

# Henlopen TID

Transportation Improvement District

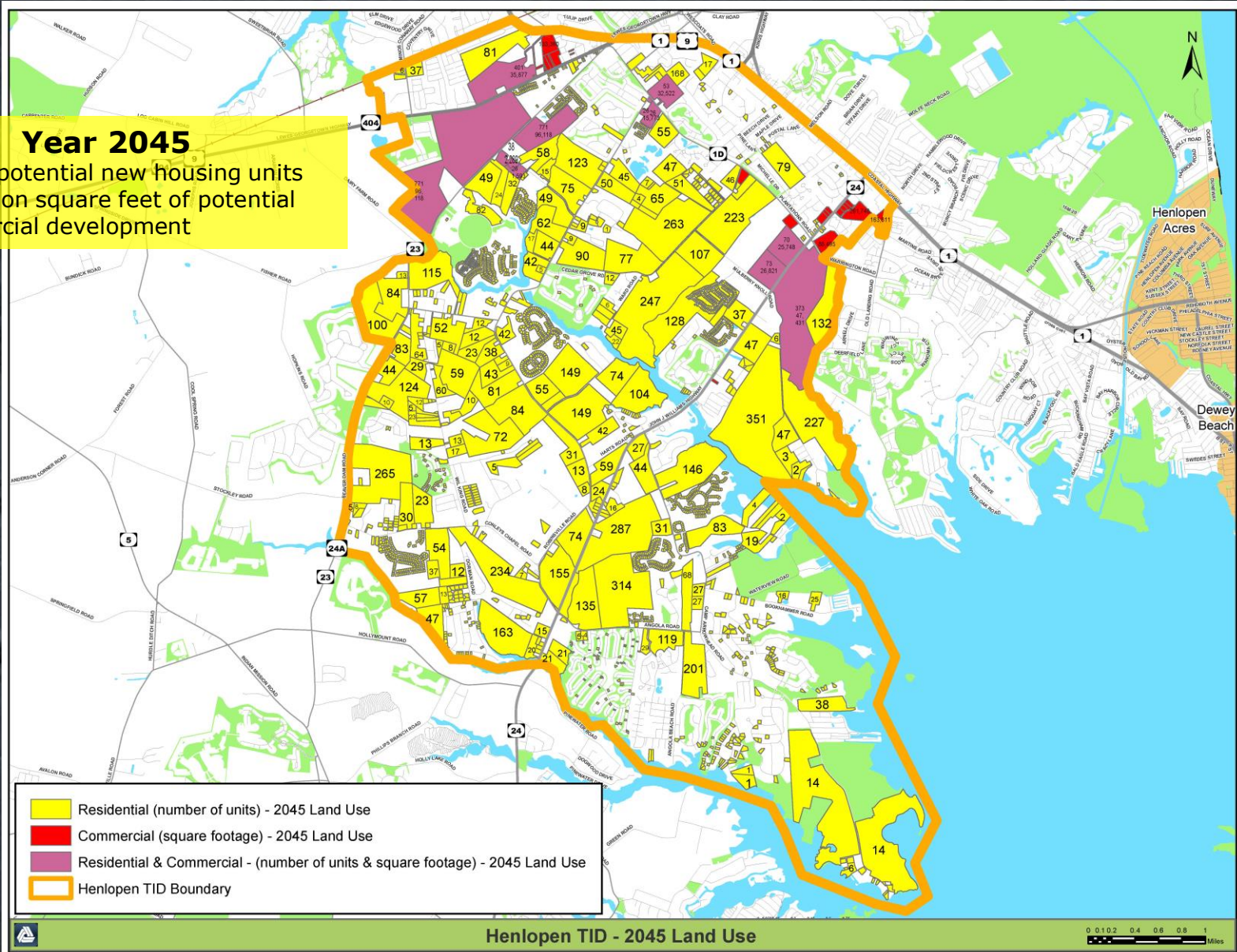
Transportation Study

# Step #1 - Land Use

- Identify areas that could develop by year 2045 under existing zoning regulations

## Year 2045

- 13,000 potential new housing units
- 1.5 million square feet of potential commercial development





# Step #2 -Traffic Analysis

## Traffic Model

- Scenario 1- Existing conditions, Fall 2017
- Scenario 2- Year 2045, DeIDOT FY2019-2024 capital transportation program projects, developer commitments as of May 2018
- Scenario 3- Scenario 2, DeIDOT proposed FY2021-2026 capital transportation program projects, TID improvements

# Step #2 -Traffic Analysis

## Henlopen TID Level of Service (LOS) Standard – D\*

### Level of Service

QUALITY OF TRAFFIC FLOW DECREASES →

Considered an acceptable LOS

Considered an unacceptable LOS

LOS A

LOS B

LOS C

LOS D

LOS E

LOS F

- Light traffic
- Free flow speeds

- Slightly increased traffic levels
- Still free flow speeds

- Approaching moderate congestion levels
- Speeds near free flow

- Speeds reduced
- Lane changes restricted due to traffic

- Congestion
- Irregular traffic flow

- Road at capacity
- Gridlock with frequent stops



LOS A



LOS B



LOS C



LOS D



LOS E

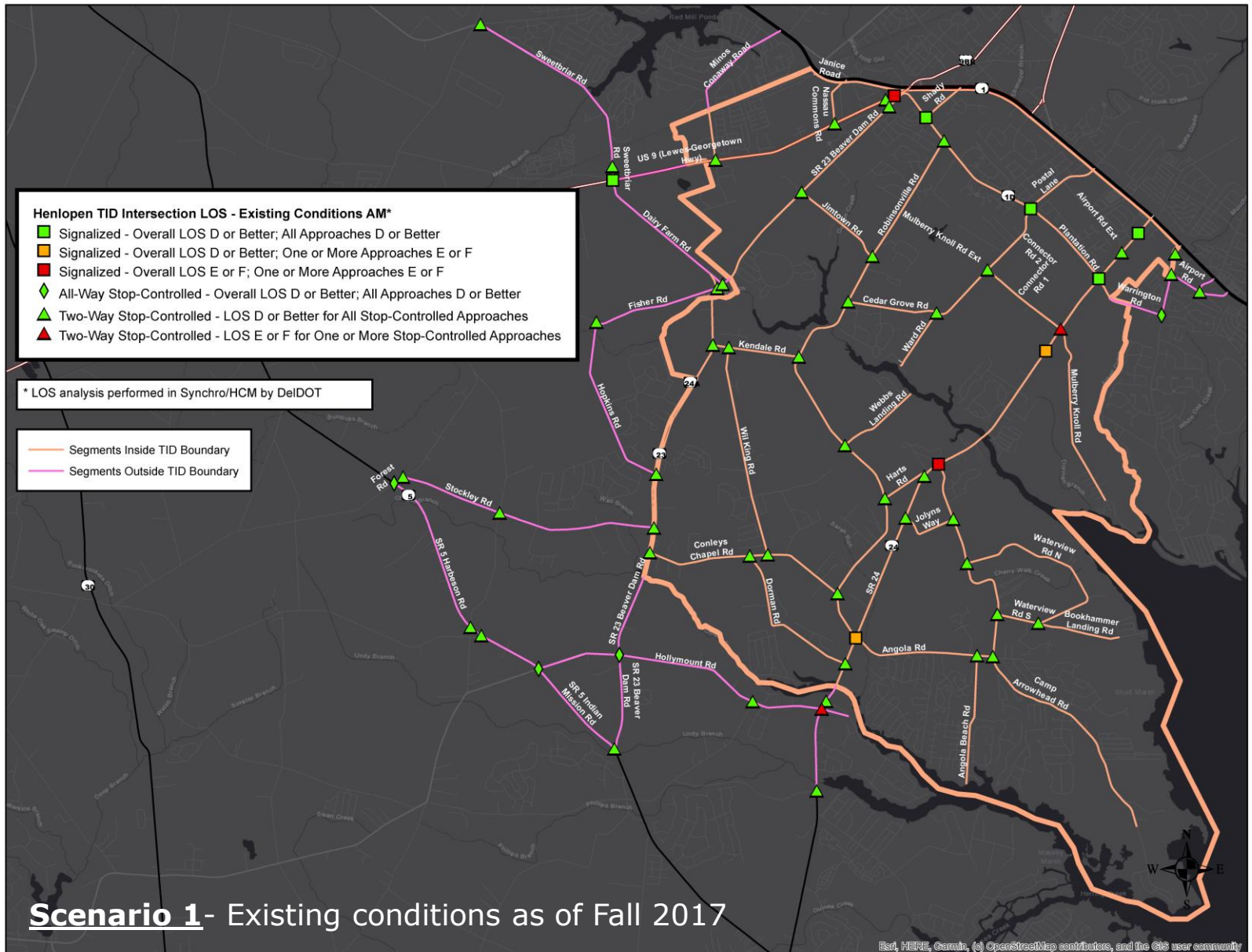


LOS F

\*Minimum overall average intersection Level of Service for weekday morning and evening peak hours

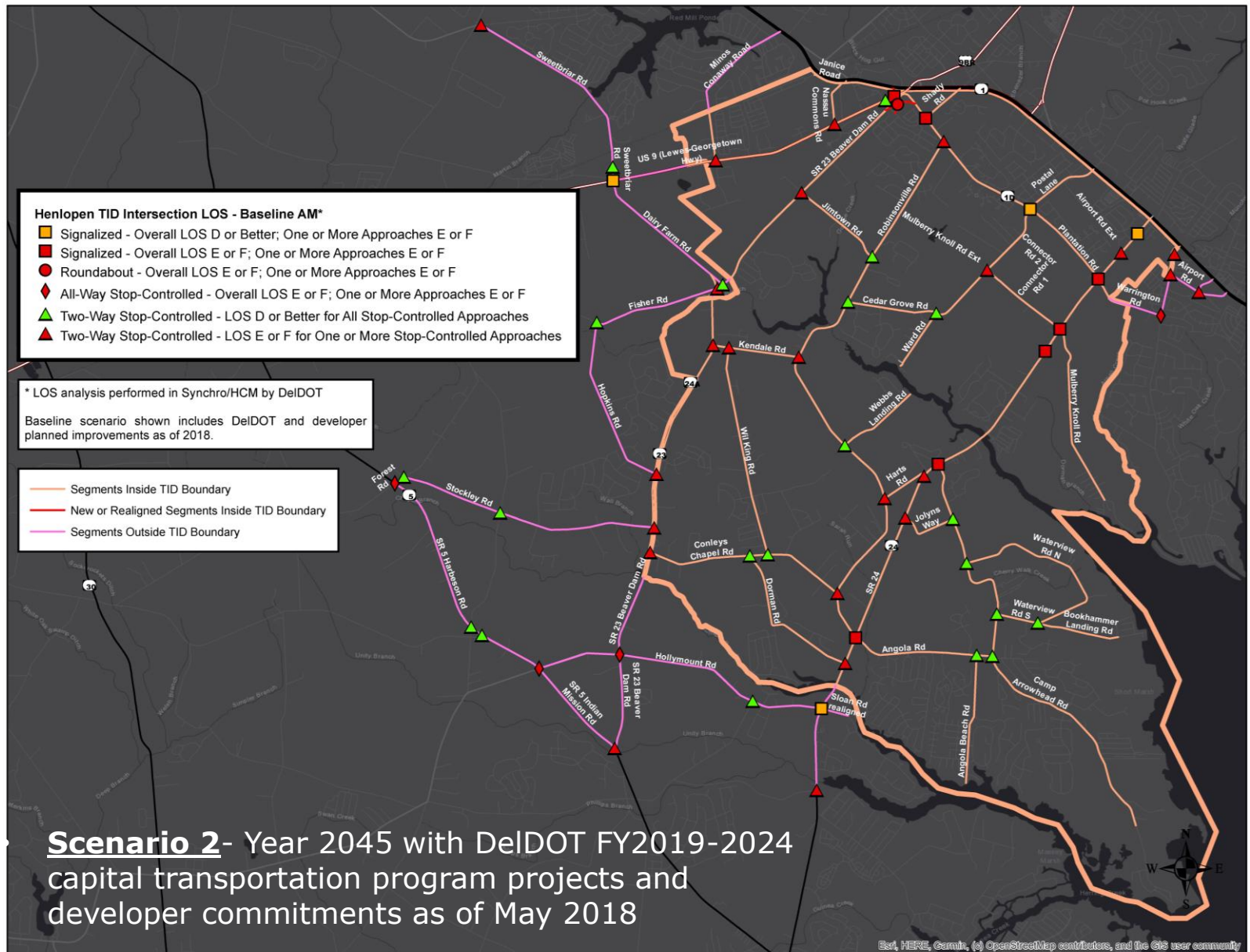


# AM - Level of Service (LOS) – Fall 2017



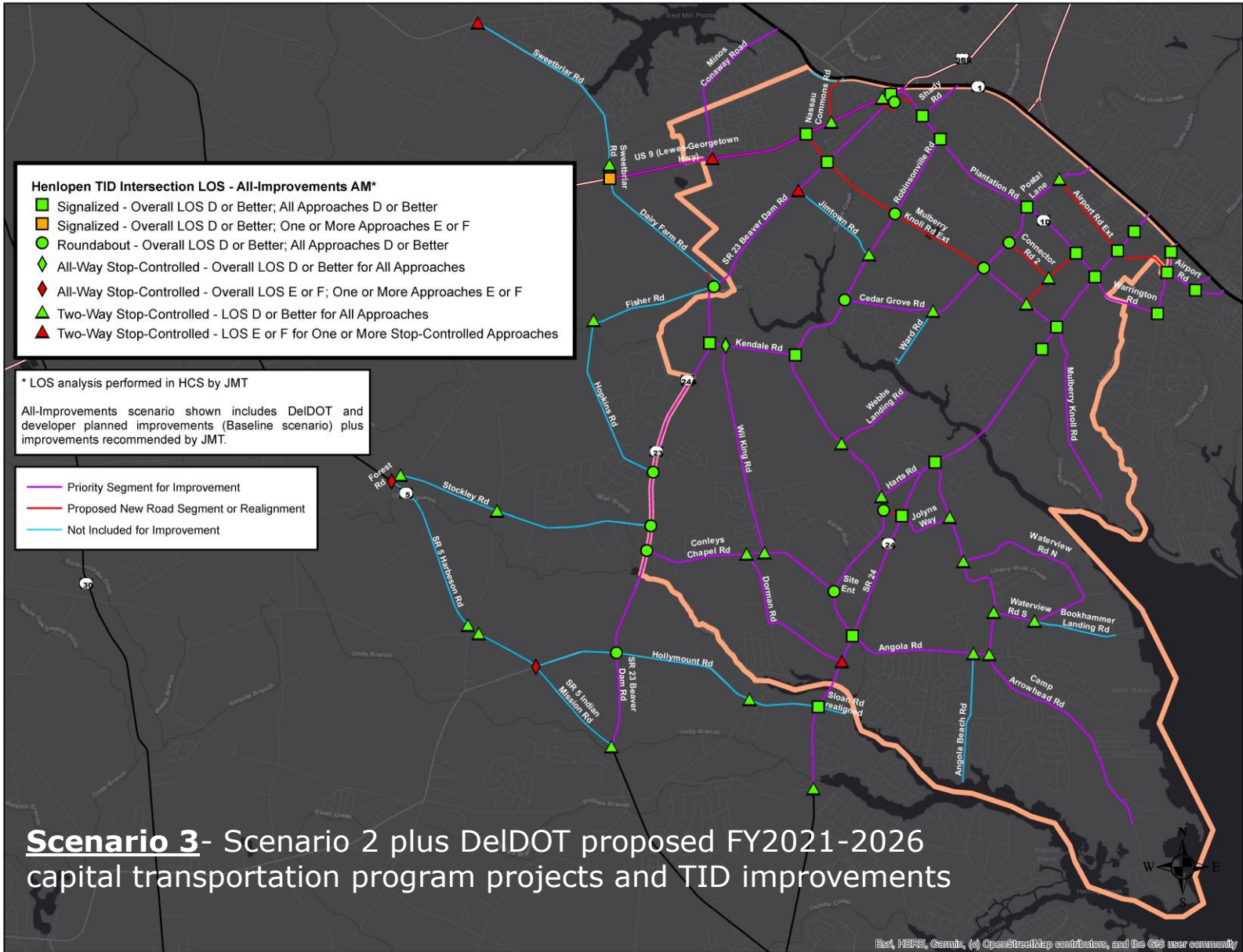
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# AM - Level of Service (LOS) – 2045

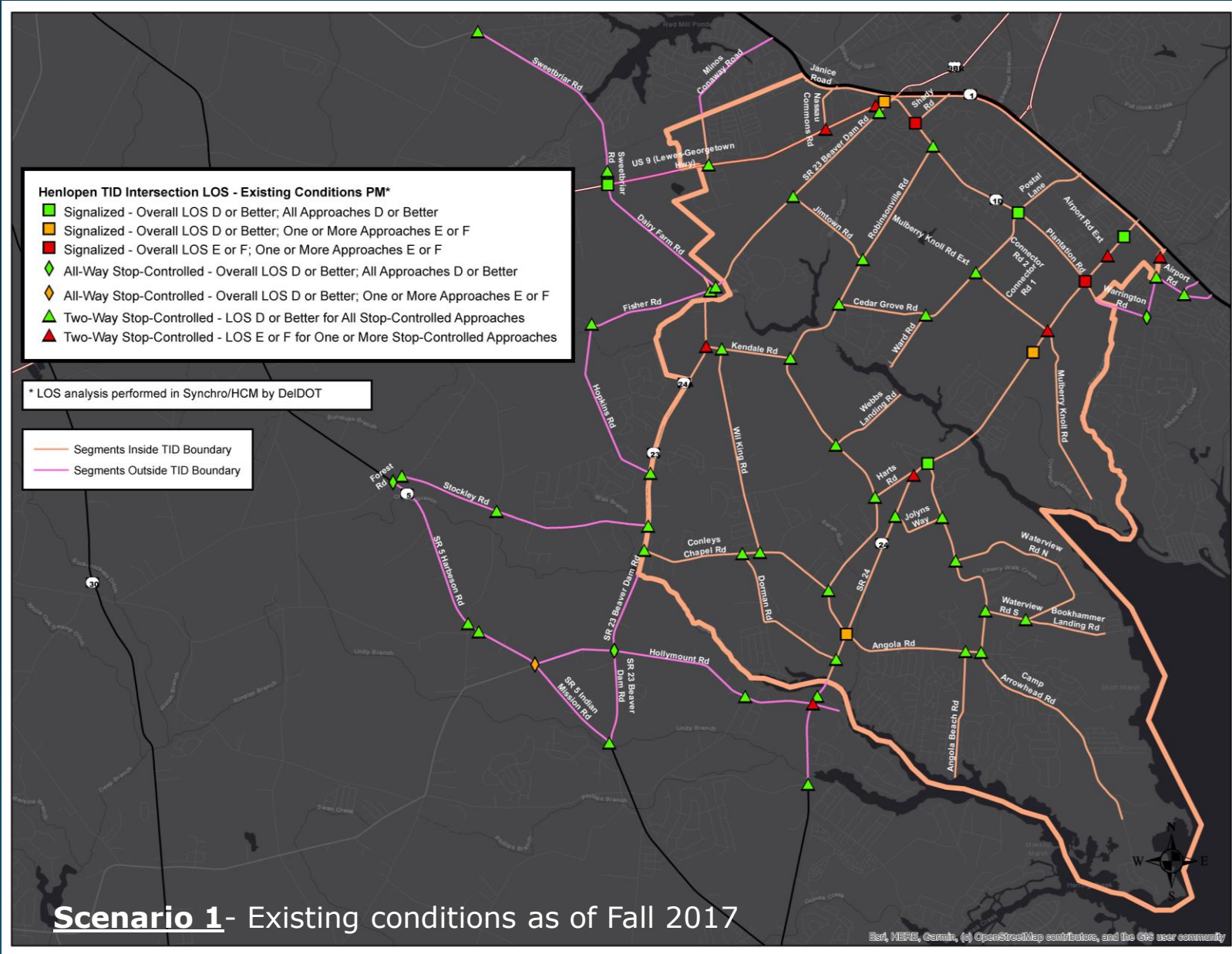




# AM - Level of Service (LOS) – 2045



# PM - Level of Service (LOS) – Fall 2017

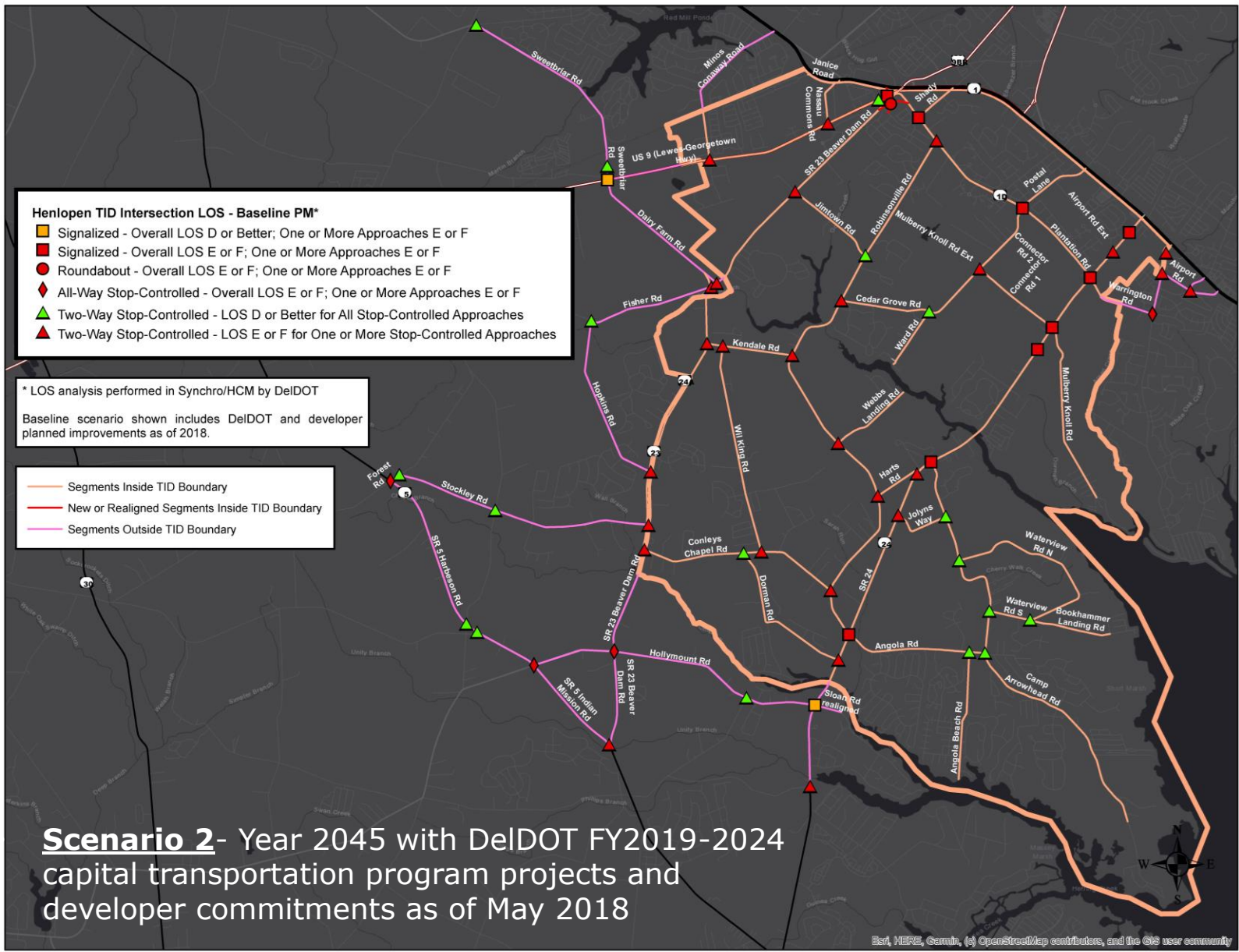


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# PM - Level of Service (LOS) – 2045



**Henlopen TID Intersection LOS - Baseline PM\***

- Signalized - Overall LOS D or Better; One or More Approaches E or F
- Signalized - Overall LOS E or F; One or More Approaches E or F
- Roundabout - Overall LOS E or F; One or More Approaches E or F
- ◆ All-Way Stop-Controlled - Overall LOS E or F; One or More Approaches E or F
- ▲ Two-Way Stop-Controlled - LOS D or Better for All Stop-Controlled Approaches
- ▲ Two-Way Stop-Controlled - LOS E or F for One or More Stop-Controlled Approaches

\* LOS analysis performed in Synchro/HCM by DeIDOT

Baseline scenario shown includes DeIDOT and developer planned improvements as of 2018.

- Segments Inside TID Boundary
- New or Realigned Segments Inside TID Boundary
- Segments Outside TID Boundary

**Scenario 2**- Year 2045 with DeIDOT FY2019-2024 capital transportation program projects and developer commitments as of May 2018

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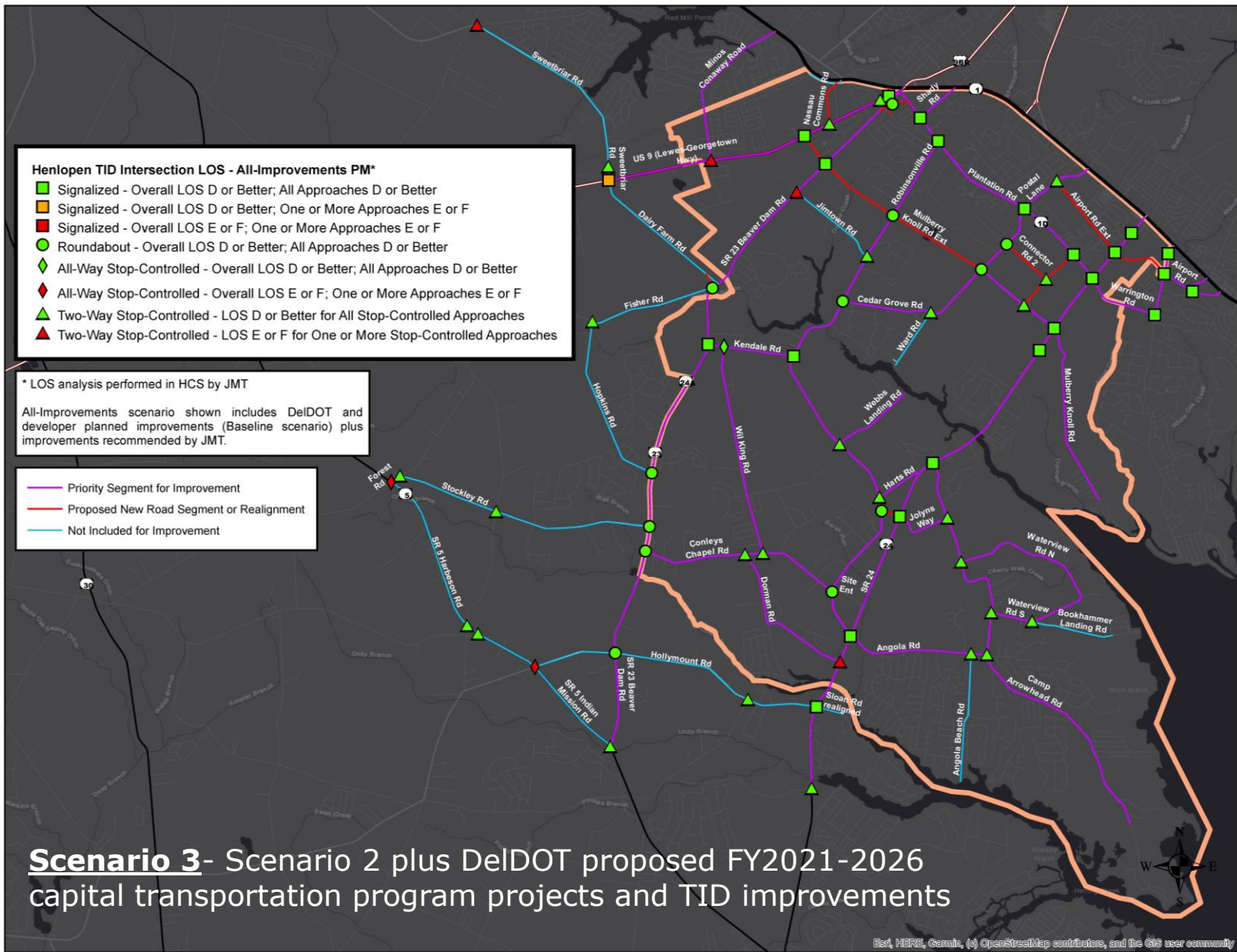
# PM - Level of Service (LOS) – 2045

- Henlopen TID Intersection LOS - All-Improvements PM\***
- Signalized - Overall LOS D or Better; All Approaches D or Better
  - Signalized - Overall LOS D or Better; One or More Approaches E or F
  - Signalized - Overall LOS E or F; One or More Approaches E or F
  - Roundabout - Overall LOS D or Better; All Approaches D or Better
  - ◇ All-Way Stop-Controlled - Overall LOS D or Better; All Approaches D or Better
  - ◇ All-Way Stop-Controlled - Overall LOS E or F; One or More Approaches E or F
  - ▲ Two-Way Stop-Controlled - LOS D or Better for All Stop-Controlled Approaches
  - ▲ Two-Way Stop-Controlled - LOS E or F for One or More Stop-Controlled Approaches

\* LOS analysis performed in HCS by JMT

All-Improvements scenario shown includes DeIDOT and developer planned improvements (Baseline scenario) plus improvements recommended by JMT.

- Priority Segment for Improvement
- Proposed New Road Segment or Realignment
- Not Included for Improvement



**Scenario 3** - Scenario 2 plus DeIDOT proposed FY2021-2026 capital transportation program projects and TID improvements

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# Step #3 – Service Standards

- Service Standards define what should be considered adequate transportation facilities.
  - LOS Standard D
  - Roadways proposed for improvements are to be upgraded to DeIDOT standards, including 11-ft wide travel lanes, and paved shoulders with widths based on roadway Functional Classification
  - On state maintained roads, roundabouts were considered first as a means of intersection control in accordance with DeIDOT Design Guidance Memorandum Number 1-26. This consideration was part of a larger intersection control evaluation that considered safety, capacity, and right-of-way need and property impacts.
  - Compliance with our Complete Streets Policy was assumed, and shared-use paths or sidewalks are recommended along at least one side of each roadway proposed for other improvements.
  - As development occurs, DeIDOT will continue to work with DART to address opportunities for new transit facilities.

# Step #4 – Concept Plans

- Develop and test transportation concept plans with initial cost estimates for review by the County and the general public

## Categories

- **Minor Intersection Improvements**
- **Major Intersection Improvements**
- **Proposed Widening**
- **New Connectors**
- **Traffic Signals**
- **Roundabouts**
- **Turn Lanes**
- **Other Improvements**








# Proposed Improvement Type & Location

## Improvements

- Roadway Widening

- Approximately 7 miles of widening
- Majority of all roads within participant boundary to be widened to 11ft travel lanes and shoulders per functional classification



 - Roadway Widening



# Proposed Improvement Type & Location

## Improvements

- New Connectors

- Approximately 4 miles of new road connections proposed

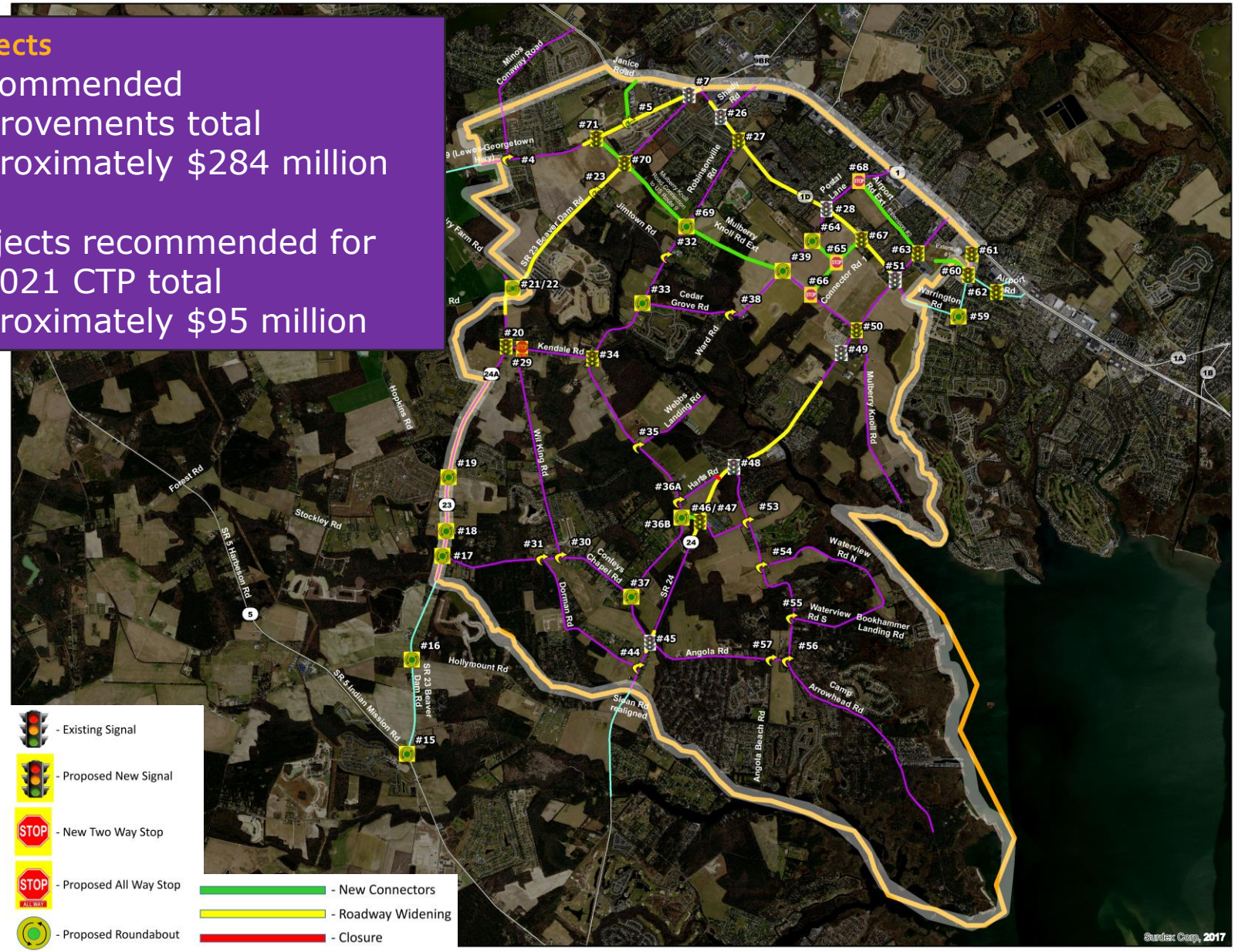




# Proposed Improvement Type & Location

## All Projects

- Recommended improvements total approximately \$284 million
- Projects recommended for FY2021 CTP total approximately \$95 million



	- Existing Signal
	- Proposed New Signal
	- New Two Way Stop
	- Proposed All Way Stop
	- Proposed Roundabout
	- New Connectors
	- Roadway Widening
	- Closure