

2026 NJ COMPLETE STREETS SUMMIT

# Middlesex County Vision Zero Action Plan and Safety Initiatives

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# DESTINATION 2040

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MIDDLESEX COUNTY ♦ NJ  
STRATEGIC PLAN

## Our Path Forward

- 20-year vision for Middlesex County
- Roadmap for how to align priorities and advance initiatives
- Five broad focus areas aligned with County Departments and offered services
- Each focus area includes:
  - Long-term Vision
  - Goals and Objectives
  - Strategic Initiatives
  - Action Plans
- Overarching issues guiding strategies:
  - Climate Change
  - COVID-19
  - Equity and Diversity



# Destination 2040 Strategic Plan



## Plan Framework

- Economic and Workforce Competitiveness
- Transportation and Mobility
- Land Use, Development, and Housing
- Community Resilience
- Healthy, Safe and Inclusive Communities

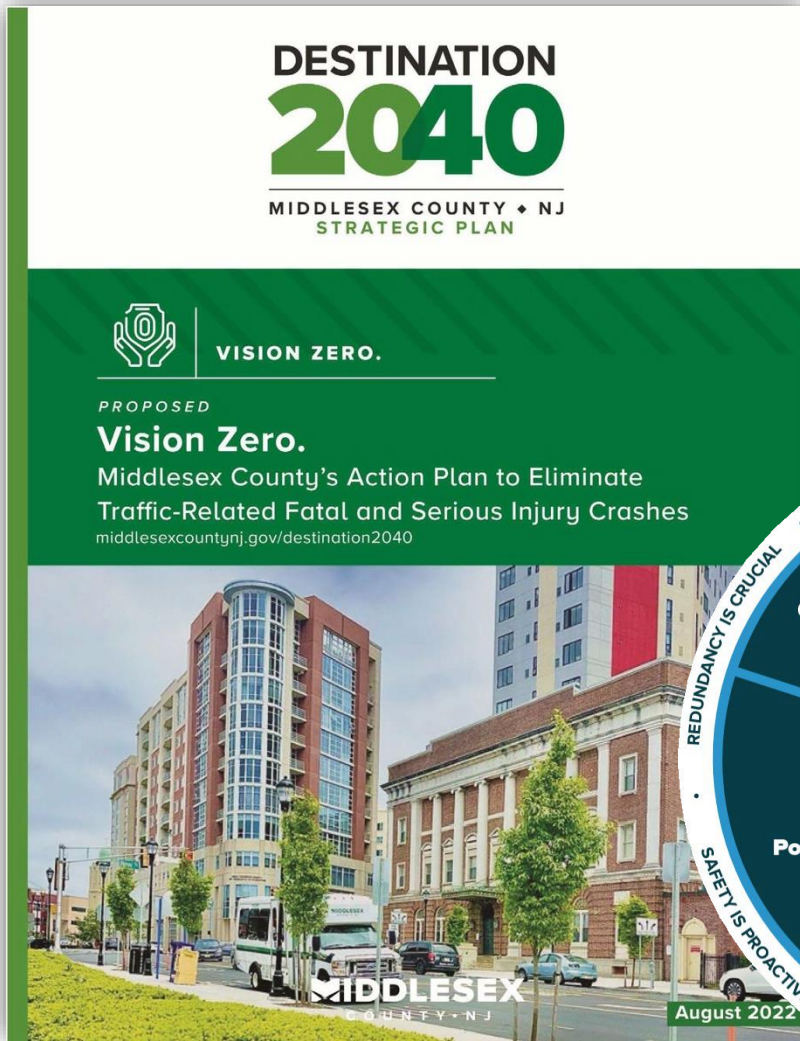
## Targeted Strategies

(Specific to Safety)

- Implement the first countywide **Vision Zero initiative** in New Jersey.
- Adopt a **Complete and Green Streets Policy**.



# Vision Zero



## Middlesex County Vision Zero Action Plan

JULY 21, 2022

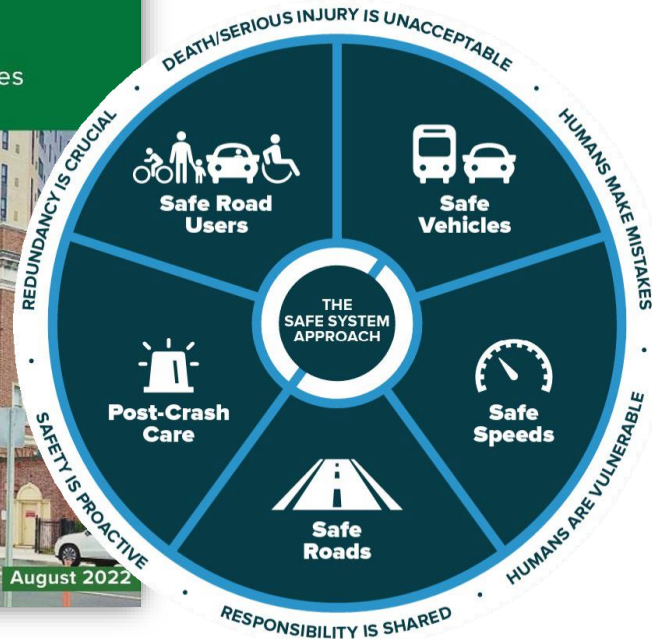
BOARD OF COUNTY COMMISSIONERS ADOPT A VISION ZERO PLEDGE

AUGUST 10, 2022

VISION ZERO PARTNERSHIP KICKOFF MEETING

SEPTEMBER 1, 2022

BOARD OF COUNTY COMMISSIONERS ADOPT THE VISION ZERO ACTION PLAN



# Vision Zero Pledge

Middlesex County is committed to eliminating traffic fatalities and serious injuries on roadways in the county by 2040.

Middlesex County will work in partnership with municipalities, agencies, and other stakeholders to achieve this goal.

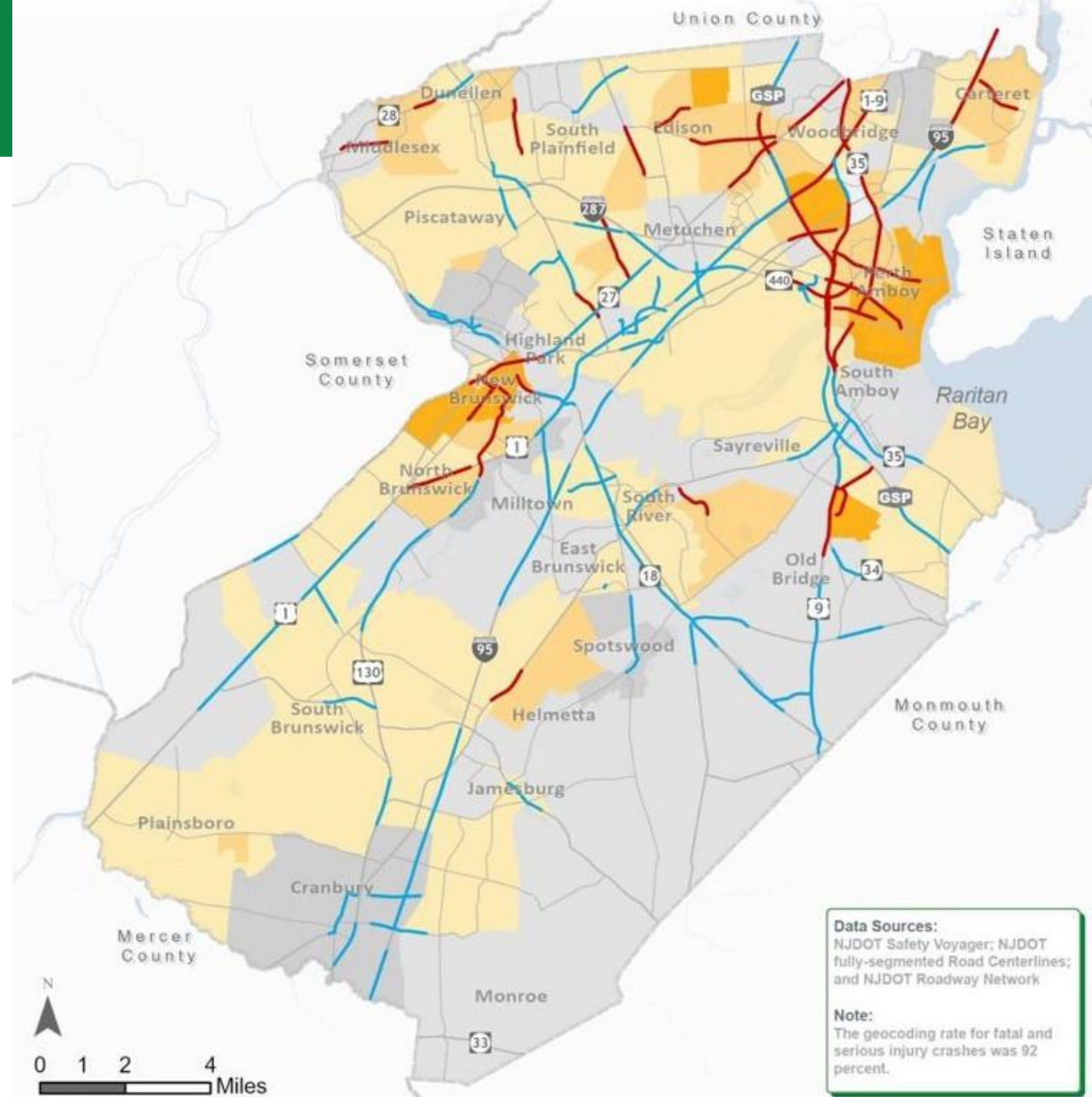
*-Middlesex County Board of County Commissioners*

*July 21, 2022*



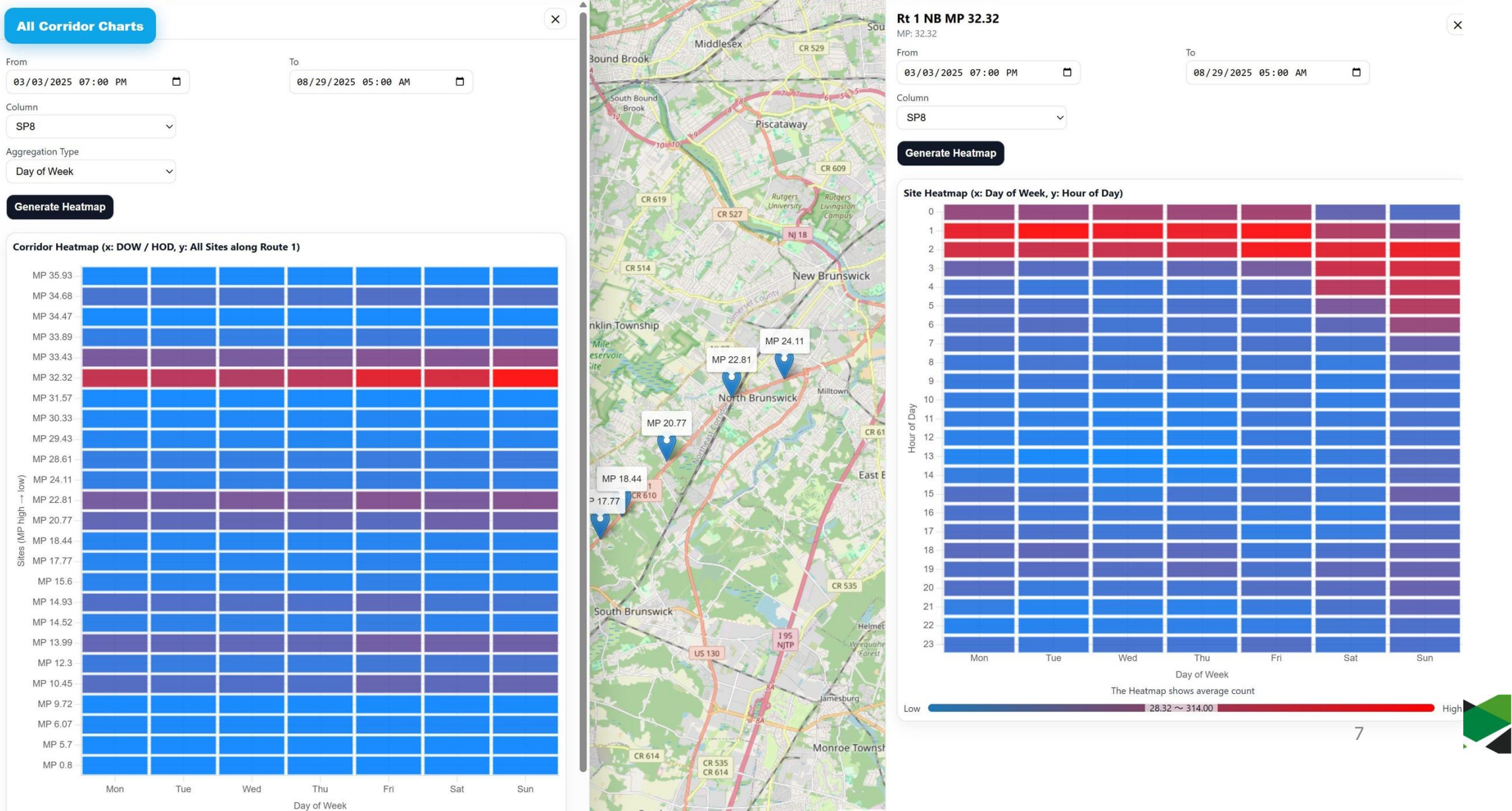
# High Injury Network

## HIN BY INDICATORS OF POTENTIAL DISADVANTAGE



# US-1 Speed Violation Visualization

## (For Enforcement by County Prosecutor's Office in Support of Vision Zero)



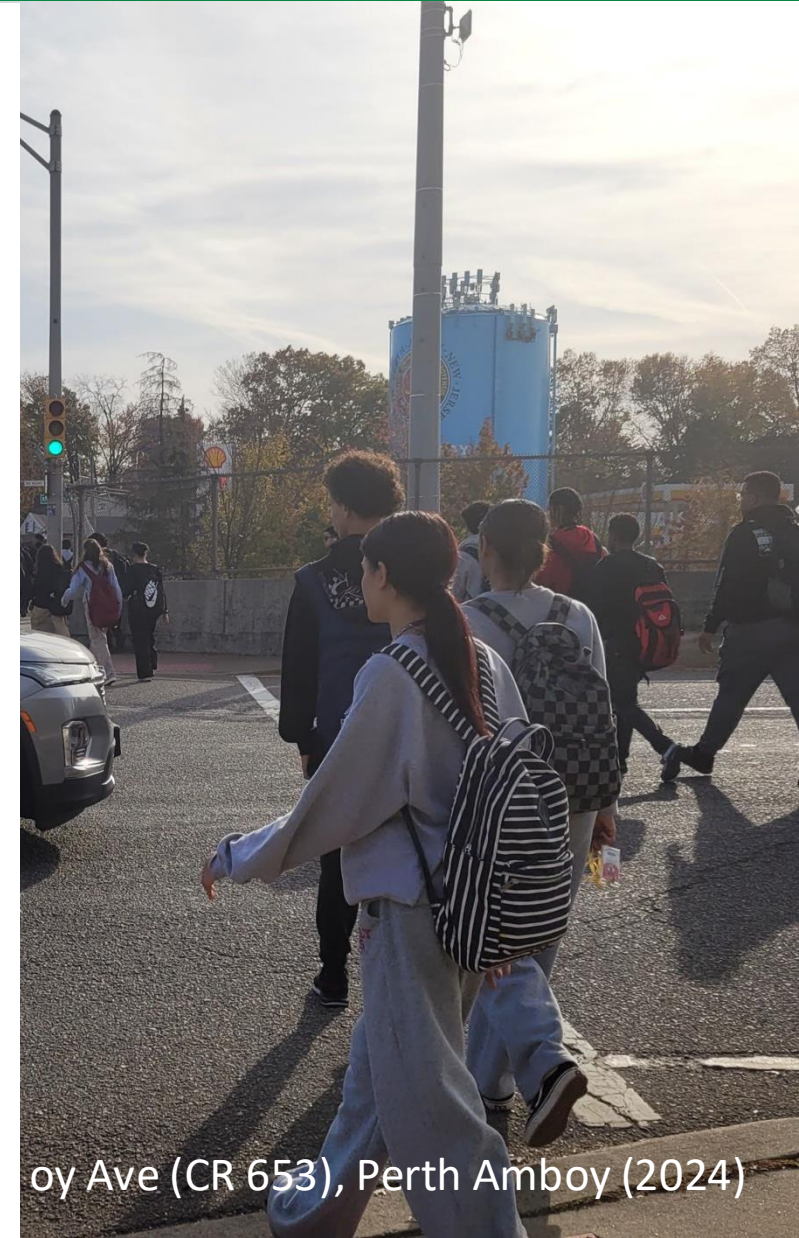
# Complete Streets Policy (work underway)

**“Adopt NJDOT’s model complete and green street policy as County policy. Encourage municipalities to follow suite”**

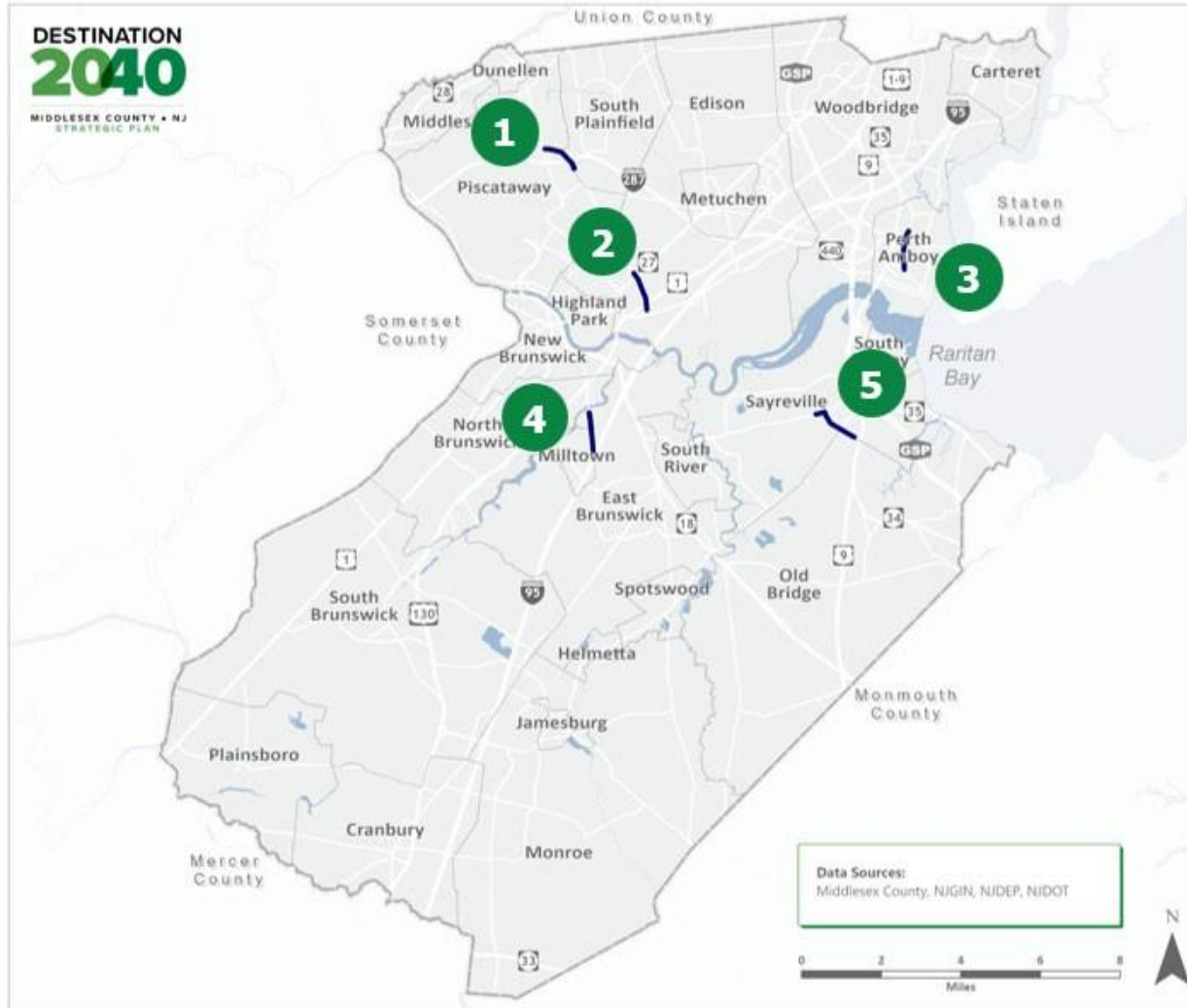
- D2040 Strategic Initiative T2

**“Establish continuous Complete Street networks...”**

- Middlesex County Vision Zero Action Plan Item SR5



# Road Safety Audits for Five Corridors



**Map 1: Road Safety Audit (RSA) Corridors**

**MIDDLESEX COUNTY • NJ**  
Middlesex County Road Safety Audits, 2024

**Legend**

- RSA Corridors
- ▭ Middlesex County
- ▭ Municipalities of Middlesex County
- ▭ Water Bodies

*Prepared: September 20, 2024*  
*By: Middlesex County Office of Planning*



# Examples of Safety Improvements Through RSAs

- **Years of safety successes within the County thanks to Road Safety Audits (RSAs)**

- Road diet/redesign of Livingston Avenue
- Signalization/ADA improvements by NJ TRANSIT New Brunswick Station.

## LIVINGSTON AVENUE BEFORE & AFTER



# Grant Funded Projects

- **Ryder's Lane Shared Use Path** – Congressional earmark funding
- **Oak Tree Road Safety Improvements** – TASA funds
  
- **Ryder's Lane Pedestrian and Safety Enhancements** – BUILD grant application (pending)



# DataCity Smart Mobility Testing Ground



# DataCity Timeline and Milestones (2024-2025)



Jan. 2024

- \* 8 Sites
- \* Real-time Feeds
- \* Road Weather Study

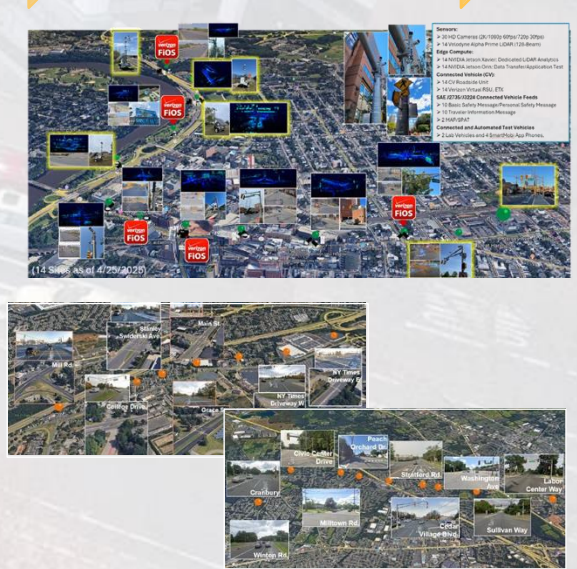
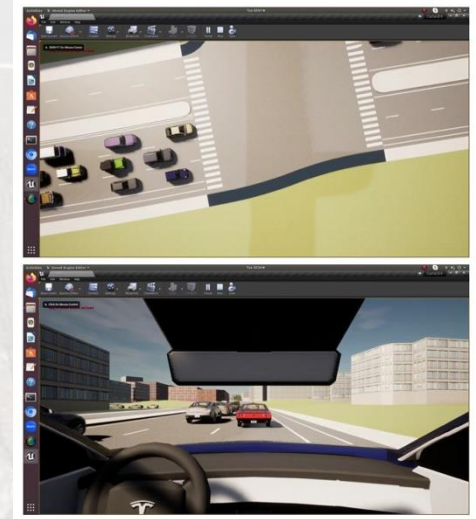
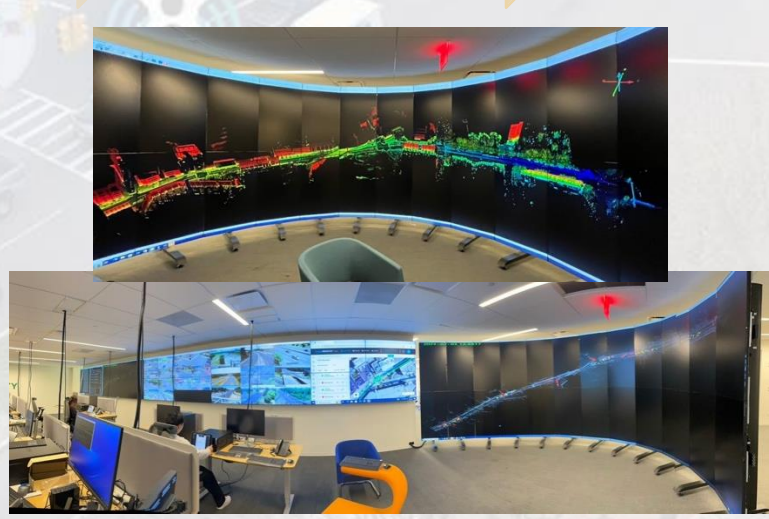
Mar. 2024  
DataCity 400TB Data Migration Showcase Dataset

June 2024  
DataCity Control Center in Operations

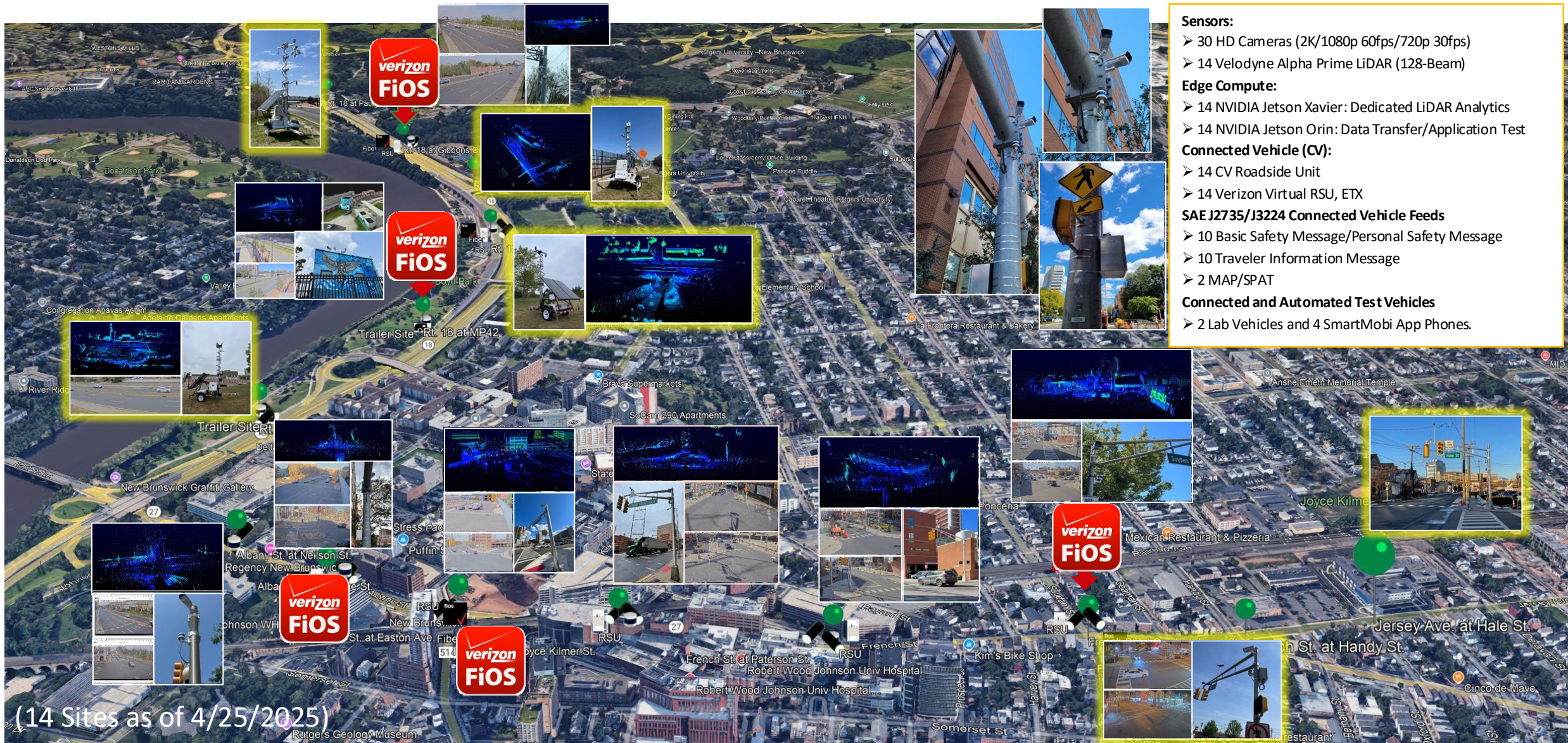
August 2024  
Digital Twin Modeling and Route 18 Trailer Sites

Nov. 2024  
New Brunswick Pilot for School Safety

Apr. 2025  
14 Sites completed  
\* Data > 1.2PB  
Expansion Planning



# DataCity Testbed 2025 (14 Sites as of 4/25/25, New Brunswick, NJ)



# DataCity Control Center

## Control Center Functions and Capabilities

### Functions

- Central computing
- Data analytics and sharing
- Application Testing

- **Components:**

- Video wall
- TMC Console Workstation, performs traffic operation
- 1.5 Petabyte Storage nodes to store, send, and receive data
- AI Analytics: 4 x NVIDIA A100 GPUs
- TMC Network Switch (aka bridging hub)
- Wireless Access Point and Wireless AP controller
- Firewall Appliance (hardware and software)



# Vision Zero Pledge and DataCity

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*-Middlesex County Board of County Commissioners  
July 21, 2022*

## **DataCity's first-wave of CAV application testing and pilots:**

1. BlueCity AI Intersection Safety Analytics Platform (historical data)
2. PedSafe Radar-based School Zone Safety System (Jersey@Hale)
3. Speed Violation Visualization Platform for Law Enforcement Campaign Planning
4. SAE J2735 SPaT and J3224 SDSM based Pedestrian on-crosswalk warning

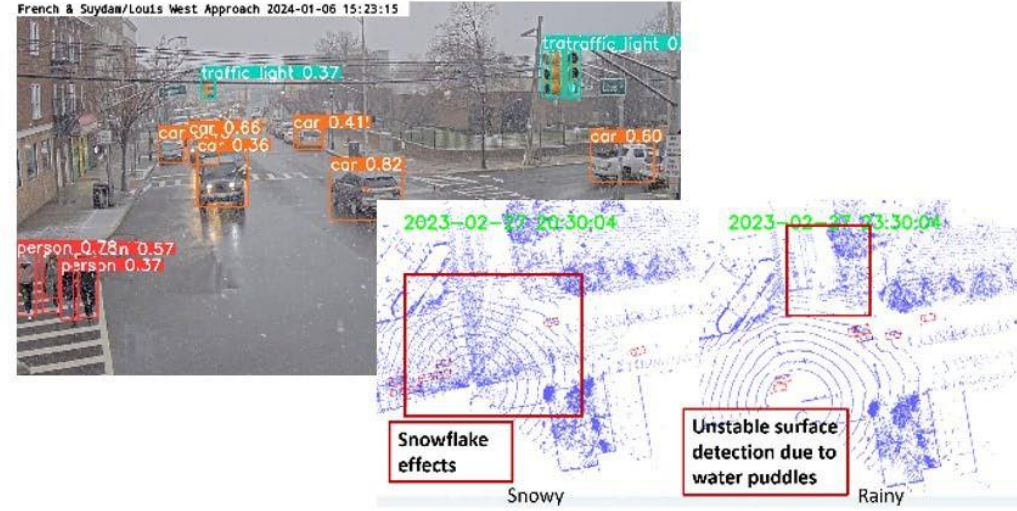


# School Zone Pedestrian Safety Pilot

## Out-of-Crosswalk Pedestrian Activities



## Road Weather Video/LiDAR Data



## Vulnerable Road Users (K-12 Students)

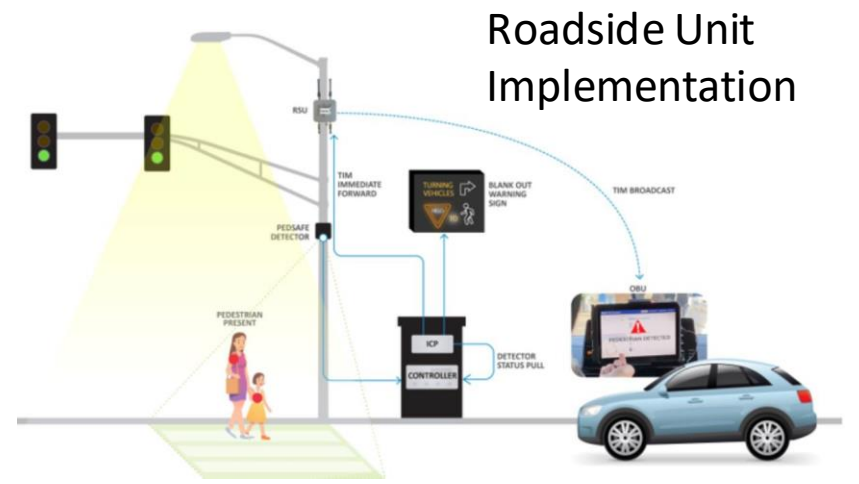


## Vulnerable Road Users (Cranes and Wheelchair)

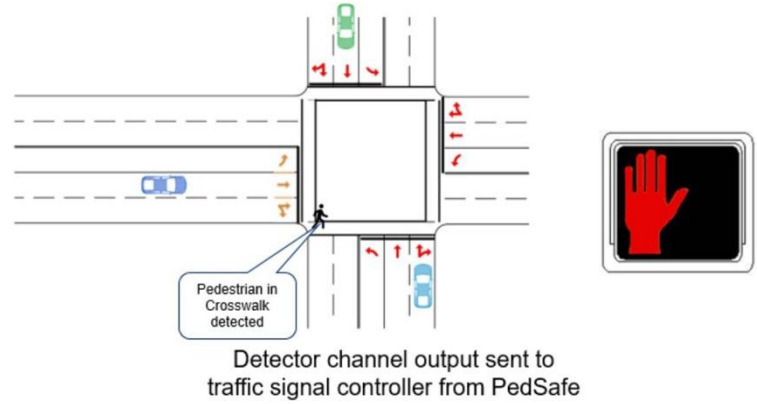


# Jersey Ave. @ Hale St. Intersection Pilot

## Blanquita B. Valenti Community School, New Brunswick



**Red Clearance Extension due to Pedestrian**  
 Detect Pedestrian in Crosswalk and don't start conflicting phase until crosswalk is clear



Radar Sensors for each crosswalk



PedSafe Warning Signs

Installed Dec. 2-3, 2024 in collaboration with Iteris Inc.



# Jersey Ave. At Hale Street Crosswalk Activity and Safety Analytics



# DataCity Technology 2025-2026 Expansion

## DataCity Expansion – Woodbridge Ave. (2025)



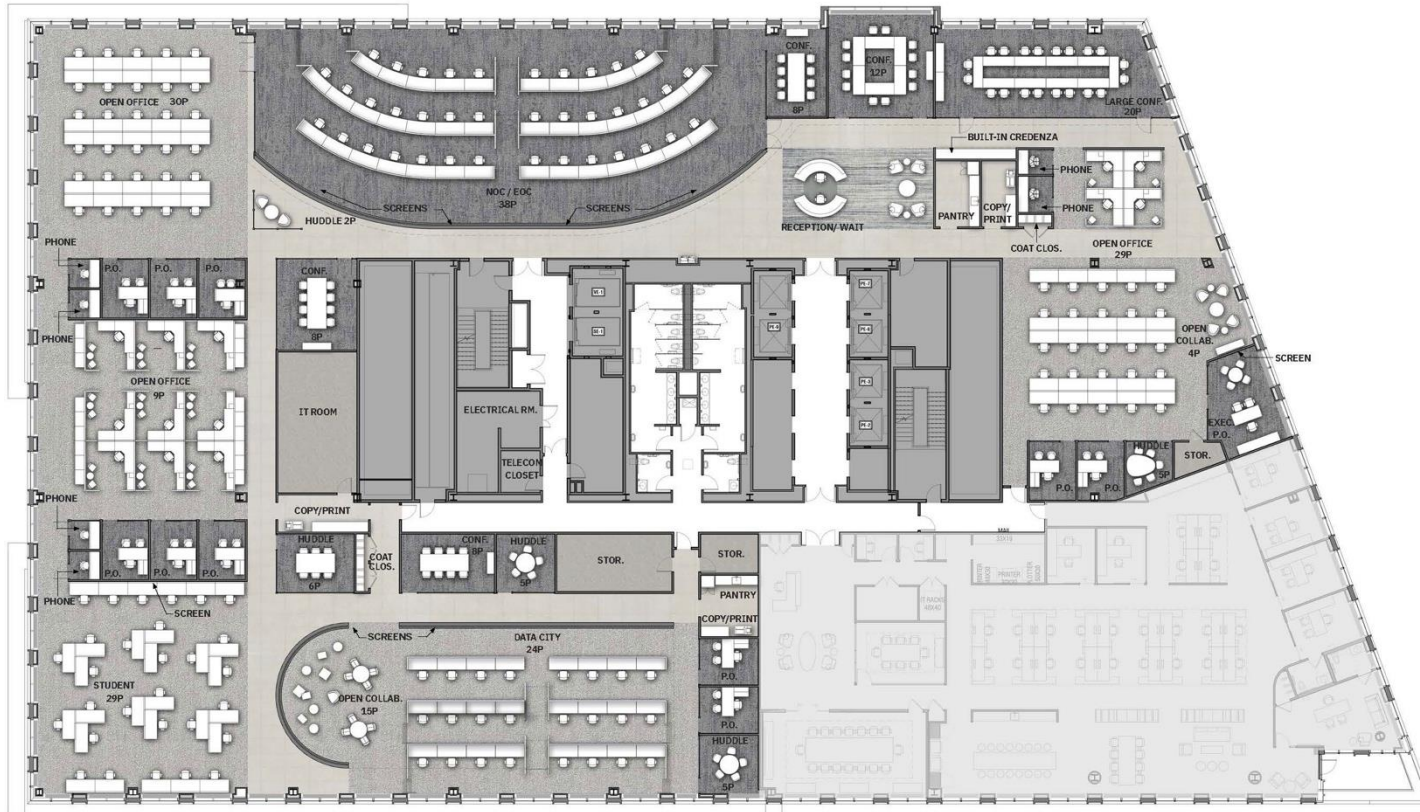
## DataCity Expansion – French/Easton Corridor



## DataCity Expansion – Ryders Lane (2026)



# New Middlesex County Network Operations Center (NOC)



## Middlesex County Network Operations Center (NOC) at HELIX

- 26,400 sq.ft of state-of-the-art new Network Operations Center facility
- Designed to serve as a Crisis Management Center in an emergency
- Dedicated space for DataCity Smart Mobility Testing Ground Control Center
  - Flat and Curved video wall sections
  - Student collaboration space
  - PI Offices
  - Conference facilities
- Anticipated Summer of 2026



# MIDDLESEX

C O U N T Y ♦ N J

