



# Downtown Trenton BICYCLE & PEDESTRIAN PLAN



October  
2015



# RESOLUTION No. 12-121

Date of Adoption MAR 01 2012

Approved as to Form and Legality

Factual content certified by

Walter Denson, Acting City Attorney

Anthony Roberts, Acting Business Administrator

Councilman /woman

presents the following Resolution:

## RESOLUTION ESTABLISHING A "COMPLETE STREETS" POLICY FOR THE CITY OF TRENTON

**WHEREAS**, the City of Trenton is committed to creating street corridors that accommodate all road users of all ages and abilities for all trips; and

**WHEREAS**, significant accomplishments have already been achieved by incorporating pedestrian safety and traffic calming measures when public streets are improved; and

**WHEREAS**, the City Council fully supports these initiatives and wishes to reinforce its commitment to creating a comprehensive, integrated, connected street network that accommodates all road users of all abilities and for all trips; and

**NOW THEREFORE BE IT RESOLVED** that all public street projects, both new construction and reconstruction (not including maintenance) in the City of Trenton shall be designed and constructed as complete streets. The "complete street" accommodates travel by pedestrians, bicyclists, public transit, and other motorized vehicles and their passengers. This policy shall be implemented as follows:

1. All City streets shall be designed and constructed to include accommodations for pedestrians, bicyclists, public transit, and motorists. Complete streets shall accommodate users of all ages and abilities.
2. Recognizing the inter-connected multi-modal network of street grid, the City of Trenton will work with Mercer County, the Delaware River Joint Toll Bridge Commission, Traffic Consultant AECOM and state agencies through existing planning efforts to ensure complete streets principles are incorporated in a context sensitive manner.
3. While complete streets principles are context sensitive, it would be appropriate to consider these features during the design, planning, maintenance and operations phases and incorporate changes into some retrofit and reconstruction projects. Departments shall reference New Jersey Roadway Design Manual; the AASHTO Guide for the

Selected Tract  
Percentage of N

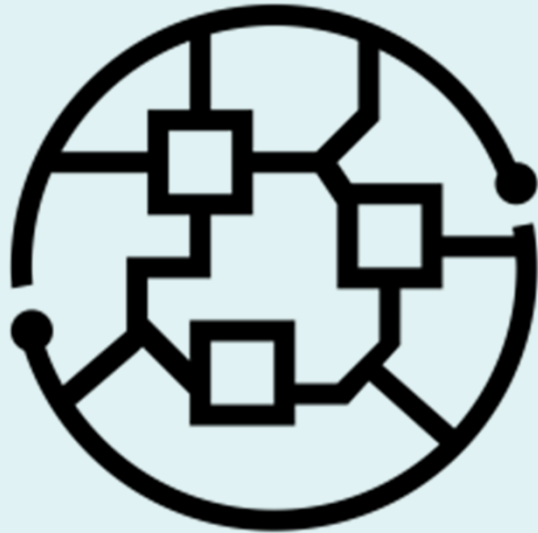
0% - 9.7%

9.8% - 25.4%

Sources: NJDOT, DVRPC,

# PROJECT PRINCIPLES

## DEVELOP A NETWORK



## SAFETY

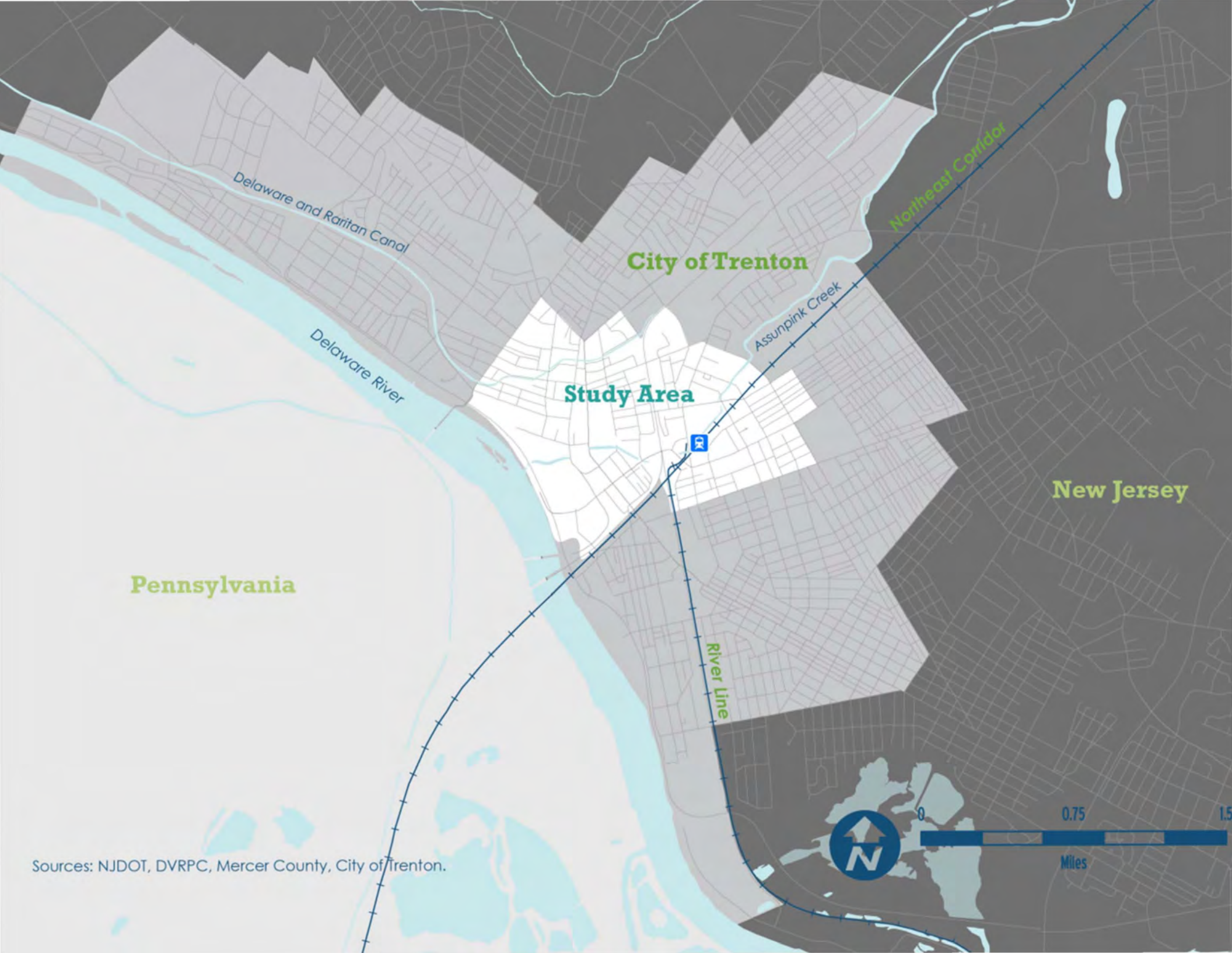


## IT'S NOT JUST ABOUT BIKES



## MAKE IT INTUITIVE





Delaware and Raritan Canal

Delaware River

City of Trenton

Study Area

Assumpink Creek

Northeast Corridor

New Jersey

Pennsylvania



River Line



Sources: NJDOT, DVRPC, Mercer County, City of Trenton.



**On-Road Bicycle Network**

- Existing Infrastructure
- Proposed Dedicated Facilities**
- One-Way Buffered/Protected Bicycle Lane
- Two-Way Buffered/Protected Bicycle Lane
- Two-Way Standard Bicycle Lane

**Proposed Mixed Traffic Routes**

- Advisory Lane
- Bicycle Boulevard

**Special Sections**

- Hanover Street
- Perry Street
- Trenton Transportation Center











# GREENWOOD AVE. & CHAMBERS ST.

Lukoil

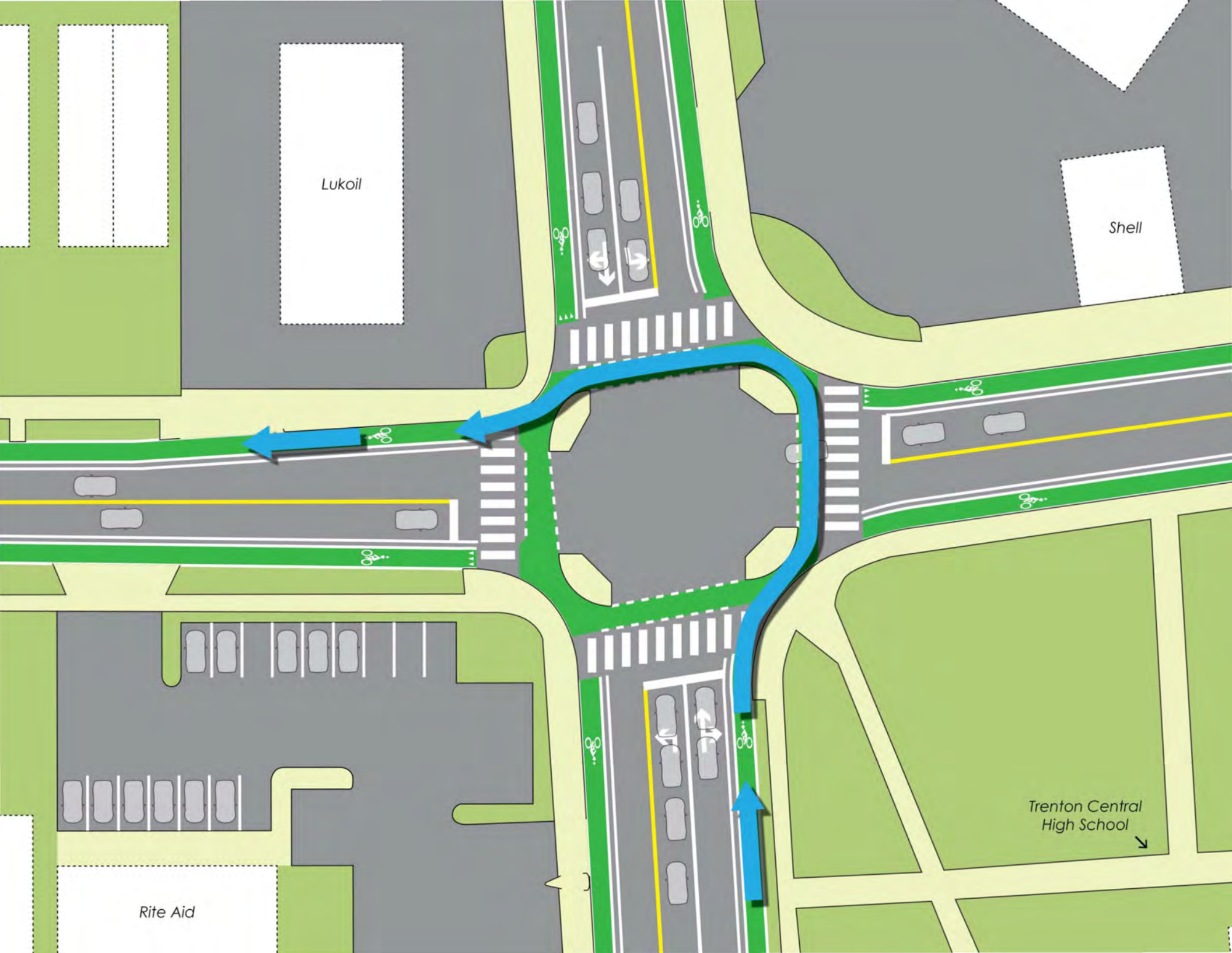
Shell

Trenton Central High School

**EXISTING**



view looking southeast



Lukoil

Shell

Rite Aid

Trenton Central High School



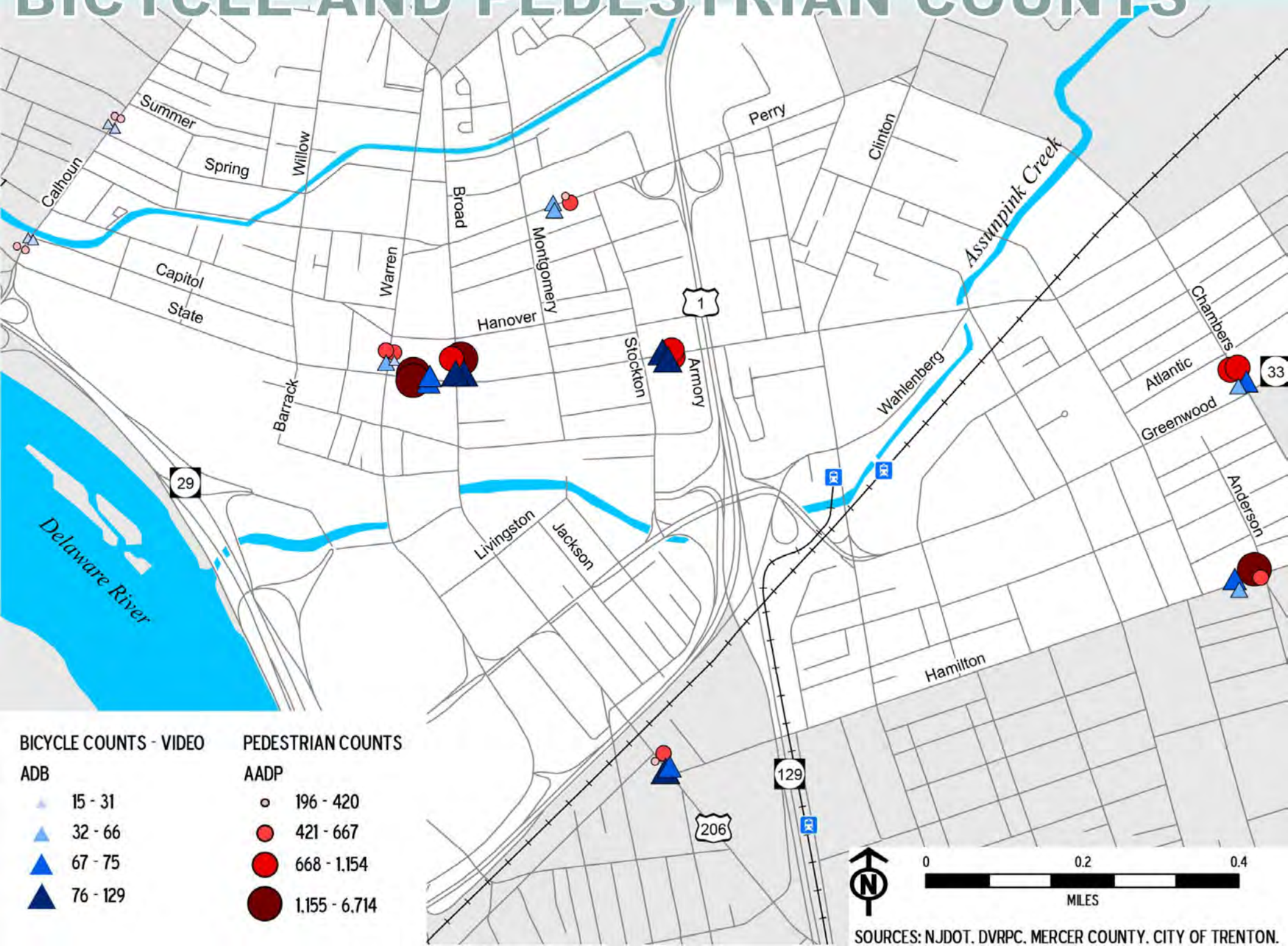
# Downtown Trenton BICYCLE & PEDESTRIAN PLAN



October  
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# BICYCLE AND PEDESTRIAN COUNTS

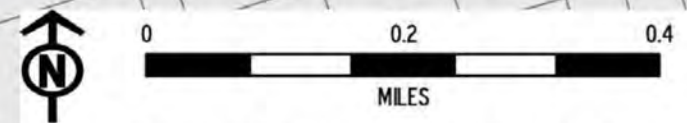


## BICYCLE COUNTS - VIDEO

- ADB**
- ▲ 15 - 31
  - ▲ 32 - 66
  - ▲ 67 - 75
  - ▲ 76 - 129

## PEDESTRIAN COUNTS

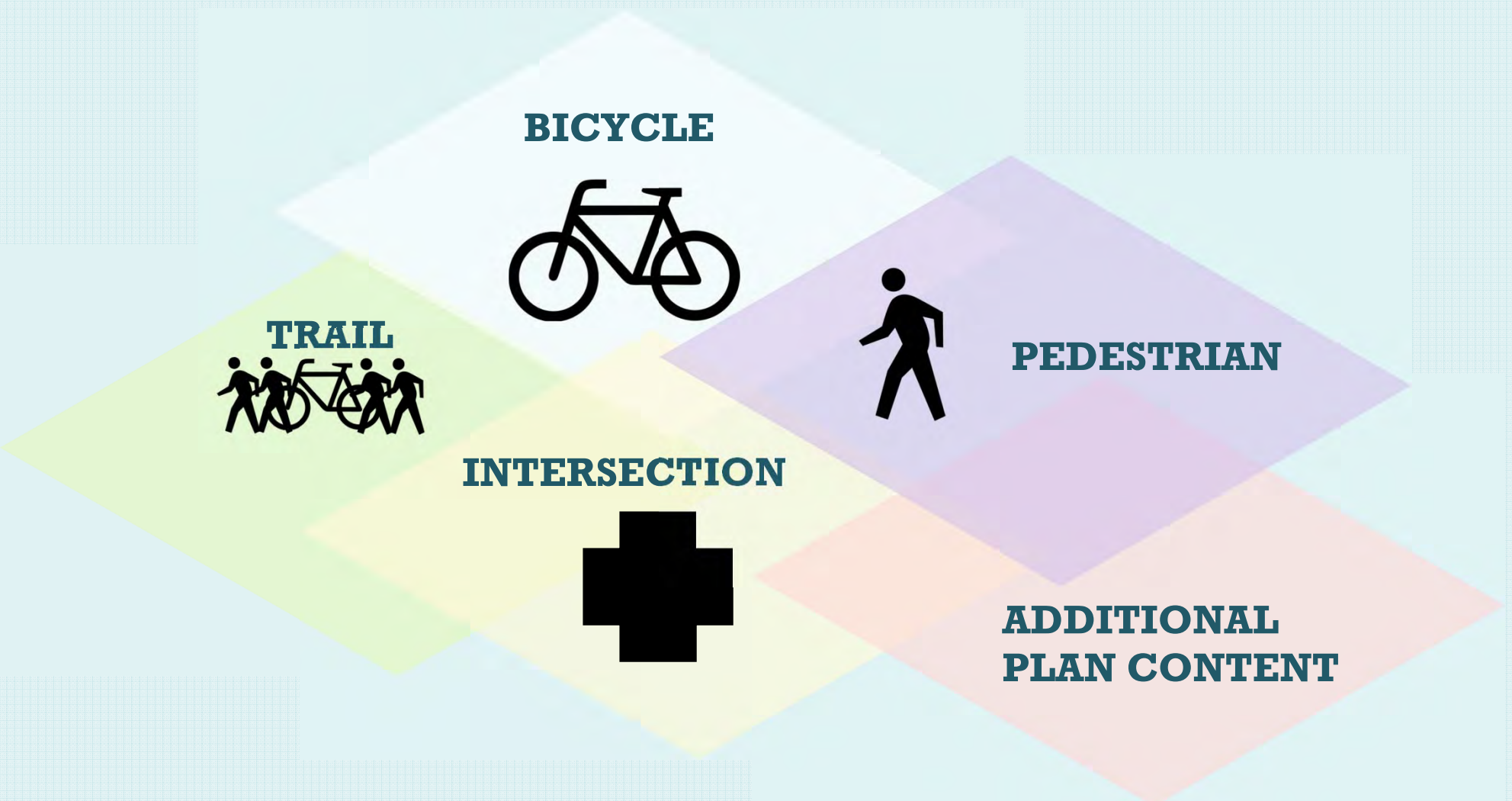
- AADP**
- 196 - 420
  - 421 - 667
  - 668 - 1,154
  - 1,155 - 6,714



SOURCES: NJDOT, DVRPC, MERCER COUNTY, CITY OF TRENTON.

# PLAN RECOMMENDATIONS

## SEPARATE, INTER-RELATED PLAN RECOMMENDATION CATEGORIES



**DOCUMENT EXISTING PLANS AND  
IDEAS**

**IDENTIFY GATEWAYS AND  
APPLICABLE TREATMENTS**

**DETERMINE OBSTACLES**



# BICYCLES

## PLAN RECOMMENDATIONS

**PROVIDE NORTH/SOUTH  
AND EAST/WEST CONNECTIONS**

**PRIORITIZE HIGH QUALITY, LOW  
STRESS FACILITIES TO INCREASE  
RIDING**

**BALANCE THE NEEDS OF ALL  
ROAD USERS**

**PROVIDE ACCESS TO  
ATTRACTIONS AND SERVICES**





# PEDESTRIANS

## PLAN RECOMMENDATIONS

**PEDESTRIAN INTERSECTION  
INVENTORY**

**PEDESTRIAN PRIORITIES**

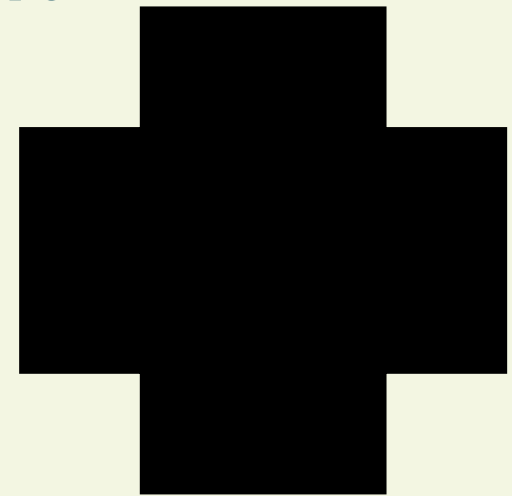


# **INTERSECTIONS**

## **PLAN RECOMMENDATIONS**

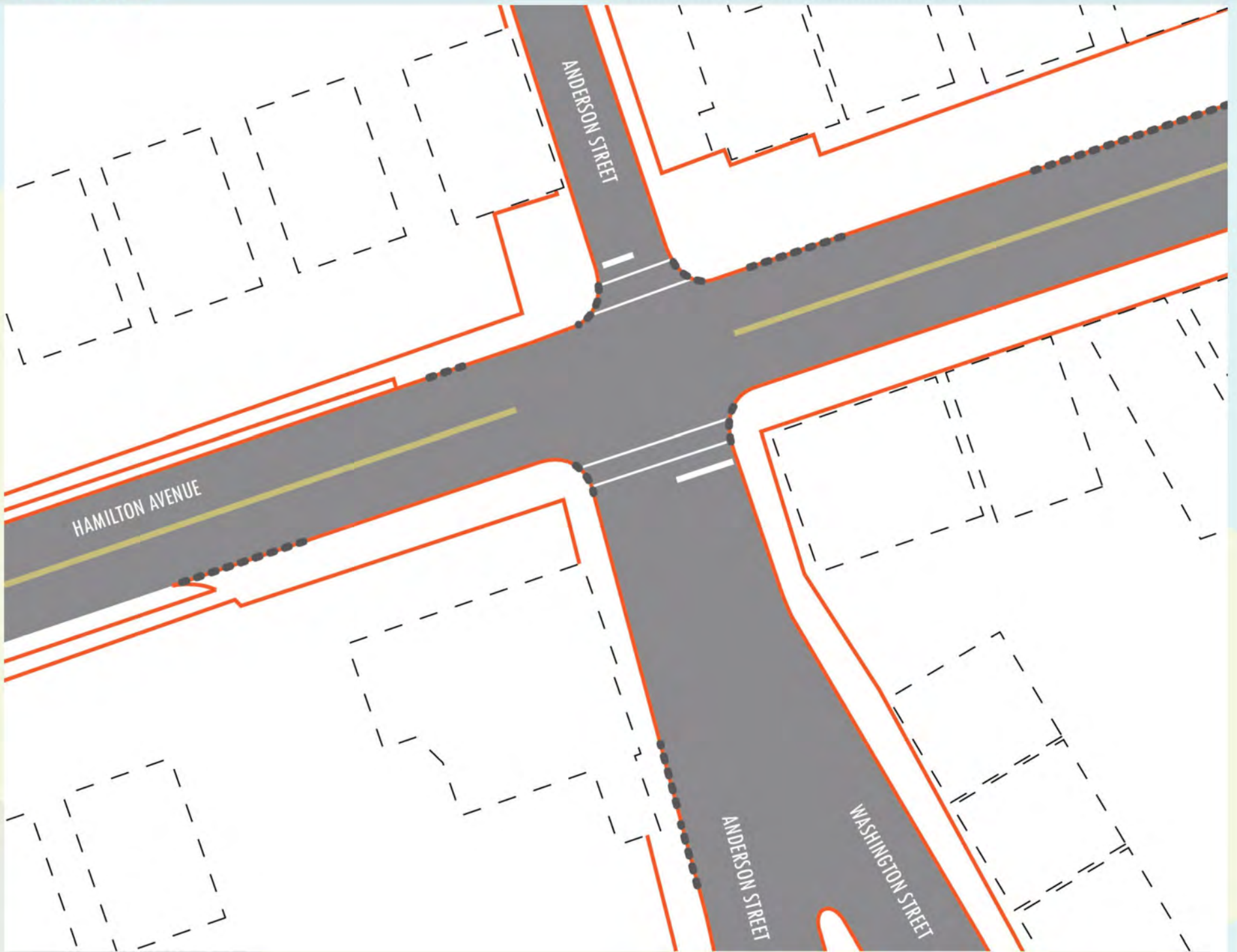
**IDENTIFY INTERSECTION ISSUES**

**PRESENT DESIGN INTERVENTIONS**



# HAMILTON & ANDERSON

***BEFORE***



# HAMILTON & ANDERSON

*AFTER*



# **OTHER PLAN ELEMENTS**

**DESIGN BEST PRACTICES**

**COMPLEMENTARY POLICIES**

**MEASURING PLAN  
IMPLEMENTATION**

**FUNDING OPPORTUNITIES**

**THANKS!**

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**Cassidy Boulan**

**cboulan@dvrpc.org**

**(215) 238-2832**

# DVRPC

## Competitive CMAQ Program



October 3, 2013



# What is the DVRPC CMAQ Competitive Program?

- The Congestion Mitigation and Air Quality (CMAQ) Program is a federal program that funds transportation projects that will help improve air quality and reduce congestion in areas not meeting the federal health based standards for air quality.
- DVRPC set aside \$3.6 million of the region's CMAQ funds for an open, competitive program in New Jersey in the FY 2016 TIP.



# Applications

- Application Period open from January 9, through April 9, 2015
- Publicized program through DVRPC listserv, website, and social media
- Held mandatory information session in January
- Application and program guidance posted on DVRPC CMAQ website ([www.dvrpc/cmaq](http://www.dvrpc/cmaq))
- Received 9 applications for 6 eligible project types from 8 organizations
- Requests totaled \$4.9 million

# Applications

- State Agencies
  - NJ DEP, S. Jersey Port Authority
- Counties
  - Burlington County
- Municipalities
  - Voorhees Twp., Princeton Twp.
- Transit Providers
  - S. Jersey Transportation Authority
- Non-profits
  - Cooper's Ferry Partnership, NJ Clean Cities

# Project Types

- Bus replacements
- Diesel retrofits and repowers
- Bike and pedestrian facilities
- Roadway operations improvements
- Truck stop electrification
- Bikeshare expansion



# Selection Process

- Selection Committee
  - NJ RTC TIP Subcommittee, Industry, Public
- Edit and Adapt Selection Criteria
  - Mix of objective (4) and subjective criteria (2)
  - Adjusted weights from 2012 process



# Selection Process

- Reviewed applications
  - All projects evaluated for emissions reductions
  - Eligibility questions referred to FHWA
  - Staff provided all scores for objective criteria to reviewers
  - Averaged scores from reviewers for subjective criteria
  - Consulted with NJ DOT Local Aid office
- Selection committee made final decision
  - One project able to be advanced in FY2015

# Selected Projects BE8

## NJ

Applicant	County	Project Title	Summary	CMAQ Request	Local Contribution	Emissions Benefits (tons/year)	
						No <sub>x</sub>	PM <sub>2.5</sub>
<b>County of Burlington</b>	Burlington	BURL Link Bus Replacements	Replace 3 MY2009 buses	\$450,000	0	0.31	0.01
<b>South Jersey Port Corporation / NJ DEP</b>	Camden	South Jersey Port Corporation Fleet Modernization Program	Replace 13 diesel fork lifts	\$1,000,000	0	2.03	0.36
<b>Princeton Township</b>	Mercer	Bike Share Expansion	Expand bike share by five stations	\$196,000	\$66,566	0.07	0.01
<b>Voorhees Township</b>	Camden	Pedestrian Safety Enhancements along Somerdale Road (County Route 678) from Burnt Mill Road (County Route 670) to Echelon Road	Bike and pedestrian improvements along Somerdale Road	\$515,000	\$103,032	0.03	0.0
<b>Voorhees Township</b>	Camden	Voorhees Township Senior Bus Replacement	Replace MY1990 shuttle with CNG bus	\$110,000	0	0.19	0.01
<b>Total</b>				\$2,271,000	\$169,598	2.64	0.39

**Slide 8**

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**BE8**

I suggest changing the title of the slide so that Selected Projects - NJ is all on one line.

Burke, Erin, 10/2/2015

# Requested Action

That the RTC recommend the Board approve the list of recommended projects to be funded as part of the DVRPC Competitive CMAQ Program (2015). Further, this action will amend the FY 2016 TIP for NJ (FY2016-2019) to include the list of 5 projects in DB #X065 (Local CMAQ Initiatives). Projects will be drawn from the line items at the appropriate time.





# 2015 CMP Update

Regional Technical Committee  
October 6, 2015



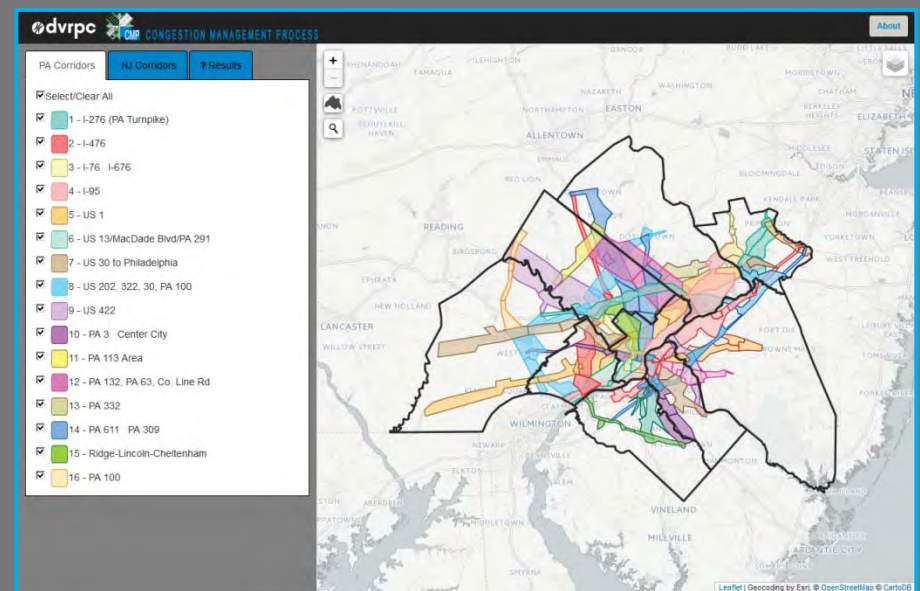
## What is the CMP?


- **Medium-term planning** to advance Long-Range Plan goals and strengthen the connection between the Plan and TIP
- **Requirement** of federal surface transportation legislation
- **Analyzes the regional transportation network** and identifies congested corridors and strategies to minimize congestion



# What's New in 2015?

- Incorporates performance measures likely to come out of MAP-21 to the degree known
- Enhanced online mapping
- Updated analysis and strategies





## Likely MAP-21 Measures

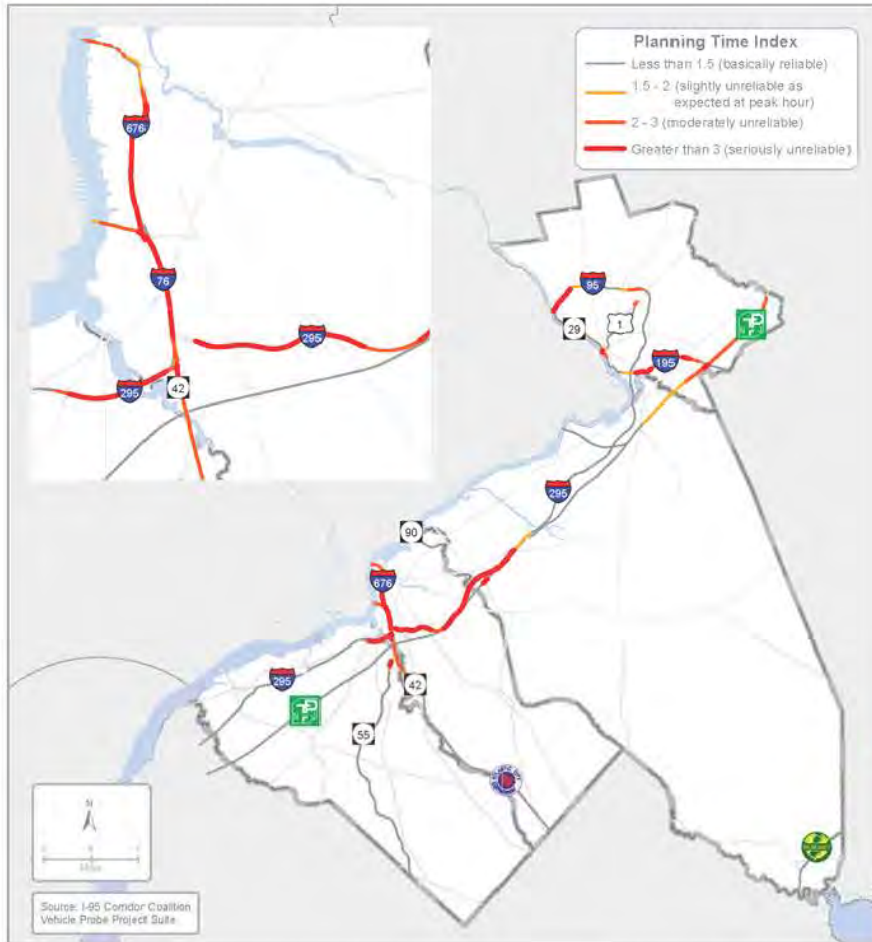
### Travel Time Index (TTI):

- Compares conditions in the peak period to free-flow
- Accounts for typical (recurring) congestion

### Planning Time Index (PTI):

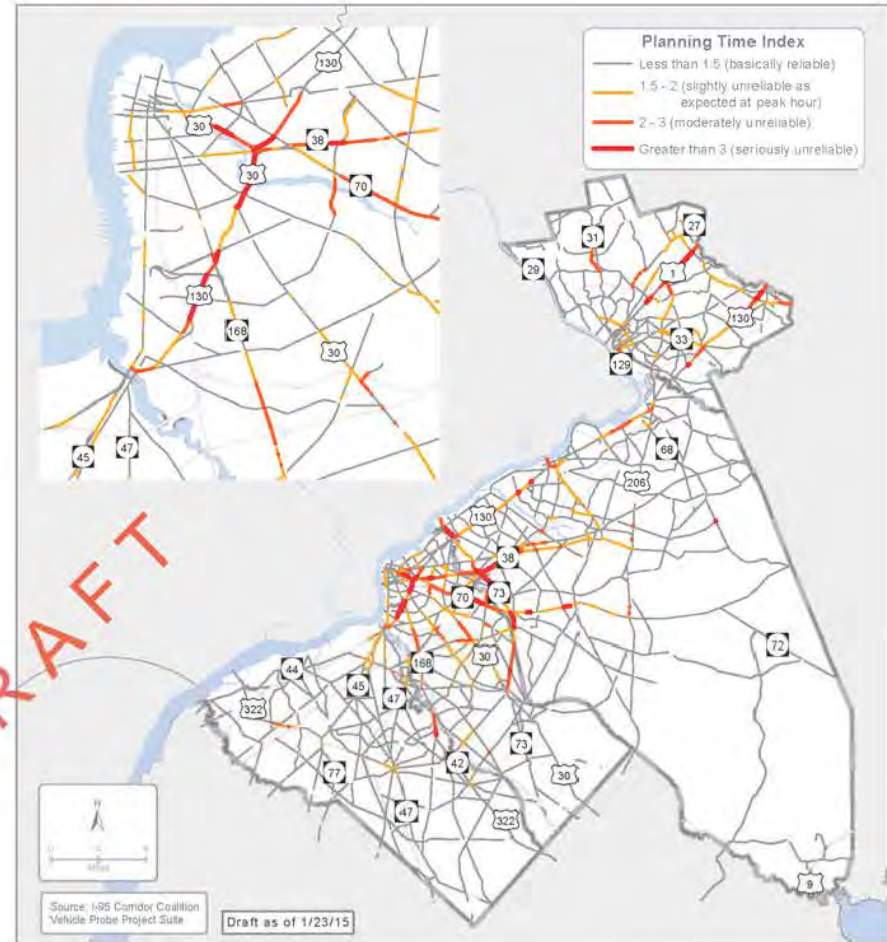
- Compares 95th percentile worst travel time to free-flow
- Accounts for typical (recurring) AND unexpected (non-recurring) delay

PTI on Limited Access Roads



A PTI of 1.5 means that for a trip that takes 20 minutes under free-flow conditions, a traveler should budget a total of 30 minutes to ensure on-time arrival 95 percent of the time. It is normal and appropriate for PTI to increase somewhat at peak hours.

PTI on Arterial Roads



DRAFT

Draft as of 1/23/15

$$PTI = (95th\ Percentile\ Travel\ Time) / (Free-Flow\ Travel\ Time^*)$$

\*Free-flow values in this equation were determined using the reference speeds received by the VPP from their data providers for each road segment. Reference speeds represent the 65th percentile observed speed for all time periods, with a maximum value of 65 mph. For more information, see <https://vpp.rttis.org/suite/faq/#performance-measures>

Archived operations data on arterial roads poses challenges. Experts are exploring how to account for intersections, driveways, and other characteristics. Data quality decreases as volume decreases. DVRPC may focus on arterials with more than one lane per direction and/or AADT >= 15,000.



## Projects and the CMP

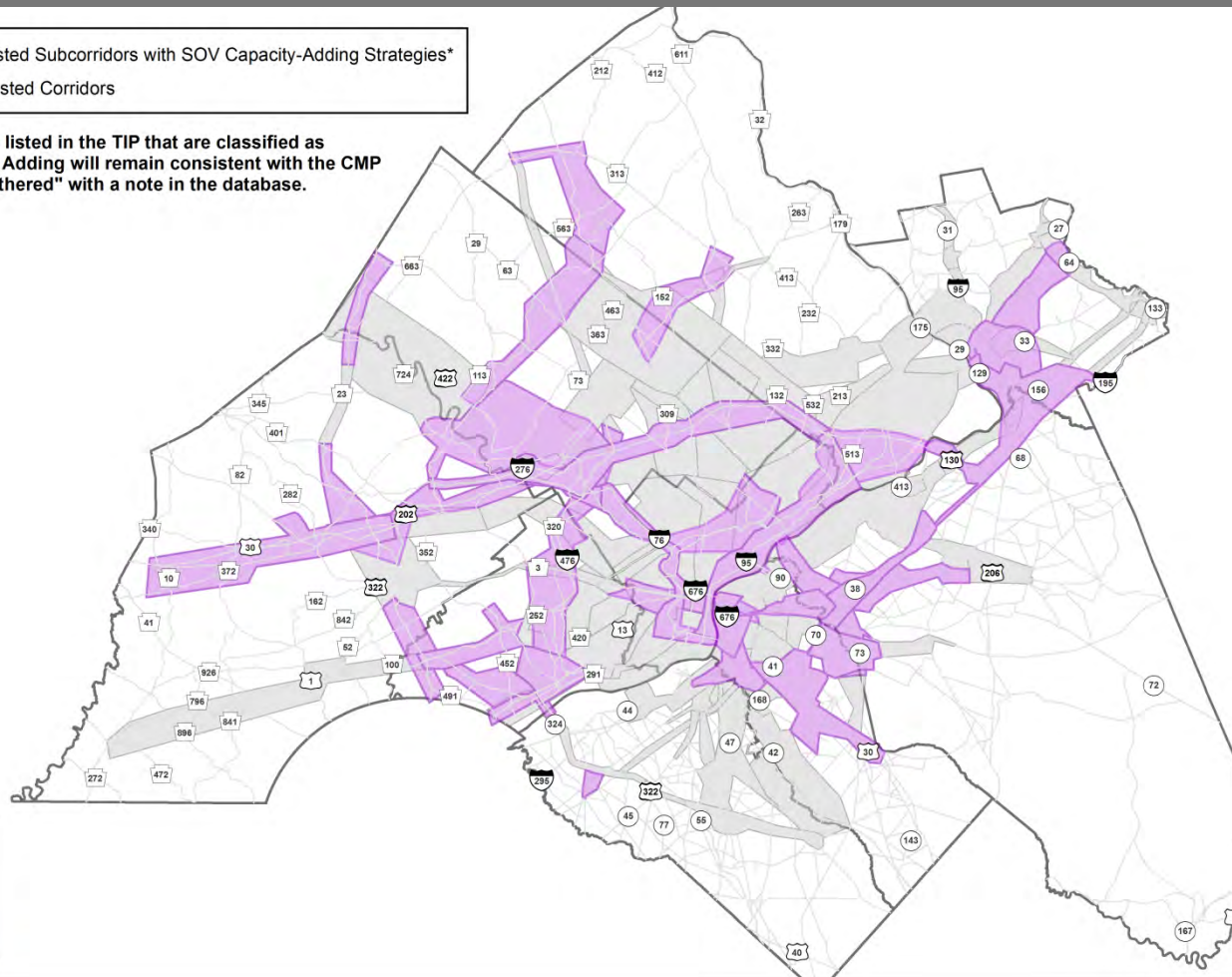
- Single Occupancy Vehicle (SOV) road capacity-adding projects must be consistent with CMP to receive TIP funding for Final Engineering
- Multimodal strategies help projects have more effect
- Early coordination encouraged
- CMP staff can help with stakeholder coordination and analysis



# Corridors and Strategies

- 2015 Congested Subcorridors with SOV Capacity-Adding Strategies\*
- Other Congested Corridors

\*All projects already listed in the TIP that are classified as Major SOV Capacity Adding will remain consistent with the CMP and will be "grandfathered" with a note in the database.





## Next Steps

- Finalize last strategy refinements and distribute the *CMP Overview*
- The CMP Advisory Committee will work with MAP-21 measures when they are announced, probably in December, 2015
- Adoption of 2015 CMP





## RTC Recommendation

The action requested today is:

The RTC recommends that the Board adopt the 2015 update of the region's Congestion Management Process.

Please help us inform your Board representative in advance if he or she is not already familiar with the CMP.



For more information, see  
[www.dvrpc.org/CongestionManagement](http://www.dvrpc.org/CongestionManagement) or contact us

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# NJDOT Systemic Pilot Program for Roundabouts

Regional Technical Committee  
October 6<sup>th</sup>, 2015



NJDOT Systemic Pilot Program for Roundabouts



# NJDOT Systemic Pilot Program for Roundabouts

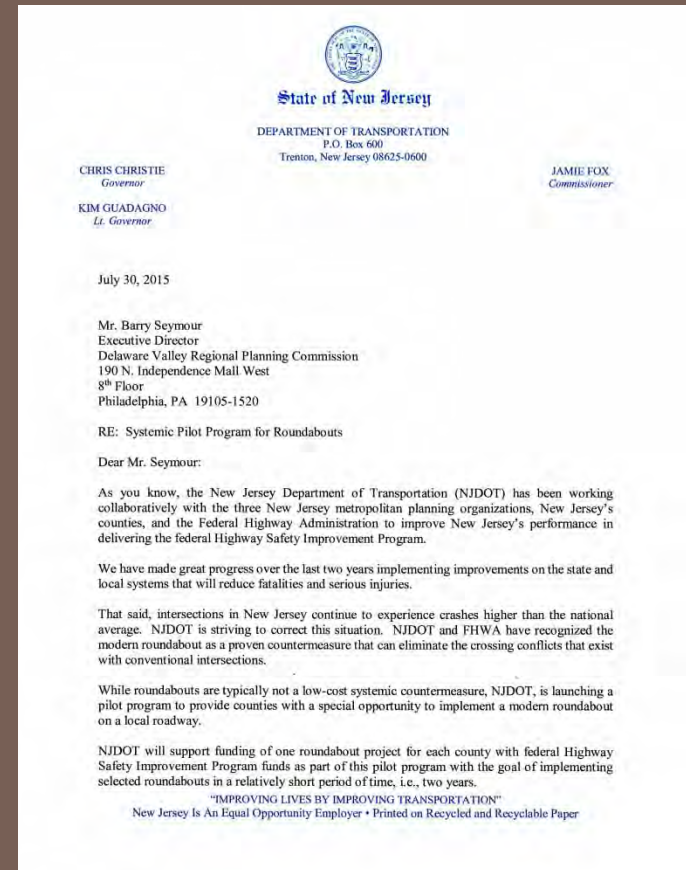
Pilot program designed to implement roundabouts systemically on local roadways in each county in NJ using HSIP funds for construction and design assistance

Suggested criteria for program eligibility:

- comparison to available network screen lists
- entering volumes between 8000 and 19000 AADT
- single lane roundabout
- minimal to no land acquisition, CED eligible
- construction costs not more than \$1.75 million
- Highway Safety Manual analysis is required

DVRCP will assist county partners with data and analysis as needed

***DVRPC has received a total of 8 candidate locations from our four counties combined!***



## Proven Safety Countermeasures

### Office of Safety Proven Safety Countermeasures



These nine countermeasures address crashes that occur in the focus areas of intersections, pedestrians, and roadway departure.



Improving safety is a top priority for the U.S. Department of Transportation, and FHWA remains committed to reducing highway fatalities and serious injuries on our Nation's highways. We are highly confident that certain processes, infrastructure design techniques, and highway features are effective and their use should be encouraged.

**Memo**  
2012 "Guidance Memorandum on Promoting the Implementation of Proven Safety Countermeasures" ([HTML](#), [PDF 78 KB](#))

In January 2012, FHWA issued a "Guidance Memorandum on Promoting the Implementation of Proven Safety Countermeasures". This guidance takes into consideration the latest safety research to advance a group of countermeasures that have shown great effectiveness in improving safety. Safety practitioners are encouraged to consider this set of countermeasures that are research-proven, but not widely applied on a national basis.

Click on one of the nine countermeasures below for more information and a downloadable fact sheet. Each fact sheet provides more detailed descriptions, related research studies, and evaluations of each of these countermeasures. Further information on each countermeasure can also be found at the Crash Modification Factors Clearinghouse (<http://www.cmfclearinghouse.org>).



You may need the [Adobe Reader](#) to view the PDFs on this page.

# Roundabouts = Safety Improvement

Two-way stop control



**Roundabout**

= up to 82 percent reduction in (fatal/injury) crashes

Signalized intersection



**Roundabout**

= up to 78 percent reduction in (fatal/injury) crashes



**“Since the June 2014 opening, ZERO crashes recorded as of June 12<sup>th</sup>, 2015”**  
source: *Burlington County Engineering*

## Action Proposed:

That the **RTC recommend the Board approve the following project submitted for inclusion in New Jersey Department of Transportation's Systemic Pilot Program for Roundabouts**, to be funded with HSIP funds during FY2016, and amend the FY2016 TIP for New Jersey (TIP Action #TBD) by including the project in the Local Safety/High Risk Rural Roads Program (DB #04314).

- \$1,000,000 HSIP for Intersection Improvements at CR 551 (Auburn Rd.) and CR 662 (High Hill Rd.) – Roundabout Woolwich Township, Gloucester County, NJ.

# Thank you!

**Kevin S. Murphy** | Assistant Manager, Safety Programs  
Office of Transportation Safety and Congestion Management  
Delaware Valley Regional Planning Commission  
190 N. Independence Mall West, 8<sup>th</sup> Floor  
Philadelphia, PA 19106-1520  
215.238.2864 | [www.dvrpc.org](http://www.dvrpc.org)

NJDOT Systemic Pilot Program for Roundabouts





*a. I-76, Regional Travel Information, Various Counties*

Modify the PA TIP by adding the final design phase (FD) back in to the TIP in **FY16 (\$350,000 CAQ)** and to add an incidental utility (UTL) phase in FY16 (\$150,000 CAQ) and an incidental ROW phase in FY16 (\$50,000 CAQ).



FY 2016

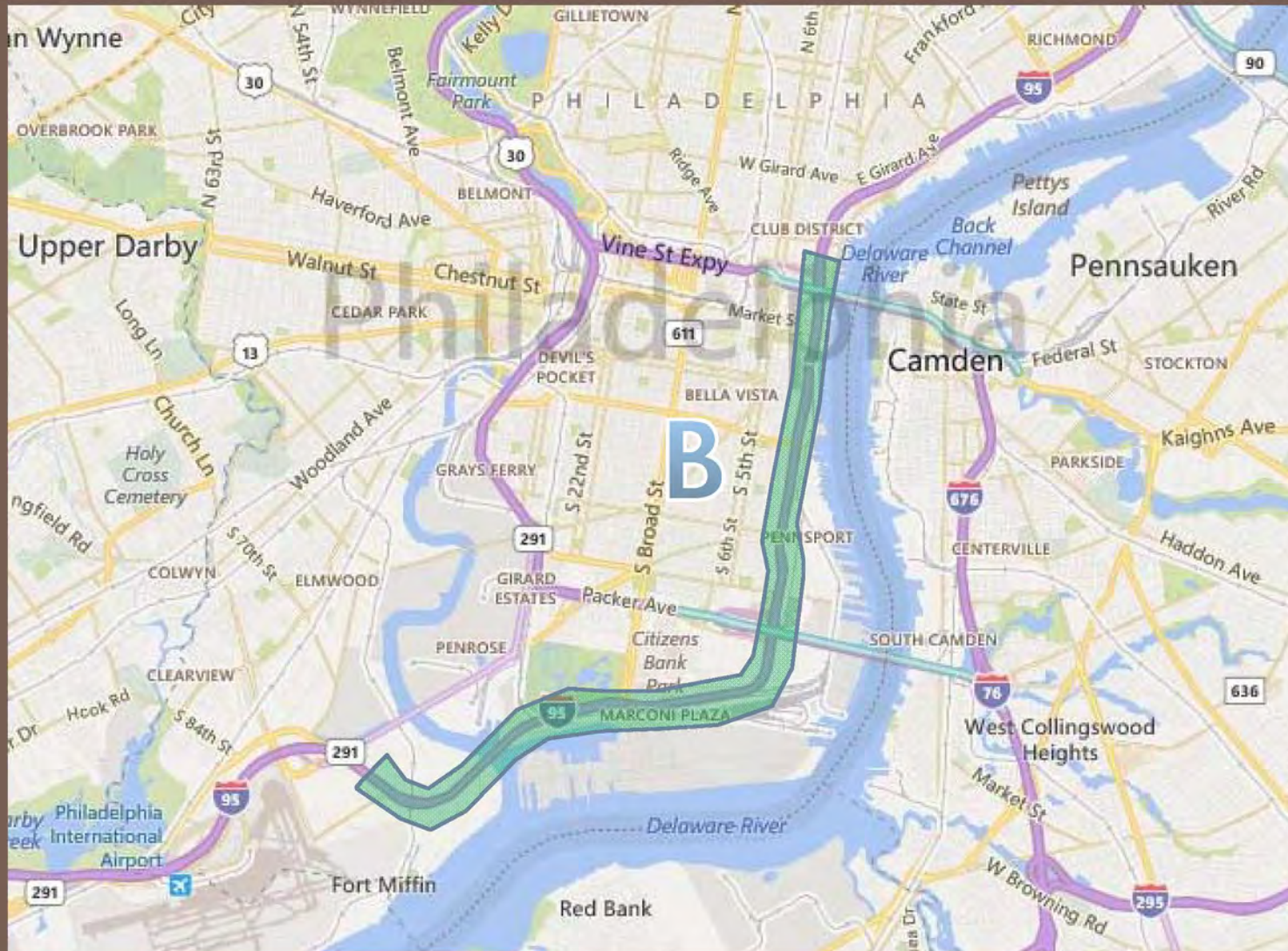
## WORK PROGRAM AMENDMENT

I-95 Central and South Philadelphia  
Traffic Forecasts

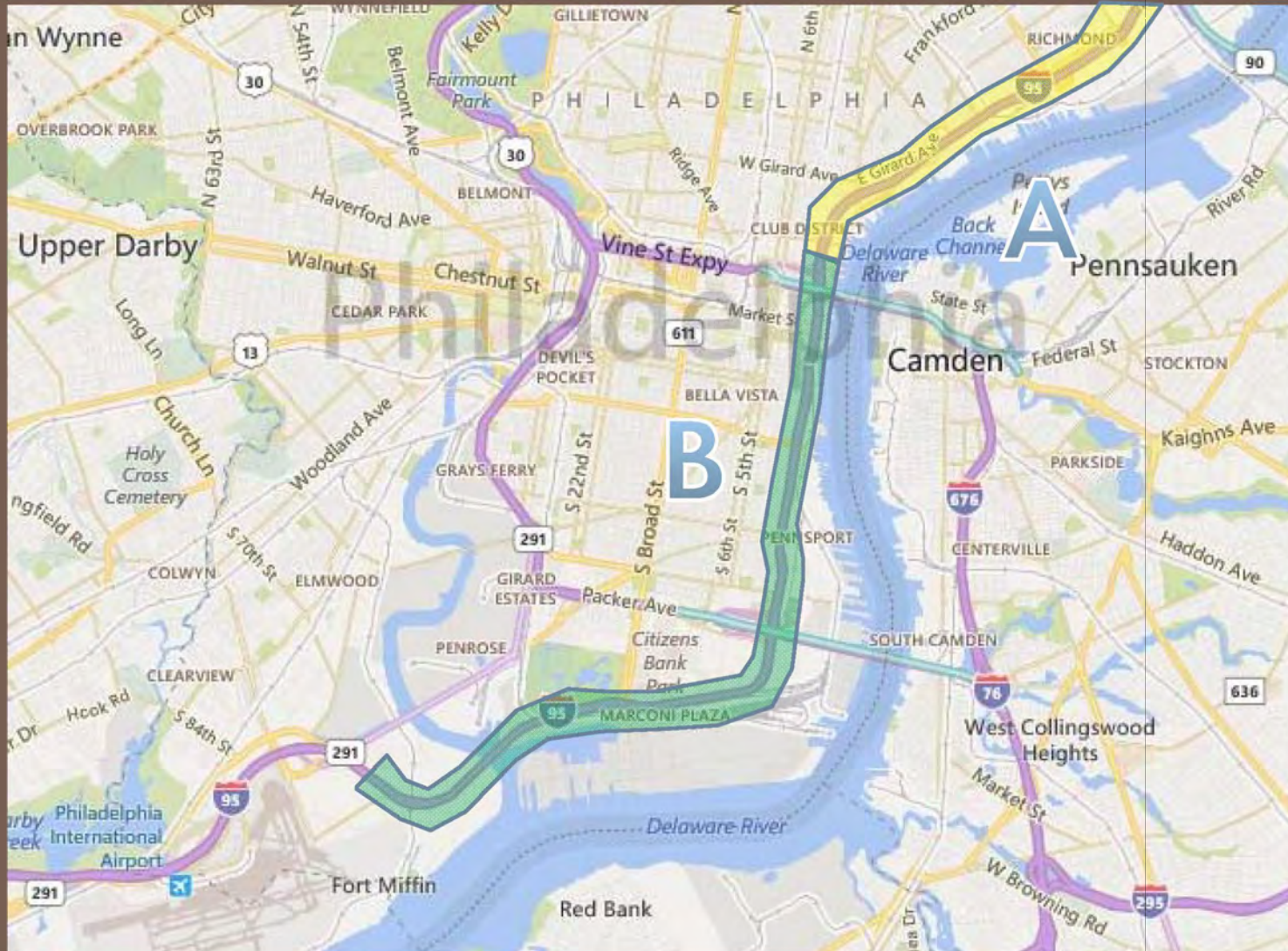
October 6, 2015  
RTC Meeting

Matthew T. Gates

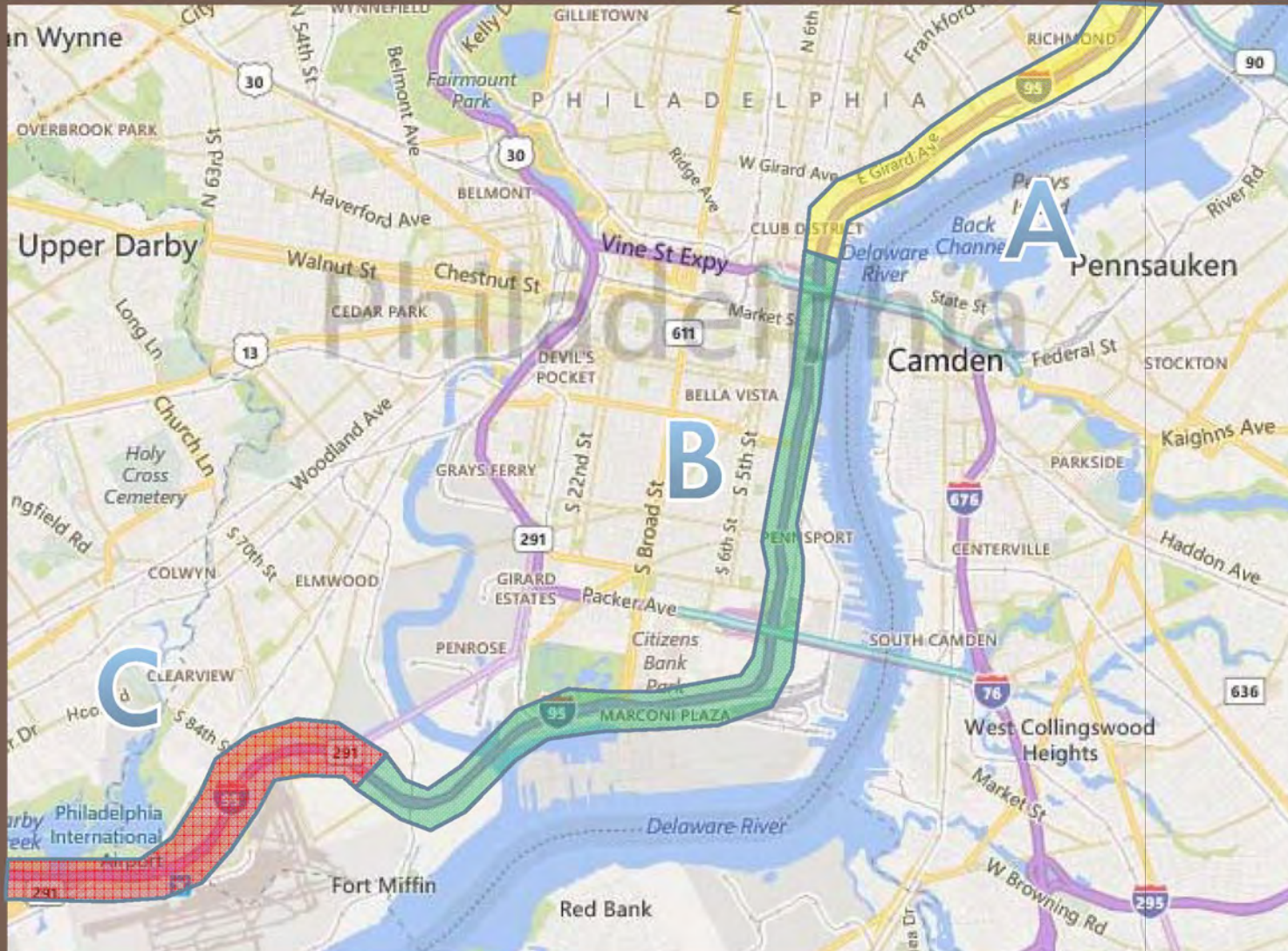
# Location – “Sector B”



# Location



# Location



# Background

- ❖ Conceptual plans
- ❖ No-Build Alternative
- ❖ 9 Build alternatives
- ❖ Daily and peak hour volumes
  - ❖ I-95 and interchange ramps
- ❖ 2040 or 2045 design year.



# I-95 Sector B Traffic Forecasts

- ❖ Focus on Interchanges
  - ❖ Penn's Landing
  - ❖ Walt Whitman/I-76
  - ❖ Broad Street
- ❖ Support Point-of-Access study
- ❖ 3-year effort



# Additional Tasks

- ❖ Additional tasks
  - ❖ Impacts of improved transit services along Columbus Blvd and/or Navy Yard
  - ❖ Land use changes along Delaware waterfront
  - ❖ Impacts to local street network
  - ❖ Additional “capping” around Penn’s Landing area





# MPMS# 104243

- *I-95 Central and South Philadelphia Project Development*
- \$4,000,000 Total Funding
  - ▣ \$385,000 for DVRPC over three years
- “This project will examine general concepts and processes necessary to accomplish the long term task of design, management, scheduling, permitting, estimating, and reconstructing the segment of I-95 between Spring Garden and Broad Streets in the City of Philadelphia.”

# Action Requested

- That the RTC recommend the Board amend DVRPC's FY 2016 Planning Work Program to include the I-95 Central and South Philadelphia Traffic Forecasts.