

District 8 Traffic Unit

Matthew S. Clouser, P.E.
Assistant District Traffic Engineer



ASHE Conference
April 25, 2023

District 8-0 Traffic Unit

Chris Flad, PE
District Traffic Engineer

Asst. Traffic Engr
Matt Clouser, PE

Permits Manager
Eric Kinard

Safety Programming
Nathan Reis, EIT

Traffic Engineering & Operations
Matt Druckenmiller

Traffic Mgmt Center
Jordan Harding

Safety Studies
TBD

Traffic Signals
Cory Poff

HOP Manager
Bill Warden

District 8-0 Traffic Unit

Consultant Support – Traffic Unit

- Open End Agreement: General Traffic Engineering Services
- (2) Highway Occupancy Review Teams
- Highway Occupancy Permit Construction Inspection
- Traffic Management Center Supplemental Staffing

District 8-0 Traffic Unit

Safety Programming

Nathan Reis, EIT

Safety Program

HSIP Scopings
Low Cost County Projects (715 Funding)
Highway Safety Predictive Analysis
Roadway Safety Audits
ECMS/Safety-based PS&E Liaison
MPO/BOO/FHWA Liaison
Planning & Programming Liaison
Design Liaison

Risk Management Tort Liability

Tort Liability
OAG Liaison
Right-to-Know
Hazardous Walking Routes

District 8-0 Traffic Unit

Safety Studies

TBD

Traffic Studies

Speed Limit
Multiway Stop
Turn Restriction
Curves/Turns
Hazards
Traffic Counts
Title 75 Signing
Sight Distance
Vehicle Size/Type Restrictions
Hazardous Grade Determinations
Engine Brake Retarder Restrictions

District 8-0 Traffic Unit

Traffic Engineering & Operations *Matt Druckenmiller*

Work Zone Traffic Control
Design Signing
Design Pavement Markings
- Including AWPM
Design Delineation
Traffic Route Changes

LOGO/TOD Signing
Large Sign Repair/Replacement
(Contract)
Line Painting Contract
RPM Contract (AWPM)
Banner Permits
Special Event Permits

District 8-0 Traffic Unit

Traffic Management Center *Jordan Harding*

TMC Operations

- TMC/Console Operations (24/7/365)
- Freeway Safety Patrol
- Travel Advisories
- MEPA Alerts
- District Incident Response Team (DIRT)
- Special Event Coordination

ITS Design

ITS Maintenance

Fiber Optic Network Planning/Design

Transportation Management Plans

Incident Management Plans

Roadway Performance Analytics

TSMO Performance Program

- Design
- Maintenance
- Construction

ICC Planning Section

CCTV Request Fulfillment

Portable Traffic Signal Deployment

District 8-0 Traffic Unit

Traffic Signals *Cory Poff*

Traffic Signal & System Design
TS Project Reviews
TS Inspections
Municipal Signal Services
Temporary Signals
Portable TS Design (District Maintenance)

Green Light Go
ARLE

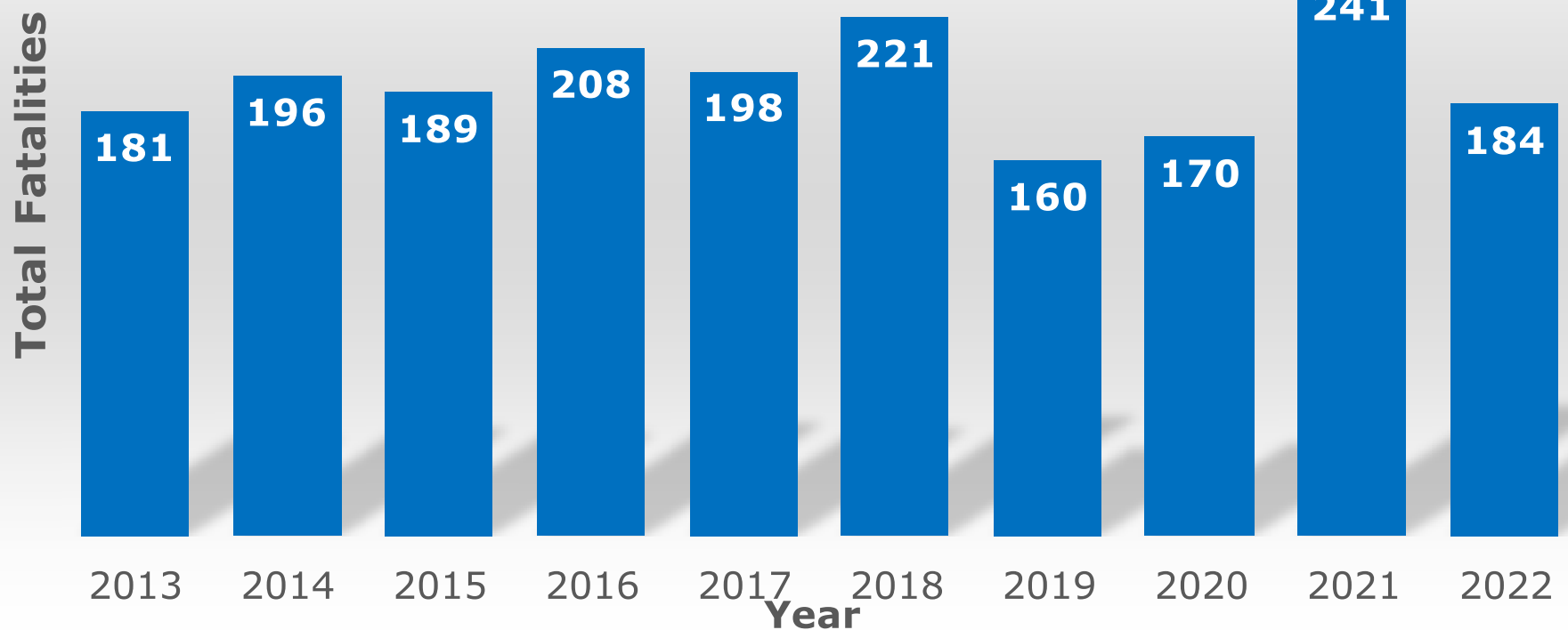
District 8-0 Traffic Unit

Highway Occupancy Permits

Bill Warden

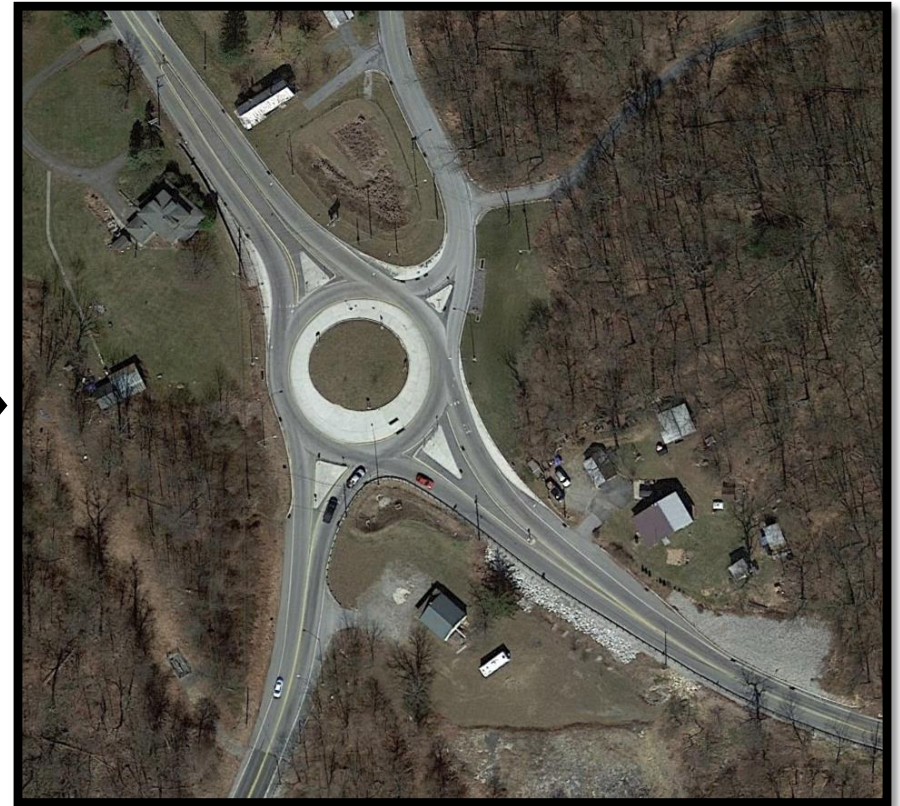
Traffic Impact Studies/Reviews
Scoping & TIS (HOP)
HOP Reviews
HOP Construction Inspection
Utility Liaison & Inspection
ePermitting/HOP Traffic Reviews
Access Management
Alternatives Analysis
POA Studies
Access Management

District 8-0 Crash Fatality Trends

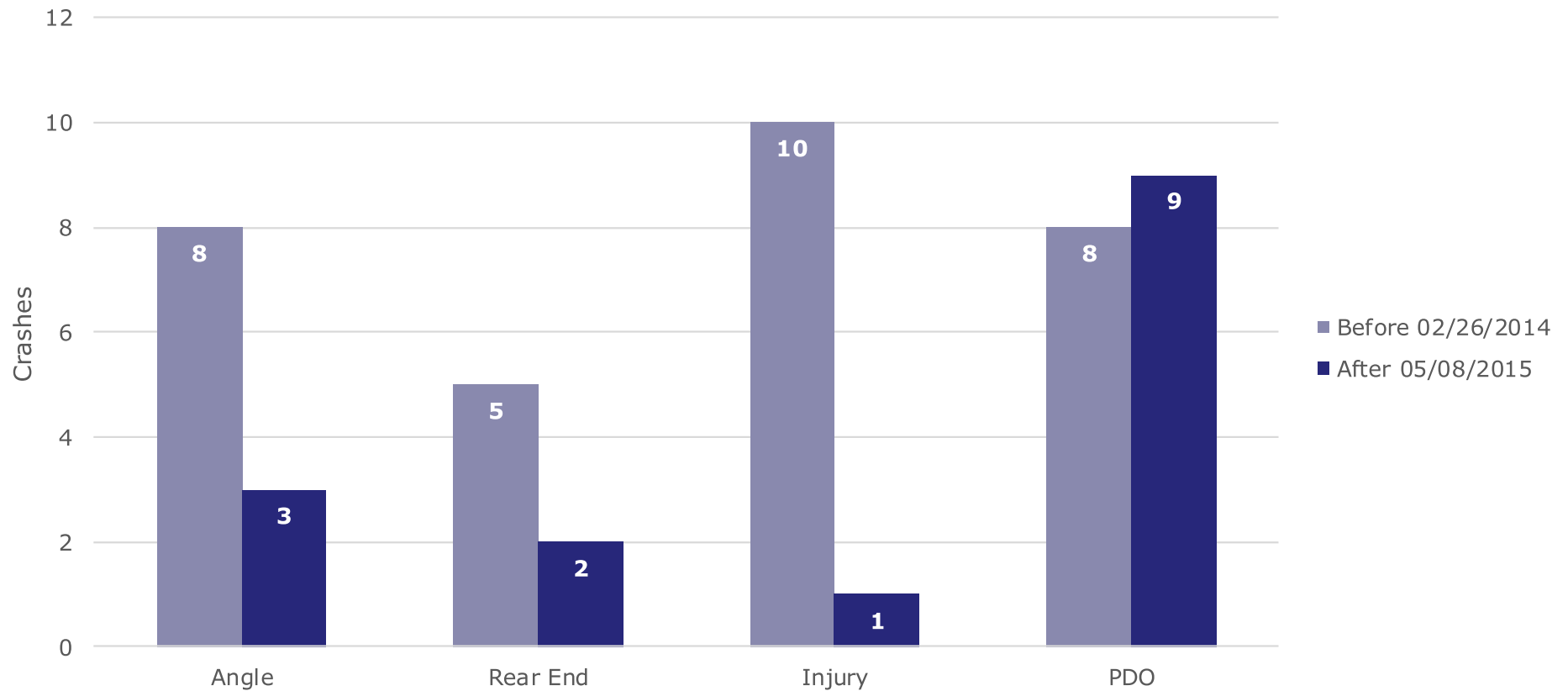


District 8-0 HSIP Project

- Safety Improvement Project: PA 34 and SR 1007 (Sunnyside Drive) Middlesex Township, Cumberland County.



District 8-0 HSIP Crash Comparison



Date Range: 1/1/2009 to 12/31/2020

Crash Data Considerations



ZERO IS OUR
GOAL
A SAFE SYSTEM IS HOW WE GET THERE

<https://safety.fhwa.dot.gov/provencountermeasures/>



Recessed Wet-Reflective Pavement Markings



Route 309, Luzerne County

Recessed Wet-Reflective Pavement Markings

- SOL 494-22-08 (October 28, 2022)
- Application – Interstate Highway System
 - New Broken White Lines
 - New Solid White Lane Lines When Used In Place of Broken White Lines
 - Other Locations at District Discretion
- See SOL for Special Provisions

Recessed Wet-Reflective Pavement Markings



Recessed Wet-Reflective Pavement Markings

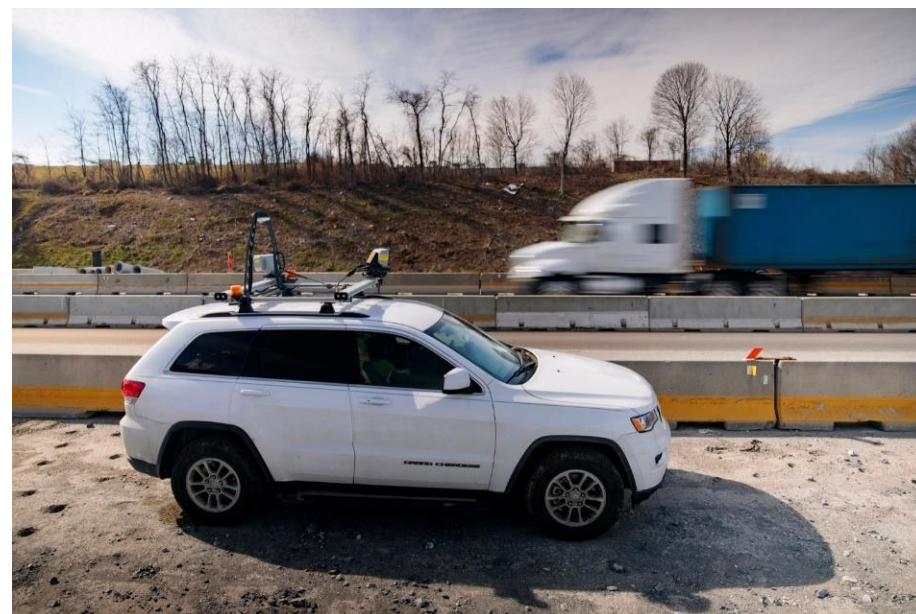


GROOVING
TRUCK

Recessed Wet-Reflective Pavement Markings



AUTOMATED WORK ZONE SPEED ENFORCEMENT



AUTOMATED WORK ZONE SPEED ENFORCEMENT

2022 - 2nd Full Year of AWZSE

- Reduced Speeds in Work Zones
- Promotes Work Zone Safety
- Improved Driver Behavior
- Save Worker & Traveler Lives
- Complements Existing Speed Enforcement (PSP)

AUTOMATED WORK ZONE SPEED ENFORCEMENT

	2020 TOTALS	2021 TOTALS	2022 TOTALS	PROGRAM TOTALS
Deployments	2,084	3,302	3,482	8,868
Violations per Deployment	105	129	128	123
Violations Issued	219,214	424,812	444,827	1,088,842
First Violations	191,584 (87.4%)	359,701 (84.7%)	362,260 (81.4%)	913,545 (83.9%)
2 Violations	19,224 (8.8%)	45,982 (10.8%)	57,094 (12.8%)	122,300 (11.2%)
3+ Violations	8,406 (3.8%)	19,129 (4.5%)	25,473 (5.8%)	53,008 (4.9%)

Table 1. Program Statistics by Year

AUTOMATED WORK ZONE SPEED ENFORCEMENT

2022 Speed Statistics

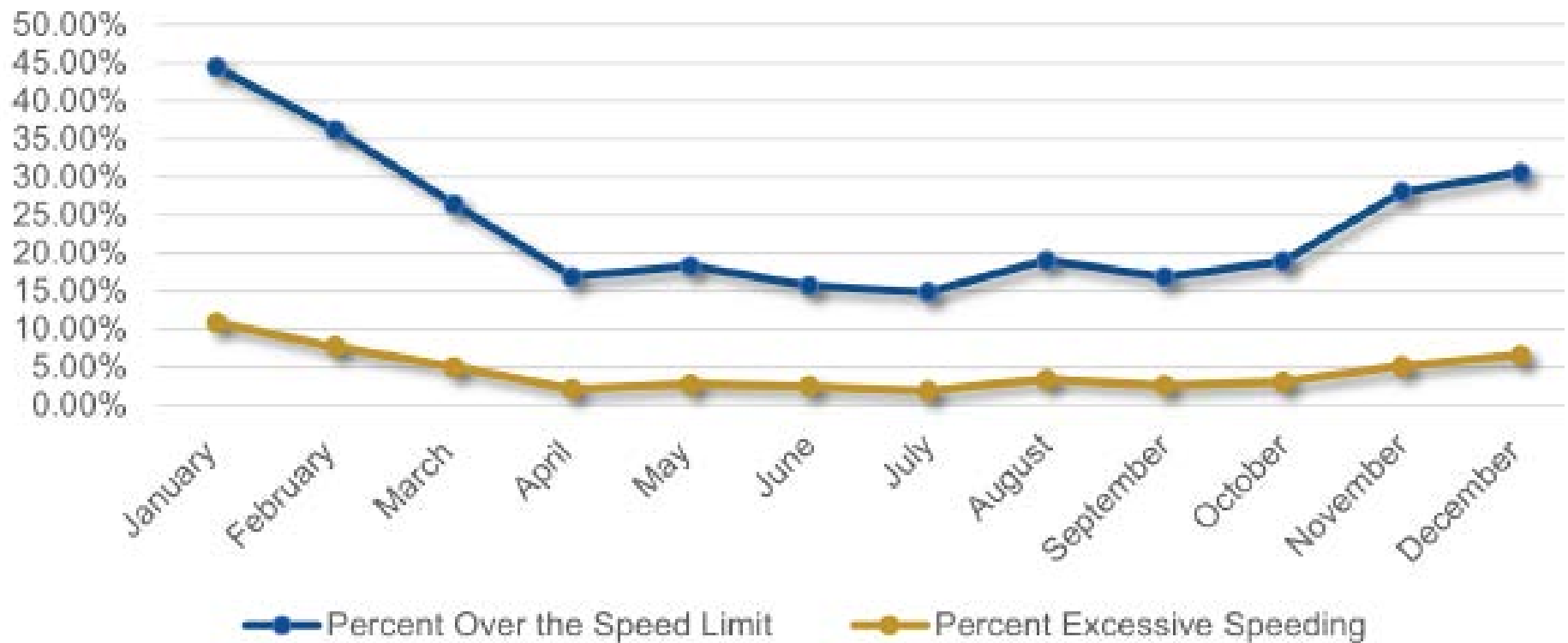


Figure 2 . Percent over Speed Limit and Percent Excessively Speeding, by Month, 2022

AUTOMATED WORK ZONE SPEED ENFORCEMENT

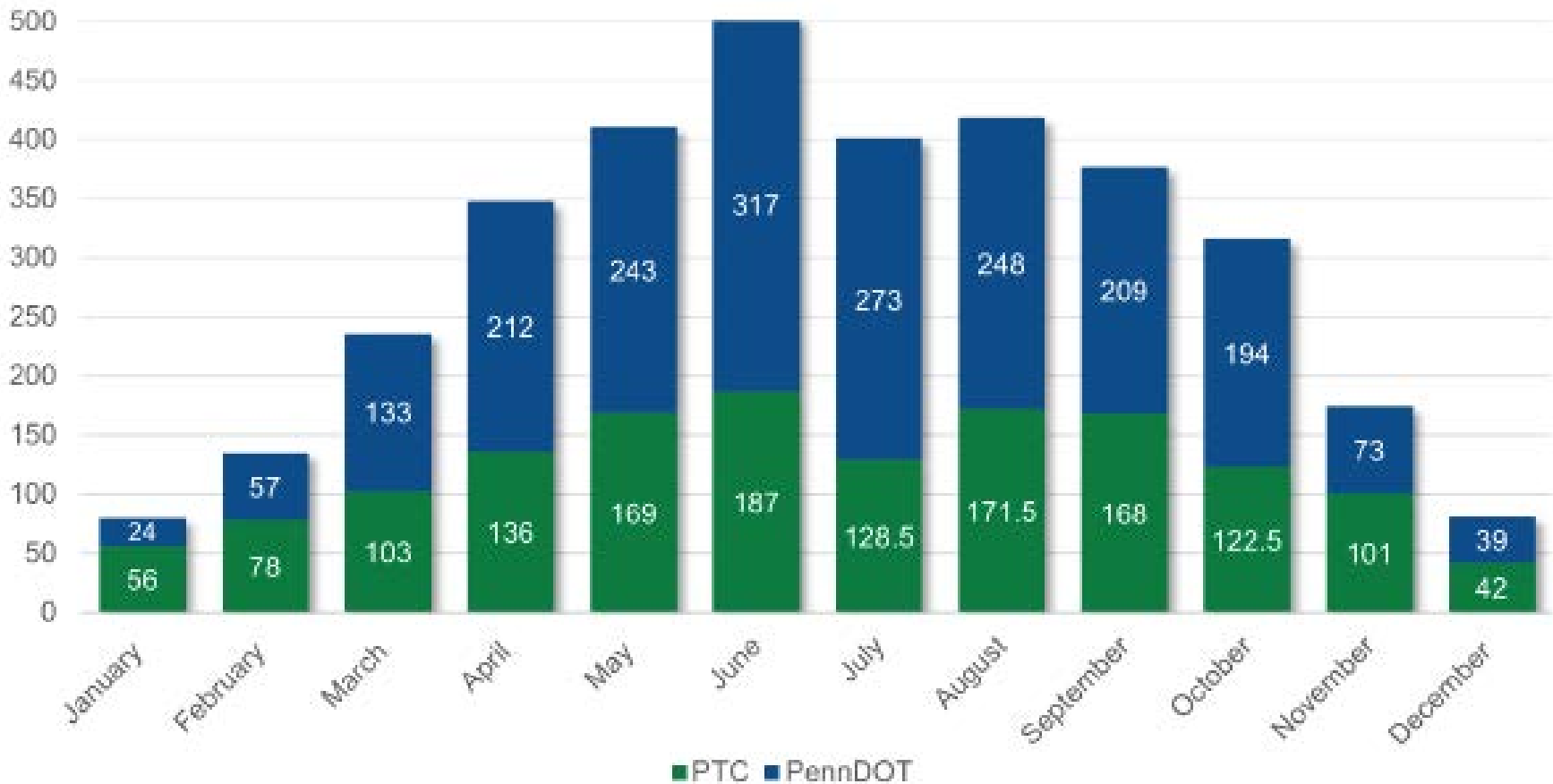


Figure 3. Deployments by Agency by Month, 2022

Signals

- Monitoring/Oversight Agency
 - Traffic Signal Permits
 - Funding Programs
 - TSAMS
 - Field Complaints/Concerns
 - CCTV/TMC
 - Maxview/Kinetic/UCC
 - ATSPMs

Signals

Areas to focus on to help our monitoring efforts

- Controllers
 - Appropriate for ATSPMs (newer models)
- Detection
 - Reliable
 - Count zones to assist with ATSPMs
- Communications
 - Reliable
 - Maxview/Kinetic
 - RTMC & Cameras

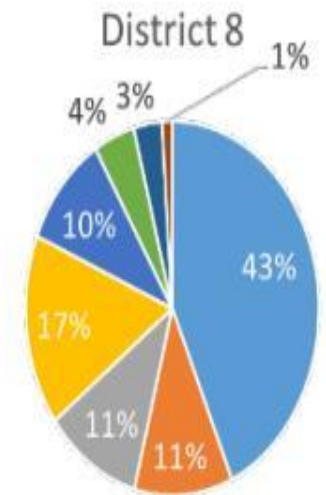
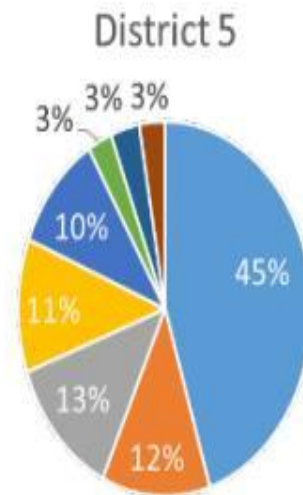
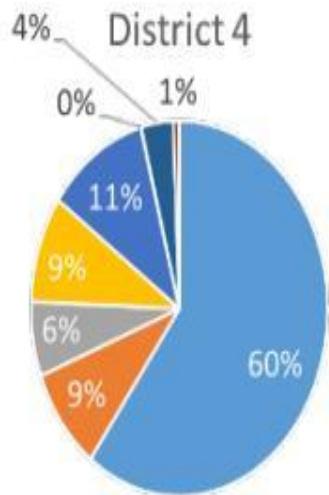
TRAFFIC ENG. AND OPERATIONS UNIT

Elements of a Complete Consultant Traffic Submission

- Maintenance and Protection of Traffic Narrative (Special Provision)
- Road User Liquidated Damages (RULD) Computations
- Traffic Control Plans
- Signing & Pavement Marking Plans
- Temporary/Permanent Traffic Signal Construction & Permit Plans
- Memorandum of Understanding When Using Non SR's for Detours

For Final Submissions, all signal plans must have municipal official signature(s) before being submitted to the District Traffic Unit.

Congestion Pie Chart/TSMO Analytics



■ Roadwork

■ Other Incident

■ Minor Crash

■ Crash

■ Weather

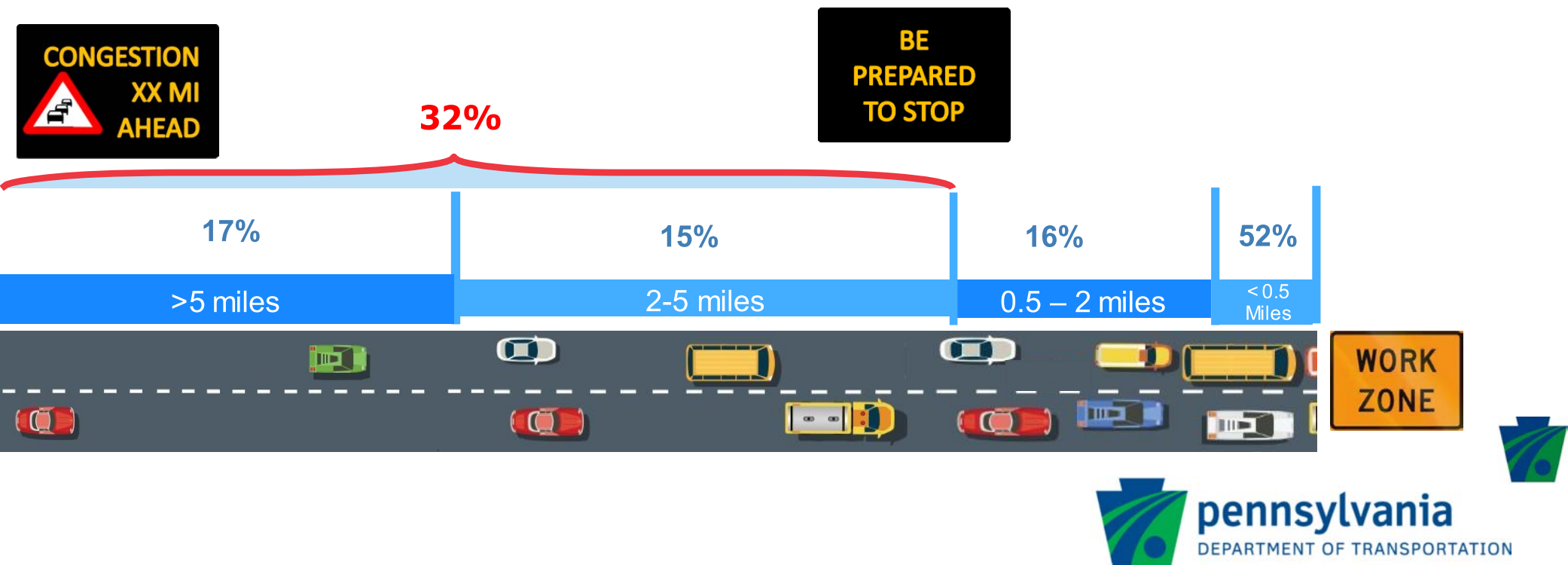
■ Recurring

■ Unknown

■ Rubbernecking

Smart Work Zones with Probe Data

- **1014 work zone** congestion crashes in 2021

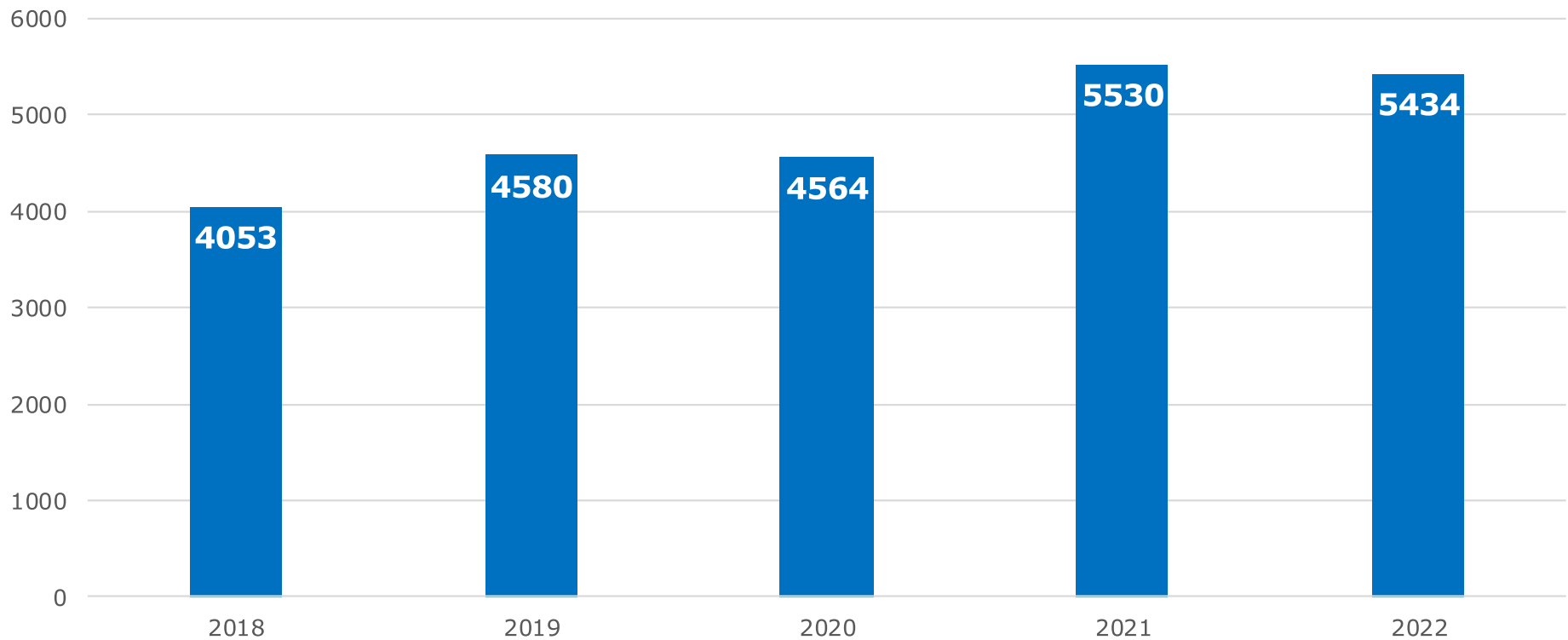


Smart Work Zones with Probe Data

- **Queue warning systems have been shown to reduce crashes by 18% to 45% in Work Zones**
- **Traditional queue protection can cost \$100's of thousands to implement.**
- **Easily utilized with minimal additional effort when developing the WZTC plans.**

Highway Occupancy Permits

HOP Submissions



Includes: Scoping Apps, TIS', HOP's & Supplements

Questions

Matthew S. Clouser, P.E.

Assistant District Traffic Engineer

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