

ARTERIAL

PRESERVATION PROGRAM

US 58 Arterial Preservation Plan – Final Recommendations

March 21, 2018; 6:00 PM – 7:30 PM

Suffolk, VA

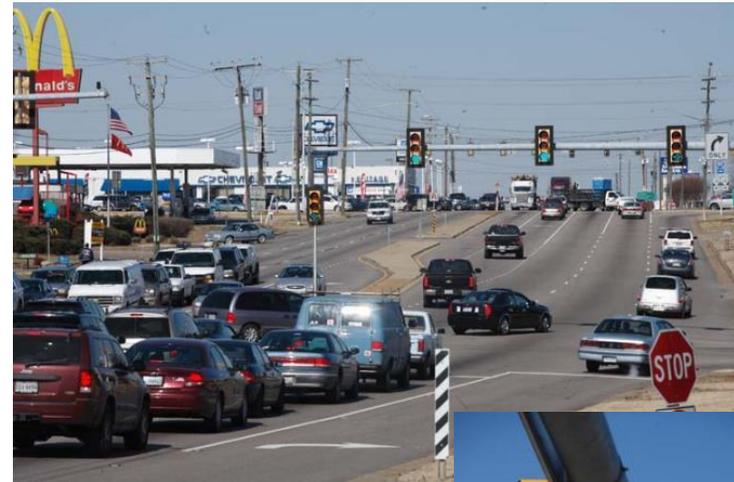


Arterial Preservation Program

Background

Summary of Program Goals

- To preserve and enhance the capacity and safety of Virginia's critical transportation highways:
 - Reduce congestion on arterial mainline
 - Minimize delays
 - Improve safety
 - Limit the number of conflict points



Implementation Strategies

- Integrate program priorities with local economic development goals
- Improve access management
- Educate communities on the benefits of improved mobility
- Inspire coordinated transportation and land use planning efforts
- Eliminate unwarranted traffic signals
- Implement innovative intersection configurations

Why This Matters

- Preparing for future traffic and economic development reduces the need for expensive, disruptive "retrofit" projects
- Route 58 is anticipated to see additional commercial and residential development
- Route 58 provides access to local destinations, the Port of Virginia, and tourist destinations



Arterial Preservation Program

Access Management Overview

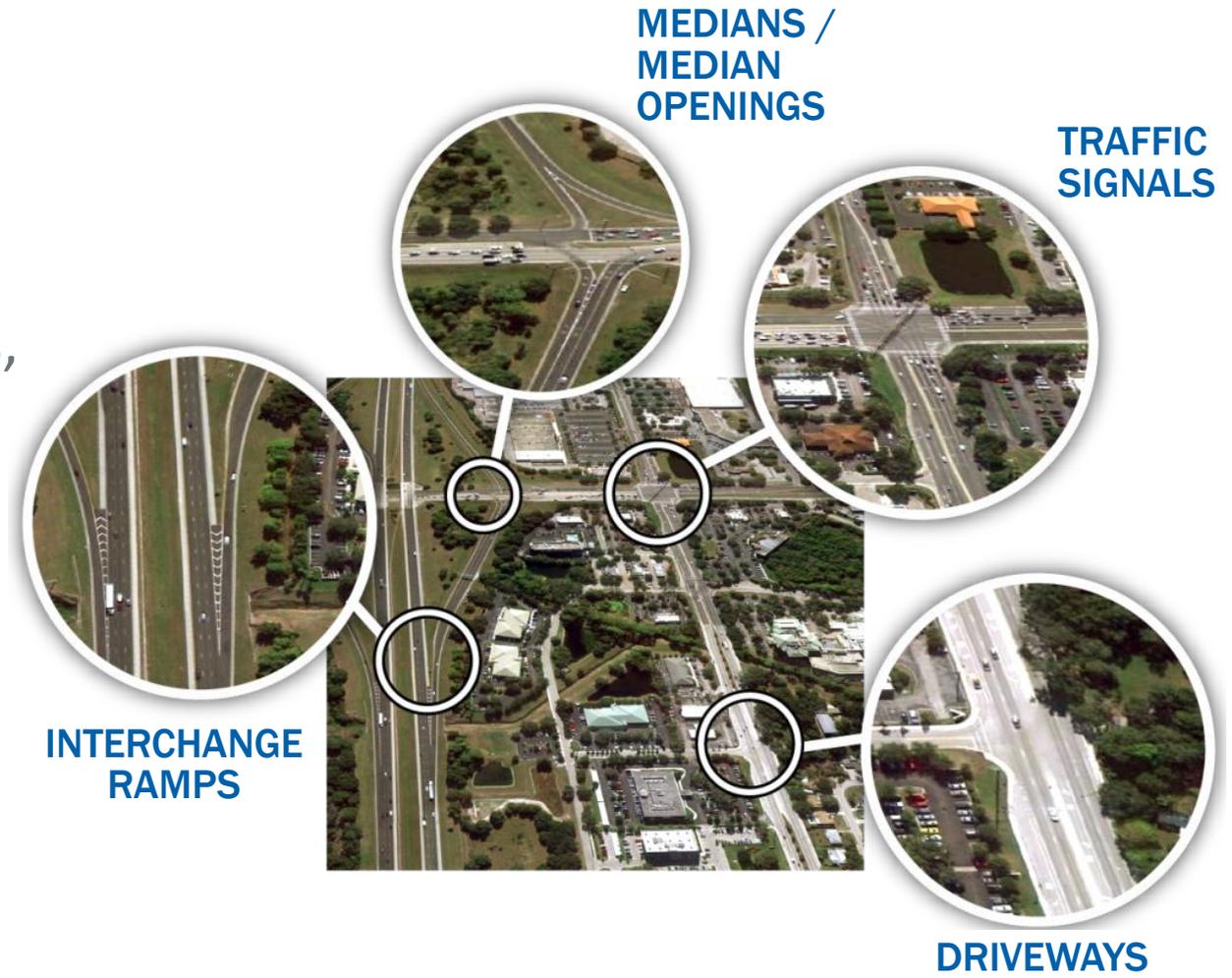
Access Management

What is Access Management?

Access management involves the location, spacing, and design of driveways, medians, median openings, traffic signals, and interchanges

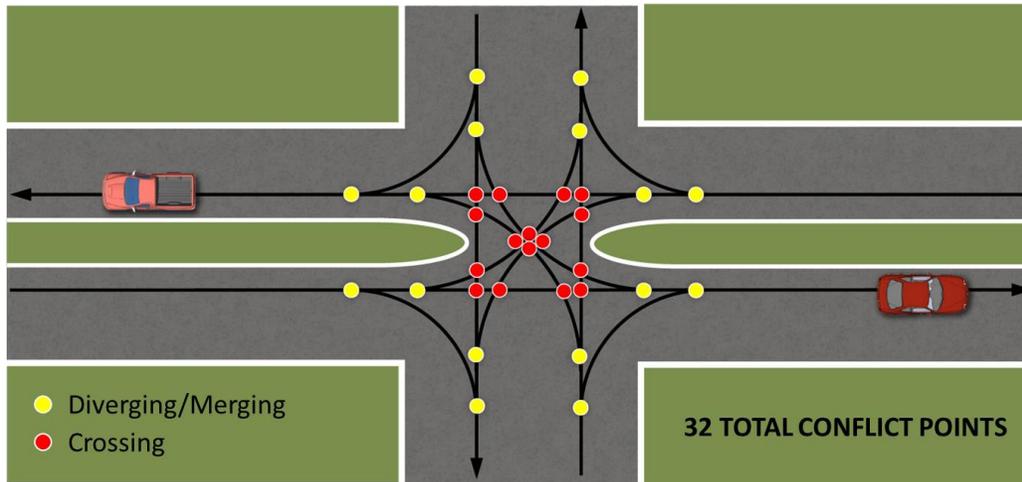
Guiding Principles

- Limit the number of conflict points
- Separate conflict points
 - Reduce the number of median openings
 - Improve driveway design
 - Consolidate driveways to reduce frequency
- Look at conflict points from a network perspective

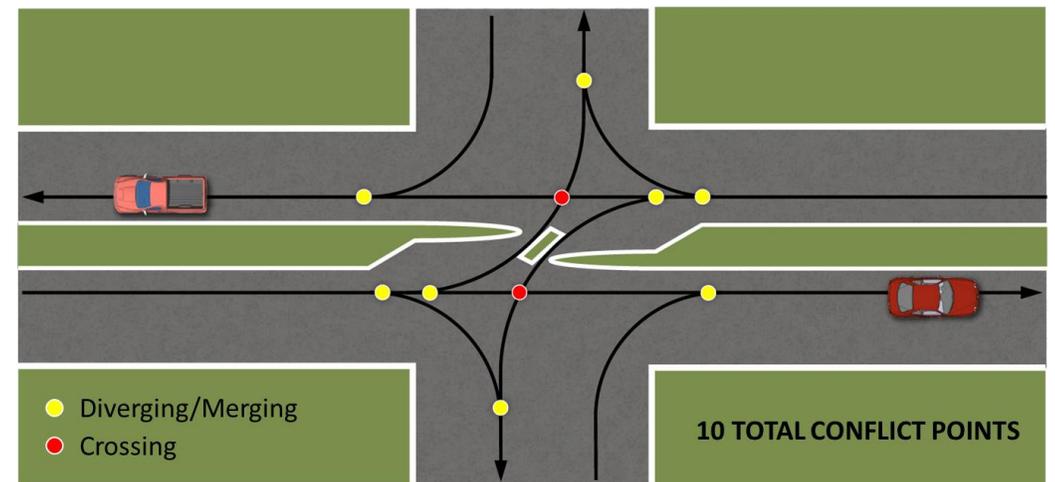


Conflict Points

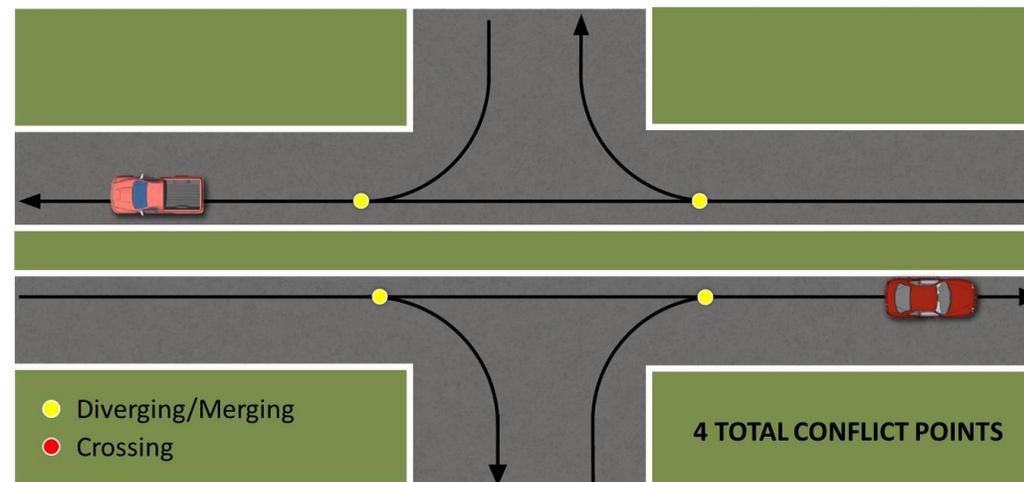
FULL UNSIGNALIZED MEDIAN OPENING



DIRECTIONAL MEDIAN OPENING

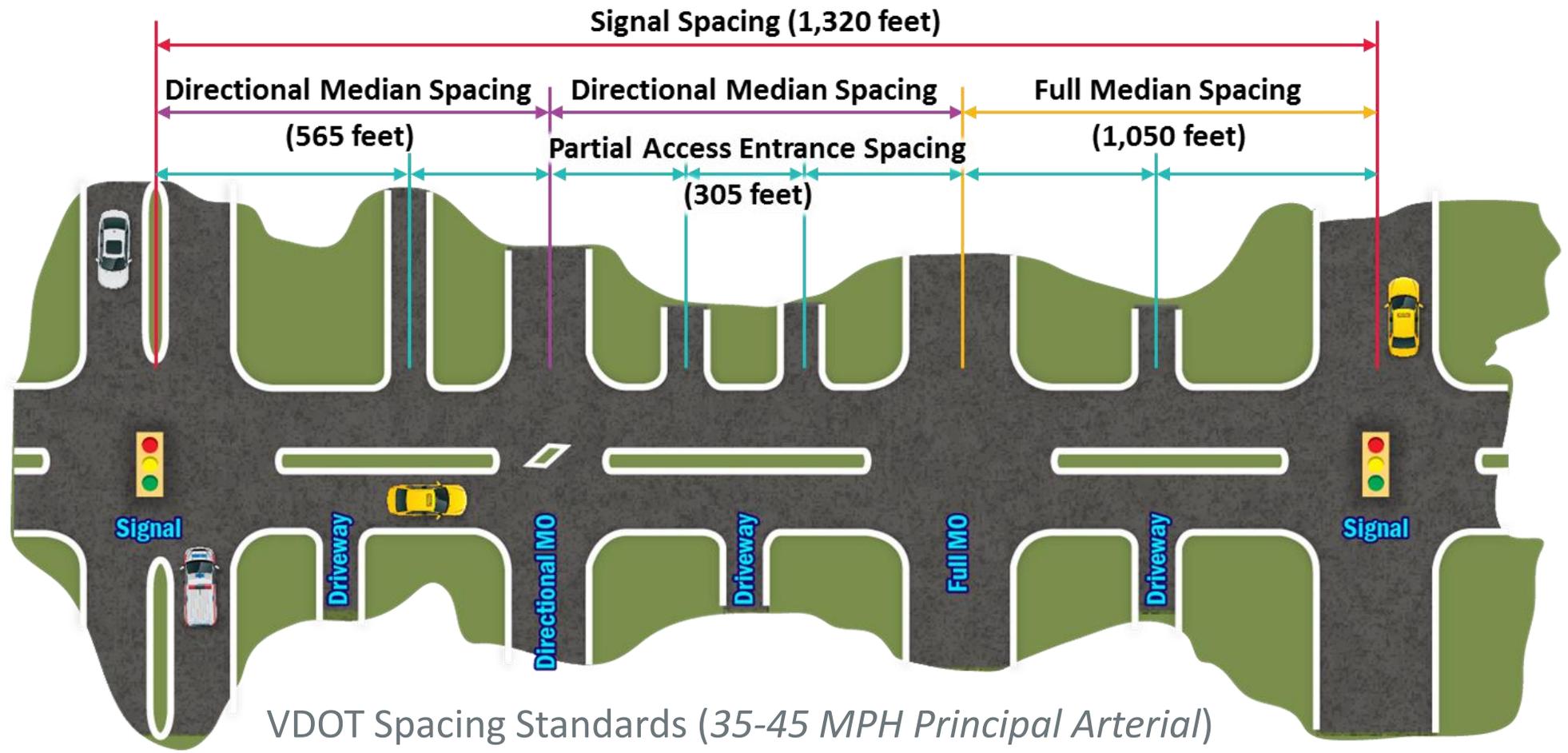


RIGHT-IN/RIGHT-OUT DRIVEWAY



Access Management Guidelines

45

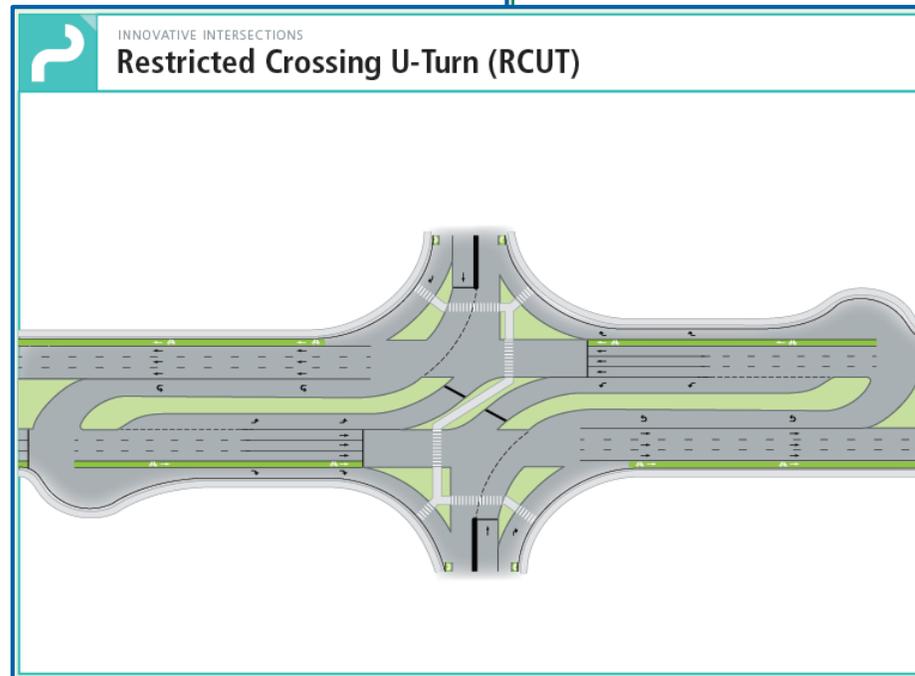
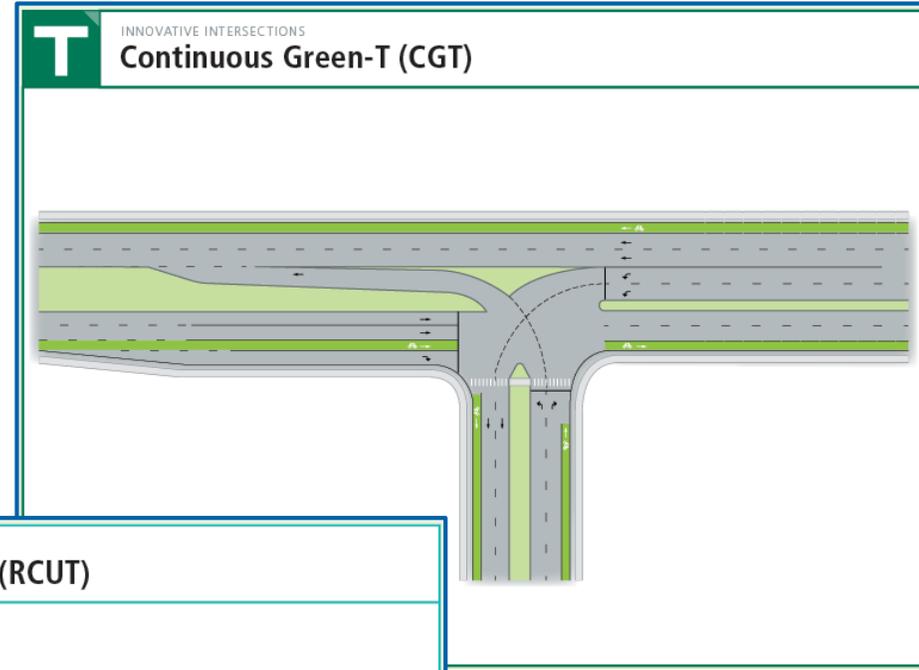


Arterial Preservation Program

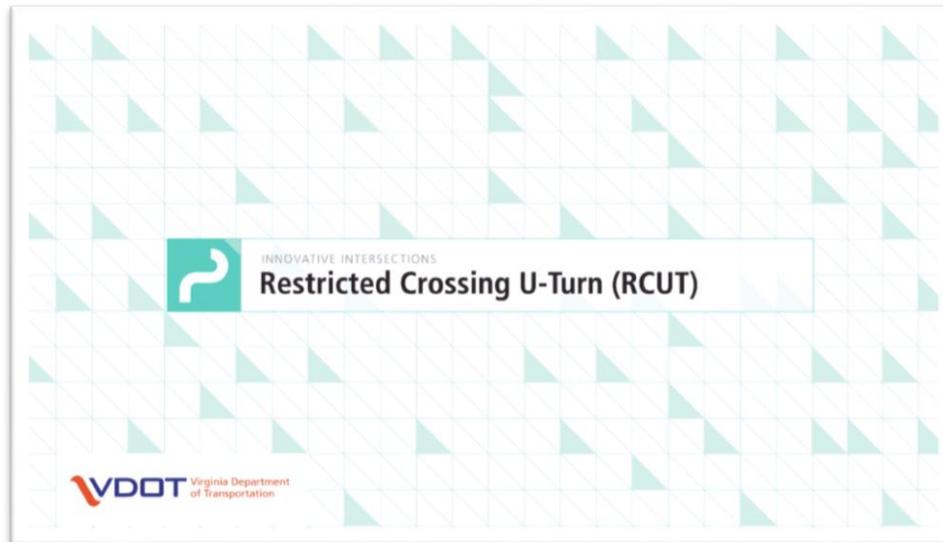
Innovative Intersections Overview

Innovative Intersections

- Intersection designs which:
 - Improve safety
 - Reduce delay
 - Increase efficiency
- Can reduce delays and crashes as much as 50%
- Also known as:
 - Alternative
 - Non-traditional
 - Unconventional
 - Reduced Conflict



Innovative Intersection Videos



Arterial Preservation Plan

US 58 Corridor

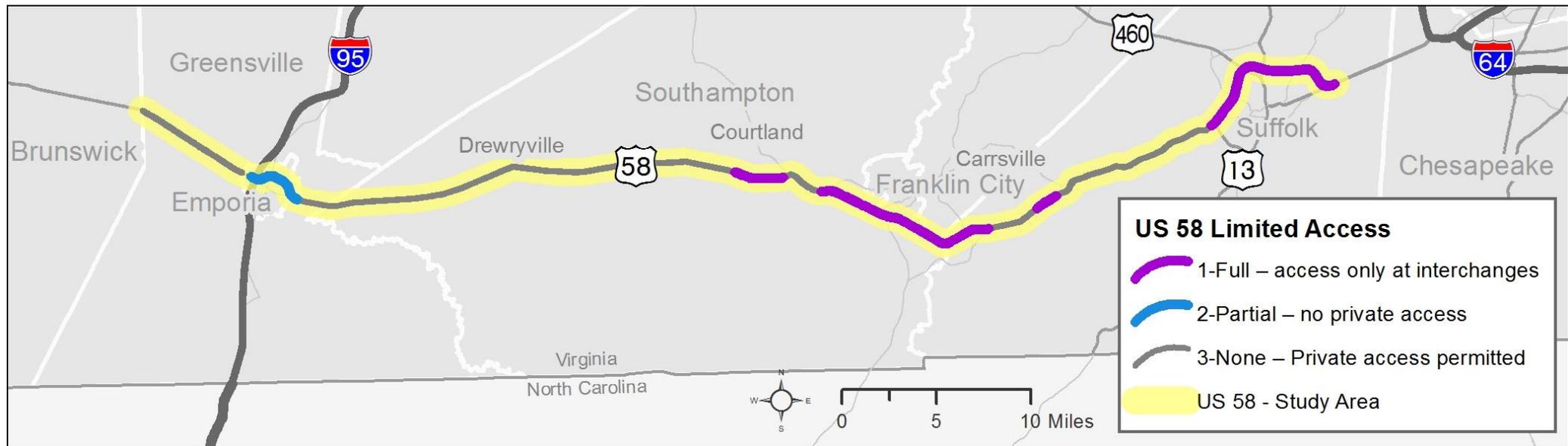
Study Corridor

US 58 from Suffolk BYP to Brunswick – Greenville County Line
(~71 miles)

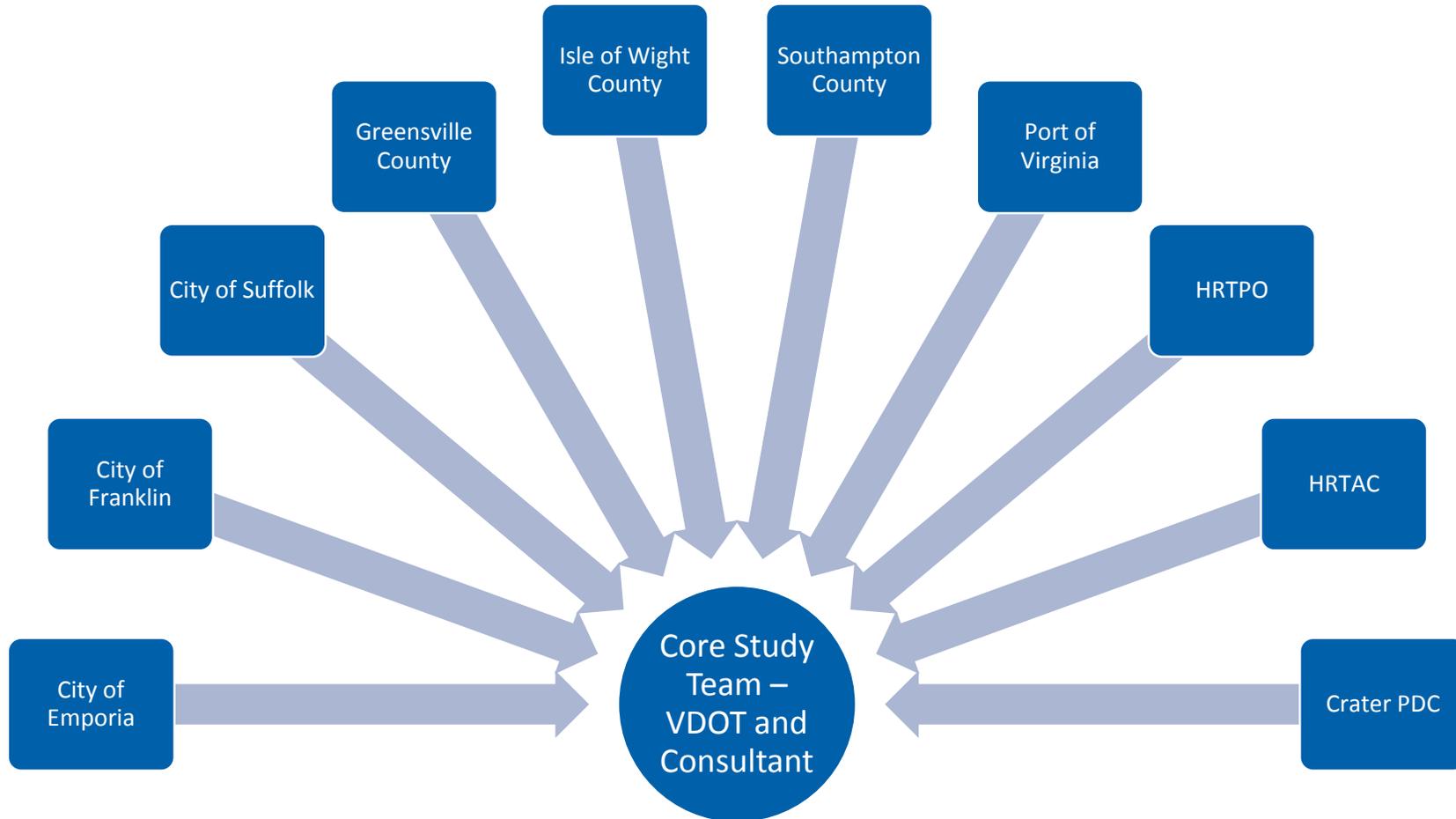


Study Corridor

- Limited-access bypass segments were considered to be improved and therefore received limited analysis as part of this study



Project Stakeholders / Working Group



Key issues identified in study corridor

- Safety concerns
 - Lack of adequate shoulders
 - Poor sight distance at intersections in certain locations
 - Poor geometric curves for high-speeds in certain locations (East of Holland BYP)
 - Higher levels of crashes in dense commercial and developed areas
 - Below standard turn lanes
- Operational challenges
 - High number of crossovers and access points
 - Delay in more developed areas
- Maintaining local access
- Future traffic growth

Example recommendations

- There are 110 crossovers and 50 intersections along the corridor
- Recommendations were prepared for each of the above and are available tonight for your review
- After the presentation, you can talk with staff and look up a specific location in the printed copies on the tables

How to Read the Figures

US 58 Arterial Preservation Plan

GREENSVILLE
COUNTY LINE

FRANKLIN CITY
LINE

US 58 Arterial Preservation Plan Figure 17 Intersections & Median Crossovers Southampton County

I## - Intersection #
C## - Crossover #

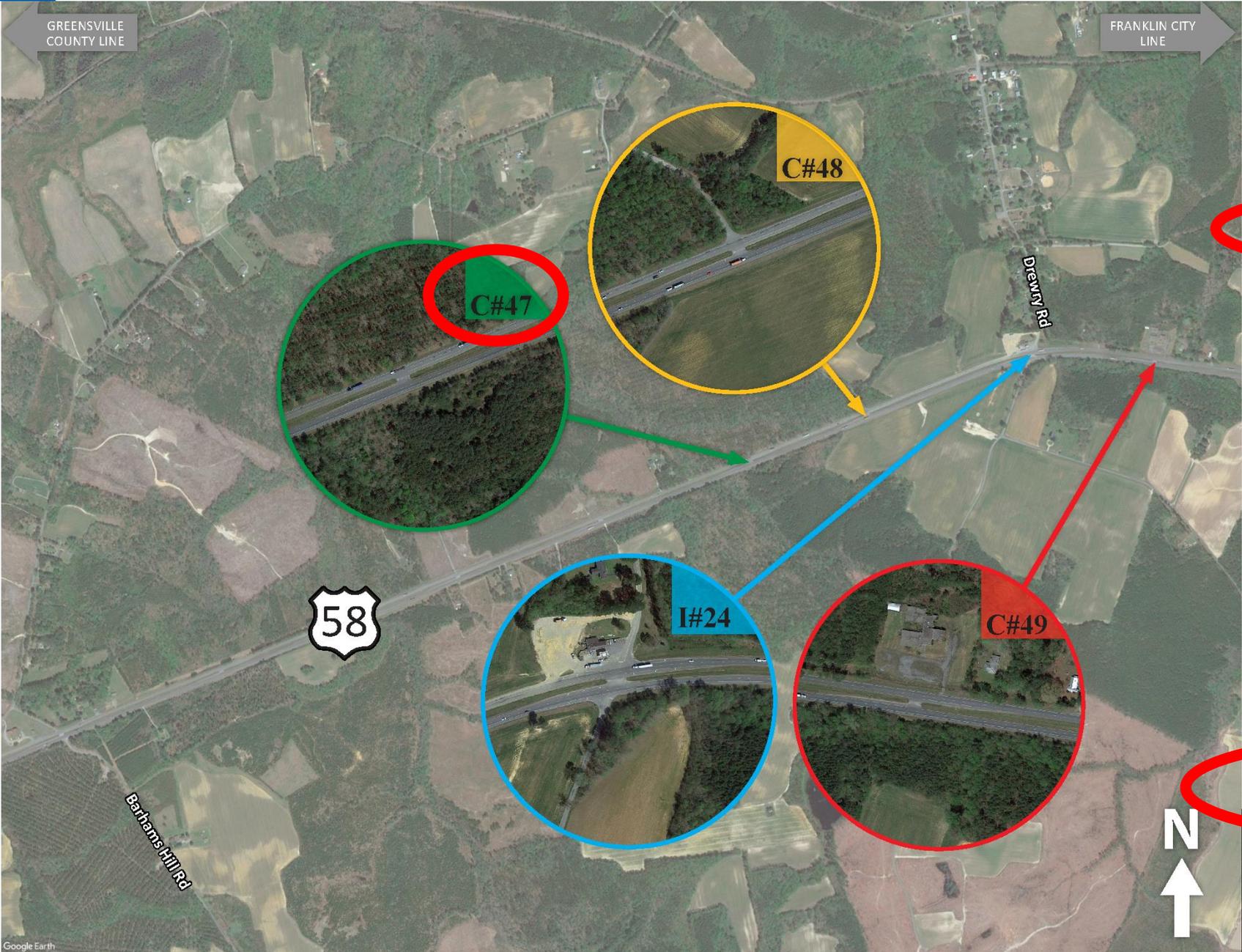
Crossover #47:
Recommendation: No Recommendation

Crossover #48:
Recommendation: Construct westbound right-turn lane on US 58
Cost: \$0.3M to \$0.4M

Intersection #24: Drewry Rd with US 58
Recommendation: See Figure 18
Cost: \$1.7M to \$2.3M

Crossover #49:
Recommendation: Remove crossover
Cost: \$0.3M to \$0.4M





US 58 Arterial Preservation Plan
Figure 17
Intersections & Median Crossovers
Southampton County

I## - Intersection #
 C## - Crossover #

Crossover #47:
Recommendation: No Recommendation

Crossover #48:
Recommendation: Construct westbound right-turn lane on US 58
Cost: \$0.3M to \$0.4M

Intersection #24: Drewry Rd with US 58
Recommendation: See Figure 18
Cost: \$1.7M to \$2.3M

Crossover #49:
Recommendation: Remove crossover
Cost: \$0.3M to \$0.4M

● No Recommendation ● Minor Improvement
● Recommended Removal ● Major Improvement



GREENSVILLE COUNTY LINE

FRANKLIN CITY LINE

US 58 Arterial Preservation Plan Figure 17 Intersections & Median Crossovers Southampton County

I## - Intersection #
C## - Crossover #

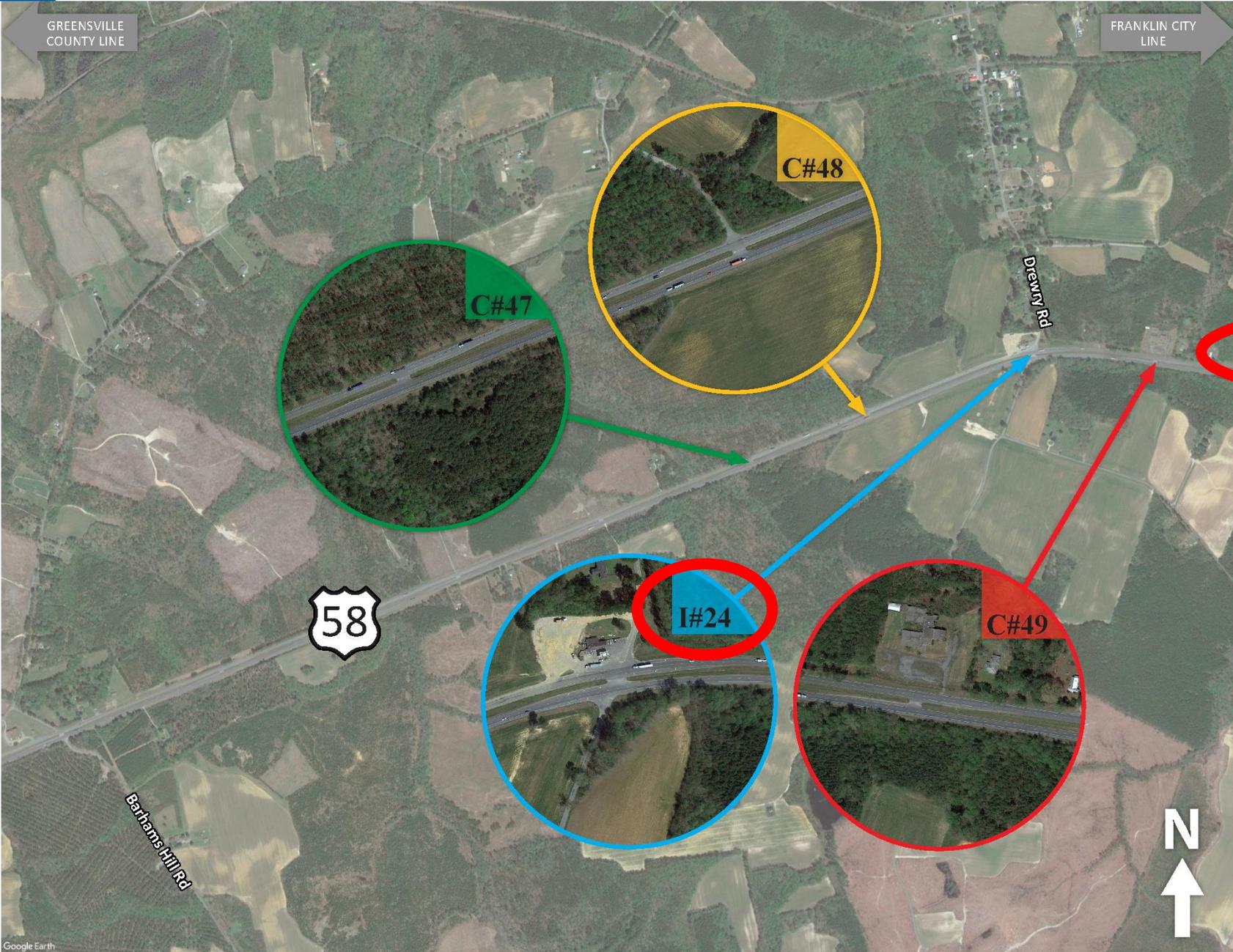
Crossover #47:
Recommendation: No Recommendation

Crossover #48:
Recommendation: Construct westbound right-turn lane on US 58
Cost: \$0.3M to \$0.4M

Intersection #24: Drewry Rd with US 58
Recommendation: See Figure 18
Cost: \$1.7M to \$2.3M

Crossover #49:
Recommendation: Remove crossover
Cost: \$0.3M to \$0.4M

● No Recommendation
● Recommended Removal
● Minor Improvement
● Major Improvement





US 58 Arterial Preservation Plan Figure 18 Intersection #24: US 58 and Drewry Rd Southampton County

Recommendation: Reconfigure intersection of US 58 and Drewry Rd to Restricted Crossing U-Turn (RCUT). Construct u-turn areas with loons east and west of intersection at Drewry Rd and US 58. Reconstruct all existing turn lanes to VDOT design standards.

ROW Impacts: Minimal land acquisition and disturbance. Some minor ROW impacts may require minimal land acquisition.

Improvement Type: Safety, Travel Time Preservation

Traffic Operations & Safety:

Traffic Operations	Minimal Improvements
Safety	Reduced conflict points where vehicles cross paths. Reduced risk of head-on collisions.

Cost: \$1.7M to \$2.3M

→ Standard Movements
→ Rerouted Movements

Suffolk Concepts

US 58 Arterial Preservation Plan

FRANKLIN CITY LINE

CHESAPEAKE CITY LINE

US 58 Arterial Preservation Plan

Figure 38

Intersection #39: US 58 and S Quay Rd

Intersection #40: US 58 and Holy Neck Rd

City of Suffolk

Recommendation: Reconfigure area to Restricted Crossing U-turn (RCUT). Reconfigure intersection of S Quay Rd with US 58 to permit left and u-turns only from westbound US 58 and right ins/outs of S Quay Rd. Reconfigure intersection of US 58 and Holy Neck Rd to main RCUT intersection. Reconfigure crossover east of main intersection to u-turn area.

ROW Impacts: Little to no land acquisition as the majority of work within the existing ROW.

Improvement Type: Safety, Travel Time Preservation

Traffic Operations Minimal Improvements

Safety Reduced conflict points where vehicles cross paths. Reduced risk of head-on collisions.

Cost: \$1.0M to \$1.3M



FRANKLIN CITY LINE

CHESAPEAKE CITY LINE

SEE FIGURE 44

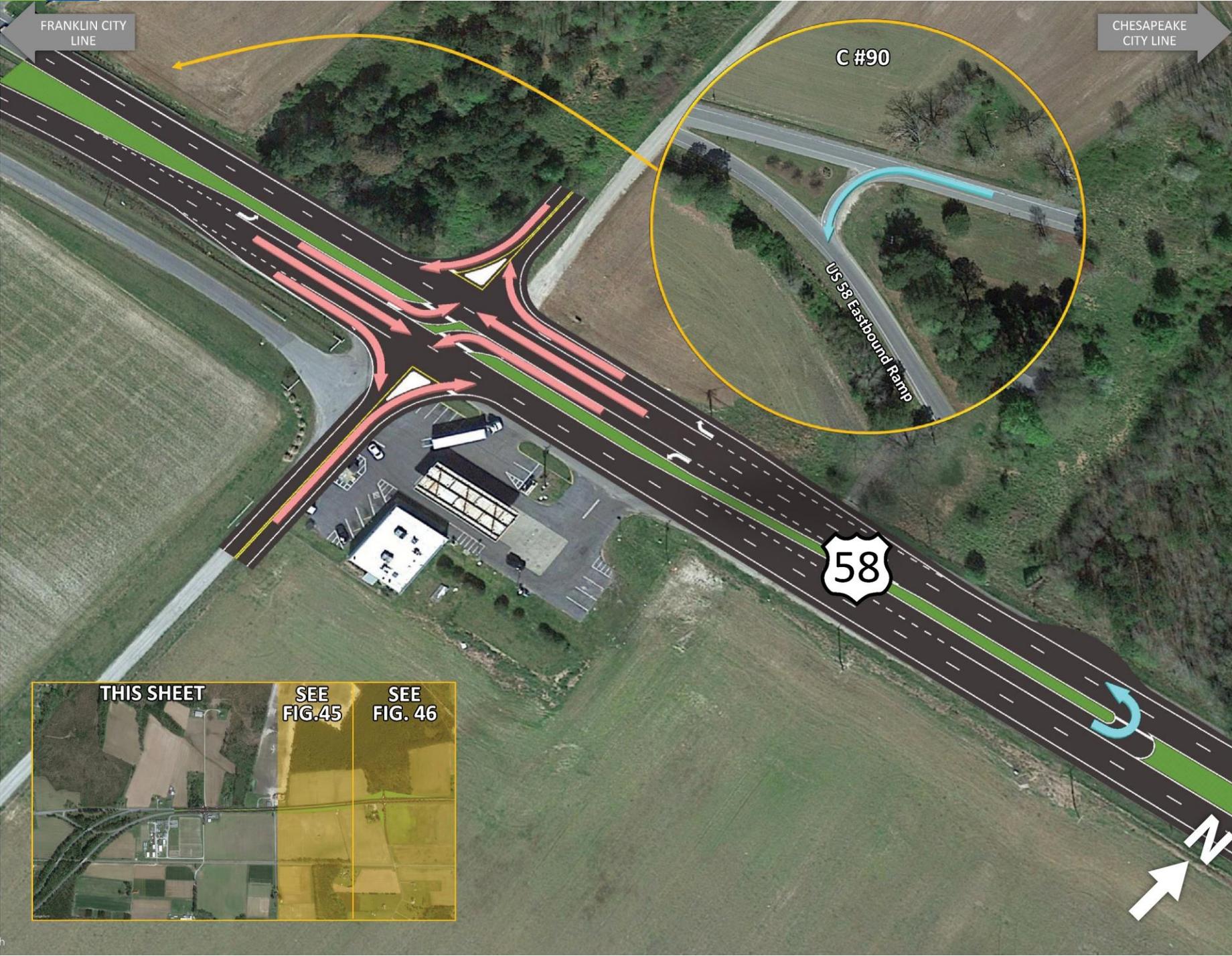
SEE FIGURE 46



SEE FIGURE 46 FOR REALIGNMENT RECOMMENDATION

US 58 Arterial Preservation Plan
Figure 43
Holland Bypass Area Summary





FRANKLIN CITY LINE

CHESAPEAKE CITY LINE

C #90

US 58 Eastbound Ramp

58

US 58 Arterial Preservation Plan
Figure 44
Crossover #90
City of Suffolk

Recommendation: Reconfigure crossover #90 to Restricted Crossing U-Turn (RCUT). Reconfigure existing crossover #91 to u-turn area west of intersection. Utilize eastbound US 58 on-ramp as u-turn area (see inset). Extend all existing turn lanes on US 58 to VDOT design standards

ROW Impacts: Minimal land acquisition may be required for loons and right-turn lanes.

Improvement Type: Safety, Travel Time Preservation

Traffic Operations & Safety:

Traffic Operations	Minimal Improvements
Safety	Reduced conflict points where vehicles cross paths. Reduced risk of head-on collisions.

Cost:
Total Project: \$4.7M to \$6.5M
Crossover #90 RCUT: \$0.8M to \$1.1M

Standard Movements
 Rerouted Movements



FRANKLIN CITY LINE

CHESAPEAKE CITY LINE

US 58 Arterial Preservation Plan

Figure 45

Holland Rd Realignment

City of Suffolk

Recommendation: Reconfigure existing alignment and remove reverse curve.

ROW Impacts: Significant land acquisition and disturbance is required north of US 58.

Improvement Type: Safety, Travel Time Preservation

Traffic Operations & Safety:

Traffic Operations Safer travel at higher speeds reduces travel time

Safety Realignment improves sight distance along US 58.

Cost:
Total Project: \$4.7M to \$6.5M
Realignment: \$2.7M to \$3.6M





FRANKLIN CITY LINE

CHESAPEAKE CITY LINE

US 58 Arterial Preservation Plan

Figure 46

Intersection #47: US 58 and Longstreet Ln City of Suffolk

Recommendation: Reconfigure intersection of US 58 and Longstreet Ln to Restricted Crossing U-Turn (RCUT). Construct u-turn areas east and west of main intersection. Extend all existing turn lanes on US 58 to VDOT design standards. Realign Longstreet Ln with new realignment of US 58/Holland Rd.

ROW Impacts: Minimal land acquisition and disturbance. Turn lane work may require minimal land acquisition.

Improvement Type: Safety, Travel Time Preservation

Traffic Operations & Safety:

Traffic Operations	Minimal Improvements
Safety	Reduced conflict points where vehicles cross paths. Reduced risk of head-on collisions.

Total Project: \$4.7M to \$6.5M
Longstreet Ln RCUT: \$1.2M to \$1.9M

Standard Movements
 Rerouted Movements



FRANKLIN CITY LINE

CHESAPEAKE CITY LINE



Lummis Rd

US 58 Arterial Preservation Plan

Figure 49

Intersection #50: US 58 and Lummis Rd City of Suffolk

Recommendation: Reconfigure main intersection of US 58 and Lummis Rd to Continuous Green-T (CGT). Extend existing right-turn lane on US 58 eastbound to VDOT design standards.

ROW Impacts: Significant land acquisition will be required to accommodate acceleration lane due to grade of median and realigning US 58 westbound lanes.

Improvement Type: Safety, Travel Time Preservation

Traffic Operations & Safety:

Traffic Operations Minimal Improvements

Safety CGT reduces conflict points for vehicles traveling westbound US 58.

Cost: \$1.9M to \$2.7M

 Standard Movements



Next Steps

- Review meeting input and finalize study report
 - Report will be available on study website once complete
- Work with City & County officials to implement solutions
 - Identify priorities & seek funding
 - Concepts do not advance without local support
 - No date has been established for construction
 - Recommendations will be implemented as opportunity and funding permits

How to find more information

- Arterial Preservation Program Website

http://www.virginiadot.org/programs/vdot_arterial_preservation_program.asp

- Innovative Intersections Website

<http://www.virginiadot.org/innovativeintersections/>

- US 58 Project Web Page

http://www.virginiadot.org/projects/hamptonroads/us_58_arterial_management_plan.asp

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