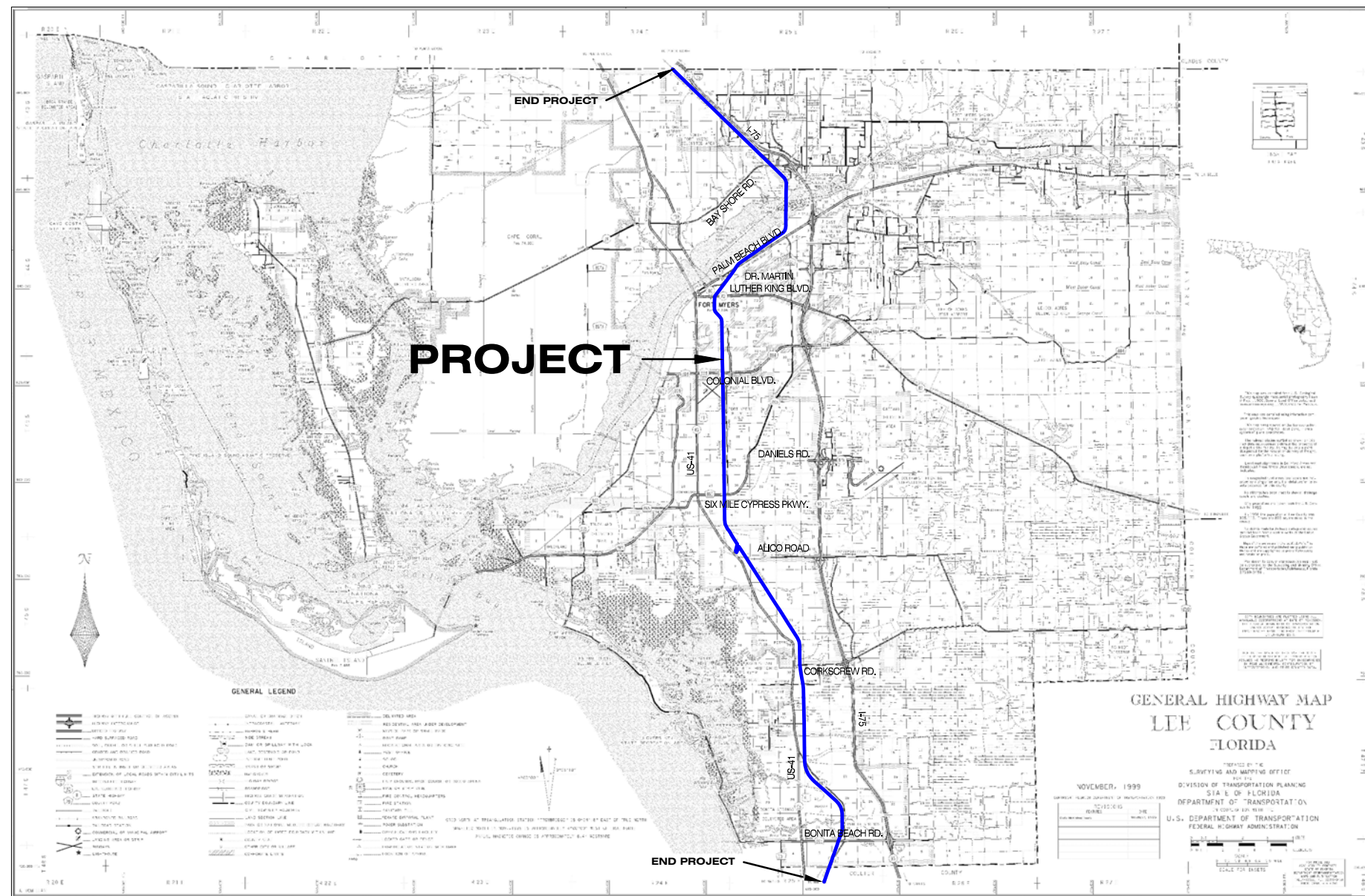


RAIL FEASIBILITY STUDY

AERIAL MAPS FOR LEE COUNTY MPO FROM COLLIER TO CHARLOTTE CO.



FINAL PLANS
JULY 29TH, 2013

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29	PLAN 43-44	64	AMERISTEEL SPUR
30	PLAN 45-46	65	HOUSE TRACK SPUR
31	PLAN 47-48	66	HOUSE TRACK SPUR
32	PLAN 49-50	67	BAKER SPUR
33	PLAN 51-52	68	BAKER SPUR
34	PLAN 53-54	69	BAKER SPUR
35	PLAN 55-56		

CLIENT:

LEE COUNTY METROPOLITAN PLANNING ORGANIZATION
815 NICHOLAS PARKWAY E.
P.O. BOX 150045
CAPE CORAL, FLORIDA 33915-0045

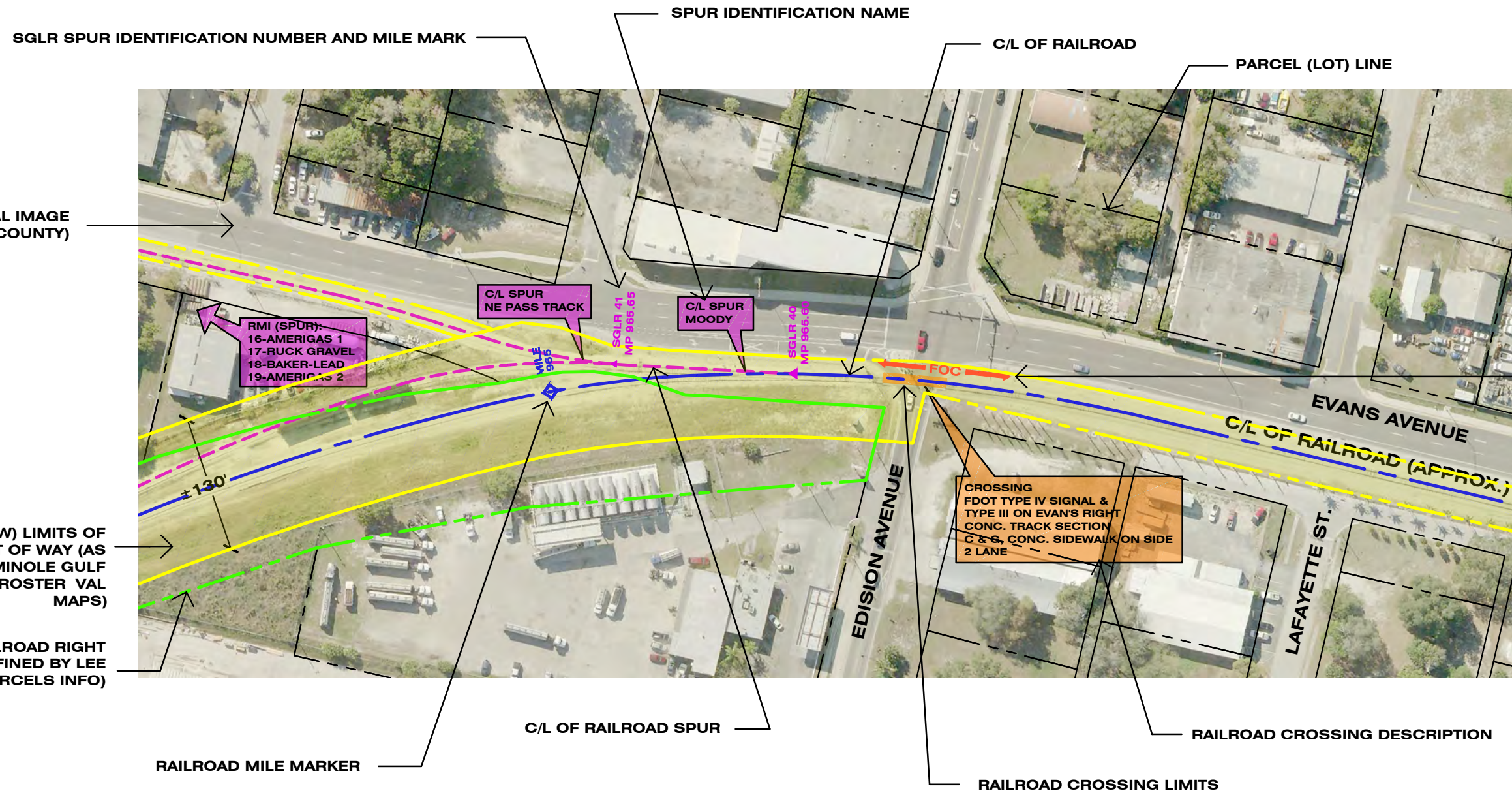
PLANS PREPARED BY:

DAVID DOUGLAS ASSOCIATES, INC.
CIVIL ENGINEERS - LAND PLANNERS - CONTRACT ADMINISTRATORS

1821 Victoria Ave, Fort Myers, Florida 33901
Ph. 239-337-3330
Web: www.ddai-engineers.com



Florida Certificate of Business # 7568

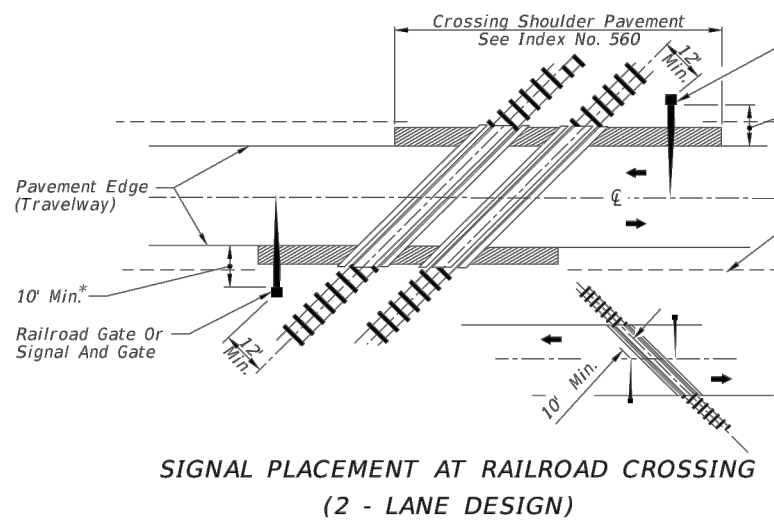


LEGEND

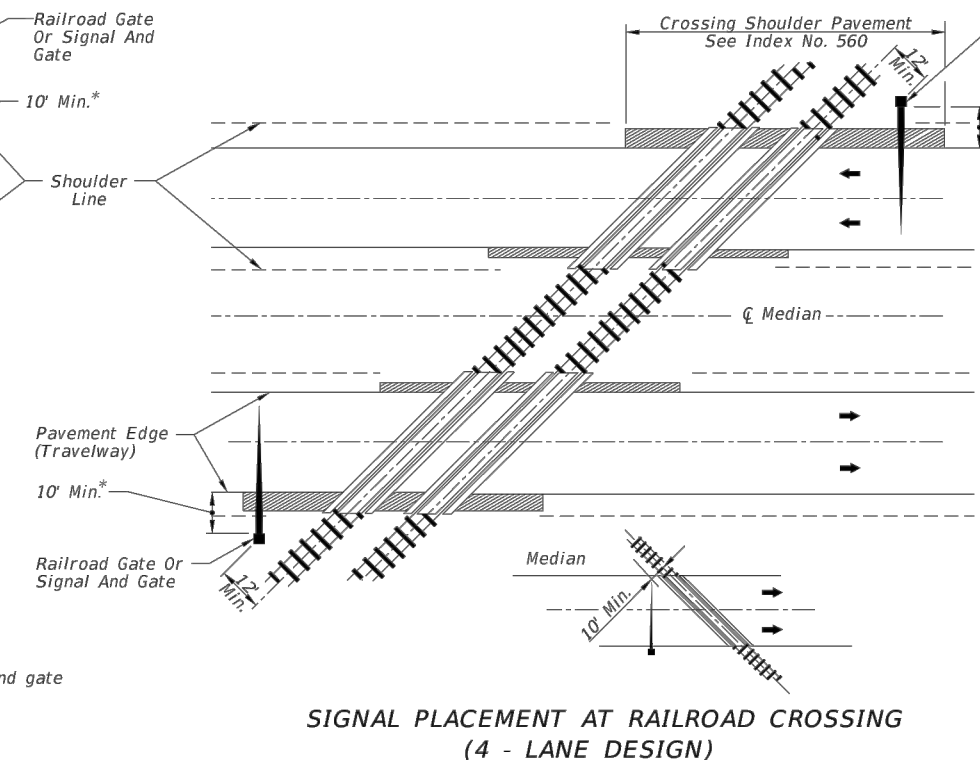
RAIL FEASIBILITY STUDY



DAVID DOUGLAS ASSOCIATES, INC.



**SIGNAL PLACEMENT AT RAILROAD CROSSING
(2 - LANE DESIGN)**



**SIGNAL PLACEMENT AT RAILROAD CROSSING
(4 - LANE DESIGN)**

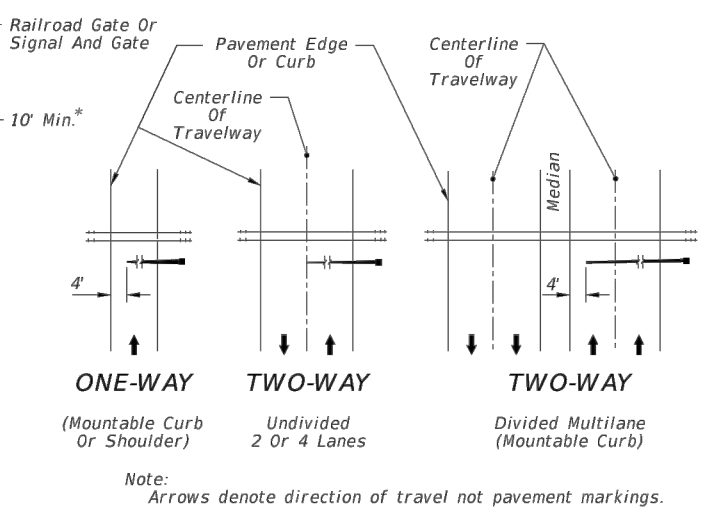


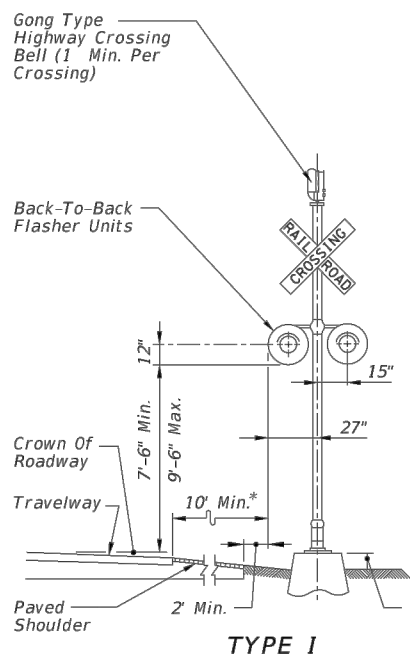
FIGURE 1
Gate Length Requirements
See Note 5 Sheet 3

General Notes

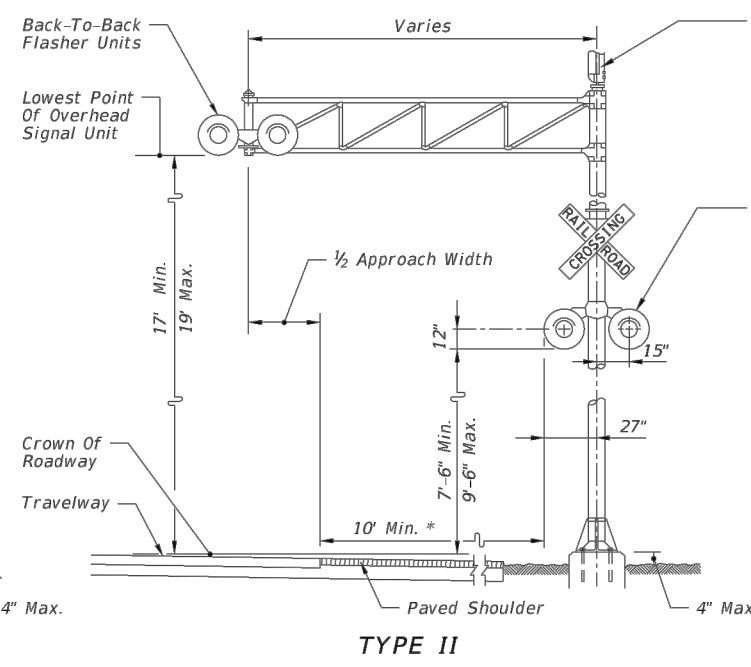
- No guardrail is proposed for signals; however, some form of impact attenuation device may be specified for certain locations.
- Advance flasher to be installed when and if called for in plans or specifications.
- Top of foundation shall be no higher than 4" above finished shoulder grade.
- Type of traffic control device
 - Flashing signals
 - Flashing signals with cantilever
 - Flashing signals with gate
 - Flashing signals with cantilever and gate
 - Gate
- Class of traffic control devices
 - Flashing signals-one track
 - Flashing signals-multiple tracks
 - Flashing signals and gates-one track
 - Flashing signals and gates-multiple tracks

Note: Two separate foundations may be required (one for signals, one for gate), depending on type of equipment used.

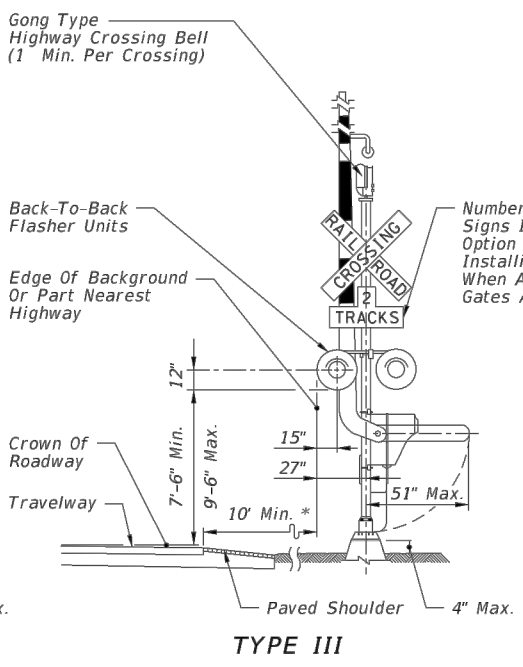
* When 10' is deemed impracticable the control device can be located as close as 2' from the edge of a paved shoulder but not less than 6' from the edge of the near traffic lane.



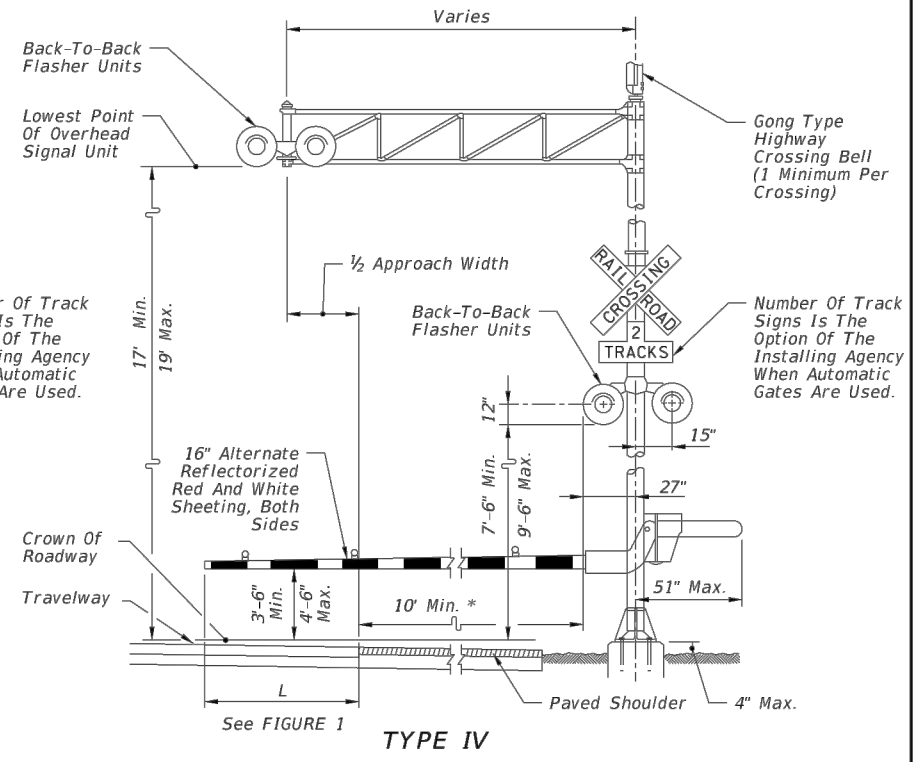
TYPE I



TYPE II



TYPE III



TYPE IV

LAST REVISION 01/01/11	REVISION	DESCRIPTION:		FDOT DESIGN STANDARDS FY 2012/2013	RAILROAD GRADE CROSSING TRAFFIC CONTROL DEVICES	INDEX NO.	SHEET NO.
						17882	1

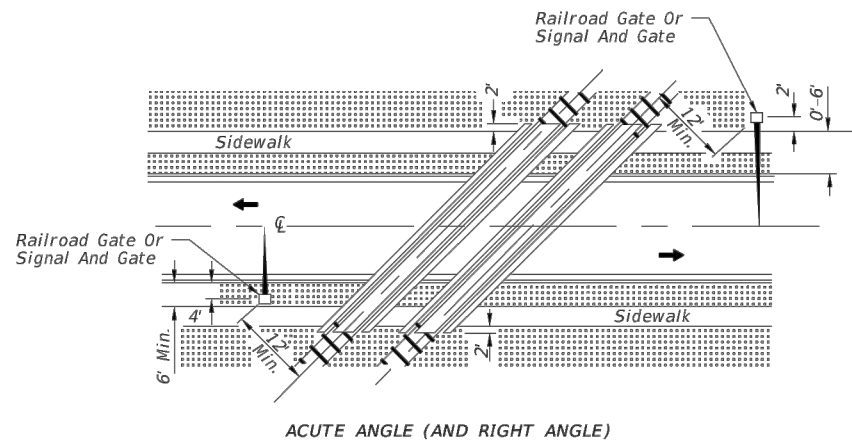
Crossing Details - Rural Section

RAIL FEASIBILITY STUDY

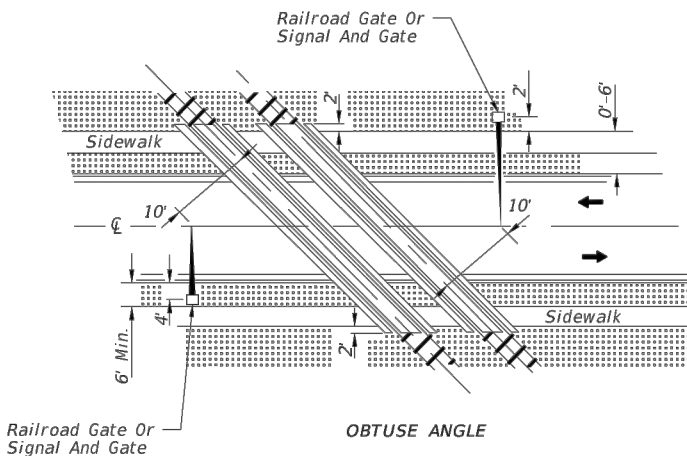
DAVID DOUGLAS ASSOCIATES, INC.



SHEET 4



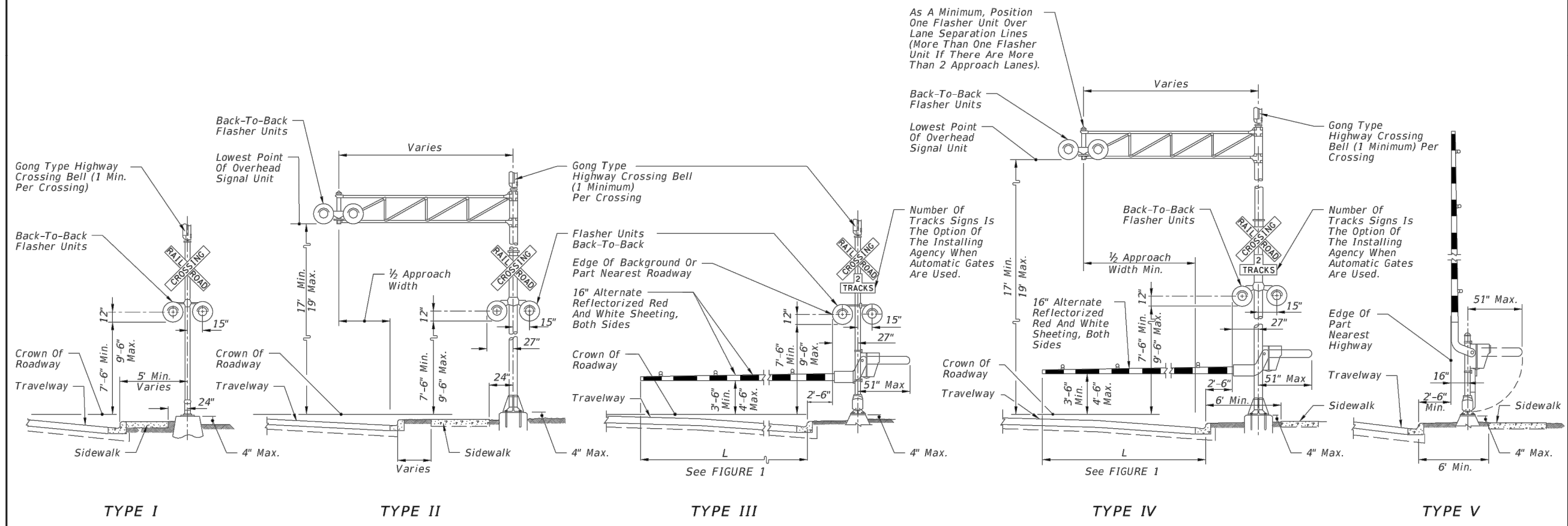
ACUTE ANGLE (AND RIGHT ANGLE)
SIGNAL PLACEMENT AT RAILROAD CROSSING
(2 LANES, CURB & GUTTER)




OBTUSE ANGLE
SIGNAL PLACEMENT AT RAILROAD CROSSING
(2 LANES, CURB & GUTTER)

GENERAL NOTES

1. The location of flashing signals and stop lines shall be established based on future (or present) installation of gate with appropriate track clearances.
2. Where plans call for railroad traffic control devices to be installed in curbed medians, the minimum median width shall be 12'-6\".
3. Location of railroad traffic control device is based on the distance available between face of curb & sidewalk. 0' to 6' - Locate device outside sidewalk. Over 6' - Locate device between face of curb and sidewalk.
4. Stop line to be perpendicular to edge of roadway, approx. 15' from nearest rail; or 8' from and parallel to gate when present.
5. When a cantilevered-arm flashing-light signal is used, the minimum vertical clearance shall be 17' from above the Crown of Roadway to the Lowest Point of the Overhead Signal Unit.



LAST REVISION 01/01/11	REVISION	DESCRIPTION:	 FDOT DESIGN STANDARDS FY 2012/2013	RAILROAD GRADE CROSSING TRAFFIC CONTROL DEVICES	INDEX NO. 17882	SHEET NO. 2

Crossing Details - Urban Section

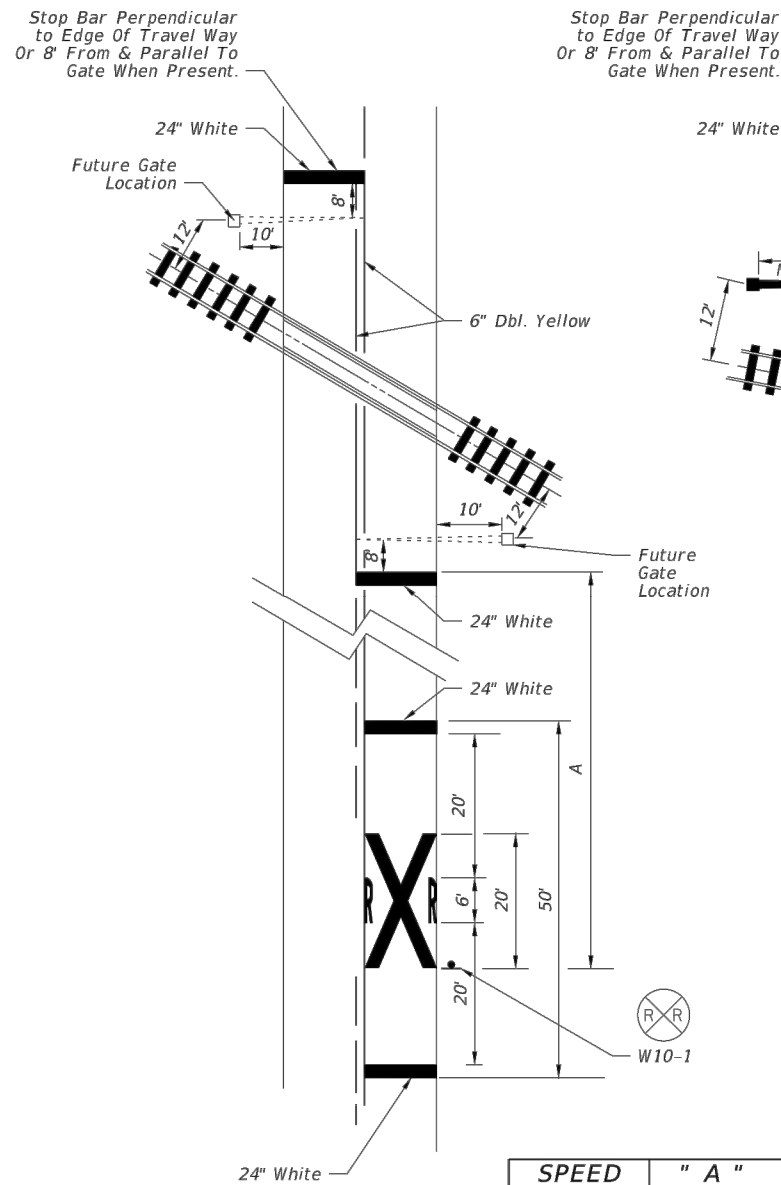
RAIL FEASIBILITY STUDY

DAVID DOUGLAS ASSOCIATES, INC.



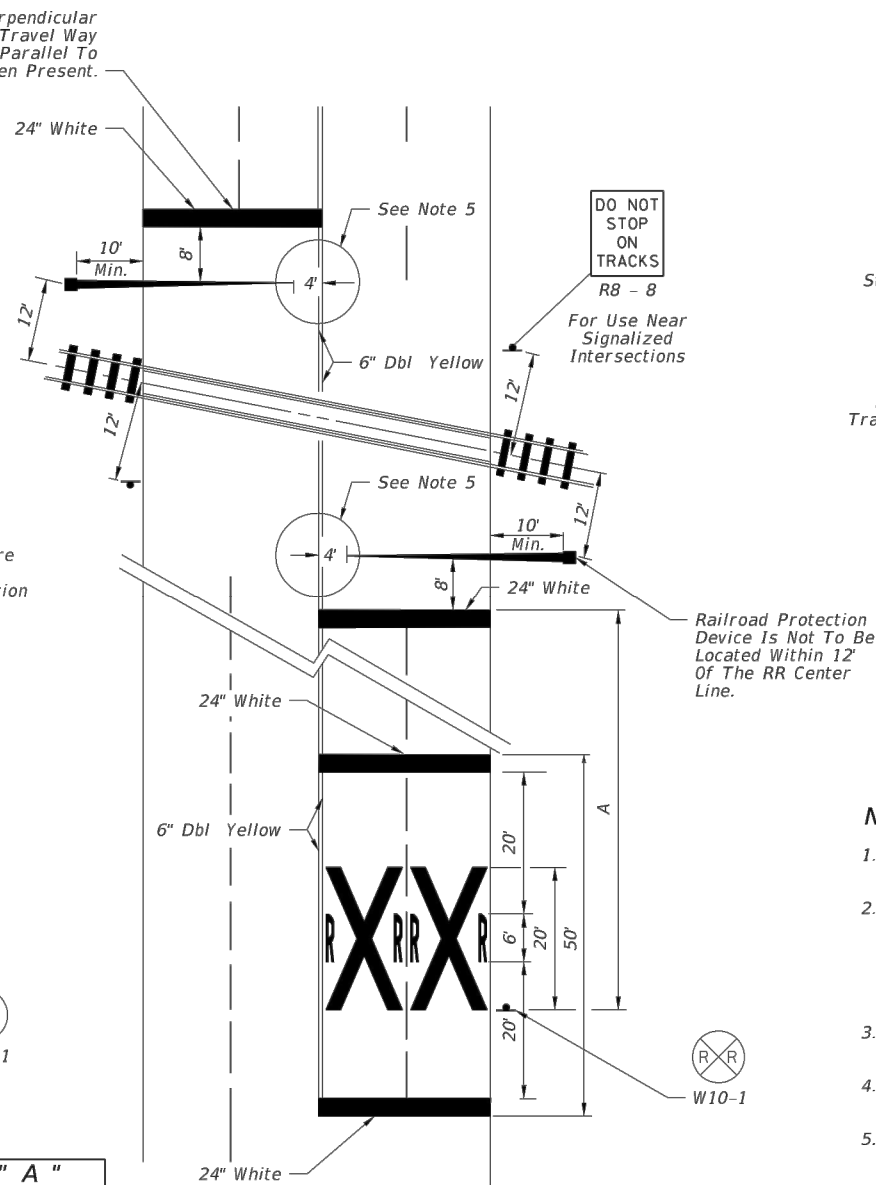
SHEET 5

RAILROAD CROSSING AT TWO (2)-LANE ROADWAY

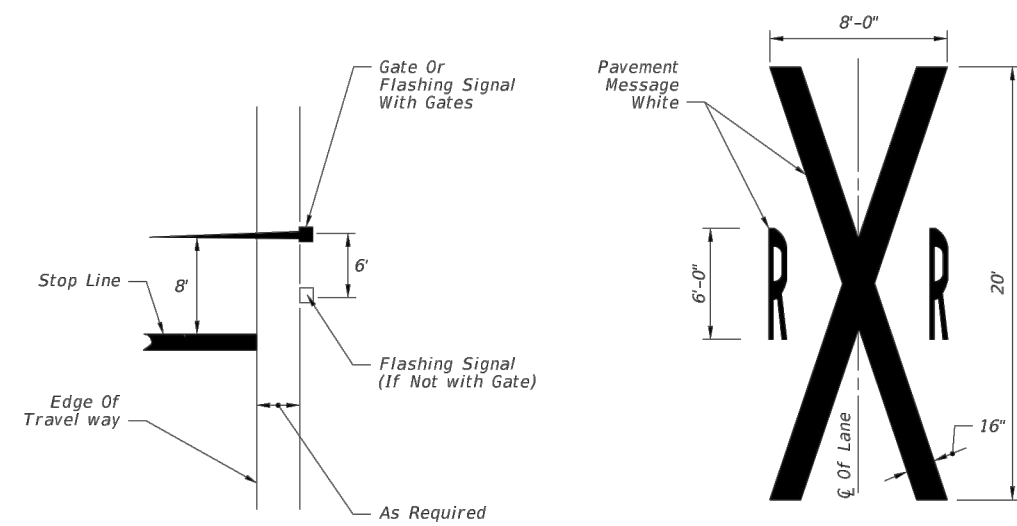


SPEED (mph)	" A " (ft)
60	400
55	325
50	250
45	175
40	125
35	100
URBAN	85 MIN.

RAILROAD CROSSING AT MULTILANE ROADWAY

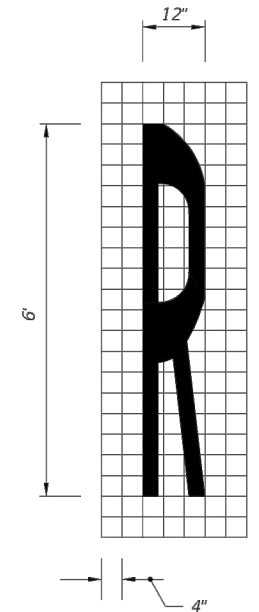


RELATIVE LOCATION OF CROSSING TRAFFIC CONTROL DEVICES



NOTES:

1. When computing pavement message, quantities do not include traverse lines.
2. Placement of sign W10-1 in a residential or business district, where low speeds are prevalent, the W10-1 sign may be placed a minimum distance of 100' from the crossing. Where street intersections occur between the RR pavement message and the tracks an additional W10-1 sign and additional pavement message should be used.
3. A portion of the pavement markings symbol should be directly opposite the W10-1 sign.
4. Recommended location for FTP-61-06 or FTP-62-06 signs, 100' urban and 300' rural. See Index 17355 for sign details.
5. Gate Length Requirements:
 For Two-way undivided sections:
 The gate should extend to within 1' of the center line. On multiple approaches the maximum gate length may not reach to within 1' of the center line. For those cases, the distance from the gate to the center line shall be a maximum of 4'.
 For one-way or divided sections:
 The gate shall be of sufficient length such that the distance from the gate tip to the inside edge of pavement is a maximum of 4'.



LAST REVISION 07/01/10

DESCRIPTION:



FDOT DESIGN STANDARDS
FY 2012/2013

RAILROAD GRADE CROSSING
TRAFFIC CONTROL DEVICES

INDEX NO. 17882

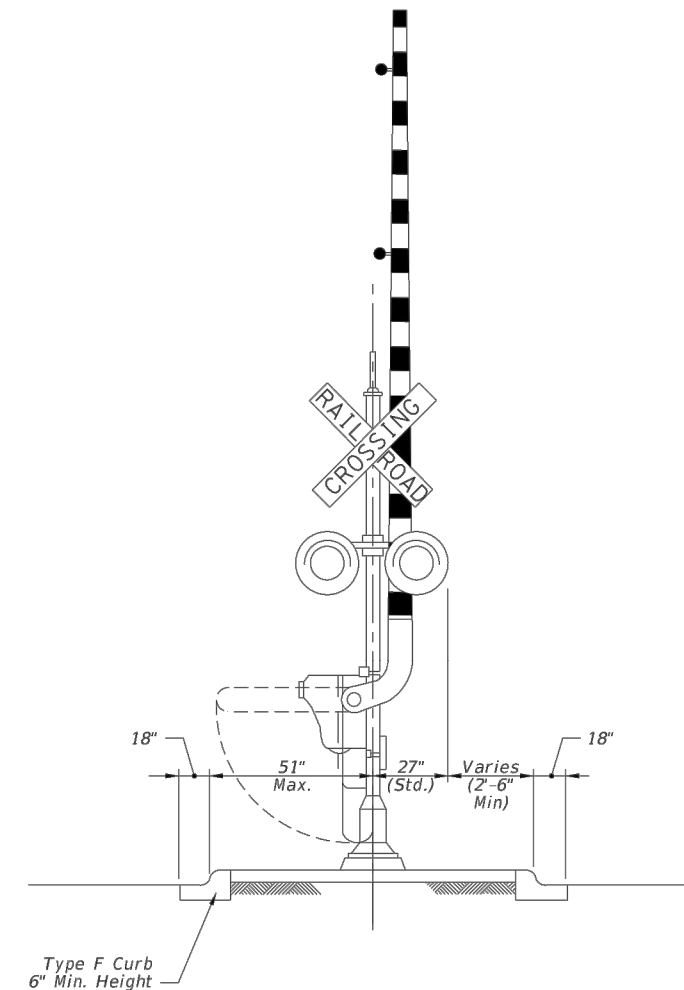
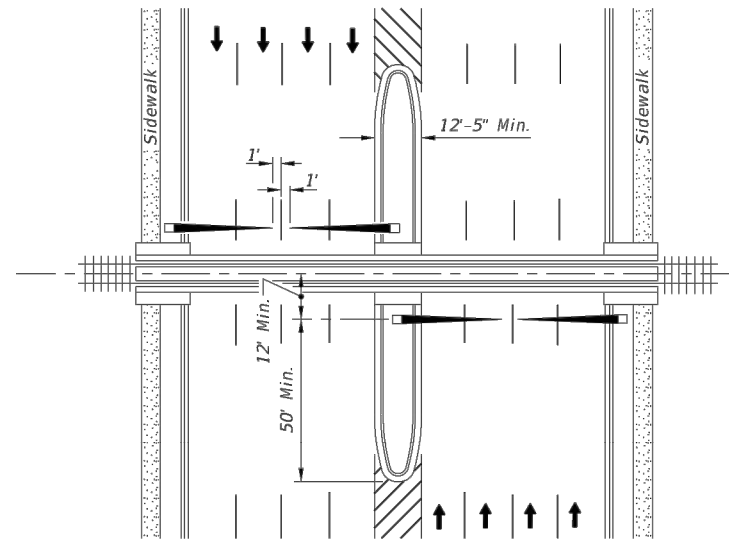
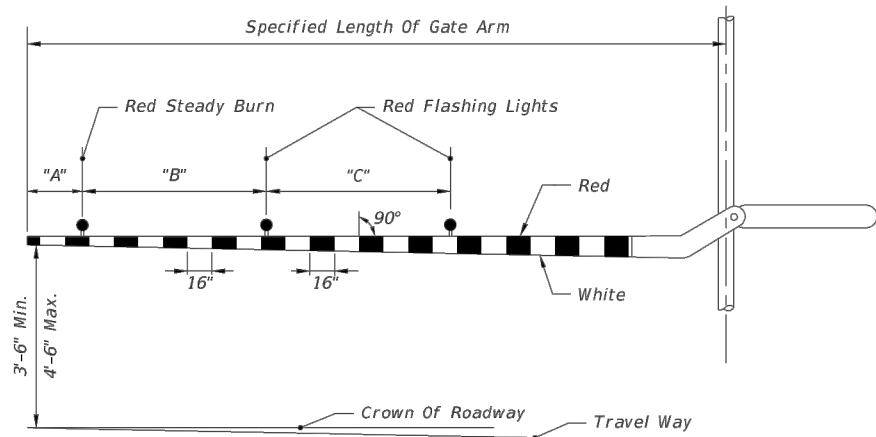
SHEET NO. 3

Crossing Details - Signing & Markings

RAIL FEASIBILITY STUDY

DAVID DOUGLAS ASSOCIATES, INC.

SHEET 6



RAILROAD GATE ARM LIGHT SPACING

Specified Length Of Gate Arm	Dimension "A"	Dimension "B"	Dimension "C"
14 Ft.	6"	36"	5'
15 Ft.	18"	36"	5'
16-17 Ft.	24"	36"	5'
18-19 Ft.	28"	41"	5'
20-23 Ft.	28"	4'	5'
24-28 Ft.	28"	5'	5'
29-31 Ft.	36"	6'	6'
32-34 Ft.	36"	7'	7'
35-37 Ft.	36"	9'	9'
38 And Over	36"	10'	10'

NOTE:
For additional information see the "Manual On Uniform Traffic Control Devices", Part 8; The "Traffic Control Handbook", Part VIII; and AASHTO "A Policy On Geometric Design Of Streets And Highways".

MEDIAN SIGNAL GATES FOR

MULTILANE UNDIVIDED URBAN SECTIONS

(THREE OR MORE DRIVING LANES IN ONE DIRECTION, 45 MPH OR LESS)

MEDIAN SECTION AT SIGNAL GATES

LAST REVISION
01/01/12

REVISION DESCRIPTION:



FDOT DESIGN STANDARDS
FY 2012/2013

RAILROAD GRADE CROSSING
TRAFFIC CONTROL DEVICES

INDEX NO.
17882

SHEET NO.
4

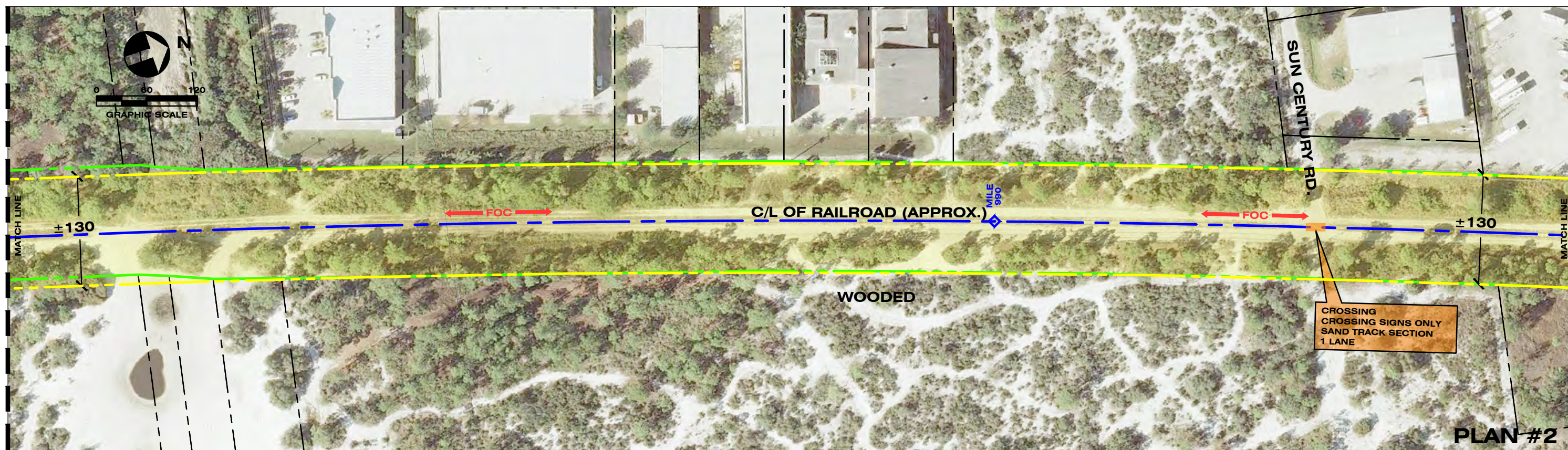
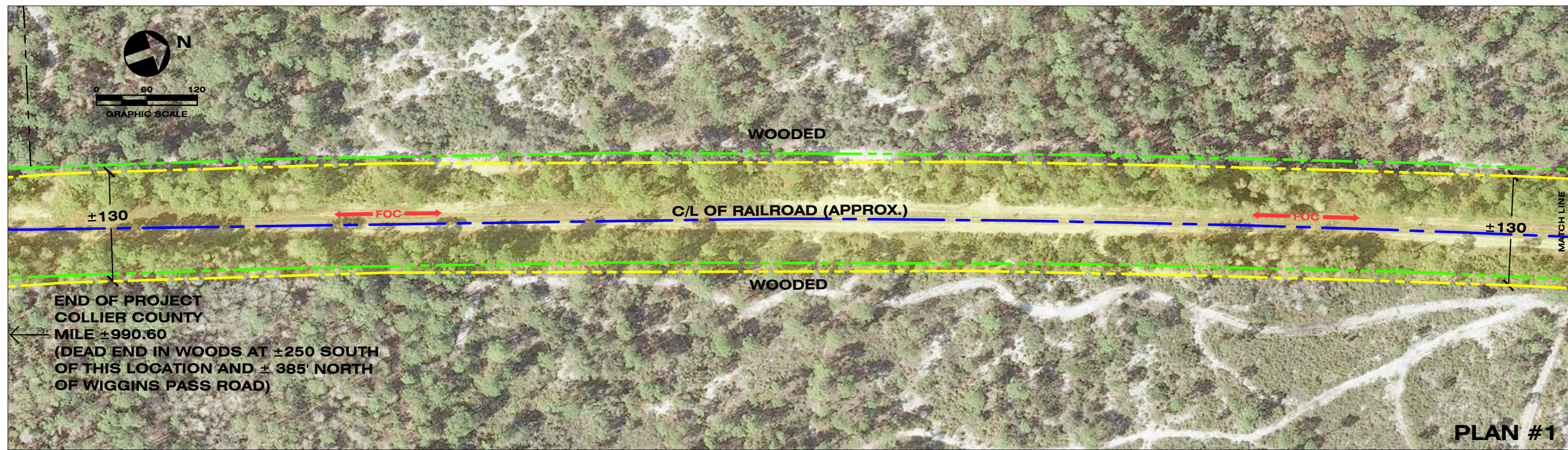
Crossing Details - Signal Gate

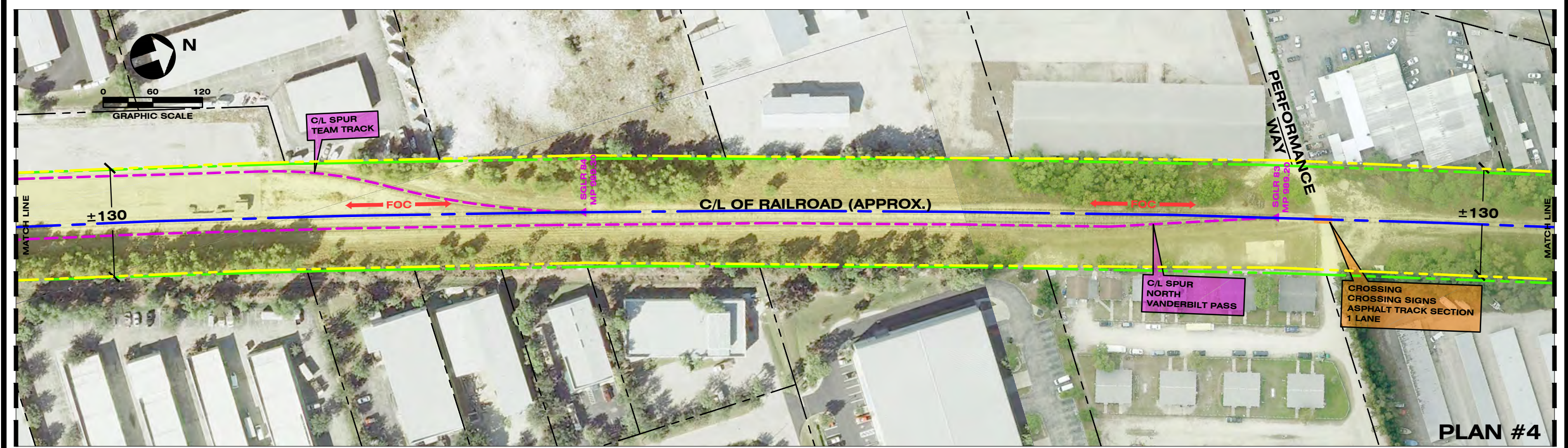
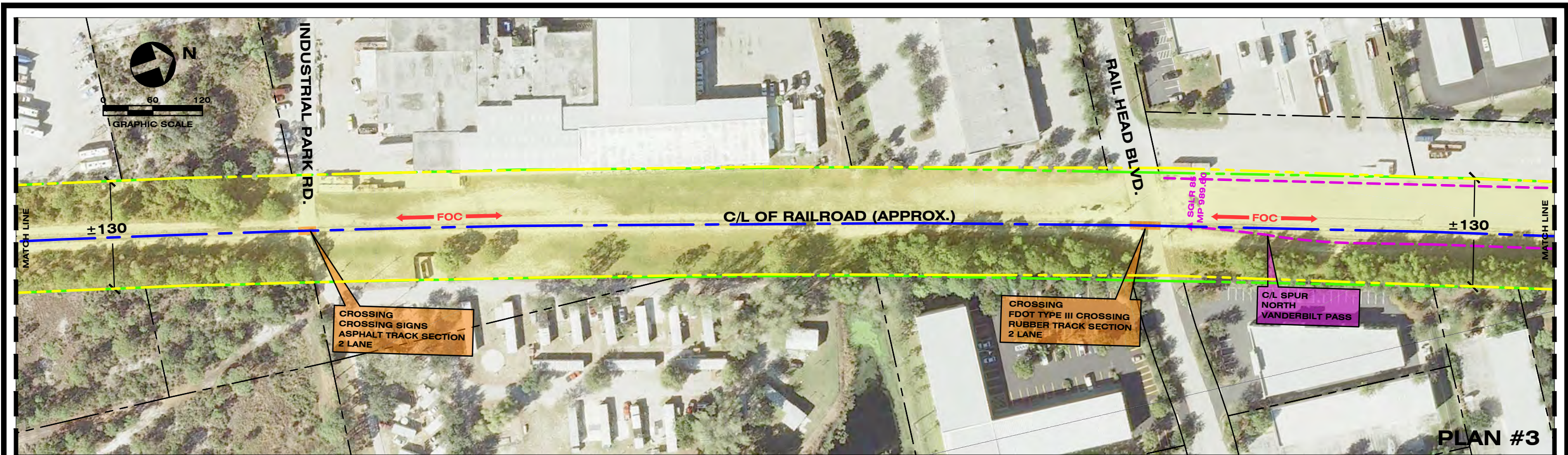
RAIL FEASIBILITY STUDY

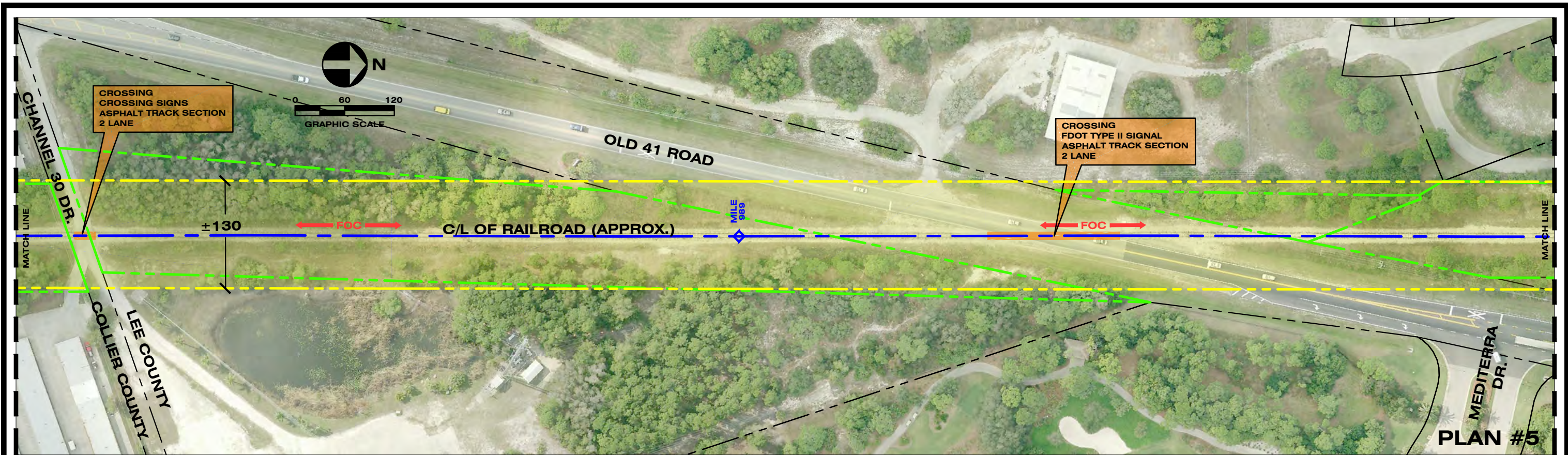


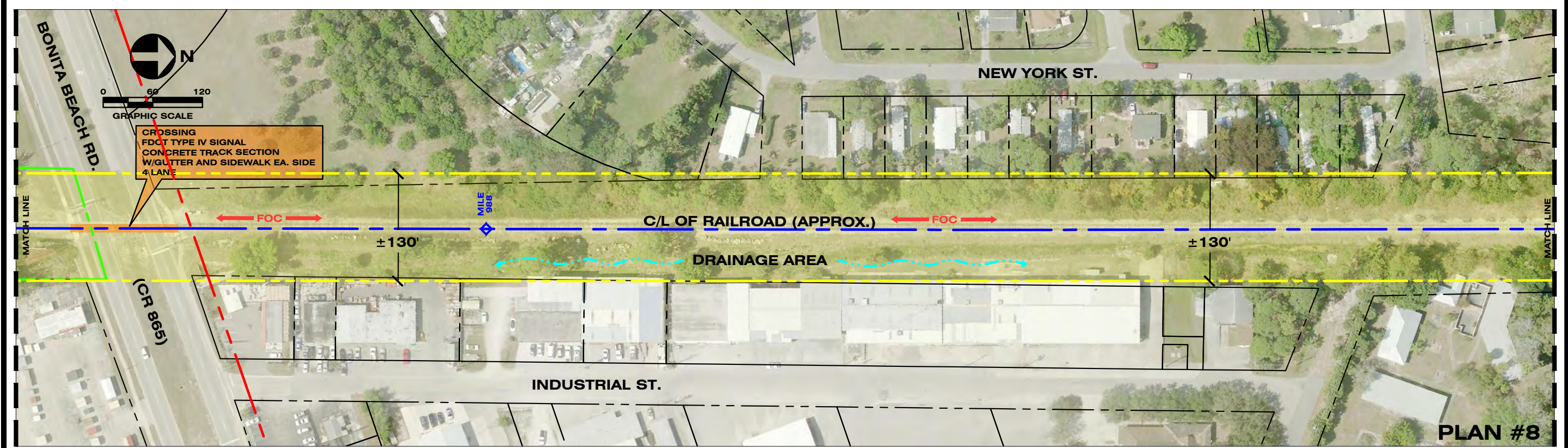
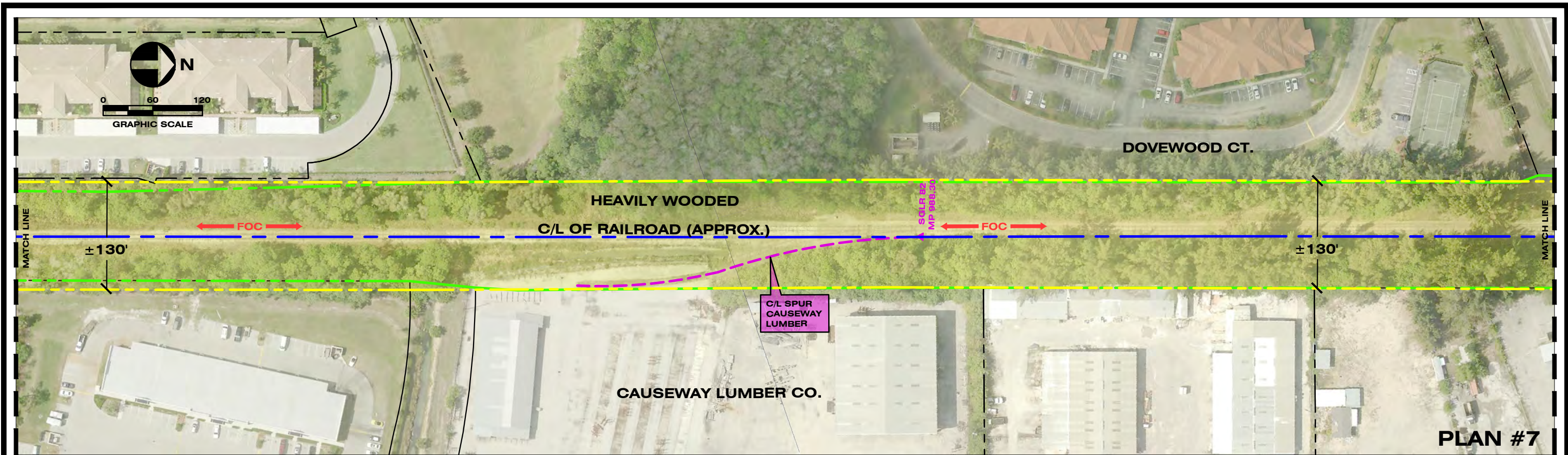
DAVID DOUGLAS ASSOCIATES, INC.

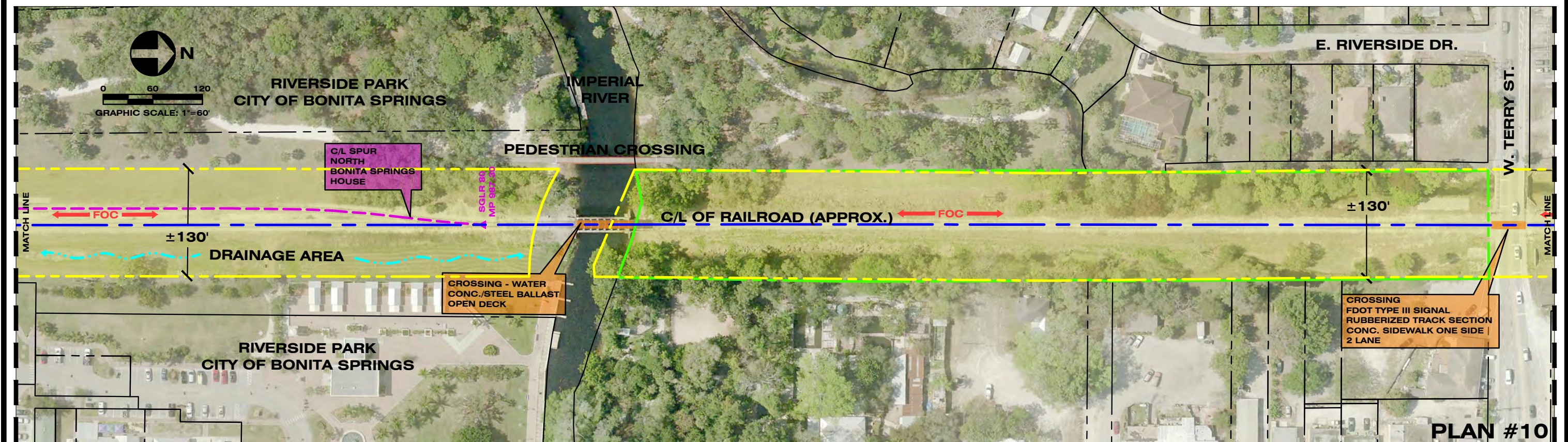
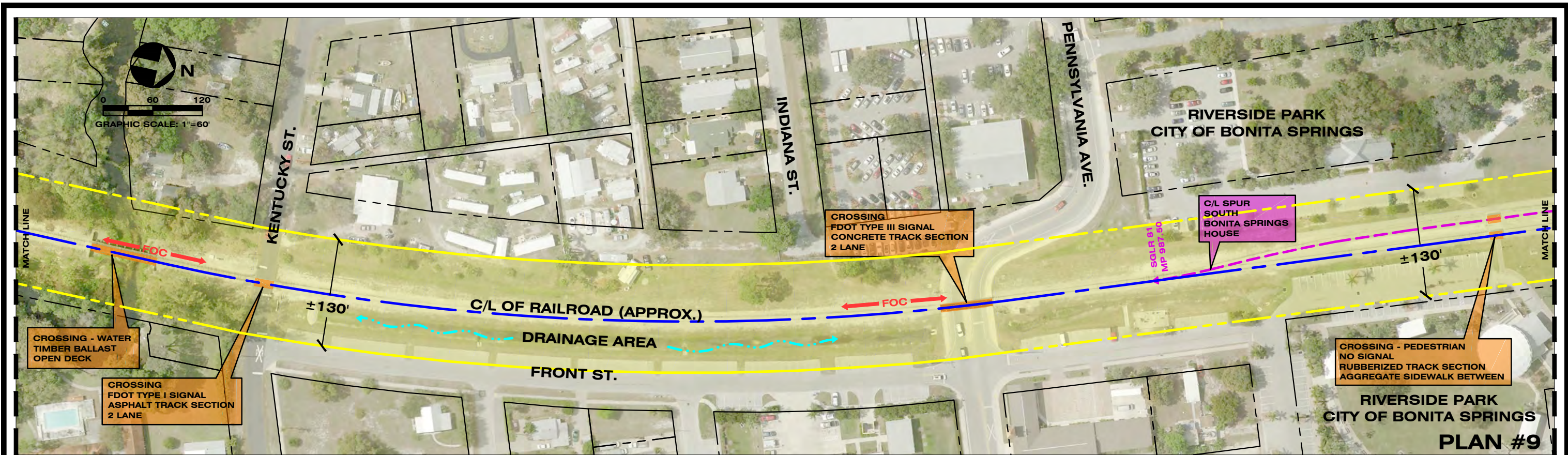
SHEET 7

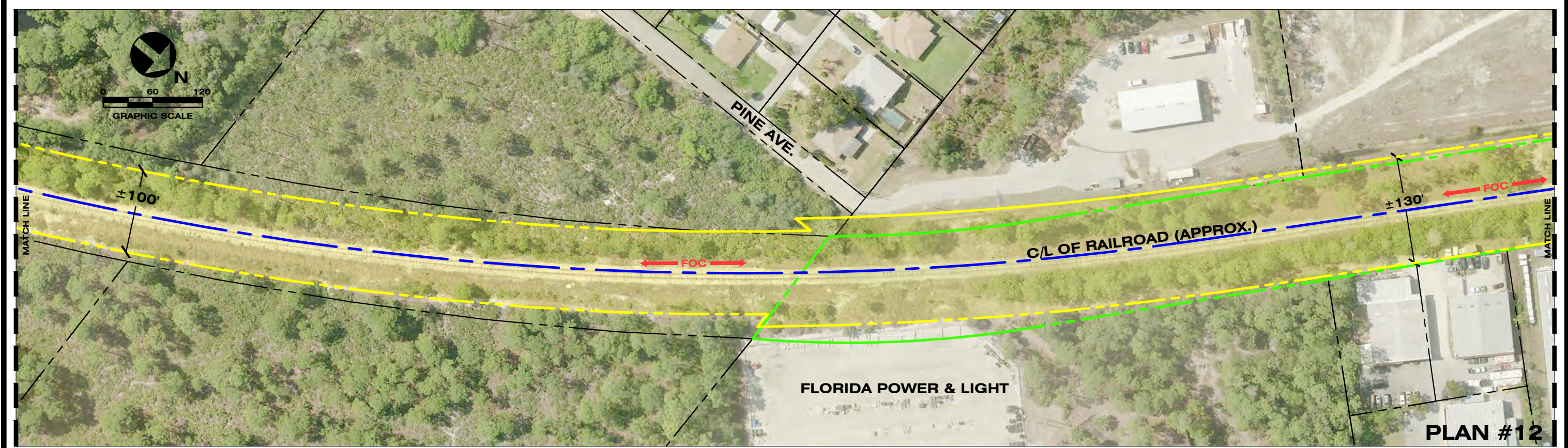
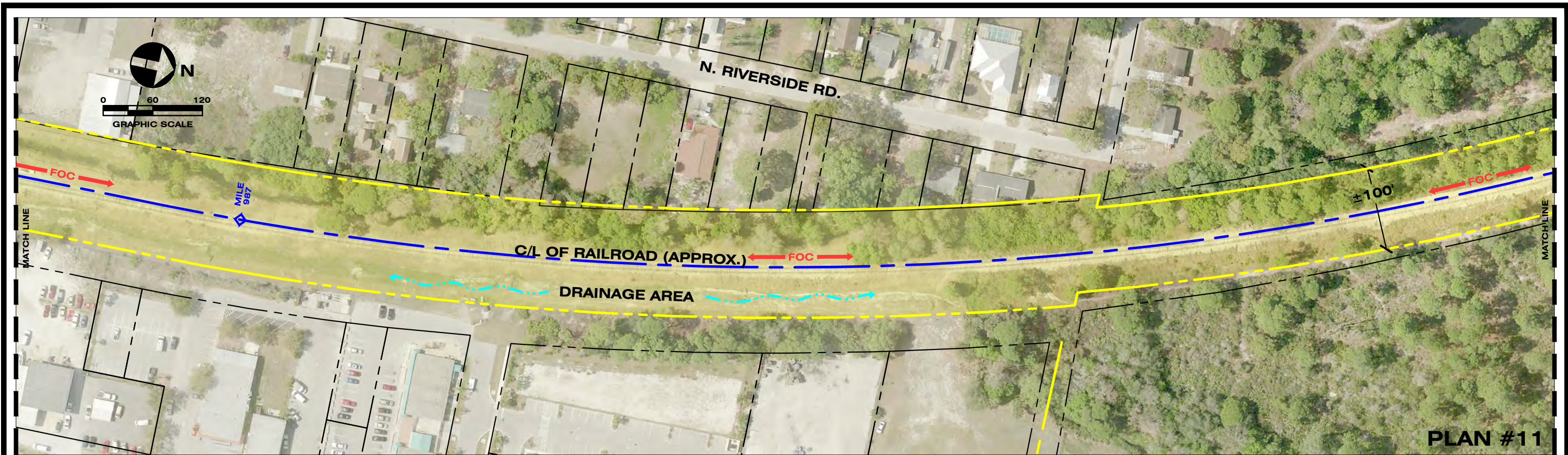


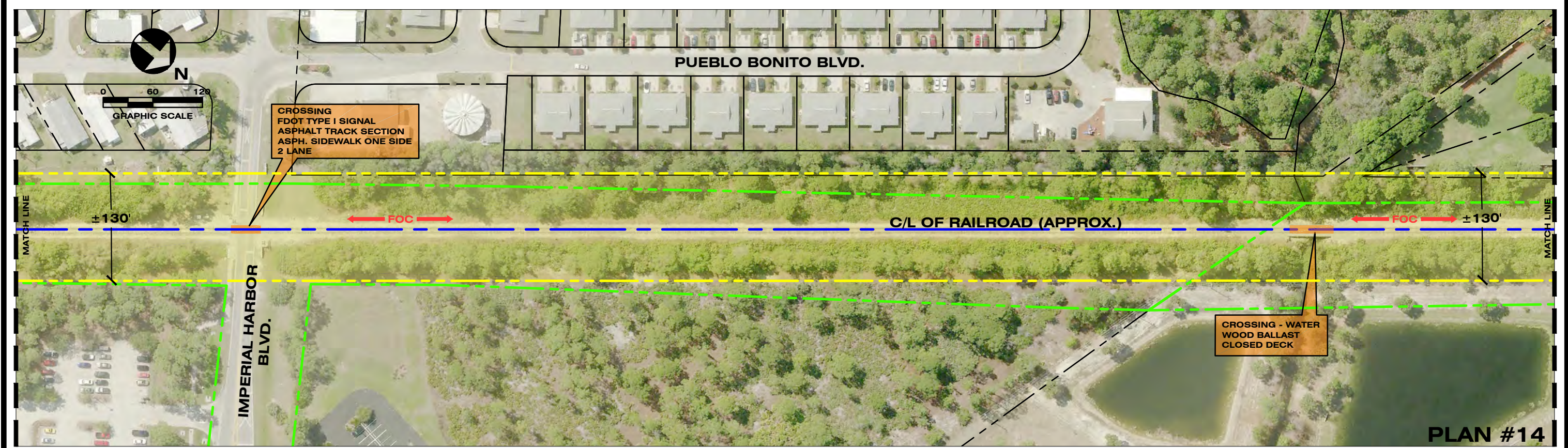


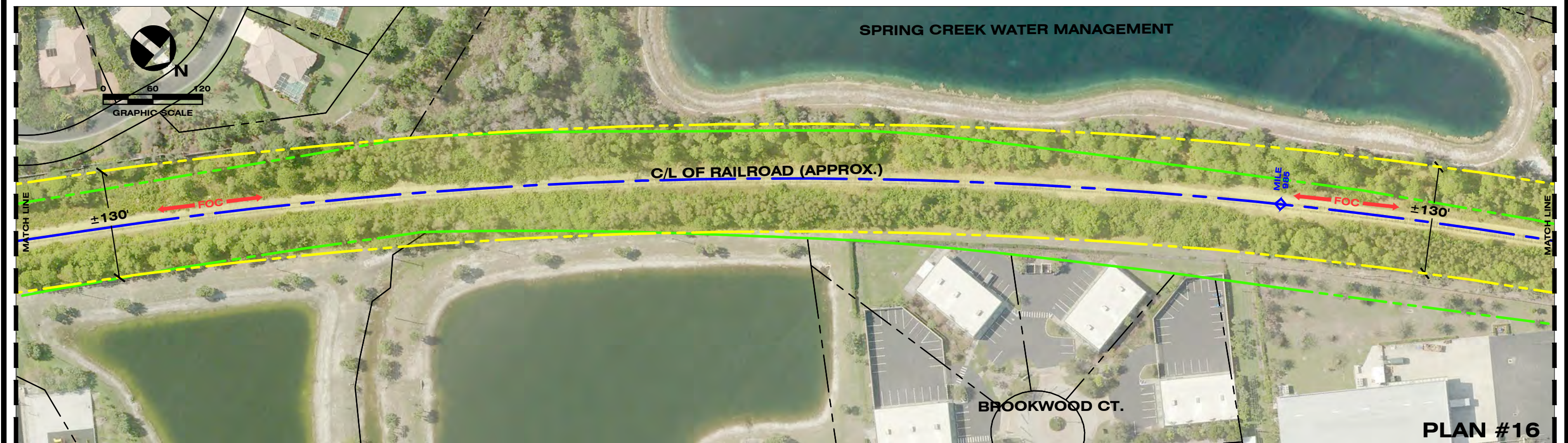
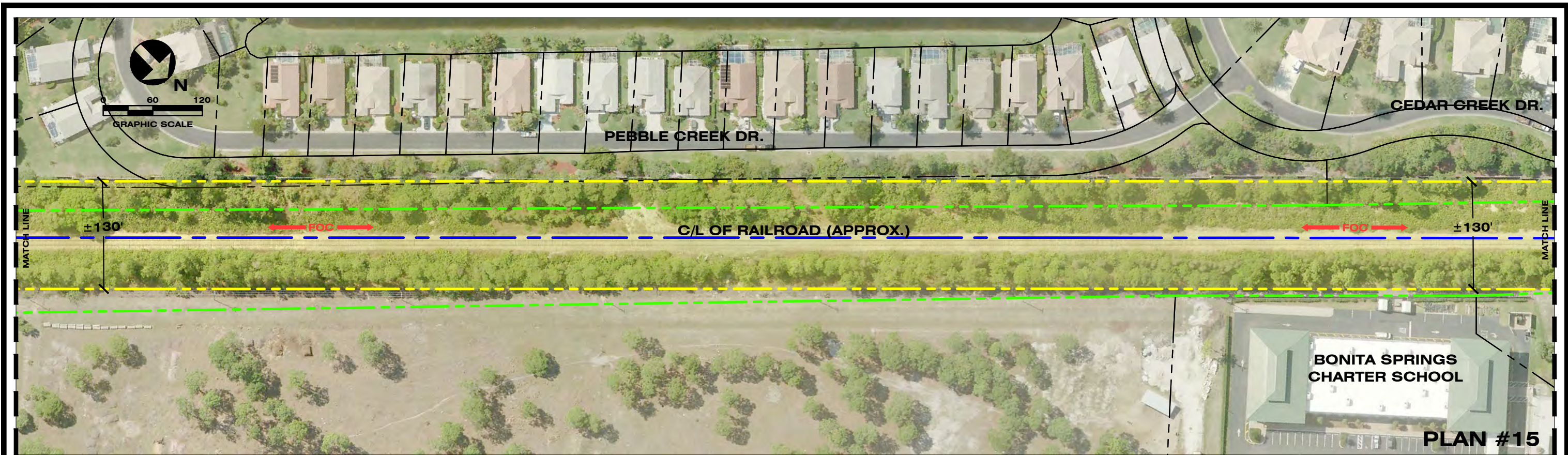


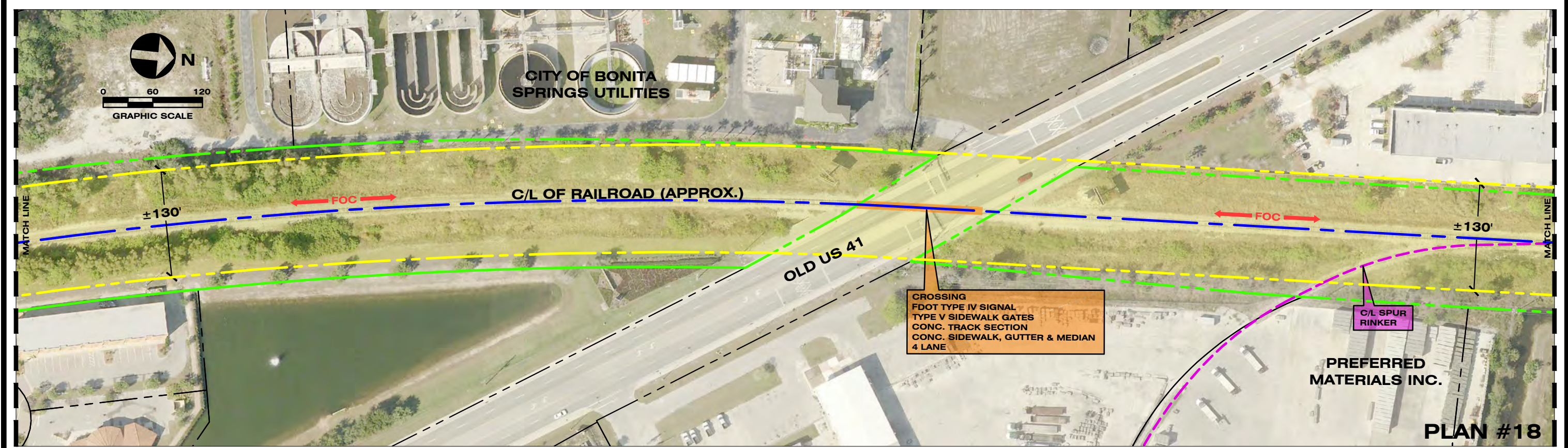
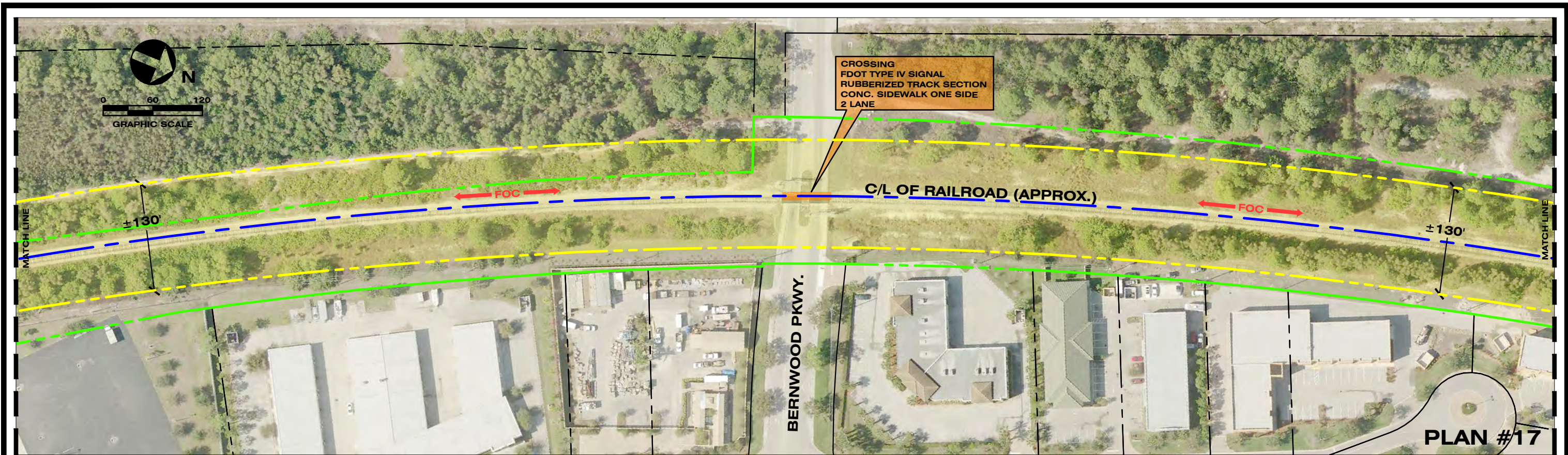


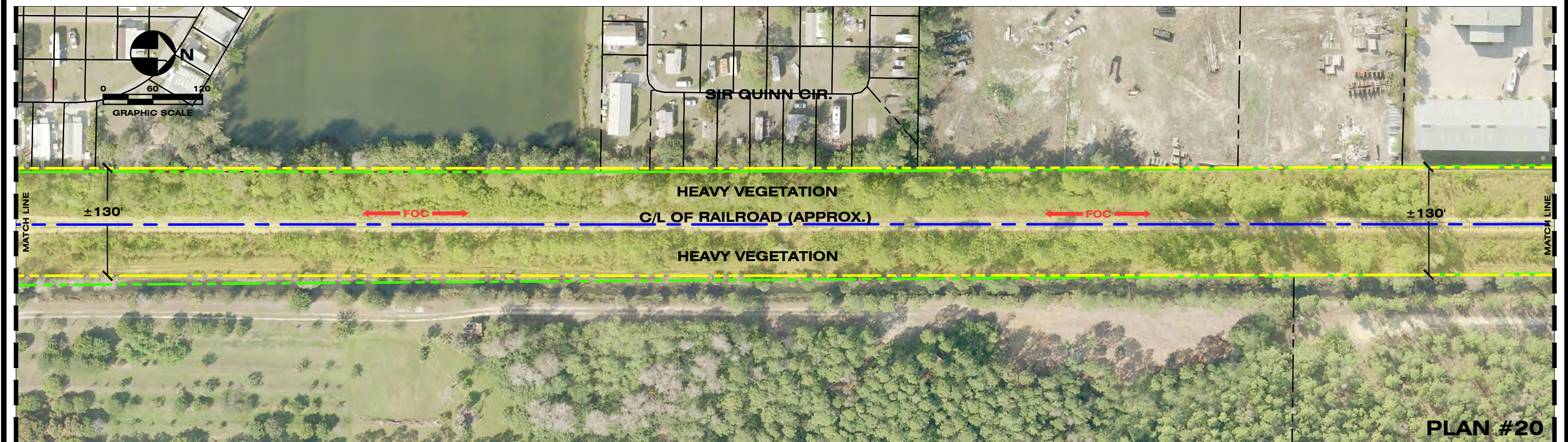
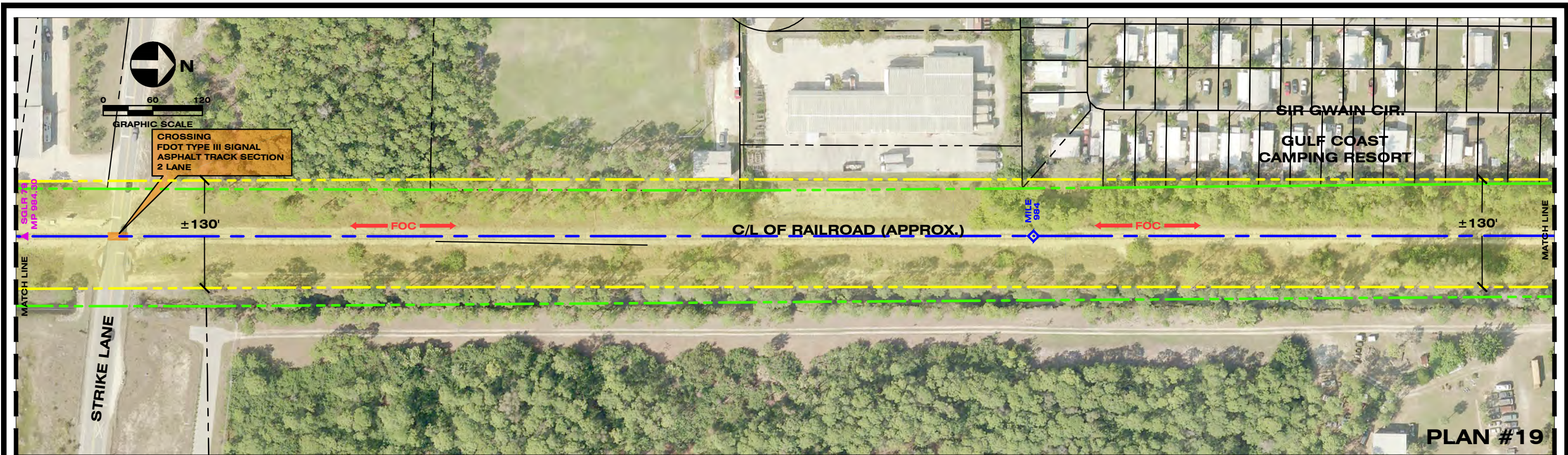


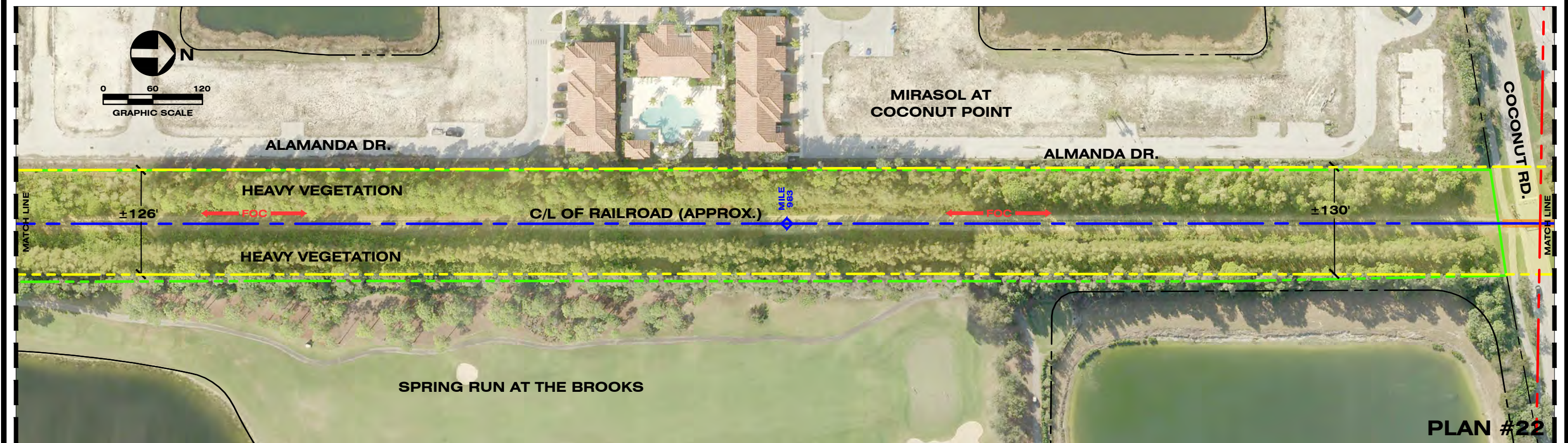
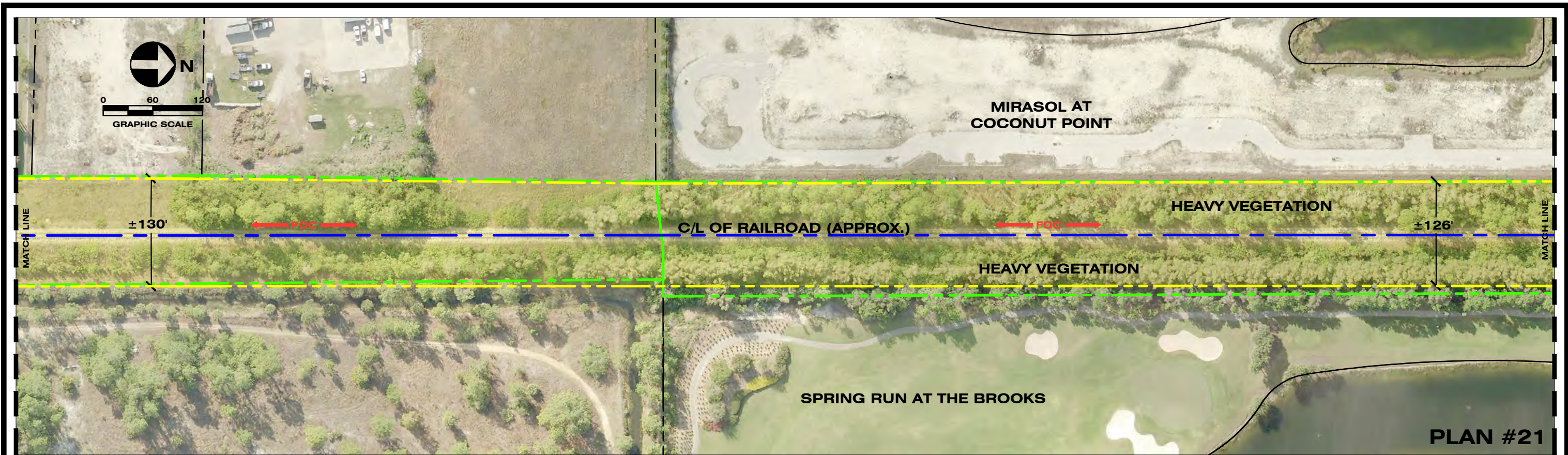


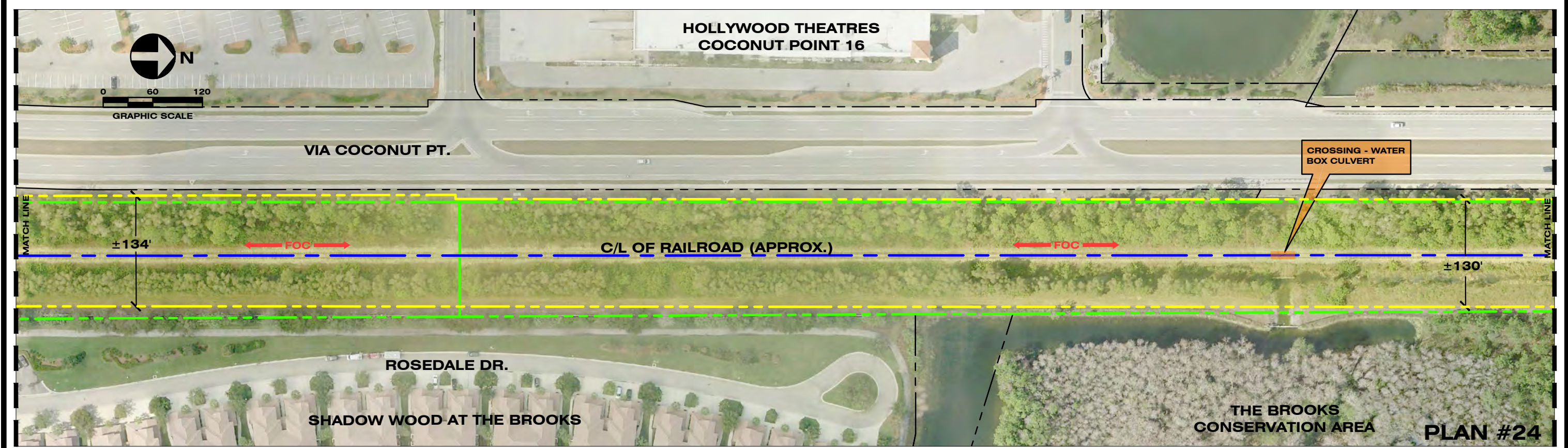
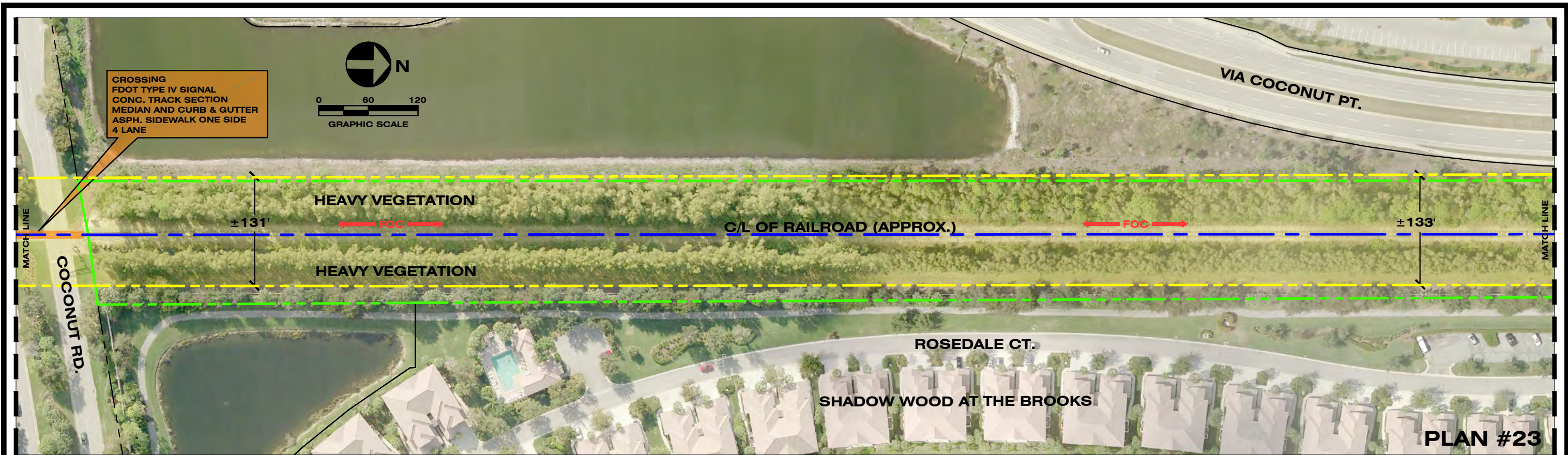


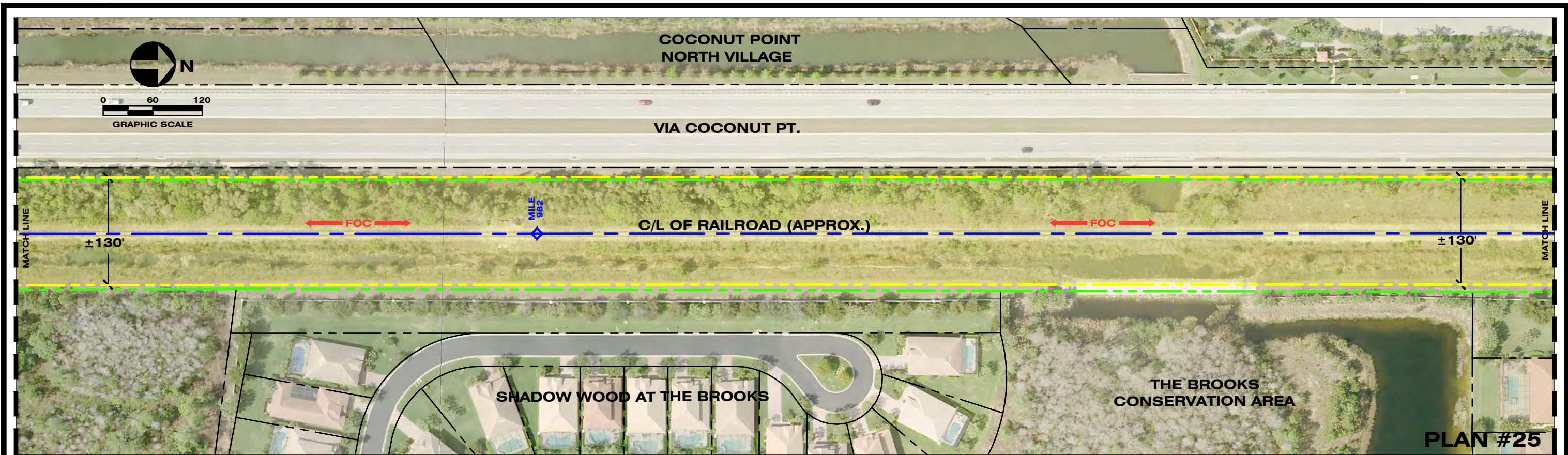




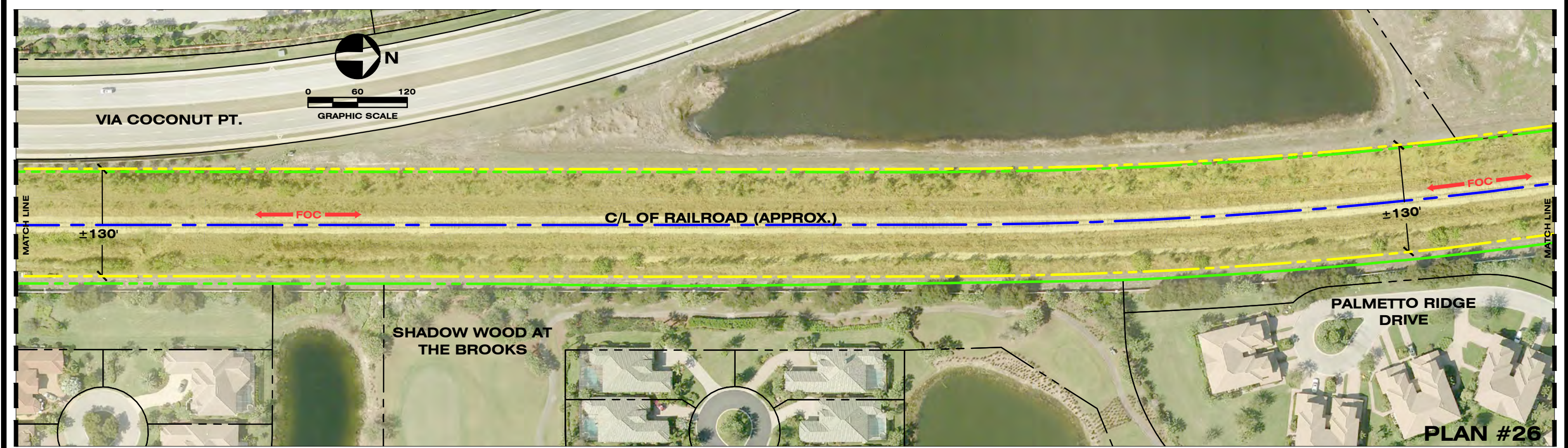




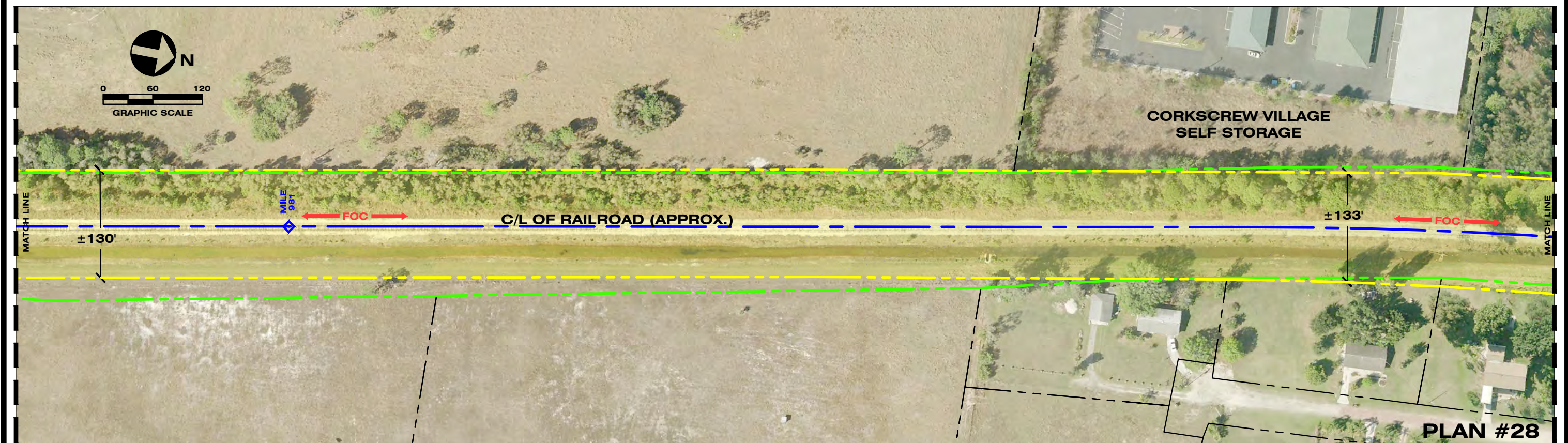
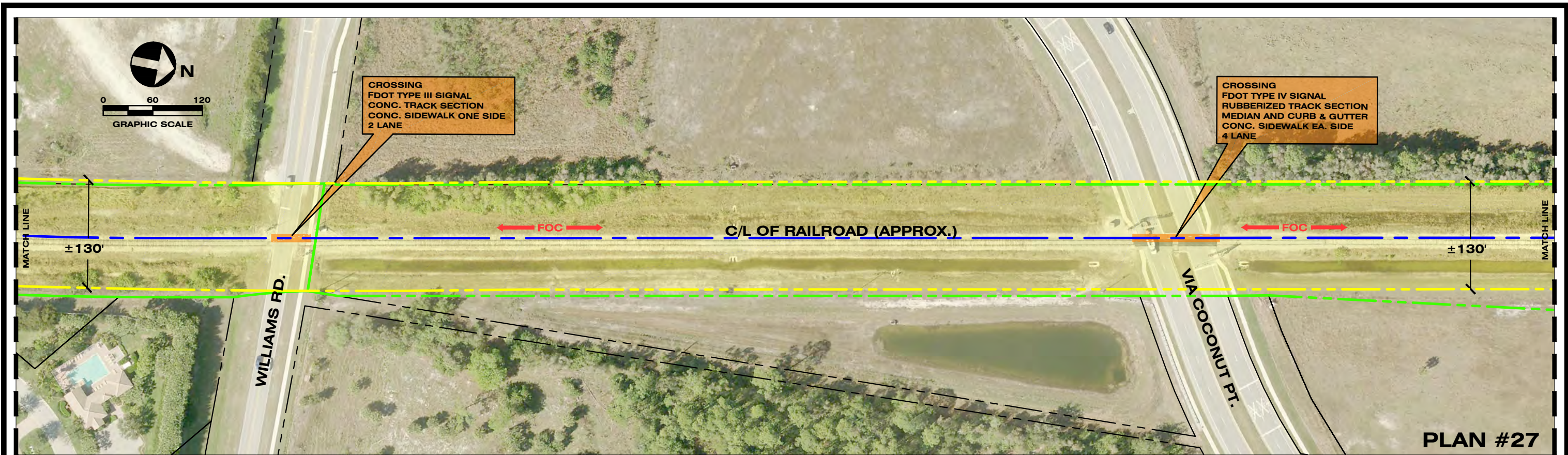


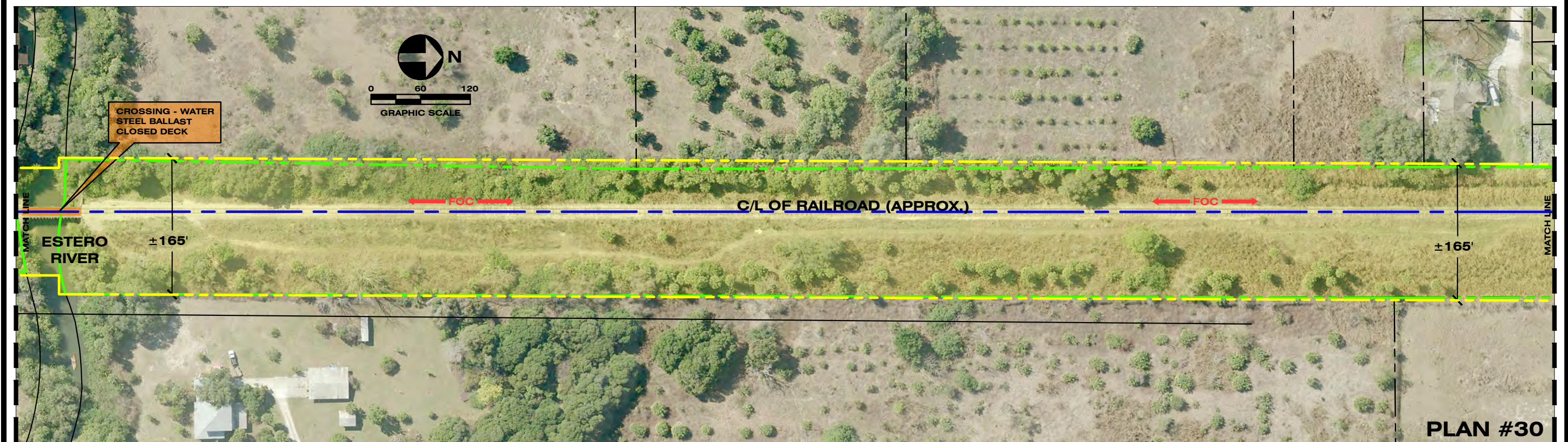
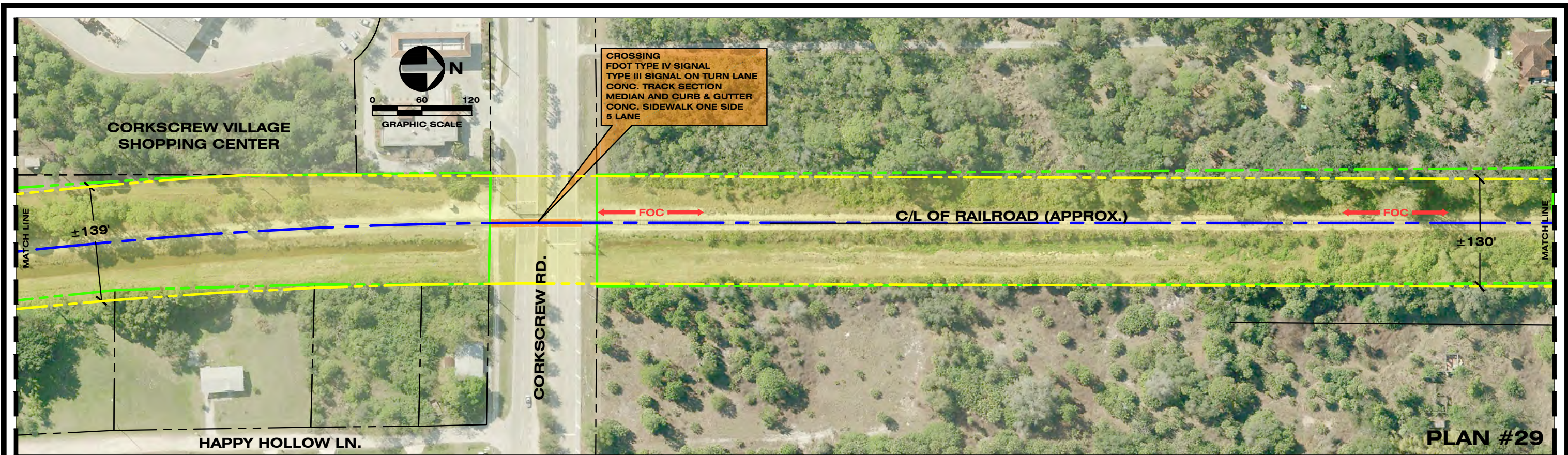


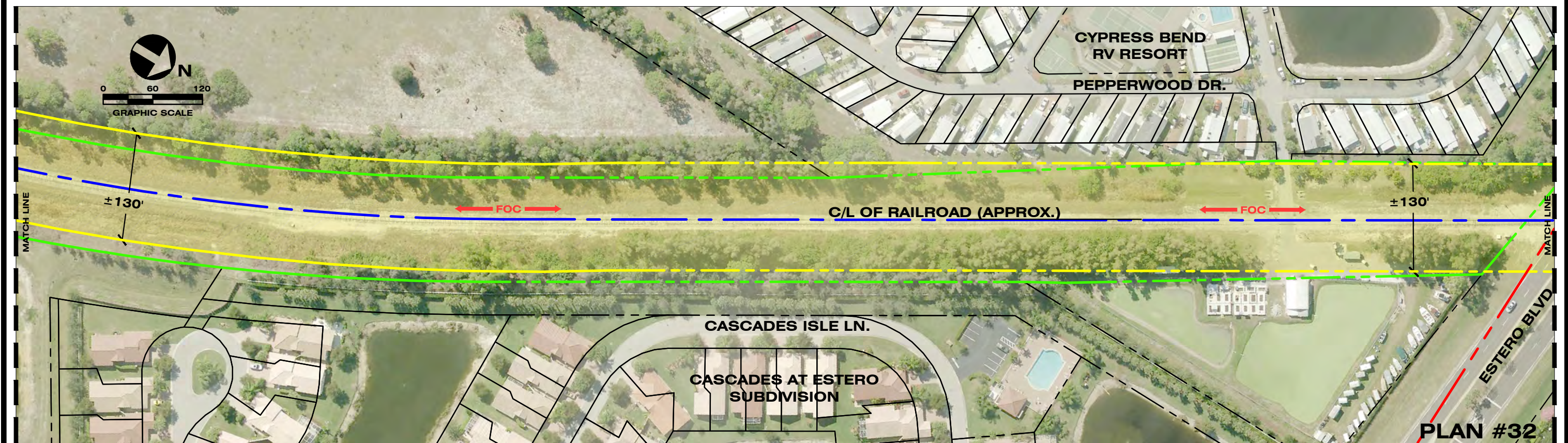
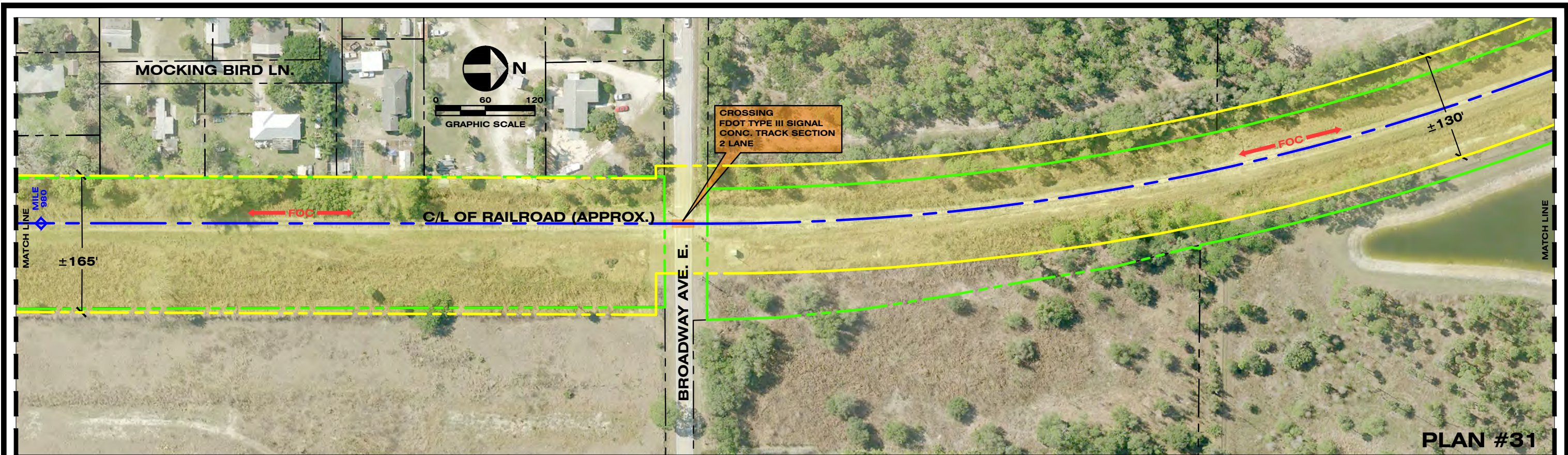
PLAN #25

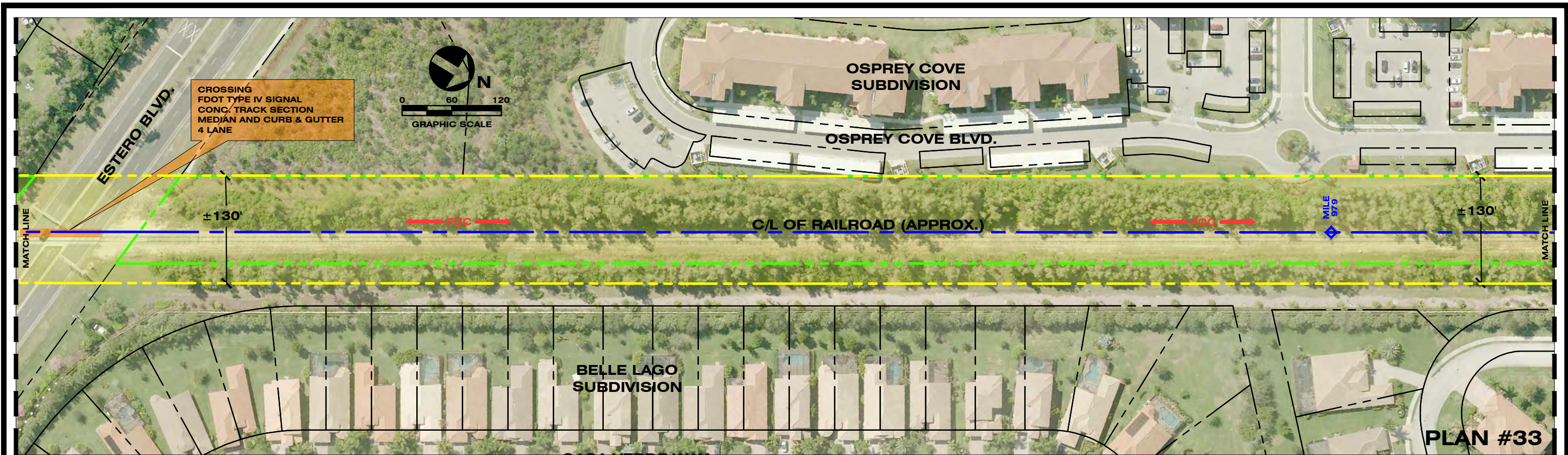


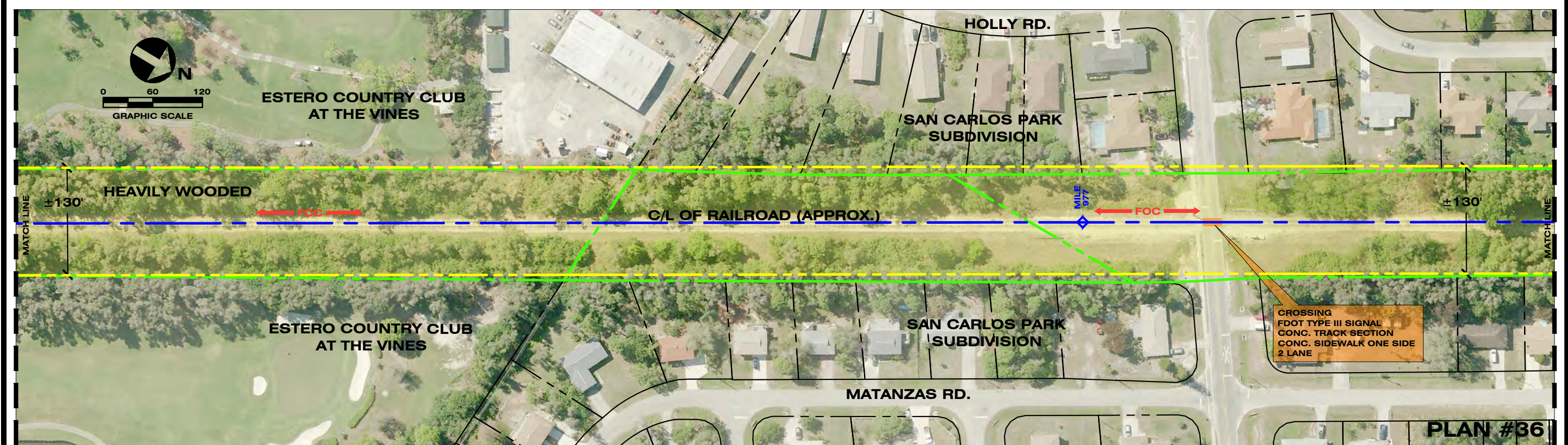
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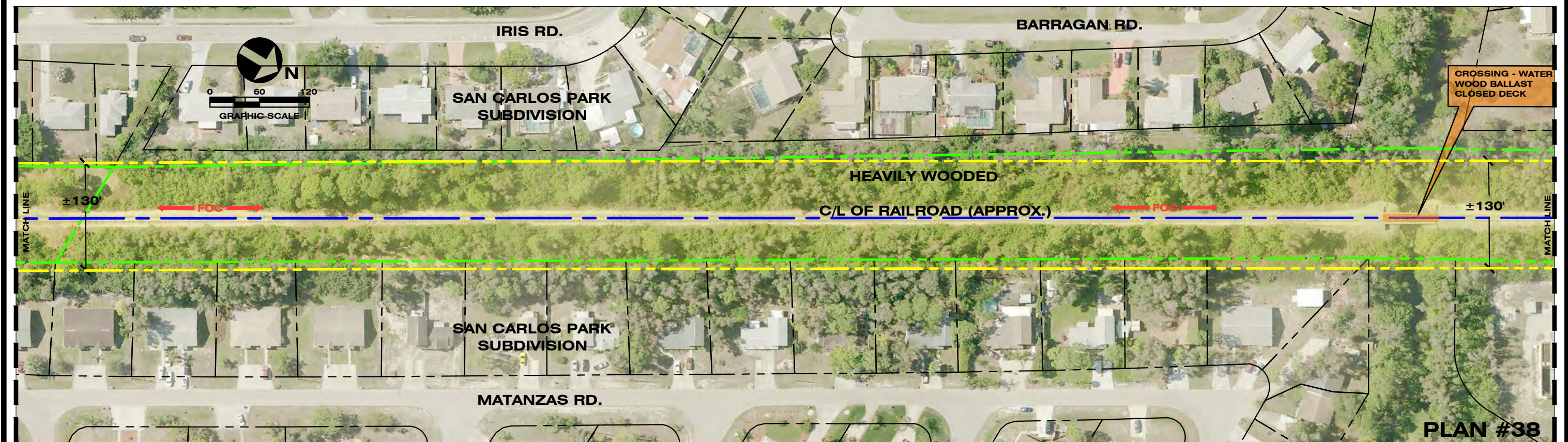
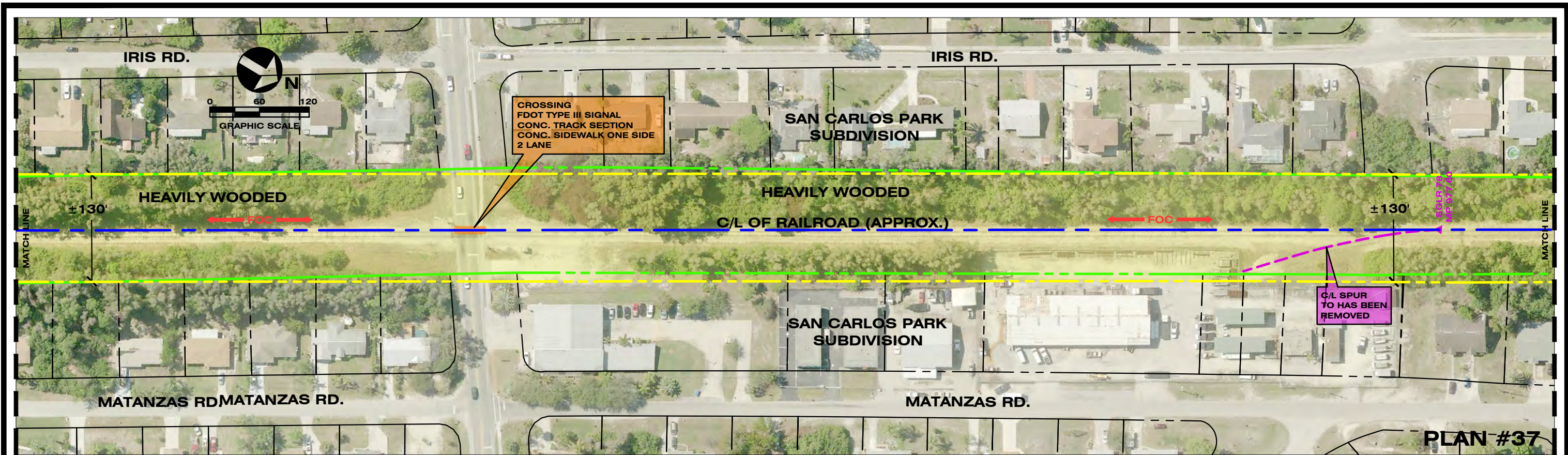


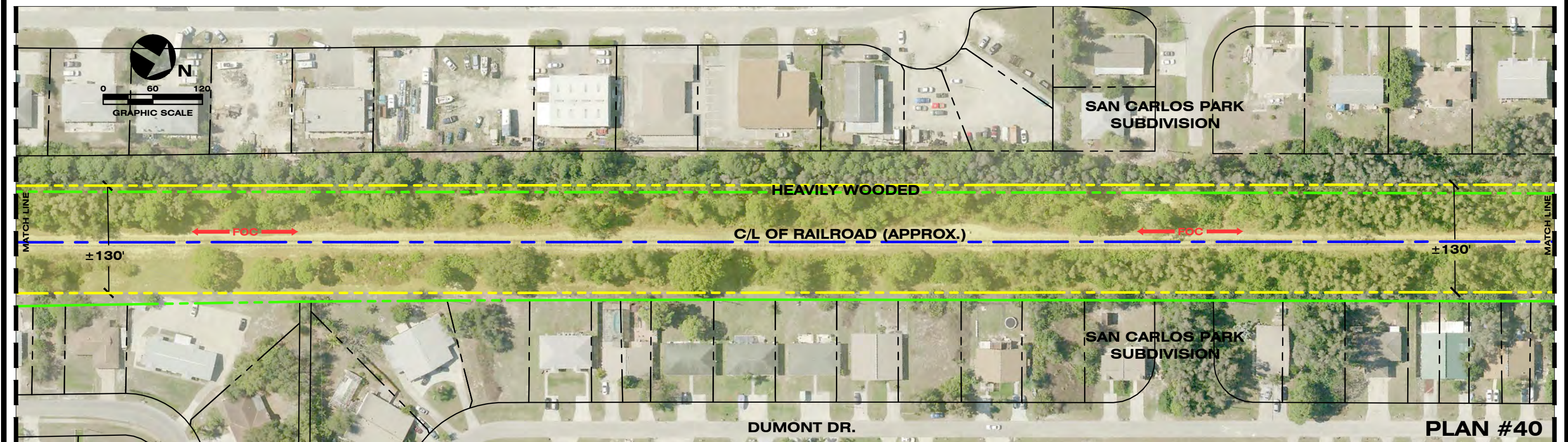
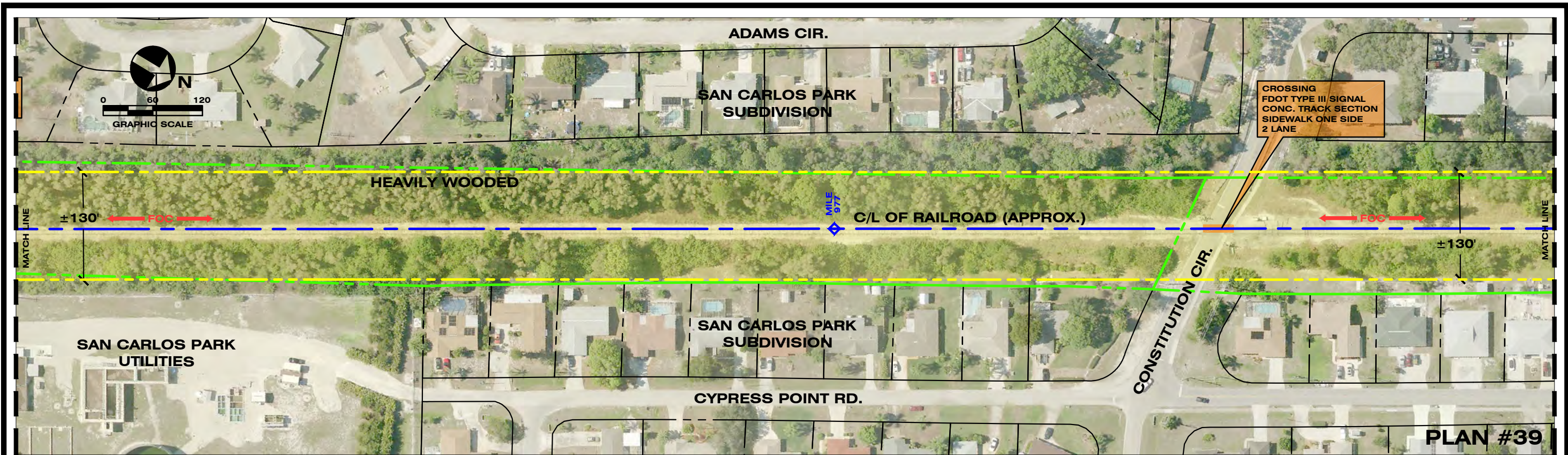


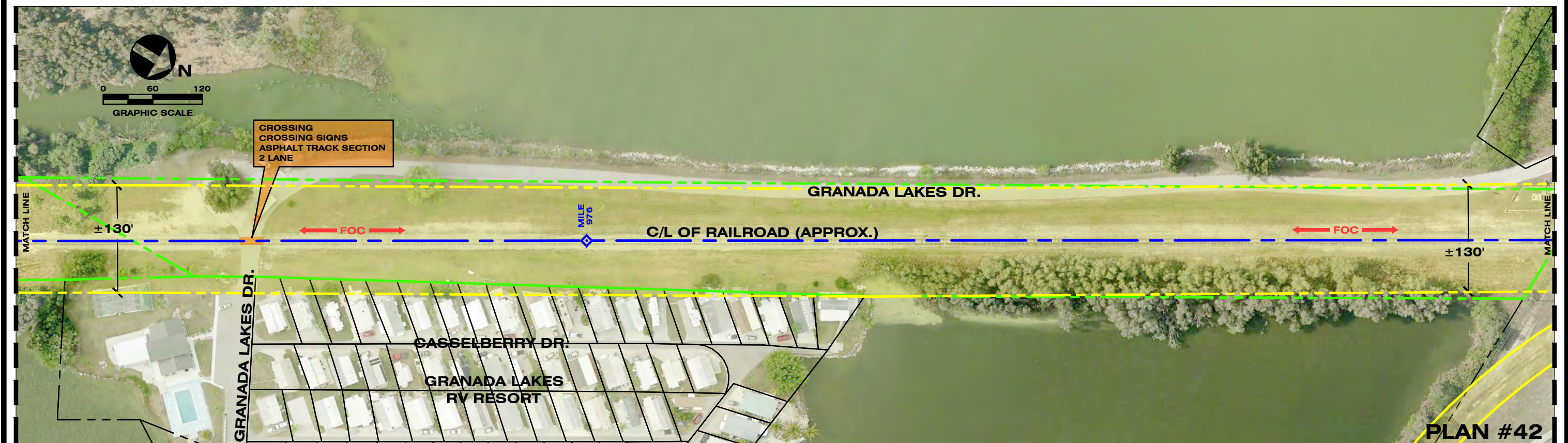


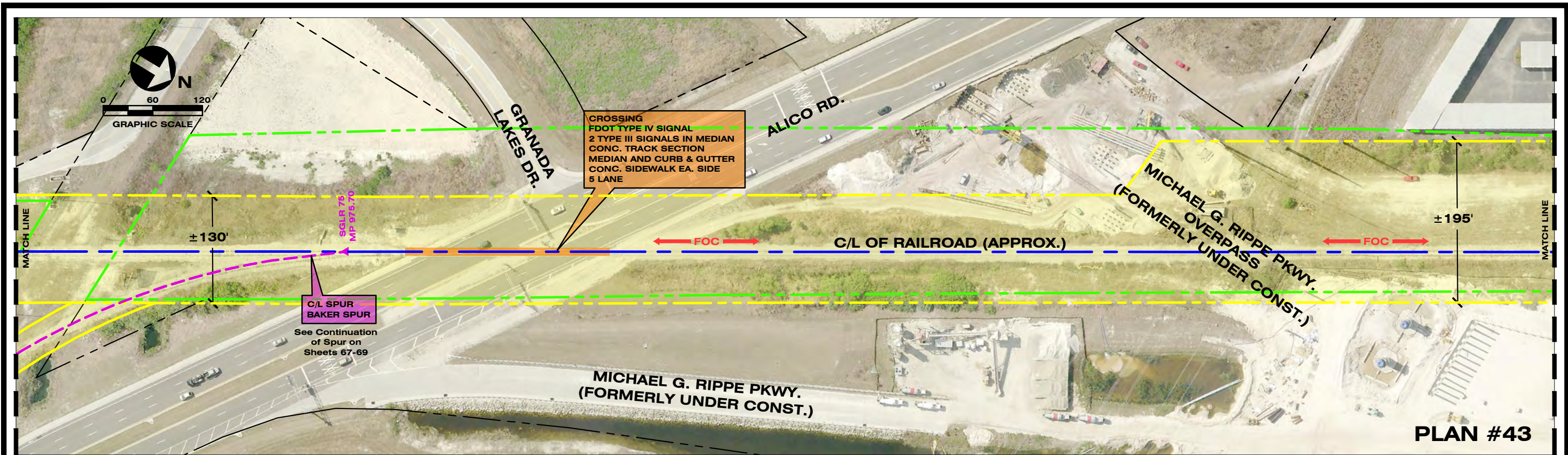




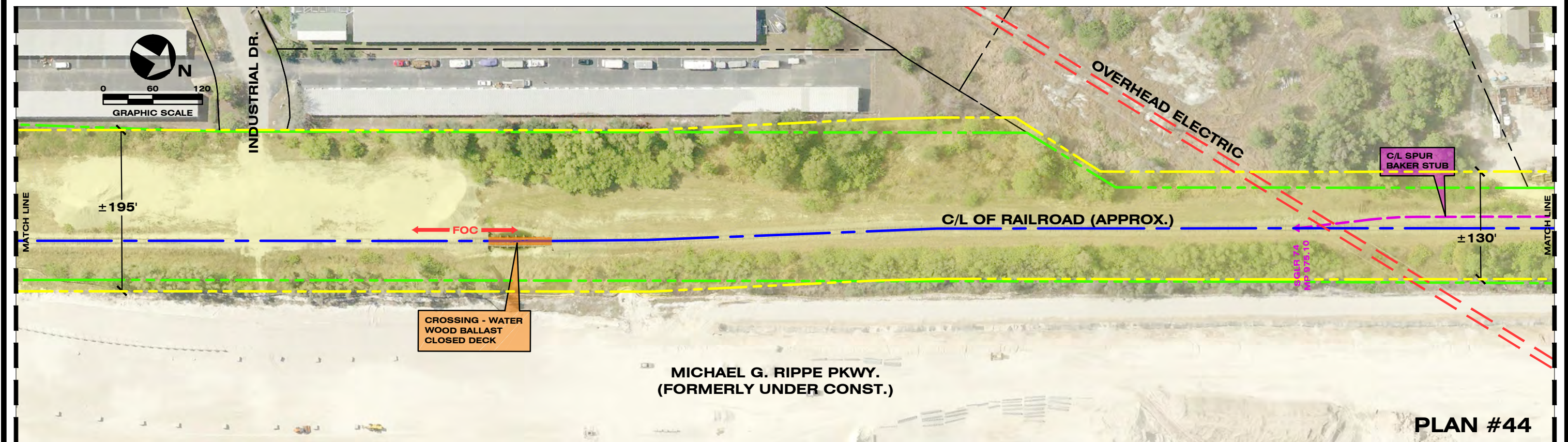




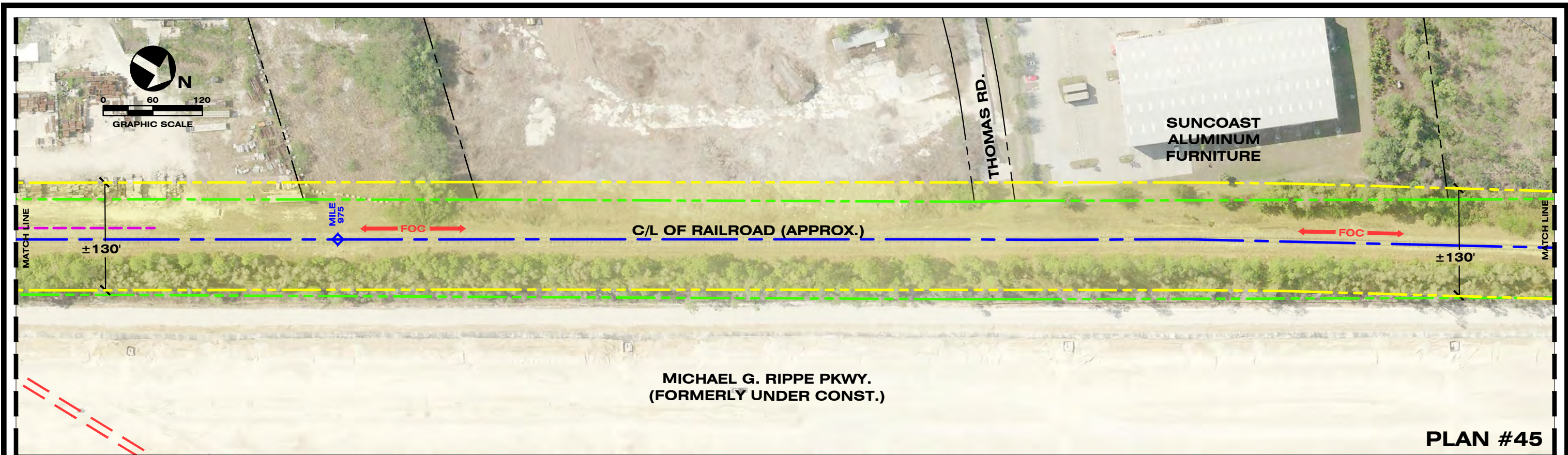




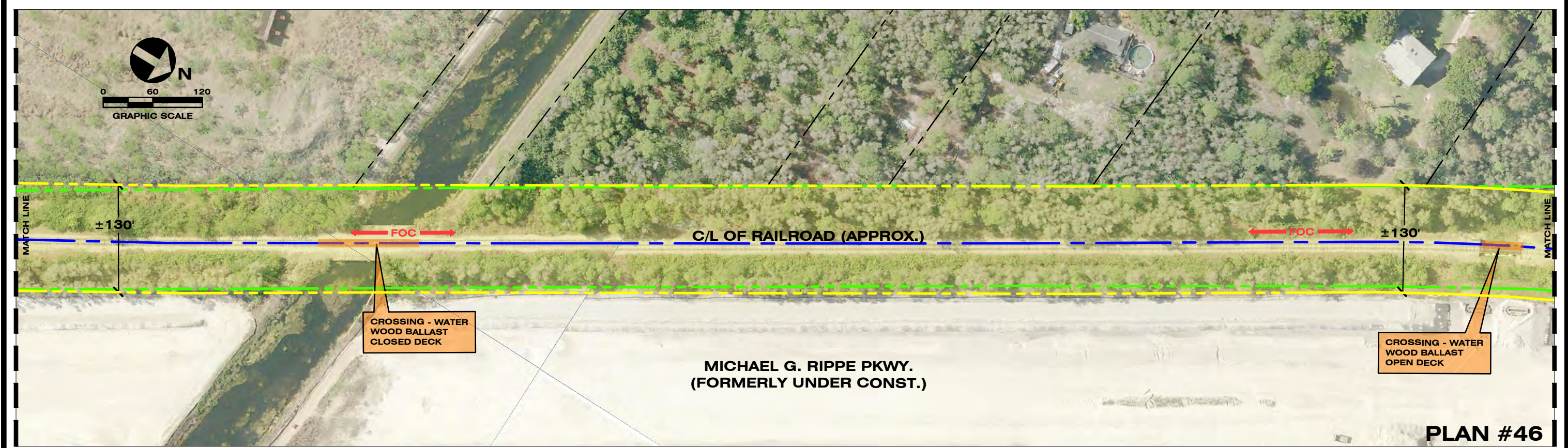
PLAN #43



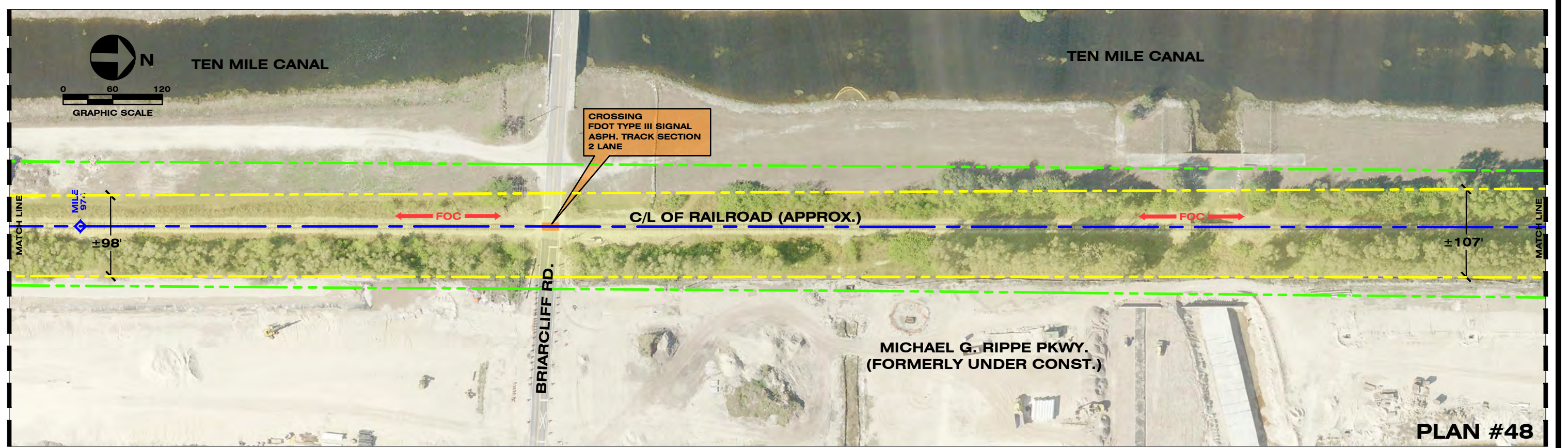
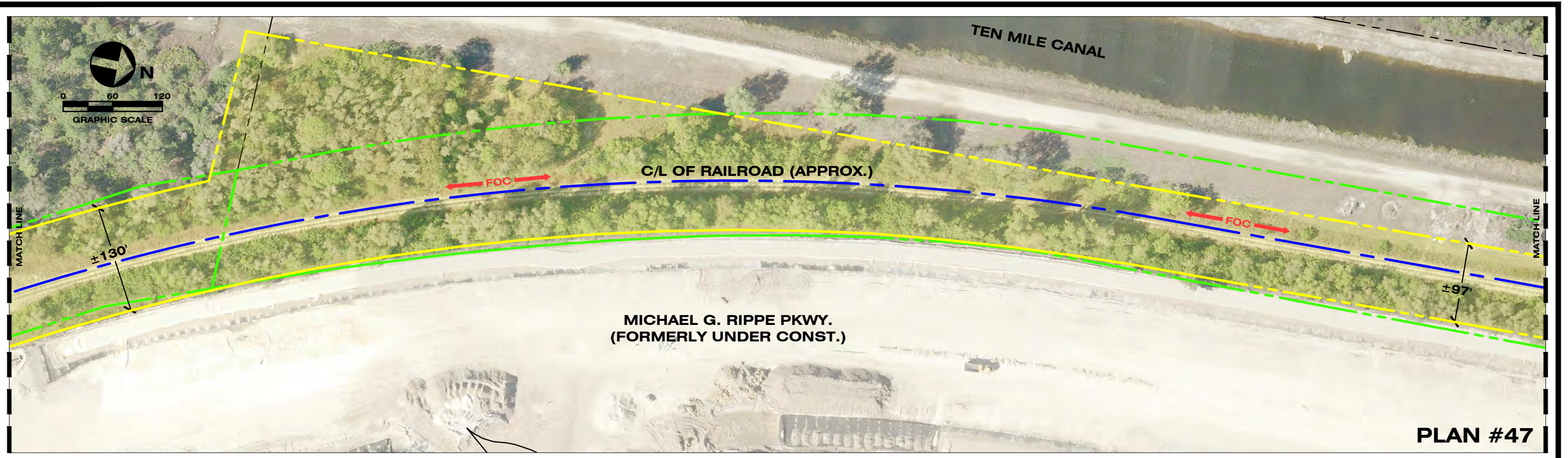
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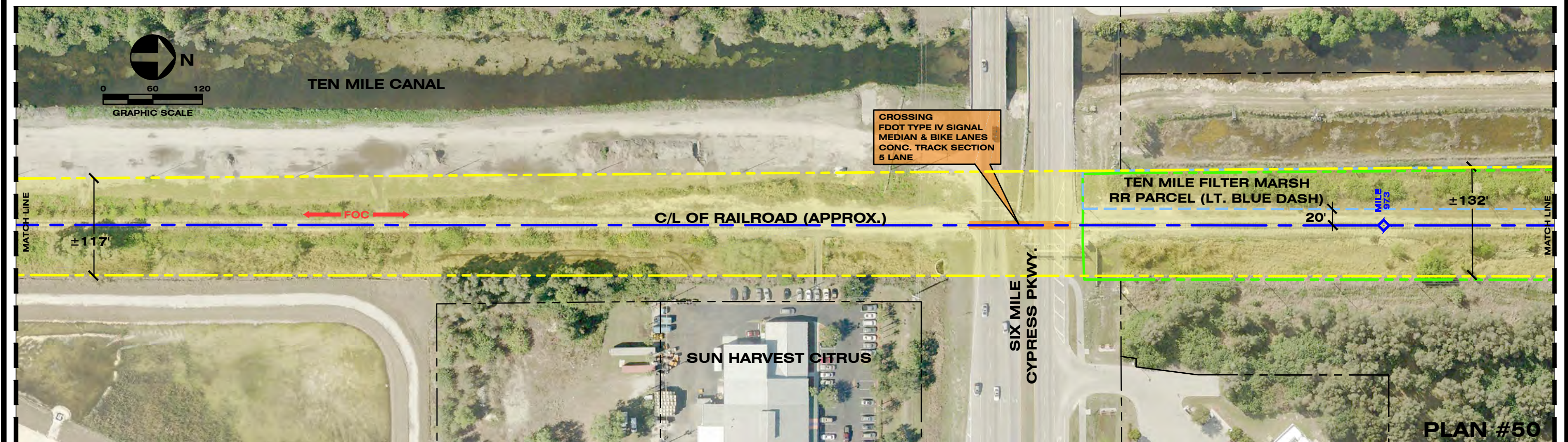
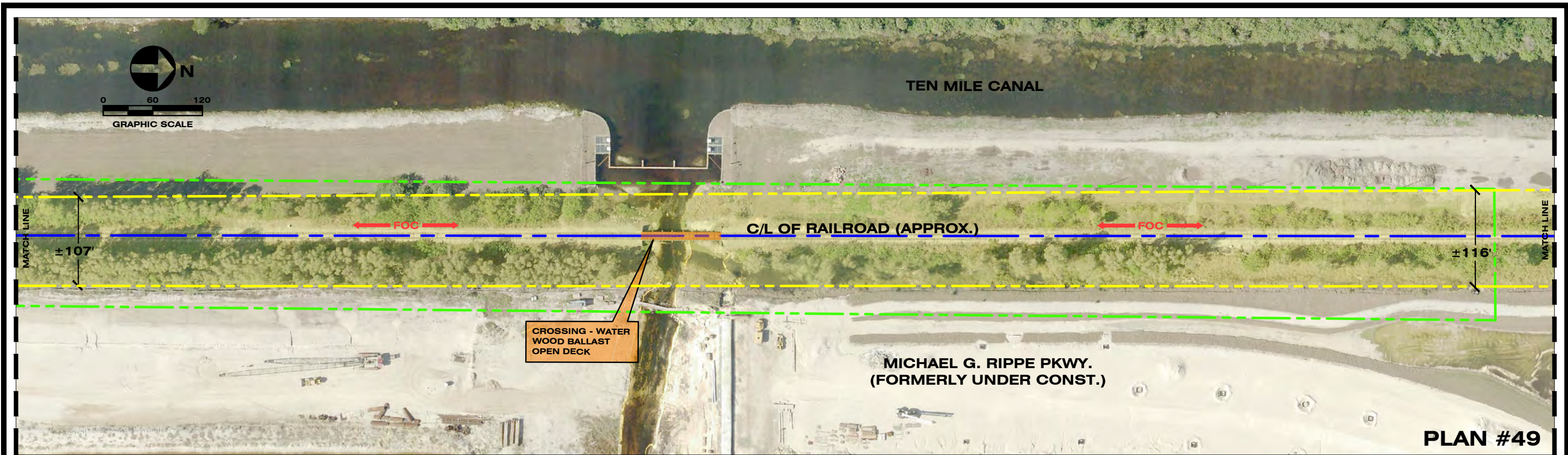


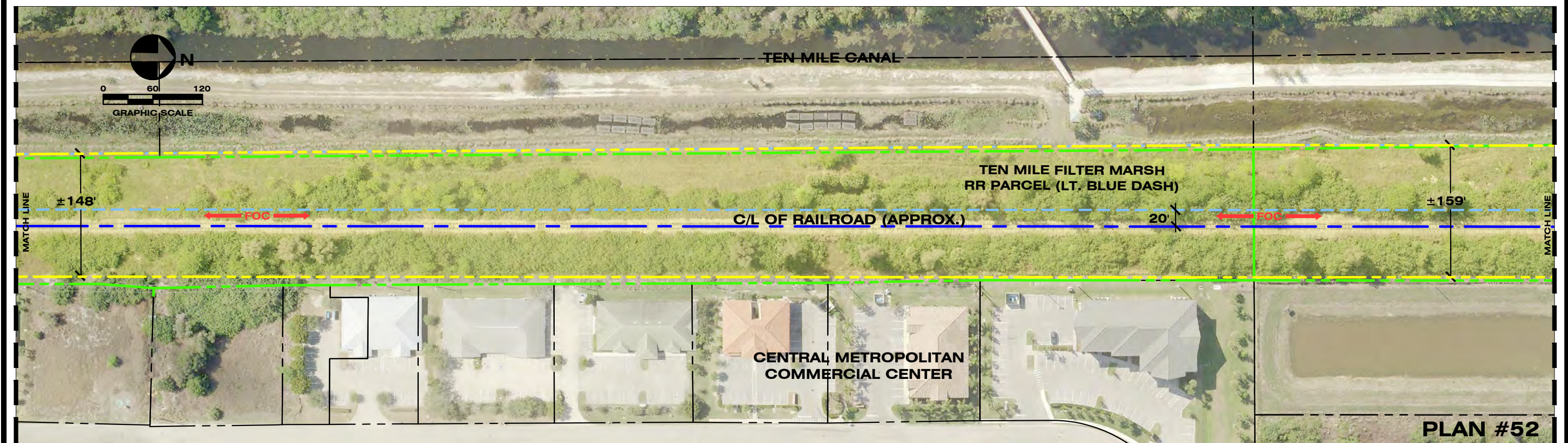
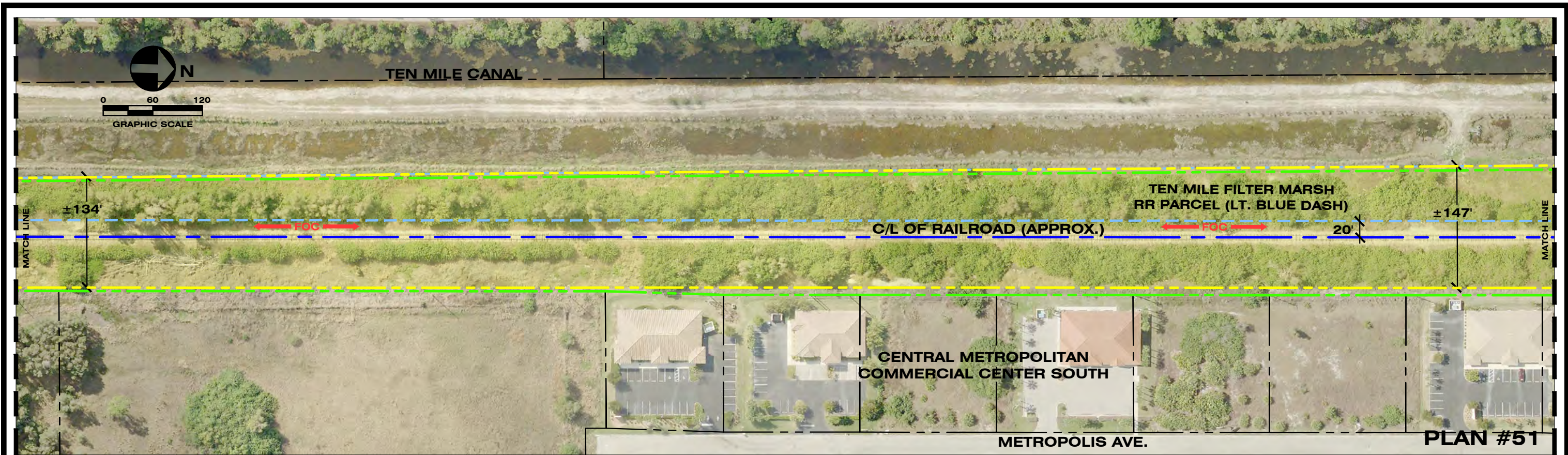
PLAN #45

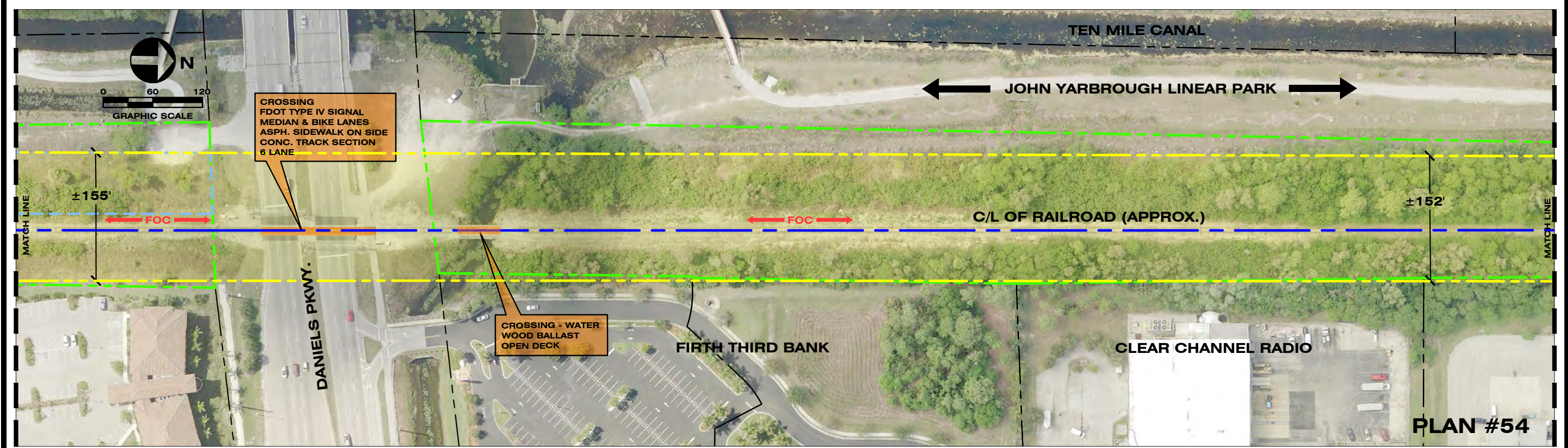
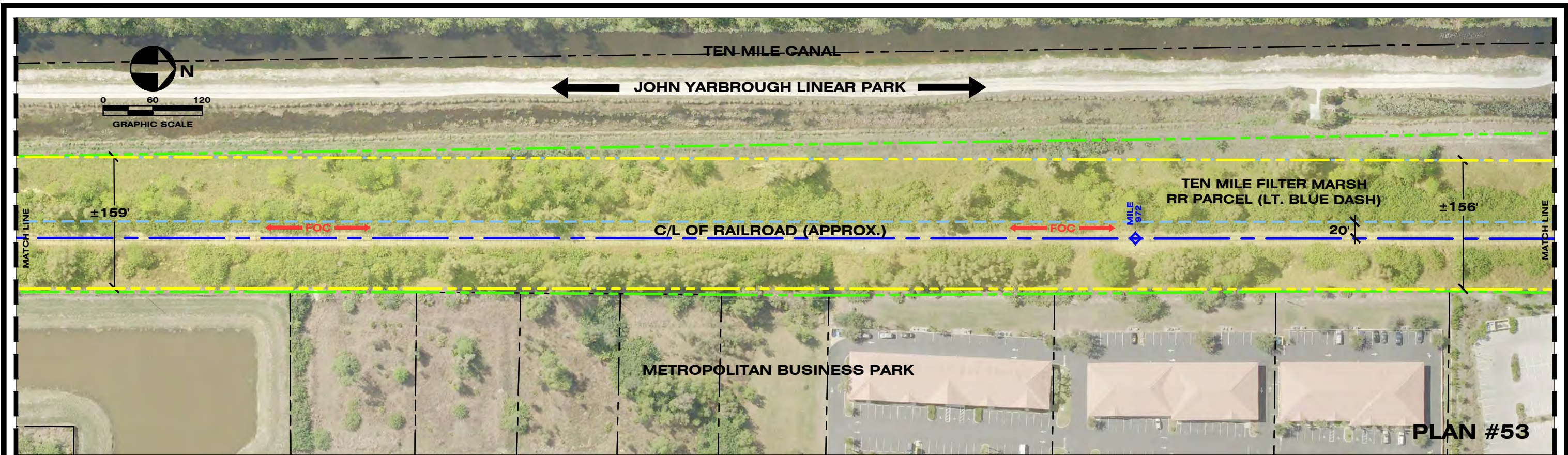


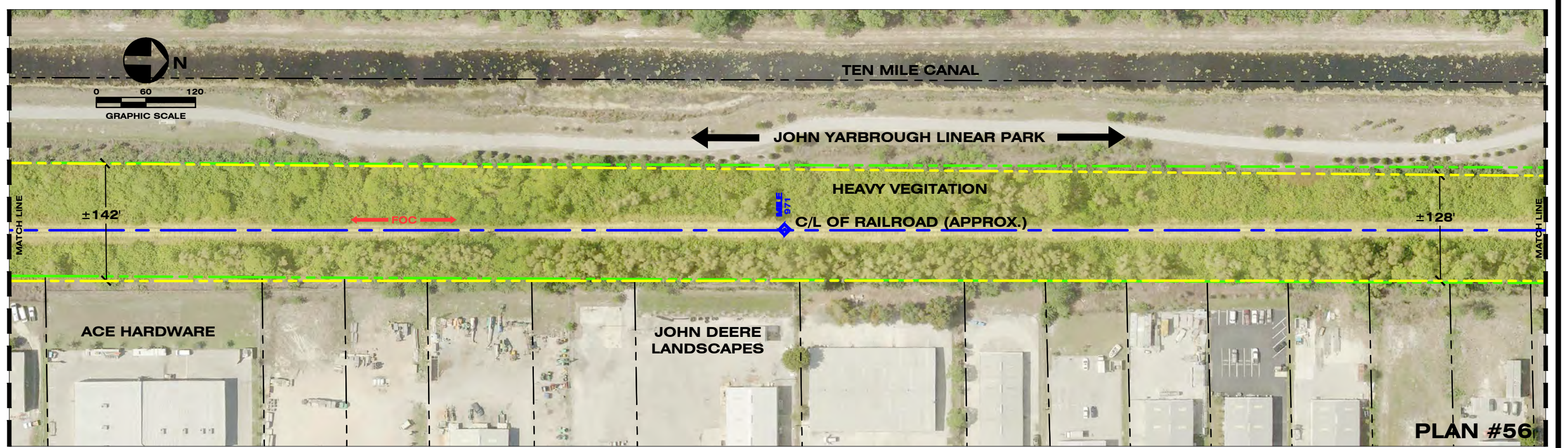
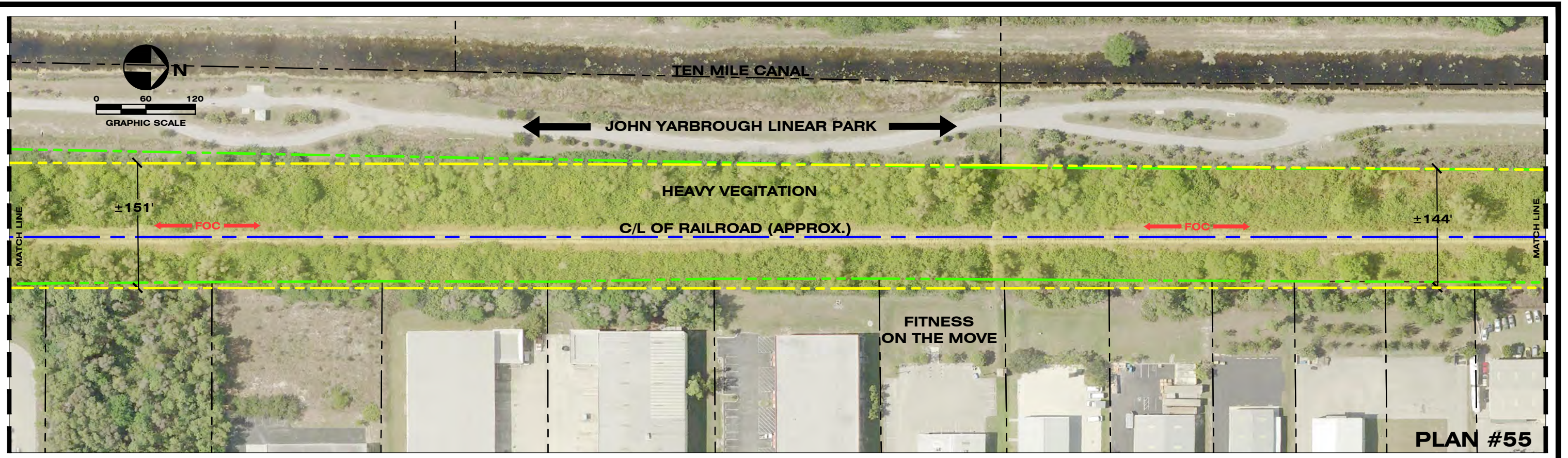
PLAN #46

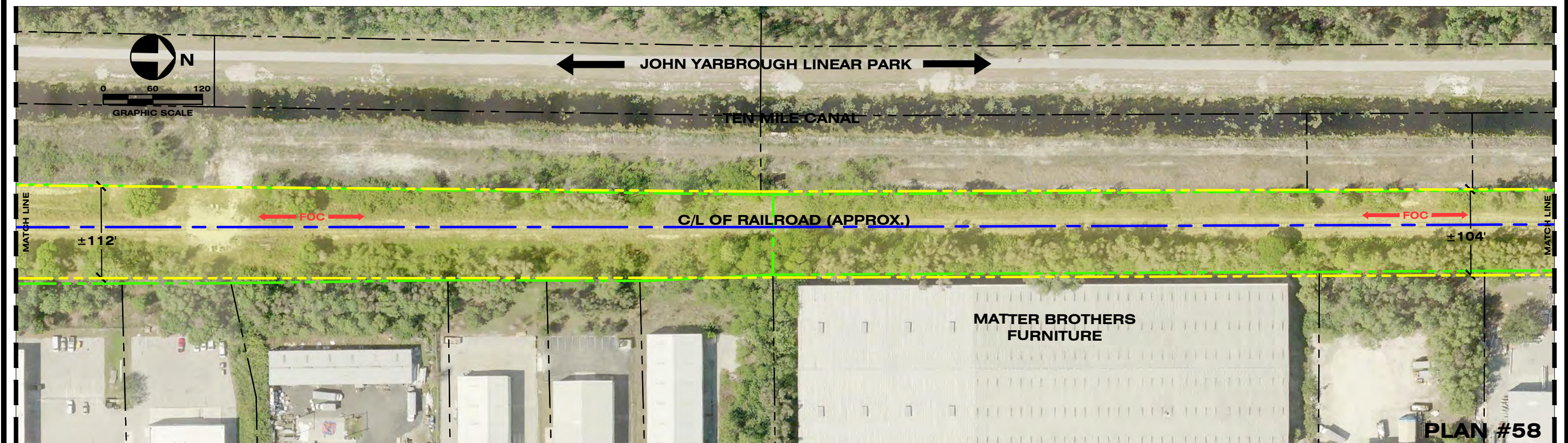
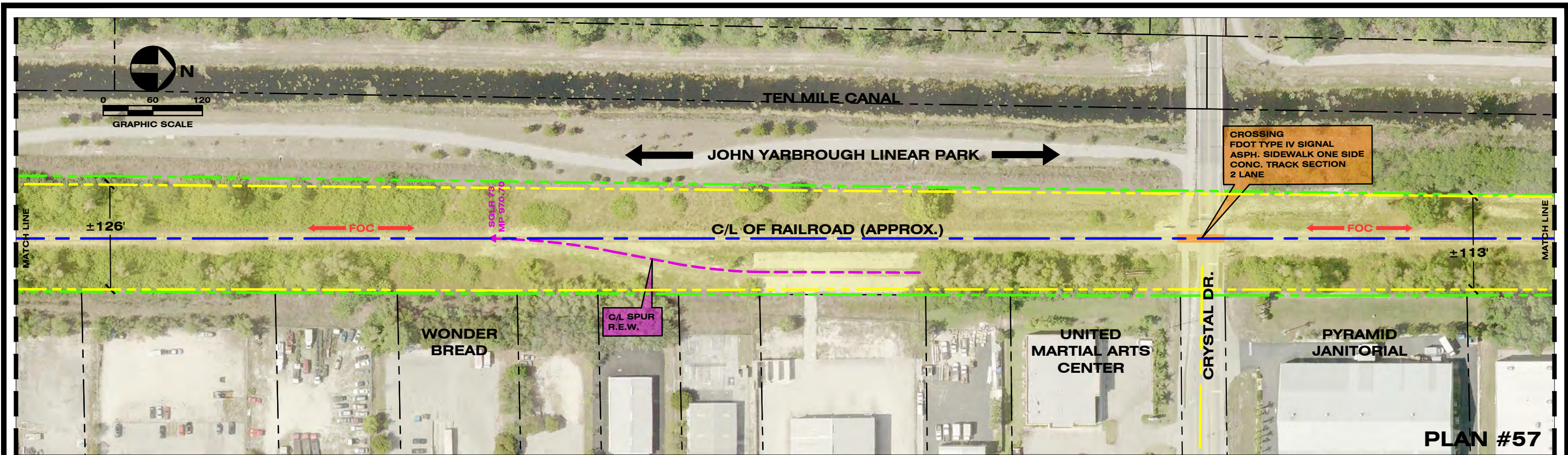


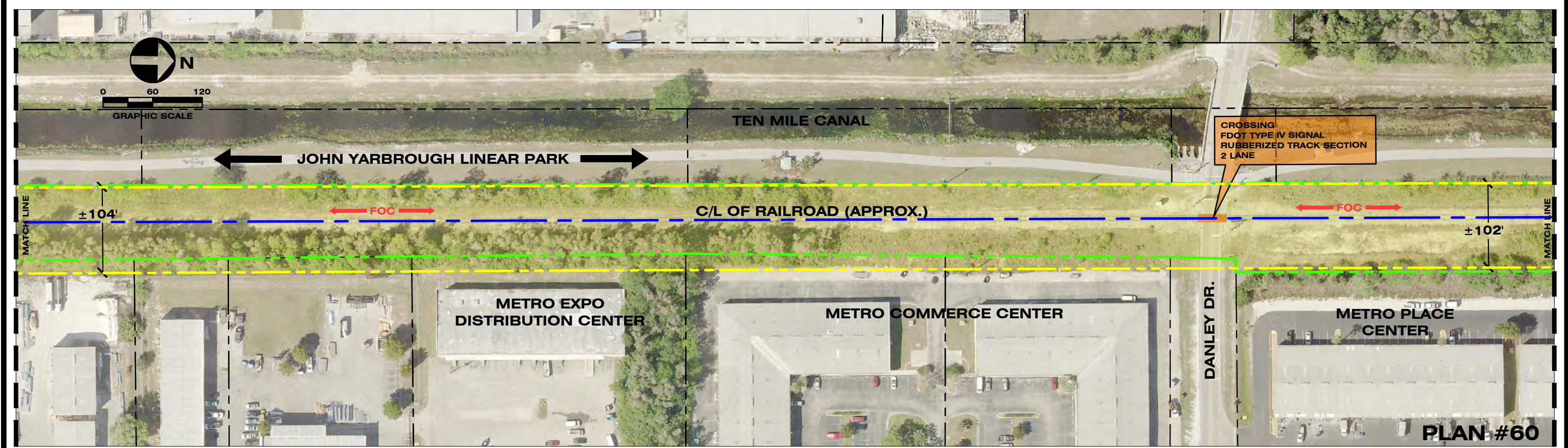
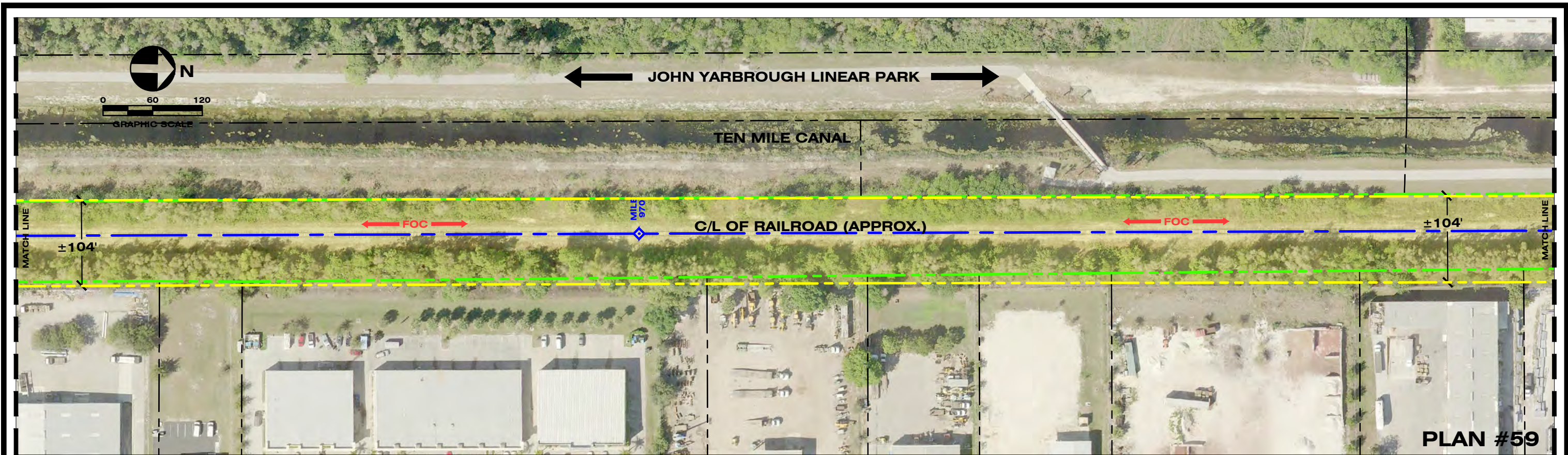


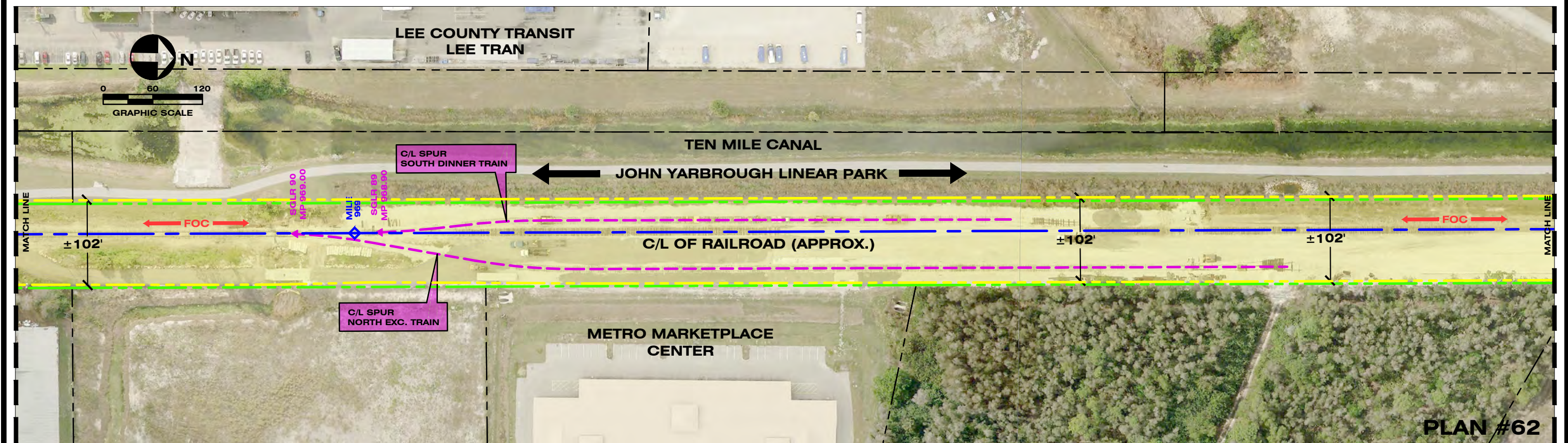
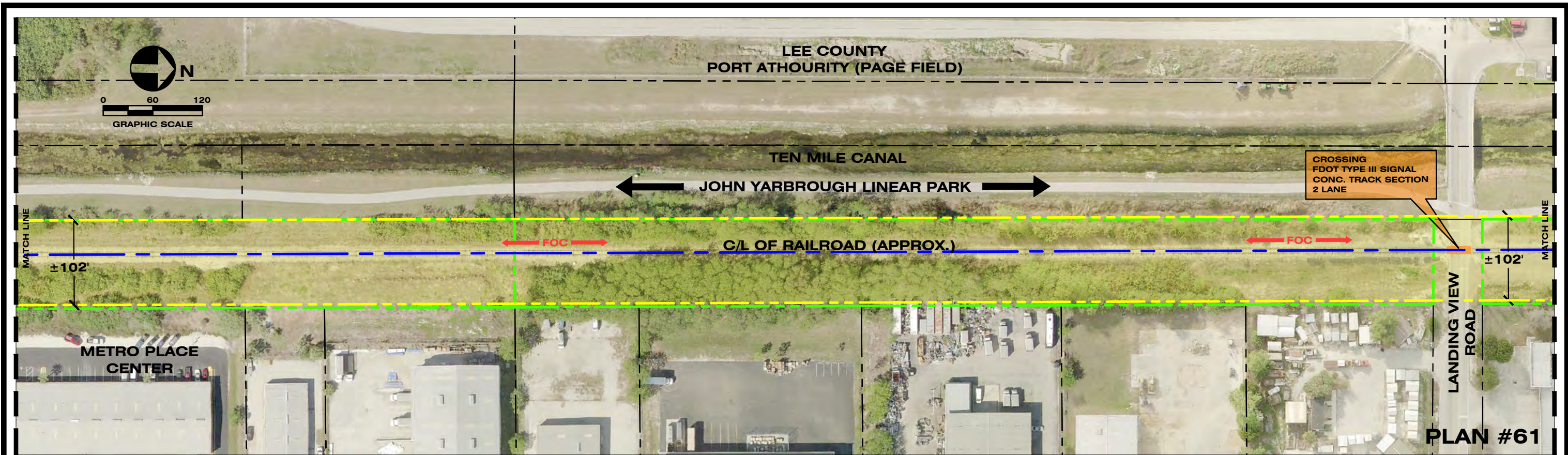


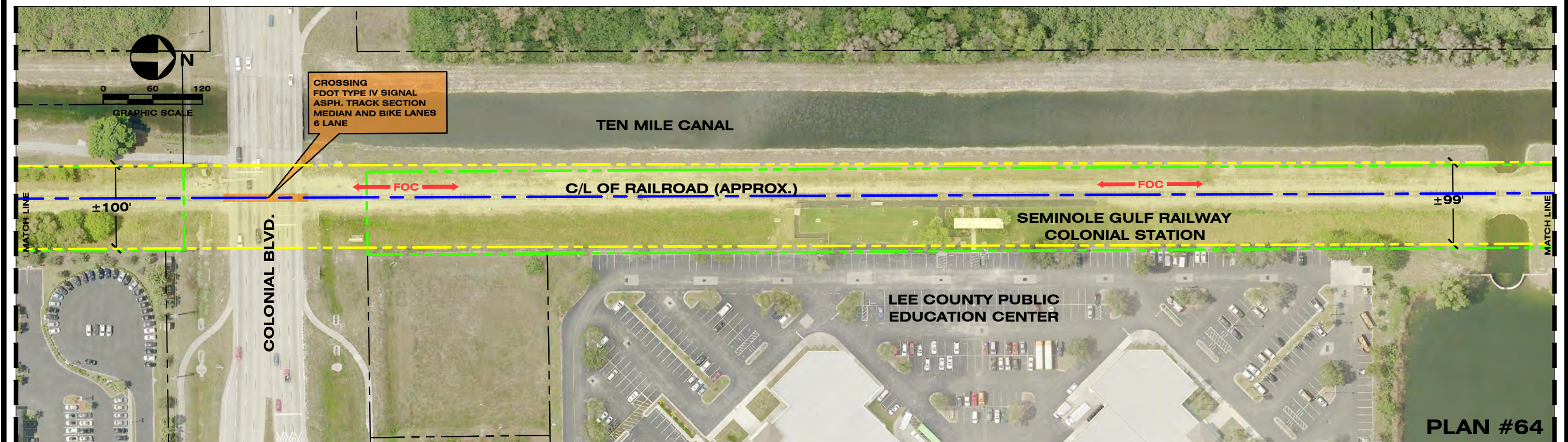
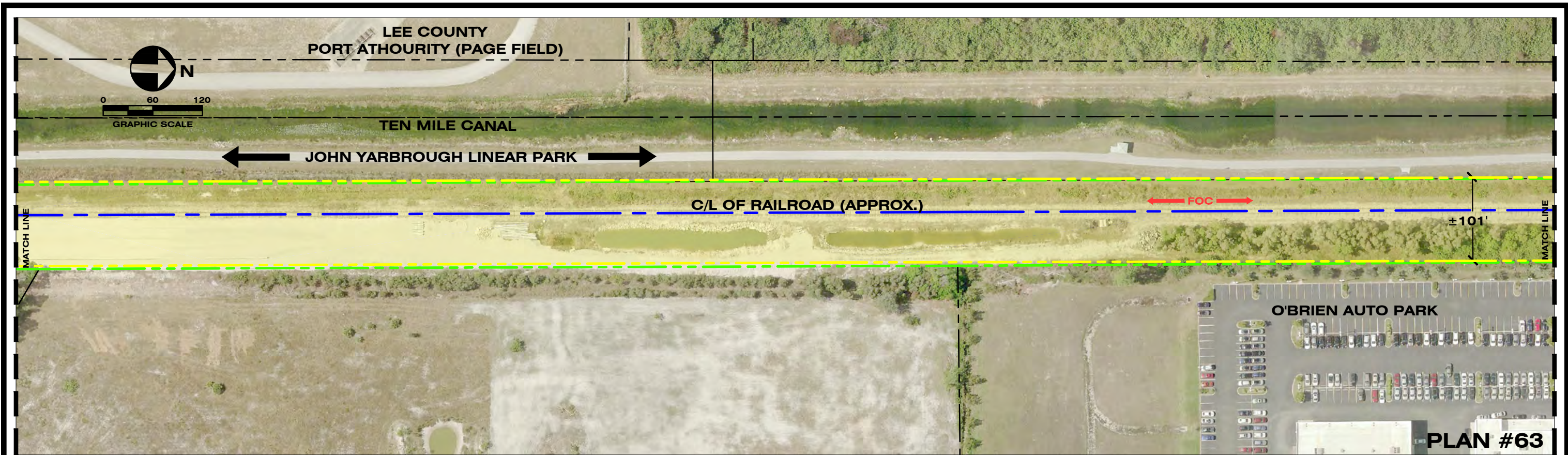


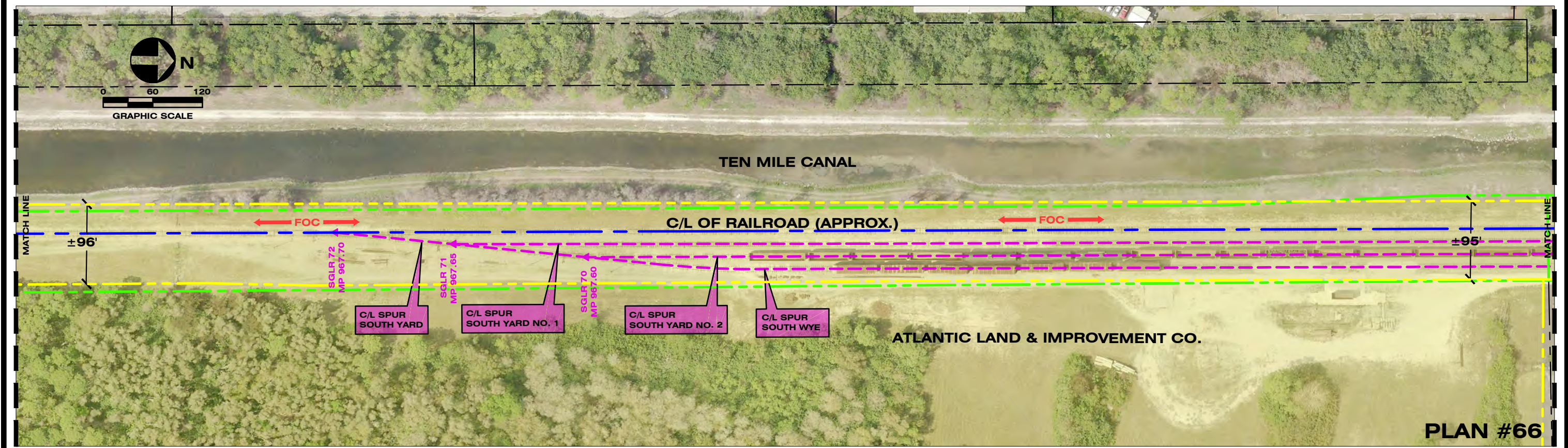
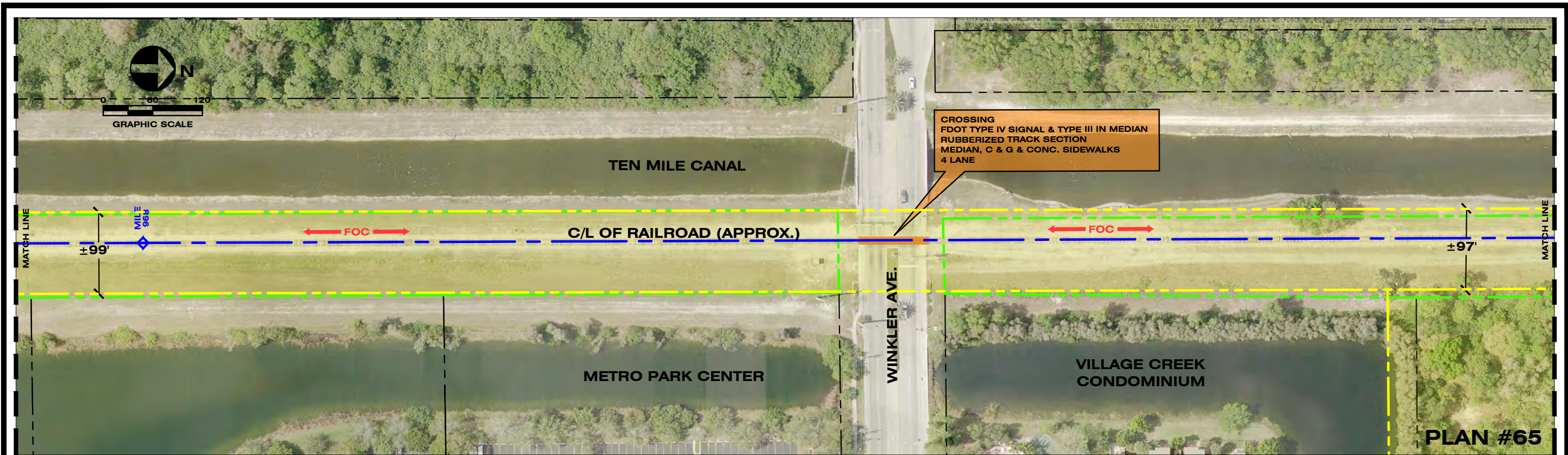


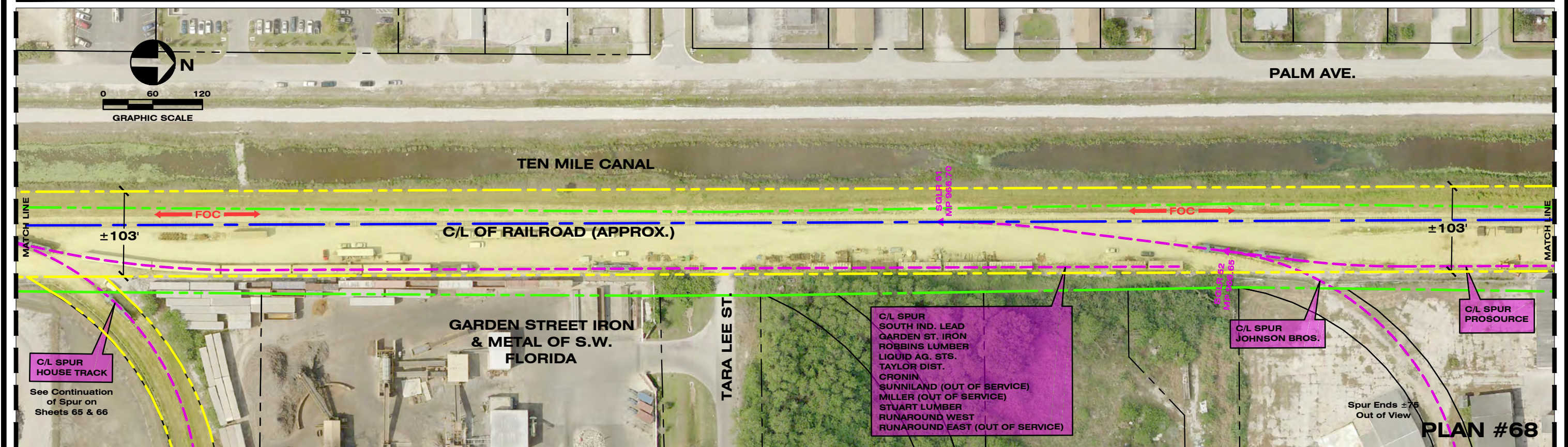
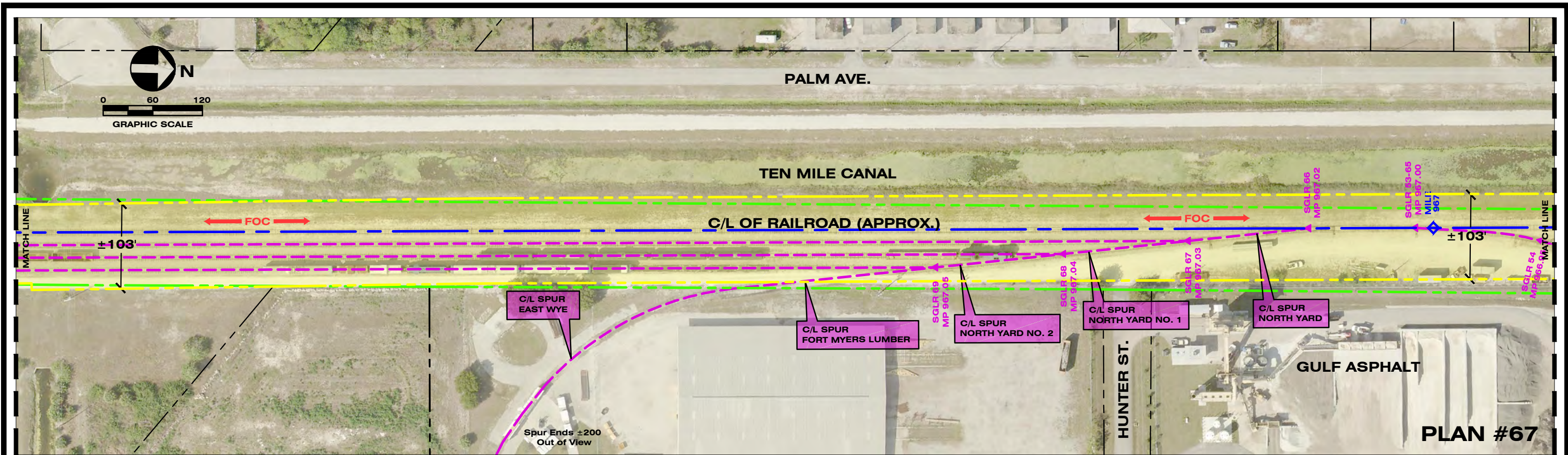


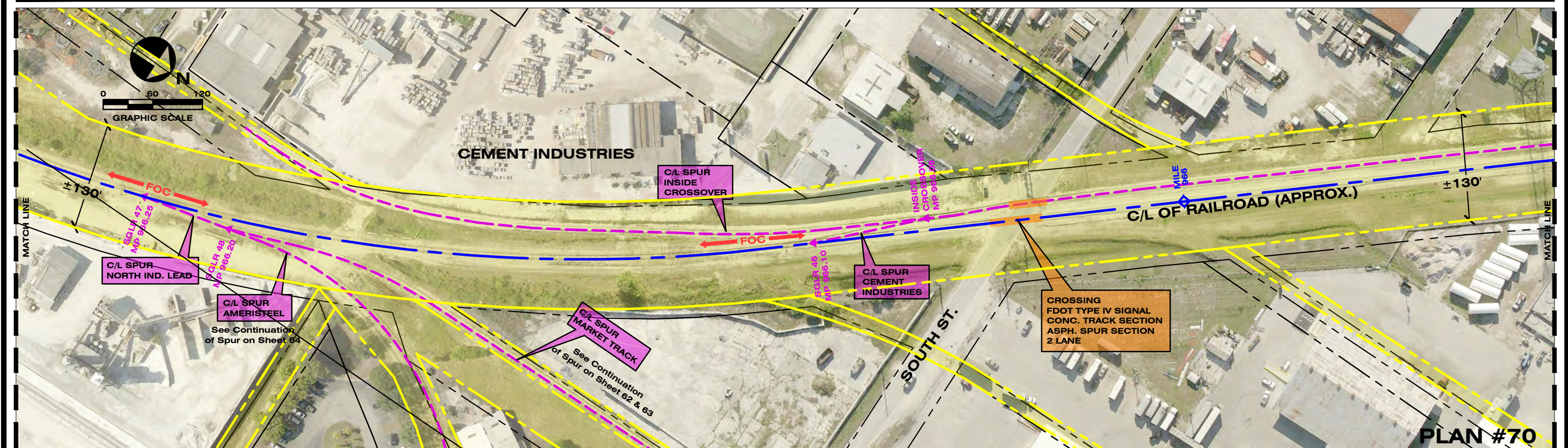
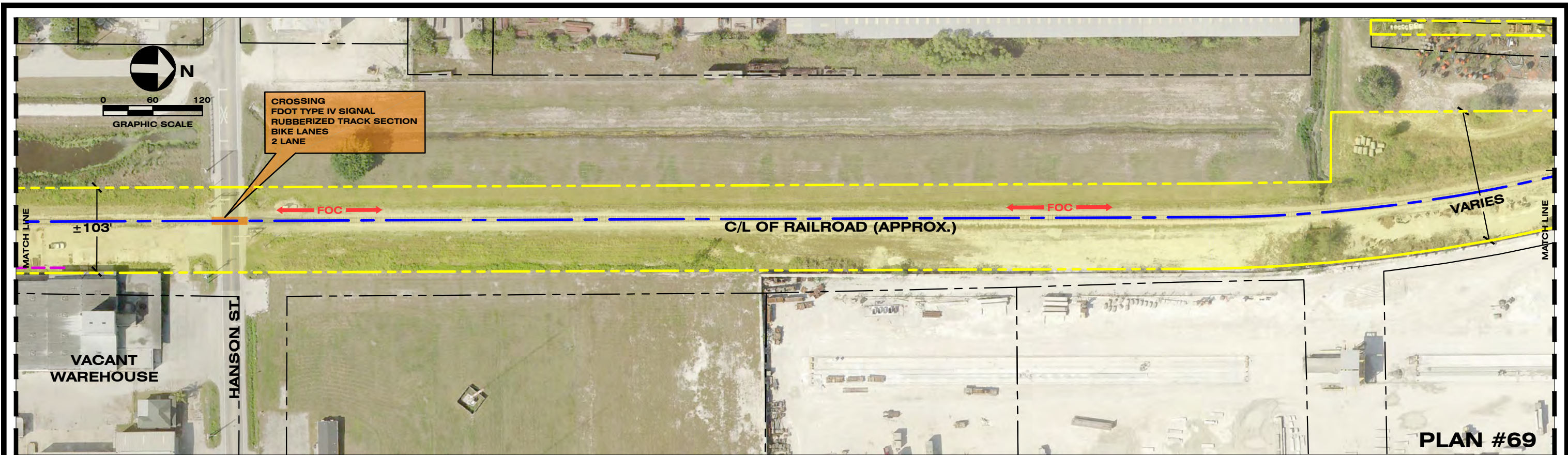


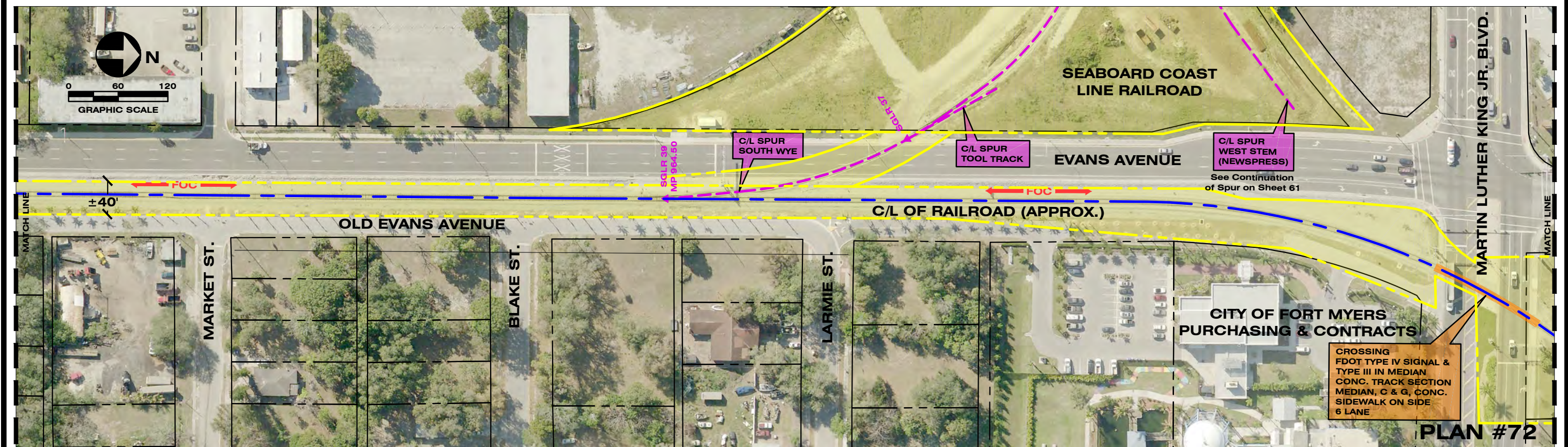
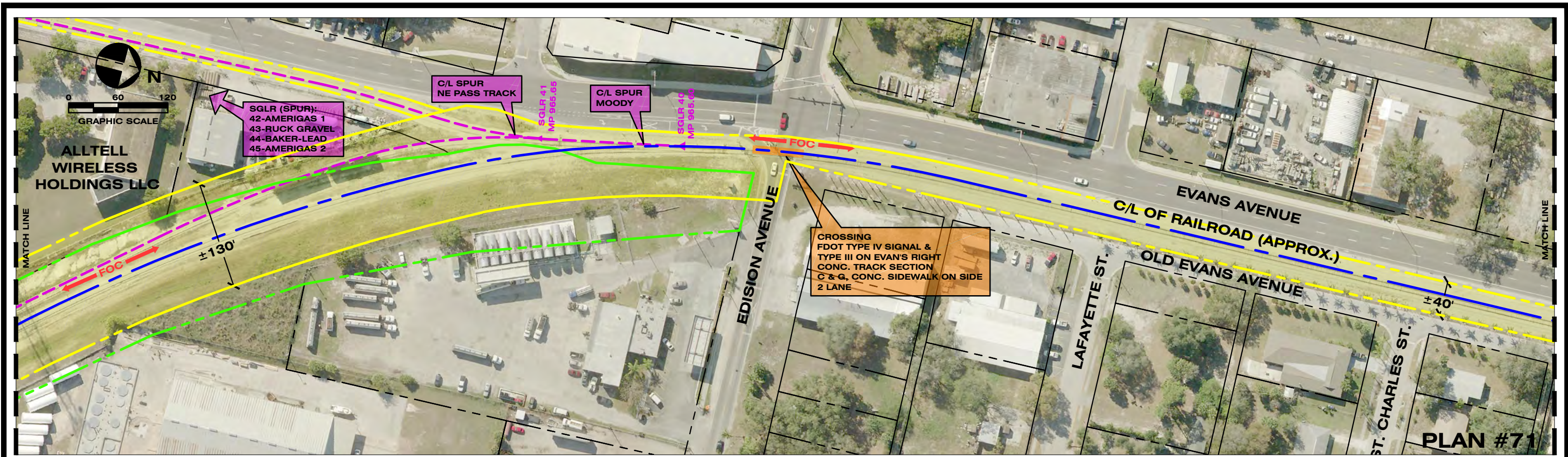


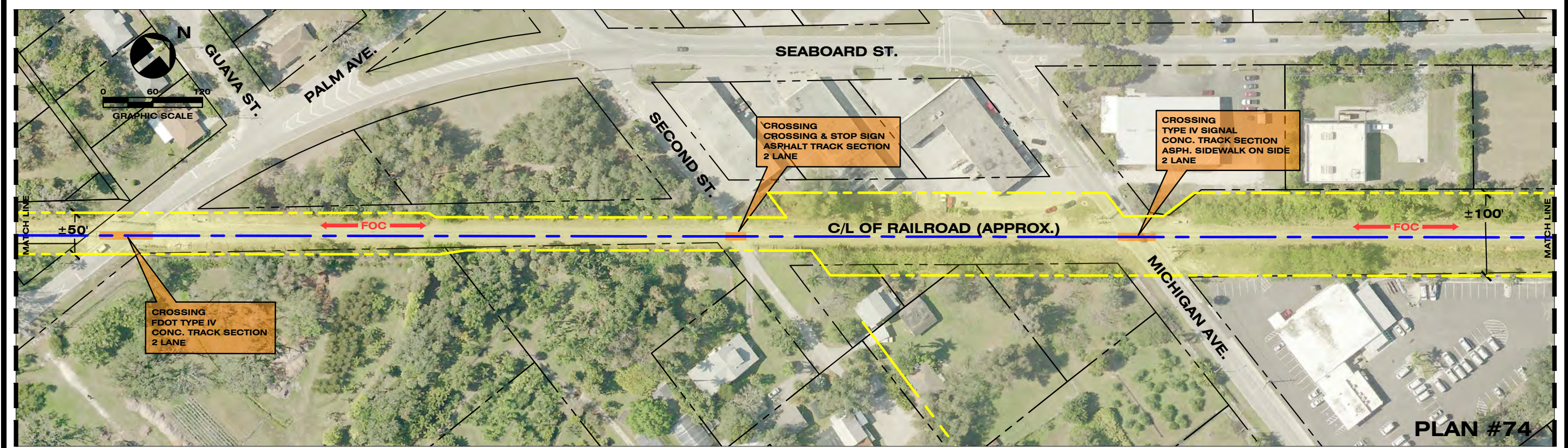
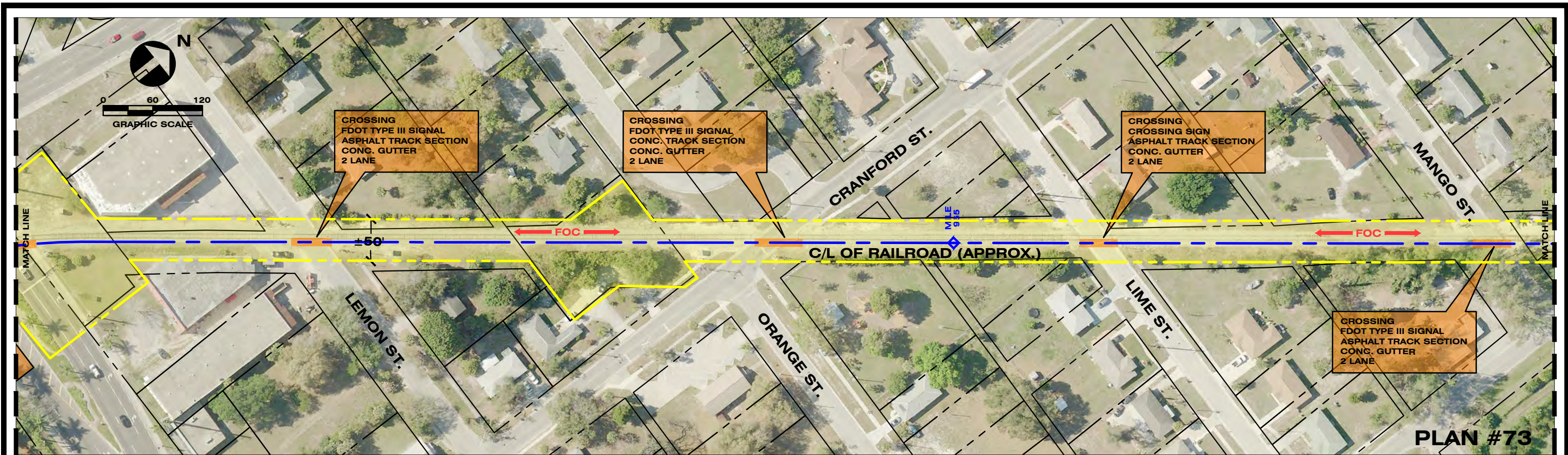


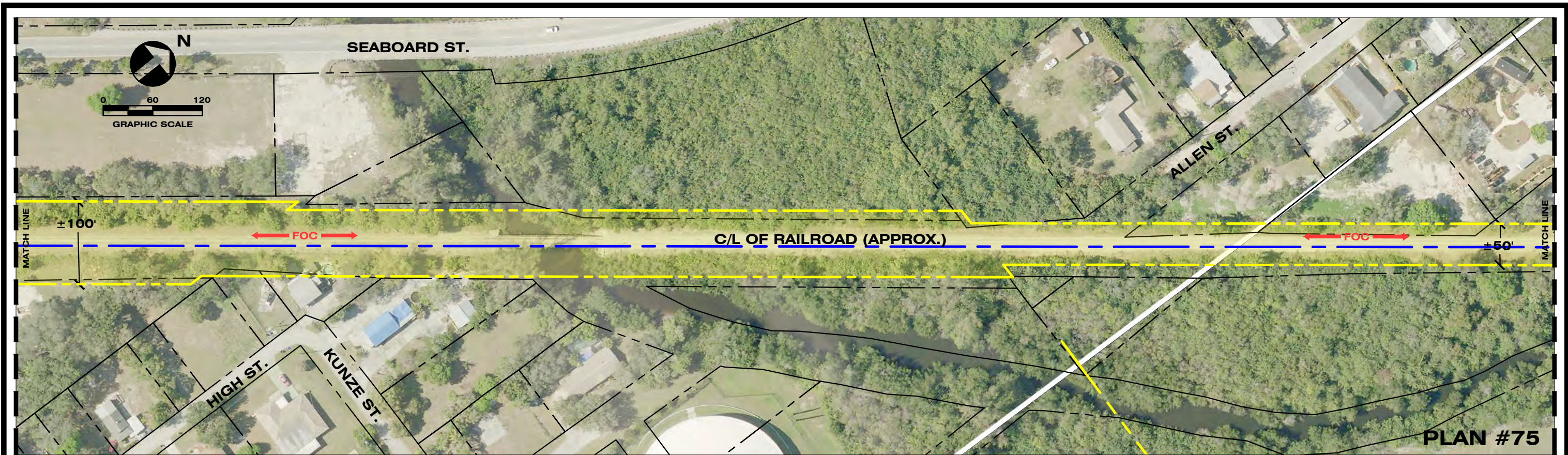




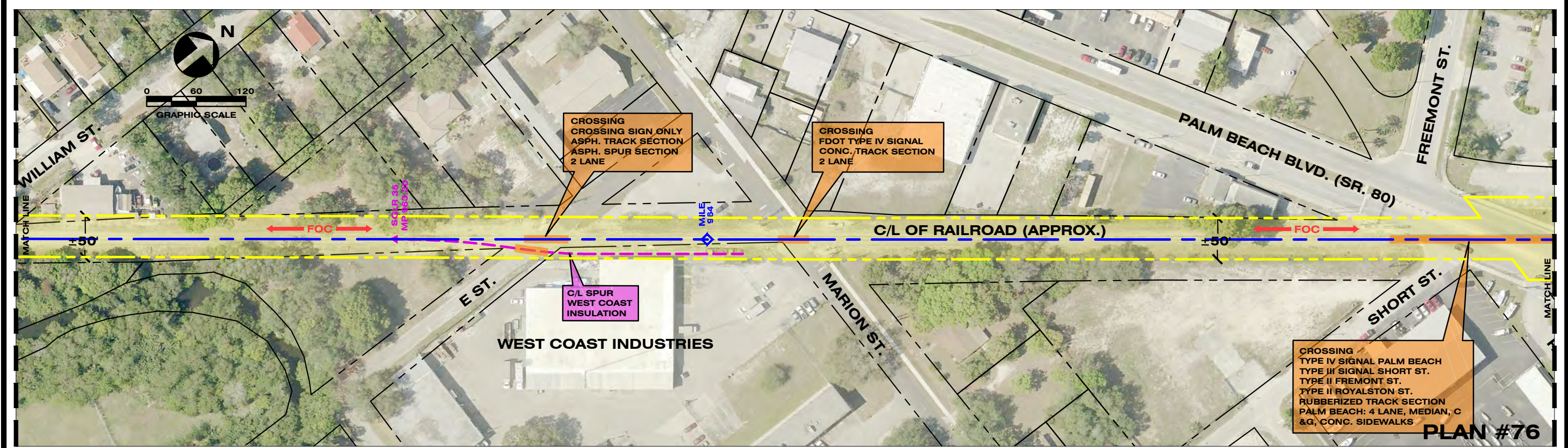




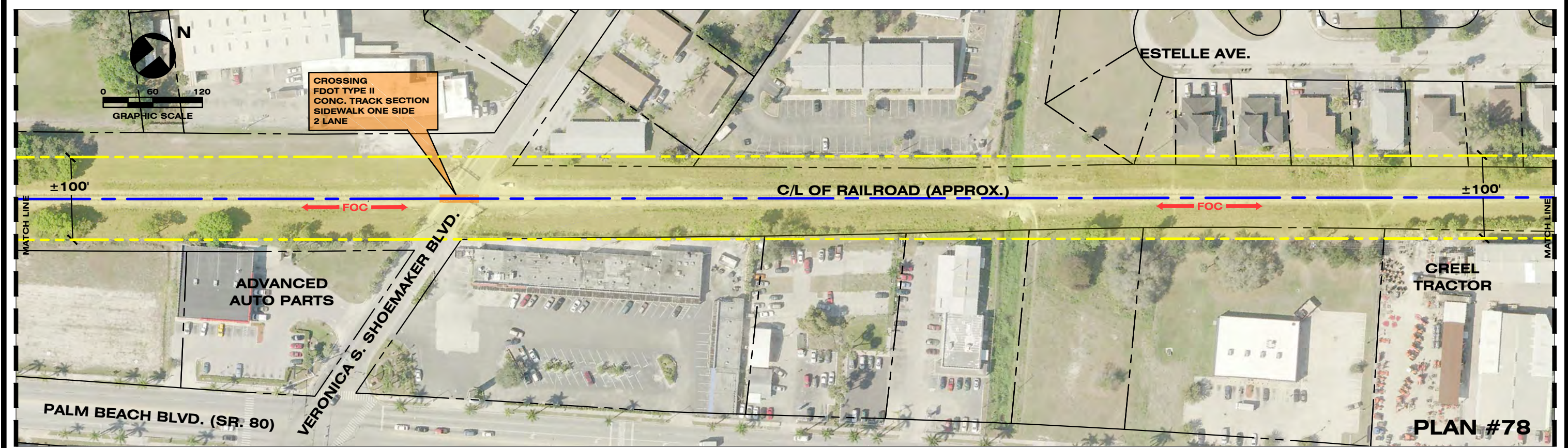
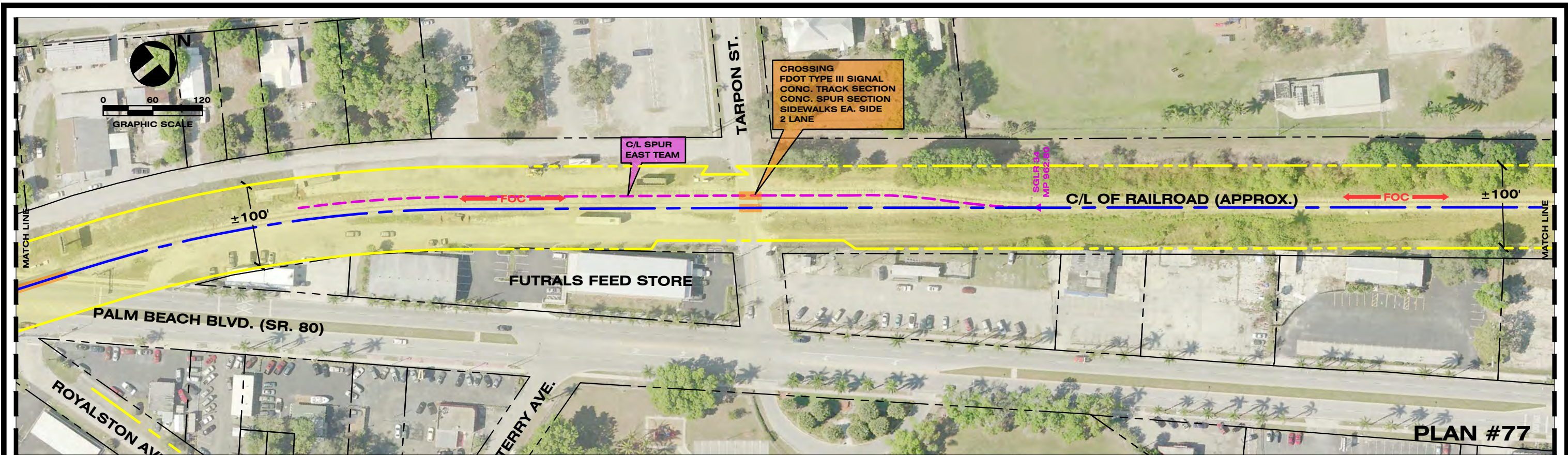


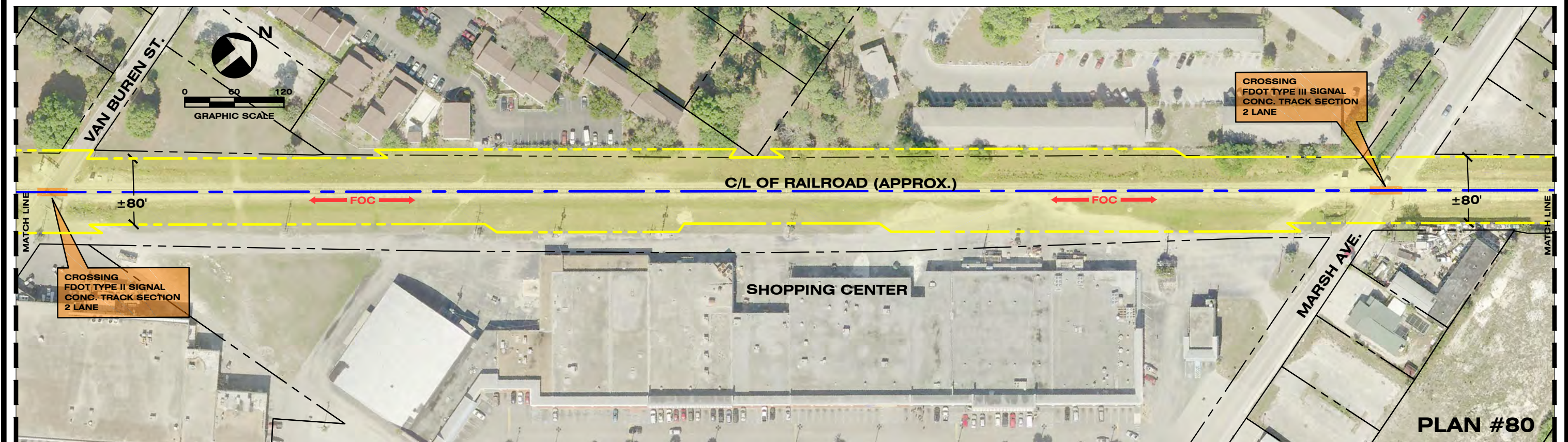
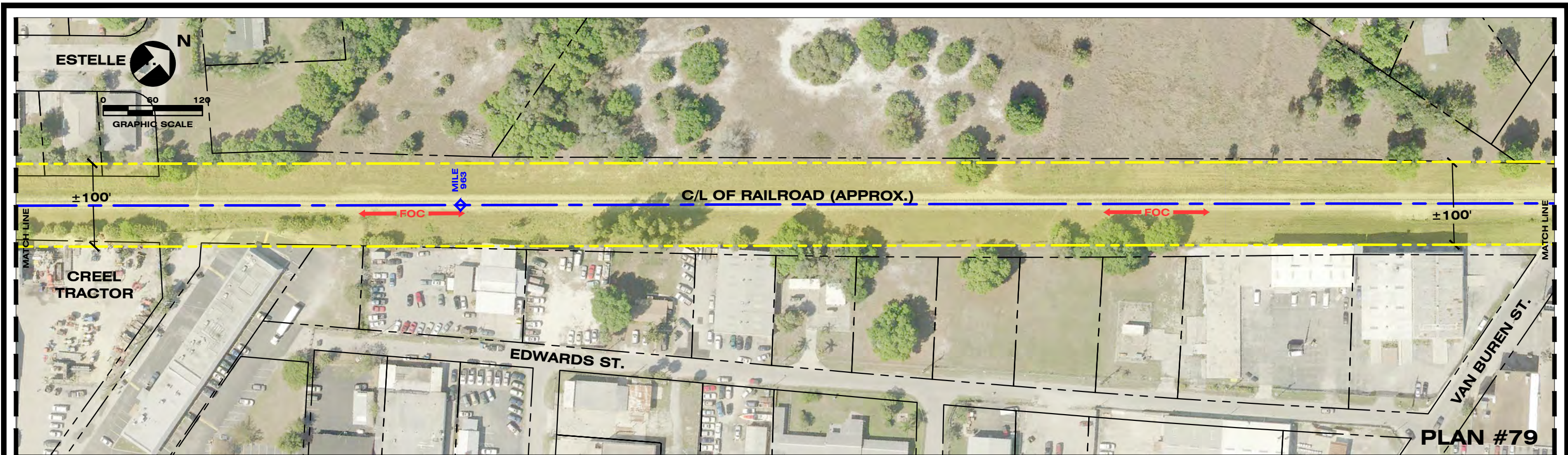


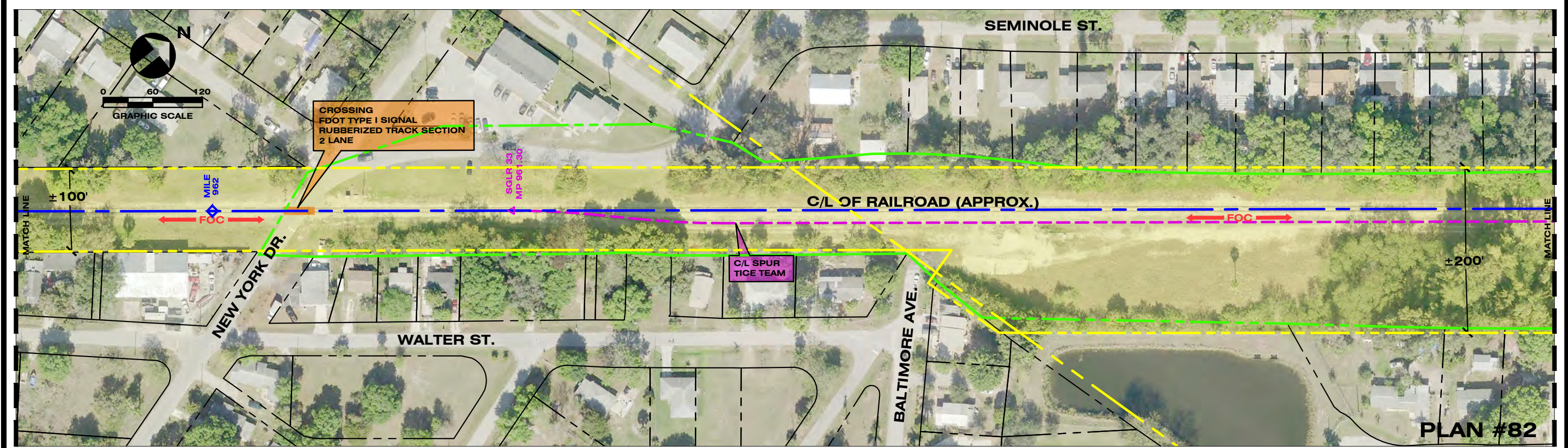
PLAN #75

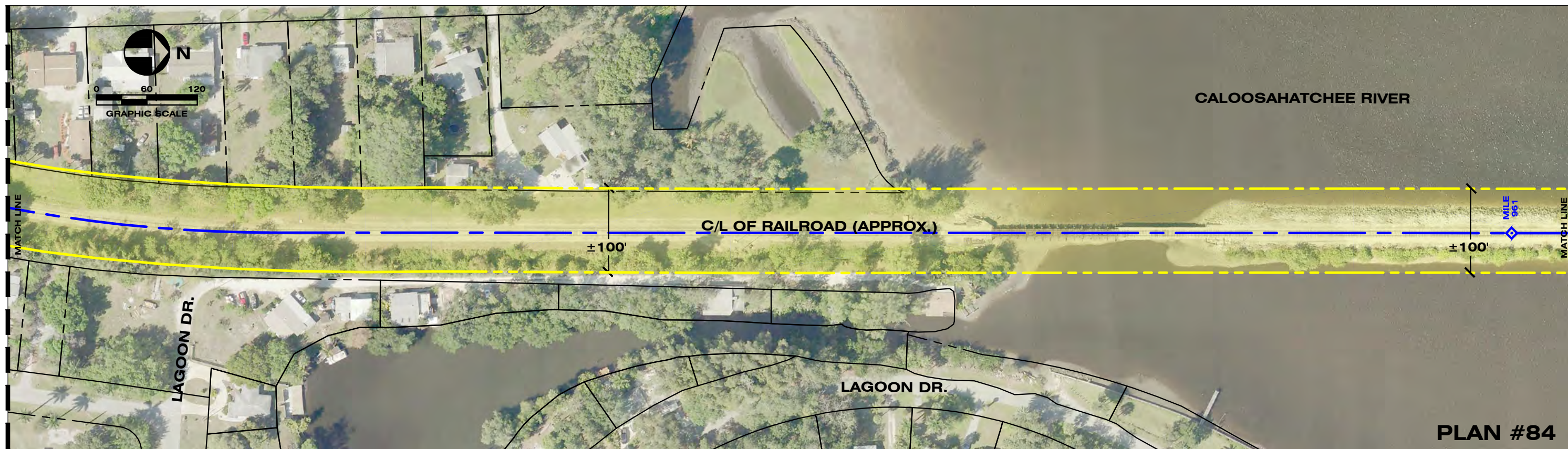
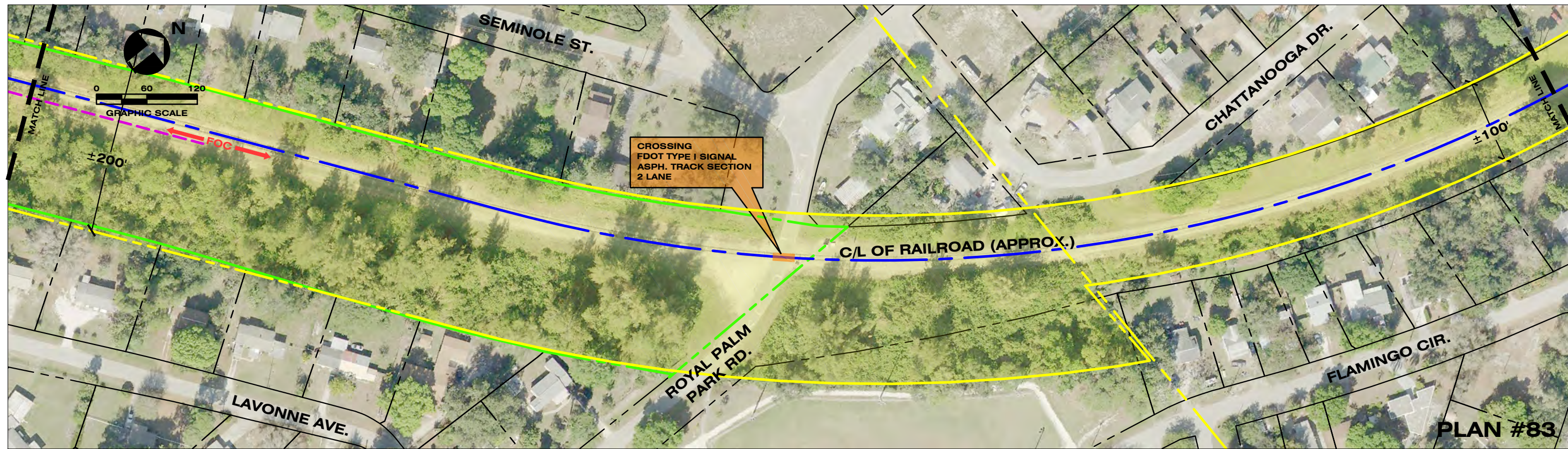


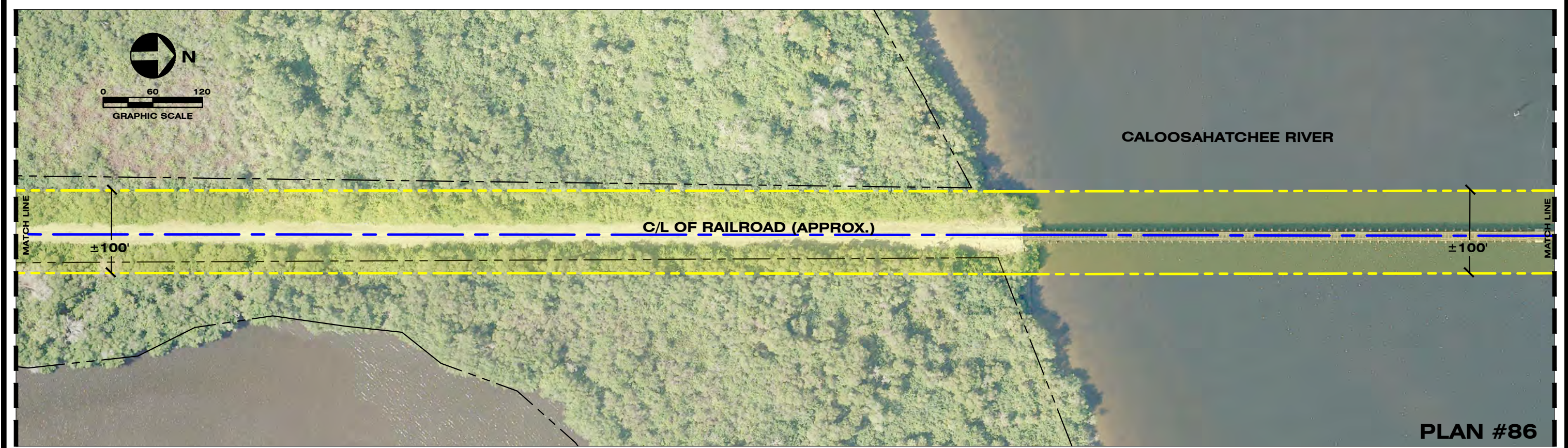
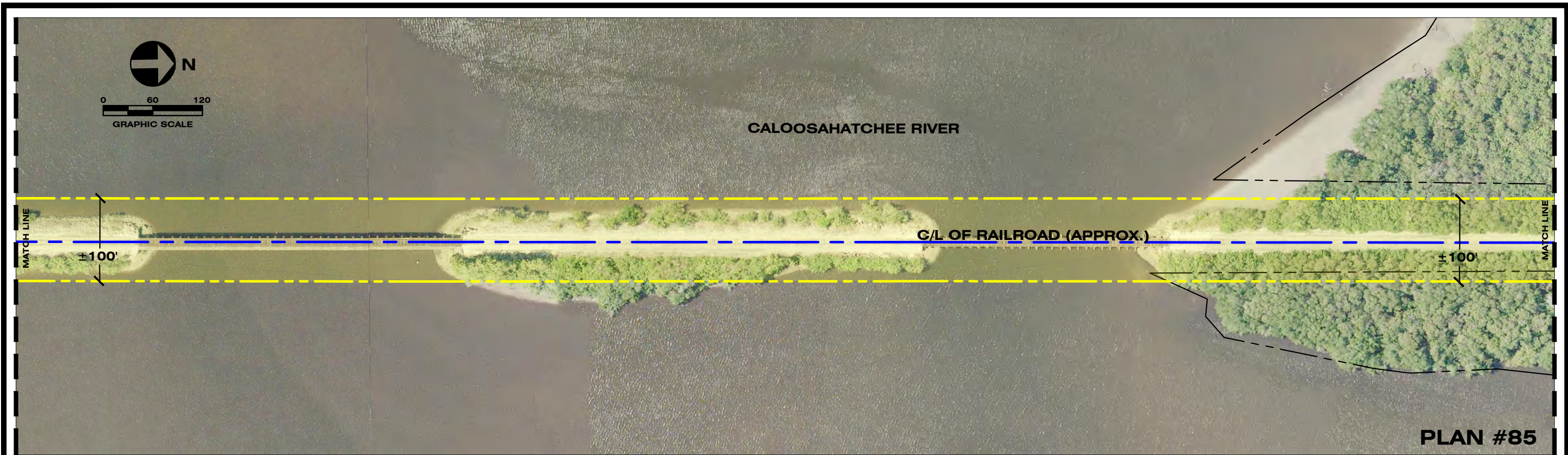
PLAN #76

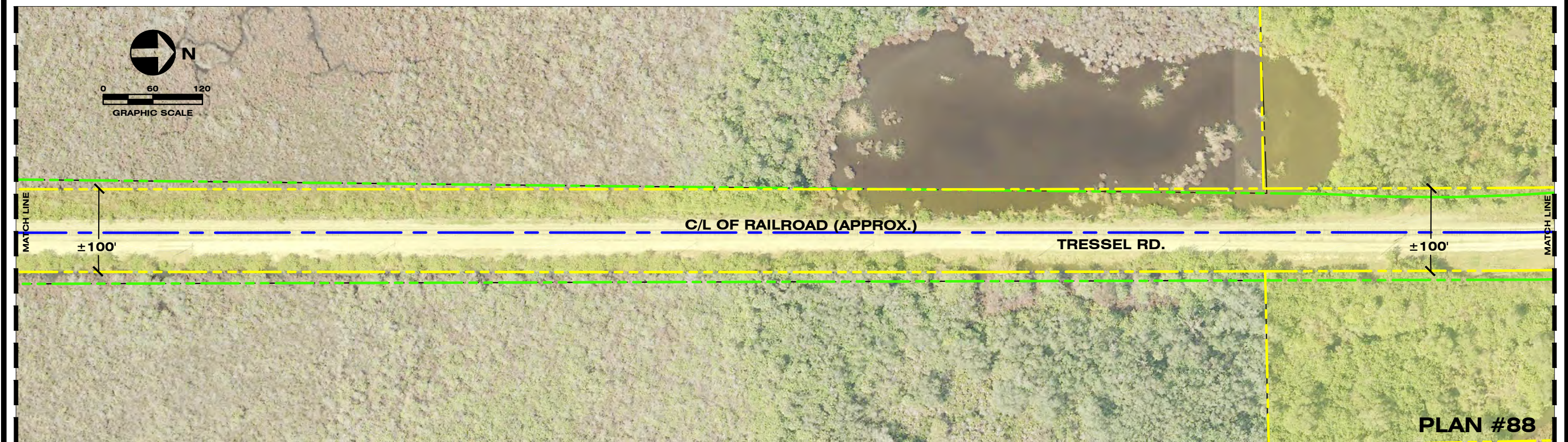
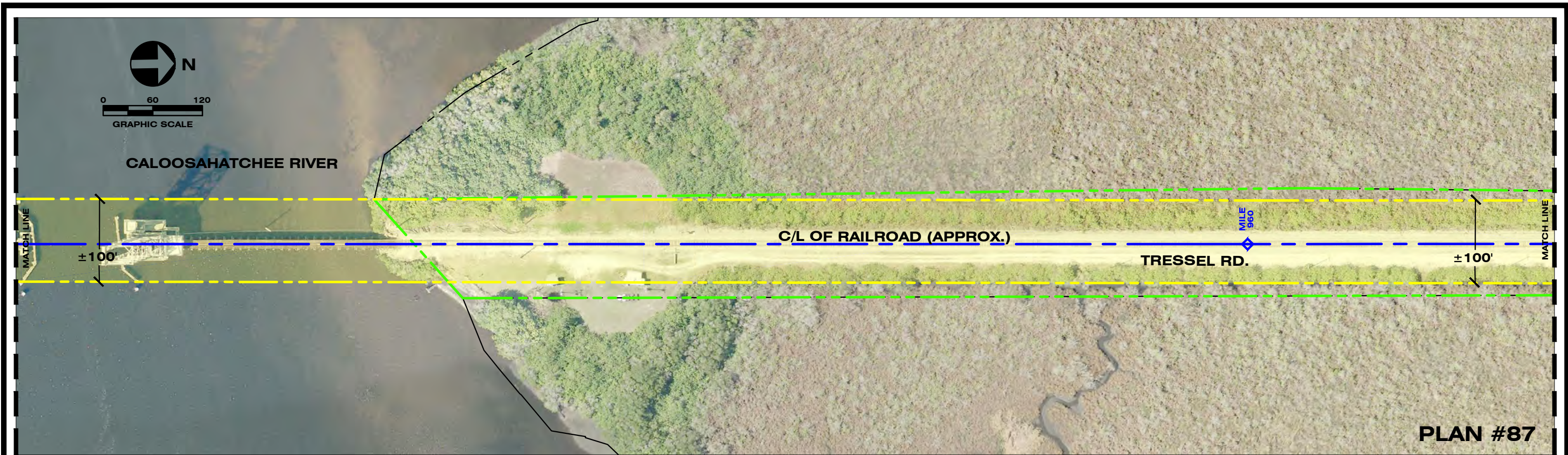


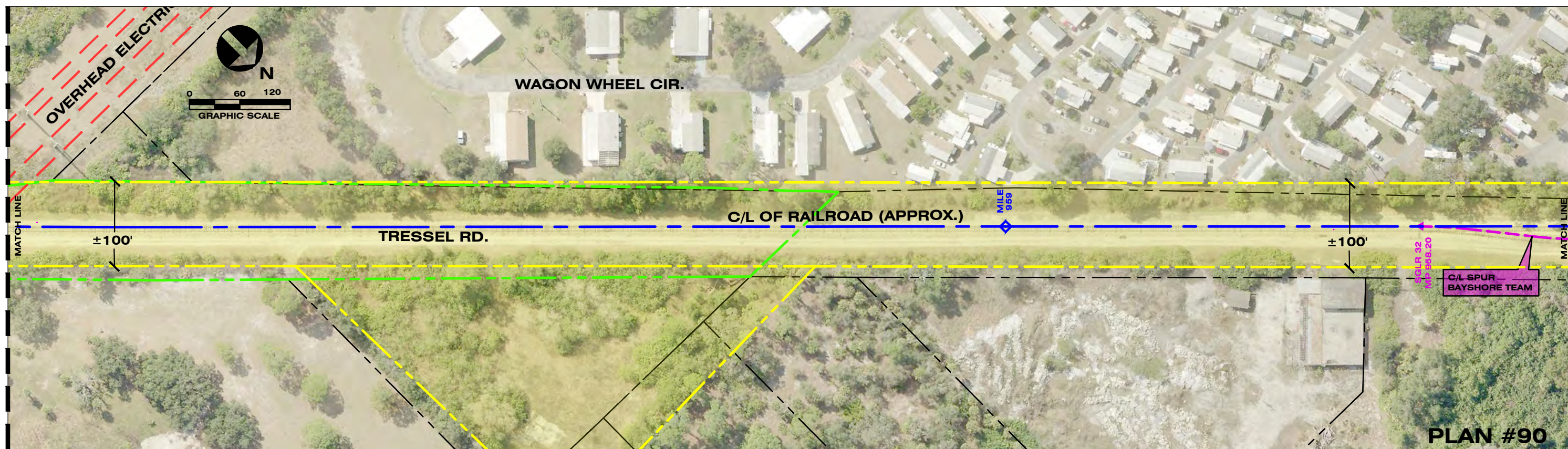
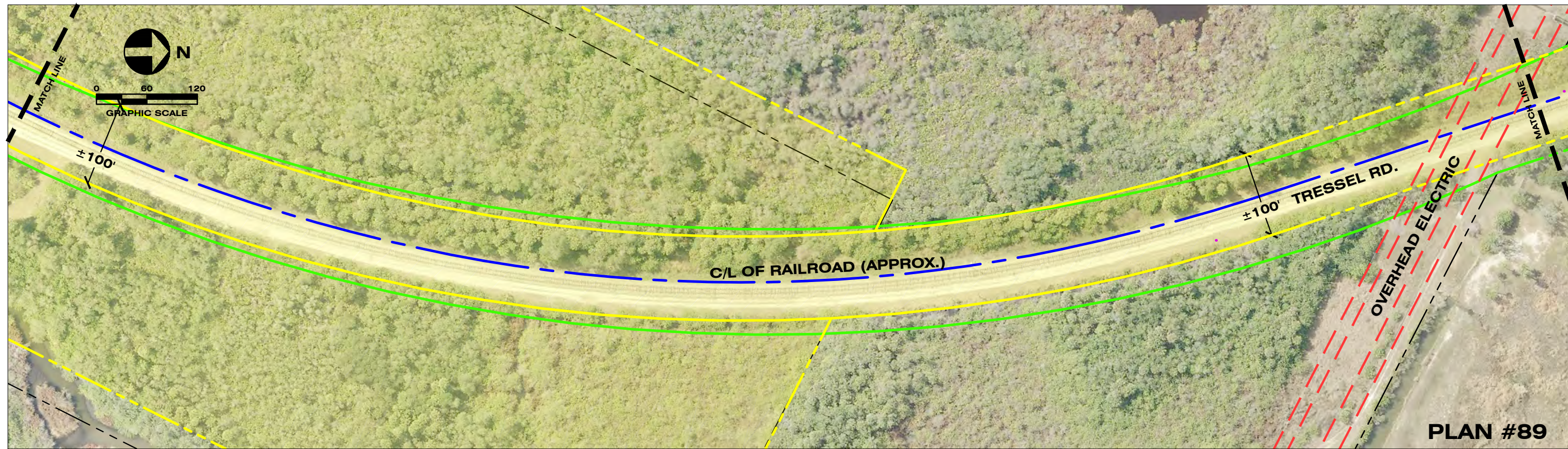


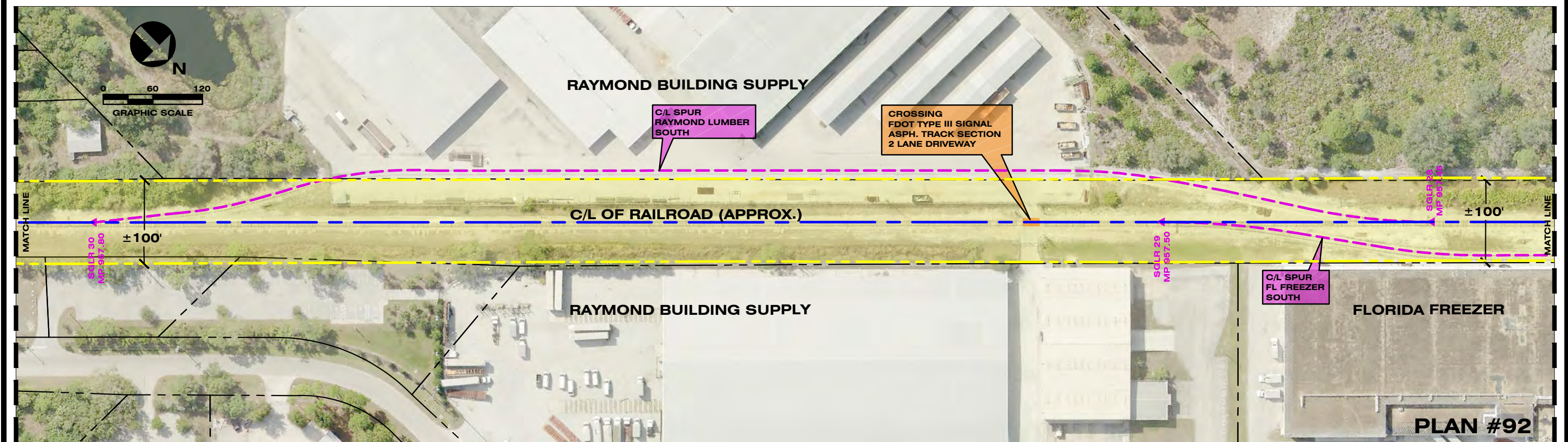
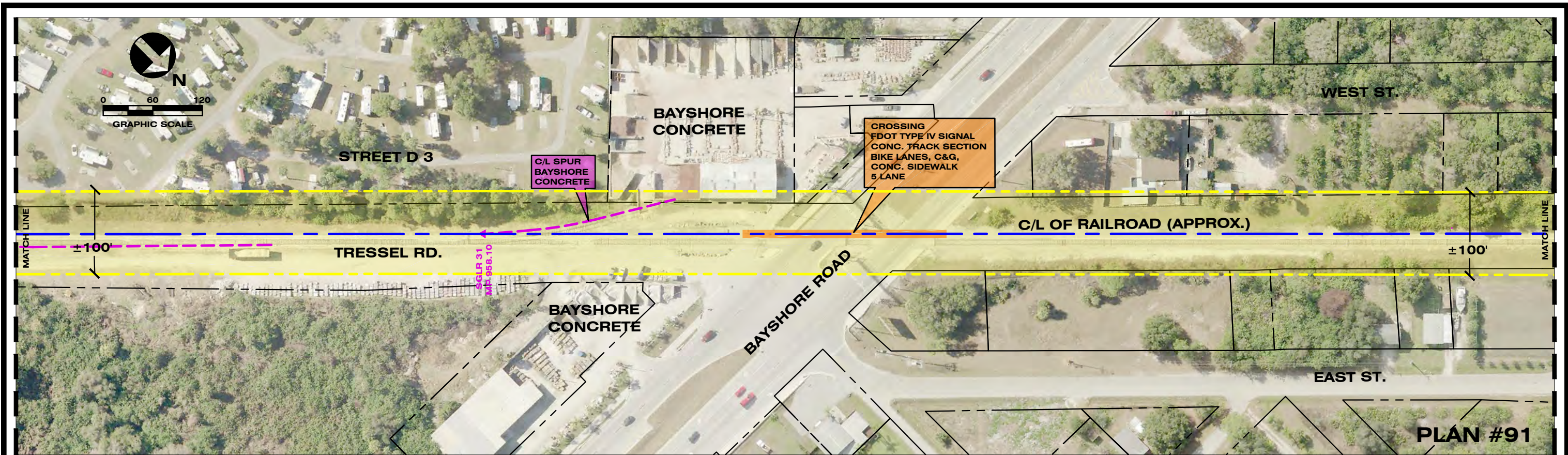


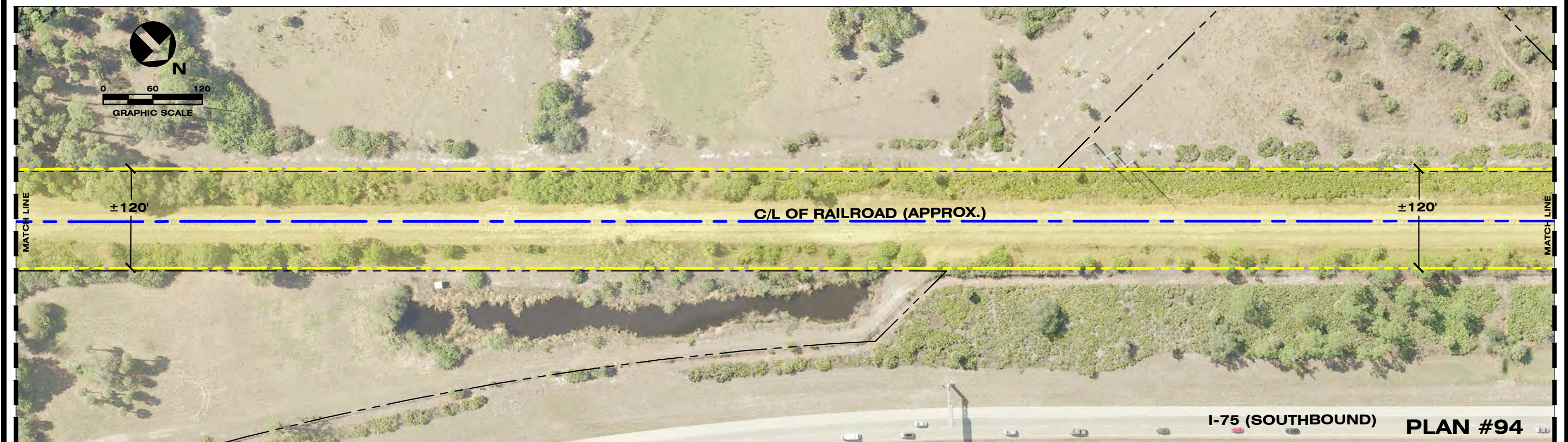
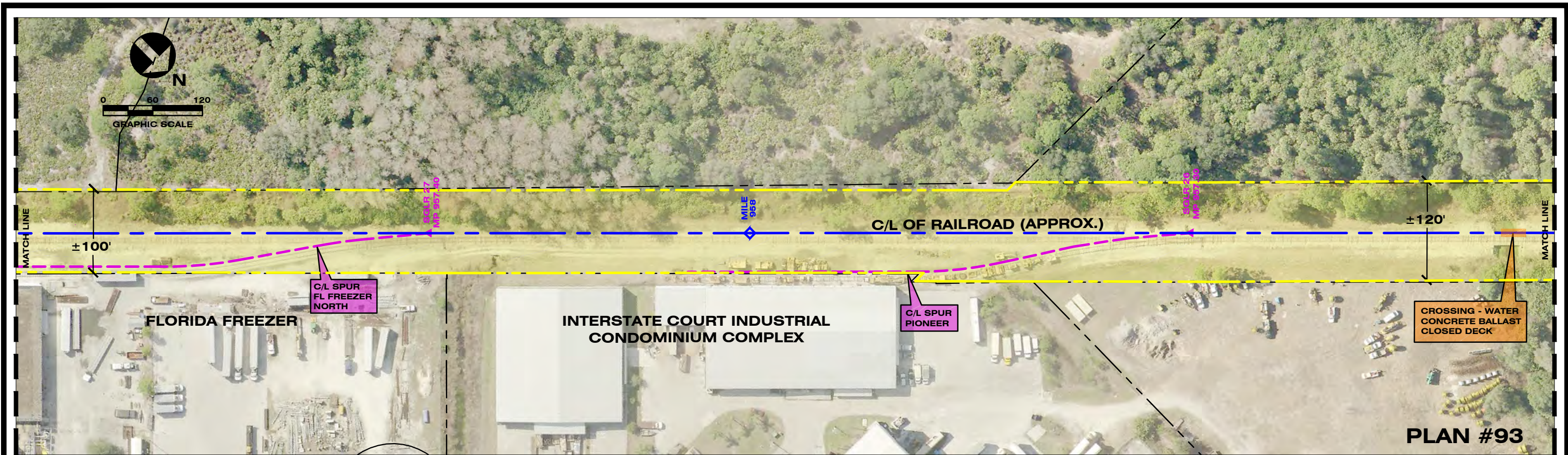


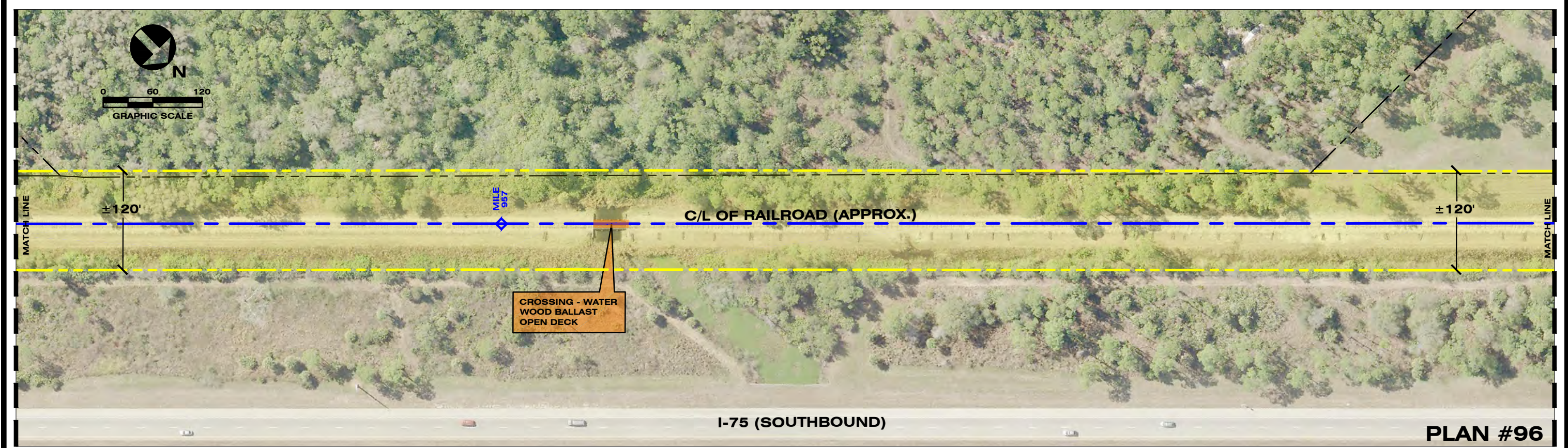
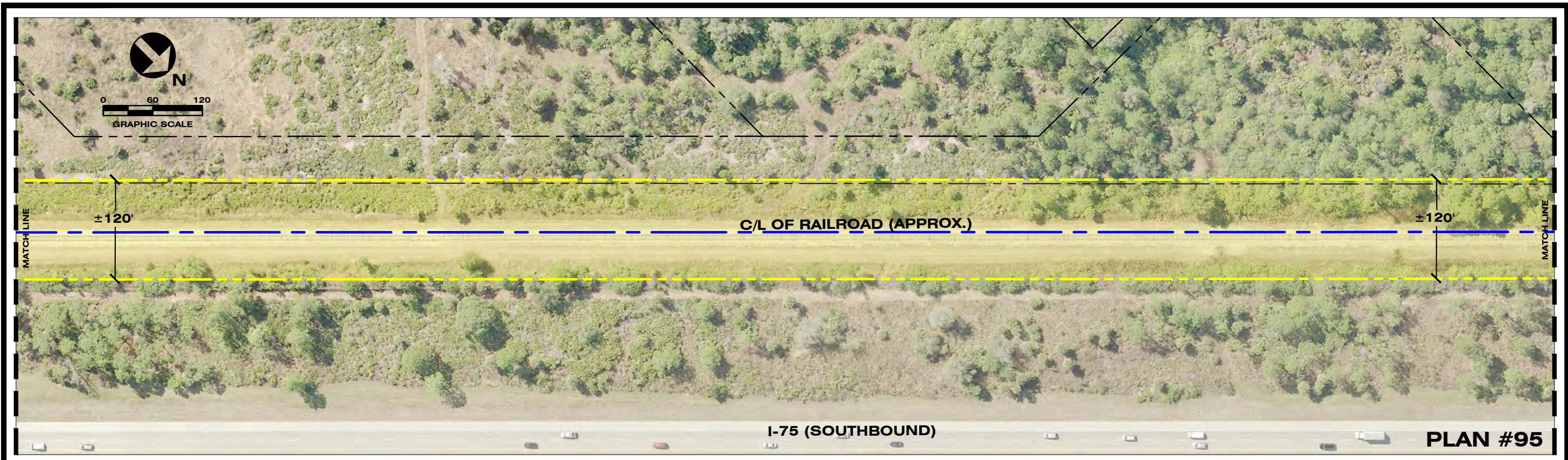


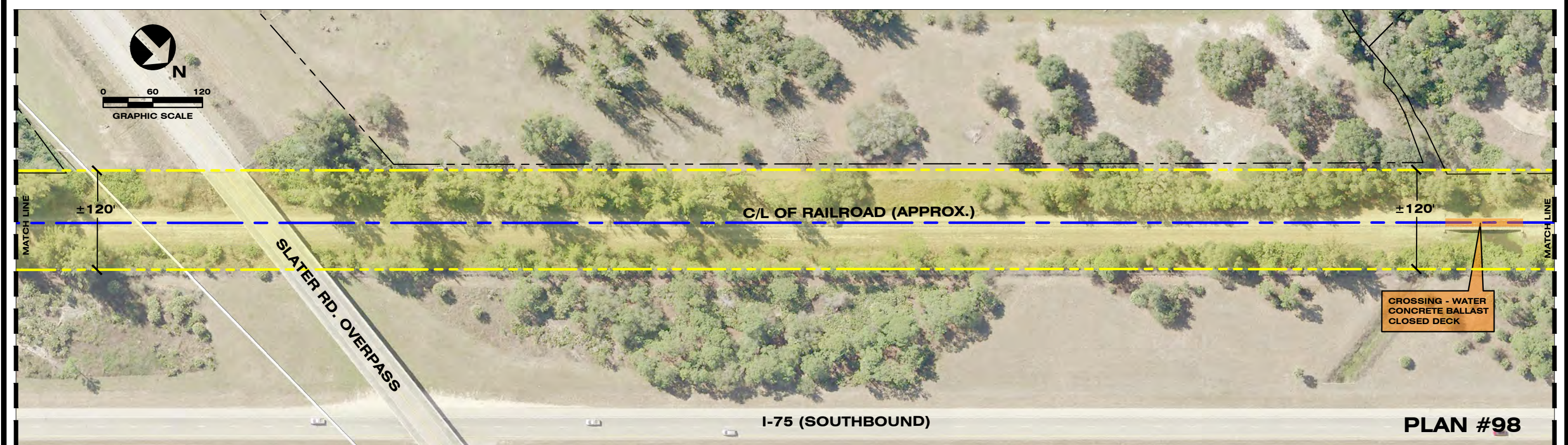
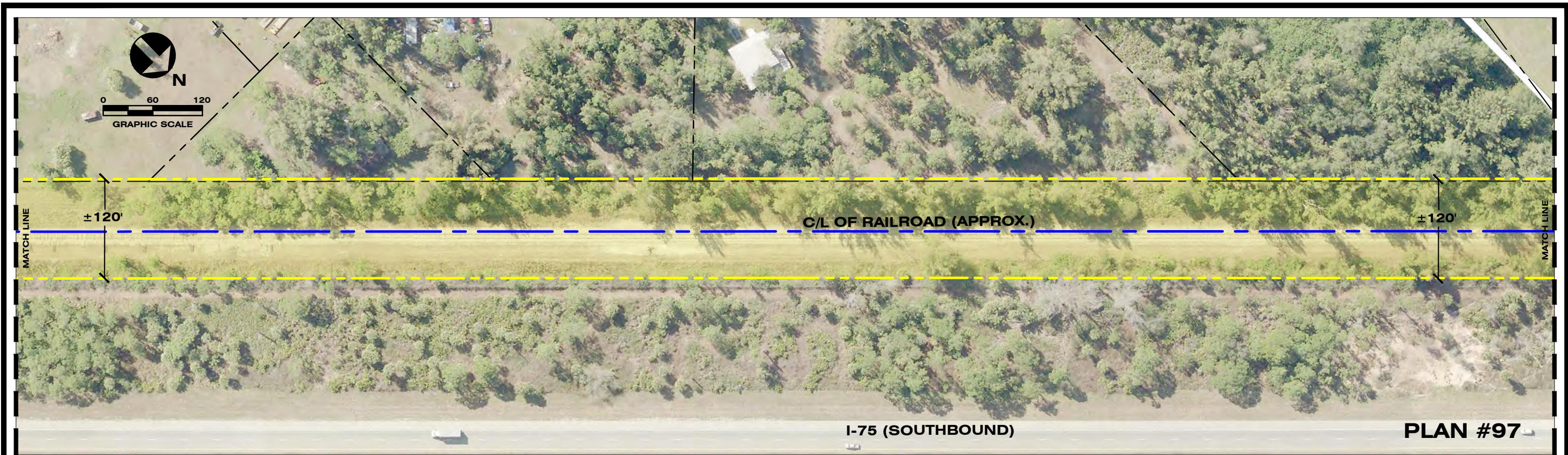


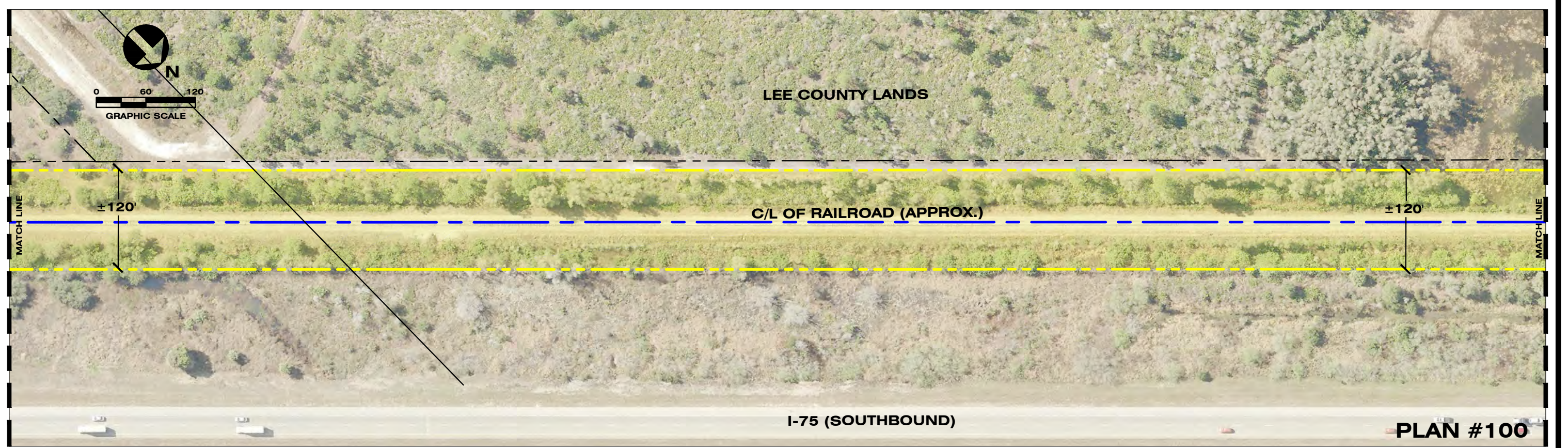
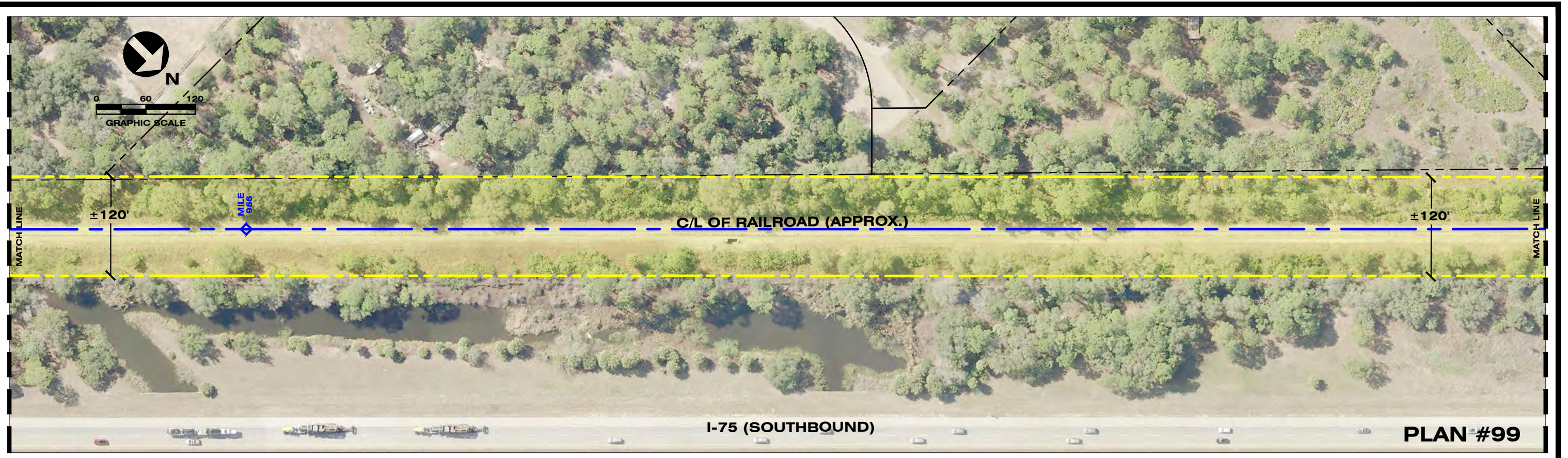


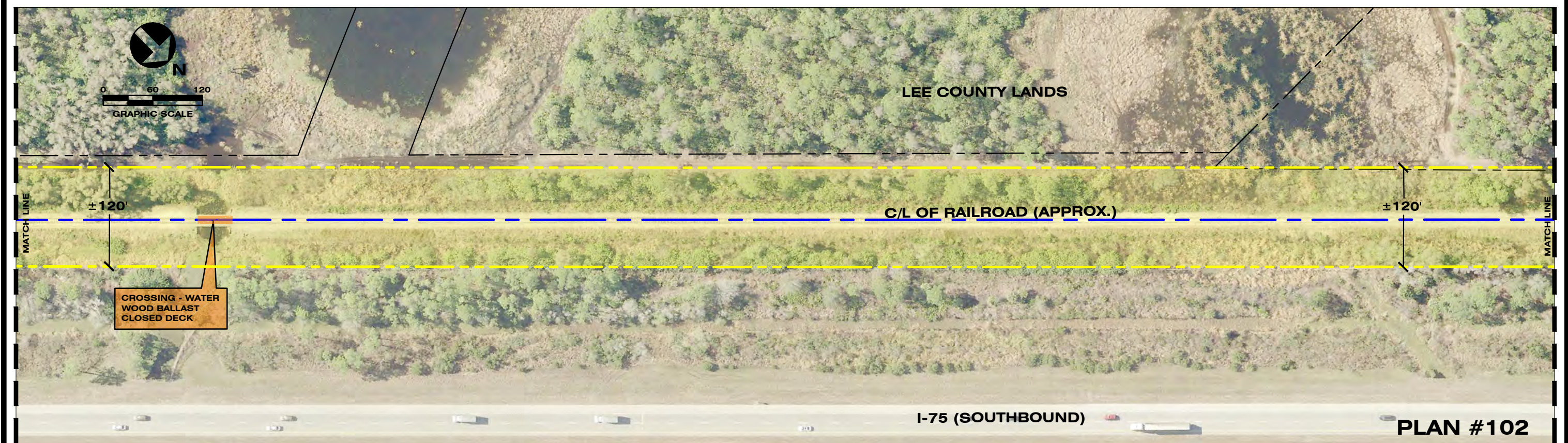
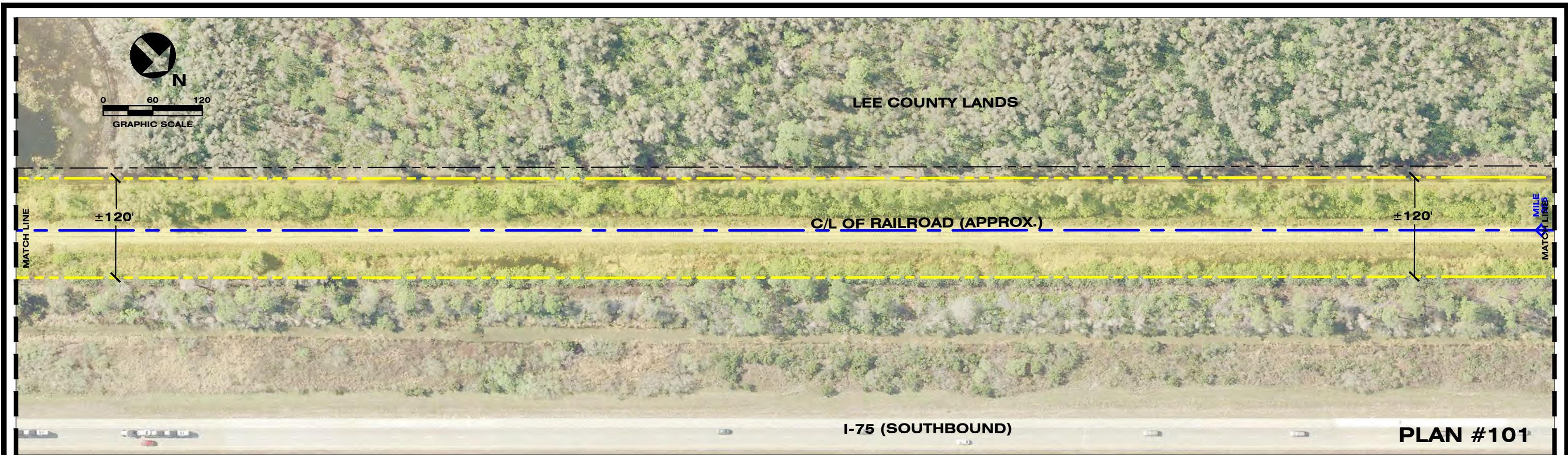


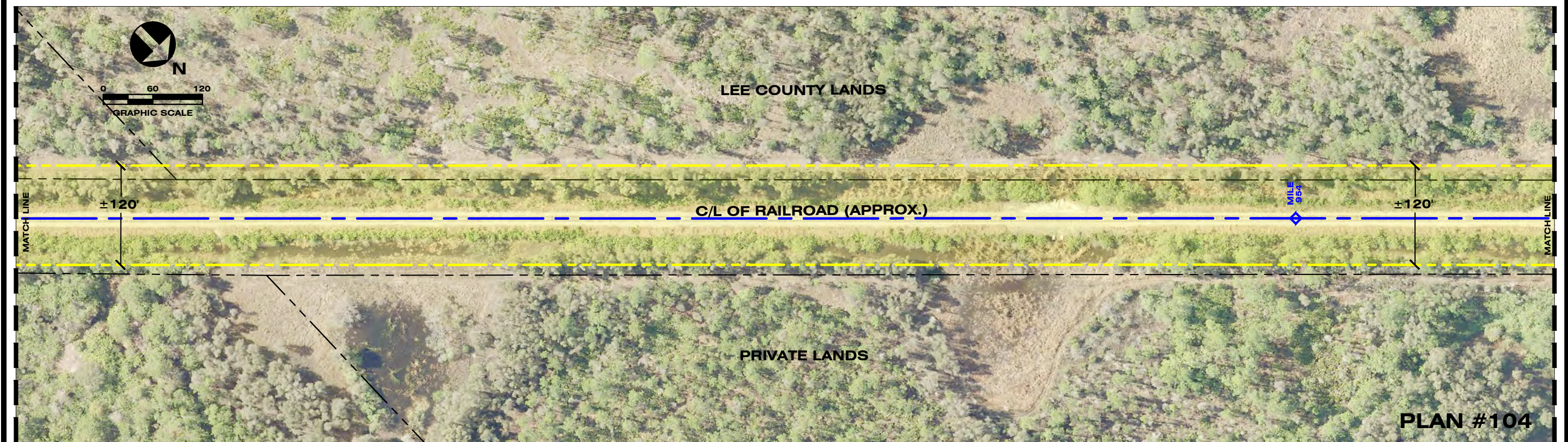
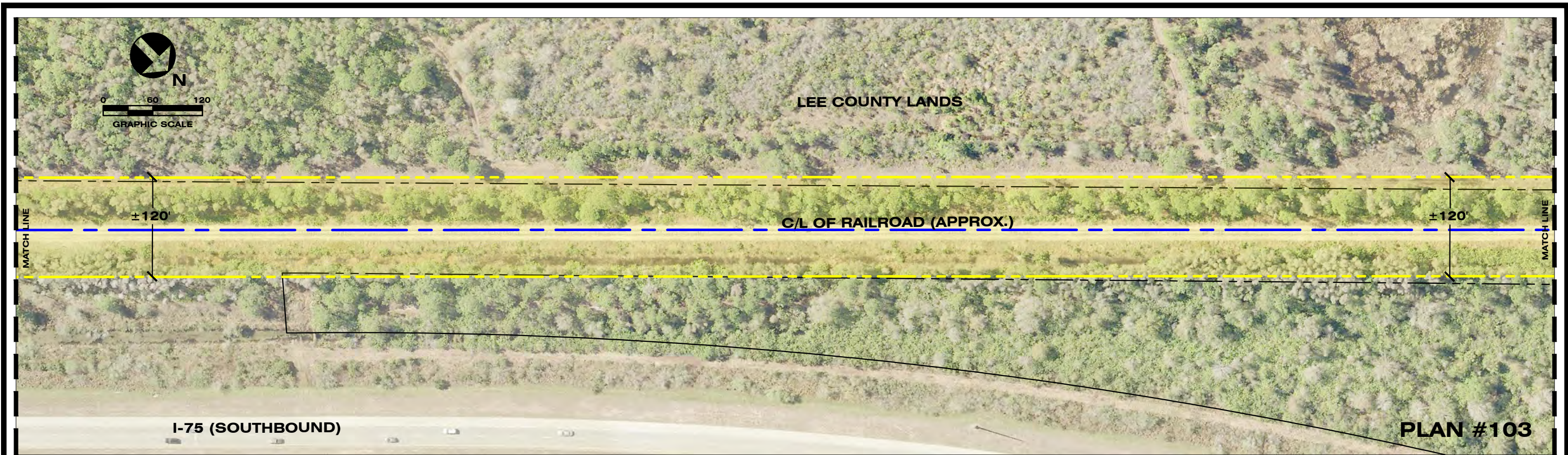


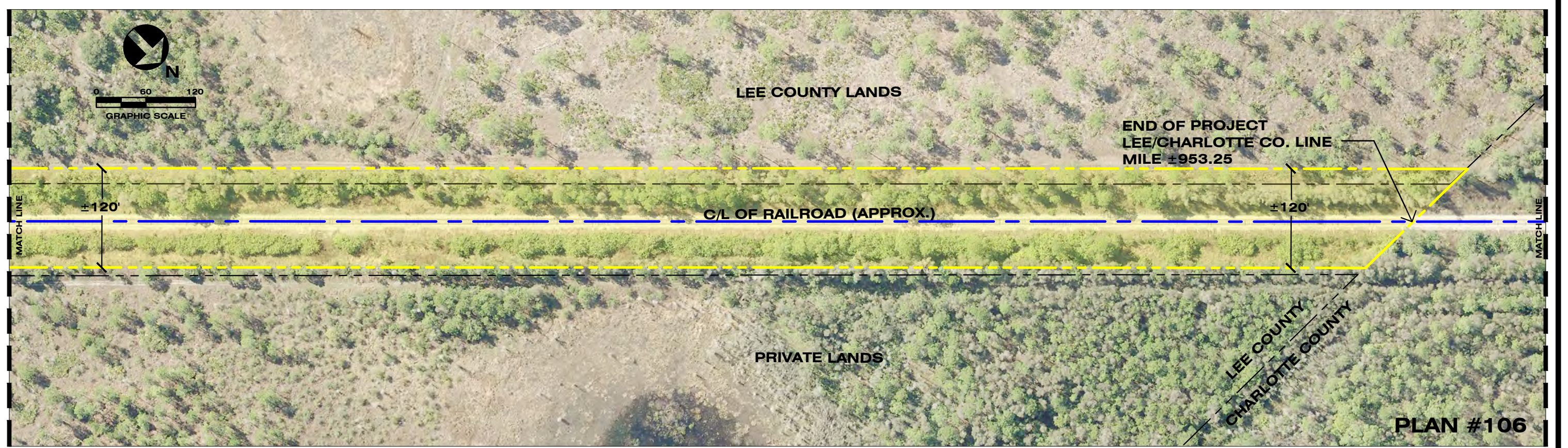
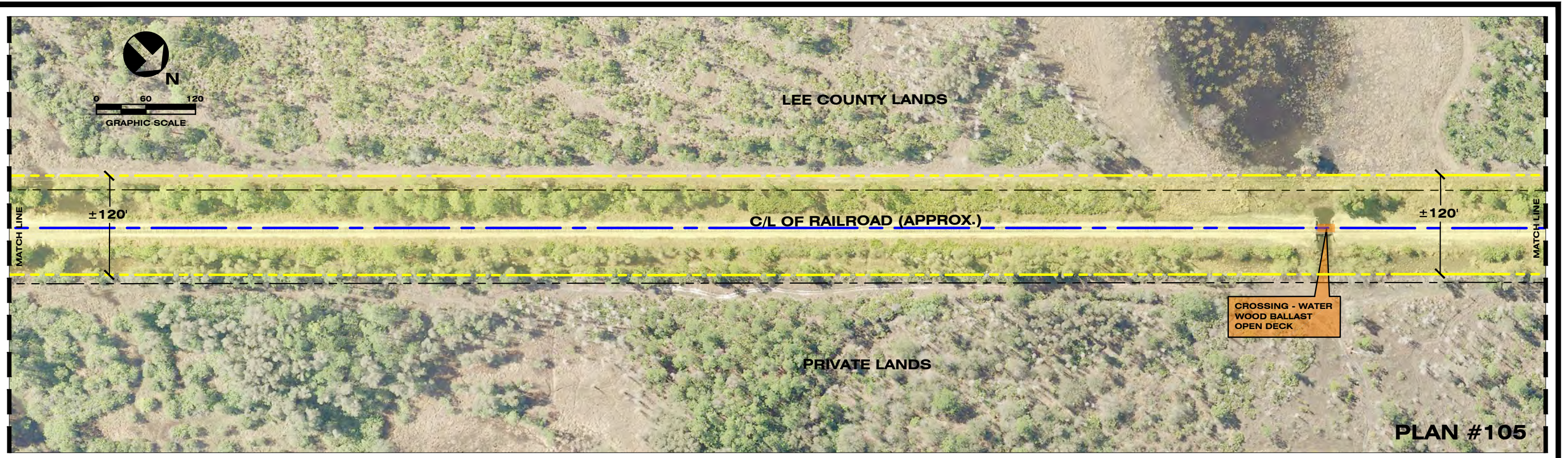


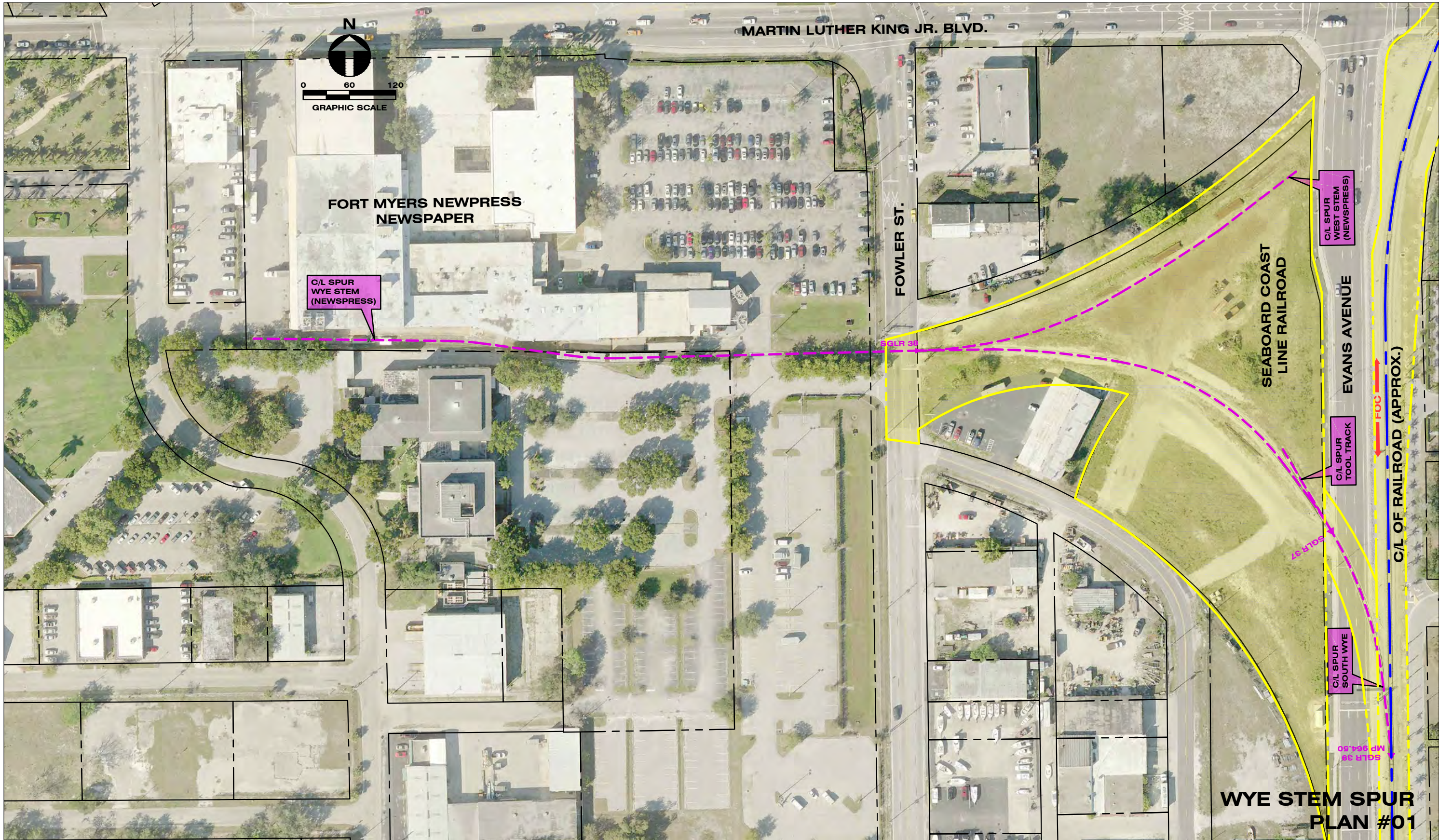


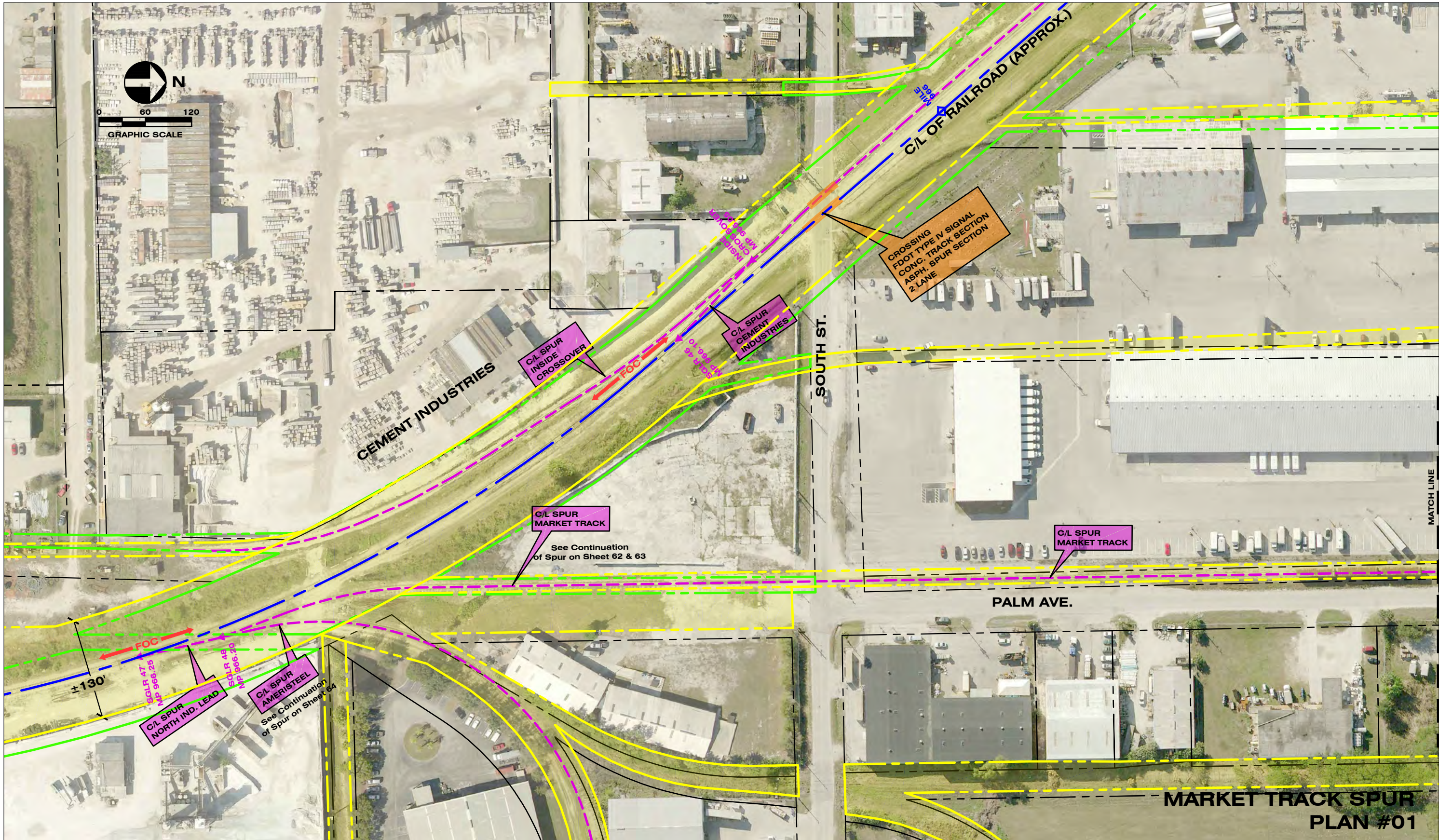


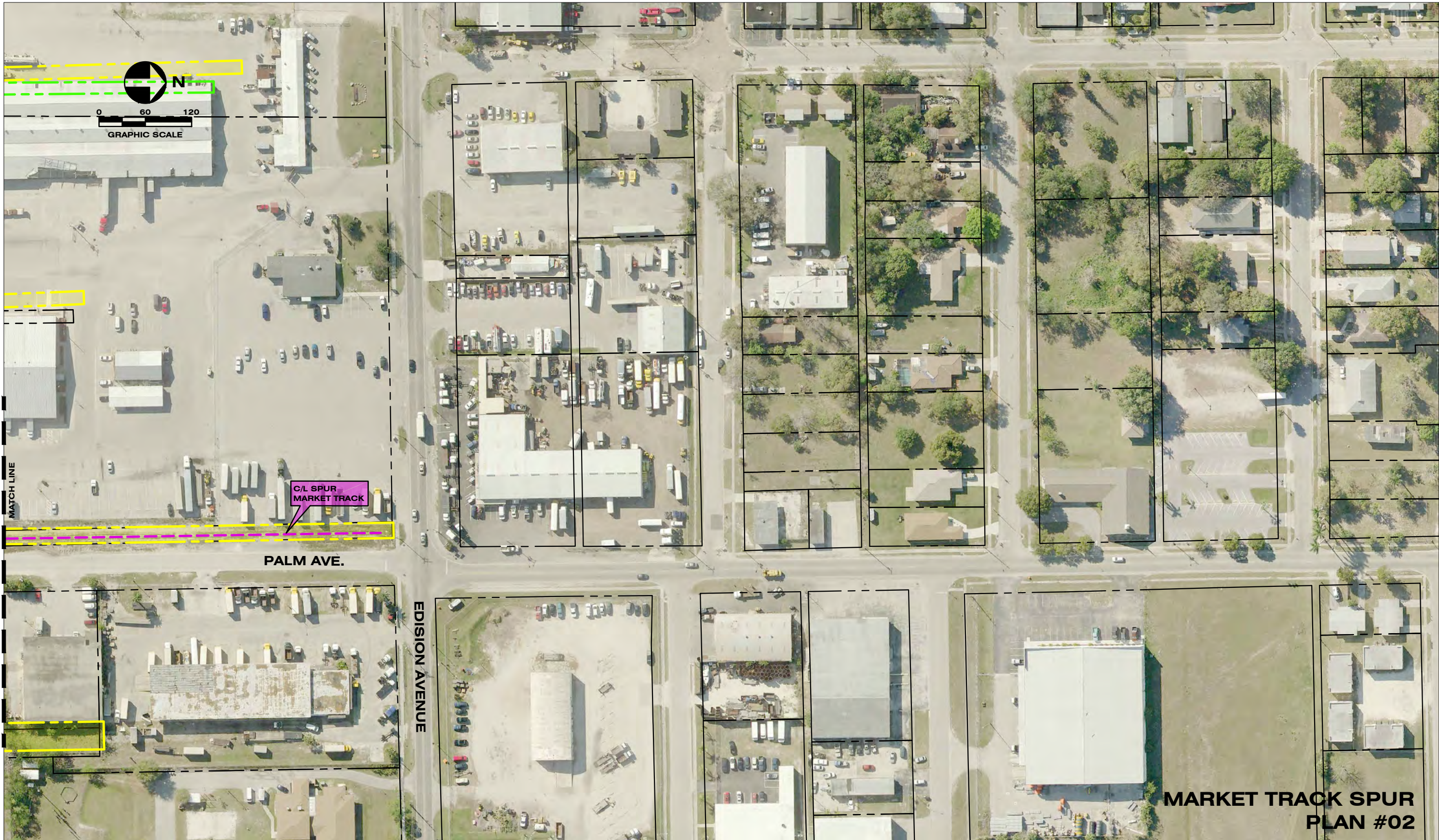




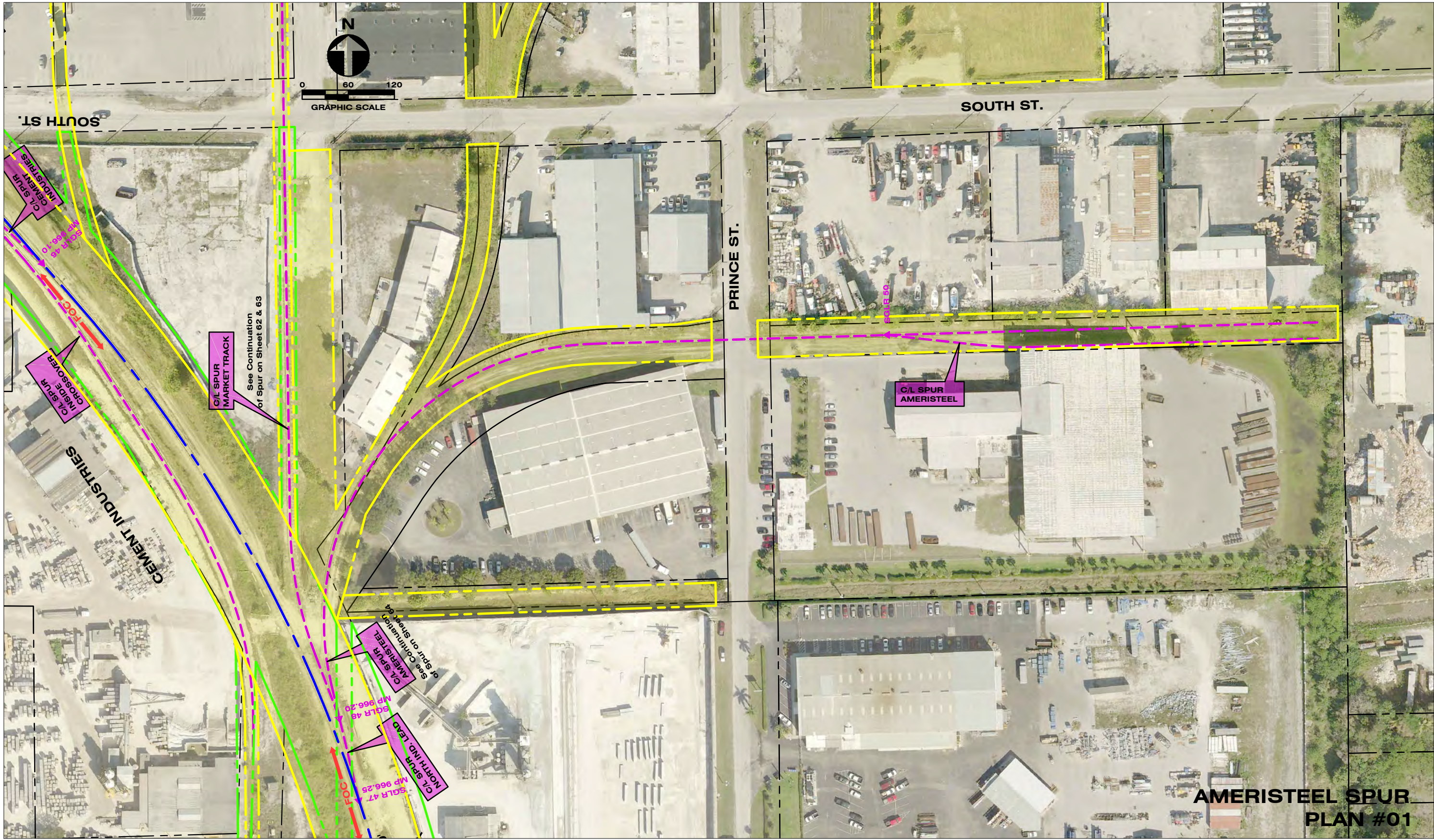




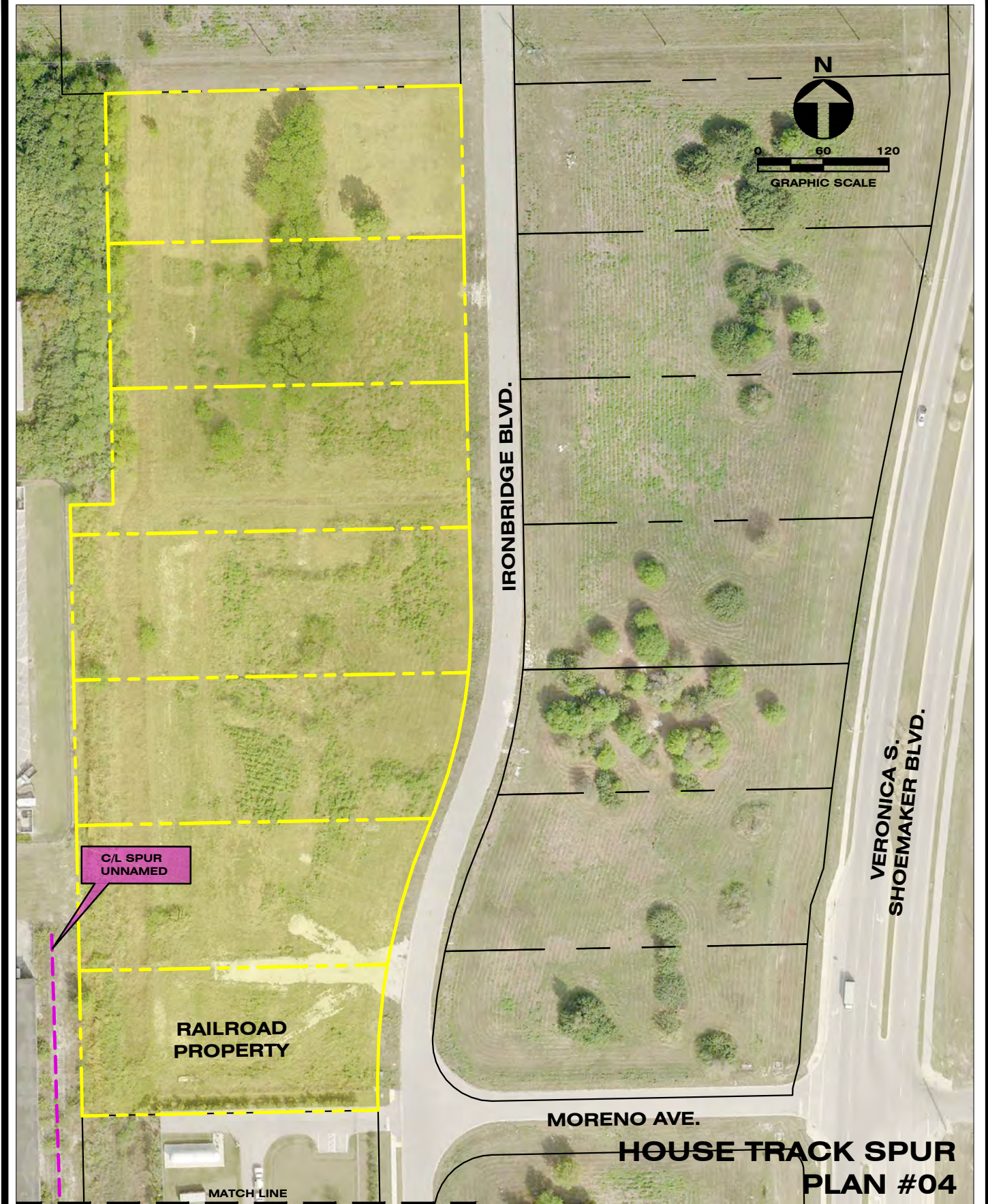
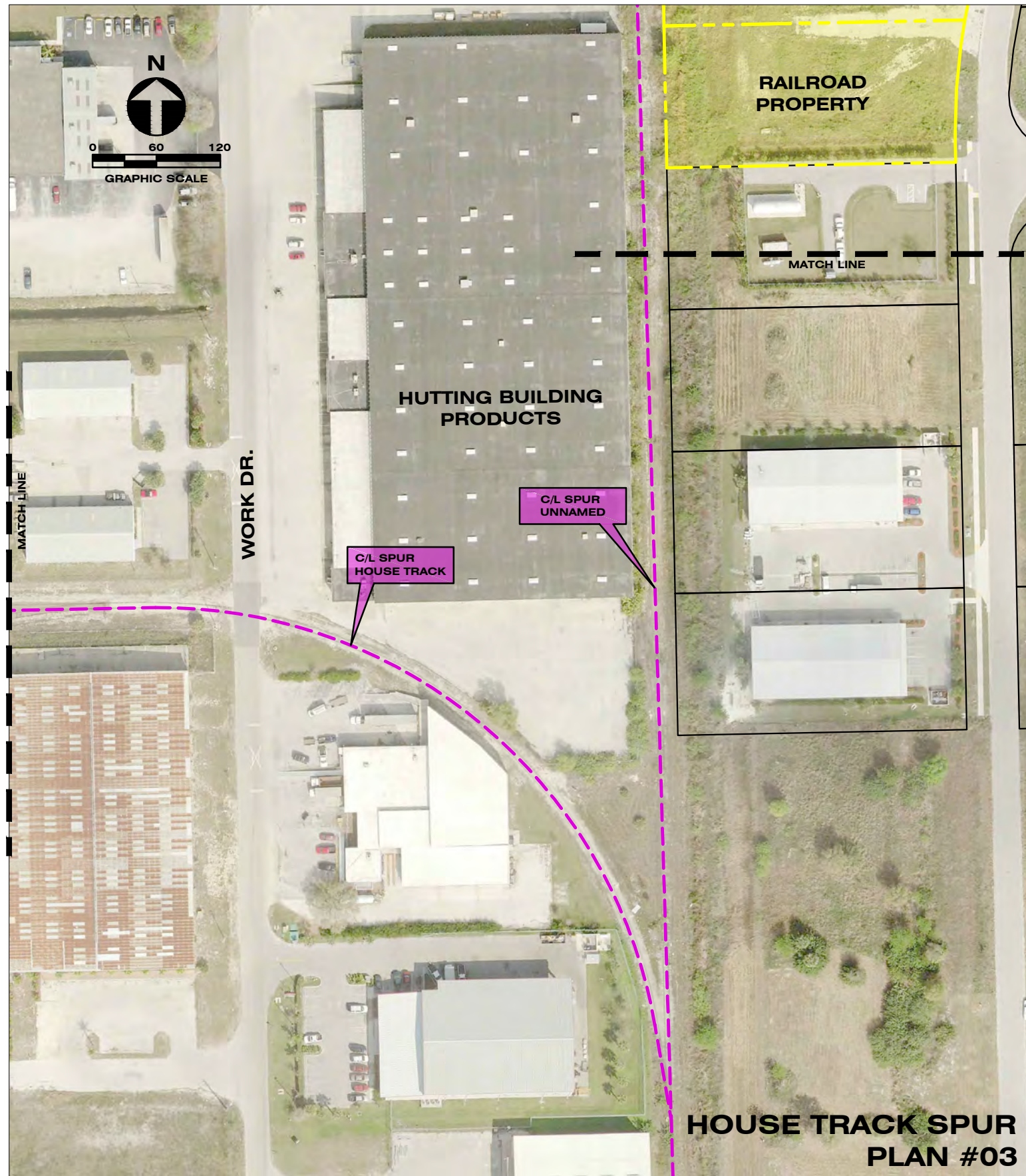


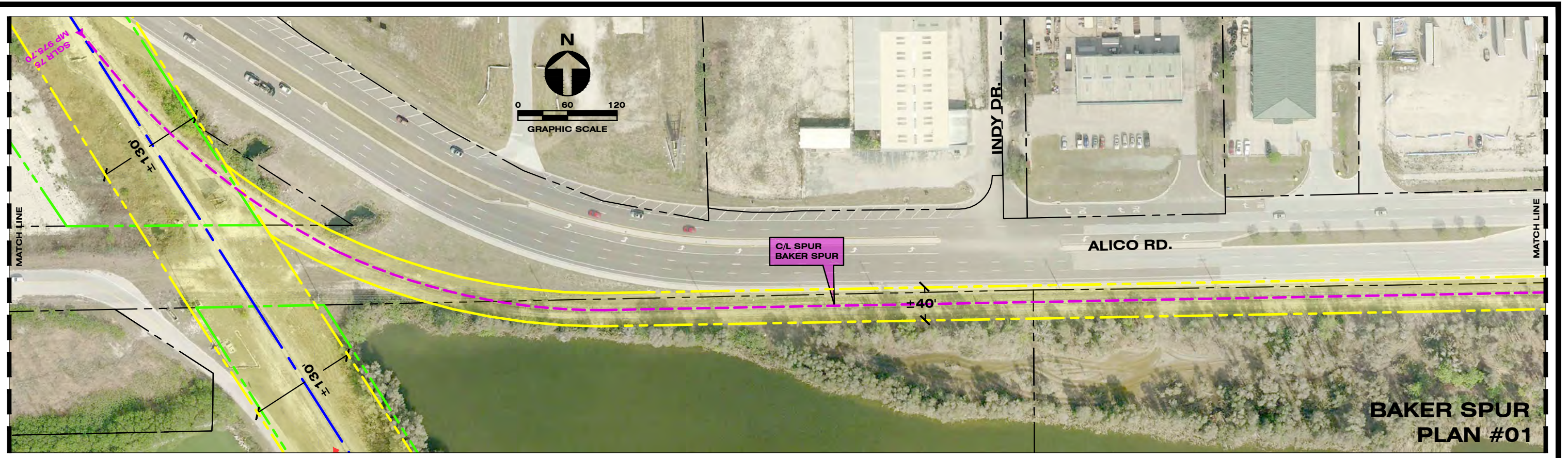


**MARKET TRACK SPUR
PLAN #02**

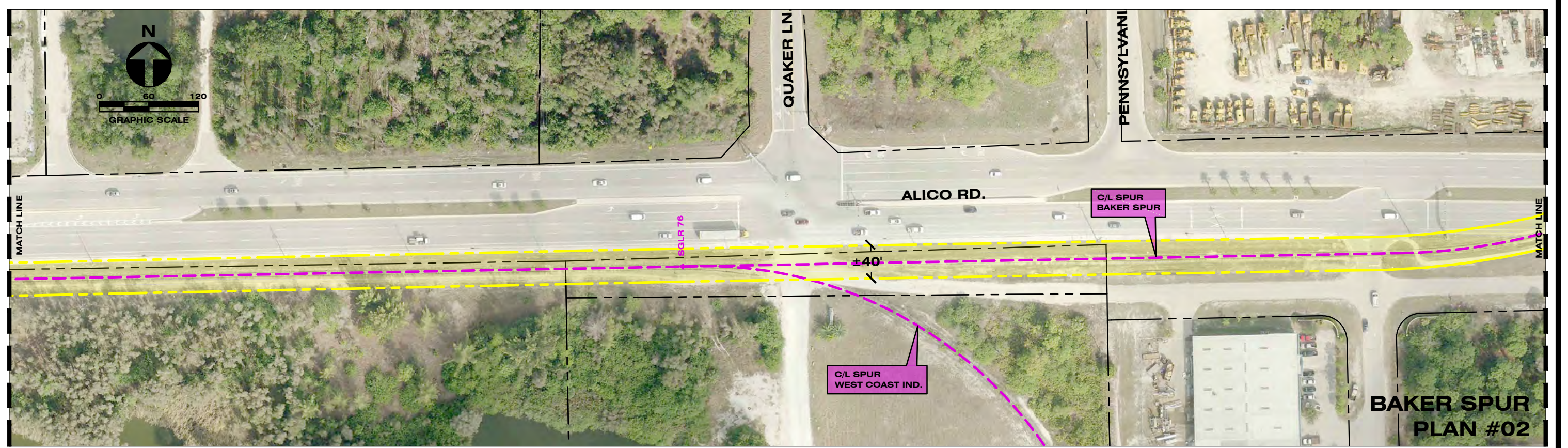








**BAKER SPUR
PLAN #01**



**BAKER SPUR
PLAN #02**

