



TIP ACTIONS

Transportation Improvement Program

New Jersey TIP (FY2022-2025)

Pennsylvania TIP (FY2021-2024)

DVRPC Board | March 2022





To match with the FY2022 DRPA Capital Budget and with *anticipated* funds from the Bipartisan Infrastructure Law, DRPA/PATCO actions (Board, Administrative, and Informational) reflect:

- DRPA actions (Board, Administrative, and Informational) reflect a \$10.1 M DRPA/PATCO program increase to \$94 M over First-Four Years (FY22-25)
- Actions include a \$29.7 M total increase in Later FY26-31
- 10-year difference: \$39.8 M increase

Electrical Cable Replacement

DRPA/PATCO | Add Project Back into the TIP

- **TIP Amendment**
- **Action:** Add project back into TIP for FY22-25 Engineering/Right of Way/Construction (ERC) for \$3.85 million (M) SECT 5337/DRPA
- **Reason:** DRPA/PATCO anticipates funding from the Bipartisan Infrastructure Law (BIL); match FY2022 DRPA Capital Budget
- **Background:**
 - *Previous FY2020 TIP project*
 - *\$3.85 M total cost*
 - *Line item provides for systemwide replacement of electrical cable to improve reliability and fire resistance of PATCO Speedline*

TIP ACTION | Proposed - NJ

Requests Board Approval of TIP Amendment

Electrical Cable Replacement

Add \$3.85 M project to the TIP for FY22-25 ERC



PATCO Station Platform Rehabilitation

DRPA/PATCO | Cost Increase (First-Four Years of TIP)

- **TIP Modification**
- **Action:** Increase FY22-25 ERC by \$600,000;
decrease FY26-31 ERC by \$15.6 M SECT 5307/DRPA
 - *10-year difference: \$15 M decrease*
- **Reason:** Updated cost estimates; match FY2022 DRPA Capital Budget
- **Background:**
 - *Line item provides for planning, design, and reconstruction activities of PATCO station platforms*

PATCO Viaduct Preservation

DRPA/PATCO | Cost Increase (First-Four Years of TIP)

- **TIP Modification**
- **Action:** Increase FY22-25 engineering/construction (EC) by \$6.5 M and FY26-31 EC by \$6.25 M SECT 5337/DRPA
 - *10-year difference: \$12.75 M increase*
- **Reason:** Updated cost estimates; match FY2022 DRPA Capital Budget
- **Background:**
 - *Line item to improve and protect Collingswood and Westmont viaducts*

PATCO Interlocking & Track Rehabilitation

DRPA/PATCO | Cost Increase (First-Four Years of TIP)

- **TIP Modification**
- **Action:** Increase FY22-25 EC by \$5.3 M and FY26-31 EC by \$14.7 M
SECT 5307/DRPA
 - *10-year difference: \$20 M increase*
- **Reason:** Updated cost estimates; match FY2022 DRPA Capital Budget
- **Background:**
 - *Line Item to rehabilitate and replace interlockings, rail bed, and other rail improvements to ensure overall PATCO system safety, reliability, and minimize service disruptions*

PATCO Stations Modernizations

DRPA/PATCO | Cost Decrease (First-Four Years of TIP)

- **TIP Modification**
- **Action:** Decrease FY22-25 EC by \$3.5 M and increase FY26-31 EC by \$15 M SECT 5337/DRPA
 - *10-year difference: \$11.5 M increase*
- **Reason:** Updated cost estimates; match FY2022 DRPA Capital Budget
- **Background:**
 - *FY22-25 decrease from \$9.5 M to \$6 M*
 - *Line Item to modernize all PATCO commuter stations and extend the useful life of the stations and their major components*

TIP ACTION | Proposed - NJ

Request Board Approval of TIP Modifications

- **PATCO Station Platform Rehabilitation**

Increase FY24-25 ERC by \$600,000 SECT 5307/DRPA

Decrease FY26-31 ERC by \$15.6 M SECT 5307/DRPA

10-year difference: \$15 M decrease

- **PATCO Viaduct Preservation**

Increase FY22-25 EC by \$6.5 M SECT 5337/DRPA

Increase FY26-31 EC by \$6.25 M SECT 5337/DRPA

10-year difference: \$12.75 M increase



TIP ACTION | Proposed - NJ

Request Board Approval of TIP Modifications



- **PATCO Interlocking & Track Rehabilitation**

Increase FY22-25 EC by \$5.3 M SECT 5307/DRPA

Increase FY26-31 EC by \$14.7 M SECT 5307/DRPA

10-year difference: \$20 M increase

- **PATCO Stations Modernizations**

Decrease FY22-25 EC by \$3.5 M SECT 5337/DRPA

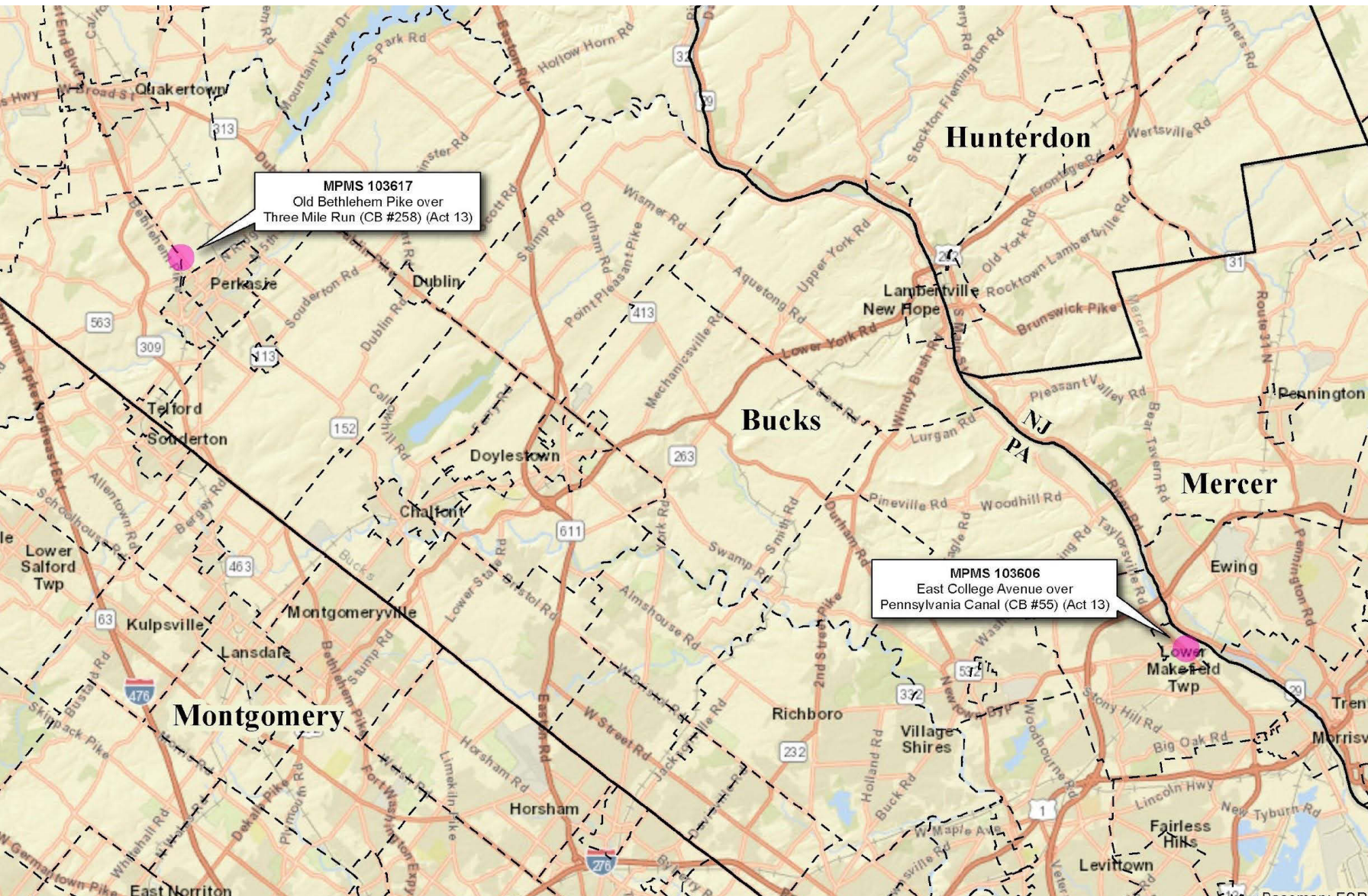
Increase FY26-31 EC by \$15 M SECT 5337/DRPA

10-year difference: \$11.5 M increase

East College Ave over PA Canal (CB #55) & Old Bethlehem Pike over Three Mile Run (CB #258)

Bucks County | Add New Projects to TIP

- **TIP Amendment**
- **Action:** Add 2 new bridge projects to TIP using \$2.9 M of Bucks County's Act 13 allocation:
 - FY22 PE: \$150,000 per bridge
 - FY22 FD: \$100,000 per bridge
 - FY23 ROW: \$25,000 per bridge
 - FY23 UTL: \$25,000 per bridge
- FY23 CON: \$1.3 M for East College Ave over PA Canal, and \$1 M for Old Bethlehem Pike over Three Mile Run
- **Reason:** For replacement or repair of locally owned at-risk deteriorated bridges
- **Background:**
 - *Act 13 funds are additional to the region*



East College Ave over PA Canal (CB #55)

- Built in 1973
- Substandard safety features at the bridge approaches
- Classified as “poor” due to condition of substructure and advanced deterioration of structural elements
- Includes safety upgrades to the bridge railing and guide rail

Old Bethlehem Pike over Three Mile Run (CB #258)

- Built in 1955
- Substandard safety features at the bridge approaches
- Classified as “poor” due to condition of super/substructure and advanced deterioration of structural elements
- Includes safety upgrades to the bridge railing and guide rail

TIP ACTION | Proposed - PA



- **Request Board Approval of TIP Amendment**
- **East College Ave over PA Canal (CB #55) & Old Bethlehem Pike over Three Mile Run (CB #258)**
Add 2 new bridge projects to TIP using \$2.9 M of Bucks County's Act 13 allocation:

FY22 PE: \$150,000 per bridge

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FY23 ROW: \$25,000 per bridge

FY23 UTL: \$25,000 per bridge

FY23 CON: \$1.3 M for East College Ave over PA Canal, and \$1 M for Old Bethlehem Pike over Three Mile Run

ADA Ramps

City of Philadelphia | Add New Projects to TIP

- **TIP Amendment**

- **Action:** Add 2 new projects totaling \$500,000 STP/
State 581 for FY22 PE:

- *ADA Ramps Center City Phila: \$400,000 (\$320,000 STP/\$80,000 State 581)*
- *2022-23 ADA Ramps Phila: \$100,000 (\$80,000 STP/\$20,000 State 581)*

- **Reason:** For repair or reconstruction of damaged/deteriorated ADA facilities

- **Background:**

- *ADA Ramps Center City Phila: repair/reconstruct ~107 ADA ramps on Market, Chestnut, and Walnut Streets*
- *2022-23 ADA Ramps Phila: improve ~258 ADA ramps along Chestnut, Walnut, Fifth, and Spring Garden Streets*

TIP ACTION | Proposed - PA



- **Request Board Approval of TIP Amendment**
- **ADA Ramps**
Add 2 new projects totaling \$500,000 STP/State 581 for FY22 PE:
 - ADA Ramps Center City Phila: \$400,000
(\$320,000 STP/\$80,000 State 581)
 - 2022-23 ADA Ramps Phila: \$100,000
(\$80,000 STP/\$20,000 State 581)

IIJA/BIL FFY 2022 Funding Allocation

Various Counties | Additional Funding Availability

- **TIP Amendment**
- **Action:** Add \$98.879 M in additional funds in FY22 from the Infrastructure Investment and Jobs Act (IIJA)/Bipartisan Infrastructure Law (BIL)
- Funds will be moved to existing/new line items, and to a specific project for a cost increase
- **Reason:** The DVRPC region is receiving \$115,259,000 in additional FY22 federal funding from the IIJA/BIL
- \$98.879M is being added to the TIP with this action
- **Background:**
 - *IIJA/BIL funds are additional to the region*
 - *Remaining FY22 IIJA/BIL funds will be added once amounts are finalized by FHWA and PennDOT*

IIJA/BIL FFY 2022 Funding Allocation

Adding the following funds to their respective line items:

- \$41,313,000 Bridge Improvement Program (BRIP) in FY22 to Bridge Investment Program line item
- \$7,050,000 HSIP to Regional Safety Initiatives line item
- \$6,222,000 Bridge Off-System (BOF) to Bridge Reserve line item
- \$500,000 CMAQ to CMAQ line item

Adding the following funds to a specific project:

- \$43,794,000 NHPP to FFY 2022 funding allocations then shifted to specific project as part of next action (PA21-73)

TIP ACTION | Proposed - PA

- **Request Board Approval of TIP Amendment**

- **IIJA/BIL FFY 2022 Funding Allocation**

Add \$98.879 M in additional funds in FY22 from the Infrastructure Investment and Jobs Act (IIJA)/Bipartisan Infrastructure Law (BIL). Funds will be moved to existing/new line items, and to a specific project for a cost increase:

Adding the following funds to their respective line items:

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Adding the following funds to a specific project:

- \$43.794 M NHPP IIJA/BIL to FFY 2022 funding allocations; shifted to project as part of next action (PA21-73)



I-95 CAP/Waterfront Access

City of Philadelphia | Cost Increase and Add Breakout Project to TIP

- **TIP Amendment**
 - **Action:** Increase CON phase of I-95 CAP/Waterfront Access project by \$94,000,000 (FY22: \$2,758,000 BRIP/\$43,794,000 NHPP/Toll Credit; FY29: \$34,949,000 STU/\$12,499,000 STP/Toll Credit) and
 - Add Penn's Landing Project Development – Local as new breakout project for \$105,000,000 (\$60,000,000 LOC/\$45,000,000 PRIV) CON in FY22
- Reason:** CON cost estimate increase as detailed on next slides; project will be delivered on 2 separate contracts

I-95 CAP/Waterfront Access

- **Project Background:**
 - Innovative cap structure, viaduct, road, and trail to re-establish connection between Central Philadelphia and the waterfront
 - Multimodal enhancements to improve experience for pedestrians, cyclists, and vehicles
 - Create and develop public spaces on the bridge/cap structure
 - These elements are not eligible for federal/state transportation funding

Park at Penn's Landing



Memorials

Play Area

Rink Plaza

Pavilion & Café

Gardens

Amphitheater

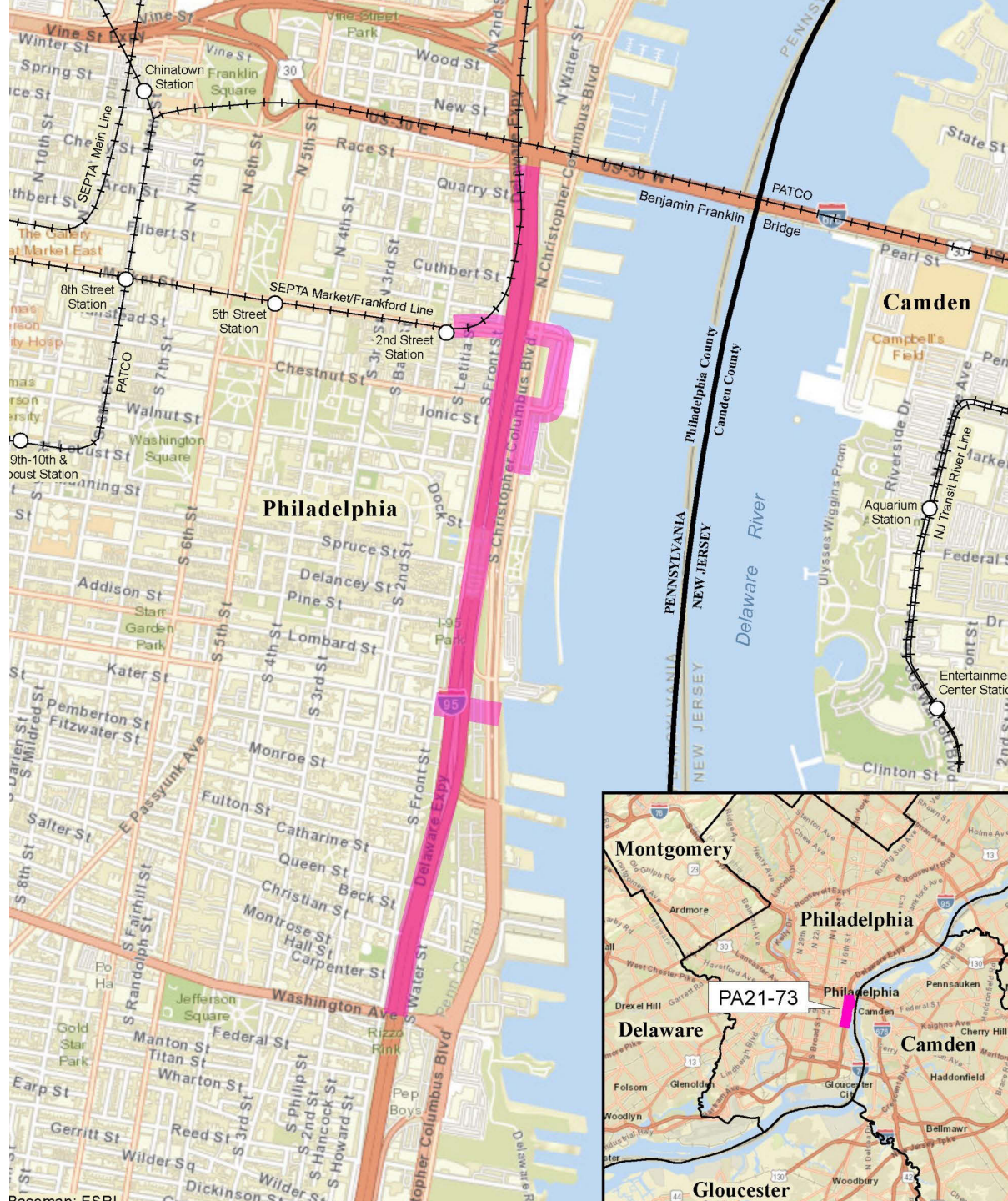
Image Credit: PennDOT

I-95 CAP/Waterfront Access – 2 Contracts

- **Contract 1: I-95 Central Access Philadelphia (CAP) / Waterfront Access**
 - Foundation, substructure, superstructure, and other Federal/State funding eligible items
 - Increased CON costs associated with:
 - Increased cost for materials (incl. steel)
 - Retaining walls and deeper foundations due to soil conditions
 - Utility relocation
 - Pavement/barrier improvements; automated lane control with VSL
 - Lighting and trail improvements; external elevator
 - Relocation and restoration of Scottish and Irish memorials

I-95 CAP/Waterfront Access – 2 Contracts

- **Contract 2: Penn's Landing Project Development – Local**
 - Funded via Local and Private funds
 - CON of essential items for public spaces that are ineligible for Federal/State transportation funding
 - PennDOT only responsible for heavy infrastructure
 - City and DRWC responsible for landscape, buildings, and amenities



I-95 CAP/Waterfront Access 5 Components:

- Replace/expand structure near Penn's Landing; new, extended structure spanning I-95 and CC Blvd between Walnut and Chestnut streets
- Extend South St pedestrian bridge to Penn's Landing
- Construct section of Del. River Trail along CC Blvd
- Repair/replace existing underwater concrete piles at Penn's Landing
- Enable creation of public spaces on bridge/cap

South Street Pedestrian Bridge Extension



Image Credit: PennDOT



Park at Penn's Landing – Memorials



Fountain Grass
Pennisetum Fairy Tails
PROPOSED MEMORIAL SCHEME

Image Credit: PennDOT

Project Elements – Park at Penn’s Landing – CAP Structure

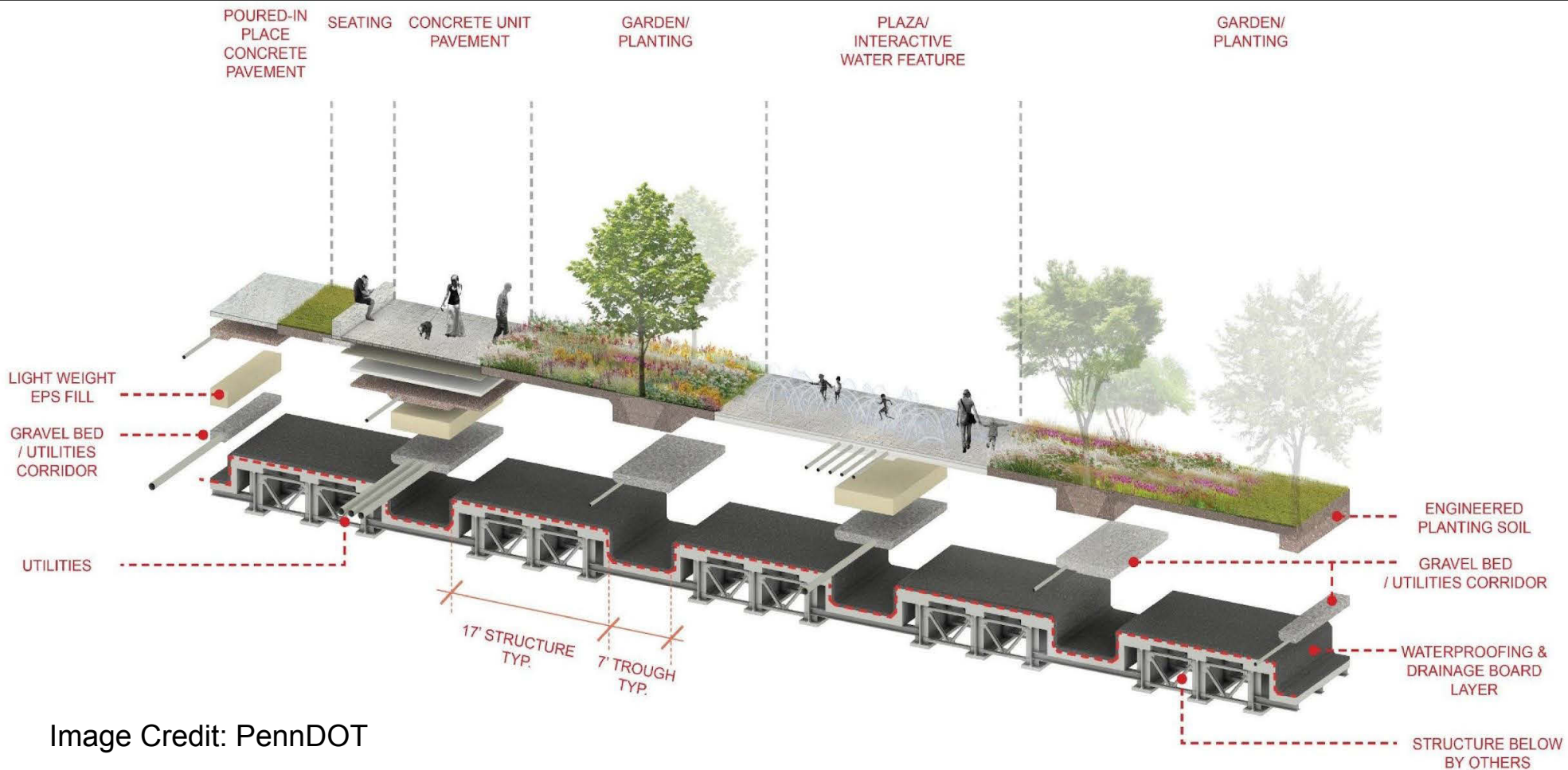


Image Credit: PennDOT

TIP ACTION | Proposed - PA



- **Request Board Approval of TIP Amendment**
- **I-95 Central Access Philadelphia (CAP) / Waterfront Access**
Increase CON phase of I-95 CAP/Waterfront Access project by \$94,000,000 (FY22: \$2,758,000 BRIP/\$43,794,000 NHPP/Toll Credit; FY29: \$34,949,000 STU/\$12,499,000 STP/Toll Credit) and
Add Penn's Landing Project Development – Local as new breakout project for \$105,000,000 (\$60,000,000 LOC/\$45,000,000 PRIV) CON in FY22

Route 29, Cass Street to Calhoun Street, Drainage

City of Trenton | Cost Increase

- **TIP Amendment**

- **Action:** Increase FY22 CON by adding \$17.57 M NHPP from \$12.22 M to \$29.79 M NHPP

- Increases overall CON cost from \$24.22 M to \$41.79 M

- No change to FY23 CON cost

- **Reason:**

- Meet SFY22 authorization deadline, advertise/bid/award by June 2022

- Design change relocates new, longer flood wall closer to the Delaware River to create parkland and additional repairs to sections of the existing floodwall

- **Background:**

- Project addresses flooding by preventing the Delaware River from backing up into the existing storm sewer pipe systems within the Route 29 right-of-way. With these improvements, various locations of the roadway will be protected from events ranging between the 15-year and 50-year floods in the river's main channel

NJ22-027: Route 29, Cass Street to Calhoun Street, Drainage



Cost increase due to:
installation of 15 backflow prevention valves; stormwater drainage inlets & culverts; shoulder widening; 3 water quality treatment devices; replacement of 590 feet of existing deteriorated floodwall

Change in design: will relocate the new flood wall, with longer required length due to river geometry, closer to the Delaware River to create parkland and will repair sections of existing flood walls

Will prevent Delaware River from backing up into the existing storm sewer pipe systems within Rt. 29 ROW

TIP ACTION | Proposed - NJ

Request Board Approval of TIP Amendment

- Route 29, Cass Street to Calhoun Street, drainage
Increase FY22 CON by adding \$17.57 M NHPP from \$12.22 M to \$29.79 M NHPP
 - Increases overall CON cost from \$24.22 M to \$41.79 M
 - No change to FY23 CON cost (\$12.0 M NHPP)





Thank

Connect With Us!     

You!

www.dvrpc.org/TIP



Bringing an Automated Shuttle to Philadelphia

***DVRPC Board Meeting
March 24, 2022***



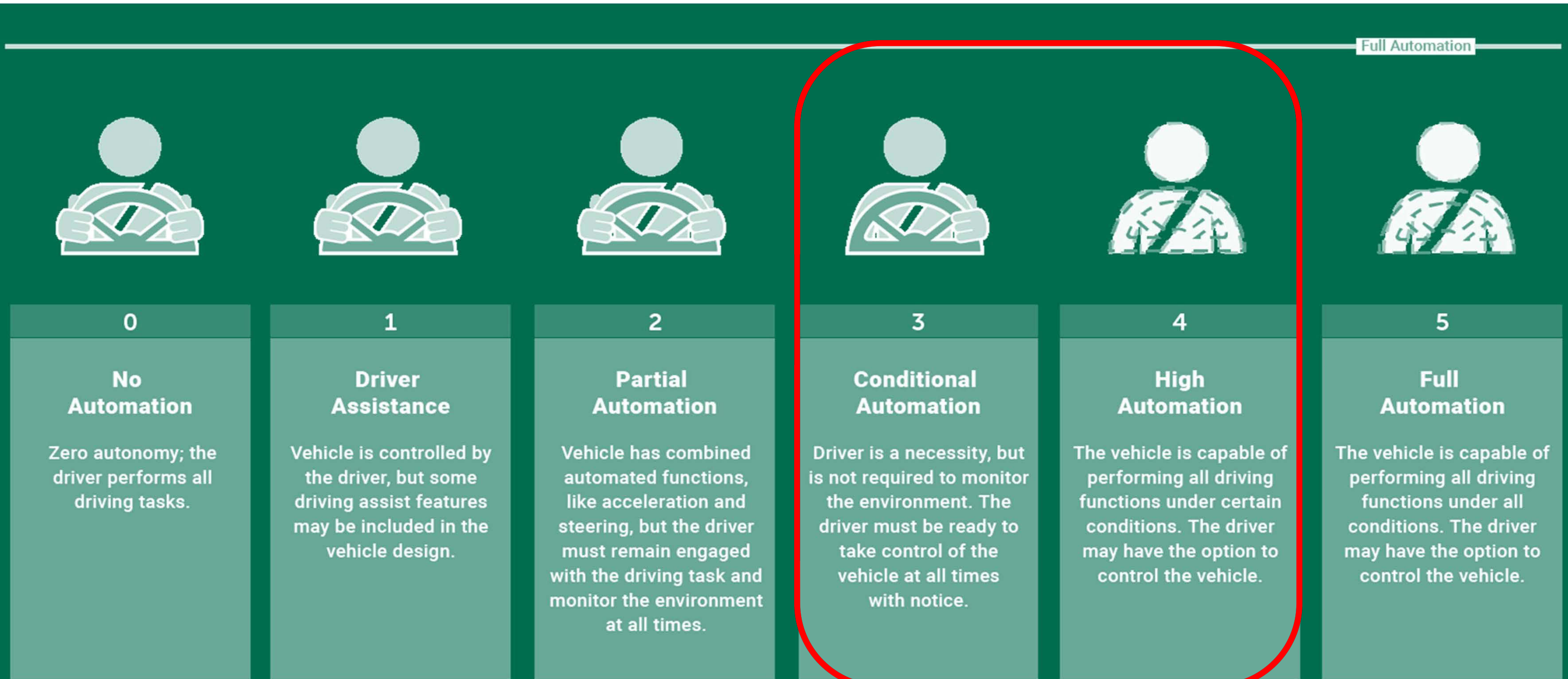
Dan Corey, PE

Global Transportation - Director Strategic Solutions








Vice President



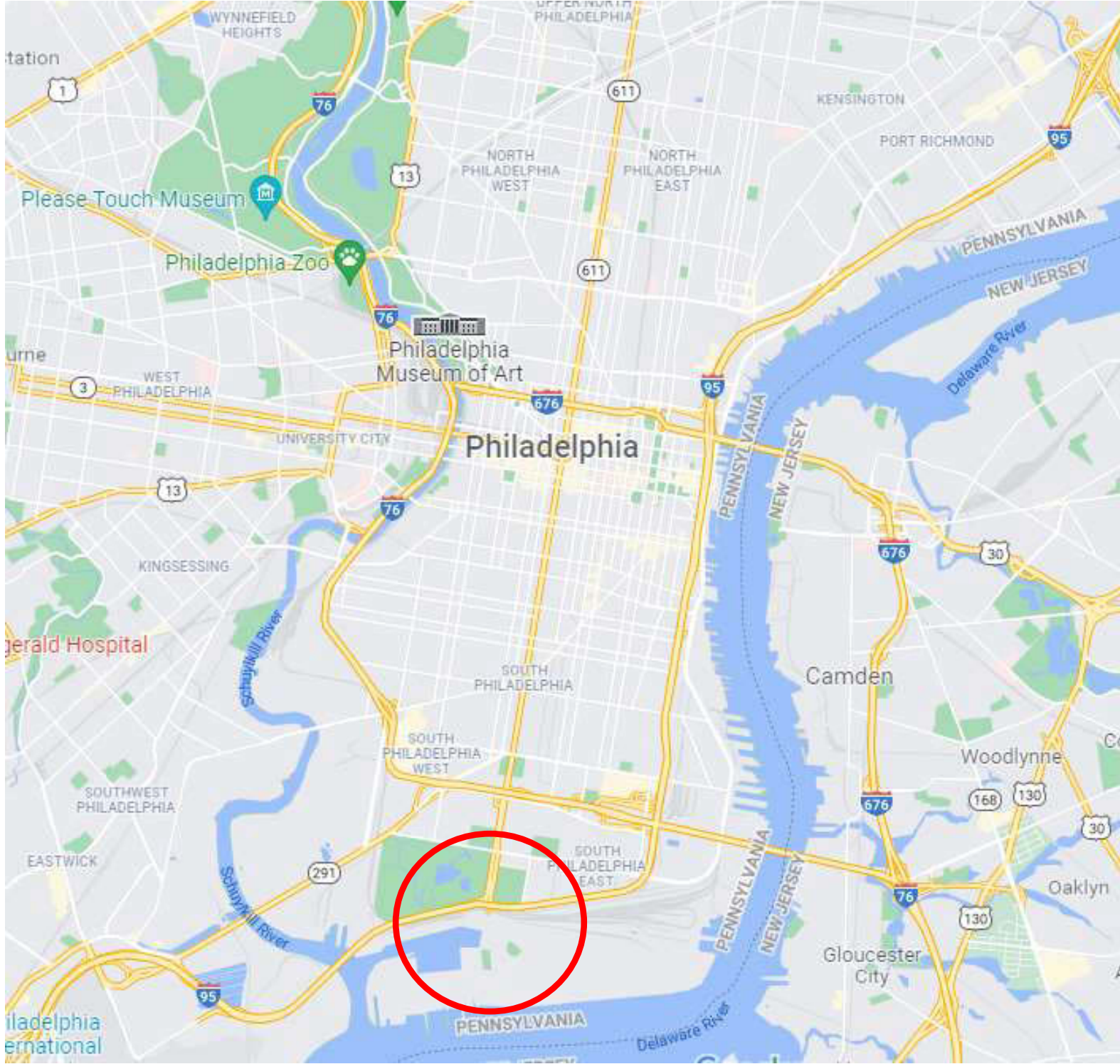
Automation Levels



Automation Market Share

OEM	Intro year	Models ¹ , #	Examples	Est. sales volume, K		Headlines
				2020	2023	
 General Motors <i>Super Cruise</i>	2020	22	<ul style="list-style-type: none"> • Cadillac Lyriq • Buick Encore 	38	177	<p>GM's Super Cruise Self-Driving Tech Will Be on 22 Vehicles by 2023</p> <p><small>CAR-DRIVER</small></p> <p>Feb 2021</p>
 Ford <i>BlueCruise</i>	2020	11	<ul style="list-style-type: none"> • Mustang Mach-E • F-150 SuperCrew 	4	53	
 Tesla <i>Autopilot</i>	2020	5	<ul style="list-style-type: none"> • Model X • Model 3 	154	302	<p>Tesla Full Self-Driving subscription model coming in Q2 2021</p> <p><small>ROAD/SHOW</small></p> <p>Mar 2021</p>
 Volvo <i>Pilot Assist</i>	2023	2	<ul style="list-style-type: none"> • Volvo XC90 • Volvo XC100 	0	8	
 Volkswagen <i>Traffic Jam Assist</i>	2020	12	<ul style="list-style-type: none"> • Volkswagen Atlas • Audi A4 	27	52	
 Nissan <i>ProPilot Assist 2.0</i>	2021	2	<ul style="list-style-type: none"> • Infiniti QX50 • Infiniti QX55 	0	6	
 Toyota <i>SafetySense 2.5</i>	2021	46	<ul style="list-style-type: none"> • Toyota Camry • Lexus LX 	0	422	<p>2021 Toyota Camry is first to get Safety Sense 2.5 Plus</p> <p><small>ROAD/SHOW</small></p> <p>Jul 2020</p>

Project Location



**South Philly
Sports
Complex**



Philly Navy Yard

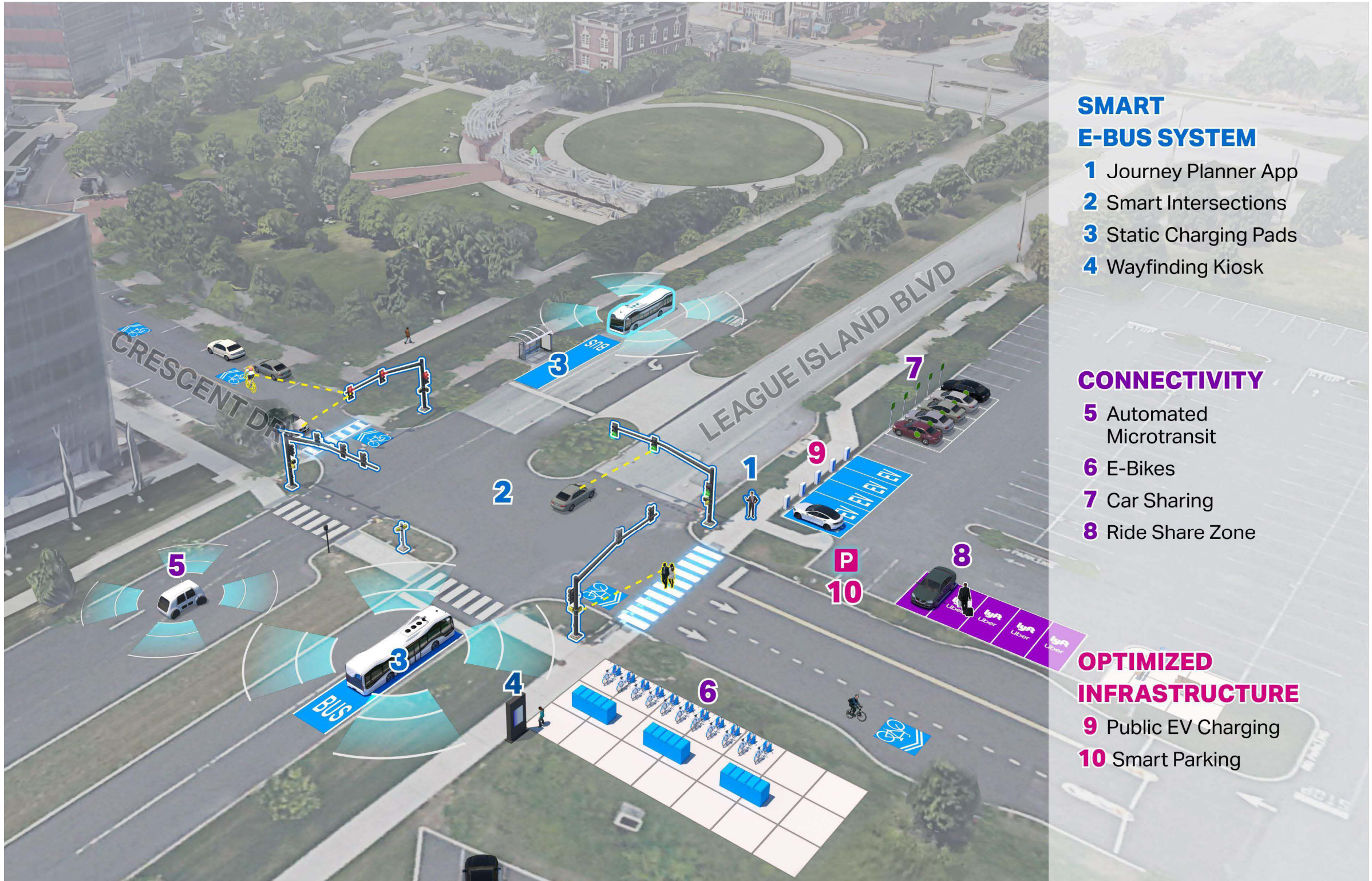


Philadelphia First - Smart Traffic Management



2018

Connected Communities - 2021



SMART E-BUS SYSTEM

- 1 Journey Planner App
- 2 Smart Intersections
- 3 Static Charging Pads
- 4 Wayfinding Kiosk

CONNECTIVITY

- 5 Automated Microtransit
- 6 E-Bikes
- 7 Car Sharing
- 8 Ride Share Zone

OPTIMIZED INFRASTRUCTURE

- 9 Public EV Charging
- 10 Smart Parking



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pennsylvania
DEPARTMENT OF TRANSPORTATION



TRAVEL OPTIONS PROGRAM

Transportation Demand Management
(TDM) Pilot Projects

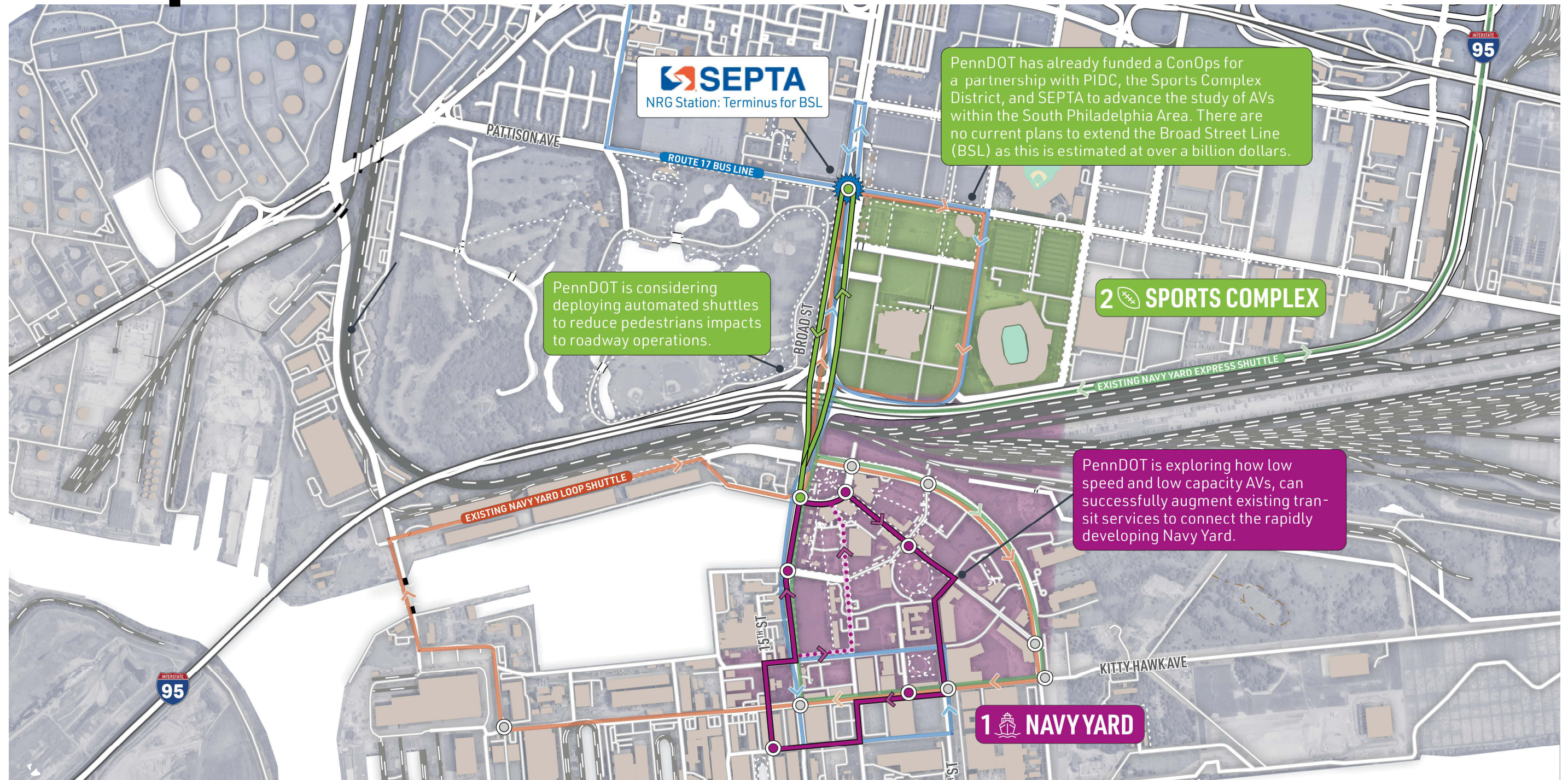


Driving growth to every corner of Philadelphia

Roles and Responsibilities

Stakeholder	Primary Responsibilities
DVRPC	Project sponsor, governance, project funding
PennDOT District 6-0	Project Co-sponsor / lead, maintenance of State roadway/upgrades, policy development, project funding
Philadelphia Industrial Development Corporation (PIDC)	Project Co-sponsor / lead, Shuttle operations (Krapf Transportation) / routing / charging / storage / security, maintenance/upgrades of PNY roadways and traffic signals.
Krapf Bus	Operator of AV shuttle, shuttle maintenance (4-hour shifts maximum)
City of Philadelphia / Streets Department	Maintenance/upgrades of City roadways and traffic signal coordination
Shuttle Manufacturer	Provide shuttle route alignment, shuttle O&M training, data sharing.
AECOM	Project administration, route development, shuttle testing and reporting
SEPTA	Data review / future integration with MOOVIT

Concept Routes



Requested Vehicle Type

- 1-Year Lease
- Fully Electric
- 11-15 Passenger Capacity
- 120 - 150 Mile Range
- Highway Speeds
- Buy America
- Altoona Tested
- FMVSS Compliant
- ADA Compliant



What Happened?...What's Next?

- Official Announcement of Award - May 2021
- Stakeholder Internal / Collective Coordination
- Shuttle Procurement - PIDC (February 2022)
- Route Preparation (Spring 2022)
- Testing (Early Summer 2022)
- Operations (Summer 2022 - Summer 2023)



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THANK YOU!

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EXPO

EXPERIMENTAL POP-UPS

PROGRAM UPDATE

DVRPC Board: March 24, 2022

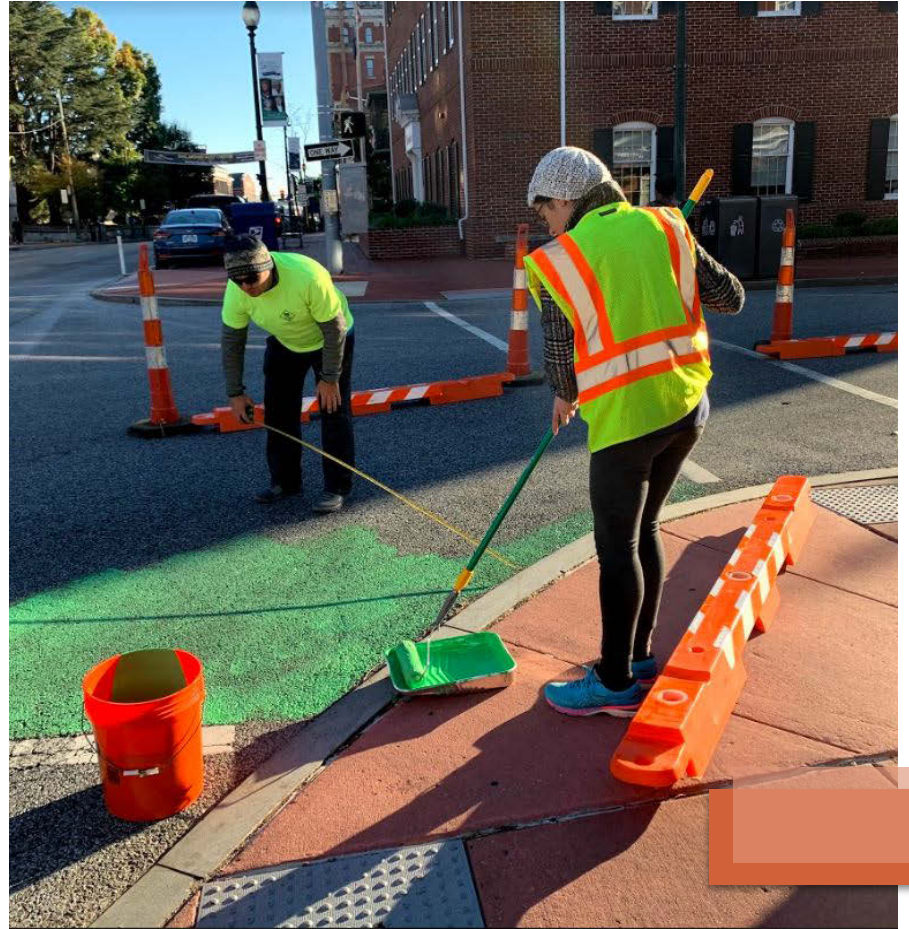
Logan Axelson, Senior Transportation Planner

Cassidy Boulan, Assistant Manager, Bicycle Programs

Tactical Urbanism

Low-cost, short-term projects that spark long-term change.

Expo is DVRPC's tactical urbanism support program.

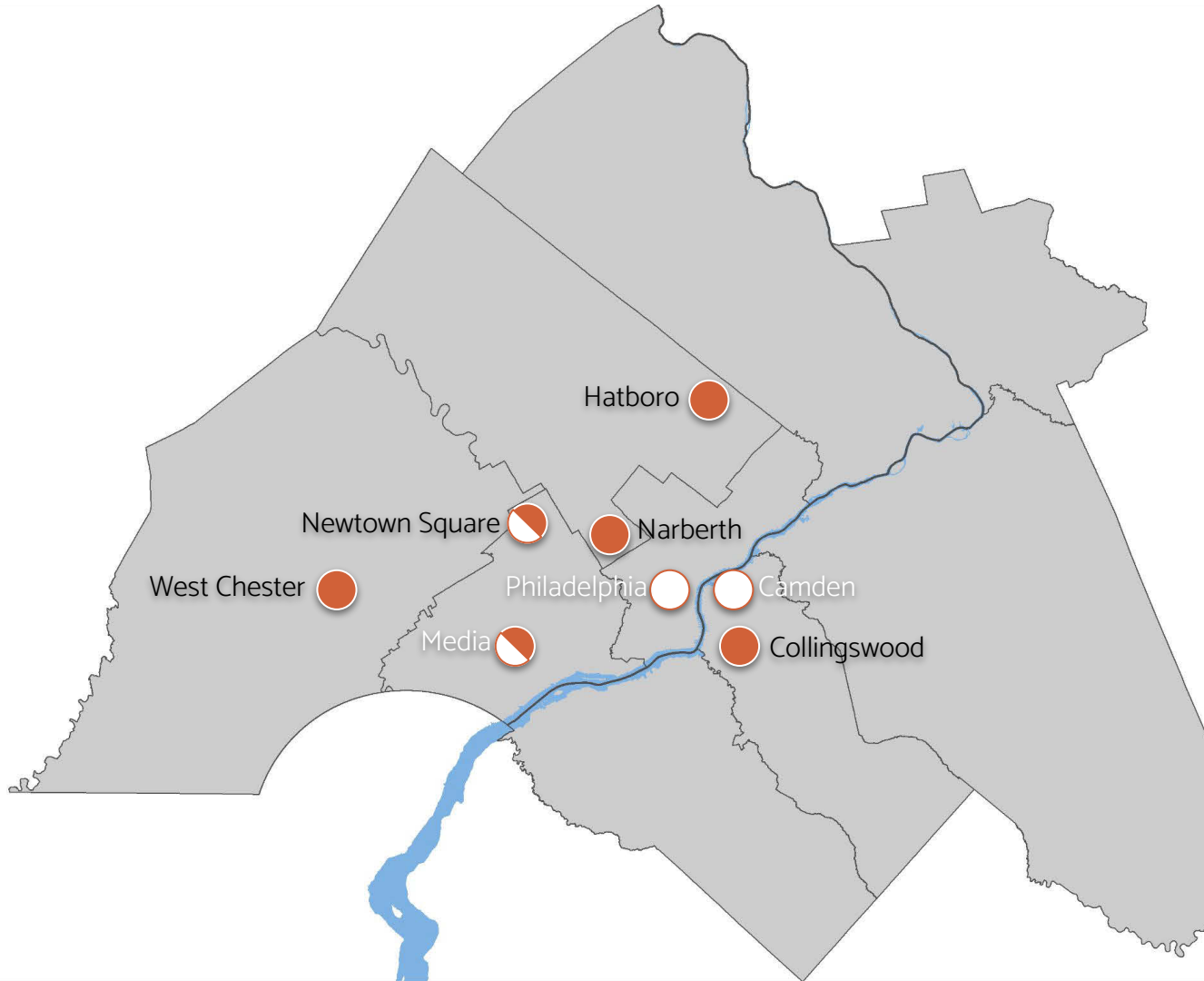


Expo Projects

○ Where we've
popped up

● Where we're
popping up
soon

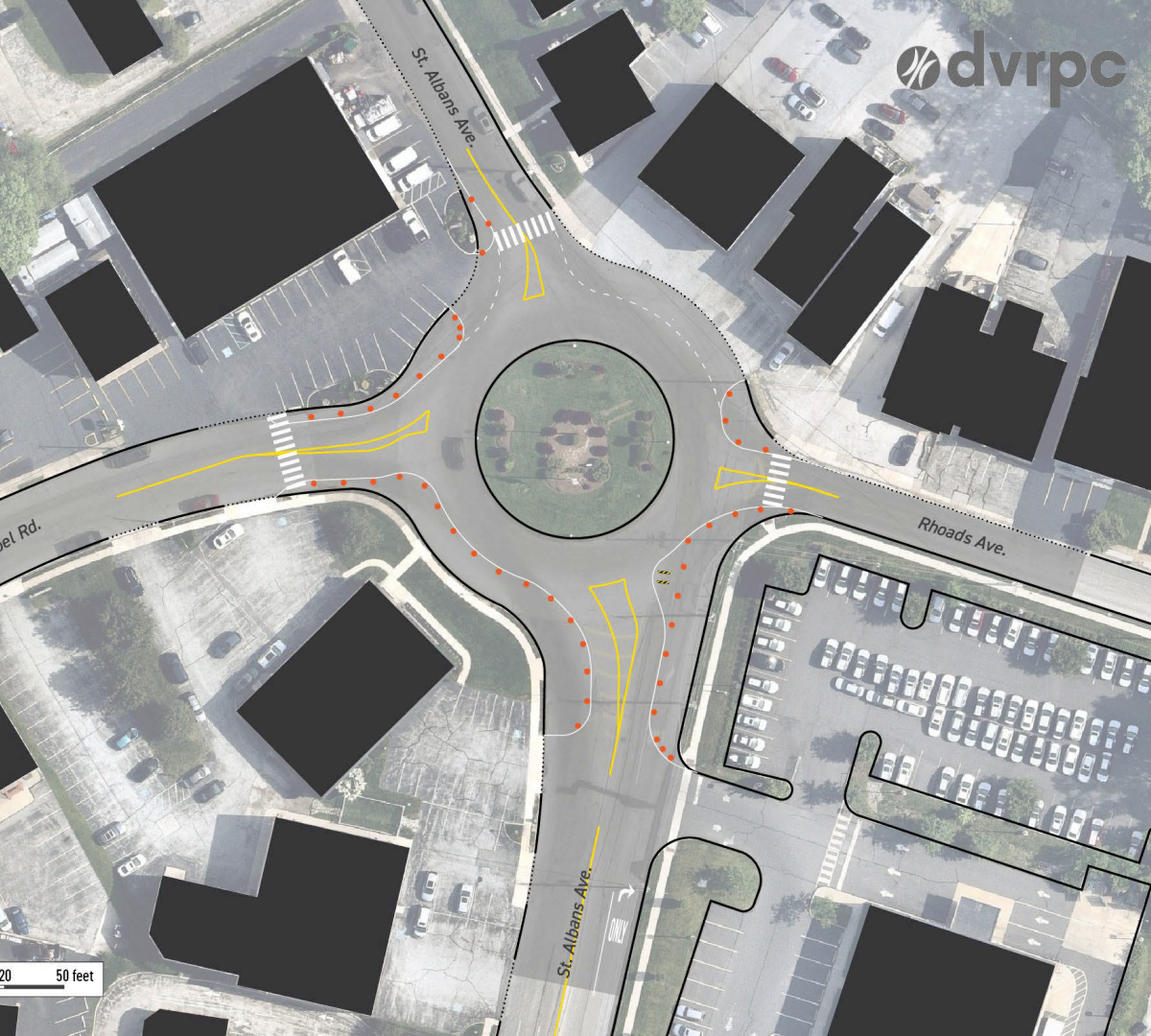
◐ Ongoing
pop-ups



St. Albans Circle, Newtown Square, PA



- + Traffic circle redesign
- + Public communications
- + Materials
- + Travel monitoring
- + Survey design
- + Implementation support



GATHER



Atlantic Ave, Collingswood, NJ



+ Project goals:

- Improve bicycle and pedestrian access
- Pilot new street treatments

+ Design elements:

- Curb extensions
- Advisory bike lanes
- New crosswalks



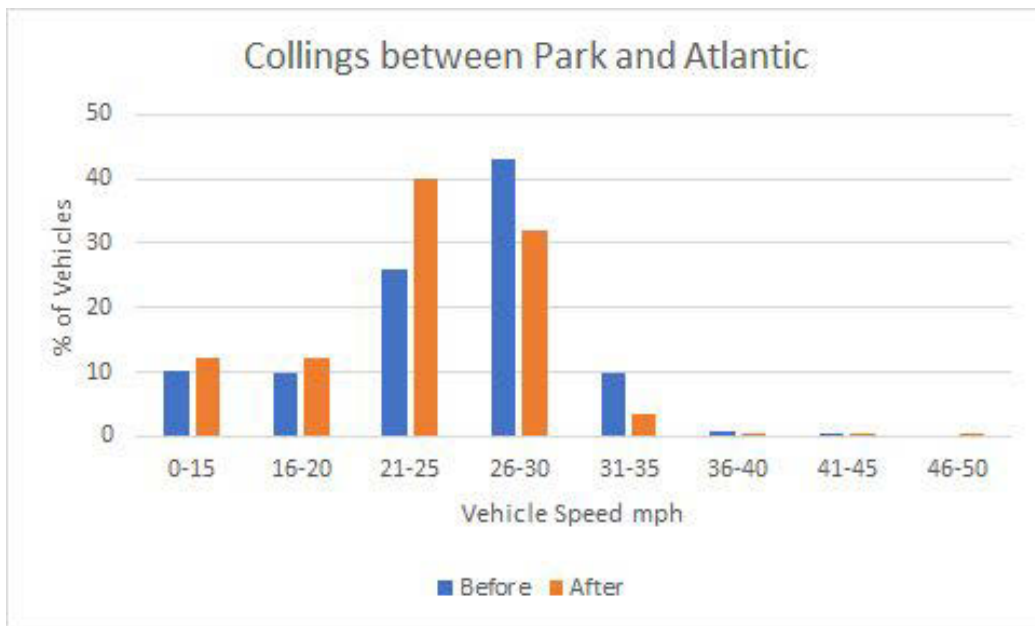
Advisory bike lanes: what and why

What:

- Provide bike lanes on either side of the street
- All cars use center lane unless passing
- Cars must yield to bicyclists in the lanes

Why:

- Increases passing distance
- Slows cars
- Shows bikes where to position themselves in the road



Performance measures

On Atlantic Ave, about 7% fewer vehicles were going above 25 MPH once the EXPO project was on the ground.

19% fewer vehicles on the Collings Ave were driving above 25 MPH.

What's Next

Camden, NJ



Media, PA



What's Next

Webinar April 20, 2022

More info:

dvrpc.org/expo



Contact

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Cassidy Boulan: cboulan@dvrpc.org

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