FINAL LOCATION HYDRAULICS REPORT

(23 CFR 650A Section 650.111)

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.

Prepared for:

The Florida Department of Transportation
District Seven
11201 North McKinley Drive
Tampa, Florida 33612-6403

May 2004

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May 2004

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(23 CFR 650A Section 650.111)

PROJECT DEVELOPMENT AND ENVIRONMENT STUDY

INTRODUCTION

The Florida Department of Transportation (FDOT) conducted a Project Development and Environment (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 attached project location map illustrates the location and limits of the PD&E Study.

The purpose of this report is to provide a location hydraulic study for the above project, in accordance with 23 CFR 650 Subpart A, Section 650.111. The report utilized the National Flood Insurance Program maps to determine highway location encroachments. This report evaluates risks associated with the implementation of the project, impacts on natural and beneficial floodplain values, the support of incompatible floodplain development, and measures to minimize floodplain impacts. Local, State, and Federal water resources and floodplain management agencies were consulted to determine if the proposed project is consistent with existing floodplain management programs.

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.**

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

Encroachments on 100-year Floodplain

The Federal Emergency Management Agency (FEMA) completed the Flood Insurance Study (FIS) for Citrus County in 1984. No changes to the FIS have been made since 1984 according to the local FEMA office.

Portions of the study area for the proposed US 19 widening are located within the floodplain limits shown on the Flood Insurance Rate Map (FIRM) Community Panels 120063 0335B, 120063 0220B, 120063 0215C, 120063 0205C, 120063 0115B, 120340 0002B, 120340 0001B, 120063 0105B, 120063 0100B, and 120063 0085B, as compiled by FEMA. The areas from West Yulee Drive to West Arber Court, West Penn Street to West Pure Lane, SR 44 to NW 7th Avenue, and NW 6th Avenue to West Watergate Lane, all lie within Zone A11. Zone A11 is an area of 100-year flood, in which the base flood elevation (elevation 9 ft NVGD to the west of US 19 and elevation 8 ft NVGD to the east of US 19) and flood hazard factors have been determined by FEMA. The FEMA flood map panels are attached to this report.

The floodplain is primarily from storm surge from the Gulf of Mexico. The existing US 19 (SR 55) alignment is a transverse encroachment to freshwater floodplains. All of the floodplain encroachments will be minimal due to the proposed roadway alignment following the same general alignment as the existing roadway. Floodplain compensation for any

freshwater encroachments may be required by Southwest Florida Water Management District (SWFWMD). There are no floodways within the project limits.

The remaining corridor within the project limits either lies in Zone C (areas of minimal flooding) or Zone B (areas between the limits of the 100-year flood plain and the 500-year flood plain; or certain areas subject to 100-year flooding with average depths less than one foot; or areas protected by levees from the base flood).

The existing cross drain information for the length of the project is provided in Table 1. Three (3) existing cross drains were evaluated from this table to represent typical cross drain extensions that will be necessary for the project improvements. The three cross drains were analyzed using a worse case scenario in which the typical section that was evaluated (widening to the outside) yielded the longest extension. These cross drains were analyzed using the procedures set forth in the FDOT Drainage Handbook-Cross Drains August 1996.

The cross drain hydrologic analysis for the widening improvements was determined using the Rational Method. The hydraulic analysis utilized FHWA's HY8 computer program. The analysis results indicate that none of the structures will increase the 100-year backwater elevation by more than 0.10-ft when they are lengthened to meet current standards (see Table 2). A more detailed modeling effort will be part of the design phase. It is anticipated that some of these structures will be found to be adequately sized and any that are not will only require one size increment increase. The analyses of these structures serve as a demonstration of the expected magnitude of changes in backwater elevations for a worse case analysis.

Drainage Patterns

The existing drainage patterns were determined using the United States Geological Survey (USGS) quadrangle maps, SWFWMD contour aerials, and FDOT drainage maps for US 19.

The stormwater runoff from the travel lanes and outside shoulders sheet flows to roadside ditches. The runoff from the inside shoulder drains to median inlets that discharge via cross drains to the roadside ditches. The roadside ditches then outfall to adjacent wetland areas. All stormwater runoff in the study corridor drains to Kings Bay, Crystal River, Halls River, Homosassa River, and Chassahowitzka River, which are all classified as Outstanding Florida Waters (OFW) By the Florida Department of Environmental Protection. All of the above river systems eventually discharge into the Gulf of Mexico.

Drainage Related Problems

The FDOT District VII Maintenance Yard, located in Brooksville, was contacted concerning any existing flooding problems in the vicinity of US 19 from US 98 to CR488. According to the FDOT's records, most of the flooding problems within the project limits have been tidal related in the City of Crystal River. However, there was also minor freshwater flooding at the northeast intersection with Cardinal Street south of Homosassa Springs at a local restaurant. There is a cross drain at this location, and a previous drainage investigation by the FDOT determined that the flooding was caused by the obstruction in the outfall ditch

easement, which was to be corrected. Poor grading at the driveway and parking lot of the restaurant may also cause temporary flooding conditions.

The Citrus County Engineering division was also contacted regarding drainage issues in the area. The County referenced a drainage study that was conducted for a tributary to the Homosassa River. The Homosassa South Fork Watershed Management Plan, Phase 3 report, dated October 2002, evaluated water quality and quantity aspects of the Homosassa South Fork Watershed. The South Fork watershed includes most of US 19 in the town of Homosassa Springs. Local drainage problems were noted in the study, which were upstream and downstream of US 19. However, no drainage problems were noted along US 19 within this watershed. Several recommendations were suggested to improve flooding problems along county roads and measures to improve water quality. However, there was no recommendation which referred to US 19 for improving any flooding or water quality condition. There were potential regional water quality facilities that were evaluated in the report; however, there was no funding source identified at the time of the report to accomplish those objectives.

A field review was conducted and no scour was observed around the downstream end of the pipes, although there was erosion around some of the culvert endwalls. There were no significant flooding problems noted within the project limits that appear to be related to inadequate cross drain capacity. US 98 had no history of freshwater stormwater overtopping. Therefore, no emergency services or evacuation opportunities will be adversely affected.

Recommended Alternatives

All of the viable improvement alternatives currently under consideration by the PD&E Study feature a six-lane roadway on the existing alignment. For analysis, all computations for cross drain extensions and replacements and floodplain encroachments are based on the impacts associated with the widest viable roadway typical section (widening to the outside). If a narrower typical section is ultimately recommended, the proposed impacts will be reduced. Floodplain encroachments do not vary significantly with any of the alternatives. Refer to the Final Preliminary Engineering Report for more detailed information on the Recommended Alternative.

All existing cross drain structures will require extension to meet clear zone requirements. Extending these structures is recommended based on their current condition. However, it is recognized that a few culverts may need to be replaced with hydraulically equivalent structures when they are inspected and analyzed in more detail in the Design phase.

The proposed project is consistent with the local Comprehensive Plan. The proposed project will not encourage floodplain development due to local (FEMA) floodplain and SWFWMD regulations. The projects drainage design will be consistent with local (FEMA), FDOT, and SWFWMD design guidelines. Therefore, no significant changes in the base flood elevation or limits will occur. The proposed roadway will follow the same general alignment as the existing roadway. Therefore, no natural and beneficial floodplain values will be significantly affected.

Project Category

Based on the information collected during this 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 Drainage Manual Volume 2A.

"The proposed structure will perform hydraulically in a manner equal to or greater than the existing structure, 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 not significant."

Table 1

Existing Cross Drain Information

STR	STA (English)	Description	Flow Direction	Size (ft or in)	Length (ft)	Inverts	
						West (ft)	East (ft)
1	137+55	EW-RCP-MEDIAN INLET)-RCP-EW	E - W	(2) 36"	164'	7.50	7.70
2	182+54	EW-CBC-MEDIAN INLET-CBC-EW	E - W	6' x 3'	164'	6.40	6.40
3	227+00	EW-CBC-MEDIAN INLET-CBC-EW	E - W	7' x 3'	164'	6.50	6.50
4	271+72	EW-CBC-MEDIAN INLET-CBC-EW	E - W	7' x 3'	164'	6.20	6.20
5	289+51	EW-RCP-MEDIAN INLET-RCP-EW	W - E	24"	168'	9.30	8.90
6	309+74	EW-RCP-MEDIAN INLET-RCP-EW	E - W	24"	169'	6.70	7.10
7	326+10	EW-RCP-MEDIAN INLET-RCP-EW	E - W	(2) 30"	164'	5.90	6.60
8	368+87	EW-CBC-MEDIAN INLET-CBC-EW	E - W	6' x 3'	164'	3.50	3.50
9	409+79	EW-RCP-MEDIAN INLET-RCP-EW	E - W	30"	177'	3.00	3.40
10	432+67	EW-CBC-EW	E - W	14.5' x 6'	120'	0.10	0.10
11	469+61	EW-CBC-EW	E - W	(2) 6' x 4'	141'	0.49	0.52
12	485+61	EW-RCP-EW	E - W	30"	150'	1.70	1.90
13	502+45	EW-CBC-EW	E - W	6' x 3'	140'	0.50	0.50
14	516+87	EW-CBC-EW	E - W	6' x 3'	142'	1.70	1.70
15	534+98	EW-RCP-EW	E - W	(2) 30"	138'	2.40	2.70
16	594+96	EW-RCP-EW	E - W	(2) 30"	134'	1.70	1.90
17	606+00	EW-CBC-EW	E - W	10' x 2'	140'	2.90	3.00
18	618+62	EW-CBC-EW	E - W	6' x 2'	143'	3.00	3.00
19	656+53	EW-RCP-EW	E - W	(2) 30"	146'	2.30	2.50
20	694+28	EW-CBC-EW	E - W	6' x 2'	140'	2.90	3.00
21	715+61	EW-RCP-EW	E - W	30"	132'	2.10	2.30
22	758+12	EW-CBC-MH-CBC-EW	E - W	3' x 3'	112'	0.00	2.00
23	777+23	EW-CBC-MH-CBC-EW	E - W	3' x 2'	137'	0.20	1.90
24	800+46	EW-CBC-EW	E - W	6' x 3'	115'	-0.70	-0.70
25	816+20	EW-CBC-EW	E - W	10' x 4'	110'	-1.30	-1.20
26	831+20	EW-CBC-EW	E - W	10' x 4'	110'	-0.50	0.50
27	866+54	EW-RCP-EW	W - E	30"	152'	3.00	3.00
28	906+87	EW-CBC-EW	W - E	2' x 2'	152'	2.02	1.93
29	947+84	EW-CBC-EW	W - E	4' x 3'	155'	2.77	2.72
30	982+42	EW-CBC-EW	W - E	3' x 2'	150'	5.59	5.53
31	1000+48	EW-CBC-EW	W - E	2' x 2'	152'	5.61	5.58
32	1014+47	EW-CBC-EW	E - W	4' x 3'	150'	5.88	5.93
33	1049+79	EW-CBC-EW	E - W	8' x 3'	150'	5.87	5.88
34	1072+81	EW-CBC-EW	E - W	8' x 3'	150'	7.31	7.33

EW: Endwall CBC: Concrete Box Culvert RCP: Reinforced Concrete Pipe W: West E: East

Table 2
100-year Headwaters

STR	STA (english)	Size (ft or in)	Existing 100-Year Headwater (ft)	Proposed 100-Year Headwater (ft)	Change in Headwater (ft)
7	326+10	(2) 30"	9.58	9.58	0.00
10	432+67	14.5' x 6'	6.59	6.59	0.00
29	947+84	4' x 3'	8.32	8.42	0.10

Q: GRAPHICS/COREL/PD&E/US 19 CITRUS CO/LHR REPORT /FIG 1-1.CDR/5.18.04

N.T.S.

SEGMENT 1 | SEGMENT 2 | SEGMENT 3 | SEG 4 | SEG 5 | SEGMENT 6

END PROJECT

GULF OF MEXICO

CHASSAHOWITZKA

CHASSAHOWITZKA RIVER

MISS MAGGIE DR.

HOMOSASSA

HOMOSASSA SPRINGS

W. YULEE DR.

W. HALLS RIVER RD.

HALLS RIVER

HOMOSASSA RIVER

W. ELKHORN DR.

W. JUMP CT.

W. OZELLO TR.

ST. MARTINS MARSH

SALT RIVER

CRYSTAL RIVER

W. FORT ISLAND TR.

KINGS BAY

N.W. 19TH ST.

N.E. 1ST TER.

N. TURKEY OAK DR.

CSX R.R.

FPC

W. EMERALD OAKS DR.

RED LEVEL

N. SUNCOAST BLVD.

CROSS FLORIDA BARGE CANAL

WITHLACOOCHEE RIVER

INGLIS

CITRUS CO.

LEVY CO.

N. DUNNELLON RD.

PORT AVE.

N. CITRUS AVE.

LAKE ROUSSEAU

W. DUNKLIN ST.

CSX R.R.

S. SUNCOAST BLVD.

SUNCOAST PARKWAY

OAK PARK BLVD.

W. CARDINAL ST.

W. GREEN ACRES ST.

GROVER CLEVELAND BLVD.

W. HOMOSASSA TR.

ROCK CRUSHER RD.

W. VENABLE ST.

W. GULF TO LAKE HWY.

W. NORVELL BRYANT HWY.

BEGIN PROJECT

19 | 98 | 55 | 490 | 490A | 494 | 44 | 495 | 488 | 40A | 40 | 480 | 486 | H | M

LEGEND

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

AREA SHOWN

CITRUS COUNTY

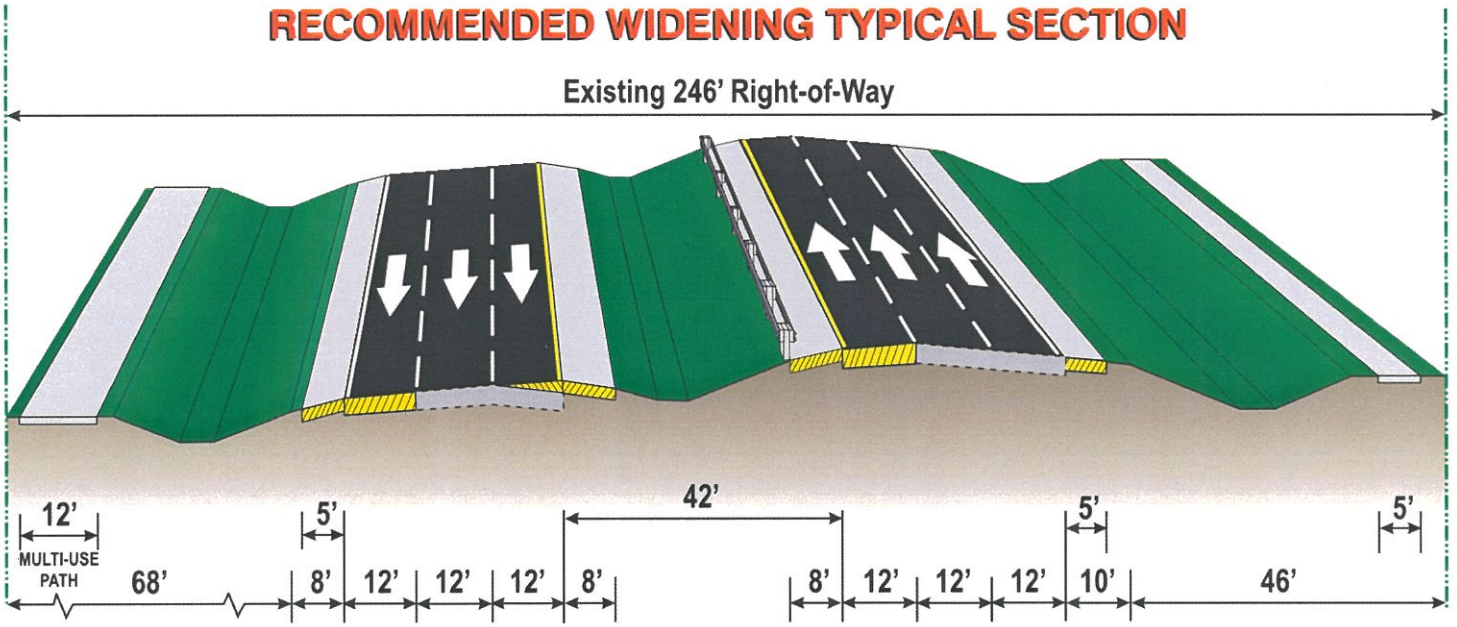
US 19 (SR 55)
PD&E STUDY
From South of US 98 to CR 488
Citrus County, Florida

PROJECT LOCATION MAP

WPI SEG NO: 405822 1
FAP: 1852 007 P

G:/COREL/PD&E/US 19 CITRUS/LHR REPORT/FIG1-11.CDR/5.18.04

RECOMMENDED WIDENING TYPICAL SECTION



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

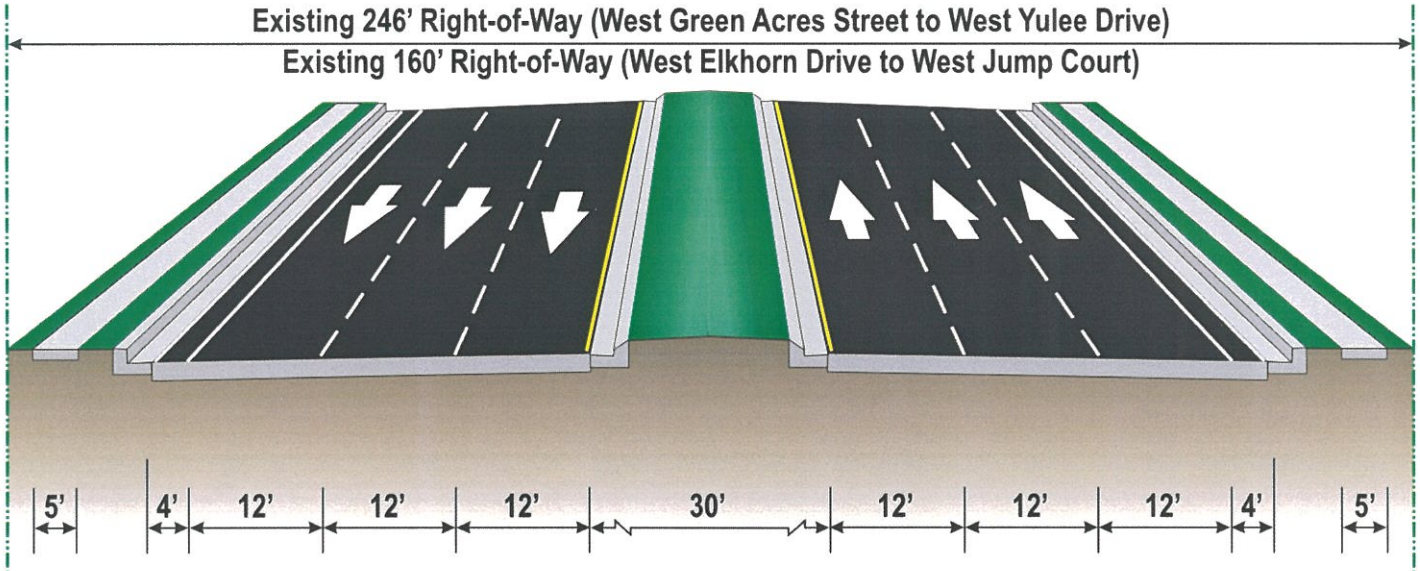
US 19 (SR 55)
PD&E STUDY
From South of US 98 to CR 488
Citrus County, Florida

RECOMMENDED WIDENING TYPICAL SECTION

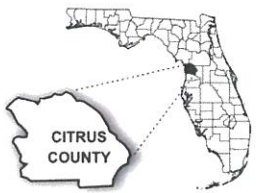
WPI SEG NO: 405822 1
FAP: 1852 007 P

G:/COREL/PD&E/US 19 CITRUS/LHR REPORT/FIG1-12.CDR/5.18.04

RECOMMENDED TYPICAL SECTION



SEGMENT 2
WEST GREEN ACRES STREET TO WEST YULEE DRIVE (CR 490)
AND WEST ELKHORN DRIVE TO WEST JUMP COURT
DESIGN SPEED 50 MPH



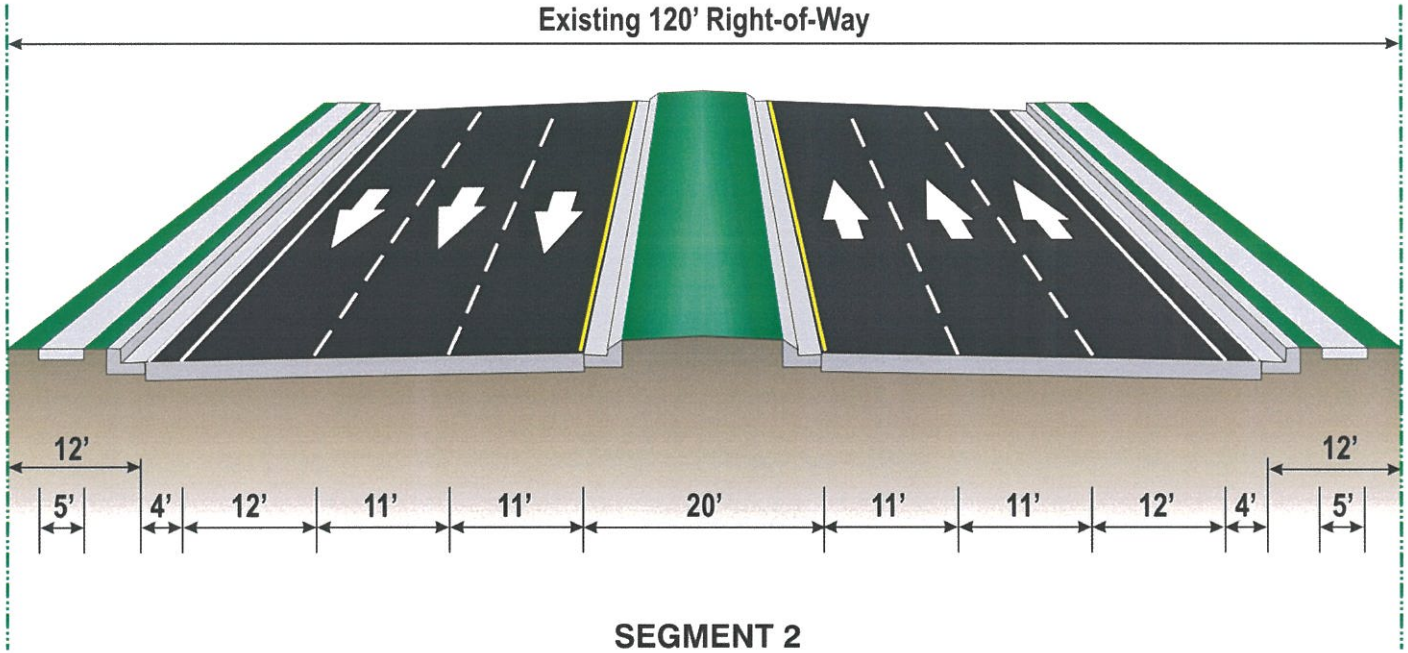
US 19 (SR 55)
PD&E STUDY
From South of US 98 to CR 488
Citrus County, Florida

RECOMMENDED TYPICAL SECTION

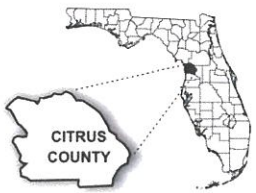
WPI SEG NO: 405822 1
FAP: 1852 007 P

G:/COREL/PD&E/US 19 CITRUS/LHR REPORT/FIG1-13.CDR/5.18.04

RECOMMENDED TYPICAL SECTION



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

RECOMMENDED TYPICAL SECTION

WPI SEG NO: 405822 1
FAP: 1852 007 P

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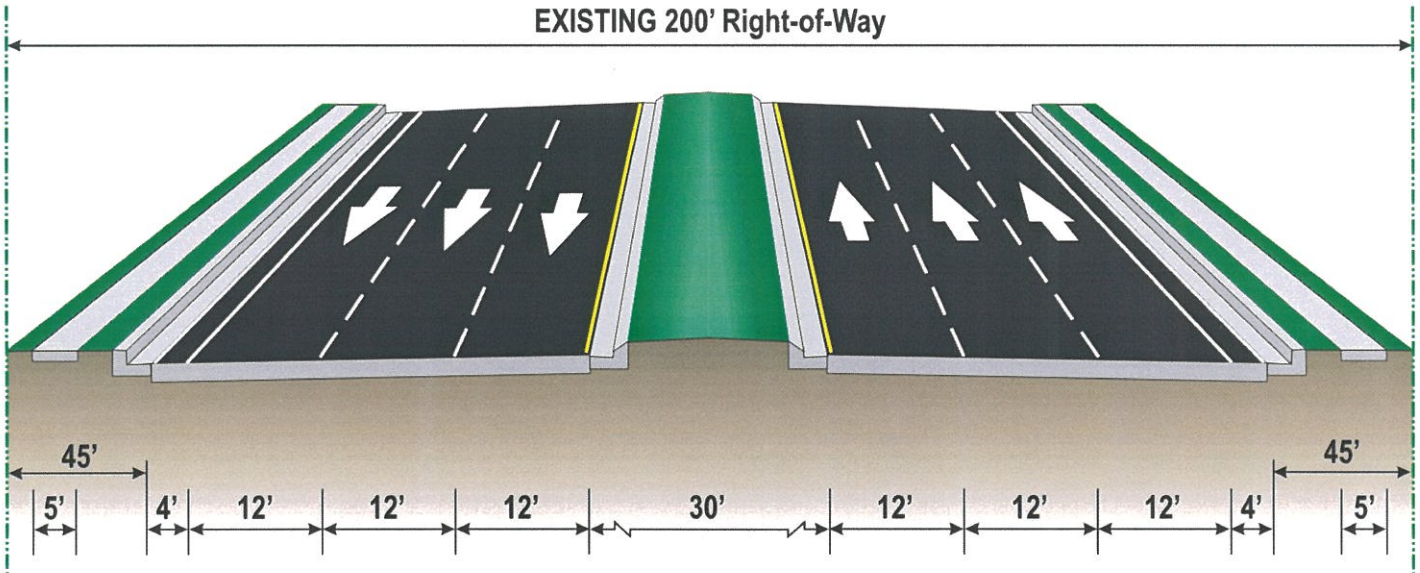
RECOMMENDED TYPICAL SECTION



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

RECOMMENDED TYPICAL SECTION

WPI SEG NO: 405822 1
FAP: 1852 007 P

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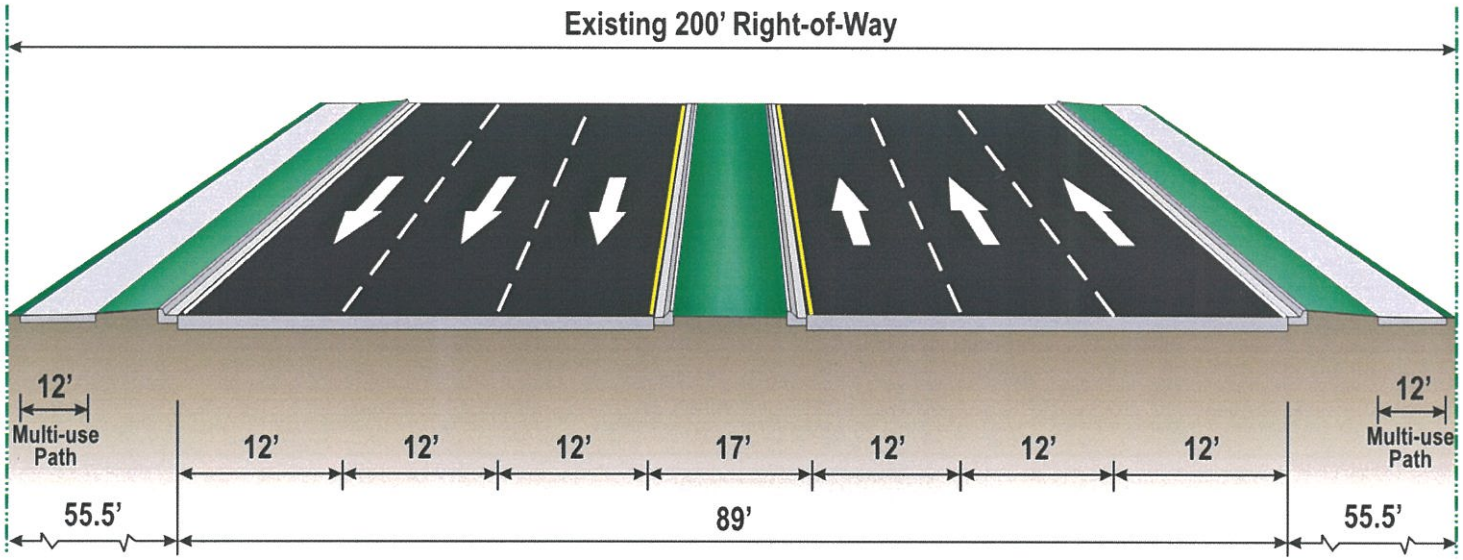
RECOMMENDED TYPICAL SECTION



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

RECOMMENDED TYPICAL SECTION

WPI SEG NO: 405822 1
FAP: 1852 007 P

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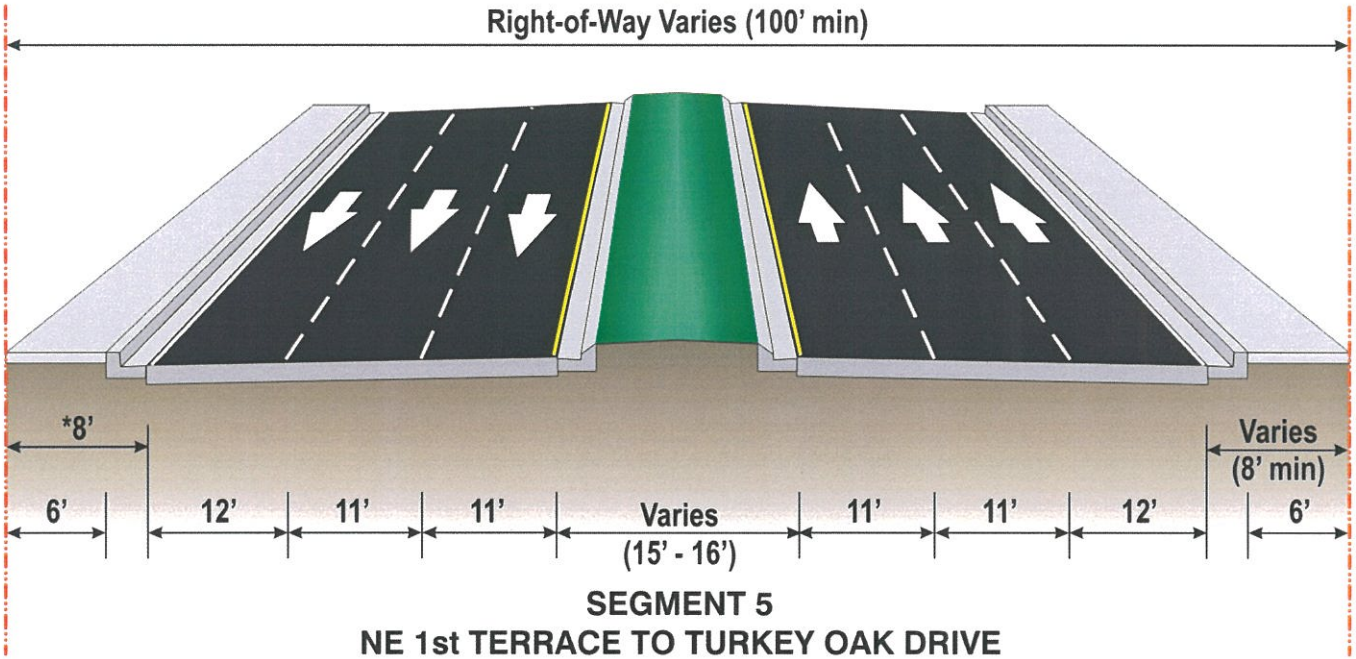


SEGMENT 5
NE 1st TERRACE TO TURKEY OAK DRIVE
DESIGN SPEED 40 MPH

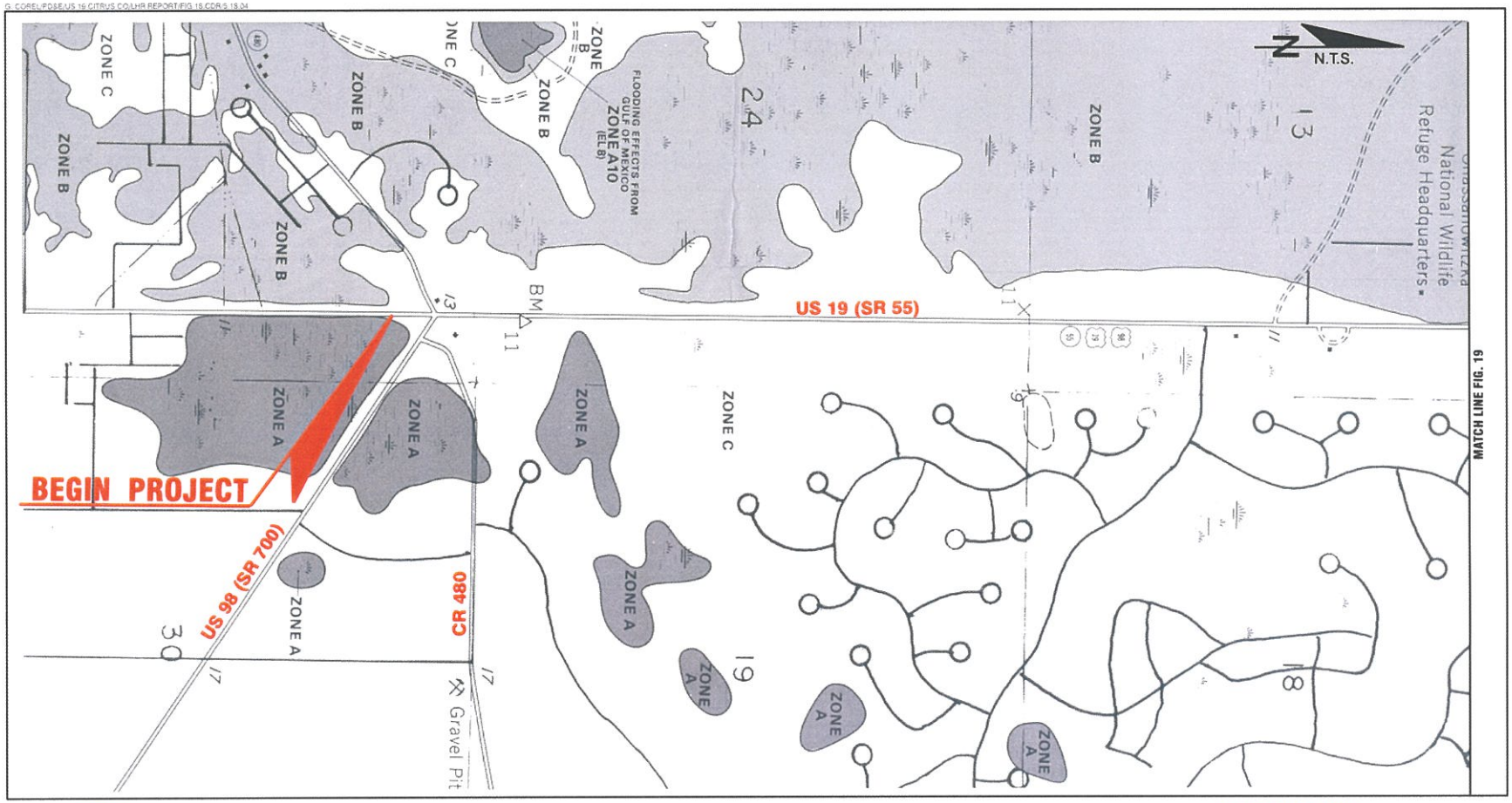
*Border width varies to accommodate gravity wall.

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

RECOMMENDED TYPICAL SECTION

WPI SEG NO: 405822 1
FAP: 1852 007 P

G:\COREL\PD&E\US 19 CITRUS CO\LHR REPORT\FIG 19.CDR/5.19.04



LEGEND

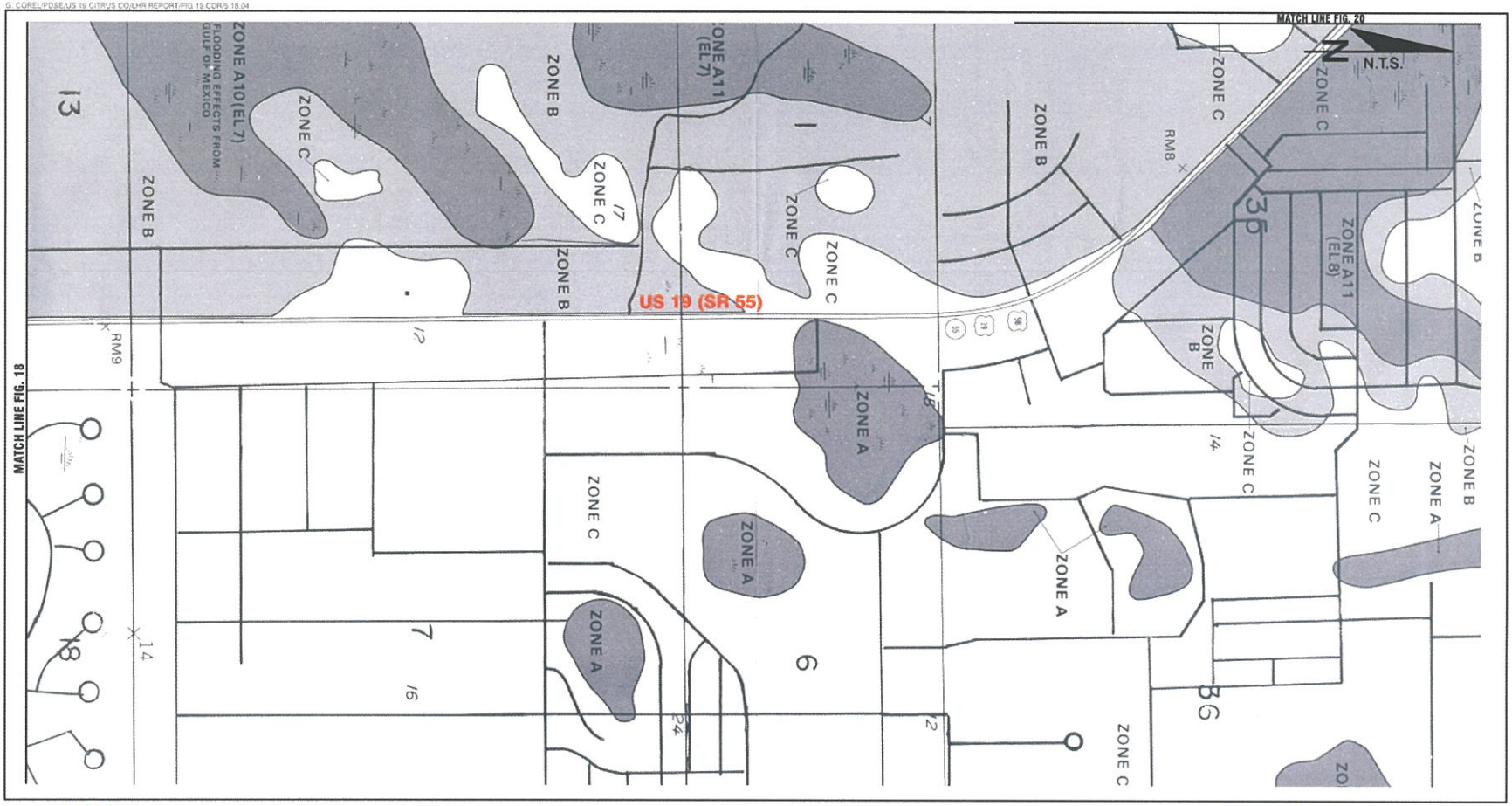
SOURCE: Federal Emergency Management Agency (F.E.M.A.)
Community-Panel Number 120063 0335B

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

F.E.M.A. MAP

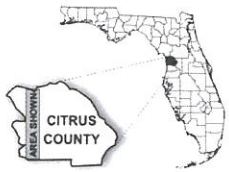
WPI SEG NO. 405822 1
FAP. 1852 007 P

G:\COREL\PD&E\US 19 CITRUS CO\LHR REPORT\FIG 19.CDR\5.18.04



LEGEND

SOURCE: Federal Emergency Management Agency (F.E.M.A.)
Community-Panel Number 120063 0220B

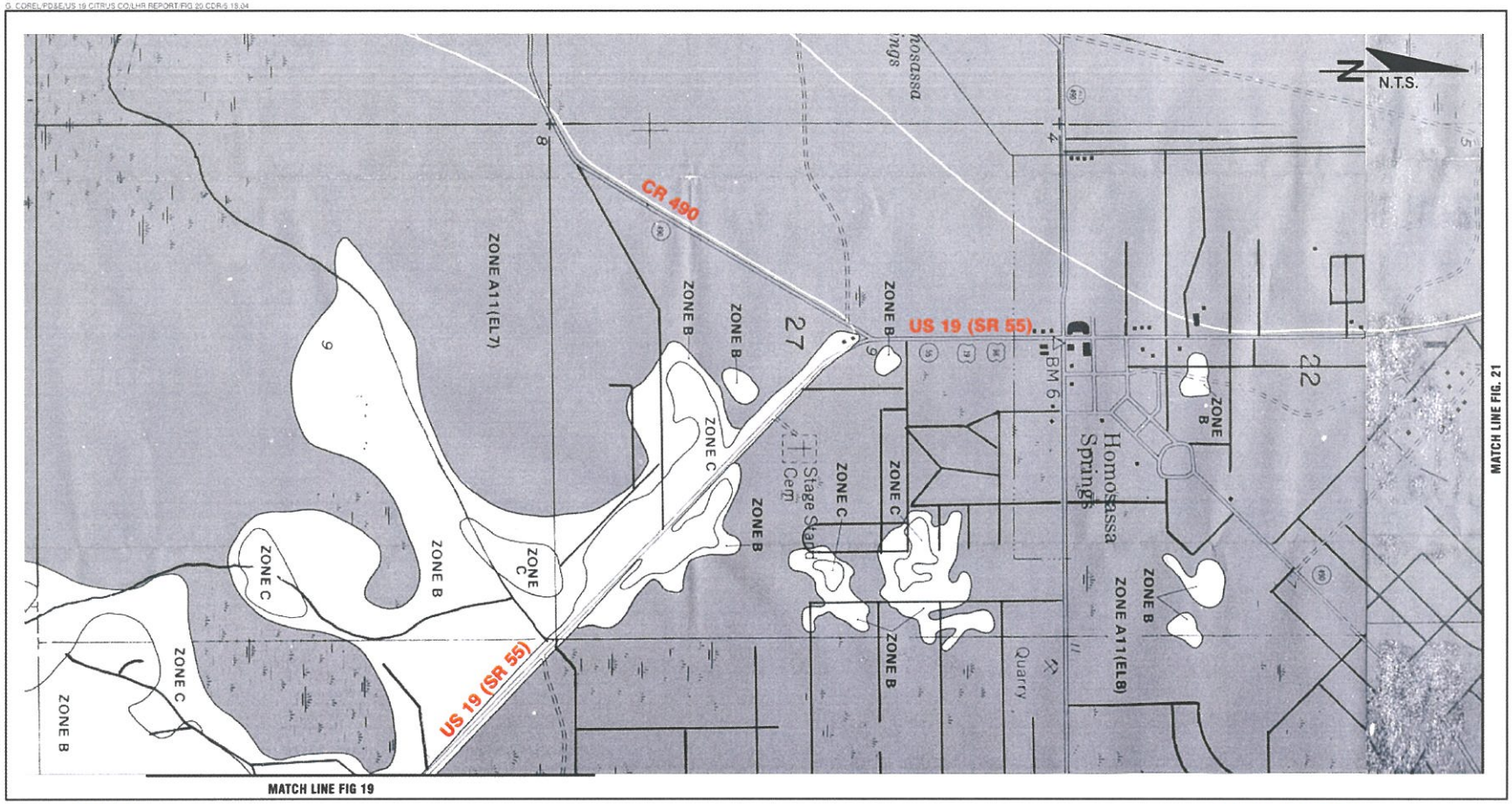


US 19 (SR 55)
PD&E STUDY
From US 98 to CR 488
Citrus County, Florida

F.E.M.A. MAP

WPI SEG NO. 405822 1
FAP. 1852 007 P

G:\COREL\PD&E\US 19 CITRUS CO\LHR REPORT\FIG 20 CDR\S 19.04



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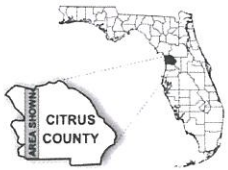
SOURCE: Federal Emergency Management Agency (F.E.M.A.)
Community-Panel Number 120063 0205 C & 120063 0215 C

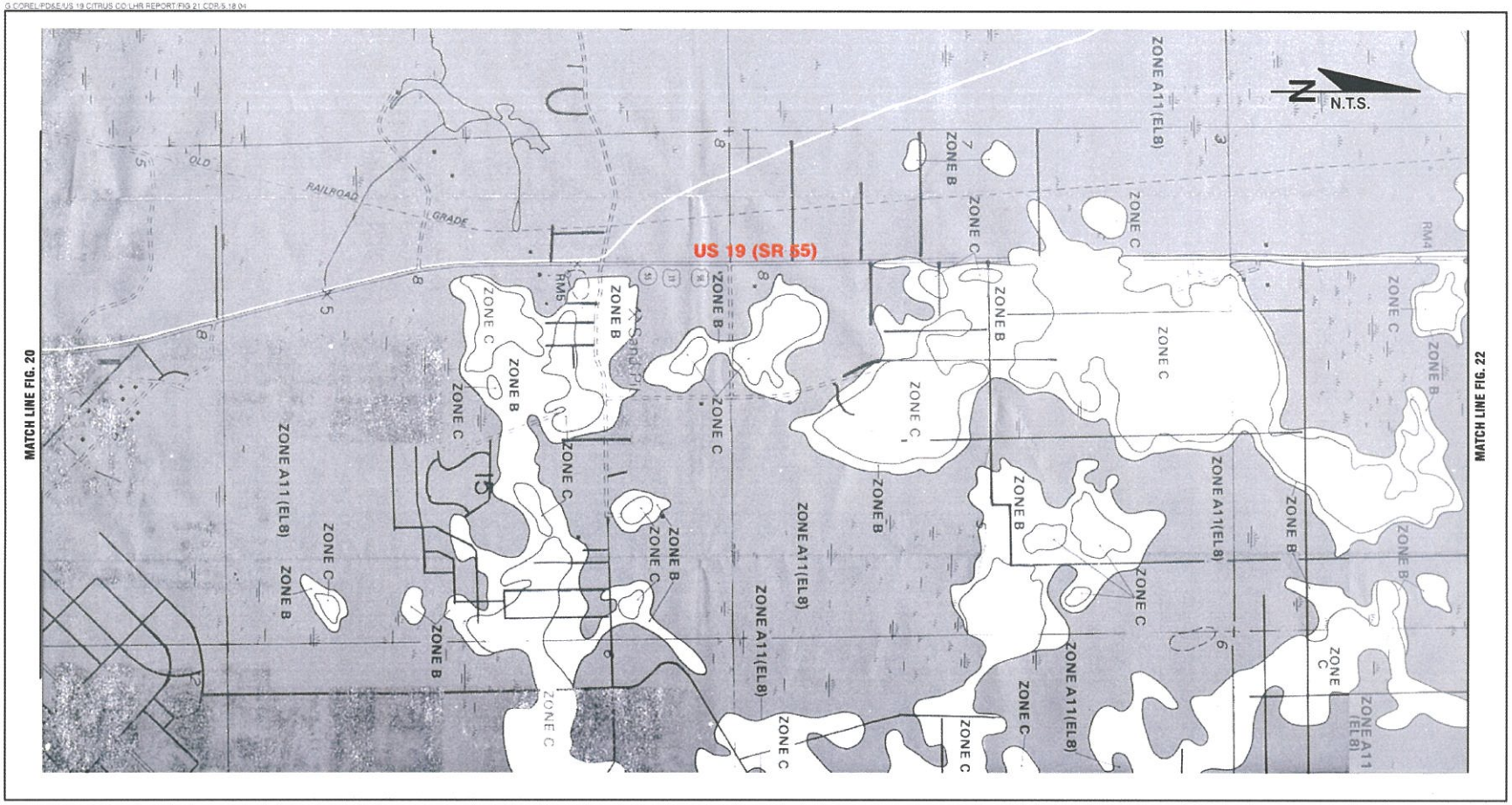


US 19 (SR 55)
PD&E STUDY
From US 98 to CR 488
Citrus County, Florida

F.E.M.A. MAP

WPI SEG NO. 405822 1
FAP: 1852 007 P

G:\COREL\PD&E\US 19 CITRUS CO\LHR REPORT\FIG 21 CDR 5.18.04



LEGEND

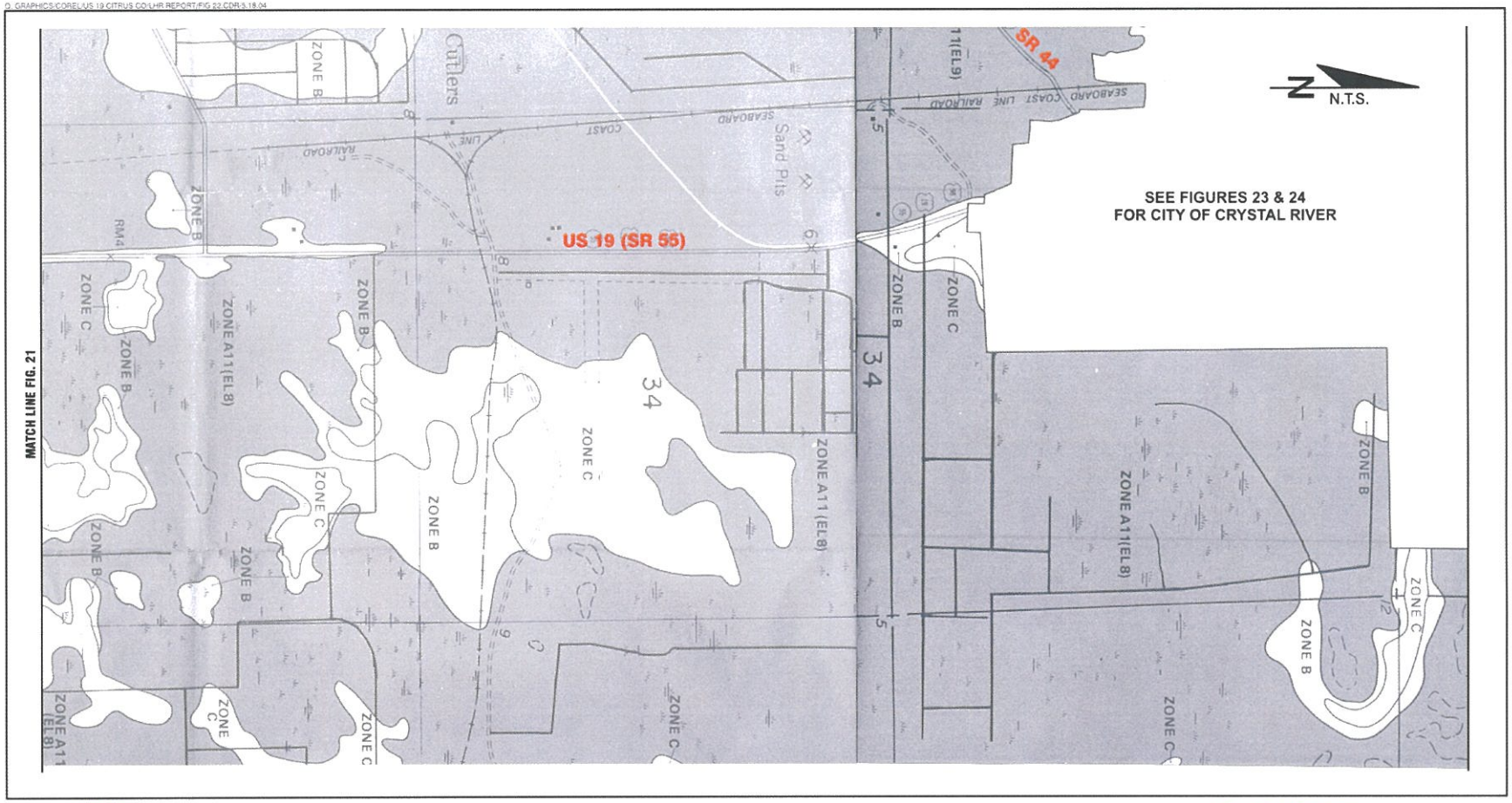
SOURCE: Federal Emergency Management Agency (F.E.M.A.)
Community-Panel Number 120063 0205 C

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

F.E.M.A. MAP

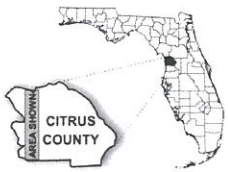
WPI SEG NO: 405822 1
FAP: 1852 007 P

G:\GRAPHICS\COREL\US 19 CITRUS CO\LHR REPORT\FIG 23.CDR\3.18.04



LEGEND

SOURCE: Federal Emergency Management Agency (F.E.M.A.)
Community-Panel Number 120063 0115 & B120063 0205 C



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

F.E.M.A. MAP

WPI SEG NO. 405822 1
FAP: 1852 007 P

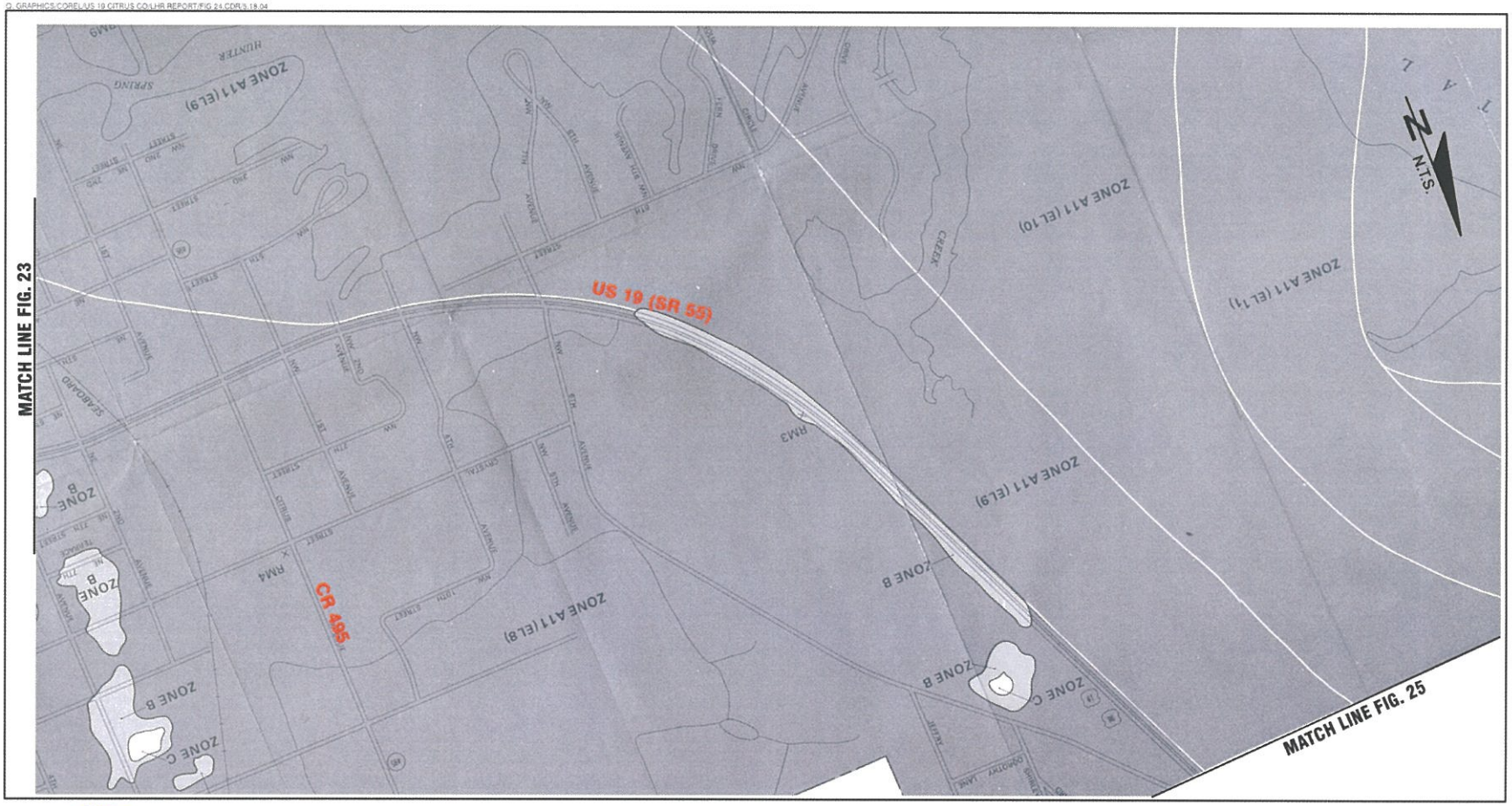
LEGEND

SOURCE: Federal Emergency Management Agency (F.E.M.A.)
Community-Panel Number 120340 0002 B (City of Crystal River)

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

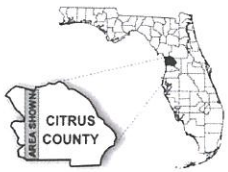
F.E.M.A. MAP

WPI SEG NO. 405822 1
FAP: 1852 007 P



LEGEND

SOURCE: Federal Emergency Management Agency (F.E.M.A.)
Community-Panel Number 120340 0002 B (City of Crystal River)

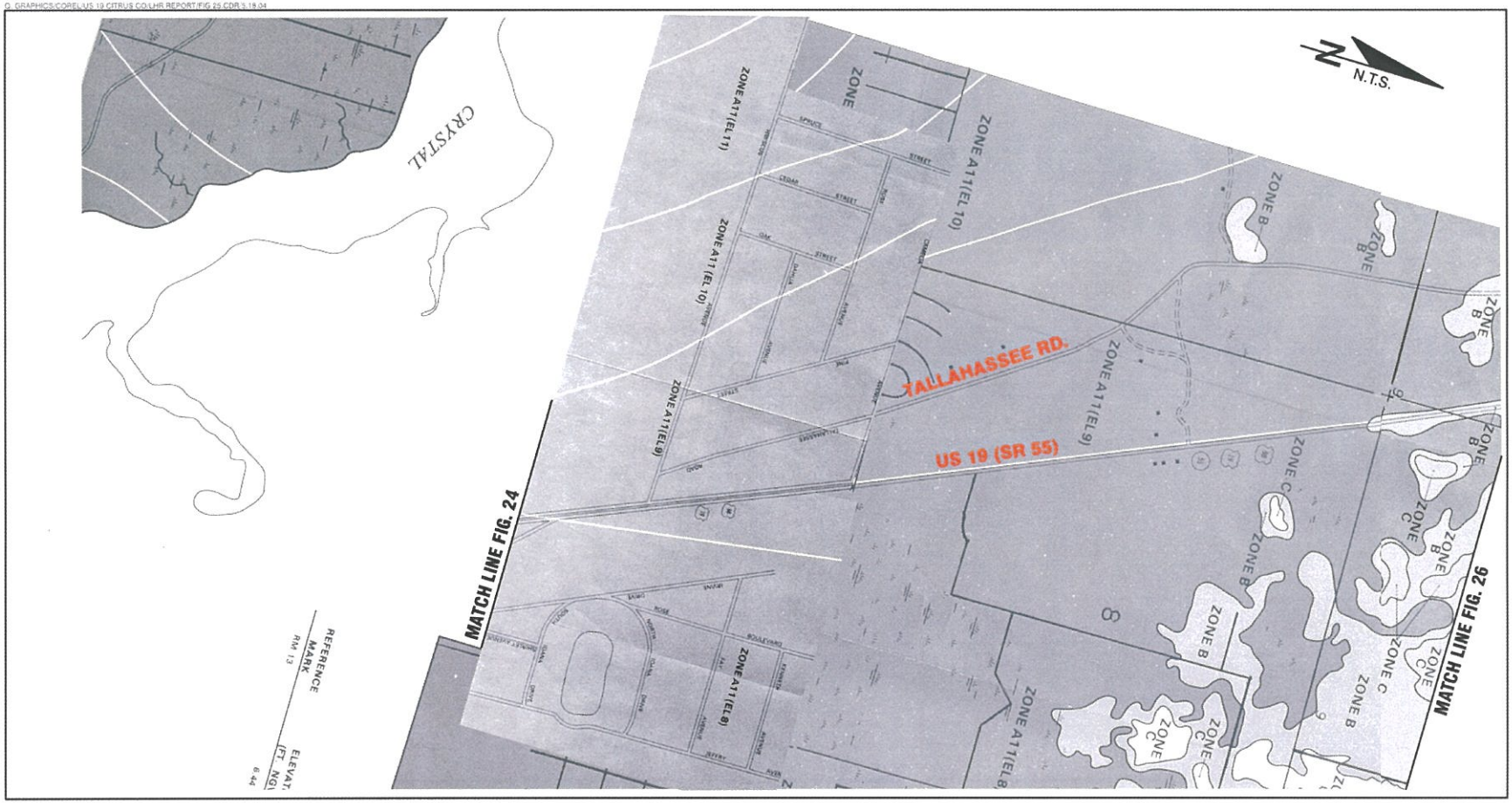


US 19 (SR 55)
PD&E STUDY
From US 98 to CR 488
Citrus County, Florida

F.E.M.A. MAP

WPI SEG NO: 405822 1
FAP: 1852 007 P

G:\GRAPHICS\COREL\US 19 CITRUS CO\LHR REPORT\FIG 25.CDR 3.18.04



LEGEND

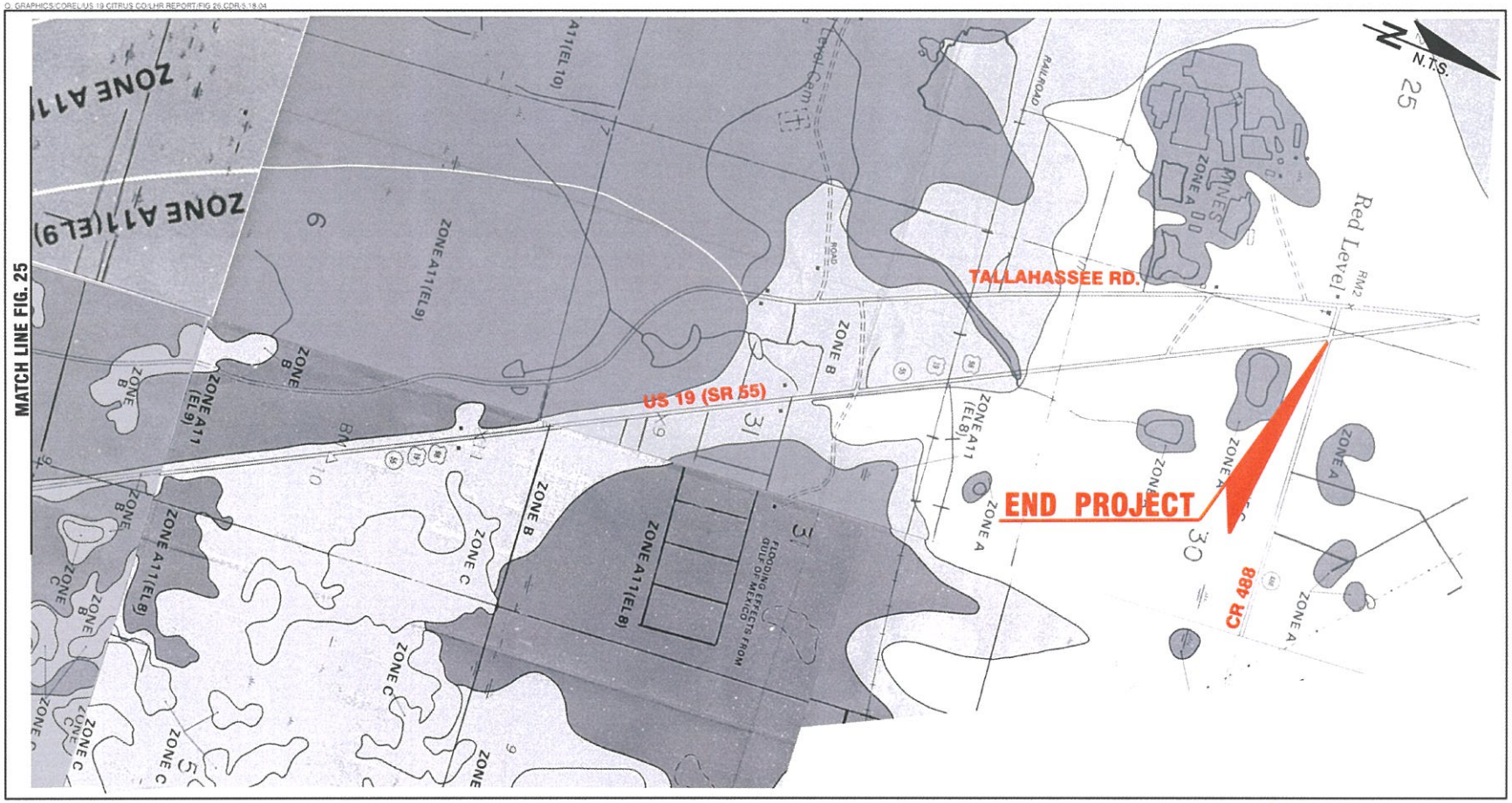
SOURCE: Federal Emergency Management Agency (F.E.M.A.)
Community-Panel Number 120340 0115 B & 120340 0001B

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

F.E.M.A. MAP

WPI SEG NO. 405822 1
FAP: 1852 007 P

G:\GRAPHICS\COREL\US 19 CITRUS CO\LHR REPORT\FIG 25.CDR/5.18.04



LEGEND

SOURCE: Federal Emergency Management Agency (F.E.M.A.)
Community-Panel Number 120063 0085 B, 120063 0105 B & 120063 0100 B

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

F.E.M.A. MAP

WPI SEG NO. 405822 1
FAP: 1852 007 P