Advanced Traffic Control Techniques

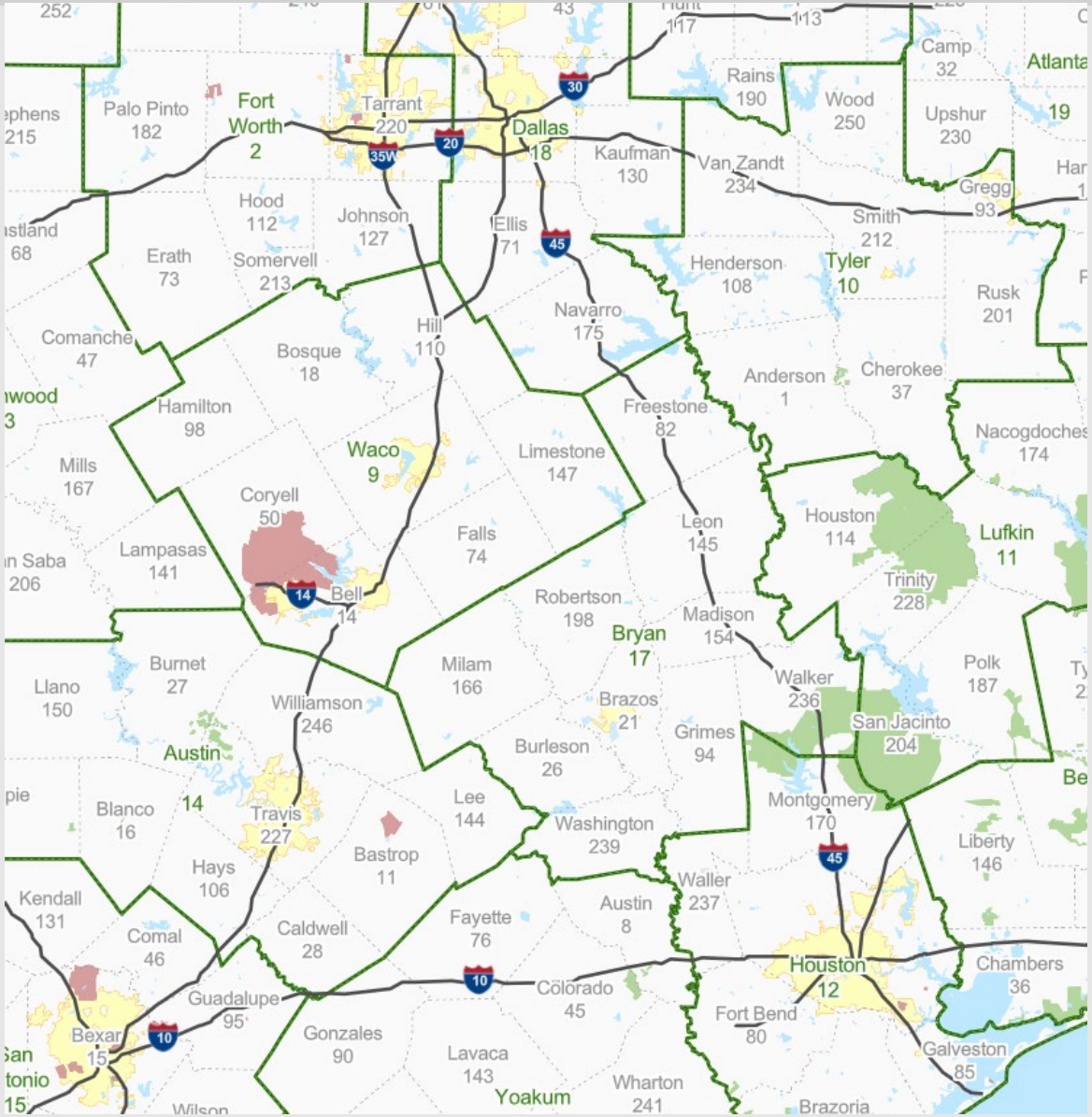
Jace M. Lee, P. E.

Huntsville Area Engineer

TxDOT – Bryan District

October 16, 2019

Project Location



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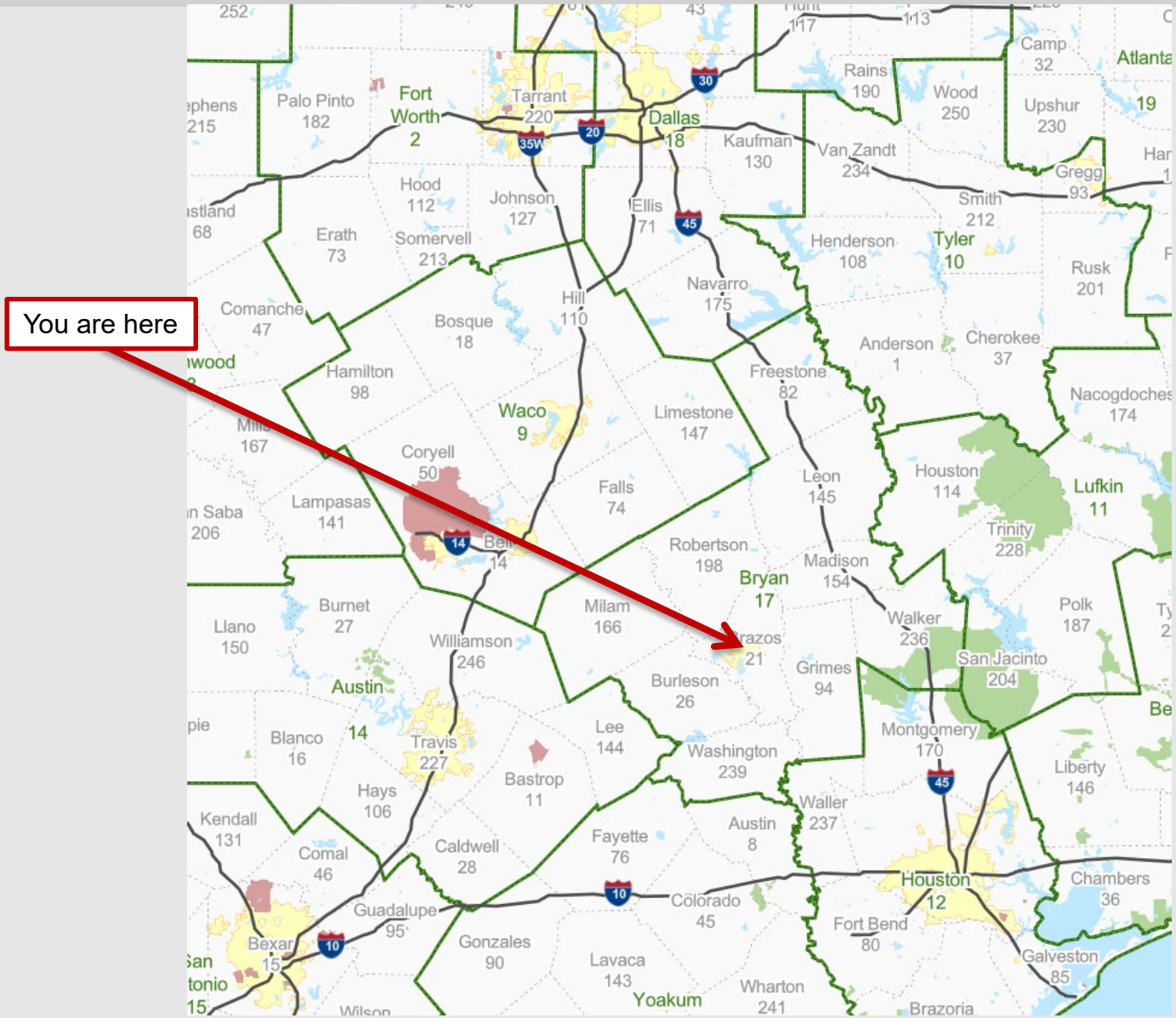

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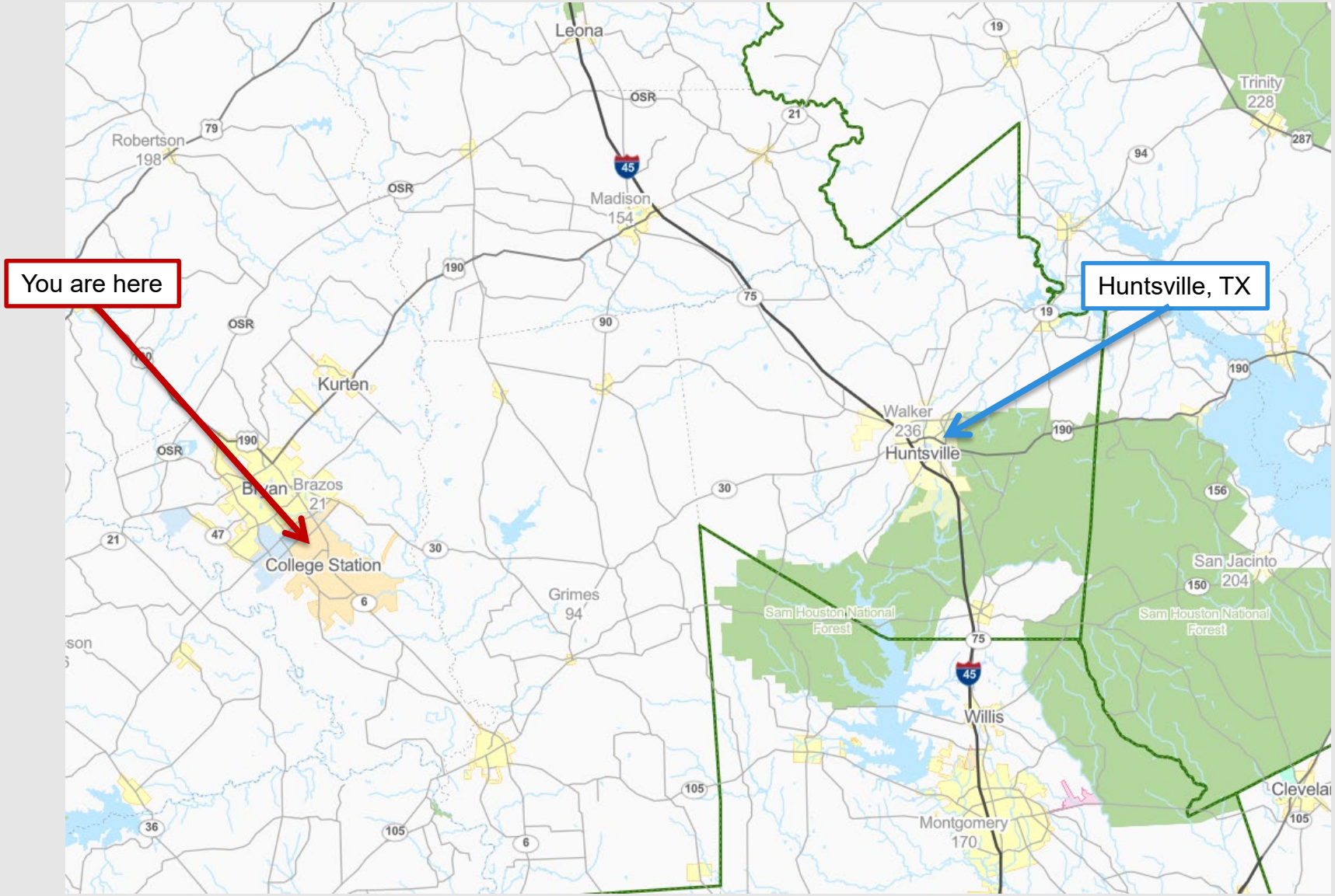

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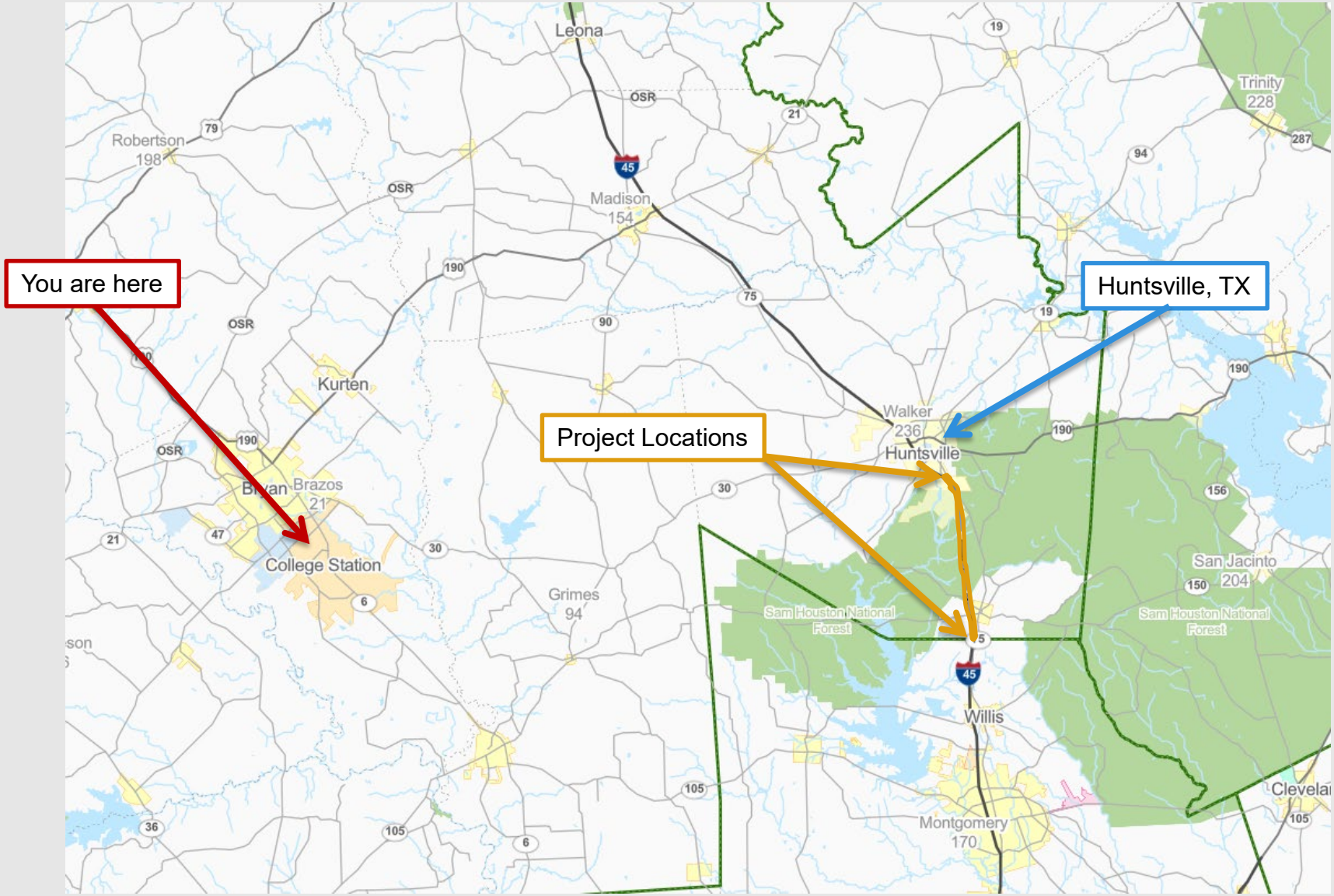

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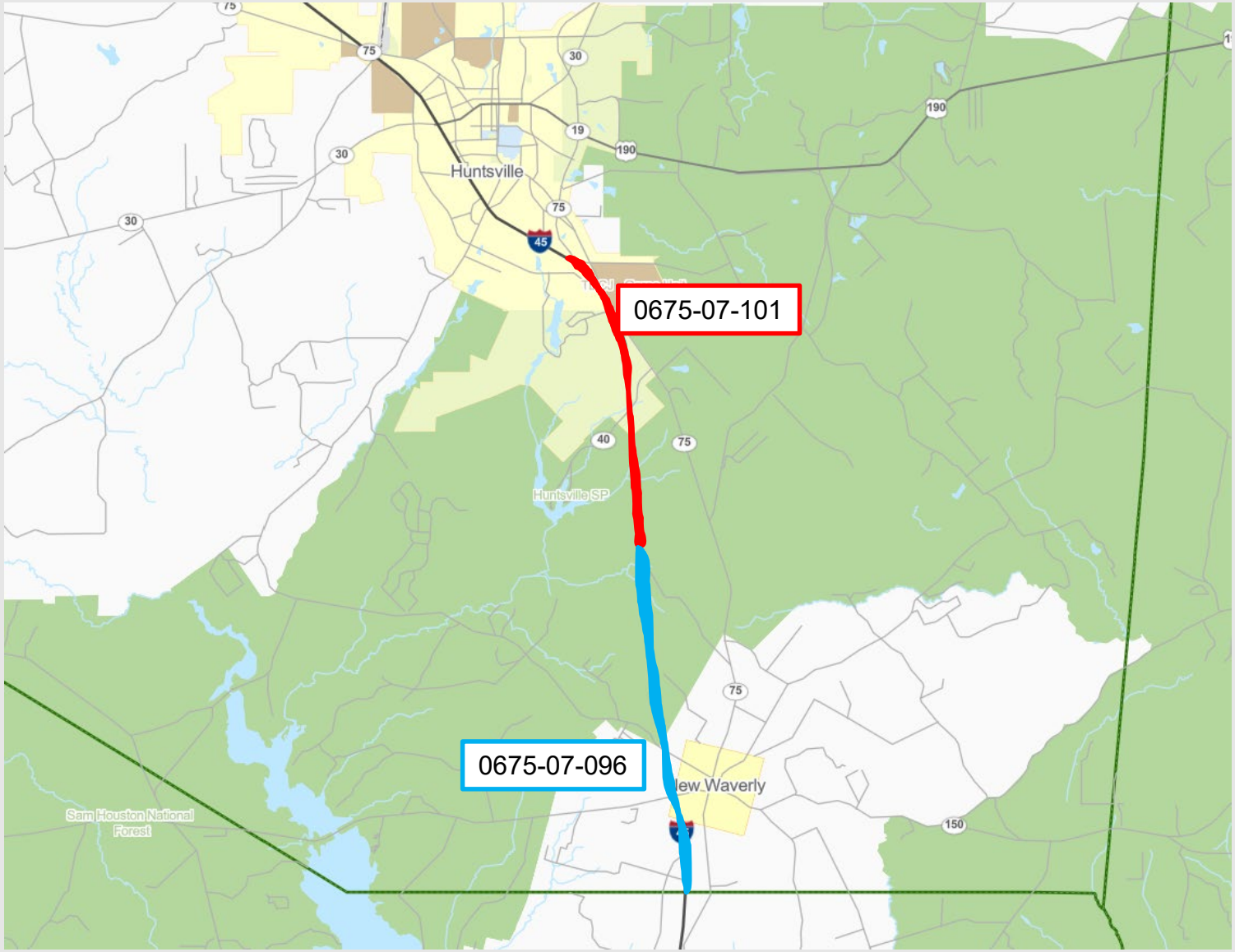
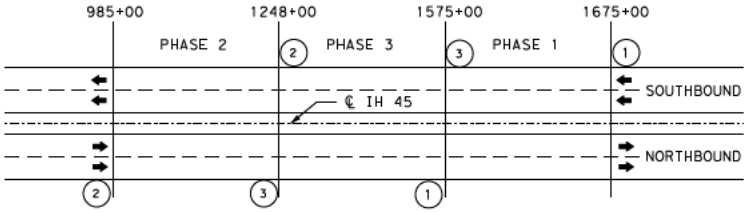


Planning

PCMS OPERATIONS RULES: DEPLOYMENT PLAN
(MAX DESIGN QUEUE < = 3.5 MILES)

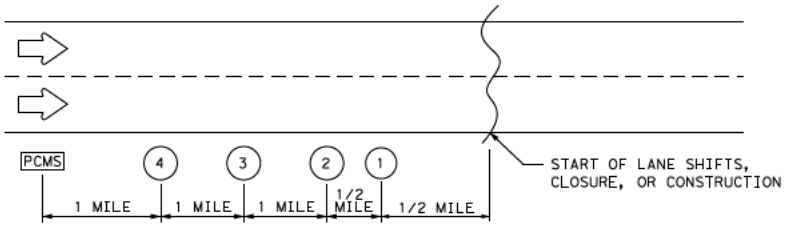
PCMS MESSAGE	LAST 5-MINUTE AVERAGE SPEED, V (MPH)			
	(4)	(3)	(2)	(1)
ROAD WORK AHEAD	V > 55 OR V = 0.0	V > 55 OR V = 0.0	V > 55 OR V = 0.0	V > 55 OR V = 0.0
SLOW TRAFFIC 3 MILES	V > 55 OR V = 0.0	V > 55 OR V = 0.0	V > 55 OR V = 0.0	40 <= V < 55
SLOW TRAFFIC 2 MILES	V > 55 OR V = 0.0	V > 55 OR V = 0.0	40 <= V < 55	V > 40 OR V = 0.0
SLOW TRAFFIC 1 MILES	V > 55 OR V = 0.0	40 <= V < 55	V > 40 OR V = 0.0	V > 40 OR V = 0.0
SLOW TRAFFIC AHEAD	40 <= V < 55	V > 40 OR V = 0.0	V > 40 OR V = 0.0	V > 40 OR V = 0.0
STOPPED TRAFFIC 3 MILES	V > 40 OR V = 0.0	V > 40 OR V = 0.0	V > 40 OR V = 0.0	0.0 <= V < 40
STOPPED TRAFFIC 2 MILES	V > 40 OR V = 0.0	V > 40 OR V = 0.0	0.0 <= V < 40	ANY VALUE
STOPPED TRAFFIC 1 MILES	V > 40 OR V = 0.0	0.0 <= V < 40	ANY VALUE	ANY VALUE
STOPPED TRAFFIC AHEAD	0.0 <= V < 40	ANY VALUE	ANY VALUE	ANY VALUE



PHASE 1
-PLACE SYSTEM IN NORTHBOUND DIRECTION SOUTH OF STATION 1575+00
-PLACE SYSTEM IN SOUTHBOUND DIRECTION NORTH OF STATION 1675+00

PHASE 2
-PLACE SYSTEM IN NORTHBOUND DIRECTION SOUTH OF STATION 985+00
-PLACE SYSTEM IN SOUTHBOUND DIRECTION NORTH OF STATION 1248+00

PHASE 3
-PLACE SYSTEM IN NORTHBOUND DIRECTION SOUTH OF STATION 1248+00
-PLACE SYSTEM IN SOUTHBOUND DIRECTION NORTH OF STATION 1575+00



LEGEND

(1) NON-INTRUSIVE TRAFFIC-SPEED DETECTOR

PCMS PORTABLE CHANGABLE MESSAGE SIGN

NOTES:

LOCATION OF THE SENSORS AND PCMS CAN BE ADJUSTED SLIGHTLY BASED ON SITE CONDITIONS (RAMP LOCATIONS, OTHER STATIC SIGNING, OVERPASSES, ETC.)

THE AUTOMATED PORTABLE SMART TRAFFIC MONITORING SYSTEM IS PAID FOR BY ITEM 6079.

STATE OF TEXAS
JAMES A. KRATZ
86301
LICENSED
PROFESSIONAL ENGINEER
8/24/2016

NO.	DATE	REVISION	BY

JACOBS
JACOBS ENGINEERING GROUP INC. FIRM #2966

Texas Department of Transportation
© 2015

IH 45

AUTOMATED PORTABLE SMART TRAFFIC MONITORING SYSTEM

PRINT DATE: 8/24/2016 SHEET 1 OF 1

STATE	CONT.	SECT.	JOB	SHEET NO.
TEXAS	0675	07	096, ETC	361
DIST	COUNTY		HIGHWAY	
BRY	WALKER		IH 45	

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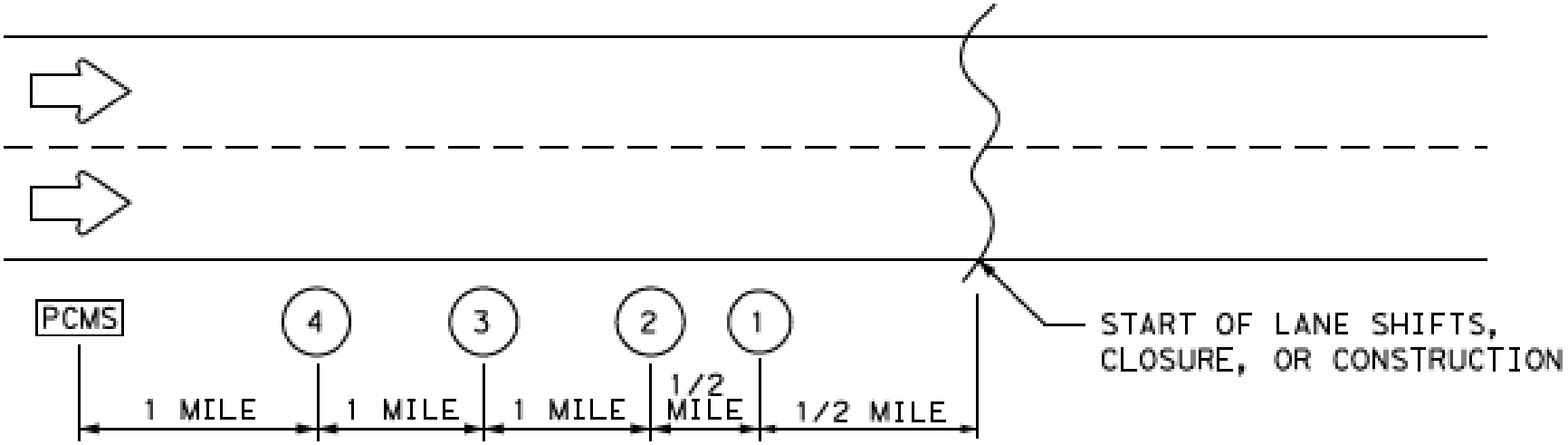
8/24/2016 3:20:56 PM

Planning



LEGEND

1	NON-INTRUSIVE TRAFFIC-SPEED DETECTOR
PCMS	PORTABLE CHANGABLE MESSAGE SIGN

NOTES:

LOCATION OF THE SENSORS AND PCMS CAN BE ADJUSTED SLIGHTLY BASED ON SITE CONDITIONS (RAMP LOCATIONS, OTHER STATIC SIGNING, OVERPASSES, ETC.)

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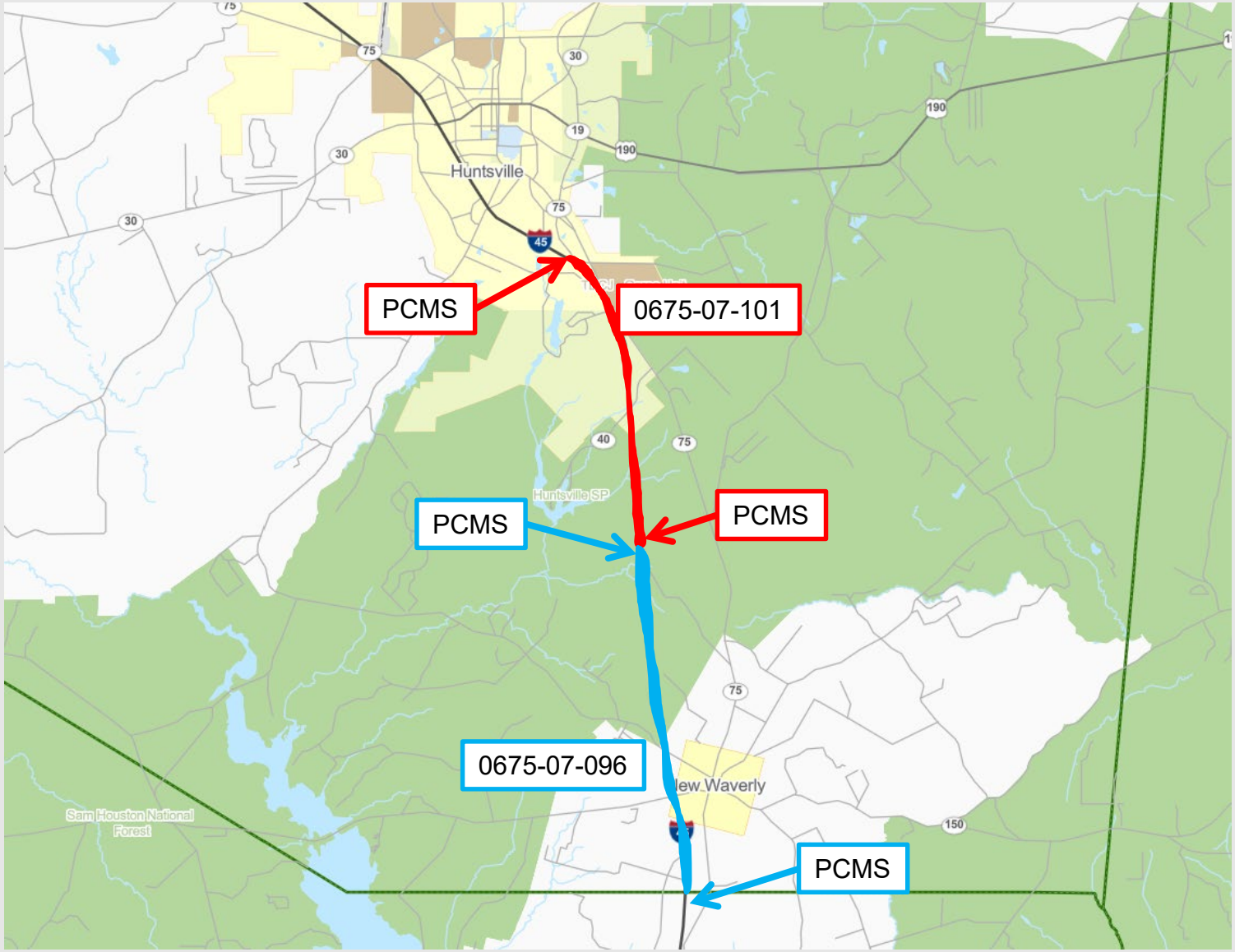
Planning


PCMS
0675-07-101
PCMS
PCMS
0675-07-096
PCMS
Huntsville
Huntsville SP
Sam Houston National Forest
New Waverly

Facing south toward the Montgomery County Line

Facing south toward the Montgomery County Line

Facing south toward the Montgomery County Line

Facing south toward the Montgomery County Line

Facing north toward New Waverly

Facing north toward New Waverly

Facing north toward New Waverly

Facing north toward PR 40 at the project split

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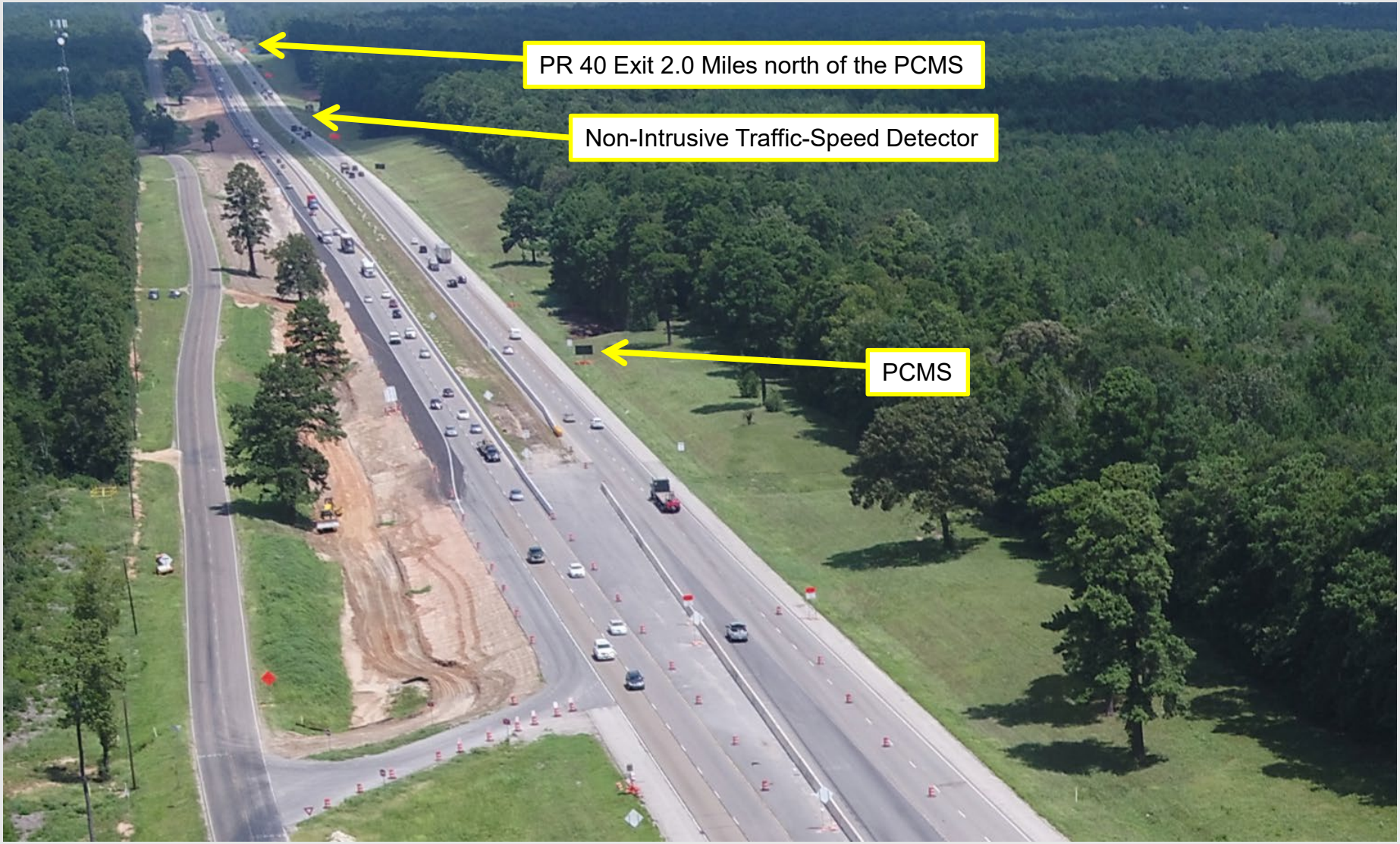
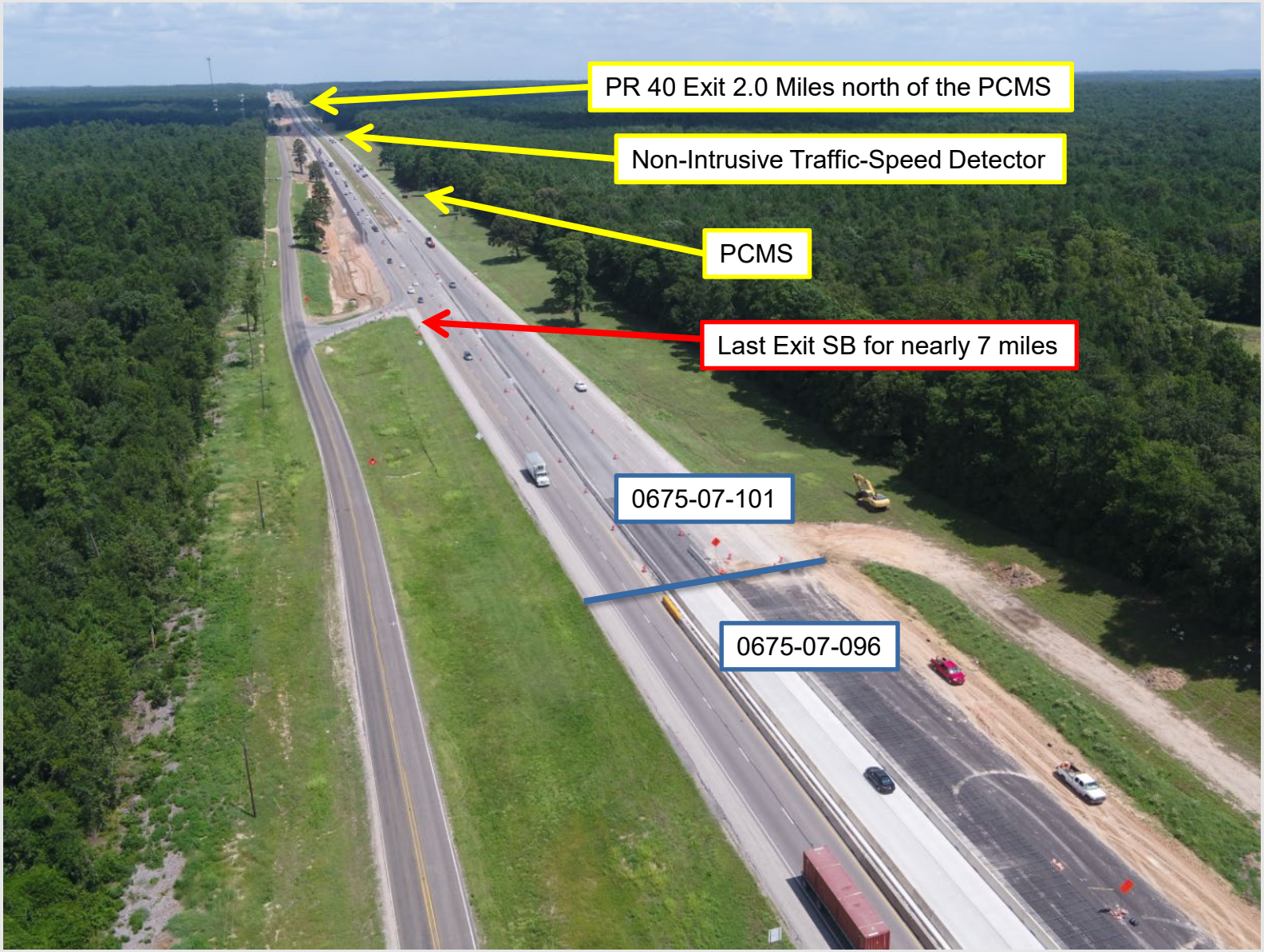
Facing north toward PR 40 at the project split



EXIT 109
PARK
40
Huntsville
State Park
1 MILE
Non-Intrusive Traffic-Speed Detector

Facing north toward PR 40 at the project split



Facing south toward New Waverly, at the project split

Facing south toward New Waverly, at the project split

Facing south toward New Waverly, south of the project split

Facing south toward New Waverly, south of the project split

Facing south toward New Waverly, south of the project split

Facing south toward New Waverly, south of the project split

Considerations for use on a Rural interstate

- Phasing impacts to PCMS locations
- Distance to Exit and Entrance Ramps

QUESTIONS?