



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



JULY 27, 2022

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

TODAY'S DISCUSSION POINTS

- Continued Focus on Safety
- Partnerships
- Central Office Re-org Status
- Asset Management
- Innovation
- Recent Program Details
- Funding
- Inflation Impacts
- TROC/PennDOT Pathways



SAFETY:

- **WORKFORCE**
- **WORK ZONES & WZ INTRUSIONS**
- **MOTORING PUBLIC**
- **FAMILIES**



Safety

INDUSTRY-WIDE SAFETY STAND-DOWN



#StandDown2SaveLives



MENTAL HEALTH STATISTICS

1 in 5 U.S. adults experience mental illness

Approximately 1 suicide every 11 minutes

Stigma prevents 40% of people with anxiety or depression from seeking help

Construction suicides are 5x greater than all fatal construction injuries (2018)

The suicide rate among men in construction is about 4x higher than the general population

From 2000-2016, the working age adult suicide rate increased 34%

If you or someone you know is in crisis, please contact the

National Suicide Prevention Lifeline



- Call 1-800-273-TALK (8255)
- Use the online Lifeline Crisis Chat
- www.suicidepreventionlifeline.org

**Text HOME
to 741741**

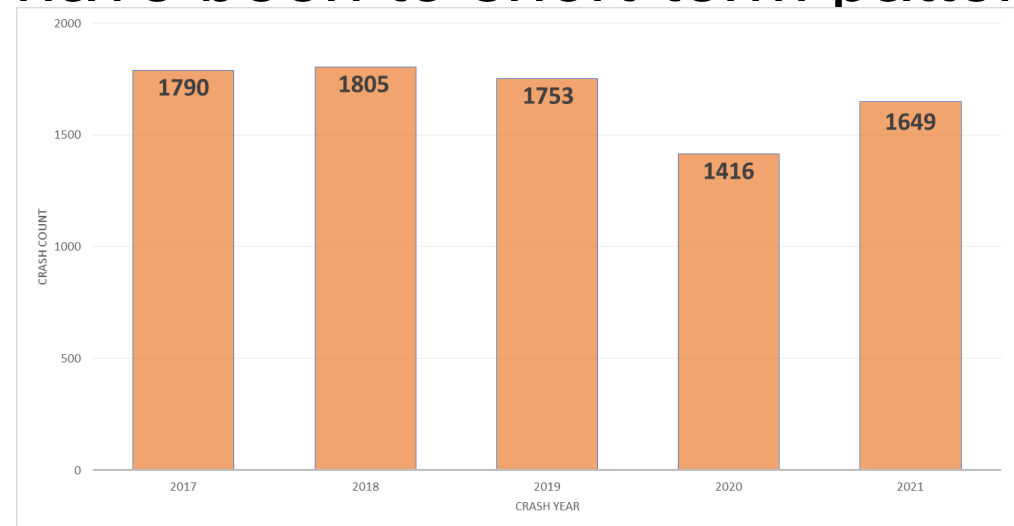
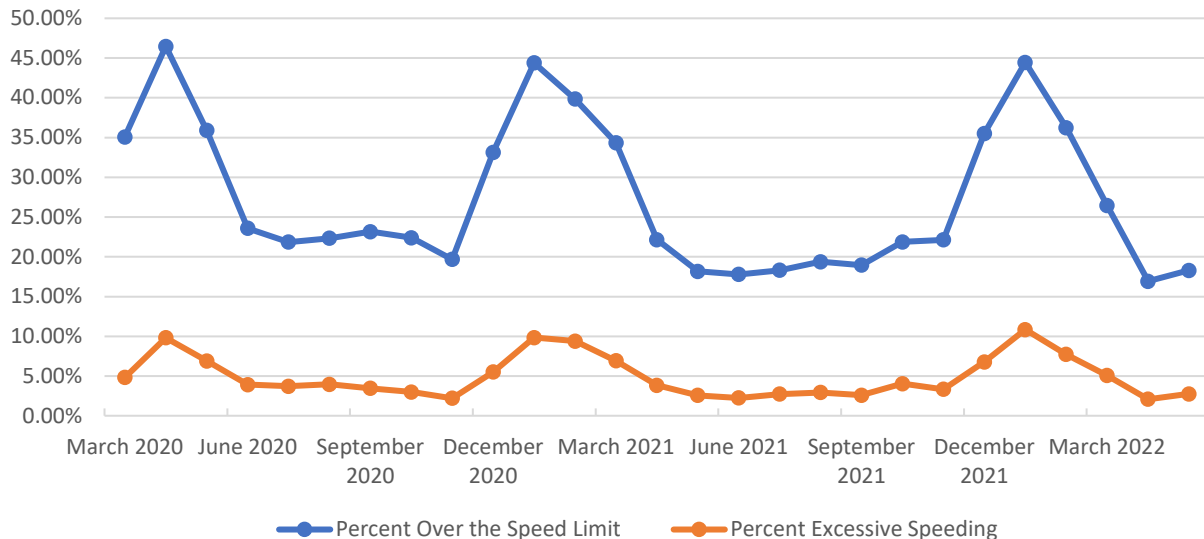
for free, 24/7 crisis
support in the US.



AUTOMATED WORK ZONE SPEED ENFORCEMENT



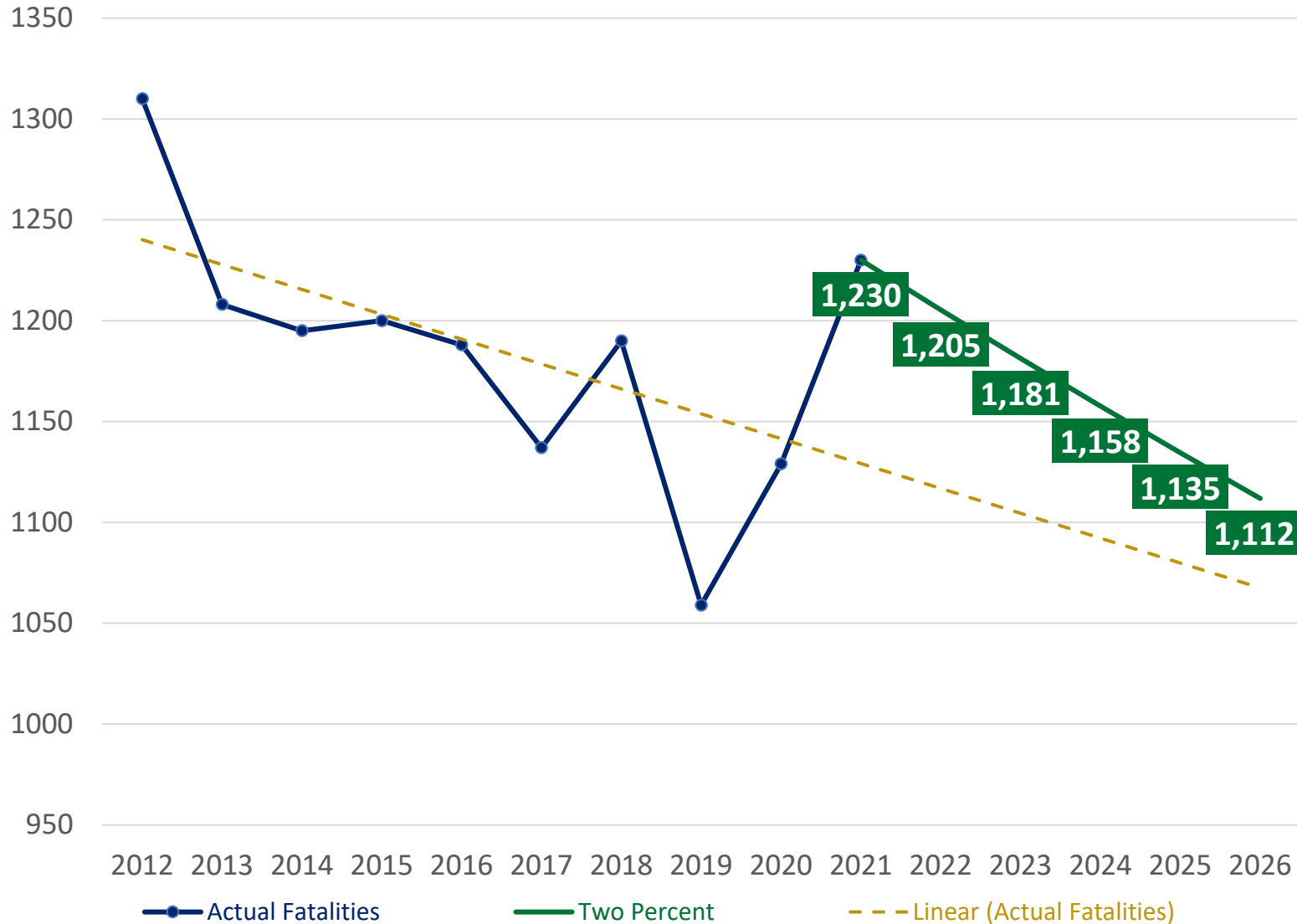
- Annual report published April 2022
- Covers from start of program to end of 2021
- Program is fulfilling its stated goals
- Program is focused on **SAFETY**, not revenue
 - Operated at a loss through end of 2021
- 68% of deployments have been to short-term patterns



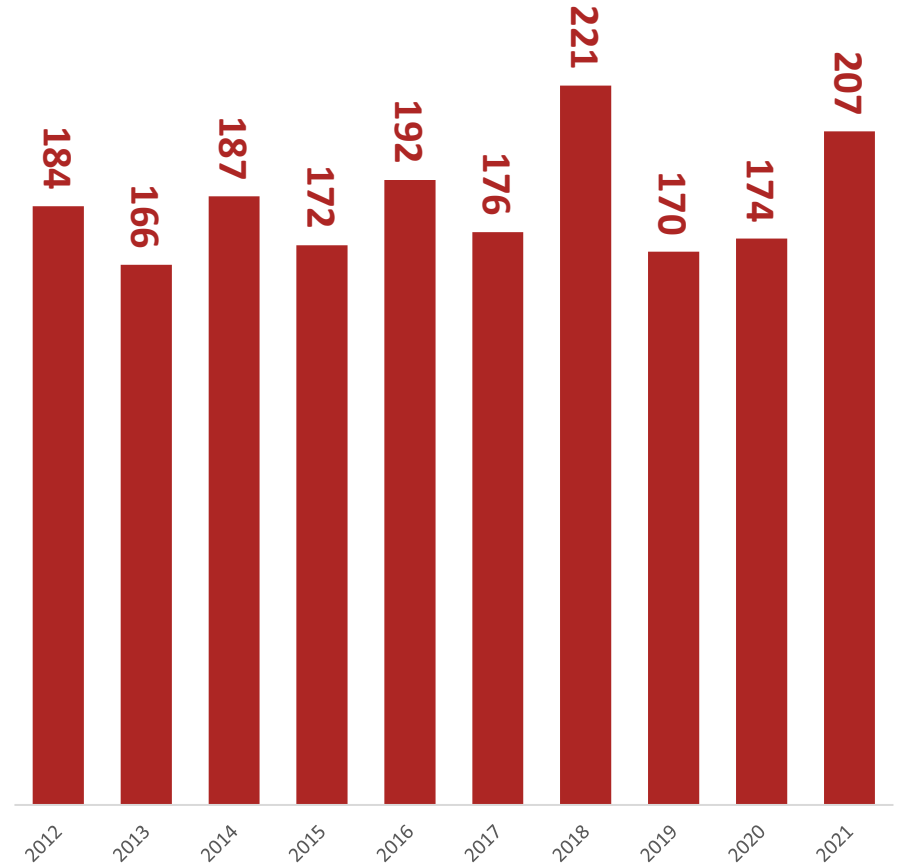
All Work Zone Crashes – 2017-2021



FATALITIES



Non-Motorized Fatalities



PARTNERSHIPS: THANK YOU!

- We value our Industry Partners
- Elected Officials/Public
- State/Federal Agencies

INDUSTRY INTERACTION

- Quarterly Industry Forum
- Meeting with Deputy Secretary and Industry Association Executives
- TQI
- Quality Improvement Committees
- Asphalt Paving Quality Improvement Committee (APQIC)
- Concrete Paving Quality Improvement Committee (CPQIC)
- Aggregate Quality Improvement Committee (AQIC)
- Concrete Quality Improvement Committee (CQIC)
- Pennsylvania Association of Asphalt Material Applicators Quality Improvement Committee (PAAMA-QIC)
- Cement Quality Improvement Committee (CEMQIC)
- Slag Quality Improvement Committee (SlagQIC)



CENTRAL OFFICE REORGANIZATION

CENTRAL OFFICE REORGANIZATION

- Chief Executive Director – Jon Fleming
 - Chief Engineer – Gavin Gray
 - Bureau of Design & Delivery – Christine Spangler
 - Bureau of Construction & Materials – Christine Norris
 - Bureau of Operations – Dan Farley
 - Bridge Office – Rich Runyen
 - Bureau of Maintenance – 2nd Round Interviews
 - Strategic Development & Implementation Office

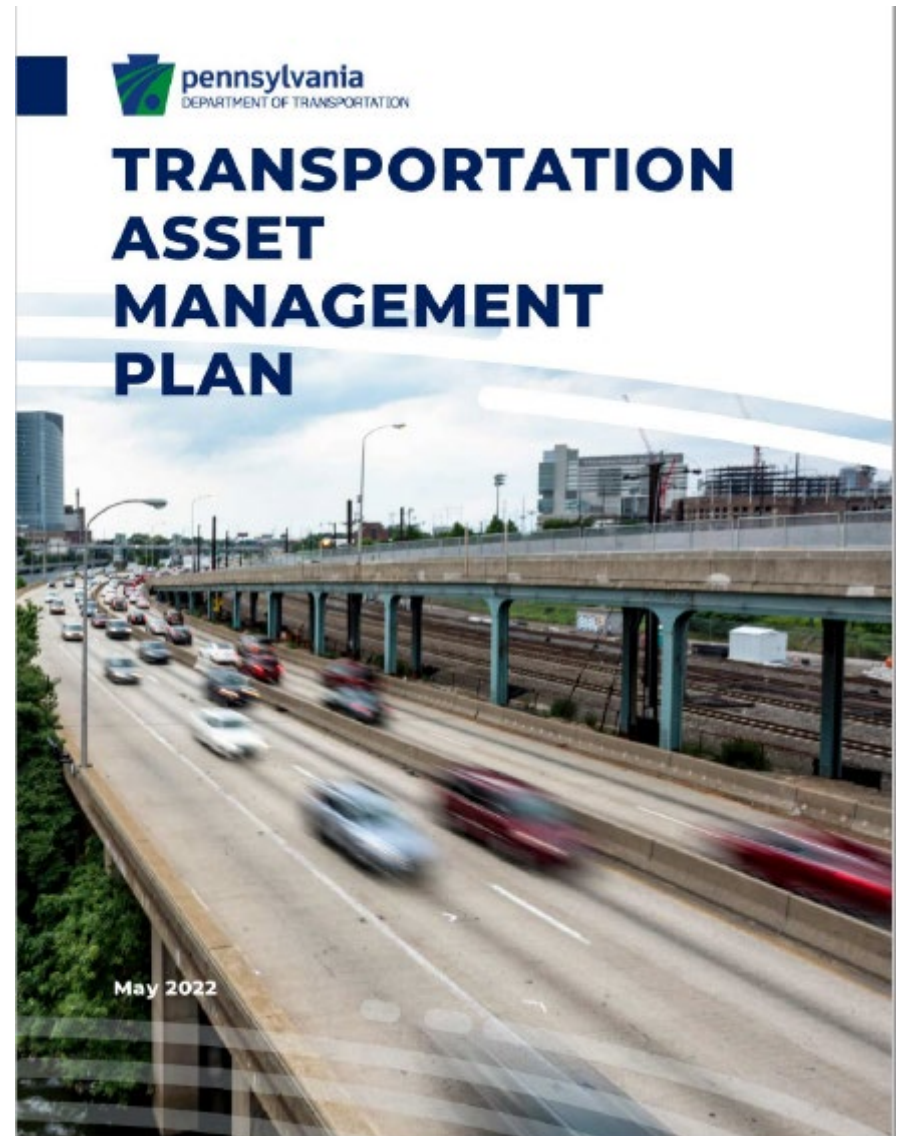


ASSET MANAGEMENT

ASSET MANAGEMENT

2022 Transportation Asset Management Plan

- Submitted to FHWA in May 2022
- Expanded scope to include all state-owned assets



ASPHALT PAVING QIC (APQIC)

Activities and Accomplishments

- e-Ticketing Pilots & Special Provision
- Mixture Performance Testing Pilots & Special Provision (Hamburg Wheel Track Testing and CT_{Index} Testing)
- Hands On Local Acceptance (HOLA) for SMA – Pub. 408/2020-2
- Foamed Asphalt for Cold-Recycled Base Courses (SSP & Pub. 408/2020-4)
- Balanced Mix Design Implementation Plan (JMF Performance Testing Data Collection & Limits Timeline) – June 8, 2021 Letter to Producers
- Plastics in Asphalt Binder Pilot Projects & Research Study Project (1st project Aug. 2021)
- Hi-Polymerized Asphalt Binder



ASPHALT PAVING QIC (APQIC)

Activities and Accomplishments

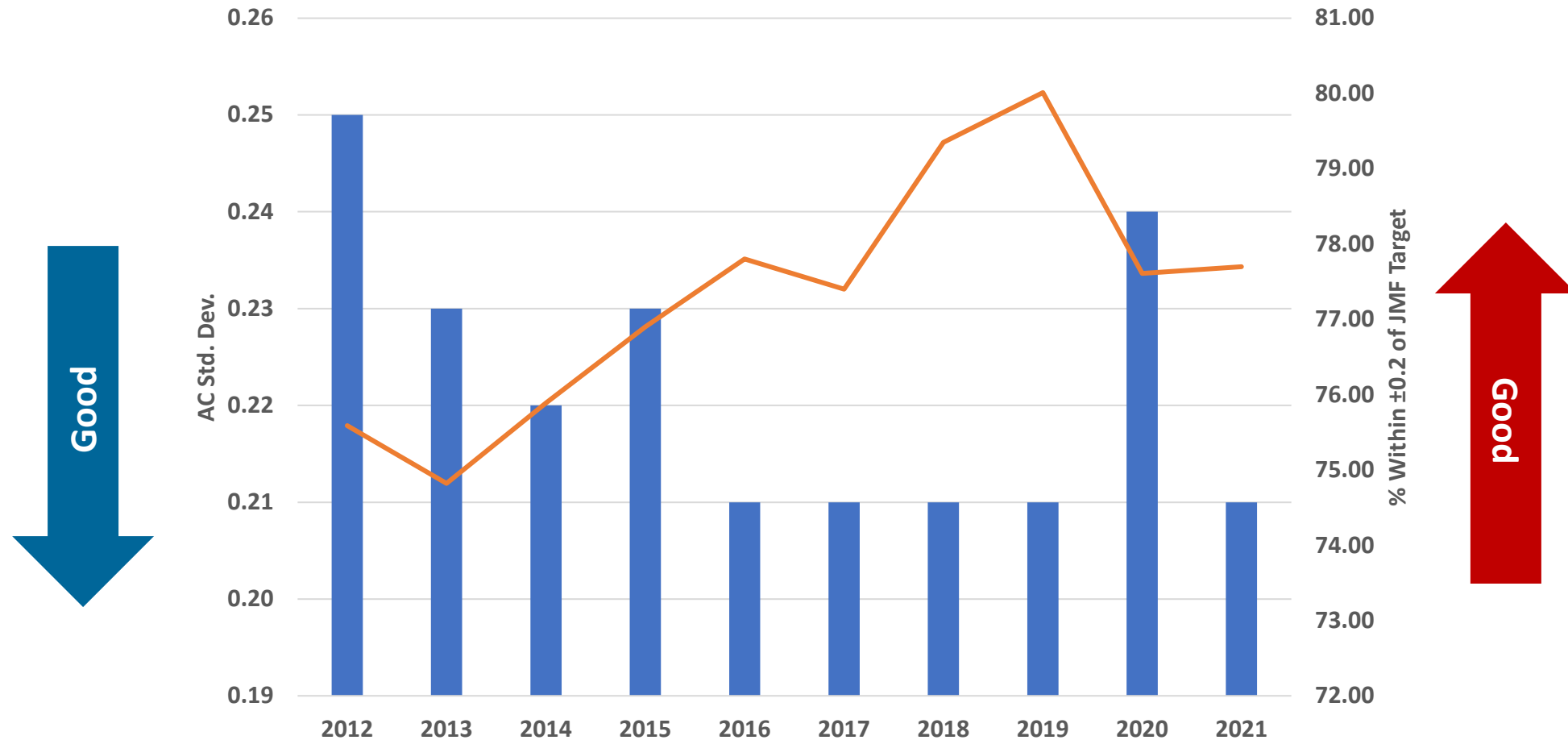
(Continued)

- Virtual Asphalt Acceptance Testing (VAAT) HOLA Pilot & AAR
- Superpave Asphalt Rich Base Course (SSP & Pub. 408/2020-4, Section 314)
- Reduction of Mix Designs
 - Reduced Gyration Levels for Superpave Courses - SOL 481-21-02, Dated 11/30/2021
- Post-Consumer Recycled Asphalt Shingles –Research Study & Development of Pilot Special Provision
- Subcommittees
 - NECEPT
 - Mixture Performance Testing
 - Research
- Long-Life Pavement Life Cycle Cost Analysis – Pub. 242
- PaveScan RDM 2.0 Demo



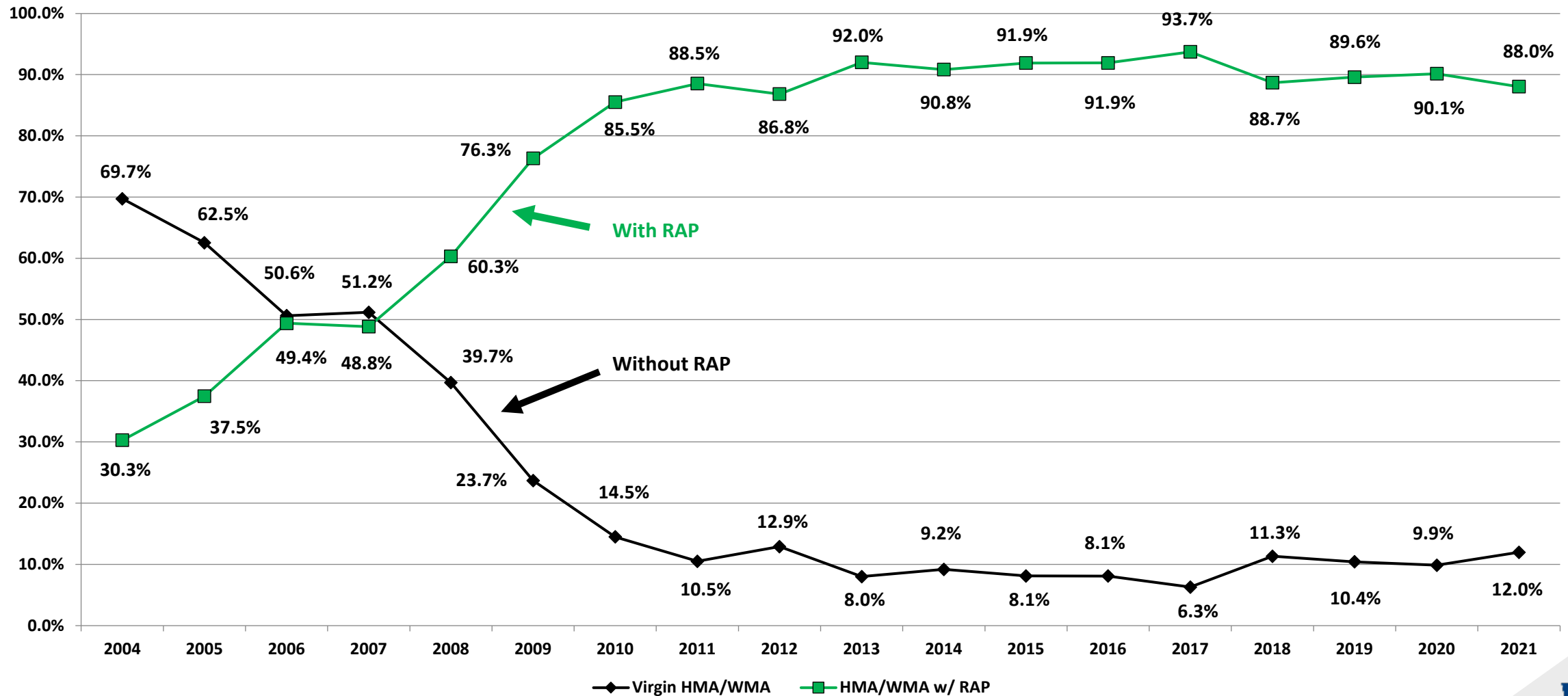
QUALITY – TRENDS & TARGETS

2020 - All 9.5 mm Wearing Courses – Std. Dev. for Asphalt Content



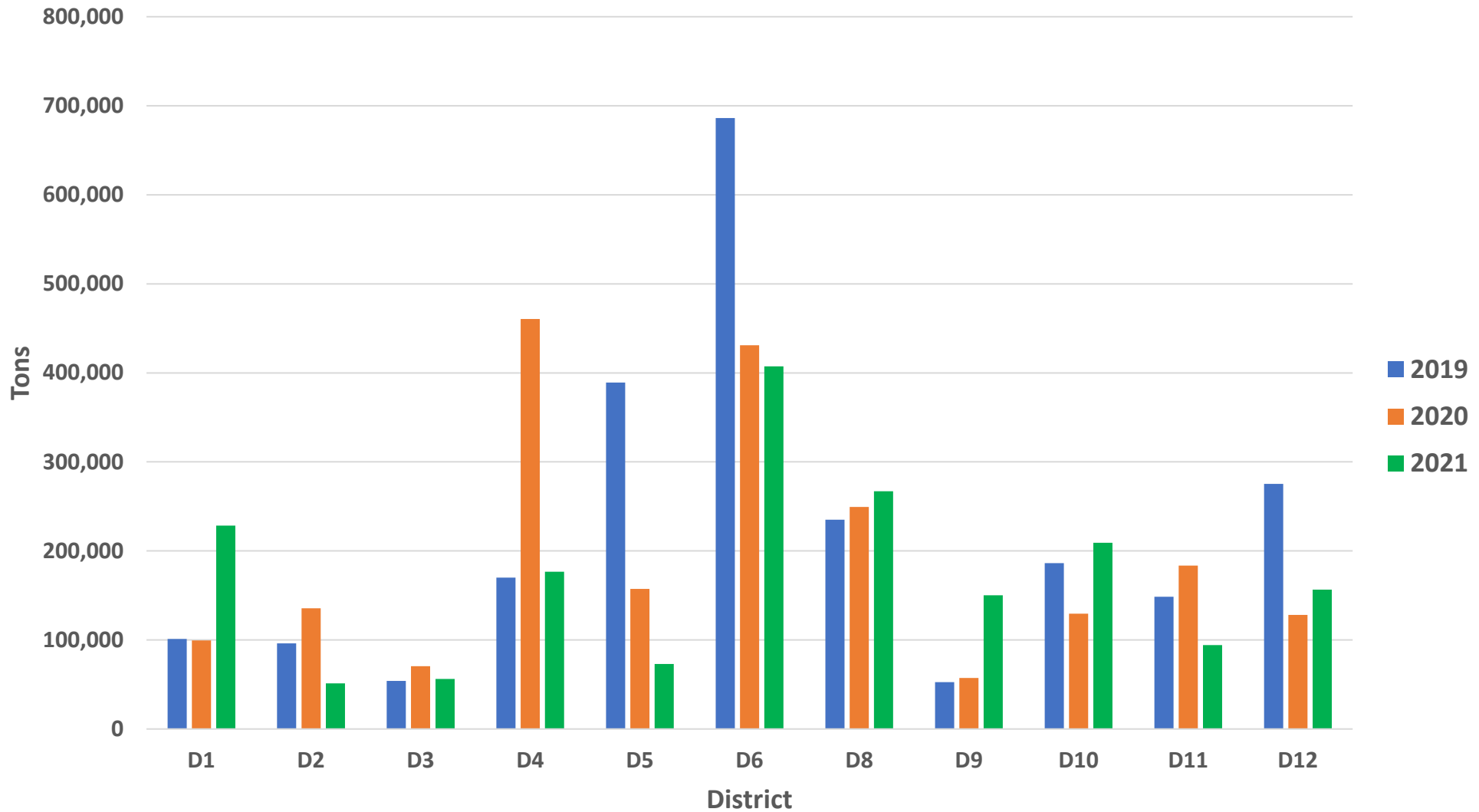
GREEN INITIATIVES - RAP

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



GREEN INITIATIVES - RAP

Amount of RAP Milled from Pavements



LONG LIFE ASPHALT PAVING (LLAP)

Many Best practices

- MTV required
- Tack Every Layer
- PWL spec
- Incentives
- Longitudinal Joint Spec.

Balanced Asphalt Mix Design Program

- Predict and balance rutting and cracking through performance testing
- New Strike Off Letter is an incremental approach for balanced mix design implementation

Future Direction

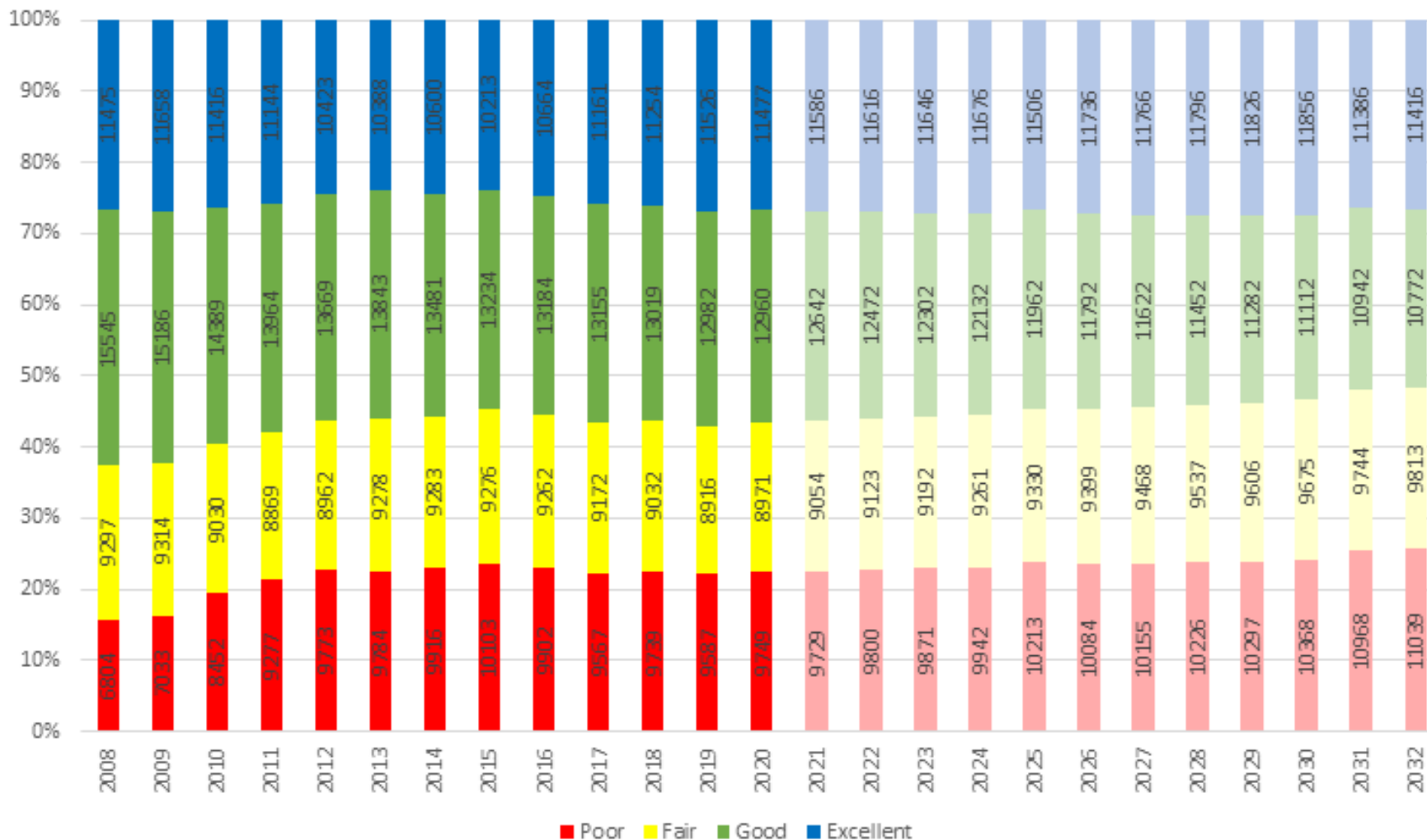
- Robust research and piloting effort
 - Select best performance related test(s)
 - Identify performance related spec. limits



ROADWAYS - STATE OF GOOD REPAIR

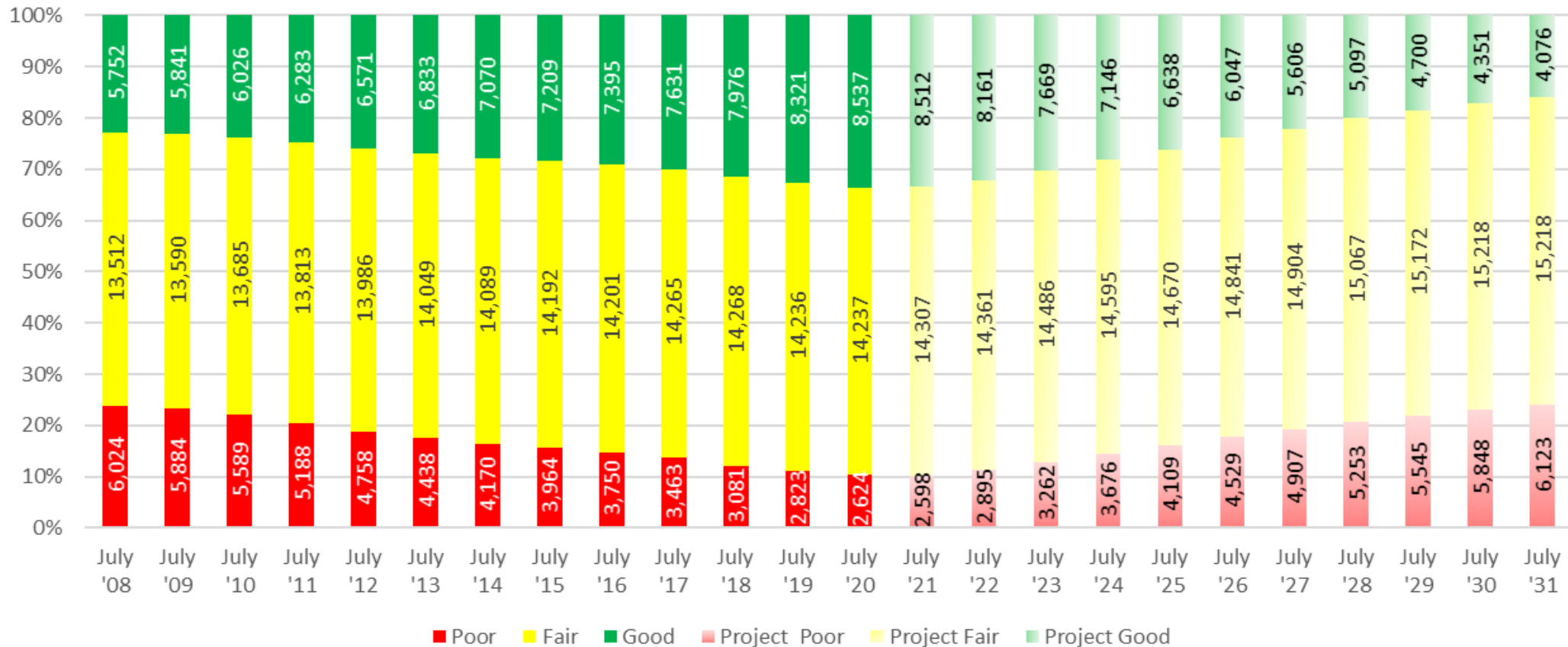
Statewide - Pavement Condition 2008-2020 Actual

2021-2032 Projects
(Miles of Pavement)



BRIDGES - STATE OF GOOD REPAIR

Statewide - Bridge Condition 2008 - 2020 Actual
2021 - 2031 Projected
(Number of Bridges)



INNOVATION

MOBILE APPLICATIONS (APPS)



MC DOCs



CID



Sample ID



PSA



MPT



Dept. ePayroll
On Hold



Punchlist



CMH Mobile



E-Ticketing



**Force
Account**

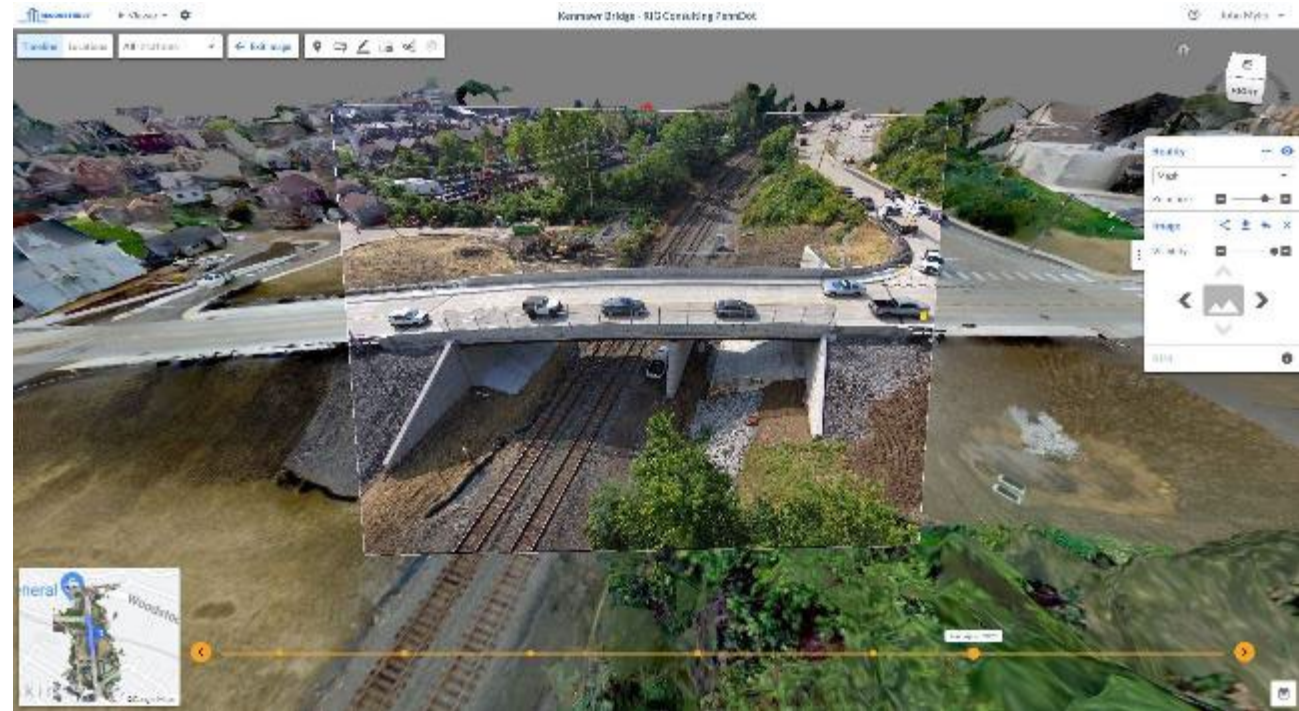


**Visual Site
Inspection Report**



MOVING INTO A VIRTUAL WORLD

Augmented Reality & Virtual Inspections



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 innovative coatings on pavement markings and work zone artifacts to improve **machine visioning**.

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



DIGITAL DELIVERY DIRECTIVE 2025 (3D2025)



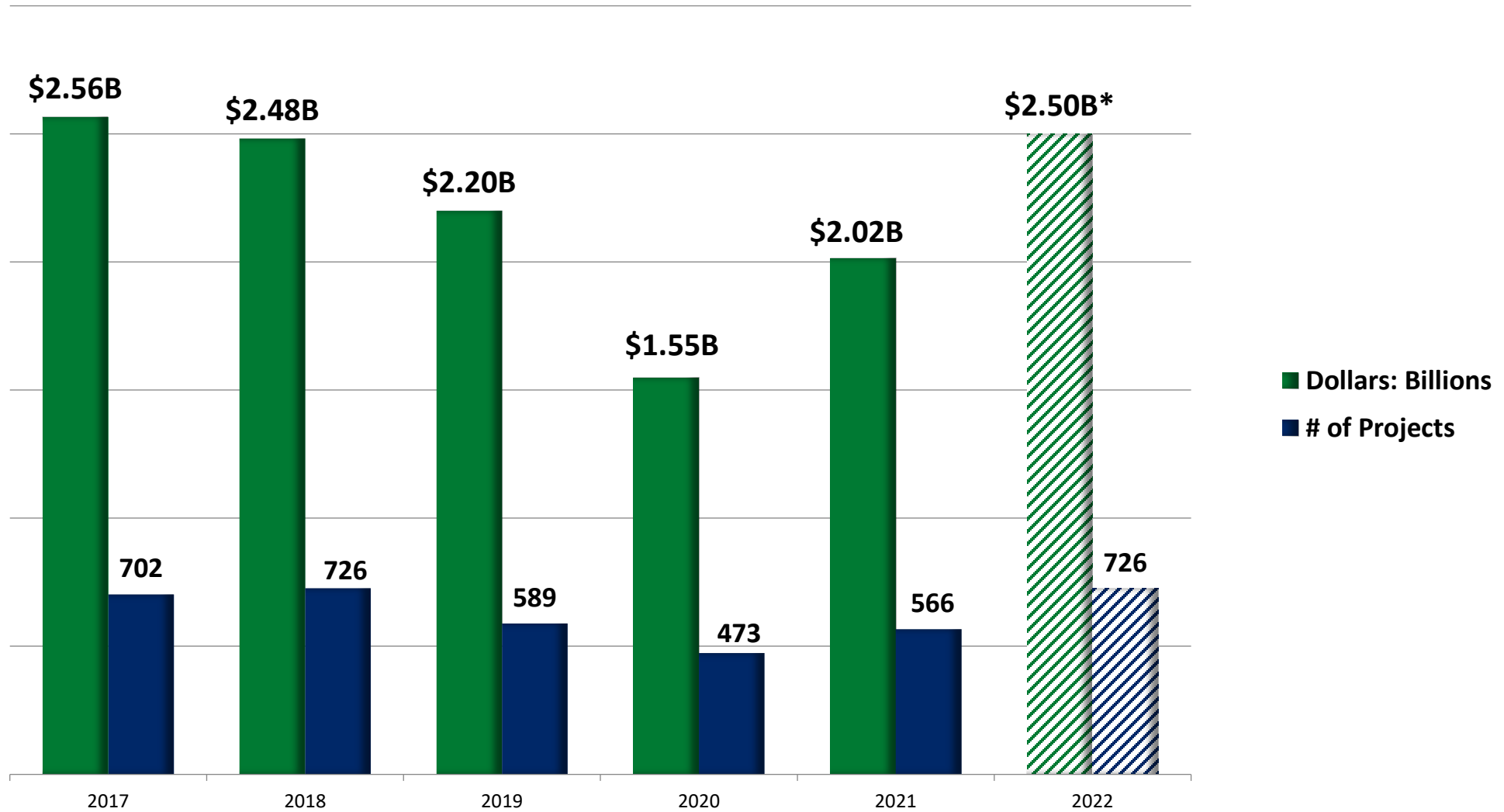
Vision: By 2025, construction projects will be bid using 3D technology and no longer be in a traditional construction plan format.

- Phase II (Development) of the Directive
- Pilot Projects
 - Digital As-Builts/Single Project PDF/Roadway & Bridge Modeling
- Stakeholder Coordination



RECENT PROGRAM DETAILS

PROJECT LETTING TRENDS



2022 Projected *



PROGRAM DISTRIBUTION

	Cost Based Percentage						
	2016	2017	2018	2019	2020	2021	2022*
Highway	53%	64%	60%	70%	61%	71%	72%
Bridge	35%	21%	28%	19%	24%	17%	20%
Other	12%	15%	12%	11%	15%	12%	8%

*2022 Projected



CONSTRUCTION MATERIAL QUANTITIES

Material	2017	2018	2019	2020	2021	2022*
Asphalt (Tons)	7,591,403	7,182,059	6,667,762	4,240,700	4,252,700	5,770,200
Structural Concrete (CY)	359,393	404,844	266,941	217,000	205,500	212,300
Concrete Paving (SY)	801,621	674,394	439,828 CSVT delayed	532,700	785,500	607,200
Aggregate (Tons)	10,807,613	8,996,689	8,271,575	5,388,700	5,408,300	6,032,300
Maintenance Asphalt (Tons)	2,398,100	1,559,600	1,152,100	585,700	964,000	1,500,000

* Estimated Projections



FUNDING

HIGHWAY TRUST FUND

Existing Core Program Areas:

- National Highway Performance Program - \$6.1 Billion
- Surface Transportation Block Grant Program - \$2.97 Billion
- Highway Safety Improvement Program - \$656.6 Million
- Rail Highway Crossings Program - \$35.7 Million
- Congestion Mitigation and Air Quality - \$592.5 Million
- Metropolitan Planning - \$89.1 Million
- National Highway Freight Program - \$296.1 Million

New Program Areas:

- Carbon Reduction Program - \$264.8 Million
- Protect Formula Program - \$301.1 Million



GENERAL FUND

New Program Areas:

- Special Bridge Program - \$1.39 Billion
 - Special Bridge Program (Off System Bridges) - \$245.3 Million
 - National Electric Vehicle Program - \$171.5 Million
-

Total Federal Funding (2022 – 2026) = \$13.1 Billion

Prior Federal Funding \$ 9.1 Billion

+/- \$ 4.0 Billion



PLANNED 2022 PROGRAM – 11/2021

- \$2.5 Billion - 727 Projects (Result of IJA & State Budget)
 - Bridge Related Work: 245 Projects (19.5%)
 - Highway Construction: 294 Projects (69.5%)
 - Miscellaneous: 188 Projects (11%)
-

- In 2021, the Department let 566 projects with a total cost of \$2.02 Billion.
- 21/22 Included Federal American Rescue Act Funding \$279 Million



INFLATION IMPACTS

- Quarter 1 bids came in approximately 3% higher than the engineering (ECMS) estimate and approximately 8% over the MPMS estimate used to establish the program
- Quarter 2 bids came in approximately 10% higher than the engineering (ECMS) estimate and approximately 16% over the MPMS estimate used to establish the program
- As 6/30/22: Bid 364 Projects = \$1.83 Billion (Adj Est - \$1.72 B)



INFLATION IMPACTS – CONTINUED

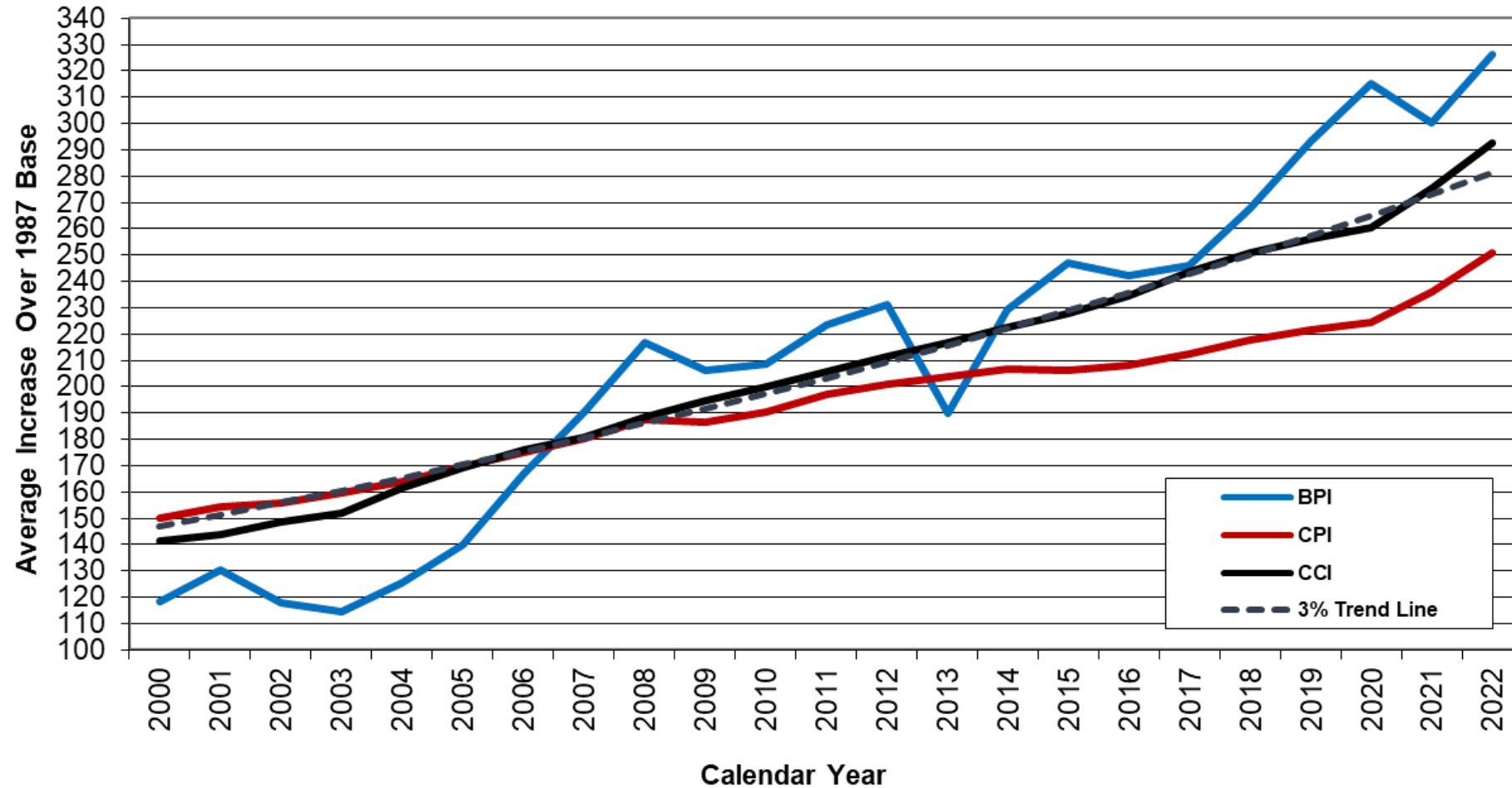
Summary of the 2022 Program to date:

- ECMS Estimates used to set the program in late 2021 have increased by +/- 15% (updated based on bidding trends)
- In addition, on average low bid amounts are +/- 7% above Department estimates
- 20% = \$500 million



INFLATION INDICES

Inflation Indices - 2000 to 2022
thru 6/30/22



TRANSPORTATION REVENUE OPTIONS COMMISSION

PA

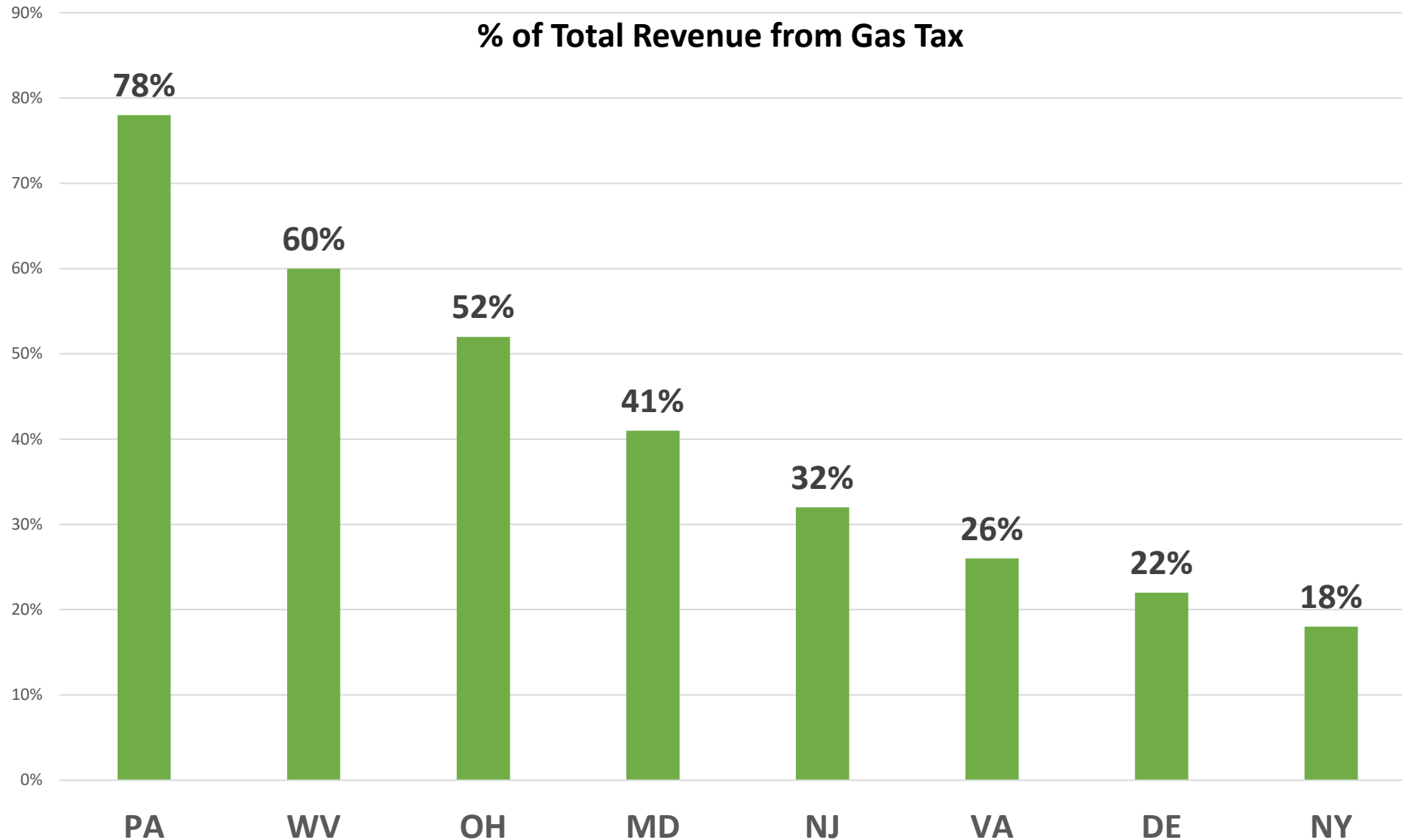


WHY WAS TROC ESTABLISHED?

Recognition that now is the time to fundamentally change the Commonwealth's transportation funding strategies:

- Align revenue with the costs of sustaining the multimodal transportation system.
- Fairly share costs among those who directly and indirectly benefit.
- Modernize and restructure transportation funding for the long term, while rapidly adopting near- and medium-term changes.

THERE ARE OPTIONS!



CONSEQUENCES OF INACTION



Greater Congestion



Closures and Detours



Impacts on Reliability



Deferred Maintenance



Decreased Competitiveness



Diminished Quality of Life

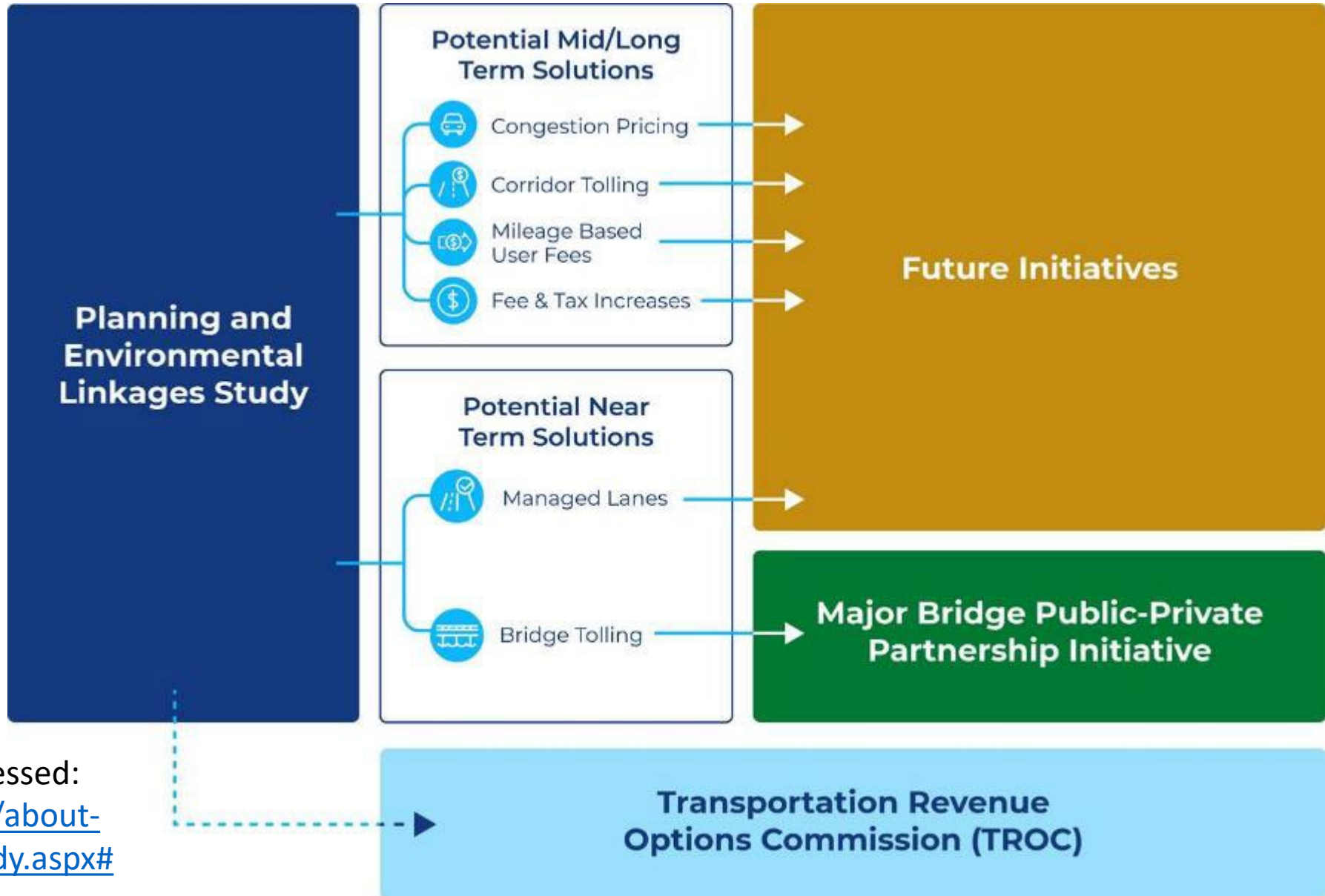


PENNDOT PATHWAYS

PennDOT PPathways



A long-term program to analyze and implement new future-focused sources of funding for our highways and bridges that could better serve our communities and all Pennsylvanians for the next generation.



Final PEL Study can be accessed:
<https://www.penndot.gov/about-us/funding/Pages/PEL-Study.aspx#>

MOVING FORWARD IN 2022

We look forward to continue working with PAPA and its members!



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BE SAFE ON OUR ROADWAYS!



AASHTO TransComm 2020 Award: Marketing/Advertising
(Print and Electronic Marketing)

