



List of meeting materials

Phase 2 Working Group Meeting #17

Monday, February 26, 2024, 6:00 pm
Hybrid

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Updated implementation plan	113





Agenda

Phase 2 Working Group Meeting #17

Monday, February 26, 2024, 6:00 pm

Hybrid Meeting

Cape Henlopen High School Library (Zoom Option below)

1. Introduction
 - Welcome and introductions
 - Summary of notebook materials
 - Approval of October 23, 2023 meeting minutes
2. Plantation Road Project Update
3. Update on Capital Transportation Program (CTP) Projects in the Five Points Area
4. DeIDOT's Artificial Intelligence Enhanced Integrated Transportation Management System (AI-ITMS)
5. Phase 2 Implementation Status
6. Public comment
7. Adjourn



You are invited to a Zoom webinar.
When: Feb 26, 2024 04:00 PM Eastern Time (US and Canada)
Topic: Five Point Study Working Group Meeting February

Please click the link below to join the webinar:

<https://deldot->

[gov.zoom.us/j/82815431071?pwd=N1E3K3VPVmVESmFWMUNiU21ISlhRdz09](https://deldot-gov.zoom.us/j/82815431071?pwd=N1E3K3VPVmVESmFWMUNiU21ISlhRdz09)

Passcode: 655125

Or One tap mobile :

+16469313860,,82815431071#,,,,*655125# US

+13017158592,,82815431071#,,,,*655125# US (Washington DC)

Or Telephone:

Dial(for higher quality, dial a number based on your current location):

+1 646 931 3860 US

+1 301 715 8592 US (Washington DC)

+1 305 224 1968 US

+1 309 205 3325 US

+1 312 626 6799 US (Chicago)

+1 646 876 9923 US (New York)

+1 408 638 0968 US (San Jose)

+1 507 473 4847 US

+1 564 217 2000 US

+1 669 444 9171 US

+1 669 900 6833 US (San Jose)

+1 689 278 1000 US

+1 719 359 4580 US

+1 253 205 0468 US

+1 253 215 8782 US (Tacoma)

+1 346 248 7799 US (Houston)

+1 360 209 5623 US

+1 386 347 5053 US

Webinar ID: 828 1543 1071

Passcode: 655125

International numbers available: <https://deldot-gov.zoom.us/j/kerNjSgjPg>



Phase 2 Working Group Meeting #17

February 26, 2024



Excellence in Transportation. *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

2024 Delaware Traffic Fatalities as of 2/22/2024

	2024	2023		2022	
		Year-to-Date	Totals	Year-to-Date	Totals
Fatalities	14	21 ↓ -33%	137	24 ↓ -42%	164
Delaware Residents	12	18 ↓ -33%	120	20 ↓ -40%	119
Person Types					
Vehicle Occupant	10	14 ↓ -29%	89	18 ↓ -44%	103
Pedestrian	4	4 0%	28	5 ↓ -20%	32
Bicyclist	0	2 ↓ -100%	5	1 ↓ -100%	7
Motorcyclist	0	1 ↓ -100%	15	0 N/A	22
Crash Types					
Curve Related	2	5 ↓ -60%	28	4 ↓ -50%	19
Roadway Departure	6	9 ↓ -33%	69	7 ↓ -14%	55
Intersection Related	4	6 ↓ -33%	37	6 ↓ -33%	50
Median Crossover	0	0 N/A	8	0 N/A	8
Wrong Way	1	0 ↑ N/A	1	1 0%	7
Work Zone	0	3 ↓ -100%	9	0 N/A	4



Agenda

- **Introduction**
- **Plantation Road Project Update**
- **Update on Capital Transportation Program (CTP) Projects in the Five Points Area**
- **DelDOT's Artificial Intelligence Enhanced Integrated Transportation Management System (AI-ITMS)**
- **Phase 2 Implementation Status**
- **Public Comment**



How to raise your hand

- **For Working Group members:**

- If you are on Zoom on your computer or tablet, click on “Raise Hand” at the bottom of your screen as shown below.
- If you are on your phone, raise your hand by pressing *9.



Introduction

- **Introductions**
- **Summary of notebook materials**
 - Agenda
 - Presentation
 - Draft minutes of October 23, 2023 Working Group meeting
 - List of upcoming meetings
 - Updated implementation plan
- **Approval of October 23, 2023 meeting minutes**



Plantation Road Project Updates



Update on CTP Projects

Construction

Plantation Road Improvements, Robinsonville Road to US 9 (Phase 1)

- **Project Description:** Provide intersection safety improvements, pedestrian/bicycle improvements and realignment of the Plantation/Beaver Dam/US 9 intersection.
- **Project Update:** Construction is underway. The current Phase 3B detour is scheduled to continue until late March 2024 when the new roundabout will open to Plantation Road and Beaver Dam Road traffic. The Phase 3C detour will continue until late May 2024 when all legs of the roundabout will be open.
- **Projected Construction Completion:** Winter (January - March 2025)



NOVEMBER 2023

PHASE 3A

ANTICIPATED CONSTRUCTION: NOVEMBER 2023 TO DECEMBER 2023



Phase 3A Notes:

Anticipated Phase Duration: 1-2 months

Anticipated Schedule: November 2023 - December 2023

Full closure/detour of Plantation Road, Beaver Dam Road and US 9 connector

Lowe's Access Phasing Note:

Lowe's main entrance to be maintained for first 30 days of Phase 3A (November 6 - December 6). This entrance to close for 30 days at end of Phase 3A and Lowe's access will be provided via southern service entrance only (see configuration on previous Phase 3 Overview display).



ROAD CLOSED

Beaver Dam Road closed to traffic (see Phase 3A/3B detour graphic)

ROAD CLOSED

US 9 connector closed to traffic (see Phase 3A/3B detour graphic)

ROAD CLOSED

ROAD CLOSED

LEGEND:

-  Phase 3A Construction
-  Phase 3A Traffic Control
-  Phase 3A Pavement Removal

Begin Beaver Dam Road tie-in (Phase 3B) concurrent with Phase 3A

Plantation Road closed to traffic (see Phase 3A/3B detour graphic)

Construct drainage, curb and gutter and roadway widening along NB Plantation Road between Lowe's entrances

See Lowe's Access Phasing Note



Delaware Department of Transportation
PLANTATION ROAD IMPROVEMENTS, ROBINSONVILLE ROAD TO US 9



NOVEMBER 2023

PHASE 3B

ANTICIPATED CONSTRUCTION: DECEMBER 2023 TO MARCH 2024



Phase 3B Notes:

Anticipated Phase Duration: 3 months

Anticipated Schedule: December 2023 - March 2024

Full closure/detour of Plantation Road, Beaver Dam Road and US 9 connector



Delaware Department of Transportation
PLANTATION ROAD IMPROVEMENTS, ROBINSONVILLE ROAD TO US 9





Phase 3C Notes:

Anticipated Phase Duration: 2-3 months

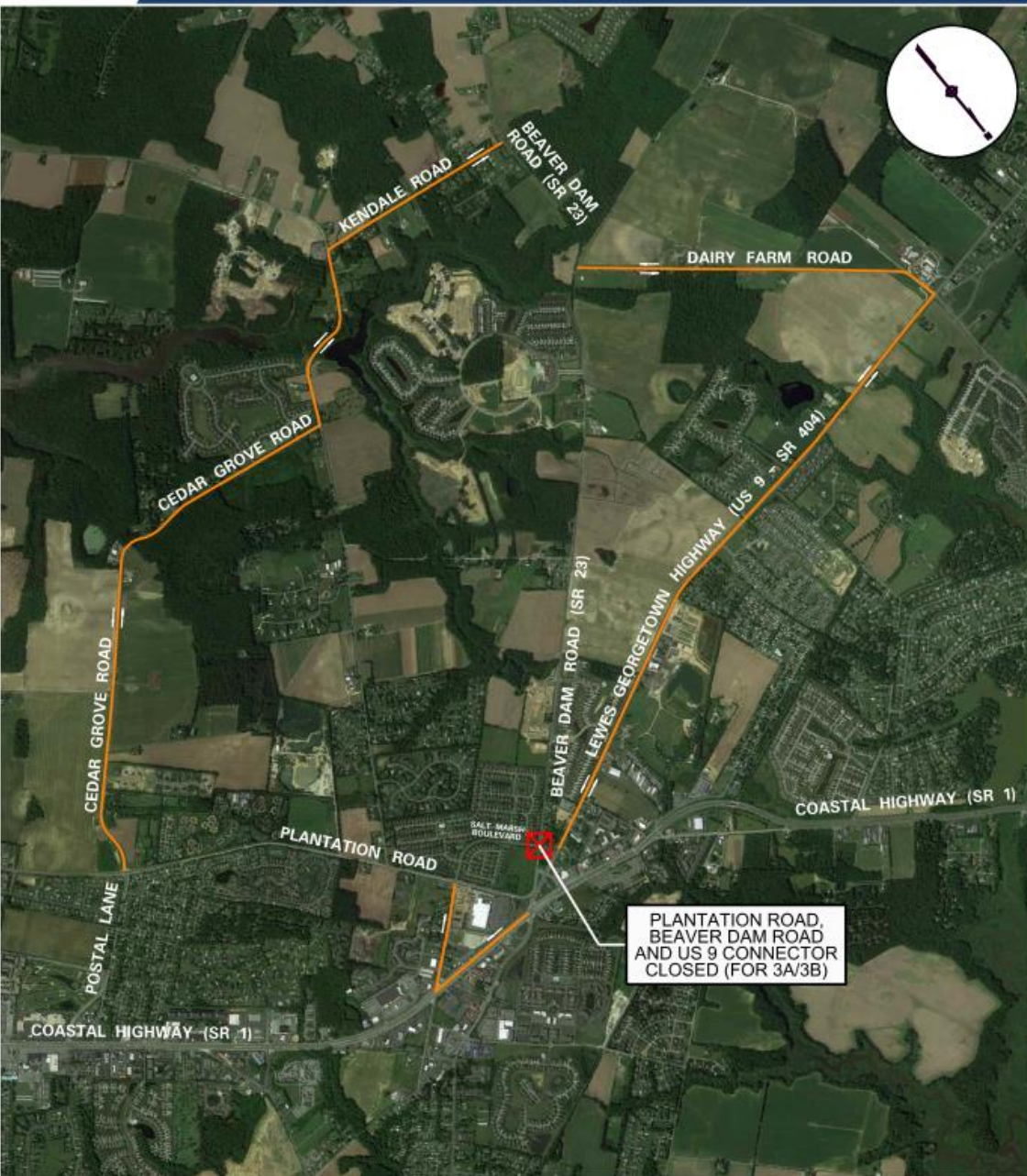
Anticipated Schedule: March 2024 - May 2024

Roundabout open to Plantation Road and Beaver Dam Road through traffic only

Full closure/detour of US 9 Connector



PHASE 3A AND 3B - DETOUR

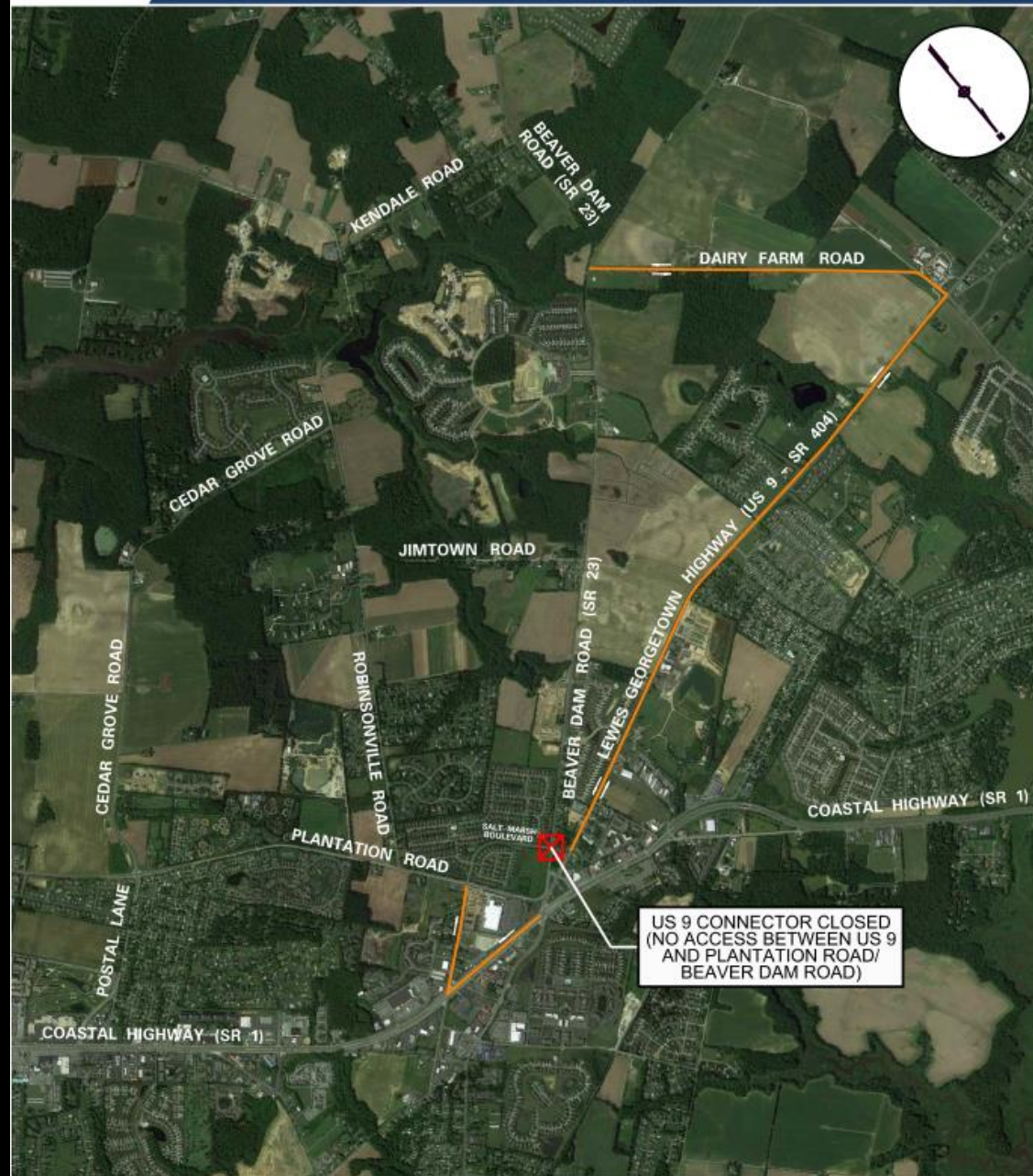


PLANTATION ROAD,
BEAVER DAM ROAD
AND US 9 CONNECTOR
CLOSED (FOR 3A/3B)

Phase 3A AND 3B Detour Notes:
 Anticipated Phase Duration: 5 months
 Anticipated Schedule: November 2023 - March 2024



PHASE 3C - DETOUR



US 9 CONNECTOR CLOSED
(NO ACCESS BETWEEN US 9
AND PLANTATION ROAD/
BEAVER DAM ROAD)

Phase 3C Detour Notes:
 Anticipated Phase Duration: 3 months
 Anticipated Schedule: March 2024 - May 2024

— VEHICLE DETOUR



Update on Capital Transportation Program (CTP) Projects in the Five Points Area



Update on CTP Projects Overview

DeIDOT Projects Portal

🔍 Search to filter by Project Name, Project Number

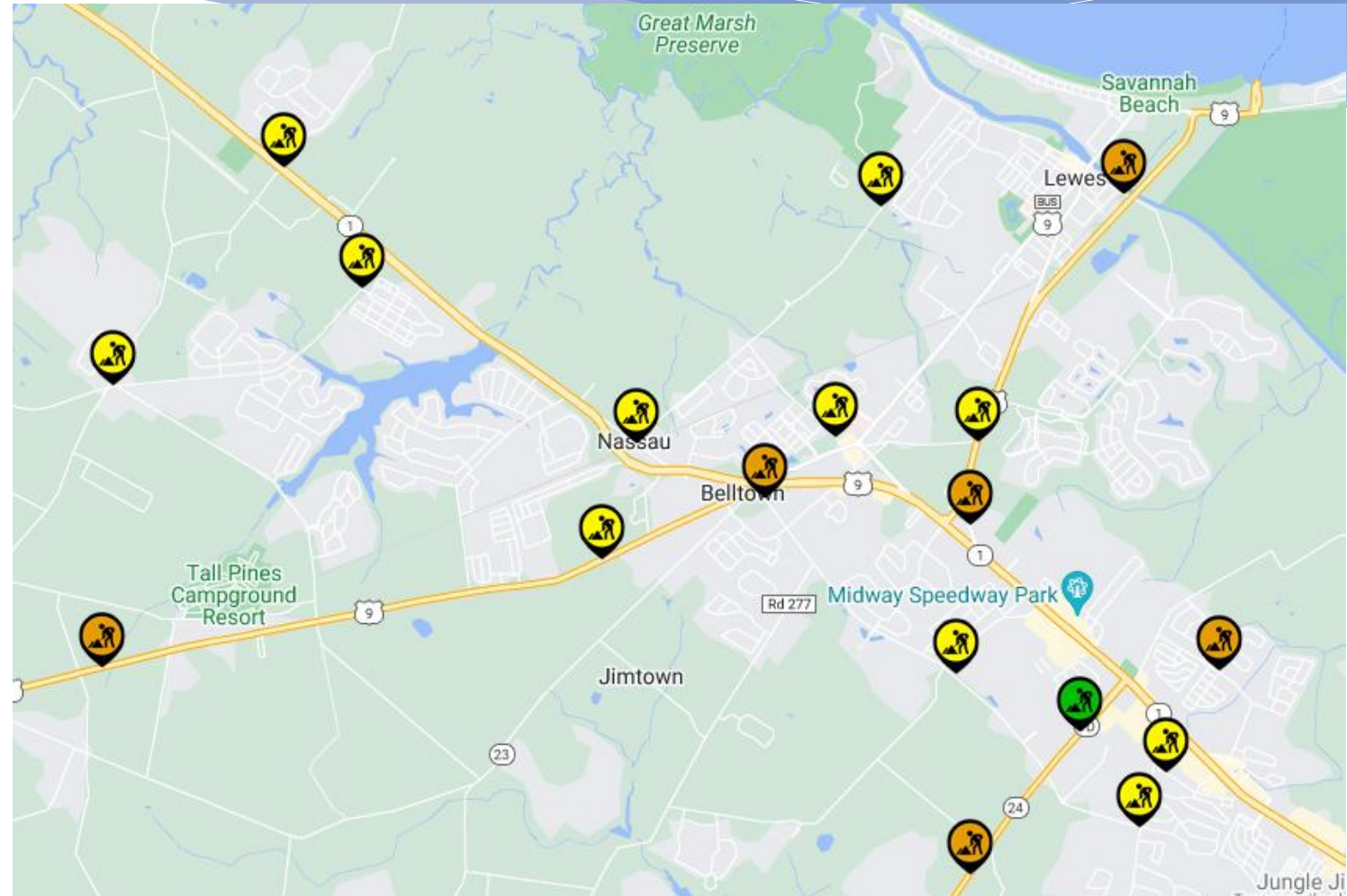
📍 Studies ▼

🚧 Planning & Design ▼

📢 Advertising / Bid / Award ▼

🚧 Under Construction ▼

🟢 Completed ▼



Visit www.deldot.gov/projects



Update on CTP Projects

Construction

- Plantation Road Improvements, Robinsonville Road to US 9 (Phase 1)
- Coastal Highway Intersection Improvements
- Removal of Bridge 3-928R, Lewes RR Swing Bridge
- SR 24, Love Creek to Mulberry Knoll



Update on CTP Projects

Construction

Coastal Highway Intersection Improvements

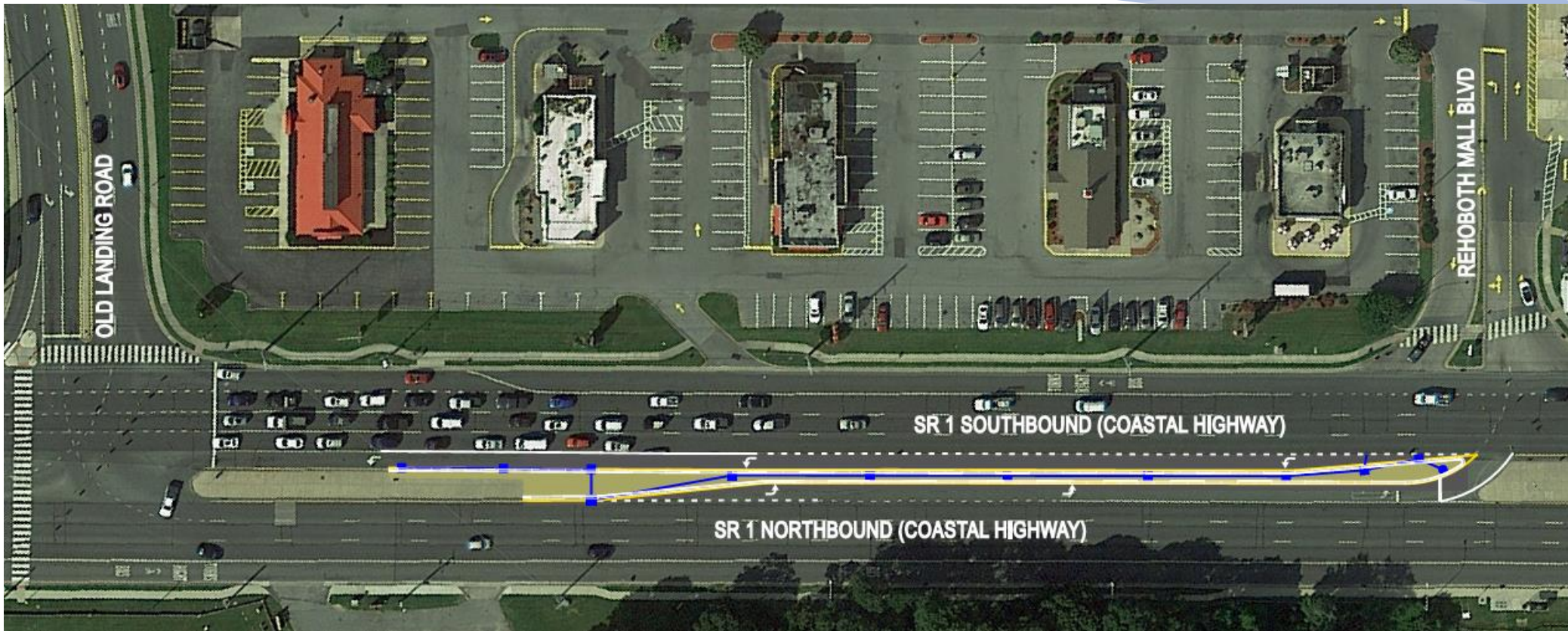
- **Project Description:** This project includes improvements at the intersection of SR 1 and Old Landing Road. This project will extend the Southbound SR 1 U-Turn at Old Landing Road by converting the existing double left-turn lanes at Rehoboth Mall Blvd into one left turn lane.
- **Project Update:** Construction is substantially complete. Contractor is performing punchlist work.
- **Projected Construction Completion:** Fall (October - December) 2023



Update on CTP Projects

Construction

Coastal Highway Intersection Improvements



Update on CTP Projects

Construction

SR 24, Love Creek to Mulberry Knoll

- **Project Description:** Project will involve safety, operational, and capacity improvements on SR 24 from Love Creek to Mulberry Knoll. Dualization of SR 24 will extend to the west of the school entrances.
- **Project Update:** Construction is underway. Construction is currently working in Phase 1 of 2.
- **Projected Construction Completion:** 2024



Update on CTP Projects

Construction

SR 24, Love Creek to Mulberry Knoll



Update on CTP Projects

Design & Planning

- **Georgetown to Lewes Trail, Fischer Road to Airport Road**
- **BR 3-714 on S266 New Road over Canary Creek**
- **SR 1 at S264 & S258 Intersection Improvements**
- **Cave Neck Road, Hudson and Sweetbriar Roads Intersection Improvement**
- **SR 1 and Cave Neck Road Grade Separated Intersection**
- **SR 1, Minos Conaway Road Grade-Separated Intersection**
- **Realignment of Old Orchard Road at Wescoats Corner**
- **US 9, Kings Highway, Dartmouth Drive to Freeman Highway**
- **Airport Rd Extension, Old Landing Rd to SR 24**
- **New Road, Nassau Road to Old Orchard Road**
- **US 9 Widening (Old Vine Road to SR 1)**
- **Beaver Dam Road Widening (SR 1 to Dairy Farm Road)**
- **Mulberry Knoll Road Extension from Cedar Grove Road to US 9 at Old Vine Road**
- **Postal Lane from Linden Lane to SR 1 Improvements**
- **Shady Road from Plantation Road to SR 1 Improvements**



Update on CTP Projects

Design & Planning

Georgetown to Lewes Trail, Fisher Road to Airport Road

- **Project Description:** This project is an extension of the Georgetown to Lewes Trail from Fisher Road to Airport Road. The trail will be constructed along the railroad corridor as a Rail to Trail and rail with trail project, and will include a 10-foot wide pathway, road crossing improvements with splitter islands, elevated boardwalk features, and informational panels/signage.
- **Project Update:** Design is underway, and the Department is on schedule to advertise the project by August/September 2024. DeIDOT received a \$21M Rebuilding American Infrastructure with Sustainability and Equity grant to fund construction.
- **Projected Construction Completion:** Spring 2026



Update on CTP Projects

Design & Planning

BR 3-714 on S266 New Road over Canary Creek

- **Project Description:** Replace Bridge 3-714 and raise approach roadway to reduce flood frequency.
- **Project Update:** Design is underway. Construction is anticipated to begin in the fall of 2024. Construction phasing is being coordinated with the Old Orchard Road/Wescoats Road intersection project to limit traffic disruption in the area to the extent possible. A public workshop was held in person on March 29, 2022. Advance utility work will begin fall of 2025.
- **Projected Construction Completion:** 2027



Update on CTP Projects

Design & Planning

BR 3-714 on S266 New Road over Canary Creek



Update on CTP Projects

Design & Planning

SR 1 at S264 & S258 Intersection Improvements

- **Project Description:** This project will provide median and side road channelization to allow certain movements and remove some movements at these two intersections. The project also includes the closure of some median crossovers and improvement of auxiliary lanes.
- **Project Update:** Design is complete and has been put on hold. The construction schedule is not yet known and is dependent on coordination with the SR 1 and SR 16 grade separation project as well as local special events.
- **Projected Construction Completion:** TBD



Update on CTP Projects

Design & Planning

SR 1 at S264 & S258 Intersection Improvements



Update on CTP Projects

Design & Planning

SR 1 at S264 & S258 Intersection Improvements



Update on CTP Projects

Design & Planning

Cave Neck Road, Hudson and Sweetbriar Roads Intersection Improvement

- **Project Description:** The project includes geometric changes to the Cave Neck Road Intersections at Sweetbriar Rd and Hudson Rd to help alleviate safety concerns. A 5-legged roundabout will be implemented.
- **Project Update:** Design is progressing on the 5-legged roundabout alternative. Right of way acquisitions are underway, and utilities work will begin in 2025.
- **Projected Construction Completion:** TBD



Update on CTP Projects

Design & Planning

Cave Neck Road, Hudson and Sweetbriar Roads

Intersection Improvement



Update on CTP Projects

Design & Planning

SR 1 and Cave Neck Road Grade Separated Intersection

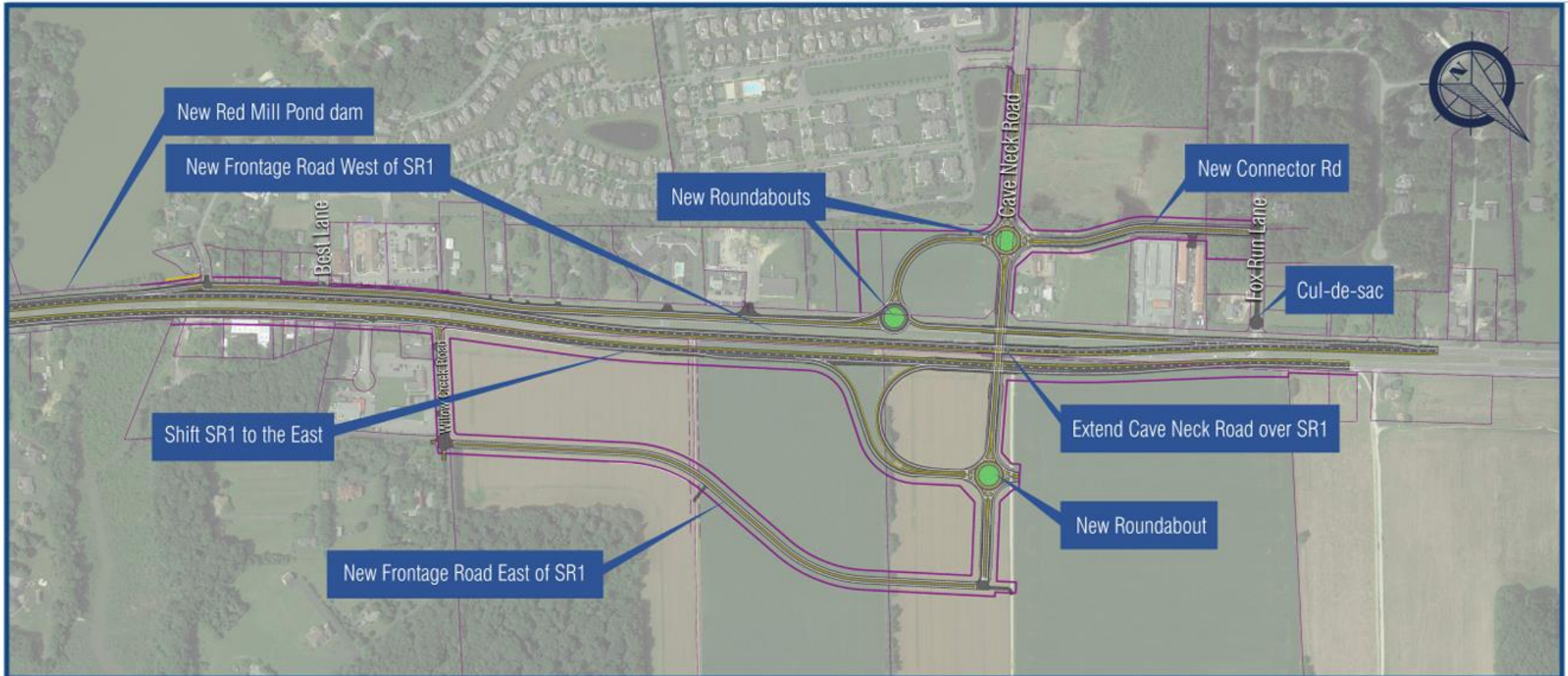
- **Project Description:** This project includes the construction of a grade-separated intersection at SR 1 and Cave Neck Road.
- **Project Update:** Design is progressing. Right-of-way acquisitions are underway. Construction is anticipated to start in spring (April-June) 2026
- **Projected Construction Completion:** Summer (July-September) 2028



Update on CTP Projects

Design & Planning

SR 1 and Cave Neck Road Grade-Separated Intersection



Update on CTP Projects

Design & Planning

SR 1, Minos Conaway Road Grade-Separated Intersection

- **Project Description:** This project provides a grade-separated intersection to separate through movements along SR 1 and turning movements to and from Minos Conaway Road, Nassau Road, and Old Mill Road. A shared use path would also be constructed to accommodate pedestrians and bicyclists.
- **Project Update:** Design and acquisition of right-of-way are ongoing. We are continuing to meet with area residents and business owners. Construction is anticipated to begin in 2024.
- **Projected Construction Completion:** Spring (April-June) 2027



Update on CTP Projects

Design & Planning

SR 1, Minos Conaway Road Grade-Separated Intersection



Update on CTP Projects

Design & Planning

SR 1, Minos Conaway Road Grade-Separated Intersection



Update on CTP Projects

Design & Planning

Realignment of Old Orchard Road at Wescoats Corner

- **Project Description:** Realign Old Orchard Road to intersect Savannah Road at its intersection with Wescoats Road. The intersection of Wescoats Road and Clay Road will also be improved. Pedestrian and bicycle facilities will be incorporated throughout the project.
- **Project Update:** Design is progressing and right-of-way acquisition is underway. Advanced utility work has begun and should last approximately a year (through Fall 2024).
- **Projected Construction Completion:** 2026



Update on CTP Projects

Design & Planning

Realignment of Old Orchard Road at Wescoats Corner



Update on CTP Projects

Design & Planning

US 9, Kings Highway, Dartmouth Drive to Freeman Highway

- **Project Description:** This project consists of widening Kings Highway from Dartmouth Drive to the split with Freeman Highway. The project includes intersection reconstruction, multimodal upgrades (shared use path and sidewalks) throughout the project limits, and integration of the Kings Highway and Gills Neck Road Master Plan.
- **Project Update:** A public workshop was held in February 2024.
- **Projected Construction Completion:** TBD



Update on CTP Projects

Design & Planning

US 9, Kings Highway, Dartmouth Drive to Freeman Highway



Update on CTP Projects

Design & Planning

Airport Rd Extension, Old Landing Rd to SR 24

- **Project Description:** Intersection improvements and extension of Airport Road to Route 24. Provides additional connectivity through a crowded segment.
- **Project Update:** Project design is underway.
- **Projected Construction Completion:** TBD



Update on CTP Projects

Design & Planning

New Road, Nassau Road to Old Orchard Road

- **Project Description:** Improving New Road follow a recommendation to the New Road Master Plan for added shoulders and multi-modal facilities.
- **Project Justification:** City of Lewes request due to Minos Conaway Project development and Canary Creek Bridge on New Road.
- **Project Update:** Design is funded and scheduled to begin in FY 2025.
- **Projected Construction Completion:** TBD



Update on CTP Projects

Design & Planning

US 9 Widening (Old Vine Road to SR 1)

- **Project Description:** This project consists of widening US 9, from SR 1 to Old Vine Road, to provide two travel lanes in each direction and complete associated intersection improvements.
- **Project Justification:** Purpose of the project is to provide additional capacity to accommodate the design year traffic volumes and improve the safety of the US9 corridor from Old Vine Road to SR 1. Henlopen TID technical analysis and study recommendations; Five Points Working Group recommendation.
- **Project Update:** Conceptual design underway.
- **Projected Construction Completion:** FY 2029



Update on CTP Projects

Design & Planning

Beaver Dam Road Widening (SR 1 to Dairy Farm Road)

- **Project Description:** Widen the roadway to provide two travel lanes in each direction and complete associated intersection improvements.
- **Project Justification:** This is the future growth area as identified in the Henlopen Transportation Improvement District technical analysis.
- **Project Update:** Design is funded and scheduled to begin in FY 2026.
- **Projected Construction Completion:** TBD



Update on CTP Projects

Design & Planning

Mulberry Knoll Road Extension from Cedar Grove Road to US 9 at Old Vine Road

- **Project Description:** New two-lane roadway to connect communities and alleviate congestion on parallel routes. Provides improved mobility for local traffic.
- **Project Justification:** This new road segment was recommended by the Five Points Working Group and was studied as an alternative to widening Plantation Road from Robinsonville to Cedar Grove because of the high cost of the widening project. Based on the findings of the Henlopen Transportation Improvement District (TID), if Mulberry Knoll Road was extended to US 9, the Plantation widening would not be necessary prior to 2050.
- **Project Update:** Design is funded and scheduled to begin in FY 2028.
- **Projected Construction Completion:** TBD



Update on CTP Projects

Design & Planning

Postal Lane from Linden Lane to SR 1 Improvements

- **Project Description:** Roadway improvements to include shoulders, sidewalk, and a bicycle lane.
- **Project Justification:** This project will continue improvements along Postal Lane due to the limited road widths and mailboxes in the State's right-of-way. These improvements were recommendations of the Five Points Working Group and Henlopen Transportation Improvement District due to high growth in the area and the need for multi-modal travel.
- **Project Update:** Design is funded and scheduled to begin in FY 2028.
- **Projected Construction Completion:** TBD



Update on CTP Projects

Design & Planning

Shady Road

from Plantation Road to SR 1 Improvements

- **Project Description:** Roadway improvements include turn lanes, sidewalk, and shoulders to provide for safe movement of all types of travel.
- **Project Justification:** Five Point Study and Henlopen TID
- **Project Update:** Design is funded and scheduled to begin in FY 2028.
- **Projected Construction Completion:** TBD



DeIDOT's Artificial Intelligence Enhanced Transportation Management System (AI-ITMS)





DeIDOT's Artificial Intelligence Enhanced Integrated Transportation Management System (AI-ITMS)

February 26, 2024

Gene Donaldson, TMC Operations Manager

Delaware Department of Transportation



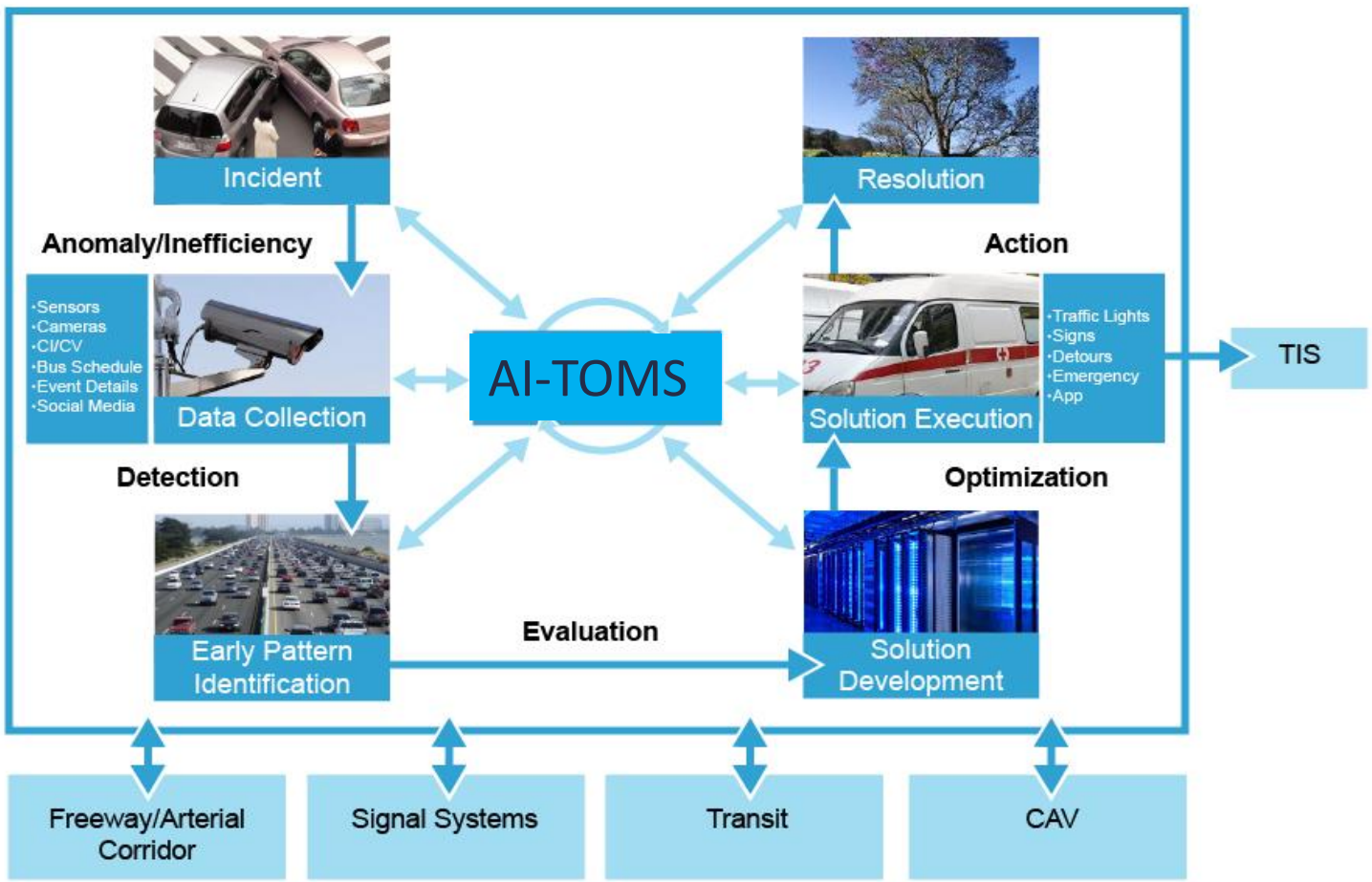


Outline

- DeIDOT's AI-ITMS Program
- AI-TOMS Software Capabilities
 - Data Fusion
 - Short Term Traffic Flow Prediction
 - Proactive Incident Management and Decision Support
 - Machine Vision for Traffic Management
 - Traffic Signal Optimization and Operation
 - Connected Automated Vehicle (CAV) Integration
- Follow-up Efforts
 - Flood prediction and Vulnerable Road User safety for traffic management (ATTAIN grant)
 - Cloud based V2X and intersection safety (SMART grant)
 - Statewide Deployment of AI-ITMS



AI Enhanced Integrated Transportation Management System (AI-ITMS)

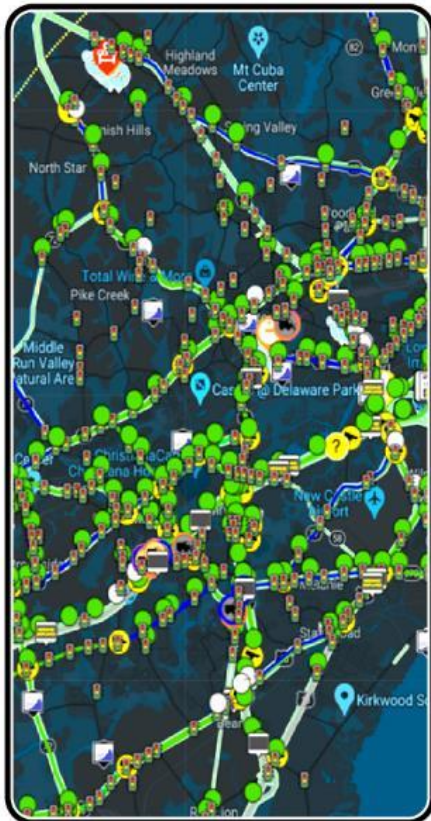


- 3-year, \$10M USDOT/DelDOT grant fund project “Advanced Transportation and Congestion Management Technologies Deployment (ATCMTD)”

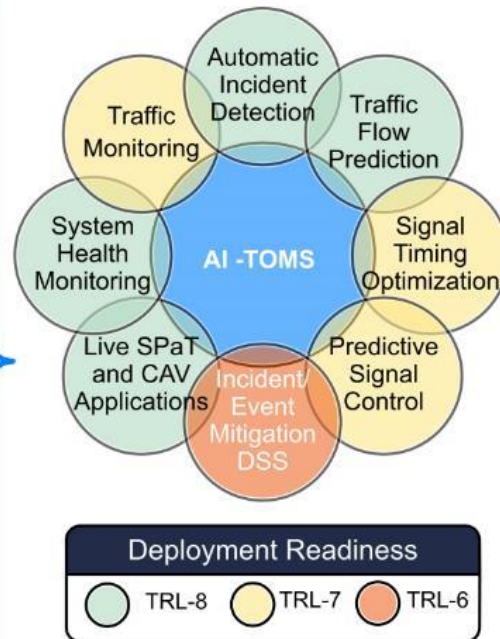
- The Vision of AI-ITMS:
 - Automate and optimize transportation systems monitoring and operations
 - Early and accurate detection and identification of transportation systems anomalies and inefficiencies
 - Reason the cause and impact of these anomalies/inefficiencies
 - Develop corresponding solutions and provide early responses

AI Transportation Operations and Management Software (AI-TOMS)

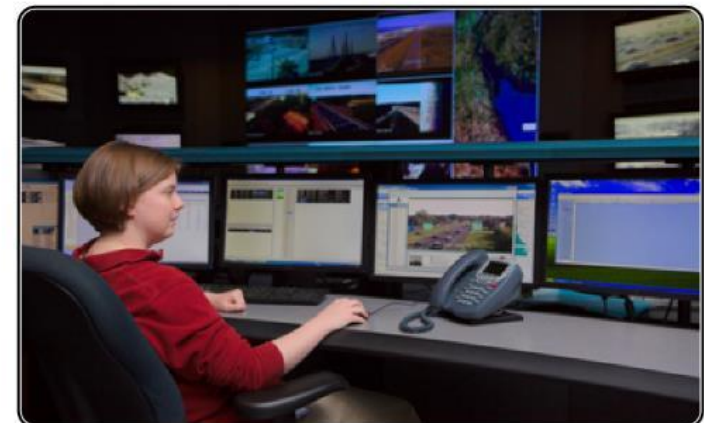
- A web-based AI/ML (machine learning) systems for comprehensive transportation management and operations
- Detect traffic disturbances and predict traffic demand
- Generate and evaluate response solutions for prevailing or impending traffic anomalies and inefficiencies



-  Road Weather Data
-  Traffic Flow Data
-  Travel Time Data
-  ATSPM and SPaT Data
-  Traffic Camera Videos
-  Travel Restrictions Data
-  CAV Data
-  Social Media Data



6494-001 (23.004)



AI-TOMS Capabilities Overview as ATMS

Functions	Current AI-TOMS Capabilities	TRL
Traffic Monitoring	AI-TOMS integrates traffic monitoring through diversified sensors, including radar, loop detectors, Bluetooth sensors, signal controllers, cameras, etc.	8
Incident Detection and Management	AI-TOMS detects events and incidents through utilization of sensor data, accurately pinpoints their location, analyzes the root causes and the types of these events, conducts assessments of their impact, and then recommends mitigation strategies, including adjustment of signal timings.	7
Traffic Flow Prediction	AI-TOMS takes history and live traffic flow data, as well as data for weather, Time-of-Day, Day-of-Week, seasons, and holidays and predicts volume, speed, occupancy for the detectors in the next 5, 10, 15, 30 and 60 minutes. Speed prediction error is usually within 5%; volume and occupancy prediction errors are usually within 15%.	8
Third Party Data Integration	AI-TOMS ingests connected probe vehicle data from agency-owned vehicles or third-party sources such as Wejo; uses the data for visualization, turning movement classification, early incident detection, corridor signal coordination measurement, etc. AI-TOMS also ingests crowd-source data from Waze and Twitter for incident detection and cause reasoning.	7
Center-to-center Data Exchange Management	AI-TOMS communicates with TMC and exchanges data through various mechanisms including restful API, SFTP, messaging brokers, and several other cloud-based interfaces.	7



AI-TOMS as Central Traffic Signal Management System

Functions	Current AI-TOMS Capabilities	TRL
Timing Plan Management and Reporting	AI-TOMS currently stores cycle length, split, and offset signal timing data in its internal database. Changes to signal timing data are logged and can synchronize with TACTICS.	7
Automated Traffic Signal Performance Measures (ATSPM)	AI-TOMS collects high-resolution data and produces ATSPM such as Purdue Coordination Diagram, Arrival on Green, Time-Space Diagram, Simple Delay, Approach Volume, etc.	8
Active Traffic Optimization	AI-TOMS identifies signals that have room for optimization using ATSPM. It proactively recommends signal pattern switches based on predicted traffic demand and may adjust offsets and splits to optimize traffic flow.	7
Central Adaptive Signal Control	AI-TOMS computes Critical Movement Summation (CMS) to recommend signal cycle length and offsets. It also employs active traffic management techniques to manage over-saturation conditions. It leverages NTCIP protocol to realize active signal control.	6
Traffic Signal Health and Operational Insights	AI-TOMS can gather controller's internal alarms through NTCIP and notify TMC operators for anomalous behavior. Critical operational events can be captured through ATSPM data and live SPaT data.	7
Third Party Traffic Modelling Tool Interoperability	AI-TOMS utilizes PTV VISUM simulation for incident mitigation and integrates with VISSIM and SUMO for solution evaluations.	6

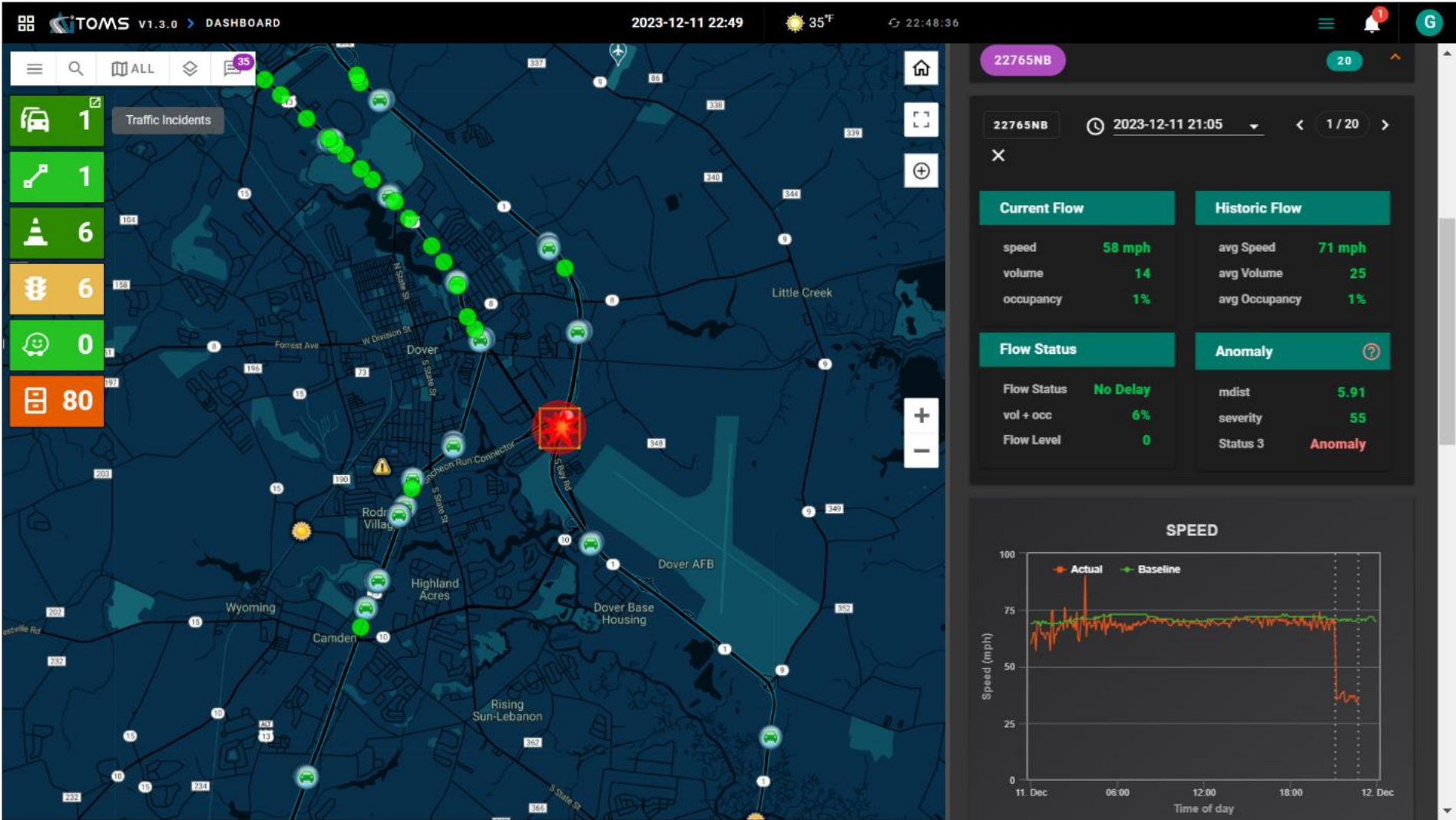


AI Sensors and Software Administrations

Functions	Current AI-TOMS Capabilities	TRL
Vehicle Classification	AI-TOMS can classify vehicles through multiple technologies such as machine vision and Loop Signatures. Requires further R&D to fully achieve FHWA 13 vehicle class classifications	6
		8
		7
		6
		7
		6

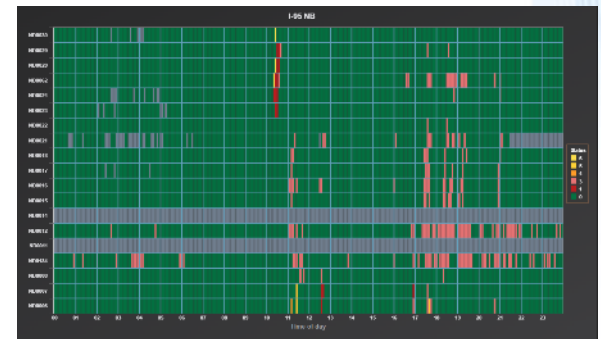
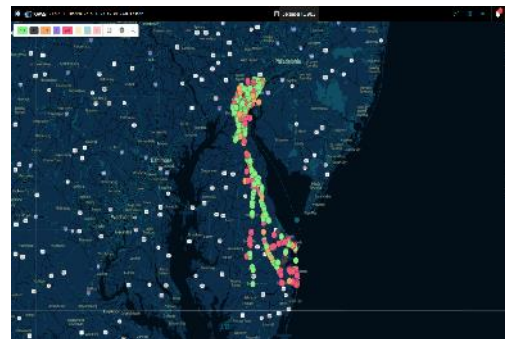
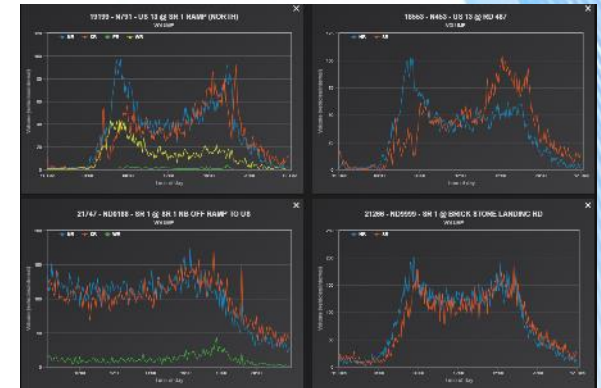


AI-TOMS Dashboard



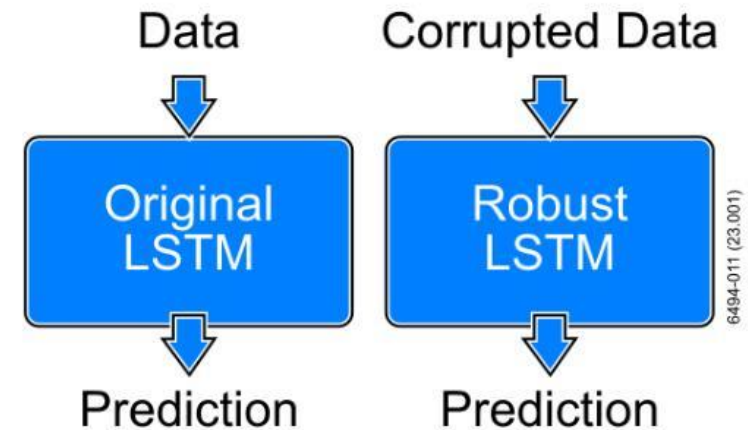
Traffic Data

- A Cutting-edge AI Tool Streamlining Traffic Management Through Multi-source Data Collection And Visualization Capabilities
- Empower Decision-making with Tailored Traffic Data, Environmental Insights, and Quality Metrics For Efficient Transportation Oversight
- Modules:
 - Traffic Data Viewer
 - Traffic Anomaly Map
 - Travel Time Map
 - Detector Quality Map
 - Traffic Flow Prediction
- Features in each module
 - Date/Time Selection
 - Region Selections
 - Detector/Device Selection
 - Single or Multiple Device Selection
 - Data-refresh Time Interval Selection



Traffic Flow Prediction

- Using Robust LSTM (Long Short-Term Memory) and GTS (Graph Structure Learning) models for prediction purposes
- Using different time frames of historical data input to capture immediate and seasonal variations
- Meta data input include time of day, day of week, month, weather, holiday
- Total trainable parameters ~750,000
- Predict Volume, Speed, Occupancy for the next 5, 10, 15, 30, and 60 minutes
- “Solution Development”:
 - Signal Optimization and Adjustment
 - ✓ Congestion Reduction
 - ✓ Improved Safety
 - Incident Mitigation Solution Recommendation and Implementation



Traffic Incident Detection and Management

The screenshot displays the TOMS v1.1.4 interface for Traffic Incidents. The top navigation bar includes the TOMS logo, version number, and current date (May 16, 2023). The main content is divided into three sections:

- Incident List:** A vertical list of incidents with details such as ID, location, duration, and severity score.
- Map:** A central map showing the incident location (Red Lion) and a route through the area.
- Incident Details:** A panel for Incident 11697 providing specific information on time, location, type, and a timeline of events.

Incident ID	Location	Duration	Severity
Incident 11695	Urban US13 NB	43min	70
Incident 11697	Urban DE1 NB	51min	83
Incident 11698	Urban I-95 NB	130min	52
Incident 11700	Urban US13 NB	58min	68
Incident 11703	Urban US13 SB	32min	68
Incident 11706	Urban US13 SB	50min	70

TIME	LOCATION	TYPE
Start Time: MAY 16, 8:49 AM	Region: URBAN AREA	Type: Incident
End Time: MAY 16, 9:40 AM	Route: DE1 NB	Proof: 42, 31, 26
Duration: 51 MIN	Detectors: 19968, 19958	Severity: 83

TIMELINE

- 07:50 AM: First waze alert received
- 08:44 AM: Incident start
- 08:49 AM: Travel time anomaly detected
- 08:50 AM: M-dist anomaly detected
- 09:15 AM: Last waze alert received
- 09:39 AM: Travel time anomaly cleared



Incident Detection Accuracy

- DeIDOT incident alerts in urban area retrieved from 2021
- Date range: 2021-01-01 to 2021-08-02
- Total 93 incidents are recorded in the urban study area
- Distribution of urban incidents based on MUTCD classification:

Route	Minor	Intermediate/Medium	Major	Total
I-95	16	38	4	57
DE-1	2	25	6	33
Total	18	62	10	90

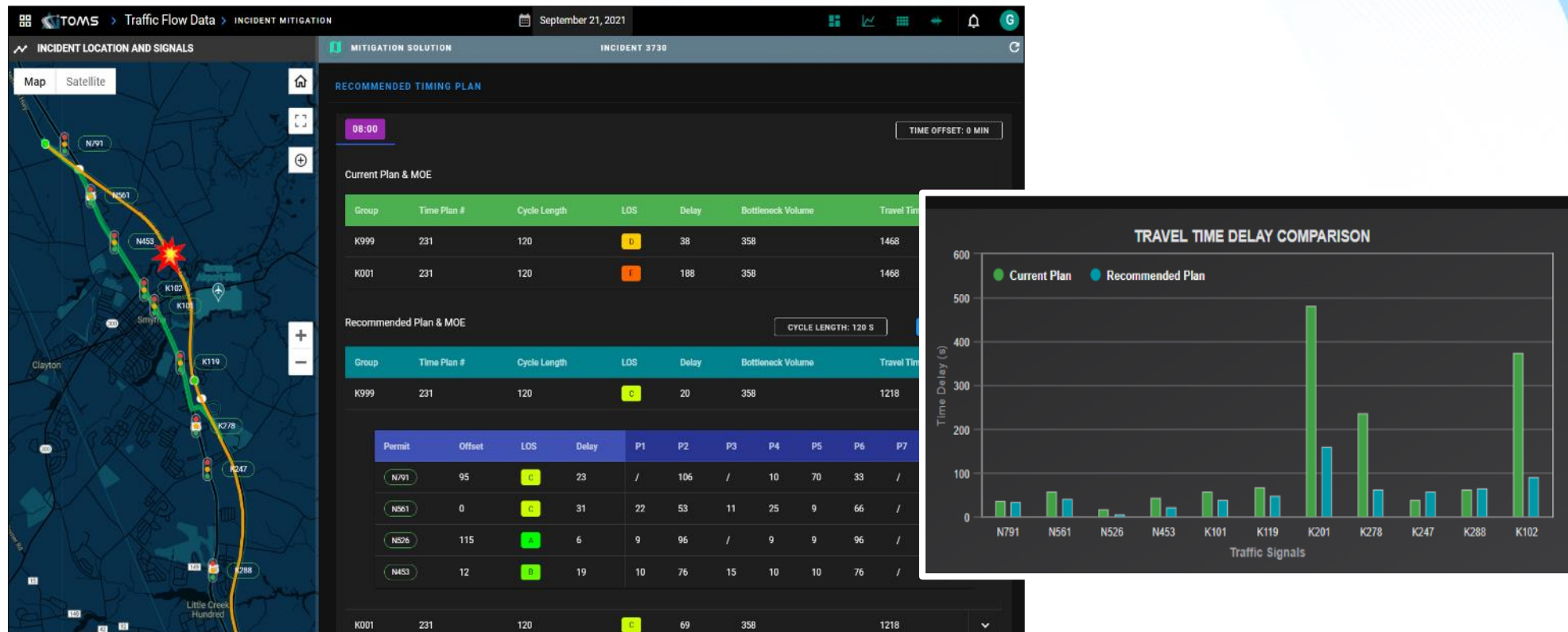
- Detection accuracy:

Major	Intermediate/Medium	Minor
100%	90.47%	88.88%

- Undetected incidents were either late night/early morning incidents or marginally outside of the study area (incident location is upstream of the study area)

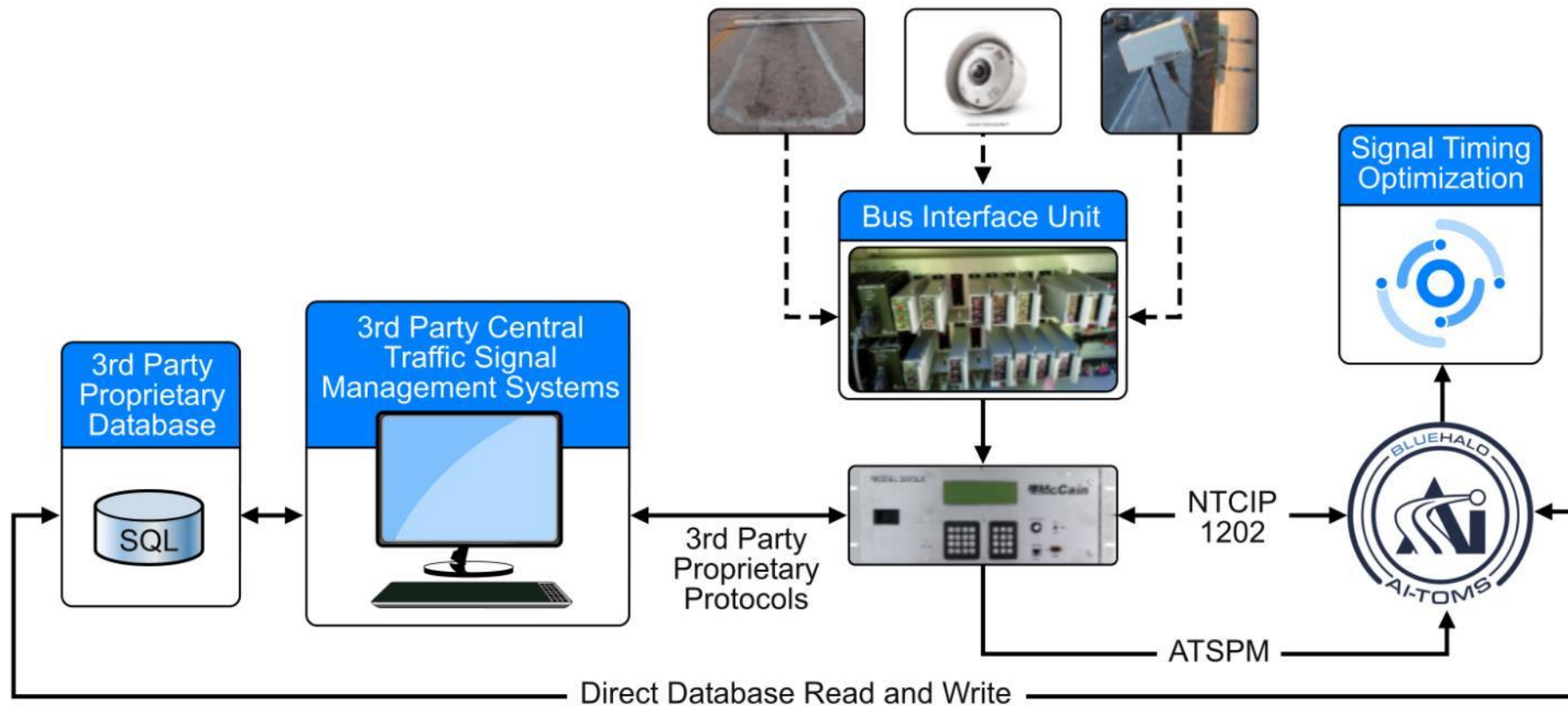
Response Plan Recommendation and Implementation

- Recommended signal timing is better than the current plan with reduced delay and travel time
- The detailed split and offset are optimized and ready for deployment



Traffic Signal Management

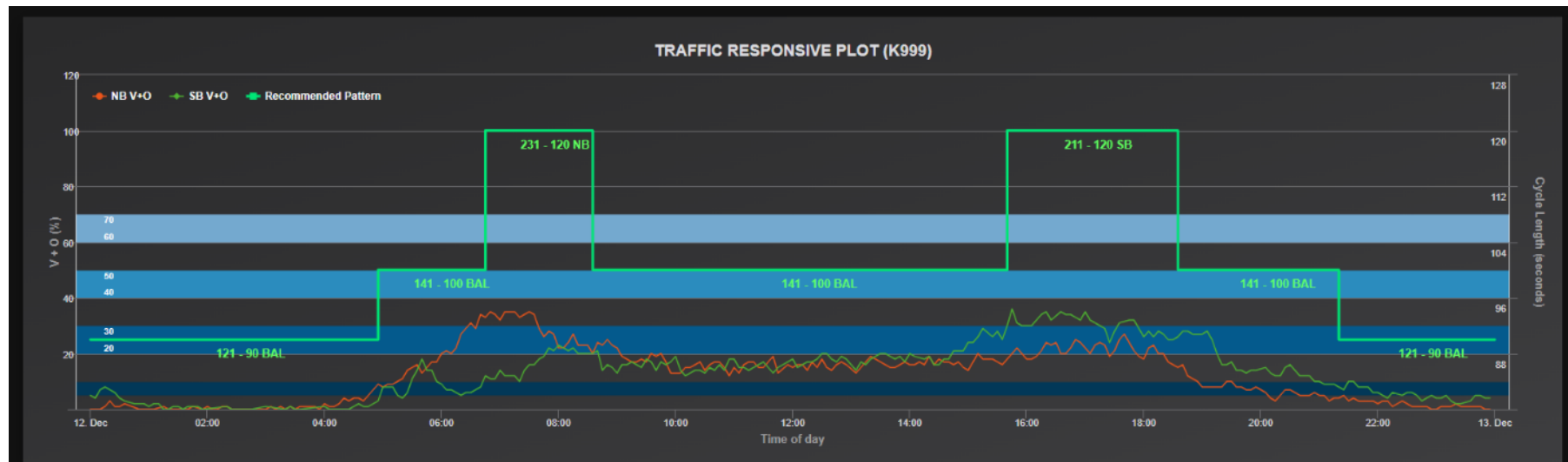
- Manage Key Intersection Data
 - Intersection info: Permit ID, Group ID, Location, IP Address
 - Signal timing data: Pattern ID, Cycle Length, Split, Coordinated Phase, Offset



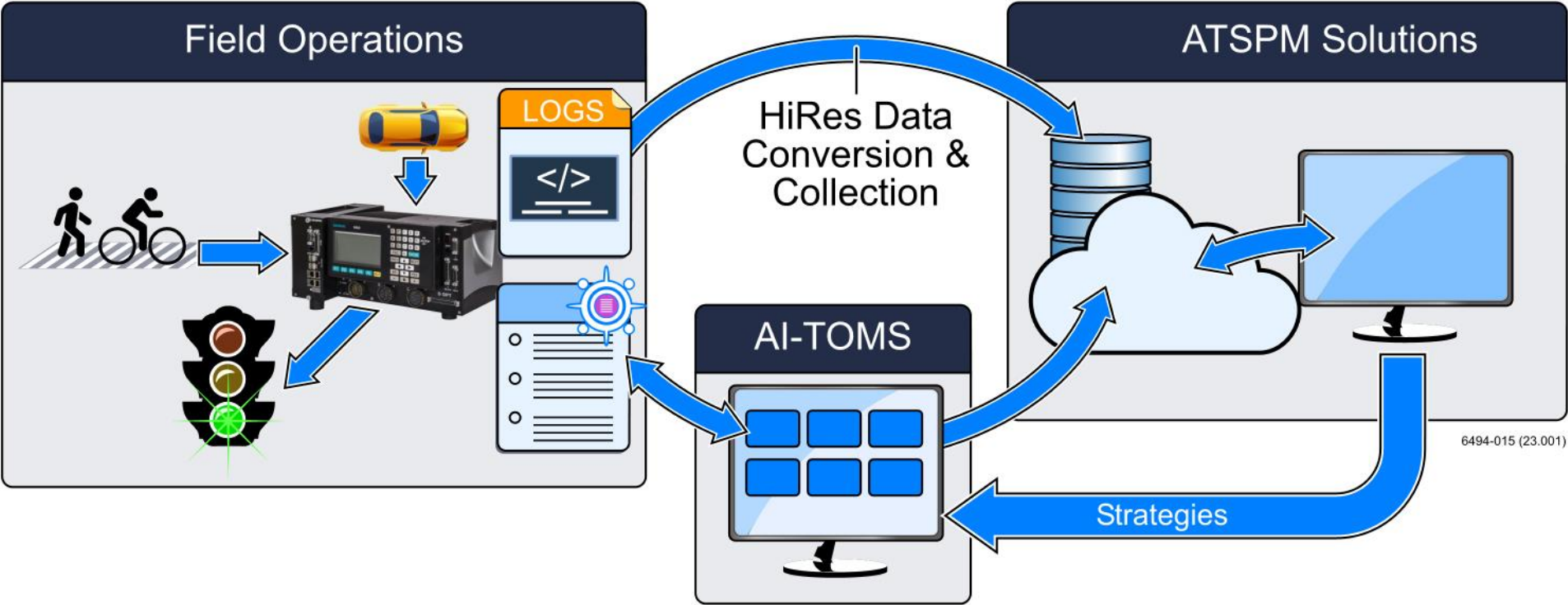
6494-019 (23.004)

Adaptive/Predictive Signal Timing

- Three control modes:
 - AI-TOMS: Recommends signal patterns based on real-time demand
 - Time-of-Day: Issues signal patterns based on a pre-determined schedule
 - Manual: Allows technicians to issue manual signal pattern changes
 - Third Party: AI-TOMS does not issue changes
- Allow group-based or individual intersection level control
- Leverage NTCIP 1202 to communicate with signal controllers

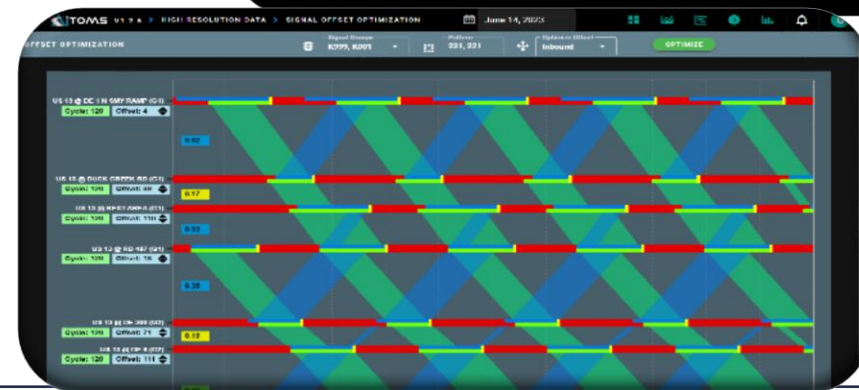
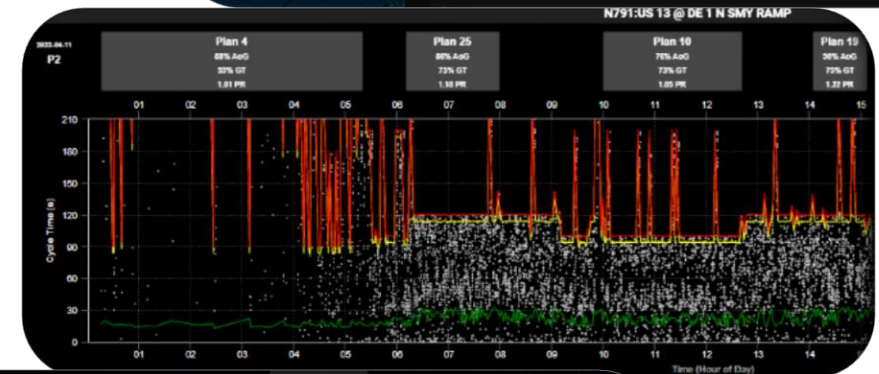
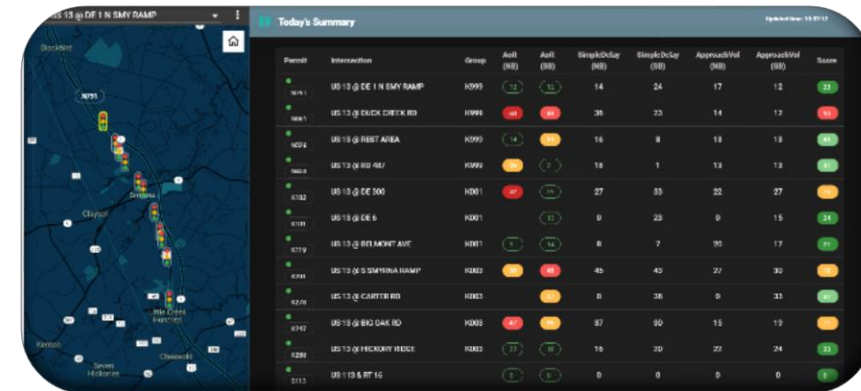


Automated Traffic Signal Performance Measures (ATSPM)

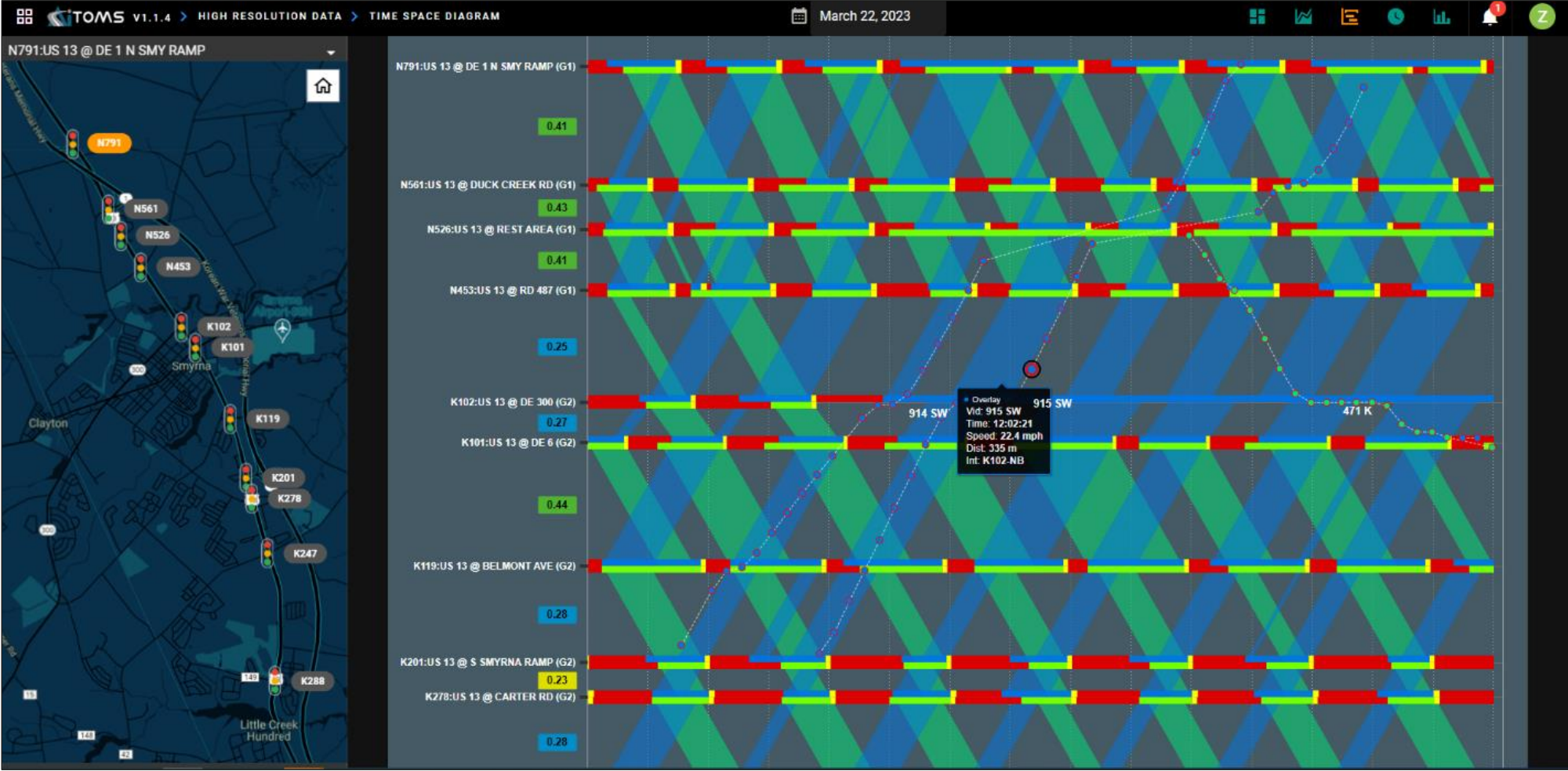


AI-TOMS Features Related to ATSPM

- Established pipeline for handling HR data
- Interacts with existing ATMS system to facilitate programming detection (ongoing)
- Pre-processes HR data to enhance user experience
- Allows the creation of traditional and customized metrics
- Utilizes collected HR data to:
 - Increase situational awareness at the intersection
 - Support creation of new signal timing plans
 - Enhance turning movement counts' estimate
 - Support calibration and validation processes

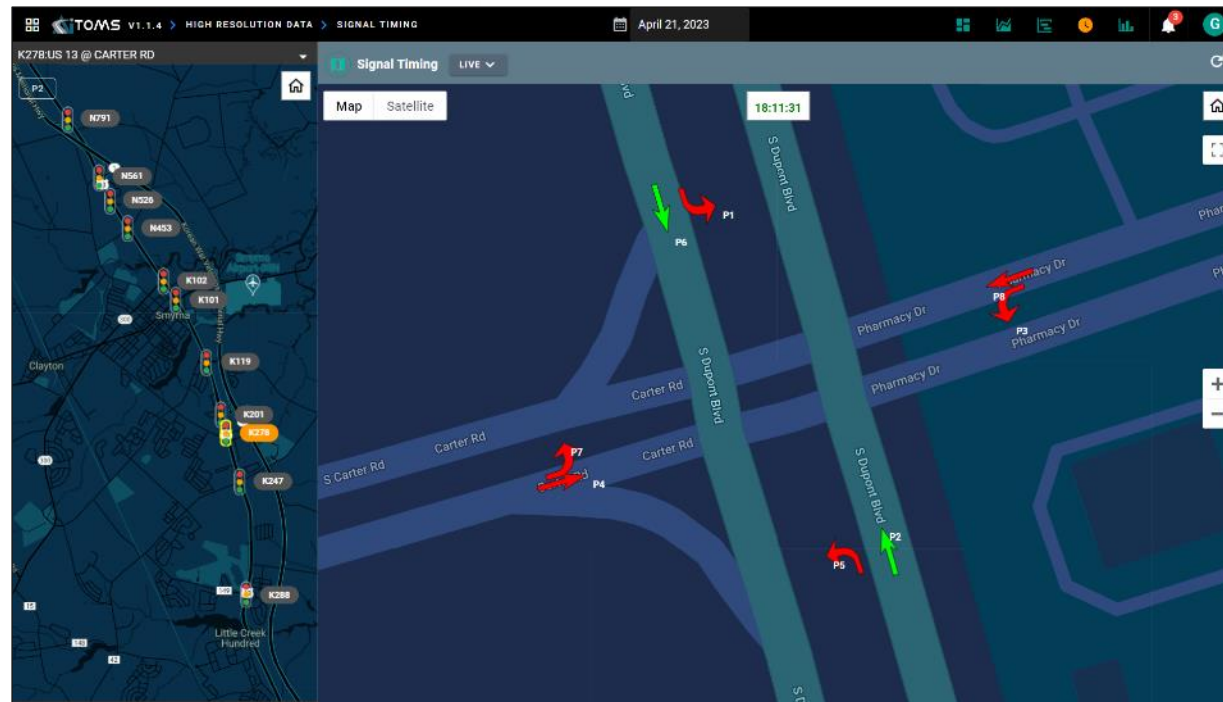


ATSPM and CAV Trajectories for Signal Performance



Live Signal Phase and Timing (SPaT) Broadcasting

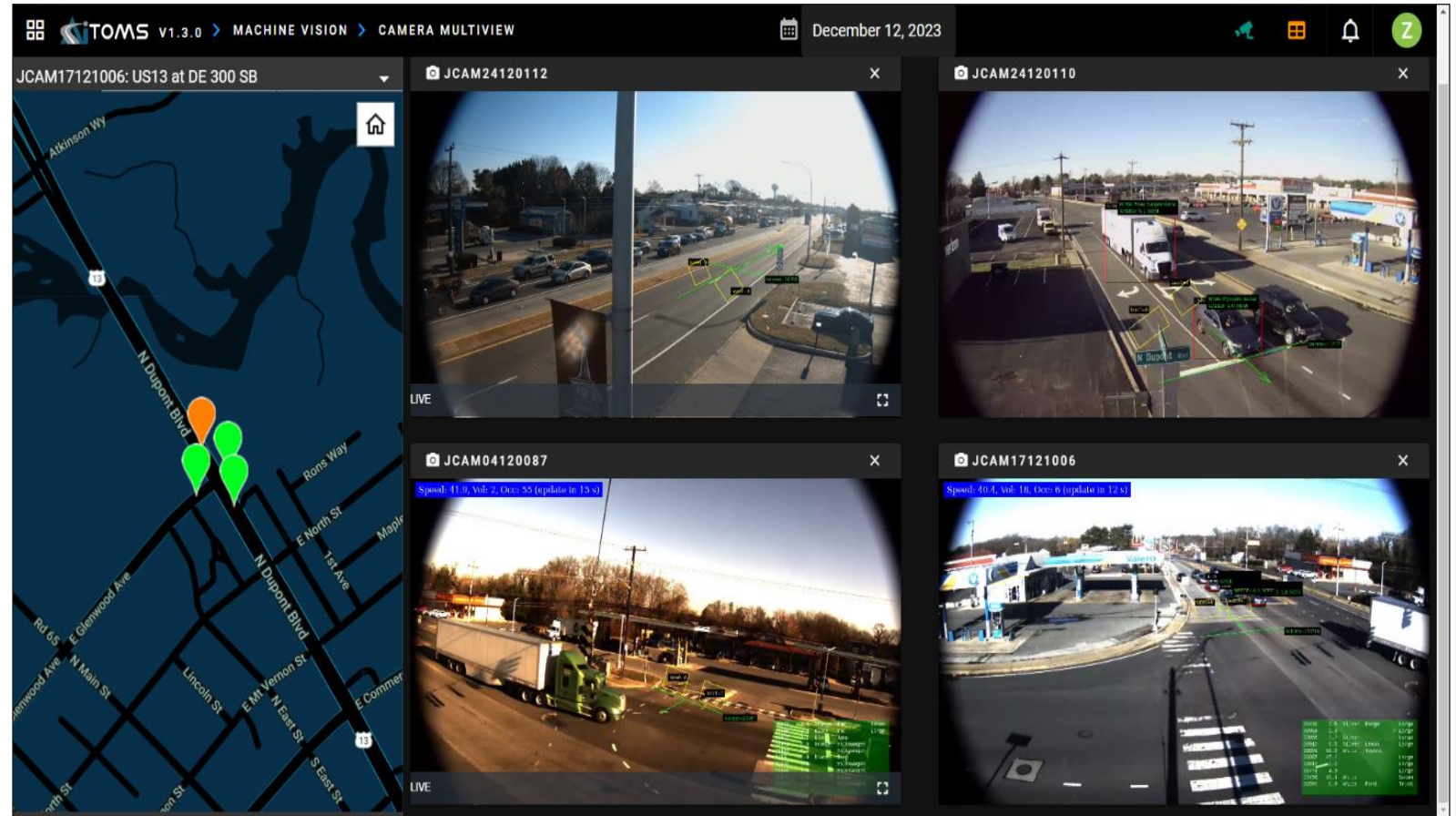
- Live signal timing data from the intersections
- Low latency (<100ms)
- Support Connected and Automated Vehicles (CAV)
- Intersection safety applications



Machine Vision for Traffic Monitoring



US-13 @ DE-300



AI-TOMS Interface for Machine Vision Cameras and Data Analysis



Machine Vision for Traffic Monitoring

Count, Speed and Occupancy

TOMS Machine Vision on Traffic Cameras

PCAM4061: US 13 at Ramp to DE 1, SMY... Tuesday, June 15, 2021 18:24

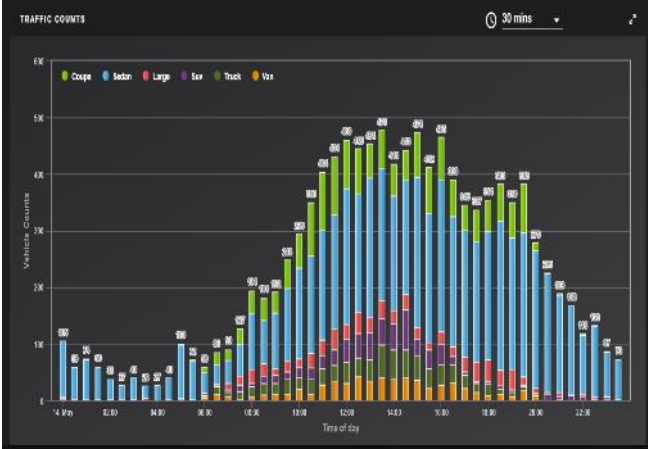
Dashboard

LIVE FEED LIVE PROCESSED HISTORICAL VIDEO

Vehicle Count Data

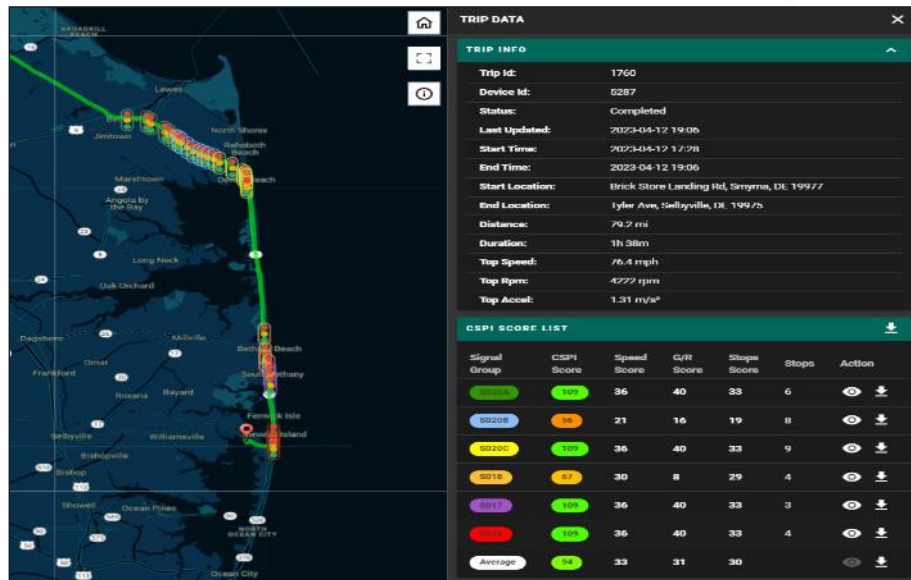
Traffic Volumes on US 13 at Ramp to DE 1, SMYRNA (PCAM4061)

Count: 18, Average Speed: 45.4 mph

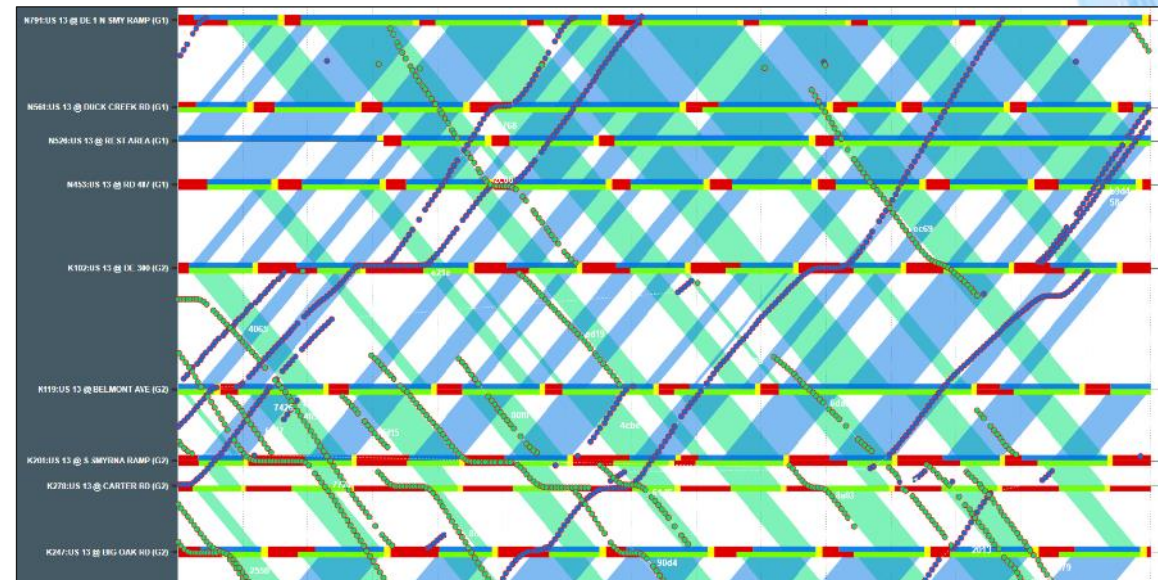


Connected Vehicle Data

- Corridor Synchronization Performance Index provide quantitative evaluation of the signal timing performance
- Feedback to signal optimization digital twin for model adjustment (for example, instead of using posted speed limit, use the actual traffic speed for improved accuracy)
- Digital twin achieves close coupling of the physical network to the digital network and makes live optimization and evaluation possible

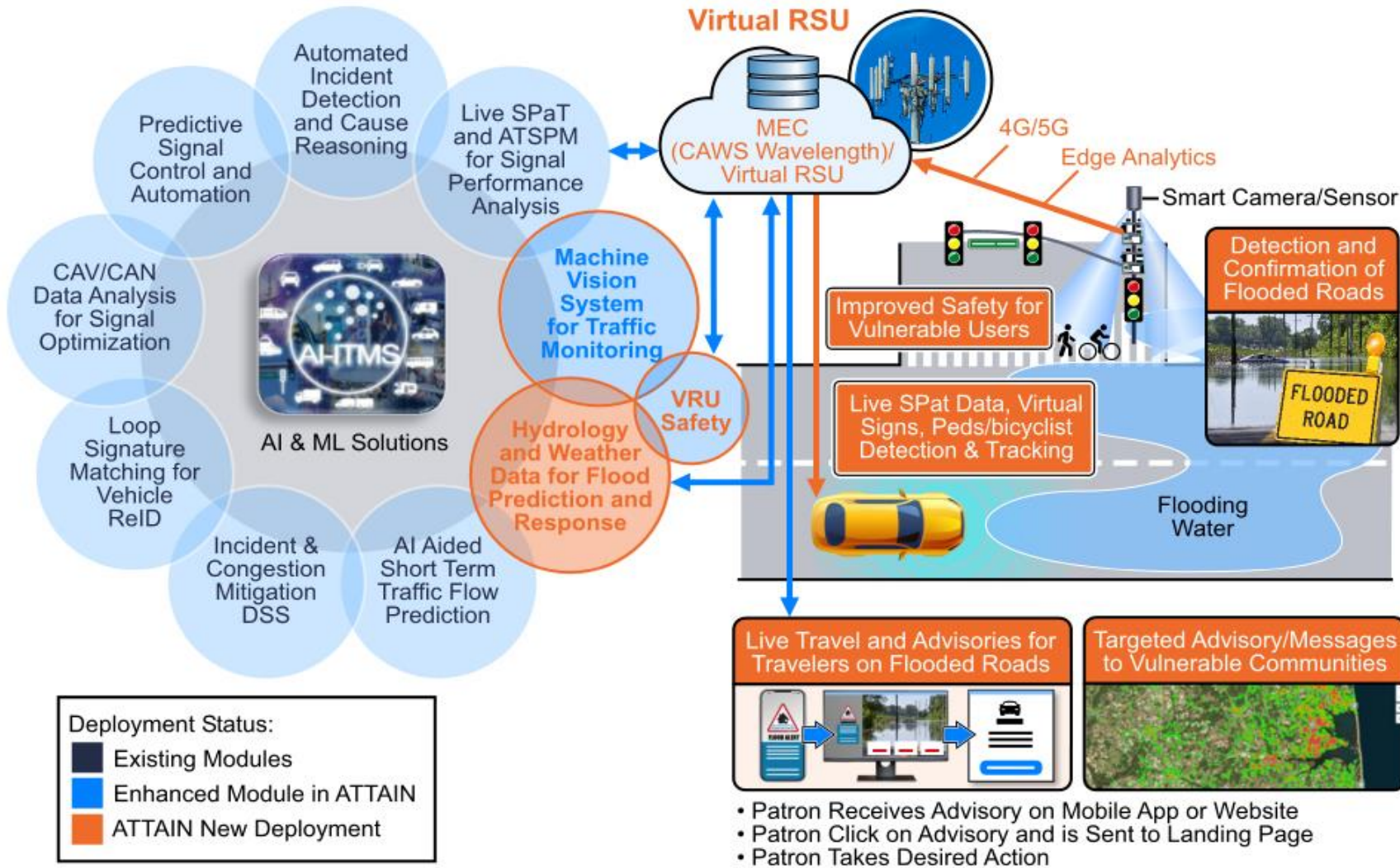


CAV/Probe Vehicle Data for Signal Performance Evaluation



Time-Space Diagram with CV Trajectories

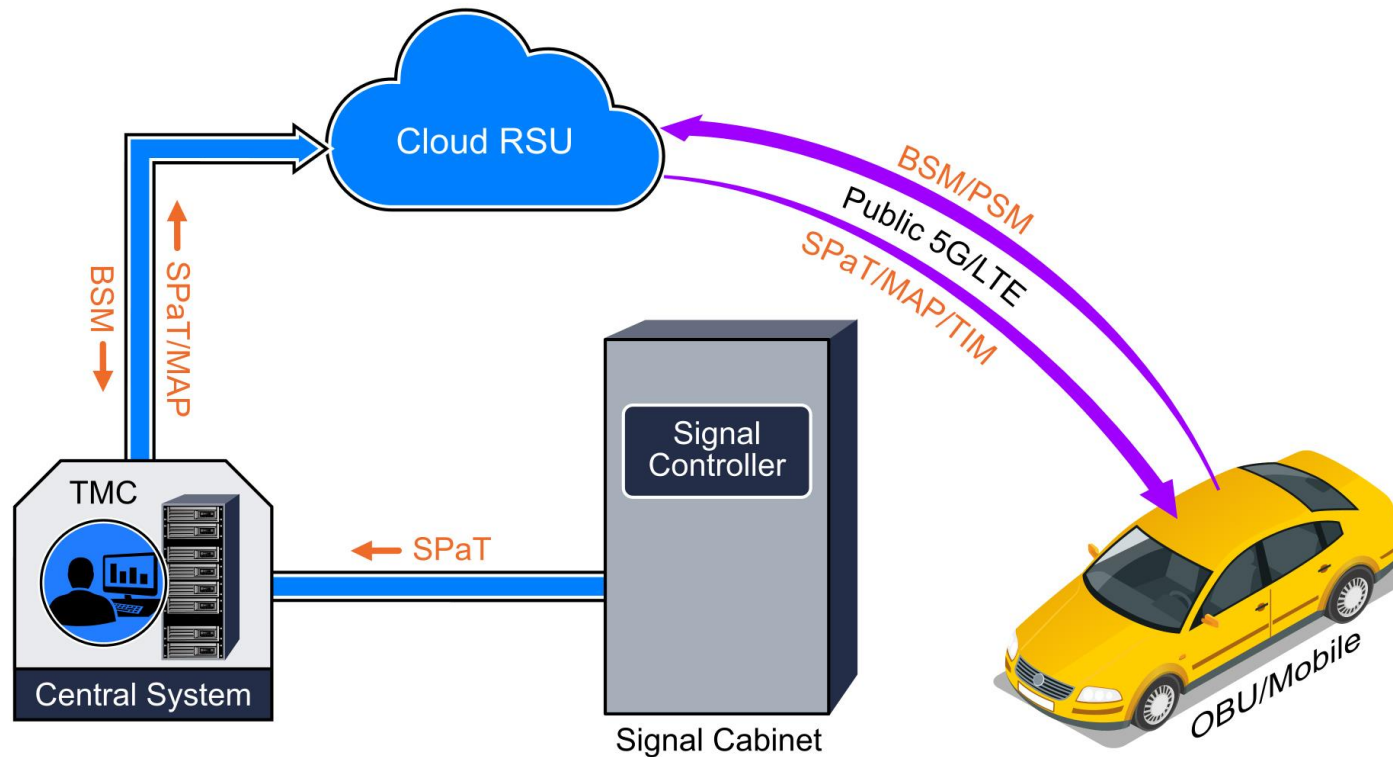
Follow on Efforts – ATTAIN Grant



- Flood prediction
- Targeted warning and assistance
- Virtual RSU and road signs
- Machine vision for VRU detection and conflict warning

Follow on Efforts – SMART Grant

- Cloud-based vehicle-to-everything technology (CbV2X)
- Dilemma Zone (DZ) application

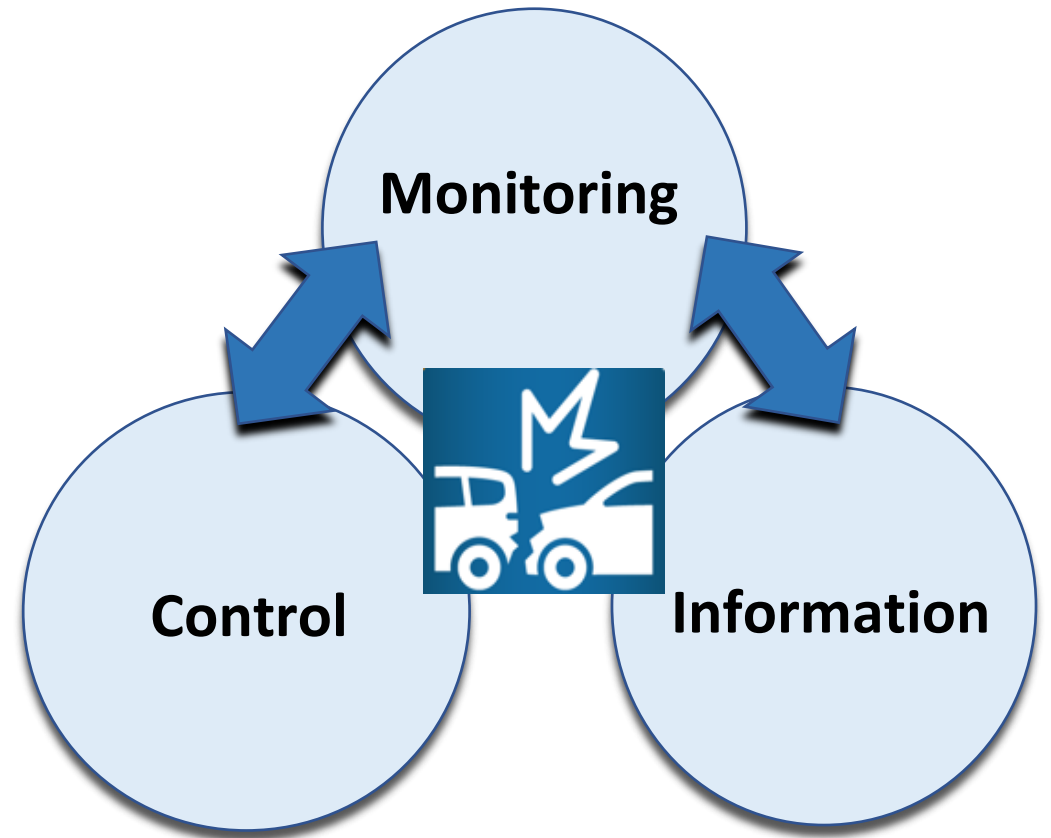


Architecture of CbV2X Technology

- Cloud and MQ Telemetry Transport (MQTT) technology
- 50-millisecond roundtrip delay times for SPaT data
- SPaT-enabled signal status information
- DZ warning advisories with both visual and audible prompts

Statewide Deployment of AI-ITMS

- Expand AI-TOMS to all the freeways and key corridors
- Continuous enhancement – system will continuously learn, as a traffic engineer would, and automate operations
- Understanding what it takes to support this advanced system – need support of staff/team with the required knowledge, skills and abilities
- Detection system of today – enhancements with ML and AI
- Enhance mobility not only in Delaware, but for transportation systems everywhere
- **A truly predictive and adaptive self-monitoring statewide transportation management system that gets smarter over time**



<https://deldot.gov/Programs/itms/>

Thank You!

<https://deldot.gov/Programs/itms/>

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Phase 2 Implementation Plan Update

**FIVE POINTS TRANSPORTATION STUDY
IMPLEMENTATION PLAN STATUS REPORT**

January 31, 2022 (red text indicates changes since October 25, 2021 Working Group meeting)

\$ - \$200K * -3 years 0 Low
 \$\$ \$200K - \$2M ** 3-10 years 0.0 Medium
 \$\$\$ \$2M - \$20M *** >10 years 0.0 0 High
 \$\$\$\$ \$20M - \$200M
 \$\$\$\$\$ - \$200M

Category	ID	Priority	Old idea no.	Working Group recommendation	Assumed lead agency	Other responsible parties (if any)	Study cost	Study timeframe	Imp. cost	Imp. timeframe	Imp. impacts	Status	Remarks
B. Implement policies and procedures to make the area more efficient, sustainable, and beautiful													
B	1	Y	34	Require new developments to plan for interconnections to any future development areas and monitor to ensure implementation	Sussex County	DeIDOT	\$	*	N/A	N/A	N/A	ONGOING	All subdivision applications are subject to pre-application meetings. Where the potential for interconnectivity to undeveloped parcels is identified, this is discussed with developers prior to application submittal.
B	2	Y	86	Consider modifications to land development requirements and/or the Development Coordination Manual that require additional buffers/setbacks for all new developments for future road expansion	Sussex County	DeIDOT	\$	*	N/A	N/A	N/A	IN PROGRESS	In 2020, the Sussex County Planning & Zoning Commission discussed a potential future revision to the Zoning Code to clarify the maximum extent to which parking may be permitted in the front yard setback. DeIDOT updated the Development Coordination Manual to require greater width along principal arterials. Sussex County's east-west roads are not principal arterials except Route 18/404. Changing right of way requirements on other road classifications would require another update to the DCM. DeIDOT is currently updating Chapter 2 of the DCM - Traffic Studies. Chapter 3 deals with Right of Way. That update is not yet underway. The DCM is in the Strategic Highway Safety Plan (Strategy 5.2 Revise DeIDOT's Development Coordination Manual to require additional pedestrian infrastructure improvements related to new developments).
B	3	Y	4	Study the feasibility and anticipated effectiveness of modifying signage, starting in Milford, to encourage through drivers (to points outside the Route 1 corridor between Lewes and Dewey Beach) to use Route 113, Route 5, Route 23, etc.	DeIDOT - Traffic	Private partner(s) such as Waze	\$	*	\$\$	*	0	COMPLETE	An additional sign was installed on southbound SR 1 south of Thompsoville Road to identify municipal destinations and distances. Anticipated effectiveness of guide signs is decreasing as more and more people rely on GPS/route guidance systems. Travel time messages are now displayed on these variable message signs approaching the beach area. This information is also available on the DeIDOT app.
B	4	Y	91	Improve advance acquisition process to allow DeIDOT to more quickly acquire land needed for transportation improvements and acquire available land within the Five Points Study Area (e.g., Creative Concepts)	General Assembly	DeIDOT	\$	**	N/A	N/A	N/A	COMPLETE	New advance acquisition regulations were approved in 2018. Now prescriptive purchases will be feasible.
B	5	Y	50	Study the feasibility of converting the Arby's driveway between Route 1 and Savannah Road into a publicly-accessible road	DeIDOT - Planning	DeIDOT - Real Estate and PD South; property owners	\$	*	\$\$	**	0	IN PROGRESS	DeIDOT negotiated a concept for connections through the Nicola Pizza property. Sussex County approved the Nicola Pizza site plan with the easement language. Further progress on hold until Arby's comes up for development. Coordinate with B-1, C-12.
B	6	Y	14	Incorporate more walkable, bikeable, mixed-use town centers into the comprehensive plan	Sussex County		\$	*	N/A	N/A	N/A	Longer-term	
B	7	Y	89	Continue TID studies both east and west of Route 1	DeIDOT - Planning	Sussex County, City of Lewes	\$\$	*	TBD	TBD	TBD	COMPLETE	At its October 27, 2020 meeting, Sussex County Council approved the Hanigpen TID agreement. The Hanigpen TID recommendations are related to Five Points Recommendations A-6, A-7, C-1, C-3, C-7, C-19, E-2, and E-3. Because most available land on the east side of Route 1 has already been developed or approved for development, there is limited value to a TID in this area.



78 recommendations

Recommendations to be implemented under current DeIDOT projects or initiatives (7 recommendations)

Implement policies and procedures to make the area more efficient, sustainable and beautiful (8 priorities out of 27 recommendations)

Make the most of existing roadway infrastructure (8 priorities out of 20 recommendations)

Make walking, bicycling, and transit more viable as alternatives to driving (5 priorities out of 15 recommendations)

Invest in new infrastructure to support anticipated growth (3 priorities out of 9 recommendations)



Current status (as of October 2023)

71 of 78 recommendations in progress, ongoing, or completed

Compares to 67 of 78 at last meeting (October 2023)

- 1 Category B recommendation newly “Complete”
- 1 Category B recommendation “To Be Initiated in 2024”
- 2 Category C recommendations newly “Complete”
- 1 Category E recommendation now “In Progress”
- 1 Category E recommendation now “Complete”



Category A

Being addressed by current DeIDOT projects and initiatives

Number of recommendations by status

Status	Oct 2023	Feb 2024	Change
COMPLETE	6	6	-
ONGOING	0	0	-
IN PROGRESS	1	1	-
Longer-term	0	0	-
Total A	7	7	



Category A Progress

- **A-4 – Study options for signage to direct appropriate traffic, i.e., local, boat, UD, and walking/biking areas, under the Nassau Bridge**
 - Still classified as “In Progress”
 - Documentation of signage is included as part of the Final Construction Plans for the Minos Conaway Grade-separated Intersection (GSI) Project and will be reviewed as part of the final QA/QC process



Category B

Policies and procedures

Number of recommendations by status

Status	Oct 2023	Feb 2024	Change	
COMPLETE	7	8	+1	
ONGOING	6	6	-	
IN PROGRESS	10	10	-	
Initiate in 2024	0	1	+1	
Longer-term	4	2	- 2	
Total B	27	27		



Category B progress

- **B-8 – Study the feasibility of a parking management system to alert travelers when parking lots at major destinations are full**
 - Still classified as “In Progress”
 - At Cape Henlopen, park access and use types would make it difficult to determine available parking spaces. Vehicles entering the park with surf fishing tags may be accessing the beach directly. Vehicles that are parking at campsites would impact count. Individual parking lots with marked spaces would require designated automated counters.
 - For test purposes, DeIDOT installed trailer mounted technology at the entrance to Fenwick Island State Park and provided real time parking availability. This was possible because the parking lot has one access/exit point with dedicated parking. Coordinate with recommendation B-3.



Category B progress

- **B-12 – Study relaxed height limits as part of the comprehensive plan to increase density**
 - Changed from “Longer-Term” to “Complete”
 - Sussex County Ordinance 2889 provides an increase in the maximum permitted height for multi-family developments within the County's Rental Program and also in proximity to certain routes in the County.
 - The Ordinance was approved by County Council on October 18, 2022.



Category B progress

- **B-15 – Identify all locations in the study area with poor drainage and make recommendations for potential inclusion in the Capital Transportation Program or developer requirements**
 - Changed from “Longer-Term” to “To Be Initiated in 2024”



Category B progress

- **B-18 – Study potential locations and designs for aesthetically pleasing gateways to coastal Sussex County**
 - Still classified as “In Progress”
 - The Savannah Road Master Plan process was launched in FY 23 and is currently underway. This effort is being funded and supported by DeIDOT but led by Historic Lewes Byway/Delaware Greenway. The master plan is considering options for a gateway along Savannah Road.
 - A presentation was made to the Mayor and Council of Lewes and an informational public workshop was held in 2023 to gain public input on the project goals.
 - Stakeholders and the public will have the opportunity to provide feedback on draft recommendations including via a public workshop in spring 2024.



Category B progress

- **B-21 – Study frequency and causes of emergency vehicle preemption and make recommendation to balance emergency vehicle access with traveler mobility**
 - Still classified as “Ongoing”
 - Signal controllers from SR 1 and SR 16 to Collins Street were upgraded on November 28, 2023. Unfortunately, the preemption recovery programming did not work as planned. DeIDOT is working with the vendor and is hopeful to have a solution in 2024. Once the solution is provided to DeIDOT it will be tested and if successful will be implemented as soon as possible.
 - The preempt programming has been modified to help reduce the recovery time to the coordinated cycle length.



Category B progress

- **B-26 – Bring in nationally recognized planners and engineers to provide new, creative ideas that draw from examples in other parts of the country.**
 - Still classified as “Ongoing”
 - A national expert conducted a peer review of the Kings Highway Project.
 - DeIDOT has been working with Mobycon, a consulting firm headquartered in the Netherlands, to incorporate best practices in the areas of transportation safety and mobility.



Category C

Make the most of existing roadway infrastructure

Number of recommendations by status

Status	Oct 2023	Feb 2024	Change	
COMPLETE	10	12	+ 2	
ONGOING	2	2	-	
IN PROGRESS	6	5	- 1	
Initiate in 2024	0	0	-	
Longer-term	2	1	- 1	
Total C	20	20		



Category C progress

- **C-10 – Continue to improve traffic signal phasing, timing and coordination using real time monitoring and control technologies**
 - Still classified as “Ongoing”
 - This is a core function of DeIDOT Traffic and is done on an ongoing basis.
 - New adjustments to the traffic responsive parameters were installed July 15, 2023. Volume and turning movement data that was collected during the summer months of 2023 has been analyzed. Findings will be reviewed by DeIDOT in late winter/early spring 2024.



Category C progress

- **C-17 – Conduct capacity analyses at study area intersections to identify the need for turn lanes**
 - Changed from “Long Term” to “Complete”
 - Study area intersections have been assessed by DeIDOT Traffic as part of Recommendation C-6 and necessary improvements have been incorporated into CTP projects as appropriate.



Category C progress

- **C-18 – Improve lane markings and signs at identified intersections: Five Points, Dartmouth Drive/Kings Highway, Plantation Road/Beavery Dam Road**
 - Changed from “In Progress” to “Complete”
 - All identified intersections have been assessed by DeIDOT Traffic and addressed by DeIDOT maintenance, DRBA Maintenance, or incorporated into CTP projects.



Category D

Walking, bicycling, and transit

Number of recommendations by status

Status	Oct 2023	Feb 2024	Change	
COMPLETE	4	4	-	
IN PROGRESS	11	11	-	
Initiate in 2024	0	0	-	
Longer-term	0	0	-	
Total D	15	15		



Category D progress

- **D-10 – Study the feasibility of a barrier in the median of Route 1 to deter pedestrian crossings at inappropriate locations**
 - Still classified as “In Progress”
 - Evaluations are being conducted in conjunction with recommendations D-2 and D-6.
 - A median barrier was discussed as part of the Route 1 Pedestrian Safety Task Force that produced a report in January 2014.
 - Traffic is working on a project nomination for the consideration of a median barrier-type treatment along the entire length of SR 1 in Sussex County.



Category D progress

- **D-13 – Identify locations in the study area where bike parking can be provided**
 - Still classified as “In Progress”
 - DeIDOT installs bike parking as part of capital projects where appropriate, for example along the Georgetown-Lewes Trail where kiosks are located.
 - Through the Development Coordination, bike parking is recommended for commercial developments.
 - Bike parking recommendations will be included as part of the Lewes Bike Plan, which will be completed in spring 2024.



Category E

New infrastructure

Number of recommendations by status

Status	Oct 2023	Feb 2024	Change	
COMPLETE	1	2	+ 1	
ONGOING	0	0	-	
IN PROGRESS	4	4	-	
Initiate in 2024	1	0	- 1	
Longer-term	3	3	-	
Total E	9	9		



Category E progress

- **E-4 – Evaluate the potential transportation benefits, costs, and impacts of a new road connecting Route 1 north of Five Points and the Vineyards**
 - Changed from “In Progress” to “Complete”
 - The benefits, costs, and impacts of a new road connection have been evaluated.
 - Vineyards has now signed the TID Agreement for future phases.
 - DelDOT and Sussex County will continue to coordinate with incoming developers throughout the development review process, however, there is no regulation requiring a new connection.



Phase 2 Implementation Plan

- **Next steps**

- Continue work on recommendations
- Finalize 2023 Annual Report
- Convene the Working Group in April



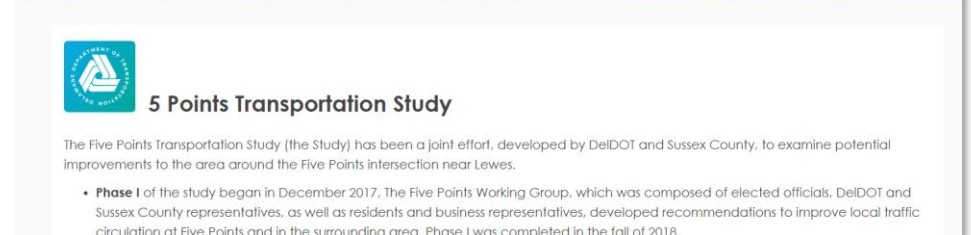
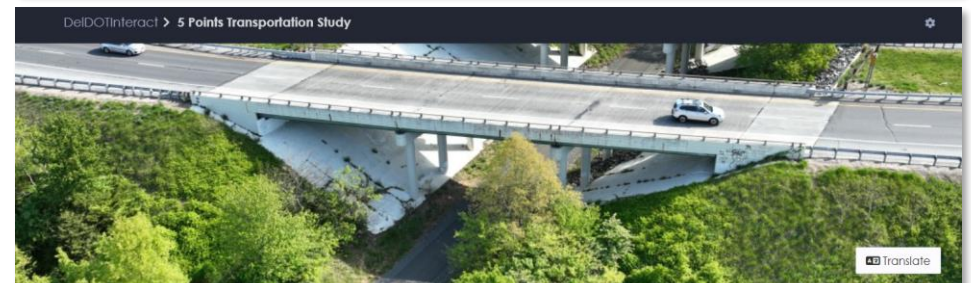
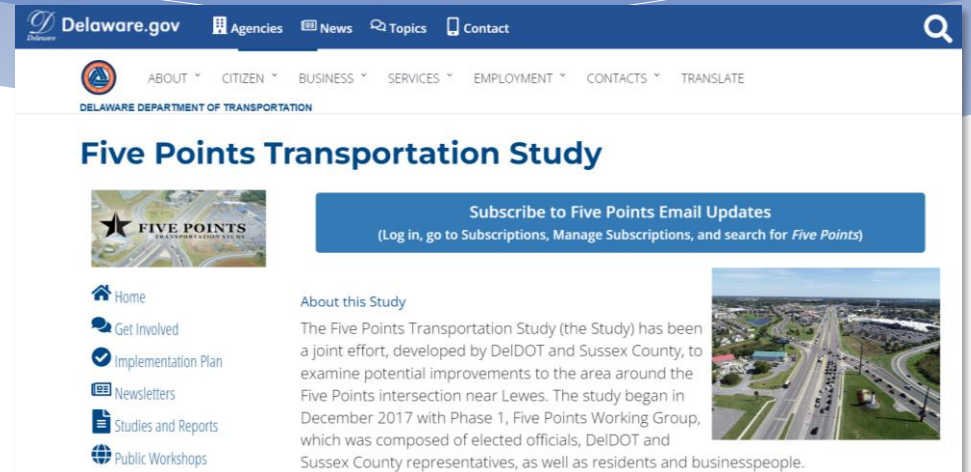
Public comment



Website Information

5Points.DeIDOT.gov will be used as a project archive. All study materials including Working Group Meeting materials (meeting packets, recordings summaries), Annual Reports, and *Following Five Points* e-newsletters from 2023 and earlier will be posted here.

The [Five Points Transportation Study](#) on DeIDOT Interact will be used for all current (2024) study materials, meeting announcements, and updates. Please use this website to stay up to date on all new/current project information.



Thank you for your participation!

Next meeting
April 22, 2024
6:00pm
Location TBD

Humaira Nabeela

Planner II

Delaware Department of Transportation

Humaira.Nabeela@delaware.gov

302.760.2174



Meeting Minutes

Phase 2 Working Group Meeting #16

DRAFT

October 23, 2023, 6:00 pm

Hybrid meeting held at Cape Henlopen High School Library and via Zoom Webinar

Recording available at: https://www.youtube.com/watch?v=lr2S_UoJRIY

Members present

David Chernuta
Bill Davis
Robert Fischer
Senator Russ Huxtable
Glenn Marshall
Ellen Lorraine McCabe
Councilman John Rieley
Mary Roth
Councilman Mark Schaeffer
Lloyd Schmitz
Pam Steinebach
Scott Thomas

Members attending virtually

Scott Green
Todd Lawson

Members absent

Scott Collins
Kathi Colman
DJ Hughes
Rep. Stell Selby-Parker
Rep. Peter Schwartzkopf
Michael Tyler

Public attendees in person

Eul Lee
Ann Quinn
Joan Quinn
Charles Reinert
Judy Rose Seibert

Public attendees on Zoom

Charles Reinert
Christine Davis
Darren Silvis
Diana (additional information not provided)
Janet Le Digabel
Matt (additional information not provided)
Sagre (additional information not provided)
13022452550 (additional information not provided)

Support to the Working Group

Kristen Ahlfeld, FHI (virtual)
Stephen Bayer, DelDOT (in person)
Andrew Bing, Kramer & Assoc. (in person)
Nabeela Humaira, DelDOT (in person)
Leah Kacanda, WRA (in person)
Molly Nur, WRA (virtual)
Jamie Whitehouse, Sussex County (in person)

This was a hybrid meeting with some working groups members, staff, and members of the public in person, and others attending virtually. A quorum of 14 Working Group members attended (12 in person and 2 virtually).



Welcome

Andrew Bing welcomed everyone, encouraged working group members to attend in person, and provided an overview of the hybrid set up and use of the Owl technology. Andrew announced that the meeting will be recorded. The recording of the meeting can be found here:

https://www.youtube.com/watch?v=lr2S_UoJRiY.

Stephen Bayer, DeIDOT reviewed the DeIDOT mission statement of *Every Trip. Every Dollar. Every Mode. Everyone.* and reviewed the DeIDOT safety slide reflecting some trends are more constant and some have changed. There have been 110 fatalities to date in 2023. He introduced the new DeIDOT project manager, Nabeela Humaira who has been appointed as Jennifer Cinelli has left DeIDOT to take another position. Nabeela stood and greeted the working group members. She has been with the DeIDOT Department of Planning for two years and has worked with Jenn Cinelli on Five Points Transportation Study for the last year. She welcomes feedback and discussion with the working group and looks forward to moving the transportation study forward together.

Working Group Notebook Materials

Andrew reviewed the contents of the notebook materials provided to working group members, including meeting agenda, presentation, draft minutes from the previous meeting, a list of upcoming meetings, and an updated version of the implementation plan.

Working Group Meetings

Andrew reminded the audience that the meetings are for the working group members. Members of the working group are encouraged to attend in person whenever possible. Members of the public can attend in person or virtually and are able to make public comment in person or virtually at the designated time at the end of the meeting.

Member Introductions

Members of the working group introduced themselves. Pam Steinebach, DeIDOT shared about a recent trip to Amsterdam where DeIDOT staff had the opportunity to learn from their European counterparts about their approach to biking and pedestrian planning and mobility.

Working Group Meeting Minutes from April 24, 2023

The meeting minutes from April 24, 2023 were reviewed. Andrew noted that Bob Fischer provided comments via email that will be incorporated in the final draft. No additional comments were made on the minutes. Glen Marshall motioned to approve the minutes. The motion was seconded by Mary Roth. With no one declining, objecting, or abstaining, the minutes passed unanimously.

Presentations

In addition to the overview, comments, and questions detailed below, content is provided on the slides attached to these minutes.



Ordinance Relating to Through Lots – Jamie Whitehouse, Sussex County
(see slides attached to minutes for images and more information)

A new ordinance was passed last night by Sussex County Council that will provide relief for residents with a “through lot.” The ordinance amends Chapter 115, Article I, Section 115-4 “Definitions” of the Sussex County Code. A through lot is one that has two street frontages (in the front and at the rear of the lot) and a parallel rectilinear lot. Frontages require setbacks but to require them for both front and rear is restrictive for residents. The ordinance provides some relief without requiring residents to apply individually for a variance. It reduces the required set back. Setbacks now stand at 30 feet in front and 15 feet along the rear and sides.

Fences are still permitted. No building or structures are permitted to abut the rear frontage, but now sheds and pools are allowed in the setback area. This ordinance reduces the number of applications and reduces an unnecessary burden on the County to have to process them.

Questions/comments

- Andrew – What is the status of the ordinance?
 - Jamie – County Council approved it last night.
- Councilman Rieley – Residents are not accessing their properties from the back? That is up to DeIDOT?
 - Jamie – Correct, residents can only access their lots from the front. They do not have the ability to enter from the rear.
- Councilman Rieley – This is also part of a bigger effort to clean up anomalies within the Code and will be ongoing.
- Glen Marshall – This is only for out structures, not the main residential structure? Can you build a new building?
 - Jamie – Within the new buildable area, yes, you could build a new building. In theory you could build a new building.
- Scott Thomas - Does that include the Accessory Dwelling Unit (ADU)?
 - Jamie – Yes. There is some additional guidance for ADUs.
- Mary Roth – When was this introduced and approved?
 - Jamie – The County Council signed the ordinance this week and it has already going into effect. We are now spreading the word.

Update on Capital Transportation Program Projects (CTP) in the Five Points Area – Pam Steinebach, DeIDOT Planning, Director

(see slides attached to minutes for images and more information)

The current CTP covers FY 2023-2028. Every two years the project list is updated and new projects are introduced. A ranking prioritization is applied which includes seven factors the Council on Transportation (COT) considers, including safety, multimodal movement, impact on the environmental, congestion management, and economic development. The new projects are presented at a meeting held in each County/MPO. The meetings were held in August and September of this year.



DelDOT is compiling the public comments which were received in person, by email, online, via a GIS survey, or postal mail. There was a 30-day comment period. In December DelDOT will review the comments with the COT. In March, COT will approve the projects and the budget. The CTP is considered approved when the CTP is signed. Then the CTP is reviewed and approved by the U.S. DOT.

Six new projects are being proposed for Sussex County and can be found on the map with descriptions here: <https://tinyurl.com/FY25-30CTPMap>. They are in the Project Development (PD) phase. The costs are only estimates. The proposed projects include:

1. US 9 between Old Vine Boulevard and Dairy Farm Road Corridor Improvements. This project is a continuation of 4 lane project that is in the current CTP.
2. Zoar Road at South Bedford Street Intersection Improvements.
3. Hudson Road between Route 9 and Route 1 Improvements. Due to increased population, Hudson Road needs upgrades. DelDOT doesn't know yet what that those improvements will be - the costs are placeholders.
4. Redden Road Corridor Improvements. Some work and development has to be done for portion of the road between US 13 and US 113. Instead of a piecemeal approach, we are combining improvements into one project.
5. Phillips Landing Road between Mt. Pleasant Road and Phillips Landing Improvements.
6. Route 24 between Love Creek Bridge and Indian Mission Road Improvements.

Note: A correction will be made to the slides to correct CTP Hearings recap FY23-30 Proposed to FY25-30.

Questions/comments

1. Bob Fischer – How many of those Sussex County projects are in our original Five Points working area of concern?
 - a. Hudson Road, U.S. 9
2. Bob Fischer - How many Five Points projects were lost because of other CTP projects?
 - a. Andrew – Five Points projects weren't "bumped" off the list by other projects. Projects in the Five Points vicinity have been advanced in consideration of conditions on the ground and to maximize coordination between adjacent projects and development.
3. Councilman Rieley – Are the CTP projects on a different track than the TID projects?
 - a. Pam - Projects are listed individually, but often many improvements roll up into a single project (e.g., bridge work, safety, signals) so there are more projects than what is listed. What we are considering is a TID is a roll up project (i.e., the funds serve all the TID projects). These are the individual line-item projects, but overall the 6-year CTP is \$4 billion. Not everything is officially listed.
4. Councilman Rieley – is the \$4 billion for the County or the State?
 - a. Pam – It is for the full state.
 - b. Leah - These are just the new projects. Shanté will give us a presentation in January with a more complete set of facts and dollar amounts.
 - c. Pam – The DelDOT GIS interactive maps include the new projects included in the CTP hearings for entire state. If you have any questions, email Pam, Steve, or Nabeela.



Update on the State Transportation Safety Bills – Pam Steinebach, DeIDOT Planning, Director
(see slides attached to minutes for images and more information)

There were six safety bills from the last legislative session that Governor Carney signed including:

- HB 92: Expand Move Over Law. This law is intended to curb excessive speeds in work zones.
- HB 94: Automated Speed Cameras.
- HB 120: Expand Reckless Driving. Speeding over 90 mph will be fined, require traffic school, or community service (i.e., picking up trash along roads)
- SB 68: Child Safety Seats.
- SB 86: Graduated Motorcycle Helmet. Novice drivers will be required to wear a helmet for two years.
- SB 89: Green Lights on Snow Equipment. Green lights have greater contrast with snow.

The only remaining legislation is the HB 119: Open Container Law.

Pam also provided examples of various safety measures DeIDOT is using, including dynamic chevron signage, High Friction Surface Treatment (HFST), the wrong way driver pilot (with lights blinking Wrong-Way), rumble strips, cable median barriers, Rapid Rectangular Flashing Beacons (RRFB), and automated speed enforcement.

Question

1. Lloyd Schmitz – What is the status of the Pedestrian and Walkability Committee?
 - a. Pam – We have all of the government representatives identified and are working with the Governor’s Office to identify 6 residents. We are hoping to have our first meeting in the beginning of the new year. We are very excited. The focus will be pedestrian safety and accessibility.

Henlopen Transportation Improvement District (TID) – Sarah Coakley, DeIDOT Department of Planning
(see slides attached to minutes for images and more information)

Sarah Coakley manages all the TIDs for DeIDOT. The Henlopen TID overlaps the Five Points study area, plus many of the Five Points recommendations for improvements were included in the TID as well.

DeIDOT did traffic modeling for to help identify improvements. Sara reviewed the status of the Henlopen TID improvements.

TID fees function as a transportation-based impact fee. Fees can only be used in the TID defined area. This approach allows for equitable treatment and expedited development reviews. There are 13 TIDs in Delaware. DeIDOT is working with Sussex County in the Roxana area to help implement another TID study.

The Henlopen TID originally had 50 intersections and 47 road miles with comprising \$311M with developers contributing 24%. The remaining will be covered by federal or state funds.



Questions/comments

1. Councilman Rieley – Is there any possibility that the footprint of the TID would change at some point?
 - a. Sarah – It is possible to adjust. DeIDOT would like to let it stay in place for a while first, fund, and implement projects before reconsidering the boundaries.
2. Councilman Schaeffer – Are there currently TIDs in Milton and in Milford?
 - a. Sarah – Milton is still in the planning phases. Southeast Milford is a TID in operations, but only in the City boundaries.
3. Councilman Schaeffer - The was some concerned that Sussex County was not involved. I'm also aware of parcels in the annexation area that are not included in the TID. I thought that maybe that was an oversight. We can follow up on that at another time.
 - a. Sarah – For Milford – between the City and DeIDOT and does not cover area outside the city jurisdiction.
 - b. Andrew – We can follow up on that outside this meeting.

Sarah noted that there are 21 signed agreements, which is an increase from 8 last year at this time. Another 7 developer agreements are in process. There has been about \$960,000 in developer contributions. Developers must sign an MOU as they start the development process. There is another \$34,000 invested in ROW. Another benefit of TIDs is the ability to accommodate increases in densities. Henlopen TID improvement are still projected to be adequate.

Question

1. Scott Thomas – Looking at a possibility for a master planned community with residential and commercial. Would increased densities be problematic and skew the forecast? Hypothetical at this point.
 - a. Sarah – Traffic wise, one dwelling unit is the same as 2-3 apartment units. It would depend on where they are located.
 - b. Pam – There is no place with 12 units. If they exceed the threshold, they will need to do their own TIS and do their own improvements. This is separate from a TID.
 - c. Glen – up to 12? So, there is an incentive to developers to stay within limit.
 - d. Andrew - Part of this working group is the discussion between these parties.
 - e. Pam – The ones in the TIDs already have the funding secured.
 - f. Scott – This may be a side conversation.
1. Councilman Schaeffer – If businesses in mixed use development are increasing their traffic, from Nassau Road, SR 1 Paintersville you could increase the traffic level over all. How does DeIDOT Traffic address that.
 - a. Pam – If you have businesses, DeIDOT will take those things into consideration.
 - b. Sarah – Highway Capacity Manual. It would depend on internal capture.

The Henlopen TID statuses following:

- Airport Rd. Extension, Old Landing Rd. to SR24: PE underway
- US9 Widening, Old Vine Rd. to US1: PE underway
- Old Landing Rd. and Warrington Rd. intersection: PE underway



- Plantation Rd.: Phase 1 under construction, Phase 2 in design
- Shady Road and Postal Lane improvements: added to out years of FY23-FY28 CTP (Preliminary Engineering to begin in FY2028)
- Mulberry Knoll Rd. Extension, from Cedar Grove Rd. to US9: added to out years of FY23-FY28 CTP (Preliminary Engineering to begin in FY2028)
- US9 Widening, Old Vine Rd. to Diary Farm Rd.: proposed FY25-FY30 CTP,
- PD in FY27 and FY28
- SR24 between Love Creek Bridge and Indian Mission Rd.: proposed FY25-FY30 CTP, PD in FY28 and FY29

Comments

1. Is Old Landing Road and Warrington Road still planned to be a roundabout?

- a. Leah – DeIDOT had a workshop last fall. There was significant public feedback. We may have an update from Shanté in January.
- b. Pam – The PD monies are already being funded by the TID.

State Development Trends – Dorothy Morris, DeIDOT Office of State Planning

(see slides attached to minutes for images and more information)

The Office of State Planning Coordination was established in the 1990s with the mission to improve the coordination and effectiveness of land use decisions made by state, county, and municipal governments while building and maintaining a high quality of life in the State of Delaware.

The [Preliminary Land Use Service](#) (PLUS) provides state agency review of major land use change proposals prior to submission to local governments. The 2004 DeIDOT-Sussex County memorandum of understanding (MOU) is currently being updated to reflect the 2018 comprehensive plan update growth areas. It is currently in Sussex County’s hands. If changes are needed, Sussex County will let DeIDOT know.

Currently the proposals that are reviewed according to the Sussex MOU, include:

- Any residential planned community
- Major residential subdivisions containing more than 50 dwelling units
- Any non-residential subdivision or site plan involving the expansion of an existing structure by 25 percent with a total floor area exceeding 75,000 square feet or new construction involving structures or buildings with a total floor area exceeding 75,000 square feet
- Any rezoning within the Environmentally Sensitive Development District (Now Coastal Area) that would increase intensity or residential density
- Applications for rezoning that are inconsistent with the Sussex County Comprehensive Plan
- Any local land use regulation, ordinance or requirement referred to the Office of State Planning
- Any amendment, modification, or update to the Sussex County Comprehensive Plan, as required by Title 9 of the Delaware Code
- Any amendment, modification or update to the Sussex County Comprehensive Plan, as required by Title 9 of the Delaware Code



The [Development Trends Dashboard](#) was created in 2020 to track all development data in one place for public viewing, including:

1. PLUS Data (Preliminary Land Use Service which tracks land development approvals for applicable state agencies)
2. Development application approvals
3. Building permits issued

Dorothy presented the 2022 and 2023 Development Trends for the state. Level 1-2 are usually located around the towns. Level 3 is typically farther out from the town centers. Level 4 is for agricultural preservation and related activities. It is important to know the difference.

The Office of State Planning Coordination (OSPC) submitted its [2023 Annual Report](#) to the Governor. It is due by October 15. It was posted to the OSPC website last week. The 2023 Development Trends are available on the website. The dashboard was first made available to the public in 2020.

Dorothy encouraged meeting attendees to look for all of this information at: <http://stateplanning.delaware.gov>. She opened the floor for questions.

Questions / Comments

1. Senator Huxtable – what are the residential building permits for? Are they broken down?
 - a. Dorothy – It will be used for some type of residential units (residential square footage). It is not fencing, pools, or room division. The dashboard does not distinguish between single family or multifamily, but the annual report indicates the amount of multifamily. We go through that information personally.
2. Pam – Is one dot a single dwelling permit or a multi dwelling permit application?
 - a. Dorothy – Yes. One dot represents both.
 - b. Pam – Has any consideration been given to having multiple dots for multiple dwelling units?
 - c. Dorothy – We are still discovering how best to use the information from the Dashboard. Currently the dashboard shows what development has occurred and what could occur. It is easier to read when you zoom in. Also, it tracks the PLUS data, i.e., what could be.
3. Councilman Rieley – Where is Level 4 (rural areas) because I see areas that have water and sewer and are labeled as 4?
 - a. Dorothy – The definition of 1-4 does not change. Level 1-2 are usually located around the towns. Level 3 is typically farther out from the town centers. Level 4 is for agricultural preservation and related activities.
 - a. Andrew – The definitions will not change, but it's possible that a specific location could change over five years?
 - i. Dorothy – Yes. It would probably be because of environmental conditions.
 - b. Dorothy – Our office takes the information to the towns and counties to validate the information before we take it to the public and it is finally approved.
4. Bob Fischer – Do the votes of DeIDOT and DNREC counted more heavily than other agencies? How do you handle conflicts among agencies?



- a. Dororthy – All agencies are included in scoring and the formula is weighted by agency with a plus one in favor of the development and a minus one if they are opposed.

Phase 2 Implementation Status – Leah Kacanda, AICP, Whitman, Requardt & Associates
(see slides attached to minutes for images and more information)

Since the working group has new members, we will review how the 78 recommendations were originally categorized as well as discuss those that have changed. Slide 62 provides a key for the color assignment by recommendation. The Five Points working group has used that framework since it was first developed. We will look at what has changed. 67 of 78 recommendations are in progress, ongoing, or completed. This year six projects have been completed and one ongoing. Signage is occurring as part of the Minos Conway project.

Recommendation B-6 was changed from Longer-Term to Ongoing by incorporating more walkable, bikeable, mixed-use town centers into the comprehensive plan. DelDOT is starting to work with the University of Delaware to enhance support and coordination to municipalities updating their comprehensive plans. An ordinance would support this recommendation. Information on the hearing is available on the County website. University of Delaware provides technical assistance to small towns for comprehensive planning.

Recommendation B-9 recommended studying New Road which has occurred in several ways, including the northern portion that was studied recently by the Lewes Bike Plan. As it was studied, we will call this complete.

Questions/comments

1. Mary Roth – Does the CTP include the Old Orchard and New Road intersection sidepath connectivity?
 - a. Leah – Yes, studying the sidepath connectivity is included. There is a gap in the connectivity of sidepaths along New Road and West Coast improvements. That is not yet programmed. There will be a conversation with DelDOT to see if the small segment can be included. I am happy to provide you with some details on that.
 - b. Bob Fisher – I recommend another roundabout.
 - i. Leah – Unfortunately there are space constraints to consider.
2. Lloyd Schmitz – Will they add sidewalks along West Coast along Route 1 as they were included in the original design?
 - a. Leah – Sidewalk and sidepaths are being considered in some instances with the West Road project. My recollection there are at least a sidewalk and sidepaths, but I will get back to you on that.

Recommendation B-17 evaluates the use of land made available by narrowing lanes for the landscape and multi-modal trails or parks. The status of the recommendation is now in progress. The focus now is on the trail rather than the park piece. There is a separate project page for the Bikeways Study. For narrow roads, narrowing lanes does not create that much road to work with.



Questions/comment

1. Councilman Rieley – Is the land trust north to Milton and South to 24 in the pipeline?
 - a. Leah – Anthony and Paul (active transportation planners) are managing the Georgetown-Lewes Trail project which is outside of the Five Points study area. We will be working with Milton on a bicycle plan this year and can look at that.
 - b. Pam – I don't think we are working on anything there currently. We updated the DelDOT design manual. We are focusing on safety and not trying to always accommodate the biggest vehicles.
2. Bob Fischer – We had discussed a grade separate bicycle grid – building out from the big developments allowing pedestrians as well. A grade separated trail is safer, but you have to imagine the bicycle transportation modality.
 - a. Leah – The low stress study is looking at this using a Level of Traffic Stress analysis. DelDOT is considering the sidepath in lieu of sidewalk and bicycle lanes to make sure the facility serves the population that will be using it.
3. Councilman Rieley – What about e-bikes?
 - a. Leah – Etiquette while using trails is an issue. People should be traveling at higher speeds when near other trail users, especially when passing. That applies to e-bikes and traditional bikes. Historically ten feet is the standard for shared used trail width, however ten feet is not wide enough to accommodate all users on higher traffic facilities. While 12-14 feet may be preferred, that has to be weighed against space constraints and increased cost.
 - b. Bob – We have already had a serious bike-on-bike crash not far from Nassau.
 - c. Leah – DelDOT is tracking this information and looking for improvement. Possibly the Lewes Bike Council will have a bicycle ambassador program to do outreach with the bicycling community soon as well.

Recommendation C-1 to conduct a corridor Study on Route 9 to determine the feasibility of widening to four lanes. There is no change of status, but just some updates. As Pam shared, plans to widen the road through Old Vine Boulevard is already underway. The Coastal Corridors Study will recommend a preliminary evaluation of widening Route 9 from Old Vine Blvd through US 113 with a focus on the portion of the corridor east of Route 5. This study is being completed in close coordination with the County.

Recommendation D-1 studied the feasibility of hop-on, hop-off van or jitney service loop for Lewes similar to the free service in Cape May. The Lewes pilot project was implemented for the past two years, so we are designating this recommendation complete.

1. Ellen Lorraine McCabe said they are compiling the report for the Council to present at a future workshop. Ridership increased from 2022 to 2023 by 120 passengers.
 - a. Leah – We could provide that report to the Working Group once it is complete.



Recommendation D-12 identified publicly- and privately-owned land in the study area that could be used for trails. The recommendation is in progress. Interconnectivity between developments is especially important to the bike and pedestrian network. We are changing the status from longer-term to in progress since the SR 1 Low-Stress Bikeways Study is looking at this issue.

1. Councilman Rieley – This is on the Council’s short-term radar also.

Recommendation D-15 to study opportunities for pedestrian crossings on Kings Highway and Freeman Highway is now complete. A new signal has been installed at Freeman Highway and Monroe Avenue that includes a crosswalk over Freeman Highway. Additional bike and pedestrian facilities will be included with the Kings Highway CTP Project as proposed by the Master Plan. A public workshop will be held soon. Rectangular Rapid Flashing Beacons (RRFB) were installed at the trail crossing of Freeman Highway near Cape Henlopen Drive as well.

Only three recommendations in the E category remain. DeIDOT is working to improve flow around the Five Points intersection and to build a more robust network. The largest potential improvement are changes to the Five Points intersection. As other CTP projects come online, DeIDOT will have additional traffic data to develop an approach to improvements.

Only ten recommendations remain from the original 78. State Planning, Sussex County, and DeIDOT plan to review those this winter. DeIDOT will update the working group next year on next steps.

8. Public comment

1. Janet Le Digabel (virtual) - Will there be a service road to the 8 homes and businesses north of Hudson connecting them to Round Pole Ridge Road, so they do not need to pull onto Route 1?
 - a. Councilman Reiley – I believe there is another development slated that may permit access.
 - b. Andrew – If you leave your email in the chat we can reach out to you with more information.
2. Janet Le Digabel (virtual) – What happens to a parcel is planned for development, yet you have plans for a service road to get the driveways that are close to Route 1 off of Route 1. It seems that DeIDOT needs to be talking to Sussex County Planning and Zoning.
 - a. Andrew – We will get back to you.
3. (not identified) - Any chance to upgrade Round Pole Road from a level B to an A?
 - a. Leah – That may be in reference to LOS. Pam mentioned that DeIDOT’s level of service are evolving.
 - b. Pam – LOS D is usually acceptable to DeIDOT and sometimes E is acceptable depending on the severity of the delay, the length, the frequency, the time of day and other factors.
 - c. Leah – Now have more data and measurements so DeIDOT can make better informed decisions, so we have more than just LOS.



4. Eul Lee (in person) – Concerning LOS which measures wait times. Some intersections do not have crossing. Sussex County is looking at AADT. But for example, the road conditions are very different, e.g., paving, sharp turns, crossings, etc. The measures need to be looked at, not just the numbers and LOS. Certain tools don't work in some situations.
 - a. Leah – Agreed. Certain tools do not work well depending on the circumstances. We will take this back to DelDOT traffic and get back to you.
5. Matt (online) - What is the progress on the roundabout for Plantation Road?
 - a. Pam – We will provide an update in January. You can also check specific projects on the online project portal.
 - b. Senator Huxtable – There will be a meeting on this project at the Lewes Transit Center on October 26th from 10:30-11:30 am if you are interested.
6. Judy Rose Seibert (in person) – What is the status of a widening of Love Creek Bridge?
 - a. Sarah – TID analysis was completed. Route 24 is being added to study in the CTP as a Project Development phase to study it.
 - b. Leah – No one has an answer yet as to what the appropriate improvement will be there. There will be opportunities for public input on the study as it proceeds.
 - c. Pam – It is on their radar.
 - d. Judy – They had a problem with widening because of the fish.
 - e. Leah – There are always environmental concerns because of the proximity to the ocean.
7. Lloyd Schmitz – Is there an update on the possible pedestrian bridge over Route 1?
 - a. Leah – The traffic analysis is still underway. The work is being coordinated with the SR 1 Low-Stress Bikeways project. It would be a large investment, so DelDOT wants to proceed carefully and review is holistically. Once we have an update, we will pass it on.
8. Eul Lee (in person) – Route 24 project from Love Creek to the Indian Mission Road. That is partly in the TID and partly out of the TID. Who is paying for that study – the TID or the CTP?
 - a. Pam – If it is a development, then the developer funding is paying for. In this case, DelDOT is paying for it.
 - b. Councilman Reiley – If they are located across the road from the development, they are not in the TID, so therefore the location does not qualify.

Adjourn – Andrew Bing

The next working group meeting is January 22, 2024. Location is likely to be here, but we have to confirm it. Feel free to reach out via email if you have questions in the interim.





List of upcoming meetings

Phase 2 Working Group

Meeting #18

Monday, April 22, 2024, 6:00 pm
Location to be determined

Meeting #19

Monday, October 28, 2024, 6:00 pm
Location to be determined

Meeting dates, times, locations, and agendas are subject to change.

See the Delaware Public Meeting Calendar
at publicmeetings.delaware.gov
for official meeting notices.



**FIVE POINTS TRANSPORTATION STUDY
IMPLEMENTATION PLAN STATUS REPORT**

February 26, 2024 (red text indicates changes since October 23, 2023 meeting)

\$ < \$200K * <3 years ◊ Low
 \$\$ \$200K - \$2M ** 3-10 years ◊ ◊ Medium
 \$\$\$ \$2M - \$20M *** >10 years ◊ ◊ ◊ High
 \$\$\$\$ \$20M - \$200M
 \$\$\$\$\$ > \$200M

Category	ID	Old idea no.	Working Group recommendation	Assumed lead agency	Other responsible parties (if any)	Study cost	Study timeframe	Imp. cost	Imp. timeframe	Imp. impacts	Status	Remarks
A. Recommendations to be implemented under current DeIDOT projects or initiatives												
A	1	25	Review the need for grade separating or restricting crossings between Frederica and Lewes before eliminating signals in this area	DeIDOT - Traffic		\$	*	N/A	N/A	N/A	COMPLETE	Studies have been completed, with results presented to the Working Group in October 2019. DeIDOT is proceeding with a program of grade separations and crossover improvements.
A	2	42	Evaluate Tulip Drive connection to Route 1 as part of the Minos Conaway Road grade separation project	DeIDOT - PD South		\$	*	\$\$	**	◊ ◊	COMPLETE	Tulip Drive connection is now part of the Minos Conaway project.
A	3	53	Study the feasibility of increasing the proposed Route 24 bypass of Millsboro from one lane in each direction to two lanes in each direction	DeIDOT - PD South		\$\$	**	\$\$\$\$	**	◊ ◊ ◊	COMPLETE	This effort was completed as part of the US 113 Millsboro-South Area Supplemental DEIS. A two-lane bypass was found to be adequate for future demand.
A	4	54	Study options for signage to direct appropriate traffic, i.e. local, boat, U of D and walking/biking areas, under the Nassau Bridge	DeIDOT - PD South		\$	*	TBD	TBD	TBD	IN PROGRESS	Southern Delaware Tourism has developed the plan for destination signing on SR 1 including the destinations and sign appearance. Directional signs installed as part of the Minos Conaway project will have a look that is consistent with the Sussex County Tourism design scheme. Documentation of signage is included as part of the Final Construction Plans and will be reviewed as part of the final QA/QC process. Coordinate with recommendation B-24.
A	5	55	Evaluate one-way service roads as part of the Minos Conaway Road grade separation project	DeIDOT - PD South		\$	*	\$\$	**	◊ ◊	COMPLETE	Service roads are now part of the project; they are two-way to provide better mobility. Please see the project page for additional information. A ramp from northbound Route 1 to the east service road in the vicinity of Meineke is under consideration to serve local traffic.
A	6	82	Study the feasibility of extending the eastbound widening of Route 24 to Love Creek	DeIDOT - PD South		\$	*	\$\$\$	**	◊ ◊ ◊	COMPLETE	The current project, design of which is nearing completion, extends the four-lane section on SR 24 to a point west of Beacon Middle School. Widening to three lanes (one through lane in each direction plus a center left-turn lane) will extend to the Love Creek bridge. The Henlopen TID study anticipates that widening of the bridge will be needed by 2040.
A	7	83	Study the feasibility of widening or adding through lanes on Plantation Road from Route 24 to Cedar Grove Road and Postal Lane	DeIDOT - PD South/Planning		\$	*	\$\$\$	**	◊ ◊ ◊	COMPLETE	The Mulberry Knoll Road Extension Study was finalized in June 2022. The Study found that an extension of Mulberry Knoll Road between Cedar Grove Road and Route 9 is feasible, and two concepts were identified. Further analysis is necessary to advance to a single Preferred Alternative. Once complete, this route will improve traffic circulation in the area, reducing the need to widen Plantation Road. See recommendations E-2 and E-3.

**FIVE POINTS TRANSPORTATION STUDY
IMPLEMENTATION PLAN STATUS REPORT**

February 26, 2024 (red text indicates changes since October 23, 2023 meeting)

\$ < \$200K * <3 years ◊ Low
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 \$\$\$ \$2M - \$20M *** >10 years ◊◊◊ High
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 \$\$\$\$\$ > \$200M

Category	ID	Old idea no.	Working Group recommendation	Assumed lead agency	Other responsible parties (if any)	Study cost	Study timeframe	Imp. cost	Imp. timeframe	Imp. impacts	Status	Remarks
B. Implement policies and procedures to make the area more efficient, sustainable, and beautiful												
B	1	34	Require new developments to plan for interconnections to any future development areas and monitor to ensure implementation	Sussex County	DeIDOT	\$	*	N/A	N/A	N/A	ONGOING	All subdivision applications are subject to pre-application meetings. Where the potential for interconnectivity to undeveloped parcels is identified, this is discussed with developers prior to application submittal.
B	2	86	Consider modifications to land development requirements and/or the Development Coordination Manual that require additional buffers/setbacks for all new developments for future road expansion	Sussex County	DeIDOT	\$	*	N/A	N/A	N/A	IN PROGRESS	In 2020, the Sussex County Planning & Zoning Commission discussed a potential future revision to the Zoning Code to clarify the maximum extent to which parking may be permitted in the front yard setback. DeIDOT updated the Development Coordination Manual to require greater width along principal arterials. Sussex County's east-west roads are not principal arterials except Route 18/404. Changing right of way requirements on other road classifications would require another update to the DCM. DeIDOT is currently updating Chapter 2 of the DCM - Traffic Studies. Chapter 3 deals with Right of Way. That update is not yet underway. The DCM is in the Strategic Highway Safety Plan (Strategy 5.2 Revise DeIDOT's Development Coordination Manual to require additional pedestrian infrastructure improvements related to new developments). Secretary Majeski and Deputy Secretary Hastings presented to Sussex County Council in March 2023. The County is participating in the Coastal Corridors Study meetings where this topic was discussed extensively. The County and DeIDOT continue to work together on this issue as part of the Coastal Corridors Study process.
B	3	4	Study the feasibility and anticipated effectiveness of modifying signage, starting in Milford, to encourage through drivers (to points outside the Route 1 corridor between Lewes and Dewey Beach) to use Route 113, Route 5, Route 23, etc.	DeIDOT - Traffic	Private partner(s) such as Waze	\$	*	\$\$	*	◊	COMPLETE	An additional sign was installed on southbound SR 1 south of Thompsonville Road to identify municipal destinations and distances. Anticipated effectiveness of guide signs is decreasing as more and more people rely on GPS/route guidance systems. Travel time messages are now displayed on these variable message signs approaching the beach area. This information is also available on the DeIDOT app.
B	4	91	Improve advance acquisition process to allow DeIDOT to more quickly acquire land needed for transportation improvements and acquire available land within the Five Points Study Area (e.g., Creative Concepts)	General Assembly	DeIDOT	\$	**	N/A	N/A	N/A	COMPLETE	New advance acquisition regulations were approved in 2018. Now proactive purchases will be feasible.
B	5	50	Study the feasibility of converting the Arby's driveway between Route 1 and Savannah Road into a publicly-accessible road	DeIDOT - Planning	DeIDOT - Real Estate and PD South; property owners	\$	*	\$\$	**	◊	IN PROGRESS	DeIDOT negotiated a concept for connections through the Nicola Pizza property. Sussex County approved the Nicola Pizza site plan with the easement language. Further progress on hold until Arby's comes up for redevelopment. Coordinate with B-1, C-12.
B	6	14	Incorporate more walkable, bikeable, mixed-use town centers into the comprehensive plan	Sussex County DeIDOT/University of Delaware		\$	*	N/A	N/A	N/A	ONGOING	DeIDOT is working with the University of Delaware to enhance support and coordination to municipalities updating their comprehensive plans.
B	7	89	Continue TID studies both east and west of Route 1	DeIDOT - Planning	Sussex County, City of Lewes	\$\$	*	TBD	TBD	TBD	COMPLETE	At its October 27, 2020 meeting, Sussex County Council approved the Henlopen TID agreement. The Henlopen TID recommendations are related to Five Points Recommendations A-6, A-7, C-1, C-3, C-7, C-19, E-2, and E-3. Because most available land on the east side of Route 1 has already been developed or approved for development, there is limited value to a TID in this area.

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B	8	62	Study the feasibility of a parking management system to alert travelers when parking lots at major destinations are full	DeIDOT - Planning	DeIDOT Traffic, DTC, property owners, businesses, DNREC, private partner(s)	\$\$	*	\$\$\$	**	◊	IN PROGRESS	DeIDOT has reached out to DNREC to obtain information on their current parking count and monitoring practices and historic lot count data. DNREC is getting ready to update the entrance to Cape Henlopen State Park, and would like to explore adding automated counters for use in tracking parking occupancy. Park access and use types would make it difficult to determine available parking spaces. Vehicles entering the park with surf fishing tags may be accessing the beach directly. Vehicles that are parking at campsites would impact count. Individual parking lots with marked spaces would require designated automated counters. For test purposes, DeIDOT installed trailer mounted technology at the entrance to Fenwick Island State Park and provided real time parking availability. This was possible because the parking lot has one access/exit point with dedicated parking. Coordinate with recommendation B-3.
B	9	69	Study enhancing New Road per Byway Master Plan	DeIDOT	City of Lewes, Sussex County, Delaware Greenways, Byway Committee	N/A	N/A	\$\$\$	**	◊ ◊ ◊	COMPLETE	The New Road Master Plan was endorsed by the Lewes Mayor & City Council on July 13, 2020. In addition, they approved the Byway's request to transition to a citizen-led Byway Committee with representation from the City on the committee. The New Road bridge over Canary Creek is being designed in accordance with the Master Plan. Improvements along frontages of new development will be addressed by developer agreements. DeIDOT has allocated additional funding for road improvements along the southern portion of New Road in the FY23-FY28 CTP. The Lewes Bike Plan (under development in 2023/2024) will include a recommendation to connect a sidepath through W. 4th Street.
B	10	94	Endorse "don't block the box" legislation with camera enforcement	General Assembly	Delaware State Police, DeIDOT	\$	**	\$\$	*	◊	COMPLETE	House Bill 490 passed the Delaware House of Representatives on June 21, 2022 and the Delaware Senate on June 30, 2022. This bill establishes the authority for the State and municipalities in the State to use an electronic traffic monitoring for vehicle obstructions system to assist in the enforcement of right-of-way, i.e. "don't block the box." A study approved by DeIDOT showing that intersection blockages are frequent is required for an intersection to be eligible. The bill only imposes civil penalties for violations and does not impose points on an individual's driver's license. The bill was signed by the Governor on October 21, 2022. DeIDOT is developing selection criteria and a candidate list of locations.
B	11	87	Ensure cost savings from transportation projects within the study area are re-invested in projects within the study area	General Assembly		\$	*	N/A	N/A	N/A	Longer-term	
B	12	15	Study relaxed height limits as part of the comprehensive plan to increase density	Sussex County		\$	*	N/A	N/A	N/A	COMPLETE	Sussex County Ordinance 2889 provides an increase in the maximum permitted height for multi-family developments within the County's Rental Program and also in proximity to certain routes in the County. The Ordinance was approved by County Council on October 18, 2022.
B	13	95	Study alternatives to both meter and slow southbound traffic approaching Five Points	DeIDOT		\$	*	TBD	TBD	TBD	COMPLETE	DeIDOT has implemented speed reduction pavement markings along SR 1 southbound approaching the Nassau Bridge.
B	14	36	Identify locations where trees can safely be planted within the right of way	DeIDOT		\$	*	\$\$	**	◊	ONGOING	DeIDOT considers adding trees during development of capital projects. At the January, 2022 meeting DeIDOT provided the Working Group with guidelines that govern how trees could potentially be planted within the right of way. DeIDOT will continue to solicit feedback from the community for future capital projects.

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B	15	17	Identify all locations in the study area with poor drainage and make recommendations for potential inclusion in the Capital Transportation Program or developer requirements	DeIDOT	Sussex County	\$	*	\$\$\$	***	◊◊	To be initiated in 2024	
B	16	16	Increase the importance of considering noise and lighting impacts of major transportation project recommendations per regulations	DeIDOT		\$	*	N/A	N/A	N/A	ONGOING	
B	17	56	Evaluate the use of land made available by narrowing lanes for landscape and multi-modal trails or parks	DeIDOT		\$	*	\$\$	**	◊	IN PROGRESS	At this time, the focus will be on multi-modal trails. The SR 1 Low-Stress Bikeways Study is exploring the feasibility of providing multi-modal trails or sidepaths along multiple roads to fill gaps in the low-stress bike network. Generally, the amount of space created by narrowing lanes is not enough to implement a trail project.
B	18	26	Study potential locations and designs for aesthetically pleasing gateways to coastal Sussex County	Sussex County	DeIDOT, City of Lewes, Byway Committee	\$	*	\$\$	**	◊	IN PROGRESS	The Savannah Road Master Plan process was launched in FY 23 and is currently underway. This effort is being funded and supported by DeIDOT, but led by Historic Lewes Byway/Delaware Greenway. The master plan is considering options for a gateway along Savannah Road. A presentation was made to the Mayor and Council of Lewes and an informational public workshop was held in 2023 to gain public input on the project goals. Stakeholders and the public will have the opportunity to provide feedback on draft recommendations including at a public workshop to be held in spring 2024.
B	19	75	Study the feasibility of mounting clear, consistent, day/night address/block numbering signage along Route 1	DeIDOT	Sussex County Tourism	\$	*	\$\$	*	◊	Longer-term	
B	20	80	Consider whether CTP funding should be allocated based on population growth	DeIDOT	Council on Transportation	\$	**	N/A	N/A	N/A	ONGOING	There are nine new Sussex County projects in the FY23-FY28 CTP, 3 of those are in the Five Points area.
B	21	7	Study frequency and causes of emergency vehicle preemption and make recommendations to balance emergency vehicle access with traveler mobility	DeIDOT	Emergency service providers	\$	*	\$\$	*	◊	ONGOING	Minimizing the impact of pre-emption is an ongoing effort. Signal controllers from SR 1 and SR 16 to Collins Street were upgraded on November 28, 2023. Unfortunately, the preemption recovery programming did not work as planned. DeIDOT is working with the vendor and is hopeful to have a solution in 2024. Once the solution is provided to DeIDOT it will be tested and if successful will be implemented as soon as possible. The preempt programming has been modified to help reduce the recovery time to the coordinated cycle length.
B	22	2	Require bike parking as a condition of certain new developments	Sussex County		\$	*	N/A	N/A	N/A	ONGOING	Discussions with developers occur as plans are submitted. Staff make recommendations that bike parking be included in Site Plans as they come through the Planning and Zoning Department for review.
B	23	35	Use an app to warn people of congestion on Route 1 and recommend alternative routes	DeIDOT		\$	*	N/A	N/A	N/A	COMPLETE	DeIDOT app is in place and continually being updated.
B	24	49	Improve tourism-oriented destination signage along Route 1	Sussex County Tourism	DeIDOT	\$	*	\$	*	◊	IN PROGRESS	Sussex County Tourism is taking the lead on this effort in conjunction with municipalities. Coordinate with recommendation A-4. Scott Thomas, Executive Director of Sussex County Tourism joined the Five Points Working Group in 2023 to aid in coordination.
B	25	28	Identify the costs and benefits of dedicating Nassau Commons Boulevard to public use	DeIDOT Planning	Sussex County, property owner	\$	*	\$\$	**	◊◊	IN PROGRESS	The Henlopen TID recommended a project to improve Nassau Commons Boulevard to state standards and become a state-maintained road, which is currently not funded. However, the developer of the Vineyards has agreed to improve a portion near US 9, for TID fee recoupment credit, as part of entrance improvements for future development phases. DeIDOT is investigating right of way issues, including maintenance, for the remaining portion to Janice Road.
B	26	21	Bring in nationally recognized planners and engineers to provide new, creative ideas that draw from examples in other parts of the country	DeIDOT	Sussex County	\$	*	N/A	N/A	N/A	ONGOING	A national expert conducted a peer review of the Kings Highway Project. DeIDOT has been working with Mobycon, a consulting firm headquartered in the Netherlands, to incorporate best practices in the areas of transportation safety and mobility.
B	27	9	Develop a better process for constituents to request transportation improvements	DeIDOT	General Assembly, Sussex County, Council on	\$	*	N/A	N/A	N/A	IN PROGRESS	DeIDOT continues to develop the Project Pipeline Process, a new portal for the public to identify transportation issues and request improvements.

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C. Make the most of existing roadway infrastructure												
C	1	20	Conduct a corridor study on Route 9 to determine the feasibility of widening to four lanes	DeIDOT - Planning		\$\$	**	\$\$\$\$	***	◊ ◊ ◊	IN PROGRESS	The Plantation Road project will complete the widening of Route 9 from Ward Avenue to Route 1. Widening is recommended by the Henlopen TID study, with limits from Ward Avenue to just west of Old Vine Boulevard. A project is programmed in the FY 23 - 28 CTP. The project development process began in October 2021. Construction is tentatively scheduled for Fall 2027-Fall 2029. A public workshop will be scheduled for Spring 2024. The Coastal Corridors Study will began a preliminary evaluation of Route 9 from Old Vine Boulevard through 113, and further study will focus on the area between SR 5 and Old Vine Boulevard.
C	2	72	Conduct a study at Route 9 and Minos Conaway Road to determine if a traffic signal is warranted and install a signal if warranted	DeIDOT - Traffic		\$	*	\$\$	*	◊	COMPLETE	Study is complete, recommending installation of a southbound right-turn lane on Minos Conaway Road and keeping stop sign control. The right turn lane was added to a paving rehabilitation project and construction is complete.
C	3	64	Initiate a capital project to improve the intersection of Old Landing and Warrington Road (developer funding and concept are available)	DeIDOT - PD South		N/A	N/A	\$\$\$	**	◊ ◊	COMPLETE	A project is programmed in the FY 21 - 26 CTP and Preliminary Engineering is funded for FY 23.
C	4	11	Improve the Canary Creek bridge on New Road to reduce flooding	DeIDOT - Bridge		N/A	N/A	\$\$\$	**	◊ ◊ ◊	IN PROGRESS	A project has been initiated under DeIDOT's Bridges/State of Good Repair budget. Online public information meetings were held in June and August 2021, and a public workshop was held in March 2022. Final right of way approval has been received. Construction is anticipated to begin in late 2026.
C	5	92	Improve the intersection of Cave Neck Road, Sweet Briar Road, and Hudson Road	DeIDOT - PD South		\$	*	\$\$\$	**	◊ ◊	IN PROGRESS	Sussex County Council selected this intersection as the first project its FAST program (Funding Accelerating Safety in Transportation). DeIDOT presented alternatives to Council in November. A public workshop was held November 16, 2021. A roundabout was announced as the preferred alternative in 2022. All-way stop control was implemented recently as a interim safety upgrade. DeIDOT is currently in the Right-of-Way acquisition phase of this project. PS&E is scheduled for Fall 2025 with construction beginning in 2026.
C	6	102	Study the feasibility of lengthening left- and right-turn lanes throughout the study area	DeIDOT - Traffic		\$	*	\$\$\$\$	***	◊ ◊ ◊	COMPLETE	DeIDOT Traffic evaluated locations suggested by Five Points Working Group members. All but two have been incorporated into other DeIDOT projects. DeIDOT is looking at the potential to add southbound Route 1 at Dartmouth Drive to the Kings Highway capital project. Southbound Route 1 at Ames Drive will be re-evaluated after changes are completed at Holland Glade Road. Design is underway on southbound Route 1 at Old Landing Rd with a goal of implementation before summer 2023. A pavement rehabilitation project on Minos Conaway Road from Route 9 to Brittany Lane added the right turn lane at US 9.
C	7	104	Study the feasibility of improving Minos Conaway Road with appropriate lane widths, shoulder widths, turn lanes, curvature, etc.	DeIDOT - Planning/Traffic		\$	*	\$\$\$	***	◊ ◊ ◊	IN PROGRESS	A curve compliance study completed in February 2019 and signage improvements were implemented in March 2019. The Henlopen TID study recommended a project to improve Minos Conaway Road. The project is not funded. A paving project added a right turn lane at US 9. Further action on hold pending completion of Minos Conaway GSI.
C	8	103	Study the feasibility of restriping two-lane sections of Savannah Road with a two-way left-turn lane	DeIDOT - Traffic		\$	*	\$\$	**	◊	COMPLETE	DeIDOT's assessment is complete. Providing a two-way left-turn lane is potentially feasible, but there are pros and cons to this idea. Implementation would likely involve more than striping. The Byway Committee is investigating moving forward with a master plan for Savannah Road that will consider whether a two-way left-turn lane should be provided.

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C	9	73	Evaluate potential short-term safety and operational improvements at Route 9, Plantation Road, and Beaver Dam Road while longer-term improvements are under development	DeIDOT Traffic/PD South		\$	*	\$	*	◊	COMPLETE	Signing and striping was implemented in spring of 2020 to better organize and direct westbound Route 9 traffic flow. Direct access to Lowe's from Route 1 may reduce traffic at this location. The design of the access point is complete and now needs to be implemented.
C	10	32	Continue to improve traffic signal phasing, timing and coordination using real time monitoring and control technologies	DeIDOT - Traffic		\$	*	\$	*	◊	ONGOING	This is a core function of DeIDOT Traffic, and is done on an ongoing basis. Pre-emption improvements are in progress; see recommendation B-21. New adjustments to the traffic responsive parameters were installed July 15, 2023. Volume and turning movement data that was collected during the summer months of 2023 has been analyzed, findings will be reviewed by DeIDOT late winter/early spring 2024.
C	11	68	Develop concepts and estimates for bringing roads in the study area to DeIDOT standard, including shoulders	DeIDOT		\$\$	**	\$\$\$\$\$	***	◊◊◊	COMPLETE	In 2020 the Working Group clarified that C-11 applies to state roads. The Henlopen TID study addressed state-maintained roads west of SR 1 and developed estimates for bringing them up to DeIDOT standard with 11-foot lanes and shoulders per functional classification. The main roadways east of Route 1 are in the CTP or are being studied by others.
C	12	98	Study access management opportunities along Route 1 in the study area, including potential connections between businesses	DeIDOT	Sussex County	\$	*	\$\$\$	**	◊◊◊	ONGOING	An agreement between Lowe's and DeIDOT has been executed to provide access to Lowe's from Route 1 through the Lewes Transit Center property. Sussex County is actively pursuing interconnectivity in all commercial projects along Route 1.
C	13	22	Study the feasibility of eliminating unsignalized crossovers on Route 1	DeIDOT		\$	*	\$\$	**	◊	Longer-term	This recommendation refers to crossovers between Five Points and Route 24.
C	14	51	Study the feasibility of installing a "YOUR SPEED" display on southbound Route 1 at Nassau Road	General Assembly	DeIDOT	\$	*	\$	*	◊	COMPLETE	Area legislators supported the installation of this sign using their Community Transportation Funds. The radar speed sign was installed August 18, 2021.
C	15	38	Study the feasibility of lengthening the southbound acceleration lane on Route 1 at Minos Conaway Road	DeIDOT		\$	*	\$\$	*	◊	COMPLETE	Construction was completed in spring 2020.
C	16	84	Study the feasibility of providing driveway access from Beacon Middle School and Love Creek Elementary School onto Mulberry Knoll Road	DeIDOT	Sussex County, Cape Henlopen School District	\$	*	\$\$\$	**	◊◊	IN PROGRESS	The Five Points project team met with Cape Henlopen School District in July 2022. CHSD is open to ideas to improve traffic circulation in the vicinity of Beacon Middle School and Love Creek Elementary School. There are significant backups on Route 24/John J Williams Highway during arrival and dismissal. Currently, Beacon Middle uses 13 buses at departure and Love Creek uses 10 buses at departure; however, only 2 buses turn left on Mulberry Knoll Road. The project team is in discussions with Delaware State Police and Sussex County to determine the viability of new driveway access to Mulberry Knoll Road.
C	17	27	Conduct capacity analyses at study area intersections to identify the need for turn lanes	DeIDOT		\$\$	*	\$\$\$\$	**	◊◊	COMPLETE	Study area intersections have been assessed by DeIDOT Traffic as part of Recommendation C-6 and necessary improvements have been incorporated into CTP projects as appropriate.
C	18	60	Improve lane markings and signs at identified intersections: Five Points, Dartmouth Drive/Kings Highway, Plantation Road/Beaver Dam Road	DeIDOT		\$	*	\$	*	◊	COMPLETE	All identified intersections have been assessed by DeIDOT Traffic and addressed by DeIDOT maintenance, DRBA Maintenance, or incorporated into CTP projects.
C	19	78	Study the feasibility of an all-way STOP at Beaver Dam Road and Kendale Road	DeIDOT		\$	*	\$	*	◊	COMPLETE	Eight reportable crashes occurred at the intersection over the three years from March 2015 – March 2018. Based on the crash type, an all-way STOP may not be an appropriate countermeasure, with the curvature of the roadway and potential to increase rear-end crashes. A roundabout was studied but is not adequate for 2045 traffic. The Henlopen TID study recommended a traffic signal by 2045; it will be installed when a signal warrant is met.
C	20	48	Study the feasibility of replacing the HAWK signal with a full signal at Holland Glade Road, potentially with a fourth leg at the outlets	DeIDOT - Development Coordination		\$	*	\$\$	*	◊	COMPLETE	In conjunction with proposed development of Coastal Station on Route 1 at Holland Glade Road, the HAWK signal will be removed and replaced with a full signal and a four-way intersection. The intersection is now in final design.

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D. Make walking, bicycling, and transit more viable as alternatives to driving												
D	1	79	Study the feasibility of a hop-on, hop-off van or jitney service loop for Lewes similar to free service in Cape May (Five Points, hospital, Lloyds Grocery Store, downtown Lewes, Library, Lewes Beach, Ferry, State Park, etc.)	City of Lewes, DRBA	DTC, DNREC	\$	*	\$\$	*	◊	COMPLETE	DTC provided the City of Lewes with small cutaway (paratransit sized) buses that they could operate as jitneys. Lewes started "Lewes Line" service as a pilot in May 2022 that included stops at the Cape-May Lewes Ferry, Johnny Walker Beach, Savannah Beach, the Otis Smith Lot, Second and Market Streets, George H.P. Smith Park, Lloyd's Market and the Lewes Public Library. Service expanded in summer 2023 to include the Villages of Five Points, Zwaanendael Museum along Savannah Road, and Bay Breeze and Jefferson Apartments.
D	2	5	Study the feasibility of potential connections for walking and bicycling between existing neighborhoods, along streets, and to trails	Sussex County (as part of comprehensive plan)	DeIDOT - Planning	\$\$	*	\$\$\$	***	◊◊	IN PROGRESS	The SR 1 Low-Stress Bikeway Study is underway to evaluate the potential for routes both parallel to and crossing Route 1. The results of the pedestrian bridge study in recommendation D-6 will be incorporated into this effort. Coordinate with D-6 and D-10.
D	3	96	Develop design guidance to separate pedestrians and bicyclists from highway traffic using aesthetic treatments	DeIDOT	Sussex County	\$	*	TBD	TBD	TBD	IN PROGRESS	DeIDOT Planning is drafting a Complete Streets Design Guide that will offer design guidance for roadways including bike and pedestrian facilities. The plan is currently in draft form and was posted for public comment in 2023.
D	4	90	Develop concepts and estimates for filling all sidewalk gaps along New Road and Old Orchard Road	DeIDOT - Planning		\$	*	\$\$\$	**	◊◊◊	IN PROGRESS	Portions will be built by current CTP projects on Old Orchard Road and SR 1/Minos Conaway Road, as well as by developer projects. The New Road Master Plan will identify remaining gaps on New Road. A gap remains on Old Orchard Road between the Trail and New Road. DeIDOT inventoried remaining gaps in FY 23.
D	5	71	Develop concepts and estimates for filling all sidewalk gaps along Savannah Road between Lewes and Five Points	DeIDOT - Planning		\$	*	\$\$\$	**	◊◊◊	IN PROGRESS	The Savannah Road Sidewalk project started construction November 1, 2021 and has been completed. It places sidewalk on the south side of Savannah Road from Quaker Road to the G&L Trail. The Old Orchard Road relocation project will add sidewalk in the project limits. DeIDOT will inventory remaining gaps in FY 23 and report to the Byway Committee. The Byway Committee has begun the Savannah Road Master Plan process. To be coordinated with C-8.
D	6	52	Study the feasibility of pedestrian bridges over Route 1 at specific locations	DeIDOT		\$	*	\$\$\$	***	◊◊	IN PROGRESS	Initial candidate locations have been identified: the Five Points intersection area, the Lewes Transit Center area, and near Rehoboth Outlets (Surfside). Further evaluation, including public input, will be conducted as part of the SR 1 Low-Stress Bikeway Study. Coordinate with D-2 and D-10.
D	7	59	Study the feasibility of transit service to tie the Milton/Red Mill Pond/Minos Conaway Road area into the transit network	DTC		\$	*	\$\$	*	◊	IN PROGRESS	DTC studied the feasibility of providing traditional fixed route transit service to Milton/Red Mill Pond/Minos Conaway Road area and presented the findings to the 5 Pts. Transportation Advisory Group in January 2020 as not feasible at this time. DTC has improved service connections for transit transfers between Routes 206 and 303, which make the connection from the Lewes Transportation Center to Milton, but other factors in the schedules prevent them from being seamless. DTC is studying other types of non-traditional transit service options to this area that are better suited to operate given the economic, road geometry and environmental factors. Statewide, DTC is looking to create micro transit service delivery options in select areas, to operate as a pilot. Additionally, DTC will be applying for grants to support these proposals. The on-demand services mentioned in D-1 for Lewes could serve Milton in the future.

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D	8	81	Study the feasibility of a park and ride lot on Route 24 at the edge of the study area	DTC	DeIDOT	\$	*	\$\$\$	**	◊ ◊ ◊	IN PROGRESS	DTC supports implementing a Park and Ride along Route 24. Discussions have begun with area businesses regarding park and ride locations along the Route 24 corridor, however none are interested. No local landowners are interested in partnering on this initiative. DTC is trying to find another location that would be feasible.
D	9	23	Identify potential connections to and from the Lewes Transit Center	DeIDOT		\$	*	\$\$	**	◊	IN PROGRESS	Being examined as part of the SR 1 Low Stress Bikeway study. FY 2023-28 CTP has a project on Shady Road including pedestrian/bicycle improvements.
D	10	6	Study the feasibility of a barrier in the median of Route 1 to deter pedestrian crossings at inappropriate locations	DeIDOT		\$	*	\$\$\$	**	◊	IN PROGRESS	Evaluations are being conducted in conjunction with recommendations D-2 and D-6. A median barrier was discussed as part of the Route 1 Pedestrian Safety Task Force that produced a report in January 2014. Traffic is working on a project nomination for the consideration of a median barrier type treatment along the entire length of SR 1 in Sussex County.
D	11	67	Study the feasibility of providing shelters at bus stops - Context Sensitive i.e. cottage beach style shelters	DTC		\$	*	\$\$	*	◊	COMPLETE	DTC has upgraded and improved transit shelters in the Five Points study area with its new statewide standard shelter. 13 shelters were installed in the Rehoboth Beach/Lewes area and along the Route 1 corridor at the higher ridership locations in 2020 and 7 more bus shelters were installed in 2021. DTC will continue to evaluate bus stops for shelters.
D	12	41	Identify publicly- and privately-owned land in the study area that may be used for trails	DeIDOT		\$	*	\$\$\$\$	***	◊ ◊	IN PROGRESS	Coordinate with recommendation B-17. The SR 1 Low-Stress Bikeways Study is exploring the feasibility of providing multi-modal trails or sidepaths to fill gaps in the low-stress bike network between Lewes and Rehoboth. The Lewes Bike Plan (underway 2023/2024) is exploring options within City limits.
D	13	1	Identify locations in the study area where bike parking can be provided	DeIDOT	Sussex County	\$	*	\$	*	◊	IN PROGRESS	This effort can be combined with B-18 (multi-modal trail) and Low-Stress Bikeway Study. DeIDOT installs bike parking as part of capital projects where appropriate, for example along the Georgetown-Lewes Trail where kiosks are located. Through the Development Coordination, bike parking is recommended for commercial developments. Bike parking recommendations will be included as part of the Lewes Bike Plan, which will be completed the spring of 2024.
D	14	43	Study the feasibility of signing and/or pavement markings that will improve bicyclist comfort turning left from Dartmouth Drive onto Route 1	DeIDOT - Traffic		\$	*	\$	*	◊	COMPLETE	A bike box is not feasible at Dartmouth Drive. Bicyclists may cross SR 1 with pedestrian signals. Additional safety measures may be considered as part of the Kings Highway CTP project, which includes this intersection.
D	15	47	Study opportunities for pedestrian crossings on Kings Highway and Freeman Highway	DeIDOT, DRBA		\$	*	\$\$	**	◊	COMPLETE	Signs were installed in May 2018. Pedestrian crossings of Kings Highway were provided at the signal at Clay Road. Improved pedestrian crossings were installed at the signal at Kings Highway and Gills Neck Road in 2022. By agreement between a developer, the City of Lewes, and DeIDOT, a new signal has been installed at Freeman Highway and Monroe Avenue which includes a crosswalk across Freeman Highway. A Rectangular Rapid Flashing Beacons (RRFB) were confirmed to be operational on 12/30/2021 at the trail crossing of Freeman Highway near Cape Henlopen Drive. Additional pedestrian facilities will be included with the Kings Highway CTP project as proposed by the Kings Highway/Gills Neck Road Byway Master Plan. The Kings Highway CTP project has started and a public meeting was held in February 2022. The project has been reviewed by a "national expert" and a public workshop will be scheduled to review the project (date TBD).

**FIVE POINTS TRANSPORTATION STUDY
IMPLEMENTATION PLAN STATUS REPORT**

February 26, 2024 (red text indicates changes since October 23, 2023 meeting)

\$ < \$200K * <3 years ◊ Low
 \$\$ \$200K - \$2M ** 3-10 years ◊ ◊ Medium
 \$\$\$ \$2M - \$20M *** >10 years ◊ ◊ ◊ High
 \$\$\$\$ \$20M - \$200M
 \$\$\$\$\$ > \$200M

Category	ID	Old idea no.	Working Group recommendation	Assumed lead agency	Other responsible parties (if any)	Study cost	Study timeframe	Imp. cost	Imp. timeframe	Imp. impacts	Status	Remarks
E. Invest in new infrastructure to support anticipated growth												
E	1	66	Study the feasibility of a grade separation at Five Points	DeIDOT - Planning		\$\$	**	\$\$\$\$	***	◊ ◊ ◊	Longer-term	This effort will depend on the results of studies under A-7, E-2, and E-3. Additionally, the shorter term improvements and CTP projects will impact the scope of the study. DeIDOT has reviewed prior GSI studies and is developing a strategy for initiating a new study.
E	2	70	Evaluate the potential transportation benefits, costs, and impacts of a new road parallel to Plantation Road connecting Mulberry Knoll Road to Route 9; require any new development in this area to build this road to state specifications one parcel at a time	DeIDOT - Planning	Sussex County	\$\$	**	\$\$\$\$	***	◊ ◊ ◊	COMPLETE	This idea was recommended by the Henlopen TID study. DeIDOT initiated a planning study for this effort, and the Mulberry Knoll Road Extension Report was finalized in June 2022. Preliminary engineering for this project was included in the FY 23-28 Capital Transportation Program which was approved by FHWA and FTA as of November 16, 2022. Coordinate with A-7 and E-3.
E	3	8	Develop a plan for grid road patterns where land is available, working with property owners and developers, including a series of roads that connect Route 9, Route 23, and Route 24 between Plantation Road and Dairy Farm Road	DeIDOT - Planning	Sussex County, property owners and developers	\$\$	**	\$\$\$\$	***	◊ ◊ ◊	IN PROGRESS	Idea is recommended by the Henlopen TID study. The TID identified grid connections, but only between Plantation Road and Mulberry Knoll Road. The County Master Plan requires connections related to US 9 when large parcels are developed along that corridor. Coordinate with A-7 and E-2.
E	4	29	Evaluate the potential transportation benefits, costs, and impacts of a new road connecting Route 1 north of Five Points and the Vineyards	DeIDOT		\$\$	**	\$\$\$	***	◊ ◊ ◊	COMPLETE	The benefits, costs, and impacts of a new road connection have been evaluated. Vineyards has now signed the TID Agreement for future phases. DeIDOT and Sussex County will continue to coordinate with incoming developers throughout the development review process, however, there is no regulation requiring a new connection.
E	5	44	Look at east/west traffic as a system: Minos Conaway (starting at Route 9), New, Old Orchard, and Clay Roads	DeIDOT - Planning, PD South		\$\$	*	TBD	TBD	TBD	Longer-term	
E	6	57	Study the feasibility, benefits, costs, and impacts of potential service roads along Route 1, including whether narrowing the median would facilitate provision of service roads	DeIDOT		\$\$	**	\$\$\$\$\$	***	◊ ◊ ◊	IN PROGRESS	There is insufficient median remaining along Route 1 to facilitate the provision of service roads.
E	7	77	Evaluate the potential transportation benefits, costs, and impacts of a new through road connecting Postal Lane with the intersection of Old Landing Road/Airport Road	DeIDOT		\$\$	**	\$\$\$	***	◊ ◊ ◊	IN PROGRESS	Airport Road extension (Old Landing Road to SR 24) is funded for preliminary engineering in FY 23. Extension from SR 24 to Postal Lane is recommended by the Henlopen TID study, but there is no project.
E	8	85	Evaluate the potential transportation benefits, costs, and impacts of a new road to connect Route 24 near Beacon Middle School with Old Landing Road near Arnell Creek	DeIDOT		\$\$	**	\$\$\$	***	◊ ◊ ◊	Longer-term	
E	9	30	Revisit and consider feasibility of recommendations from 2003 SR 1 Land Use and Transportation Study	DeIDOT		\$\$	*	\$\$\$\$\$	***	◊ ◊ ◊	IN PROGRESS	