



**Pennsylvania Asphalt  
Pavement Association**  
Pennsylvania Rides on US.



**JANUARY 15-17, 2024**

**MIKE REBERT, P.E.  
DEPUTY SECRETARY FOR HIGHWAY ADMINISTRATION**



\*Total miles on all PA roadways

# SAFETY THROUGH PARTNERSHIPS

- WORKFORCE



- WORK ZONES



- FAMILIES



- PUBLIC



# SAFETY THROUGH PARTNERSHIPS



pennsylvania

DEPARTMENT OF TRANSPORTATION



ACEC/PA



Safety Stand Down

Entering A Work Zone



Safe Pull Over Location



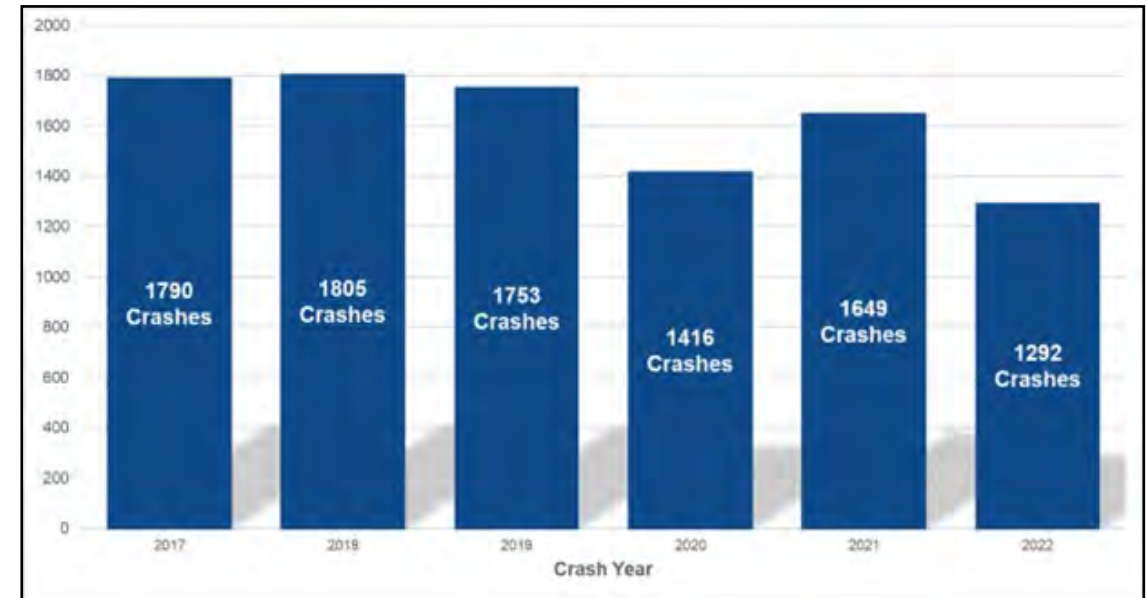
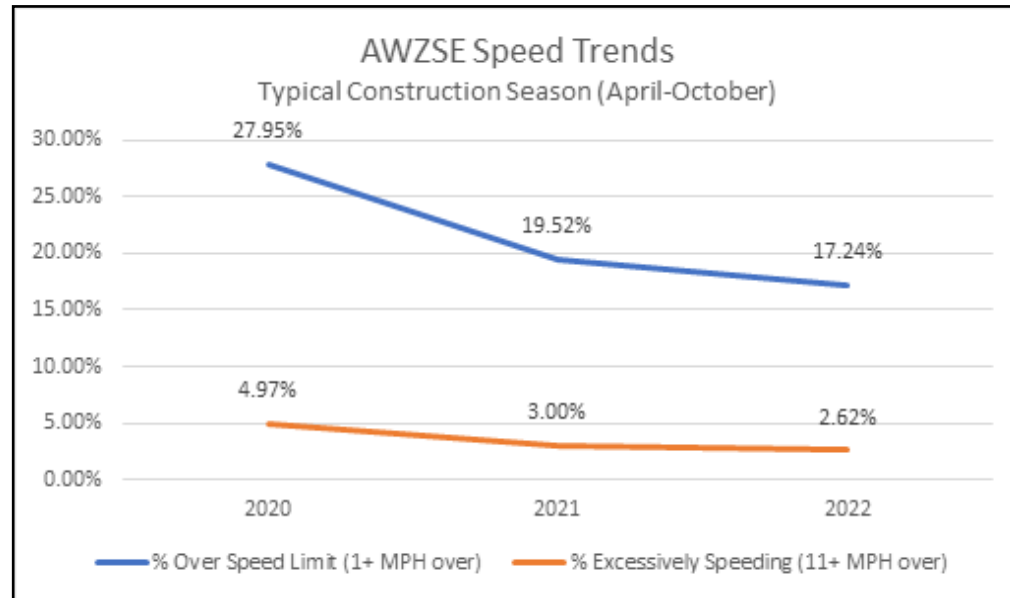
Slips, Trips, & Falls



# AUTOMATED WORK ZONE SPEED ENFORCEMENT



- Annual report published April 2023
- Covers from start of program to end of 2022
- Program is fulfilling its stated goals
- Program is focused on **SAFETY**, not revenue
  - Operated at a loss through end of 2022
- 68% of deployments have been to short-term patterns

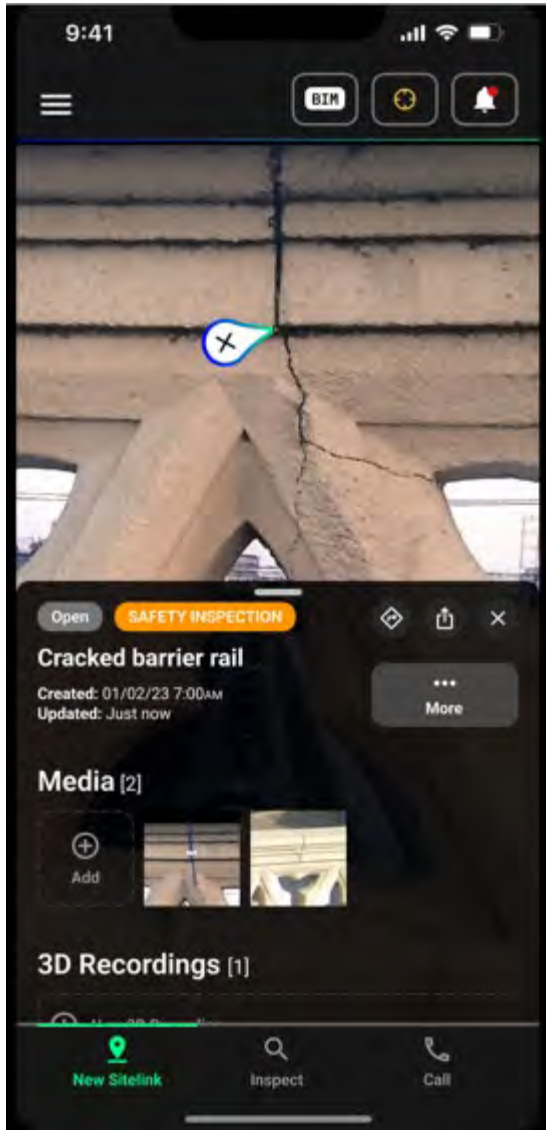


All Work Zone Crashes – 2017-2022



# INNOVATION

# MOVING INTO A VIRTUAL WORLD



Augmented Reality & Construction Analytics



Unmanned Aircraft Systems



# CONNECTED AND AUTOMATED



## \$8.4 Million US DOT Grant - Safe Integration of Automated Vehicles into Work Zones

### Goal:

Develop a consistent approach to allow for AVs to safely operate in work zones.

### Approach:

Evaluate the impact of **connectivity** between AVs and the work zone.

Evaluate the impact of providing **high definition mapping** of work zone.





# DIGITAL DELIVERY DIRECTIVE



Vision: By 2025, construction projects will have the ability to be bid using 3D technology and no longer be in a traditional construction plan format.

- Pilot Projects
  - 21 Active projects in Design or Construction
- Stakeholder Coordination



# Major Projects

# DISTRICT 1

## Erie County I-90 (A30) MM 3.5 to 10.5 Reconstruction



- **Prime Contractor:** Lindy Paving Inc.
- **Asphalt Supplier:** Lindy Paving Inc.
- **Contract Amount:** \$70.3 Million (projected final contract amount)
- **Substantially Completed on:** October 27, 2023



# DISTRICT 2

## McKean County, US 219 from SR 59 toward Lewis Run

- **Prime Contractor:** IA Construction Corporation
- **Asphalt Supplier:** IA Construction Corporation
- **Inspector:** PennDOT 2-0
- **Project Let:** September 15, 2022
- **Contract Bid:** \$2,897,777.77
- **Project Complete:** August 3, 2023



# DISTRICT 3

## Lycoming County, SR 180-130/133

- **Contractor:** Glenn O. Hawbaker, Inc.
- **Supplier:** Glenn O. Hawbaker, Inc.
- **Project Let:** December 15, 2022
- **Contract Bid:** \$11,362,362
- **Project Completion:** August 27, 2024
  - *(Paving completed in 2023)*
- **Project Information:**
  - 216,593 SY of 9.5mm SMA
  - VRAM



# DISTRICT 4

## Lackawanna County, SR 307 Resurfacing Project

- **Prime Contractor:** Pennsy Supply Inc.
- **Asphalt Supplier:** Pennsy Supply Inc.
- **Project LET:** March 2, 2023
- **Contract Bid:** \$1,866,559.84
- **Project Completion:** November 1, 2023



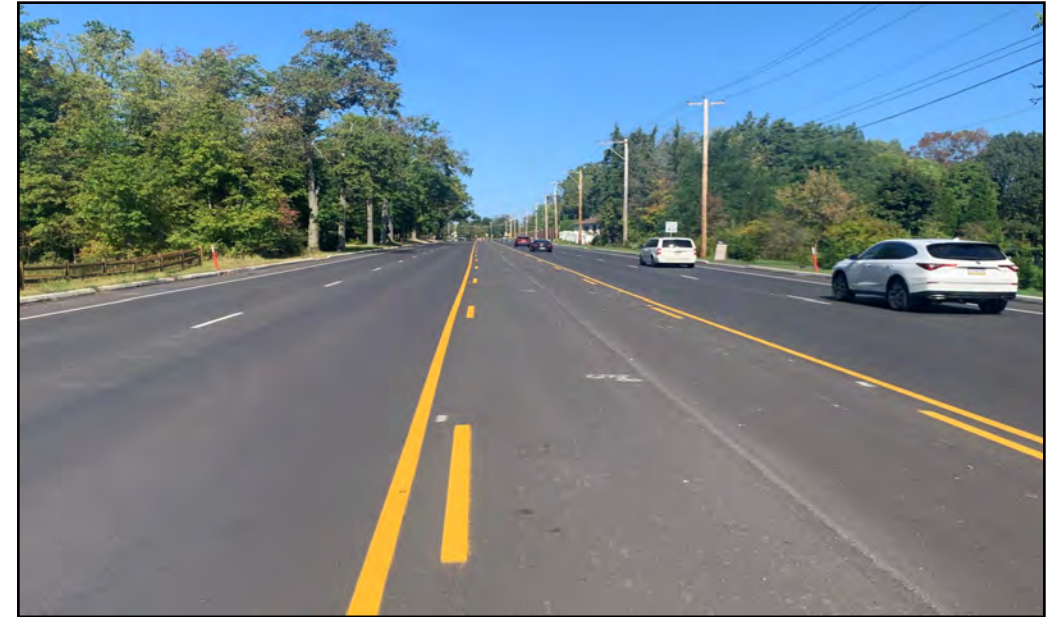
## Northampton County, 22-03M

- **Contractor:** J.D. Eckman / H&K Group
- **Asphalt Supplier:** ABE Materials (H&K Group)
- **Let Date:** 4/28/2022
- **Contract Amount:** \$20.8M
- **Project Completion Date:** November 2023



# DISTRICT 6

## Montgomery County, SR 202 Section 65S



- **Contractor:** James D. Morrissey (Philadelphia, PA)
- **Supplier:** Eureka Stone Quarry (Chalfont, PA)
- **Project Let Date:** 9/12/2019
- **Substantial Completion:** 11/8/2023
- **Contract Amount:** \$44,866,468





# DISTRICT 8

## Adams / York Counties, SR 15 Sections 34 & 38

- **Prime Contractor:** New Enterprise Stone & Lime Inc.
- **Asphalt Supplier:** New Enterprise Stone & Lime Inc.
- **Designer:** SPK Engineering Inc.
- **Project Cost:** \$22.065 million
- **Project Completion:** 8/31/2023
- **Wearing Course:**  
50,000 Tons - 2.0" 12.5 mm RPS



# DISTRICT 9

## Bedford and Fulton Counties, SR 0070 Sections 021 and 033



- **Contractors:**
  - Cottle's Asphalt Maintenance, Inc.
  - New Enterprise Stone & Lime Company, Inc.
- **Asphalt Suppliers:**
  - Grannas Brothers Stone & Asphalt - Ganister, PA (GRB07B41)
  - New Enterprise Stone & Lime Company - Ashcom (NEW05C41)
- **Construction Cost:** \$35.4M combined



# DISTRICT 10

## Indiana County, PA 286: US 422 Interchange East Oakland Avenue Widening



- **Prime Contractor:** Gulisek Construction, LLC
- **Paving Sub-Contractor:** Lindy Paving, Inc.
- **Contract Bid:** \$18,026,679.05
- **Let Date:** 10/10/2019
- **Completion:** Fall 2023



# DISTRICT 11

## Lawrence County, SR 0422-L37 Benjamin Franklin Highway

- **Contractor:** Lindy Paving, Inc.
- **Asphalt Supplier:** Lindy Paving Inc.
- **Construction Cost:** \$7.5M
- **Project LET:** December 2022
- **Project Completion:** December 2023



# DISTRICT 12

## Washington County, SR 0018 Section 22R



- **Contractor:** Eurovia (Northeast Paving)
- **Supplier:** Northeast Paving Plant
- **Letting Date:** 3/2/2023
- **Completion:** 4/26/2024
- **Construction Contract:** \$8,173,893.50



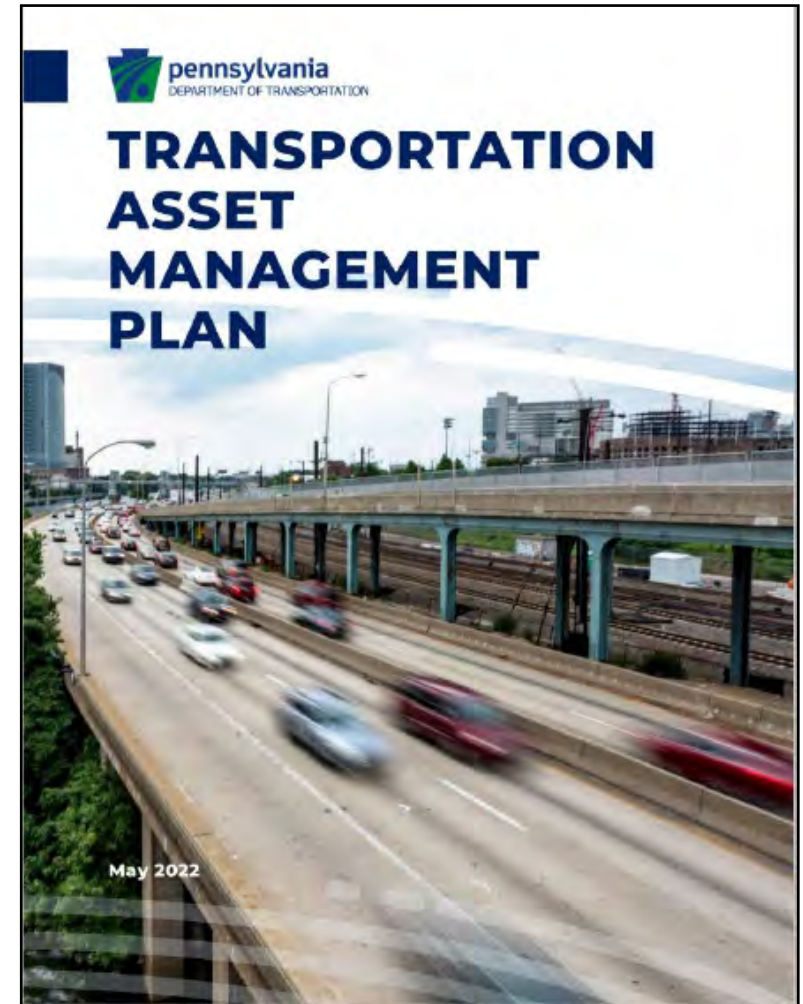
# PROGRAM DELIVERY:

- . ASSETS
- . PAVEMENT UPDATES
- . FUNDING
- . PROGRAM

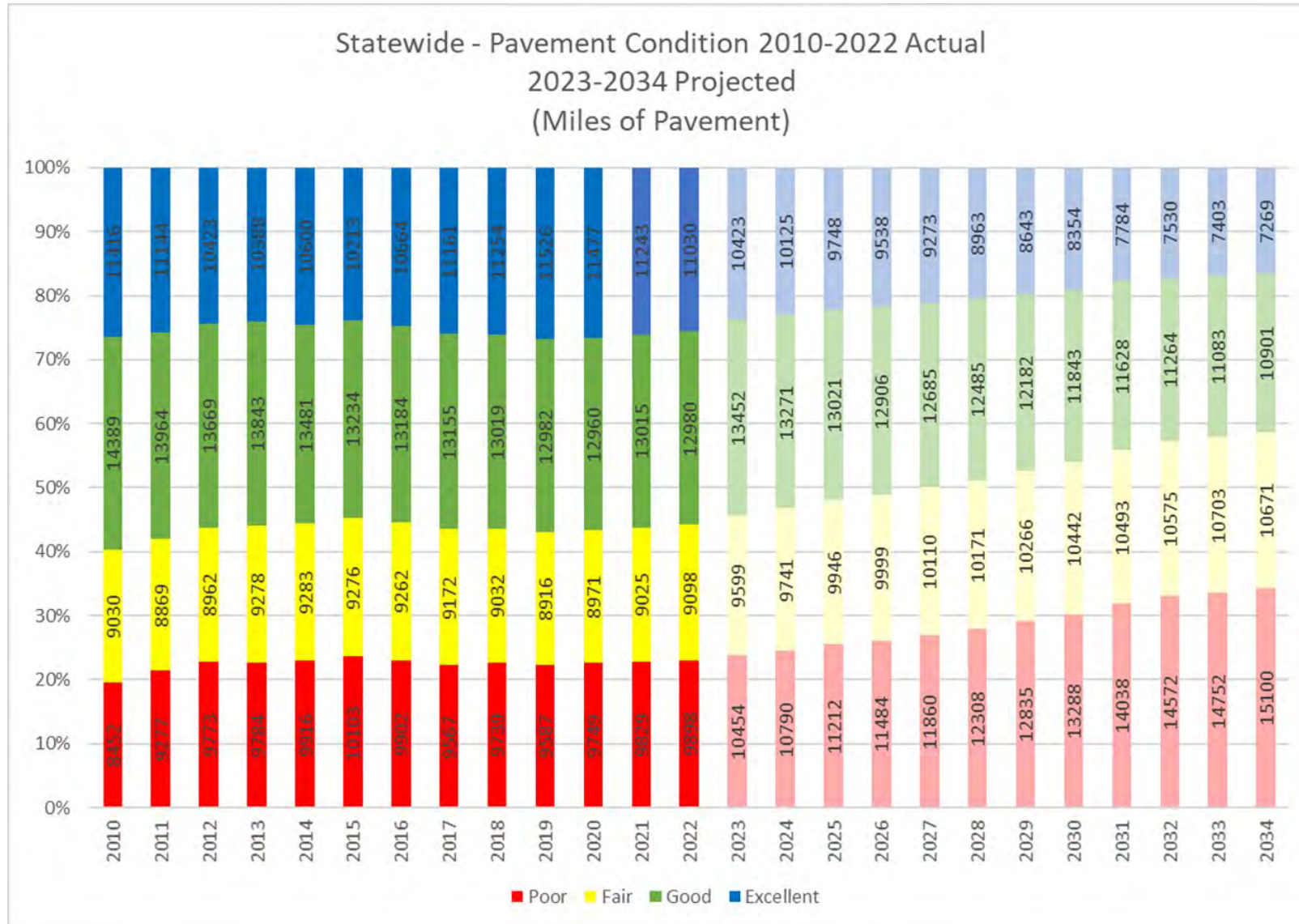
# ASSET MANAGEMENT

## 2022 Transportation Asset Management Plan

- FHWA BIL compliance issued in March 2023
- In addition to Pennsylvania's National Highway System, this TAMP was expanded to include all state-owned roads and bridges
- Includes:
  - Inventory & Conditions
  - Performance Management
  - Life Cycle Planning
  - Risk Management
  - Financial Plan
  - Implementation Plan



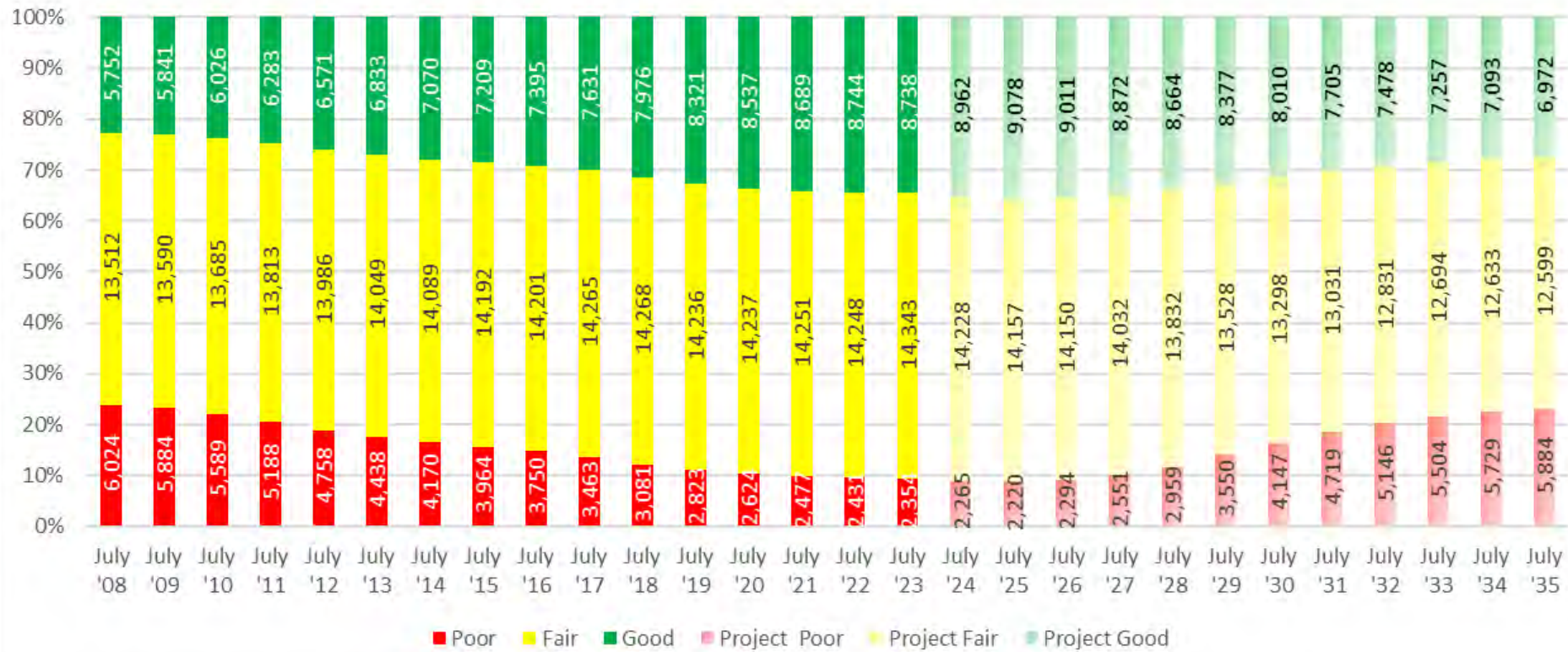
# ROADWAYS- STATE OF GOOD REPAIR





# BRIDGES - STATE OF GOOD REPAIR

Statewide - Bridge Condition 2008 - 2023 Actual  
2024 - 2035 Projected  
(Number of Bridges)



# PENNSYLVANIA LOCAL NETWORK



**Greenfield Ave. Bridge  
City of Pittsburgh**

- **Local Governments Own Over 78,000 miles**
- **Local Owned Bridges Over 6,600**
  - 26% of Deck Area in Good Condition
  - 54% of Deck Area in Fair Condition
  - 20% of Deck Area in Poor Condition



# INDUSTRY INTERACTION

## Quality Improvement Committees

- Asphalt Paving Quality Improvement Committee (APQIC)
- Concrete Paving Quality Improvement Committee (CPQIC)
- Aggregate Technical Working Groups (TWGs)
- Concrete Quality Improvement Committee (CQIC)
- Pennsylvania Association of Asphalt Material Applicators Quality Improvement Committee (PAAMA-QIC)
- Cement Quality Improvement Committee (CEMQIC)



# ASPHALT PAVING QIC (APQIC)

## Activities and Accomplishments

- e-Ticketing 2023 Projects under Revised Special Provision for 2023.
- Submission of approximately 700 Asphalt Job Mix Formulas with Performance Testing Data.
- Mixture Performance Testing – PSU Research/Data Collection  
(Hamburg Wheel Track Testing and  $CT_{Index}$  Testing).
- Highly-Polymerized Asphalt Binder – FHWA Grant for SMA Pilot Projects.



# ASPHALT PAVING QIC (APOIC)

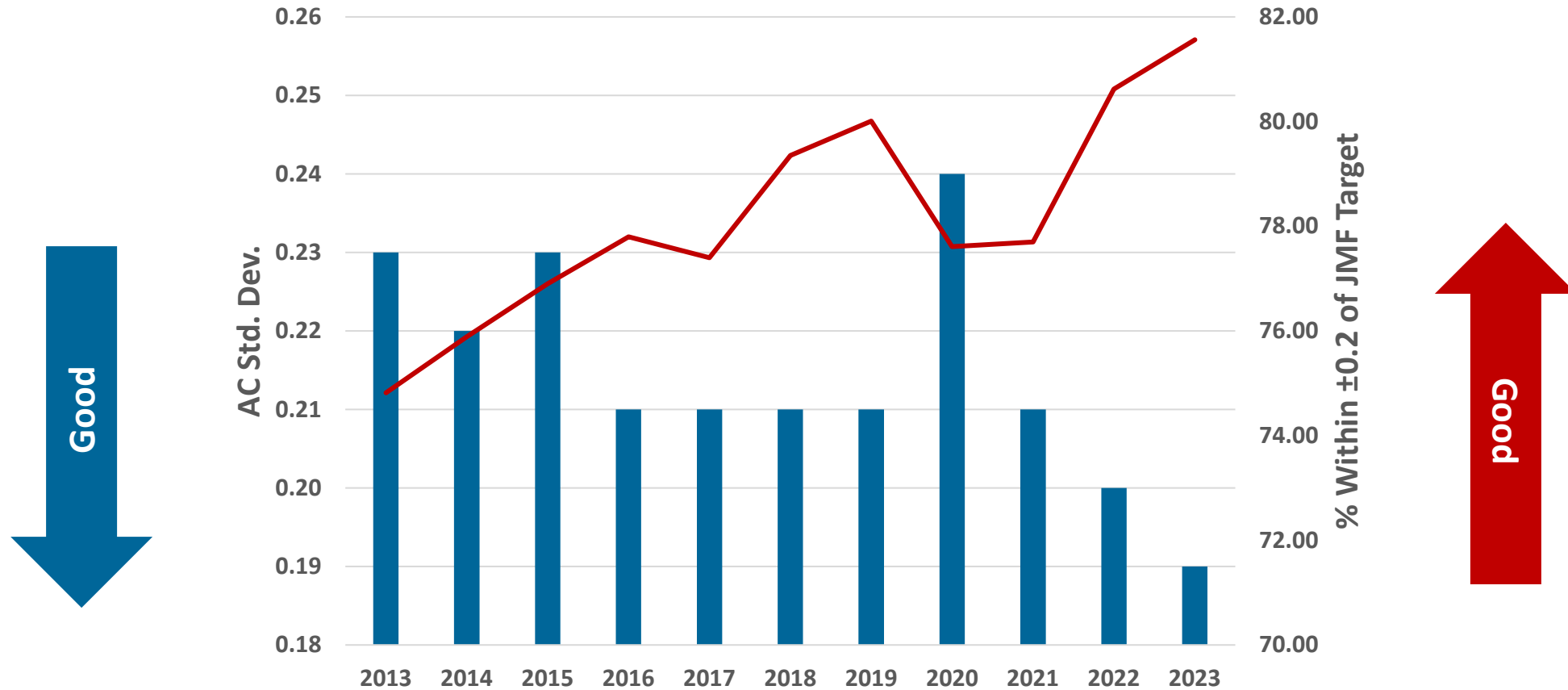
## Activities and Accomplishments (Continued)

- Post-Consumer Recycled Asphalt Shingles – Development of Pilot Special Provision & Initial Pilot Projects (D1 & D2 Paved, D6 Pending).
- SMA with 10% RAP Pilot Projects Standard Special Provision Implemented.
- Fiberless SMA Standard Special Provision Implemented.
- 6.3 mm Thin Asphalt Overlay Course using PG 64S-22 Standard Special Provision Implemented.
- Subcommittees
  - NECEPT
  - Mixture Performance Testing
  - Research



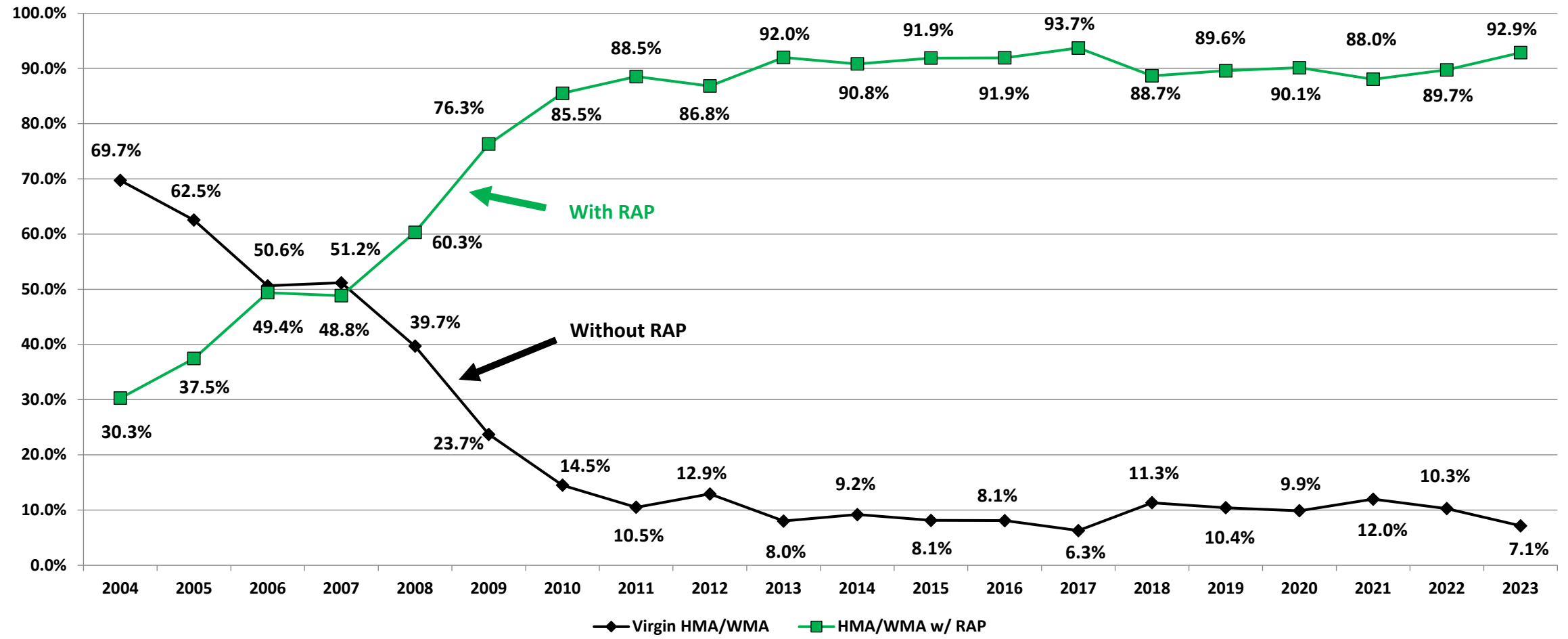
# QUALITY – TRENDS & TARGETS

## 2023 - All 9.5 mm Wearing Courses – Std. Dev. for Asphalt Content



# GREEN INITIATIVES - RAP

## Reclaimed Asphalt Pavement (RAP) Usage Trend in HMA & WMA





## FHWA Everyday Counts 7 (EDC-7) Environmental Product Declarations (EPDs) for Sustainable Project Delivery



### *Environmental Impacts*

- Global Warming Potential
- Ozone Depletion Potential
- Smog Potential
- Acidification Potential





- **PennDOT is currently in the development stage of supporting this innovation.**
  - The Department is continually reviewing guidance and best practices, building team and support with partners and stakeholders, and developing an implementation process. Federal funding sources to assist with development and implementation. (BIL, Federal Buy Clean, IRA)
- **Benefits**
  - **Sustainable Procurement.** EPDs encourage the demand and supply of products that promote the more sustainable use of resources and create less stress on the environment by reducing Green House Gas Emissions.
  - **Sustainable Design.** EPDs provide critical information for use in conceptual- and project-level full Life Cycle Assessments (LCAs) or other types of environmental assessment of alternative design decisions. EPDs allow for meaningful information of environmental performance for construction materials.
  - **Sustainable Asset Management.** EPD data can be included in databases used in asset management systems to perform network-level LCAs and identify areas for environmental performance improvement.

**NAPA Emerald Eco Label EPD Software Available For Use**



# ONGOING TOPICS

- Balanced Mix Design – APQIC Subcommittee formed. Research project with Penn State ongoing, anticipated completion in 2025. Second year of required mixture testing in 2024.
- Hands On Local Acceptance (HOLA) –
  - Current HOLA SSP for Superpave Mixes available for use.
  - SMA HOLA included in Pub. 408.
  - Consultant option being explored.
- High RAP Mixes for Low Volume Road – SSP's available for 9.5 mm wearing courses and 19 mm binder courses. Overall successful performance.
  - SSP for 25 mm base courses now available.
- Taking temperatures on asphalt mixtures - Discussions continue with FHWA, PennDOT and PAPA on recommended best practices. Calibrated stick thermometers are required.
- Composite pavement design is now included in the Pavement Policy Manual, Pub 242 and included in the Life Cycle Cost Analysis (LCCA) model for future installations. This was included in Change #8 released December 22, 2023.



# FUNDING

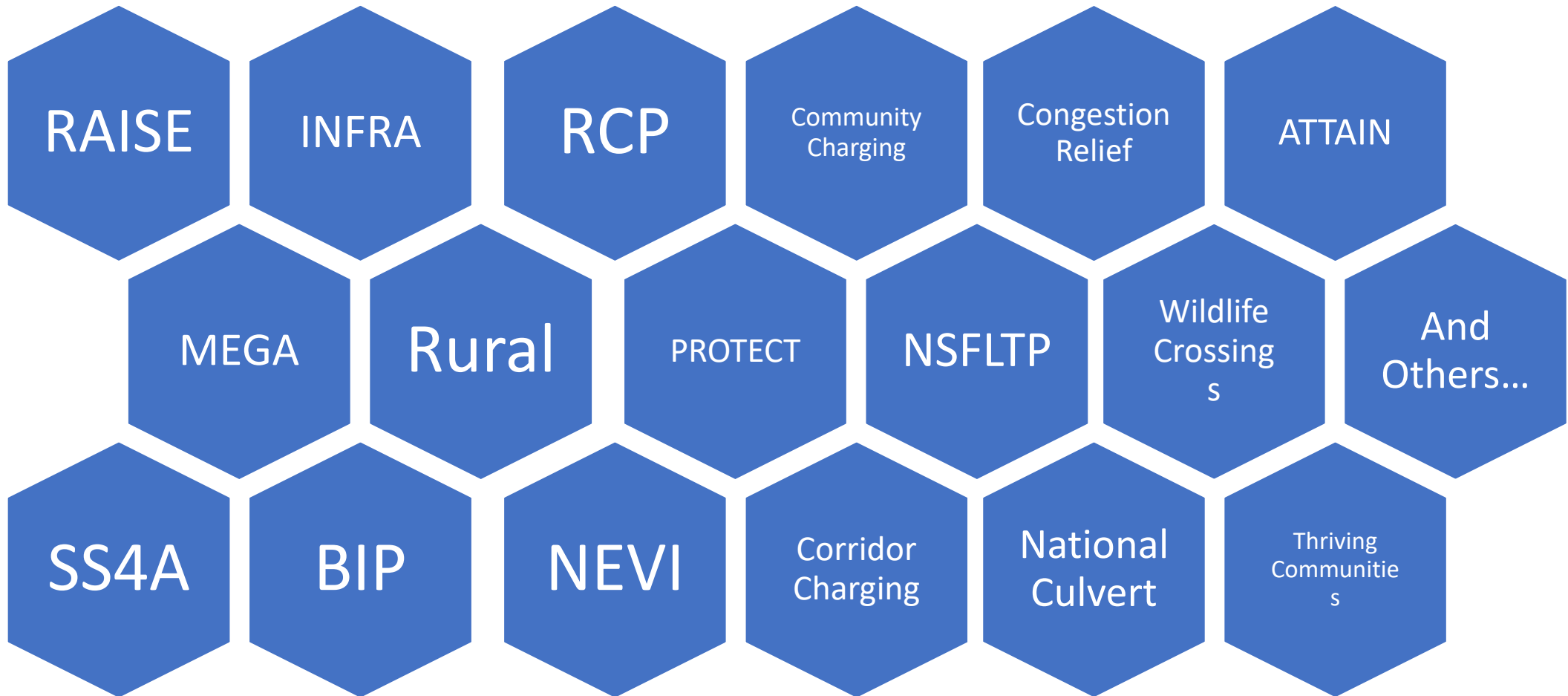
# BI-PARTISAN INFRASTRUCTURE LAW (BIL)

FFY	PA Increased Formula Highway and Bridge Funding	PA Federal Formula Highway and Bridge Funding Totals (Existing + New)
2022	\$704.7 million	\$2.5 billion
2023	\$748.2 million	\$2.5 billion
2024	\$792.5 million	\$2.6 billion
2025	\$837.7 million	\$2.6 billion
2026	\$883.9 million	\$ 2.7 billion
<b>5-year Total</b>	<b>\$4 billion</b>	<b>~\$13 billion</b>



# BI-PARTISAN INFRASTRUCTURE LAW (BIL)

**Numerous competitive grant programs, each with a different focus.**

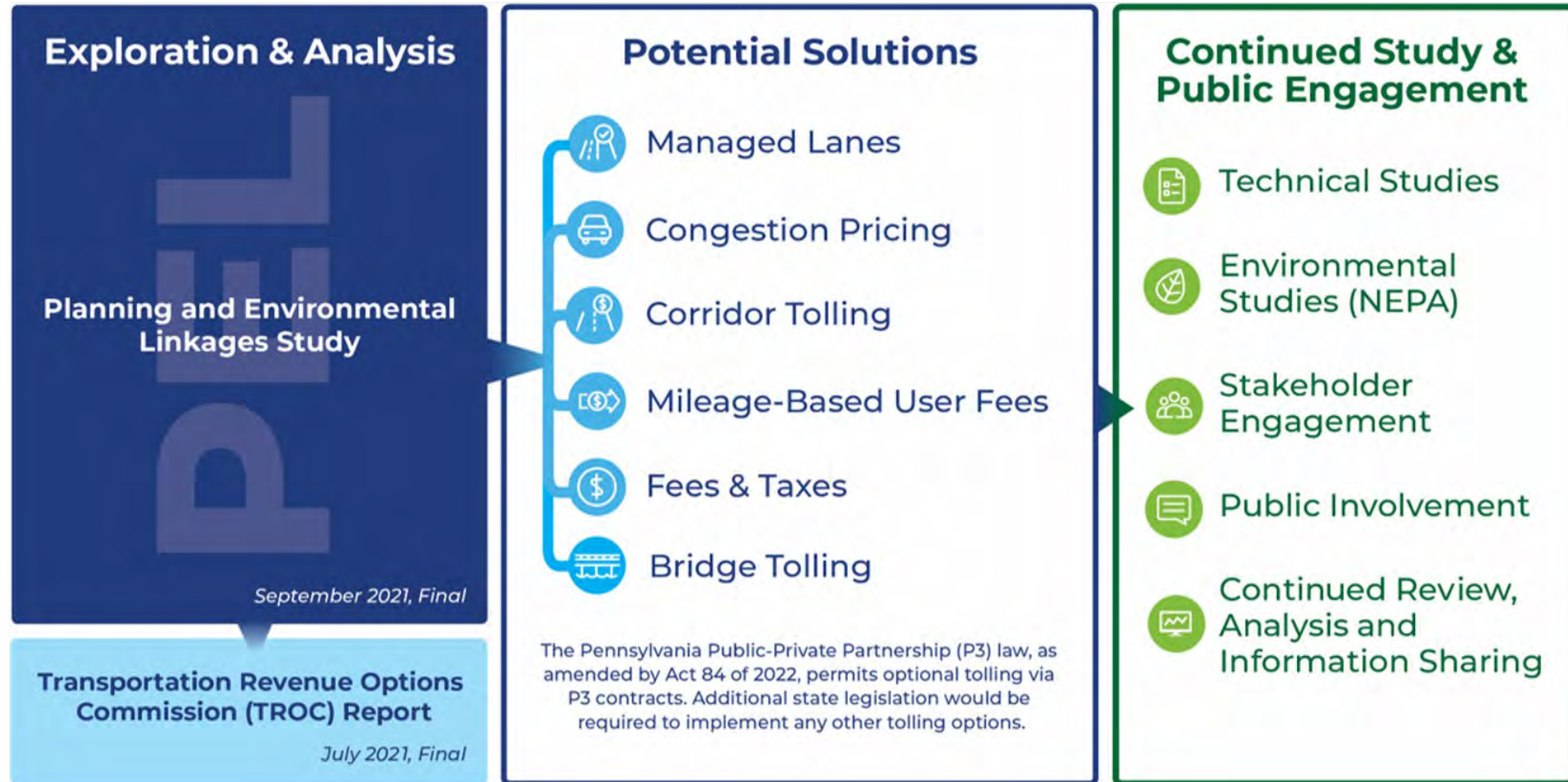


# FUNDING PROJECTS- CASH FLOW

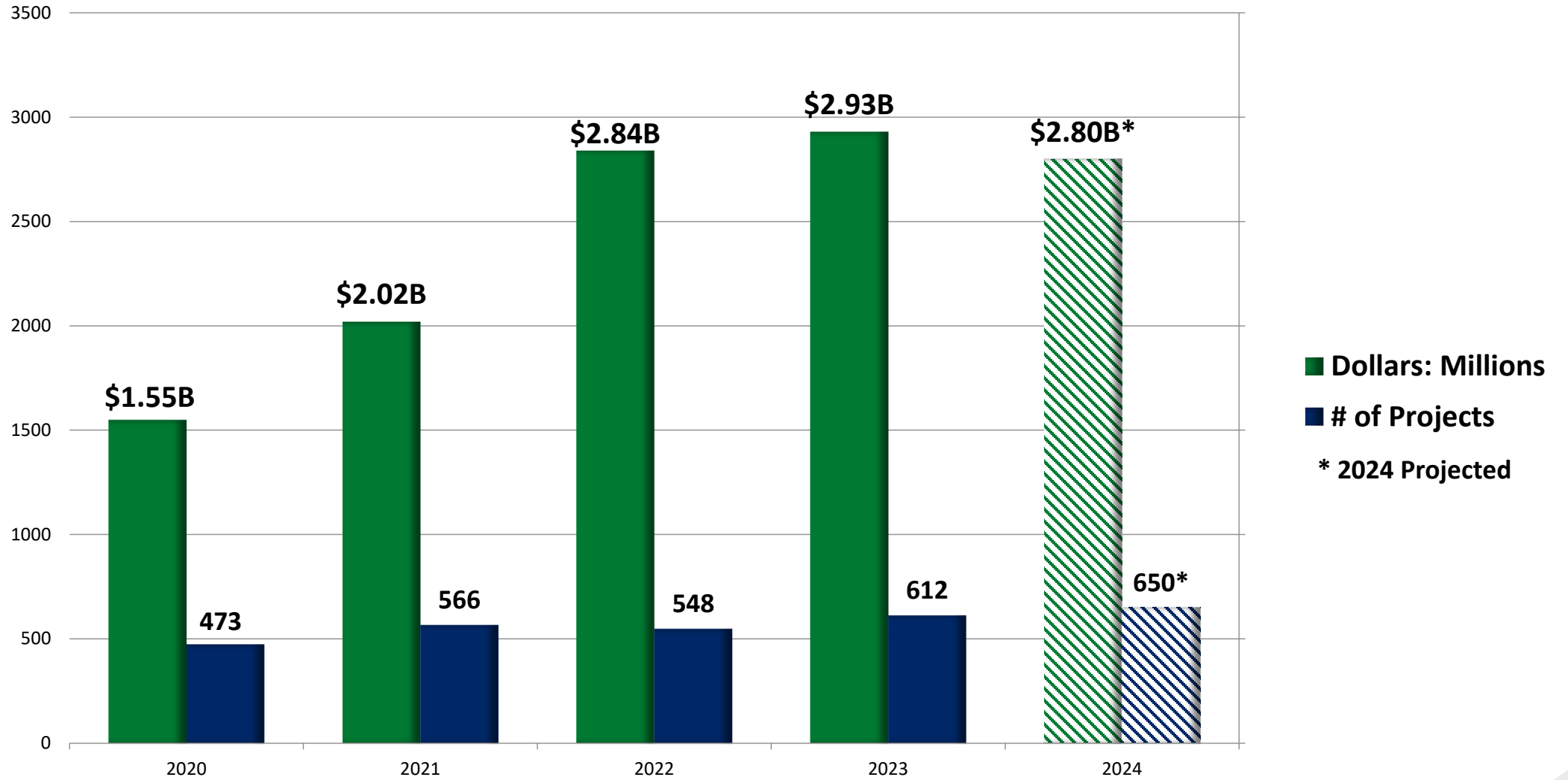
- FY 23-24 Budget Enactment reduced the PSP funding by \$125 million.
- Highway Construction Appropriation is holding \$160 million, that will be held for future IIJA state match.
- Highway Maintenance was increased by \$50 million from the \$125 million PSP reduction.



# PENNDOT PATHWAYS

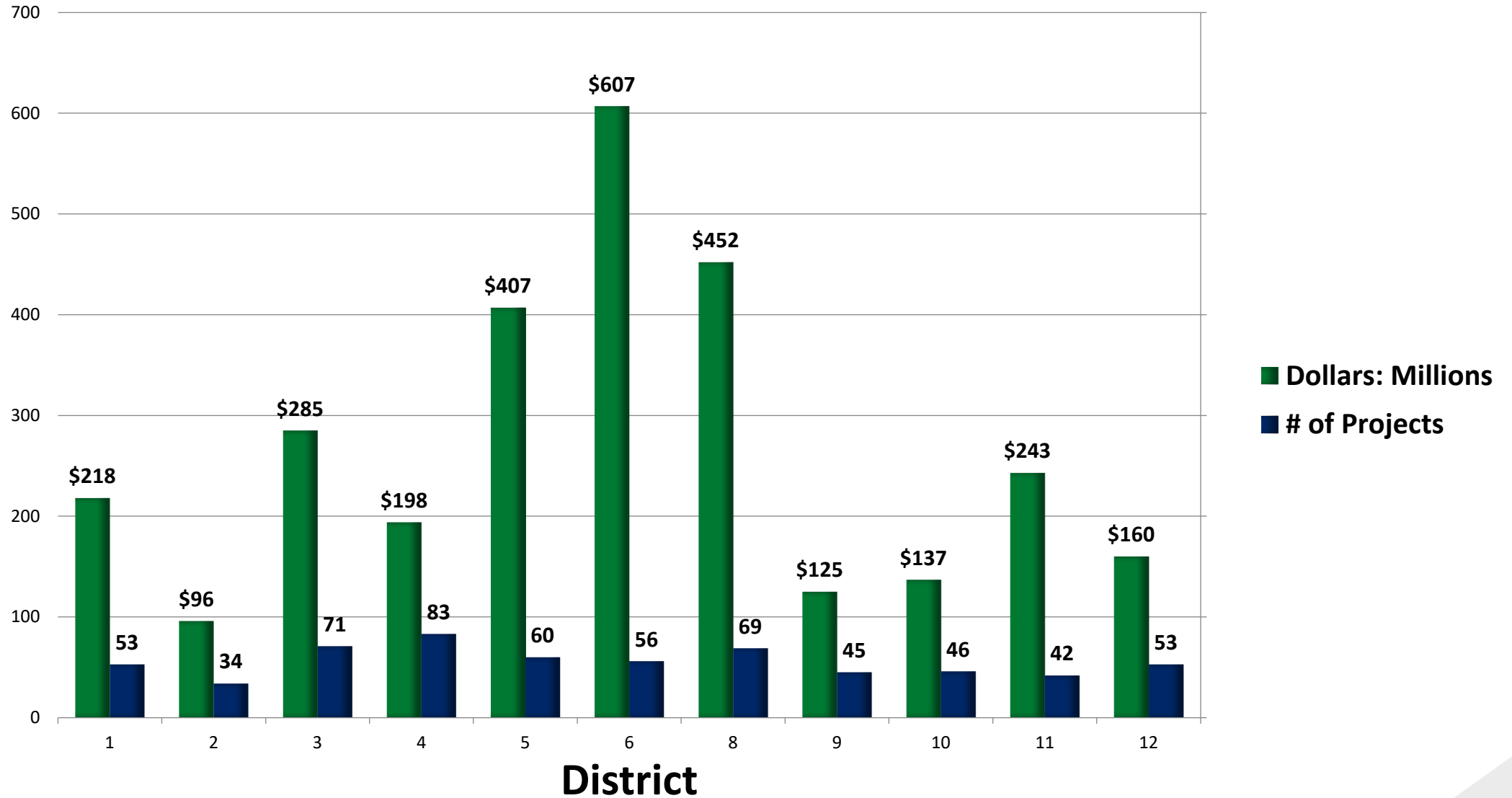


# PROJECT LETTING TRENDS





# 2023 PROJECT LETTING RESULTS



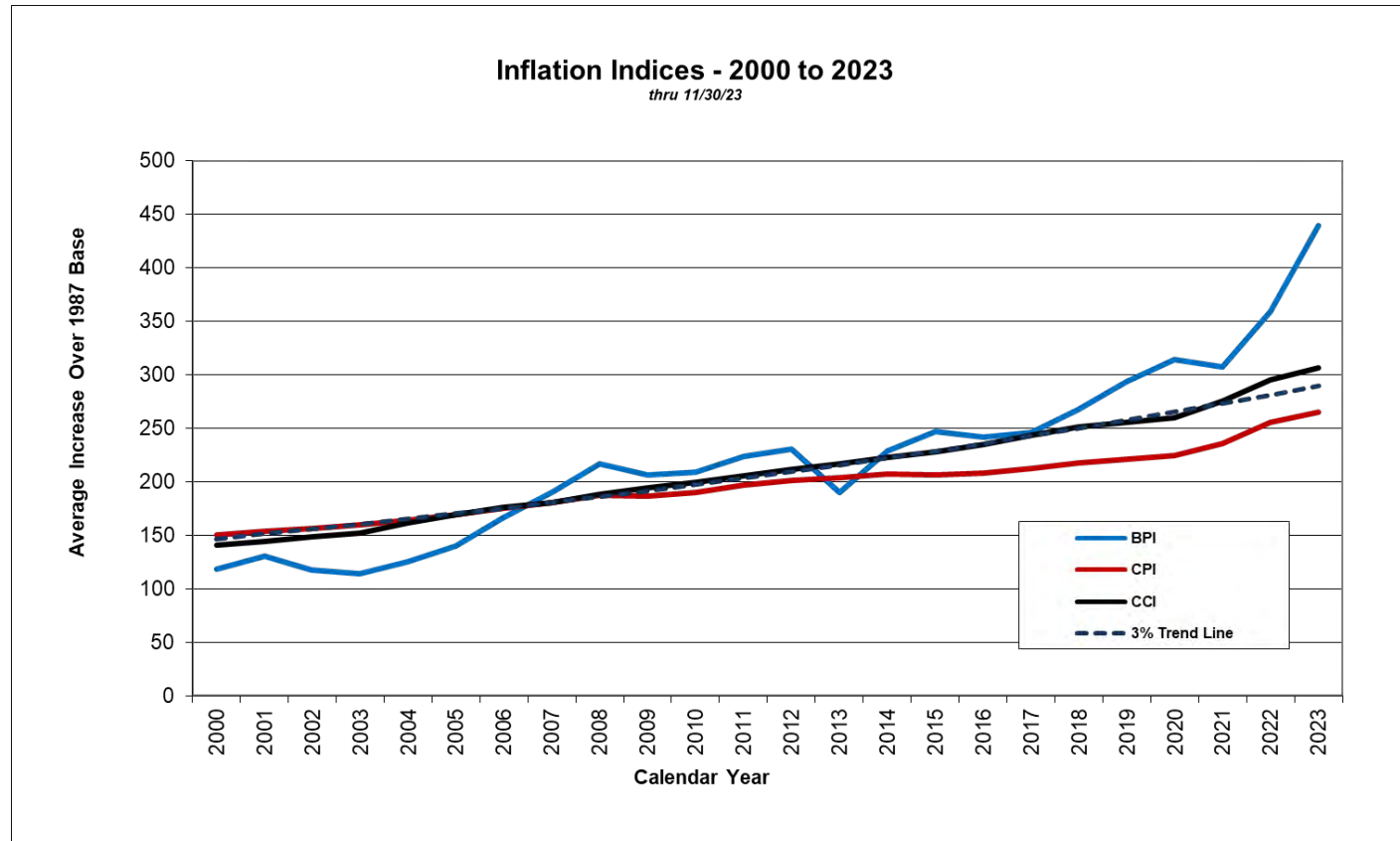
# PROGRAM DISTRIBUTION

	Cost Based Percentage				
	2020	2021	2022	2023	2024*
Highway	61%	71%	73%	61%	45%
Bridge	24%	17%	19%	26%	36%
Other	15%	12%	8%	13%	19%

\*2024 Projected



# INFLATION



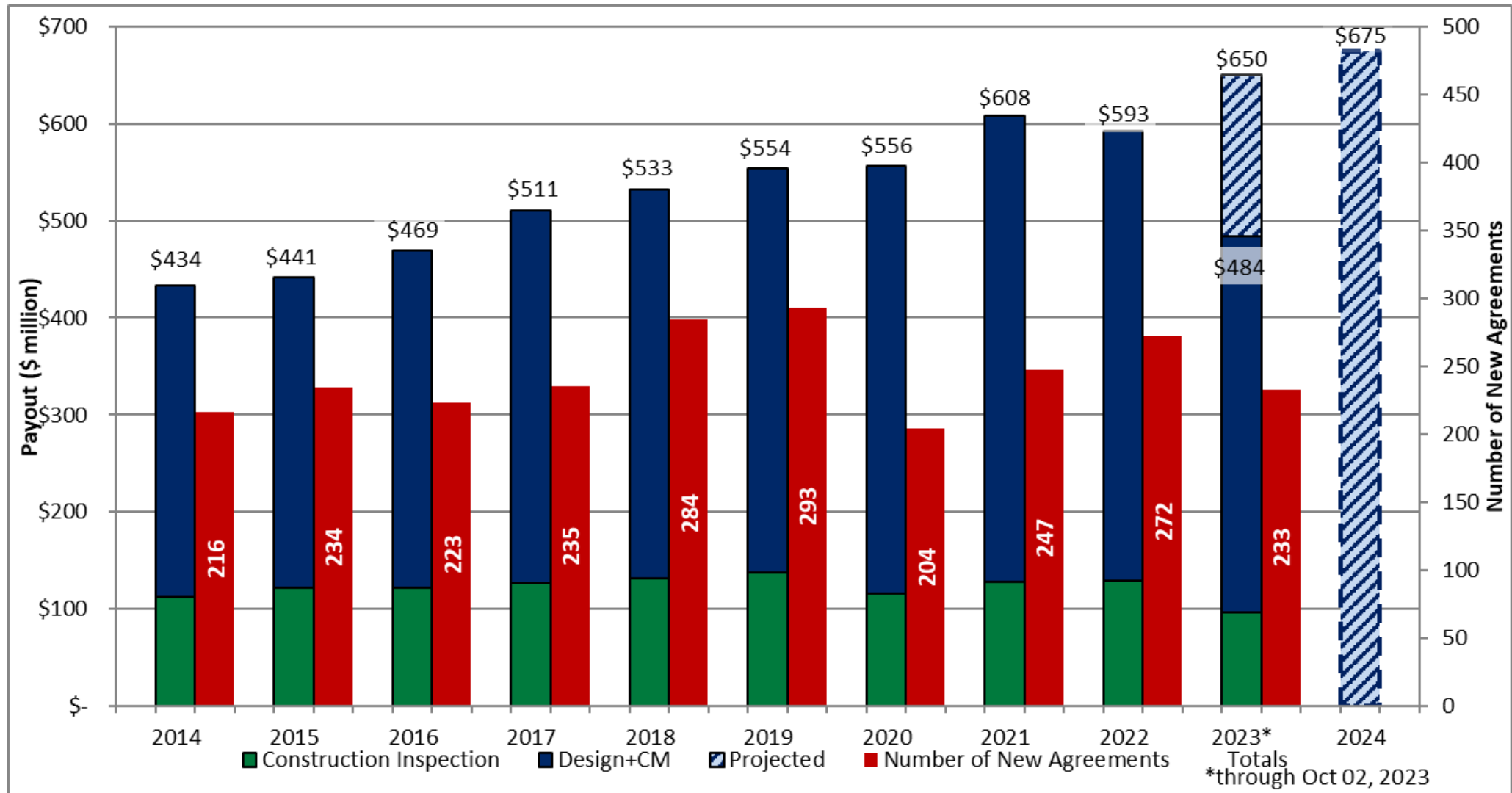
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
BPI	3.3%	-17.8%	20.7%	7.9%	-2.0%	1.5%	8.8%	9.6%	7.1%	-2.3%	16.9%	22.5%
CPI	2.1%	1.4%	1.5%	-0.4%	1.0%	2.1%	2.6%	1.7%	1.2%	5.3%	8.4%	3.7%
CCI	2.6%	2.6%	2.7%	2.3%	3.0%	3.9%	3.0%	2.0%	1.6%	5.8%	7.2%	3.9%



# 2024 PROGRAM

\$2.8 Billion

# CONSULTANT PAYOUTS & NEW AGREEMENTS



# CONSTRUCTION MATERIAL QUANTITIES

<b>Material</b>	<b>2020</b>	<b>2021</b>	<b>2022</b>	<b>2023 thru October</b>	<b>2024*</b>
<b>Asphalt (Tons)</b>	<b>4,240,700</b>	<b>4,252,700</b>	<b>4,581,000</b>	<b>4,393,100</b>	<b>4,467,000</b>
<b>Structural Concrete (CY)</b>	<b>217,000</b>	<b>205,500</b>	<b>206,900</b>	<b>191,800</b>	<b>176,600</b>
<b>Concrete Paving (SY)</b>	<b>532,700</b>	<b>785,500</b>	<b>546,200</b>	<b>231,800</b>	<b>179,400</b>
<b>Aggregate (Tons)</b>	<b>5,388,700</b>	<b>5,408,300</b>	<b>5,458,200</b>	<b>4,933,900</b>	<b>4,838,000</b>

\* Estimated Projections



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# MOVING FORWARD INTO 2024

**We look forward to working with PAPA and its members in 2024!**





# BE SAFE ON OUR ROADWAYS!



**Be Safe PA.**  
There's more than one way  
to be under the influence.  
Don't Drive Impaired

Paid for with Pennsylvania taxpayer dollars.



**Be Safe PA.**  
Buckle up every trip, every time.  
Don't Drive Unbuckled

Paid for with Pennsylvania taxpayer dollars.



**Be Safe PA.**  
Distractions are everywhere.  
Don't Drive Distracted

Paid for with Pennsylvania taxpayer dollars.



**Be Safe PA.**  
Use crosswalks and obey traffic  
control devices.  
Drive Safe. Walk Safe.

Paid for with Pennsylvania taxpayer dollars.

