

Welcome to the Southeast Sussex Study Public Workshop

- This meeting is in a hybrid format (In-Person and Virtual).
- We will begin promptly at 4:00 PM.
- We will record in-person attendees using sign-in sheet. If attending virtually, please add your name to the chat box (e-mail address optional).
- The virtual meeting portion will be recorded.
- Virtual attendees will be muted by default when they enter the virtual room.

SOUTHEAST SUSSEX STUDY



Public Workshop
June 14, 2022

Virtual Attendees: How to ask questions



- During the session, please type all questions and comments in the Q&A box, which you can access by clicking on the icon at the bottom of your screen.
- We will pause at certain points during the presentation to answer questions. You may raise your hand to ask a question verbally by clicking Raise Hand at the bottom of your screen.
- Presenters will repeat the question and respond verbally.
- If you cannot use the Q&A or the Raise Hand function, please e-mail questions to Jennifer.Cinelli@delaware.gov at any time during or after this session.

DeIDOT Mission

Excellence in Transportation.

Every Trip.

We strive to make every trip taken in Delaware safe, reliable and convenient for people and commerce.

Every Mode.

We provide safe choices for travelers in Delaware to access roads, rails, buses, airways, waterways, bike trails, and walking paths.

Every Dollar.

We seek the best value for every dollar spent for the benefit of all.

Everyone.

We engage our customers and employees with respect and courtesy as we deliver our services.



SAFETY MOMENT

Delaware Traffic Fatalities as of 6/9/2022

	2022	2021		2020	
		Year-to-Date	Totals	Year-to-Date	Totals
Fatalities	65	47 ↑ 38%	139	39 ↑ 67%	117
Delaware Residents	49	37 ↑ 32%	49	34 ↑ 44%	96
Person Types					
Vehicle Occupant	44	28 ↑ 57%	83	24 ↑ 83%	75
Pedestrian	12	8 ↑ 50%	30	9 ↑ 33%	25
Bicyclist	1	0 ↑ N/A	2	0 ↑ N/A	3
Motorcyclist	8	11 ↓ -27%	24	6 ↑ 33%	14
Crash Types					
Curve Related	9	8 ↑ 13%	23	4 ↑ 125%	19
Roadway Departure	24	22 ↑ 9%	59	16 ↑ 50%	47
Intersection Related	24	15 ↑ 60%	53	13 ↑ 85%	32
Median Crossover	3	2 ↑ 50%	7	1 ↑ 200%	3
Wrong Way	2	0 ↑ N/A	0	0 ↑ N/A	1
Work Zone	0	1 ↓ -100%	8	1 ↓ -100%	3

DELAWARE
2021-2025
Strategic Highway
Safety Plan:
Toward Zero Deaths

Agenda

- Why this Study?
 - Context/Background
- What are we finding?
 - Summary of Ongoing Technical Assessments and Findings
- What is next?
 - Overview of Next Steps

Why this study?

- **Study area and vicinity growing quickly**
 - Sussex County is the fastest growing county in DE
 - Summer congestion continues to be an issue
 - More year-round trips adding to non-summer peak period congestion
 - Study initiated due to HOA and legislatures bringing concerns to DeIDOT
- **Growing congestion leads to other issues**
 - Traffic using alternative routes through neighborhoods
 - Multimodal safety concerns – focus of recent SR54 Study
 - Quality of life impacts – feedback from area residents, stakeholders and elected officials
- **Need to understand and plan for required improvements**
 - Based on both current and anticipated future needs
 - Understand potential for TID establishment



Study Area



- Legend**
- -Unsignalized Intersection
 - ☐ -Signalized Intersection



Study Area

Study Roadway Segments

- SR 54 (Lighthouse Road) between W. Fenwick Blvd. and Hudson Road
- SR 20 between SR 54 and Bayard Road
- Bayard Road between SR 20 and Central Avenue
- Old Mill Bridge Road between Bayard Road and SR 54

Study Roadway Intersections

- SR 54 (Lighthouse Road) and Hudson Road
- SR 54 (Lighthouse Road) and W. Line Road
- SR 54 (Lighthouse Road) and SR 20 (Signalized)
- SR 54 (Lighthouse Road) and Old Mill Bridge Road
- SR 54 (Lighthouse Road) and W. Bluewater Run
- SR 54 (Lighthouse Road) and W. Fenwick Blvd (Signalized)
- SR 20 and Tidal Road
- SR 20 and Bayard Road (Signalized)
- Bayard Road and Central Avenue
- Bayard Road and Double Bridge Road
- Bayard Road and Old Mill Bridge Road
- Old Mill Bridge Road and Herring Way
- Old Mill Bridge Road and Tidal Road

Recent SR54 Corridor Study - Context

- Focused on multimodal safety
- Study Recommendations
 - Pedestrian safety upgrades
 - Lighting between SR 20 and Bluewater Run
 - Adjust signal timings and offsets
 - Transit improvements to close gaps
 - Sidewalk/side path and Complete Street projects to close gaps
- Southeast Sussex Study will connect above safety considerations with operational improvements needs



SR 54 Corridor Study

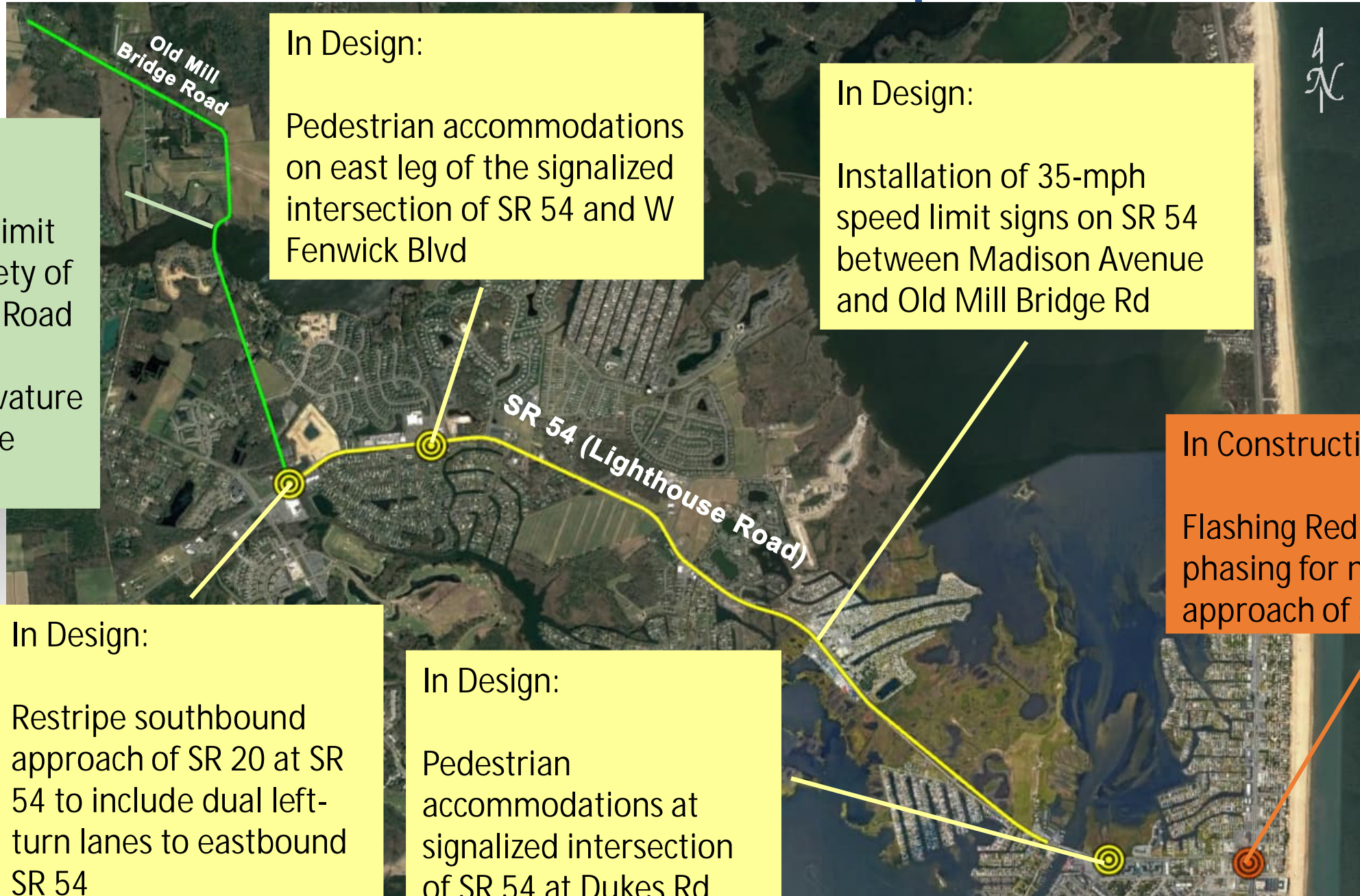
SR 1 to SR 20/Americana Parkway in Sussex County, Delaware

May 2021



<https://deldot.gov/Programs/DSHSP/index.shtml?dc=project-pedestrian-safety-audit>

Recent and Planned Improvements



Completed:
40 mph speed limit along the entirety of Old Mill Bridge Road and additional signage for curvature approaching the bridge

In Design:
Pedestrian accommodations on east leg of the signalized intersection of SR 54 and W Fenwick Blvd

In Design:
Installation of 35-mph speed limit signs on SR 54 between Madison Avenue and Old Mill Bridge Rd

In Construction:
Flashing Red Arrow left-turn phasing for northbound approach of SR 1 at SR 54

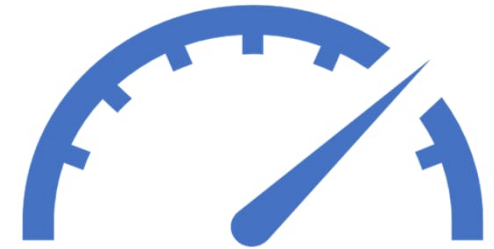
In Design:
Restripe southbound approach of SR 20 at SR 54 to include dual left-turn lanes to eastbound SR 54

In Design:
Pedestrian accommodations at signalized intersection of SR 54 at Dukes Rd

Technical Assessments



Traffic Volumes



Speed Study



Crash Assessment



Intersection Performance

Traffic Counts – Compilation/Collection

- Intersection Turning Movement Counts



- Automatic Traffic Recorder (ATR) Counts



- Traffic Count Periods

- Weekday PM Peak Period
- Summer Saturday Mid-day Peak Period



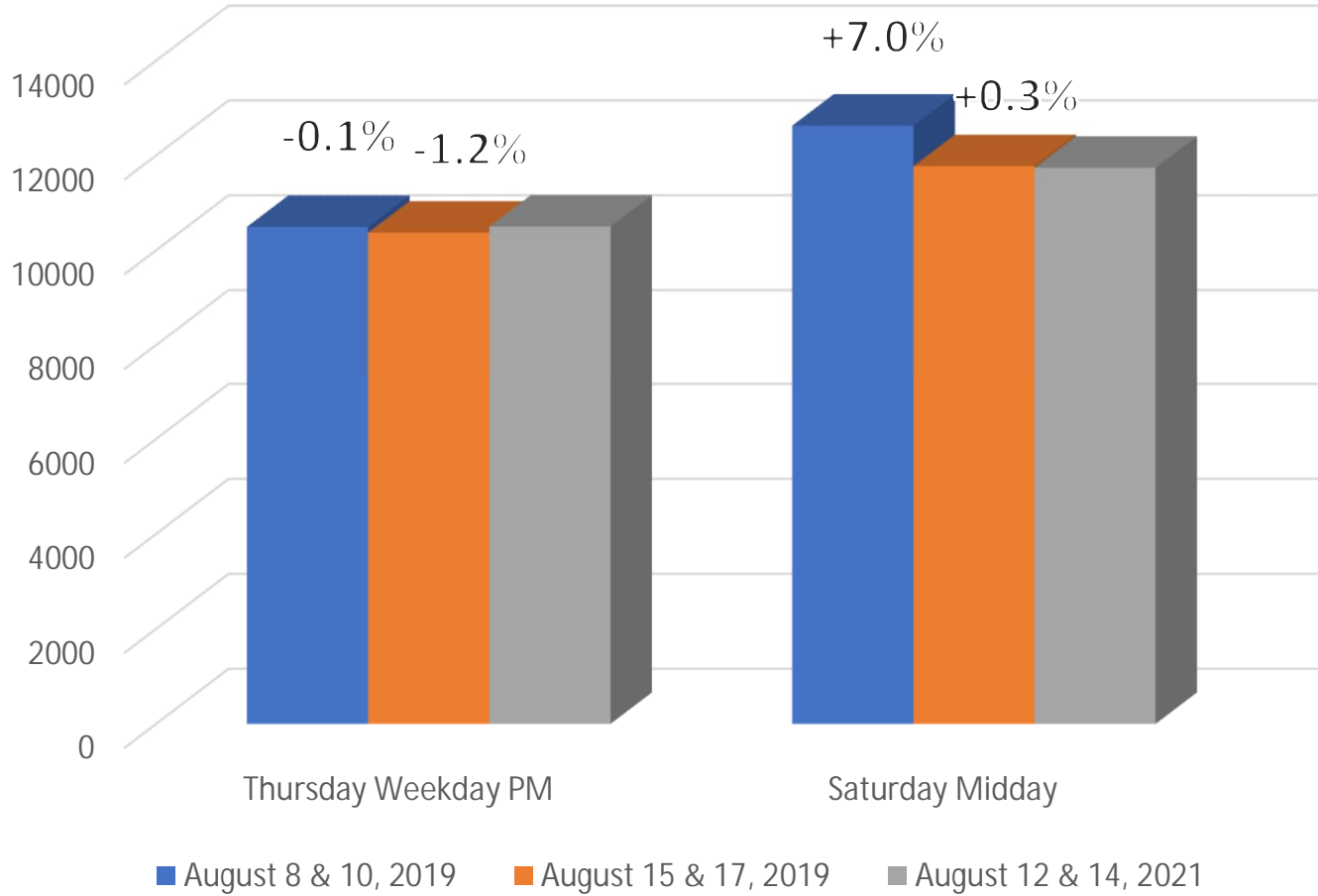
Traffic Counts – Comparison

Current volumes in context to pre-pandemic traffic trends

- Key Findings:
- Traffic volumes generally returning to pre-pandemic levels
 - Traffic peak hours are slightly shifting although peak volumes are comparable



Average Daily Traffic Comparison SR 54 west of Bayville Shores Dr



Questions?



Existing Speed Study

- Speed Data Collection

- Using ATRs along SR54 and SR20
- Validation using actual directional travel time runs

- Speed Study Periods

- Weekday PM Peak
- Summer Saturday Mid-Day Peak

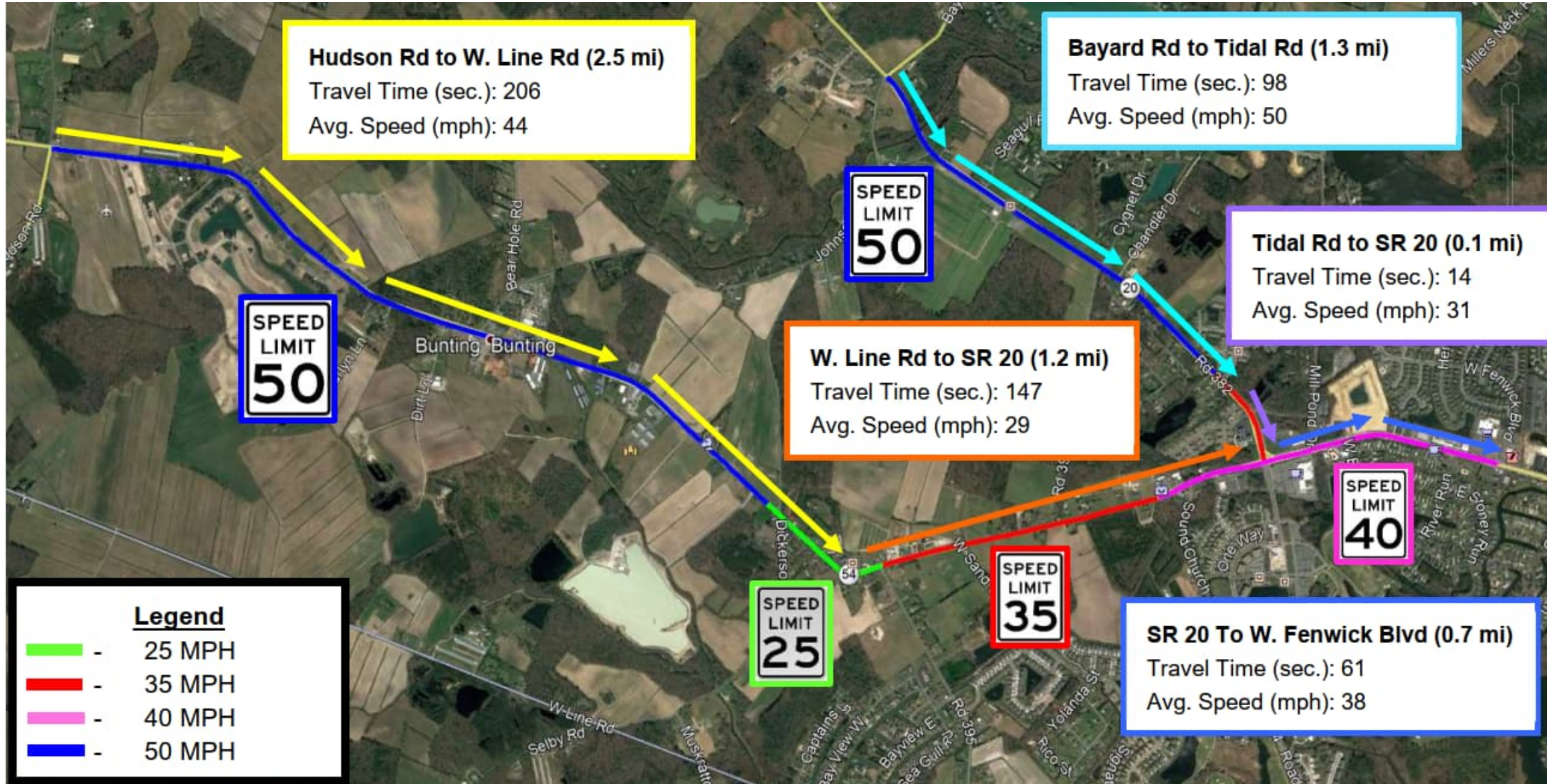


Key Findings:

- Generally, traffic is observed to flow through the study area at speeds slightly less than the posted speeds (no apparent speeding issues)
- Average speeds are significantly lower than speed limits on SR 54 east of SR 20 and along SR 20 southbound between Tidal Rd and SR 54 (congestion related speed drops)



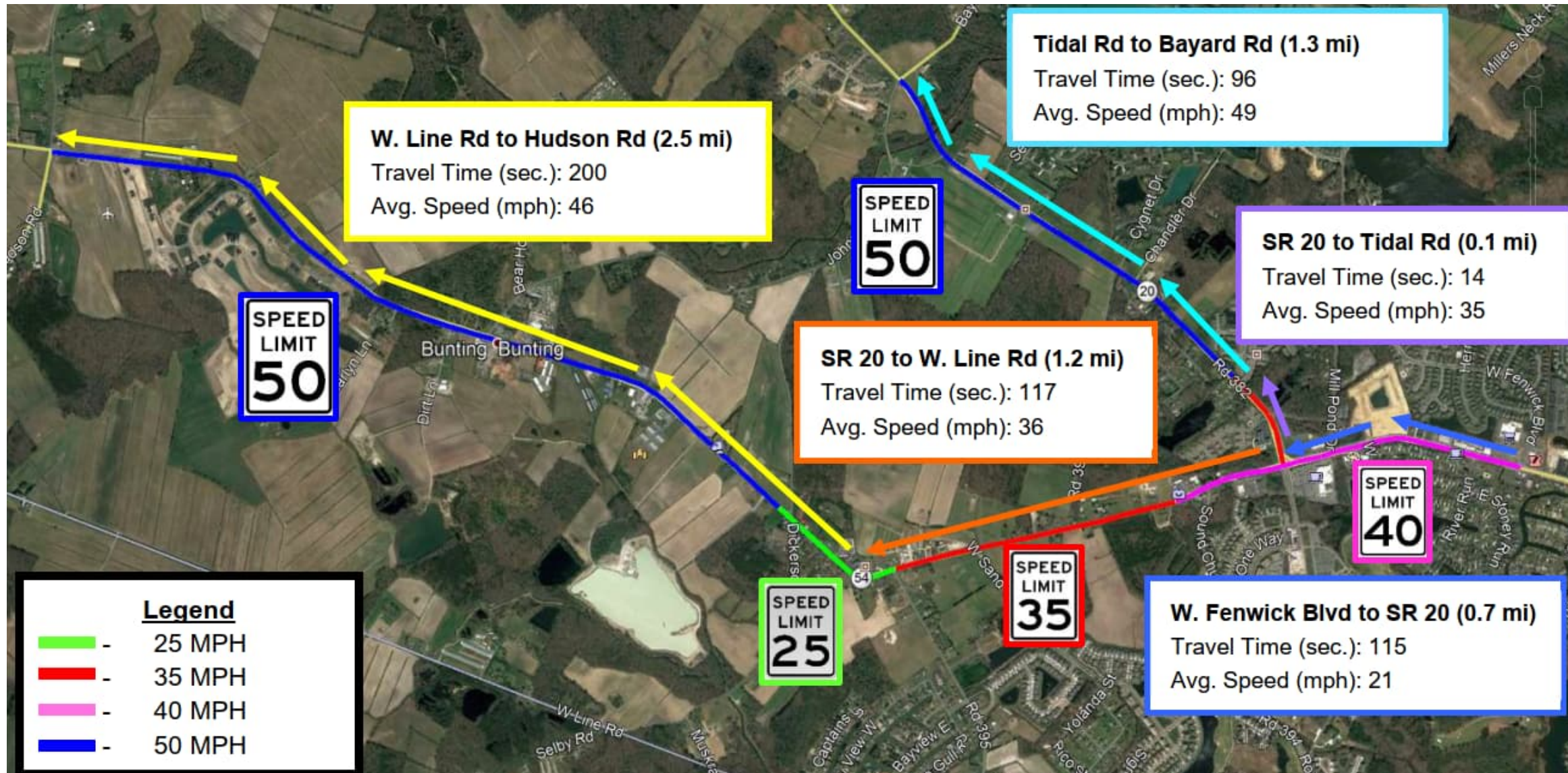
Existing Conditions Speed Study



Travel Time Runs – Weekday PM Peak



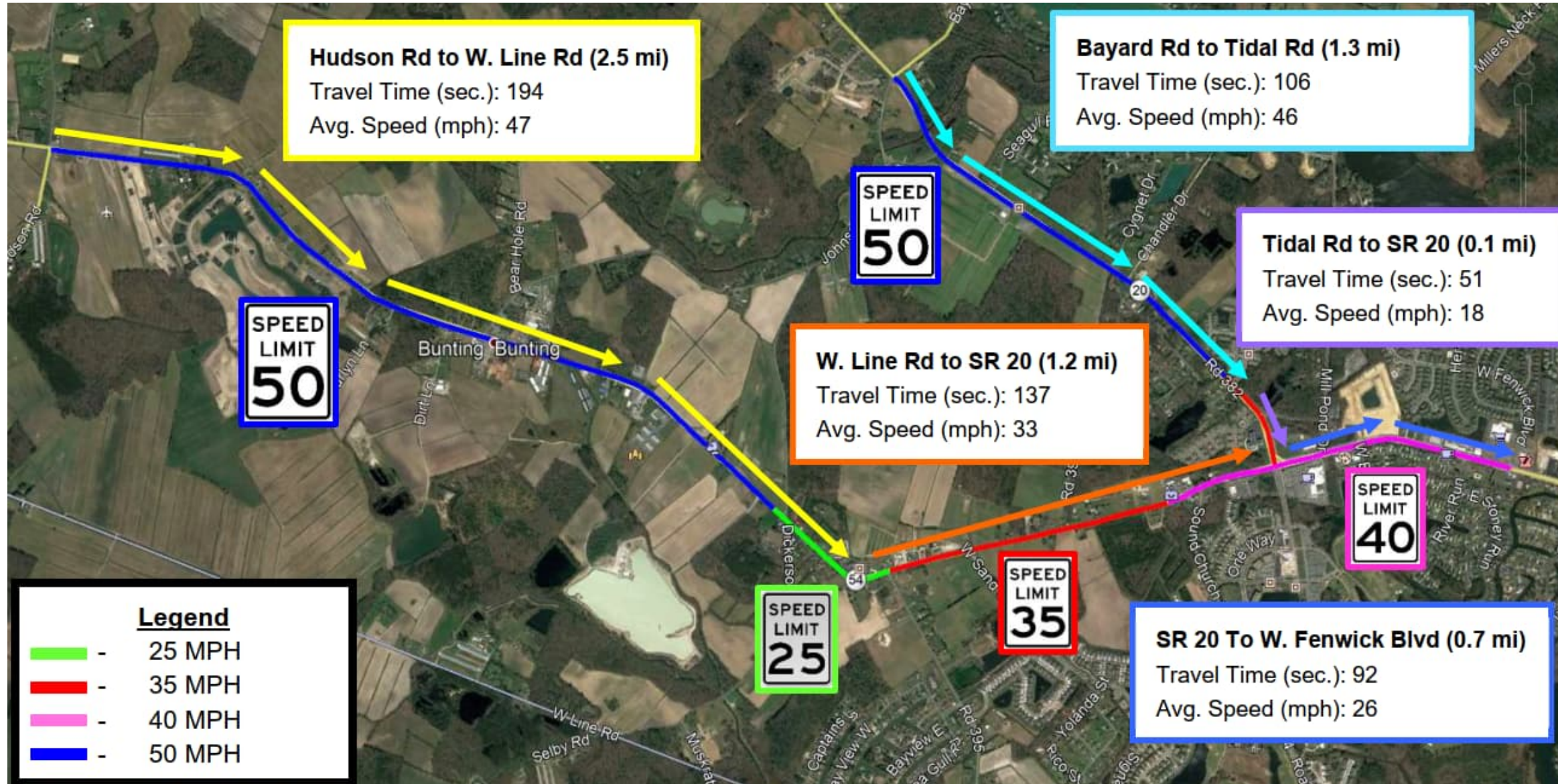
Existing Conditions Speed Study



Travel Time Runs – Weekday PM Peak



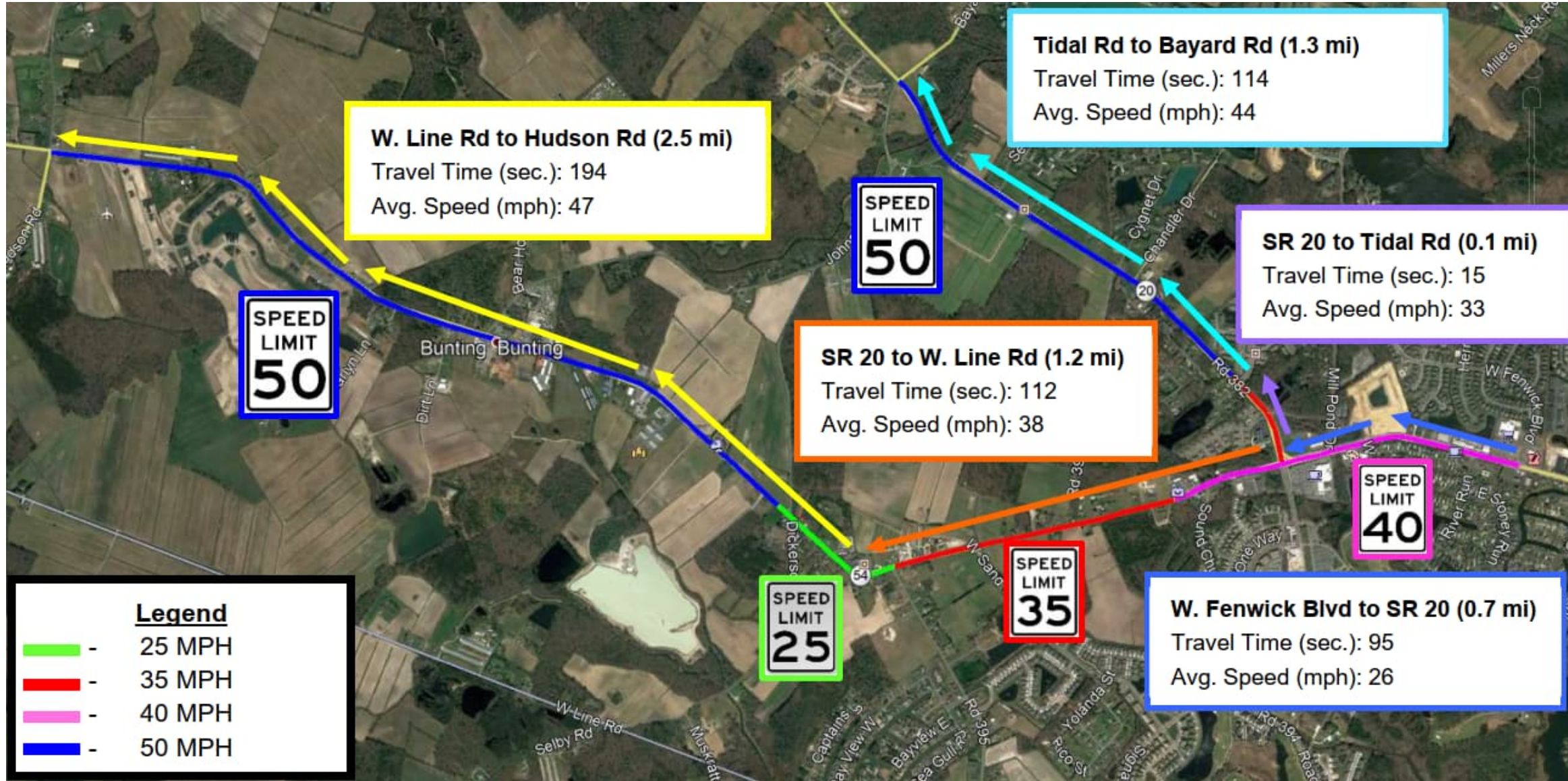
Existing Conditions Speed Study



Travel Time Runs – Summer Saturday Mid-Day Peak



Existing Conditions Speed Study



Travel Time Runs – Summer Saturday Mid-Day Peak



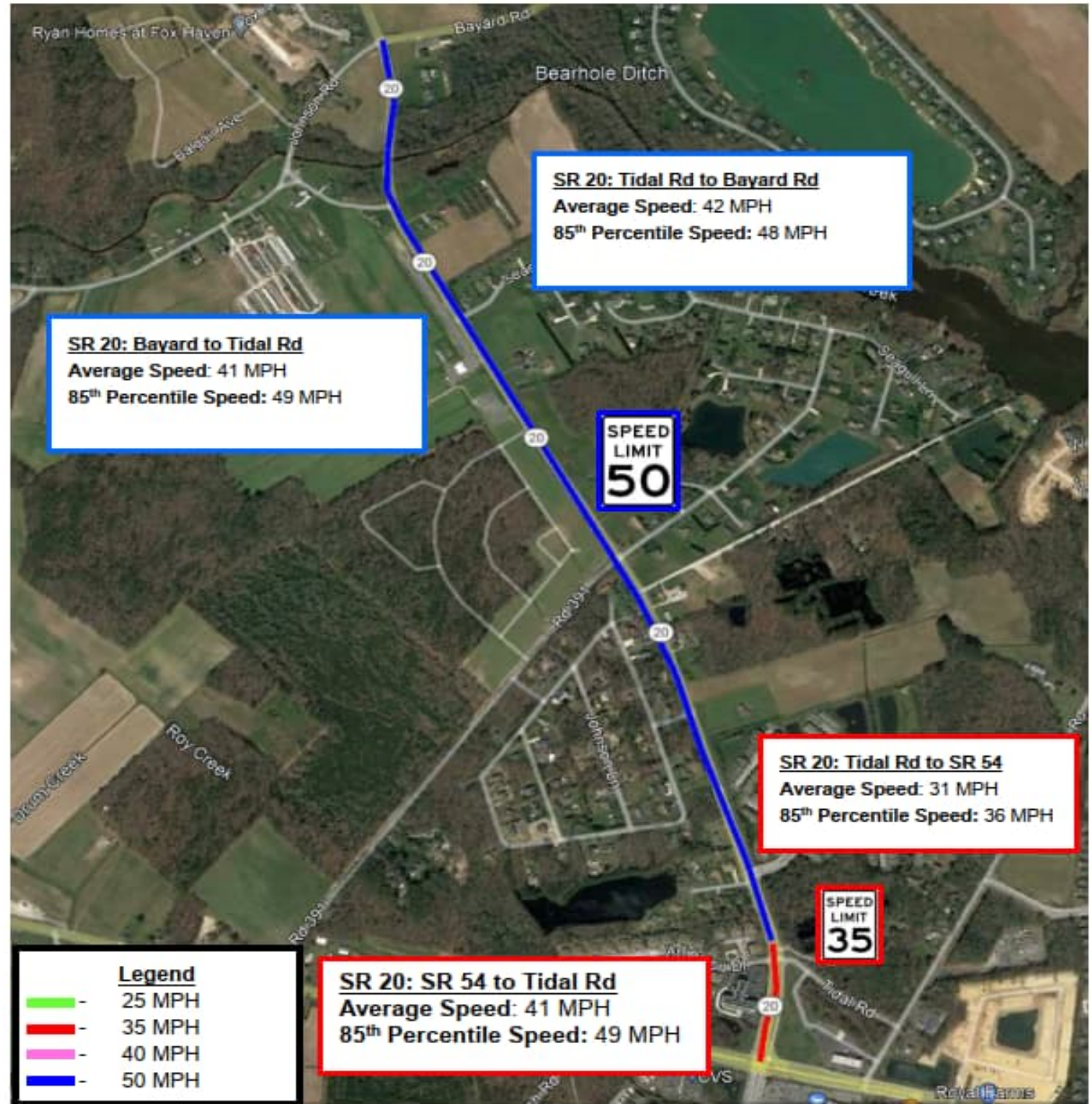
Existing Conditions Speed Study





Speed Study

Existing Conditions Speed Study



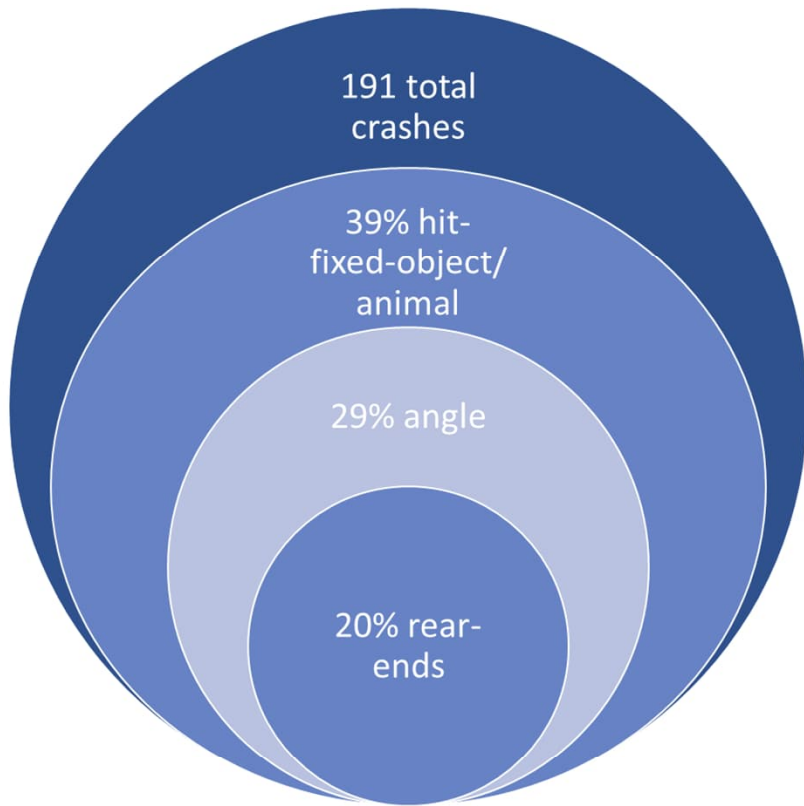
Questions?



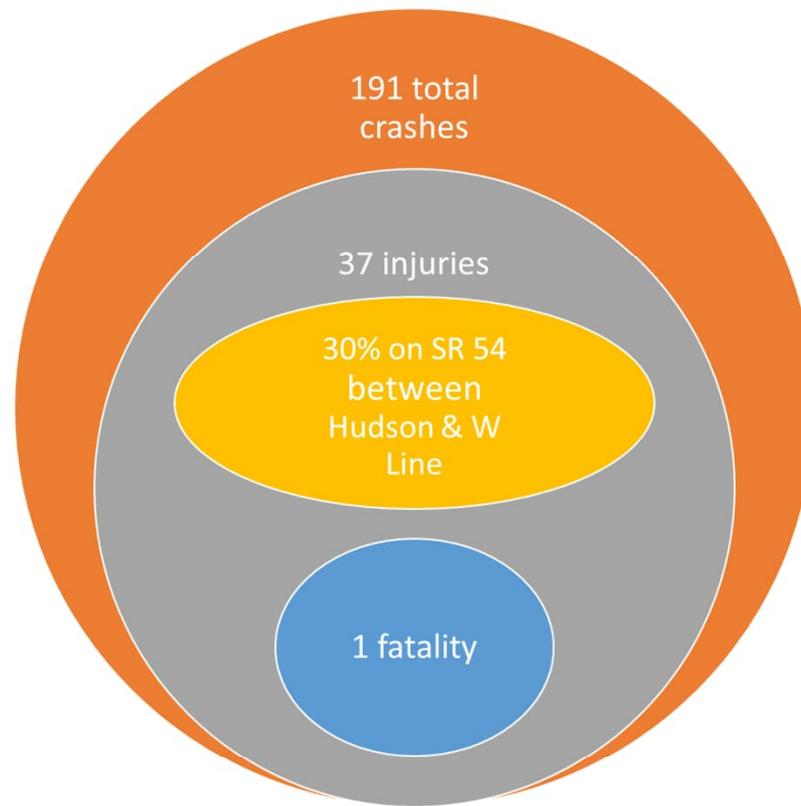


Recent Crash Data Summary

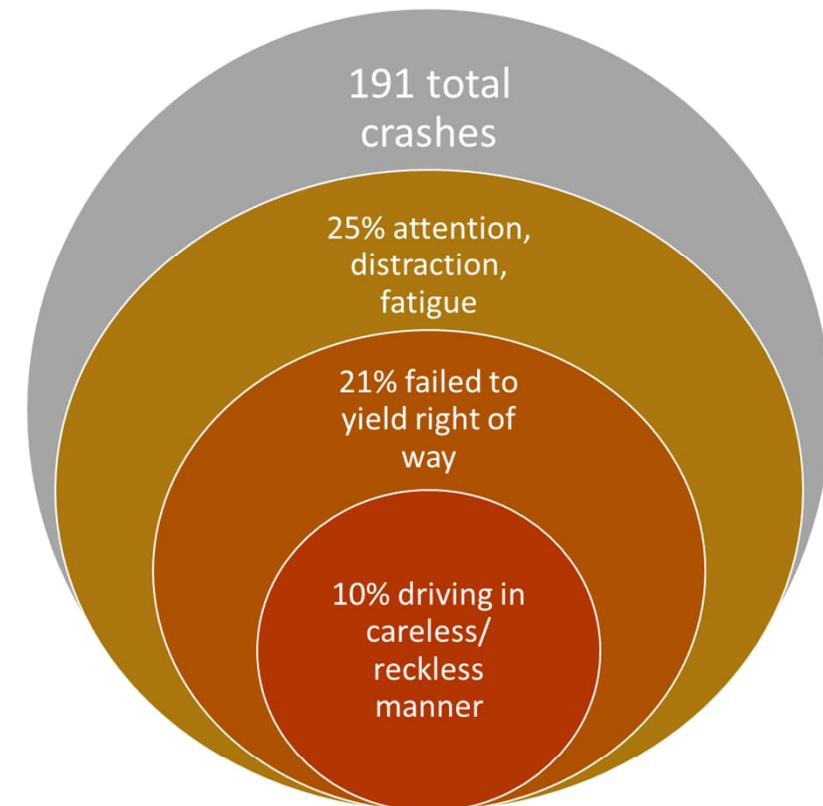
Data Period – 3-Year: Jan 2018 to Dec 2020



Crash Types



Crash Severities

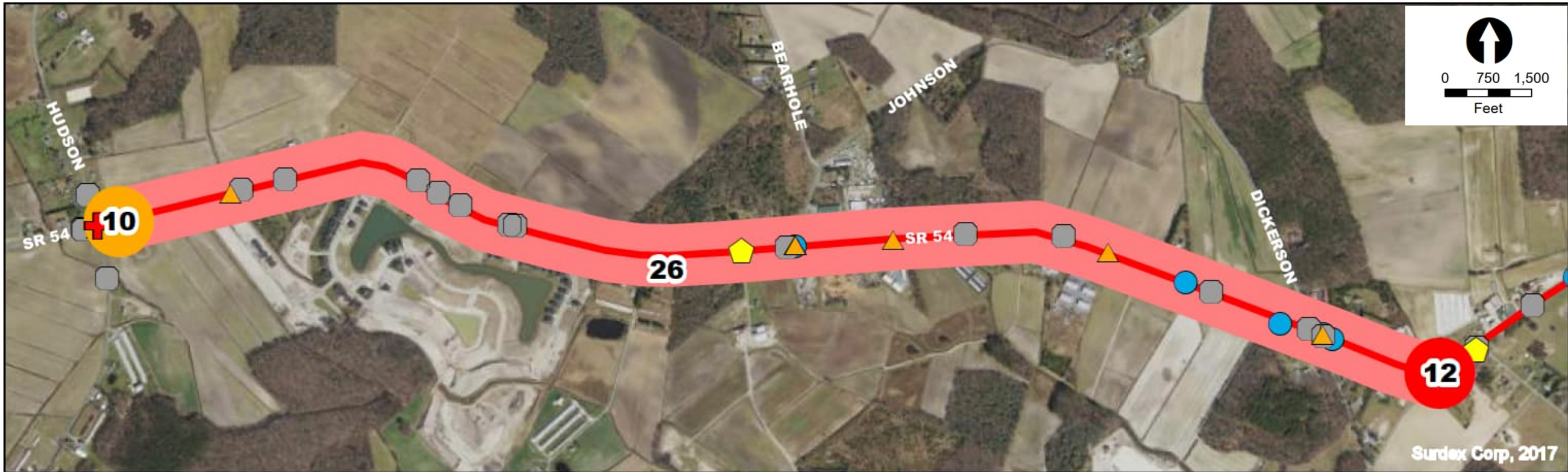


Contributing Factors



Recent 3-Year Crash Assessment

SR 54 Between Hudson Rd & W. Line Rd



- | | | | | | |
|---|----------|---|---------------------------|---|-------------------------------|
| + | Fatality | ▲ | Rear End | ◊ | Sideswipe; opposite direction |
| ● | Angle | ■ | Hit Fixed Object / Animal | ◊ | Sideswipe; same direction |
| ◆ | Head On | ◆ | Other | ● | Unknown |



Recent 3-Year Crash Assessment

SR 54 Between W. Line Rd & SR 20

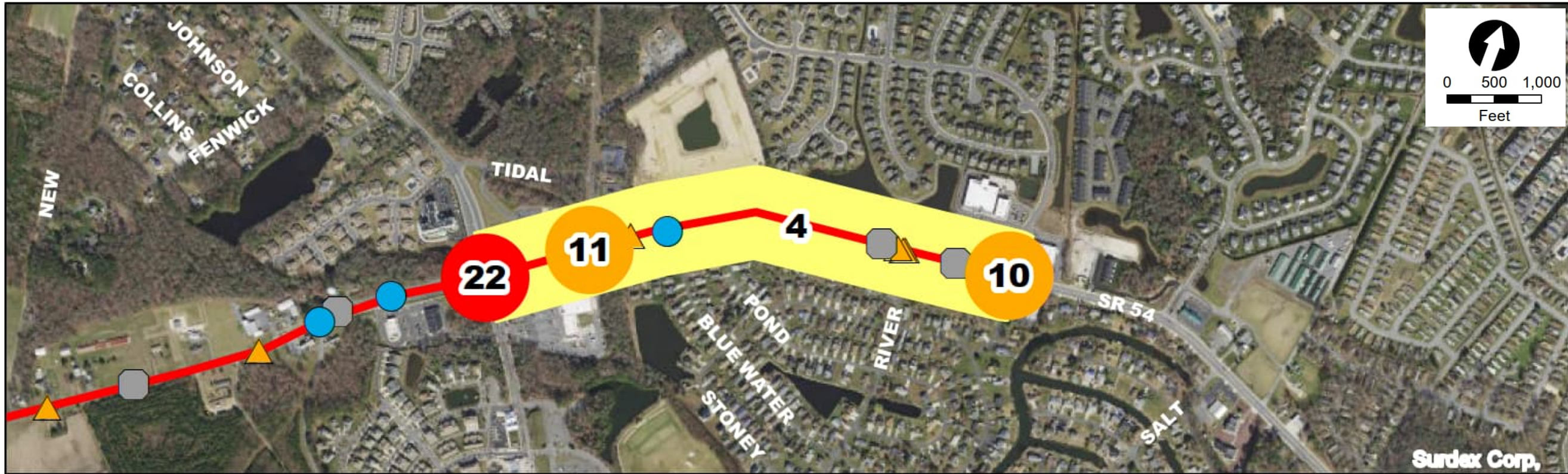


- | | | |
|----------|---------------------------|-------------------------------|
| Fatality | Rear End | Sideswipe; opposite direction |
| Angle | Hit Fixed Object / Animal | Sideswipe; same direction |
| Head On | Other | Unknown |



Recent 3-Year Crash Assessment

SR 54 SR 20 & W. Fenwick Blvd

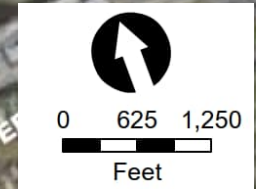


- | | | |
|----------|---------------------------|-------------------------------|
| Fatality | Rear End | Sideswipe; opposite direction |
| Angle | Hit Fixed Object / Animal | Sideswipe; same direction |
| Head On | Other | Unknown |



Recent 3-Year Crash Assessment

SR 20 Between Bayard Rd & SR 54



- | | | |
|---|---|---|
| + Fatality | ▲ Rear End | ◆ Sideswipe; opposite direction |
| ● Angle | ■ Hit Fixed Object / Animal | ◇ Sideswipe; same direction |
| ◆ Head On | ◆ Other | ● Unknown |



Recent 3-Year Crash Assessment

Bayard Rd Between SR 20 & Central Ave



- | | | |
|---|---|---|
| + Fatality | ▲ Rear End | ◇ Sideswipe; opposite direction |
| ● Angle | ■ Hit Fixed Object / Animal | ⬠ Sideswipe; same direction |
| ◆ Head On | ⬠ Other | ● Unknown |



Recent 3-Year Crash Assessment

Old Mill Bridge Rd Between Bayard Rd & SR 54



- | | | | | | |
|---|----------|---|---------------------------|---|-------------------------------|
| + | Fatality | ▲ | Rear End | ◇ | Sideswipe; opposite direction |
| ● | Angle | ■ | Hit Fixed Object / Animal | ◊ | Sideswipe; same direction |
| ◆ | Head On | ◆ | Other | ● | Unknown |

Questions?



Existing Conditions Analysis – Level of Service



Level of Service

LOS A	LOS B	LOS C	LOS D	LOS E	LOS F
<ul style="list-style-type: none">• Light traffic• Free flow speeds	<ul style="list-style-type: none">• Slightly increased traffic levels• Still free flow speeds	<ul style="list-style-type: none">• Approaching moderate congestion levels• Speeds near free flow	<ul style="list-style-type: none">• Speeds reduced• Lane changes restricted due to traffic	<ul style="list-style-type: none">• Congestion• Irregular traffic flow	<ul style="list-style-type: none">• Road at capacity• Gridlock with frequent stops



LOS A



LOS B



LOS C



LOS D



LOS E

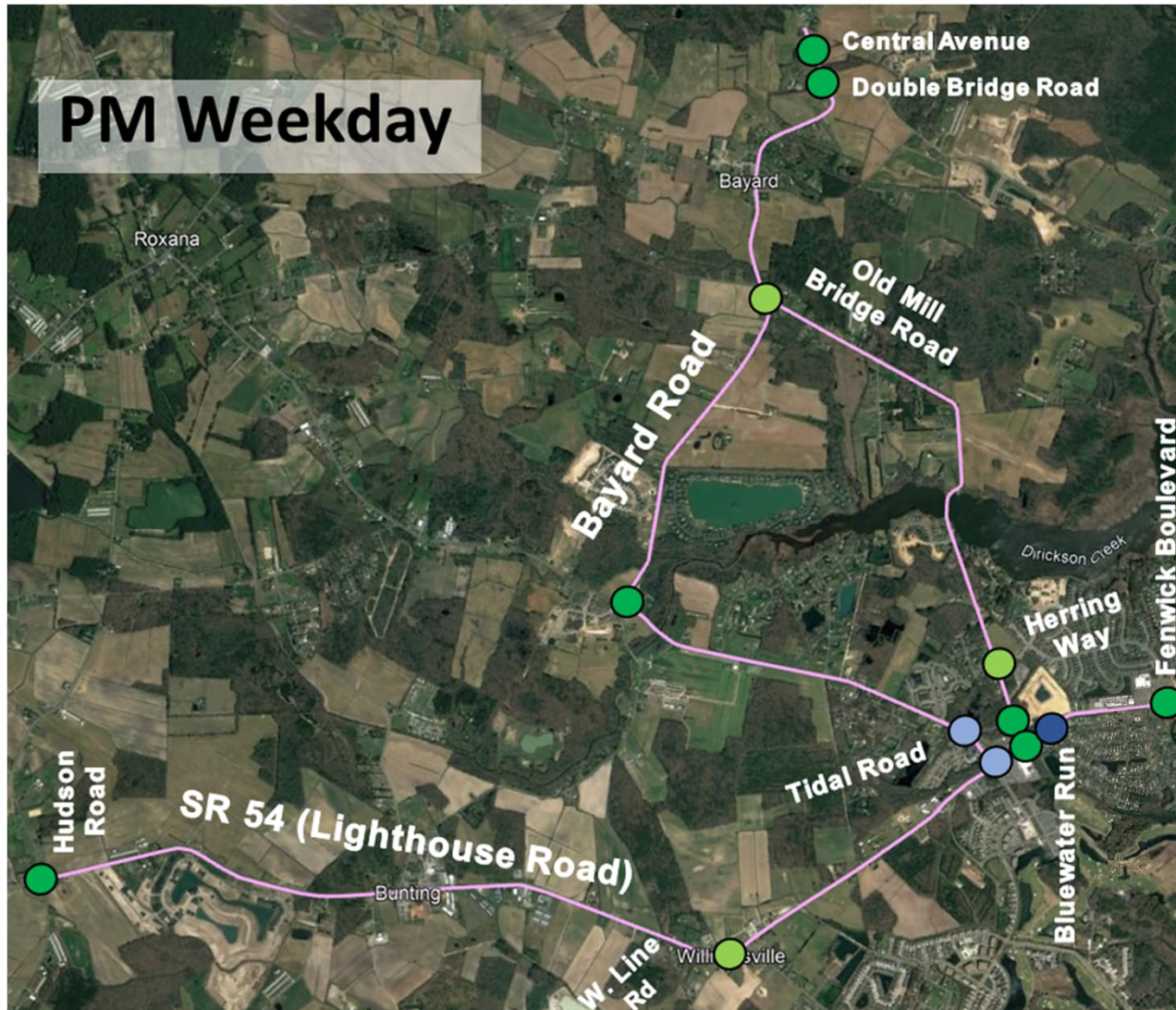


LOS F

Existing Conditions Analysis – Intersection Level of Service (LOS)



PM Weekday



Saturday



Questions?



Existing Conditions – Recap



Traffic Volumes

- Post-pandemic volumes are close to pre-pandemic levels

Speed Study

- Generally, 85th percentile observed speeds and recommended speed limits close to posted speed limits
- Lower average travel speeds approaching intersection of SR 54 and SR 20 indicate congestion hot spot

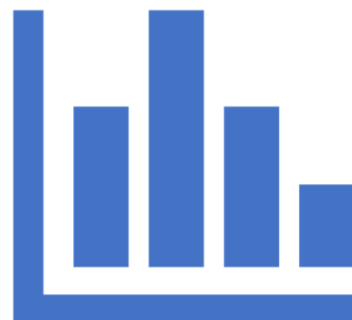
Crash Assessment

- Crash data indicate driver inattention as the predominant contributing factor; some geometric issues and peak hour congestion also contribute to crash occurrences

Intersection Performance

- Weekday PM: All study intersections currently operate at acceptable LOS
- Saturday Midday: Eleven study intersection operate at acceptable LOS while two operate at an unacceptable LOS

Next Steps



Growth Projections



Future Traffic
Estimates

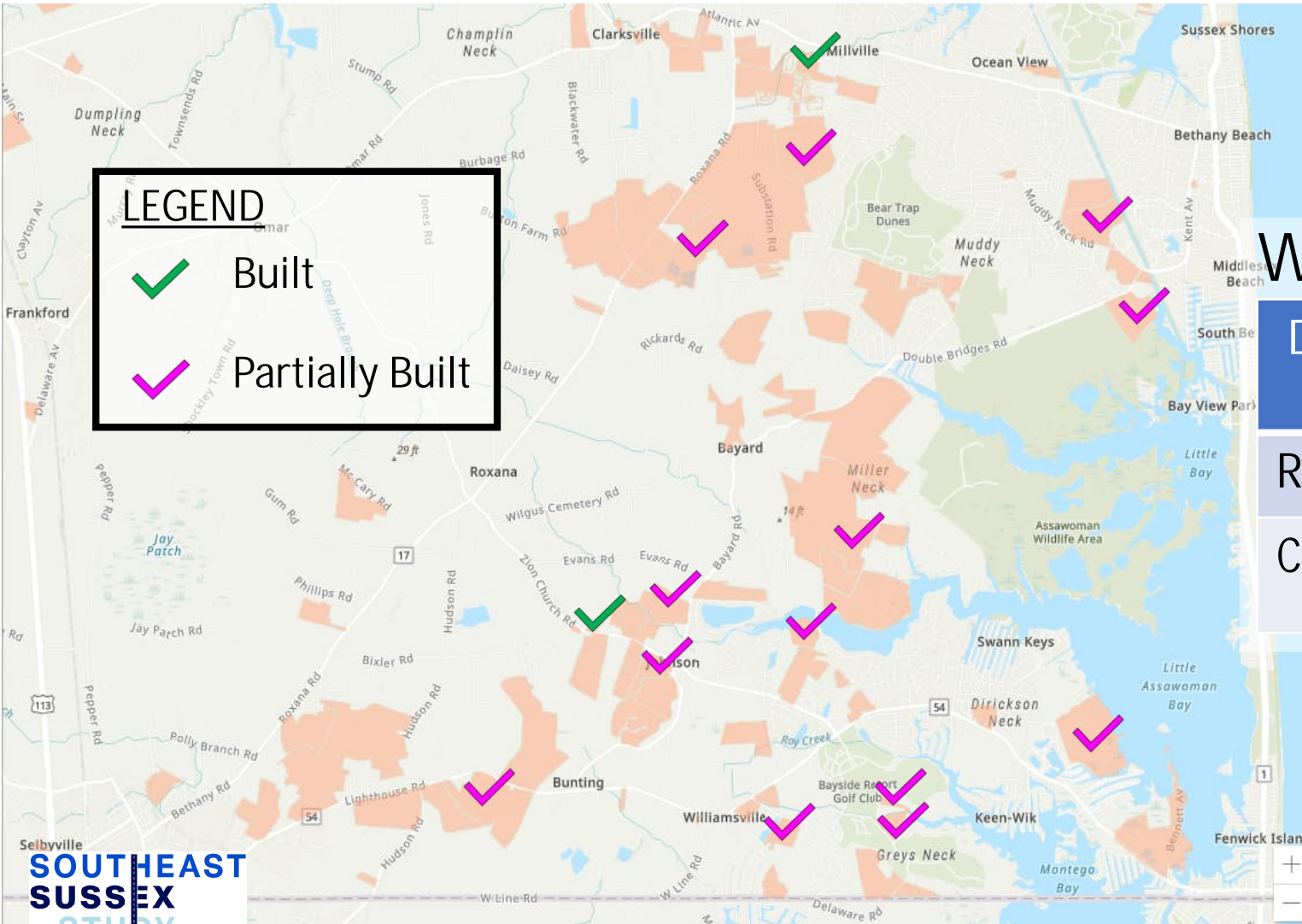


Future Intersection
Performance



Potential Improvements
Identification

Next Steps – Growth Projections PLUS Development Review

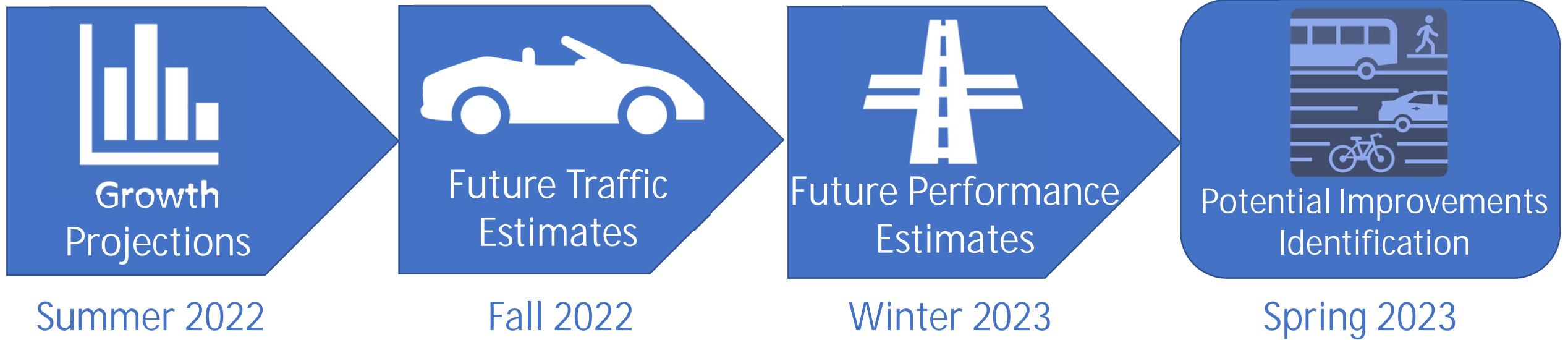


What does it mean?

Development Type	Built/Partially Built	Unbuilt
Residential	1,240 units	9,207 units
Commercial	335,370 sq ft	3,077,417 sq ft

Office of State Planning – Preliminary Land Use
<https://plus.stateplanning.delaware.gov/pages/about-plus>

Next Steps - Tentative Timeline



Goal:
(with your help)

Develop short, medium, and long-term improvements that are going to enhance safety and operations through the study corridors and intersections.

Questions?