

# Rapid Bridge Replacement Project

**Industry Forum**  
November 6, 2013

# Agenda

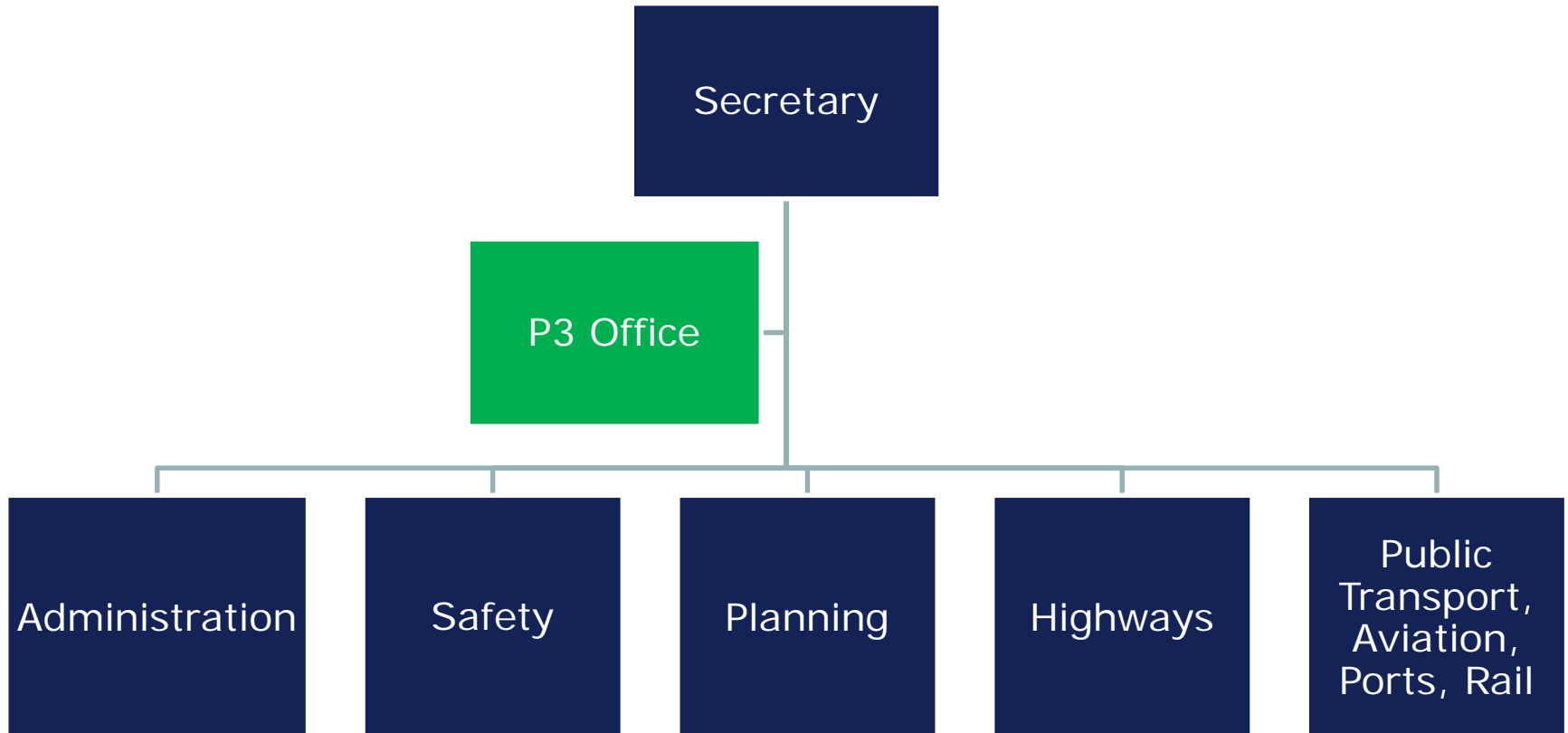
- P3 Program Overview
- Rapid Bridge Replacement Project Summary
- Identification, Screening and Selection of Bridges
- Transaction Structure and Procurement Process
- Next Steps



# P3 Program Overview

[www.P3forPA.com](http://www.P3forPA.com)

# PennDOT P3 Office



[www.P3forPA.com](http://www.P3forPA.com)

# Steering Committee

- Purpose: Provide policy and procurement guidance and technical expertise to the P3 Board
  
- Membership includes:
  - Secretary of Transportation
  - Deputy Secretaries
  - Office of Chief Counsel / General Counsel
  - Secretary of Budget
  - Secretary of Policy & Planning / Governor's Office
  - Project-specific members

# P3 Transportation Partnership Board

- Purpose: To approve potential Public-Private Transportation Projects for procurement
- Appointed Members:
  - Barry Schoch, Secretary of Transportation (Chair)
  - Charles Zogby, Secretary of Budget
  - Nicholas DeBenedictis, Aqua America Inc. (Gov.)
  - Michael Murchie, M&T Bank (Senate Maj.)
  - Ryan Boyer, Laborers District Council of Phila (Senate Min.)
  - Ronald Drnevich, formerly of Gannett Fleming (House Maj.)
  - Hon. Steve Santarsiero, PA House (House Min.)

# PennDOT P3 Program

Act 88 Signed into Law (Jul. 2012)

P3 Office Established (Aug. 2012)

Board Approves Guidelines (Jan. 2013)

P3 Board Approves First Projects  
(Jan. 2013)

P3 Office Completes Advisory Team  
(Sep. 2013)

# Active Projects

- Solicited:
  - 511 Traffic and Traveler Information – **Bid Awarded**
  - Sponsorship & Advertising Program – **Proposals Submitted**
  - Rapid Bridge Replacement – **Board Approved**
  - Train Station Redevelopments – **Under Development**
  
- Unsolicited:
  - Wireless Telecom Partnerships – **Board Approved**
  - APRAS (Hauling Permit System) – **Board Approved**





# Rapid Bridge Replacement Project Summary

[www.P3forPA.com](http://www.P3forPA.com)

# Progress To Date

Project Goals and Objectives Analysis

PennDOT Initiates Project Development

Initial Bridge Screening and Validation

P3 Steering Committee Recommendation

P3 Board Approval (Sep. 27, 2013)

# Project Goals & Objectives

- Accelerate replacement of Structurally Deficient (SD) bridges
- Maximize efficiencies / economies of scale to deliver more bridges
- Minimize impact on traveling public
- Improve system connectivity and mobility for commerce
- Reduce negative impact of SD bridges statewide
- Allocate risks to the parties best able to manage them

# Project Development

- Bridge Selection
  - Structurally Deficient
  - Full Replacements
  - Multi-Spans and Single Spans
  - Geographically Diverse / Statewide

# The List

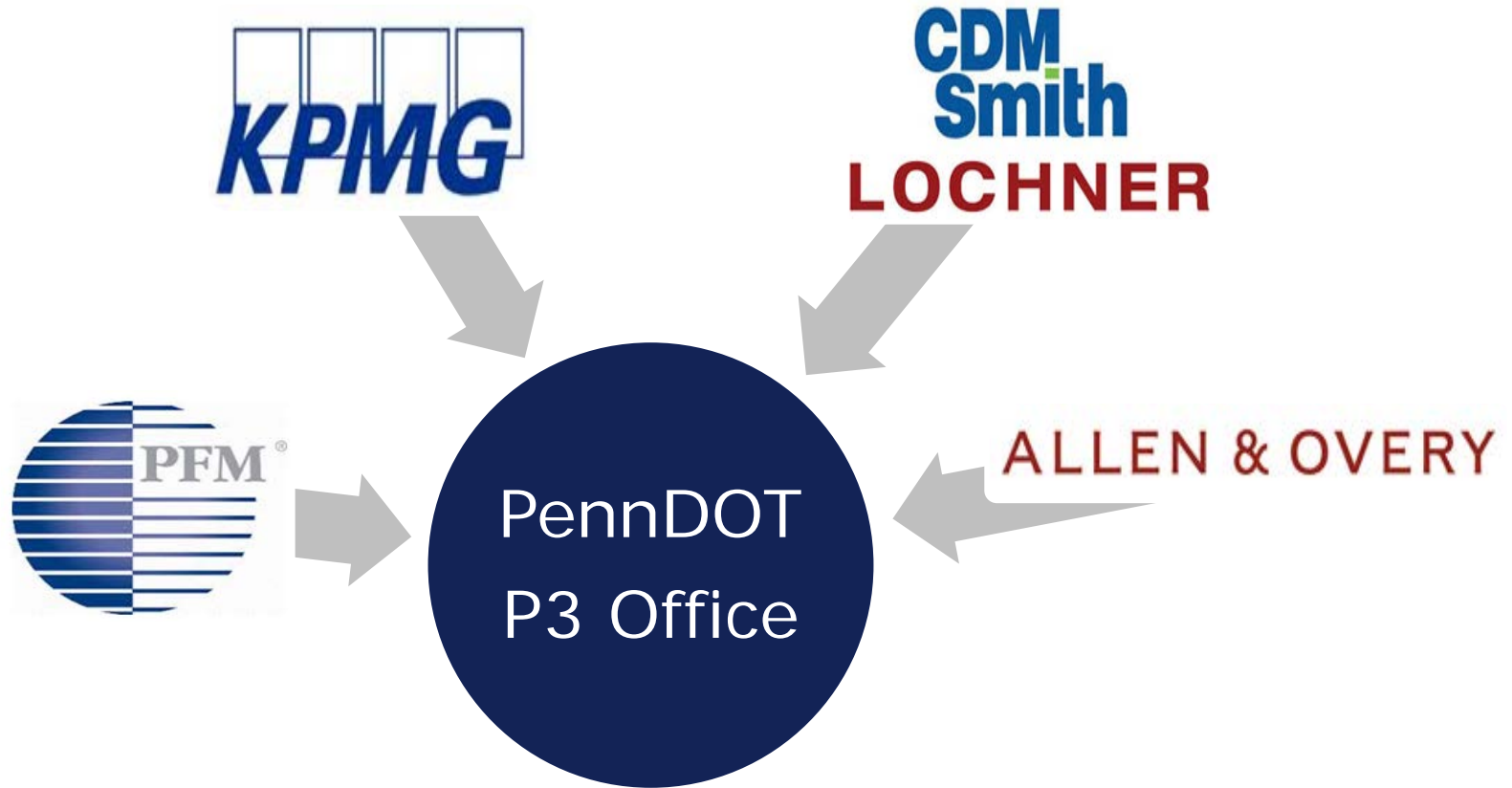
- More than 2,000 bridges screened
- Over 900 eligible bridges
- Ranked and Prioritized
  - Critical Structures
  - Minimal ROW / Environmental / Utility Concerns
  - Ready for Construction in 2015 and 2016
- Bridge Database Validation

# The Project

- Availability Payment / Not Tolls: State will make performance based payments
- Term of 25 – 35 years
- Design, Build, Finance and Maintain (DBFM)
- 200 – 300 Bridges
  - Average Cost: \$2.1 million
  - Average Age: 50+
- Begin Design and Construction in early 2015
- Available Funding to Determine Additional Packages / Bridges

Added to the Project  
[www.P3forPA.com](http://www.P3forPA.com)

# Project Team





# Identification, Screening and Selection of Bridges

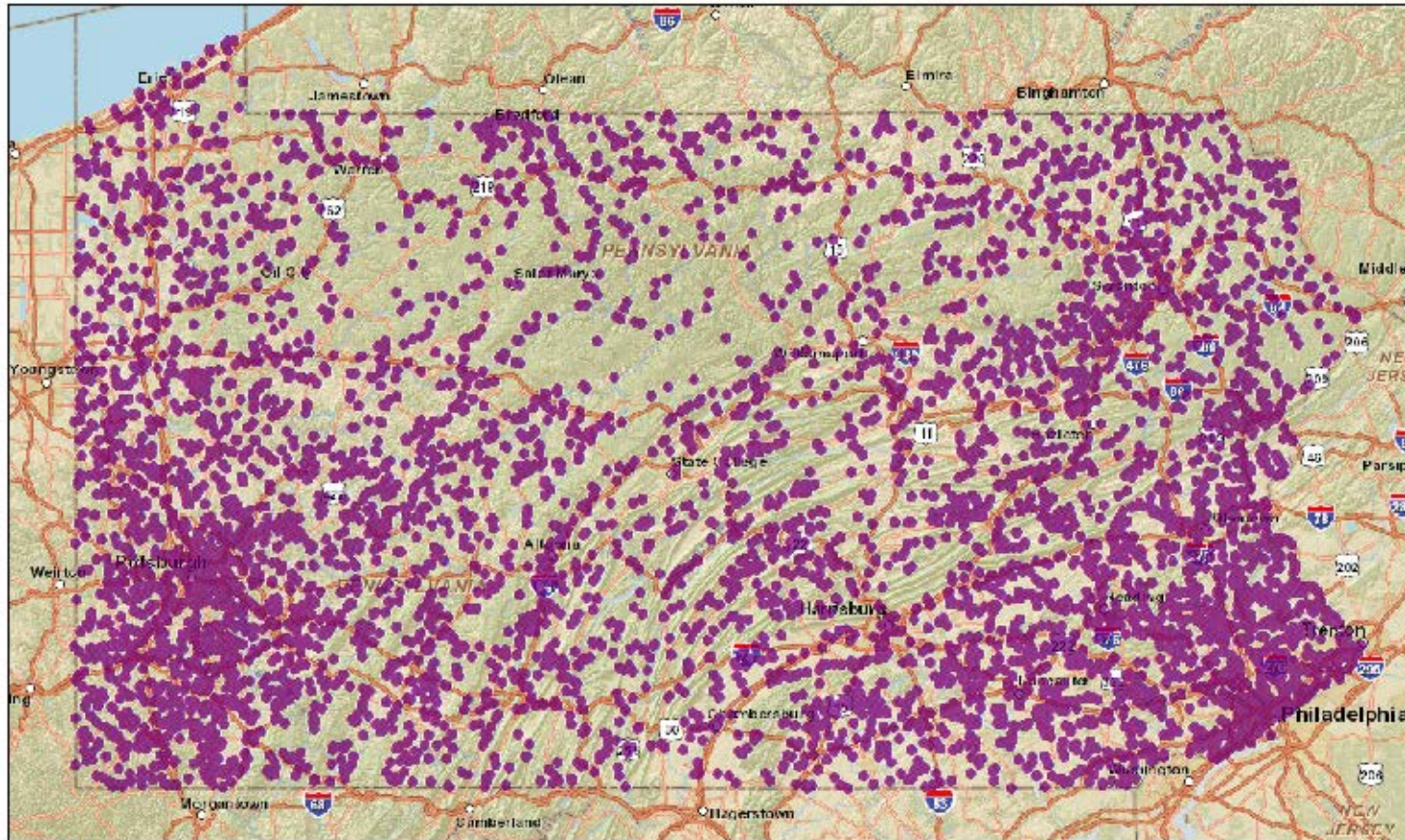
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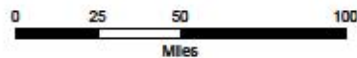
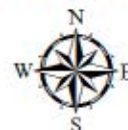
# Project Identification

- Pennsylvania is a large and geographically diverse state
- 31,000+ State and Local bridges
- 1,600+ SD bridges have already been replaced
- 4,350+ SD bridges are still remaining
- Bridges under consideration for P3 Project
  - 1,000+ bridges
  - Bridge demographics: Age, Spans, Length, Lanes, Traffic (ADT), RR & Water, Sufficiency Rating, Environmental Impact Proximity

# 4,350+ Structurally Deficient Bridges



- Legend**
- Bridge
- Structurally Deficient

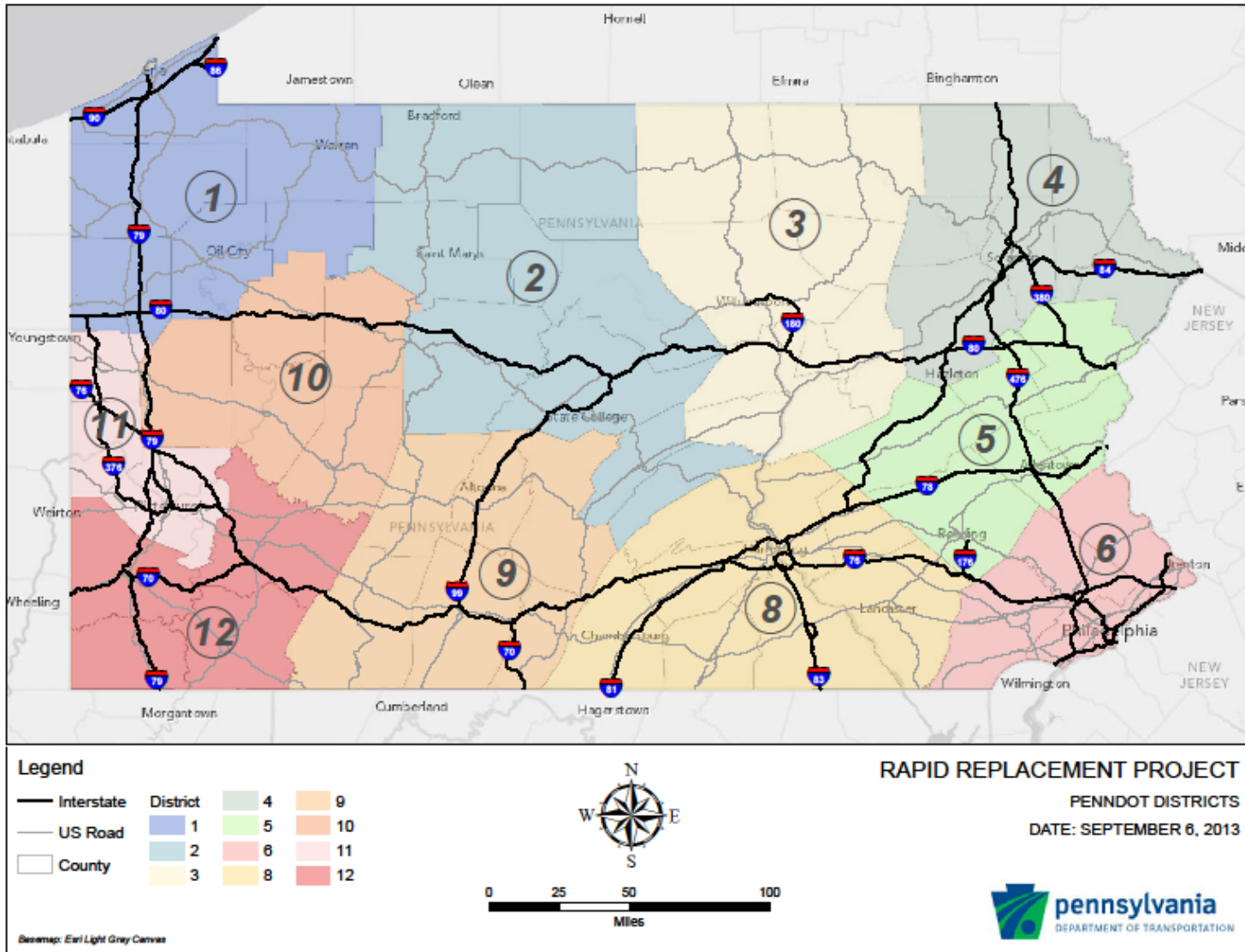


**RAPID REPLACEMENT PROJECT**  
STRUCTURALLY DEFICIENT BRIDGES  
DATE: SEPTEMBER 10, 2013

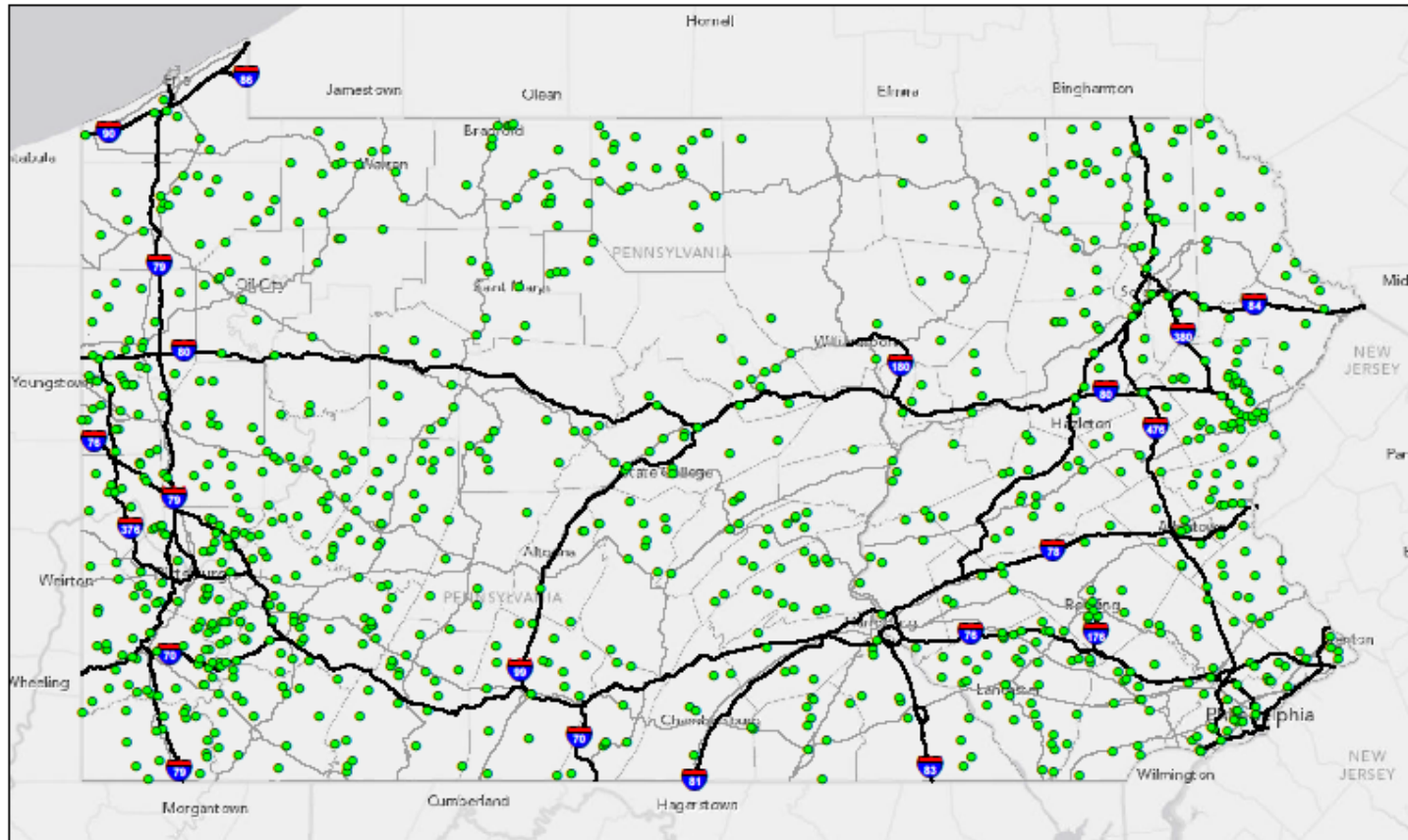


Source: Basemap and points taken from MPMS-IQ screenshot.

# Local District Coordination



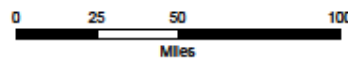
# 900+ Bridges Under Consideration



## Legend

- Bridge Under Consideration
- Interstate
- US Road
- County

Basemap: Esri Light Gray Canvas



## RAPID REPLACEMENT PROJECT

BRIDGES UNDER CONSIDERATION

DATE: SEPTEMBER 8, 2013



# PennDOT Bridge Database

- Over 100 columns of data for each bridge
- Over 2,000 bridges/rows of data taken to Districts
- Resulting in 1,000 bridges on a consideration listing
- Identified key criteria to use for screening
- Combined criteria to develop three goals
- Combined criteria to identify two key factors
- Review of the bridge demographics/features

# Project Goals and Key Factors

## Project Goals:

- Largest Number
  - Number of bridges replaced
- Best Value
  - Maximize use of available funding
- Greatest Impact
  - Benefit a high number of users

## Key Factors:

- P3 Readiness
  - Minimal utility and Right of Way concerns
- Environmental Readiness
  - Limited impacts

# Screening and Selection Process



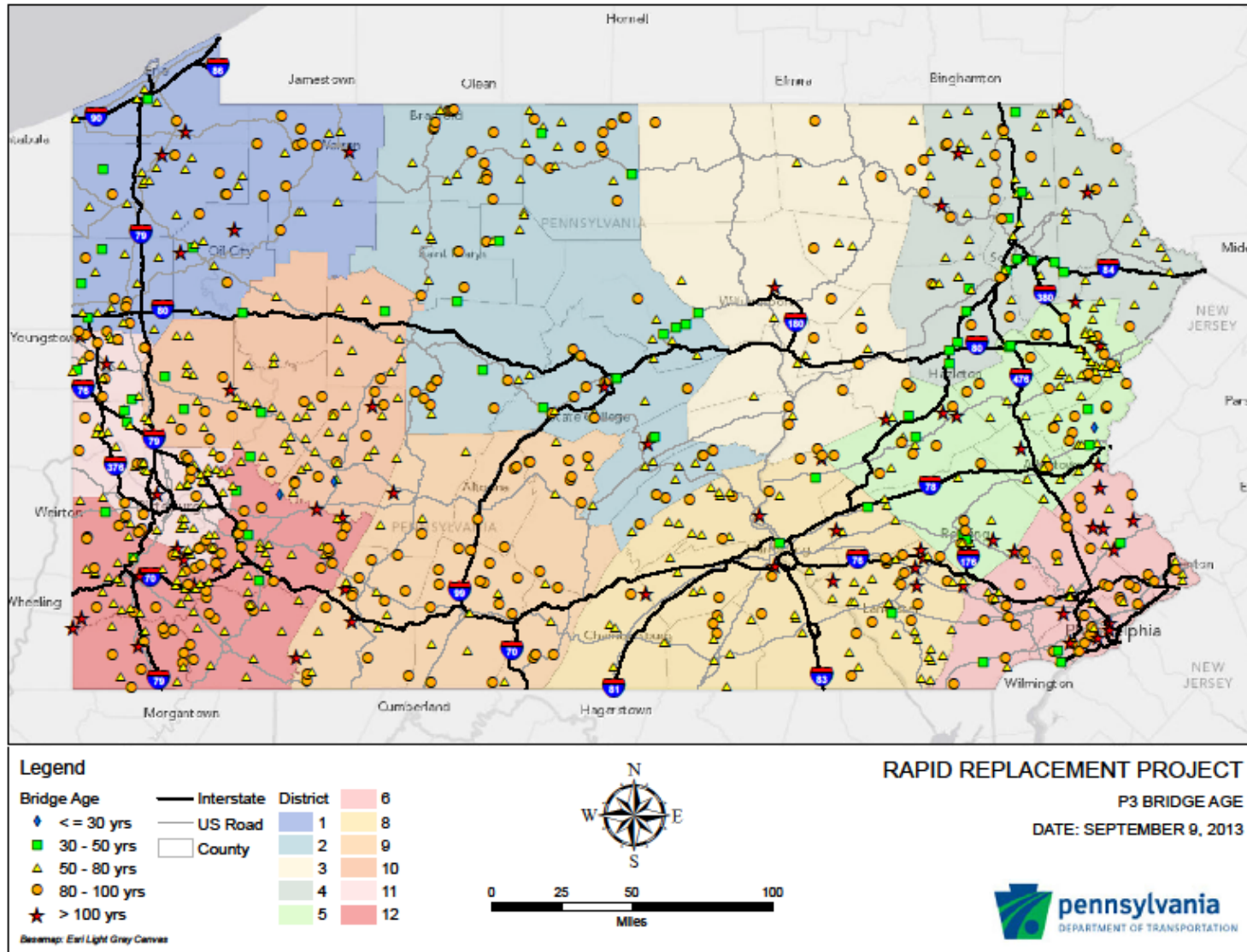
**Step 1:** Review of PennDOT Bridge Database

**Step 2:** Develop Bridge Database and Apply P3 Criteria for Sorting

**Step 3:** Perform Field and Desk Audits to verify accuracy of information in Bridge Database

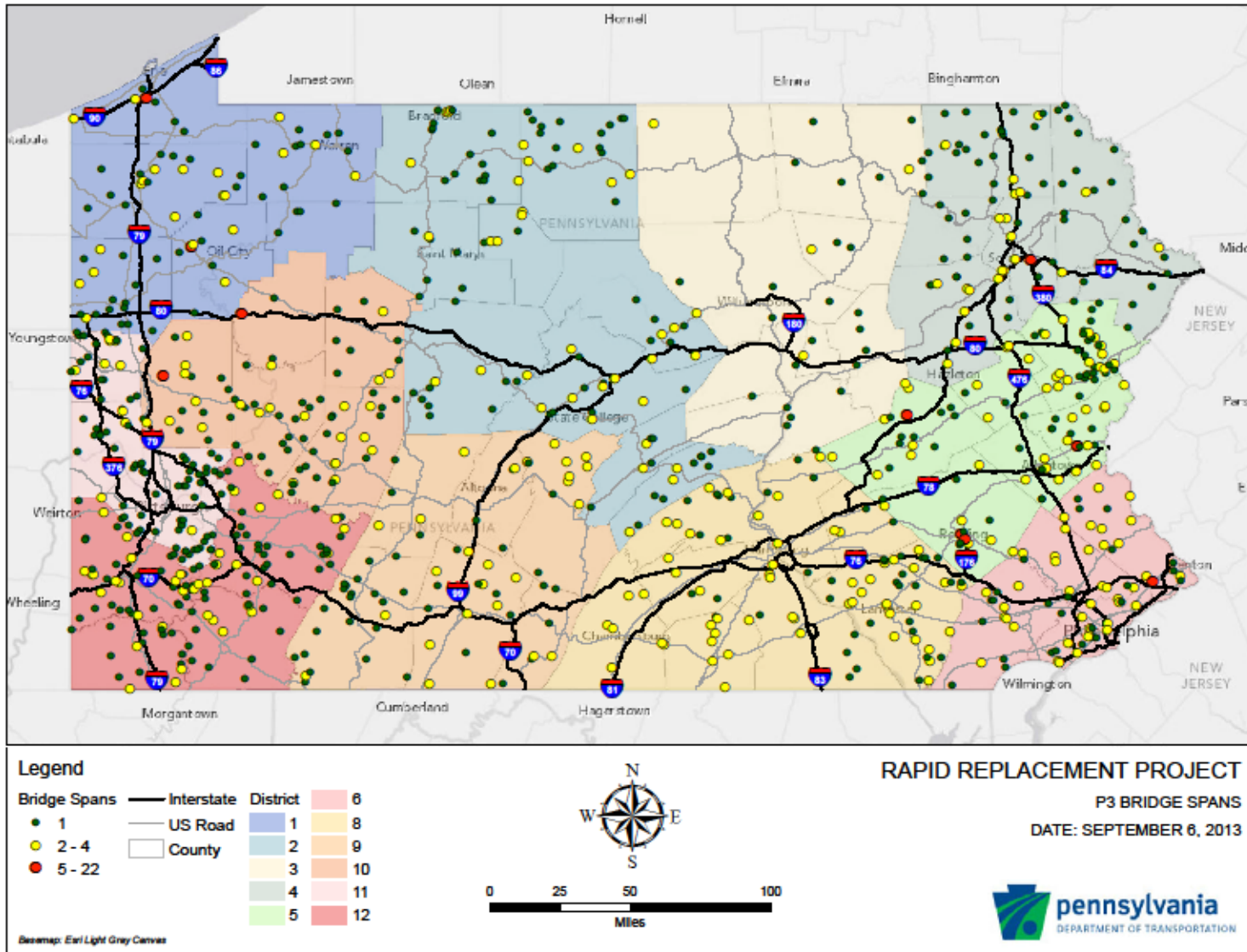
**Step 4:** Identify bridges to be included in Bridge Project

# Age

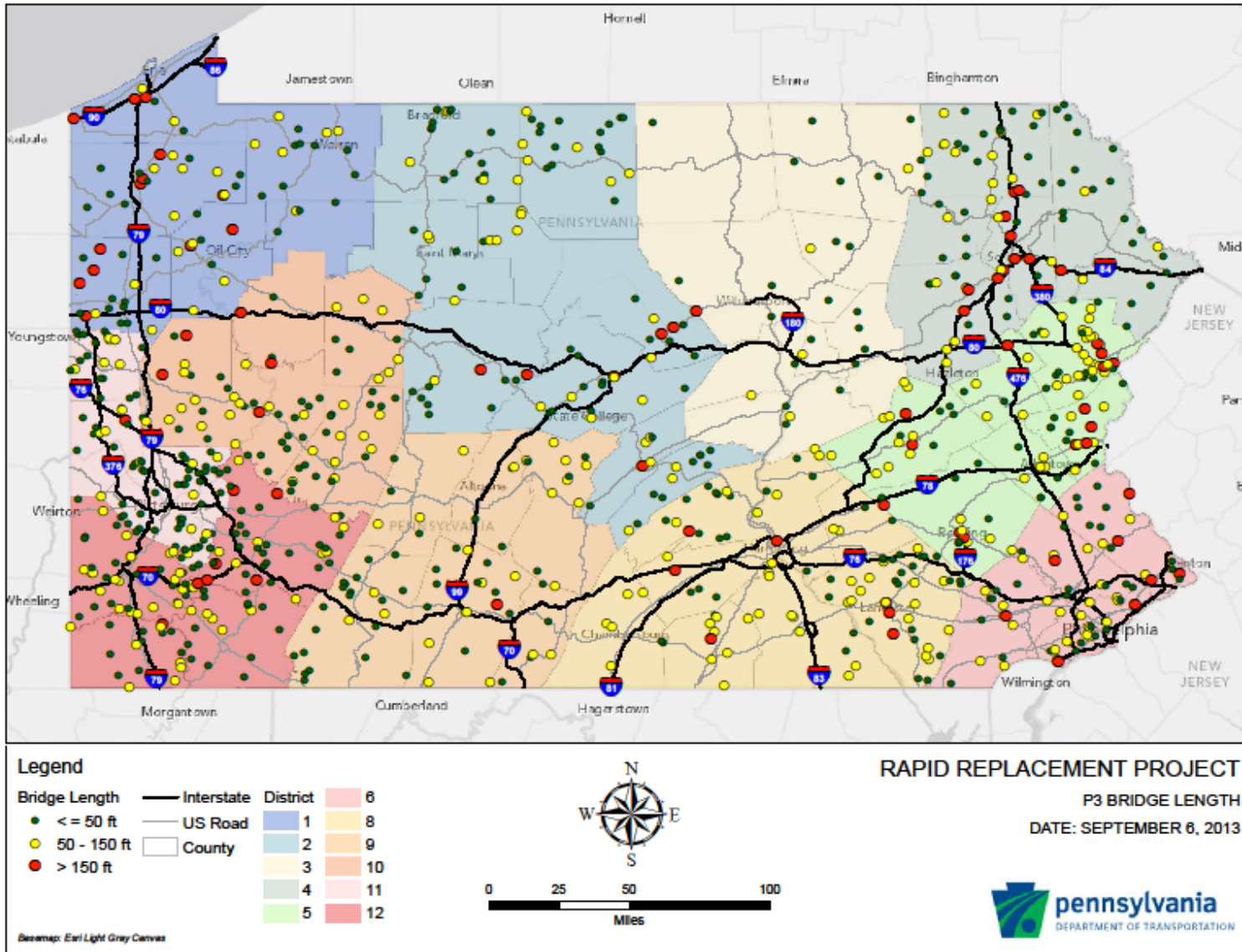




# Spans – Single



# Length – Short



# Deliverability

## ■ Considerations:

- Minimal changes to existing alignment
- Maintain existing profile
- Standardized structures
- Bundled implementation

## ■ Limited impacts to:

- Utilities
- Waterway
- Environmental Resources
- Railroad
- Traffic
- ROW

# Environmental Considerations

- Archeological Resources
- Support Wild Trout Production
- Storage Tank
- Wilderness Trout Streams
- FEMA/PEMA Hazard Mitigation
- Wild Trout Ch. 93 HQ/EV Designated Use
- 100-Year Floodplain
- Historic Properties
- Act 167 Watersheds
- Class A Wild Trout Streams
- State Parks
- Statewide Trails
- Protected Lands

# Sample Bridge Type



## Spans – Single



## Length – Short



## Lanes – Two Lanes





# Water Crossings



# Low Clearance



## To Do List

- Preliminary Engineering, Right of Way, Environmental and Geotech
- Develop Performance Based Technical Provisions
- Coordinate with Local Stakeholders
- Coordinate with Local Resource Agencies
- Fine tune project prioritization
  - Indicative list including locations by end of the year
  - The “Final” List prior to Draft RFP (Q2 2014)



# Transaction Structure and Procurement Process

[www.P3forPA.com](http://www.P3forPA.com)

# PennDOT Capital Program

## 2011-12 Revenue

- \$7.802 billion from 16 sources, including:
  - Motor License Fund Non-Restricted: \$2.540 billion
  - Federal Funds Highways: \$1.466 billion
  - Motor License Fund Restricted Highways: \$894 million

## Budget Highlights

- \$6.167 billion allocated to PennDOT's ongoing needs
- \$914 million allocated to debt service and other agencies
- 80% of funds for highway related programs
- \$1.550 billion capital construction funds for CY 2014

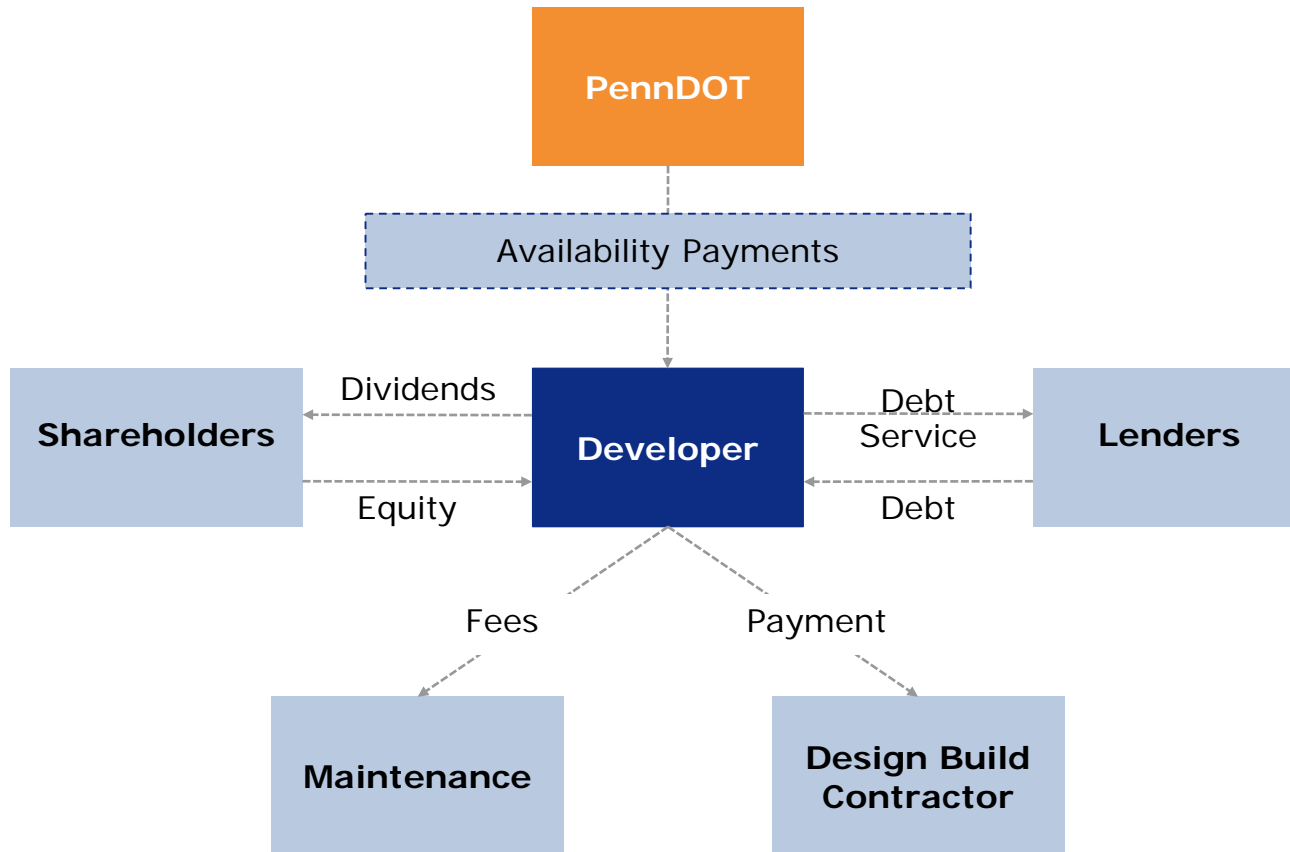
**The Project is manageable within PennDOT's overall capital program**

Source: PennDOT 2012 Annual Report

# Rapid Bridge Replacement Procurement

- Availability Style DBFM Procurement
  - PennDOT payments subject to appropriation
- 25-35 year term (to be determined)
- Opportunities for Innovation
- Performance-based proposal requirements
  - Includes preventative capital maintenance and lifecycle costs
- Important procurement features
  - Construction commencement in 2015
  - Interim and final completion targets
- Potential alternatives
  - Lowest Maximum AP for a Given Number of Bridges
  - Greatest Number of Bridges for a Given Affordability Limit

# Transaction Structure



# Issues Under Consideration

- Detailed Risk Allocation
- Performance Based Maintenance Responsibilities
- Proposal Stipends
- Proposal Security
- Data Room Development
- Proposal Pricing Commitments
- Alternative Financial Concepts
- Milestone Payments
- Maximum AP Indexation
- Handback Requirements





# Next Steps

[www.P3forPA.com](http://www.P3forPA.com)

# Procurement Schedule

Milestone	Date
Issue RFQ	December 2013
RFQ Due Date	Mid Q1 2014
Shortlist / Issue Draft RFP	Late Q1 2014
Issue Final RFP	Late Q2 2014
Proposal Due Date	Late Q3 2014
Select Preferred Proposer	October 2014
Commercial Close	December 2014

## Contact Information

**[www.P3forPA.com](http://www.P3forPA.com)**

[www.P3forPA.pa.gov](http://www.P3forPA.pa.gov)

### **Office of Policy & Public Private Partnerships**

**Bryan Kendro, Director**

**(717) 787-8765**

**[brkendro@pa.gov](mailto:brkendro@pa.gov)**

**[www.P3forPA.com](http://www.P3forPA.com)**

