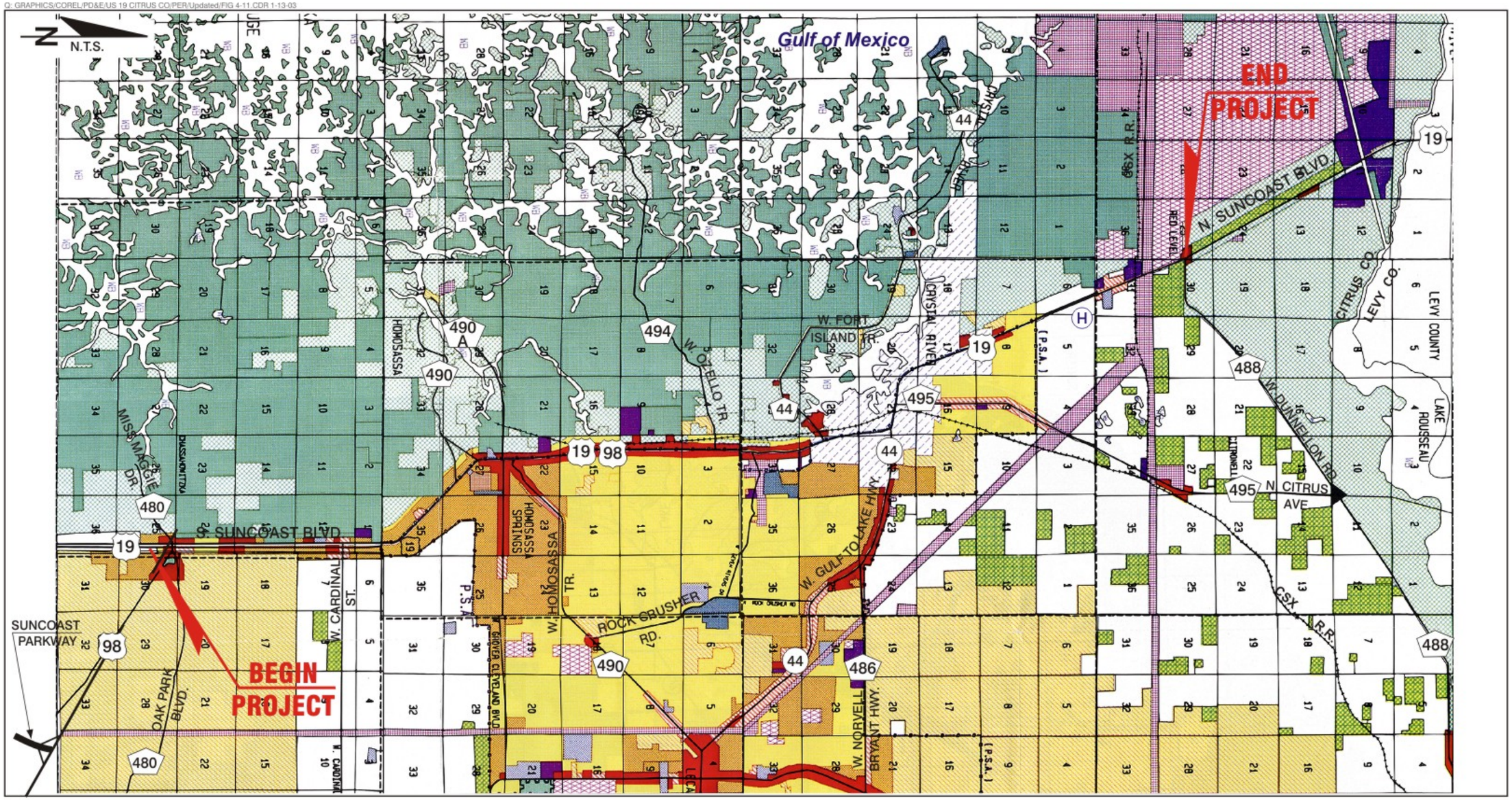
STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION

EXISTING LAND USE MAP

WPI SEG NO: 405822 1
FAP: 1852 007 P

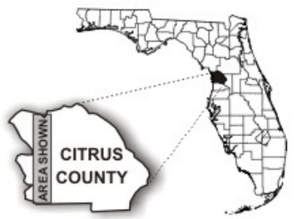
FIGURE 4-10

Q: GRAPHICS/COREL/PD&E/US 19 CITRUS CO/PER/Updated/FIG 4-11.CDR 1-13-03



LEGEND

- Low Intensity Coastal Lakes
- Rural Residential
- Low Density Residential
- Medium Density Residential
- High Density Residential
- Residential Mixed Use
- Central Ridge Residential
- Professional Service and Office
- General Commercial
- Industrial
- Extractive
- Public/Semi-Public/Institutional
- Transportation, Communication and Utilities
- Recreation
- Conservation
- Agriculture
- City



US 19 (SR 55)
PD&E STUDY
From South of US 98 to CR 488
Citrus County, Florida

2020 FUTURE LAND USE MAP

WPI SEG NO: 405822 1
FAP: 1852 007 P

FIGURE 4-11

acquisition that may be required to construct the proposed improvements is not likely to affect the area land use patterns.

US 19 is one of several designated Corridor Planning Zones in Citrus County. This requires that all development within the zones will be subject to special review criteria established in the County Land Development Code. The Citrus County Comprehensive Plan states "Special corridor provisions have been developed for US 19 from one quarter mi north of North Dunnellon Road (CR 488) to north City limits of Crystal River and from CR 490 (west of US 19) to the intersection with US 98. Population growth from new and developed residential projects has generated the need for significant commercial and office land use in the US 19 study area by year 2005. As an alternative to existing linear commercial land use along the US 19 moratorium area, several commercial nodes have been established along with additional access management policies. The remainder of the corridor is re-designated to appropriate land uses such as residential, industrial and planned residential development."

US 19 is within the Planned Service Area (PSA) for Citrus County. The Citrus County Comprehensive Plan states "PSAs represent designated areas where regional utility service (sewer and water) is available or will be available by the year 2020. Development is encouraged in the PSA because of the availability or future availability of infrastructure to accommodate future development. The PSA has proven to be an effective tool to promote compact urban development through provision of public services and facilities and encouragement of higher density and intensity of land use."

The City of Crystal River Comprehensive Plan[6] indicates that there will be a small increase in residential, commercial, and public/semi-public land uses and a decrease in vacant/other use. There is no forecast for an increase in land for industrial, educational, wetlands, transportation/communication/utilities, or wetland uses. Expending US 19 to six lanes is consistent with the City of Crystal River Comprehensive Plan.

4.3.2 Cultural Features and Community Services

4.3.2.1 Cultural Resources Assessment Survey

A Final Cultural Resources Assessment Survey[7] (CRAS) has been prepared as part of this PD&E Study. The State Historic Preservation Officer (SHPO) has concurred with the findings of the CRAS, which indicate that the proposed improvements to US 19 will have no involvement with any cultural resources, including archaeological sites and historic structures, which are listed, determined eligible, or considered potentially eligible for listing in the National Register of Historic Places[8] (NRHP). A letter of concurrence from the Florida Department of State, Division of Historic Resources is included in Appendix B. The specific findings of the CRAS are incorporated by reference into this PER.

4.3.2.2 Community Services

Community facilities and services provide a focal point for adjacent neighborhoods and communities, as well as serving the needs of surrounding areas. For the purpose of this study, community facilities include churches, cemeteries and funeral homes, parks and recreation areas, public and private schools, medical and emergency treatment facilities, fire and police stations, public buildings and facilities and other neighborhood gathering places. These community facilities are discussed below and are shown in Figures 4-12 and 4-13. For specific locations, see the Recommended Alternative Concept Plans in Appendix C.

Churches

There are 16 churches located within the study area. These churches are listed below with a number that corresponds to the churches labeled on the Community Facilities Map (Figures 4-12 and 4-13).

Q: GRAPHICS/COREL/PD&E/US 19 CITRUS CO / PER /Updated/FIG 4-12.CDR 1-13-03

SEGMENT 1

SEGMENT 2

SEGMENT 3

CHASSAHOWITZKA

HOMOSASSA

HOMOSASSA SPRINGS

MISS MAGGIE DR.

W. BURNT BRIDGE RD.

S. SUNCOAST BLVD.

98

19

490

490 A

W. BRADSHAW ST.

W. CYPRIAN CT.

W. YULEE DR.

W. ELKHORN DR.

W. JUMP CT.

W. GOSHAWK LN.

19 98 55

W. VETERANS DR.

W. GOODMAN LN.

MOOSE LN.

494

W. OZELLO TR.

MATCH LINE FIGURE 4-14

W. CARDINAL ST.

W. GREEN ACRES ST.

GROVER CLEVELAND BLVD.

W. HOMOSASSA TR.

ROCK CRUSHER RD.

BEGIN PROJECT

N.T.S.

LEGEND

- US 19 Project Limits
- Crystal River Airport
- Crystal River City Limits
- Seven Rivers Community Hospital
- Crystal River Mall
- Church
- School
- Park and Recreational Facility
- Cemetery and Funeral Home
- Public Facility
- Police Station
- Fire Station

CITRUS COUNTY

US 19 (SR 55)
PD&E STUDY
From South of US 98 to CR 488
Citrus County, Florida

COMMUNITY FACILITIES MAP

WPI SEG NO: 405822 1
FAP: 1852 007 P

FIGURE 4-12

G:COREL/PD&E/US 19 CITRUS CO/PER 2003/FIG 4-13.CDR/10-1-03

SEGMENT 3
SEGMENT 4
SEGMENT 5
SEGMENT 6

RED LEVEL

N.T.S.

SALT RIVER
CRYSTAL RIVER
CITY OF CRYSTAL RIVER
CSX R.R.
W. POWERLINE ST.
W. EMERALD OAKS DR.
N.W. 19TH ST.
W. FORT ISLAND TR.
KINGS BAY
S.E. 5TH TER.
N.E. 1ST TER.
W. VENABLE ST.
N. TURKEY OAK DR.
W. GULF TO LAKE HWY.
N. DUNNELLON RD.

19
44
55
98
488
495
16

END PROJECT

MATCH LINE FIGURE 4-13

N.W. 6TH AVE.
N.W. 3RD AVE.
N.W. 2ND AVE.
N.W. 1ST AVE.
N. CITRUS AVE.
N.E. 2ND AVE.
N.E. 3RD AVE.
N.E. 7TH AVE.
N.E. 8TH AVE.
N.E. 3RD St.
CRYSTAL ST.
N.E. 11TH ST.
CRYSTAL RIVER
CITY LIMITS

LEGEND

- US 19 Project Limits
- Crystal River Airport
- Crystal River City Limits
- Seven Rivers Community Hospital
- Crystal River Mall
- Church
- School
- Park and Recreational Facility
- Cemetery and Funeral Home
- Public Facility
- Police Station
- Fire Station

CITRUS COUNTY

US 19 (SR 55)
PD&E STUDY
From South of US 98 to CR 488
Citrus County, Florida

COMMUNITY FACILITIES MAP

WPI SEG NO: 405822 1
FAP: 1852 007 P

FIGURE 4-13

1. St. Thomas the Apostle Church
2. Suncoast Baptist Church
3. Christian Center Church
4. New Covenant Church
5. Solid Rock Baptist Church
6. St. Benedict Catholic Church
7. St. Timothy Lutheran Church
8. First Presbyterian Church
9. Bailey Temple Church of God in Christ
10. Church of Christ
11. House of God
12. Fountain of Life Restoration Ministries
13. Church of Christ
14. First Baptist Church
15. Crystal River United Methodist
16. New Life Christian Center

Cemeteries and Funeral Homes

The Wilder-Foundation Funeral Home, located west of US 19 just north of West Green Acres Street, and the Stage Stand Cemetery, east of US 19 north of West Bradshaw Street, are both within Segment 2. The Strickland Funeral Home is located just south of SE 8th Street, east of US 19 in Segment 3. In Segment 5, on the corner of NE 3rd Street and NE 3rd Avenue, is the Crystal River Cemetery.

Parks and Recreation Areas

There are several parks and recreation areas within the study area. Several of these areas are also conservation areas, preserves and/or refuges. Each of the areas that are adjacent to US 19 are listed below with a number that corresponds to the parks and recreation areas labeled on the Community Facilities Map (Figures 4-12 and 4-13).

1. Homosassa Tract (Homosassa Wildlife Management Area) of the Withlacoochee State Forest (Segments 1 and 2)
2. Chassahowitzka National Wildlife Refuge (Segment 1)
3. Homosassa Springs State Wildlife Park (Segment 2)
4. Crystal River bike path (Segment 5)
5. Bicentennial Park\Creative Playground (Segment 5)
6. Crystal River State Buffer Preserve (Segment 5)

The existing Crystal River bike path is located north and south of US 19 between NE 2nd Avenue and North Citrus Avenue (CR 495) but does not have a marked crossing at US 19. These parcels were originally used as a transportation corridor for the railroad. Since the bike path is still being used as a transportation corridor, the original use has not changed, and therefore Section 4(f) would not apply.

Schools

There are four schools (three public and one private) located within one mile of the study area. These schools are listed below with a number that corresponds to the schools labeled on the Community Facilities Map (Figure 4-13). Bussing is currently used to transport children to these schools. There are designated school zones located along US 19 and SR 44 which serve the Crystal River Middle School. The school zone on US 19 begins near NE 2nd Street and ends south of NE 3rd Avenue. The school zone on SR 44 begins east of NE 7th Avenue and ends at the US 19 intersection.

1. Crystal River Primary School
2. Crystal River Middle School
3. Crystal River High School
4. West Coast Christian School

Medical Facilities

There are numerous privately owned medical and dental facilities along with several eye clinics throughout the project corridor. These facilities are depicted on the Recommended Alternative Concept Plans in Appendix C. The Seven Rivers Community Hospital is south of West Emerald Oaks Drive, east of US 19 in Segment 6. None of these facilities were identified as potentially sensitive to vibration caused during construction. However, if during final design it is determined that provisions to control vibration are necessary, the project's construction provisions can be modified as needed.

Fire and Police Stations

In Segment 2, the Homosassa Volunteer Fire Department Station No. 91 is located on Homosassa Trail (CR 490); 0.2 mi east of US 19, and the Sheriff's Substation Coastal Region Community Resource Office is located on Grover Cleveland Boulevard; 0.4 mi east of US 19. In downtown Crystal River, east of US 19, are the Crystal River Fire Department, located on NW 3rd Avenue, and the Sheriff's Station on NW 2nd Avenue. The fire and police stations are shown in Figures 4-12 and 4-13.

Public Facilities

There are 10 public facilities within the study area and are listed below with a number that corresponds to the public facilities labeled on the Community Facilities Map (Figures 4-12 and 4-13).

1. United States Coast Guard Auxiliary, Homosassa Flotilla 15-04
2. United States Post Office
3. Homosassa Springs Chamber of Commerce
4. V.F.W.
5. Moose Lodge
6. Florida National Guard Armory
7. Boys and Girls Club of Citrus County

8. Crystal River City Hall
9. Citrus County Health Department
10. Crystal River Chamber of Commerce

4.3.2.3 Potential Section 4(f) Properties

In accordance with Section 4(f) of the Department of Transportation Act of 1966 (Title 49, USC, Section 1653 (f), amended and recodified in Title 49, USC, Section 303, in 1983), the project was examined for possible Section 4(f) properties. These properties are further discussed in Section 9.14.11.

4.3.3 Natural and Biological Features

4.3.3.1 Wetlands

A Final Wetland Evaluation Report[9] (WER) has been prepared as part of this PD&E Study. The findings of the WER are incorporated by reference into this PER.

4.3.3.2 Listed Species

A Final Threatened and Endangered Species Evaluation[10] (TESE) has been prepared as part of this PD&E Study. The findings of the TESE are incorporated by reference into this PER.

4.3.4 Potential Hazardous Materials and Petroleum Products Contaminated Sites

A Final Contamination Screening Evaluation Report[11] (CSER) has been prepared as part of this PD&E Study. The findings of the CSER are incorporated by reference into this PER.

4.4 REFERENCES

1. Final Traffic Report: Volume 1 - Existing Conditions; From South of US 98 to CR 488; PBS&J; May 2004.

2. Final Location Hydraulic Report; PBS&J; Tampa, Florida; May 2004.

3. Final Geotechnical Report; Tierra, Inc.; Tampa, Florida; May 2004.

4. Utility Assessment Package; Florida Department of Transportation, Utility Office; Tampa, Florida; February 19 2003.

5. Citrus County Comprehensive Plan 1995-2020; Citrus County Department of Development Services; Lecanto, Florida, with revisions through December 14, 1999, Amended November 18, 2003.

6. City of Crystal River Comprehensive Plan; Crystal River, Florida; adopted March 1998, Amended March 31, 2003.

7. Final Cultural Resource Assessment Survey; ACI; Tampa, Florida; May 2004.

8. National Register of Historic Places; Division of Archive, History and Records Management; Tallahassee, Florida; 1972.

9. Final Wetland Evaluation Report; PBS&J; Tampa, Florida; May 2004.

10. Final Threatened and Endangered Species Evaluation; PBS&J; Tampa, Florida; May 2004.

11. Final Contamination Screening Evaluation Report; PSI; Tampa, Florida; May 2004.

SECTION 5
DESIGN CRITERIA

In order for the proposed roadway improvements to fulfill the objective of accommodating motorized vehicles, and where appropriate, pedestrians and bicyclists in a safe and efficient manner, the proposed typical sections must adhere to specific design standards. The FDOT Plans Preparation Manual (PPM)[1], American Association of State Highway and Transportation Officials (AASHTO) – A Policy on Geometric Design of Highway Streets[2], and the District Seven Straight Line Diagram (SLD) was used as the reference for development of proposed typical section design criteria for this project. Table 5-1 presents the pertinent criteria used for this effort and their respective values or designations. A discussion of each criterion follows below.

5.1 FUNCTIONAL CLASSIFICATION

The functional classification of a roadway affects elements of design such as design speed, LOS requirements, and local access accommodations. The US 19 study corridor is classified as a rural principal arterial from south of US 98 to North Dunnellon Road (CR 488). In addition, the cross streets, US 98 and SR 44 are classified as principal arterials. West Cardinal Street, West Grover Cleveland Boulevard, West Homosassa Trail (CR 490 east), North Citrus Avenue (CR 495) and North Dunnellon Road (CR 488) are classified as major collectors. West Yulee Drive (CR 490), West Halls River Road (CR 490A), West Ozello Trail (CR 494) and West Fort Island Trail (CR 44) are classified as minor collectors. All of the remaining cross streets are classified as "others." The "others" category includes residential, local and dead-end streets.

Table 5-1
US 19 Proposed Typical Section Design Criteria

Criteria	Value/Designation	Documentation
Functional Classification: US 19	Rural Principal Arterial – Other	SLD
Access Classification: US 19	Class 3, Class 4 and Class 6	PPM, Access Management Rule 14-97
Design Speed: Urban (Center Turn Lane) *** Urban (Divided) Rural Ramp Flyover	 40 mph 50 mph 70 mph 35 mph (minimum)	 PPM Section 1.9, Table 1.9.2
Lane Width: Mainline Travel Lane Bicycle Lane Ramp or Flyover	 12.0 ft 4.0 ft (Urban) 5.0 ft paved shoulder (Rural) 15.0 ft	 PPM Tables 2.1.1, 2.1.2 & 2.1.3
Median Width: Urban* Rural	 22.0 ft 40.0 ft	 PPM Table 2.2.1
Roadway Shoulder Width: Roadway Outside Median or Left Ramp Flyover (Single Lane)** Outside Median or Left	 8.0 ft, 10.0 ft, 12.0 ft total with 5.0 ft paved 8.0 ft, 10.0 ft, 12.0 ft total with 0.0 ft paved 6.0 ft with 5.0 ft paved 6.0 ft with 2.0 ft paved	 PPM Table 2.3.2 (Based on low, medium or high volume roadway)
Sidewalk Width: Standard Adjacent to Curb and Gutter	 5.0 ft 6.0 ft	 PPM Section 8.3.1
Border Width: Travel Lane at Curb Bike Lane at Curb Flush Shoulder	 14.0 ft (Urban Divided) 12.0 ft (Center Turn Lane) 12.0 ft (Urban Divided) 10.0 ft (Center Turn Lane) 40.0 ft	 PPM Table 2.5.1 Table 2.5.2

Table 5-1 (Cont.)
US 19 Proposed Typical Section Design Criteria

Criteria	Value/Designation	Documentation
Clear Zone: Urban Rural	 N/A 36.0 ft	 PPM Table 2.11.9
Horizontal Alignment: Maximum Curvature Maximum Rate Superelevation Maximum Deflection w/o Curve	 10° 45' 00" (Center Turn Lane) 6° 30' 00" (Urban Divided) 3° 30' 00" (Rural) 0.05 (Urban), 0.10 (Rural) 2° 00' 00" (Center Turn Lane) 1° 00' 00" (Urban Divided) 0° 45' 00" (Rural)	 PPM Table 2.8.1a & 2.8.3 Table 2.9.1 & 2.9.2
Vertical Alignment: Maximum Grades US 19 (Flat Terrain) Ramps Sag Vertical Curve K Value Crest Vertical Curve K Value Maximum Grade Difference w/o Vertical Curve	 7% (Center Turn Lane) 6% (Urban Divided) 3% (Rural) 4% to 6% 64 (Center Turn Lane) 96 (Urban Divided) 181 (Rural) 70 (Urban Undivided) 136 (Urban Divided) 401 (Rural) 0.8% (Center Turn Lane) 0.6% (Urban Divided) 0.2% (Rural)	 PPM Table 2.6.1, 2.6.2, 2.8.5 & 2.8.6
Stopping Sight Distance: Grades of 2% or Less	 305 ft (Center Turn Lane) 425 ft (Urban Divided) 730 ft (Rural)	 PPM Table 2.7.1

* Design Speed ≤ 50 mph and Posted Speed ≤ 45 mph
** Width of shoulder varies depending upon horizontal curve geometry along the bridge.
*** Requires approval of State Highway Engineer

5.2 FLORIDA INTRASTATE HIGHWAY SYSTEM

US 19 is included in the FIHS network, which is part of the state highway system. The FIHS, created in 1990 by the Florida Legislature, is comprised of interconnected limited and controlled access roadways, including interstate highways, Florida's Turnpike, selected urban expressways and major arterial highways. It is a statewide transportation network that provides for high-speed and high-volume traffic movements within the state. The primary function of the system is to serve interstate and regional commerce and long distance trips. As such, the facility is held to higher standards than other state roads.

5.3 ACCESS CLASSIFICATION

The objective of the Access Classification system is to protect the public safety, enhance the mobility of people and goods, and preserve the functional integrity of the highway system. The current access management classification for US 19 from the Hernando County line to West Fort Island Trail (CR 44) and from NW 7th Avenue in Crystal River to the Levy County line is Class 3. This classification is distinguished by restrictive medians and maximum distance between traffic signals and median openings. Access Class 3 is used where existing land use and roadway sections have not completely built out to the maximum land use or roadway capacity, or where the probability of significant land use change in the future is high. The access class standards for a Class 3 roadway are shown in Table 5-2. The existing median opening locations for the US 19 corridor are shown in Section 6.3.2, Table 6-2 of this report. Refer to the Recommended Alternative Concept Plans in Appendix C for location of streets and median openings.

Table 5-2
Access Class Standards

Standard	Access Class 3	Access Class 4	Access Class 6
Facility Design Features (Median Treatment & Access Roads)	Restrictive	Non-Restrictive	Non-Restrictive
Minimum Connection Spacing - With posted speed over 45 mph - With posted speed at or less than 45 mph	 660 ft 440 ft	 660 ft 440 ft	 440 ft 245 ft
Minimum Directional Median Opening Spacing	1,320 ft	N/A	N/A
Minimum Full Median Opening Spacing	2,640 ft	N/A	N/A
Minimum Signal Spacing	2,640 ft	2,640 ft	1,320 ft

From West Fort Island Trail (CR 44) to SR 44/NE 4th Street, the current access management classification is Class 6. SR 44 east of US 19 is also classified as Class 6. Access Class 6 applies to roadways where the existing land use and roadway sections are built out to a greater extent, and where the probability of major land use changes is not as high as those roadway segments classified as Access Class 3 or 4. These highways are distinguished by existing or planned non-restrictive medians and less restrictive connection and signal spacing. The standards for a Class 6 roadway are shown in Table 5-2.

US 98 east of US 19 as well as US 19 from SR 44/NE 4th Street to NW 7th Avenue is classified as Access Class 4. These facilities are controlled access highways where direct access to abutting land will be controlled to maximize the operation of the through movement. Access Class 4 applies to roadways where the existing land use and roadway sections have not completely built out to the maximum land use or roadway capacity or where the probability of significant land use change in the near future is high. These highways are distinguished by existing or planned non-restrictive medians and somewhat restrictive connection spacing. The standards for a Class 4 roadway are shown in Table 5-2.

5.4 REFERENCES

1. Plans Preparation Manual (English); Florida Department of Transportation; Tallahassee, Florida; January 2002.

2. AASHTO-A Policy on Geometric Design of Highways and Streets; American Association of State Highway and Transportation Officials; 2001.

SECTION 6
TRAFFIC

The existing traffic conditions for the US 19 PD&E Study are addressed in the Final Traffic Report: Volume 1 - Existing Conditions[1]. Projected future (design year 2025) conditions in the study area are addressed in the Final Traffic Report: Volume 2 - Future Conditions[2]. The traffic projections for the design year (2025) considered two alternatives: 1) 2025 conditions with Suncoast Parkway Phase 2, and 2) 2025 conditions without Suncoast Parkway Phase 2 and the associated improvements necessary with each of these alternatives. The following sections present a summary of the findings from these reports.

6.1 EXISTING TRAFFIC VOLUMES

6.1.1 Traffic Counts

The recent US 19 Action Plan Update – From US 98 to Crystal River Mall[3], hereafter referred to as the Action Plan Update, was completed in July 2000. This study includes available traffic count data from 1998. In order to establish growth along the US 19 corridor over the past three years and expand the study area beyond that which was used for the Action Plan Update, additional traffic counts were conducted along the US 19 corridor and existing cross streets, where deemed necessary. These additional traffic counts were conducted in July and August 2001.

6.1.2 Annual Average Daily Traffic

The daily traffic counts were multiplied by an axle adjustment factor and a weekly seasonal adjustment factor from the 2000 Florida Traffic Information CD-ROM[4] to determine the AADT volumes. The axle adjustment factor ranged from 0.92 to 0.97, dependent on the week the traffic count was conducted. The seasonal adjustment factor also varied dependent on the week of the count, ranging from 1.07 to 1.09. The axle and

seasonal adjustment factors and documentation of the calculations and methodology to determine AADT volumes are provided in Appendices C and D of the Final Traffic Report: Volume 1 - Existing Conditions.

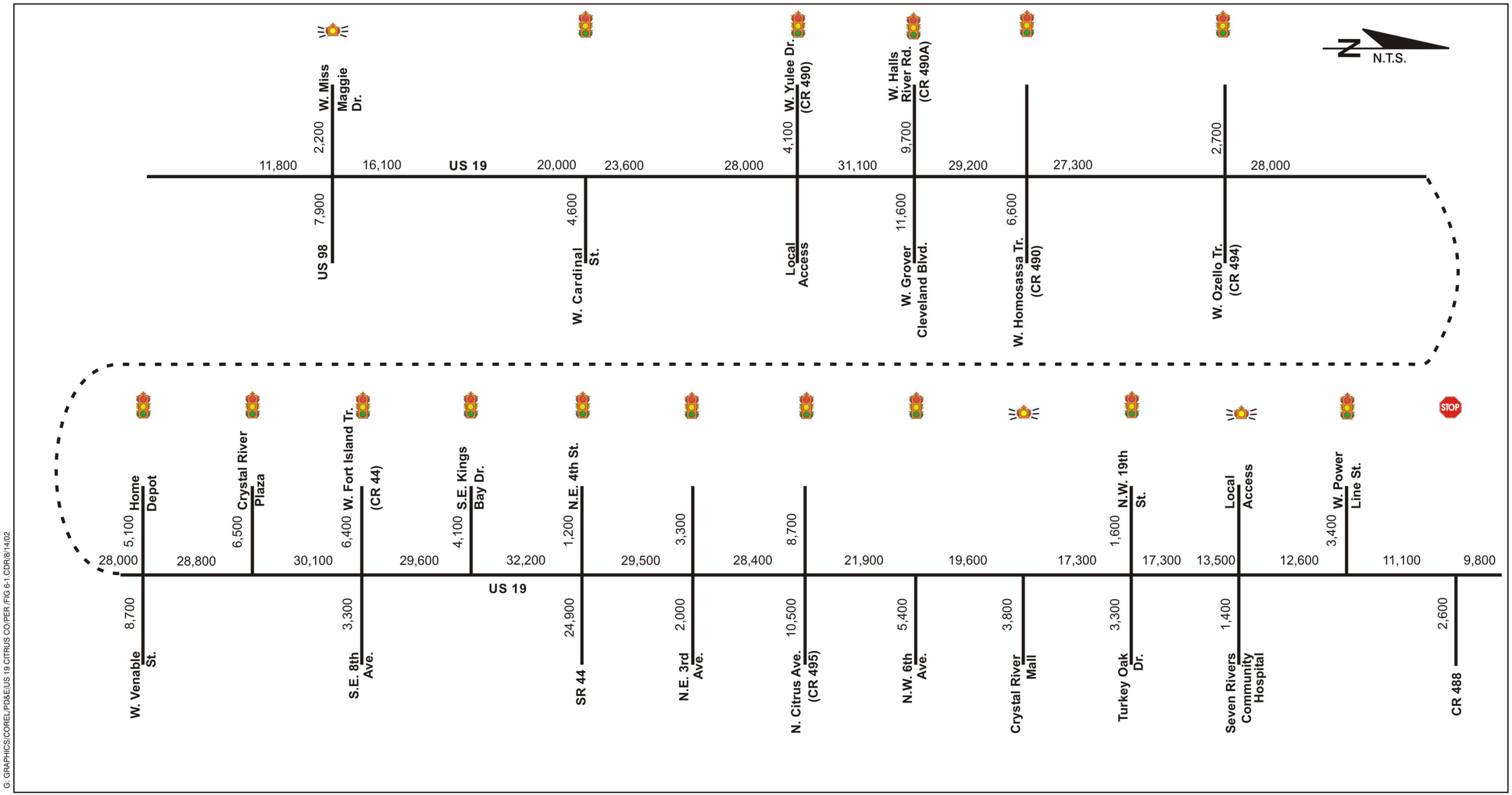
Based on the methodology developed for the PD&E Study, the AADT volumes developed from the 2001 traffic counts were compared to the 1998 AADT volumes from the Action Plan Update. The purpose of this comparison was to determine whether the existing (1998) volumes used for the Action Plan Update should be carried forward for the PD&E Study. It was agreed that a growth rate of one percent or less in AADT volumes from 1998 to 2001 meant that 1998 AADT volumes could be carried forward for 2001 existing conditions. As a result of this comparison, it was determined that the 1998 AADT volumes needed to be adjusted to use for existing conditions. This is because it was found that the growth rate from 1998 to 2001 generally exceeded ten percent along the corridor. The existing (2001) AADT volumes are depicted in Figure 6-1.

6.1.3 Peak Hour Volumes

The turning movement counts were used to determine the existing peak hour volumes that reflect traffic conditions during the 30th highest hour. The purpose of estimating existing turning movement volumes that reflect the 30th highest hour is to provide an equivalent comparison to the design hour volumes that are developed for future conditions. Appendix D of the Final Traffic Report: Volume 1 - Existing Conditions documents the methodology and calculations used to adjust the peak hour traffic volumes. Figure 6-2 displays the existing (2001) PM peak hour turning movement volumes. AM peak hour volumes were not developed, to be consistent with US 19 Action Plan Update and the agreed upon methodology for the Study.

6.1.4 Traffic Characteristics

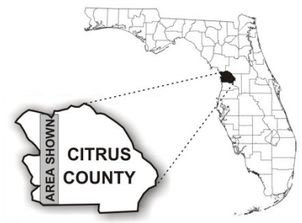
As was agreed to at the methodology meeting for the PD&E Study, the design hour (30th highest hour) K, D and T factors from the Action Plan Update were used for the PD&E Study. The corresponding K and D factors are 10.56 percent and 54.10 percent,



G: GRAPHICS/COREL/PD&E/US 19 CITRUS CO/PER./FIG 6-1.CDR/8/14/02

LEGEND

- Signalized intersection
- Flashing signal intersection
- Unsignalized intersection

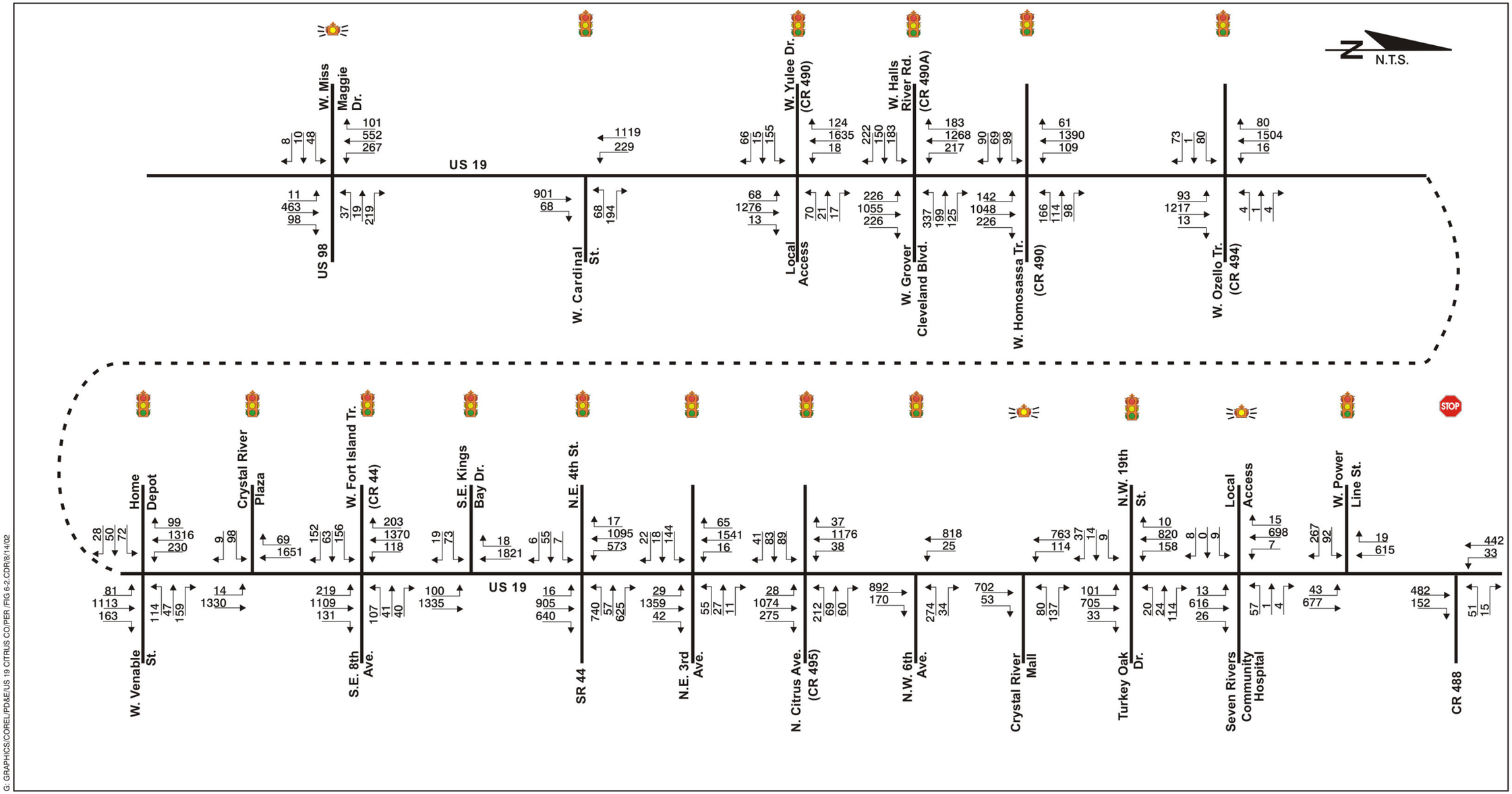


US 19 (SR 55)
PD&E STUDY
From South of US 98 to CR 488
Citrus County, Florida

EXISTING (2001) AADT VOLUMES

WPI SEG NO: 405822 1
FAP: 1852 007 P

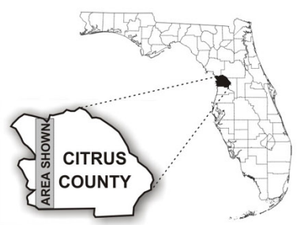
FIGURE 6-1



G: GRAPHICS/COREL/PD&E/US 19 CITRUS CO/PER /FIG 6-2.CDR/8/14/02

LEGEND

- Signalized intersection
- Flashing signal intersection
- Unsignalized intersection



US 19 (SR 55)

PD&E STUDY

From South of US 98 to CR 488

Citrus County, Florida

EXISTING (2001) PM PEAK HOUR VOLUMES

WPI SEG NO: 405822 1
FAP: 1852 007 P

FIGURE 6-2

respectively. The T factor used varies along the corridor. A T factor of seven percent was used for US 19 and all cross streets from the US 98 intersection to south of the SR 44/NE 4th Street intersection. A T factor of six percent was used for US 19 and all cross streets from the SR 44/NE 4th Street intersection north to the North Dunnellon Road (CR 488) intersection.

In addition, a peak hour factor (PHF) of 0.95 was used for the existing capacity analyses conducted as part of the PD&E Study. This is also consistent with the Action Plan Update.

It is also important to note that the same AADT and peak hour volumes were used for the Build and No-Build scenarios for 2025 conditions with Suncoast Parkway Phase 2. The same is true for 2025 conditions without Suncoast Parkway Phase 2. This is consistent with the methodology used for the US 19 Action Plan Update. As such, the 1997 Highway Capacity Software, Release 2.1g[5], (HCS) analysis for 2025 Build and No-Build scenarios shows the same volumes.

6.2 ROADWAY CHARACTERISTICS

The US 19 corridor through Citrus County is classified as part of the FIHS. Based on the FDOT 1998 Level of Service Handbook[6], the existing LOS standard for the US 19 corridor is LOS B for rural sections and LOS C for communities located along the corridor (i.e., Homosassa Springs and Crystal River).

The corridor consists of a mostly four-lane cross section. The exceptions being a five-lane cross section with a two-way left turn lane from West Yulee Drive (CR 490) to north of West Homosassa Trail (CR 490) in Homosassa Springs, a seven-lane cross section with a two-way left turn lane from SE 8th Avenue/West Fort Island Trail (CR 44) to SR 44/NE 4th Street and a five-lane cross section with a two-way left turn lane from SR 44/NE 4th Street to south of NW 6th Avenue in Crystal River.

There are currently 15 signalized and four unsignalized intersections located along the corridor. The intersections are noted in Section 3.1.

The existing lane geometries from the recently completed Action Plan Update were verified and updated, as necessary, to reflect existing conditions. The lane geometry for the intersections is displayed in Figure 3-1.

6.3 EXISTING ACCESS MANAGEMENT

This section addresses the issues concerning access management standards along US 19 from south of US 98 to North Dunnellon Road (CR 488).

The FDOT has developed access management regulations to help achieve safer and more efficient traffic flow on the state highway system. The major documents on access management regulations are:

- Florida Statute 335.18 - The Access Management Act (Adopted 1988 and Revised 1992),
- Administrative Rule 14-96 (Regulating the access permitting process), and
- Administrative Rule 14-97 (the access management classification system and standards).

Administrative Rule 14-97 divides the state highways into seven access management classes, each class with its own standards. The most stringent standards apply to Access Class 1, which covers freeways. Access Classes 2 through 7 cover controlled access highways and are organized from the most restrictive (Class 2) to the least restrictive (Class 7).

6.3.1 Access Standards

As explained in Section 5.3 of this report, US 19 has adopted Access Class 3, Access Class 4 and Access Class 6 classifications.

US 19 is a FIHS facility. The question arises as to whether access management standards more stringent than Access Class 3 standards should be adopted for US 19 in light of its FIHS classification. Table 6-1 summarizes the standards for controlled access FIHS facilities.

Table 6-1
Standards for Controlled Access FIHS Facilities

Access Management Standards	The access management standards for controlled access segments of the FIHS shall be those contained in Access Class 2 or 3 as defined in Administrative Rule 14-97 and the FDOT's PPM[7].
Other Access Management Classifications	Other access management standards may be assigned to a segment of the FIHS through a corridor access management plan developed as part of the Action Plan Update for the segment. The plan should define the highest standards attainable where Class 2 or 3 would not be feasible. In certain cases, a lower standard may lead to removal of the segment from the FIHS.
Design of Medians and Median Openings	The minimum median width standards for the FIHS should be those in the FDOT's latest PPM (Topic Nos. 625-000-005 and 625-000-101**)**. Safe accommodation of left turns and U-turns to ensure minimum interference with through traffic on controlled access facilities shall be provided through greater than minimum median width to accommodate these movements or through other strategies. Other strategies may include the use of such techniques as flared approaches, jug-handle designs, or roundabouts when properly justified. Refer to the FDOT's Median Handbook and the Florida Roundabout Guide for additional details.
Deviation from Median Opening Standards	Deviation from median opening standards shall follow the FDOT's Median Opening and Access Management Decision Process[8] (Topic No. 625-010-020), which requires more analysis and justification when considering deviations from these standards on the FIHS.
Design Speed Standards	The design speed for controlled access facilities shall be at least 65 mph in rural areas and at least 50 mph in urban and urbanized areas.

Table 6-1 implies that where the current Access Class 3 classification exists for US 19 it is stringent enough to suffice for US 19's dual classification as a controlled access FIHS facility. In the cases where Access Class 4 or Access Class 6 exist, consideration will need to be made as to whether to bring these segments under more stringent access management guidelines or make exceptions to the FIHS Access Class 2 or 3 requirements for controlled access facilities.

6.3.2 Access Management Under Existing (No-Build) Conditions

In order to study US 19's access management under No-Build conditions, it suffices to examine access management issues along US 19 within the project limits. There are several median openings located along US 19 within the project limits. These median openings and their relative spacing are summarized in Table 6-2.

Table 6-2
Existing (2001) Median Opening Locations

Location	Station	Milepost	Type	Signalized	Distance (Feet)[1]
South of US 98	102+75	1.743	Full	No	----
US 98	112+00	1.920	Full	Flashing	930
Thomas Lumber	120+60	2.086	Full	No	860
Main Street	129+00	2.246	Full	No	840
Vacant	135+70	2.374	Full	No	670
Delaware Street	142+30	2.502	Full	No	660
Homosassa Storage	153+00	2.707	Full	No	1070
Vacant	163+80	2.911	Full	No	1080
Dental Associates	174+50	3.110	Full	No	1070
West Cypress Boulevard	186+75	3.337	Full	No	1220
Cumberland Farms	192+50	3.451	Full	No	580
West Burnt Bridge Road	196+00	3.504	Full	No	350
Vacant	207+00	3.721	Full	No	1100
Vacant	218+00	3.933	Full	No	1100
Vacant	229+00	4.145	Full	No	1100
St. Thomas Apostle Church	240+25	4.357	Full	No	1120
Vacant	251+30	4.569	Full	No	1110
West Cardinal Street	262+25	4.766	Full	Yes	1090
Manatee Auto Sales	274+00	4.989	Full	No	1180

Table 6-2 (Cont.)
Existing (2001) Median Opening Locations

Location	Station	Milepost	Type	Signalized	Distance (Feet)[1]
Vacant	286+00	5.219	Full	No	1200
Vacant	297+50	5.444	Full	No	1150
West McKinley Street	309+25	5.604	Full	No	1150
West Fair Acres Place	320+25	5.869	Full	No	1100
Vacant	327+30	6.007	Full	No	730
West Village Drive	334+75	6.136	Full	No	770
South Oakridge Drive	340+50	6.256	Full	No	550
West Cyprian Court	352+25	6.471	Full	No	1150
Vacant	361+00	6.654	Full	No	900
West Green Acres Street	370+00	6.811	Full	No	900
Vacant	378+50	6.978	Full	No	850
West Bradshaw Street	387+00	7.131	Full	No	850
Suntrust Bank	395+00	7.286	Full	No	800
Post Office	399+50	7.374	Full	No	450
Stage Stand Cemetery	403+00	7.445	Full	No	350
Homosassa Square	407+50	7.524	Full	No	450
West Yulee Drive (CR 490)	415+25[2]	7.673	Full	Yes	750
West Yulee Drive (CR 490) to West Faust Lane contains no restrictive median					
West Faust Lane	446+00[2]	8.436	Full	No	3100
West Goshawk Lane	452+50	8.560	Full	No	650
14th Street	455+80	8.624	Full	No	330
West Ivy Place	462+00	8.744	Full	No	620
West Jump Court	468+75	8.880	Full	No	680
Vacant	479+25	9.081	Full	No	1045
Vacant	490+00	9.281	Full	No	1075
West White Dogwood Drive	500+50	9.467	Full	No	1050
Cadillac Village	510+00	9.665	Full	No	950
West Kingston Drive / West Longfellow Street	519+50	9.830	Full	No	950
Vacant	526+25	9.960	Full	No	675
West Goodman Lane	533+00	10.082	Full	No	675
Moose Lane	541+50	10.242	Full	No	850
All Save Auto / Goodyear	551+00	10.435	Full	No	950
West Dixieland Street	560+25	10.609	Full	No	900
Buick / Eagle / GMC	571+25	10.812	Full	No	1125
Crystal Chevrolet	582+25	11.024	Full	No	1100
West Highland Street	593+25	11.227	Full	No	1125
Vacant	605+00	11.451	Full	No	1150
West Ozello Trail (CR 494)	616+50	11.668	Full	Yes	1150

Table 6-2 (Cont.)
Existing (2001) Median Opening Locations

Location	Station	Milepost	Type	Signalized	Distance (Feet)[1]
Foundation for the Advancement of Mesoamerican Studies, Inc.	625+00	11.824	Full	No	850
West Penn Drive	633+00	11.975	Full	No	800
West Venable Street	647+25	12.251	Full	Yes	1400
Crystal River Plaza (south access)	655+00	12.395	Full	No	800
Crystal River Plaza (north access)	665+00	12.585	Full	Yes	1000
Vacant	669+50	12.671	Full	No	450
West Pure Lane	678+00	12.833	Full	No	850
West Godfrey Lane	683+50	12.936	Full	No	550
Ewell Industries, Inc.	693+50	13.121	Full	No	1000
West Mayo Drive	700+00	13.247	Full	No	650
West Sue Lane	704+00	13.320	Full	No	400
West Fort Island Trail (CR 44)	714+50	13.524	Full	Yes	1050
SE Paradise Point Road	719+50[2]	13.617	Full	No	500
SE Paradise Point Road to NW 6th Avenue contains no restrictive median					
NW 6th Avenue	855+50[2]	16.002	Full	Yes	
Crystal River Mall	872+00	16.314	Full	Flashing	1650
NW 19th Street / Turkey Oak Drive	880+00	16.474	Full	Yes	800
Rex Audio Video Appliances	888+00	16.617	Full	No	800
NW 22nd Street	894+00	16.735	Full	No	600
West State Park Street	905+50	16.951	Full	No	1150
Econo Lodge	914+50	17.119	Full	No	900
Andy's Affordable Auto Repair	922+50	17.270	Full	No	800
Vacant	939+00	17.583	Full	No	1650
Vacant	955+75	17.900	Full	No	1675
Vacant	972+75	18.222	Full	No	1700
Castaways Pub & Grill / Bentbow Path	989+50	18.538	Full	No	1675
Vacant	1010+50	18.937	Full	No	2100
West Curtis Tool Lane	1019+25	19.108	Full	No	875
Seven Rivers Community Hospital	1029+50	19.306	Full	Flashing	1025
West Garnet Court	1039+75	19.491	Full	No	1025
West Powerline Street	1064+00	19.945	Full	Yes	2425
Crystal River Quarries, Inc. Red Level Mine	1081+50	20.281	Full	No	1750
North Dunnellon Road (CR 488)	1105+50	20.742	Full	No	2400

(1) Distance from the center of previous median opening.
(2) Station equation occurs between station limits.

A study of existing median openings along the corridor south of Crystal River was recently completed and is documented in US 19 Access Management Study from Hernando County Line to Mayo Drive[9] dated August 2001. Dyer, Riddle, Mills & Precourt, Inc. completed the study for Citrus County. The recommendations put forward as part of that study were reviewed by the FDOT Access Review Committee and alterations based on the Committee's comments were incorporated into this PD&E Study.

6.4 EXISTING TRAFFIC CONDITIONS

The existing capacity analysis included evaluation of the 15 signalized and four unsignalized intersections within the US 19 corridor. As part of this study, capacity analyses were also conducted for the arterial segments between the intersections. The HCS based on the Highway Capacity Manual, Special Report 209, Third Edition[10] (HCM) was used for both the intersection and arterial segment analyses.

6.4.1 Intersection Operational Analyses

The results from the HCS unsignalized intersection analyses are provided in Table 6-3. The existing HCS unsignalized intersection analyses are provided in Appendix F of the Final Traffic Report: Volume 1 - Existing Conditions.

Three of the four unsignalized intersections have cross street left-turn movements onto US 19 that are failing during peak hour conditions. Only the US 19/North Dunnellon Road (CR 488) intersection has no failing cross street left-turn movements.

The results from the HCS signalized intersection analyses are also provided in Table 6-3. The existing HCS signalized intersection analyses are provided in Appendix F of the Final Traffic Report: Volume 1 - Existing Conditions.

Table 6-3
Existing (2001) Intersection Analyses

Intersection	PM Peak Hour LOS[1]
US 19/US 98 (Unsignalized)	F
US 19/West Cardinal Street	B
US 19/West Yulee Drive (CR 490)	C
US 19/West Halls River Road (CR 490A)/West Grover Cleveland Boulevard	D
US 19/West Homosassa Trail (CR 490)	D
US 19/West Ozello Trail (CR 494)	B
US 19/West Venable Street	B
US 19/Crystal River Plaza	B
US 19/SE 8th Avenue/West Fort Island Trail (CR 44)	C
US 19/SE Kings Bay Drive	B
US 19/SR 44/NE 4th Street	D
US 19/NE 3rd Avenue	B
US 19/North Citrus Avenue (CR 495)	B
US 19/NW 6th Avenue	B
US 19/Crystal River Mall (Unsignalized)	F
US 19/NW 19th Street/Turkey Oak Drive	A
US 19/Seven Rivers Community Hospital (Unsignalized)	F
US 19/West Power Line Street	B
US 19/North Dunnellon Road (CR 488) (Unsignalized)	C

[1] Level of Service. Overall intersection reported for signalized intersections and cross street worst case left-turns onto US 19 are reported for unsignalized intersections.

Three signalized intersections are currently not meeting LOS standards. The intersections are located in the Homosassa Springs and Crystal River city limits, where the LOS standard is C. The three intersections are: US 19/West Halls River Road (CR 490A)/West Grover Cleveland Boulevard, US 19/West Homosassa Trail (CR 490) and US 19/SR 44/NE 4th Street.

6.4.2 Arterial Operational Analyses

The HCS Multilane Highways and Urban Arterial Modules were used to evaluate the PM peak hour operations for the arterial segments along the US 19 corridor. The analyses considered operations between the major intersections along the corridor. The results of these analyses are presented in Table 6-4. Based on these results the corridor is not currently meeting LOS standards along segments of US 19 in Homosassa Springs (West Yulee Drive [CR 490] to West Homosassa Trail [CR 490] both northbound and southbound), between West Venable Street and Crystal River Plaza (both northbound and southbound) and in Crystal River (SE Kings Bay Drive to North Citrus Avenue [CR 495] northbound and NE 3rd Avenue to SR 44/NE 4th Street southbound). The HCS segment analyses are provided in Appendix G of the Final Traffic Report: Volume 1 - Existing Conditions.

Table 6-4
Existing (2001) LOS Summary by Segment

US 19 Segment		Existing Lanes	2001 Two-Way Peak Hour Volume[1]	FDOT LOS Standard[2]	2001 Peak Hour LOS	
From	To				Northbound	Southbound
South of US 98	US 98	4LD	1,169	B	A	B
US 98	West Cardinal Street	4LD	2,156	B	A	B
West Cardinal Street	West Yulee Drive (CR 490)	4LD	3,128	B	A	A
West Yulee Drive (CR 490)	West Halls River Road (CR 490A)/ West Grover Cleveland Boulevard	5L	3,334	C	D	D
West Halls River Road (CR 490A) / West Grover Cleveland Boulevard	West Homosassa Trail (CR 490)	5L	3,062	C	F	F
West Homosassa Trail (CR 490)	West Ozello Trail (CR 494)	4LD	2,904	B	A	A
West Ozello Trail (CR 494)	West Venable Street	4LD	2,815	B	A	A
West Venable Street	Crystal River Plaza	4LD	3,004	B	C	E
Crystal River Plaza entrance	SE 8th Avenue / West Fort Island Trail (CR 44)	4LD	3,088	B	A	A
SE 8th Avenue / West Fort Island Trail (CR 44)	SE Kings Bay Drive	7L	3,275	C	A	B
SE Kings Bay Drive	SR 44/NE 4th Street	7L	3,402	C	D	C
SR 44/NE 4th Street	NE 3rd Avenue	5L	3,048	C	D	D
NE 3rd Avenue	North Citrus Avenue (CR 495)	5L	2,806	C	D	C

Table 6-4 (Cont.)
Existing (2001) LOS Summary by Segment

US 19 Segment		Existing Lanes	2001 Two-Way Peak Hour Volume[1]	FDOT LOS Standard[2]	2001 Peak Hour LOS	
From	To				Northbound	Southbound
North Citrus Avenue (CR 495)	NW 6th Avenue	5L	2,154	C	A	A
NW 6th Avenue	Crystal River Mall	4LD	1,598	C	A	B
Crystal River Mall entrance	NW 19th Street/ Turkey Oak Drive	4LD	1,716	C	A	B
NW 19th Street/ Turkey Oak Drive	Seven Rivers Community Hospital	4LD	1,418	B	A	A
Seven Rivers Community Hospital	West Power Line Street	4LD	1,602	B	A	A
West Power Line Street	North Dunnellon Road (CR 488)	4LD	1,403	B	A	A

[1] Volumes were obtained from Figure 6-2, Existing (2001) PM Peak Hour Volumes.
[2] 1998 LOS Manual, Table 2-1.

6.5 MULTIMODAL TRANSPORTATION SYSTEM CONSIDERATIONS

6.5.1 Transit

As explained in Section 4.1.12 of this report, there are no specific transit routes along US 19.

The CCPTS identifies two phases to its' long-range transit plan. Phase one entails establishment of a fixed route system in the County when population density is sufficient to support the system, there is an inability to add additional capacity to roadways and funding mechanisms are in place to support public or private sector operation of a transit system. Implementation of the following is anticipated under Phase One of the plan:

- Establishment of fixed route service between Crystal River and Inverness
- As warranted, extended hours are anticipated to meet demands of a fixed route system
- Sheltered bus stops will be needed at stops with frequent service
- Fleet size will need to be increased in order to support a fixed route system

Once a fixed route system is established under Phase One, Phase Two will entail expansion of the fixed route service. Implementation of the following is anticipated under Phase Two of the plan:

- Add Beverly Hills and the Homosassa area to the fixed route system
- Add new terminals in Crystal River and Beverly Hills, which will serve as secondary transfer points, to complement the existing terminal and primary transfer point in Lecanto
- Expansion of the bus fleet as needed to support the expanded fixed route system

Although no fixed route service is proposed along the US 19 corridor as part of the future transit plan, expansion of service to the Crystal River and Homosassa areas in the future should serve population and businesses located along the corridor.

6.5.2 Rail

There is currently one existing railroad that crosses US 19 just south of West Power Line Street. This rail line serves the Crystal River Energy Complex.

6.5.3 Aviation

The Crystal River Airport is located at the northeast corner of the US 19/West Venable Street intersection. Coordination with the Crystal River Airport of any proposed improvements along the US 19 corridor needs to occur since this airport lies immediately adjacent to the existing ROW.

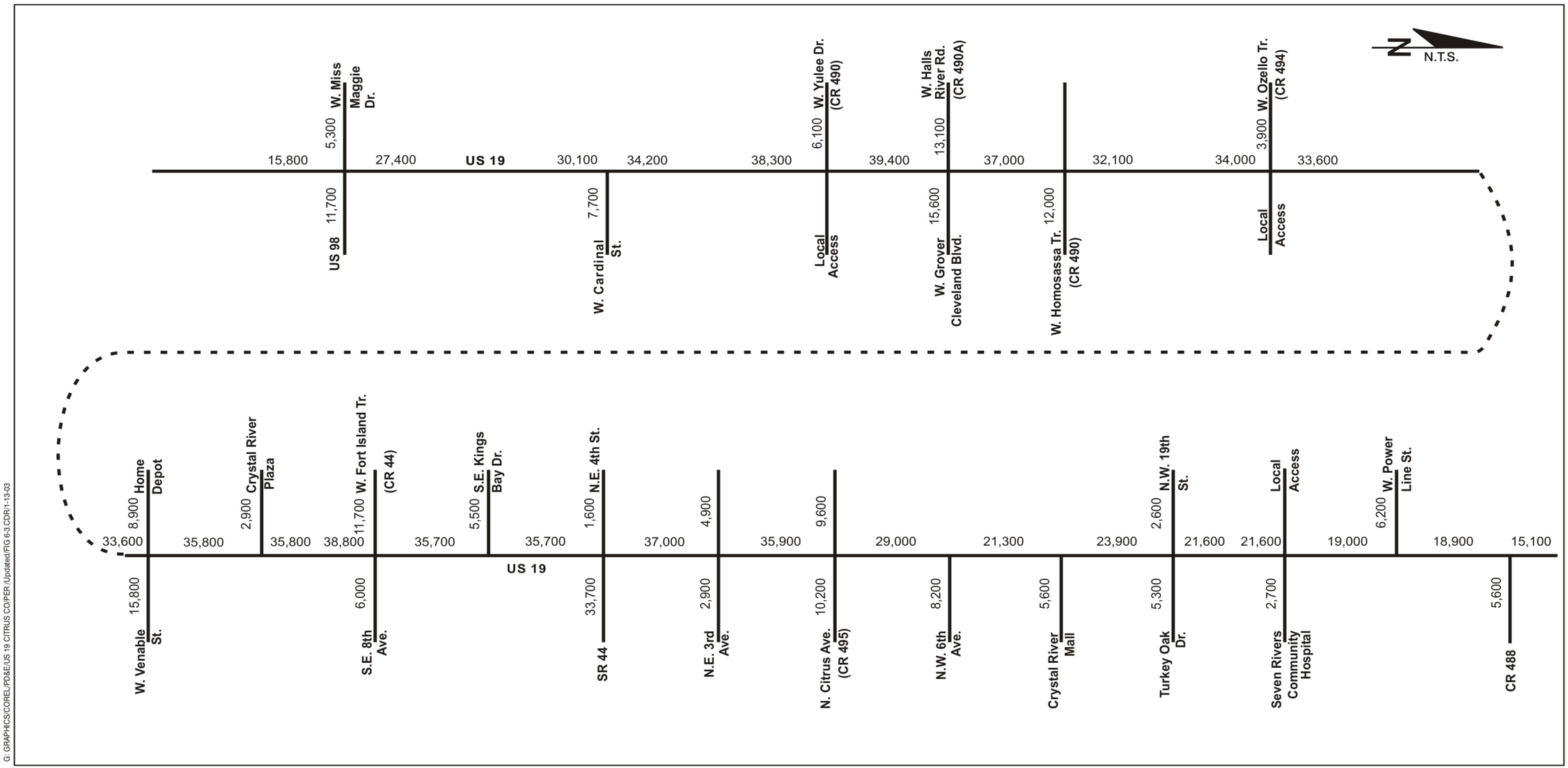
6.6 TRAFFIC ANALYSIS ASSUMPTIONS AND LEVEL OF SERVICE

The future daily traffic volumes were developed for the design year (2025) for the US 19 corridor. The future daily traffic volumes were used to determine the peak hour traffic projections for this study. The following subsections summarize these data.

6.6.1 Annual Average Daily Traffic Projections

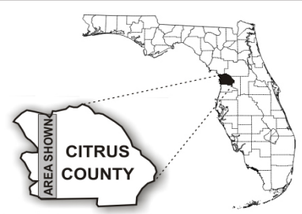
The AADT projections for the study corridor were developed for the design year (2025). The Design Traffic Procedures adopted by FDOT were followed during the development of the daily traffic projections. The Tampa Bay Regional Planning Model (TBRPM) and historical traffic volumes were used to develop the future traffic projections. Documentation of the calculation and methodology to determine AADT volumes are provided in Appendix B of the Final Traffic Report: Volume 2 - Future Conditions.

The design year (2025) AADT volumes along the corridor for the with and without Suncoast Parkway Phase 2 scenarios are provided in Figures 6-3 and 6-4, respectively.



G: GRAPHICS/COREL/PD&E/US 19 CITRUS CO/PER /Updated/FIG 6-3.CDR/1-13-03

A BALANCED APPROACH — ENVIRONMENT · PEOPLE · ENGINEERING



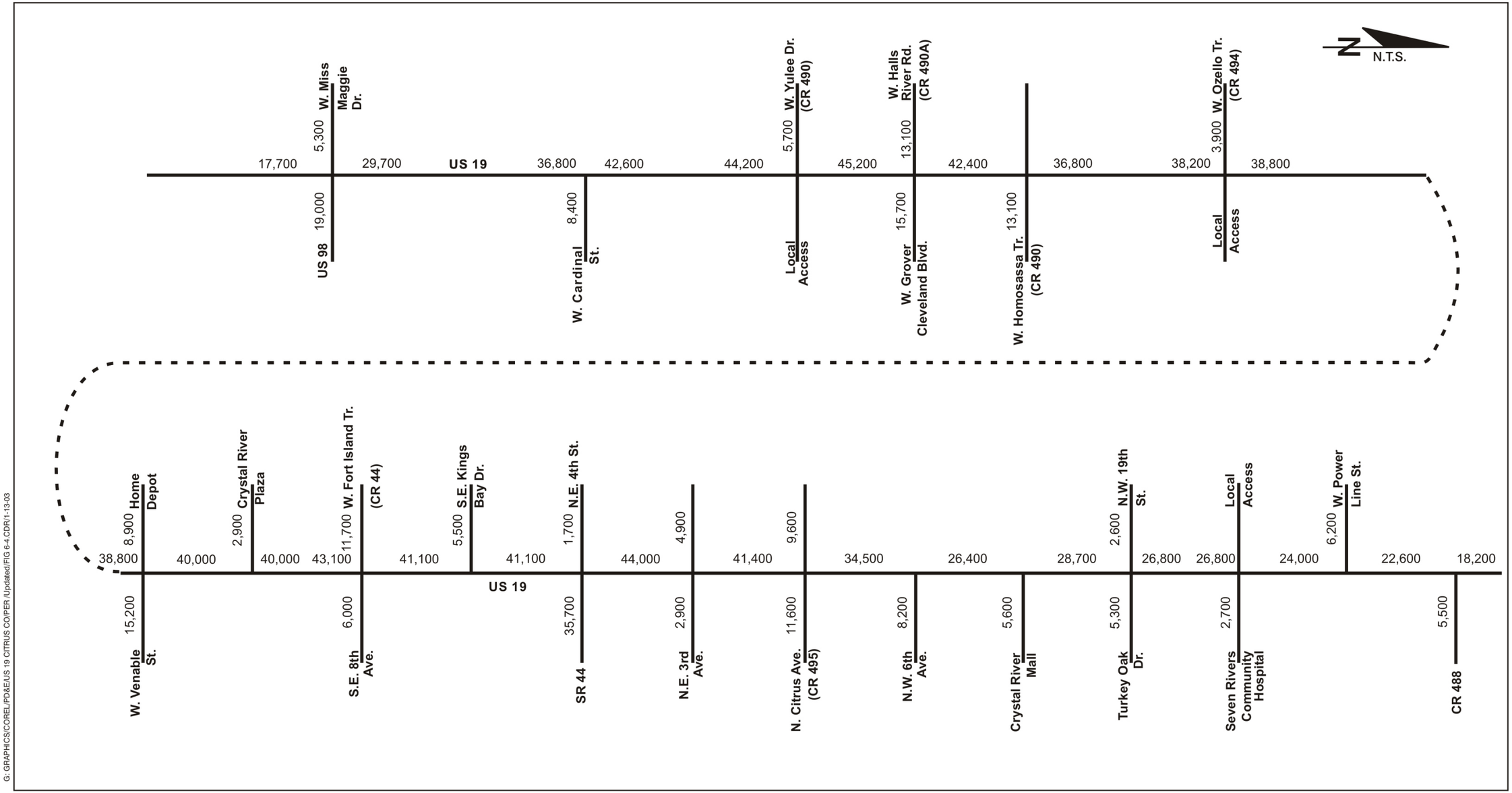
US 19 (SR 55)
PD&E STUDY
From South of US 98 to CR 488
Citrus County, Florida

2025 AADT VOLUMES WITH SUNCOAST PARKWAY PHASE 2

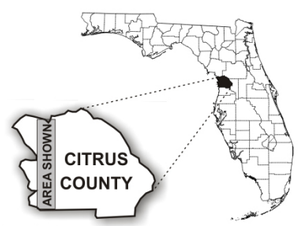
WPI SEG NO: 405822 1
FAP: 1852 007 P

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION

FIGURE 6-3



G: GRAPHICS/COREL/PD&E/US 19 CITRUS CO/PER /Updated/FIG 6-4.CDR/1-13-03



US 19 (SR 55)
PD&E STUDY
From South of US 98 to CR 488
Citrus County, Florida

2025 AADT VOLUMES
WITHOUT SUNCOAST PARKWAY PHASE 2

WPI SEG NO: 405822 1
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FIGURE 6-4

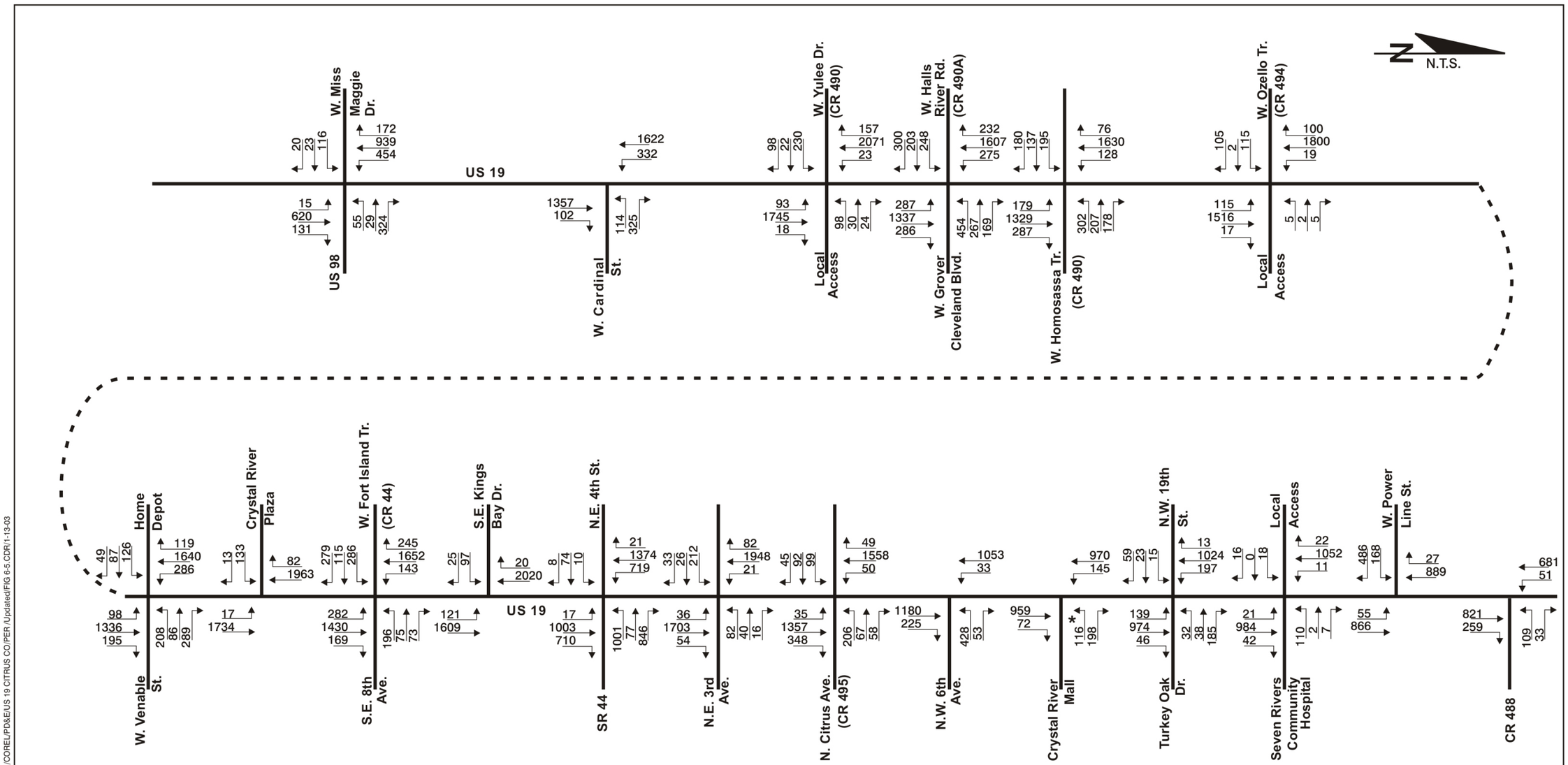
In the design year (2025), the AADT volumes are expected to range between 15,800 vpd to 39,400 vpd for the with Suncoast Parkway Phase 2 scenario. Volumes are generally a few thousand vehicles higher for the without Suncoast Parkway Phase 2 scenario, ranging between 17,700 vpd to 45,200 vpd.

6.6.2 Future Traffic Assumptions

Future traffic assumptions are outlined in Section 6.1.4 of this report.

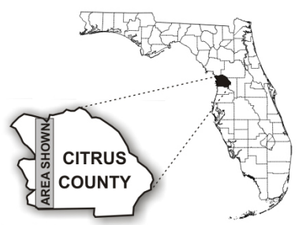
6.6.3 Peak Hour Traffic Projections

The traffic assumptions previously discussed were used to develop the peak hour traffic projections. Based on existing traffic count data, the peak direction along the US 19 corridor was determined to be southbound from West Power Line Street through the US 98 intersection and northbound from West Power Line Street through the North Dunnellon Road (CR 488) intersection during the PM peak hour. The same peak hour distribution conditions were assumed in the development of the future traffic volumes. PM peak hour volumes for cross streets intersecting the US 19 corridor were developed consistent with existing travel patterns. AM peak hour volumes were not developed, to be consistent with the Action Plan Update and the agreed upon methodology for the study. Appendix B of the Final Traffic Report: Volume 2 - Future Conditions documents the methodology and calculations used to develop the peak hour volumes. The resultant 2025 peak hour volumes with and without Suncoast Parkway Phase 2 are shown in Figures 6-5 and 6-6, respectively.



* Note: Under the Build Alternative it is recommended that the Crystal River Mall entrance be directionalized to allow southbound entry off of US 19 but no westbound left turn movement to US 19 southbound. In this instance, the 116 westbound left turns would be redistributed 50/50 to the N. W. 6th Avenue and Turkey Oak Drive signalized intersections.

G: GRAPHICS/COREL/PD&E/US 19 CITRUS CO/PER /Updated/FIG 6-5.CDR/1-13-03

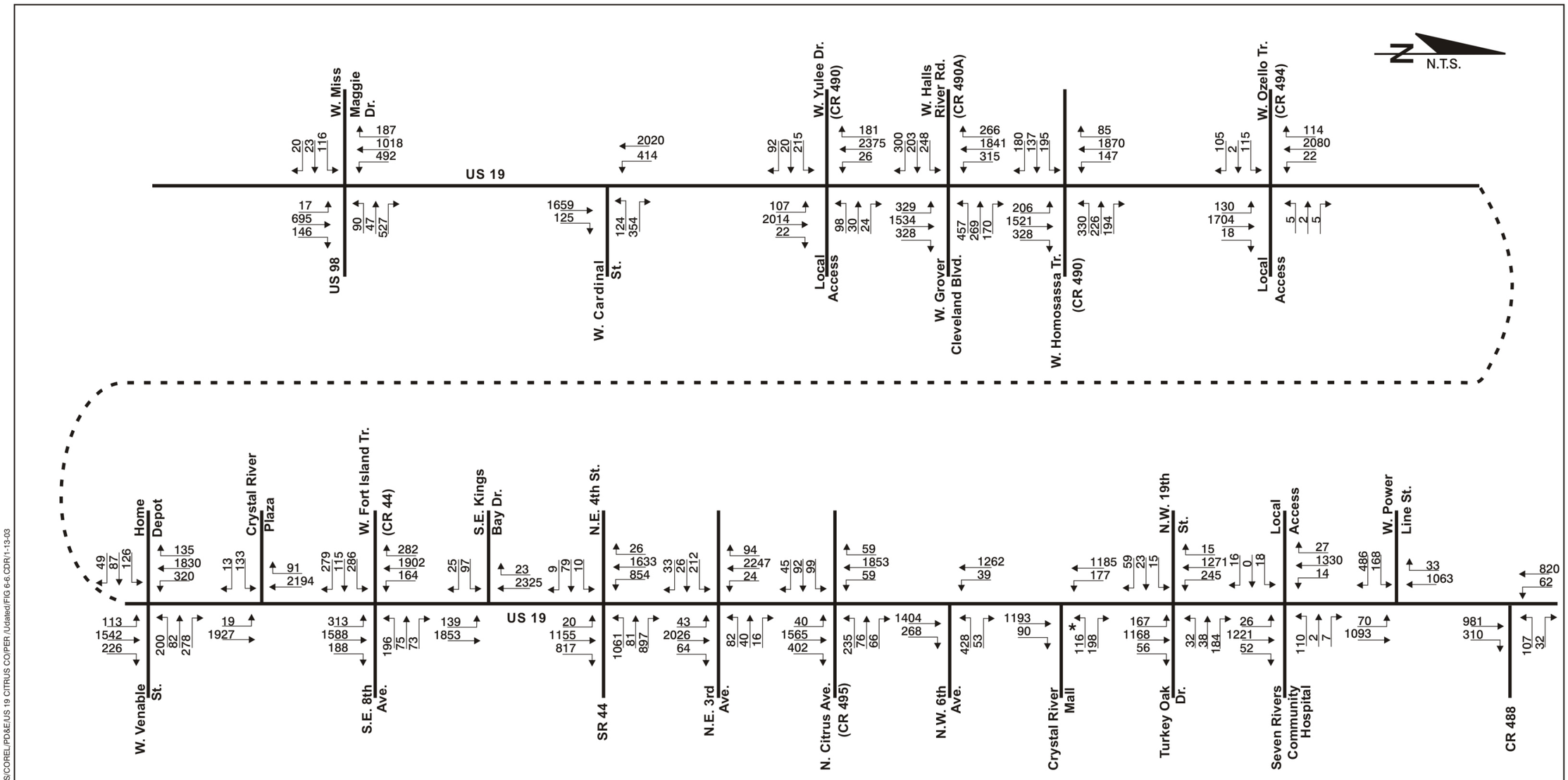


US 19 (SR 55)
PD&E STUDY
From South of US 98 to CR 488
Citrus County, Florida

2025 PM PEAK HOUR VOLUMES WITH SUNCOAST PARKWAY PHASE 2

WPI SEG NO: 405822 1
FAP: 1852 007 P

FIGURE 6-5



* Note: Under the Build Alternative it is recommended that the Crystal River Mall entrance be directionalized to allow southbound entry off of US 19 but no westbound left turn movement to US 19 southbound. In this instance, the 116 westbound left turns would be redistributed 50/50 to the N. W. 6th Avenue and Turkey Oak Drive signalized intersections.

G: GRAPHICS/COREL/PD&E/US 19 CITRUS CO/PER /Udated/FIG 6-6.CDR/1-13-03

US 19 (SR 55)
PD&E STUDY
From South of US 98 to CR 488
Citrus County, Florida

2025 PM PEAK HOUR VOLUMES WITHOUT SUNCOAST PARKWAY PHASE 2

WPI SEG NO: 405822 1
FAP: 1852 007 P

FIGURE 6-6

6.6.4 2025 Conditions

The future traffic analyses for 2025 conditions evaluated the operation of the corridor under four different scenarios:

- 2025 No-Build – With Suncoast Parkway Phase 2
- 2025 No-Build – Without Suncoast Parkway Phase 2
- 2025 Build – With Suncoast Parkway Phase 2
- 2025 Build – Without Suncoast Parkway Phase 2

The purpose in analyzing each of the various 2025 scenarios was to identify conditions not only under No-Build and Build conditions but also in attempt to gauge the effects of the proposed Suncoast Parkway Phase 2 project on the US 19 corridor. The Suncoast Parkway Phase 2 PD&E Study is currently underway. For the purpose of the US 19 PD&E Study, the location of the Suncoast Parkway Phase 2 is assumed to be its previously approved location, with the southern terminus at the intersection of US 98 and the Suncoast Parkway Phase 1 and the northern terminus at US 19 near Red Level, north of CR 488. Interchanges were assumed to be located at US 98, West Cardinal Street, SR 44, CR 495, and US 19 in the Design Year 2025. The opening year for the Suncoast Parkway Phase 2 was assumed to be 2010.

The following subsections summarize the results of the 2025 traffic analyses.

6.6.4.1 2025 No-Build Conditions

Analysis of 2025 No-Build conditions for the US 19 corridor, both with and without Suncoast Parkway Phase 2, indicate that a number of intersections and roadway segments will not meet LOS standards in the future. Besides the poor LOS for left turns from unsignalized cross streets located along the corridor, a number of signalized intersections in the Homosassa Springs and Crystal River areas are expected to fail (LOS F). The No-Build analyses results for both intersections and arterials, both with and without Suncoast Parkway Phase 2, are presented in Tables 6-5 to 6-8. The accompanying HCS

intersection and arterial analyses are provided in Appendices E-H of the Final Traffic Report: Volume 2 - Future Conditions.

Table 6-5
2025 No-Build Intersection Analyses
With Suncoast Parkway Phase 2

Intersection	PM Peak Hour LOS[1]
US 19/US 98	B
US 19/West Cardinal Street	B
US 19/West Yulee Drive (CR 490)	D
US 19/West Halls River Road (CR 490A)/West Grover Cleveland Boulevard	F
US 19/West Homosassa Trail (CR 490)	F
US 19/West Ozello Trail (CR 494)	B
US 19/West Venable Street	C
US 19/Crystal River Plaza	B
US 19/SE 8th Avenue/West Fort Island Trail (CR 44)	F
US 19/SE Kings Bay Drive	B
US 19/SR 44/NE 4th Street	F
US 19/NE 3rd Avenue	D
US 19/North Citrus Avenue (CR 495)	C
US 19/NW 6th Avenue	B
US 19/Crystal River Mall (Unsignalized)	F
US 19/NW 19th Street/Turkey Oak Drive	B
US 19/Seven Rivers Community Hospital (Unsignalized)	F
US 19/West Power Line Street	B
US 19/North Dunnellon Road (CR 488) (Unsignalized)	F

[1] Level of Service. Overall intersection reported for signalized intersections and cross street worst case left - turns onto US 19 are reported for unsignalized intersections.

Table 6-6
2025 No-Build Intersection Analyses
Without Suncoast Parkway Phase 2

Intersection	PM Peak Hour LOS[1]
US 19/US 98	B
US 19/West Cardinal Street	C
US 19/West Yulee Drive (CR 490)	F
US 19/West Halls River Road (CR 490A)/West Grover Cleveland Boulevard	F
US 19/West Homosassa Trail (CR 490)	F
US 19/West Ozello Trail (CR 494)	C
US 19/West Venable Street	D
US 19/Crystal River Plaza	C
US 19/SE 8th Avenue/West Fort Island Trail (CR 44)	F
US 19/SE Kings Bay Drive	B
US 19/SR 44/NE 4th Street	F
US 19/NE 3rd Avenue	F
US 19/North Citrus Avenue (CR 495)	F
US 19/NW 6th Avenue	B
US 19/Crystal River Mall (Unsignalized)	F
US 19/NW 19th Street/Turkey Oak Drive	F
US 19/Seven Rivers Community Hospital (Unsignalized)	F
US 19/West Power Line Street	B
US 19/North Dunnellon Road (CR 488) (Unsignalized)	F

[1] Level of service. Overall intersection reported for signalized intersections and cross street worst case left-turns onto US 19 are reported for unsignalized intersections.

Table 6-7
2025 No-Build Level of Service Summary by Segment
With Suncoast Parkway Phase 2

US 19 Segment		Existing Lanes	2025 Two-Way Peak Hour Volume[1]	FDOT LOS Standard[2]	2025 Peak Hour LOS	
From	To				Northbound	Southbound
South of US 98	US 98	4LD	1,780	B	A	A
US 98	West Cardinal Street	4LD	3,195	B	A	A
West Cardinal Street	West Yulee Drive (CR 490)	4LD	4,123	B	F[3]	F[3]
West Yulee Drive (CR 490)	West Halls River Road (CR 490A)/ West Grover Cleveland Boulevard	5L	4,271	C	F[3]	F[3]
West Halls River Road (CR 490A)/ West Grover Cleveland Boulevard	West Homosassa Trail (CR 490)	5L	3,907	C	F[3]	F[3]
West Homosassa Trail (CR 490)	West Ozello Trail (CR 494)	4LD	3,558	B	F[3]	F[3]
West Ozello Trail (CR 494)	West Venable Street	4LD	3,526	B	F[3]	F[3]
West Venable Street	Crystal River Plaza	4LD	3,727	B	F[3]	F[3]
Crystal River Plaza	SE 8th Avenue / West Fort Island Trail (CR 44)	4LD	4,008	B	F[3]	F[3]
SE 8th Avenue / West Fort Island Trail (CR 44)	SE Kings Bay Drive	7L	3,775	C	F[3]	F[3]
SE Kings Bay Drive	SR 44/NE 4th Street	7L	4,113	C	F[3]	F[3]
SR 44/NE 4th Street	NE 3rd Avenue	5L	3,856	C	F[3]	F[3]
NE 3rd Avenue	North Citrus Avenue (CR 495)	5L	3,549	C	F[3]	F[3]

Table 6-7 (Cont.)
2025 No-Build Level of Service Summary by Segment
With Suncoast Parkway Phase 2

US 19 Segment		Existing Lanes	2025 Two-Way Peak Hour Volume[1]	FDOT LOS Standard[2]	2025 Peak Hour LOS	
From	To				Northbound	Southbound
North Citrus Avenue (CR 495)	NW 6th Avenue	5L	2,886	C	A	B
NW 6th Avenue	Crystal River Mall	4LD	2,117	C	B	B
Crystal River Mall	NW 19th Street/ Turkey Oak Drive	4LD	2,274	C	B	B
NW 19th Street/ Turkey Oak Drive	Seven Rivers Community Hospital	4LD	2,225	B	A	A
Seven Rivers Community Hospital	West Power Line Street	4LD	2,296	B	A	A
West Power Line Street	North Dunnellon Road (CR 488)	4LD	1,870	B	A	A

[1] Volumes were obtained from Figure 6-5, 2025 PM Peak Hour Volumes With Suncoast Parkway Phase 2.
[2] 1998 LOS Manual, Table 2-1.
[3] Overall LOS for the segments from West Cardinal Street to North Citrus Avenue (CR 495) is F. LOS for individual segments cannot be reported because of excessive delays for a number of intersections along the corridor.

Table 6-8
2025 No-Build Level of Service Summary by Segment
Without Suncoast Parkway Phase 2

US 19 Segment		Existing Lanes	2025 Two-Way Peak Hour Volume[1]	FDOT LOS Standard[2]	2025 Peak Hour LOS	
From	To				Northbound	Southbound
South of US 98	US 98	4LD	1,986	B	A	A
US 98	West Cardinal Street	4LD	3,928	B	A	A
West Cardinal Street	West Yulee Drive (CR 490)	4LD	4,708	B	F[3]	F[3]
West Yulee Drive (CR 490)	West Halls River Road (CR 490A)/ West Grover Cleveland Boulevard	5L	4,789	C	F[3]	F[3]
West Halls River Road (CR 490A)/ West Grover Cleveland Boulevard	West Homosassa Trail (CR 490)	5L	4,435	C	F[3]	F[3]
West Homosassa Trail (CR 490)	West Ozello Trail (CR 494)	4LD	4,042	B	F[3]	F[3]
West Ozello Trail (CR 494)	West Venable Street	4LD	3,960	B	F[3]	F[3]
West Venable Street	Crystal River Plaza	4LD	4,153	B	F[3]	F[3]
Crystal River Plaza	SE 8th Avenue / West Fort Island Trail (CR 44)	4LD	4,466	B	F[3]	F[3]
SE 8th Avenue / West Fort Island Trail (CR 44)	SE Kings Bay Drive	7L	4,342	C	F[3]	F[3]
SE Kings Bay Drive	SR 44/NE 4th Street	7L	4,695	C	F[3]	F[3]
SR 44/NE 4th Street	NE 3rd Avenue	5L	4,495	C	F[3]	F[3]
NE 3rd Avenue	North Citrus Avenue (CR 495)	5L	4,140	C	F[3]	F[3]
North Citrus Avenue (CR 495)	NW 6th Avenue	5L	3,362	C	A	F[4]

Table 6-8 (Cont.)
2025 No-Build Level of Service Summary by Segment
Without Suncoast Parkway Phase 2

US 19 Segment		Existing Lanes	2025 Two-Way Peak Hour Volume[1]	FDOT LOS Standard[2]	2025 Peak Hour LOS	
From	To				Northbound	Southbound
NW 6th Avenue	Crystal River Mall	4LD	2,584	C	B	F[4]
Crystal River Mall	NW 19th Street/ Turkey Oak Drive	4LD	2,753	C	B	F[4]
NW 19th Street/ Turkey Oak Drive	Seven Rivers Community Hospital	4LD	2,755	B	A	F[4]
Seven Rivers Community Hospital	West Power Line Street	4LD	2,712	B	A	F[4]
West Power Line Street	North Dunnellon Road (CR 488)	4LD	2,218	B	B	A

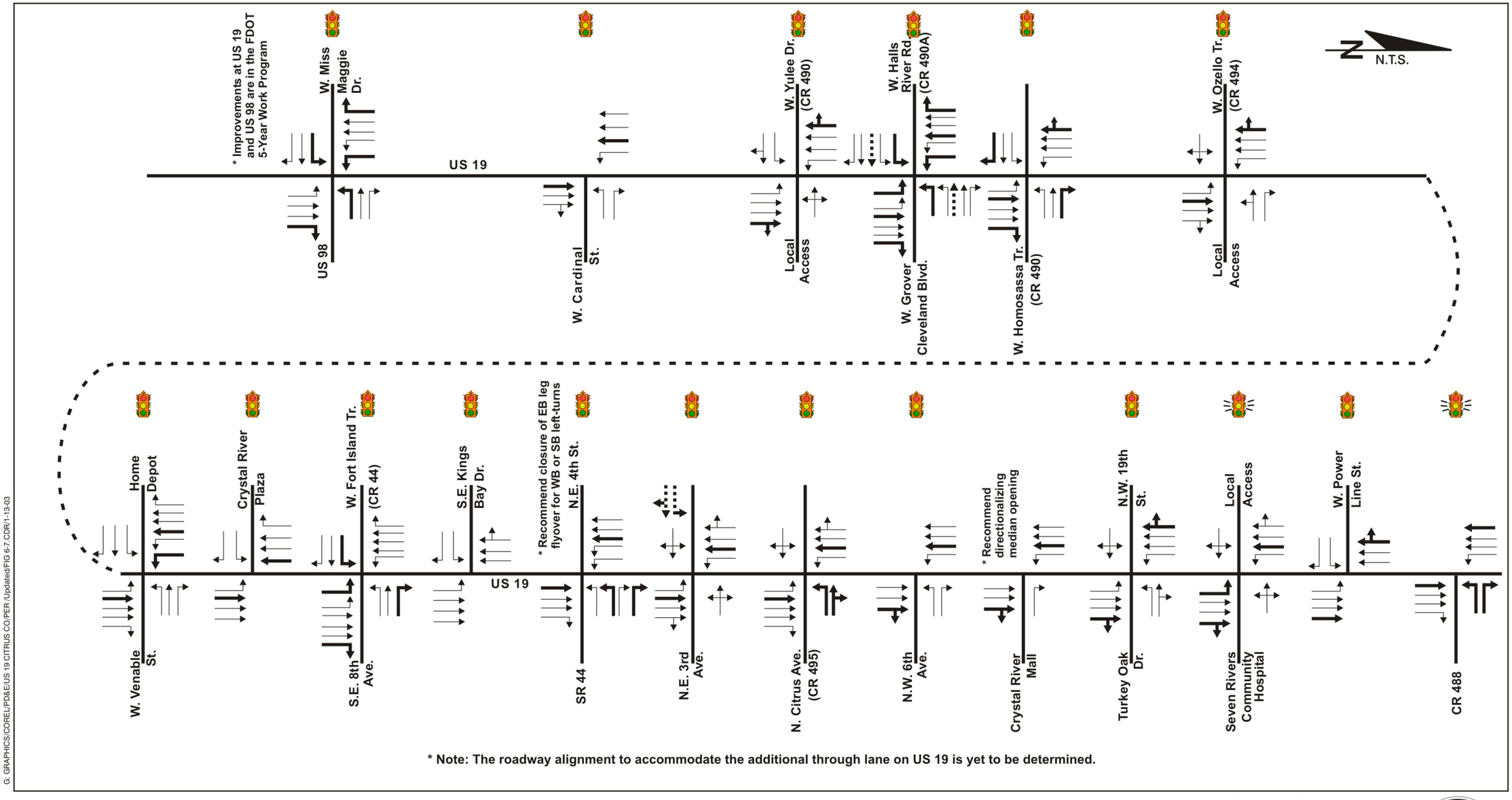
[1] Volumes were obtained from Figure 6-6, 2025 PM Peak Hour Volumes Without Suncoast Parkway Phase 2.
[2] 1998 Level of Service Manual, Table 2-1.
[3] Overall LOS for the northbound and southbound segments from West Cardinal Street to North Citrus Avenue (CR 495) is F. LOS for individual segments cannot be reported because of excessive delays for a number of intersections along the corridor.
[4] Overall LOS for the southbound segment from West Power Line Street to North Citrus Avenue (CR 495) is F. LOS for individual segments cannot be reported because of excessive delays at the North Citrus Avenue (CR 495) intersection.

6.6.4.2 2025 Build Conditions

As outlined in Section 6.6.4.1 and highlighted in Tables 6-5 to 6-8, under No-Build conditions the US 19 corridor is expected to be deficient in meeting LOS standards for a number of intersections and roadway segments by 2025. In order to address these deficiencies a number of recommendations put forward as part of the Action Plan Update were tested. This included a number of intersection improvements, including the widening of the existing corridor to six lanes.

Figure 6-7 includes a comparison of the corridor improvements needed by 2025 both with and without Suncoast Parkway Phase 2. Tables 6-9 to 6-12 presents the results for the Build condition intersection and arterial analyses based on the improvements outlined in Figure 6-9. The accompanying HCS intersection and arterial analyses are provided in Appendices I-L of the Final Traffic Report: Volume 2 - Future Conditions.

Based on the improvements outlined on Figure 6-8 and the 2025 forecast peak hour volumes with and without Suncoast Parkway, Figures 6-5 and 6-6 respectively, queue calculations were performed. The queue calculations are provided in Appendix M of the Final Traffic Report: Volume 2 - Future Conditions. The corresponding storage requirements for the with and without Suncoast Parkway Phase 2 Build scenarios are provided in Figures 6-8 and 6-9, respectively.



G: GRAPHICS/COREL/PD&E/US 19 CITRUS CO/PER./Updated/FIG 6-7.CDR/1-13-03

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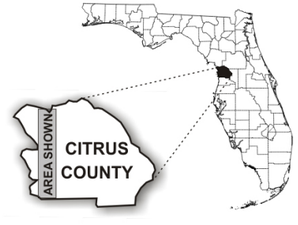
LEGEND

- Existing or programmed signal
- New signal (if warranted)
- Additional lane/reconfigured lane needed with or without Suncoast Parkway Phase 2
- Additional lane/reconfigured lane needed without Suncoast Parkway Phase 2 only



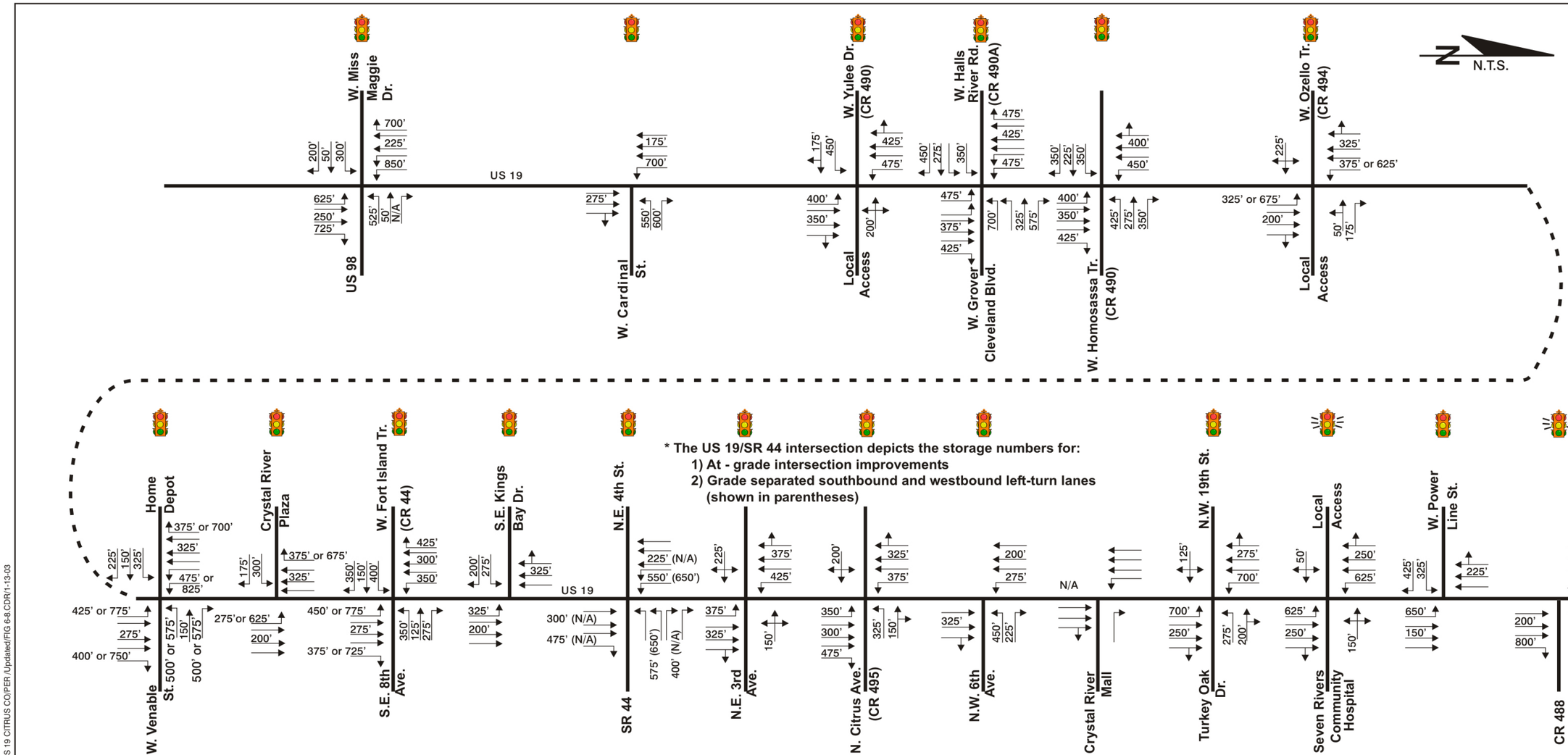
US 19 (SR 55)
PD&E STUDY
From South of US 98 to CR 488
Citrus County, Florida

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION

2025 INTERSECTION LANE GEOMETRY COMPARISON

WPI SEG NO: 405822 1
FAP: 1852 007 P

FIGURE 6-7



* Notes: Storage requirements are from the queue calculations included in Appendix M of the Traffic Report: Volume 2 - Future Conditions. No storage requirements were calculated for the N.E. 4th Street leg or the Crystal River Mall intersection given access modifications and lack of signalization. Assumes 50 MPH urban design speed or 70 MPH rural design speed for US 19 except for the W. Ozello Trail, W. Venable Street, Crystal River Plaza and Fort Island Trail intersections which have calculations shown for both urban alternatives (shorter distances) and rural alternatives (long distances). Where more than one lane is shown for a particular movement (i.e., left-turn lanes) the storage requirement reflects all lanes.

G: COREL/PD&E/US 19 CITRUS CO/PER /Updated/FIG 6-8.CDR/1-13-03

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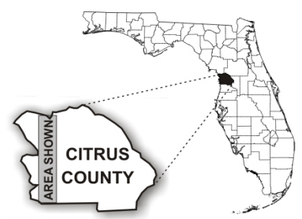
LEGEND

Existing or programmed signal

New signal (if warranted)



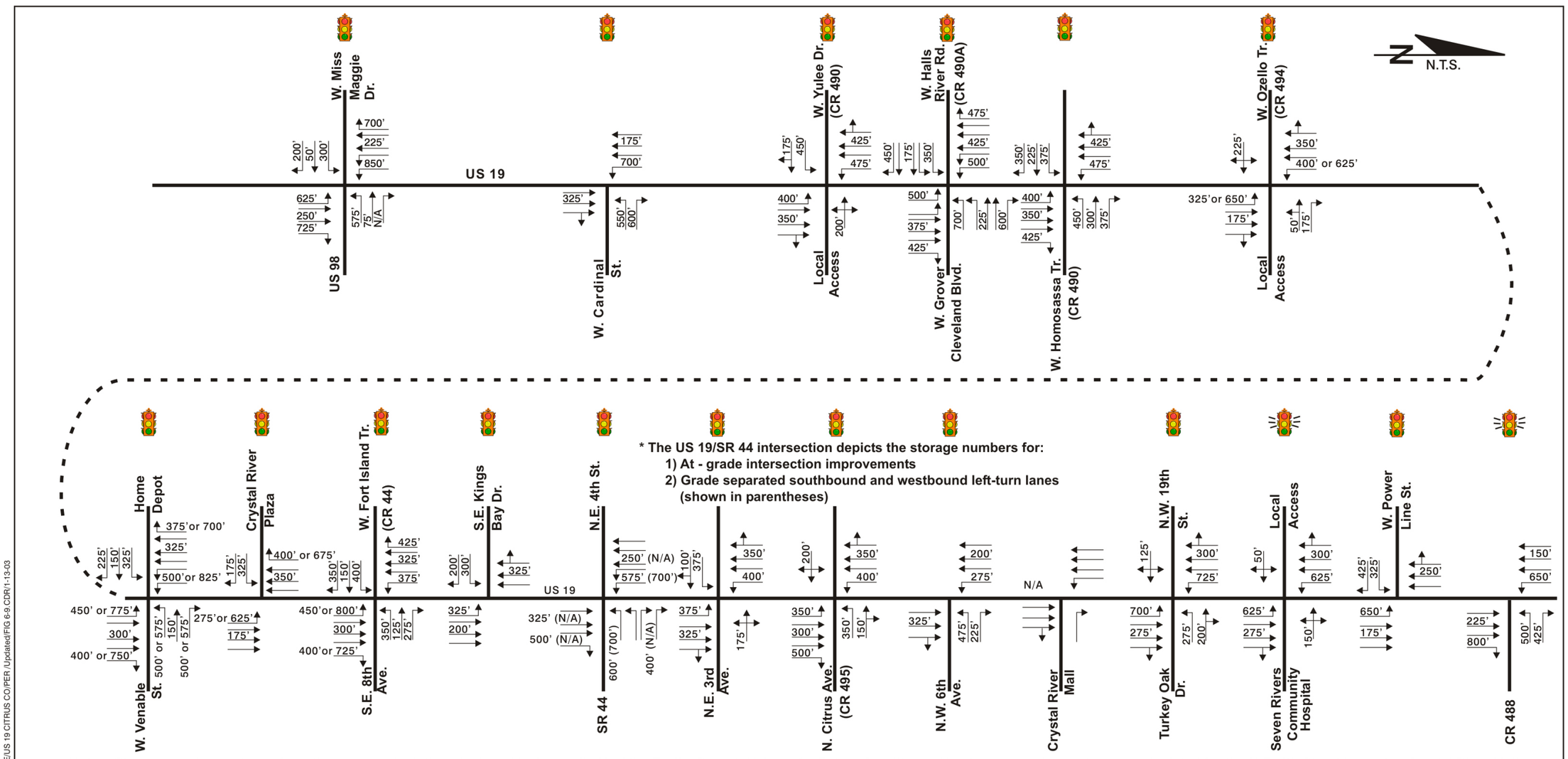
US 19 (SR 55)
PD&E STUDY
From South of US 98 to CR 488
Citrus County, Florida

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION

2025 STORAGE REQUIREMENTS WITH SUNCOAST PARKWAY PHASE 2

WPI SEG NO: 405822 1
FAP: 1852 007 P

FIGURE 6-8



* The US 19/SR 44 intersection depicts the storage numbers for:
1) At - grade intersection improvements
2) Grade separated southbound and westbound left-turn lanes (shown in parentheses)

* Notes: Storage requirements are from the queue calculations included in Appendix M of the Traffic Report: Volume 2 - Future Conditions. No storage requirements were calculated for the N.E. 4th Street leg or the Crystal River Mall intersection given access modifications and lack of signalization. Assumes 50 MPH urban design speed or 70 MPH rural design speed for US 19 except for the W. Ozello Trail, W. Venable Street, Crystal River Plaza and Fort Island Trail intersections which have calculations shown for both urban alternatives (shorter distances) and rural alternatives (long distances). Where more than one lane is shown for a particular movement (i.e., left-turn lanes)the storage requirement reflects all lanes.

G: COREL/PD&E/US 19 CITRUS CO/PER /Updated/FIG 6-9.CDR/1-13-03

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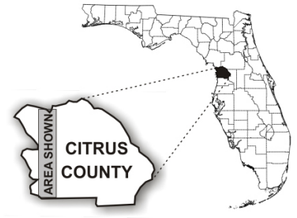
LEGEND

- Existing signal
- New signal (if warranted)



US 19 (SR 55)
PD&E STUDY
From South of US 98 to CR 488
Citrus County, Florida

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION

2025 STORAGE REQUIREMENTS WITHOUT SUNCOAST PARKWAY PHASE 2

WPI SEG NO: 405822 1
FAP: 1852 007 P

FIGURE 6-9

Table 6-9
2025 Build Intersection Analyses
With Suncoast Parkway Phase 2

Intersection	PM Peak Hour LOS[1]
US 19/US 98	B
US 19/West Cardinal Street	B
US 19/West Yulee Drive (CR 490)	C
US 19/West Halls River Road (CR 490A)/ West Grover Cleveland Boulevard	C
US 19/West Homosassa Trail (CR 490)	C
US 19/West Ozello Trail (CR 494)	B
US 19/West Venable Street	B
US 19/Crystal River Plaza	B
US 19/SE 8th Avenue/West Fort Island Trail (CR 44)	B
US 19/SE Kings Bay Drive	B
US 19/SR 44/NE 4th Street With At-Grade Intersection	B
US 19/SR 44/NE 4th Street With Grade Separated Southbound and Westbound Left-Turn Movements	F
US 19/NE 3rd Avenue	C
US 19/North Citrus Avenue (CR 495)	B
US 19/NW 6th Avenue	B
US 19/Crystal River Mall (Unsignalized)	B[(2)]
US 19/NW 19th Street/Turkey Oak Drive	B
US 19/Seven Rivers Community Hospital	B
US 19/West Power Line Street	B
US 19/North Dunnellon Road (CR 488)	B

[1] Level of service.
[2] Westbound Right-Turn Movement.

Table 6-10
2025 Build Intersection Analyses
Without Suncoast Parkway Phase 2

Intersection	PM Peak Hour LOS[1]
US 19/US 98	B
US 19/West Cardinal Street	B
US 19/West Yulee Drive (CR 490)	C
US 19/West Halls River Road (CR 490A)/West Grover Cleveland Boulevard	C
US 19/West Homosassa Trail (CR 490)	C
US 19/West Ozello Trail (CR 494)	B
US 19/West Venable Street	B
US 19/Crystal River Plaza	B
US 19/SE 8th Avenue/West Fort Island Trail (CR 44)	B
US 19/SE Kings Bay Drive	B
US 19/SR 44/NE 4th Street With At-Grade Intersection	C
US 19/SR 44/NE 4th Street With Grade Separated Southbound and Westbound Left-Turn Movements	F
US 19/NE 3rd Avenue	C
US 19/North Citrus Avenue (CR 495)	C
US 19/NW 6th Avenue	B
US 19/Crystal River Mall (Unsignalized)	B[(2)]
US 19/NW 19th Street/Turkey Oak Drive	B
US 19/Seven Rivers Community Hospital	B
US 19/West Power Line Street	B
US 19/North Dunnellon Road (CR 488)	B

[1] Level of service.
[2] Westbound Right-Turn Movement.

Table 6-11
2025 Build Level of Service Summary by Segment
With Suncoast Parkway Phase 2

US 19 Segment		Proposed Through Lanes	2025 Two-Way Peak Hour Volume[1]	FDOT LOS Standard[2]	2025 Peak Hour LOS	
From	To				Northbound	Southbound
South of US 98	US 98	4	1,780	B	A	A
US 98	West Cardinal Street	6	3,195	B	A	A
West Cardinal Street	West Yulee Drive (CR 490)	6	4,123	B	A	A
West Yulee Drive (CR 490)	West Halls River Road (CR 490A)/ West Grover Cleveland Boulevard	6	4,271	C	C	D[3]
West Halls River Road (CR 490A)/ West Grover Cleveland Boulevard	West Homosassa Trail (CR 490)	6	3,907	C	F[3]	F[3]
West Homosassa Trail (CR 490)	West Ozello Trail (CR 494)	6	3,558	B	A	A
West Ozello Trail (CR 494)	West Venable Street	6	3,526	B	A	A
West Venable Street	Crystal River Plaza	6	3,727	B	C[3]	E[3]
Crystal River Plaza	SE 8th Avenue / West Fort Island Trail (CR 44)	6	4,008	B	A	A
SE 8th Avenue / West Fort Island Trail (CR 44)	SE Kings Bay Drive	6	3,775	C	A	B
SE Kings Bay Drive	SR 44/NE 4th Street	6	4,113	C	C/B[4]	C/B[4]
SR 44/NE 4th Street	NE 3rd Avenue	6	3,856	C	D/D[3,4]	C/B[4]
NE 3rd Avenue	North Citrus Avenue (CR 495)	6	3,549	C	D[3]	D[3]

Table 6-11 (Cont.)
2025 Build Level of Service Summary by Segment
With Suncoast Parkway Phase 2

US 19 Segment		Proposed Through Lanes	2025 Two-Way Peak Hour Volume[1]	FDOT LOS Standard[2]	2025 Peak Hour LOS	
From	To				Northbound	Southbound
North Citrus Avenue (CR 495)	NW 6th Avenue	6	2,886	C	B	B
NW 6th Avenue	Crystal River Mall	6	2,117	C	C	B
Crystal River Mall	NW 19th Street/ Turkey Oak Drive	6	2,274	C	C	B
NW 19th Street/ Turkey Oak Drive	Seven Rivers Community Hospital	6	2,225	B	A	A
Seven Rivers Community Hospital	West Power Line Street	6	2,296	B	A	A
West Power Line Street	North Dunnellon Road (CR 488)	6	1,870	B	A	A

[1] Volumes were obtained from Figure 6-5, 2025 PM Peak Hour Volumes With Suncoast Parkway Phase 2.
[2] 1998 Level of Service Manual, Table 2-1.
[3] Does not meet LOS standard for segment but since the intersections operate at acceptable LOS (within the standard) it is recommended that signals in Homosassa Springs (West Yulee Drive [CR 490] to West Homosassa Trail [CR 490]), at the West Venable Street and Crystal River Plaza intersections and in Crystal River (SR 44/NE 4th Street) to North Citrus Avenue (CR 495) be coordinated to minimize delays along the corridor.
[4] Reflects LOS under two scenarios: 1) at-grade intersection improvements at the US 19/SR 44/NE 4th Street intersection and, 2) with grade separated southbound and westbound left-turn movements at the US 19/SR 44/NE 4th Street intersection. In all other instances, LOS is unaffected on segments along the West Cardinal Street to North Citrus Avenue (CR 495) arterial.

Table 6-12
2025 Build Level of Service Summary by Segment
Without Suncoast Parkway Phase 2

US 19 Segment		Proposed Through Lanes	2025 Two-Way Peak Hour Volume[1]	FDOT LOS Standard[2]	2025 Peak Hour LOS	
From	To				Northbound	Southbound
South of US 98	US 98	4	1,986	B	A	A
US 98	West Cardinal Street	6	3,928	B	A	A
West Cardinal Street	West Yulee Drive (CR 490)	6	4,708	B	A	A
West Yulee Drive (CR 490)	West Halls River Road (CR 490A)/ West Grover Cleveland Boulevard	6	4,789	C	C	D[3]
West Halls River Road (CR 490A)/ West Grover Cleveland Boulevard	West Homosassa Trail (CR 490)	6	4,435	C	E[3]	F[3]
West Homosassa Trail (CR 490)	West Ozello Trail (CR 494)	6	4,042	B	A	A
West Ozello Trail (CR 494)	West Venable Street	6	3,960	B	A	B
West Venable Street	Crystal River Plaza	6	4,153	B	C[3]	E[3]
Crystal River Plaza	SE 8th Avenue / West Fort Island Trail (CR 44)	6	4,466	B	A	A
SE 8th Avenue / West Fort Island Trail (CR 44)	SE Kings Bay Drive	6	4,342	C	A	B
SE Kings Bay Drive	SR 44/NE 4th Street	6	4,695	C	D/B[3,4]	C/B[4]
SR 44/NE 4th Street	NE 3rd Avenue	6	4,495	C	D/B[3,4]	D/B[3,4]
NE 3rd Avenue	North Citrus Avenue (CR 495)	6	4,140	C	D[3]	E[3]

Table 6-12 (Cont.)
2025 Build Level of Service Summary by Segment
Without Suncoast Parkway Phase 2

US 19 Segment		Proposed Through Lanes	2025 Two-Way Peak Hour Volume[1]	FDOT LOS Standard[2]	2025 Peak Hour LOS	
From	To				Northbound	Southbound
North Citrus Avenue (CR 495)	NW 6th Avenue	6	3,362	C	B	B
NW 6th Avenue	Crystal River Mall	6	2,584	C	C	B
Crystal River Mall	NW 19th Street/ Turkey Oak Drive	6	2,753	C	C	B
NW 19th Street/ Turkey Oak Drive	Seven Rivers Community Hospital	6	2,755	B	A	A
Seven Rivers Community Hospital	West Power Line Street	6	2,712	B	A	A
West Power Line Street	North Dunnellon Road (CR 488)	6	2,218	B	A	A

[1] Volumes were obtained from Figure 6-6, 2025 PM Peak Hour Volumes Without Suncoast Parkway Phase 2.
[2] 1998 Level of Service Manual, Table 2-1.
[3] Does not meet LOS standard for segment but since the intersections operate at acceptable LOS (within the standard) it is recommended that signals in Homosassa Springs (West Yulee Drive [CR 490] to West Homosassa Trail [CR 490]), at the West Venable Street and Crystal River Plaza intersections and in Crystal River (SR 44/NE 4th Street) to North Citrus Avenue (CR 495) be coordinated to minimize delays along the corridor.
[4] Reflects LOS under two scenarios: 1) with at-grade intersection improvements at the US 19/SR 44/NE 4th Street intersection and, 2) with grade separated southbound and westbound left-turn movements at the US 19/SR 44/NE 4th Street intersection. In all other instances, LOS is unaffected on segments along the West Cardinal Street to North Citrus Avenue (CR 495) link.

6.6.4.3 Level of Service Improvement Recommendations

The following improvements are recommended to improve the operation of US 19 in the design year (2025):

- Six-lane divided roadway
- Cross street improvements

The recommended lane geometry for US 19 is reflected in the Recommended Alternative Concept Plans located in Appendix C.

6.7 ACCESS MANAGEMENT

6.7.1 Preliminary Access Management Plan

In order to meet access management criteria as shown in Tables 5-2 and 6-1, an Access Management Plan was developed for the proposed improvements. The Access Management Plan incorporated the recommendations put forward as part of the US 19 Access Management Study from Hernando County Line to Mayo Drive, prepared as a separate study for Citrus County, and comments received from the FDOT Access Review Committee. Table 6-13 shows the recommended median openings and signal locations and spacing. It also indicates whether the recommended spacing meets criteria. In some cases the proposed spacing does not meet criteria where certain existing signals or median openings are necessary to maintain reasonable access. The FDOT Median Review Committee approved the recommended Access Management Plan on June 19, 2003.

Table 6-13
Proposed Median Opening Locations

Proposed Access Class	Segment	Access Point	Proposed Traffic Control	Milepost M.P.	PD&E Station	Median Opening Type	Directional Spacing (ft)	Full Spacing (ft)	Signal Spacing (ft)	Does Spacing Meet Rule 14-97 Class 3 Criteria?	Comment
Class 3	Begin 1	US 98/ CR 480	**Signal**	1.920	112+00	Full		4650		Yes	No change.
		Vacant/Shell	None / Stop	2.086	121+00	Directional	900			68%	Directional with northbound and southbound left-turn lanes.
		Maine St.	None / Stop	2.246	129+00	Full	800	1700		61% / 64%	Full with left turn lanes.
		N.A.	None / Stop	2.707	153+00	Full		2400		91%	Full access.
		N.A.	None / Stop	3.091	173+50	Directional	2050			Yes	Directional (split) with northbound and southbound left turns.
		Sugarmill Woods/ W. Cypress Blvd.	**Flashing Beacon**	3.337	186+75	Full	1325	3375	7475	Yes / Yes / Yes	Full with left turn lanes.
		W. Burnt Bridge Road	None / Stop	3.507	195+75	Directional	900			68%	Section 4(f) Facility - constructive use: access, left-in/left-out
		Chassahowitzka Wildlife Refuge	None / Stop	3.706	206+25	Directional	1050			80%	Section 4(f) Facility - constructive use: access, left-in/left-out
		N.A.	None / Stop	3.933	218+00	Full	1175	3125		89% / Yes	Full with left turn lanes.
		N.A.	None / Stop	4.357	240+25	Full		2225		84%	Full with left turn lanes.
		W. Cardinal St.	**Signal**	4.766	262+25	Full		2200	7550	83% / Yes	No change signalized. Add northbound left-turn lanes.
		Howard's Flea Market (n. driveway)	None / Stop	5.219	286+00	Full		2375		90%	Full with left turn lanes.
		W.McKinley St.	None / Stop	5.604	309+25	Full		2325		88%	Full with left turn lanes.
		W. Fair Acres Pl.	None / Stop	5.869	320+25	Directional	1100			83%	Directional with northbound and southbound left-turn lanes.
		W. Village Dr.	None / Stop	6.136	334+75	Full	1450	2550		Yes / 97%	Full with left turn lanes.
		Suncoast Baptist/ W.Cyprian Ct.	None / Stop	6.471	352+25	Directional	1750			Yes	Directional with northbound and southbound left-turn lanes.
	End 1 / Begin 2	W. Green Acres St.	None / Stop	6.811	370+00	Full	1775	3525		Yes / Yes	Full with left-turn lanes.
		W. Bradshaw St.	None / Stop	7.131	387+00	Directional	1700			Yes	Directional with northbound and southbound left-turn lanes.
		N.A.	None / Stop	7.286	395+00	Directional	800			No (FDOT Approved)	Directional southbound left-turn lane only.
		Post Office Entrance	None / Stop	7.353	399+00	Directional	400			No (FDOT Approved)	Directional northbound left-turn lane only.
		Post Office Exit	None / Stop	7.390	402+25	Directional	325			No (FDOT Approved)	Directional eastbound left-turn only.
		Homosassa Square Entrance	None / Stop	7.489	407+50	Directional	525			40%	Directional northbound left-turn only.
		CR 490 / W. Yulee Dr.	**Signal**	7.673	415+25	Full	775	4525	15,300	59% / Yes / Yes	No change signalized.
	*	Homosassa Springs State Wildlife Park	None / Stop	7.858	425+00	Directional	975			74%	Section 4(f) Facility - constructive use: access, left-in/left-out
	*	CR 490A (W. Halls River Rd.) / (W. Grover Cleveland Blvd.)	**Signal**	8.055	425+75	Full	1068	1075	2050	81% / 41% / 78%	No change signalized and heavily developed.
		W. Homosassa Trl.	**Signal**	8.182	432+50	Full		675	675	26% / 26%	No change signalized and heavily developed.
		W. Faust Ln.	None / Stop	8.436	446+00	Directional	1350			Yes	Directional with northbound and southbound left-turn lanes.
		14th St. / Bell Villa MHP	None / Stop	8.619	455+50	Directional	950			72%	Directional with northbound and southbound left-turn lanes.
	End 2 / Begin 3	W. Stone Brook Dr./ W. Jump Ct.	None / Stop	8.880	468+75	Full	1325	3625		Yes / Yes	Full with left-turn lanes.
		W. Dogwood Dr.	None / Stop	9.467	500+50	Full		3175		Yes	Full with left-turn lanes.
		Cadillac Village	None / Stop	9.665	510+00	Directional	950			72%	Directional southbound left-turn lane only.
		W. Longfellow St.	None / Stop	9.830	519+50	Full	950	1900		72% / 72%	Full with left-turn lanes.
		W. Goodman Ln.	None / Stop	10.082	533+00	Directional	1350			Yes	Directional with northbound and southbound left turn lanes.
		The Boat House	None / Stop	10.609	560+25	Full	2725	4075		Yes / Yes	Full with left-turn lanes.
		Eagle Buick/ GMC	None / Stop	10.812	571+25	Directional	1100			83%	Directional with northbound and southbound left turn lanes.
		Crystal Chevy/ N. Entrance	None / Stop	11.024	582+25	Directional	1100			83%	Directional with northbound and southbound left turn lanes.
		W. Highland St.	None / Stop	11.227	593+25	Full	1100	3300		83% / Yes	Full with left-turn lanes.
		CR 494/ W. Ozello Tr.	**Signal**	11.668	616+50	Full		2325	18,400	88% / Yes	No change signalized.
		W. Penn Dr.	None / Stop	11.975	633+00	Directional	1650			Yes	Directional with northbound and southbound left-turn lanes.
		Home Depot/ W. Venable Dr.	**Signal**	12.251	647+25	Full	1425	3075	3075	Yes / Yes / Yes	Full no change signalized and heavily developed.
		Crystal River Plaza	**Signal**	12.585	665+00	Full		1775	1775	67% / 67%	Full no change signalized and heavily developed.
		W. Godfrey Ln.	None / Stop	12.936	683+50	Full		1850		70%	Full with left-turn lanes.
		Ewell Industries	None / Stop	13.121	693+50	Full		1000		38%	No change heavily developed.
		W. Mayo Dr. / Regions Bank	None / Stop	13.247	700+00	Full		650		25%	No change heavily developed.

Class 3 Criteria
Directional / Full / Signal
1320' / 2640' / 2640'

Table 6-13
Proposed Median Opening Locations

Proposed Access Class	Segment		Access Point	Proposed Traffic Control	Milepost M.P.	PD&E Station	Median Opening Type	Directional Spacing (ft)	Full Spacing (ft)	Signal Spacing (ft)	Does Spacing Meet Rule 14-97 Class 3 Criteria?	Comment
Class 3 Criteria Directional / Full / Signal 1320' / 2640' / 2640'	**End 3 / Begin 4**		W Fort Island Trl. (CR 44)	**Signal**	13.524	714+50	Full		1450	4950	55% / Yes	No change signalized.
	End 3 / Begin 4		W Fort Island Trl. (CR 44)	**Signal**	13.524	714+50	Full		1450	4950	55% / Yes	No change signalized.
			Southtrust Bank / H&H Motors	None / Stop	13.772	727+50	Directional	1300			98%	Directional with northbound and southbound left-turn lanes.
		*	Crystal Square	None / Stop	14.025	740+50	Directional	1300			98%	Directional with northbound and southbound left-turn lanes.
		*	SE Kings Bay Dr.	**Signal**	14.203	14+00	Full	1015	3615	3615	77% / Yes / Yes	No change signalized and heavily developed.
	End 4 / Begin 5		NE 1st Ter.	None / Stop	14.373	23+00	Directional	900			68%	Directional with northbound and southbound left-turn lanes.
			SR 44	**Signal**	14.648	37+50	Full	1450	2350	2350	Yes / 89% / 89%	No change signalized and heavily developed.
			SR 44	**Signal**	14.648	37+50	Full	1450	2350	2350	Yes / 89% / 89%	No change signalized and heavily developed.
		*	NE 3rd Ave.	**Signal**	14.838	47+00	Full		950	950	36% / 36%	No change signalized and heavily developed.
		*	CR 495 (N Citrus Ave.)	**Signal**	15.090	807+00	Full		1340	1340	51% / 51%	No change signalized and heavily developed.
			NW 2nd Ave/City Hall/Police/Park	None / Stop	15.223	814+00	Directional	700			53%	Directional with left-in / left-out for Police Station, park.
			NW 6th St./C.R. Fire Dept.	**Signal**	15.332	820+25	Full	625	1325	1325	47% / 50% / 50%	Full with northbound and southbound left-turn lanes. Signal is actuated for Crystal River Fire Department only.
			N.A.	None / Stop	15.590	833+50	Directional	1325			Yes	Directional with northbound and southbound left-turn lanes.
			NW 6th Ave.	**Signal**	16.002	855+50	Full	2200	3525	3525	Yes / Yes / Yes	No change signalized.
			C.R. Mall / Churchhouse Hammock	None / Stop	16.315	872+00	Directional	1650			Yes	Directional with northbound and southbound left turn lanes.
	End 5 / Begin 6		NW 19th St. / Turkey Oak Dr.	**Signal**	16.474	880+00	Full	800	2450	2450	61% / 93% / 93%	No change signalized.
			Rex Audio Video Appliances	None / Stop	16.617	888+00	Full		800		30%	No change.
			NW 22nd St.	None / Stop	16.735	894+00	Full		600		23%	No change.
			W State Park St.	None / Stop	16.951	905+50	Full		1150		44%	No change.
			Econo Lodge	None / Stop	17.119	914+50	Full		900		34%	No change.
			Andy's Affordable Auto Repair	None / Stop	17.270	922+50	Full		800		30%	No change.
			Vacant	None / Stop	17.583	939+00	Full		1650		63%	No change.
			Vacant	None / Stop	17.900	955+75	Full		1675		63%	No change.
			Vacant	None / Stop	18.222	972+75	Full		1700		64%	No change.
			Castaways Pub & Grill / Bentbow Path	None / Stop	18.538	989+50	Full		1675		63%	No change.
			Vacant	None / Stop	18.937	1010+50	Full		2100		80%	No change.
			W. Curtis Tool Ln.	None / Stop	19.108	1019+25	Full		875		33%	No change.
			Seven Rivers Community Hospital	**Signal**	19.306	1029+50	Full		1025	14950	39% / Yes	No change.
			W. Garnet Court	None / Stop	19.491	1039+75	Full		1025		39%	No change.
			W Powerline St.	**Signal**	19.945	1064+00	Full		2425	3450	92% / Yes	No change.
			Crystal River Quarries, Inc. Red Level	None / Stop	20.281	1081+50	Full		1750		66%	No change.
	End 6		N. Dunnellon Road / (CR 488)	**Signal**	20.742	1105+50	Full		2400	4150	91% / Yes	Full with left turn lanes and signal.

6.8 REFERENCES

1. Final Traffic Report: Volume 1 - Existing Conditions; From South of US 98 to CR 488; PBS&J; May 2004.

2 Final Traffic Report: Volume 2 - Future Conditions; From South of US 98 to CR 488; PBS&J; May 2004.

3. US 19 Action Plan Update – From US 98 to Crystal River Mall; Florida Department of Transportation; URS Greiner Woodward Clyde; Citrus County; July 2000.

4. 2000 Florida Traffic Information CD-ROM; Florida Department of Transportation; Tallahassee, Florida; 2000.

5. 1997 Highway Capacity Manual Software; Release 2.1g; McTrans; University of Florida Transportation Research Center; 1997.

6. 1998 Level of Service Handbook; Florida Department of Transportation, Systems Planning Office; Tallahassee, Florida; 1998.

7. Plans Preparation Manual (English); Florida Department of Transportation; Tallahassee, Florida; January 2002.

8. Median Opening and Access Management Decision Process; Florida Department of Transportation; Tallahassee, Florida; January 2001.

9. US 19 Access Management Study from Hernando County Line to Mayo Drive; Dyer, Riddle, Mills & Precourt, Inc.; June 2002.

10. Highway Capacity Manual, Special Report 209, Third Edition; Transportation Research Board; Washington, D.C.; 1994.

SECTION 7
CORRIDOR ANALYSIS

7.1 EVALUATION OF ALTERNATE CORRIDORS

In order to identify potential alternatives, which could satisfy the future travel demand of the US 19 corridor, the following options were considered.

- Improvements to other existing parallel roadways within the region;
- Development of a new facility on a new corridor;
- Enhancement of transit within the corridor; and
- Roadway improvements to the existing US 19 corridor.

7.1.1 Improvement of Parallel Roadways

A review to determine the feasibility of improving existing parallel facilities was conducted prior to the evaluation of widening US 19. CR 491 is a two-lane undivided roadway located approximately five mi east of US 19. CR 491 was recently widened to five lanes from Grover Cleveland Boulevard to SR 44/NE 4th Street. Another section of CR 491, from CR 486 to Pine Ridge Boulevard, is scheduled for widening to four and six lanes beginning in year 2003. However, this facility is approximately five mi away from US 19 and has different termini. Therefore, CR 491 is not appropriate to handle the needs of US 19. CR 495, an existing two-lane collector, extends northward from US 19 in Crystal River. According to the Citrus County Comprehensive Plan[1] Traffic Circulation Element, CR 495 is proposed be widened to a four-lane divided facility by year 2020. However, since CR 495 dead-ends at Lake Rousseau, it cannot be expected to divert traffic from US 19 or otherwise satisfy the need for additional capacity on US 19. West of US 19, there are no existing north/south roadways that could be widened. Tallahassee Road, north of Turkey Oak Drive is currently a two-lane, undivided, curvilinear local roadway with approximately 50 ft of existing ROW. Improvements to

this roadway are not consistent with the Citrus County Comprehensive Plan. Therefore, improvements to parallel facilities are not considered a viable alternative to improving US 19.

7.1.2 Improvement of a New Corridor

West of US 19, there are several potential Section 4(f) facilities: a wildlife refuge, a wildlife management area, a state forest, several Outstanding Florida Waters (OFW) and other environmentally sensitive lands incompatible with a new roadway corridor. East of US 19, the Suncoast Parkway Phase 2 is already planned for construction as a four-lane, divided, limited access freeway. Improvements to add additional capacity to US 19 are needed with or without the Suncoast Parkway Phase 2 in place. Therefore, new roadways on parallel corridors are not considered a viable alternative to improving US 19.

7.1.3 Enhancement of Transit Service

The CCPTS operates as a demand response para-transit bus system. The service picks up passengers at any location throughout the county and transport them to their planned destination(s). A 24-hour advance reservation is required from a passenger in order for CCPTS to schedule the drivers' routes.

The Citrus County Comprehensive Plan Public Transit Element indicates an increase in transit service demand is expected by the year 2020. The Citrus County Comprehensive Plan projects an increase in the transit fleet to 105 vehicles by the year 2020. Currently, the transit fleet consists of 19 vehicles.

In addition to the increase in fleet size, the Citrus County Comprehensive Plan recommends studying the feasibility of implementing a fixed route transit system for the county. Although enhancements to transit service in the area are planned for further study, they will not be able to accommodate much of the future travel demand.

7.1.4 Improvement of the Existing Corridor

The improvements to US 19, from south of US 98 to North Dunnellon Road (CR 488), are consistent with the Citrus County Comprehensive Plan. Several Build Alternatives have been developed with varying median widths, additional turn lanes, and specific alignments. The ROW along the US 19 corridor is sufficient to accommodate much of the proposed improvements; however, the amount of ROW acquisition necessary varies by alternative. All of the Build Alternatives, as well as the No-Build Alternative, are considered viable for further study.

7.2 CORRIDOR SELECTION

In summary, neither alternative corridors nor enhanced transit service were considered viable alternatives to the widening of US 19 from south of US 98 to North Dunnellon Road (CR 488). Therefore, the existing corridor is considered viable for further study.

7.3 REFERENCES

1. Citrus County Comprehensive Plan 1995-2020; Citrus County Department of Development Services; Lecanto, Florida; Revisions through December 14, 1999, Amended November 18, 2003.

SECTION 8
ALTERNATIVE ALIGNMENT ANALYSIS

To develop an improved roadway facility for US 19 that is in the best overall public interest, engineering, environmental, and economic factors as well as urban development conditions must be taken into consideration. The improved facility should be designed to safely and efficiently accommodate the projected design year vehicular traffic as well as multi-modal traffic. The design and alignment of the improved facility must consider environmental conditions, public recreation areas, as well as sites potentially contaminated with hazardous and/or petroleum materials. The alignment should be placed so as to optimize the possibility for construction staging and traffic control. Access control techniques to promote safe and efficient operations should be used. All of these criteria have a direct bearing on the selection of the recommended design concept.

Included in the following sections are descriptions of the alternative improvement concepts developed for this project and the evaluation methods used to compare the alternatives. These descriptions are preceded by a presentation of the advantages and disadvantages of the No-Build Alternative.

8.1 NO-BUILD ALTERNATIVE

The No-Build Alternative assumed that the existing mainline laneage is present in the year 2025. The years 2005 and 2025 were analyzed for the Final Traffic Report: Volume 2 - Future Conditions[1] assuming that no additional through lanes would be constructed on US 19 and that cross-street improvements would be constructed as scheduled in local work program plans. US 19 would be maintained in good condition during this period of time and minor traffic systems management projects could be constructed as justified. Certain advantages would be associated with the implementation of the No-Build Alternative, including the following:

- No new construction costs.
- No disruption of traffic or to the existing land uses along the corridor due to construction activities.
- No environmental degradation or disruption of natural resources.
- No ROW acquisitions or relocations.

The disadvantages of the No-Build Alternative include:

- Substandard LOS for the existing roadway network.
- Increased traffic congestion causing increased road user cost due to travel delay.
- Deterioration of air quality caused by traffic congestion and delays.
- Deterioration of the existing safety deficiencies due to the increase in traffic.
- Potential deterioration in the emergency service response time.
- Increased roadway maintenance costs.
- No stormwater management facilities via stormwater attenuation and treatment.

The No-Build Alternative remained under consideration throughout the PD&E Study process.

8.2 TRANSPORTATION SYSTEM MANAGEMENT

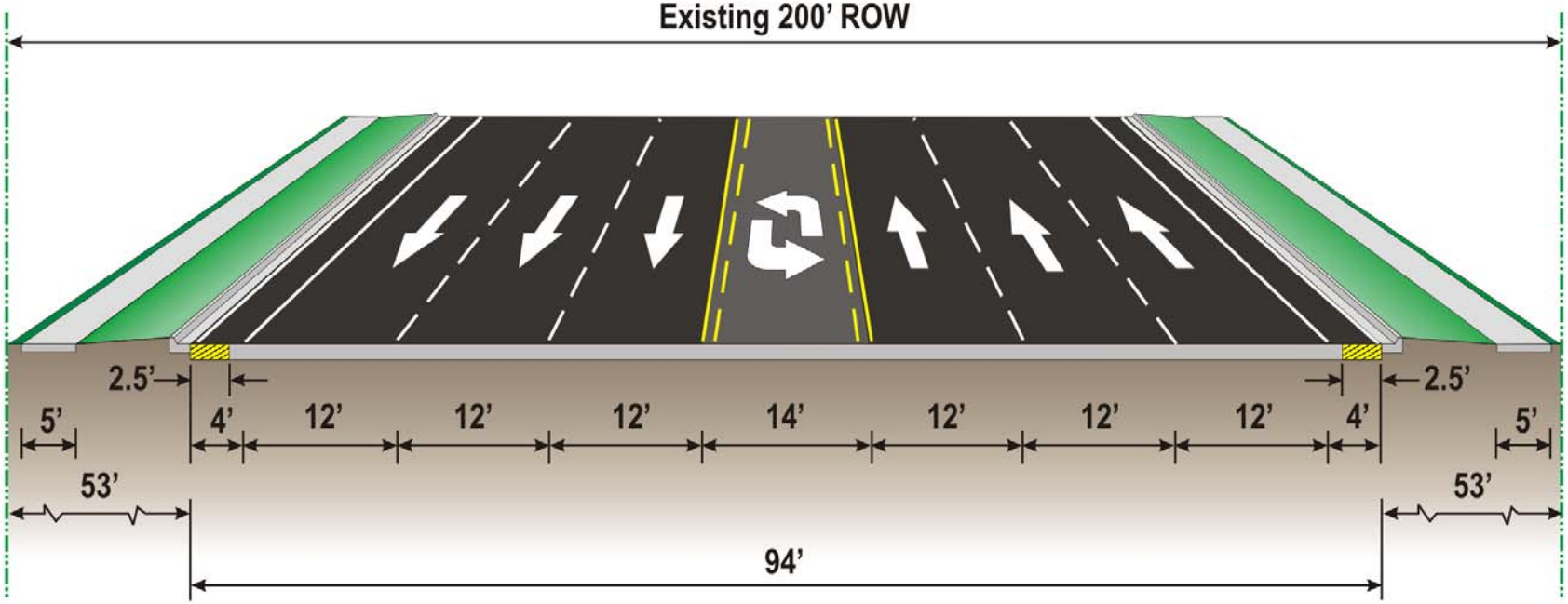
The TSM Alternative, which consists of minor capital improvements that maximize the efficiency of the present system, was also considered for this project. TSM amenities include, but are not limited to, improved intersection geometry, sidewalks, bicycle facilities, signal timing, transit improvements, and improved access features.

8.2.1 TSM Alternative – Segment 4

The proposed widening typical section illustrated in Figure 8-1 was evaluated for Segment 4 as a TSM Alternative. This proposed typical section widens the existing seven-lane roadway 2.5 ft along both sides. Widening of the existing pavement allows

Q: GRAPHICS/COREL/PD&E/US 19 CITRUS CO/PER/Updated/FIG 8-1.CDR/ 1-13-03

PROPOSED WIDENING TYPICAL SECTION



TSM ALTERNATIVE - SEGMENT 4
WEST FORT ISLAND TRAIL (CR 44) TO NE 1ST TERRACE
DESIGN SPEED 40 MPH

LEGEND

Proposed Widening

US 19 (SR 55)
PD&E STUDY
From South of US 98 to CR 488
Citrus County, Florida

PROPOSED WIDENING TYPICAL SECTION

WPI SEG NO: 405822 1
FAP: 1852 007 P

FIGURE 8-1

for three 12-ft travel lanes and a 4-ft bicycle lane in each direction separated by a 14-ft two-way left turn lane. Sidewalks, 5-ft in width, are provided adjacent to the ROW lines on both sides of the roadway. This typical section can be accommodated within the existing 200 ft of ROW. The proposed design speed for this typical section is 40 mph. Current FIHS standards require that all urban FIHS facilities ultimately provide a raised median. Since this typical section does not provide a raised median and the design speed is below the FIHS required urban design speed of 50 mph, a design variation or exception must be prepared and have the concurrence of the State Highway Engineer.

Minimal ROW acquisition of approximately three ft is required along the east side for a small portion of this segment. ROW acquisition is also necessary for stormwater management facilities.

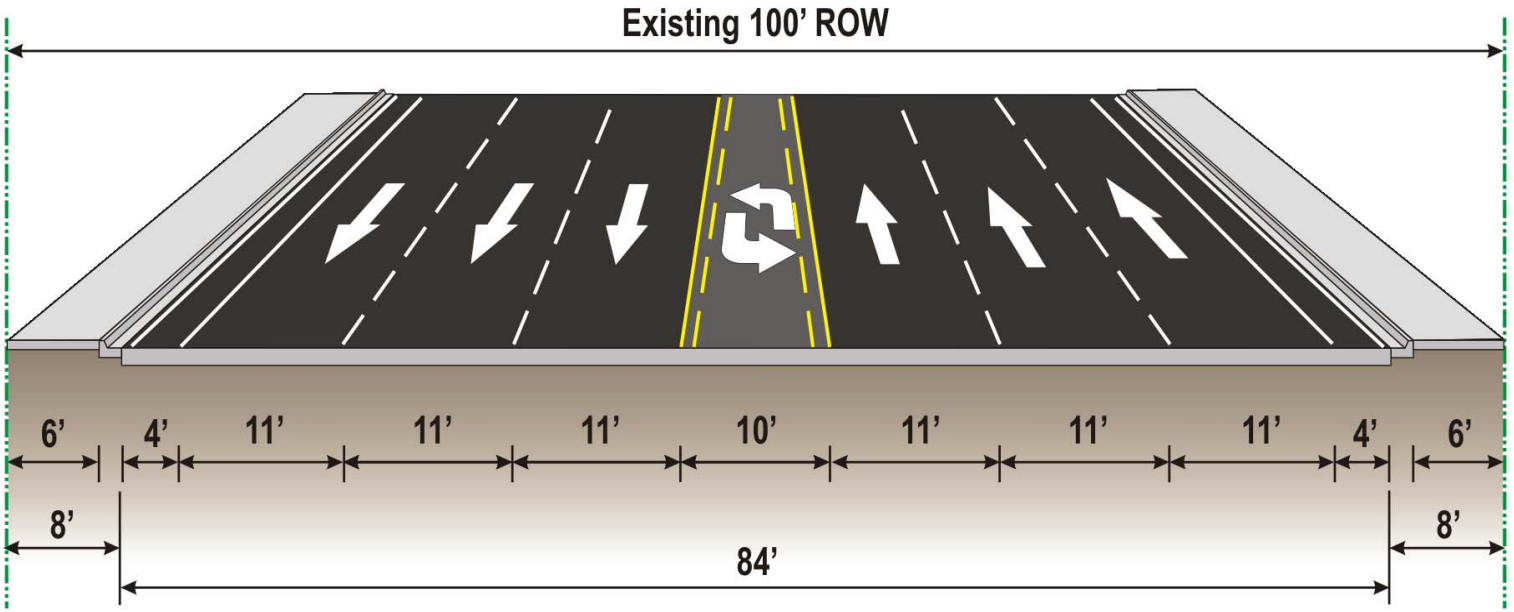
8.2.2 TSM Alternative – Segment 5

According to the Final Traffic Report: Volume 2 – Future Conditions, six lanes on US 19 are needed for Segments 1 through 5 to accommodate future travel demand at an adequate LOS; therefore, TSM activities alone were not considered a viable alternative to roadway improvements within these segments of US 19. However, since the downtown Crystal River area, NE 1st Terrace to the Crystal River Mall, in Segment 5 is heavily developed and contains no available ROW for widening, a TSM Alternative was considered for this segment. The following TSM improvements will not require any additional ROW:

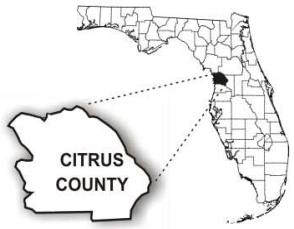
- Restripe the existing five and seven-lane roadway in the downtown Crystal River area (Figures 8-2 and 8-3), NE 1st Terrace to the Crystal River Mall, to include bike lanes. This results in reduced lane widths from 12 ft to 11 ft for the seven lane portion of roadway from NE 1st Terrace to SR 44/NE 4th Street. The transitioning portion from the Crystal River Mall to Turkey Oak Drive contains an existing 4-ft paved shoulder. Therefore, the outside lanes in this area will be re-striped to 11 ft to accommodate a 5-ft paved shoulder for bicyclists.

G:/COREL/PD&E/US 19 CITRUS/PER/Updated/FIG 8-2.CDR/1-13-03

PROPOSED TYPICAL SECTION



TSM ALTERNATIVE - SEGMENT 5
NE 1ST TERRACE TO SR 44 (PORTION OF SEGMENT 5)
DESIGN SPEED 40 MPH
RESTRIPE EXISTING PAVEMENT TO INCLUDE BIKE LANE



US 19 (SR 55)
PD&E STUDY
From South of US 98 to CR 488
Citrus County, Florida

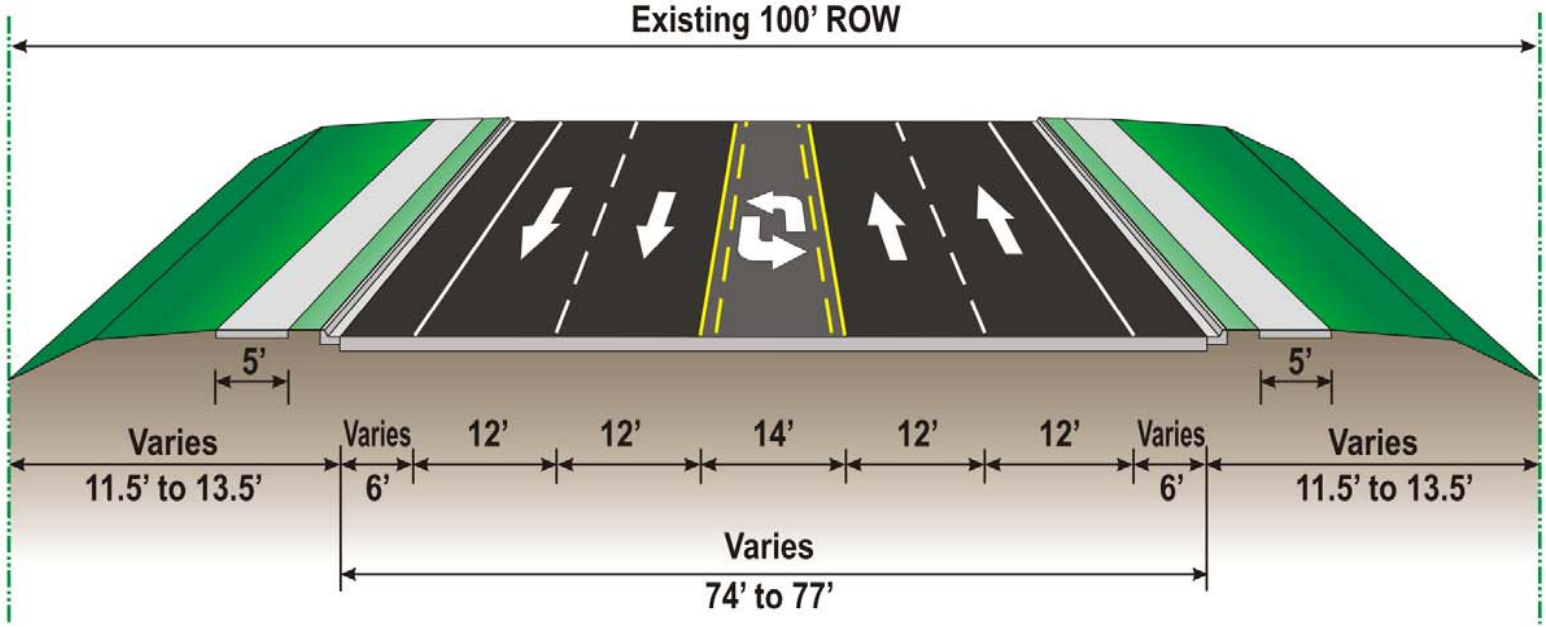
PROPOSED TYPICAL SECTION

WPI SEG NO: 405822 1
FAP: 1852 007 P

FIGURE 8-2

G:/COREL/PD&E/US 19 CITRUS/PER/Update/FIG 8-3.CDR1-13-03

PROPOSED TYPICAL SECTION



TSM ALTERNATIVE - SEGMENT 5
SR 44 TO CRYSTAL RIVER MALL (PORTION OF SEGMENT 5)
DESIGN SPEED 40 MPH
RESTRIPE EXISTING PAVEMENT TO INCLUDE BIKE LANE

US 19 (SR 55)
PD&E STUDY
From South of US 98 to CR 488
Citrus County, Florida

PROPOSED TYPICAL SECTION

WPI SEG NO: 405822 1
FAP: 1852 007 P

FIGURE 8-3

- Sidewalk improvements along US 19 from NE 1st Terrace to the Crystal River Mall.
- Upgrade existing traffic signals to mast arm at SR 44/NE 4th Street, NE 3rd Avenue, North Citrus Avenue (CR 495), and NW 6th Avenue.
- In addition to pedestrian signals and crosswalks at each signalized intersection, a pedestrian overpass is proposed for the Crystal River bike path over US 19.

The proposed TSM improvements meet current FDOT standards for pedestrian and bicycle facilities but do not meet the established FDOT standard LOS C required through downtown Crystal River; therefore, to accommodate future travel demand at an adequate LOS along the US 19 corridor, TSM activities alone were not considered a viable alternative to roadway improvements along that portion of US 19.

8.2.3 TSM Alternative – Segment 6

According to the Final Traffic Report: Volume 2 - Future Conditions, the 2025 No-Build Intersection Analyses (with Suncoast Parkway Phase 2) indicate that only minor operational improvements in Segment 6 are justified from Turkey Oak Drive to North Dunnellon Road (CR 488) (assuming Suncoast Parkway Phase 2 is in place) to meet an acceptable LOS; therefore, a TSM Alternative was considered for this segment. The TSM improvements described below can be accommodated within the existing 200 ft of ROW.

- Extend the northbound left and right turn lanes at North Dunnellon Road (CR 488).
- Extend southbound left turn lane at North Dunnellon Road (CR 488).
- Add an exclusive right turn lane along westbound North Dunnellon Road (CR 488).
- The intersection at Seven Rivers Community Hospital is currently controlled by a flashing signal. The TSM Alternative includes replacement of the flashing signal with a full signal, if warranted.

- Signalize the intersection of US 19 and North Dunnellon Road (CR 488) if warranted.
- Upgrade existing traffic signals to mast arms at Seven Rivers Community Hospital and West Powerline Street. Pedestrian signals and crosswalks will also be included at each signalized intersection.

Crash data was obtained for US 19 within Segment 6. The safety ratios are less than 1.0 for the five year period from 1995 through 1999, indicating a below average crash rate; therefore, there are no safety issues associated with this segment of US 19.

8.3 ALTERNATIVES EVALUATION

To effectively develop and evaluate all viable improvement alternatives for the project, the following three-step process was applied:

- In Step One, the project was divided into six segments based on the existing typical sections, land use patterns, location of crossover streets, and available ROW width.
- In Step Two, alternative typical cross sections were developed based on roadway design criteria discussed in Section 5 and the results of the traffic analysis. The selection of the type and dimensions of the typical sections for each segment also considered socioeconomic and environmental impacts.
- In Step Three, alternative improvement alignments were generated for each segment based on the typical cross sections (developed in Step Two) and the assumption that the additional ROW would be acquired where necessary along the existing facility.

8.3.1 Proposed Alternatives

The subsections contained within this section of the report describe the proposed typical sections and alignments developed for this study and present graphically the proposed typical sections. The Final Traffic Report: Volume 2 - Future Conditions indicates the

need for six lanes on US 19 from US 98 to the Crystal River Mall in the design year 2025. Since each project segment was unique and required the analysis of different typical sections, the project segments were used to define the proposed alternatives for the corridor analysis. These alternatives were fully evaluated and presented at the Public Workshop held on January 16, 2003. Alternative refinements made after the Public Workshop are described in Section 8.5 of this report.

8.3.1.1 Segment 1

The limits of Segment 1 are from south of US 98 to West Green Acres Street. The design year 2025 AADT for this section ranges from 15,800 to 34,200 vpd with a projected Truck Factor of 7 percent.

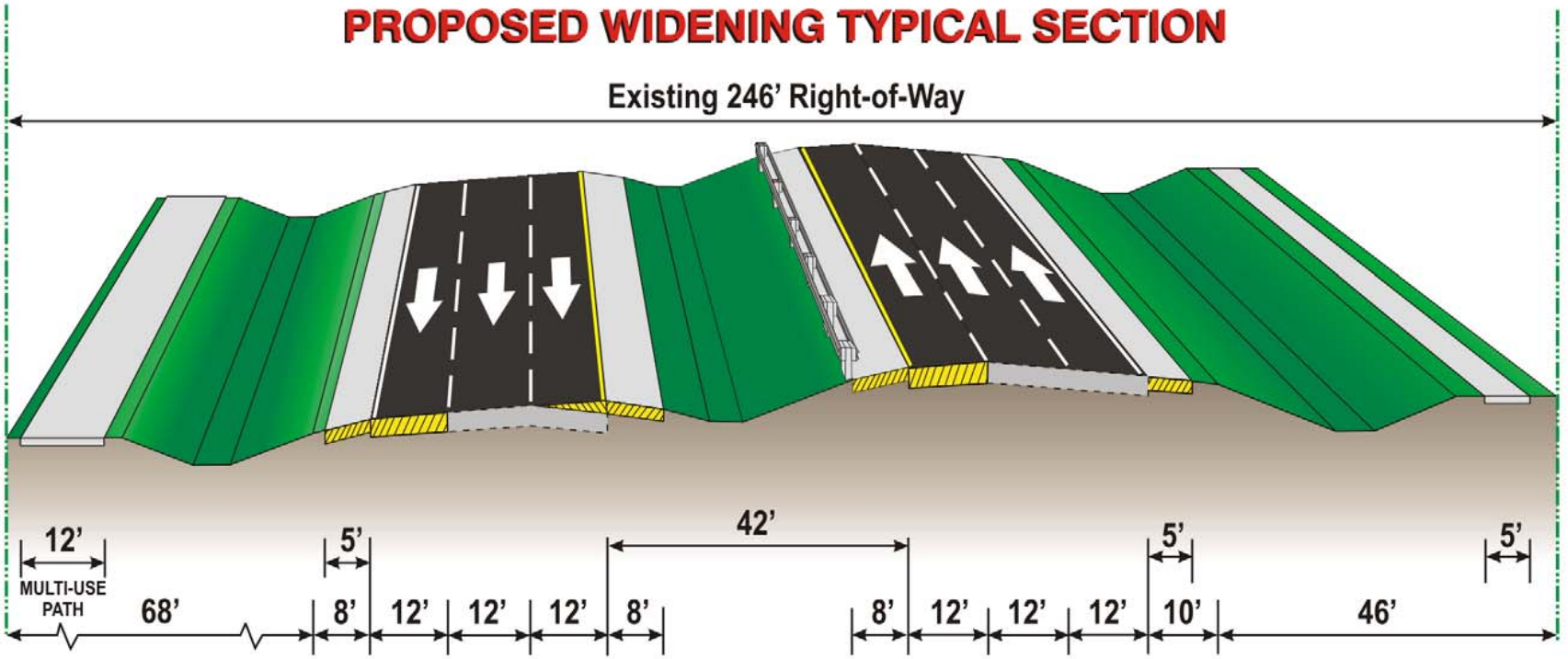
A programmed reconstruction project for US 98 from the Suncoast Parkway to US 19 (Financial Project ID 257174-1-52-01) was being designed during the PD&E Study process. The letting date for construction was scheduled for May 2003. The US 98 project included improvements to the intersection of US 98 and US 19 such as a new right turn lane for westbound US 98, dual left turn lanes and an exclusive right turn lane for southbound US 19, and an exclusive right turn lane for northbound US 19. The proposed PD&E Study alternatives for US 19 in Segment 1 begin where the US 98 project ends, north of US 98. The Recommended Alternative Concept Plans in Appendix C show the limits of the reconstruction project.

Alternative 1

The proposed typical section illustrated in Figure 8-4 was evaluated for Segment 1. This proposed typical section widens the existing four-lane roadway to a six-lane divided rural roadway with a 42-ft depressed grass median. Since the existing roadway is offset to the east within the ROW, both northbound and southbound roadways are widened to the west. This typical section includes the widening of southbound US 19 to the outside to accommodate an additional 12-ft travel lane and an 8-ft shoulder of which 5 ft is paved.

G:/COREL/PD&E/US 19 CITRUS/PER/Updated/FIG 8-4.CDR/1-13-03

PROPOSED WIDENING TYPICAL SECTION



ALTERNATIVE 1 - SEGMENT 1
NORTH OF US 98 TO WEST GREEN ACRES STREET
DESIGN SPEED 70 MPH

Notes: Widen Northbound to Median
Widen Southbound to Outside

LEGEND

- Proposed Widening
- Asphalt Overbuild
- Existing Pavement

US 19 (SR 55)
PD&E STUDY
From South of US 98 to CR 488
Citrus County, Florida

PROPOSED WIDENING TYPICAL SECTION

WPI SEG NO: 405822 1
FAP: 1852 007 P

FIGURE 8-4

This typical section also contains asphalt overbuild of the existing southbound inside lane to remove the crown in the existing pavement. Since the northbound roadway was constructed approximately 2.5 ft higher than the southbound roadway, the asphalt overbuild will help facilitate proposed median crossovers and construction of a median ditch. An 8-ft paved shoulder is also to be added within the median.

This typical section also includes inside widening of northbound US 19 to allow for an additional 12-ft travel lane and an 8-ft paved shoulder. The additional inside lane contains a downward cross slope of 0.02 ft/ft to convey stormwater runoff to the median ditch, whereas the remaining two lanes are sloped to the outside ditch. Since the northbound roadway was constructed approximately 2.5 ft higher than the southbound roadway, the new lane sloping to the median will help facilitate proposed median crossovers and construction of a median ditch. The existing 4-ft paved shoulder on the outside of northbound US 19 will be widened to 5 ft to accommodate bicyclists. Guardrail will be provided along the edge of the paved shoulder on one side of the median only.

A multi-use path, 12 ft in width, is also provided along the existing western ROW line. A 5-ft sidewalk is proposed on the east side of the northbound roadway. Pedestrian signals and crosswalks will also be included at each signalized intersection. The proposed pavement widening for this segment allows the typical section to remain within existing ROW while meeting all current design criteria. Additional ROW is required for stormwater management facilities. The proposed design speed for this typical section is 70 mph.

Two alternative pedestrian overpass configurations have been evaluated near the US 98 intersection. Option A includes a bulb-T type structure, crossing over US 19 just south of the US 98 intersection. Option B includes a steel truss/arch frame structure crossing US 19 at US 98 from the southeast quadrant to the northwest quadrant. Option A may require that an advance traffic signal be placed south of the overpass since the overpass itself may interfere with the driver's line of sight to the traffic signal. With Option B, the signals will be mounted directly onto the overpass structure.

8.3.1.2 Segment 2

The limits of Segment 2 are from West Green Acres Street to West Jump Court. The design year 2025 AADT for this section ranges from 32,100 to 39,400 vpd with a projected Truck Factor of 7 percent.

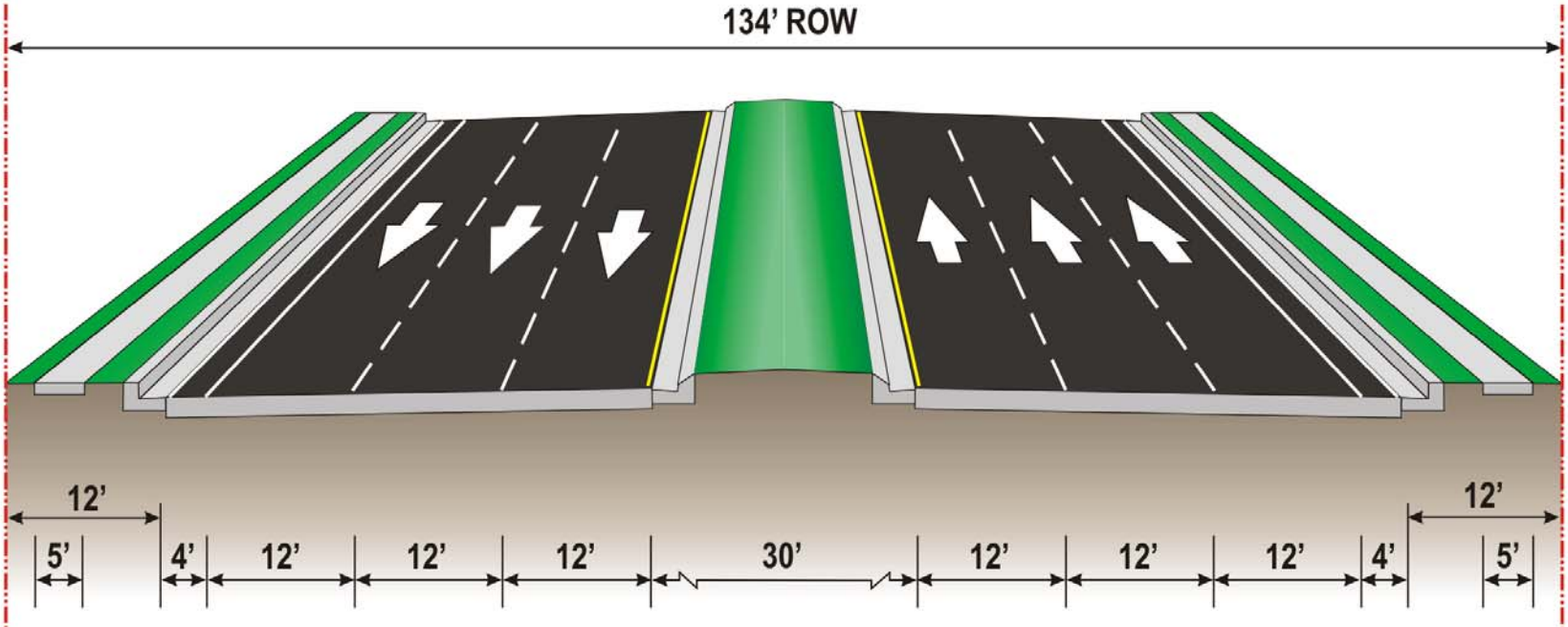
Alternative 1

The proposed typical section illustrated in Figure 8-5 was evaluated for Segment 2. This proposed typical section is a six-lane divided urban roadway with a 30-ft raised median. This typical section contains three 12-ft travel lanes and a 4-ft bicycle lane in each direction. Typically, sidewalks 5-ft in width are provided within a 12-ft border along both sides of the roadway and are separated from the curb by a grass buffer strip. However, a 12-ft multi-use path is provided along the existing western ROW line in place of the 5-ft sidewalk for a small portion of this segment from West Green Acres Street to West Yulee Drive (CR 490). Pedestrian signals and crosswalks are also included at each signalized intersection. This typical section requires 134 ft of ROW. ROW acquisition is necessary to accommodate the proposed typical section from West Yulee Drive (CR 490) to West Elkhorn Drive. However, the proposed typical section can be accommodated within the existing 246 ft of ROW from West Green Acres Street to West Yulee Drive (CR 490) and within the existing 160 ft of ROW from West Elkhorn Drive to West Jump Court. The proposed design speed for this typical section is 50 mph.

A centered alignment was evaluated from West Green Acres Street to West Yulee Drive (CR 490). This alignment allows for the reconstruction of US 19 to fit within the existing ROW. From West Yulee Drive (CR 490) to West Elkhorn Drive, the alignment shifts to the east to avoid impacts to the Homosassa Springs State Wildlife Park located along the west side of US 19. The shift in the alignment results in ROW acquisition of approximately 14 ft primarily from the east side of US 19. At West Elkhorn Drive, the alignment transitions back to the center, generally fitting within the existing ROW. Additional ROW acquisition is required for exclusive right-turn lanes, corner clips, side road tie-ins, and stormwater management facilities.

G:/COREL/PD&E/US 19 CITRUS/PER/Updated/FIG 8-5.CDR/1-13-03

PROPOSED TYPICAL SECTION



ALTERNATIVES 1, 2, 3, & 4 - SEGMENT 2
ALTERNATIVES 1 & 4: WEST GREEN ACRES STREET TO WEST JUMP COURT
ALTERNATIVES 2 & 3: WEST GREEN ACRES STREET TO YULEE DRIVE (CR 490) AND WEST ELKHORN DRIVE TO WEST JUMP COURT
DESIGN SPEED 50 MPH

US 19 (SR 55)
PD&E STUDY
From South of US 98 to CR 488
Citrus County, Florida

PROPOSED TYPICAL SECTION

WPI SEG NO: 405822 1
FAP: 1852 007 P

FIGURE 8-5

Alternative 2

The proposed typical section illustrated in Figure 8-5, previously described in Alternative 1, was evaluated for part of Segment 2. In an effort to minimize impacts, a minimized typical section (Figure 8-6) was evaluated for a portion of this segment from West Yulee Drive (CR 490) to West Elkhorn Drive where the existing ROW is reduced. This typical section is a six-lane divided urban roadway with a 20-ft raised median. This typical section contains two 11-ft travel lanes and one 12-ft outside travel lane with a 4-ft bicycle lane in each direction. Sidewalks, 5-ft in width, are provided within a 12-ft border along both sides of the roadway and are separated from the curb by a grass buffer strip. Pedestrian signals and crosswalks are included at each signalized intersection. This typical section can be accommodated within the existing 120 ft of ROW. Design variations are required for the reduced lane and median widths since the standard widths are 12 ft and 22 ft, respectively. The proposed design speed for this typical section is 50 mph.

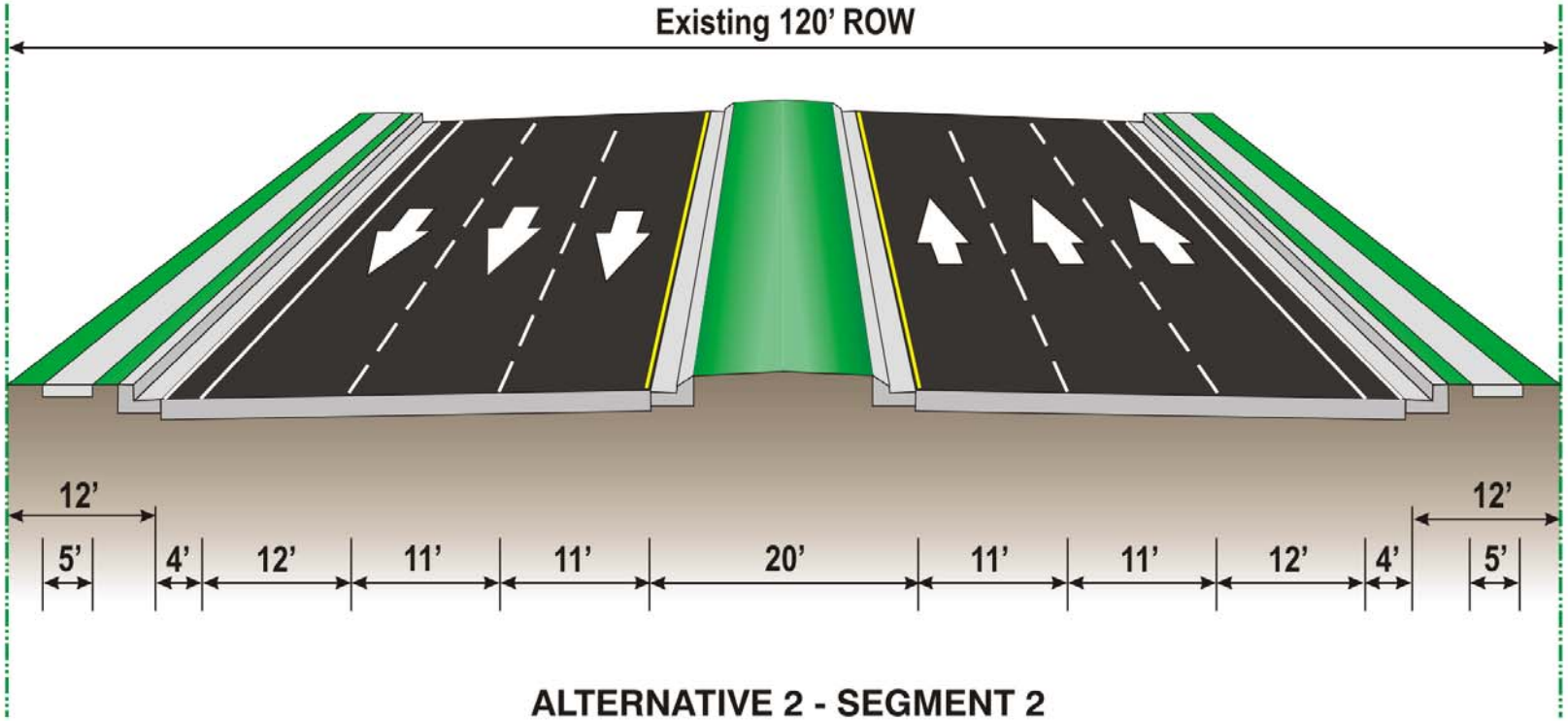
A centered alignment was evaluated for this segment of US 19. ROW acquisition is required for dual left-turn lanes, exclusive right-turn lanes, corner clips, side road tie-ins, and stormwater management facilities.

Alternative 3

The proposed typical section illustrated in Figure 8-5, previously described in Alternative 1, was evaluated for part of Segment 2. In an effort to further reduce impacts, a minimized typical section (Figure 8-7) was evaluated for a portion of this segment from West Yulee Drive (CR 490) to West Elkhorn Drive where the existing ROW width is reduced. This typical section is a seven-lane undivided urban roadway with a 14-ft two-way left turn lane. This typical section contains three 12-ft travel lanes and a 4-ft bicycle lane in each direction. Sidewalks, 5-ft in width, are provided within a 13-ft border along both sides of the roadway and are separated from the curb by a grass buffer strip. Pedestrian signals and crosswalks are included at each signalized intersection.

G:/COREL/PD&E/US 19 CITRUS/PER/Updated/FIG 8-6.CDR/1-13-03

PROPOSED TYPICAL SECTION



ALTERNATIVE 2 - SEGMENT 2
WEST YULEE DRIVE (CR 490) TO WEST ELKHORN DRIVE (PORTION OF SEGMENT 2)
DESIGN SPEED 50 MPH

US 19 (SR 55)
PD&E STUDY
From South of US 98 to CR 488
Citrus County, Florida

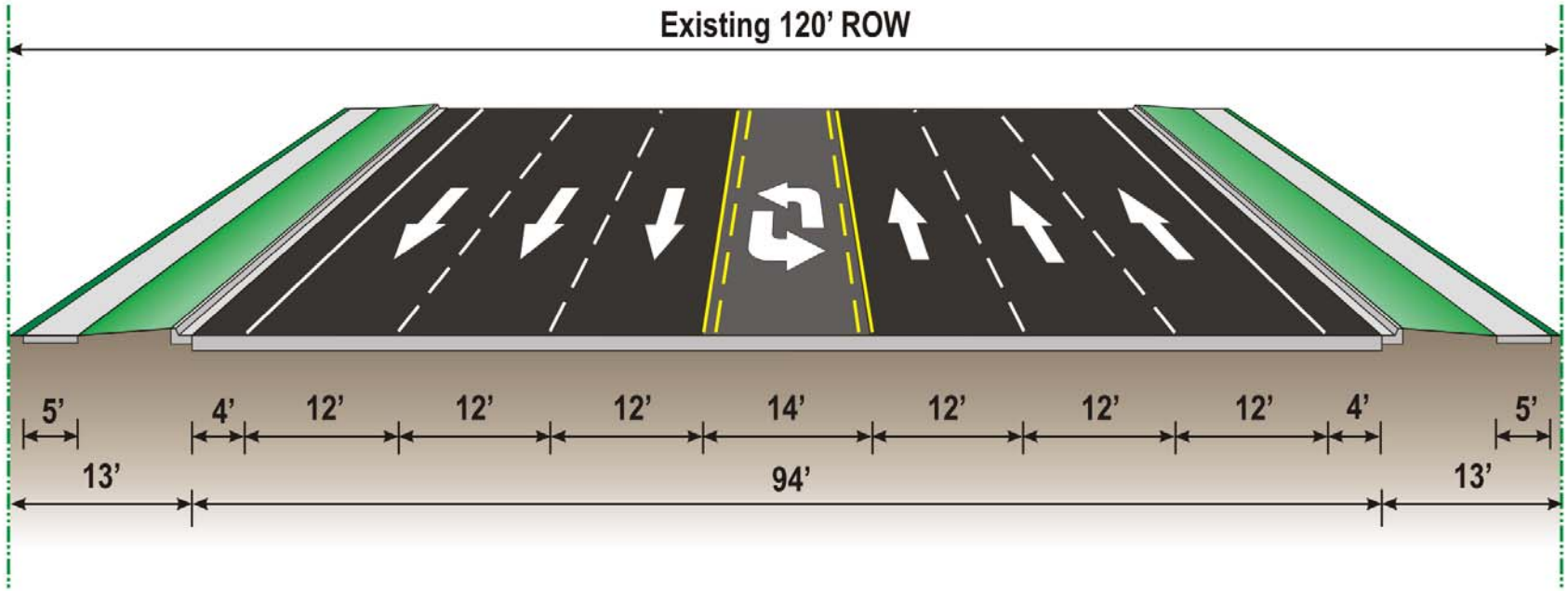
PROPOSED TYPICAL SECTION

WPI SEG NO: 405822 1
FAP: 1852 007 P

FIGURE 8-6

G:/COREL/PD&E/US 19 CITRUS/PER/Updated/FIG 8-7.CDR/1-13-03

PROPOSED TYPICAL SECTION



ALTERNATIVE 3 - SEGMENT 2
WEST YULEE DRIVE (CR 490) TO WEST ELKHORN DRIVE (PORTION OF SEGMENT 2)
DESIGN SPEED 40 MPH

US 19 (SR 55)
PD&E STUDY
From South of US 98 to CR 488
Citrus County, Florida

PROPOSED TYPICAL SECTION

WPI SEG NO: 405822 1
FAP: 1852 007 P

FIGURE 8-7

This typical section can be accommodated within the existing 120 ft of ROW. The proposed design speed for this typical section is 40 mph. Current FIHS standards require that all urban FIHS facilities ultimately provide a raised median and have a design speed of 50 mph or greater. This typical section does not provide a raised median and the design speed is below the FIHS required design speed. In addition, the 14 ft two-way left turn lane is restricted to five-lane sections. Therefore, according to the FDOT procedure Development of the Florida Intrastate Highway System[2], a design variation must be prepared and have the concurrence of the State Highway Engineer.

A centered alignment was evaluated for this segment of US 19. ROW acquisition is required for any additional turn lanes, corner clips, side road tie-ins, and stormwater management facilities.

Alternative 4

The proposed typical section illustrated in Figure 8-5, previously described in Alternative 1, was again evaluated for all of Segment 2. This typical section maintains a centered alignment from West Green Acres Street to West Yulee Drive (CR 490), which will allow for the reconstruction of US 19 to fit within existing ROW. Unlike Alternative 1, the Alternative 4 alignment shifts to the west from West Yulee Drive (CR 490) to West Elkhorn Drive to avoid impacts to the established businesses located along the east side of US 19. The shift in the alignment results in ROW acquisition of approximately 14 ft primarily from the west side of US 19. At West Elkhorn Drive, the alignment transitions back to the center, generally fitting within existing ROW. Additional ROW acquisition is required for exclusive right-turn lanes, corner clips, side road tie-ins, and stormwater management facilities.

8.3.1.3 Segment 3

The limits of Segment 3 are from West Jump Court to West Fort Island Trail (CR 44). The design year 2025 AADT for this section ranges from 33,600 to 38,800 vpd with a projected Truck Factor of 7 percent.

Alternative 1

The proposed typical section illustrated in Figure 8-8 was evaluated for Segment 3. This proposed typical section is a six-lane divided urban roadway with a 30-ft raised median. This typical section contains three 12-ft travel lanes and a 4-ft bicycle lane in each direction. Sidewalks 5-ft in width are provided within a 45-ft border along both sides of the roadway and are separated from the curb by a grass buffer strip. Pedestrian signals and crosswalks are included at each signalized intersection. This typical section can be accommodated within the existing 200 ft of ROW. The proposed design speed for this typical section is 50 mph. This typical section is consistent with Alternatives 1 and 4 in Segment 2.

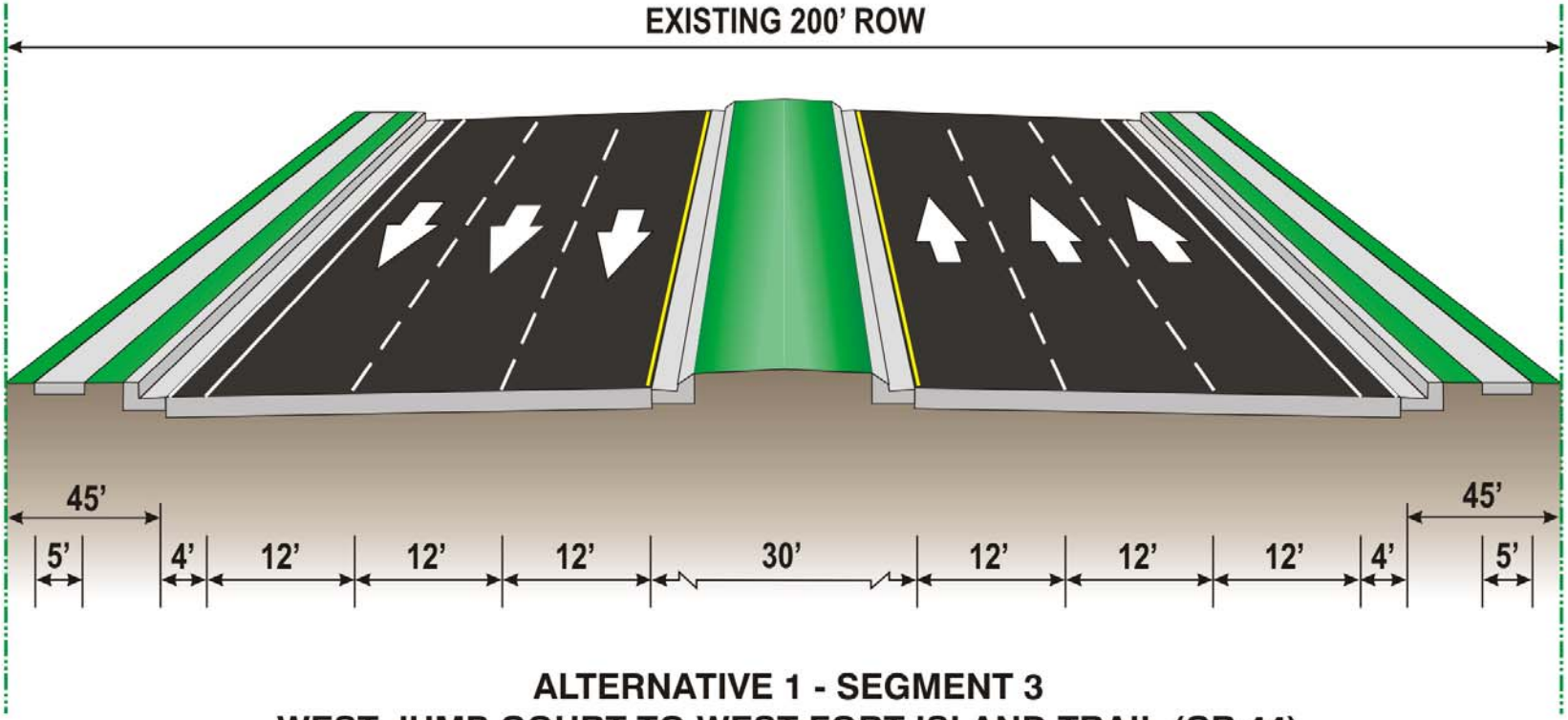
A centered alignment was evaluated for Alternative 1 since the reconstruction of US 19 can generally be accommodated within existing ROW. However, ROW acquisition is required for stormwater management facilities.

Alternative 2

The proposed typical section illustrated in Figure 8-9 was also evaluated for Segment 3. This proposed typical section is a six-lane divided rural roadway with a 40-ft depressed median. This typical section contains three 12-ft travel lanes in each direction with 8-ft inside and outside shoulders. The inside shoulders are paved full width while the outside shoulders contain 5 ft of pavement. Guardrail is provided along the edge of the shoulder on one side of the median only. Open drainage ditches parallel both sides of the roadway to allow for conveyance of stormwater runoff. Sidewalks 5-ft in width are provided within a 36-ft border along both sides of the roadway adjacent to the ROW line. Pedestrian signals and crosswalks are included at each signalized intersection. This typical section normally would require 208 ft of ROW. However, in an effort to fit within the existing 200 ft of ROW, the back slopes of the drainage ditches were increased from the standard 1:4 slopes to 1:2 slopes. Upon review of the existing cross sections in

G:/COREL/PD&E/US 19 CITRUS/PER/Updated/FIG 8-8.CDR/1-13-03

PROPOSED TYPICAL SECTION



ALTERNATIVE 1 - SEGMENT 3
WEST JUMP COURT TO WEST FORT ISLAND TRAIL (CR 44)
DESIGN SPEED 50 MPH

US 19 (SR 55)
PD&E STUDY
From South of US 98 to CR 488
Citrus County, Florida

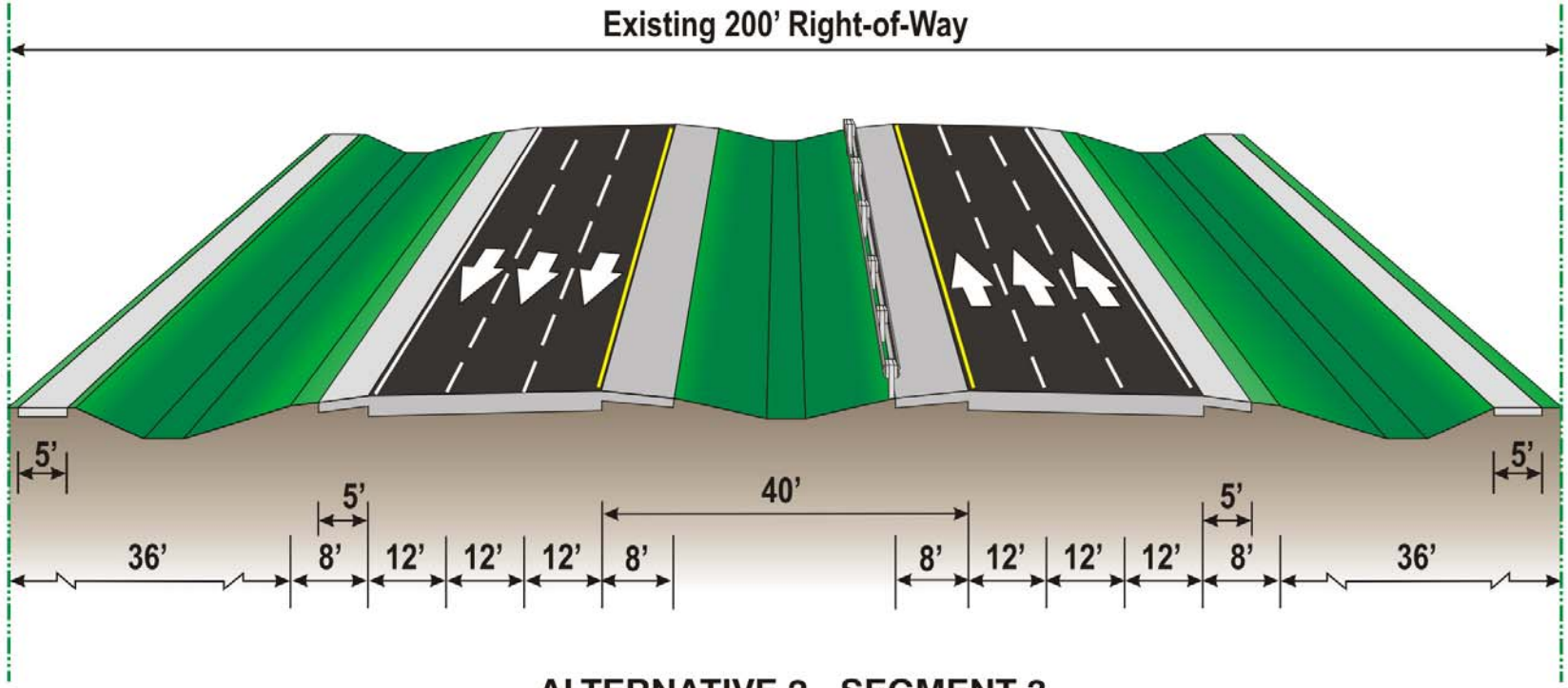
PROPOSED TYPICAL SECTION

WPI SEG NO: 405822 1
FAP: 1852 007 P

FIGURE 8-8

G:/COREL/PD&E/US 19 CITRUS/PER/Updated/FIG 8-9.CDR/1-13-03

PROPOSED TYPICAL SECTION



ALTERNATIVE 2 - SEGMENT 3
WEST JUMP COURT TO WEST FORT ISLAND TRAIL (CR 44)
DESIGN SPEED 70 MPH

US 19 (SR 55)
PD&E STUDY
From South of US 98 to CR 488
Citrus County, Florida

PROPOSED TYPICAL SECTION

WPI SEG NO: 405822 1
FAP: 1852 007 P

FIGURE 8-9

the as-built plans, it appears the topography is relatively flat such that 1:2 back slopes will be adequate to tie back to existing ground. The substandard border width of 36 ft will allow the proposed roadway to be accommodated within the existing ROW. However, a design variation is required for the border width since the standard border width is 40 ft. A design variation is also required for the increased side slopes. The proposed design speed for this typical section is 70 mph.

A centered alignment was evaluated for Alternative 2 since the reconstruction of US 19 can generally be accommodated within existing ROW. However, ROW acquisition is required for stormwater management facilities.

8.3.1.4 Segment 4

The limits of Segment 4 are from West Fort Island Trail (CR 44) to NE 1st Terrace. The design year 2025 AADT for this section is 35,700 vpd with a projected Truck Factor of 7 percent.

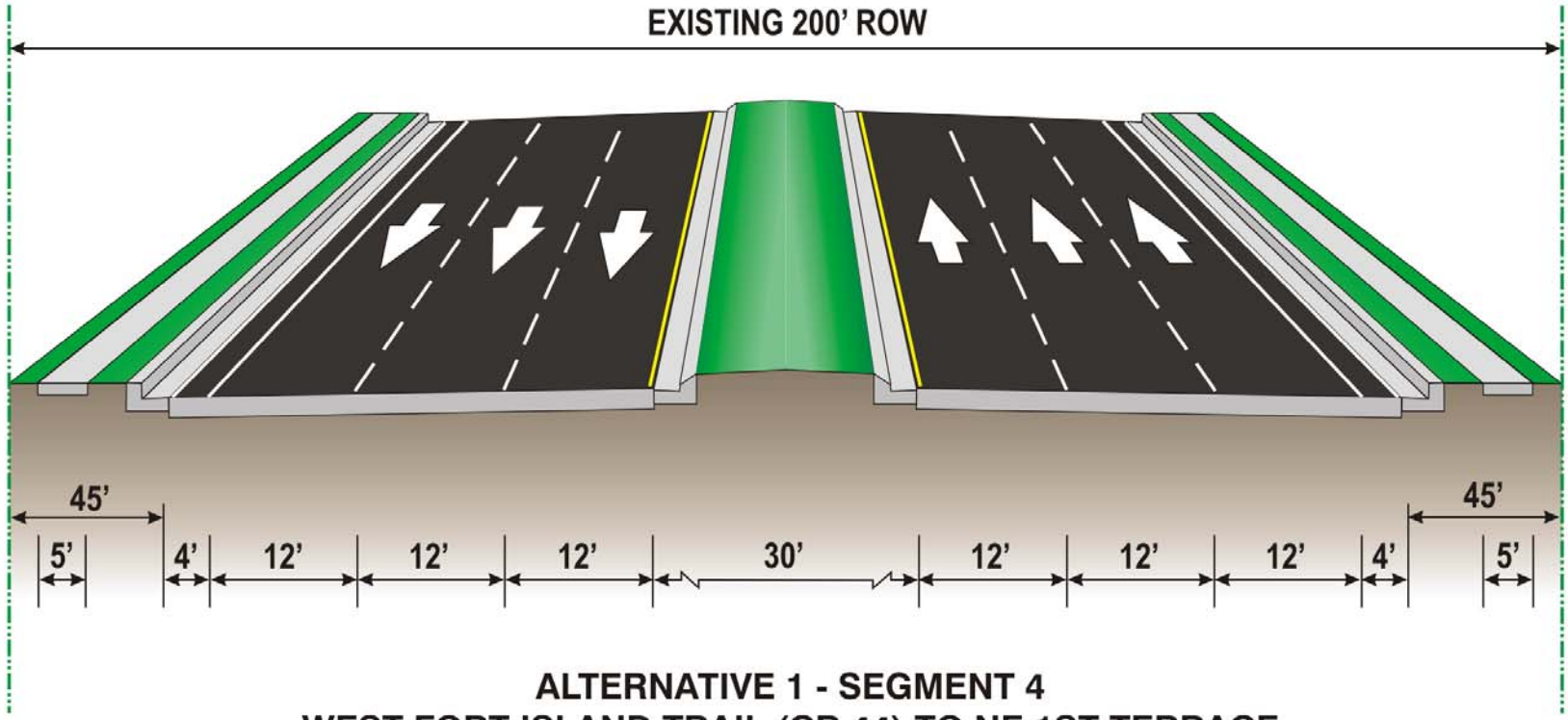
Alternative 1

The proposed typical section illustrated in Figure 8-10 was evaluated for Segment 4. This proposed typical section is a six-lane divided urban roadway with a 30-ft raised median. This typical section contains three 12-ft travel lanes and a 4-ft bicycle lane in each direction. Sidewalks, 5-ft in width, are provided within a 45-ft border along both sides of the roadway and are separated from the curb by a grass buffer strip. Pedestrian signals and crosswalks are included at each signalized intersection. This typical section can be accommodated within the existing 200 ft of ROW. The proposed design speed for this typical section is 50 mph. This typical section is consistent with Alternatives 1 and 4 in Segment 2 and Alternative 1 in Segment 3.

A centered alignment was evaluated for Alternative 1 since the reconstruction of US 19 can generally be accommodated within existing ROW. However, ROW acquisition is required for stormwater management facilities.

G:/COREL/PD&E/US 19 CITRUS/PER/Updated/FIG 810.CDR/1-13-03

PROPOSED TYPICAL SECTION



ALTERNATIVE 1 - SEGMENT 4
WEST FORT ISLAND TRAIL (CR 44) TO NE 1ST TERRACE
DESIGN SPEED 50 MPH

US 19 (SR 55)
PD&E STUDY
From South of US 98 to CR 488
Citrus County, Florida

PROPOSED TYPICAL SECTION

WPI SEG NO: 405822 1
FAP: 1852 007 P

FIGURE 8-10

8.3.1.5 Segment 5

The limits of Segment 5 are from NE 1st Terrace to Turkey Oak Drive. The design year 2025 AADT for this section ranges from 21,300 to 37,000 vpd with a projected Truck Factor of 7 percent south of SR 44/NE 4th Street and a Truck Factor of 6 percent north of SR 44/NE 4th Street.

The Final Traffic Report: Volume 2 - Future Conditions indicated that improvements were needed by the design year 2025 for the intersection of US 19 and SR 44/NE 4th Street. Three alternatives were evaluated in Segment 5. Alternatives 1 and 2 both include the same at-grade intersection at SR 44, but have differing alignments further to the north. Alternative 3 includes a center turning overpass, which accommodates all left turn movements on the elevated portion of the interchange. Alternatives 1, 2, and 3 are described in the following sections.

Alternative 1

Alternative 1 evaluated the proposed typical section illustrated in Figure 8-11 with an at-grade intersection at SR 44. This typical section contains three 12-ft travel lanes and a 4-ft bicycle lane in each direction separated by a 22-ft raised median. However, the raised median widens to 26 ft to accommodate dual southbound left turn lanes and a traffic separator at SR 44. The west leg of the SR 44 intersection allows only right-in and right-out movements to meet the acceptable LOS criteria for this intersection. Sidewalks, 5-ft in width, are also provided within a 12-ft border along both sides of the roadway and are separated from the curb by a grass buffer strip. In addition to pedestrian signals and crosswalks at each signalized intersection, a pedestrian overpass is proposed for the Crystal River bike path over US 19. This typical section requires 126 ft of ROW. The proposed design speed for this typical section is 50 mph.

Improvements along US 19 alone would not be adequate for the facility to operate at an acceptable LOS in the design year 2025. Therefore, minor improvements to the

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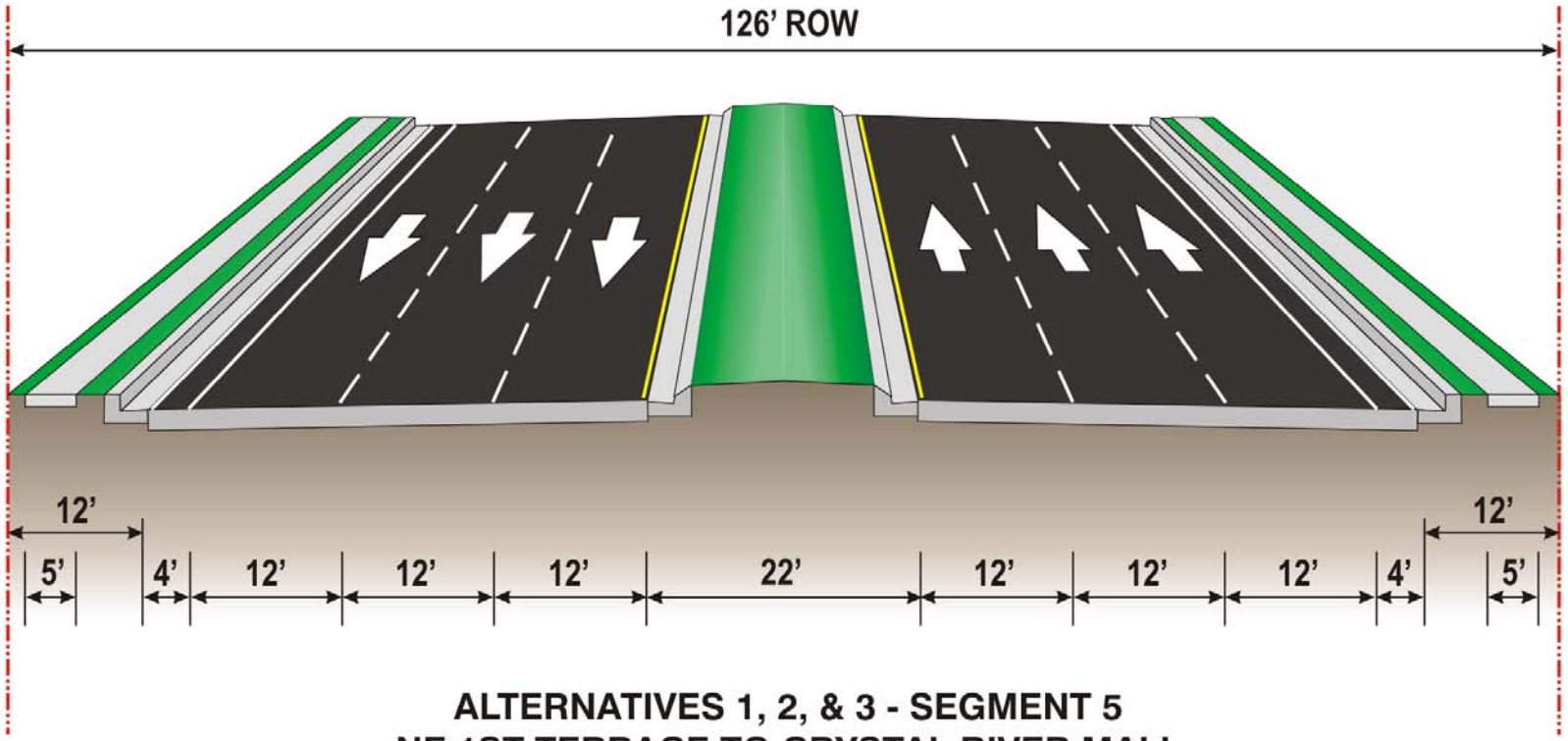
PROPOSED TYPICAL SECTION



ALTERNATIVES 1, 2, & 3 - SEGMENT 5
NE 1ST TERRACE TO CRYSTAL RIVER MALL
DESIGN SPEED 50 MPH

US 19 (SR 55)
PD&E STUDY
From South of US 98 to CR 488
Citrus County, Florida

PROPOSED TYPICAL SECTION

WPI SEG NO: 405822 1
FAP: 1852 007 P

FIGURE 8-11

side streets, such as extending existing turn lanes and adding new turn lanes were necessary. The Final Traffic Report: Volume 2 - Future Conditions indicates the need for an additional exclusive right-turn lane and the extension of the existing dual left-turn lanes along westbound SR 44. Also, Alternative 1 evaluated the intersection of US 19 and SR 44/NE 4th Street assuming NE 4th Street would be limited to right-in and right-out movements only; therefore, eliminating the eastbound left-turn movements. The two intersections to the north, NE 3rd Avenue and North Citrus Avenue (CR 495), can accommodate the additional left-turn and through volumes that were diverted from NE 4th Street. This results in avoidance of significant ROW impacts along NE 4th Street. The proposed improvements along SR 44/NE 4th Street are shown in the Recommended Alternative Concept Plans in Appendix C.

A western alignment was evaluated for a portion of this segment from NE 1st Terrace to NW Snug Harbor Road. This alignment requires ROW acquisition (typically 26 ft) primarily from the west side of US 19. At NW Snug Harbor Road, the alignment transitions to the east to minimize impacts to the Crystal River State Buffer Preserve located on both sides of US 19. The shift in the alignment results in ROW acquisition of approximately 26 ft, primarily from the east side of US 19. The alignment from the Crystal River Mall (Station 865+00) to Turkey Oak Drive transitions from the east to a centered alignment within the existing ROW. Additional ROW acquisition is required for exclusive right-turn lanes, corner clips, side road tie-ins, and stormwater management facilities. ROW acquisition of approximately 15 ft is also required along the north side of SR 44 to accommodate the proposed improvements along SR 44.

Alternative 2

Alternative 2 also utilizes the proposed typical section illustrated in Figure 8-11 with an at-grade intersection at SR 44, as described in Alternative 1. However, in an effort to reduce ROW costs, the proposed alignment transitions from the west to the east at North Citrus Avenue (CR 495), approximately 3000 ft south of where Alternative 1 transitions to the east. Shifting the alignment at North Citrus Avenue (CR 495) minimizes the overall business damages for this segment. Additional ROW acquisition is still required for exclusive right-turn lanes, corner clips, side road tie-ins, and stormwater management

facilities. In addition to pedestrian signals and crosswalks at each signalized intersection, a pedestrian overpass is proposed for the Crystal River bike path over US 19.

As described in Alternative 1, additional improvements are necessary along SR 44 and NE 4th Street to allow the intersection to operate at an acceptable LOS in the design year 2025. The proposed improvements are illustrated in the Recommended Alternative Concept Plans in Appendix C.

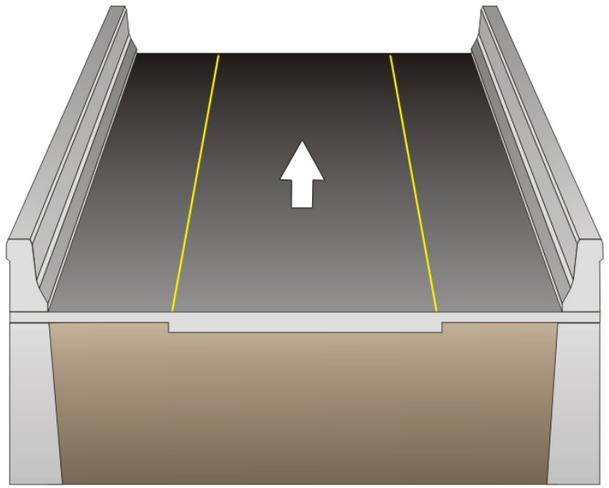
Alternative 3

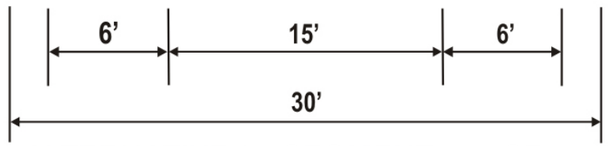
Alternative 3 also utilizes the proposed typical section illustrated in Figure 8-11, as described in Alternatives 1 and 2. However, unlike Alternatives 1 and 2, Alternative 3 includes a center turning overpass at SR 44. The center turning overpass separates the left-turn movements from the through movements by placing the left-turning vehicles on a separate, independently signalized structure above the intersection. The through movements and right-turn movements occur at-grade. See Figure 8-12 for schematic diagram of this concept.

Although the US 19 Action Plan Update[3] includes a cul-de-sac on NE 4th Street (west leg of SR 44 intersection), Alternative 3 evaluated the intersection assuming NE 4th Street would be limited to right-in and right-out movements only; therefore, eliminating the left-turn movements eastbound and northbound. The right-in and right-out movements occur at-grade. The two signalized intersections to the north, NE 3rd Avenue and North Citrus Avenue (CR 495), can accommodate the additional left turn and through volumes that were diverted from NE 4th Street. This results in avoidance of significant ROW impacts along NE 4th Street.

Since only right turns occur at-grade within the SR 44/NE 4th Street intersection, the number of through lanes on US 19 can be reduced. Only two travel lanes along US 19 are required through the intersection to meet an acceptable LOS. This will result in reduced impacts to the businesses near the intersection. However, the left-turn movements on the center overpass fail to meet the acceptable LOS, which causes the overall intersection to operate at an undefined LOS. An undefined LOS means that the intersection is so overly saturated with vehicles that the software cannot adequately define a LOS.

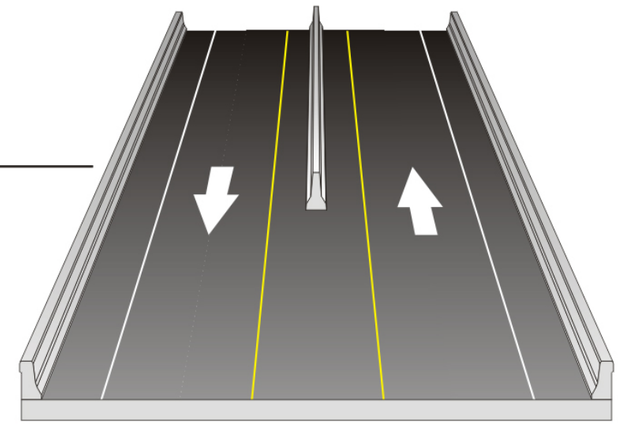
PROPOSED RAMP TYPICAL SECTION

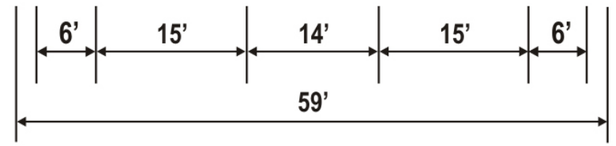




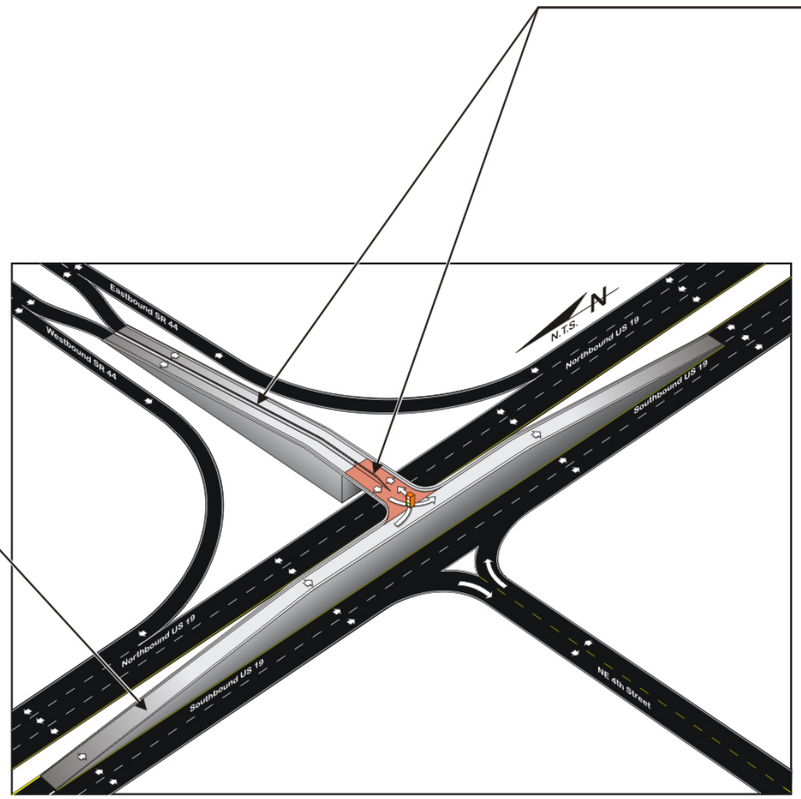
ALTERNATIVE 3 - SEGMENT 5 at SR 44
DESIGN SPEED 35 MPH

PROPOSED RAMP & BRIDGE TYPICAL SECTION



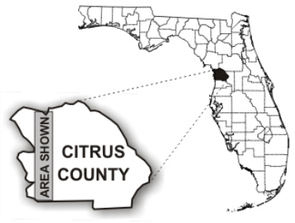


ALTERNATIVE 3 - SEGMENT 5 at SR 44
DESIGN SPEED 35 MPH



ALTERNATIVE 3 - SEGMENT 5 at SR 44
CENTER TURNING OVERPASS

G: GRAPHICS/COREL/PD&E/US 19 CITRUS CO/PER /Updated/FIG 8-12.CDR/2-12-03



US 19 (SR 55)
PD&E STUDY
From South of US 98 to CR 488
Citrus County, Florida

PROPOSED RAMP AND BRIDGE TYPICAL SECTIONS

WPI SEG NO: 405822 1
FAP: 1852 007 P

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION

FIGURE 8-12

Alternative 3 utilizes the same alignment along US 19 as described in Alternative 1. However, ROW acquisition is required along the south side of SR 44, typically 18 ft in width. ROW acquisition of approximately 24 ft is also required along the north side of SR 44 to accommodate the exclusive right-turn movement. In addition to pedestrian signals and crosswalks at each signalized intersection, a pedestrian overpass is proposed for the Crystal River bike path over US 19.

8.3.1.6 Segment 6

The limits of Segment 6 are from Turkey Oak Drive to North Dunnellon Road (CR 488). The design year 2025 AADT for this section ranges from 18,900 to 21,600 vpd with a projected T factor of six percent.

According to the Final Traffic Report: Volume 2 - Future Conditions, the existing four-lane facility will operate at a LOS A or B for all arterial segments north of Turkey Oak Drive. Since the existing facility meets the LOS standards for the design year 2025 and crash rates are within normal ranges for similar facilities, no widening or reconstruction typical section is proposed for this segment as a whole.

8.4 EVALUATION PROCESS

8.4.1 Quantifiable Criteria

The Segment Alternatives discussed in Section 8.3 can be combined together to make a variety of Corridor Alternatives along the entire length of the project. Tables 8-1 through 8-6 display the effects associated with each alternative within each segment.

In order to evaluate the study alternatives, evaluation matrices shown in Tables 8-1 through 8-6 were prepared using quantifiable criteria from a multitude of categories including socioeconomic, environmental, cultural, potential hazardous material/ petroleum contamination, and costs (engineering, ROW, and construction). The matrix data was developed utilizing raster-based aerial photography depicting the proposed ROW needs for each alternative. A brief description of these quantifiable evaluation criteria follows.

Table 8-1
Evaluation Matrix Segment 1 Alternatives

EVALUATION FACTORS	ALTERNATIVES 1 Widening	
SEGMENT LENGTH (miles)	4.86	
POTENTIAL BUSINESS AND RESIDENTIAL RELOCATIONS		
Number of businesses estimated to be relocated	0	
Number of residences estimated to be relocated	0	
RIGHT-OF-WAY INVOLVEMENT		
Area of ROW to be acquired in ac (includes roadway and estimated stormwater management facilities sites)	21.14	
COMMUNITY FACILITY EFFECTS WITHIN ROW		
Number of churches, schools, child care facilities, nursing homes, hospitals, cemeteries, other public services (fire stations, etc.) affected	0	
CULTURAL/HISTORIC RESOURCES AND PUBLIC PARKS INVOLVEMENT		
Number of historic sites/structures within or adjacent to ROW	0	
Number of public parks adjacent to ROW	2	
Number of public parks affected	0	
NATURAL ENVIRONMENTAL INVOLVEMENT		
Wetland involvement (ac)	1.99	
Base floodplain encroachment (ac)	27.59	
PHYSICAL ENVIRONMENT INVOLVEMENT		
Estimated number of noise sensitive sites (66 dBA or above)	48	
Number of potential petroleum pollutant and hazardous materials contaminated sites ranked medium and high	5	
ESTIMATED PROJECT COSTS (in million $, 2002/2003)		
Engineering design [2]	$2.62	$2.83
ROW acquisition (SMF only) [1]	$13.86	$13.86
Construction (Roadway)	$16.16	$16.16
Construction (Pedestrian Overpass)	Option A $1.31	Option B $2.69
Construction engineering & inspection [2]	$2.62	$2.83
TOTAL ALTERNATIVE COST	**$36.57**	**$38.37**

(1) Includes estimated pond areas
(2) 15% of Construction Cost

Table 8-2
Evaluation Matrix Segment 2 Alternatives

EVALUATION FACTORS	ALTERNATIVES			
	1	2	3	4
	30' Urban Center/East	20' Urban Center	7-Lane Center	30' Urban Center/West
SEGMENT LENGTH (miles)	2.07			
POTENTIAL BUSINESS AND RESIDENTIAL RELOCATIONS [3]				
Number of businesses estimated to be relocated	20	19	9	10
Number of residences estimated to be relocated	3	3	0	0
RIGHT-OF-WAY INVOLVEMENT				
Area of ROW to be acquired in ac (includes roadway and estimated stormwater management facilities sites)	10.49	9.85	9.39	10.32
COMMUNITY FACILITY EFFECTS WITHIN ROW				
Number of churches, schools, child care facilities, nursing homes, hospitals, cemeteries, other public services (fire stations, etc.) affected	0	0	0	0
CULTURAL/HISTORIC RESOURCES AND PUBLIC PARKS INVOLVEMENT				
Number of historic sites/structures within or adjacent to ROW	0	0	0	0
Number of public parks adjacent to ROW	2	2	2	2
Number of public parks affected	0	0	0	1
NATURAL ENVIRONMENTAL INVOLVEMENT				
Wetland involvement (ac)	0.23	0.23	0.22	0.25
Base floodplain encroachment (ac)	42.64	41.10	41.34	42.54
PHYSICAL ENVIRONMENT INVOLVEMENT				
Estimated number of noise sensitive sites (66 dBA or above)	85	85	85	85
Number of potential petroleum pollutant and hazardous materials contaminated sites ranked medium and high	6	6	6	6
ESTIMATED PROJECT COSTS (in million $, 2002/2003)				
Engineering design [2]	$1.69	$1.69	$1.72	$1.69
ROW acquisition [1]	$37.75	$35.04	$27.21	$32.64
Construction	$11.25	$11.27	$11.47	$11.25
Construction engineering & inspection [2]	$1.69	$1.69	$1.72	$1.69
TOTAL ALTERNATIVE COST	**$52.38**	**$49.69**	**$42.12**	**$47.27**

(1) Includes estimated pond areas
(2) 15% of Construction Cost
(3) Does not include relocations for pond sites, to be determined in Design

Table 8-3
Evaluation Matrix Segment 3 Alternatives

EVALUATION FACTORS	ALTERNATIVES	
	1	2
	30' Urban Center	40' Rural Center
SEGMENT LENGTH (miles)	4.65	
POTENTIAL BUSINESS AND RESIDENTIAL RELOCATIONS		
Number of businesses estimated to be relocated	0	0
Number of residences estimated to be relocated	0	0
RIGHT-OF-WAY INVOLVEMENT		
Area of ROW to be acquired in ac (includes roadway and estimated stormwater management facilities sites)	20.91	20.91
COMMUNITY FACILITY EFFECTS WITHIN ROW		
Number of churches, schools, child care facilities, nursing homes, hospitals, cemeteries, other public services (fire stations, etc.) affected	0	0
CULTURAL/HISTORIC RESOURCES AND PUBLIC PARKS INVOLVEMENT		
Number of historic sites/structures within or adjacent to ROW	0	0
Number of public parks adjacent to ROW	0	0
Number of public parks affected	0	0
NATURAL ENVIRONMENTAL INVOLVEMENT		
Wetland involvement (ac)	2.72	2.72
Base floodplain encroachment (ac)	76.36	76.36
PHYSICAL ENVIRONMENT INVOLVEMENT		
Estimated number of noise sensitive sites (66 dBA or above)	56	56
Number of potential petroleum pollutant and hazardous materials contaminated sites ranked medium and high	10	10
ESTIMATED PROJECT COSTS (in million $, 2002/2003)		
Engineering design (2)	$3.70	$3.31
ROW acquisition (SMF only) (1)	$17.28	$17.28
Construction	$24.65	$22.06
Construction engineering & inspection (2)	$3.70	$3.31
TOTAL ALTERNATIVE COST	**$49.33**	**$45.96**

(1) Includes estimated pond areas
(2) 15% of Construction Cost

Table 8-4
Evaluation Matrix Segment 4 Alternatives

EVALUATION FACTORS	ALTERNATIVES	
	TSM [3]	1
	7-Lane Widening	30' Urban Center
SEGMENT LENGTH (miles)	0.86	
POTENTIAL BUSINESS AND RESIDENTIAL RELOCATIONS		
Number of businesses estimated to be relocated	0	0
Number of residences estimated to be relocated	0	0
RIGHT-OF-WAY INVOLVEMENT		
Area of ROW to be acquired in ac (includes roadway and estimated stormwater management facilities sites)	0.57	0.52
COMMUNITY FACILITY EFFECTS WITHIN ROW		
Number of churches, schools, child care facilities, nursing homes, hospitals, cemeteries, other public services (fire stations, etc.) affected	0	0
CULTURAL/HISTORIC RESOURCES AND PUBLIC PARKS INVOLVEMENT		
Number of historic sites/structures within or adjacent to ROW	0	0
Number of public parks adjacent to ROW	0	0
Number of public parks affected	0	0
NATURAL ENVIRONMENTAL INVOLVEMENT		
Wetland involvement (ac)	0.19	0.20
Base floodplain encroachment (ac)	15.54	15.56
PHYSICAL ENVIRONMENT INVOLVEMENT		
Estimated number of noise sensitive sites (66 dBA or above)	1	1
Number of potential petroleum pollutant and hazardous materials contaminated sites ranked medium and high	2	2
ESTIMATED PROJECT COSTS (in million $, 2002/2003)		
Engineering design [2]	$0.33	$0.71
ROW acquisition [1]	$3.01	$2.24
Construction	$2.22	$4.76
Construction engineering & inspection [2]	$0.33	$0.71
TOTAL ALTERNATIVE COST	**$5.89**	**$8.42**

(1) Includes estimated pond areas
(2) 15% of Construction Cost
(3) Transportation System Management

Table 8-5
Evaluation Matrix Segment 5 Alternatives

EVALUATION FACTORS	ALTERNATIVES			
	TSM[3]	1	2	3
	Re-stripe	22' Urban At-Grade	22' Urban At-Grade	22' Urban Center Turning Overpass
SEGMENT LENGTH (miles)	2.05			
POTENTIAL BUSINESS AND RESIDENTIAL RELOCATIONS [4]				
Number of businesses estimated to be relocated	0	47	39	46
Number of residences estimated to be relocated	0	0	4	0
POTENTIAL NON-PROFIT ORGANIZATION RELOCATIONS				
Number of non-profit organizations estimated to be relocated	0	1	1	2
RIGHT-OF-WAY INVOLVEMENT				
Area of ROW to be acquired in ac (includes roadway and estimated stormwater management facilities sites)	0	7.94	7.73	8.84
COMMUNITY FACILITY EFFECTS WITHIN ROW				
Number of churches, schools, child care facilities, nursing homes, hospitals, cemeteries affected	0	1 Church	1 Church	1 Church
Number of other public services (fire stations, etc.) affected	0	4	3	5
CULTURAL/HISTORIC RESOURCES AND PUBLIC PARKS INVOLVEMENT				
Number of historic sites/structures within or adjacent to ROW	0	0	0	0
Number of public parks adjacent to ROW	3	3	3	3
Number of public parks affected	1	2	2	2
NATURAL ENVIRONMENTAL INVOLVEMENT				
Wetland involvement (ac)	0.00	0.64	0.85	0.67
Base floodplain encroachment (ac)	0.00	33.81	33.74	35.70
PHYSICAL ENVIRONMENT INVOLVEMENT				
Estimated number of noise sensitive sites (66 dBA or above)	0	16	16	16
Number of potential petroleum pollutant and hazardous materials contaminated sites ranked medium and high	0	13	13	13
ESTIMATED PROJECT COSTS (in million $, 2002/2003)				
Engineering design [2]	$0.48	$1.83	$1.83	$2.68
ROW acquisition [1]	$0.00	$85.46	$75.50	$91.71
Construction (Roadway)	$3.17	$12.18	$12.18	$17.88
Construction (Pedestrian Overpass)	$1.22	$1.22	$1.22	$1.22
Construction engineering & inspection [2]	$0.48	$1.83	$1.83	$2.68
TOTAL ALTERNATIVE COST	**$5.35**	**$102.52**	**$92.56**	**$116.17**

(1) Includes estimated pond areas
(2) 15% of Construction Cost
(3) Transportation System Management
(4) Does not include relocations for pond sites, to be determined in Design

Table 8-6
Evaluation Matrix Segment 6 Alternatives

EVALUATION FACTORS	TSM [3] ALTERNATIVE
SEGMENT LENGTH (miles)	4.31
POTENTIAL BUSINESS AND RESIDENTIAL RELOCATIONS	
Number of businesses estimated to be relocated	0
Number of residences estimated to be relocated	0
RIGHT-OF-WAY INVOLVEMENT	
Area of ROW to be acquired in ac (includes roadway and estimated stormwater management facilities sites)	0
COMMUNITY FACILITY EFFECTS WITHIN ROW	
Number of churches, schools, child care facilities, nursing homes, hospitals, cemeteries, other public services (fire stations, etc.) affected	0
CULTURAL/HISTORIC RESOURCES AND PUBLIC PARKS INVOLVEMENT	
Number of historic sites/structures within or adjacent to ROW	0
Number of public parks adjacent to ROW	0
Number of public parks affected	0
NATURAL ENVIRONMENTAL INVOLVEMENT	
Wetland involvement (ac)	0.00
Base floodplain encroachment (ac)	0.55
PHYSICAL ENVIRONMENT INVOLVEMENT	
Estimated number of noise sensitive sites (66 dBA or above)	0
Number of potential petroleum pollutant and hazardous materials contaminated sites ranked medium and high	0
ESTIMATED PROJECT COSTS (in million $, 2002/2003)	
Engineering design [2]	$0.16
ROW acquisition [1]	$0.00
Construction	$1.08
Construction engineering & inspection [2]	$0.16
TOTAL ALTERNATIVE COST	**$1.40**

(1) Includes estimated pond areas
(2) 15% of Construction Cost
(3) Transportation System Management

- Potential Business Relocations:

  The number of businesses estimated to be relocated by each of the Build Alternatives was identified using raster-based aerial photography and field verification. Other business effects expected to be sustained by businesses which will not require relocation, such as parking losses, etc., were considered in the ROW acquisition cost estimates.

- Potential Residential Relocations:

  The number of existing residences estimated to be relocated by the Build Alternatives was assessed by determining the number of residences that exist within the proposed ROW, and which residences will have to be relocated if the Build Alternative is implemented.

- ROW Involvement:

  Property affects were quantified with two measures: number of parcels being affected and acreage of property to be purchased. Cost of ROW acquisition is related to both the number parcels affected and the amount of acreage required. Since administrative costs are incurred with each land parcel impacted, regardless of the acreage, costs will be greater when parcel count increases. In addition, the greater the acreage required, the higher the costs will be. A combination of these two factors produces the ROW costs. The ROW costs were determined using 2002 dollars.

- Community Facility Effects:

  The project involvement with existing community facilities such as churches, schools, child care facilities, nursing homes, hospitals, cemeteries, fire stations, etc. were assessed. The number of community facilities that exist within proposed ROW and require relocation were counted.

- Cultural/Historical Resources and Public Parks Involvement:
  A thorough investigation was undertaken to identify the number of NRHP-eligible historic sites and structures along the project corridor. Similarly, the location of existing and proposed public parks was determined.

- Natural Environmental Involvement:
  Affects of the proposed ROW on the natural environment include affects on wetlands, floodplains, and floodways.

  The floodplain throughout this study area of US 19 is primarily from flooding effects from the Gulf of Mexico. The encroachment into the tidal floodplain is longitudinal, whereas the freshwater encroachments are transverse. The area of base floodplain encroachment shown in the matrices includes both the tidal and freshwater encroachments.

- Noise sensitive sites are areas associated with rest, recreation, concentration, and communication. Such sites include picnic areas, recreation facilities, playgrounds, active sports areas, parks, residences, motels, hotels, schools, churches, libraries, and hospitals. The number of existing noise sensitive sites, within 66 dBA, to be evaluated for the Recommended Alternative was modeled using the FHWA approved Traffic Noise Model, (TNM) version 2.1.

- Potential Hazardous Material and Petroleum Pollutant Contaminated Sites: Several potentially hazardous material and/or petroleum contaminated sites exist along the project. The number of potentially contaminated sites within or adjacent to the proposed ROW were grouped into two categories: hazardous material sites and petroleum contaminated sites.

- Estimated Project Costs:
  Preliminary cost estimates were prepared for the Build Alternative, including separate estimates of ROW acquisitions, engineering/design, construction, and

Construction Engineering and Inspection (CEI) costs. These project costs shown in the matrices were generated using year 2002 dollars.

The ROW acquisition cost includes the cost of business and residence relocations, private property purchase, stormwater management facilities, and reimbursement cost for miscellaneous business damages. The construction cost of each Build Alternative was calculated using FDOT's Long Range Estimates (LRE) computer program, and includes stormwater management systems, signing and marking, signalization adjustments, and lighting. Excluded are utility adjustments and wetland mitigation. These costs also assume no existing pavement will remain, with the exception of the Proposed Widening Typical Sections shown in Figures 8-1 and 8-4 in Segments 4 and 1, respectively.

The engineering (final design) cost and the CEI costs were estimated based upon a percentage (15%) of the construction cost.

8.4.2 Non-Quantifiable Criteria

The next step in the evaluation process was the consideration of factors which are qualitative, non-quantifiable, such as consistency with local transportation plans, LOS during the design year, safety, user benefits, mobility of people and goods, access, safety, economic prosperity, neighborhood enhancement, environment, and drainage considerations. In addition, consistency with Florida Statutes in regard to the FIHS system was weighed heavily.

The LOS standard specified by FDOT for future traffic conditions for segments along US 19 is LOS B for rural sections and LOS C for communities located along the corridor (i.e., Homosassa Springs and Crystal River).

US 19 in Citrus County is a FIHS facility. The FIHS system was established in 1990 by the Florida Legislature. Sections 334.046 and 335.02, F.S. require the FDOT to plan, develop, and implement the FIHS, including establishing standards and criteria for the

functional characteristics and design of the FIHS facilities. These responsibilities include designation of the statewide system of limited and controlled access facilities, and preparing, administering, and implementing the FIHS Plan. To the maximum extent feasible, the FDOT shall ensure that the proposed system projects are consistent with the approved local government comprehensive plans. Section 338.001, F.S. requires a statewide transportation network that provides for high-speed and high-volume traffic movements, and further states that access to abutting land is subordinate to this function, and must be prohibited or highly regulated. FIHS standards shall be followed to the greatest extent feasible. Some of the FIHS standards set forth include a design speed of 50 mph in urban areas, a raised or restrictive median, 12-ft travel lanes, and use of Access Class 2 or 3 standards. While exceptions and variations to the established criteria are possible with approval of the State Highway Engineer, the FIHS standards shall be followed to the greatest extent feasible.

8.5 RECOMMENDED ALTERNATIVE

The selection of a Recommended Alternative, either a No-Build, TSM, or Build Alternative, was based upon the impact evaluation matrix and consideration of the non-quantifiable factors. The following sections explain the rationale behind the selection of the Recommended Alternative for each Segment.

8.5.1 Segment 1

The limits of Segment 1 extend from south of US 98 to West Green Acres Street. Only Alternative 1 was evaluated for this segment. The US 98 and West Cardinal Street intersections meet the LOS B criteria for the No-Build condition with Suncoast Parkway Phase 2. However, the West Cardinal Street westbound and northbound approaches fall to LOS D, and the overall intersection falls to LOS C without the Suncoast Parkway. Due to excessive delays at the intersections, the overall arterial No-Build LOS with and without Suncoast Parkway from West Cardinal Lane to North Citrus Avenue is LOS F. In addition, the West Cardinal Street intersection has been identified as an above-average

crash location for each year from 1995 to 1999. Therefore, the Build Alternative is justified.

Alternative 1 with pedestrian overpass Option A is consistent with the Citrus County Comprehensive Plan[4]. Access management, traffic capacity, LOS, and safety will all be greatly improved with Alternative 1, which will improve the mobility of people and goods and economic prosperity for the area. The addition of the pedestrian overpass, multi-use path, and sidewalk are significant recreational and travel enhancements for pedestrians and recreational users. The multi-use path could ultimately be connected, via US 98, to the Suncoast Trail recreational path. These amenities would provide improved pedestrian and bicycle access to the Homosassa Wildlife Management Area, which allows off road bicycling on its forest trails. The multi-use path would also extend northward to the Homosassa Springs State Wildlife Park. Future land use adjacent to US 19 is primarily medium density residential and sparse general commercial and professional service. The rural nature of Alternative 1 is compatible with these types of land uses.

The pedestrian overpass Option A is less expensive than Option B and has less impact to access and visibility to adjacent property; therefore, it is included with Recommended Alternative 1. It may require that an advance traffic signal be placed south of the overpass since the overpass itself may interfere with the driver's line of sight to the traffic signal.

8.5.2 Segment 2

The limits of Segment 2 extend from West Green Acres Street to West Jump Court. Four different alternatives were evaluated for this segment of US 19. Table 8-2 in Section 8.4.1 of this report identifies the quantifiable impacts associated with each alternative. The following sections analyze the quantifiable and non-quantifiable factors used in selecting a Recommended Alternative.

8.5.2.1 Analysis of Quantifiable Factors for Segment 2

Review of the quantifiable factors show each alternative has a similar effect on the physical and natural environment. However, Alternative 3 requires the least number of estimated businesses and residences to be relocated. As a result, Alternative 3 has the least ROW acquisition cost ($27.21 million), and therefore the least overall total cost ($42.12 million).

8.5.2.2 Analysis of Non-Quantifiable Factors for Segment 2

Review of the non-quantifiable factors show several disadvantages to the No-Build Alternative. The No-Build LOS for the intersections at West Yulee Drive (CR 490), West Halls River Road (CR 490A)/West Grover Cleveland Boulevard, and West Homosassa Trail are all LOS D or F with Suncoast Parkway Phase 2, with West Yulee Drive (CR 490) also dropping to LOS F without the Suncoast Parkway. In addition, all three of the intersections are identified as above average crash locations for three or more of the five years evaluated. The overall arterial No-Build LOS with and without Suncoast Parkway from West Cardinal Lane to North Citrus Avenue is LOS F due primarily to excessive delays at the intersections. The No-Build Alternative fails to address these safety deficiencies that currently exist or are expected to be present in design year 2025.

In addition, the No-Build Alternative is not consistent with the FDOT Strategic Highway Safety Plan, which identifies the two-way left-turn lane as one of the five focus areas for retrofit or elimination of at least 10 centerline miles per year. Since the No-Build Alternative fails to provide a restrictive median, it does not meet Access Classification 3 standards for controlled access FIHS facilities.

Alternative 3 in Segment 2 was least desirable due to a substandard design speed, lack of a raised median, inability to meet Access Classification 2 or 3 standards for median opening spacing, and it fails to meet established LOS criteria at the West Halls River Road (CR 490A)/West Grover Cleveland Boulevard intersection. In addition, Alternative

3 is not consistent with the FDOT Strategic Highway Safety Plan in regards to retrofit or elimination of the two-way left-turn lane.

Alternatives 1, 2, and 4 are more desirable than Alternative 3 since all provide a restrictive median and meet design speed criteria. Alternative 2, however, includes two 11-ft lanes and one 12-ft lane in each direction, separated by a 20-ft raised median. Since the 11-ft lane widths and the 20-ft median width do not meet current FIHS standards, design variations are required for this alternative.

In addition, Alternative 4 utilizes a western alignment, which impacts the Homosassa Springs State Wildlife Park, a potential Section 4(f) site, where the other alternatives only affect access to the park. The impact is limited to approximately 0.36 ac (total park area 210 ac) including the park entrance and handicapped parking. No other park facilities, amenities, or features would be impacted and ample space exists for relocation of the handicapped parking.

8.5.2.3 Alternative Refinement for Segment 2

Alternatives 1 through 4 were developed prior to the Public Workshop held on January 16, 2003. The following alternatives were developed after the Public Workshop as a refinement to Alternative 2.

Alternative 5

In an effort to further reduce impacts to the established businesses, Alternative 5 was developed as a refinement of Alternative 2. This alternative utilizes the six-lane divided urban typical section (Figure 8-5) with a 30-ft raised median from West Green Acres Street to West Yulee Drive (CR 490) and from West Elkhorn Drive to West Jump Court as described previously in Section 8.3.1.2. Alternative 5 also maintains the same minimized typical section (Figure 8-6) with a 20-ft raised median as described in Alternative 2 from West Yulee Drive (CR 490) to West Elkhorn Drive. However, unlike Alternative 2, a western alignment was utilized for this portion of US 19 to lessen the

amount of impacts and costs associated with the established businesses located along the east side of US 19. As a result, the shift in the alignment directly impacts the Homosassa Springs State Wildlife Park located along the west side. The exclusive northbound right-turn lanes at West Grover Cleveland Boulevard/West Halls River Road (CR 490A) and West Homosassa Trail will be accommodated within existing ROW, with exception to corner clips.

The western alignment results in ROW acquisition on average of 16 ft from the west side of US 19. Additional ROW acquisition is required for stormwater management facilities. The ROW cost for Alternative 5 is estimated at $26.15 million. Refined Alternative 5 would substantially reduce the number of impacts to nearby businesses and the costs associated with these impacts. However, Design Variations are required for the reduced lane and median widths from West Yulee Drive (CR 490) to West Elkhorn Drive since the standard widths are 12 ft and 22 ft, respectively. The proposed design speed for Alternative 5 is 50 mph.

Alternative 6

In an effort to eliminate impacts to the Homosassa Springs Wildlife State Park, Alternative 6 was developed as a refinement of Alternative 2. This alternative utilizes the same typical sections described in Alternative 2 (Section 8.3.1.2); a six-lane divided urban typical section (Figure 8-5) with a 30-ft raised median from West Green Acres Street to West Yulee Drive (CR 490) and from West Elkhorn Drive to West Jump Court, and a six-lane divided urban typical section (Figure 8-6) with a 20-ft raised median from West Yulee Drive (CR 490) to West Elkhorn Drive. However, the proposed typical section was modified immediately to the south of West Grover Cleveland Boulevard/West Halls River Road (CR 490A) to accommodate northbound dual left-turn lanes and an exclusive right-turn lane without impacting the Section 4(f) facility. The modifications include:

- Reducing the outside travel lanes in both directions from 12 ft to 11 ft,
- Reducing the bike lanes from 4 ft to 3 ft,

- Replacing the outside Type F curb and gutter with Type D curb, and
- Reducing the 4-ft traffic separator to 1-ft.

Alternative 6 reduces ROW acquisition south of West Grover Cleveland Boulevard/West Halls River Road (CR 490A) from an average of 16 ft in Alternative 5 to an average of 6 ft along the west side of US 19. Additional ROW acquisition is required for stormwater management facilities. The ROW cost for Alternative 6 is estimated at $25.70 million. Alternative 6 would eliminate impacts to the Homosassa Springs Wildlife State Park and the costs associated with these impacts. However, design variations are required for the reduced lane and median widths from West Yulee Drive (CR 490) to West Elkhorn Drive since the standard widths are 12 ft and 22 ft, respectively. The proposed design speed for Alternative 6 is 50 mph.

Alternative 7

Alternative 7 was also developed as a refinement of Alternative 2 to eliminate impacts to the Homosassa Springs Wildlife State Park located along the west side. This alternative utilizes the same typical sections described in Alternative 2 (Section 8.3.1.2); a six-lane divided urban typical section (Figure 8-5) with a 30-ft raised median from West Green Acres Street to West Yulee Drive (CR 490) and from West Elkhorn Drive to West Jump Court, and a six-lane divided urban typical section (Figure 8-6) with a 20-ft raised median from West Yulee Drive (CR 490) to West Elkhorn Drive. This typical section contains two 11-ft travel lanes and one 12-ft outside travel lane in each direction. Alternative 7 also maintains a centered alignment for most of Segment 2. However, unlike Alternative 2, a western alignment was utilized from West Grover Cleveland Boulevard/West Halls River Road (CR 490A) to West Homosassa Trail to accommodate an exclusive northbound right-turn lane at West Homosassa Trail. The alignment begins to shift to the west at the northern end of the Homosassa Springs Wildlife State Park property, avoiding ROW acquisition from the park. Alternative 7 continues with a western alignment until reaching West Homosassa Trail intersection, where it begins to shift back to a centered alignment.

Alternative 7 reduces ROW acquisition south of West Grover Cleveland Boulevard/West Halls River Road (CR 490A) from an average of 16 ft in Alternative 5 to an average of 10 ft along the west side of US 19. Additional ROW acquisition is required for stormwater management facilities. The ROW cost for Alternative 7 is estimated at $25.72 million. Alternative 7 would eliminate impacts to the Homosassa Springs Wildlife State Park and the costs associated with these impacts. However, design variations are required for the reduced lane and median widths from West Yulee Drive (CR 490) to West Elkhorn Drive since the standard widths are 12 ft and 22 ft, respectively. The proposed design speed for Alternative 7 is 50 mph.

8.5.2.4 Recommendation for Segment 2

Alternative 7 avoids impacting the Homosassa Springs Wildlife State Park, has the least number of business impacts, the least amount of ROW acquisition, and the lowest total cost; therefore, it has been selected as the Recommended Alternative in Segment 2.

8.5.3 Segment 3

The limits of Segment 3 extend from West Jump Court to West Fort Island Trail (CR 44). Two different alternatives were evaluated for this segment of US 19. Table 8-3 in Section 8.4.1 of this report identifies the quantifiable impacts associated with each alternative. The following sections analyze the quantifiable and non-quantifiable factors used in selecting a Recommended Alternative.

8.5.3.1 Analysis of Quantifiable Factors for Segment 3

Review of the quantifiable factors show that neither of the alternatives will require business relocations or residential relocations. The only difference between the two alternatives is that Alternative 2 has less cost associated with engineering design, construction, and CEI than Alternative 1.

8.5.3.2 Analysis of Non-Quantifiable Factors for Segment 3

Review of the non-quantifiable factors show several disadvantages to the No-Build Alternative. The No-Build LOS for the overall intersection at West Venable Street is LOS C, and SE 8th Avenue/West Fort Island Trail (CR 44) is LOS F with Suncoast Parkway Phase 2, with the LOS at each intersection projected to be worse without the Suncoast Parkway. The overall arterial No-Build LOS with and without Suncoast Parkway from West Cardinal Lane to North Citrus Avenue is LOS F. In addition, all four intersections within Segment 3 are identified as above average crash locations for two or more of the five years evaluated.

Spawned by increases in development, the commercial land use fronting US 19 in Segment 3 is expected to intensify over the next twenty years to become entirely commercial. This will bring an increase in the number of driveway connections to US 19. Alternative 1, the lower speed urban alternative, is more suitable for the anticipated urban nature of this segment. In addition, Alternative 1 allows for greater flexibility than Alternative 2. Alternative 1 can accommodate the Crystal River Airport runway expansion without requiring additional ROW and can avoid conflicting with the large transmission towers located along the west side of US 19. Alternative 1 is also consistent with the Recommended Alternative in Segment 2.

8.5.3.3 Recommendation for Segment 3

All quantitative factors other than cost are essentially equal. Since Alternative 1 has more favorable qualitative factors than Alternative 2, such as consistency with urban features in surrounding segments, compatibility with expected land use in this segment, flexibility to accommodate existing transmission lines and the Crystal River Airport expansion, and the ability to meet all design standards and FIHS criteria, Alternative 1 was selected as the Recommended Alternative in Segment 3.

8.5.4 Segment 4

The limits of Segment 4 extend from West Fort Island Trail (CR 44) to NE 1st Terrace. A TSM Alternative and Build Alternative 1 were evaluated for this segment of US 19. Table 8-4 in Section 8.4.1 of this report identifies the quantifiable impacts associated with each alternative. The following sections analyze the quantifiable and non-quantifiable factors used in selecting a Recommended Alternative.

8.5.4.1 Analysis of Quantifiable Factors for Segment 4

Review of the quantifiable factors show that each of the alternatives has a similar effect on the ROW involvement, natural environment, and physical environment. However, Alternative 1 has significantly more cost associated with engineering design, construction, and CEI than the TSM Alternative. As a result, the TSM Alternative has the least overall total cost.

8.5.4.2 Analysis of Non-Quantifiable Factors for Segment 4

Review of the non-quantifiable factors show several disadvantages to the No-Build Alternative. The No-Build LOS for the intersection at SE 8th Avenue/West Fort Island Trail (CR 44) is LOS F with and without Suncoast Parkway Phase 2. The overall arterial No-Build LOS with and without Suncoast Parkway Phase 2 from West Cardinal Lane to North Citrus Avenue is LOS F.

The TSM Alternative involves a significant cost and disruption for a minor amount of widening with the improvement only producing bike lanes. A less costly alternative of constructing an off-road multi-use path would produce the same benefit for bicyclists, and could be done within existing ROW as an enhancement project. However, in either case, the typical section fails to meet the FIHS requirement for a restrictive median and design speed. In addition, the TSM Alternative does not include improvements to address the LOS deficiency at the intersections, and therefore, the Segment as a whole. Furthermore, the use of the center turn lane is restricted to five-lane sections, and FDOT

has targeted the two-way left turn lane for elimination of at least 10 centerline miles per year. The TSM Alternative results in no benefit to the drainage situation. Alternative 1 will require that any additional pavement be treated and that a net reduction of pollutant discharge occur, which will benefit the environment. In addition, Alternative 1 is consistent with the future commercial land use within the City of Crystal River and with the Recommended Alternative in Segment 3.

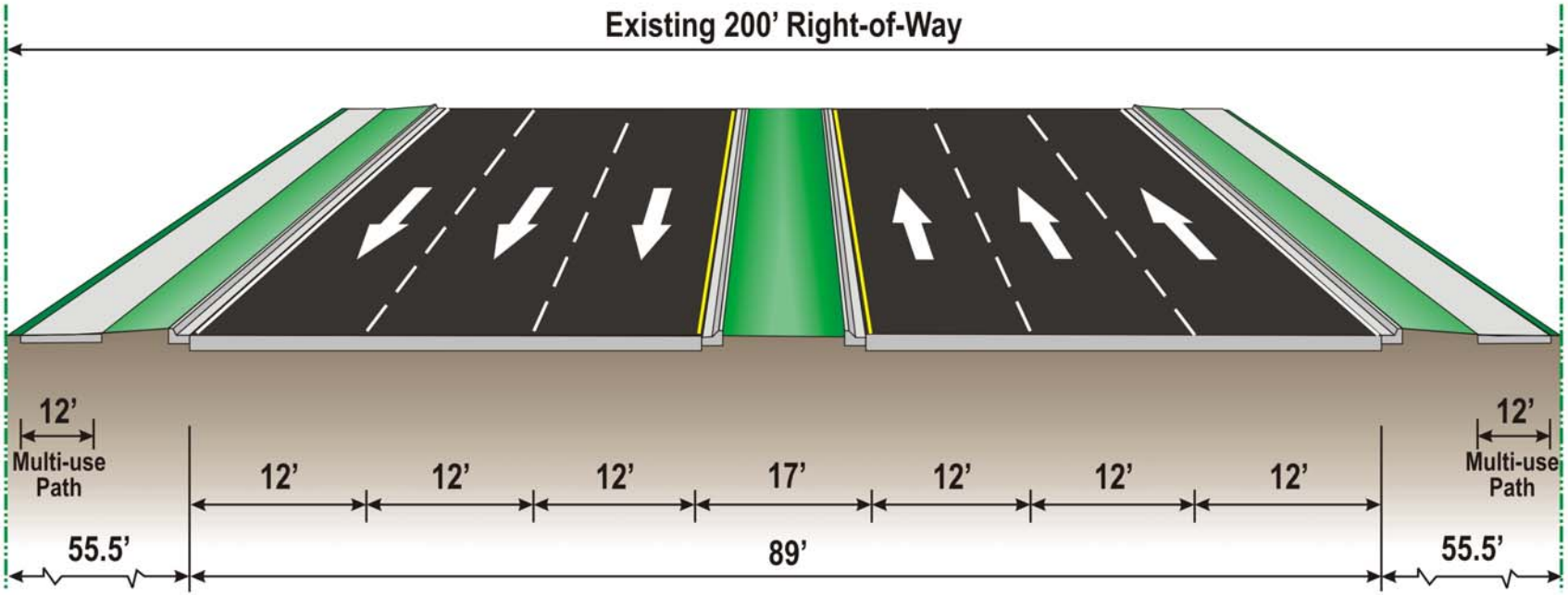
8.5.4.3 Alternative Refinement for Segment 4

Subsequent to the evaluation process, the TSM Alternatives was further examined with the intent to minimize construction costs and disturbance to the existing roadway system while still accommodating pedestrians and bicyclists. The original TSM Alternative proposed widening the existing seven-lane roadway 2.5 ft along both sides to allow for a 4 ft bicycle lane in each direction. Sidewalks were also proposed along both sides, adjacent to the ROW line. However, the benefits received from the improved pedestrian facilities do not outweigh the costs associated with widening the existing roadway. As a result, TSM Alternative 2 was developed as a refinement of the original TSM Alternative.

TSM Alternative 2 includes reconstructing the existing median from a two-way left-turn lane to a 17 ft raised median as shown in Figure 8-13. In areas where left-turn lanes are proposed, the raised median will be reduced to a 4-ft traffic separator with a single 12-ft exclusive left-turn lane. This alternative also includes milling and resurfacing of the existing roadway to allow for three 12-ft travel lanes in each direction. Multi-use paths, 12 ft in width, are proposed along both sides of the roadway, adjacent to the ROW line to accommodate pedestrians and bicyclists. At SE Kings Bay Drive, bicyclists using the multi-use paths will exit US 19 since no provisions for bicyclists were developed within Segment 5 due to significant ROW impacts which would result. However, alternative bike routes can be accommodated with minor upgrades to SE Kings Bay Drive and SE Cutler Spur, incorporating the proposed pedestrian overpass at the Crystal River bike path. Due to the heavily commercialized land use in this segment and the addition of a narrow raised median, a design speed of 40 mph is proposed for this alternative. Since

G:/COREL/PD&E/US 19 CITRUS CO/PER/PER 2003/FIG 8-13.CDR/8-18-03

PROPOSED TYPICAL SECTION



TSM ALTERNATIVE 2 - SEGMENT 4
WEST FORT ISLAND TRAIL (CR 44) TO NE 1ST TERRACE
DESIGN SPEED 40 MPH

US 19 (SR 55)
PD&E STUDY
From South of US 98 to CR 488
Citrus County, Florida

PROPOSED TYPICAL SECTION

WPI SEG NO: 405822 1
FAP: 1852 007 P

FIGURE 8-13

the reduced design speed does not meet current FIHS standards, a design variation is required for this alternative.

Unlike the original TSM Alternative, TSM Alternative 2 provides a restrictive median, which is consistent with FIHS requirements. Since TSM Alternative 2 introduces a restrictive median into a segment currently classified as Access Class 6, reclassification to Class 3 is required. A Public Hearing for reclassification was held concurrently with the PD&E Study Public Hearing.

8.5.4.4 Recommendation for Segment 4

In evaluating the two TSM Alternatives and the Build Alternative 1, TSM Alternative 2 was selected as the Recommended Alternative for Segment 4. This alternative meets FIHS criteria for a restrictive median, accommodates pedestrian and bicyclists, and provides the lowest total cost.

8.5.5 Segment 5

The limits of Segment 5 extend from NE 1st Terrace to Turkey Oak Drive. A TSM Alternative and three Build Alternatives (Alternatives 1, 2, and 3) were evaluated for this segment of US 19. Table 8-5 in Section 8.4.1 of this report identifies the quantifiable impacts associated with each alternative. The following sections analyze the quantifiable and non-quantifiable factors used in selecting a Recommended Alternative.

8.5.5.1 Analysis of Quantifiable Factors for Segment 5

Review of the quantifiable factors show each build alternative has a similar effect on the physical and natural environment. However, Alternative 2 requires the least number of estimated businesses to be relocated (39) and the least area of ROW to be acquired (7.73 ac). As a result, Alternative 2 has the least ROW acquisition cost ($75.50 million), and therefore the least overall total cost ($92.56 million) of the build alternatives. The TSM

Alternative has the least affect on all quantifiable factors considered with the lowest overall total cost ($5.35 million).

8.5.5.2 Analysis of Non-Quantifiable Factors for Segment 5

Review of the non-quantifiable factors show several disadvantages to the No-Build Alternative. The No-Build LOS for intersections at SR 44 and NE 3rd Avenue is LOS F and D, respectively with Suncoast Parkway Phase 2. The No-Build LOS for intersections at SR 44, NE 3rd Avenue, North Citrus Avenue, and Turkey Oak Drive are all LOS F without Suncoast Parkway Phase 2. From a safety standpoint, SR 44, NE 3rd Avenue, North Citrus Avenue (CR 495), and Turkey Oak Drive are all identified as above average crash locations for all of the five years evaluated.

While the TSM Alternative provides advantages for pedestrians and bicyclists, there are no provisions for intersection improvements to improve the LOS or safety of the overall segment. In fact, the narrow lane widths can further negatively affect LOS. As previously discussed, the TSM Alternative south of SR 44 fails to meet FIHS criteria for restrictive median, lane width, and design speed. In addition, the center turn lane is restricted to a five-lane section, and in such case, is required to be at least 12 ft in width, preferably 14 ft. Also, the FDOT has targeted the two-way left turn lane for retrofit or elimination of at least 10 centerline miles per year, as stated in the FDOT Strategic Highway Safety Plan.

In addition, the TSM Alternative and the No-Build Alternative are not consistent with the Citrus County Comprehensive Plan or the City of Crystal River Comprehensive Plan[5] north of SR 44. Both Alternatives propose maintaining the existing five-lane roadway whereas both comprehensive plans show a need for six-lanes in this area. While the TSM Alternative maintains current access patterns within existing ROW, it fails to meet the purpose of the project to accommodate future traffic in a safe and efficient manner. Also, the TSM Alternative results in no benefit to the existing drainage situation, which has been identified by the City of Crystal River as needed.

Alternatives 1 and 2 require that any additional pavement be treated, resulting in a net reduction of pollutant discharge. The TSM alternative results in no benefit to the drainage situation.

Alternative 2 provides an adequate LOS and is expected to improve the safety of the overall segment while accommodating pedestrian and bicyclists. While US 19 currently bisects the City of Crystal River, the proposed pedestrian overpass will offset any negative impacts of the proposed widening and provide a valuable asset to the community.

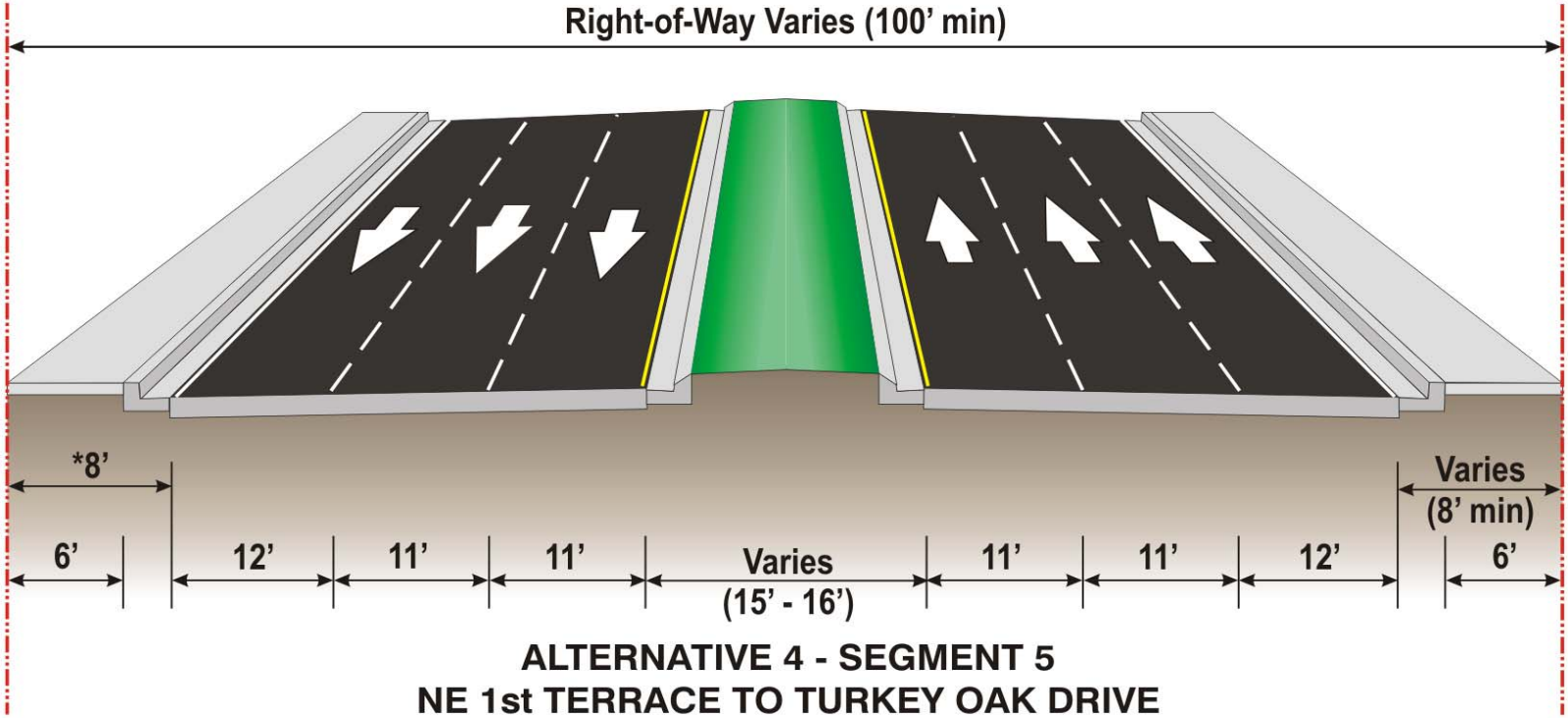
8.5.5.3 Alternative Refinement for Segment 5

Subsequent to the evaluation process, the alternatives were further examined with the intent to minimize ROW cost and impacts to the commercial properties located along US 19 in the Crystal River area. The section of US 19 between NE 1st Terrace and the Crystal River Mall contains 100 ft of existing ROW with established businesses on the east and west sides and the Crystal River State Buffer Preserve located predominantly along the west side. The previously discussed alternatives utilize a 22-ft raised median typical section (Figure 8-11) with differing alignments along US 19 and differing intersection geometry at SR 44. Alternatives 1 and 2 proposed an at-grade intersection at SR 44 with Alternative 2 transitioning to the east approximately 3,000 ft south of where Alternative 1 transitions to the east. Alternative 3 proposed a center turning overpass at SR 44, utilizing the same alignment as Alternative 1. Although Alternatives 1 and 2 have fewer impacts to the surrounding businesses than Alternative 3, the overall cost and impact to the Crystal River downtown area is substantial. As a result, a minimized typical section was developed for this Segment.

In an effort to reduce impacts to the established businesses, Alternative 4 was developed as a refinement of Alternative 2. This alternative utilizes the proposed typical section illustrated in Figure 8-14 with an at-grade intersection at SR 44. The proposed typical section is a six-lane divided urban roadway with a 16-ft raised median from NE 1st Terrace to the Crystal River Mall. North of the mall, the 16-ft median transitions to

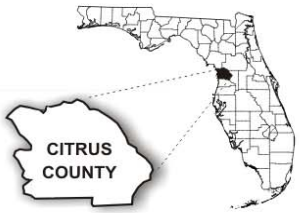
G:/COREL/PD&E/US 19 CITRUS/PER/PER 2003/FIG 8-14.CDR/9-11-03

PROPOSED TYPICAL SECTION



ALTERNATIVE 4 - SEGMENT 5
NE 1st TERRACE TO TURKEY OAK DRIVE
DESIGN SPEED 40 MPH

*Border width varies to accommodate gravity wall.



US 19 (SR 55)
PD&E STUDY
From South of US 98 to CR 488
Citrus County, Florida

PROPOSED TYPICAL SECTION

WPI SEG NO: 405822 1
FAP: 1852 007 P

FIGURE 8-14

match the 40-ft median north of Turkey Oak Drive. This typical section contains two 11-ft travel lanes and one 12-ft travel lane in each direction. Sidewalks, 6 ft in width, are provided along both sides of the roadway adjacent to the back of curb. This typical section utilizes a best-fit alignment and is contained within the existing 100 ft of ROW for a portion of this segment.

The Crystal River State Buffer Preserve occupies a small parcel on the east side of US 19 approximately 400 ft north of NW 7th Avenue. The proposed alignment is centered within the existing ROW through this area in order to avoid impacting this parcel. However, due to the curved geometry in this area, tying into existing ground on the west side may not be feasible without acquiring additional ROW. Therefore, a gravity wall may be necessary on the west side through the curved geometry section. In order to accommodate the gravity wall, the median width may need to be reduced to 15 ft.

Pedestrian signals and crosswalks are proposed at each signalized intersection. No bike lanes were developed with this alternative due to significant ROW impacts that would result. However, alternative bike routes can be accommodated with minor upgrades to existing side streets, incorporating the proposed pedestrian overpass at the Crystal River bike path over US 19. Due to the heavily commercialized land use in this segment and the addition of a narrow raised median, a design speed of 40 mph is proposed for this alternative. Since the reduced design speed does not meet current FIHS standards, a design variation is required for this alternative. Also, design variations are needed for the substandard lane widths (11 ft), border width (8 ft), median width (15 ft), and lack of bicycle facilities.

Alternative 4 is consistent with FIHS requirements of a restrictive median, however it does not meet the FIHS requirement of a 50 mph design speed. The ROW cost for Alternative 4 is estimated at $29.28 million, including stormwater management facilities. Alternative 4 would substantially reduce the number of impacts to nearby businesses and the costs associated with these impacts.

8.5.5.4 Recommendation for Segment 5

In evaluating all of the alternatives, Alternative 4 was selected as the Recommended Alternative in Segment 5. Alternative 4 has the least number of business impacts, the least amount of ROW acquisition, and the lowest total cost, while providing improvements to LOS and safety.

8.5.6 Segment 6

The limits of Segment 6 extend from Turkey Oak Drive to North Dunnellon Road (CR 488). Only a TSM Alternative was evaluated for this segment. The overall intersection LOS at Turkey Oak Drive, Seven Rivers Community Hospital (flashing signal), and West Powerline Street meet the established LOS B criteria for the No-Build scenario with Suncoast Parkway Phase 2. The Turkey Oak Drive intersection falls to LOS F for the No-Build scenario without Suncoast Parkway and the Seven Rivers Community Hospital falls to LOS C. The westbound approach at CR 488 is LOS F with and without Suncoast Parkway. The existing four-lane rural facility will operate at a LOS A or B for all arterial segments north of Turkey Oak Drive. In summary, the existing facility in Segment 6 meets the LOS standards for the design year 2025 with Suncoast Parkway (and substantially meets LOS criteria without Suncoast Parkway). Crash rates are within normal ranges for similar facilities. Therefore, no widening is proposed for this segment as a whole.

Intersection improvements associated with Alternative 4 in Segment 5 will address the deficiency at Turkey Oak Drive. However, in Segment 6, the TSM Alternative is justified to address the failing westbound LOS as well as upgrade all the signals to mast arms. Therefore, the TSM Alternative is the Recommended Alternative.

The following matrix (Table 8-7) provides the total quantifiable effects of the resulting Recommended Alternative for the entire project. The estimated business and non-profit organization relocations as well as the potential petroleum pollutant and hazardous materials contaminated sites ranked medium and high are shown in the Recommended Alternative Concept Plans in Appendix C. The Recommended Alternative Concept Plans show the locations of these public services and parks.

Table 8-7
Evaluation Matrix - Recommended Alternative

EVALUATION FACTORS	SEGMENT						
	1	2	3	4	5	6	Total
	Alt 1	Alt 7	Alt 1	TSM[3] 2	Alt 4	TSM	
SEGMENT LENGTH (miles)	4.86	2.07	4.65	0.86	2.05	4.31	**18.80**
POTENTIAL BUSINESS AND RESIDENTIAL RELOCATIONS[5]							
Number of businesses estimated to be relocated	0	3	0	0	18	0	**21**
Number of residences estimated to be relocated	0	0	0	0	0	0	**0**
POTENTIAL NON-PROFIT ORGANIZATION RELOCATIONS							
Number of non-profit organizations estimated to be relocated	0	0	0	0	1	0	**1**
RIGHT-OF-WAY INVOLVEMENT							
Area of ROW to be acquired in ac (includes roadway and estimated stormwater management facilities sites)	21.14	9.50	20.99	0.00	3.76	0	**55.39**
COMMUNITY FACILITY EFFECTS WITHIN ROW							
Number of churches, schools, child care facilities, nursing homes, hospitals, cemeteries affected	0	0	0	0	1	0	**1**
Number of other public services (fire stations, etc.) affected	0	0	0	0	3	0	**3**
CULTURAL/HISTORIC RESOURCES AND PUBLIC PARKS INVOLVEMENT							
Number of historic sites/structures within or adjacent to ROW	0	0	0	0	0	0	**0**
Number of public parks adjacent to ROW	2	1	0	0	3	0	**6**
Number of public parks affected	0	0	0	0	0	0	**0**
NATURAL ENVIRONMENTAL INVOLVEMENT							
Wetland involvement (ac)	1.99	0.24	2.72	0.19	0.50	0	**5.64**
Base floodplain encroachment (ac)	27.59	34.12	76.36	14.26	26.17	0.55	**179.05**
PHYSICAL ENVIRONMENT INVOLVEMENT							
Estimated number of noise sensitive sites affected (66 dBA or above)	20	8	6	0	1	0	**35**
Number of potential petroleum pollutant and hazardous materials contaminated sites ranked medium and high	5	7	8	6	8	0	**34**
ESTIMATED PROJECT COSTS (in million $, 2002/2003)							
Engineering design[2]	$2.36	$1.52	$3.34	$0.23	$1.41	$0.15	**$9.01**
ROW acquisition[1]	$13.86[4]	$25.72	$17.57	$0.00	$29.28	$0.00	**$86.43**
Construction (Roadway)	$14.42	$10.12	$22.29	$1.51	$8.21	$1.00	**$57.55**
Construction (Pedestrian Overpass)	$1.31	$0.00	$0.00	$0.00	$1.22	$0.00	**$2.53**
Construction engineering & inspection[2]	$2.36	$1.52	$3.34	$0.23	$1.41	$0.15	**$9.01**
TOTAL COST	**$34.31**	**$38.88**	**$46.54**	**$1.97**	**$41.17**	**$1.30**	**$164.53**

(1) Includes estimated pond areas (2) 15% of Construction Cost (3) Transportation System Management (4) Includes stormwater management facilities only
(5) Does not include relocations for pond sites, to be determined in Design

8.6 REFINEMENT OF RECOMMENDED ALTERNATIVE

The Recommended Alternative generally includes intersection turn lanes and storage lengths assuming the 'with Suncoast Parkway Phase 2' scenario as outlined in the Final Traffic Report: Volume 2 – Future Conditions. However, in some cases, lane calls or storage lengths were revised in order to reduce costs or impacts. In addition, the design speed reduction from 50 mph to 40 mph in Segments 4 and 5 will reduce turn lane storage requirements by reducing distances required for deceleration by 85 ft. These changes will provide significant benefits including greatly reduced ROW costs, reduced relocations, and avoidance of impacts to Section 4(f) facilities, such that the Recommended Alternative is feasible to construct. While these refinements could potentially affect LOS for specific movements at intersections, these effects are not expected to be significant and each overall intersection is still expected to operate at an acceptable LOS. Each of these situations is explained below and shown in the Recommended Alternative Concept Plans included in Appendix C.

West Grover Cleveland Boulevard

The westbound dual left-turn lanes along West Grover Cleveland Boulevard were reduced from 700 ft as shown in the Final Traffic Report: Volume 2 - Future Conditions to 630 ft. This was a result of inadequate spacing between South Ohio Avenue and US 19 to fit the desired storage length. The reduced turn lane length is not expected to significantly affect the LOS for the overall intersection. In addition, the reduced turn lane will not conflict with the South Ohio Avenue intersection with West Grover Cleveland Boulevard.

West Halls River Road (CR 490A)/West Grover Cleveland Boulevard and West Homosassa Trail (CR 490) Intersections

The proposed southbound dual left-turn lanes at West Halls River Road (CR 490A)/West Grover Cleveland Boulevard and the northbound left-turn lane at West Homosassa Trail (CR 490) were also reduced due to inadequate spacing between intersections. According to the Final Traffic Report: Volume 2 - Future Conditions, the desirable southbound and

northbound storage lengths should be 475 ft and 400 ft, respectively. The existing intersections are spaced approximately 700 ft apart centerline to centerline, leaving only 550 ft for the two turn lanes. This spacing will not accommodate the left-turn storage requirements without significantly impacting adjacent commercial parcels or impacting the Homosassa Springs State Wildlife Park, a Section 4(f) facility. Therefore, the lengths of the turn lanes were reduced to 375 ft southbound and 265 ft northbound. The reduction in turn lane lengths is not expected to significantly affect the overall LOS for either intersection.

An exclusive northbound right-turn lane at West Halls River Road (CR 490A)/West Grover Cleveland Boulevard was originally proposed in the Final Traffic Report: Volume 2 - Future Conditions, which was consistent with the US 19 Action Plan Update. Adding an exclusive northbound right-turn lane at this intersection would require ROW acquisition from the Walgreens located on the southeast corner. The cost associated with this ROW acquisition is expected to be significant. As a result, additional analysis was performed for this intersection in which the exclusive northbound right-turn lane was eliminated. The results of the analysis indicate the overall intersection will operate at LOS D, which does not meet the established LOS criteria. The intersection was projected to operate at a LOS C with the exclusive right-turn lane in place. Since the elimination of the exclusive right-turn lane would not dramatically reduce the overall intersection LOS, and considering that the right-turn lane would cause Section 4(f) impacts to the Homosassa Springs Wildlife State Park as well as significantly increase ROW costs the exclusive right-turn lane was removed from the Recommended Alternative.

SE 8th Avenue

The westbound approach lane configuration along SE 8th Avenue currently consists of a single left-turn lane with a shared through/right-turn lane within 50 ft of existing ROW. The Final Traffic Report: Volume 2 - Future Conditions indicated the need for an additional exclusive westbound right turn lane in 2025, which was consistent with the US 19 Action Plan Update. Adding an exclusive westbound right-turn lane at this intersection would require ROW acquisition from the Crystal River Shopping Center, which contains up to 17 individual businesses. The cost associated with this ROW

acquisition is expected to be significant due to a loss of parking spaces. As a result, additional analysis was performed for this intersection in which the existing lane geometry remained unchanged for westbound SE 8th Avenue. The results of the analysis indicates the overall intersection will operate at LOS B, which meets the established LOS criteria. Since the exclusive right-turn lane provides little benefit to the overall intersection LOS and the costs associated with purchasing ROW are anticipated to be significant, the additional lane was removed from further consideration.

SR 44

The Final Traffic Report: Volume 2 - Future Conditions shows an exclusive right-turn lane is needed in 2025 for northbound US 19 at SR 44. The recommended storage requirement for this turn lane is 475 ft. However, due to the densely commercialized land use in this area and the constrained existing ROW width, the storage length was reduced to 375 ft. This resulted in approximately $1.3 million in ROW savings and the elimination of three business relocations. The reduction in storage length is not expected to significantly affect the overall LOS for the intersection. In addition, the design speed reduction from 50 mph to 40 mph in Segments 4 and 5 will reduce turn lane storage requirements by reducing distances required for deceleration by 85 ft.

CR 495

The Final Traffic Report: Volume 2 - Future Conditions shows an exclusive right-turn lane is needed in 2025 for northbound US 19 at North Citrus Avenue (CR 495). The recommended storage requirement for this turn lane is 475 ft. However, due to the densely commercialized land use in this area and the constrained existing ROW width, the storage length was reduced to 250 ft. This resulted in approximately $12.0 million dollars in ROW savings and the elimination of one business relocation. The reduction in storage length is not expected to significantly affect the overall LOS for the intersection. In addition, the design speed reduction from 50 mph to 40 mph in Segments 4 and 5 will reduce turn lane storage requirements by reducing distances required for deceleration by 85 ft.

Turkey Oak Drive/NW 19th Street

Since Segment 6 will remain as a four-lane facility, only two northbound through lanes could be carried through the intersection from Segment 5. Therefore, the third northbound lane in Segment 5 becomes an exclusive right-turn lane, and is dropped at the intersection. The existing southbound lane arrangement north of the intersection includes two through lanes and an exclusive right-turn lane. The proposed lane configuration includes converting the exclusive right-turn lane to a shared through-right turn lane. Approach lanes on Turkey Oak Drive and NW 19th Street are proposed to remain as they currently exist. The intersection configuration is expected to operate at LOS B with or without Suncoast Parkway Phase 2.

8.7 REFERENCES

1. Final Traffic Report: Volume 2 - Future Conditions; From South of US 98 to CR 488; PBS&J; Tampa, Florida; May 2004.

2. Development of the Florida Intrastate Highway System; Topic No. 525-030-250-f; Florida Department of Transportation Systems Planning Office; May 16, 2002.

3. US 19 Action Plan Update – From US 98 to Crystal River Mall; Florida Department of Transportation; URS Greiner Woodward Clyde; Citrus County; July 2000.

4. Citrus County Comprehensive Plan 1995-2020; Citrus County Department of Development Services; Lecanto, Florida; Revisions through December 14, 1999, Amended November 18, 2003.

5. City of Crystal River Comprehensive Plan; Crystal River, Florida; Adopted March 1998, Amended March 31, 2003.

SECTION 9
PRELIMINARY DESIGN ANALYSIS

The next step in the process was to define/refine the design parameters associated with the Recommended Alternative as described in Section 8. The defining of these parameters allows for a more comprehensive and accurate evaluation of project impact and costs.

9.1 DESIGN TRAFFIC VOLUMES

The AADT volumes and PM peak hour traffic volumes were discussed previously in Section 6 of this report. The AADT volumes for the projected design year (2025) are expected to range between 15,800 vpd to 39,400 vpd with Suncoast Parkway Phase 2 and 17,700 vpd to 45,200 vpd without Suncoast Parkway Phase 2. These volumes are illustrated in Figures 6-3 and 6-4. After consideration of the existing turning movements and the impacts of future developments on traffic flow, PM peak hour traffic volumes were developed for the signalized and major unsignalized intersections along the project. Figures 6-5 and 6-6 depict the 2025 PM peak hour traffic volumes with and without Suncoast Parkway Phase 2, respectively.

9.2 TYPICAL SECTIONS

9.2.1 Recommended Alternative

Segment 1

The limits of Segment 1 are from south of US 98 to West Green Acres Street. The proposed typical section for this segment was previously described in Section 8.3.1.1 under Alternative 1 and shown in Figure 8-4.

Segment 2

The limits of Segment 2 are from West Green Acres Street to West Jump Court. The proposed typical sections for this segment were previously described in Sections 8.3.1.2 and 8.5.2.3 under Alternatives 2 and 7, respectively. The typical sections are shown in Figures 8-5 and 8-6.

Segment 3

The limits of Segment 3 are from West Jump Court to West Fort Island Trail (CR 44). The proposed typical section for this segment was previously described in Section 8.3.1.3 under Alternative 1 and shown in Figure 8-8.

Segment 4

The limits of Segment 4 are from West Fort Island Trail (CR 44) to NE 1st Terrace. The proposed typical section for this segment was previously described in Sections 8.3.1.4 and 8.5.4.3 under TSM Alternative 2 and shown in Figure 8-13.

Segment 5

The limits of Segment 5 are from NE 1st Terrace to Turkey Oak Drive. The proposed typical section for this segment was previously described in Sections 8.3.1.5 and 8.5.5.3 under Alternative 4 and shown in Figure 8-14. This typical section does not accommodate on-street parking.

Segment 6

The limits of Segment 6 are from Turkey Oak Drive to North Dunnellon Road (CR 488). A proposed typical section was not developed for this segment since the existing four-

lane facility will operate at a LOS A or B for all arterial segments north of Turkey Oak Drive under the No-Build Alternative.

9.3 INTERSECTION CONCEPTS AND SIGNAL ANALYSIS

The Final Traffic Report: Volume 2 - Future Conditions[1] illustrates the recommended intersection lane geometry and provides detailed information about the operation of each signalized intersection during the design hour as well as the expected average vehicle queue lengths. Tables 6-9 through 6-12 in Section 6 of this report provide detailed information about the projected operation of each signalized intersection during PM peak hours and arterial analyses based on the improvements outlined in Figures 6-8 and 6-9. Review of Tables 6-9 through 6-12 reveals some of the intersections are expected to experience movements operating at a LOS D or F in the year 2025.

9.4 ALIGNMENT AND RIGHT-OF-WAY NEEDS

Aerial photos illustrating the Recommended Alternative for the project and the anticipated roadway ROW needs are shown in Appendix C. The proposed roadway improvements in Segments 1, 4, and 6 are accommodated within the existing ROW. However, ROW acquisition of 21.14 ac will be required for the stormwater management facilities anticipated in Segment 1. Segments 2, 3, and 5 require approximately 9.50, 20.99 and 3.76 ac of ROW respectively to accommodate the proposed roadway improvements and stormwater management facilities. Segments 4 and 6 will not require ROW acquisition for stormwater management facilities since none are proposed.

9.5 POTENTIAL RELOCATIONS

As shown previously in Table 8-7, the construction of the Recommended Alternative is estimated to cause the potential relocation of 21 businesses and one non-profit organization for roadway construction only. The relocations that will result from construction of the stormwater management facilities will be determined in Design. The

relocations for the Recommended Alternative are quantified by project segment as follows:

Segment 1: No relocations

Segment 2: 3 potential business relocations

Segment 3: No relocations

Segment 4: No relocations

Segment 5: 18 potential business relocations and one non-profit organization

Segment 6: No relocations

9.6 RIGHT-OF-WAY COSTS

As shown previously in Table 8-7, the ROW acquisition costs by segment for the Recommended Alternative were summarized. These costs include ROW acquisitions for improving the roadway facility along US 19 from south of US 98 to North Dunnellon Road (CR 488). The total estimated ROW acquisition cost for the Recommended Alternative is $86.43 million. The ROW costs were determined using 2003 dollars and include estimates of the costs for stormwater management facilities that are anticipated for the proposed roadway improvements.

9.7 CONSTRUCTION COSTS

The estimated construction cost by project segment for the Recommended Alternative is summarized in Table 8-7. The costs were calculated using the FDOT's LRE method. As shown, the estimated total construction costs for the roadway and pedestrian overpasses are $57.49 million and $2.53 million, respectively. The construction cost was generated using 2003 dollars.

9.8 PRELIMINARY ENGINEERING AND CONSTRUCTION ENGINEERING COSTS

The cost for engineering (final design) and the cost for CEI were estimated at 15% of the estimated $60.02 million construction cost for roadway and pedestrian overpasses combined. Therefore, engineering design and CEI are estimated to cost approximately $9.01 million each for a total of $18.02 million.

9.9 RECYCLING OF SALVAGEABLE MATERIAL

During construction of the project, recycling of reusable materials will occur to the greatest extent possible. Where possible, removal and recycling of the existing pavement for use in the new pavement will be considered. This will help to reduce the volume of the materials that need to be hauled away and disposed of from the project and to reduce the cost of purchasing materials suitable for pavement construction. Other materials such as signs, drainage concrete pipes, etc., will also be salvaged and reused for regular maintenance operations if they are deemed to be in good condition.

9.10 USER BENEFITS

The public will realize numerous benefits after the Recommended Alternative is constructed. Savings in travel time, reduced vehicle operating costs, reduced traffic accident related costs, and reduced emergency response times are the main benefits. Bicyclists and pedestrians will be able to share this facility with motorists safely and efficiently. Access to schools, public parks and community facilities, as well as the numerous commercial establishments and residences, will be enhanced. The creation of a motorist-friendly facility will contribute to the economic growth of the area adjacent to the project.

9.11 PEDESTRIAN AND BICYCLE FACILITIES

Pedestrian accommodation is proposed in the form of concrete sidewalks to be replaced or constructed and placement of pedestrian signals at intersections as appropriate where a build alternative is proposed. Also, a 12-ft wide multi-use path located along the west side of US 19 is proposed in Segment 1 and a portion of Segment 2, from south of US 98 to West Yulee Drive (CR 490). Segment 4 proposes 12-ft wide multi-use paths along both sides of the roadway, adjacent to the ROW lines. The multi-use path can accommodate both pedestrians and bicyclists. Pedestrian overpasses are proposed in Segments 1 and 5, south of US 98 and at the Crystal River bike path, respectively. Bicycle lanes or paved shoulders are provided along both sides of the roadway for Segments 1 through 4 and Segment 6. However, no provisions for bicyclists were developed for Segment 5 due to significant ROW constraints. Although, alternative bike routes can be accommodated with minor upgrades to existing side streets, incorporating the proposed pedestrian overpass at the Crystal River bike path.

9.12 SAFETY

The proposed improvements will upgrade this portion of US 19 to a safer and more efficient transportation facility. The increased roadway capacity is expected to result in less congestion and reduce the probability for crashes. The placement of sidewalks, crosswalks, pedestrian overpasses, and other safety provisions will provide safe pedestrian circulation.

The design and alignment of the roadway will meet applicable safety standards. Adherence to design speed as it applies to establishing and setting minimum values on critical roadway design features will be closely followed. Roadway design elements including curvature, sight distance, width, and clearance will meet the applicable minimum roadway design standards. Access control techniques to promote safe and efficient traffic circulation will also be used.

9.13 ECONOMIC AND COMMUNITY DEVELOPMENT

A Community Redevelopment Plan was prepared by the University of Florida in 1988 for the City of Crystal River downtown area. This plan indicated the need for sidewalk improvements, drainage improvements, additional parking, provisions for street lighting, and roadway improvements in the Crystal River area. The City of Crystal River has indicated that they intend to update the Community Redevelopment Plan in the near future. It is anticipated that the Community Redevelopment Plans designed by public and private entities can be implemented in conjunction with proposed improvements to US 19. Proposed improvements to US 19 will not result in any adverse impacts to economic and community development.

9.14 ENVIRONMENTAL EFFECTS

9.14.1 Land Use Data

9.14.1.1 Community Facilities and Established Land Uses

Community facilities provide a focal point for adjacent neighborhoods and communities, as well as serving the needs of surrounding areas. For the purpose of this study, community facilities included churches and other religious institutions, parks and recreation areas, other neighborhood gathering places, fire stations, police stations, public and private schools, medical and emergency treatment facilities, cemeteries, and public buildings and facilities. These community facilities are discussed in Section 4.3.2.2 and are shown in Figures 4-12 and 4-13. Information for mapping the community facilities in the project vicinity was derived from on-site observation and on-line research. For specific locations, see the Recommended Alternative Concept Plans in Appendix C.

It is anticipated that there will be access management changes along the US 19 corridor, with revisions to the median openings. The worst-case change in access will be an introduction of a median where none currently exists. There will also be an emergency

signal, at NW 6th Street and US 19, to accommodate emergency vehicles from Crystal River Fire Department. No other effects on community facilities are expected.

US 19 bisects Homosassa, Homosassa Springs, the City of Crystal River, as well as unincorporated areas of Citrus County. The existing land use within the US 19 corridor consists of residential, commercial, public/semi-public (including community facilities), conservation and open areas containing upland forests, and wetlands in both rural and urban settings. There are also limited industrial, transportation, and extractive uses. The proposed project is consistent with the Citrus County Comprehensive Plan 1995-2020[2] and City of Crystal River Comprehensive Plan[3] future land use plans. Future land uses are expected to follow the established trends.

9.14.2 Community Cohesion

Since the proposed project involves the widening of an existing facility with minimal expected ROW acquisition, no splitting or isolation of neighborhoods will occur. The project is not anticipated to harm elderly persons, handicapped individuals, non-drivers and transit-dependent individuals, or minorities.

The US 19 project has proposed improvements that will enhance community cohesiveness. These improvements include adding, enhancing, and providing connectivity of sidewalks from US 98 to Turkey Oak Drive. Roadway improvements will accommodate bicyclists by providing either a multi-use path, a 4-ft undesignated bike lane or a 5-ft paved shoulder. The only exception will be in Segment 5 where an alternative bike route along side roads will have to be used. There are also plans for two pedestrian overpasses. The first overpass is at the intersection of US 19 and US 98, providing a connection for bicyclists traveling from the Suncoast Parkway Trail via US 98 to the multi-use path at US 19. This multi-use path, 12 ft in width, will run adjacent to US 19 on the west side of Segment 1 and will continue north through part of Segment 2 providing connectivity to the Homosassa Tract (Homosassa Wildlife Management Area) of the Withlacoochee State Forest, Chassahowitzka National Wildlife

Refuge, and Homosassa Springs State Wildlife Park. There will also be 12-ft multi-use paths on each side of US 19 throughout Segment 4. The second pedestrian overpass will connect the Crystal River bike path over US 19 in downtown Crystal River. This will allow bicyclists, pedestrians, and children from the four area schools to safely cross US 19.

Therefore, this project was developed to comply with Executive Order 12898, Environmental Justice, issued on February 11, 1994. The proposed improvements are considered to have a beneficial effect on community cohesiveness.

9.14.3 Cultural Features

A Final CRAS[4] was prepared as part of this PD&E Study. The recommended improvements proposed by this PD&E Study will have no involvement with any cultural resources, including archaeological sites and historic structures, which are listed, determined eligible, or considered potentially eligible for listing in the NRHP[5] (SHPO concurrence letter dated June 4, 2002).

9.14.4 Wetland Impact and Mitigation

A WER[6] was prepared for this PD&E Study. There are 5.64 ac of wetland impacts associated with the Recommended Alternative. Unavoidable wetland impacts that will result from the Recommended Alternative will be mitigated pursuant to Senate Bill (SB) 1986 (373.4137 Florida Statutes [FS]) to satisfy all mitigation requirements of Part IV Chapter 373, FS and 33 United States Code (USCs) 1344.

9.14.5 Threatened and Endangered Species

A TESE[7] was prepared as part of this study. A summary of the findings was sent to the USFWS for review and concurrence. The USFWS, on October 16, 2003, determined that, “the proposed action is not likely to adversely affect resources protected by the

Endangered Species Act of 1973, as amended (16 U.S.C. 1531 et seq.). This fulfills the requirement of the act."

9.14.6 Potential Hazardous Materials and Petroleum Products Contaminated Sites

A Final CSER[8] was prepared as part of this PD&E Study. A total of 112 potential contamination sites within or adjacent to the project corridor were identified. Of these 112, 36 sites were identified as having a "NO" risk rating, 42 sites were identified as having a "LOW" risk rating, 17 sites were identified as having a "MEDIUM" risk rating, and 17 sites were identified as having a "HIGH" risk rating. Further evaluation of the potential contamination sites within the project corridor should be conducted in the later stages of design.

9.14.7 Noise Impacts

A Final Noise Study Report[9] was prepared as part of this PD&E Study. For the Recommended Alternative and year 2025 traffic conditions, traffic noise levels at 35 sites (33 residences, one outdoor congregational area [private facility used by residents of Sugarmill Manor], and one outdoor recreation area [Bicentennial Park]) are predicted to experience noise levels that approach or exceed the Noise Abatement Criteria (NAC) established by FHWA. Noise barriers were determined to not be a feasible and cost reasonable abatement measure for the 35 sites due to numerous access requirements for driveways and intersecting side streets that would restrict the length of a noise barrier.

Using FDOT's listing of vibration sensitive sites, residences were identified as potentially sensitive to vibration caused during construction. If during final design it is determined that provisions to control vibration are necessary, the project's construction provisions can be modified as needed.

9.14.8 Air Quality Impacts

A Final Air Quality Report[10] was prepared as part of this PD&E Study. Based on FDOT's air quality screening test, COSCREEN98R2 (Revised September 2002), the project will not cause the National Ambient Air Quality Standards (NAAQS) for carbon monoxide to be exceeded. This project will not degrade air quality.

The project is in an area that has been designated by the Environmental Protection Agency as attainment for all the NAAQS. Therefore, the transportation conformity rule (49 CFR Part 93) does not apply.

9.14.9 Water Quality Impacts

The proposed stormwater facility design will include, at a minimum, the water quality requirements for water quality impacts as required by the SWFWMD, in Rule 40D-3.2.2.2. Therefore, no further mitigation for water quality impacts will be needed. A Water Quality Impact Evaluation (WQIE) form has been completed for this PD&E Study, and is included in Appendix B.

9.14.10 Aquatic Preserves

This project has no involvement with Aquatic Preserves.

9.14.11 Section 4(f) Lands

In accordance with Section 4(f) of the Department of Transportation Act of 1966 (Title 49, USC, Section 1653 (f), amended and recodified in Title 49, USC, Section 303, in 1983), the project was examined for possible Section 4(f) properties.

The Homosassa Springs Wildlife State Park main entrance and visitors center are adjacent to US 19 on the west side, just south of West Halls River Road. There is also a

west entrance to the wildlife park on Fish Bowl Drive. The park is owned and operated by the FDEP, Division of Recreation and Parks.

The Homosassa Tract (Homosassa Wildlife Management Area) of the Withlacoochee State Forest trailhead is located west of US 19. The Homosassa Tract can be accessed by two entrances off of US 19, on the west side. The first entrance is Burnt Bridge Road, north of US 98, and the second entrance, Hog Pond Road, located approximately 2 mi south of Homosassa. The tract is owned and operated by Florida Department of Agriculture and Consumer Services, Division of Forestry.

The Chassahowitzka National Wildlife Refuge Maintenance Facility is adjacent to US 19 on the west side, just north of US 98. The refuge is owned and operated by the United States Department of Interior, USFWS.

The Bicentennial Park/Creative Playground is located on the southeast corner of US 19 and NW 2nd Avenue. Both parks can be accessed directly from US 19 at NW 2nd Avenue. The park is owned and operated by the City of Crystal River.

The Crystal River State Buffer Preserve is located west of US 19. A large portion of the Crystal River State Buffer Preserve is accessible only by watercraft. On the mainland portion the Visitor Center, EcoWalk Trail, and the multi-use trail can be accessed from State Park Drive or Curtis Tool Road. The Churchhouse Hammock trail can be accessed from US 19. The entrance to Churchhouse Hammock does not grant entrance to any other part of the park. The park is owned and operated by the FDEP, Division of Recreation and Parks, Bureau of Land Aquatic Resource Management.

The Recommended Alternative will not require the acquisition of any ROW from any of the above parks. Additionally, the Recommended Alternative will not impair or diminish their activities, features, or attributes that qualify them as Section 4(f) properties for protection. Therefore, the Recommended Alternative will have no involvement with these Section 4(f) protected properties.

9.14.12 Outstanding Florida Waters

The project does not cross over any OFW within its limits. All stormwater runoff in the study corridor drains to Kings Bay, Crystal River, Halls River, Homosassa River, and Chassahowitzka River, which are each classified as an OFW. The OFW designation requires a higher emphasis of minimizing direct wetland impacts and higher water quality treatment will be required and will be in accordance with the requirement as set forth by the Environmental Protection Agency (EPA). Coordination will be conducted with Southwest Florida Water Management District (SWFWMD) regarding treatment requirements for each basin during the design phase. Impacts are expected to be minimal.

9.14.13 Floodplains

In accordance with Executive Order 11988 "Floodplain Management", U.S. Department of Transportation (USDOT) Order 5650.2, and Chapter 23, CFR 650A, impacts to floodplains from the proposed improvements were considered. Portions of the study area are located within the floodplain limits shown on the Flood Insurance Rate Maps ([FIRMs]: Community Panel Numbers 120063 0335B, 120063 0220B, 120063 0215C, 120063 0205C, 120063 0115B, 120340 0002B, 120340 0001B, 120063 0105B, 120063 0100B, and 120063 0085B) compiled by Federal Emergency Management Agency (FEMA). The project corridor has four segments that lie in a designated 100-year floodplain that are primarily from flooding effects from the Gulf of Mexico. The encroachment into the tidal floodplain is longitudinal; whereas the freshwater encroachments are transverse. The base floodplain encroachment is approximately 179.05 ac in size. There are no floodways within the project limits. Floodplain compensation for any freshwater encroachments may be required by SWFWMD.

Based on the information collected during the study, the proposed improvement can be categorized as a Category 4: Projects on existing alignment involving replacement of

existing drainage structures with no record of drainage problems, as defined in Section 3.2.4 of the FDOT's Drainage Manual[11] Volume 2A. This qualifies the project for a Level 2 Evaluation. The proposed structures will perform hydraulically in a manner equal to or greater than the existing structures, and backwater surface elevations are not expected to increase. As a result, there will be no significant adverse impacts on natural and beneficial floodplain values; there will be no significant change in flood risk; and there will be no significant change in the potential for interruption or termination of emergency service or emergency evacuation routes. Therefore, it has been determined that this encroachment is considered minimal.

9.15 UTILITY IMPACTS

A Utility Assessment Package[12] was prepared as part of this PD&E Study. The type, location, and ownership of existing and proposed utilities, along with cost estimates for relocation of the existing utilities within the project corridor, are summarized in this report. Depending on the location and depth of the utilities, implementation of the recommended improvements for the project may require adjustment of some of these facilities. Costs for utility adjustments are not included in the total estimated project costs presented in Section 9.7, since they will be incurred by the utility owners. However, they are considered in the selection of the Recommended Alternative.

9.16 TRAFFIC CONTROL PLAN

US 19 provides access to numerous residences and businesses along this corridor. Due to its importance, US 19 should remain functional throughout the duration of the construction activities. The existing number of travel lanes should be maintained to the maximum extent possible. Lane closures, if necessary, should occur during off-peak hours.

The following conceptual construction sequence will help maintain traffic operations along US 19:

- Relocate existing utilities within the ROW.
- Construct stormwater facilities.
- Construct temporary pavement as necessary to maintain existing two-way traffic.
- Construct either the northbound or southbound lanes (sidewalks, curb and gutter, travel lanes) while maintaining existing two-way traffic on a combination of the existing pavement and newly constructed or temporary pavement.
- Temporarily operate two-way traffic on the completed northbound or southbound lanes while constructing the remaining travel lanes.
- Shift northbound and southbound traffic to their respective, completed roadways.

9.17 RESULTS OF PUBLIC INVOLVEMENT PROGRAM

A Public Involvement Program (PIP) was approved for this Study on July 31, 2001. The purpose of the program was to outline the various mechanisms and opportunities the Department was implementing to inform and solicit responses from interested parties, including local residents, public officials and agencies, and business owners. The program included an Advanced Notification (AN) Package; presentations to the Crystal River City Council; an informational kiosk at the Crystal River Scarecrow Festival; an Alternatives Public Workshop, and a Public Hearing. Several presentations were given to the Crystal River City Council. The FDOT did not receive any requests for presentations to small groups such as homeowners associations and chambers of commerce. The results of the program are summarized in the Final Comments and Coordination Report[13].

9.17.1 Advance Notification

An AN Package was prepared in accordance with Part 1, Chapter 2 of the FDOT PD&E Manual and was transmitted to the Florida State Clearinghouse in the Governor's Office

of Planning and Budgeting on June 25, 2001. While several agencies responded with no comments, the following had comments: Withlacoochee Regional Planning Council (WRPC), FDEP, Florida Department of Community Affairs, and the Seminole Nation of Oklahoma.

Generally, the comments indicated either no anticipated impacts, consistency with applicable requirements, a request that protective measures be used, or a request for further coordination as the project progressed. The AN package and the entirety of the comments and corresponding responses are included in Appendix A of the Final Comments and Coordination Report.

9.17.2 Public Official/Agency Kick-off Meeting

A Public Official /Agency Kick-off Meeting was held on August 22, 2001, from 10:00 a.m. to 12:00 noon at the Crystal River City Hall Meeting Room, 123 NW Highway 19, Crystal River, Florida. The purpose of the meeting was to introduce the project to local officials and agency representatives, and to solicit information regarding local issues and concerns. Information presented at the meeting included graphics depicting the project location map, and proposed project schedule. A brief project handout that discussed the proposed improvements, and provided a comment sheet that could be submitted at the meeting or by mail, was also included in the information presented. A copy of the notification letters and meetings materials may be found in Appendix B of the Final Comments and Coordination Report.

9.17.3 Newsletters/Presentations

The FDOT has issued two newsletters to elected officials, agencies, and property owners within 300 ft of the centerline of proposed alternatives. The first was mailed in December 2002 and while introductory in nature, it also announced the upcoming Alternative Public Workshop to be held in January 2003. Specifically, it acquainted the public with the PD&E process, project description, the proposed alternatives, and

upcoming activities. The newsletter also included a comment sheet for people to mail in their comments and concerns regarding the proposed improvements. The second newsletter, issued in October 2003, announced the Public Hearing and outlined the Recommended Alternative for each segment. Finally, a newsletter will be mailed upon project approval from the FHWA and will explain the final conceptual design for the proposed improvements and include an upcoming project schedule for design, ROW, and construction activities.

The FDOT met with the City Manager for Crystal River, Ken Lilly, and his staff on July 23, 2002 to discuss the proposed improvements. The FDOT gave presentations to the Crystal River City Council on March 10, 2003 and May 27, 2003. The first presentation on March 10th outlined the viable alternatives for Segments 4 and 5. For Segment 5, a new alternative was also presented that consisted of a reduced typical section and ROW width. This alternative received support from the City and the FDOT was directed to conduct additional engineering and environmental analysis for refinement of that alternative. That alternative was subsequently refined as was the alternative for Segment 4. These were formally presented to the City as the Recommended Alternatives for these segments on May 27, 2003, and subsequently presented at the Public Hearing on November 3, 2003.

9.17.4 Alternatives Public Workshop

An Alternatives Public Workshop was held on January 16, 2003, from 4:30 p.m. to 7:30 p.m. at the National Guard Armory, 8551 West Venable Street, Crystal River, Florida. Elected Officials were notified by first class mail at least 25-30 days prior. Property owners within 300 ft of the centerline of any of the proposed alternatives were notified of the meeting by a newsletter sent first class mail. A quarter-page legal display ad was published in the Citrus County Chronicle on January 6, 2003.

The meeting was held in an informal setting during which the public could view a continuously looped project video, review the conceptual plans and project documents on display, or ask questions from FDOT representatives.

Approximately 201 people attended the Workshop. A total of 31 written comments resulted in 13 responses that clearly supported the need for improvements; 7 were opposed to the project; 5 were general in nature; 2 dealt with issues outside the project area; and 4 either requested to be added to the mailing list or wanted copies of the conceptual plans. Comments and issues noted include access management or median opening concerns, requests for resurfacing, impacts to businesses during construction, signage and signalization requests, protection of wildlife and wetlands, safety, drainage, stormwater runoff, requested bypasses for the communities of Homosassa and Crystal River, and funding schedule information.

Based upon public comment received from the Workshop, additional engineering and environmental analysis, and input from the City of Crystal River, a Recommended Alternative was developed. This alternative was presented at the Public Hearing on November 3, 2003. A copy of the material presented at the Workshop, all notification materials, and comments received and corresponding responses, may be found in Appendix C of the Final Comments and Coordination Report.

9.17.5 Public Hearing

A Public Hearing was held on November 3, 2003, from 4:30 p.m. to 7:30 p.m. at the National Guard Armory, located at 8551 West Venable Street, Crystal River, Florida. The purpose of the Public Hearing was to present the Recommended Alternative and its associated impacts and to receive community input on the information presented. The "No Build" Alternative was also presented and is considered to be a viable alternative throughout the duration of the Study. Elected officials and agencies were notified of the meeting at least 25-30 days prior. Per Florida Statute and the FDOT's PD&E Manual, property owners whose property lies in whole or part within 300 ft from the centerline of

any of the proposed alternatives were notified by first class mail 21 days in advance. The Hearing was advertised in the Florida Administrative Weekly on October 17, 2003, and in the Citrus County Chronicle on October 13, 2003 and again October 25, 2003.

The Hearing was also held in accordance with Department Rule 14.97.005, F.A.C., Review and Modification of Access Classifications. The Access Management reclassification was for US 19 in Crystal River from West Fort Island Trail (CR 44) to NW 7th Avenue to Access Class 3. This reclassification was also consistent with the US 19 Access Management Study from the Hernando County Line to Mayo Drive prepared for Citrus County.

The meeting consisted of an informal session and a formal session. The informal session began at 4:30 p.m. and lasted until 6:00 p.m. During that time, the public could view a continuously looped project video, view the conceptual plans and project documents on display, speak to the court reporter in a one-on-one setting, and ask questions from FDOT representatives. Project handouts, a copy of the Evaluation Matrix, a Comment Form, and Request to Speak Cards were available to all attendees. At 6:00 p.m. the formal portion of the Hearing commenced. At that time, the FDOT gave a formal presentation regarding the project and its associated effects. The project video was also shown during this time. An opportunity to provide formal public comment followed the project video. No one gave an oral statement during the formal portion. A court reporter transcribed the entire formal portion. Following the formal portion of the Hearing, the informal portion resumed until 7:30 p.m.

Conceptual alignments and project reports were available for public viewing prior to and after the Hearing beginning October 13, 2003 through November 13, 2003, at the Coastal Region Library, 8619 West Crystal Street, Crystal River, Florida. As stated previously, information brochures/handouts, along the with the Evaluation Matrix and a Comment Form, were offered to attendees at the Public Hearing. A copy of these materials, as well as all notification materials, may be found in Appendix D of the Final Comments and Coordination Report.

Approximately 60 people attended the Public Hearing. No one spoke during the formal portion of the Hearing; two individuals gave their statements to the court reporter during the informal portion following the formal presentation. A total of eleven written comments were received at the Public Hearing; five were mailed to the FDOT within the ten day comment period. One of the comments received in the mail was from an individual who gave a statement to the court reporter during the informal portion of the Hearing. Many of the comments received addressed several issues. Four comments requested copies of the conceptual plans; three comments expressed total support of the project – one of those with particular respect to the proposed pedestrian overpass in Segment 5; five comments expressed concern regarding the stormwater runoff; one comment requested that the FDOT look at provisions for U-turns for semis; one comment (a possible relocatee) opposed the Recommended Alternative in Segment 5; one comment requested the provision of wildlife crossings; one comment expressed disappointment with the lack of bicycle access to businesses in Segment 5; and finally, one comment did not support the project because of the provision for pedestrians and bicyclists – that provision was viewed as detrimental due to a perceived increase in litter. A copy of the Official Public Hearing Transcript may be found in Appendix E of the Final Comments and Coordination Report.

9.18 VALUE ENGINEERING

This project was reviewed by a Value Engineering (VE) team formed by FDOT staff. The review was performed from April 2003 to May 2003. As a result of the review, a Value Engineering Study[14] was prepared as part of this PD&E Study. Two recommendations from the VE team were incorporated into the Recommended Alternative, with an estimated savings of up to $7.1 million. The recommendations include resurfacing and re-striping Segment 4 in lieu of widening (savings of $3.5 to $6 million) and utilizing the Crystal River bike path and local streets for bicycle accommodations instead of providing bike lanes in Segment 5 (savings of $1.1 million).

9.19 DRAINAGE

A Final LHR[15] has been prepared as part of this PD&E Study. This report summarizes the existing drainage conditions within the US 19 project limits. The FDOT Brooksville Maintenance Yard was contacted concerning the condition of the existing drainage systems within the project corridor. They indicated there are records of flooding south of Cardinal Lane and in the City of Crystal River, north of SR 44. A drainage investigation revealed the cause of flooding south of Cardinal Lane was due to blockage of an outfall ditch. The flooding in the City of Crystal River occurs during storm surges. There were no reported problems with roadway overtopping, however, some areas experience flooding of the entire outside traffic lanes.

The proposed improvements will include filling in the existing roadside ditches and construction of a closed drainage system for the urban typical sections. The urban typical sections will utilize adequately sized stormwater management facilities to collect and treat the runoff.

9.20 STRUCTURES

There are no existing or proposed roadway bridges or bridge culverts within the limits of this study for US 19. However, there are two pedestrian overpasses that are proposed along US 19. The first overpass traverses US 19 south of US 98, connecting bicyclists traveling from the Suncoast Parkway Trail via US 98 to the multi-use path along the west side of US 19. The second overpass serves as a connection for the existing Crystal River bike path located on both sides of US 19 in downtown Crystal River.

9.21 SPECIAL FEATURES (NOISE BARRIERS, RETAINING WALLS, UNDERDRAINS, ETC.)

Noise barriers were determined to not be a feasible and cost reasonable abatement measure for the 33 residences and 2 outdoor recreation areas (congregational area for the

Sugarmill Manor and Bicentennial Park) with predicted noise levels that approach or exceed the NAC.

9.22 ACCESS MANAGEMENT

In order to meet access management criteria as shown in Tables 5-2 and 6-1, an Access Management Plan was developed for the proposed improvements. The Access Management Plan incorporated the recommendations put forward as part of the US 19 Access Management Study from Hernando County Line to Mayo Drive,[16] prepared as a separate study for Citrus County, and comments received from the FDOT Access Review Committee. The current access management classification for US 19 from the Hernando County line to West Fort Island Trail (CR 44) and from NW 7th Avenue in Crystal River to the Levy County line is Class 3. From West Fort Island Trail (CR 44) to SR 44/NE 4th Street, the current access management classification is Class 6. US 19 from SR 44/ NE 4th Street to NW 7th Avenue is classified as Access Class 4. A public hearing was held on November 3, 2003 for reclassification of the section of US 19 from West Fort Island Trail (CR 44) to NW 7th Avenue to Access Class 3.

US 19 currently has no restrictive median separation from West Yulee Drive (CR 490) to West Elkhorn Drive and from West Fort Island Trail (CR 44) to the Crystal River Mall. However, a restrictive raised median is proposed for these sections of US 19 with the Recommended Alternative. The recommended median openings and signal locations and spacing for US 19 are shown in Table 6-13. The proposed spacing substantially meets access management criteria in most cases. However, there are areas where certain existing signals or median openings are necessary to maintain reasonable access. All Build Alternatives considered in this study involved median modification to substantially comply with the current standards.

9.23 AESTHETICS AND LANDSCAPING

There have been no provisions or commitments made regarding special aesthetic features or landscaping for this section of the US 19 corridor.

9.24 CONSTRUCTION PHASING

In order to create manageable construction projects and set priorities for funding and construction phasing, the overall project was divided into smaller design and construction projects. Each of the six study segments was evaluated based on the need for improvement. Factors such as future AADT, existing and no-build operating conditions, safety ratios, and project cost were used in the evaluation process. The recommended construction phasing is shown in Table 9-1. Note that Segment 3 was divided into two projects to create manageable project sizes.

Table 9-1
Recommended Construction Phasing

Priority	Construction Phase	Length (miles)	Total Cost(1) (million $)
1	Segment 2 West Green Acres Street to West Jump Court	2.07	$38.88
2	Segment 4 West Fort Island Trail (CR 44) to NE 1st Terrace	0.86	$1.97
3	Segment 5 NE 1st Terrace to Turkey Oak Drive	2.05	$41.17
4	Segment 3B Highland Street (STA 594+00) to West Fort Island Trail (CR 44)	2.28	$23.90
5	Segment 3A West Jump Court to Highland Street (STA 594+00)	2.37	$22.64
6	Segment 6 CR 488 Intersection Improvements and Signal Upgrades	N/A	$1.30
7	Segment 1 South of US 98 to West Green Acres Street	4.86	$34.31

(1) Total Cost includes ROW, Construction, Engineering Design, and CEI. ROW includes roadway and estimated stormwater management facilities.

9.25 REFERENCES

1. Final Traffic Report: Volume 2 - Future Conditions; From South of US 98 to CR 488; PBS&J; Tampa, Florida; March 2004.

2. Citrus County Comprehensive Plan 1995-2020; Citrus County Department of Development Services; Lecanto, Florida, with revisions through December 14, 1999, Amended November 18, 2003.

3. City of Crystal River Comprehensive Plan; Crystal River, Florida; adopted March 1998, Amended March 31, 2003.

4. Final Cultural Resource Assessment Survey; ACI; Tampa, Florida; March 2004.

5. National Register of Historic Places; Division of Archive, History and Records Management; Tallahassee, Florida; 1972.

6. Wetland Evaluation Report; PBS&J; Tampa, Florida; March 2004.

7. Threatened and Endangered Species Evaluation; PBS&J; Tampa, Florida; March 2004.

8. Final Contamination Screening Evaluation Report; PSI; Tampa, Florida; March 2004.

9. Final Noise Study Report; PBS&J; Tampa, Florida; March 2004.

10. Final Air Quality Report; PBS&J; Tampa, Florida; March 2004.

11. Drainage Manual; Florida Department of Transportation, Office of Design, Drainage Section; Tallahassee, Florida; October 2000.

12. Utility Assessment Package; Florida Department of Transportation, Utility Office; Tampa, Florida; February 19, 2003.

13. Final Comments and Coordination Report; PBS&J; Tampa, Florida; March 2004.

14. Value Engineering Study; Florida Department of Transportation; Tampa, Florida; May 2003.

15. Final Location Hydraulics Report; PBS&J; Tampa, Florida; March 2004.

16. US 19 Access Management Study from Hernando County Line to Mayo Drive; Dyer, Riddle, Mills & Precourt, Inc.; June 2002.

APPENDICES

Appendix A: Geopak Output
Appendix B: Correspondence
Appendix C: Alternative Design Concept Plans

Appendix A

Geopak Output

==========
G E O P A K

Project: US19
Subject: [None]
Job No. 019 Operator: RD
Date: Monday February 11, 2002 2:16 pm
SYSTEM FIX 2 ASEC 2 BEAR PRI 0 RED NE STA 2 FILE: 'NEWBL'

* 2 des cha newbl

Chain NEWBL contains:
201 204 92 CUR 8 998 CUR 10 1504 CUR 11 CUR 12 CUR 13 CUR 14 1517 CUR 15 1520
C-
UR 6 CUR 7 616

Beginning chain NEWBL description
==========

Point 201 N 1,594,876.09 E 478,967.74 Sta 102+00.00

Course from 201 to 204 N 0^ 07' 43.51" W Dist 1,418.29

Point 204 N 1,596,294.37 E 478,964.55 Sta 116+18.28

Course from 204 to 92 N 0^ 08' 25.51" W Dist 10,611.56

Point 92 N 1,606,905.90 E 478,938.55 Sta 222+29.85

Course from 92 to PC 8 N 0^ 07' 38.44" W Dist 7,721.71

Curve Data

Curve 8					
P.I. Station	311+37.90	N	1,615,813.93	E	478,918.75
Delta =	44^ 59' 16.38" (LT)				
Degree =	1^ 59' 59.65"				
Tangent =	1,186.34				
Length =	2,249.50				
Radius =	2,864.93				
External =	235.91				
Long Chord =	2,192.16				
Mid. Ord. =	217.96				
P.C. Station	299+51.56	N	1,614,627.60	E	478,921.39
P.T. Station	322+01.07	N	1,616,651.11	E	478,078.20
C.C.		N	1,614,621.23	E	476,056.46
Back = N	0^ 07' 38.44" W				
Ahead = N	45^ 06' 54.83" W				
Chord Bear = N	22^ 37' 16.64" W				

Course from PT 8 to 998 N 45^ 06' 54.83" W Dist 4,848.90

Point 998 N 1,620,072.90 E 474,642.62 Sta 370+49.96

Course from 998 to PC 10 N 45^ 08' 14.67" W Dist 3,863.36

Curve Data

Curve 10					
P.I. Station	413+88.11	N	1,623,133.06	E	471,567.74

```
Delta       =      45^ 00' 39.43" (RT)
Degree      =       5^ 00' 00.00"
Tangent     =              474.78
Length      =              900.22
Radius      =           1,145.92
External    =               94.46
Long Chord  =              877.25
Mid. Ord.   =               87.27
P.C.  Station          409+13.32  N       1,622,798.15  E         471,904.27
P.T.  Station          418+13.54  N       1,623,607.84  E         471,566.69
C.C.                              N       1,623,610.37  E         472,712.61
Back        = N  45^ 08' 14.68" W
Ahead       = N   0^ 07' 35.25" W
Chord Bear  = N  22^ 37' 54.96" W

Course from PT 10 to 1504  N 0^ 07' 35.24" W         Dist 1,755.03

                                                              End   Region 1
Equation: Sta 435+68.57 (BK) = Sta 425+73.19 (AH)             ---------------
                                                              Begin Region 2

Point 1504     N        1,625,362.87  E          471,562.82  Sta     425+73.19

Course from 1504 to PC 11  N 0^ 07' 35.24" W         Dist 3,339.23

                                  Curve Data
                                 *----------*
Curve 11
P.I.  Station          466+32.28  N       1,629,421.95  E         471,553.86
Delta       =      14^ 19' 20.11" (LT)
Degree      =       1^ 00' 00.00"
Tangent     =              719.87
Length      =           1,432.23
Radius      =           5,729.58
External    =              45.04
Long Chord  =           1,428.50
Mid. Ord.   =              44.69
P.C.  Station          459+12.41  N       1,628,702.08  E         471,555.45
P.T.  Station          473+44.64  N       1,630,119.04  E         471,374.25
C.C.                              N       1,628,689.44  E         465,825.88
Back        = N   0^ 07' 35.24" W
Ahead       = N  14^ 26' 55.35" W
Chord Bear  = N   7^ 17' 15.30" W

Course from PT 11 to PC 12  N 14^ 26' 55.37" W        Dist 2,063.79

                                  Curve Data
                                 *----------*
Curve 12
P.I.  Station          501+28.80  N       1,632,815.15  E         470,679.56
Delta       =      14^ 19' 56.33" (RT)
Degree      =       1^ 00' 00.00"
Tangent     =              720.38
Length      =           1,433.23
Radius      =           5,729.58
External    =              45.11
Long Chord  =           1,429.50
Mid. Ord.   =              44.76
P.C.  Station          494+08.43  N       1,632,117.56  E         470,859.30
P.T.  Station          508+41.66  N       1,633,535.52  E         470,678.10
C.C.                              N       1,633,547.16  E         476,407.66
```

Back = N 14^ 26' 55.38" W
Ahead = N 0^ 06' 59.04" W
Chord Bear = N 7^ 16' 57.21" W

Course from PT 12 to PC 13 N 0^ 06' 59.05" W Dist 16,920.27

Curve Data

Curve 13

P.I. Station	687+12.02	N	1,651,405.85	E	470,641.79
Delta =	18^ 49' 49.75"	(LT)			
Degree =	1^ 00' 00.00"				
Tangent =	950.09				
Length =	1,883.05				
Radius =	5,729.58				
External =	78.24				
Long Chord =	1,874.59				
Mid. Ord. =	77.18				
P.C. Station	677+61.93	N	1,650,455.76	E	470,643.72
P.T. Station	696+44.98	N	1,652,304.47	E	470,333.30
C.C.		N	1,650,444.12	E	464,914.15

Back = N 0^ 06' 59.05" W
Ahead = N 18^ 56' 48.80" W
Chord Bear = N 9^ 31' 53.92" W

Course from PT 13 to PC 14 N 18^ 56' 48.80" W Dist 2,880.31

Curve Data

Curve 14

P.I. Station	734+35.02	N	1,655,889.16	E	469,102.71
Delta =	18^ 02' 38.16"	(RT)			
Degree =	1^ 00' 00.00"				
Tangent =	909.73				
Length =	1,804.39				
Radius =	5,729.58				
External =	71.77				
Long Chord =	1,796.95				
Mid. Ord. =	70.88				
P.C. Station	725+25.29	N	1,655,028.72	E	469,398.09
P.T. Station	743+29.69	N	1,656,798.78	E	469,088.37
C.C.		N	1,656,889.07	E	474,817.24

Back = N 18^ 56' 48.79" W
Ahead = N 0^ 54' 10.64" W
Chord Bear = N 9^ 55' 29.72" W

Course from PT 14 to 1517 N 0^ 54' 10.66" W Dist 321.34

Equation: Sta 746+51.03 (BK) = Sta 9+86.12 (AH)

End Region 2

Begin Region 3

Point 1517 N 1,657,120.08 E 469,083.31 Sta 9+86.12

Course from 1517 to PC 15 N 0^ 54' 10.64" W Dist 1,319.04

Curve Data

Curve 15

P.I. Station	42+01.94	N	1,660,335.50	E	469,032.63
Delta =	89^ 36' 23.07"	(LT)			

```
Degree      =       3^ 00' 00.00"
Tangent     =            1,896.78
Length      =            2,986.88
Radius      =            1,909.86
External    =              781.86
Long Chord  =            2,691.66
Mid. Ord.   =              554.75
P.C.  Station            23+05.16  N       1,658,438.95  E         469,062.52
P.T.  Station            52+92.04  N       1,660,318.64  E         467,135.92
C.C.                               N       1,658,408.86  E         467,152.90
Back        = N   0^ 54' 10.65" W
Ahead       = S  89^ 29' 26.28" W
Chord Bear  = N  45^ 42' 22.18" W

Course from PT 15 to 1520  S 89^ 29' 26.28" W        Dist 0.00

                                                              End   Region 3
Equation: Sta 52+92.04 (BK) = Sta 799+52.35 (AH)              ---------------
                                                              Begin Region 4

Point 1520     N        1,660,318.64  E          467,135.92  Sta     799+52.35

Course from 1520 to PC 6  S 89^ 29' 26.28" W        Dist 1,319.65

                                  Curve Data
                                 *----------*
Curve 6
P.I.  Station             830+28.49  N       1,660,291.29  E         464,059.91
Delta       =       67^ 10' 58.13" (RT)
Degree      =        2^ 09' 59.53"
Tangent     =            1,756.48
Length      =            3,100.93
Radius      =            2,644.58
External    =              530.17
Long Chord  =            2,926.32
Mid. Ord.   =              441.63
P.C.  Station            812+72.00  N       1,660,306.91  E         465,816.32
P.T.  Station            843+72.93  N       1,661,904.21  E         463,364.39
C.C.                               N       1,662,951.38  E         465,792.81
Back        = S  89^ 29' 26.28" W
Ahead       = N  23^ 19' 35.58" W
Chord Bear  = N  56^ 55' 04.65" W

Course from PT 6 to PC 7  N 23^ 19' 35.58" W        Dist 26,699.76

                                  Curve Data
                                 *----------*
Curve 7
P.I.  Station            1121+09.86  N       1,687,374.00  E         452,381.37
Delta       =        6^ 54' 21.77" (LT)
Degree      =        0^ 20' 00.00"
Tangent     =            1,037.17
Length      =            2,071.82
Radius      =           17,188.80
External    =               31.26
Long Chord  =            2,070.57
Mid. Ord.   =               31.21
P.C.  Station            1110+72.69  N       1,686,421.61  E         452,792.06
P.T.  Station            1131+44.51  N       1,688,270.10  E         451,859.15
C.C.                               N       1,679,615.34  E         437,008.22
Back        = N  23^ 19' 35.58" W
```

Ahead = N 30^ 13' 57.35" W
Chord Bear = N 26^ 46' 46.47" W

Course from PT 7 to 616 N 30^ 13' 57.35" W Dist 1,527.75

Point 616 N 1,689,590.06 E 451,089.91 Sta 1146+72.26

==========

Ending chain NEWBL description

Appendix B

Correspondence

DIVISIONS OF FLORIDA DEPARTMENT OF STATE
Office of the Secretary
Office of International Relations
Division of Elections
Division of Corporations
Division of Cultural Affairs
Division of Historical Resources
Division of Library and Information Services
Division of Licensing
Division of Administrative Services

MEMBER OF THE FLORIDA CABINET
State Board of Education
Trustees of the Internal Improvement Trust Fund
Administration Commission
Florida Land and Water Adjudicatory Commission
Siting Board
Division of Bond Finance
Department of Revenue
Department of Law Enforcement
Department of Highway Safety and Motor Vehicles
Department of Veterans' Affairs

FLORIDA DEPARTMENT OF STATE
Katherine Harris
Secretary of State
DIVISION OF HISTORICAL RESOURCES

Mr. James E. St. John
U.S. Department of Transportation
Federal Highway Administration, Florida Division
227 N. Bronough Street, Suite 2015
Tallahassee, Florida 32301

June 4, 2002

Re: DHR No. 2002-05354 / Date Received by DHR: May 30, 2002
Federal-aid Project No.1852 007 P / Financial Management No. 405822-1
Final Cultural Resource Assessment Survey, Project Development and Environment Study, US 19 (SR 55) from South of US 98 to CR 488, Citrus County, Florida
(Archaeological Consultants, Inc. and PBS&J 2002)

Dear Mr. St. John:

Our office has received and reviewed the above referenced project in accordance with Section 106 of the *National Historic Preservation Act of 1966* (Public Law 89-665), as amended in 1992, and *36 C.F.R., Part 800: Protection of Historic Properties*. The State Historic Preservation Officer is to advise and assist federal agencies when identifying historic properties listed or eligible for listing in the *National Register of Historic Places*, assessing effects upon them, and considering alternatives to avoid or minimize adverse effects.

Results of the survey indicate that two previously unrecorded archaeological sites (8CI1091, 8CI1110), four previously recorded archaeological sites (8CI133, 8CI139, 8CI140, 8CI158), and one archaeological occurrence were identified. In addition, seventeen previously unrecorded historic structures (8CI1092 - 8CI1108), seven previously recorded historic structures (8CI400, 8CI401, 8CI458, 8CI495, 8CI460, 8CI461, 8CI487), one previously recorded historic cemetery (8CI938) were identified. Archaeological occurrences are categorically ineligible for listing in the *National Register of Historic Places*, and none of the archaeological sites identified during this survey are considered eligible for listing in the *National Register* due to their limited artifact assemblages and lack of substantive research potential. Newly recorded historic structures 8CI1092 – 8CI1108 and previously recorded structures 8CI400, 8CI401, 8CI458, 8CI495, 8CI460, and 8CI461 are considered ineligible for listing in the *National Register* as they lack distinguishing architectural features and are not associated with events or persons significant in the past. Similarly, cemetery 8CI938 is not considered eligible for listing in the *National Register* due to the absence of unique attributes and lack of significant historical association. Based on the information provided, this office concurs with these determinations and finds the submitted report complete and sufficient.

Historic structure 8CI487, the Old Jail/Pump House of Crystal River, is a Spanish Revival style building that has been considered potentially eligible for listing in the *National Register* within the context of community planning and development. Although the interior of 8CI487 has been

500 S. Bronough Street • Tallahassee, FL 32399-0250 • http://www.flheritage.com

☐ Director's Office (850) 245-6300 • FAX: 245-6435
☐ Archaeological Research (850) 245-6444 • FAX: 245-6436
☒ Historic Preservation (850) 245-6333 • FAX: 245-6437
☐ Historical Museums (850) 245-6400 • FAX: 245-6433
☐ Palm Beach Regional Office (561) 279-1475 • FAX: 279-1476
☐ St. Augustine Regional Office (904) 825-5045 • FAX: 825-5044
☐ Tampa Regional Office (813) 272-3843 • FAX: 272-2340

altered, the pump system this structure is associated with remains intact and functions as a backup water system for the city. Until this structure is compared with similar properties to demonstrate that better-preserved examples of 1920s Spanish Revival Pump/Jail Houses exist, it will remain the opinion of this office that we have insufficient information to determine whether 8CI487 is eligible for listing in the *National Register*. However, it is also the opinion of this office that the location of 8CI487 and the presence of vegetative cover are such to ensure that the proposed project will have no adverse effect on this resource. Upon the condition that proposed storm water retention/mitigation areas will be surveyed to identify and evaluate any cultural resources present, it is the opinion of this office that the proposed US 19 improvements will have no adverse effect on any historic properties listed, or eligible for listing, in the *National Register*.

If you have any questions concerning our comments, please contact Mary Beth Fitts, Historic Sites Specialist, at mbfitts@mail.dos.state.fl.us or (850) 245-6333. Your interest in protecting Florida's historic properties is appreciated.

Sincerely,

Laura A. Kammerer

for Janet Snyder Matthews, Ph.D., Director, and
State Historic Preservation Officer

Xc: Mr. C. L. Irwin, FDOT – CEMO
Mr. Jerry Comellas, FDOT – District 7 EMO

WQIE CHECKLIST

Project Name: US 19 PD&E Study from south of US 98 to CR 488

County: Citrus County

Financial Project Number: 405822 1

Federal Aid Project No: 1852 007 P

Short project description: PD&E Study limits encompasses the portion of US 19 from south of US 98 (milepost 1.730) to North Dunnellon Road (CR 488) (milepost 20.742) in Citrus County, a distance of approximately 18.8 miles (mi.). Improvements considered as part of this PD&E Study include widening US 19 from a 4-, 5-, and 7-lane roadway to a 6-lane divided roadway along the majority of the corridor which will improve capacity, meet level of service (LOS) standards, and improve safety. The roadway is currently and will remain a controlled access facility. However, the level of access control will be improved in Homosassa and Crystal River to incorporate a raised restricted median where none exists today. All signalized intersections along with CR 488 will be improved.

PART 1: DETERMINATION OF WQIE SCOPE

Does project increase impermeable surface area? ☒ Yes ☐ No

Does project alter the drainage system? ☐ Yes ☒ No

If the answer to both questions is no, complete the WQIE by checking Box A in Part 4.

Do environmental regulatory requirements apply? ☒ Yes ☐ No

If no, proceed to part 4 and check Box B.

PART 2: PROJECT CHARACTERISTICS

20-year design ADT: 15,100 – 45,200 vpd Expected speed limit: 45 - 55 mph

Drainage area: 459.08 Acres 52.65 % Impervious 47.35 % Pervious

Land Use: 27 % Residential 44 % Commercial 2 % Industrial

2 % Agricultural 3 % Wetlands 22 % Other (City)

Potential large sources of pollution (identify): N/A

Groundwater receptor (name of aquifer or N/A): Surficial Aquafer

Designated well head protection area: ☐ Yes ☒ No Name: _____

Sole source aquifer: ☐ Yes ☒ No Name: _____

Groundwater recharge mechanism: Recharge to the surficial aquifer will be neglible. Any recharge will be filtered by local soils. No Karst conditions exist in the project area.

(Notify District Drainage Engineer if karst conditions expected)

Surface water receptor (name or N/A): Kings Bay, Crystal River, Halls River, Homosassa River & Chassahowitzka River.

Classification: ☐ I ☐ II ☒ III ☐ IV ☐ V

Special designation (check all that apply):

☐ ONRW ☒ OFW ☐ Aquatic Preserve ☐ Wild & Scenic River

☐ Special Water ☐ SWIM Area ☐ Local Comp Plan ☐ MS4 Area

☐ Other (specify): _____

Conceptual storm water conveyances (check all that apply):

☒ Swales ☒ Curb and Gutter ☐ Scuppers ☒ Pipe ☐ French Drains

☒ Retention/Detention Ponds ☐ Other (specify): _____

PART 3: ENVIRONMENTAL REGULATORY REQUIREMENTS

Regulatory Agency (check all that apply)	Reference citation for regulatory criteria **(attach copy of pertinent pages)**	Most stringent criteria (check all that apply and describe below)
USEPA ☒	NPDES	☐
FDEP ☒	Dredge & Fill	☐
WMD (Specify) ☒	SWFWMD	☒
OTHER (Specify) ☒	Crystal River Stormwater Program	☐

PART 4: WQIE DOCUMENTATION

A. ☐ Water quality is not an issue.

B. ☐ No regulatory requirements apply to water quality issues.
(Document by checking the "none" box for water quality in Section 6.C.3 of the Environmental Determination Form or Section5.C.3 of the SEIR.)

C. ☒ Regulatory requirements apply to water quality issues. Water quality issues will be mitigated through compliance with the quantity design requirements placed by SWFWMD, an authorized regulatory agency.
(Document by checking the "none" box for water quality in Section 6.C.3 of the Environmental Determination Form or Section5.C.3 of the SEIR.)

Evaluator Name (print):
WENDY G. LASHER

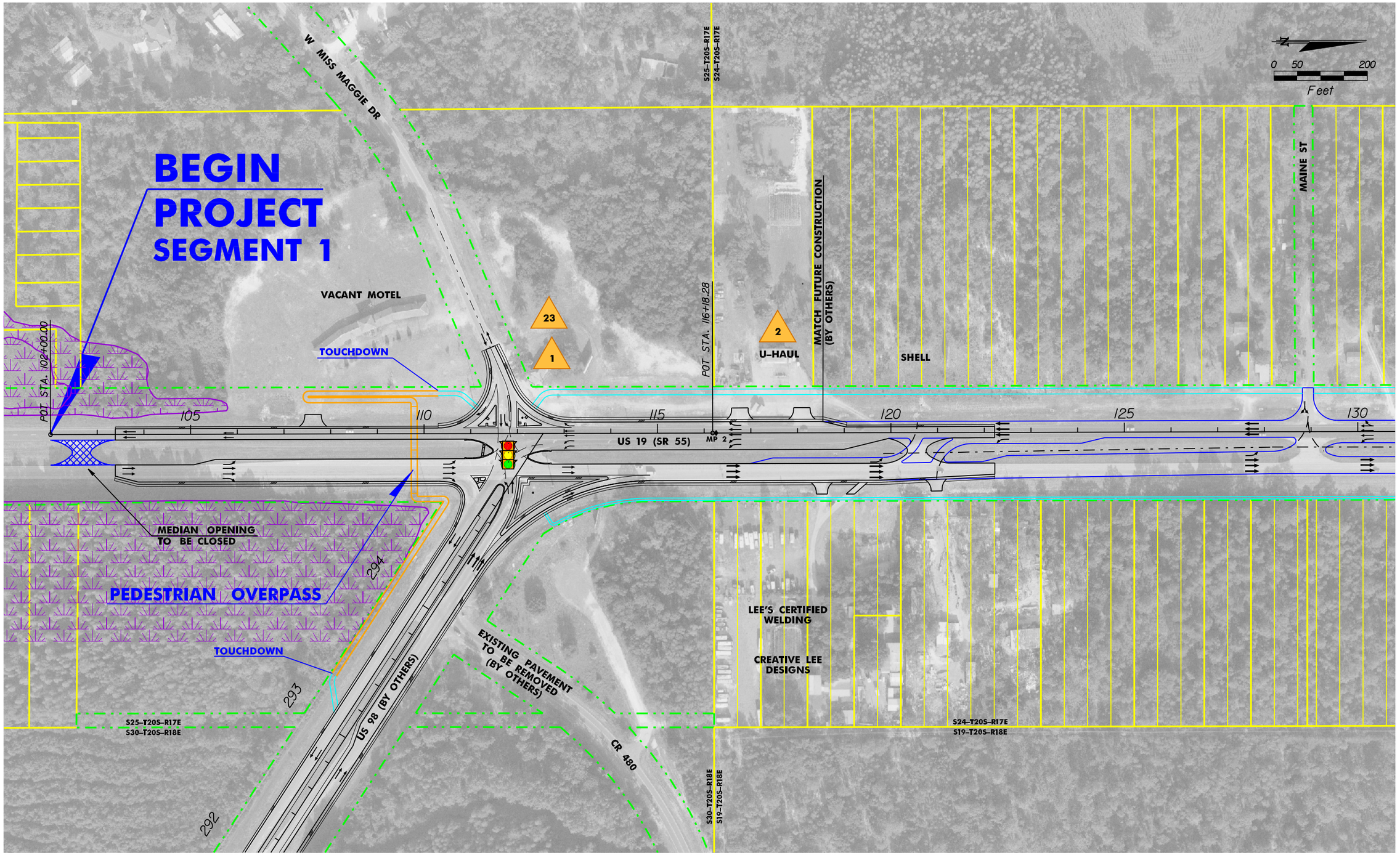
Office:
PBS&J 5300 W. CYPRESS ST., STE. 300 TAMPA, FL 33607

Signature: Wendy G. Lasher Date: 5-21-03

Appendix C

Recommended Alternative Concept Plans

FLIGHT DATE : JUNE 11, 2001



SEGMENT 1 RECOMMENDED ALTERNATIVE

EXISTING RIGHT OF WAY OR EASEMENT
PROPERTY LINES
120 / MP 3 BASELINE SURVEY MILEPOST
CENTERLINE OF CONSTRUCTION
PROPOSED PAVEMENT / CURB
POTENTIAL CONTAMINATION SITE (X)
PROPOSED RIGHT OF WAY
BRIDGE STRUCTURE OR RETAINING WALL
PROPOSED SIDEWALK OR MULTI-USE PATH
WETLANDS WITHIN STUDY AREA
B R NP BUSINESS / RESIDENTIAL / NON-PROFIT ORGANIZATION RELOCATION

PBSJ
5300 W. Cypress St.
Suite 300
Tampa, Fl. 33607
Phone: 813.282.7275
www.PBSJ.com

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 55	CITRUS	405822-1-22-01

US 19 (SR 55) PD&E STUDY
FROM SOUTH OF US 98 TO CR 488
CITRUS COUNTY, FLORIDA

SHEET NO. 1

19-MAR-2004 09:34
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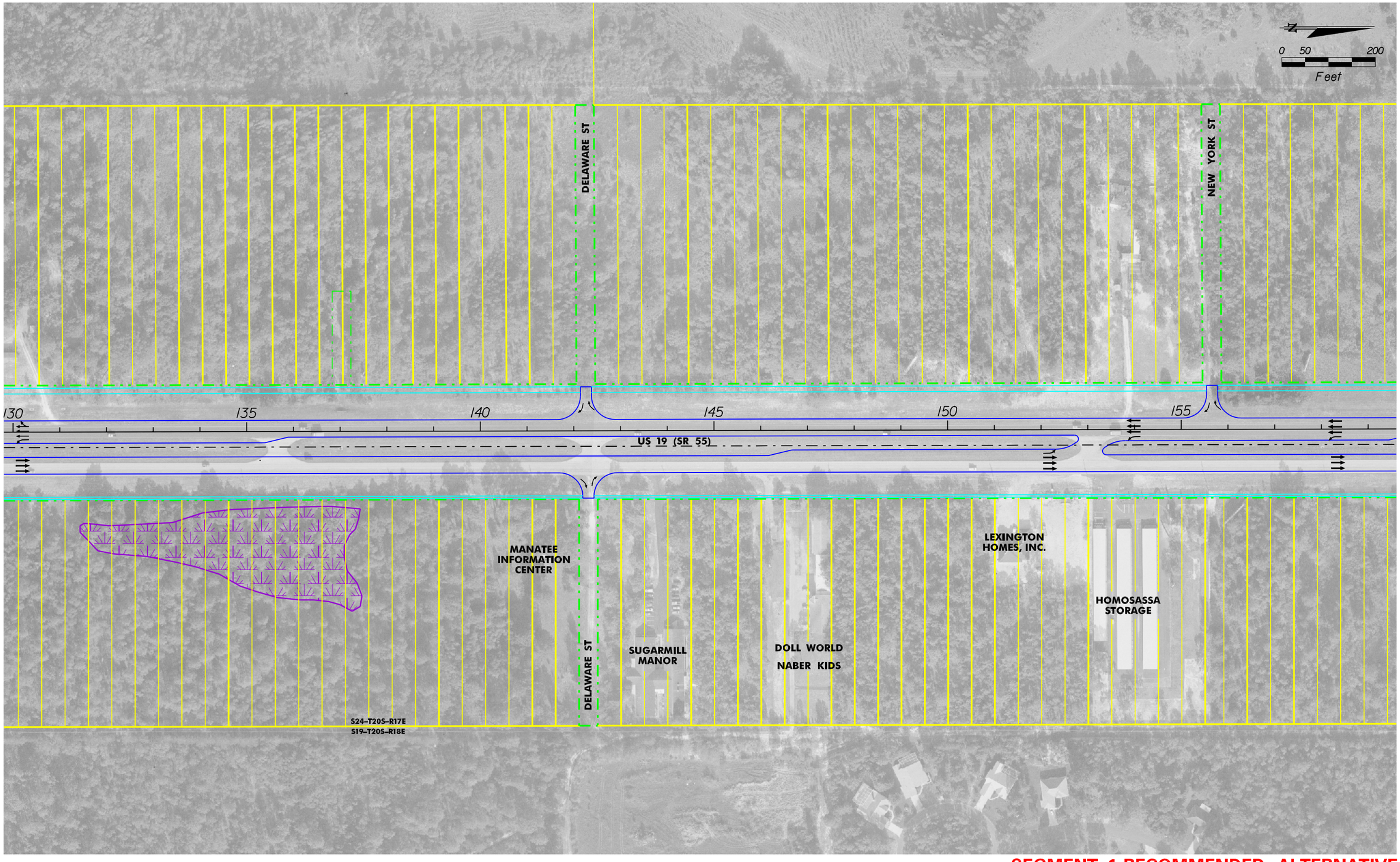
FLIGHT DATE : JUNE 11, 2001



SEGMENT 1 RECOMMENDED ALTERNATIVE

EXISTING RIGHT OF WAY OR EASEMENT
PROPERTY LINES
120 / MP 3 BASELINE SURVEY MILEPOST
CENTERLINE OF CONSTRUCTION
PROPOSED PAVEMENT / CURB
POTENTIAL CONTAMINATION SITE (X)
PROPOSED RIGHT OF WAY
BRIDGE STRUCTURE OR RETAINING WALL
PROPOSED SIDEWALK OR MULTI-USE PATH
WETLANDS WITHIN STUDY AREA
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PBS&J
5300 W. Cypress St.
Suite 300
Tampa, Fl. 33607
Phone: 813.282.7275
www.PBSJ.com

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

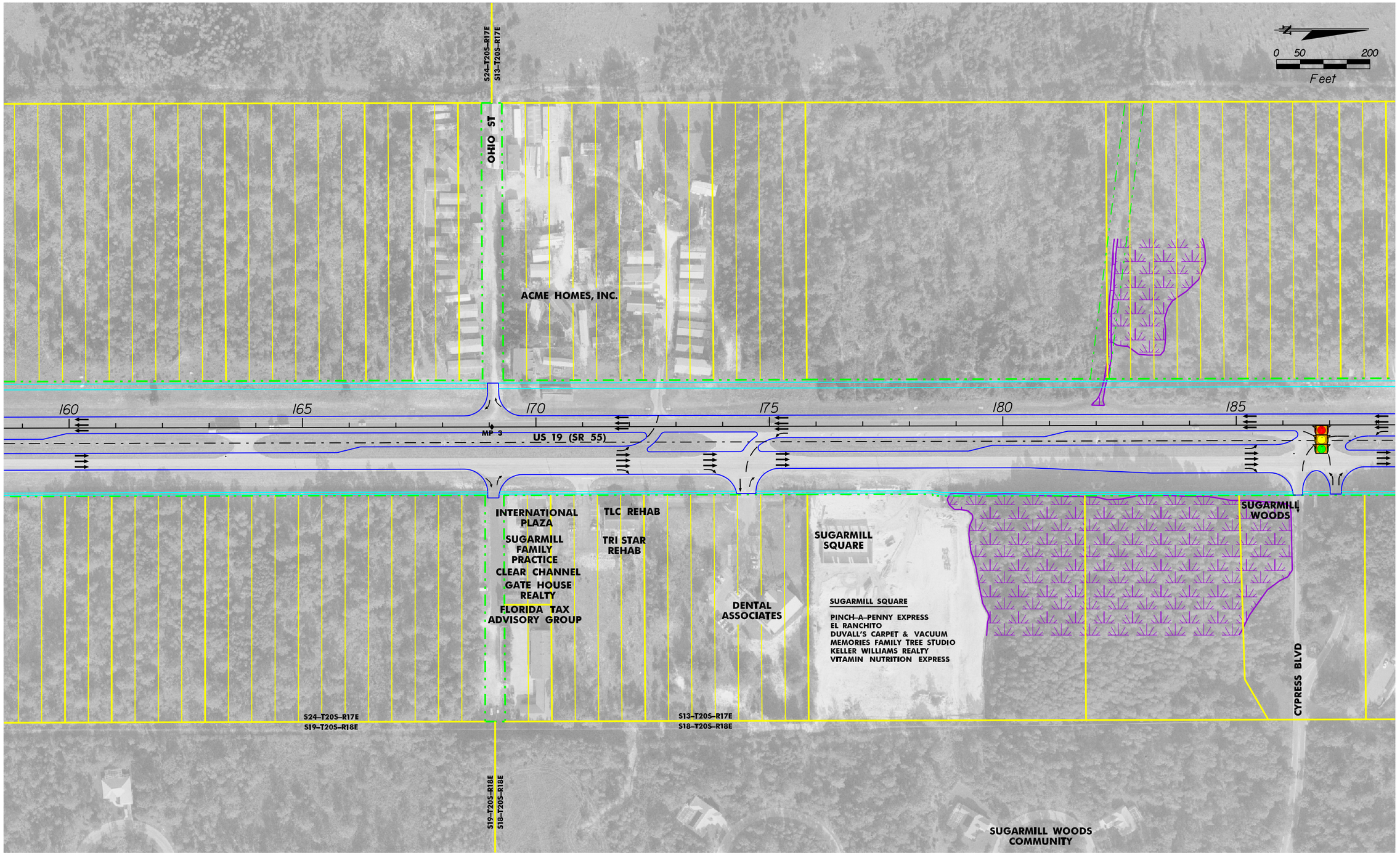
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 55	CITRUS	405822-1-22-01

US 19 (SR 55) PD&E STUDY
FROM SOUTH OF US 98 TO CR 488
CITRUS COUNTY, FLORIDA

SHEET NO. 2

19-MAR-2004 09:35
Q:\US-19_Citrus\PlanSheets\Recommended\plan02.dgn

FLIGHT DATE : JUNE 11, 2001



SEGMENT 1 RECOMMENDED ALTERNATIVE

EXISTING RIGHT OF WAY OR EASEMENT
PROPERTY LINES
120 / MP 3 BASELINE SURVEY MILEPOST
CENTERLINE OF CONSTRUCTION
PROPOSED PAVEMENT / CURB
POTENTIAL CONTAMINATION SITE
PROPOSED RIGHT OF WAY
BRIDGE STRUCTURE OR RETAINING WALL
PROPOSED SIDEWALK OR MULTI-USE PATH
WETLANDS WITHIN STUDY AREA
B R NP BUSINESS / RESIDENTIAL / NON-PROFIT ORGANIZATION RELOCATION

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ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 55	CITRUS	405822-1-22-01

US 19 (SR 55) PD&E STUDY FROM SOUTH OF US 98 TO CR 488 CITRUS COUNTY, FLORIDA

SHEET NO. 3

FLIGHT DATE : JUNE 11, 2001

SEGMENT 1 RECOMMENDED ALTERNATIVE

EXISTING RIGHT OF WAY OR EASEMENT
PROPERTY LINES
120 / MP 3 BASELINE SURVEY MILEPOST
CENTERLINE OF CONSTRUCTION
PROPOSED PAVEMENT / CURB
POTENTIAL CONTAMINATION SITE
PROPOSED RIGHT OF WAY
BRIDGE STRUCTURE OR RETAINING WALL
PROPOSED SIDEWALK OR MULTI-USE PATH
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ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 55	CITRUS	405822-1-22-01

US 19 (SR 55) PD&E STUDY FROM SOUTH OF US 98 TO CR 488 CITRUS COUNTY, FLORIDA

SHEET NO. 4

19-MAR-2004 09:36
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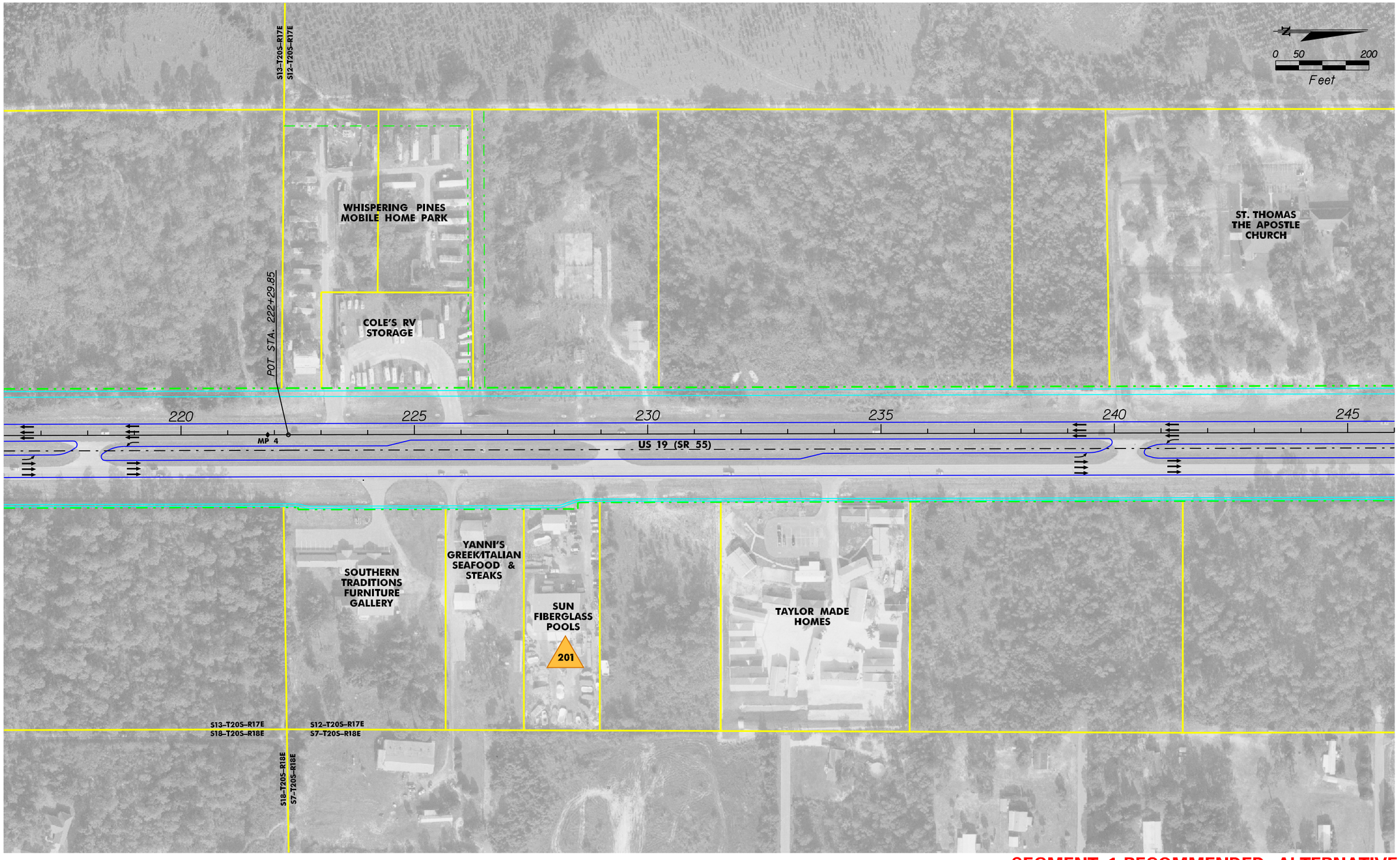
FLIGHT DATE : JUNE 11, 2001



SEGMENT 1 RECOMMENDED ALTERNATIVE

EXISTING RIGHT OF WAY OR EASEMENT
PROPERTY LINES
120 / MP 3 BASELINE SURVEY MILEPOST
CENTERLINE OF CONSTRUCTION
PROPOSED PAVEMENT / CURB
POTENTIAL CONTAMINATION SITE
PROPOSED RIGHT OF WAY
BRIDGE STRUCTURE OR RETAINING WALL
PROPOSED SIDEWALK OR MULTI-USE PATH
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ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 55	CITRUS	405822-1-22-01

US 19 (SR 55) PD&E STUDY FROM SOUTH OF US 98 TO CR 488 CITRUS COUNTY, FLORIDA

SHEET NO. 5

19-MAP-2004 09:36
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FLIGHT DATE : JUNE 11, 2001

SEGMENT 1 RECOMMENDED ALTERNATIVE

EXISTING RIGHT OF WAY OR EASEMENT
PROPERTY LINES
120 MP 3 BASELINE SURVEY MILEPOST
CENTERLINE OF CONSTRUCTION
PROPOSED PAVEMENT / CURB
X POTENTIAL CONTAMINATION SITE
PROPOSED RIGHT OF WAY
BRIDGE STRUCTURE OR RETAINING WALL
PROPOSED SIDEWALK OR MULTI-USE PATH
WETLANDS WITHIN STUDY AREA
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ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 55	CITRUS	405822-1-22-01

US 19 (SR 55) PD&E STUDY FROM SOUTH OF US 98 TO CR 488 CITRUS COUNTY, FLORIDA

SHEET NO. 6

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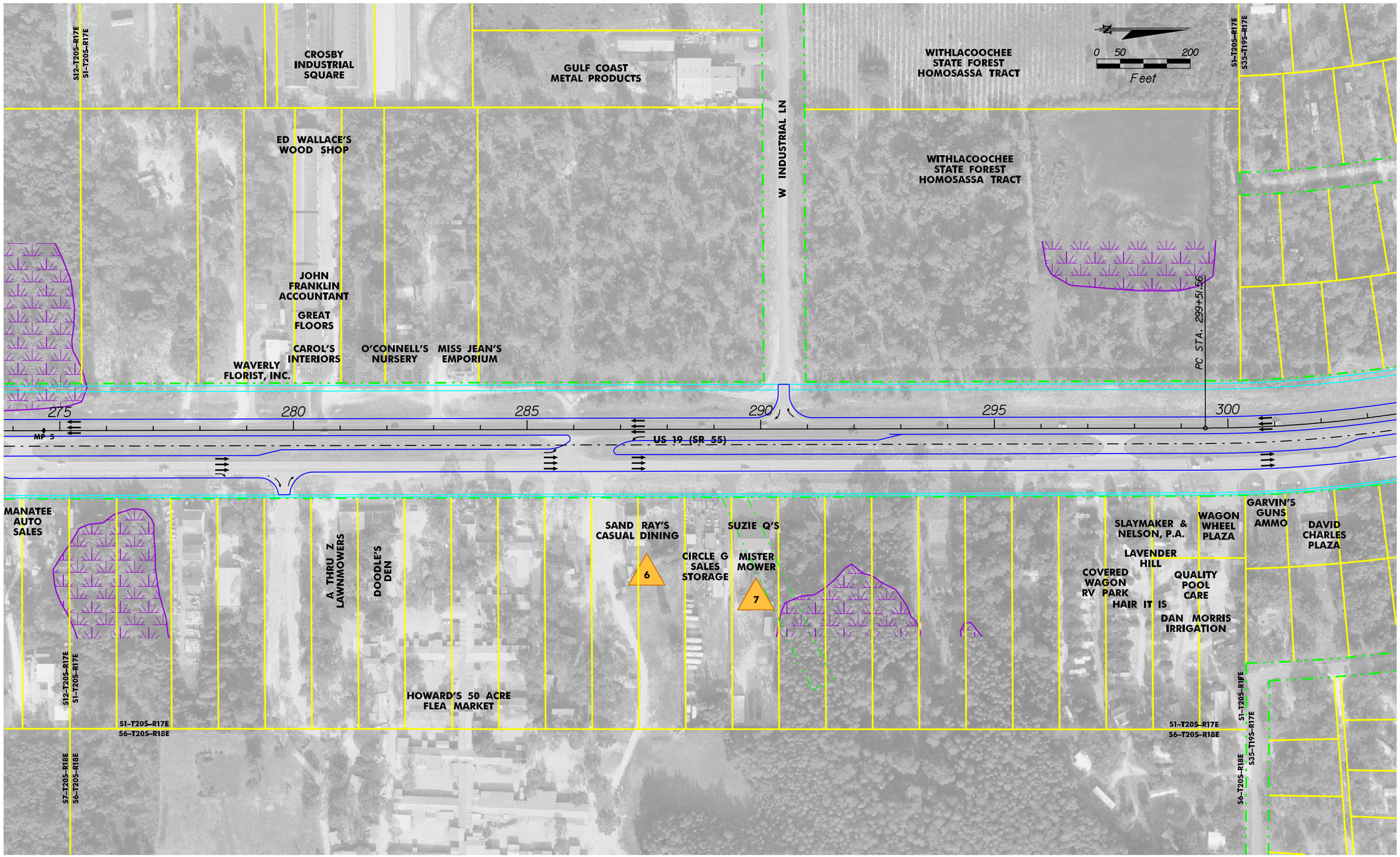

SEGMENT 1 RECOMMENDED ALTERNATIVE

EXISTING RIGHT OF WAY OR EASEMENT
PROPERTY LINES
120 MP 3 BASELINE SURVEY MILEPOST
CENTERLINE OF CONSTRUCTION
PROPOSED PAVEMENT / CURB
X POTENTIAL CONTAMINATION SITE
PROPOSED RIGHT OF WAY
BRIDGE STRUCTURE OR RETAINING WALL
PROPOSED SIDEWALK OR MULTI-USE PATH
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SR 55	CITRUS	405822-1-22-01

US 19 (SR 55) PD&E STUDY
FROM SOUTH OF US 98 TO CR 488
CITRUS COUNTY, FLORIDA

SHEET NO. 7

19-MAR-2004, 09:37
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FLIGHT DATE : JUNE 11, 2001

SERVOS SQUARE BLDG 1
CITRUS CARPET & TILE
BOULEVARD FLORIST
BASS REAL ESTATE
COSTPETOLOGY GROOMING
J.P.'S LOCKS & KEYS
JUST CUTS
COMPUTERS
VERTICAL BLINDS
ALTERATIONS & CONSIGNMENT

SERVOS SQUARE BLDG 2
NATIONWIDE INS.
NEVADA UNION
COMMUNITY MANAGEMENT ASSOCIATES
CANADA DRUGS
SUBURBAN PROPANE
MAXINE'S
VERTICAL BLINDS
SUGARMILL RESTAURANT

OAK RIDGE CENTER
CURVES
INSURANCE DEN
ASSOCIATED REALTY
CAROL'S QUALITY GROOMING
MAGIC TOUCH TANNING & MASSAGE
KATHI'S HAIR AFFAIR
DISCOUNT CARDS
MIKE'S PUB

SUNNY DAYS PLAZA
AA GLASS
HOMOSASSA SPRINGS FLORIST
DENTIST
BEAUTY SALON
S.A.C. ENVIRO LAB
FAMILY HEADQUARTERS BARBER SHOP
LAUNDROMAT
DISCOUNT BEVERAGE
H&D MAIN APPLIANCES
SUNNY DAYS DELI
CRYSTAL CRAFTS
CHRISTIAN CHIROPRACTIC CENTER
SPORTS CARDS & GAMING
JENKINS HEARING AIDS
WARREN'S BOOKS

0 50 200 Feet

S BLUE RIDGE TER
S OAKRIDGE DR
S PALACE PATH
W CYPRIAN CT
BLDG 1
SERVOS SQUARE BLDG 2
OAK RIDGE CENTER
HOMOSASSA TIRE
SUNNY DAYS PLAZA
COASTAL
SUNCOAST BAPTIST CHURCH
AMERICAN HOMES
12
14

330 335 340 345 350 355
MP 6
US 19 (SR 55)

PACK -N- POST
W VILLAGE DR
SUFFOLK TER
11 CITGO
13 MINI WAREHOUSE
RAZOR'S EDGE AUTO SALES
HOMOSASSA PRINTING
VASCIMINI WOODWORKING
W VILLAGE DR
S MANATEE TER
S SUFFOLK TER
S KNOBHILL TER

SEGMENT 1 RECOMMENDED ALTERNATIVE

EXISTING RIGHT OF WAY OR EASEMENT
PROPERTY LINES
120 BASELINE SURVEY
MP 3 MILEPOST
CENTERLINE OF CONSTRUCTION
PROPOSED PAVEMENT / CURB
X POTENTIAL CONTAMINATION SITE
PROPOSED RIGHT OF WAY
BRIDGE STRUCTURE OR RETAINING WALL
PROPOSED SIDEWALK OR MULTI-USE PATH
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ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 55	CITRUS	405822-1-22-01

US 19 (SR 55) PD&E STUDY FROM SOUTH OF US 98 TO CR 488 CITRUS COUNTY, FLORIDA

SHEET NO. 9

19-MAR-2004 09:38
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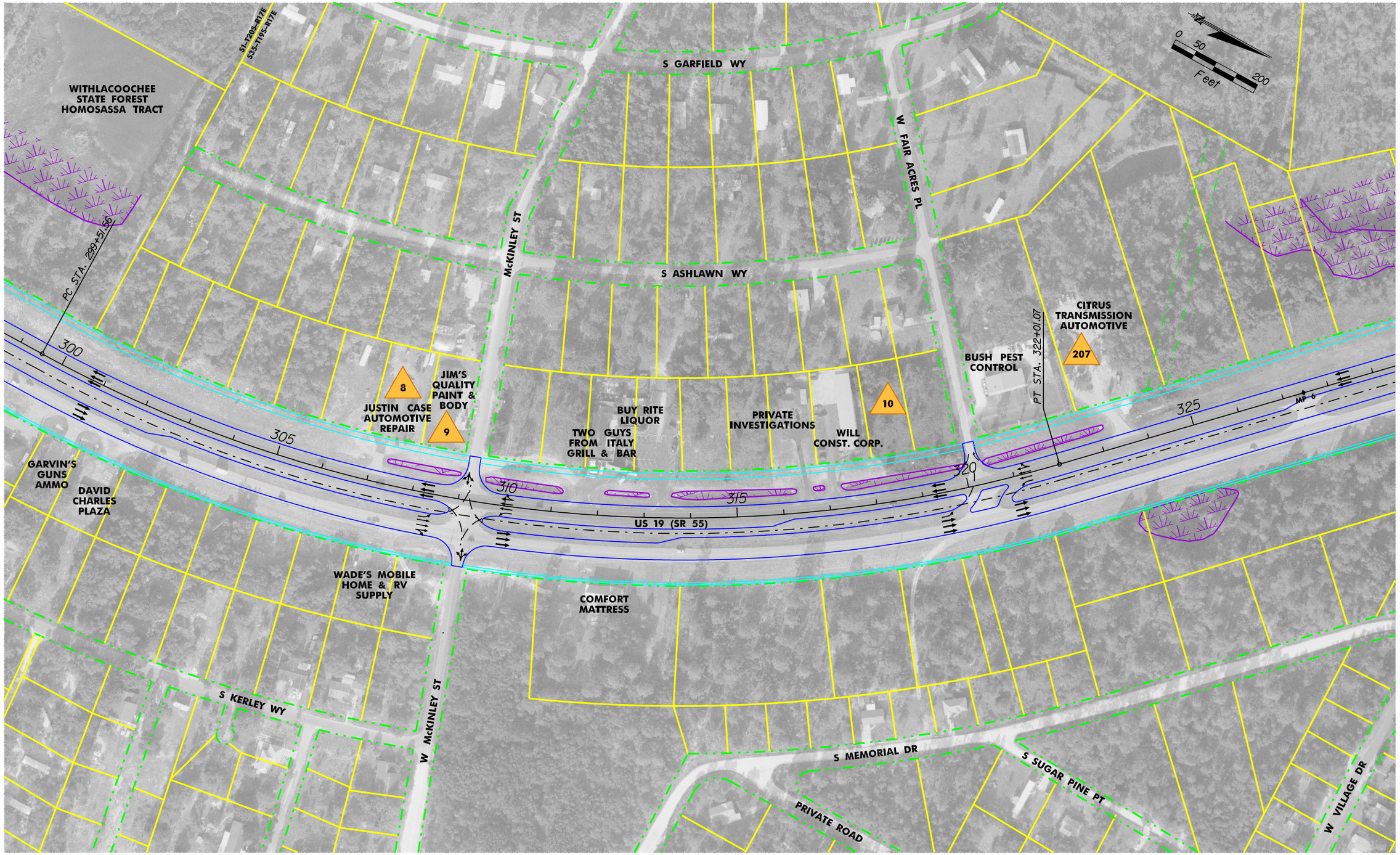
FLIGHT DATE : JUNE 11, 2001



SEGMENT 1 RECOMMENDED ALTERNATIVE

EXISTING RIGHT OF WAY OR EASEMENT
PROPERTY LINES
120 BASELINE SURVEY
MP 3 MILEPOST
CENTERLINE OF CONSTRUCTION
PROPOSED PAVEMENT / CURB
X POTENTIAL CONTAMINATION SITE
PROPOSED RIGHT OF WAY
BRIDGE STRUCTURE OR RETAINING WALL
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SR 55	CITRUS	405822-1-22-01

US 19 (SR 55) PD&E STUDY
FROM SOUTH OF US 98 TO CR 488
CITRUS COUNTY, FLORIDA

SHEET NO. 8

19-MAR-2004 09:37
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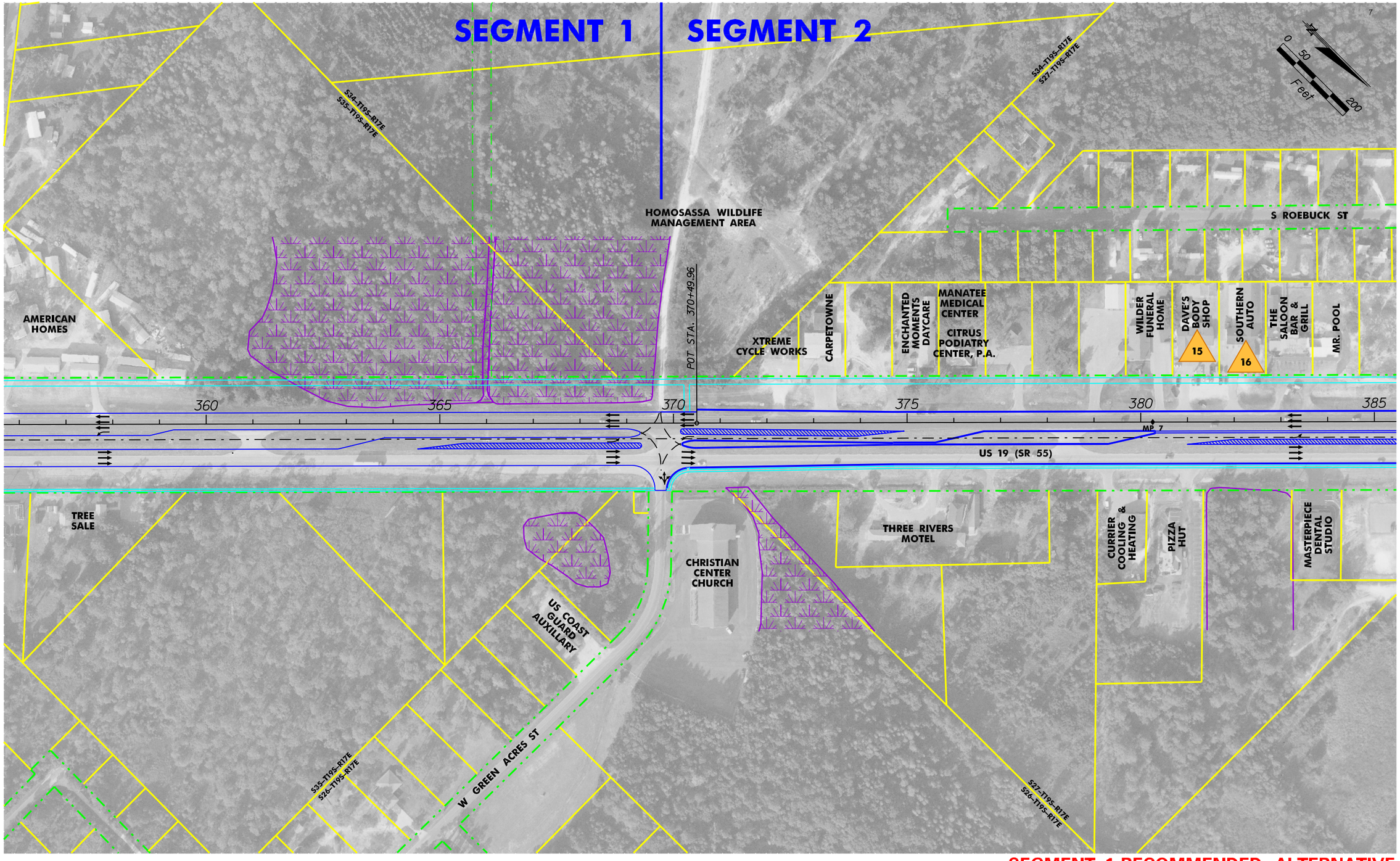
FLIGHT DATE : JUNE 11, 2001



SEGMENT 1 RECOMMENDED ALTERNATIVE

EXISTING RIGHT OF WAY OR EASEMENT
PROPERTY LINES
120 MP 3 BASELINE SURVEY MILEPOST
CENTERLINE OF CONSTRUCTION
PROPOSED PAVEMENT / CURB
POTENTIAL CONTAMINATION SITE
PROPOSED RIGHT OF WAY
BRIDGE STRUCTURE OR RETAINING WALL
PROPOSED SIDEWALK OR MULTI-USE PATH
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US 19 (SR 55) PD&E STUDY
FROM SOUTH OF US 98 TO CR 488
CITRUS COUNTY, FLORIDA

SHEET NO. 10

19-MAR-2004 09:39
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FLIGHT DATE : JUNE 11, 2001

7

HOMOSASSA SQUARE

AMSOUTH BANK
WXCV 95.3, WGUL 106.3, WXOF 96.3
PAPA JOHN'S
EDWARD JONES & COMPANY
DOLLAR GENERAL
SUE'S HALLMARK
LUIGI'S PIZZA
VIDEO TYME TOO GAMES AND VIDEO
HAIR WORKS
KASH-N-KARRY
ALEXANDER'S FflorIST
HOSPICE THRIFT & GIFT SHOPPE
CHINA FIRST BUFFET

0 50 Feet 200

W BRADSHAW ST
S ROEBUCK ST
NEW COVENANT CHURCH
VACANT
SUNTRUST BANK
POST OFFICE
HOMOSASSA EYE CLINIC AND OPTICAL CENTER
HOMOSASSA SQUARE
18 TEXACO

385 390 395 400 405 410

US 19 (SR 55)

PC STA. 409+13.32

ADVANCE HOMESTEAD TITLE
REGIONS BANK
SPRINT 17
BANK OF AMERICA
STAGE STAND CEMETERY
HOMOSASSA SPRINGS GARDENS
MEDICAL CLINIC

SEGMENT 2 RECOMMENDED ALTERNATIVE

EXISTING RIGHT OF WAY OR EASEMENT
PROPERTY LINES
120 BASELINE SURVEY
MP 3 MILEPOST
CENTERLINE OF CONSTRUCTION
PROPOSED PAVEMENT / CURB
POTENTIAL CONTAMINATION SITE
PROPOSED RIGHT OF WAY
BRIDGE STRUCTURE OR RETAINING WALL
PROPOSED SIDEWALK OR MULTI-USE PATH
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US 19 (SR 55) PD&E STUDY
FROM SOUTH OF US 98 TO CR 488
CITRUS COUNTY, FLORIDA

SHEET NO. 11

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FLIGHT DATE : JUNE 11, 2001

SEGMENT 2 | SEGMENT 3

N

0 50 200
Feet

S22-T19S-R17E
S15-T19S-R17E

BELL VILLA MOBILE HOMES

BELL VILLA HOTEL

PC STA. 459+12.41

455 460 465 470 475 480

US 19 (SR 55)

MP 9

W JUMP CT

W TRADEWAYS CT

HOMOSASSA INDUSTRIAL PARK

VACANT

PT STA. 473+44.64

JIM'S CLUB 19

THE SHED STORE

GOLDEN EAGLE PLAZA

W IVY PL

W IVY PLACE

S CANADIAN WAY

COLONEL FROG'S TENNESSEE BAR-B-QUE

S STONE BROOK DR

S MICHIGAN BLVD

14TH ST

15TH ST

GOLDEN EAGLE PLAZA

BEAU GESTE BEAUTY SALON
AZ DISCOUNT BEVERAGES
CITRUS ONLINE
DSK GROUP, INC.
DR. BYTE'S COMPUTERS
HEALTH FOOD
PROPERTY MANAGEMENT
STIXX BILLIARDS
BARRIER FREE AMERICA
DOODLEBUG'S
NOIZY TOYZ
DININ' IN THE PAST

28
CITRUS OLDSMOBILE PONTIAC

SEGMENT 2 RECOMMENDED ALTERNATIVE

- EXISTING RIGHT OF WAY OR EASEMENT
- PROPERTY LINES
- 120 / MP 3 — BASELINE SURVEY MILEPOST
- CENTERLINE OF CONSTRUCTION
- PROPOSED PAVEMENT / CURB
- POTENTIAL CONTAMINATION SITE
- PROPOSED RIGHT OF WAY
- BRIDGE STRUCTURE OR RETAINING WALL
- PROPOSED SIDEWALK OR MULTI-USE PATH
- WETLANDS WITHIN STUDY AREA
- B R NP — BUSINESS / RESIDENTIAL / NON-PROFIT ORGANIZATION RELOCATION

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US 19 (SR 55) PD&E STUDY
FROM SOUTH OF US 98 TO CR 488
CITRUS COUNTY, FLORIDA

SHEET NO. 14

19-MAR-2004 09:42
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FLIGHT DATE : JUNE 11, 2001

SPRING'S PLAZA
TOUCH OF QUALITY CLEANERS
ECKERD
RADIO SHACK
OPTICAL OUTLET
PUBLIX
HUNGRY HOWIES
SOUL EXPRESSIONS
H&R BLOCK
NAILS ART
MOVIE GALLERY
BON WORTH
HAIR MASTERS
KIM'S CAFE
MR WANG
WICKS IN WAX CANDLE CO.
BEALLS OUTLET
TOBACCO DEPOT
SWEET GEORGIA BROWN

HOMOSASSA REGIONAL
WAL-MART
WINN DIXIE
DOLLAR TREE
SCHIANO PIZZA & ITALIAN RESTAURANT
NEW CHINA
FANTASTIC SAMS
HOLLYWOOD NAILS
SUNCOAST ANIMAL CLINIC
ADVANCE AMERICA
SUBWAY

0 50 200
Feet

22 24 25 26 27

W HOMOSASSA TRL

W ELKHORN DR

W FAUST LN

HARDEES
SHELL
STORMAN'S PRODUCE STAND
HOMOSASSA REGIONAL
McDONALD'S
KEY SHOP
DENTIST
ACHIEVEMENT CENTER
HEALTH FOODS
ACE HARDWARE/ KANE'S INDOOR PISTOL RANGE
HOMOSASSA MARINE
BELL VILLA MOBILE HOMES
BELL VILLA HOTEL

430 435 440 445 450 455
US 19 (SR 55)

ECKERD
STATE FARM LAND TITLE INSURANCE
BOARDWALK OFFICE SUITES
CAR WASH
PITTSBURGH AVE
TEXACO
NATIONWIDE REAL ESTATE
PSYCHIC READINGS
LA PETITE EMERAUDE
ENRICOS ITALIAN RISTORANTE
MOBILE HOME PARK
SCUDDER & SONS OUTFITTERS
AMERITAX
NEFFER'S BOWLING & BOSCO'S SPORTS BAR
HOMOSASSA SPRINGS CHAMBER OF COMMERCE
W GOSHAWK LN
HOMOSASSA MEDICAL CENTER
14TH ST

HOOPER FUNERAL HOME
W AQUADUCT ST
WARD EYE CENTER
W HOMOSASSA TRL
DEEM CABINETS
CR 490
ANTIQUES
W DESTINY LN
W ELKHORN DR
W FAUST LN
W GLENSTORM LN
S OHIO AVE
STORAGE

SEGMENT 2 RECOMMENDED ALTERNATIVE

EXISTING RIGHT OF WAY OR EASEMENT
PROPERTY LINES
120 MP 3 BASELINE SURVEY MILEPOST
CENTERLINE OF CONSTRUCTION
PROPOSED PAVEMENT / CURB
POTENTIAL CONTAMINATION SITE
PROPOSED RIGHT OF WAY
BRIDGE STRUCTURE OR RETAINING WALL
PROPOSED SIDEWALK OR MULTI-USE PATH
WETLANDS WITHIN STUDY AREA
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19-MAR-2004 09:41
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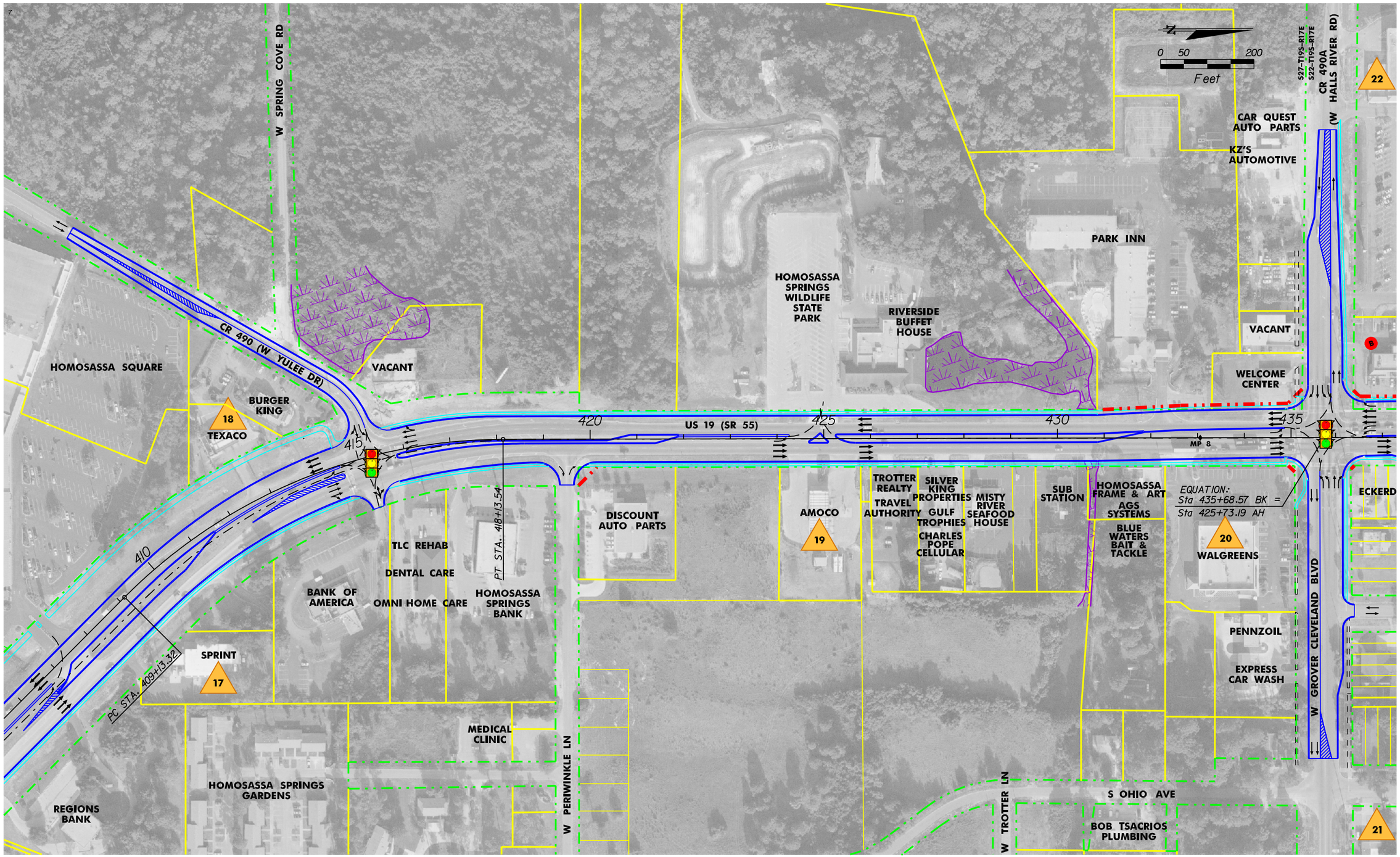
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 55	CITRUS	405822-1-22-01

US 19 (SR 55) PD&E STUDY
FROM SOUTH OF US 98 TO CR 488
CITRUS COUNTY, FLORIDA

SHEET NO. 13

FLIGHT DATE : JUNE 11, 2001



SEGMENT 2 RECOMMENDED ALTERNATIVE

EXISTING RIGHT OF WAY OR EASEMENT
PROPERTY LINES
120 / MP 3 BASELINE SURVEY MILEPOST
CENTERLINE OF CONSTRUCTION
PROPOSED PAVEMENT / CURB
POTENTIAL CONTAMINATION SITE
PROPOSED RIGHT OF WAY
BRIDGE STRUCTURE OR RETAINING WALL
PROPOSED SIDEWALK OR MULTI-USE PATH
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US 19 (SR 55) PD&E STUDY
FROM SOUTH OF US 98 TO CR 488
CITRUS COUNTY, FLORIDA

SHEET NO. 12

19-MAP-2004 09:41
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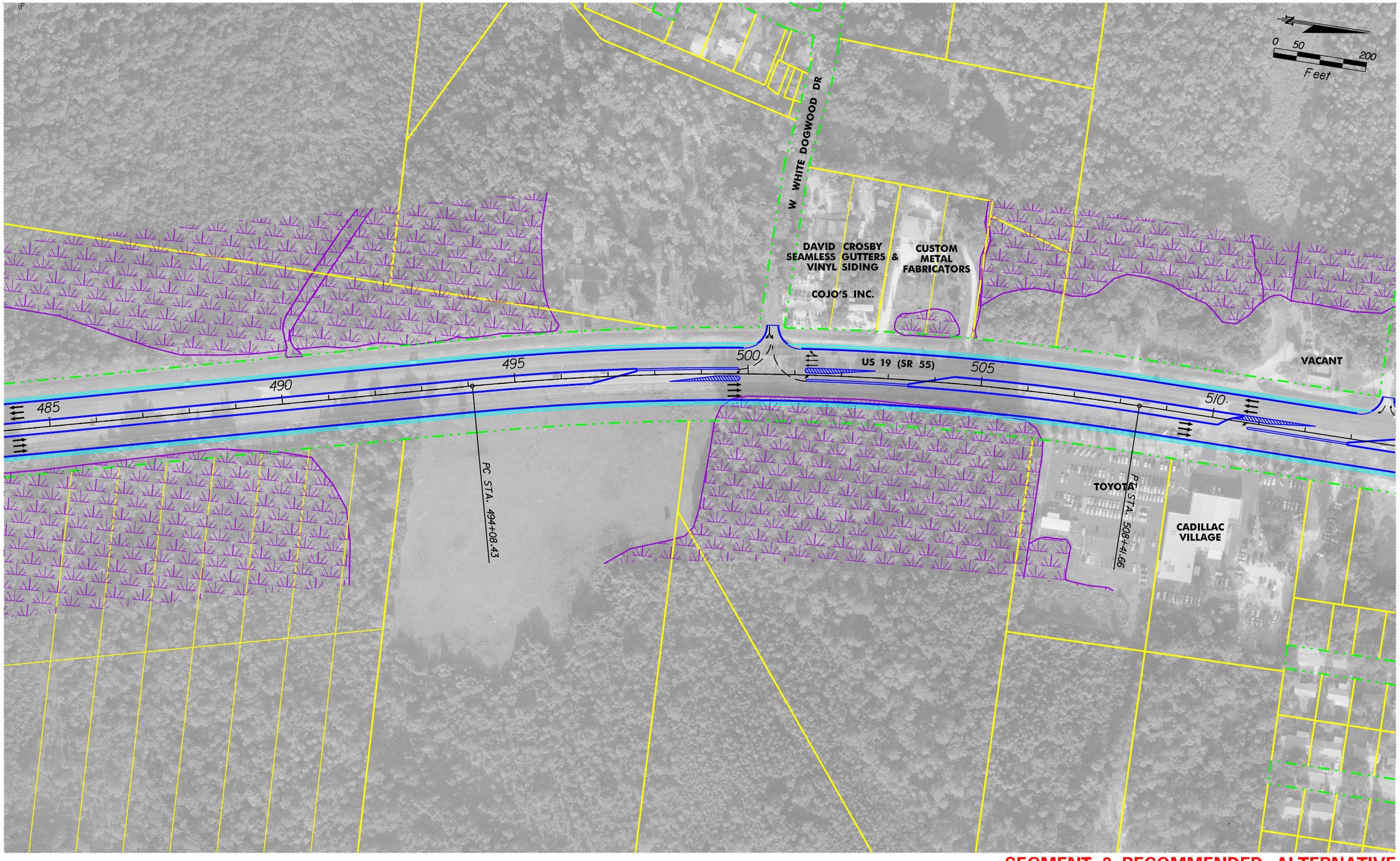
FLIGHT DATE : JUNE 11, 2001



SEGMENT 3 RECOMMENDED ALTERNATIVE

EXISTING RIGHT OF WAY OR EASEMENT
PROPERTY LINES
120 MP 3 BASELINE SURVEY MILEPOST
CENTERLINE OF CONSTRUCTION
PROPOSED PAVEMENT / CURB
POTENTIAL CONTAMINATION SITE
PROPOSED RIGHT OF WAY
BRIDGE STRUCTURE OR RETAINING WALL
PROPOSED SIDEWALK OR MULTI-USE PATH
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SR 55	CITRUS	405822-1-22-01

US 19 (SR 55) PD&E STUDY FROM SOUTH OF US 98 TO CR 488 CITRUS COUNTY, FLORIDA

SHEET NO. 15

19-MAR-2004 09:43
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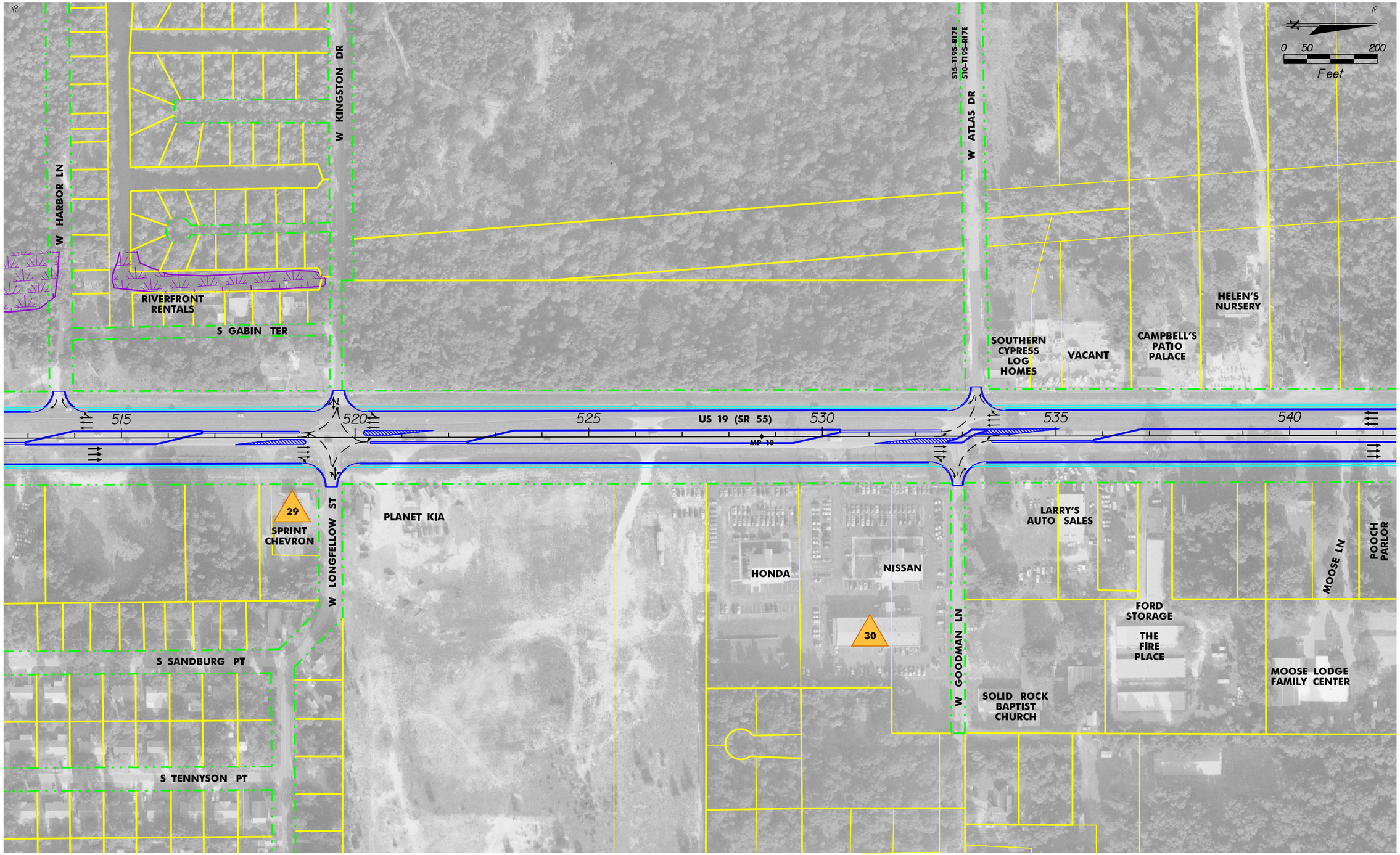
FLIGHT DATE : JUNE 11, 2001



SEGMENT 3 RECOMMENDED ALTERNATIVE

EXISTING RIGHT OF WAY OR EASEMENT
PROPERTY LINES
120 / MP 3 BASELINE SURVEY MILEPOST
CENTERLINE OF CONSTRUCTION
PROPOSED PAVEMENT / CURB
X POTENTIAL CONTAMINATION SITE
PROPOSED RIGHT OF WAY
BRIDGE STRUCTURE OR RETAINING WALL
PROPOSED SIDEWALK OR MULTI-USE PATH
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US 19 (SR 55) PD&E STUDY FROM SOUTH OF US 98 TO CR 488 CITRUS COUNTY, FLORIDA

SHEET NO. 16

19-MAR-2004 09:43
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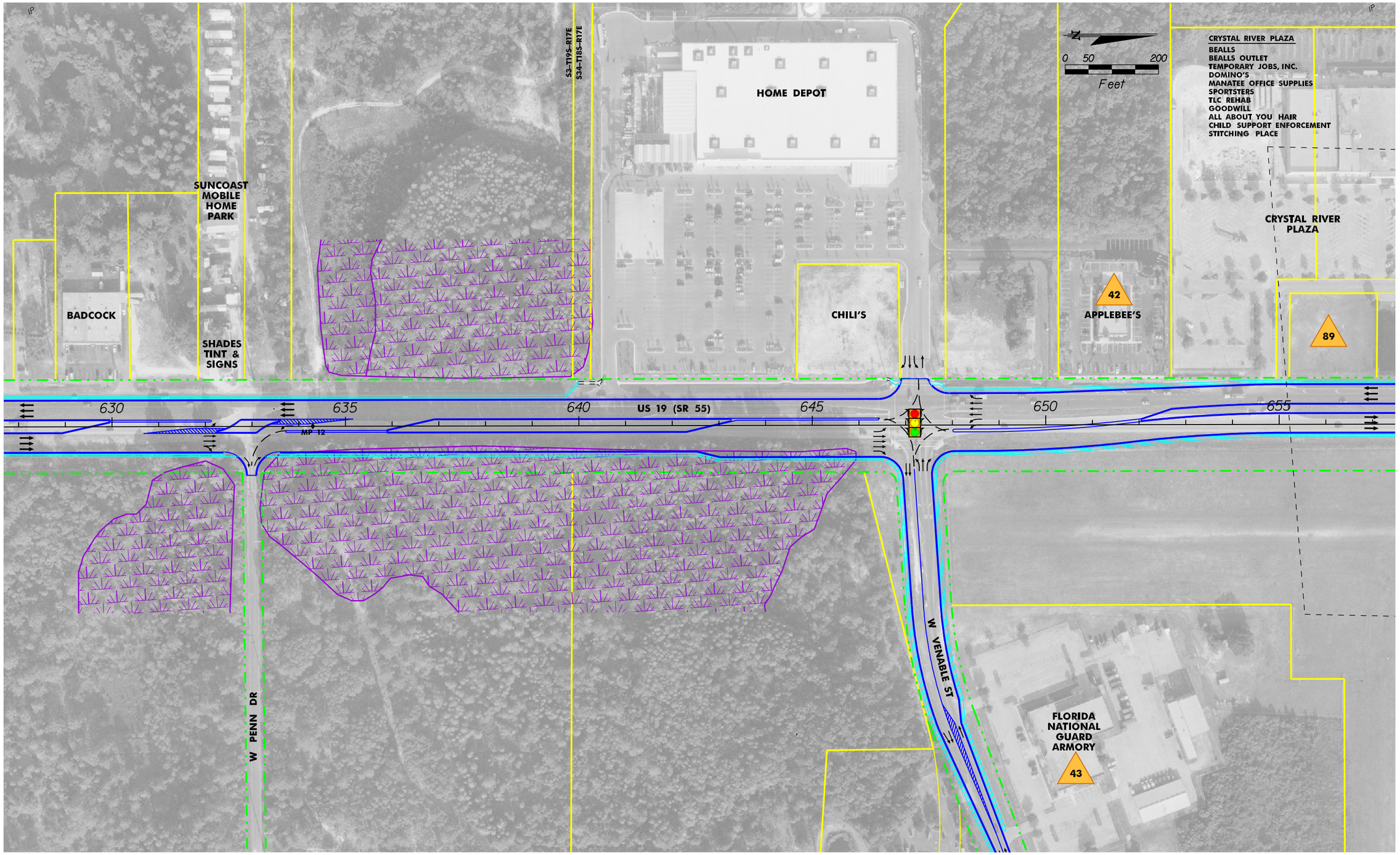
FLIGHT DATE : JUNE 11, 2001



SEGMENT 3 RECOMMENDED ALTERNATIVE

EXISTING RIGHT OF WAY OR EASEMENT
PROPERTY LINES
120 MP 3 BASELINE SURVEY MILEPOST
CENTERLINE OF CONSTRUCTION
PROPOSED PAVEMENT / CURB
POTENTIAL CONTAMINATION SITE
PROPOSED RIGHT OF WAY
BRIDGE STRUCTURE OR RETAINING WALL
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ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 55	CITRUS	405822-1-22-01

US 19 (SR 55) PD&E STUDY FROM SOUTH OF US 98 TO CR 488 CITRUS COUNTY, FLORIDA

SHEET NO. 20

19-MAR-2004, 09:45
Q:\US-19_Citrus\PlanSheets\Recommended\plan20.dgn

FLIGHT DATE : JUNE 11, 2001

SEGMENT 3 RECOMMENDED ALTERNATIVE

- EXISTING RIGHT OF WAY OR EASEMENT
- PROPERTY LINES
- 120 / MP 3 — BASELINE SURVEY MILEPOST
- CENTERLINE OF CONSTRUCTION
- PROPOSED PAVEMENT / CURB
- POTENTIAL CONTAMINATION SITE
- PROPOSED RIGHT OF WAY
- BRIDGE STRUCTURE OR RETAINING WALL
- PROPOSED SIDEWALK OR MULTI-USE PATH
- WETLANDS WITHIN STUDY AREA
- B / R / NP — BUSINESS / RESIDENTIAL / NON-PROFIT ORGANIZATION RELOCATION

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STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 55	CITRUS	405822-1-22-01

US 19 (SR 55) PD&E STUDY FROM SOUTH OF US 98 TO CR 488 CITRUS COUNTY, FLORIDA

SHEET NO. 19

19-MAR-2004 09:45
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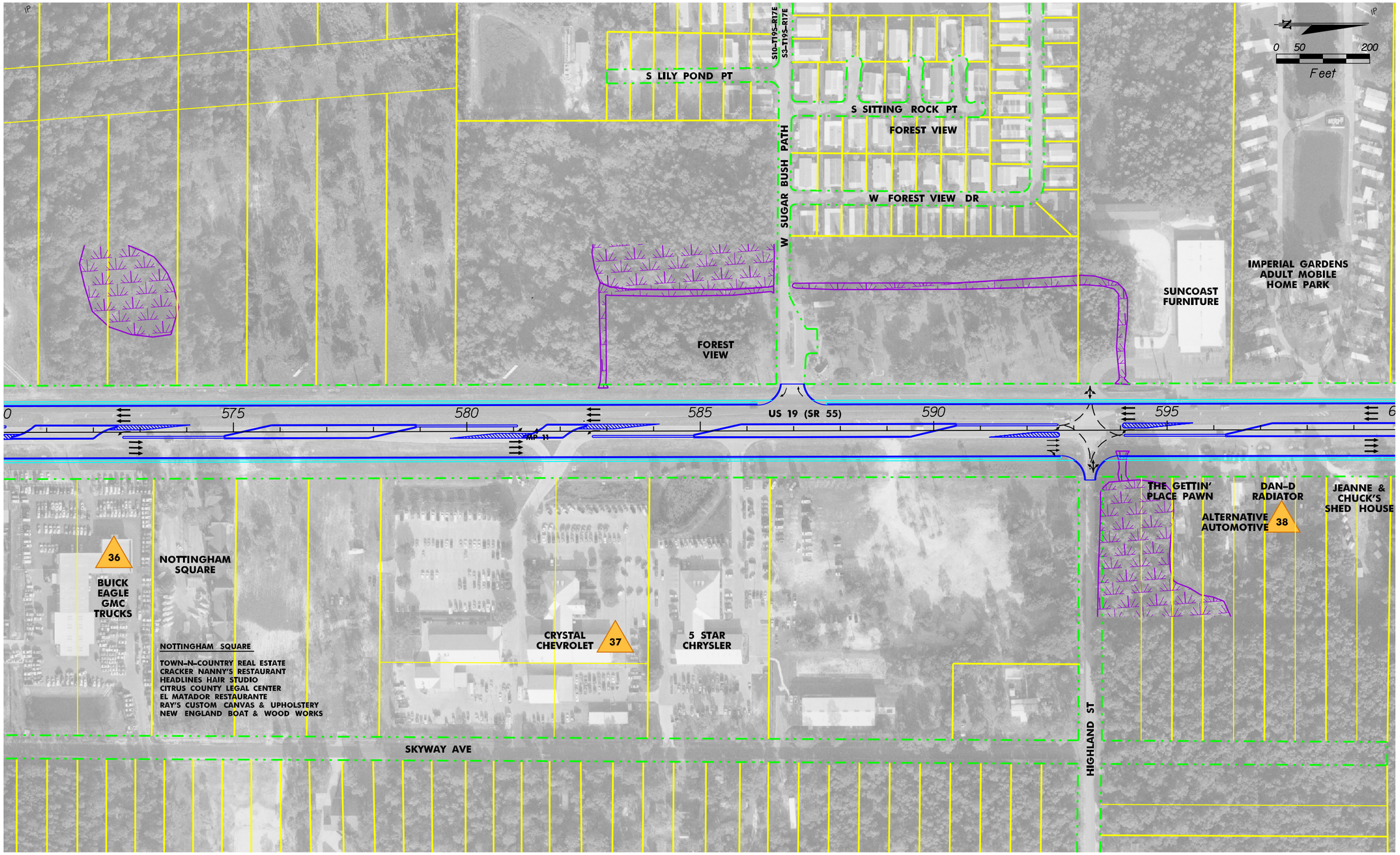
FLIGHT DATE : JUNE 11, 2001



SEGMENT 3 RECOMMENDED ALTERNATIVE

EXISTING RIGHT OF WAY OR EASEMENT
PROPERTY LINES
120 BASELINE SURVEY
MP 3 MILEPOST
CENTERLINE OF CONSTRUCTION
PROPOSED PAVEMENT / CURB
X POTENTIAL CONTAMINATION SITE
PROPOSED RIGHT OF WAY
BRIDGE STRUCTURE OR RETAINING WALL
PROPOSED SIDEWALK OR MULTI-USE PATH
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ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 55	CITRUS	405822-1-22-01

US 19 (SR 55) PD&E STUDY FROM SOUTH OF US 98 TO CR 488 CITRUS COUNTY, FLORIDA

SHEET NO. 18

19-MAR-2004 09:44
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FLIGHT DATE : JUNE 11, 2001

SEGMENT 3 RECOMMENDED ALTERNATIVE

EXISTING RIGHT OF WAY OR EASEMENT
PROPERTY LINES
120 MP 3 BASELINE SURVEY MILEPOST
CENTERLINE OF CONSTRUCTION
PROPOSED PAVEMENT / CURB
X POTENTIAL CONTAMINATION SITE
PROPOSED RIGHT OF WAY
BRIDGE STRUCTURE OR RETAINING WALL
PROPOSED SIDEWALK OR MULTI-USE PATH
WETLANDS WITHIN STUDY AREA
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ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 55	CITRUS	405822-1-22-01

US 19 (SR 55) PD&E STUDY
FROM SOUTH OF US 98 TO CR 488
CITRUS COUNTY, FLORIDA

SHEET NO. 17

19-MAR-2004 09:44
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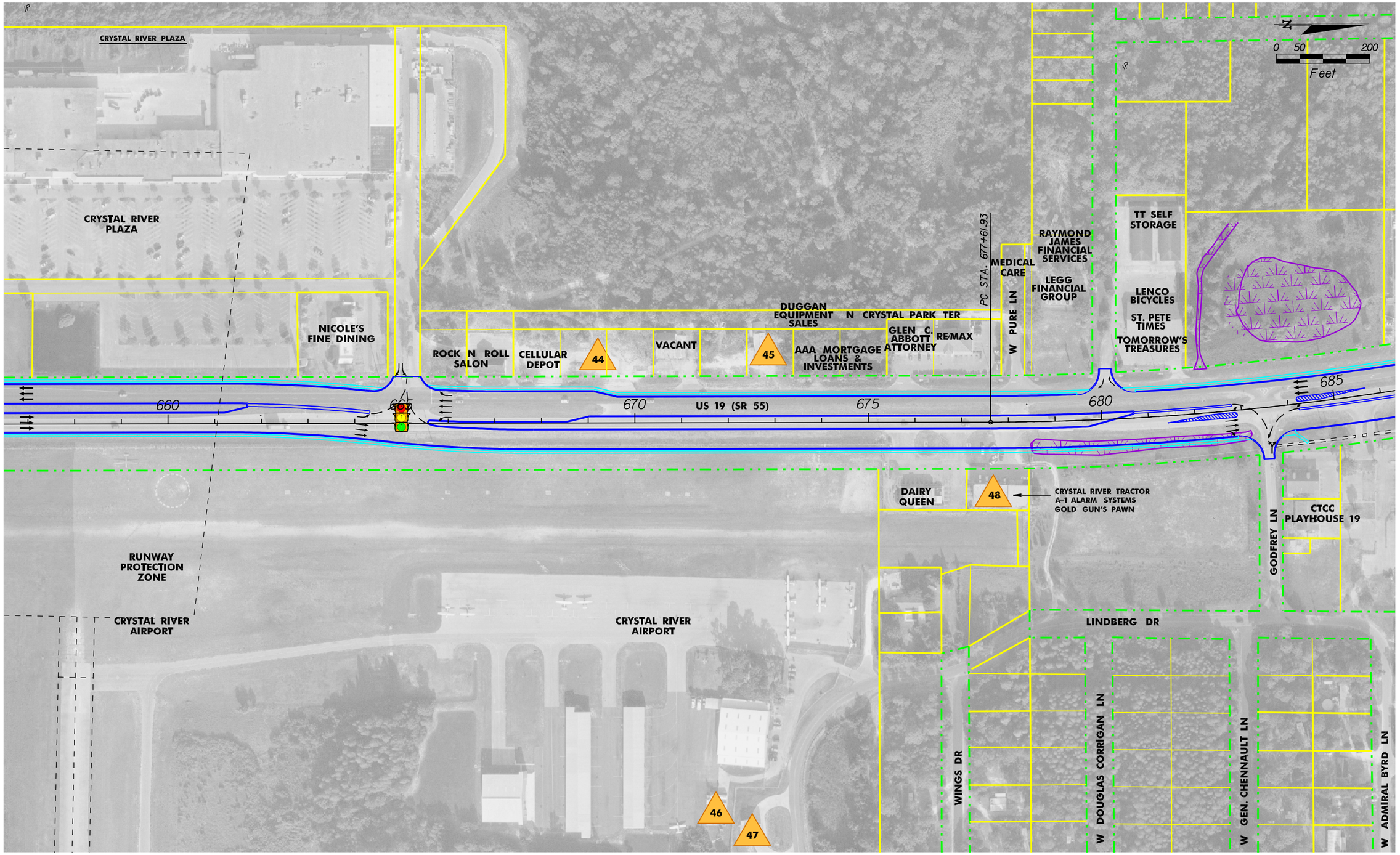
FLIGHT DATE : JUNE 11, 2001



SEGMENT 3 RECOMMENDED ALTERNATIVE

EXISTING RIGHT OF WAY OR EASEMENT
PROPERTY LINES
120 / MP 3 BASELINE SURVEY MILEPOST
CENTERLINE OF CONSTRUCTION
PROPOSED PAVEMENT / CURB
POTENTIAL CONTAMINATION SITE
PROPOSED RIGHT OF WAY
BRIDGE STRUCTURE OR RETAINING WALL
PROPOSED SIDEWALK OR MULTI-USE PATH
WETLANDS WITHIN STUDY AREA
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SR 55	CITRUS	405822-1-22-01

US 19 (SR 55) PD&E STUDY
FROM SOUTH OF US 98 TO CR 488
CITRUS COUNTY, FLORIDA

SHEET NO. 21

19-MAR-2004, 09:45
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FLIGHT DATE : JUNE 11, 2001

SEGMENT 3

S34-T18S-R17E
S27-T18S-R17E

N LA JOLLA PT

W SUE LN

S28-T18S-R17E
S27-T18S-R17E

0 50 200
Feet

SOUTH SQUARE

CASTLE DENTAL CENTER
CHRISTINE C. ECK, CPA
EXIT REALTY
AAA-1 MINI STORAGE
AMERICAN BLIND CREATIONS
AN MIAN MEDICAL PRACTICE
SHERMAN CHIROPRACTIC
ACCENT BEAUTY SALON
FIRST FINANCIAL OF CITRUS COUNTY, INC.
JMJ ORIENTAL FOOD MART
FIRST TITLE CO., INC.QUEHUONG PHAM, M.D., P.A.

SOUTH SQUARE

CRYSTAL RIVER MARINE

49

CRYSTAL RIVER FIRESTONE

50

THREE RIVERS MARINE

ST. TIMOTHY LUTHERAN CHURCH

PT STA. 696+44.98

CRYSTAL EYE CENTER & OPTICAL
JOHN D. HORNER DENTISTRY
AMERICA'S CHOICE MORTGAGE
NANCY ARGENZIANO STATE SENATOR

REGIONS BANK

CRYSTAL RIVER ANIMAL HOSPITAL

WELCH CABINETS & APPLIANCES

FLORIDA PEST CONTROL

52

TRIPLE TOWERS

ABC PIZZA
BRIDAL
CYNTHIAS SALON
JOHN T. CONROY REAL ESTATE
BRAND SOURCE

JOHNSON'S KIA

53

685 690 695 700 705 710

MP 13

US 19 (SR 55)

CTCC PLAYHOUSE 19

AIRPORT PLAZA

AIRPORT PLAZA

SCISSOR & COMB BARBER BEAUTY
PAY-DAY
A-WHITE SEW & VAC
ED'S BAIT & TACKLE
COAST RV PARTS
DISCOUNT CUGARETTE OUTLET
SOUPS SALADS PASTA
WINDOWS & SIDING UNLIMITED
KID'S EXCHANGE

U-LOCK-IT

EWELL INDUSTRIES, INC.

51

CRYSTAL RIVER CITY LIMITS

THE HAGAR GROUP INSURANCE

RAYMOND JAMES & ASSOC., INC.

PEKING GARDEN RESTAURANT

W MAYO DR

CRYSTAL INN

RAY'S REAL PIT BAR-B-Q

CRAZY DAVE'S A-1 PAWN & JEWELRY

STRICKLAND FUNERAL HOME

FAMILY DENTISTRY

HARLEY DAVIDSON MOTORCYCLES

SE 8TH AVE

CRYSTAL LANDING

SE 21ST ST

CRYSTALWOOD COURT MOBILE HOME PARK

N TRUDEL PT

W ADMIRAL BYRD LN

N COLIN KELLY PT

SEGMENT 3 RECOMMENDED ALTERNATIVE

EXISTING RIGHT OF WAY OR EASEMENT
PROPERTY LINES
120 MP 3 BASELINE SURVEY MILEPOST
CENTERLINE OF CONSTRUCTION
PROPOSED PAVEMENT / CURB
X POTENTIAL CONTAMINATION SITE
PROPOSED RIGHT OF WAY
BRIDGE STRUCTURE OR RETAINING WALL
PROPOSED SIDEWALK OR MULTI-USE PATH
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SR 55	CITRUS	405822-1-22-01

US 19 (SR 55) PD&E STUDY
FROM SOUTH OF US 98 TO CR 488
CITRUS COUNTY, FLORIDA

SHEET NO. 22

19-MAR-2004 09:46
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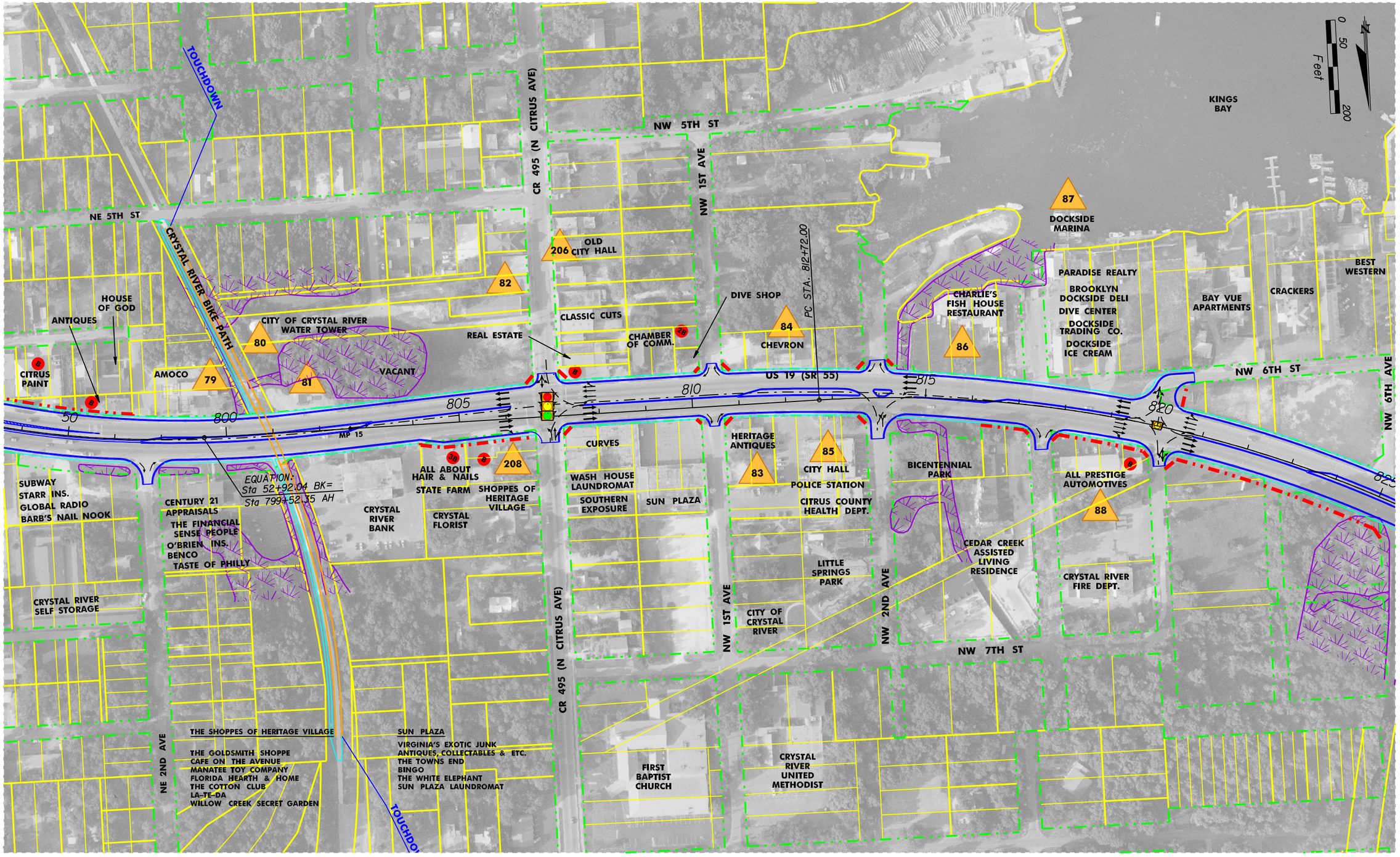
FLIGHT DATE : JUNE 11, 2001



SEGMENT 5 RECOMMENDED ALTERNATIVE

EXISTING RIGHT OF WAY OR EASEMENT
PROPERTY LINES
120 / MP 3 BASELINE SURVEY MILEPOST
CENTERLINE OF CONSTRUCTION
PROPOSED PAVEMENT / CURB
POTENTIAL CONTAMINATION SITE
PROPOSED RIGHT OF WAY
BRIDGE STRUCTURE OR RETAINING WALL
PROPOSED SIDEWALK OR MULTI-USE PATH
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ROAD NO.	COUNTY	FINANCIAL PROJECT ID
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US 19 (SR 55) PD&E STUDY FROM SOUTH OF US 98 TO CR 488 CITRUS COUNTY, FLORIDA

SHEET NO. 26

19-MAR-2004 09:50
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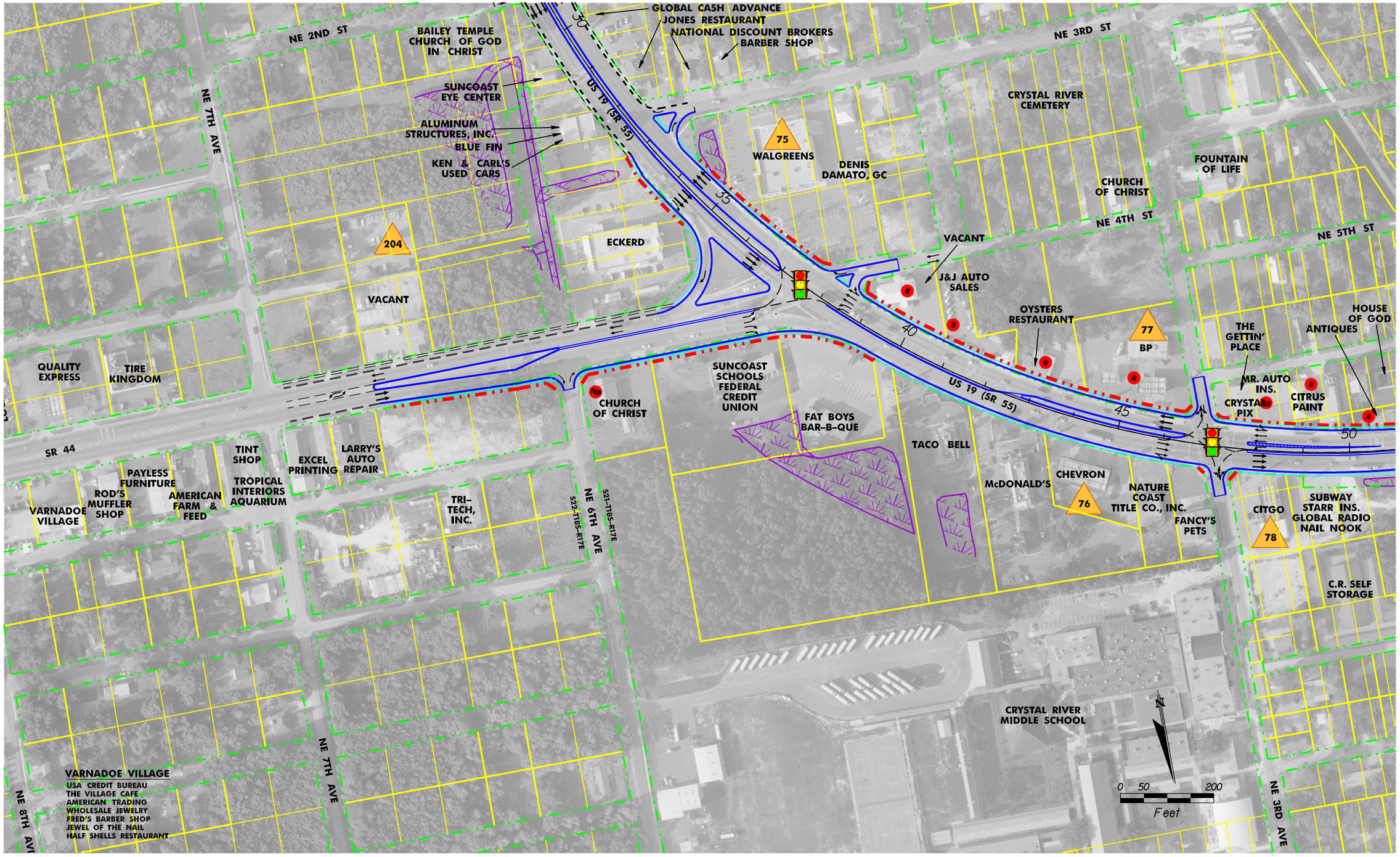
FLIGHT DATE : JUNE 11, 2001



SEGMENT 5 RECOMMENDED ALTERNATIVE

EXISTING RIGHT OF WAY OR EASEMENT
PROPERTY LINES
120 / MP 3 BASELINE SURVEY MILEPOST
CENTERLINE OF CONSTRUCTION
PROPOSED PAVEMENT / CURB
POTENTIAL CONTAMINATION SITE
PROPOSED RIGHT OF WAY
BRIDGE STRUCTURE OR RETAINING WALL
PROPOSED SIDEWALK OR MULTI-USE PATH
WETLANDS WITHIN STUDY AREA
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US 19 (SR 55) PD&E STUDY FROM SOUTH OF US 98 TO CR 488 CITRUS COUNTY, FLORIDA

SHEET NO. 25

19-MAR-2004 09:49
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FLIGHT DATE : JUNE 11, 2001

TSM2b

SEGMENT 4

SEGMENT 5

0 50 200 Feet

SE CUTLER SPUR

HUFFMAN'S HERITAGE WHOLE FOODS

ST. PETERSBURG TIMES

SE KINGS BAY DR

KINGS BAY PLAZA

DUDS N SUDS
RENDEZVOUS BEAUTY SALON
BELTONE HEARING AID CENTER
LITTLE CAESARS
VIDEO
CHINA BRIDGE RESTAURANT
WEST MARINE
BIG LOTS
SPORTING HEALTH CLUB

KINGS BAY PLAZA

68

NE 1ST TER

POST OFFICE

NE 1ST ST

NE 2ND ST

70 CRYSTAL TERRACE

ULTIMATE AUTO DETAIL

GLOBAL CASH ADVANCE

CRYSTAL PAINT & DECORATING

63

S28-T18S-R17E
S21-T18S-R17E

MOJOS
DOLLAR GENERAL STORE
AMERICAN SPEEDY PRINTING
TEASERS HAIR & NAIL
SAVE-A-LOT
CRYSTAL CENTER LAUNDROMAT
CHINA FIRST BUFFET
SHERWIN WILLIAMS
WINE & CHEESE CO.

62 MR B'S CAR WASH

JOHNSON KIA 62

SPECIALTY GEMS
WESTON PROPERTIES
VAL'S BOUTIQUE & SPA

40 BANK OF AMERICA

64 VACANT

WENDY'S

NEWCEL COMM.

69 CIRCLE K

TOUCH OF QUALITY CLEANERS

74

73

EC STA. 23+05.16

S28-T18S-R17E

S21-T18S-R17E

740 745 10 15 US 19 (SR 55) 20 25 30

MP 14

S27-T18S-R17E

S22-T18S-R17E

EQUATION:
Sta 746+51.03 BK =
Sta 9+86.12 AH

PT STA. 743+29.69

DILLON'S INN

CODY'S ORIGINAL ROADHOUSE

OPHTHALMOLOGY

A+ HEALTHCARE

CHECKERS

YANGER & SMITH ATTORNEYS

65 TEXACO

GYPSY'S DEN

67 CAPITAL CITY BANK

ENTERPRISE

TRAVEL TOWN

A-1 TRUCK REPAIR

71

BUMPER TO BUMPER

72

BURGER KING

ACE BAIL BONDS
NAILS 2000

AETNA WEST COAST INSURERS

C.H.I.P.S. ALLSTATE

CRYSTAL SQUARE

CRYSTAL SQUARE
CITRUS COUNTY CENTER
FLORIDA SHERIFF'S YOUTH RANCHES
JACKSON HEWITT TAX SERVICE
QUALITY HAIR CUTS
DANCETC. ACADEMY
KACY'S PORTRAIT STUDIO
JAN'S OPTICAL
WADE'S COINS
BINGO
HUNTER'S HIDEOUT
THIBADO TAE KWON DO
658 SALON SPA
GMAC REAL ESTATE
FRED'S
TRUCKLOADS
BLUE CHIP AUTO GLASS
FARMERS FURNITURE
FRAMES N GALLERY
SUNCOAST SCHOOLS FEDERAL CREDIT UNION

LAB CORP.

66

SUNCOAST CLINICAL LABORATORIES

SE 7TH AVE

SE 5TH TER

BOYS & GIRLS CLUB OF CITRUS COUNTY

PROFESSIONAL PARK

SEGMENT 4 RECOMMENDED ALTERNATIVE

EXISTING RIGHT OF WAY OR EASEMENT
PROPERTY LINES
120 MP 3 BASELINE SURVEY MILEPOST
CENTERLINE OF CONSTRUCTION
PROPOSED PAVEMENT / CURB
POTENTIAL CONTAMINATION SITE
PROPOSED RIGHT OF WAY
BRIDGE STRUCTURE OR RETAINING WALL
PROPOSED SIDEWALK OR MULTI-USE PATH
WETLANDS WITHIN STUDY AREA
B R NP BUSINESS / RESIDENTIAL / NON-PROFIT ORGANIZATION RELOCATION

19-MAR-2004 09:48
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ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 55	CITRUS	405822-1-22-01

US 19 (SR 55) PD&E STUDY
FROM SOUTH OF US 98 TO CR 488
CITRUS COUNTY, FLORIDA

SHEET NO. 24

FLIGHT DATE : JUNE 11, 2001

SEGMENT 4

TSM2D

0 50 200 Feet

S28-T18S-R17E
S27-T18S-R17E

SE 5TH AVE
SE CUTLER SPUR
SE PARADISE PT RD
CR 44W (W FORT ISLAND TRL)
US 19 (SR 55)
SE 8TH AVE
SE 8TH TER
SE 8TH AVE

KING'S BAY PREFERRED AUTOMOTIVE SERVICE
VACANT
GRANNIE'S COUNTRY KITCHEN
PACK -N- POST
SUNTRUST BANK
AAA ENGINE & MACHINE CORP.
CENTRAL MARINE
SALON DAVID J
NAILS & BODY WORKS
SHELLY'S K-9 DESIGNS
SUNCOAST REALTY
SOUTHTRUST BANK
SHELL
RACE TRAC
MERCANTILE BANK
PIZZA HUT
ABC
MR B'S CAR WASH
JOHNSON KIA
CRYSTAL RIVER VILLAGE
CRYSTAL RIVER SHOPPING CENTER
FIRST PRESBYTERIAN CHURCH
PALMS RENTAL & HOME CENTER
J&W AUTO PARTS
PC STA. 725+25.29
H&H MOTORS, INC.
COASTAL
WHETSTONE OIL COMPANY
SHADON'S SUBS
GANNON'S BEEF SHOPPE
KFC
AMERICAN PRO DIVING CENTER
MANATEE PLUMBING
CRYSTAL SQUARE

55 58 62 54 56 57 60 61 59

715 720 725 730 735 740

MP 14

CRYSTAL RIVER SHOPPING CENTER

KASH-N-KARRY
SIZZOR'S UNISEX SALON
FRAME DESIGN
CRYSTAL RIVER CLEANERS
HUNGRY HOWIES
MOVIE GALLERY
JIM GREEN JEWELERS
SEW & VAC
OPTI-MART
BONUS DOLLAR STORE
THE DENTOFACIAL INSTITUTE
JOE'S CARPET
CRYSTAL RIVER TRAVEL
LA CASA DI NORMA
CHARLES POPE CELLULAR
A-T NAILS
GROUPER'S RESTAURANT
WICKS ARE US
MAYFIELD
UPSCALE RETAIL
OBEE'S
SEVEN RIVERS REHAB CENTER

CRYSTAL SQUARE

CITRUS COUNTY CENTER
FLORIDA SHERIFF'S YOUTH RANCHES
JACKSON HEWITT TAX SERVICE
QUALITY HAIR CUTS
DANCETC. ACADEMY
KACY'S PORTRAIT STUDIO
JAN'S OPTICAL
WADE'S COINS
BINGO
HUNTER'S HIDEOUT
THIBADO TAE KWON DO
658 SALON SPA
GMAC REAL ESTATE
FRED'S
TRUCKLOADS
BLUE CHIP AUTO GLASS
FARMERS FURNITURE
FRAMES N GALLERY
SUNCOAST SCHOOLS FEDERAL CREDIT UNION

SEGMENT 4 RECOMMENDED ALTERNATIVE

EXISTING RIGHT OF WAY OR EASEMENT
PROPERTY LINES
120 / MP 3 BASELINE SURVEY MILEPOST
CENTERLINE OF CONSTRUCTION
PROPOSED PAVEMENT / CURB
POTENTIAL CONTAMINATION SITE
PROPOSED RIGHT OF WAY
BRIDGE STRUCTURE OR RETAINING WALL
PROPOSED SIDEWALK OR MULTI-USE PATH
WETLANDS WITHIN STUDY AREA
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US 19 (SR 55) PD&E STUDY
FROM SOUTH OF US 98 TO CR 488
CITRUS COUNTY, FLORIDA

SHEET NO. 23

19-MAR-2004 09:47
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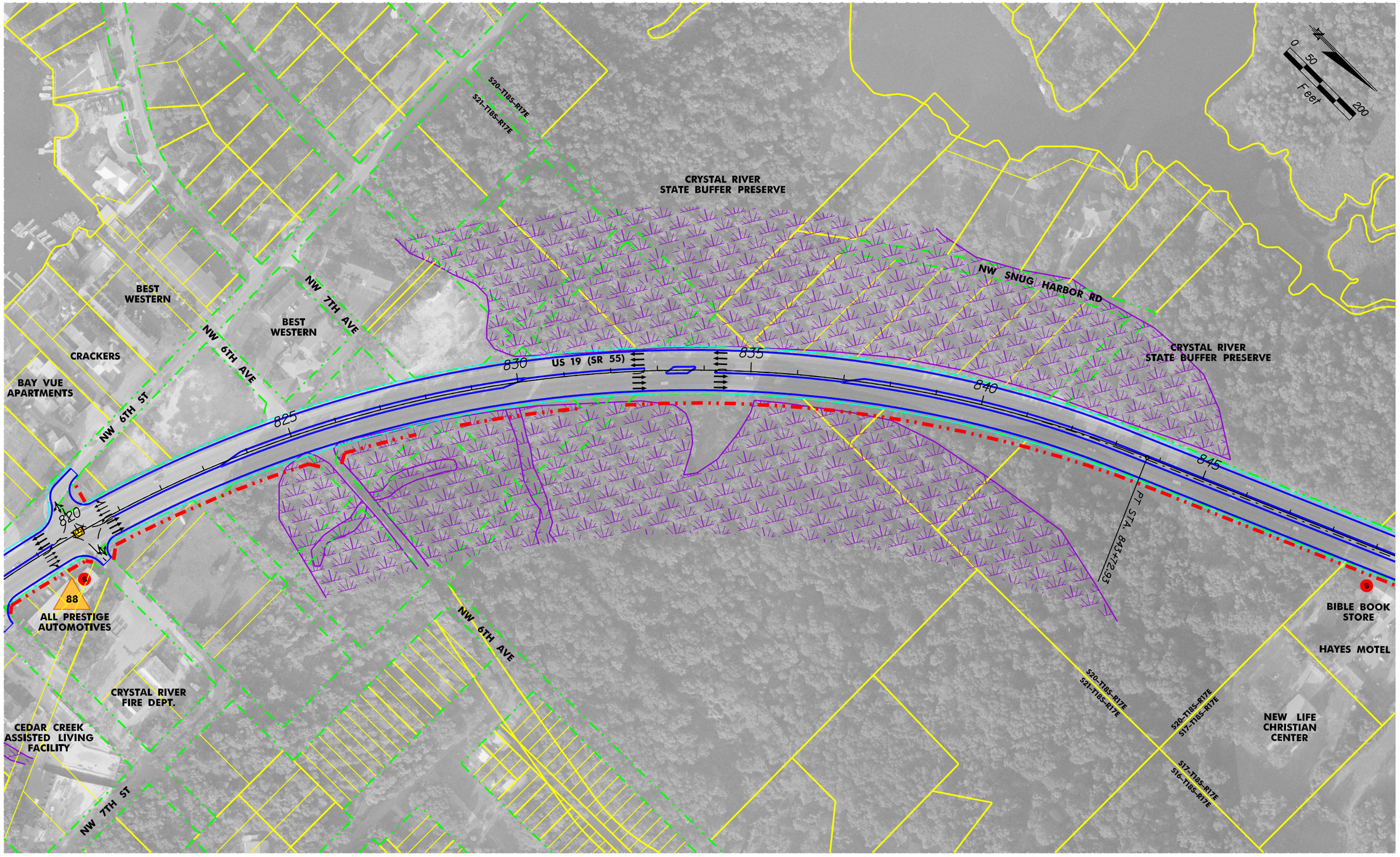
FLIGHT DATE : JUNE 11, 2001



SEGMENT 5 RECOMMENDED ALTERNATIVE

- EXISTING RIGHT OF WAY OR EASEMENT
- PROPERTY LINES
- 120 / MP 3 — BASELINE SURVEY MILEPOST
- CENTERLINE OF CONSTRUCTION
- PROPOSED PAVEMENT / CURB
- POTENTIAL CONTAMINATION SITE
- PROPOSED RIGHT OF WAY
- BRIDGE STRUCTURE OR RETAINING WALL
- PROPOSED SIDEWALK OR MULTI-USE PATH
- WETLANDS WITHIN STUDY AREA
- B / R / NP — BUSINESS / RESIDENTIAL / NON-PROFIT ORGANIZATION RELOCATION

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US 19 (SR 55) PD&E STUDY
FROM SOUTH OF US 98 TO CR 488
CITRUS COUNTY, FLORIDA

SHEET NO. 27

19-MAP-2004 09:50
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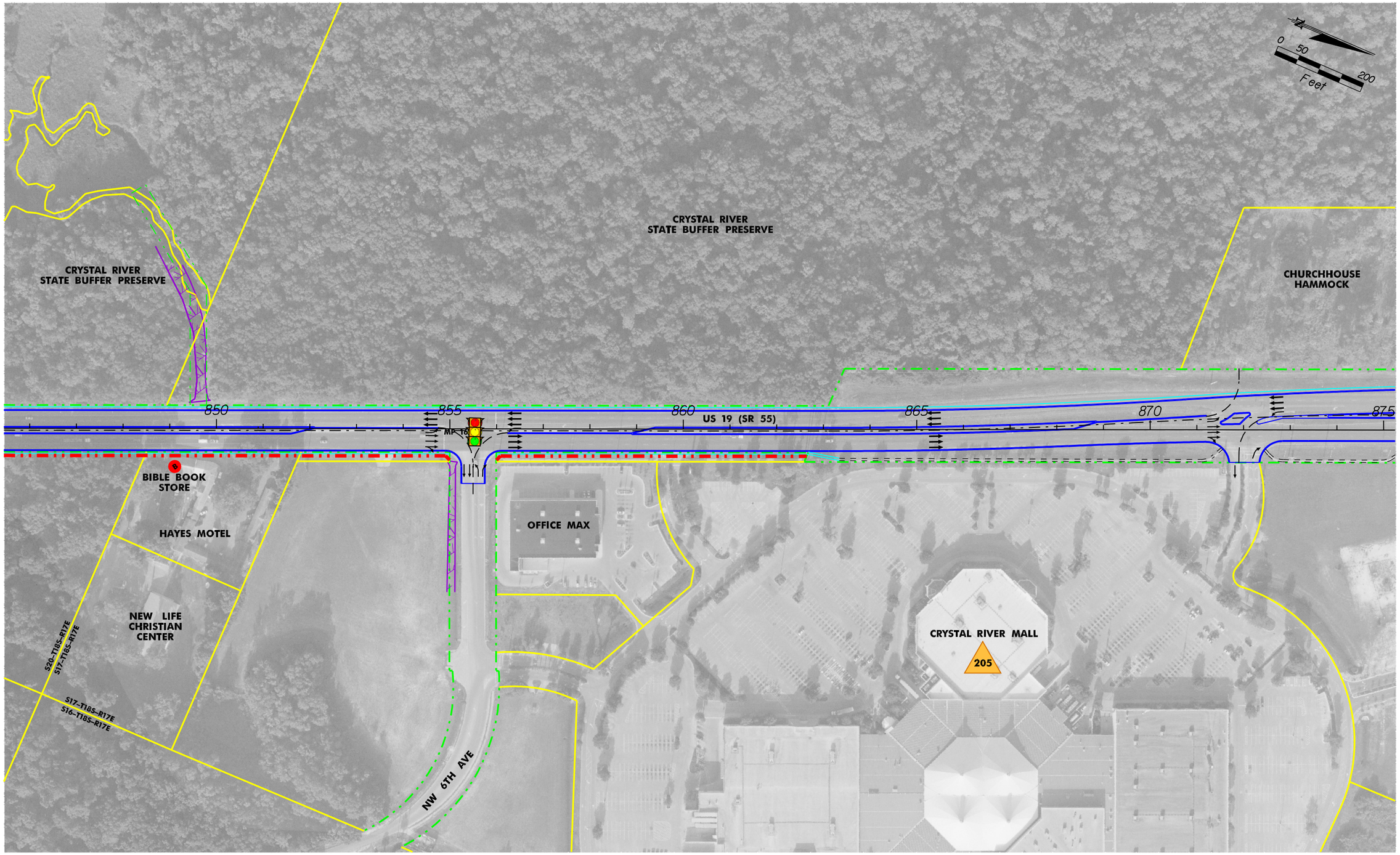
FLIGHT DATE : JUNE 11, 2001



SEGMENT 5 RECOMMENDED ALTERNATIVE

- EXISTING RIGHT OF WAY OR EASEMENT
- PROPERTY LINES
- 120 / MP 3 — BASELINE SURVEY MILEPOST
- CENTERLINE OF CONSTRUCTION
- PROPOSED PAVEMENT / CURB
- POTENTIAL CONTAMINATION SITE (X)
- PROPOSED RIGHT OF WAY
- BRIDGE STRUCTURE OR RETAINING WALL
- PROPOSED SIDEWALK OR MULTI-USE PATH
- WETLANDS WITHIN STUDY AREA
- B / R / NP — BUSINESS / RESIDENTIAL / NON-PROFIT ORGANIZATION RELOCATION

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US 19 (SR 55) PD&E STUDY
FROM SOUTH OF US 98 TO CR 488
CITRUS COUNTY, FLORIDA

SHEET NO. 28

19-MAR-2004 09:51
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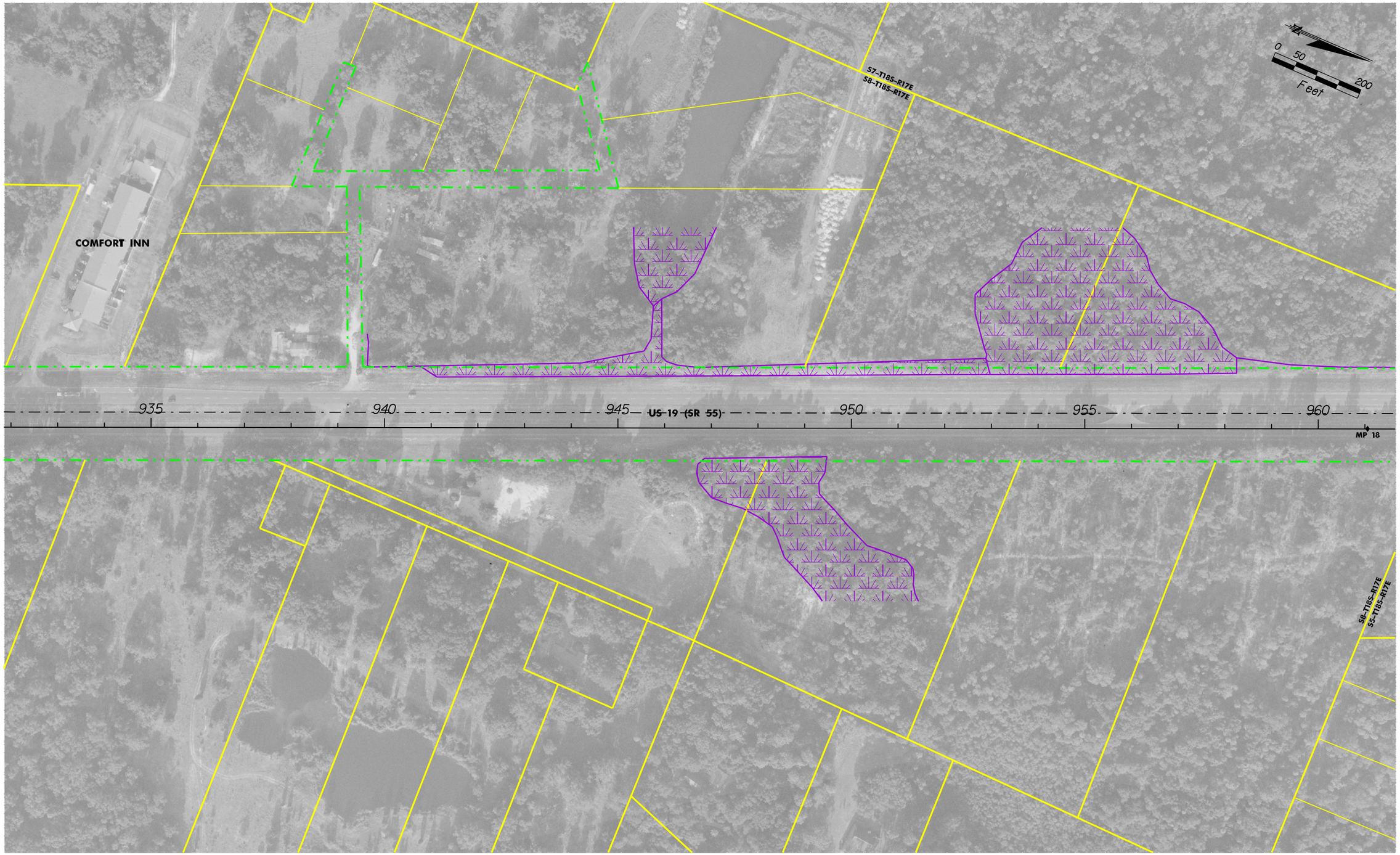
FLIGHT DATE : JUNE 11, 2001



SEGMENT 6 RECOMMENDED ALTERNATIVE

EXISTING RIGHT OF WAY OR EASEMENT
PROPERTY LINES
120 / MP 3 BASELINE SURVEY MILEPOST
CENTERLINE OF CONSTRUCTION
PROPOSED PAVEMENT / CURB
POTENTIAL CONTAMINATION SITE
PROPOSED RIGHT OF WAY
BRIDGE STRUCTURE OR RETAINING WALL
PROPOSED SIDEWALK OR MULTI-USE PATH
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US 19 (SR 55) PD&E STUDY FROM SOUTH OF US 98 TO CR 488 CITRUS COUNTY, FLORIDA

SHEET NO. 31

19-MAR-2004 09:54
Q:\US-19_Citrus\PlanSheets\Recommended\plan13.dgn

FLIGHT DATE : JUNE 11, 2001

SEGMENT 6 RECOMMENDED ALTERNATIVE

EXISTING RIGHT OF WAY OR EASEMENT
PROPERTY LINES
120 BASELINE SURVEY MILEPOST MP 3
CENTERLINE OF CONSTRUCTION
PROPOSED PAVEMENT / CURB
POTENTIAL CONTAMINATION SITE
PROPOSED RIGHT OF WAY
BRIDGE STRUCTURE OR RETAINING WALL
PROPOSED SIDEWALK OR MULTI-USE PATH
WETLANDS WITHIN STUDY AREA
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US 19 (SR 55) PD&E STUDY
FROM SOUTH OF US 98 TO CR 488
CITRUS COUNTY, FLORIDA

SHEET NO. 30

19-MAR-2004 09:53
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FLIGHT DATE : JUNE 11, 2001

SEGMENT 5 | SEGMENT 6

NW 19TH ST

NW 22ND ST

TALLAHASSEE RD

0 50 200 Feet

CHURCHHOUSE HAMMOCK

TED'S SHEDS

THE COTTAGE FRAMER

PINCH-A-PENNY VIDEOS 4 LESS

LIL CHAMP

J'S RESTAURANT

JACKIE HATCHER AUTO SALES

NEIL'S CUSTOM AUTO INTERIORS

ROY BROWN LINCOLN MERCURY MAZDA

DAYS INN

DENNY'S

RILEY'S IRISH PUB

875 880 885 US 19 (SR 55) 890 895 900

HONDA

CREATIVE NAILS

M&E'S DONUTS & SUBS

FUN 102.7

COR-BRO, INC.

NOBLE'S MARINE

REX AUDIO VIDEO APPLIANCES

TURKEY OAK DR

S17_T18S_R17E

S8_T18S_R17E

SEGMENT 5 RECOMMENDED ALTERNATIVE

EXISTING RIGHT OF WAY OR EASEMENT
PROPERTY LINES
120 BASELINE SURVEY MILEPOST
MP 3
CENTERLINE OF CONSTRUCTION
PROPOSED PAVEMENT / CURB
POTENTIAL CONTAMINATION SITE
PROPOSED RIGHT OF WAY
BRIDGE STRUCTURE OR RETAINING WALL
PROPOSED SIDEWALK OR MULTI-USE PATH
WETLANDS WITHIN STUDY AREA
BUSINESS / RESIDENTIAL / NON-PROFIT ORGANIZATION RELOCATION

PBS&J
5300 W. Cypress St.
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Tampa, Fl. 33607
Phone: 813.282.7275
www.PBSJ.com

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 55	CITRUS	405822-1-22-01

US 19 (SR 55) PD&E STUDY
FROM SOUTH OF US 98 TO CR 488
CITRUS COUNTY, FLORIDA

SHEET NO. 29

18-MAY-2004 15:01
Q:\US-19_Citrus\PlanSheets\Recommended\plan1d29.dgn

FLIGHT DATE : JUNE 11, 2001

0 50 200 Feet

57-T18S-R17E
58-T18S-R17E
56-T18S-R17E
55-T18S-R17E

CASTAWAYS PUB & GRILL

965 970 US 19 (SR 55) 975 980 985 990

MP 18

58-T18S-R17E
55-T18S-R17E

LAURIE DENISE TER (PRIVATE)

W WATERGATE LN

ROAD EASEMENT

EASEMENT

BENTBOW PATH

56-T18S-R17E
55-T18S-R17E

SPRING RUN PRIVATE COMMUNITY

SEGMENT 6 RECOMMENDED ALTERNATIVE

EXISTING RIGHT OF WAY OR EASEMENT
PROPERTY LINES
120 MP 3 BASELINE SURVEY MILEPOST
CENTERLINE OF CONSTRUCTION
PROPOSED PAVEMENT / CURB
POTENTIAL CONTAMINATION SITE
PROPOSED RIGHT OF WAY
BRIDGE STRUCTURE OR RETAINING WALL
PROPOSED SIDEWALK OR MULTI-USE PATH
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ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 55	CITRUS	405822-1-22-01

US 19 (SR 55) PD&E STUDY
FROM SOUTH OF US 98 TO CR 488
CITRUS COUNTY, FLORIDA

SHEET NO. 32

19-MAR-2004 09:55
G:\US-19_Citrus\PlanSheets\Recommended\plan32.dgn

FLIGHT DATE : JUNE 11, 2001

SEGMENT 6 RECOMMENDED ALTERNATIVE

EXISTING RIGHT OF WAY OR EASEMENT
PROPERTY LINES
120 / MP 3 BASELINE SURVEY MILEPOST
CENTERLINE OF CONSTRUCTION
PROPOSED PAVEMENT / CURB
POTENTIAL CONTAMINATION SITE
PROPOSED RIGHT OF WAY
BRIDGE STRUCTURE OR RETAINING WALL
PROPOSED SIDEWALK OR MULTI-USE PATH
WETLANDS WITHIN STUDY AREA
B R NP BUSINESS / RESIDENTIAL / NON-PROFIT ORGANIZATION RELOCATION
AREA WITHIN RIGHT OF WAY

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ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 55	CITRUS	405822-1-22-01

US 19 (SR 55) PD&E STUDY
FROM SOUTH OF US 98 TO CR 488
CITRUS COUNTY, FLORIDA

SHEET NO. 33

19-MAR-2004 09:56
Q:\US-19\Citrus\PlanSheets\Recommended\plan33.dgn

FLIGHT DATE : JUNE 11, 2001

SEGMENT 6 RECOMMENDED ALTERNATIVE

EXISTING RIGHT OF WAY OR EASEMENT
PROPERTY LINES
120 / MP 3 BASELINE SURVEY MILEPOST
CENTERLINE OF CONSTRUCTION
PROPOSED PAVEMENT / CURB
POTENTIAL CONTAMINATION SITE
PROPOSED RIGHT OF WAY
BRIDGE STRUCTURE OR RETAINING WALL
PROPOSED SIDEWALK OR MULTI-USE PATH
WETLANDS WITHIN STUDY AREA
B R NP BUSINESS / RESIDENTIAL / NON-PROFIT ORGANIZATION RELOCATION
AREA WITHIN RIGHT OF WAY

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ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 55	CITRUS	405822-1-22-01

US 19 (SR 55) PD&E STUDY FROM SOUTH OF US 98 TO CR 488 CITRUS COUNTY, FLORIDA

SHEET NO. 36

19-MAR-2004, 09:57
Q:\US-19_CITrus\PlanSheets\Recommended\plan rd36.dgn

FLIGHT DATE : JUNE 11, 2001

SEGMENT 6 RECOMMENDED ALTERNATIVE

EXISTING RIGHT OF WAY OR EASEMENT
PROPERTY LINES
120 / MP 3 BASELINE SURVEY MILEPOST
CENTERLINE OF CONSTRUCTION
PROPOSED PAVEMENT / CURB
POTENTIAL CONTAMINATION SITE
PROPOSED RIGHT OF WAY
BRIDGE STRUCTURE OR RETAINING WALL
PROPOSED SIDEWALK OR MULTI-USE PATH
WETLANDS WITHIN STUDY AREA
B R NP BUSINESS / RESIDENTIAL / NON-PROFIT ORGANIZATION RELOCATION
AREA WITHIN RIGHT OF WAY

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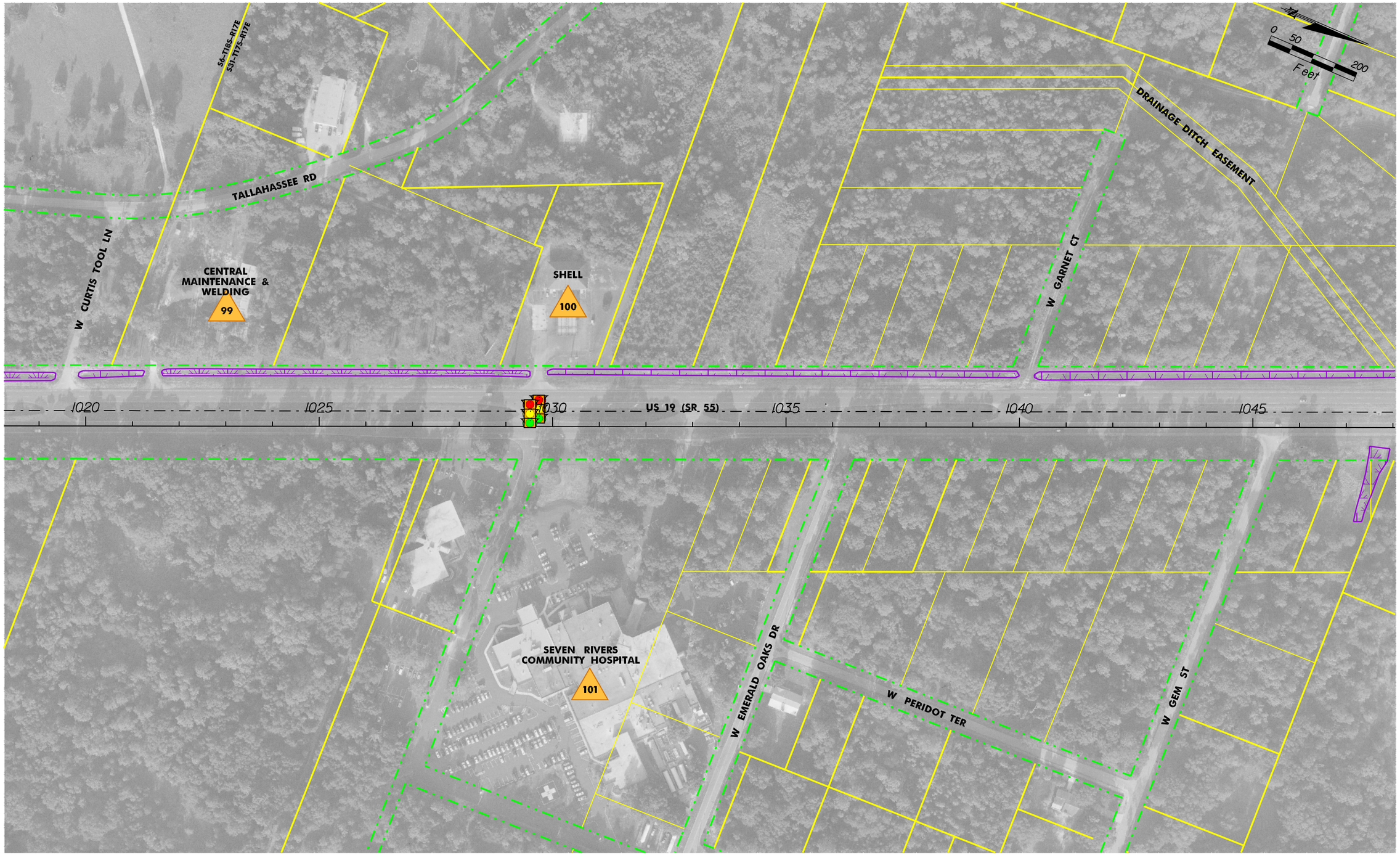
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 55	CITRUS	405822-1-22-01

US 19 (SR 55) PD&E STUDY FROM SOUTH OF US 98 TO CR 488 CITRUS COUNTY, FLORIDA

SHEET NO. 35

19-MAP-2004 09:57
Q:\US-19_CIT\us19\PlanSheets\Recommended Valan\35.dgn

FLIGHT DATE : JUNE 11, 2001



SEGMENT 6 RECOMMENDED ALTERNATIVE

EXISTING RIGHT OF WAY OR EASEMENT
PROPERTY LINES
120 / MP 3 BASELINE SURVEY MILEPOST
CENTERLINE OF CONSTRUCTION
PROPOSED PAVEMENT / CURB
POTENTIAL CONTAMINATION SITE
PROPOSED RIGHT OF WAY
BRIDGE STRUCTURE OR RETAINING WALL
PROPOSED SIDEWALK OR MULTI-USE PATH
WETLANDS WITHIN STUDY AREA
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AREA WITHIN RIGHT OF WAY

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ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 55	CITRUS	405822-1-22-01

US 19 (SR 55) PD&E STUDY
FROM SOUTH OF US 98 TO CR 488
CITRUS COUNTY, FLORIDA

SHEET NO. 34

19-MAR-2004 09:56
G:\US-19_Citrus\PlanSheets\Recommended\plan434.dgn

FLIGHT DATE : JUNE 11, 2001

END PROJECT
SEGMENT 6

0 50 200 Feet

441

PC STA. 1110+72.69

PT STA. 1131+44.51

1105 1110 1115 US 19 (SR 55) 1120 MP 21 1125 1130

N BASSWOOD AVE

S25-T17S-R16E
S30-T17S-R17E

S25-T17S-R16E
S24-T17S-R16E

SEGMENT 6 RECOMMENDED ALTERNATIVE

EXISTING RIGHT OF WAY OR EASEMENT
PROPERTY LINES
120 MP 3 BASELINE SURVEY MILEPOST
CENTERLINE OF CONSTRUCTION
PROPOSED PAVEMENT / CURB
POTENTIAL CONTAMINATION SITE
PROPOSED RIGHT OF WAY
BRIDGE STRUCTURE OR RETAINING WALL
PROPOSED SIDEWALK OR MULTI-USE PATH
WETLANDS WITHIN STUDY AREA
B R NP BUSINESS / RESIDENTIAL / NON-PROFIT ORGANIZATION RELOCATION
AREA WITHIN RIGHT OF WAY

19-MAR-2004 09:58
Q:\US-19_Citrus\Plan\Sheets\Recommended\plan37.dgn

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ROAD NO.	COUNTY	FINANCIAL PROJECT ID
SR 55	CITRUS	405822-1-22-01

US 19 (SR 55) PD&E STUDY
FROM SOUTH OF US 98 TO CR 488
CITRUS COUNTY, FLORIDA

SHEET NO. 37