



## **CIRCUIT RIDER PROGRAM**

Energy Efficiency in Local Government Operations

July 8, 2014

**Liz Compitello**

Delaware Valley Regional Planning Commission

Research Analyst, Energy and Climate Change Initiatives

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## Direct Technical Assistance

\$1.1 Million in energy cost savings identified for participating municipalities over 15 years

Average annual energy cost savings of \$11,581, and an average payback of 2.5 years

Institutionalized energy management best practices



# DVRPC Circuit Rider Program

Focus on energy efficiency in municipal operations

Provide municipalities resources and tools needed to prioritize projects for cost-effectively reducing energy costs in their operations.

1. Reducing Energy Costs in Municipal Operations **Seminar Series**
2. **Streetlights and Traffic Signal** assistance
3. **Direct Technical Assistance**

Circuit Rider: “any professional who travels a regular circuit of locations to provide services”



# Challenge of Municipal Energy Planning

- Small local governments
- Limited staffing capacity
- Fiscal constraints
- Equipment vendor driven
- Lack of confidence in energy decisions
- Unsure where to start with energy management





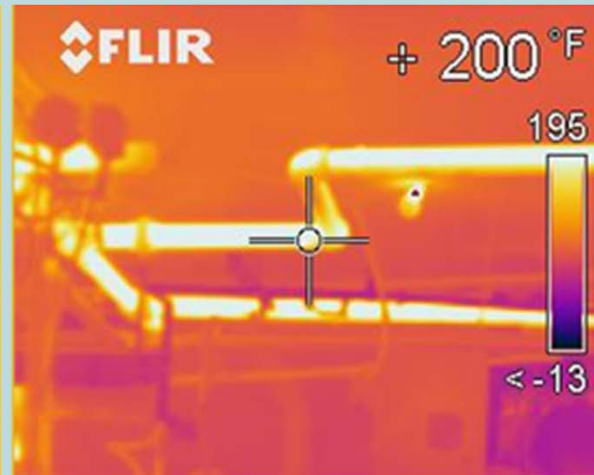


# Direct Technical Assistance


Lessons learned from  
Direct Technical Assistance

# Direct Technical Assistance

- One-on-one assistance for from DVRPC and a certified energy expert (Practical Energy Solutions)
- Work with munis to Identify and prioritize cost-effective projects to reduce energy costs.
- Provide assistance with implementing recommended projects



# Our Partners

- US EPA (Funder)
- Advisory Group
  - County Planning Depts. (EECBG projects)
  - The Reinvestment Fund
  - PA Southeast Regional Energy Office
-  **PECO**  
An Exelon Company
- City of Philadelphia's Greenworks plan
- PA's Local Development Districts





# Direct Technical Assistance Process

Hire Technical Consultant

Select Municipalities

Collect Data + Perform Utility Bill Analysis

Hold On-site Scoping Meeting

Prioritize Assessment Work

Carry Out Energy Assessments

Present Energy Assessments

Follow-up + Implementation Assistance

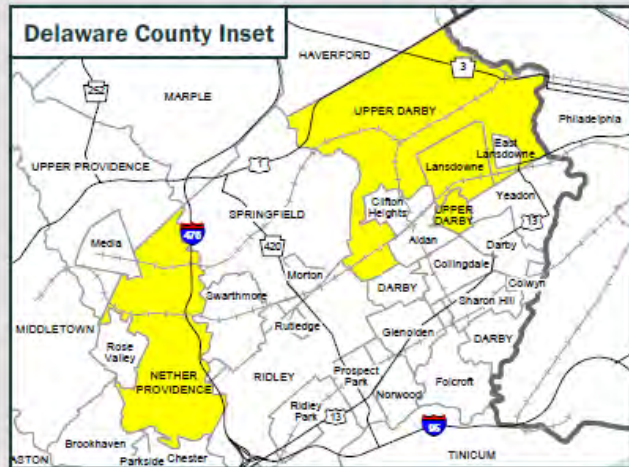
# Direct Technical Assistance Process



# Direct Technical Assistance Communities\*



**CIRCUIT RIDER PROGRAM**



## Bucks County

- Lower Southampton Township
- Bristol Township

## Chester County

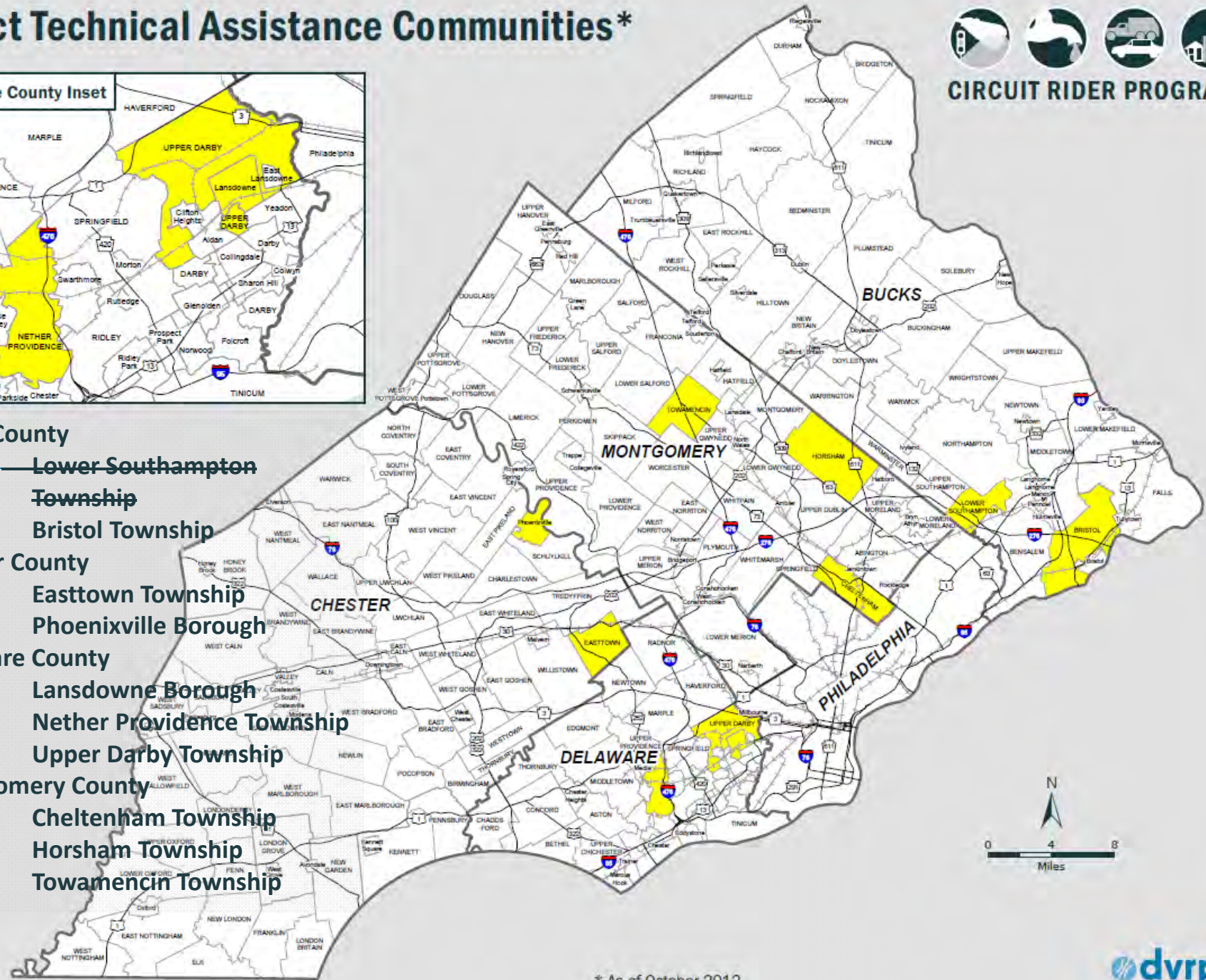
- Easttown Township
- Phoenixville Borough

## Delaware County

- Lansdowne Borough
- Nether Providence Township
- Upper Darby Township

## Montgomery County

- Cheltenham Township
- Horsham Township
- Towamencin Township



\* As of October 2012



# Reflecting the Diversity of our Region's Municipalities

Municipality	Population (2010)	Median Household Income (2009 ACS)
<b>DELAWARE</b>		
<b>Nether Providence</b>	13,706	\$96,435
<b>Lansdowne Borough</b>	10,620	\$63,009
<b>Upper Darby Township</b>	82,795	\$52,572
<b>CHESTER</b>		
<b>Easttown Township</b>	10,477	\$128,984
<b>Phoenixville Borough</b>	16,440	\$61,153
<b>MONTGOMERY</b>		
<b>Towamencin Township</b>	17,578	\$75,128
<b>Cheltenham Township</b>	36,793	\$72,584
<b>Horsham Township</b>	26,147	\$81,888
<b>BUCKS</b>		
<b>Lower Southampton Township</b>	18,909	\$74,193
<b>Bristol Township</b>	54,582	\$47,693

# Direct Technical Assistance Process

Hire Technical Consultant

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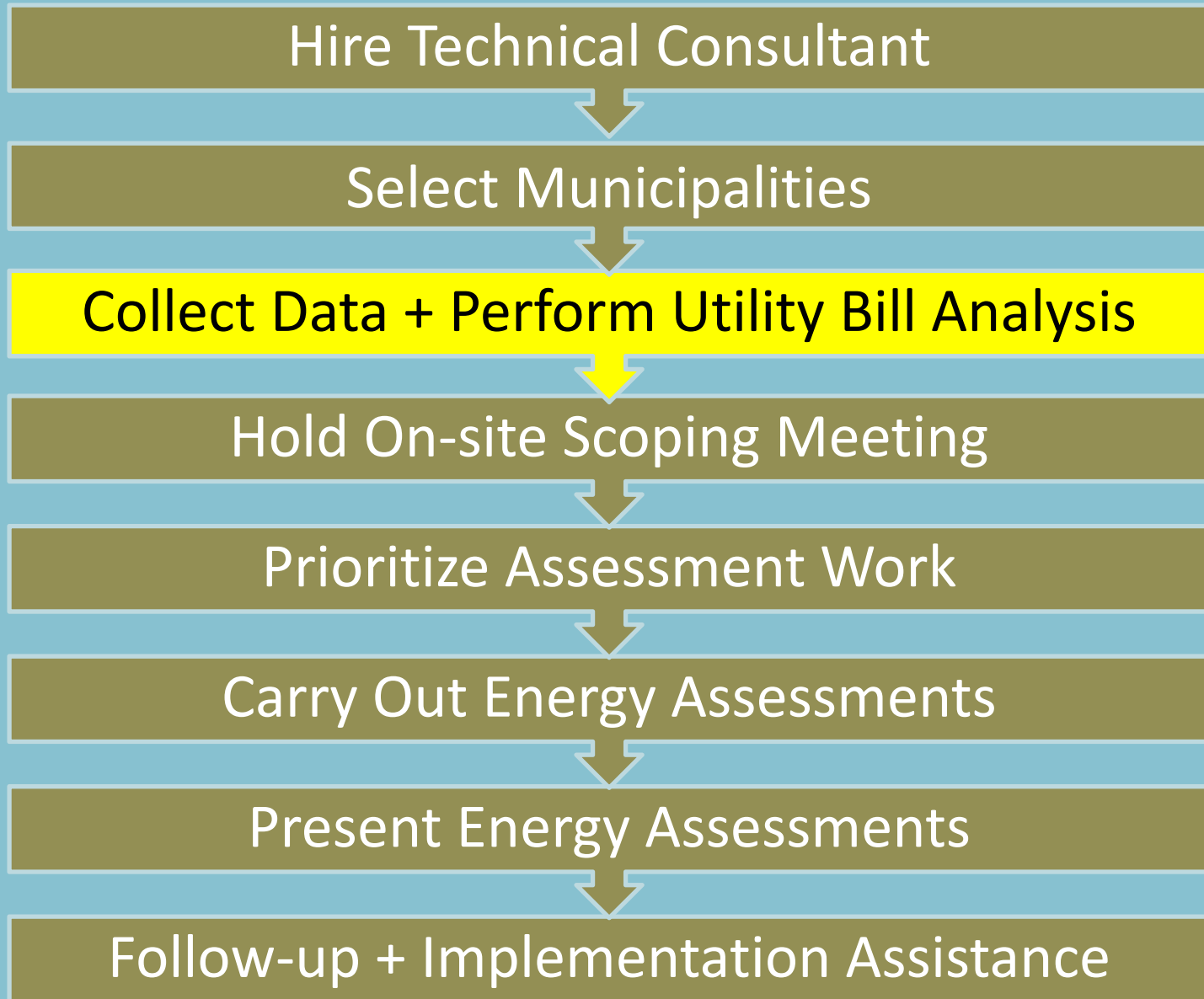
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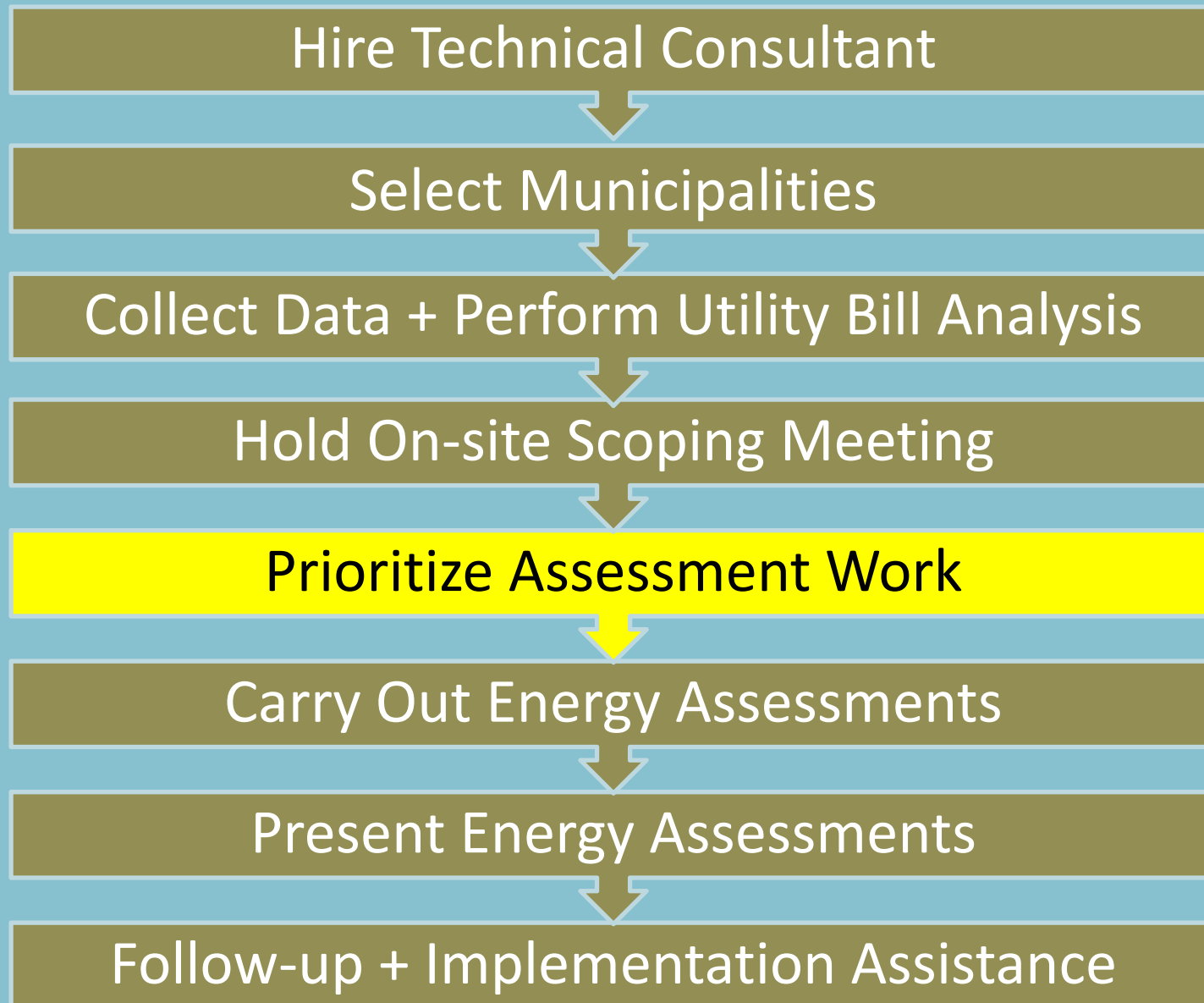


# Direct Technical Assistance Process

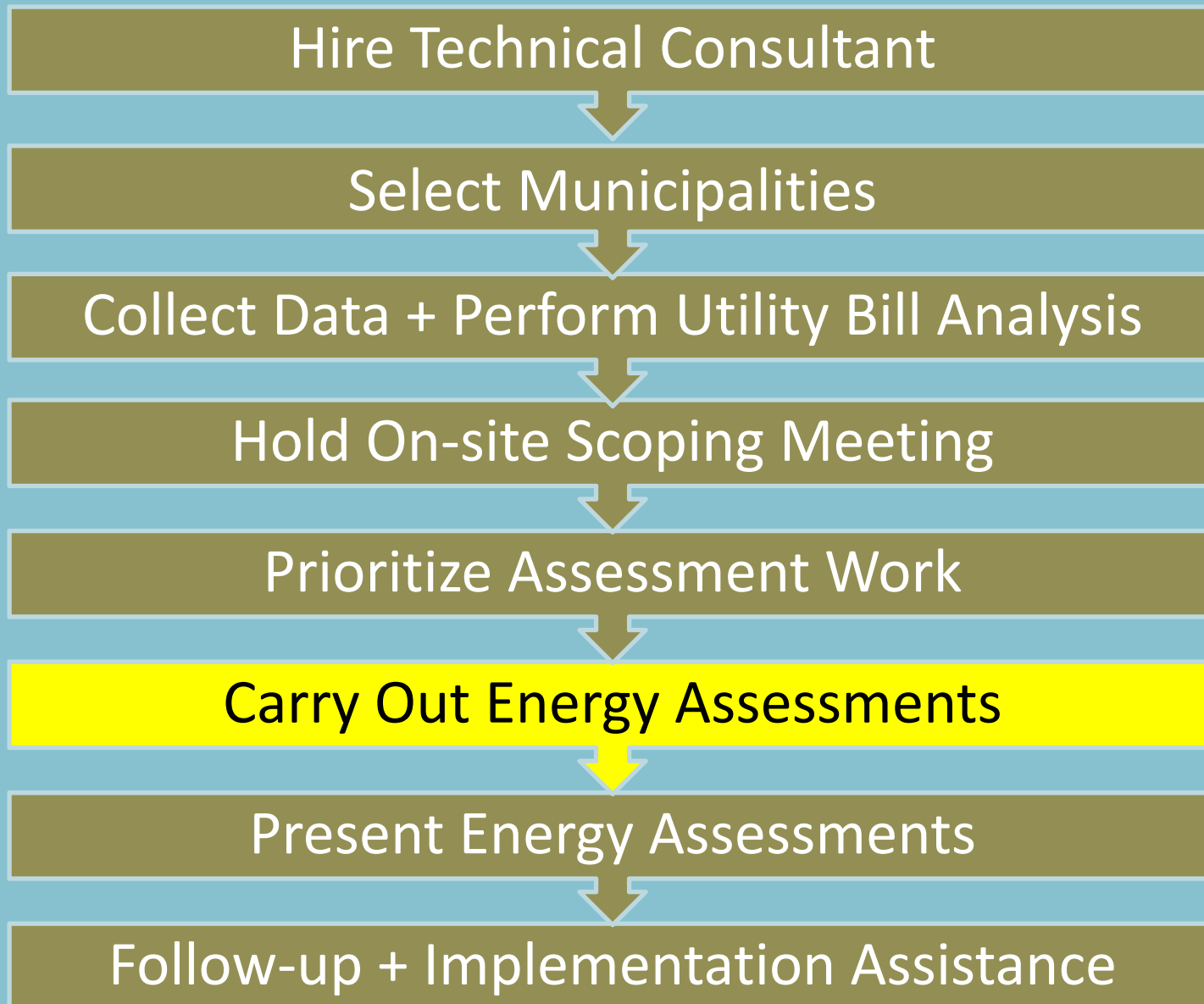




# Direct Technical Assistance Process



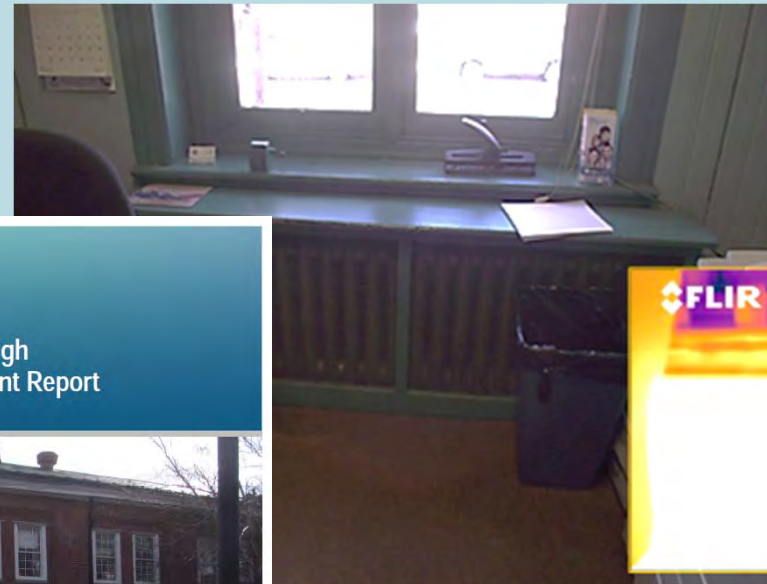
# Direct Technical Assistance Process



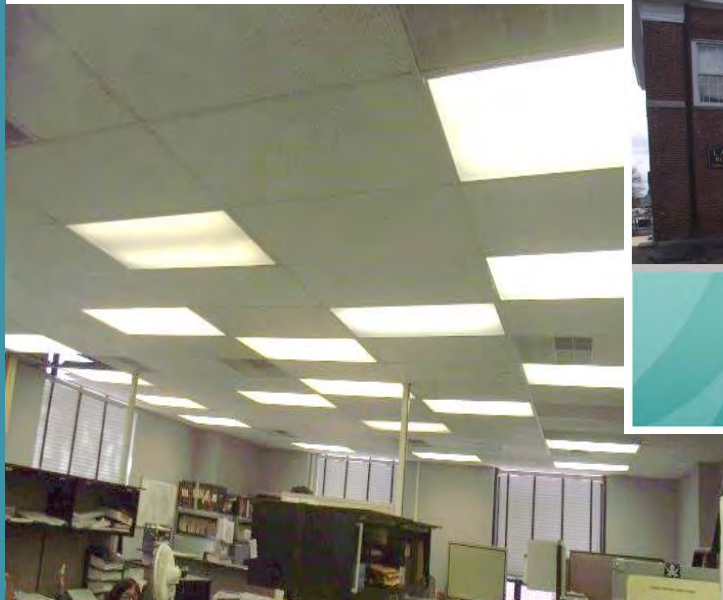
# Energy Assessments



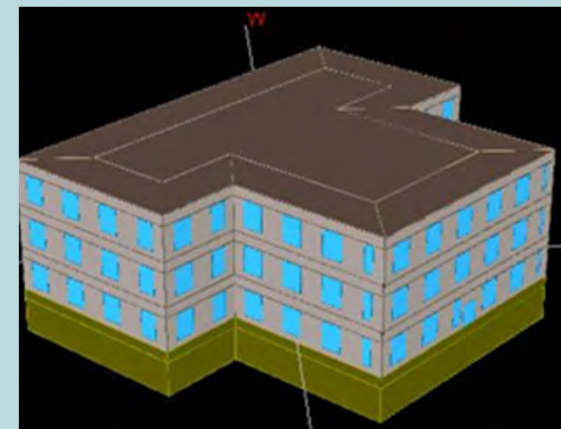
Figure 8. Significant Overlighting



Lansdowne Borough  
Energy Assessment Report  
Borough Hall

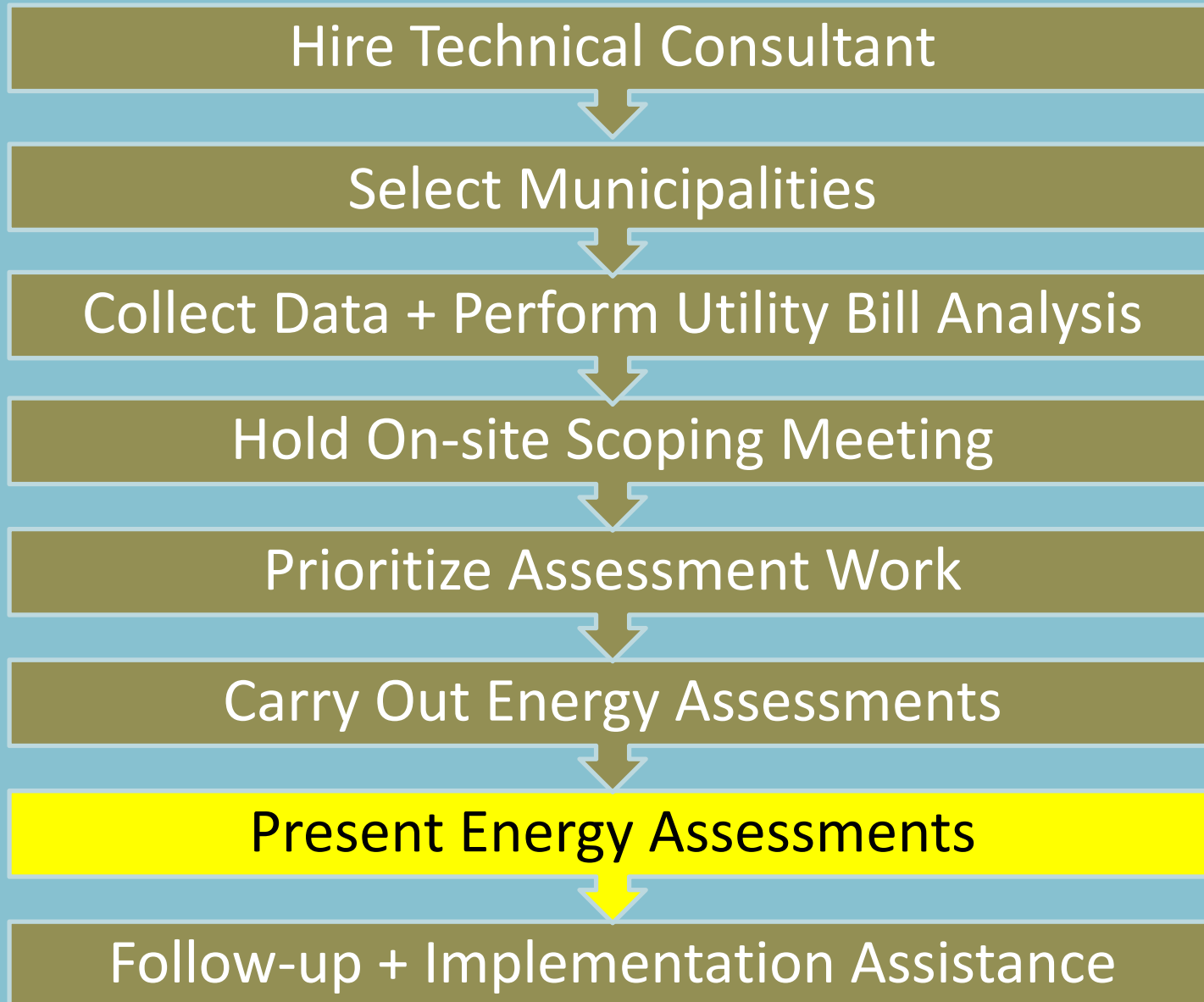


SEPTEMBER 2013  
DELAWARE VALLEY  
edvrpc  
REGIONAL  
PLANNING COMMISSION

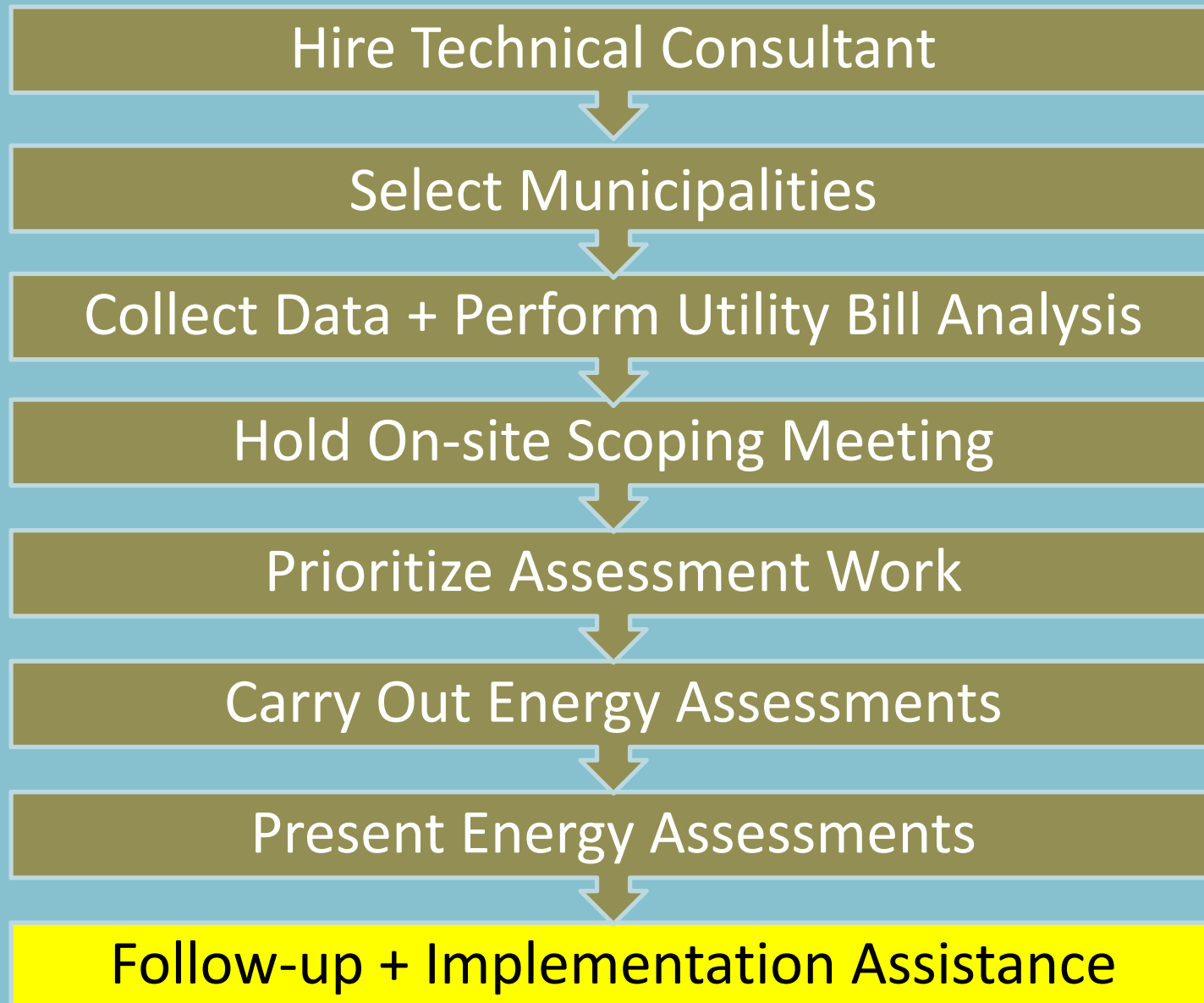




# Direct Technical Assistance Process

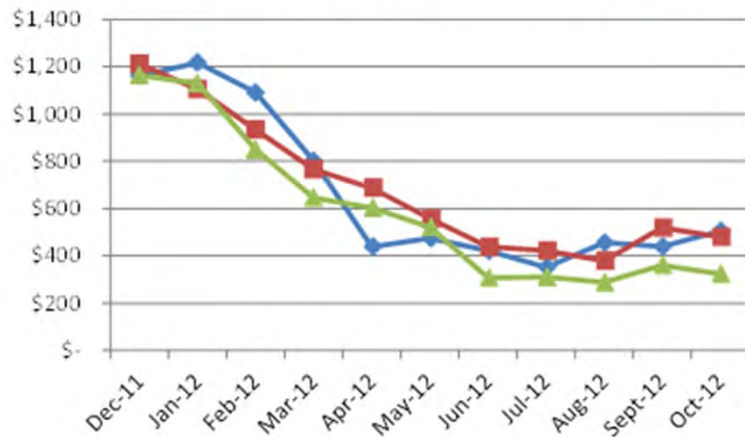


# Direct Technical Assistance Process



# Bristol Township Pump Stations

Figure 1. Selected Pump Station Energy Costs (11 months, 2011-2012)



## High Wintertime Costs: Why?



### ● Findings:

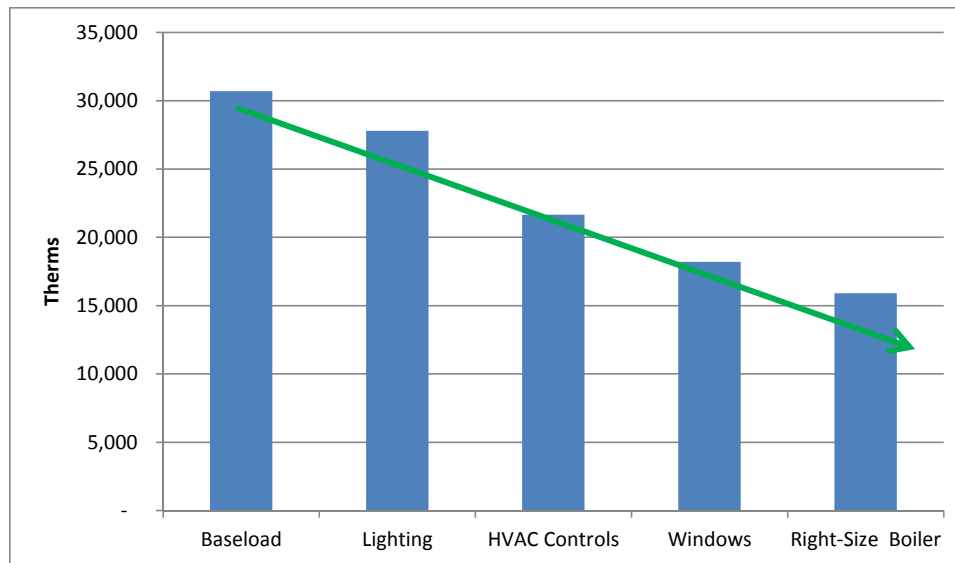
- \$50,000/year on electricity for 18 pump stations
- Some pump stations had notably higher wintertime electricity use, suggesting cause other than snow or rain
- High temps in pump house, despite low thermostat setting

### ● Action:

- Replace thermostats, set to 55°
- Save \$3,600, pay off in matter of months

# Upper Darby Admin Building

## Planned approach maximizes savings



### Findings:

- Verify prior energy assessment
- On-going energy measures by staff
  - Lighting
  - Steam System Repairs
  - Boiler right-sizing and natural gas conversion

### Action:

- Continue energy measures
- Consider interior storms
- **Save \$50,086 annually (2/3 reduction)**
- Payback: less than 4 years

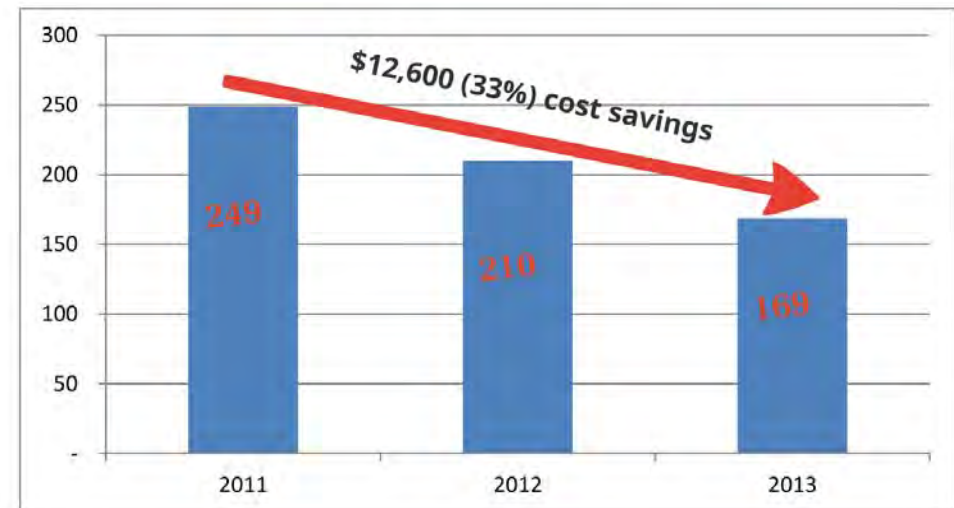
# Lansdowne Borough Hall

- Findings:
  - Lack of HVAC zoning requires 24/7 conditioning of space (<half is police)
  - Energy intensive system
- Action:
  - Create zoning by installing ductless splits in police's 24/7 areas
  - Set back building temps at night/weekends
  - Enable BAS to control RTU fans/pumps

**Will cut electricity use by 28 percent and save \$7,454 annually.**



## Lansdowne Police/Admin EUIs







# Thank you!

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# Transportation Conformity Demonstration: FY 2014 NJ TIP, DRAFT FY 2015 PA TIP, and Amendment to *Connections 2040* LRP



July 8, 2014



# Presentation

- ❖ Conformity Overview
- ❖ DVRPC Region
- ❖ Emissions Analysis Results
- ❖ Air Quality Trends

# Conformity Overview

Transportation Conformity is a federal requirement to control emissions from on-road, mobile sources in designated air quality Non-attainment or Maintenance Areas



# Conformity Overview

## Non-Attainment Areas

- ❖ Region not meeting federal air quality standards (NAAQS)

## Maintenance Area

- ❖ Area that previously was in non-attainment
- ❖ Must develop a maintenance plan, and implement steps to continue meeting the air quality standard



# Conformity Overview

There are four major sources of emissions

- ❖ Stationary – power plants, industrial boilers, etc.
- ❖ Industry – petroleum refineries, cement kilns, etc.
- ❖ Non-Road Mobile Sources – trains, planes, construction equipment
- ❖ On-Road Mobile Sources – cars, trucks, buses
  - ❖ Accounts for 33% NO<sub>x</sub>, 23% VOC, 9% PM<sub>2.5</sub>

-Source: EPA Air Trends Report 2013

# Conformity Test

Conformity is tested against SIP “Budgets”

- ❖ A budget is an emissions ceiling established in the SIP
- ❖ Projected emissions from projects in the TIP and Plan are compared to SIP budgets
- ❖ If projected emissions are less than budget, the TIP or Plan is conforming to the SIP

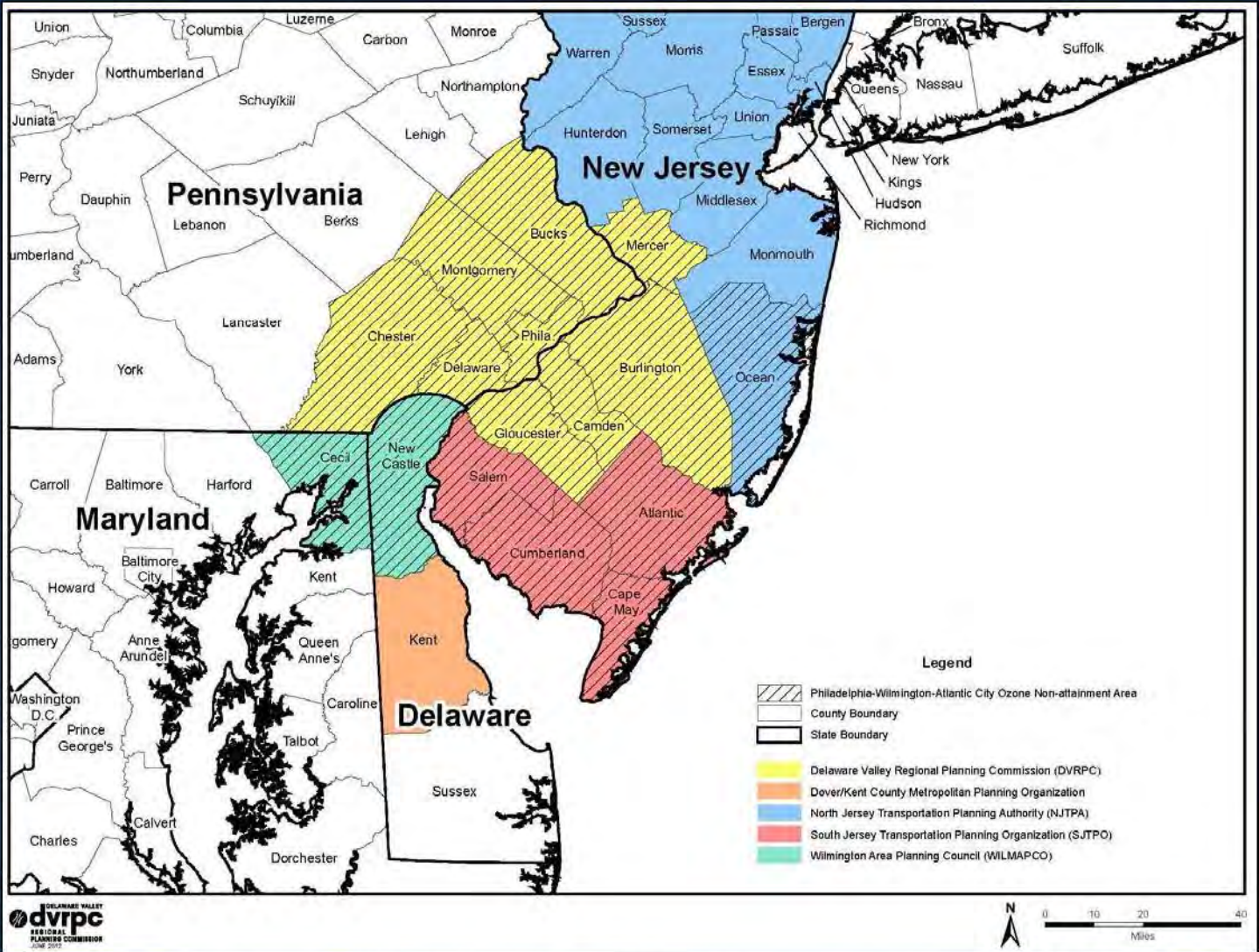
# DVRPC Region

## Multiple Non-attainment Areas in Multiple Jurisdictions

- ❖ Two States
- ❖ Region is in Non-Attainment for two NAAQS
  - Ozone
    - Entire region in one NAA.
  - PM<sub>2.5</sub>
    - Two forms of the standard
      - 24-Hour
      - Annual
    - Region is in two different NAAs
      - Philadelphia – Wilmington (8 DVRPC Counties + NCC, DE)
      - New York – Northern NJ – Long Island (Mercer County)

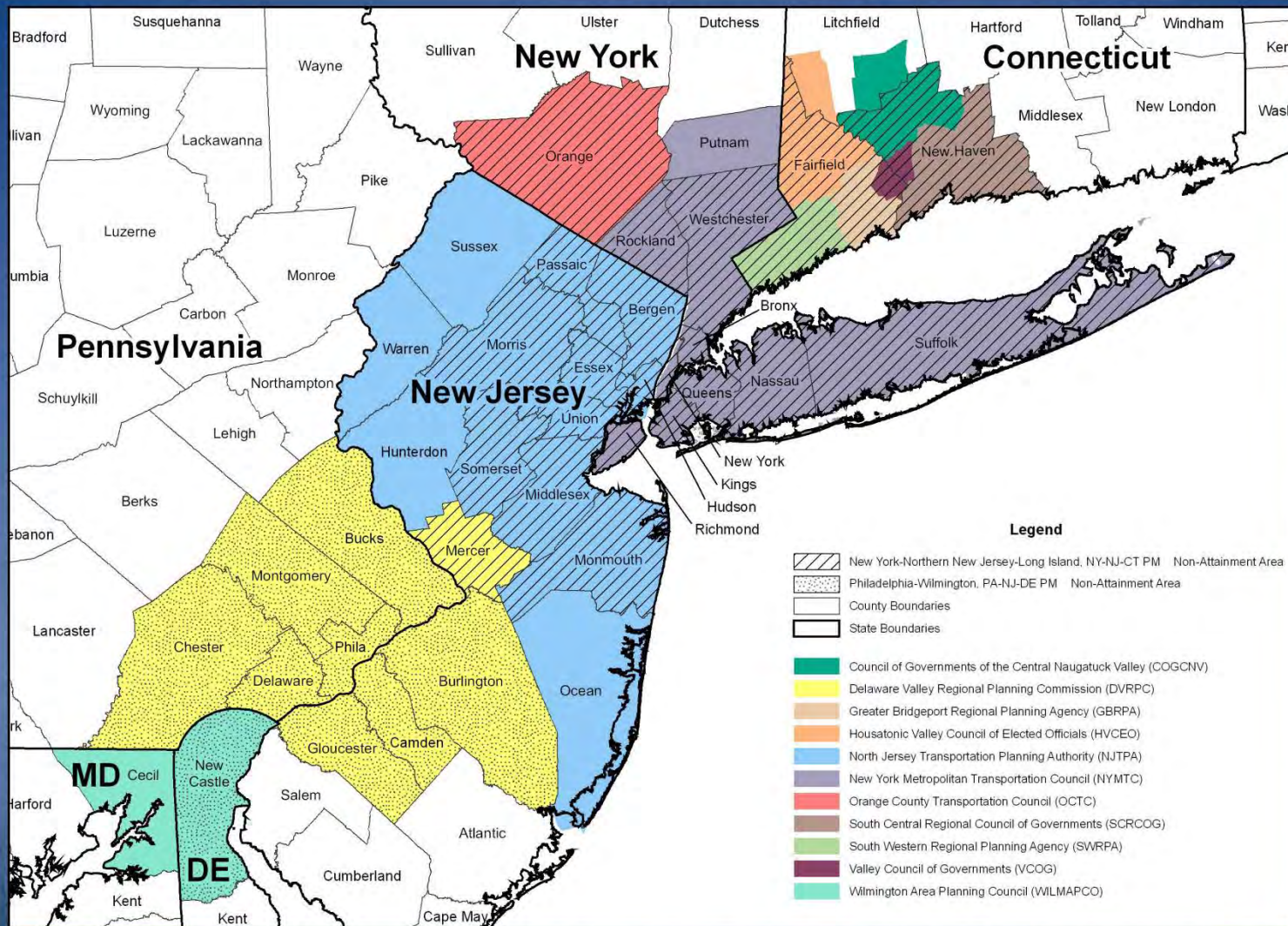


# Ozone Nonattainment Area





# PM<sub>2.5</sub> Nonattainment Areas



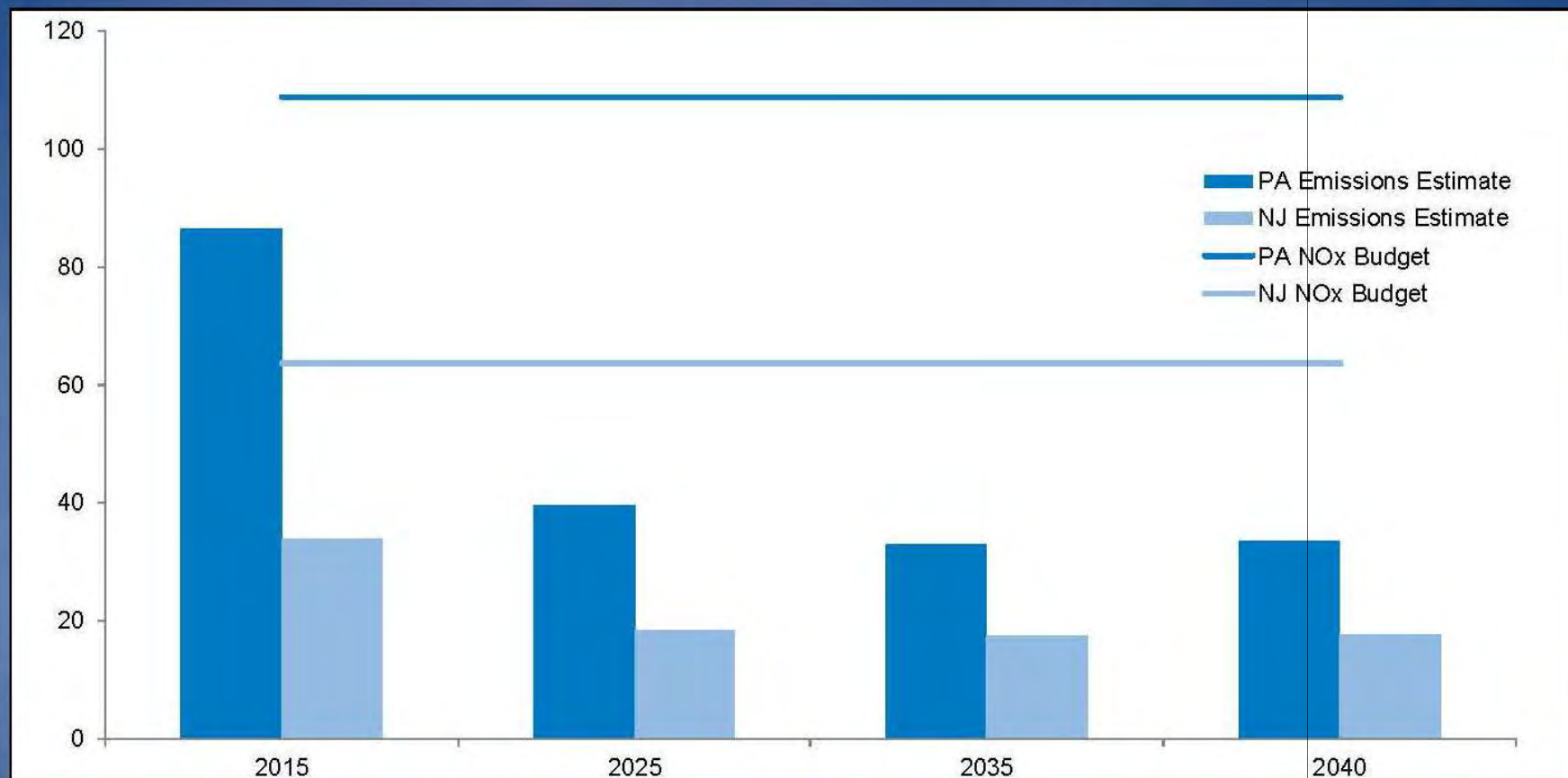


# Conformity Overview

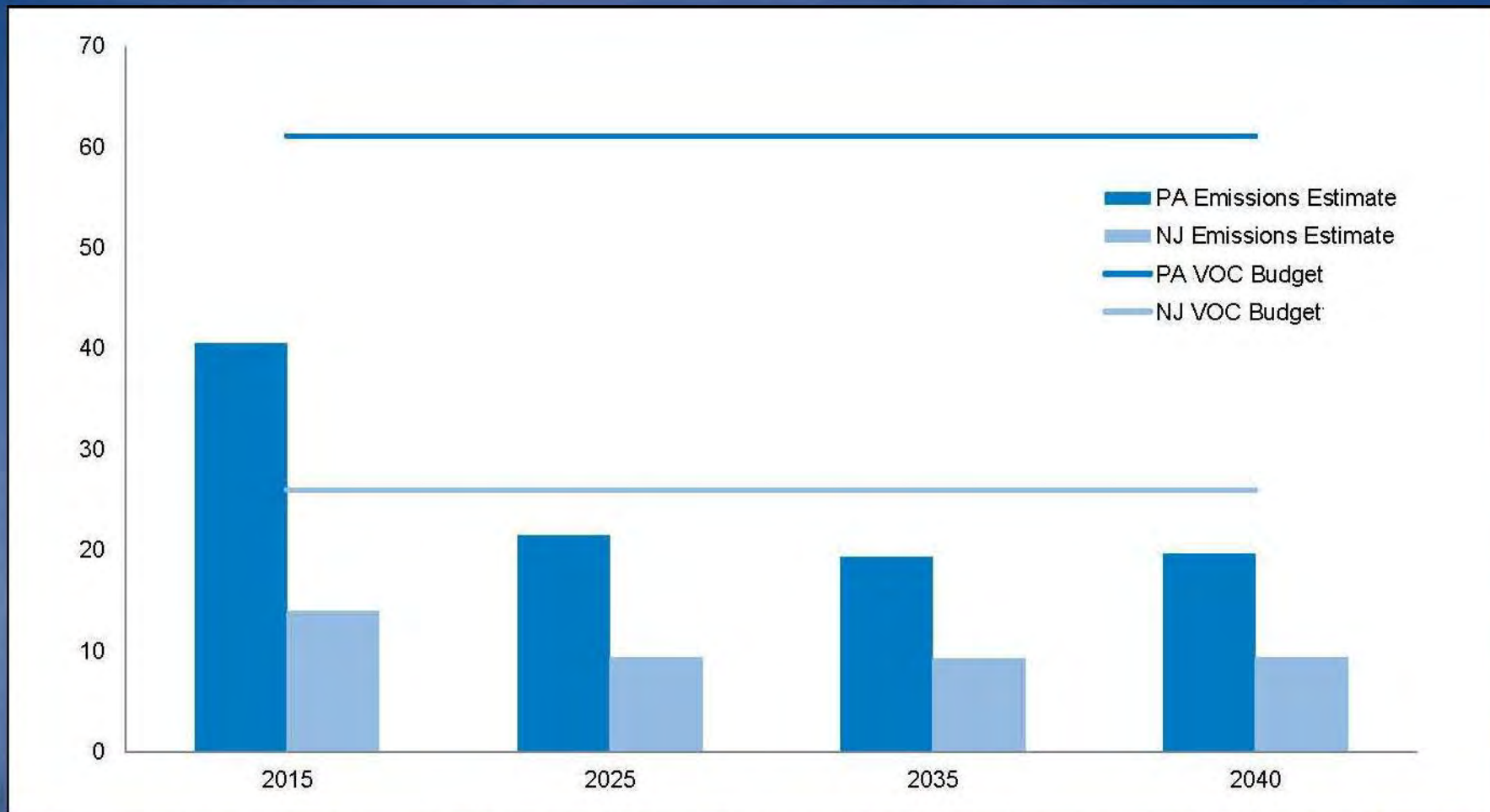
## Conformity Triggers

- ❖ A new FY 2015 PA TIP
- ❖ Amendment to financial plan for *Connections 2040 LRP* that adds regionally significant and nonexempt projects in PA
- ❖ Since no regionally significant projects are being added to the FY 2014 NJ TIP, DVRPC is reaffirming conformity finding from 2013.

# NOx Emissions Results

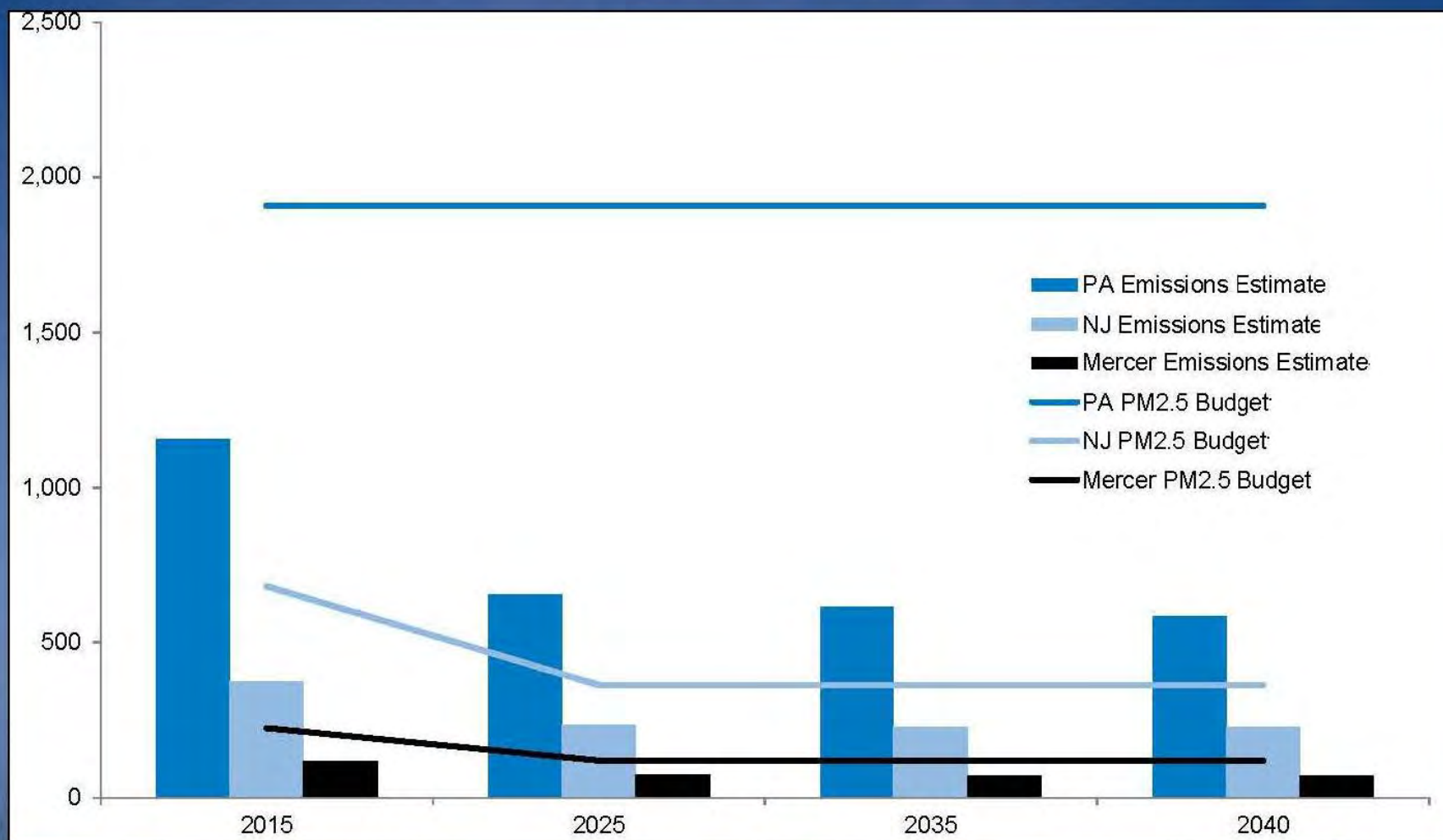


# VOC Emissions Results

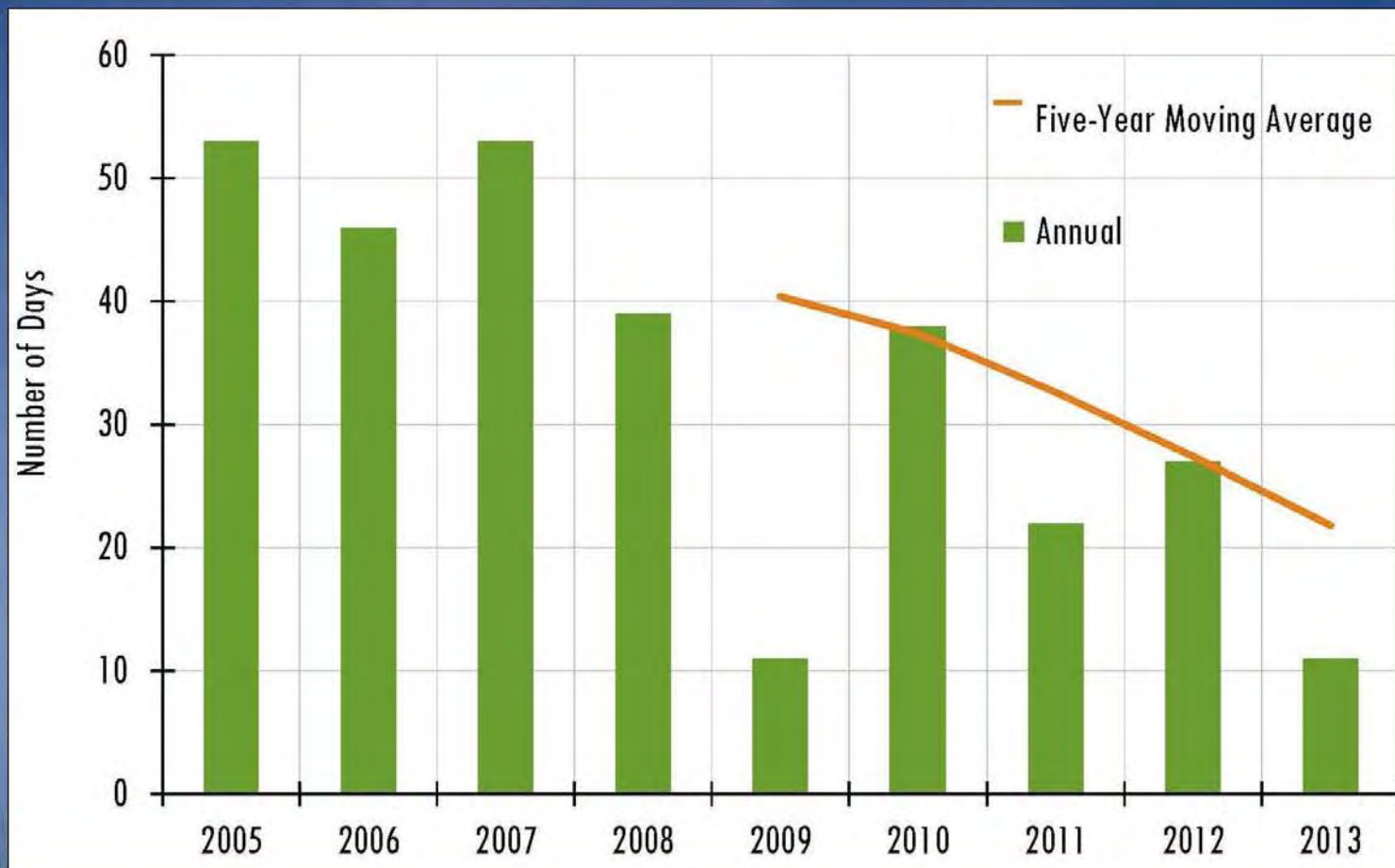




# PM<sub>2.5</sub> Emissions Results

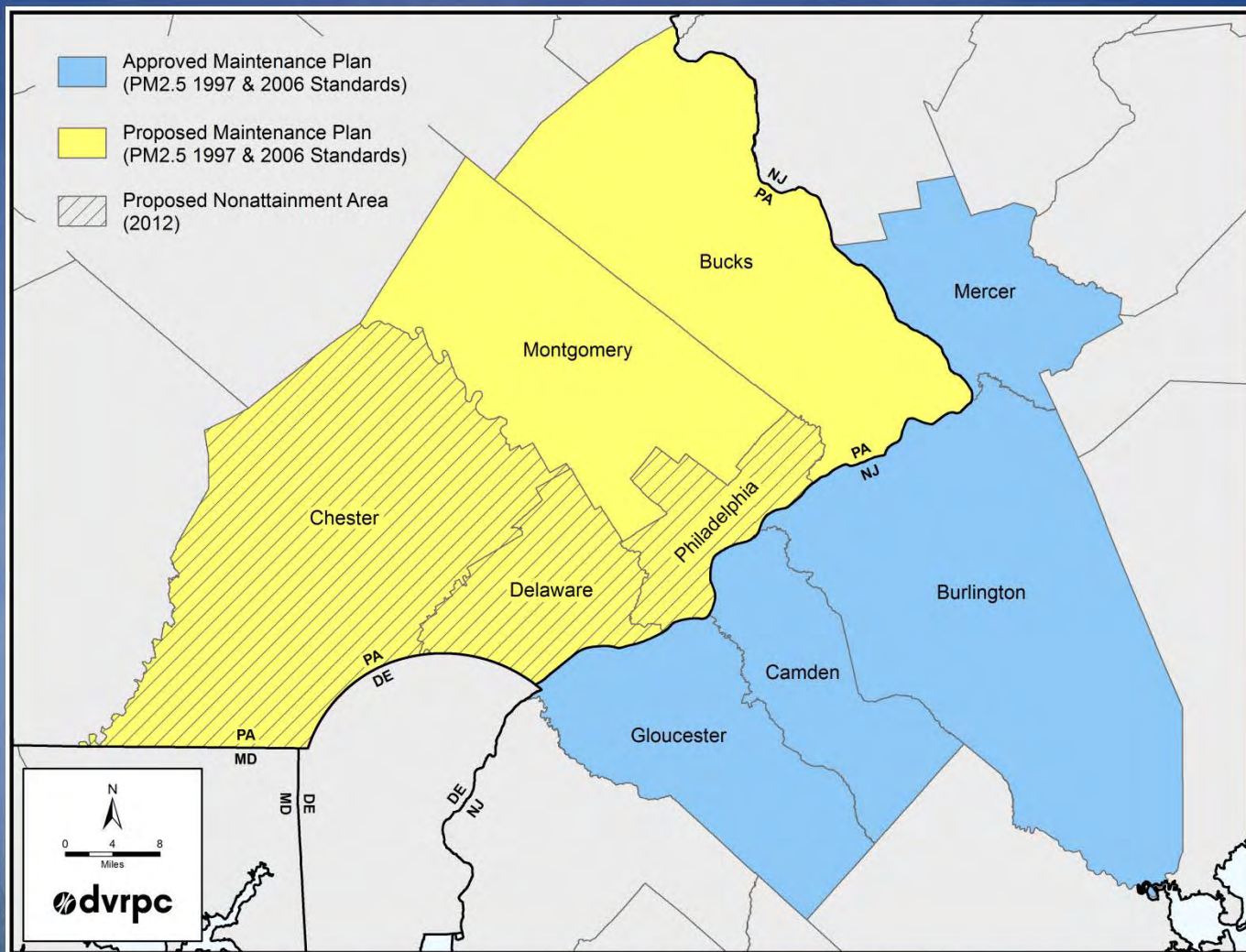


# Regional Air Quality Trends





# Regional Air Quality Trends



# Emissions Analysis Results

PA and NJ TIPs and the *Connections 2040* LRP

- ❖ “Conform” to the corresponding SIPs and the current final conformity guidance under CAAA including all applicable NAAQS requirements
- ❖ Transportation investments identified in the TIPs and the Plan do not impede efforts to attain NAAQS

Conformity Results

- ❖ Meet the 8-hour ozone, daily and annual PM<sub>2.5</sub> SIP requirements
- ❖ Replaces the existing conformity finding of July 2013



# Public Comment

## Public Comment Period

- ❖ June 16 through July 18, 2014
- ❖ One public meeting (June 26)

## Comments are accepted:

- ❖ At Public Meeting
- ❖ Via email
- ❖ Online
- ❖ Via mail and fax

To view documents or submit comments, please visit [www.dvrpc.org](http://www.dvrpc.org) and search conformity

# Requested Action

That the RTC recommend that the DVRPC Board adopt the conformity findings of *Connections 2040* LRP and PA and NJ TIPs for Ozone, PM<sub>2.5</sub> and CO in the DVRPC planning area

# Questions?

## Thank you

Sean Greene  
Transportation Planner  
DVRPC  
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★ **TIP** TRANSPORTATION  
IMPROVEMENT PROGRAM

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## Draft DVRPC FY2015 TIP for PA

*RTC / July 8, 2014*





# Transportation Improvement Program

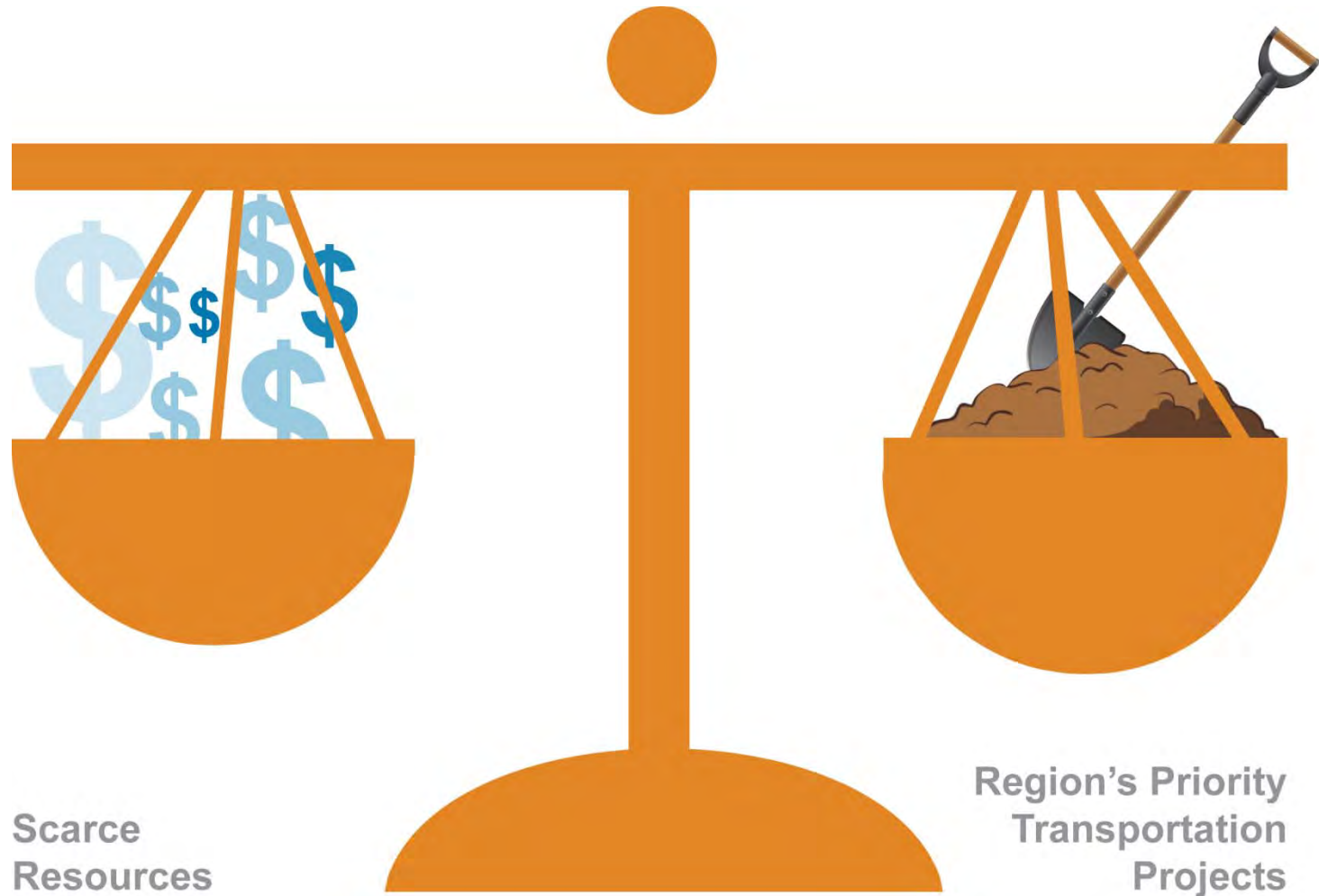
Developing and maintaining the Transportation Improvement Program is what makes the region eligible to receive and to spend federal transportation dollars.

**PA and NJ TIP = \$6.7 Billion over 4 years**

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# Regional Decision Making

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## What is the TIP?

- The near-term expression of the Long Range Plan
- Agreed upon list of priority projects that are regionally significant and all other projects seeking federal funds. DVRPC TIP also includes state funded capital improvements.
- Not a guarantee of funds or implementation
- Not a grant of money, but based on reimbursements
- Financially constrained program
- **REQUIRED** by federal legislation

# Draft DVRPC FY 2015-2018 TIP for PA

Draft Version

Pennsylvania - Highway Program (Status: TIP)

## Montgomery

MPMS# 16484 Edgehill Road Bridge Over Old York Road SR:2034

LIMITS: Over Old York Road

Est Let Date: 4/23/2015

MUNICIPALITIES: Abington Township

IMPROVEMENT: Bridge Repair/Replacement

FC: 17

AQ Code: S19

DVRPC PLANNING AREA: Developed Community

IPD: 1

PROJECT MANAGER: EE/J. Detora

CMP: Not SOV Capacity Adding

CMP Subcorridor(s): 14E

This project involves rehabilitating or replacing the bridge carrying Edgehill Road over Old York Road. The work includes replacing the deck of the bridge and painting and the replacement of approach curb and sidewalk.

The bridge carries a 2 lane road with sidewalks over a 4 lane road with sidewalks and a mountable median. The single span, 116'-long built-up steel through girder bridge is supported on horizontally scored concrete abutments with stepped modern style pilasters.

A final alternative for bridge rehabilitation or replacement is determined upon federal National Environmental Policy Act (NEPA) or state Categorical Exclusion clearance.

		TIP Program Years (\$ 000)												
Phase	Fund	FY2015	FY2016	FY2017	FY2018	FY2019	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025	FY2026	
ROW	TOLL													
ROW	BOF	318												
UTL	TOLL													
UTL	BOF		526											
CON	TOLL													
CON	BOF			3,809										
		318	526	3,809	0	0	0	0	0	0	0	0	0	
		Total FY2015-2018			4,653	Total FY2019-2022				0	Total FY2023-2026			0

**Multi-year, multi-modal program.  
Best estimate of project schedule and costs.  
Four-year program, updated every other year.**



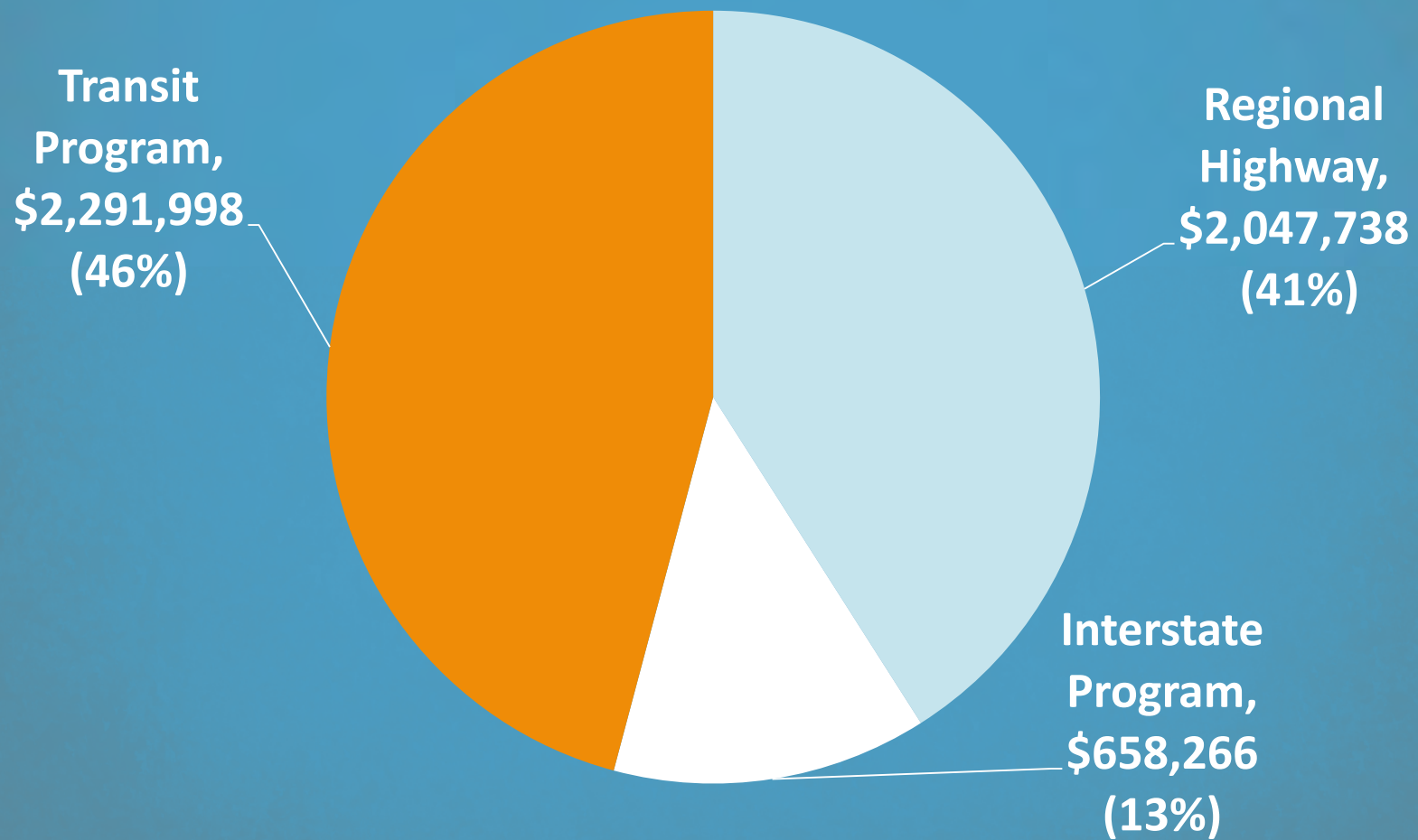


## Draft FY2015 TIP for PA

- 286 Regional Highway projects totaling \$2 Billion
- 20 projects funded by \$660 million provided by the Statewide Interstate Management Program (IMP) for I-95 and I-76 Reconstruction projects
- 32 Transit projects totaling \$2.3 Billion

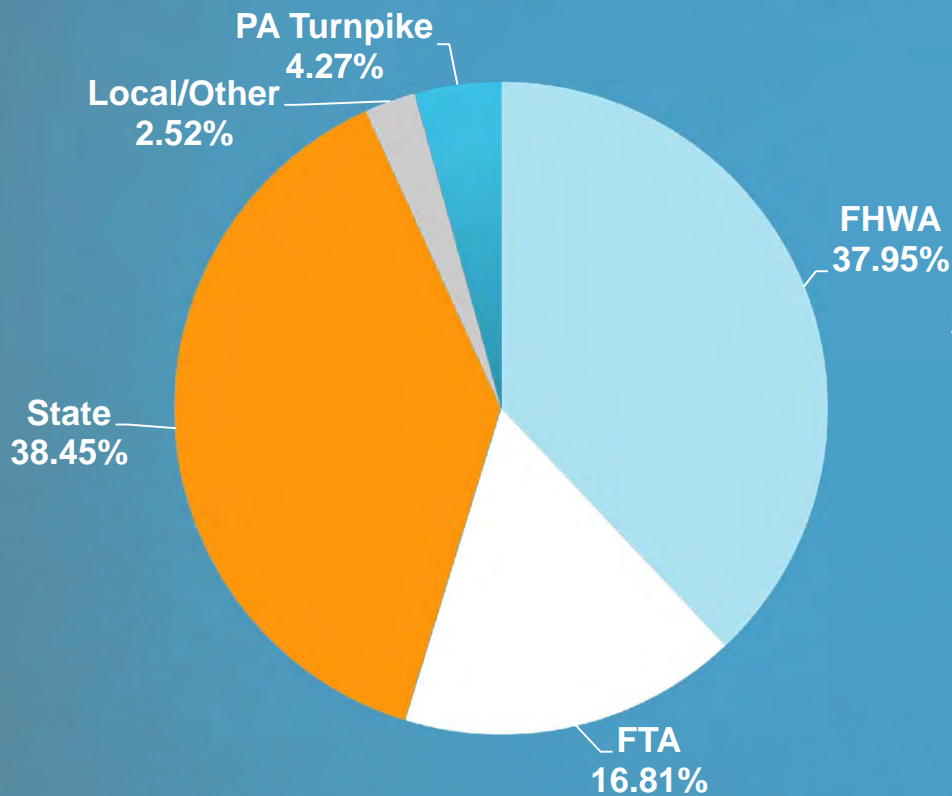


# Cost Summary By Program

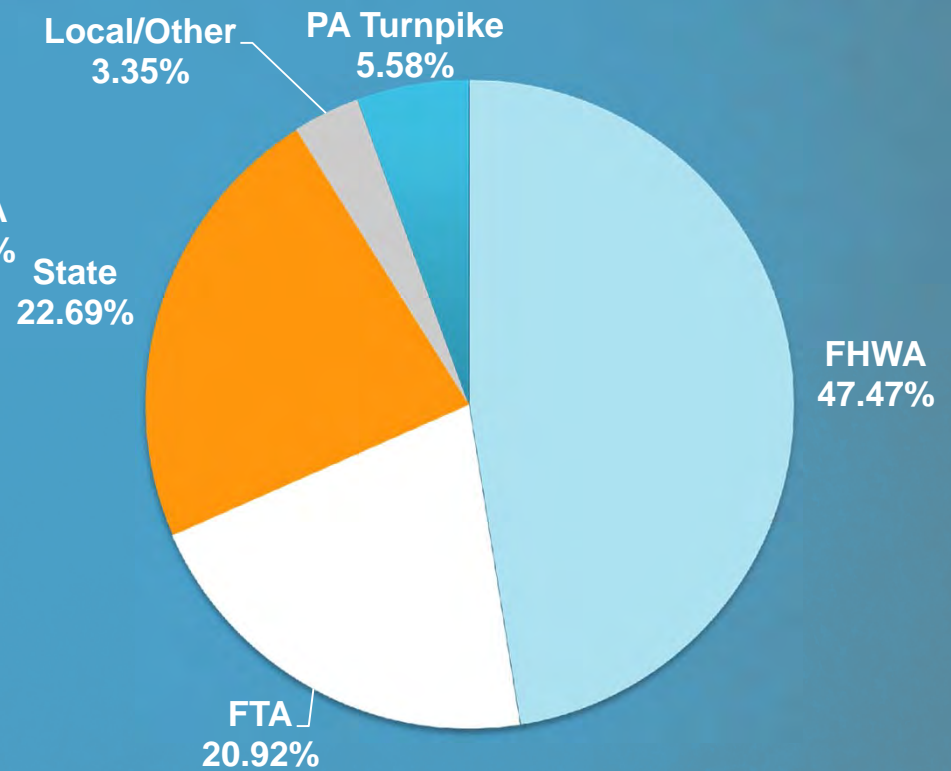




# Sources of Funding to DVRPC Region



Draft FY2015 TIP

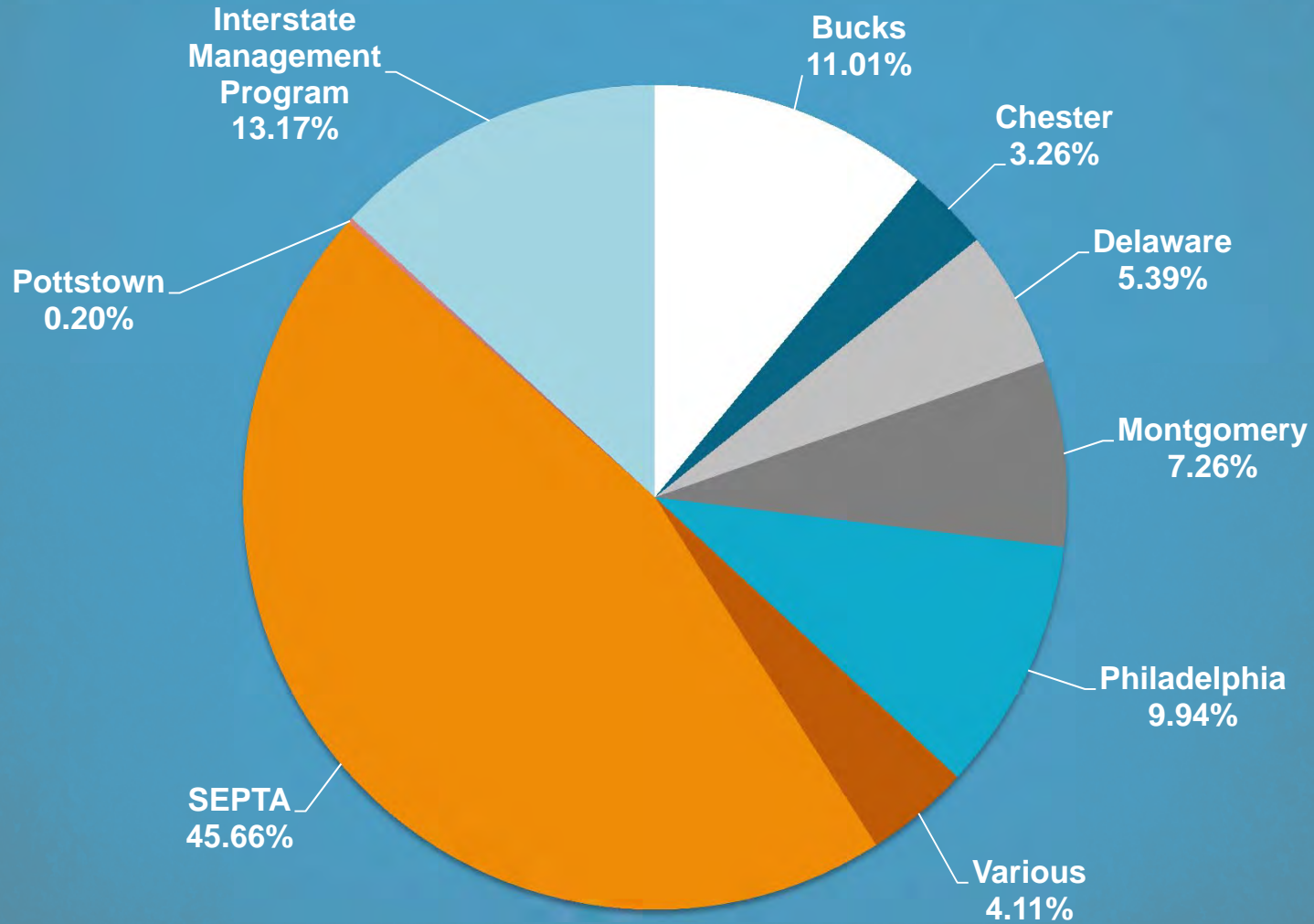


Current FY2013 TIP





# Funds by County/Operator





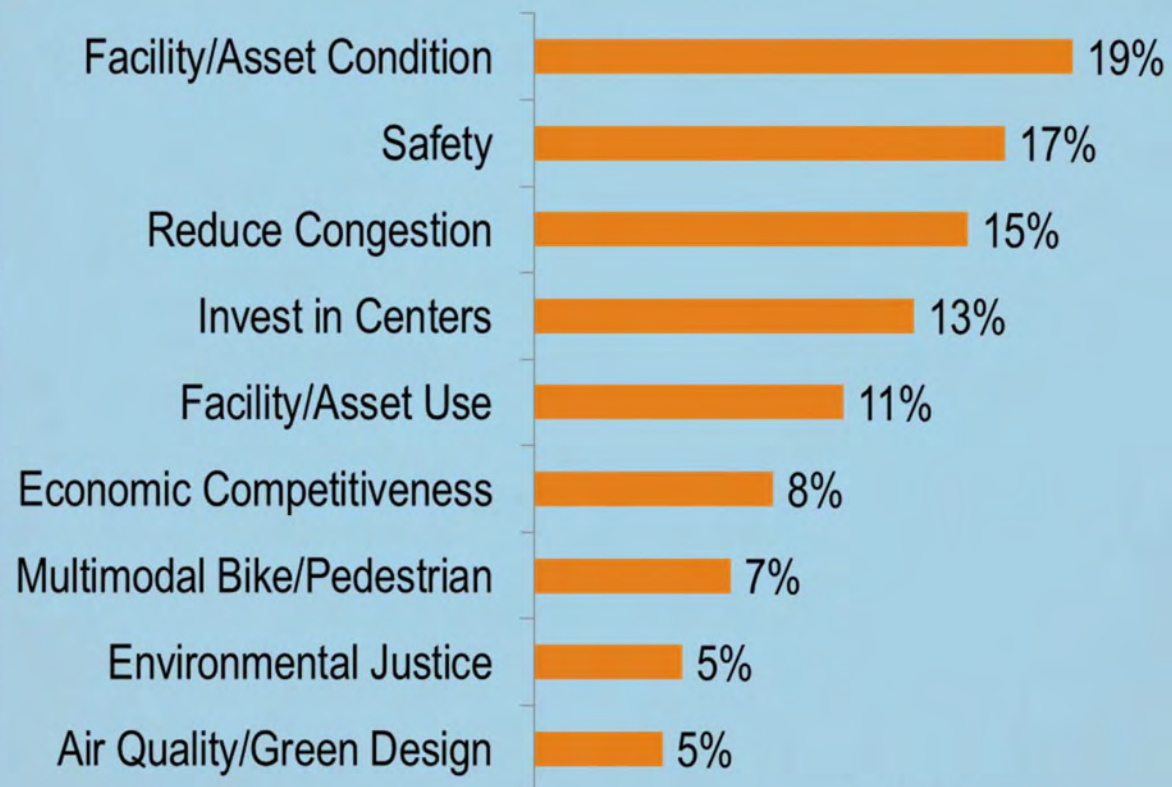
## What's New?

- MAP 21 – Federal Transportation Authorization
  - *New fund categories*
  - *Performance factor emphasis*
    - *Project evaluation criteria revised*
- Act 89
  - *Additional PA state funds*
    - *No “Illustrative Unfunded” list of projects*
- More Statewide programs



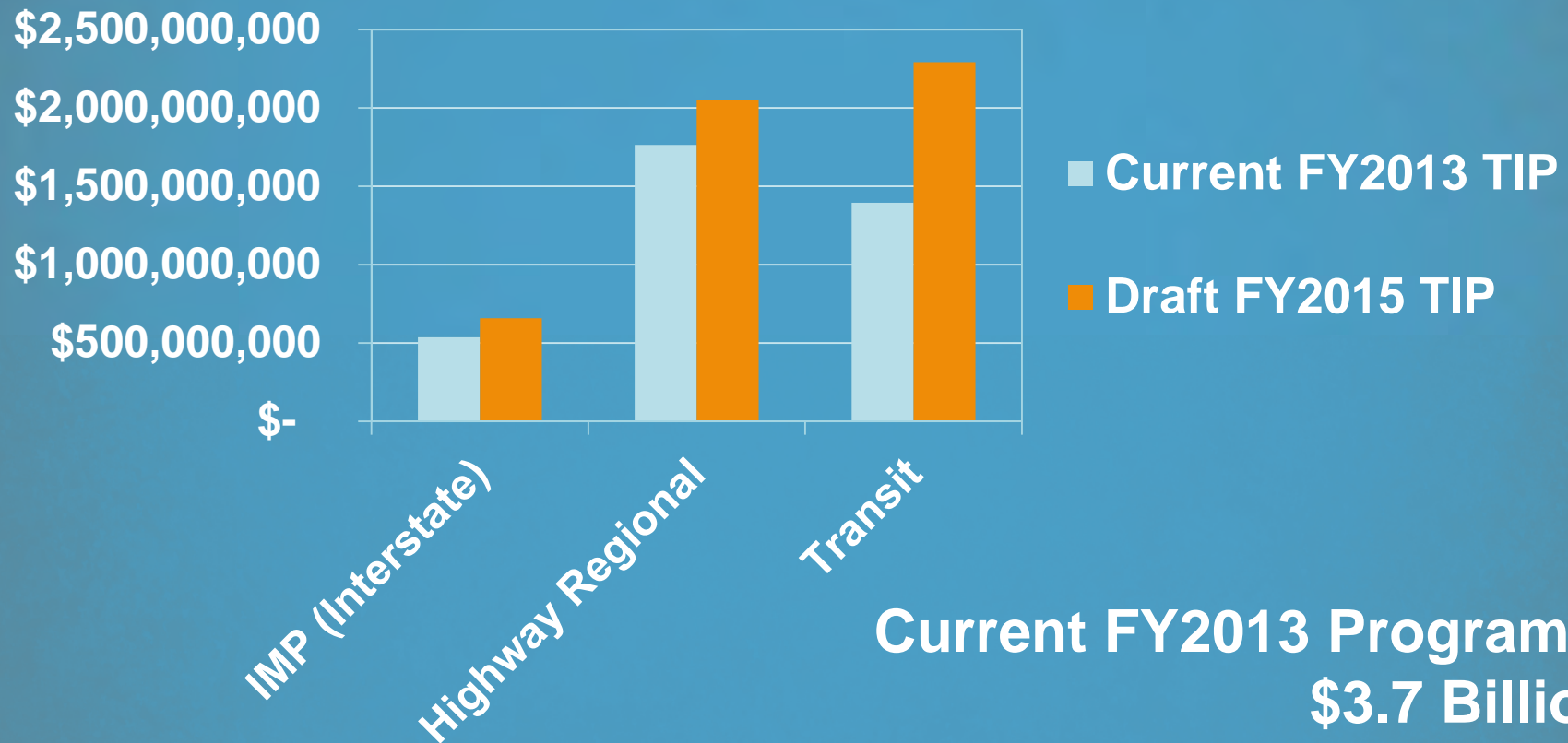


# New Project Evaluation Criteria





# Growth in Programs - \$1.2 Billion



Current FY2013 Program =  
\$3.7 Billion

Draft FY2015 Program  
= \$4.9 Billion





# What's In the Highway Program?

- Major projects that have been delayed due to insufficient funds are now able to advance, including
  - *Reconstruction of US 1 - Bucks*
  - *Paoli Transportation Center/Darby Road Bridge Connection - ChesCo*
  - *322 Reconstruction and Widening – DelCo*
  - *US 422 Bridge Across the Schuylkill River – MontCo*
  - *7 Bridges over I-676/Vine - Philadelphia*
- No “Illustrative Unfunded” list
- Municipal Bridge Line Item
- Interstate Management Program (IMP)
  - *\$660 million for reconstruction of I-95, I-76 bridges*
  - *I-95-322 Interchange in DelCo moved into 3<sup>rd</sup> four years*
  - *Flex funds to increase transit service to provide congestion mitigation*



# What's in the Transit Program?

- Rail Station Program, including
  - *Levittown Station – Bucks County*
  - *Exton Station – Chester County*
  - *Paoli Transportation Center – Chester County*
  - *Villanova Station - Delaware County*
  - *City Hall Station - Philadelphia*
- Bridges
- Elwyn to Wawa Service Restoration
- Rail Car, Locomotive, and Trolley purchases
- Substation Repair/Replacement
- Building and Equipment Repairs





## Examples of Project Categories (for highway funded projects)

- Bridge Replacement/Rehabilitation - 38%
- Roadway Reconstruction/Restoration – 13%
- Highway New Capacity – 10%
- Interchanges/Intersections, Signals, ITS – 13%
- Bicycle/Pedestrian/Streetscapes – 4%
- PA Turnpike Interchange (includes TPK\$) – 16%
- Transit Flex – 3%
- Other; CMAQ Competitive Program; Transportation Management Associations, Mobility Alternatives and Share-A-Ride programs; Reserve Line Items – 3%



## Public Comment on Program

- Public Comment Period
  - *May 30, 2014 – June 30, 2014*
- Meeting/Webinar held June 26 at DVRPC Offices, 4-6 PM
- During Comment period **over 270** submissions of comments were received on **over 360** “Issues”
- All documents on website: [www.dvrpc.org/tip](http://www.dvrpc.org/tip)



# Comments and Responses

- “Index of Comments” – summary and commentor
- Comments
  - *Each “Issue” has an “Item ID”*
  - *A’s are from Individuals*
  - *B’s are from our DVRPC “Planning Partners”*
  - *C’s are from Agencies or Organizations*
- Responses - incomplete
- Recommended Changes – table of changes





## Comments and Responses

- Support for additional funding to “The Circuit” regional bike network and the \$1 million CMAQ added for next round of TAP - 185
- Support for Municipal Bridge Line Item - 35
- Support for Schuylkill River Swing Bridge - 30
- Design Concerns
- Support of projects
- Opposition to projects
- Requests for new projects
- Requests that projects advance





# Proposed Recommended Changes

- **Schedule Adjustments and Cost Restructuring (pgs. 1-3)**
  - *General*
    - Minor shifts of small preconstruction phases.
  - *Minor adjustment of cash flow of 5 projects in order to accommodate \$1.3 million Osborne bridge inadvertently omitted.*
  - *Acknowledge “Pro-Rata” (e.g. 80%/20%, 80%/15%/5% fund splits) and fund-type revisions will be required for projects that were programmed with Act 26/179 funds. Local project may need to be increased in some cases. DVRPC programmed state highway funds on non-state bridge projects as there are more bridges than can be accommodated with just eligible state and federal funds, especially for non-state bridges. MAP-2 NHPP funds also have a more restricted use. Adjustments will be made as modifications to the FY2015 program.*
  - *Moving funds between HSIP eligible projects and HSIP Line Item.*



# Proposed Recommended Changes

- **Highway Project Additions (Pages 3-5)**
  - *Add in \$1.3 million Osborne Road Bridge – inadvertently omitted.*
  - *North Delaware Avenue Extension – earmark funded projects*
  - *Note 10 recently selected and approved TAP (Transportation Alternative Program) projects in the TAP Line Item to be drawn down when ready for authorization of funds*
  - *New Phase 2 HSIP Breakout Project for Henry Avenue to be included in the line item(likely to draw down in later fiscal years)*
  - *Add 8 resurfacing projects with “SPIKE” funded CON in FY15 which were newly added to current program for FY14 and FY15.*
  - *Add 6 previously approved ARLE projects back into program – funds not encumbered.*



# Proposed Recommended Changes

- **Highway Project Removals (Page 6)**
  - *Remove Baltimore Pike project – project has been advertised!*
  - *Remove 16 Round 3 ARLE projects – funds have been encumbered*





# Proposed Recommended Changes

- **Transit Project Cost Increase/Decrease (page 7)**
  - *Cost Increase and advance into first 4 years*
    - Advance \$24 million to the first-three years (FY15-17) of SEPTA's Paoli Transportation Center (MPMS #60574) to advance Phase 1 of project for ADA improvements. Note contributions by Amtrak and PennDOT Bureau of Public Transit for Phase 1.
  - *Cost Decrease*
    - *Reduce SEPTA reserve Line Item to accommodate increase for Paoli Transportation Center*

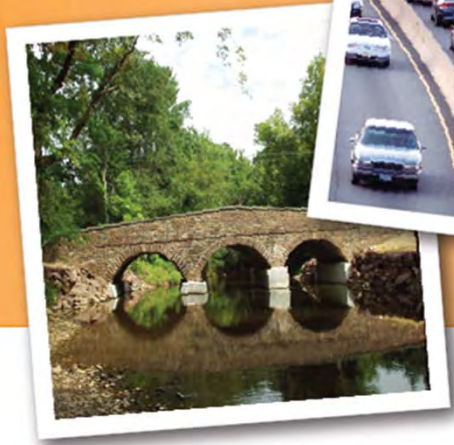




# Proposed Recommended Changes

- **Project Scope and Description Revisions**
  - *Update project limits*
  - *New/updated project description*
  - *Minor change in project's title*
- **Technical Corrections and “As Needed” Corrections for Final TIP Document**

***Responses.....***



# THANK YOU



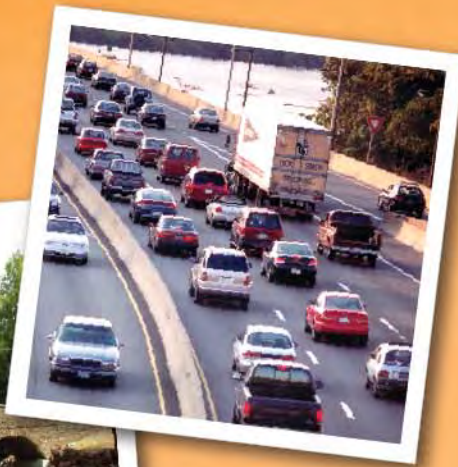
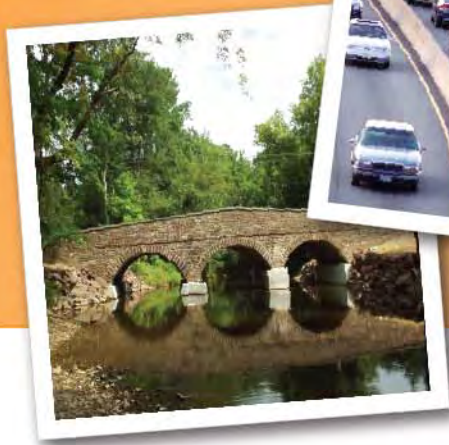
**You know who you are!!!**





## Proposed Action

Adopt the DVRPC FY2015  
Transportation Improvement Program  
(TIP)  
for Pennsylvania (FY2015-FY2018)  
with the proposed  
Recommended Changes  
as the region's official selection of  
transportation projects for federal funding



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# CONNECTIONS *2040*

PLAN FOR GREATER PHILADELPHIA

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*fostering sustainability, equity and innovation*

## Amended Transportation Investments



# AMENDED TRANSPORTATION INVESTMENTS

- Addresses additional funding from Act 89
- Updates the Financial Plan revenue assumptions, allocation to funding categories, and major regional projects
- Products: Revised Chapter 5 and *Funding the Future* pamphlet

# FUNDING OUTLOOK JULY 2013



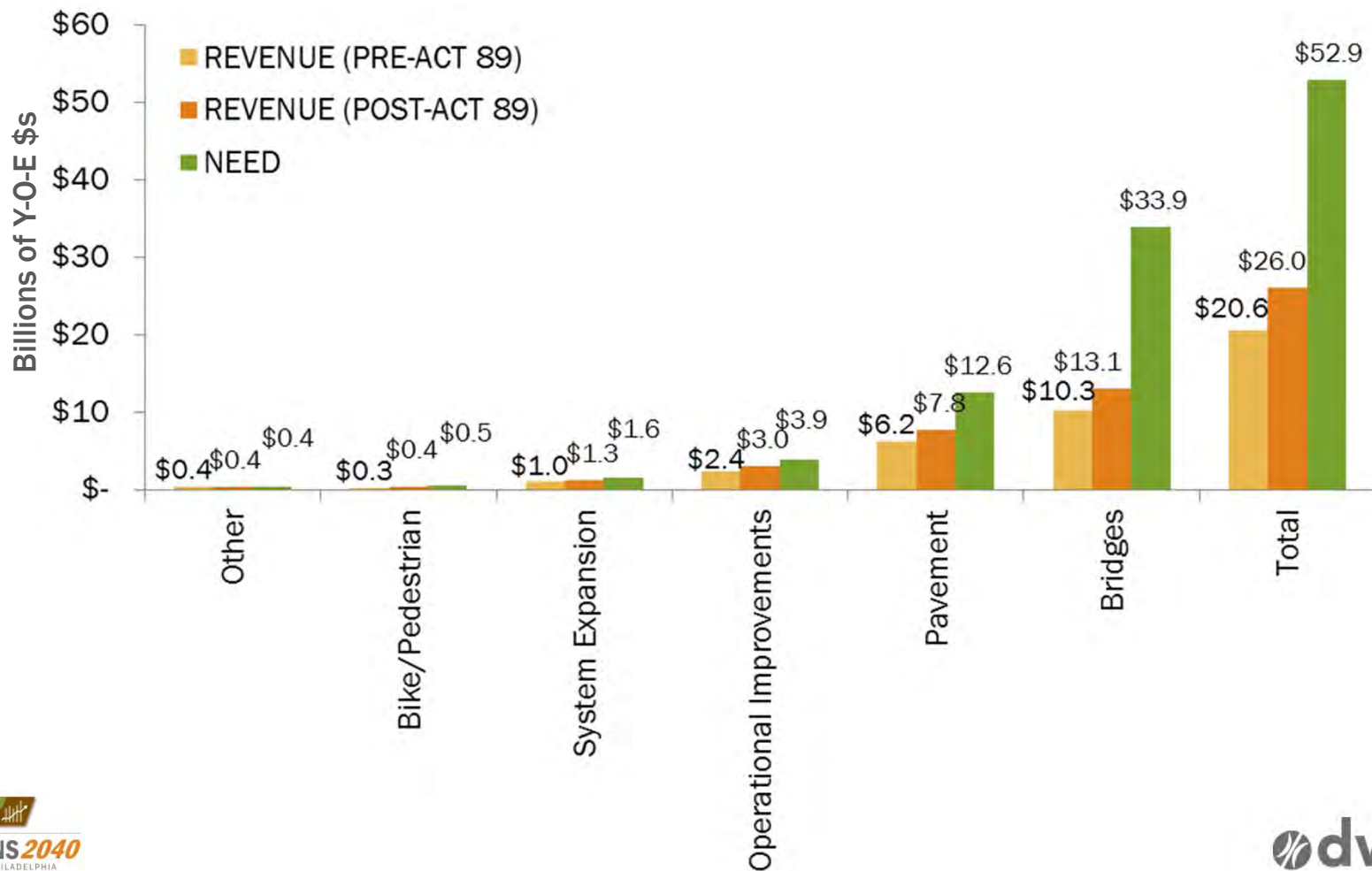
# ROADWAY FUNDING

CATEGORY	CURRENT % ALLOCATION	CURRENT \$ ALLOCATION	ACT 89 % ALLOCATION	ACT 89 \$ ALLOCATION	ADDITIONAL FUNDING
Bridges	50%	\$10.3 B	50%	\$13.1 B	\$2.8 B
Pavement	30%	\$6.2 B	30%	\$7.8 B	\$1.6 B
Operational Improvements	11.5%	\$2.4 B	11.5%	\$3.0 B	\$0.6 B
System Expansion	5%	\$1.0 B	5%	\$1.3 B	\$0.3 B
Bike/Pedestrian	1.5%	\$0.3 B	1.5%	\$0.4 B	\$0.1 B
Other	2%	\$0.4B	2%	\$0.4 B	-
<b>TOTAL</b>	<b>100%</b>	<b>\$20.6 B</b>	<b>100%</b>	<b>\$26.0</b>	<b>\$5.4 B</b>

*Totals may not add up due to rounding*



# ROADWAY REVENUE VS. NEED



# NEW ROADWAY INVESTMENTS

- Additional \$2.8 Billion for bridges and \$1.6 Billion for roadway reconstruction
- Reconstruction of I-95 from Queen Street to Girard Point Bridge
- Reconstruction of US 422 from Stowe to Sanatoga
- Reconstruction of US 30/Coatesville-Downingtown Bypass from Exton Bypass to Reeceville Road, complete partial interchanges, and congestion reduction strategies
- Construct an additional 40 miles of The Circuit trail network

# TRANSIT FUNDING

CATEGORY	CURRENT % ALLOCATION	CURRENT \$ ALLOCATION	ACT 89 % ALLOCATION	ACT 89 \$ ALLOCATION	ADDITIONAL FUNDING
Vehicles	33%	\$4.2 B	40%	\$7.1 B	\$2.9 B
Rail Infrastructure	32%	\$4.0 B	26.5%	\$4.7B	\$0.7 B
Stations	14.5%	\$1.8 B	15.7%	\$2.8 B	\$1 B
Operational Improvements	5%	\$0.6 B	3.4%	\$0.6 B	-
System Expansion	0%	\$0.0 B	3.1%	\$0.6 B	\$0.6 B
New Starts Funding	-	-	-	\$0.4 B*	\$0.4 B*
Other	15.5%	\$2.0 B	11.3%	\$2.0 B	-
<b>TOTAL</b>	<b>100%</b>	<b>\$12.6 B</b>	<b>100%</b>	<b>\$17.8 B</b>	<b>\$5.2 B</b>

*Totals may not add up due to rounding*

*\* Non-federal formula funding, Not included in Total*

# TRANSIT FUNDING

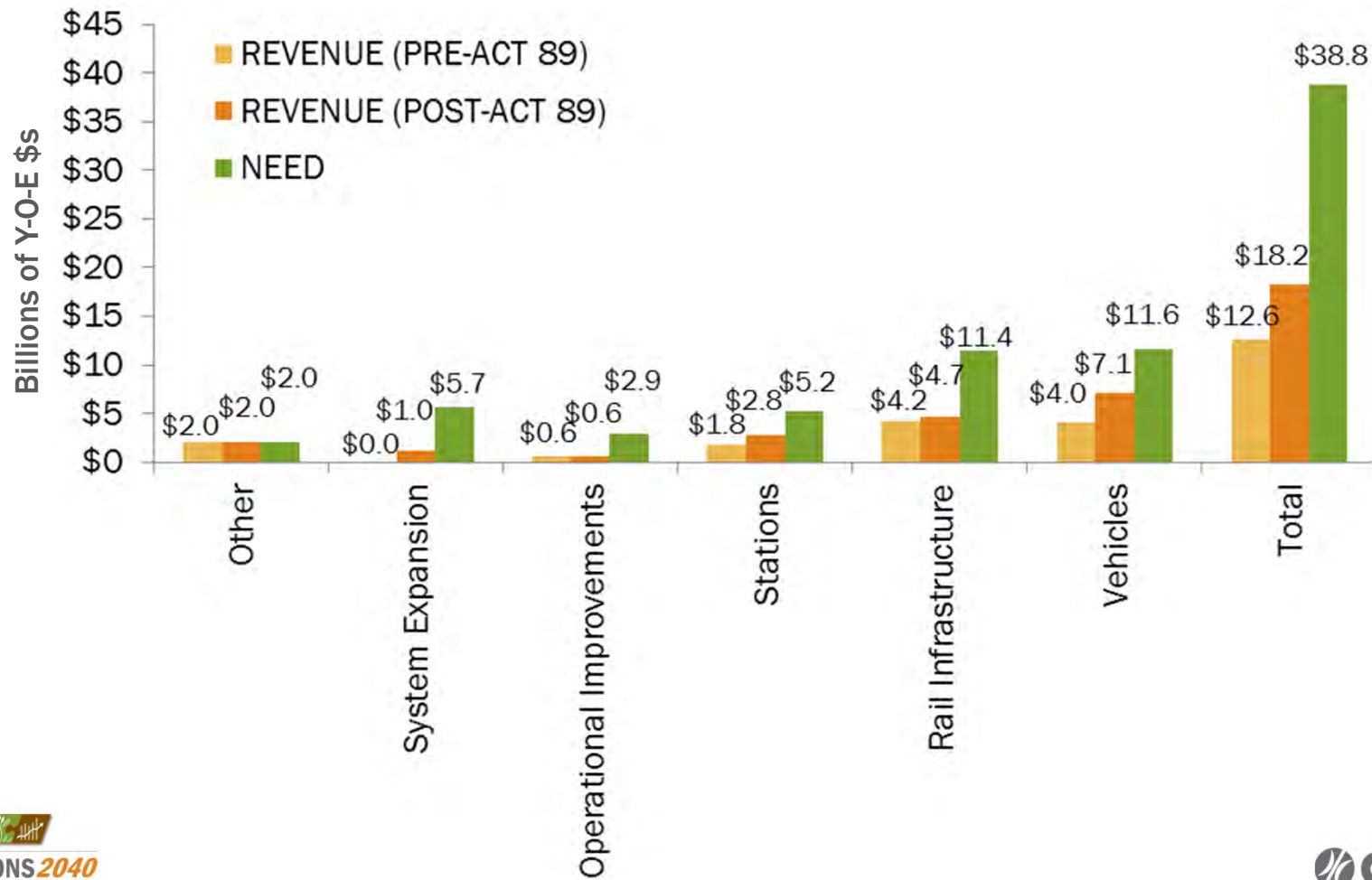
CATEGORY	CURRENT % ALLOCATION	CURRENT \$ ALLOCATION	ACT 89 % ALLOCATION	ACT 89 \$ ALLOCATION	ADDITIONAL FUNDING
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Rail Infrastructure	32%	\$4.0 B	26.5%	\$4.7B	\$0.7 B
Stations	14.5%	\$1.8 B	15.7%	\$2.8 B	\$1 B
Operational Improvements	5%	\$0.6 B	3.4%	\$0.6 B	-
System Expansion	0%	\$0.0 B	3.1%	\$0.6 B	\$0.6 B
New Starts Funding	-	-	-	\$0.4 B*	\$0.4 B*
Other	15.5%	\$2.0 B	11.3%	\$2.0 B	-
<b>TOTAL</b>	<b>100%</b>	<b>\$12.6 B</b>	<b>100%</b>	<b>\$17.8 B</b>	<b>\$5.2 B</b>

*Totals may not add up due to rounding*

*\* Non-federal formula funding, Not included in Total*



# TRANSIT REVENUE VS. NEED



# NEW TRANSIT INVESTMENTS

- Additional \$4.6 Billion to rebuild the transit system:
  - \$1 Billion for Stations; \$700 Million for Rail Infrastructure; \$2.9 Billion for Vehicles
- Purchase locomotives, bi-level rail cars, Silverliner VI fleet, and trolley fleet, and rehabilitate Broad Street Subway fleet
- Extend Elwyn Line to Wawa
- Extend rail service to King of Prussia
- Roosevelt Boulevard Better Bus

# PUBLIC COMMENT

- Public comment period from June 16 to 5 PM on July 18
- Advertised through legal notice and by e-mail blast. Documents available on DVRPC website and offices, and regional libraries
- Comments can be submitted:
  - In person at the June 26 public comment meeting
  - On-line
  - E-Mail
  - Fax
  - Mail
- 5 Comments received to date. Complete set of comments will be submitted to the Board at the July 24 meeting.

# SUMMARY OF COMMENTS RECEIVED

- Remove 5% cap on roadway system expansion and include US 30 Bypass
- Better integration of both transit fares and passenger information
- Continued investment in transit, bike, and pedestrian facilities



# ADDITION TO THE UNFUNDED VISION PLAN

## ■ Penn's Landing Access and Community Improvement Project

- A multimodal bridge structure between Chestnut and Walnut Streets spanning I-95 and Columbus Boulevard, and extending from Front Street to the river's edge
- An extension of the South Street pedestrian bridge from I-95 to the southern end of the Penn's Landing marina basin
- A two-mile multi-use, pedestrian and bikeway adjacent to Columbus Boulevard, from Washington Avenue to Spring Garden Street

# REQUESTED ACTION

- Recommend adoption of the amended transportation investments for the *Connections 2040 Plan for Greater Philadelphia*, the region's long-range transportation plan.



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# CONNECTIONS *2040*

PLAN FOR GREATER PHILADELPHIA

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*fostering sustainability, equity and innovation*

[WWW.DVRPC.ORG/CONNECTIONS2040](http://WWW.DVRPC.ORG/CONNECTIONS2040)

*Thank  
You  
for all  
your  
work*

Michael Boyer  
[mboyer@dvrpc.org](mailto:mboyer@dvrpc.org)  
215.238.2848



**PHL** PHILADELPHIA  
INTERNATIONAL AIRPORT



*“Creating the Airport  
OF THE FUTURE  
for OUR FUTURE”*

***Delaware Valley Regional Planning Commission***

***Presented to:  
Regional Technical Committee***

***Michael J. McCartney  
Airport Engineering Manager***

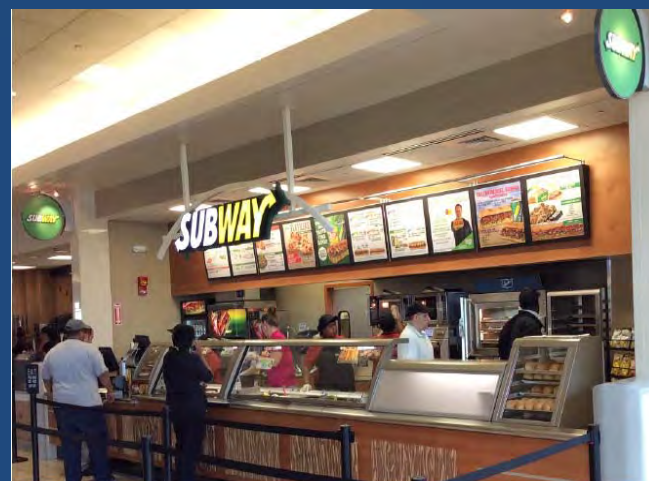
***July 8, 2014***





## Philadelphia International Airport is a Major Economic Engine

- ❖ Generating more than \$14.4 billion a year for the region's economy



- ❖ Supporting more than 141,000 jobs in the region



# TOP 10

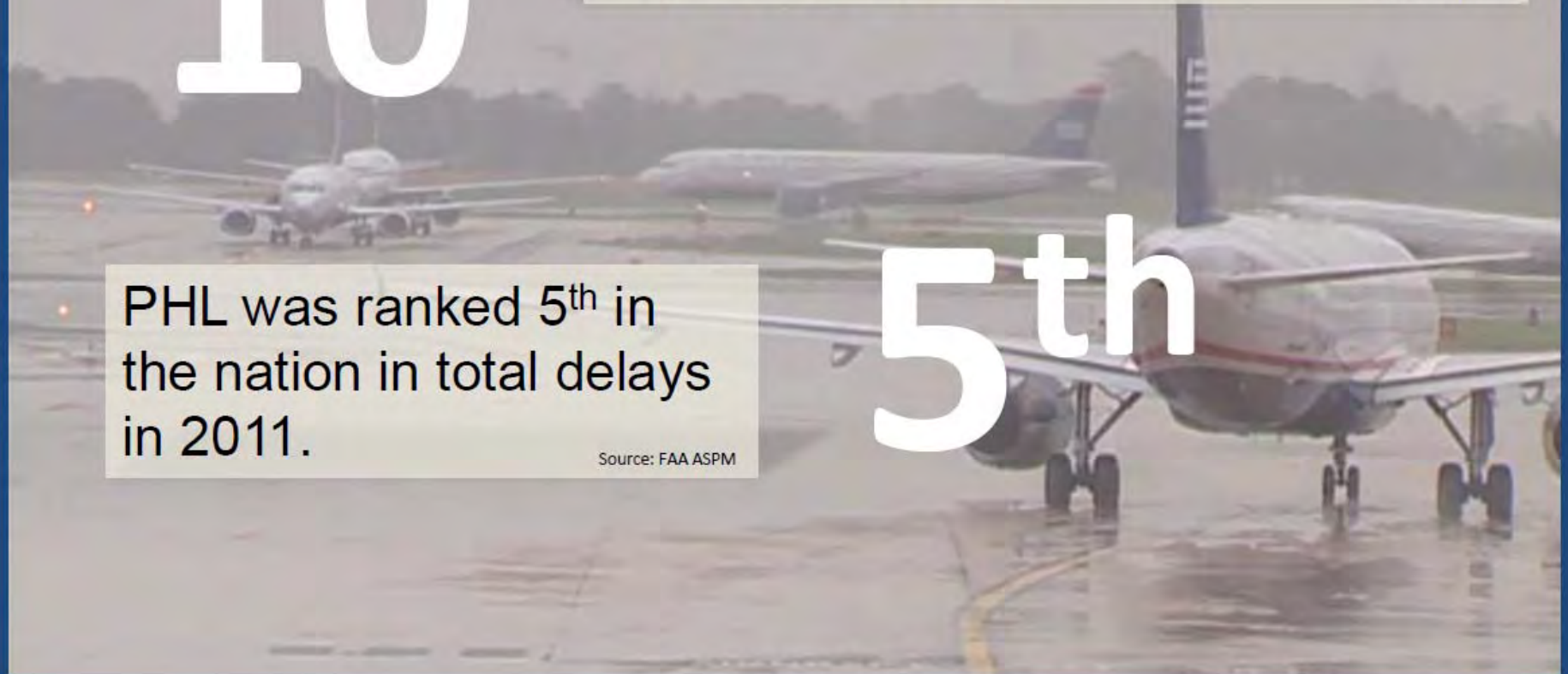
For nearly 15 years, PHL has ranked among the TOP 10 most delayed airports in the U.S.

Source: FAA ASPM

PHL was ranked 5<sup>th</sup> in the nation in total delays in 2011.

Source: FAA ASPM

# 5<sup>th</sup>







## IMPACT ON NATIONAL AIRSPACE SYSTEM



Pacing Airport

*According to the FAA, "The delays at Philadelphia affect the national airspace system. These delays impose substantial costs in time and money for passengers and airlines, cargo shippers and for other users of the air transportation system."*

*(FACT 2 Report, 2007)*



# AIRFIELD CONSTRAINTS

## ❖ Delays/Constraints:

- Insufficient Primary Runway Separation
- Inadequate Secondary Runway Length
- Insufficient Taxiway/Taxilane Arrangement







## INEFFICIENT TERMINAL DESIGN/LAYOUT



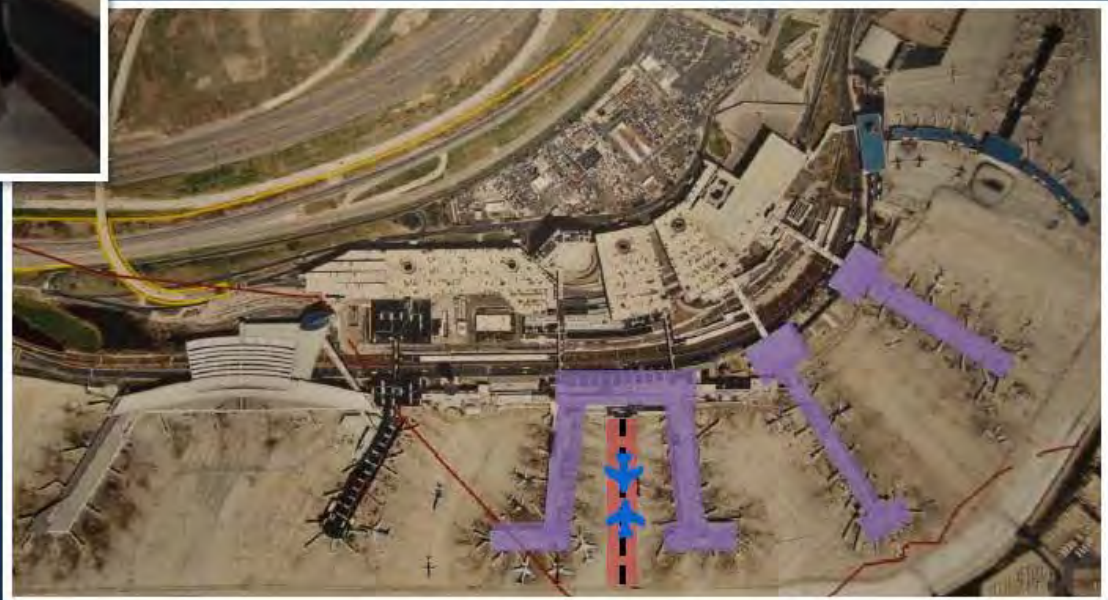
### Aging Facilities

Several terminals/concourses are more than 40 years old and lack modern design standards (LEED certification, low ceilings, minimal natural lighting, maintenance heavy, and narrow public corridors)

### Connectivity/Land Constraints

“Single” taxilane design between pier concourses creates choke points/congestion

Terminal complex spans almost two miles but lacks efficient/automated people mover system







## PROGRAM OBJECTIVES – AIRFIELD

Airfield expansion to:

- Reduce existing delay/passenger wait times
- Improve on-time performance
- Provide additional capacity for future growth
- Dual independent arrival and departure streams in all weather conditions
- Runway/taxiway configuration to enhance ground traffic flow





## *Capacity Enhancement Program (CEP)*

- ❖ Ground Transportation Center
- ❖ Renovated Terminals
- ❖ Remote Concourses
- ❖ Automated People Mover (APM)
- ❖ Airfield Improvements







# CEP Phasing

Existing 1 2 3 4 5 6+





# CEP Phasing

Existing 1 2 3 4 5 6+

Independent Utility

Taxiway K5  
Taxiway K Extension  
Taxiways EE & H





# CEP Phasing

Existing 1 2 3 4 5 6+

Runway 9R Localizer





# CEP Phasing

Existing 1 2 3 4 5 6+

Independent Utility

Runway 27L Extension and Taxiways



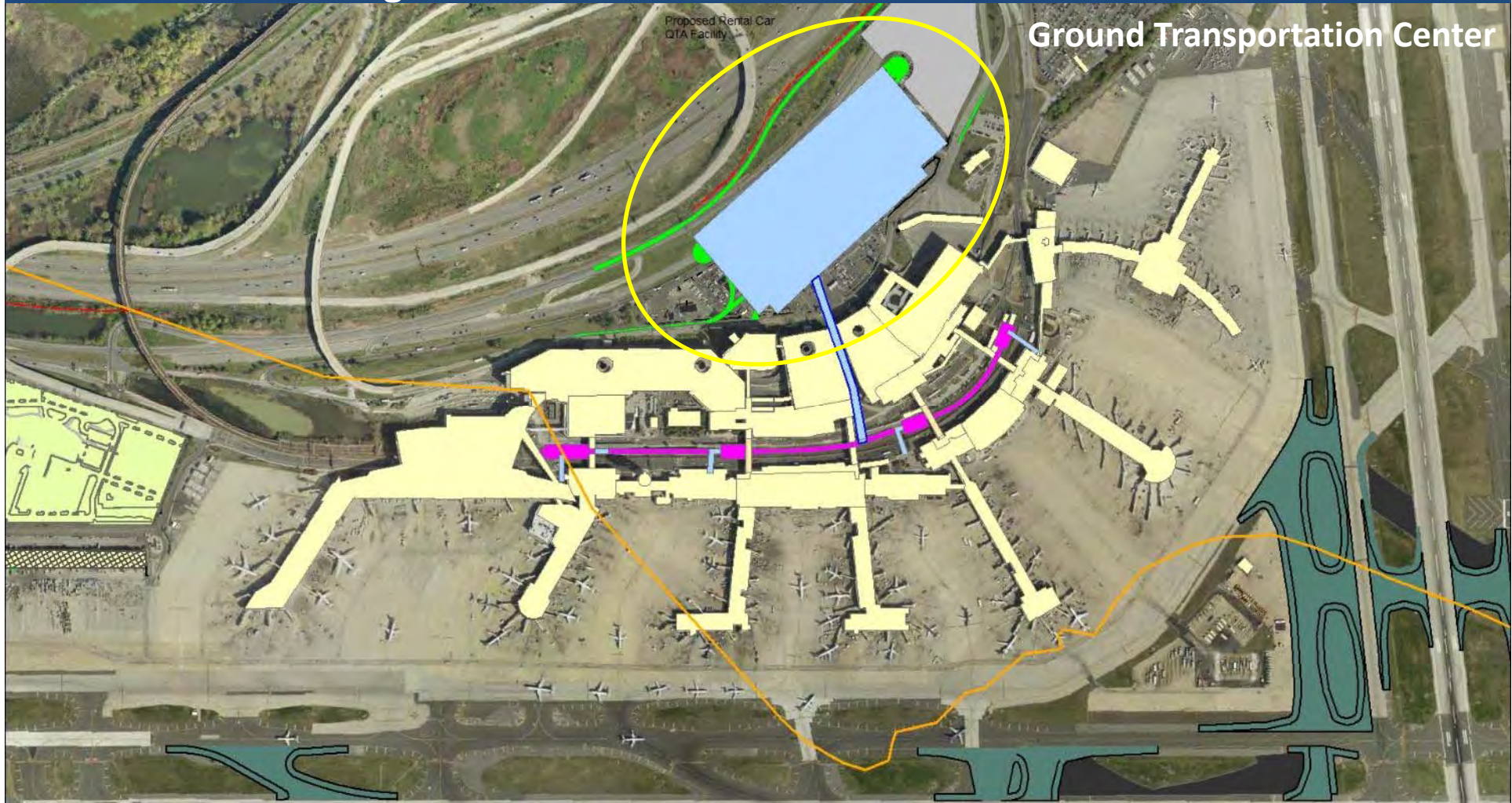






# CEP Phasing

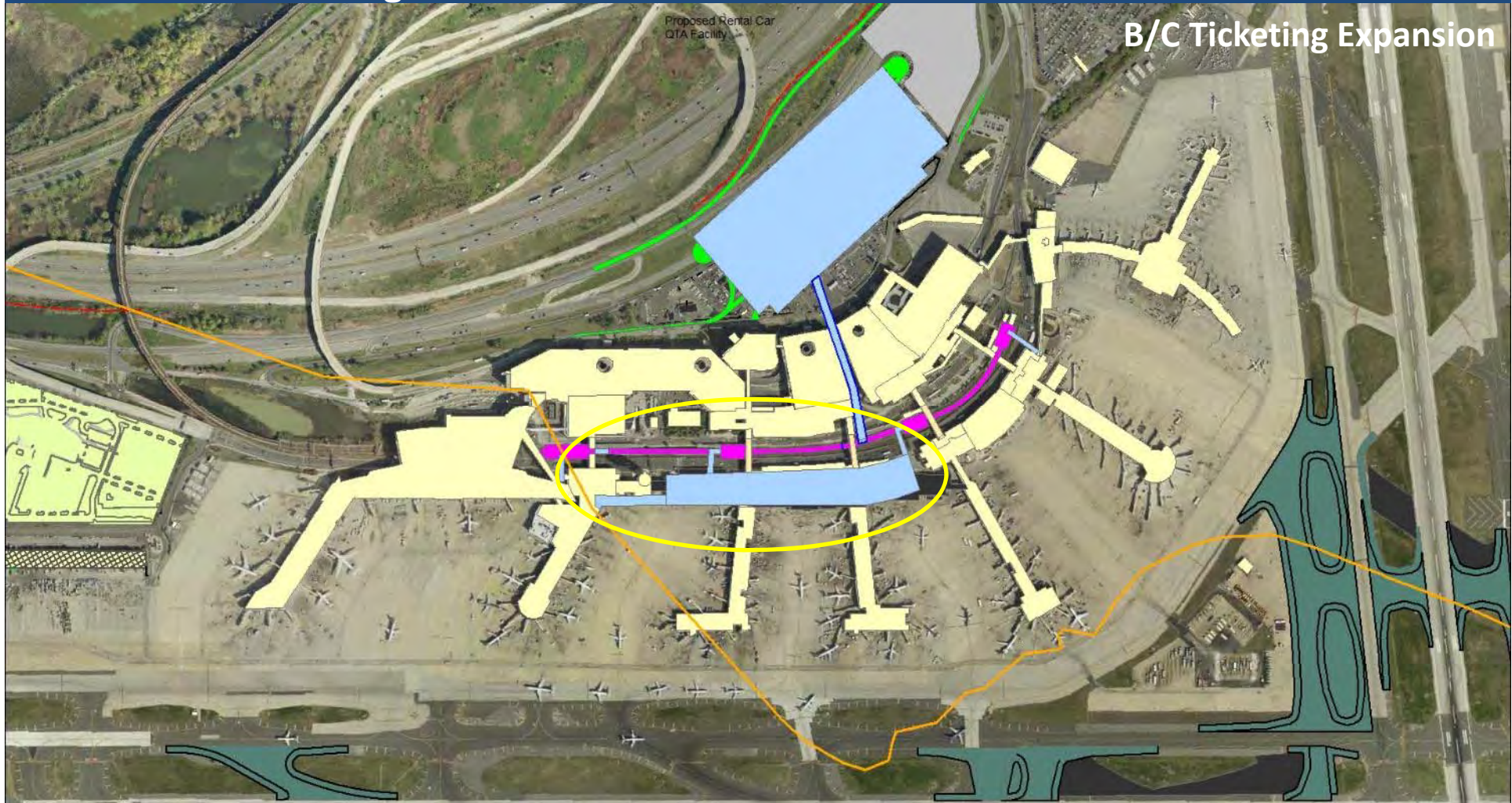
Existing 1 2 3 4 5 6+





# CEP Phasing

Existing 1 2 3 4 5 6+





# CEP Phasing

Existing 1 2 3 4 5 6+

Southern Runway Enabling Projects:

Hog Island Road  
Control Tower and TRACON  
Fuel Farm  
Corporate Hangars  
ARFF Training Facility and Stations  
UPS Relocation







# CEP Phasing

Existing 1 2 3 4 5 6+

60<sup>th</sup> Street Industrial Railroad





# CEP Phasing

Existing 1 2 3 4 5 6+

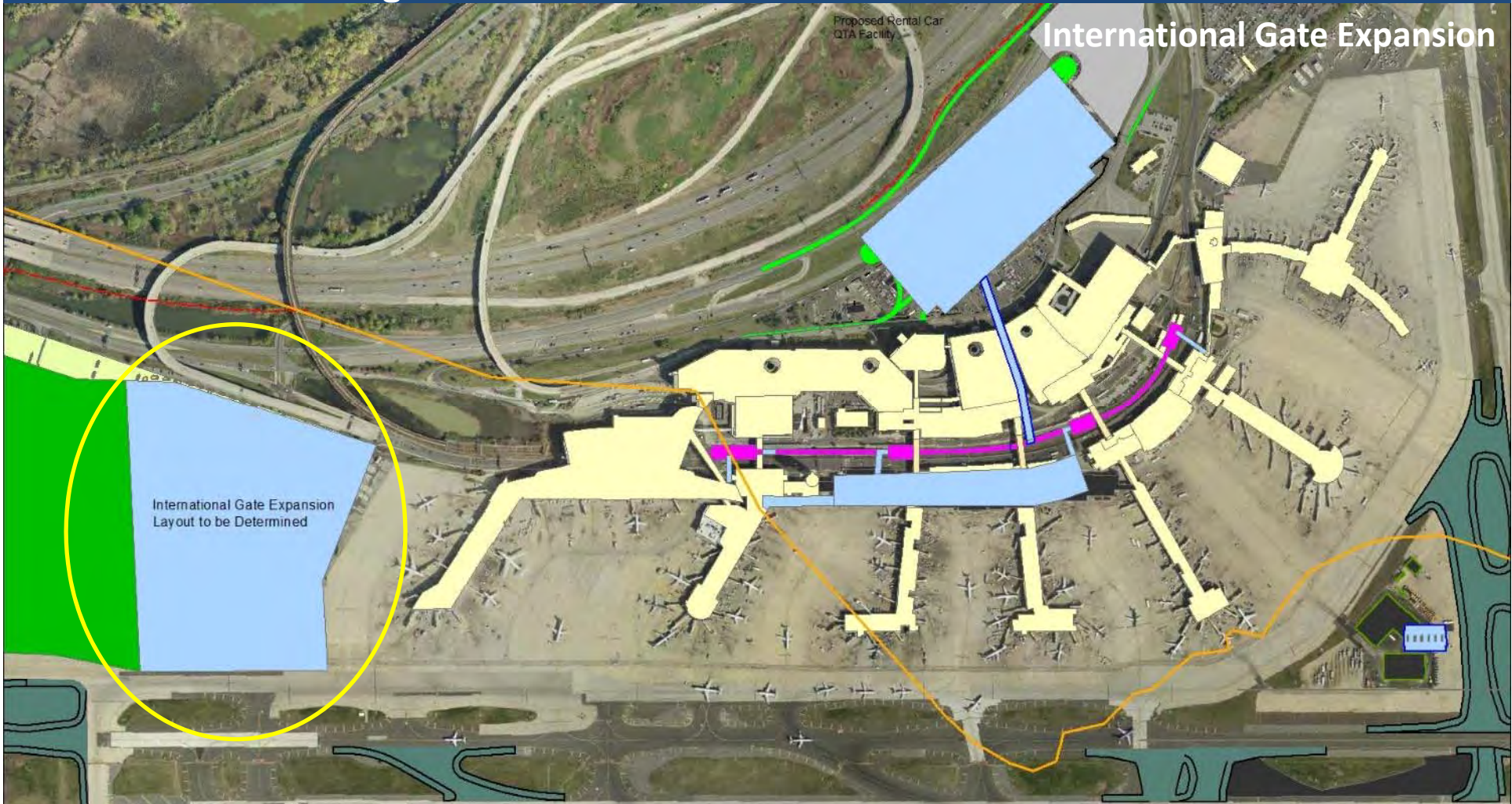
Runway 27L Southern Access Taxiways





# CEP Phasing

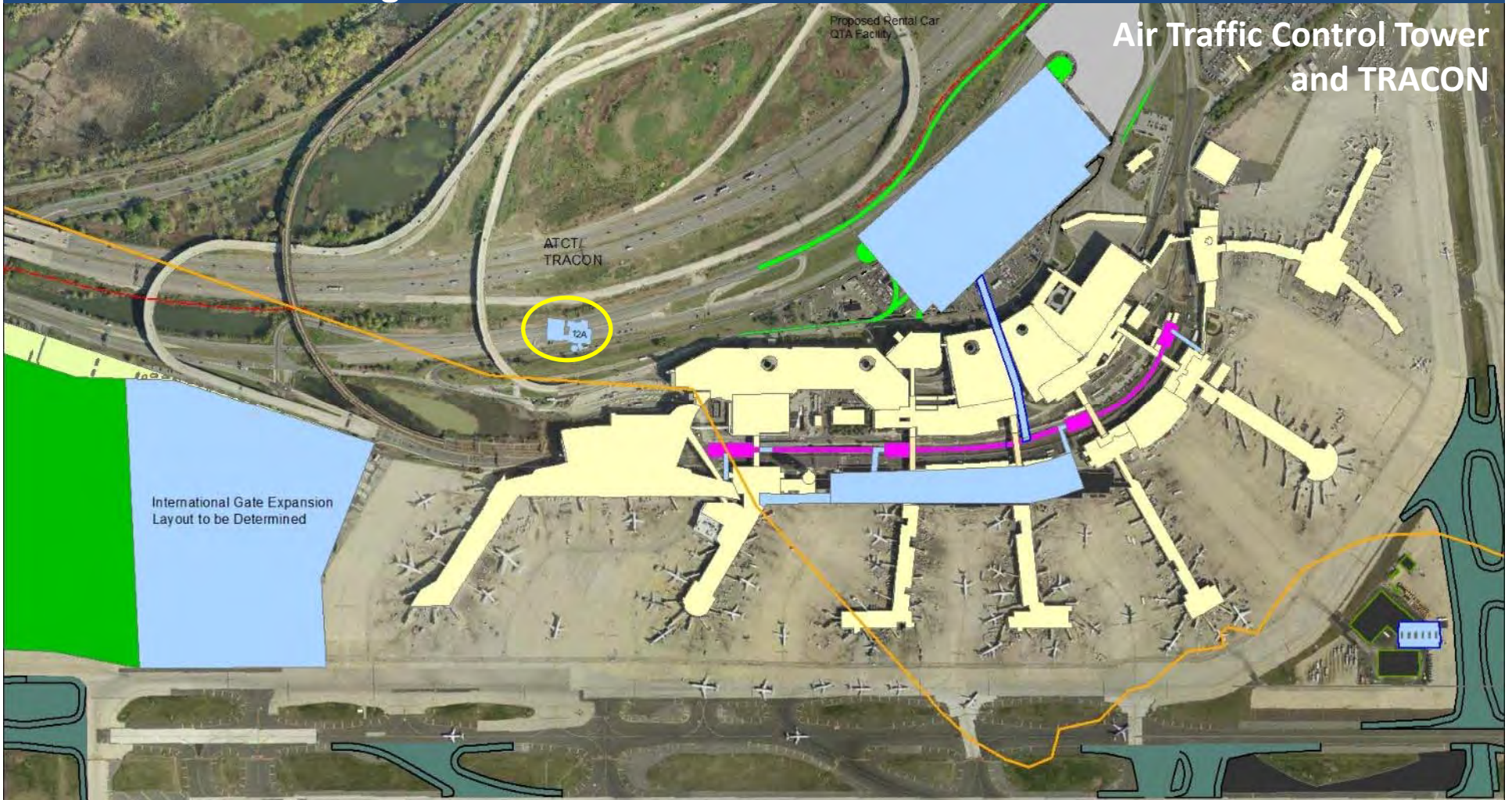
Existing 1 2 3 4 5 6+





# CEP Phasing

Existing   1   2   3   4   5   6+





# CEP Phasing

Existing    1    2    3    4    5    6+

Runway 9R/27L







# CEP Phasing

Existing    1    2    3    4    5    6+

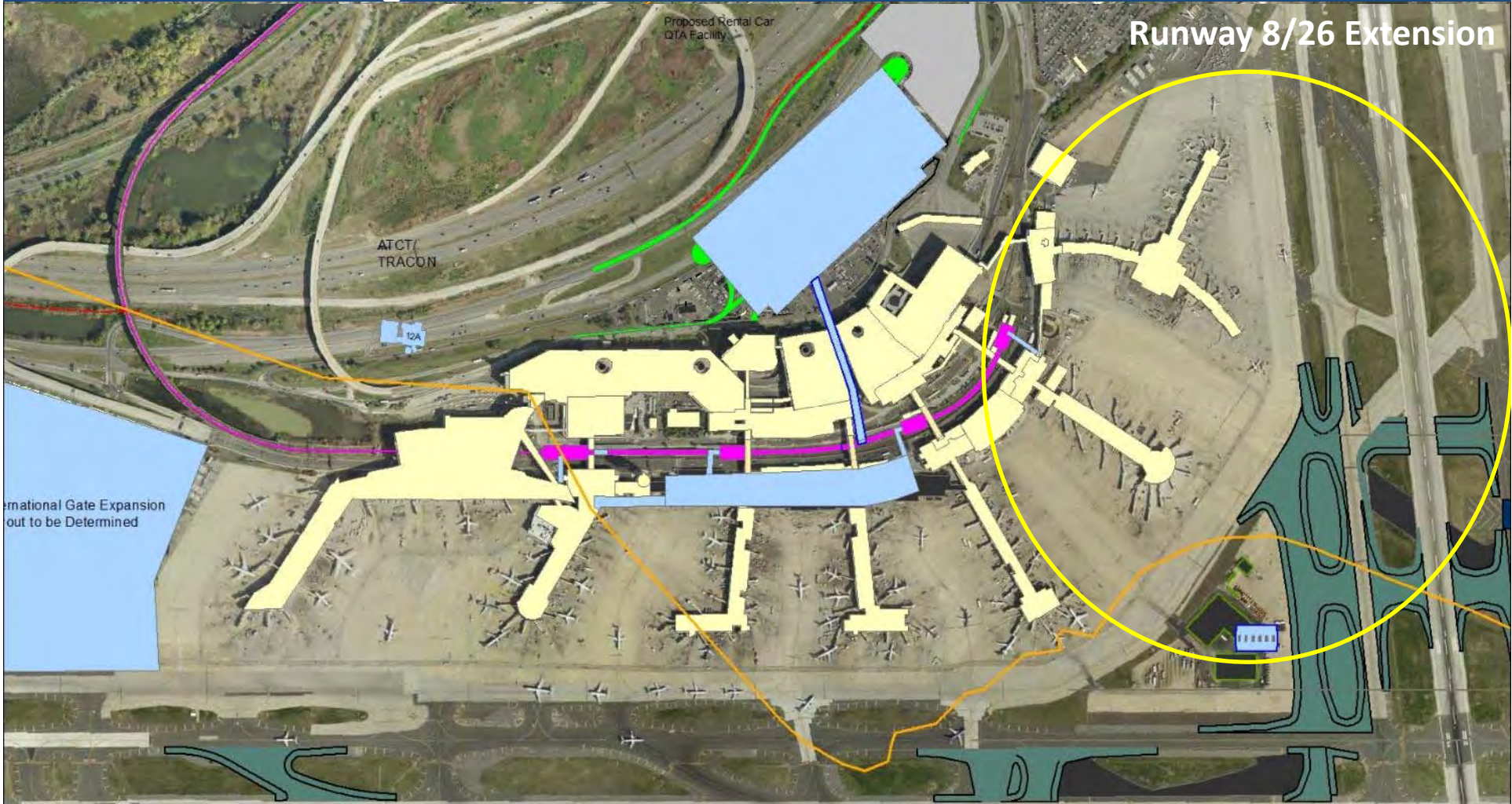


APM Extension



# CEP Phasing

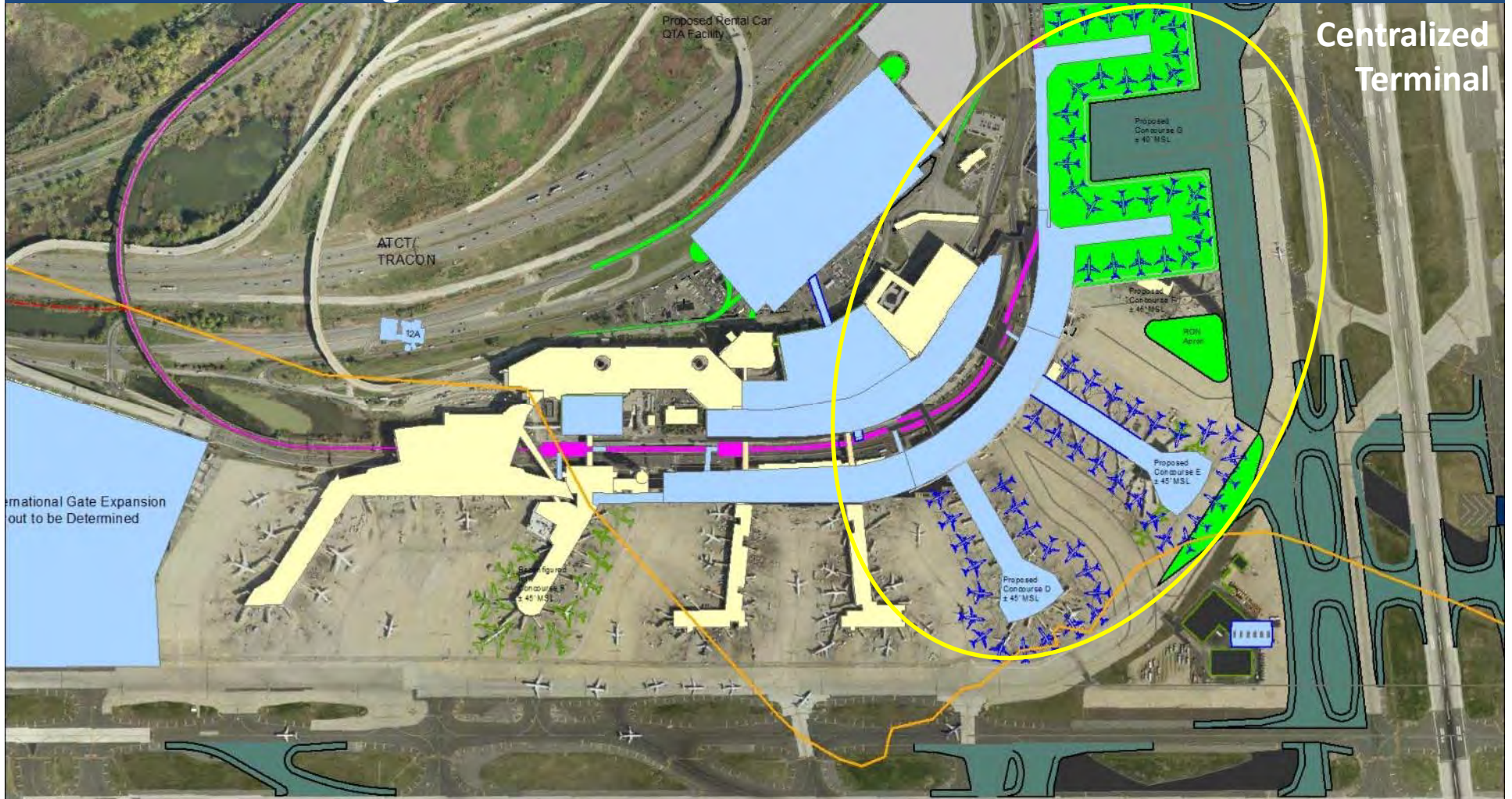
Existing 1 2 3 4 5 6+





# CEP Phasing

Existing    1    2    3    4    5    6+







# CEP Phasing

Existing 1 2 3 4 5 6+





# CEP Phasing

Existing   1   2   3   4   5   6+

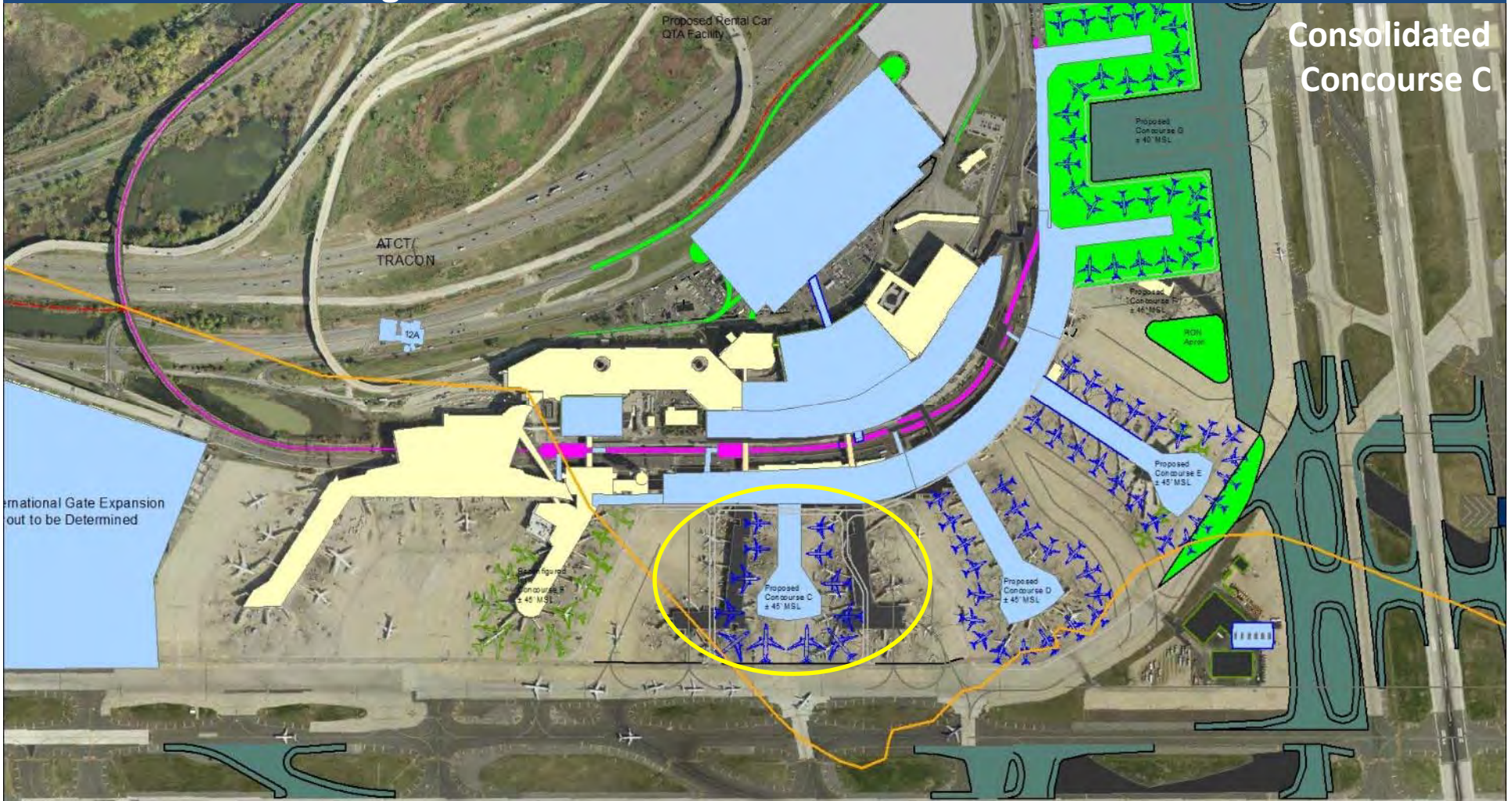
East Side Property Acquisitions





# CEP Phasing

Existing 1 2 3 4 5 6+





# CEP Phasing

Existing 1 2 3 4 5 6+





## Tentative Agreement with Tinicum Township

- ❖ If approved, the agreement in principle would settle four pieces of litigation between the City of Philadelphia, Delaware County, Tinicum Township, and Interboro School District
- ❖ Agreement in principle allows the Airport to move forward with the CEP without the need to acquire 72 Tinicum Township homes and relocate approximately 300 Tinicum residents







**PHL** PHILADELPHIA  
INTERNATIONAL AIRPORT

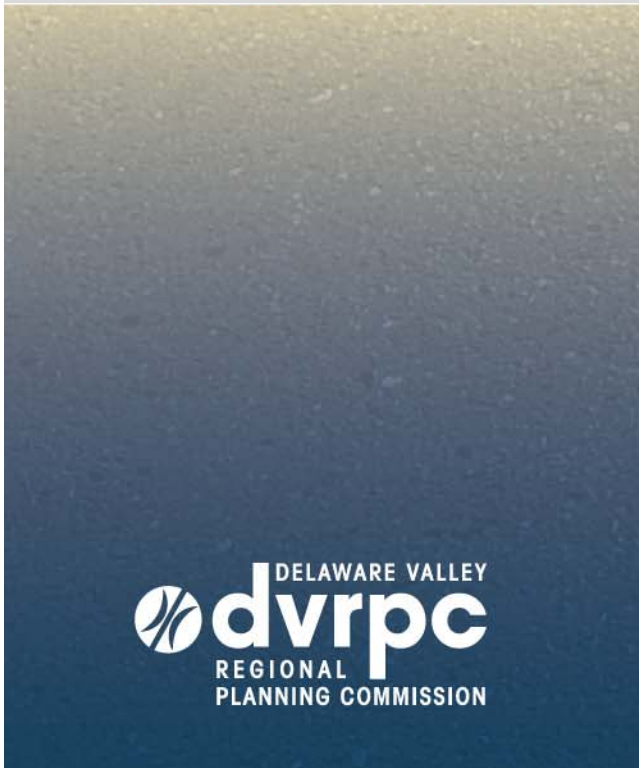
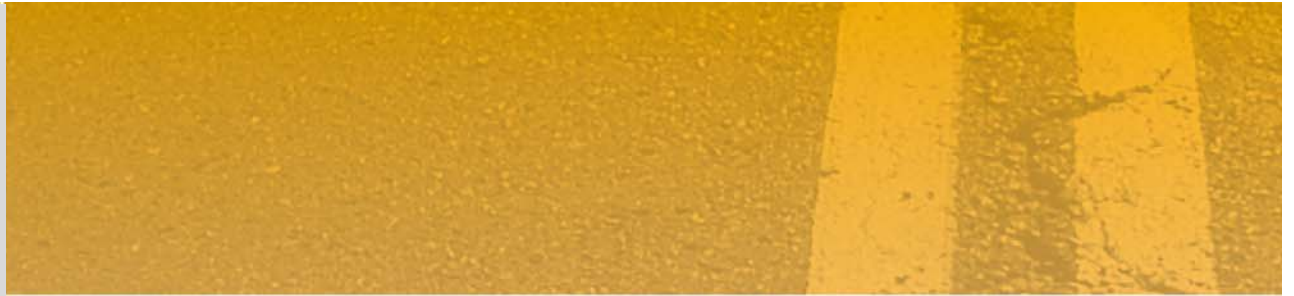
*Questions?*

*“Creating the Airport  
OF  
THE FUTURE  
FOR  
OUR FUTURE”*

*Thank You!*







# Pennsylvania Regional Traffic Signal Retiming Initiative Project

Laurie Matkowski  
Manager, Office of Transportation Operations Management

Regional Technical Committee  
Tuesday, July 8, 2014

# Development of the Regional Signal Retiming Project



- Concept discussed for years
- TIP Line Item
- Collaboration with Central Office to Initiate development
- Discussions with District 6
- Discussions with County Planning Commissions
- DVRPC Contracts, TIP, CMP, LRP at table from beginning



# Financial Support for the Regional Signal Retiming Project

- DVRPC's *Connections 2040* Long Range Plan
  - Transportation Investment Priorities
    - Preserve and maintain existing transportation system and rights of way
    - Improve the operation of existing transportation facilities
    - Increase the capacity of existing multimodal transportation system, limiting the addition of through travel lanes
- 100% CMAQ funded through the TIP
- Contract through PennDOT
  - Open Ended, set up for multiple years
  - Flexible scope to meet needs of each corridor

# Regional Signal Retiming Project Process

## Project Sponsors



## Project Team



## Contacts

Contractor PM  
Preston Hitchens  
Taylor Wiseman Taylor

DVRPC  
Laurie Matkowski

PennDOT  
Ashwin Patel

- Choose Corridor
- *Meet with Stakeholders Throughout Process*
- MOU and Concept of Operations
- “Before” Study
- Rapid Field Assessment
- PennDOT Compliance Review
- Analysis, Recommendations, and Implementation
- “After” Study
- Performance Evaluation



# Regional Signal Retiming Project Agreements

- Memorandum of Understanding
  - Outlines purpose and partners
- Concept of Operations
  - Day-to-day operations, but *NO* Upgrades
  - The Municipality to give free access to all equipment
  - *Timings will be implemented at no cost to the Municipality*
  - Future enhancements
  - Terms

# Regional Signal Retiming Project

## Completed, Current, & Future Corridors

### Completed

- SR 0100, West Whiteland Township (Rt. 30 EB off-ramp to Shoen Road)
- SR 0320, SR 0001, Springfield Road: Marple & Springfield Townships, Delaware County (Springfield Road to Country Club Drive)
- Baltimore Pike at SR 0476 Ramps, Nether Providence Township, Delaware County
- SR 0030, SR 0010, West Sadsbury Township, Chester County (3 intersections)

### Corridors in Progress

- West Valley Road (T-421), Treddyfrin Township, Chester County (2 intersections)
- SR 0340 at Route 30 Bypass, Caln Township, Chester County (2 intersections)
- SR 0030, Caln, Downingtown, East Caln Townships, City of Coatesville
- SR 0029, SR 0023, Phoenixville Borough, Chester County

### Future Corridors

- SR 0611, Montgomery County, various municipalities
- SR 0030, Lower Merion Township

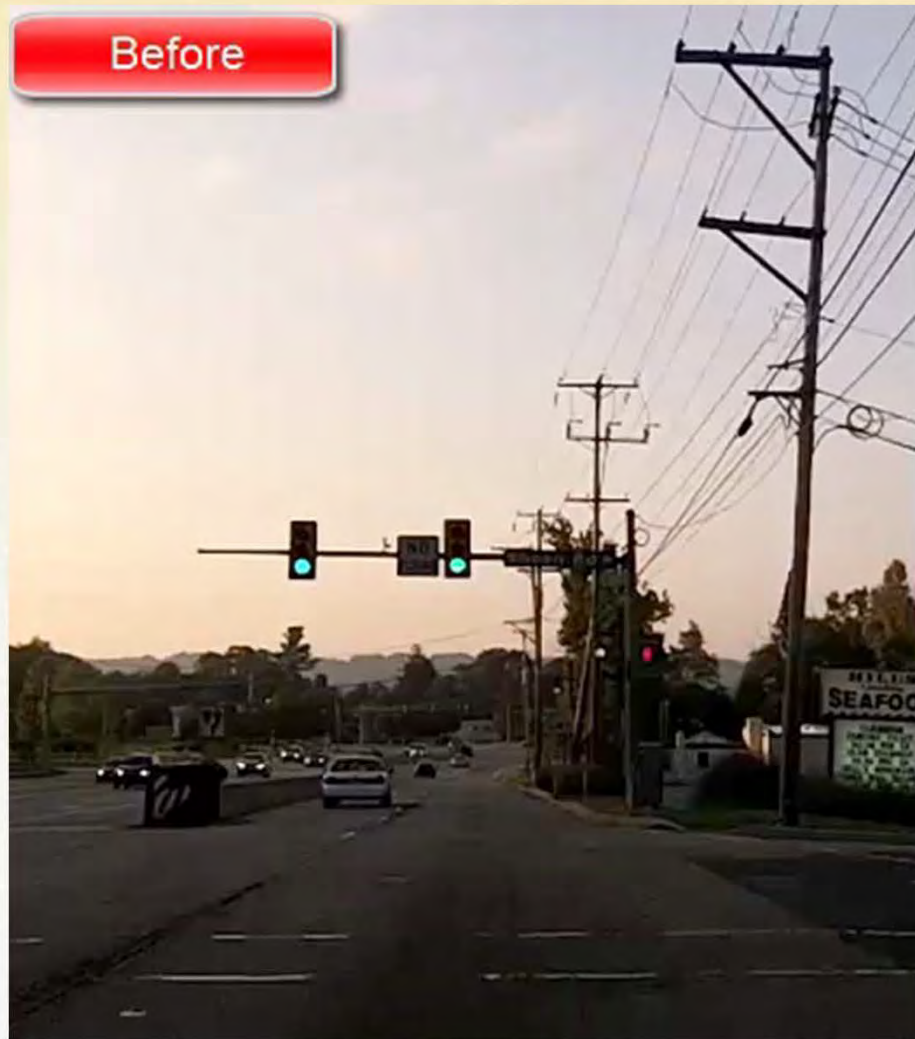


# Regional Signal Retiming Project Overall Results

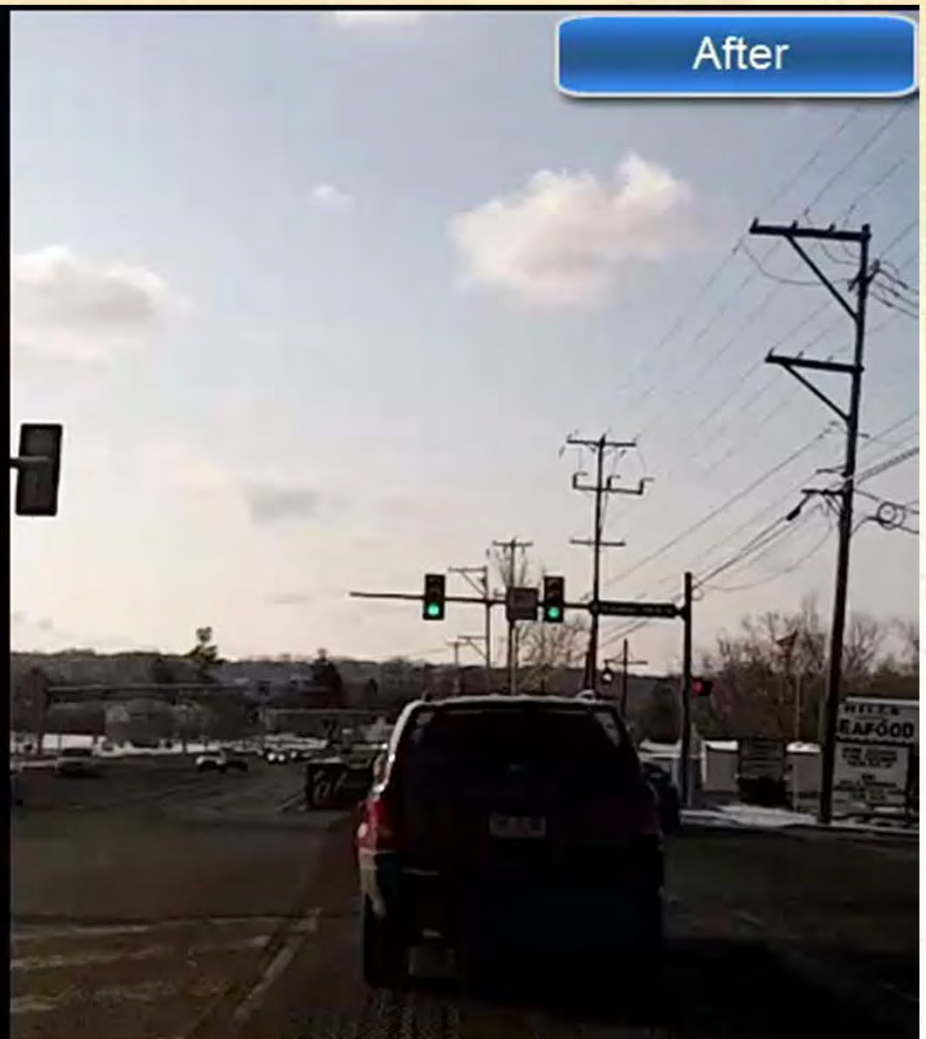
- ↓ Total Delay... 15% to 58%
- ↓ Number of Stops... 23% to 69%
- ↑ Average Speed... 11% to 55%
- ↓ Total Travel Time... 8% to 41%
- ↓ Fuel Consumed... 6% to 14%
- ↓ Unserved Vehicles... 25% to 100%

# Route 0100 Before vs. After

Before

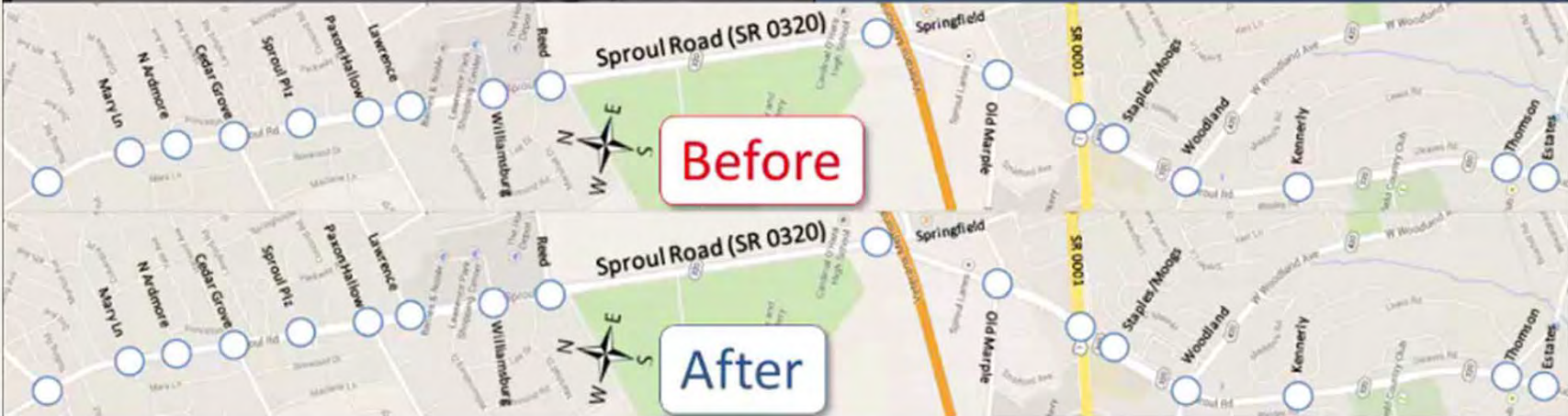


After





# Route 0320 Before vs. After



# Regional Signal Retiming Project Sustainability

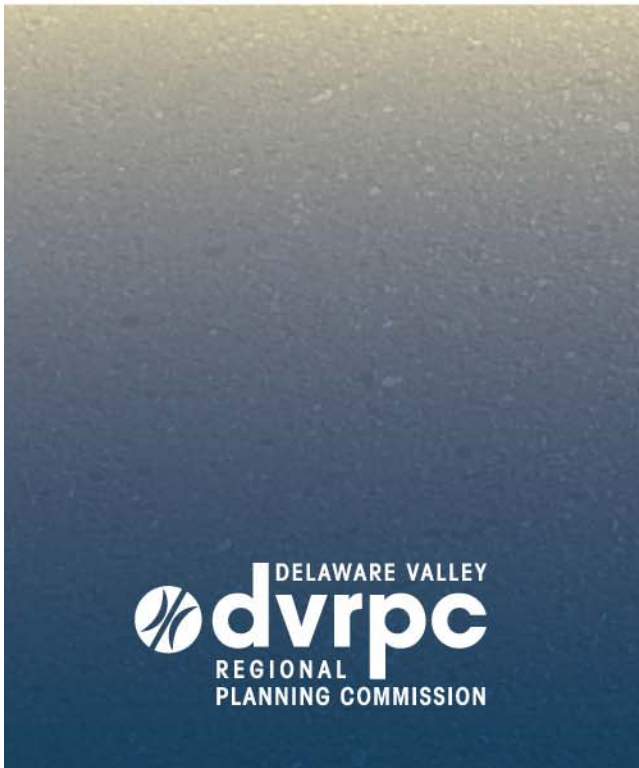
- RTC to help ensure continued financial support
- Staff continues to provides leadership
- Work with goals of PennDOT & new legislation
- Continue to support this project through the revised Transportation Operations Master Plan
- New signals in the corridor to comply with MOU and ConOps
- Work hand-in-hand with ARLE and Corridor Modernization Projects



# Regional Signal Retiming Project Summary



- Traffic signal operations can be improved!
- Success depends on collaboration, cooperation, coordination, and consensus building



# Thank You!

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## Contact Information

Laurie Matkowski, Manager  
Office of Transportation Operations Management  
[Lmatkowski@dvrpc.org](mailto:Lmatkowski@dvrpc.org)  
215.238.2853



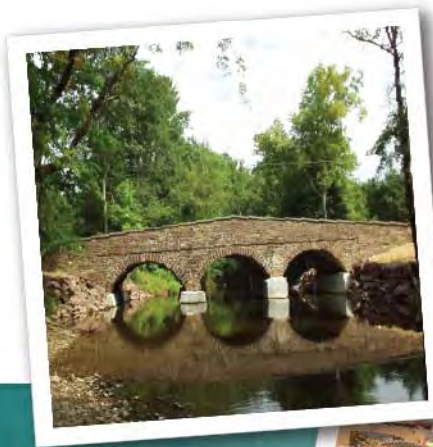


July 2014

# ★ TIP A-C-T-I-O-N-S

## Transportation Improvement Program

*New Jersey (FY2014-2017)*  
*Pennsylvania (FY2013-2016)*



DELAWARE VALLEY  
**dvrpc**  
REGIONAL  
PLANNING COMMISSION



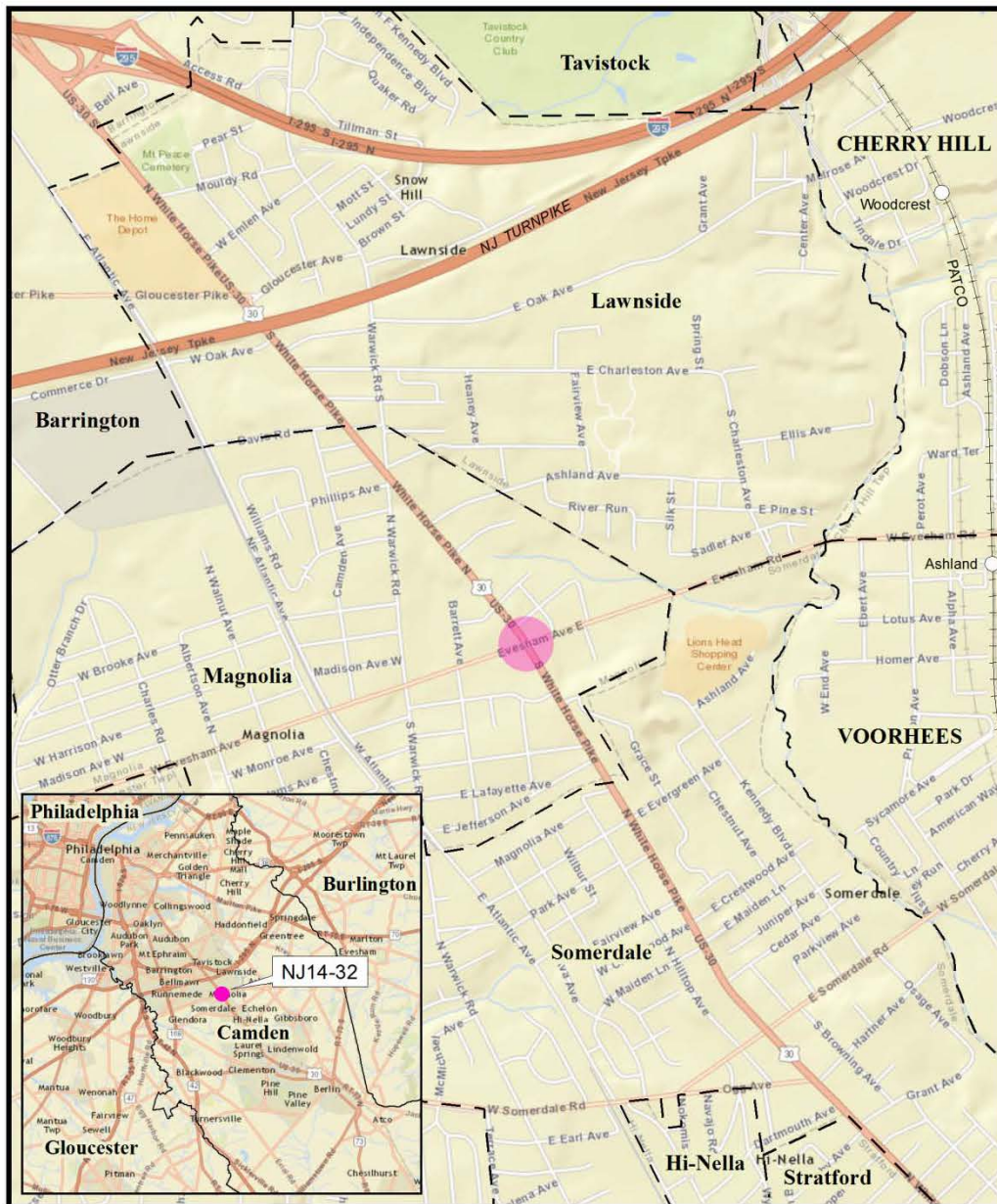
# Add a Project Back into the TIP- NJ

## a. Route 30, and Evesham Road Intersection Improvements, Camden County

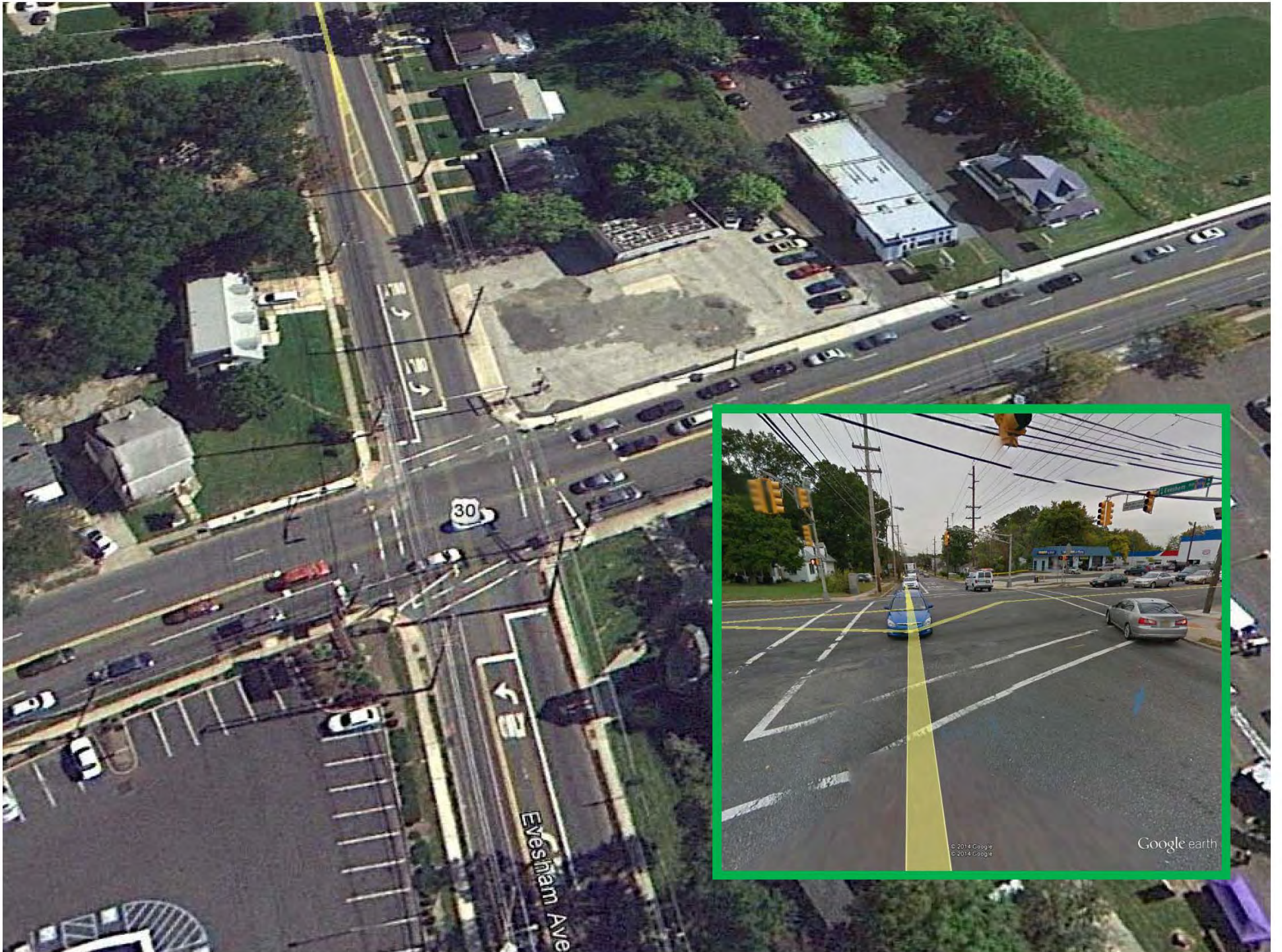
- ❖ *Amend the TIP for PA by adding a \$6,805,000 NHPP funded project back into the TIP for FY14 construction.*
- ❖ *Funds will address safety and operational deficiencies of the Route 30 and Evesham Road (CR 544) intersection in Magnolia Borough by adding left-turn lanes, a new traffic signal, new signs, new curbs and sidewalks, as well as reconstructed pavement, drainage improvements, and the relocation of utilities.*
- ❖ *US Route 30 is a major east-west highway, and Evesham Road (CR 544) carries a significant volume of traffic to and from the PATCO High Speed Line's Ashland Station. This intersection currently ranks 15th out of 100 intersections with the most severe accident history due to lack of any left turn lanes on US 30.*



# NJ14-32: Route 30, Evesham Road Intersection Improvements









- a. Route 30, and Evesham Road Intersection Improvements,  
Camden County

Amend the TIP for NJ by adding a \$6,805,000 NHPP funded project back into the TIP for FY14 construction.



## Add a Proposed Project to the Line Item - NJ

### b. Burlington County Centerline Safety Enhancement Project, 2014, Burlington County

- ❖ *Amend the TIP by adding a new project, Burlington County Centerline Safety Enhancement Project, 2014 to the TIP in the amount of \$1,750,000 HSIP funds for construction in FY14, as a component of the Local Safety/High Risk Rural Roads Program (DB# 04314).*
- ❖ *Funds will provide for the construction of approximately 150 miles of centerline rumble strips on Burlington County roadways throughout the county.*
- ❖ *The primary purpose of centerline rumble strips is to prevent cross-over crashes or head-on collisions on two-lane roadways.*





Source: <http://www.oregon.gov/ODOT/HWY/REGION2/Pages/Region-2-Centerline-Rumble-Strip-Project.aspx>



b. Burlington County Centerline Safety Enhancement Project, 2014,  
Burlington County

Amend the TIP for NJ by adding a new project, Burlington County Centerline Safety Enhancement Project, 2014 to the TIP in the amount of \$1,750,000 HSIP funds for construction in FY14, as a component of the Local Safety/High Risk Rural Roads Program (DB# 04314).





# THANK YOU