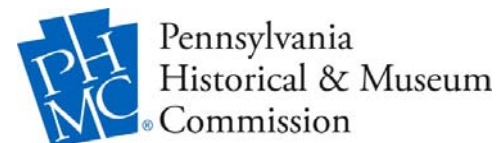


Beyond Basics:

Opportunities for Advance and Alternative Mitigations for Transportation Projects in Pennsylvania

April 7, 2015



Introductions

Alison Hastings

Manager of Strategic Partnerships
Delaware Valley Regional Planning Commission
ahastings@dvrpc.org

Cory Kegerise

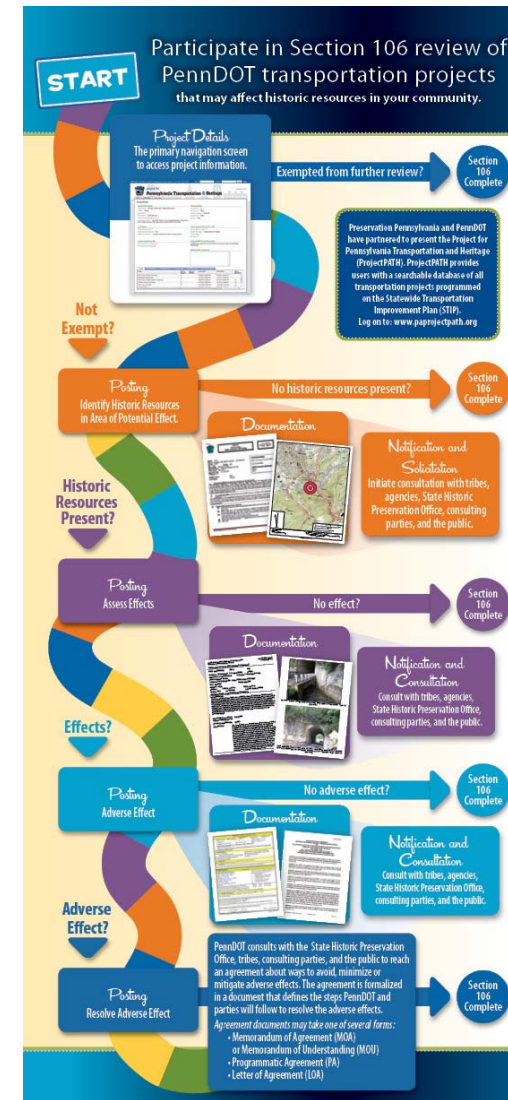
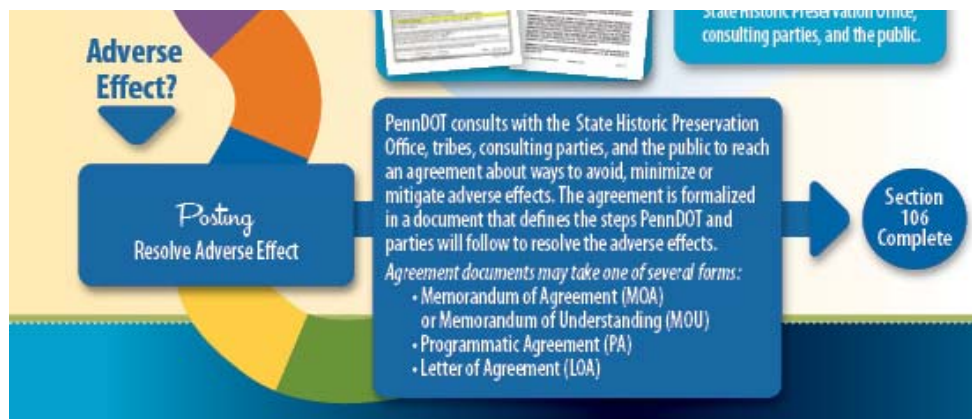
Community Preservation Coordinator
Pennsylvania Historical & Museum Commission
ckegerise@pa.gov

The Parameters

- Related to larger “Linking Planning and NEPA” initiatives
- Not policy-setting exercise
- Set the groundwork for future work
- Exploring ideas
- Looking at above ground resources only

What's the Problem?

- Transportation projects go through rigorous environmental review to assess their effects on various types of resources.



What is an adverse effect?

An adverse effect is defined as an action that may “alter, directly or indirectly, any of the characteristics of a historic property that qualify the property for inclusion in the National Register in a manner that would diminish the integrity of the property’s location, design, setting, material, workmanship, feeling, or association.” 36 CFR 800.5(a)(1)

Examples of adverse effects

- physical destruction and demolition
- alteration not consistent with the Secretary of the Interior's Standards for the Treatment of Historic Properties
- change to physical features within the property's setting that contribute to its historic significance
- introduction of visual, atmospheric or audible elements
- deterioration by neglect
- transfer, lease or sale out of Federal ownership without restrictions to ensure long-term preservation

How are adverse effects resolved?

- Avoid
- Minimize
- Mitigate

Standard Mitigation

- Some standard mitigation options for historic structures include:
 - Commitment to design elements of the project to minimize impacts to historic properties
 - Scholarly research and recordation for the purpose of advancing the understanding of a property or property type and preserving a record of the existence of a property
 - A public education component
 - Bridge Marketing

The Question(s)

- Are these standard mitigations good enough?
- Do these mitigations adequately compensate for the loss or alteration of a historic property?
- Do these mitigations have effective, long-lasting, positive impacts on the community?
- Are there missed opportunities?

What do we need and want from the Section 106 Review Process?

Some things we heard...

- Faster project delivery
- Context Sensitive Design as part of standard project delivery, not mitigation activity
- Ongoing identification of historically significant sites (known and unknown)
- Creation of *new landmarks*; what's going to be significant 50 years from now?

New Landmarks



Willimantic, CT - Thread City Crossing, aka the Frog Bridge

Mitigation Concepts

- Creative
- Alternative
- Advance

Creative Mitigation

- *Beyond* standard mitigation
- “Developing actions that recognize the special place a building has in the history and culture of a location. Such mitigation strives to preserve the stories, associations, and feelings tied to specific buildings and places, usually by involving the public through interpretation and display.” - FHWA - Tutorial on Section 4(f)

Creative Mitigation

- Examples:
 - Create Popular Publication
 - Develop educational curricula or museum exhibit
 - Fund lecture, open house and/or tour
 - Interpretive signage
 - Enhanced signage (ex. signs directing to Historic District)

Alternative Mitigation

- An *alternative* to standard mitigation; especially when mitigation cannot happen on site
- “Such approaches can either be implemented alone or as part of a broader mitigation package.” - ACHP - Guidance on Archeology Guidance

Alternative Mitigation

Examples:

- Contribute to a local historic preservation effort
- Develop National Register nominations
- Prepare Preservation Plans and Ordinances
- Update a Historic Resources Survey
- Establish a fund for a particular activity, such as heritage tourism

Advance Mitigation

- Do *now* and receive a credit for compensatory mitigation *later*
- Aggregate smaller adverse effects to achieve larger, more effective impacts
- “The restoration, creation, enhancement and, in exceptional circumstances, preservation of wetlands and/or other aquatic resources expressly for the purpose of providing compensatory mitigation in advance of authorized impacts to similar resources.”
EPA - Federal Guidance for the Establishment, Use and Operation of Mitigation Banks

Advance Mitigation

- What needs to be in place...
 - A “Bank”
 - Planning and prioritization of local and state proposed mitigation activities
 - Valuation system
 - Seed money for mitigation activities (debits)
 - Project registry of activities that are already completed (credits)
 - Review process for credits and debits

It's Already Happening...

- Henry Longfellow School, Frankford neighborhood, Philadelphia
 - PennDOT
 - I-95 reconstruction
- Thomas Edison High School, Fairhill neighborhood, Philadelphia
 - HUD
 - large redevelopment project "Edison Square"
- Compensatory mitigation from each project is partially funding an Update to a Survey of Philadelphia Public Schools (at a critical time)



From Accidental to Intentional

- What mechanisms need to be in place to make these mitigation strategies more readily available to project managers and consulting parties...
- What mechanisms need to be in place to take advantage of these opportunities and respond to needs...

Mitigation Vehicles

- Creative → Treatment Options
- Alternative → In-lieu Fee program
- Advance → Banking
- *We might need all three options...*

The Road to More Effective Mitigation

- Goals
 - Identify preservation-related needs and projects at various geographic scales BEFORE consultation begins
 - Find the most effective mitigation for the affected resource, not be driven by the urge to complete projects on the registry

Assumptions

- Through consultation, standard mitigation options have already been determined to be insufficient
- Context Sensitive Design is considered to be the standard approach to project design and not a mitigation strategy

Mitigation “Bank”

Two important components

- Mitigation Project Registry
 - A list of preservation projects, both capital and non-capital, to be consulted during the selection of appropriate mitigation measures
- Mitigation Project Fund
 - A fiscal vehicle to receive, hold, and disburse funds contributed by project sponsors and other sources for mitigation projects

The Challenges

- Can mitigation activities be used to advance broader agendas and meet bigger picture needs?
- How do we identify those goals and needs?
- How do we decide if/when it is appropriate to apply alternative or creative mitigation strategies to a particular project?
- Who decides which projects benefit from mitigation activities?

QUESTION: What project conditions must exist for mitigation “banking” to be considered appropriate and advantageous?

The project sponsors have taken all reasonable and appropriate steps to either avoid or minimize the effects of the project

AND 1 or more of the following:

1

Standard mitigation treatments (recordation, relocation, design, education) are insufficient to adequately compensate for the adverse effect

3

Multiple projects will affect the same resource within a reasonably short time period

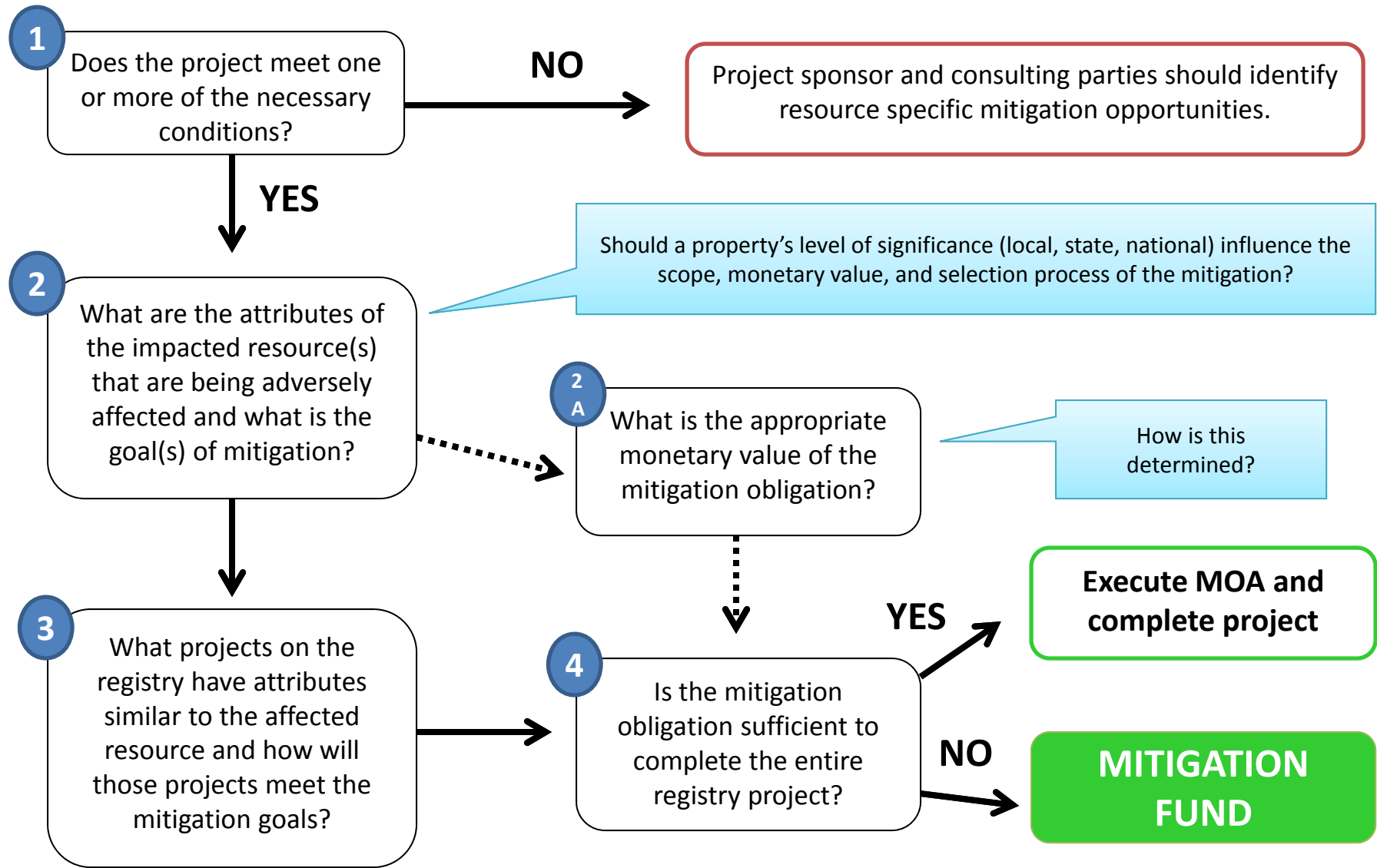
2

The affected resource is sufficiently documented, rendering recordation unnecessary, but mitigation is still required

OR

4

Projects affecting multiple resources of a similar type within a reasonably close geographic area are planned to be undertaken within a reasonably short time period



Next Steps

- Finish white paper
- Share with local/state stakeholders
- Share with peer reviewers (including other states looking at mitigation banking)
- Revise
- Continue to meet with PennDOT, FHWA and other stakeholders interested in implementing these ideas

Thank you!

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ahastings@dvrpc.org

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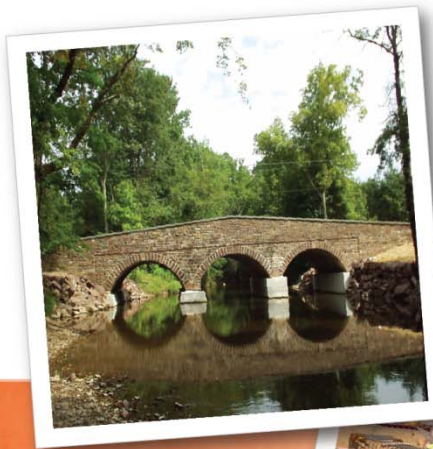


April 2015

★ TIP A-C-T-I-O-N-S

Transportation Improvement Program

New Jersey (FY2014-2017)
Pennsylvania (FY2015-2018)



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★ Cost Increase - PA

a. Passyunk Avenue Drawbridge Over the Schuylkill River, City of Philadelphia

- Modify TIP for PA by increasing CON phase by \$7,502,000
[FY15: \$1,804,000 NHPP/\$1,197,000 STP/\$750,000 State Bridge (185),
FY16: \$1,804,000 NHPP/\$1,197,000 STP/\$750,000 State Bridge (185)].
- Increase due to:
 - *Entire structure being painted*
 - *Removal of submarine cables*
 - *Installation of wireless communications/ITS*
 - *Removal of contaminated materials*
 - *Additional mobilization*
 - *Additional structure repairs*
 - *Additional Construction Engineering or Inspection*

Passyunk Avenue Drawbridge



Schuylkill River

GRAYS FERRY

a. Passyunk Avenue Drawbridge Over the Schuylkill River, City of Philadelphia

Modify TIP for PA by increasing CON phase by \$7,502,000

[FY15: \$1,804,000 NHPP/\$1,197,000 STP/\$750,000 State Bridge (185),
FY16: \$1,804,000 NHPP/\$1,197,000 STP/\$750,000 State Bridge (185)].



Add Project Back in to TIP - PA

b. Race Street Connector, City of Philadelphia

- Amend the TIP for PA by adding this project back in to the TIP for FY15 CON in the amount of \$1,300,000 STU.

- Originally funded through PCTI grant to DRWC
 - *Delay in obtaining ROW clearance*
 - *Ongoing negotiations with DRPA*
 - *Funding directed to Manayunk Bridge Pedestrian Trail*

- License Agreement for ROW clearance ready to be executed
 - *Project could be let in June 2015*

- Construction of streetscape and beautification improvements
 - *Between 2nd St. and Columbus Blvd.*
 - *Pedestrian amenities, Revision to horizontal geometry of I-95 on-ramp, ADA compliant crossing, Landscape and lighting improvements, Utility and drainage improvements*



Add Project Back in to TIP - PA

b. Race Street Connector, City of Philadelphia

- Google Street View - <https://goo.gl/maps/UX169>

b. Race Street Connector, City of Philadelphia

Amend the TIP for PA by adding this project back in to the TIP for FY15 CON in the amount of \$1,300,000 STU.



Add CON Phases - PA

c. Statewide Highway-Rail Grade Crossing Program, Various Counties

- Amend the TIP for PA by adding 13 statewide Highway-Rail Grade Crossing (RRX) projects in the amount of \$2,626,000 for CON in FY15, FY16, FY17 and FY18.
- Additional Funds to the region
- Funding Distribution of Statewide Program
 - 50% *Statewide Priority List*
 - 50% *safety concerns not on Statewide Priority List, local concerns, and local RR concerns*



Add CON Phases- PA

c. Statewide Highway-Rail Grade Crossing Program, Various Counties

- Criteria
 - *Fund only used on open, public heavy rail crossings*
 - *Crossing must be on top 25% of FRA Accident Prediction System for state*
 - *Crossing surface improvement costs cannot exceed 20% of total cost*
 - *Corridor projects must include one project within top 25% of FRA Accident Prediction System for state*
 - *Warning device upgrades must provide safety benefit; not replacement in kind*
 - *Crossing falls within terminus of highway/bridge project if crossing meets top 25% criteria above.*
- Project may be outside top 25% of FRA Accident Prediction System if safety concerns are present and not reflected in FRA system



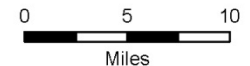
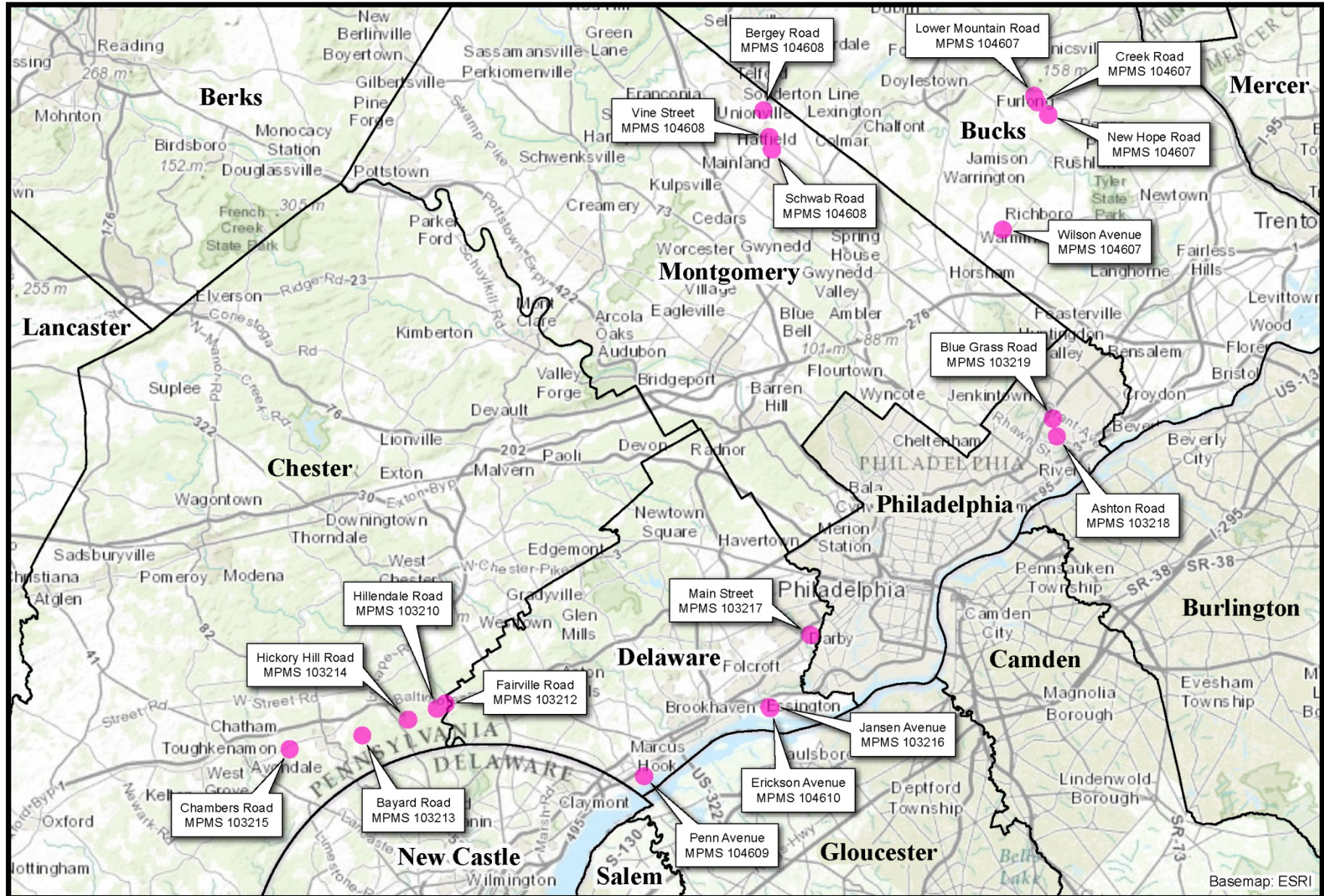
Add CON Phases - PA

c. Statewide Highway-Rail Grade Crossing Program, Various Counties

- RRX funds used to be distributed to MPO/RPO via formula-based process
 - *Projects could not be undertaken due to small distribution for many MPOs/RPOs*
 - *Resistance to shift funds between MPOs/RPOs*
 - *RRX funds were underutilized – 58%*
- Currently RRX funds centrally managed
 - *Program shifted to Central Office Grade Crossing Unit*
 - *Neighboring states that centrally managed have higher utilization rates - < 90%*
 - *PA's utilization rate expected to rise*

County	Project	Cost
Bucks	SR 2093 (Wilson Rd, Creek Rd, New Hope Rd, Lower Mountain Rd)	\$26,000
Chester	Hillendale Road Grade Crossing	\$191,000
	Fairville Road Grade Crossing	\$212,000
	Bayard Road Grade Crossing	\$225,000
	Hickory Hill Grade Crossing	\$219,000
	Chambers Road Grade Crossing	\$208,000
Delaware	Jansen Avenue Grade Crossing	\$273,000
	Main Street Darby Borough	\$338,000
	Penn Avenue Grade Crossing	\$270,000
	Erickson Avenue Grade Crossing	\$218,000
Montgomery	Hatfield RR LED Lights (Schwab Rd, Vine St, Bergey Rd, Penn St)	\$18,000
Philadelphia	Ashton Road Grade Crossing	\$214,000
	Blue Grass Road Grade Crossing	\$214,000
TOTAL		\$2,626,000

PA15-39: Statewide Highway-Rail Grade Crossing Program



c. Statewide Highway-Rail Grade Crossing Program, Various Counties

Amend the TIP for PA by adding 13 statewide Highway-Rail Grade Crossing (RRX) projects in the amount of \$2,626,000 for CON in FY15, FY16, FY17 and FY18.

SR 2093 - MPMS #104607	\$26,000	Main St Darby Borough - MPMS #103217	\$338,000
Hillendale Rd Grade Crossing - MPMS #103210	\$191,000	Penn Ave Grade Crossing - MPMS #104609	\$270,000
Fairville Rd Grade Crossing - MPMS #103212	\$212,000	Erickson Ave Grade Crossing - MPMS #104610	\$218,000
Bayard Rd Grade Crossing - MPMS #103213	\$225,000	Hatfield RR LED Lights - MPMS #104608	\$18,000
Hickory Hill Grade Crossing - MPMS #103214	\$219,000	Ashton Rd Grade Crossing - MPMS #103218	\$214,000
Chambers Rd Grade Crossing - MPMS #103215	\$208,000	Blue Grass Rd Grade Crossing - MPMS #103219	\$214,000
Jansen Ave Grade Crossing - MPMS #103216	\$273,000		



Add ROW Phases - PA

d. P3 Rapid Bridge Replacement ROW Phases, Various Counties

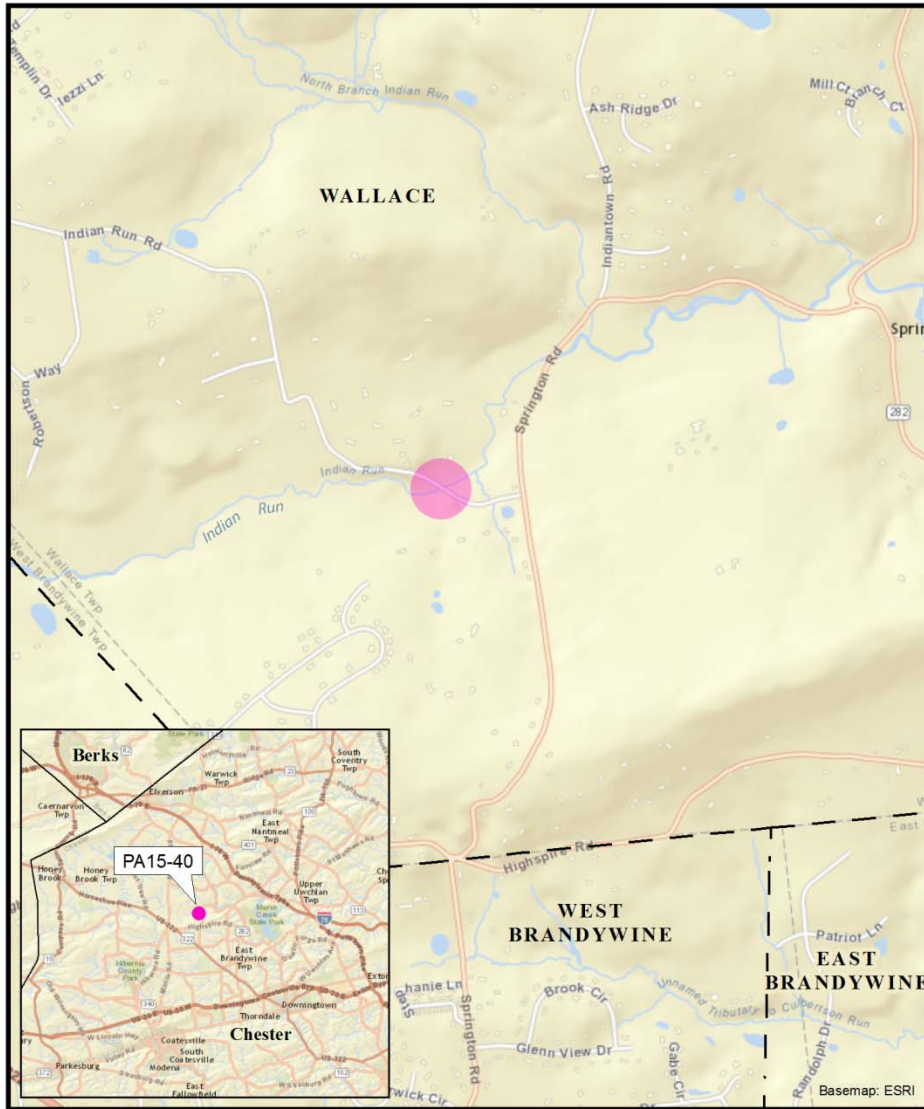
- Amend the TIP for PA by adding the ROW phases for the Indian Run Drive over Indian Run bridge in Wallace Twp, Chester County in FY15 for \$3,000 s581, and the Wynnewood Road over East Branch of Indian Creek in Lower Merion Twp, Montgomery County in FY15 for \$3,000 s581.

- Current Action
 - *Address minor right-of-way issues and prepares projects for construction*

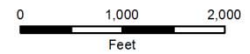
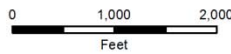
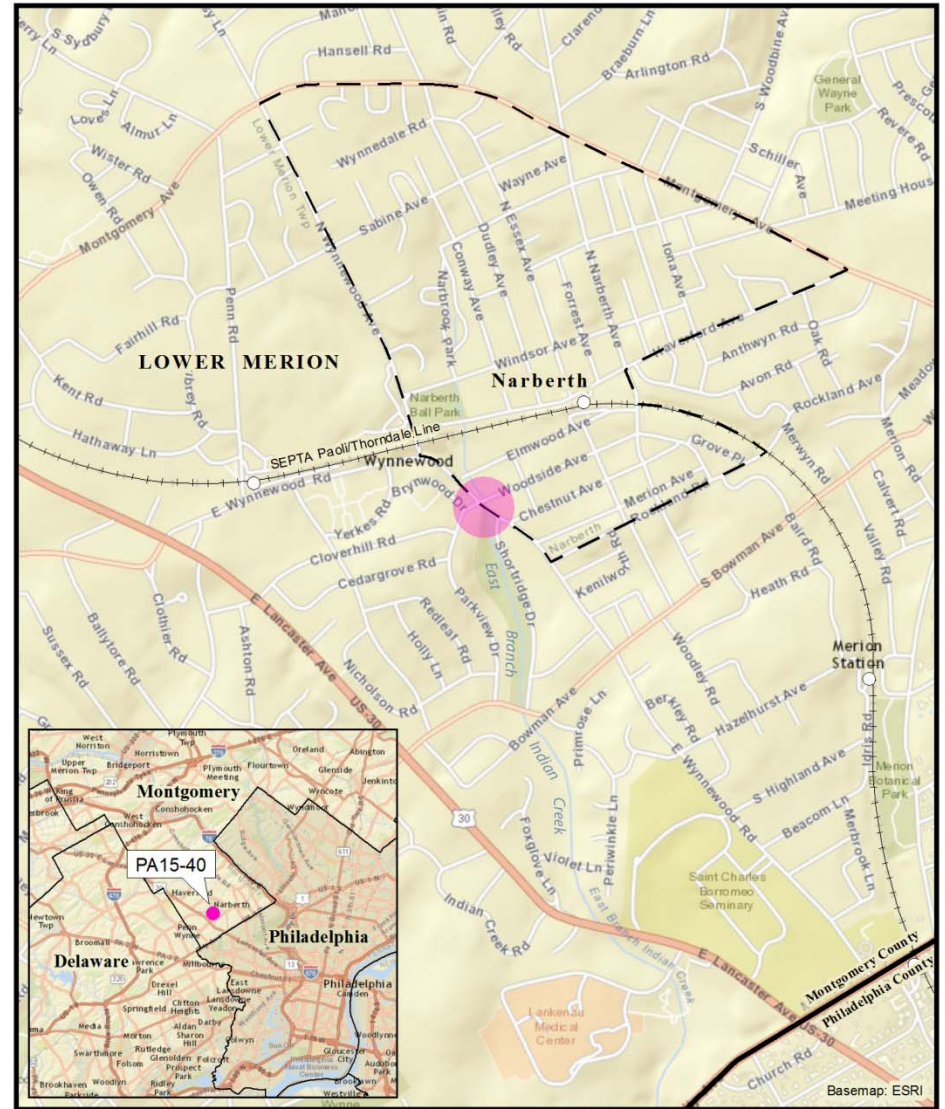
- P3 – Public Private Partnership
 - *558 SD bridges will be replaced over 3 years*
 - *Contract is for design, construction and maintenance of bridges for 25 years*
 - *PennDOT retains ownership and handles routine maintenance, e.g snow plowing*

County	Bridge	Expected CON
Bucks	Lincoln Highway over East Branch Queen Anne Creek	2016
Chester	Ewing Road over Middle Branch White Clay Creek	2016
	Indian Run Drive over Indian Run	2016
Delaware	Kedron Avenue over Stony Creek	2016
Montgomery	Layfield Road over Perkiomen Creek	2017
	Philmont Avenue over Valley Creek	2017
	Pennsylvania Avenue over Sandy Run	2017
	Wynnewood Road over Branch Indian Creek	2016
	Grosstown Road over Manatawny Creek	2016

PA15-40: P3 RBR ROW Phases,
Indian Run Road Bridge over Indian Run

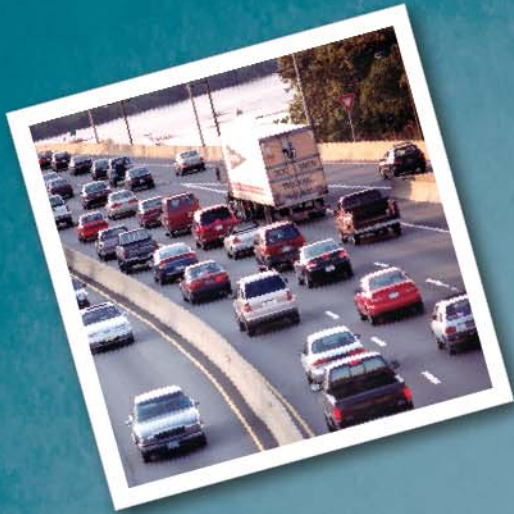


PA15-40: P3 RBR ROW Phases,
Wynnewood Road Bridge over East Branch of Indian Creek



d. P3 Rapid Bridge Replacement ROW Phases, Various Counties

Amend the TIP for PA by adding the ROW phases for the Indian Run Drive over Indian Run bridge in Wallace Twp, Chester County in FY15 for \$3,000 s581, and the Wynnewood Road over East Branch of Indian Creek in Lower Merion Twp, Montgomery County in FY15 for \$3,000 s581.



THANK YOU



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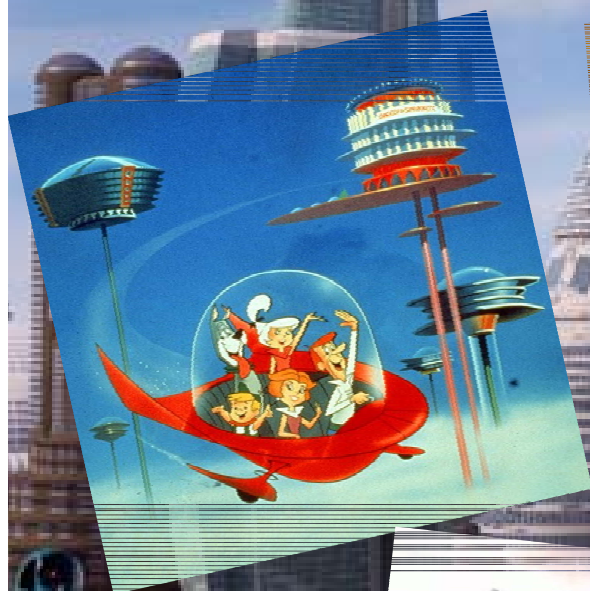
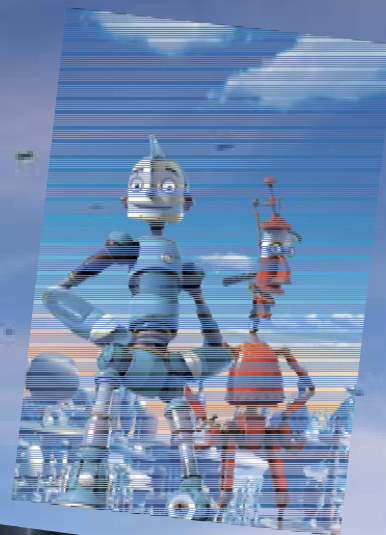
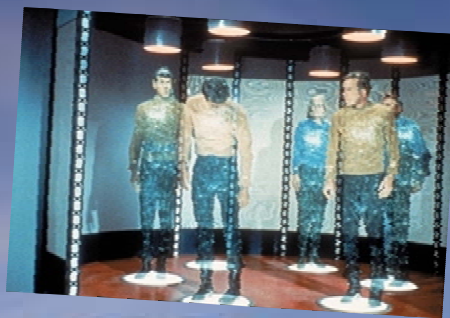
GREATER PHILADELPHIA
FUTURES GROUP
ENGAGE, COLLABORATE, ENVISION



GREATER
PHILADELPHIA
FUTURE
.....
FORCES

BOARD POLICY ANALYSIS COMMITTEE

APRIL 10, 2015



 dvipc

***“Never make predictions;
especially about the future.”***

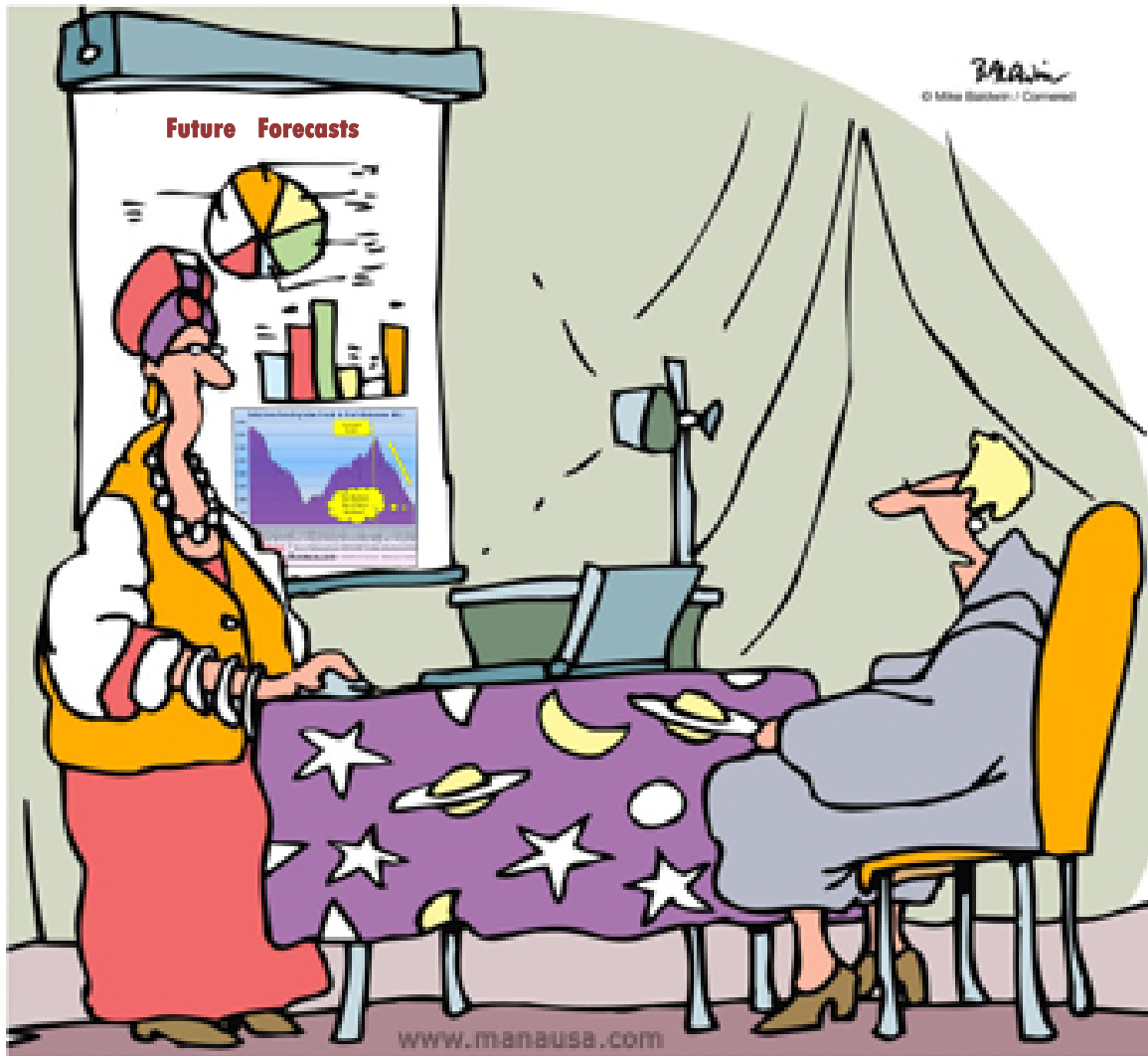
- Casey Stengel

“The future ain’t what it used to be.”

- Yogi Berra

“The key to making a good forecast is to not limit yourself to quantitative information.”

- Nate Silver



"This just isn't doing it for me. Could we go back to using the crystal ball?"

Previous Scenario Efforts

“What-If” Drivers



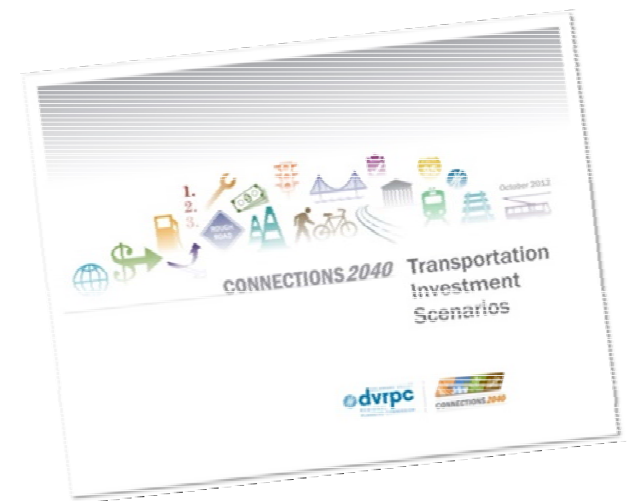
2003

Land Use & Development



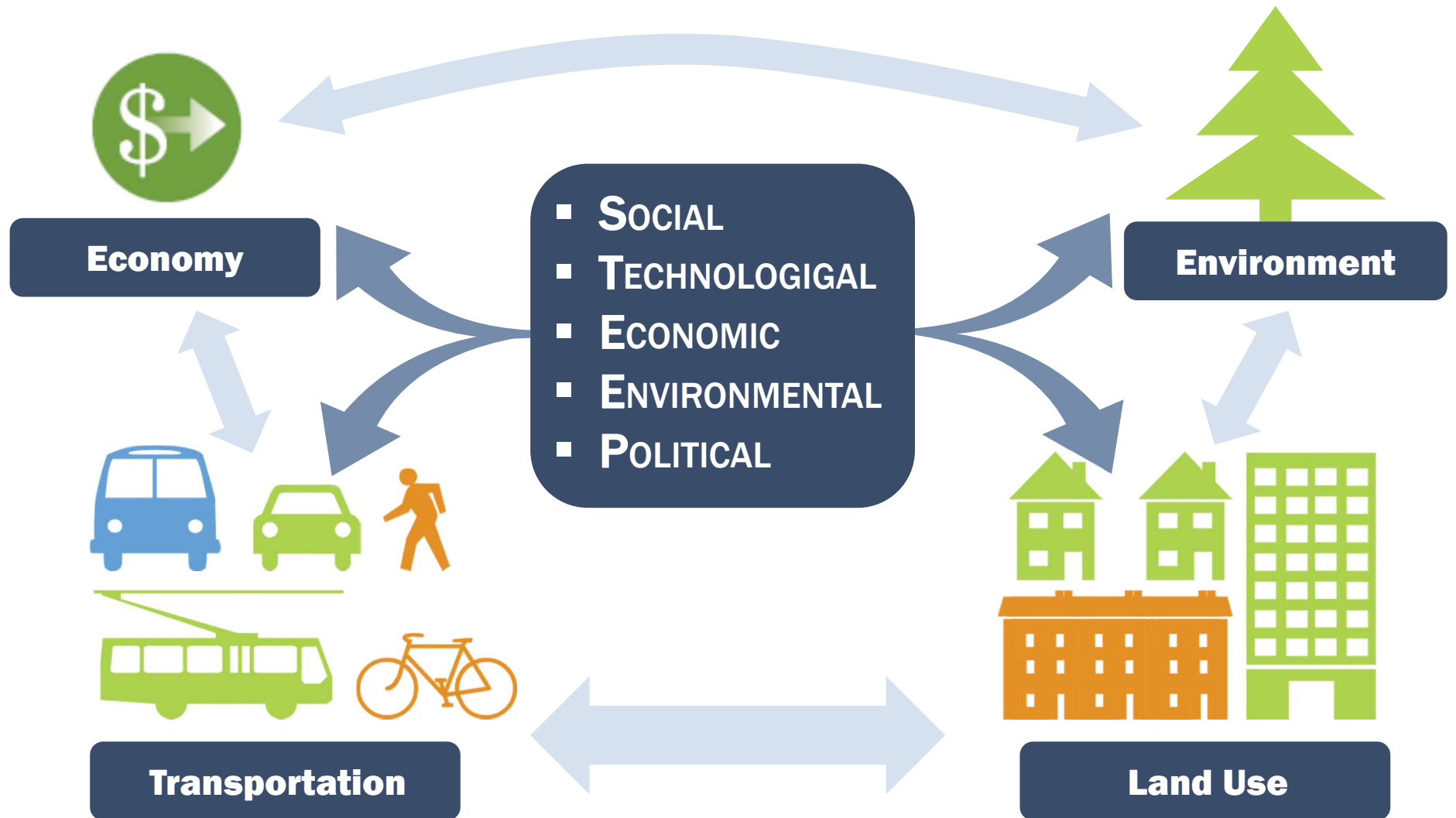
2008

Transportation Funding



2012

Future Forces



***“We are called to be architects of the future,
not its victims.”***

- Buckminster Fuller



***Can you imagine
doing this alone?***

-Me either.

 **dvrpc**

Greater Philadelphia Futures Group



Futures Dialogue



Impact-Likelihood Voting Results



Background Forces & Assumptions

- Partisan Paralysis**
- Intelligent Infrastructure**
- Connected Vehicles**
- Increasing Chronic Health Conditions**
- Aging Population**
- Panama Canal Widening**
- Growing Demand for Same-Day Delivery**
- Improving Freight Logistics**
 - Efficiency**
 - Redundancy**
- Urban School Quality Driving Family Location**
- More Immigration**
- Declining Water Quality (Suburban)**
- The Internet of Everything**

30-Year Forecasts

Baseline Assumptions	US	Region
Annual Population Growth	0.7%	0.4%
Annual Employment Growth	0.9%	0.4%
Vehicle VMT	0.8%	0.3%
Truck VMT	1.4%	0.3%
Annual Gasoline Cost	-0.3%	N/A
Annual GDP Growth	2.5%	*
Disposable Income / Capita	1.8%	*

* Greater Philadelphia expected to slightly trail U.S.
 Source: FWHA, IHS Global Insight, and DVRPC

Enduring Urbanism



Photo: Lucian Perkins, The Washington Post



Photo: Michael S. Wirtz, Philadelphia Inquirer



Image: WikiTrends

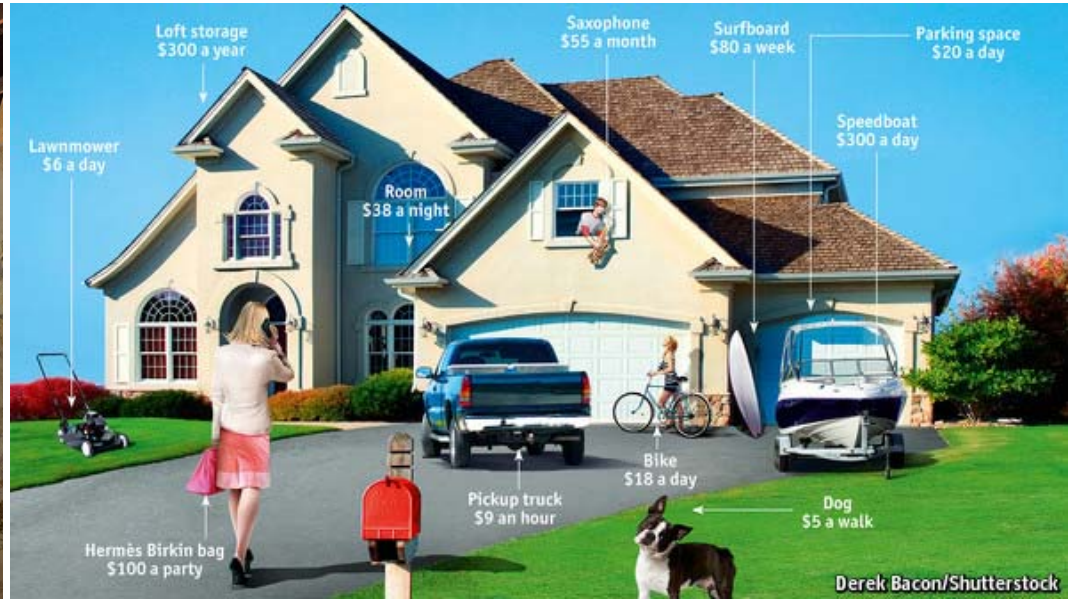
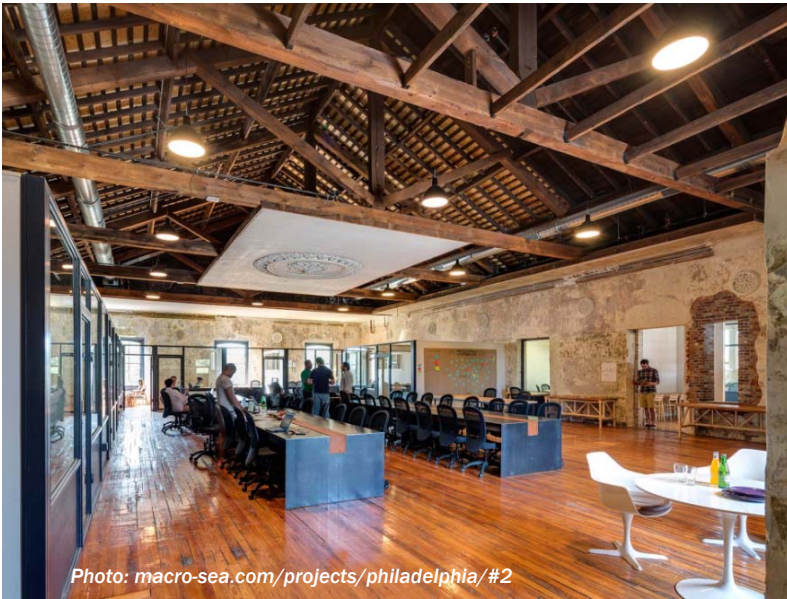


Photo: Michael Falco NY Times



Photo: www.phys.org

The Free-Agent Economy



Severe Climate



Transportation On Demand

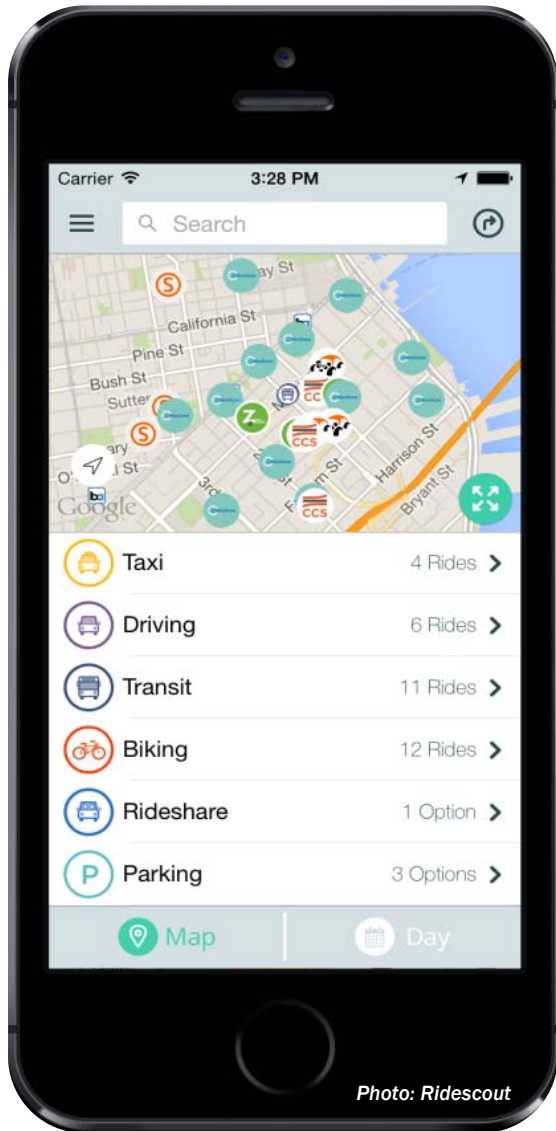


Photo: Ridescout



Photo: www.wikipedia.org



Photo: www.triadstrategies.typepad.com/



Photo: www.frontporchdenver.com/ride-your-b-cycle-on-down-to-the-front-porch/



Photo: www.hornlogistic.com/portfolio-item/stockage-de-produits-contionnes/

The U.S. Energy Boom

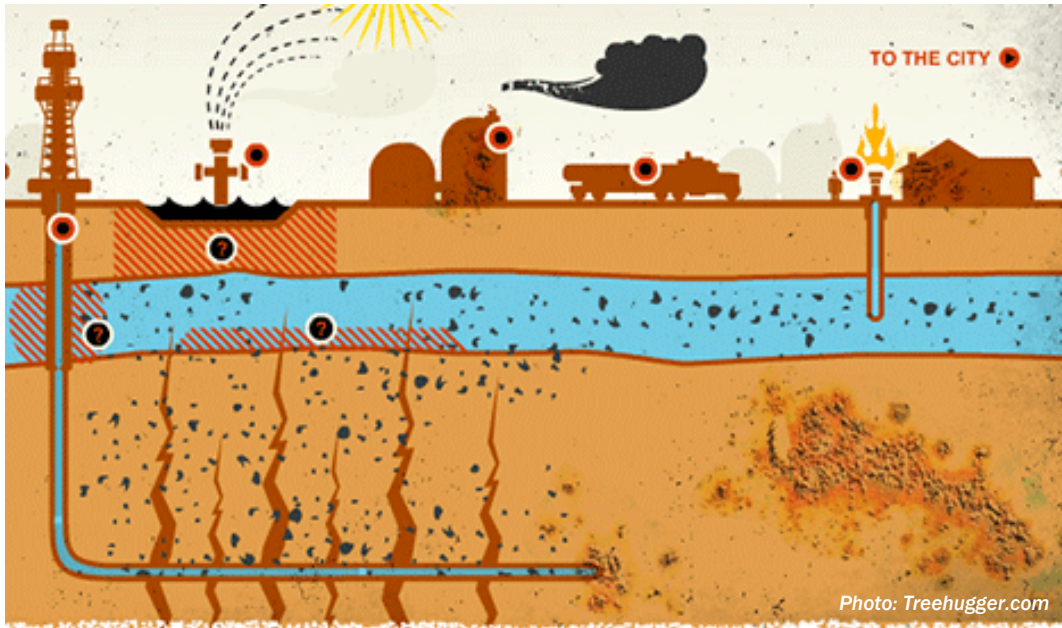


Photo: Treehugger.com



Photo: Flickr user PRR-6753



Photo: Kellie McGinn/Philadelphia Energy Solutions



Photo: American Institute of Chemical Engineers

Other Voices

DVRPC Committees

Public Participation Task Force

Goods Movement Task Force

Environmental Justice Working Group

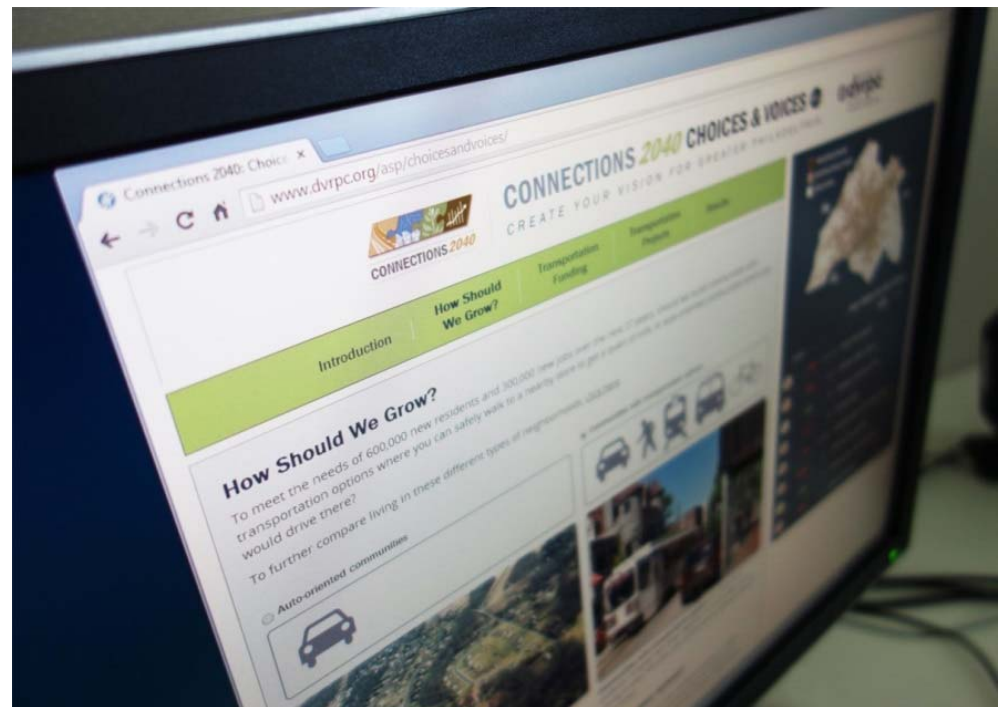
Healthy Communities Working Group

Regional Aviation Committee

Public Survey

What's Next?

- Impact Assessment
- Choices & Voices v3.0
- Report
- 2045 Long-Range Plan



www.dvrpc.org/ChoicesAndVoices

Discussion Questions

- What are the likely outcomes?
- What action steps can the region take to address the force?
- How should the region prioritize transportation infrastructure investments to account for the force?



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[http://www.dvrpc.org/
Connections2040/FuturesGroup](http://www.dvrpc.org/Connections2040/FuturesGroup)

Michael Boyer

mboyer@dvrpc.org
215.238.2848

Brett Fusco

bfusco@dvrpc.org
215.238.2937

“The future will be better tomorrow.”

- Dan Quayle



Chester County Public Transportation Plan

April | 2015

Making the case for transit investment



Chester County Public Transportation Plan





Chester County Public Transportation Plan





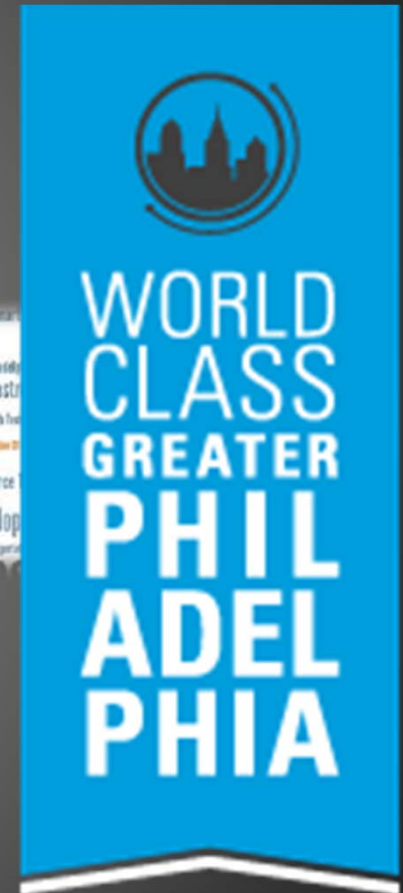
Chester County Public Transportation Plan



Snapshot of Challenges



Why a Public Transportation Plan?



Chester County Public Transportation Plan



Why a Public Transportation Plan?

*A 'first-class' county demands
a 'first-class' transit system.*



Three Components of Successful Transit



Improving the **SYSTEM**



SYSTEM | Our Vision



- Rail station and parking upgrades:
 - Coatesville, Parkesburg, Downingtown, Exton, Paoli
- Double amount of commuter rail parking
- Double number of park n' ride lots
- Initiate express(way) bus service
- Shuttle bus services from train stations
- Triple number of bus shelters
- Restore rail service to West Chester & Phoenixville



Express Bus: Lebanon CommuteKing



Improving the Built ENVIRONMENT



Bus shelters in Chester County



Policy: Bus stops with more than 5 daily boardings warrant a bus shelter and connecting sidewalk

- **116 stops with more than 5 daily boardings**

23% have shelters

- **Goal: 75% by 2030**



ENVIRONMENT | Bus Stops



Chester County Public Transportation Plan



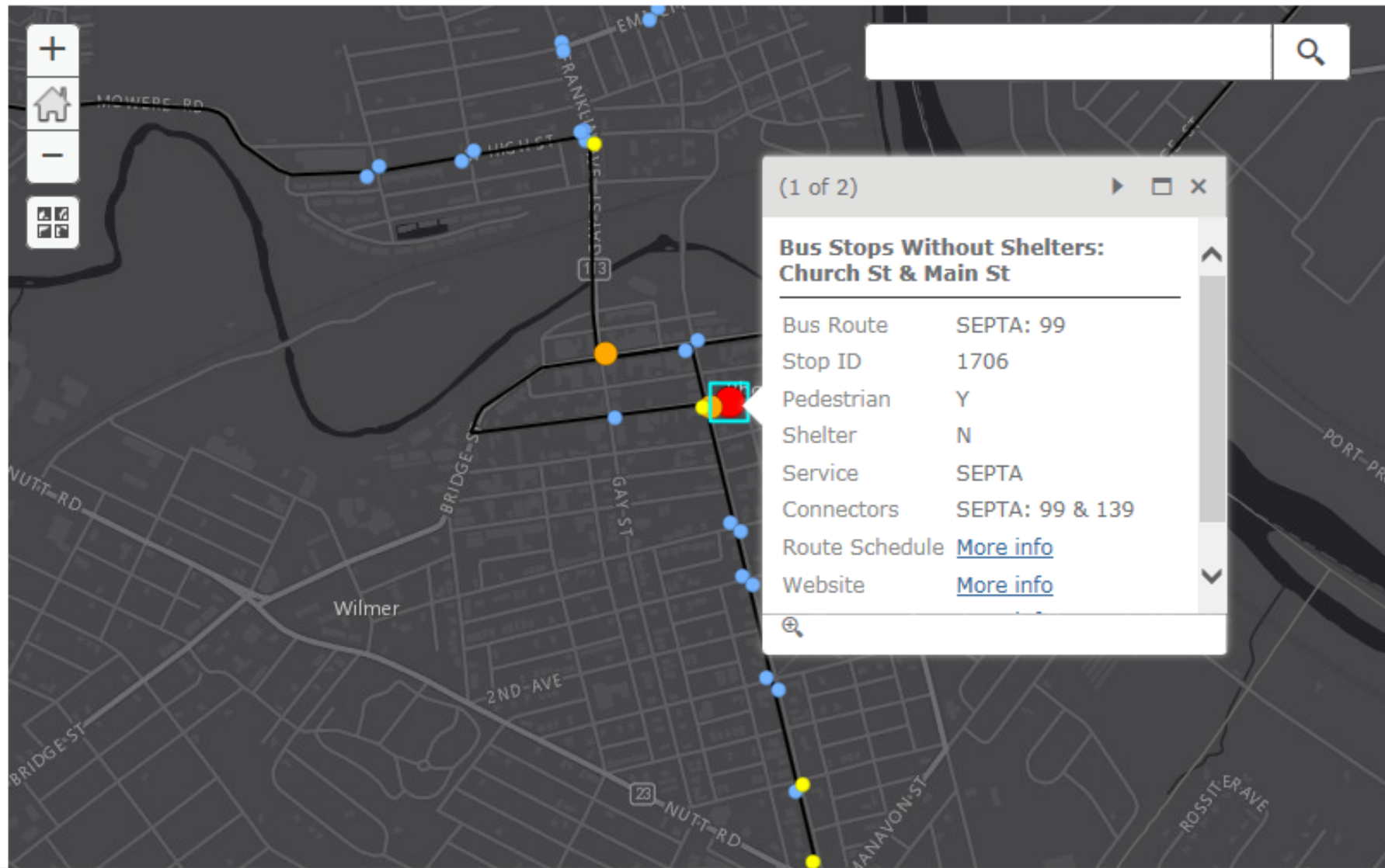
ENVIRONMENT | Bus Stops



AFTER



Bus Stops Recommended for Shelters in Chester County

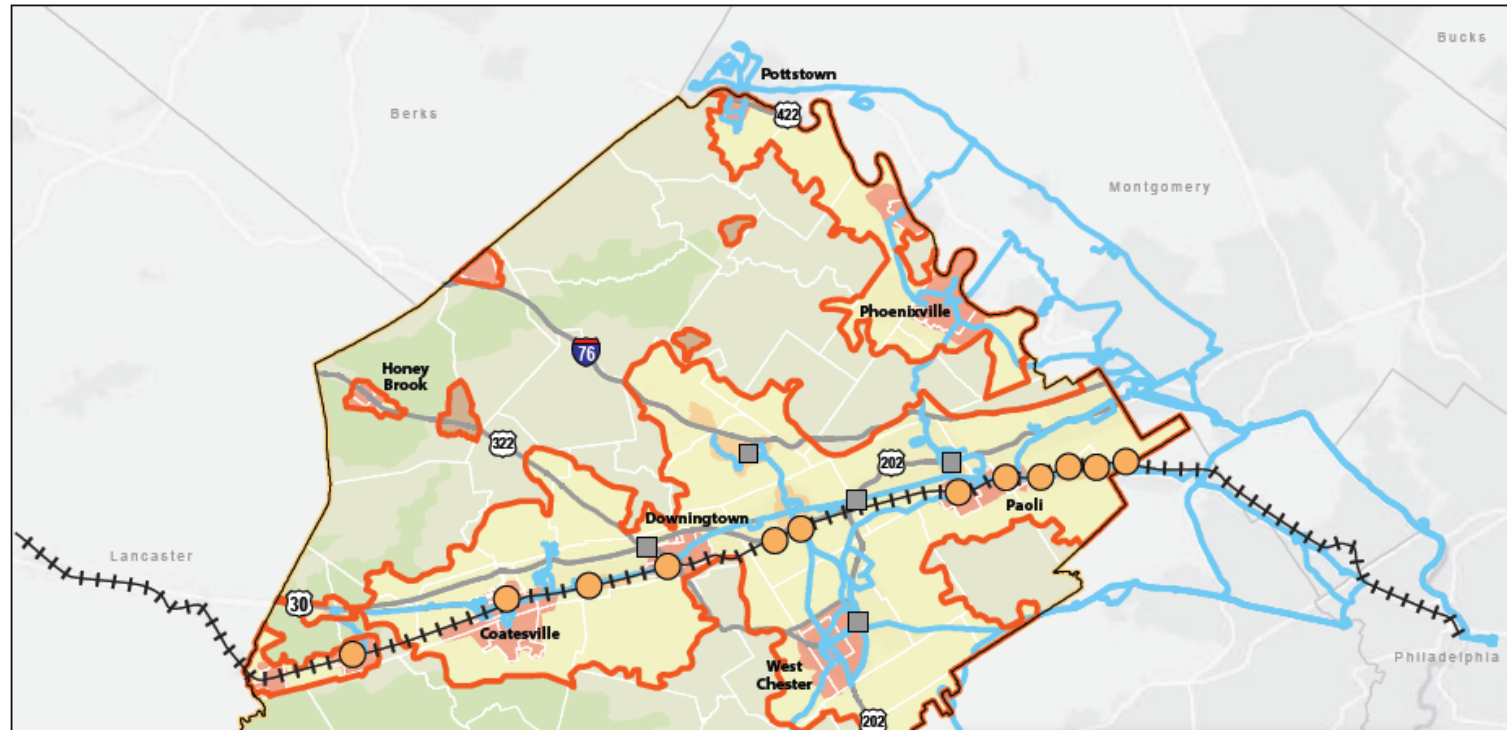


ENVIRONMENT | Sidewalks



Policy: Sidewalks should be provided in defined growth areas and rural centers

Recommended areas for pedestrian facilities



Improving the **EXPERIENCE**



EXPERIENCE | Our Vision



- Cashless payment system
- Real-time/next-to-arrive traveler information
- Cross-agency mobile app/platform
- Cross-agency fare acceptance



Implementation Strategies



Implementation Strategies

1. “Adopt” a bus shelter

- ...in front of your business
- ...a key stop in your municipality
- ...required as part of land development



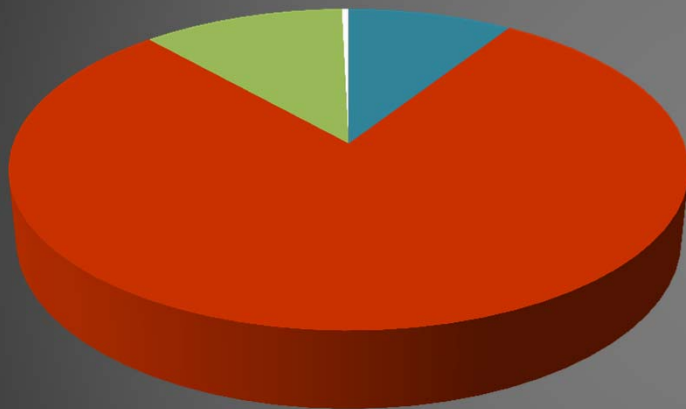
2. Require sidewalks in ordinances (and don't waive them!)

3. Build a Coalition of support for Public Transportation

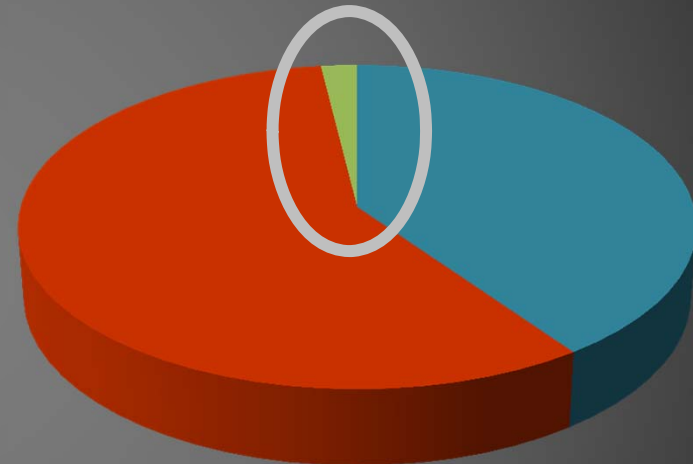


Funding of SEPTA by Source

Operating Subsidy (\$795 M)



Capital Budget (\$571 M)



Federal

State

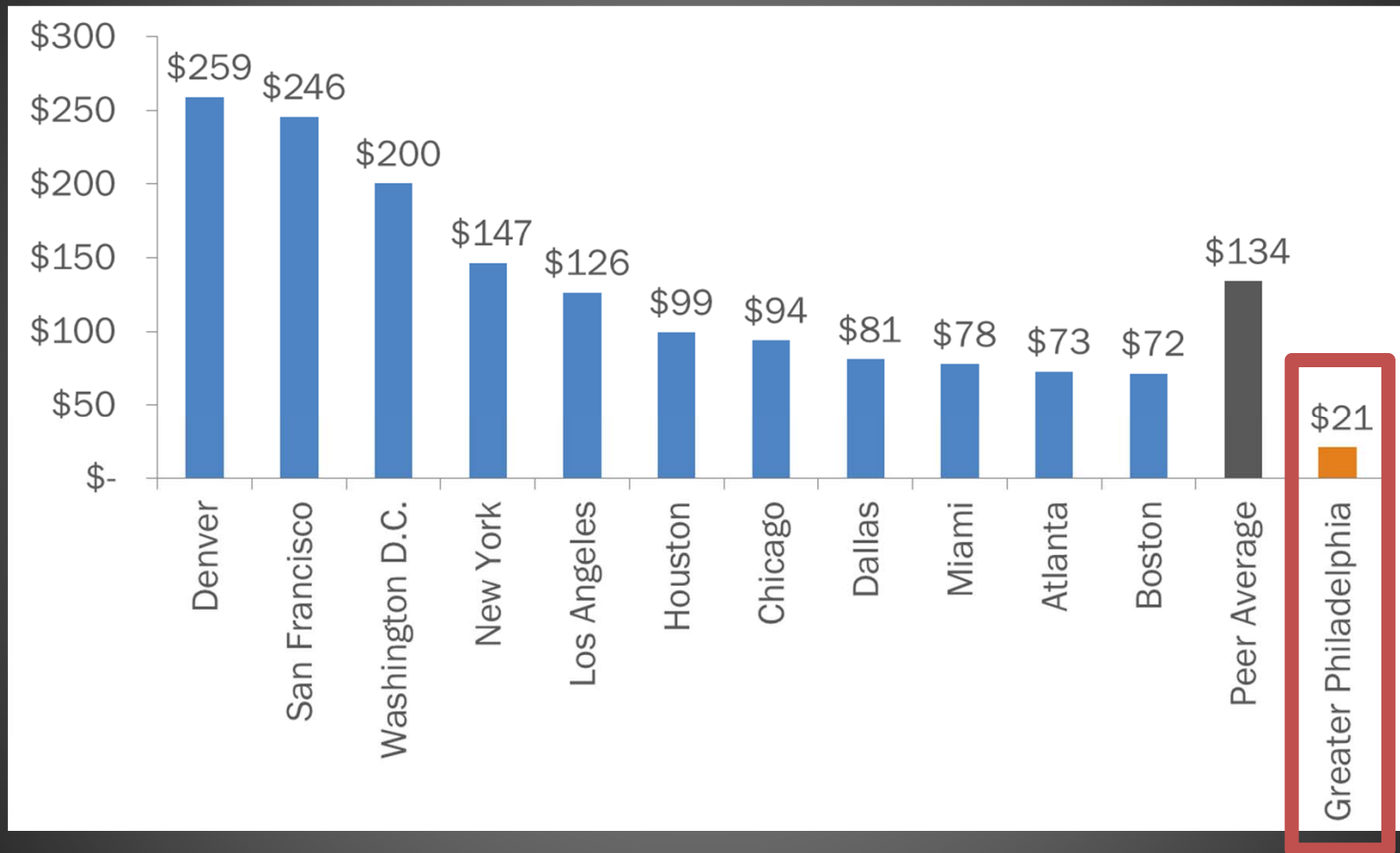
Local

Other

Source: SEPTA FY2015 Operating Budget & Capital Budget



Local Funding per Capita

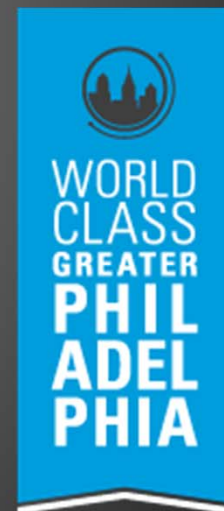


Source: National Transit Database, 2011 - Capital & Operating Funding; chart assembled by DVRPC



A *'first-class'* ^{region} ~~county~~ demands
a *'first-class'* transit system.

Build Trustworthy And Capable Civic And Economic Leadership In Coatesville Area
Agriculture
Support Businesses
Expand Rail To West Chester And King Of Prussia
Improve Public Transportation
Expand Public Transit
Improve Existing Infrastructure
Workforce Training
Creation And Execution Of 10 Year Plan With Business Community Leadership
Discourage Housing And Shopping Center Development
Complete Exton Park
Balance Growth With Maintaining Rural Areas





Chester County Public Transportation Plan





Chester County Public Transportation Plan

www.chesco.org/planning/transitplan

April | 2015

Making the case for transit investment