2015 Winter Workshop

DelDOT Highway Safety Improvement Program

February 20, 2015

PRESENTED BY:
Adam Weiser, P.E. PTOE
Safety Programs Manager
Delaware Department of Transportation

TEAM DelDOT
Transparent Efficient Accountable Measured

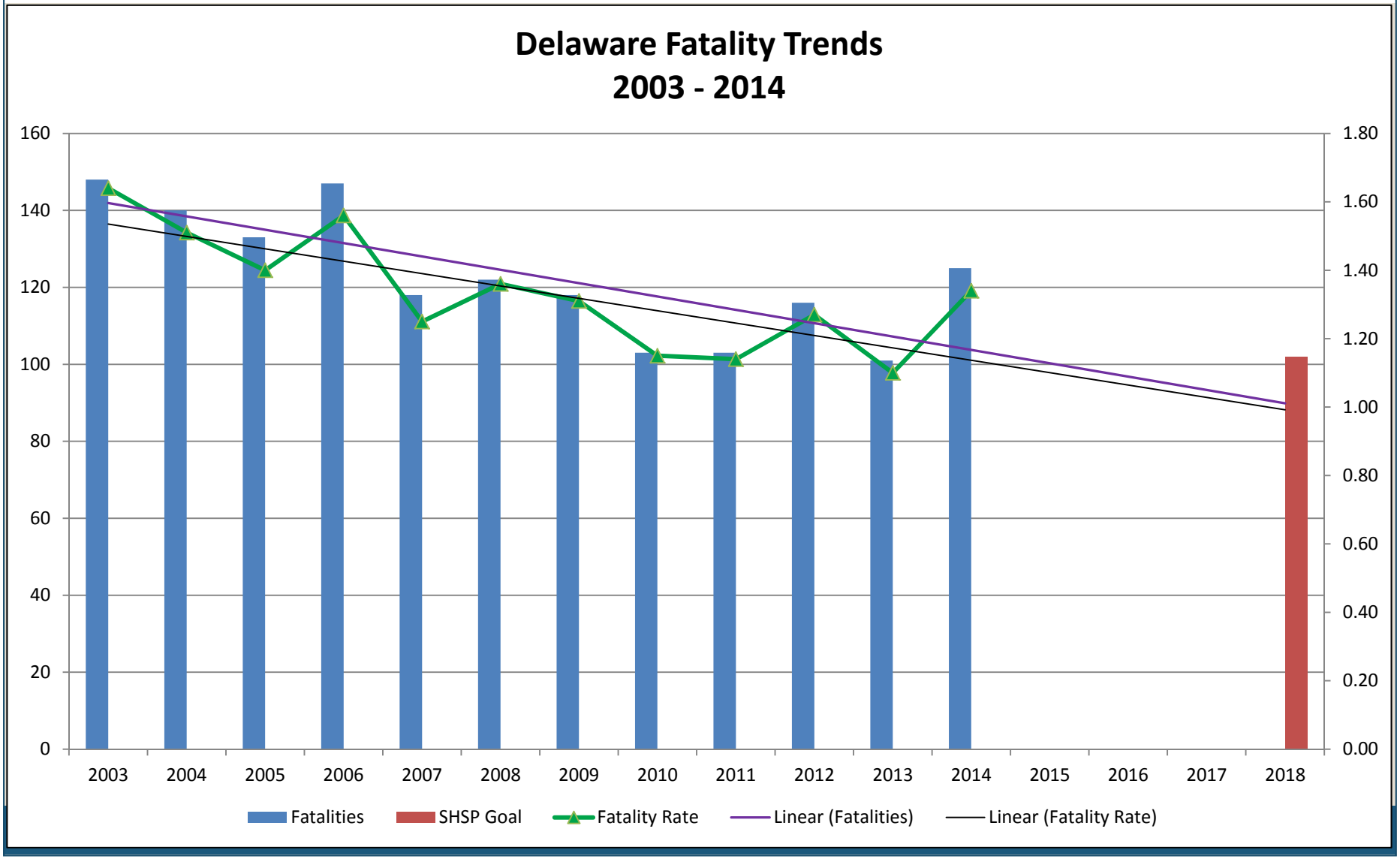
Agenda

- Crash Data Review
- Strategic Highway Safety Plan Update
- Systemic Safety Program Update
- Electronic Red Light Safety Program Update
- Work Zone Safety Initiatives
- New Tools in the Toolbox
- ET-Plus Saga

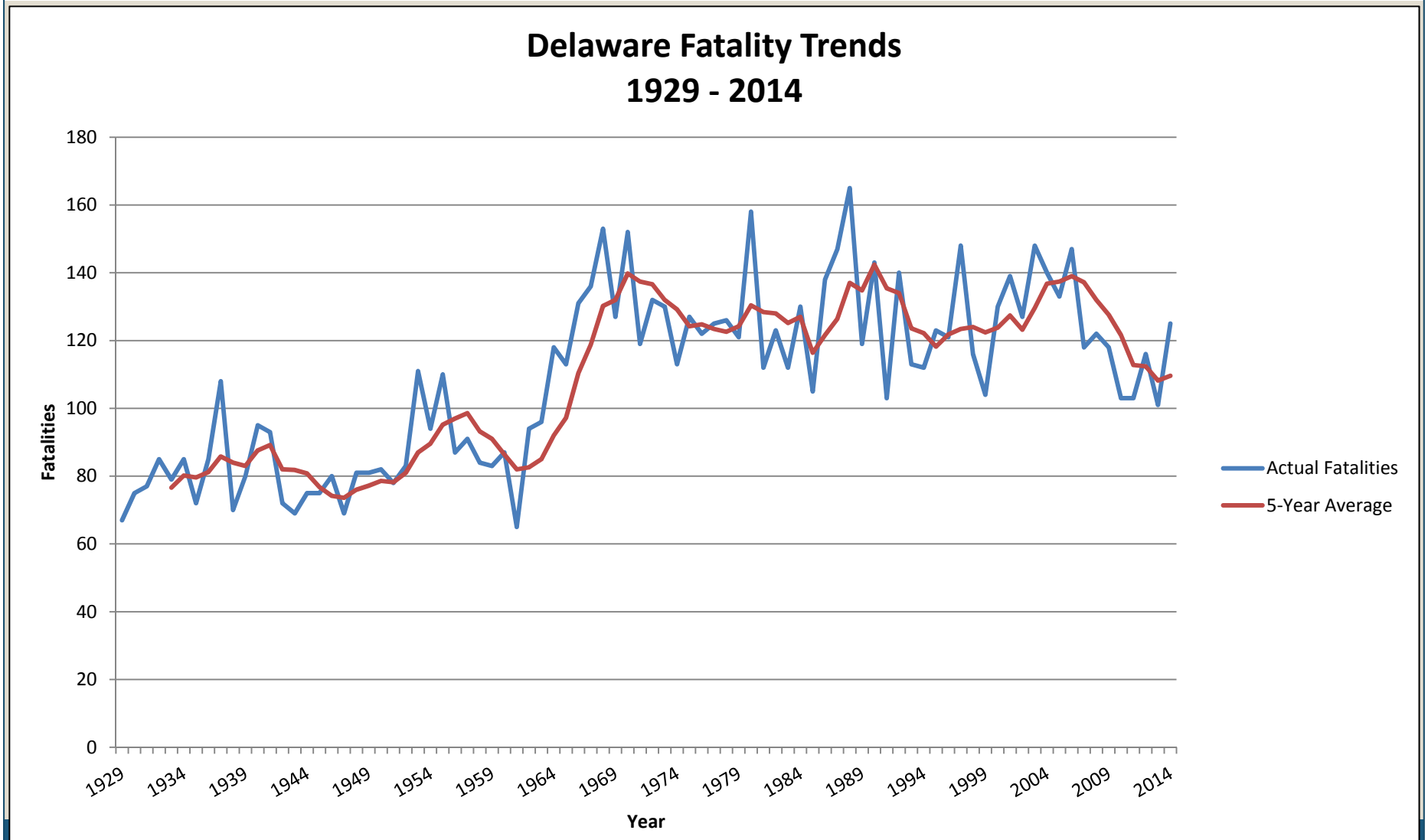
Crash Data Overview

- 2014 – 125 fatalities
  - 112 fatal crashes
- Increase from 2013
  - 101 fatalities
- Performance Goal
  - Achieve a fatality rate of 1.0 crash/100 MVMT by 2018
  - Still on pace to meet target

Crash Data Overview



Crash Data Overview



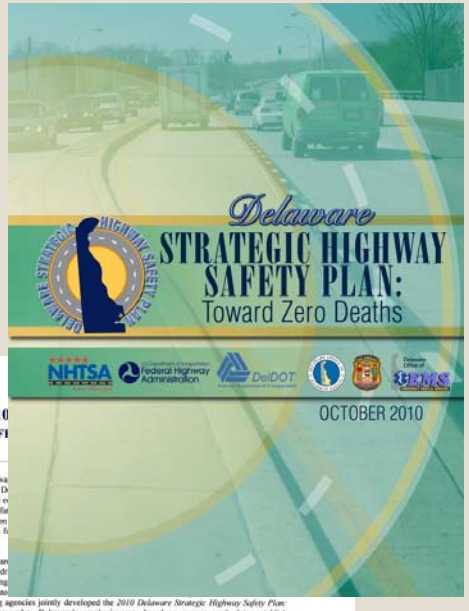
Crash Data Overview

- Identifiable trends in 2014:
  - 12 crashes involving multiple fatalities
    - Typically average 6 multiple fatality crashes/year
  - 27 pedestrians were killed
    - 26 were killed in 2013
  - 46% involved some level of impairment
  - 44% of those killed were unbelted
  - 39% were speed related crashes
  - 54% of crashes involved a roadway departure
  - 24% of crashes were intersection related
  - 17% of crashes involved an older driver

Strategic Highway Safety Plan

- **<u>Mission Statement</u>**: The *Delaware Strategic Highway Safety Plan: Toward Zero Deaths* aims to eliminate fatalities on Delaware's roadways through a multi-agency approach that utilizes education, enforcement, engineering and emergency services strategies.

- **<u>Vision Statement:</u>** The goal of Delaware's *Strategic Highway Safety Plan* is to achieve a fatality rate of 1.0 per 100 million vehicle miles traveled per year by 2018.




Carolann D. Wicks, P.E.
Secretary, Department of Transportation

Lewis D. Schiliro
Secretary, Department of Safety and Homeland Security

Colonel Robert M. Coupe
Superintendent, Delaware State Police

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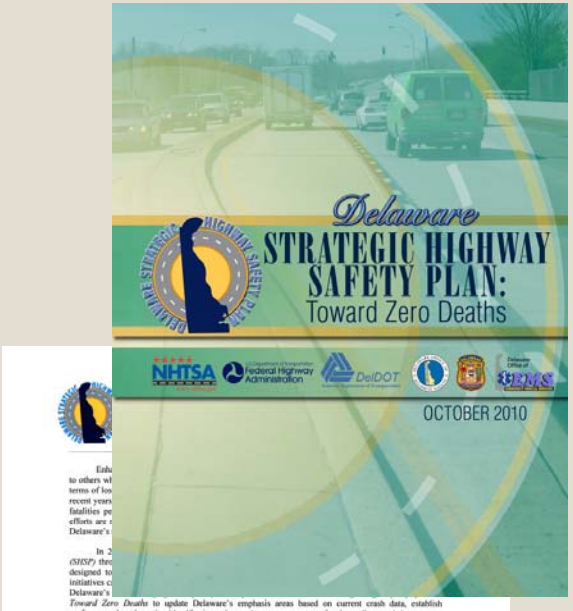
Strategic Highway Safety Plan – 2015 Update

- **<u>Mission Statement</u>**: The *Delaware Strategic Highway Safety Plan: Toward Zero Deaths* aims to eliminate fatalities **and serious injuries** on Delaware's roadways through a multi-agency approach that utilizes education, enforcement, engineering and emergency services strategies.

- **<u>Vision Statement:</u>** The goal of Delaware's *Strategic Highway Safety Plan* is **<u>to be determined</u>**

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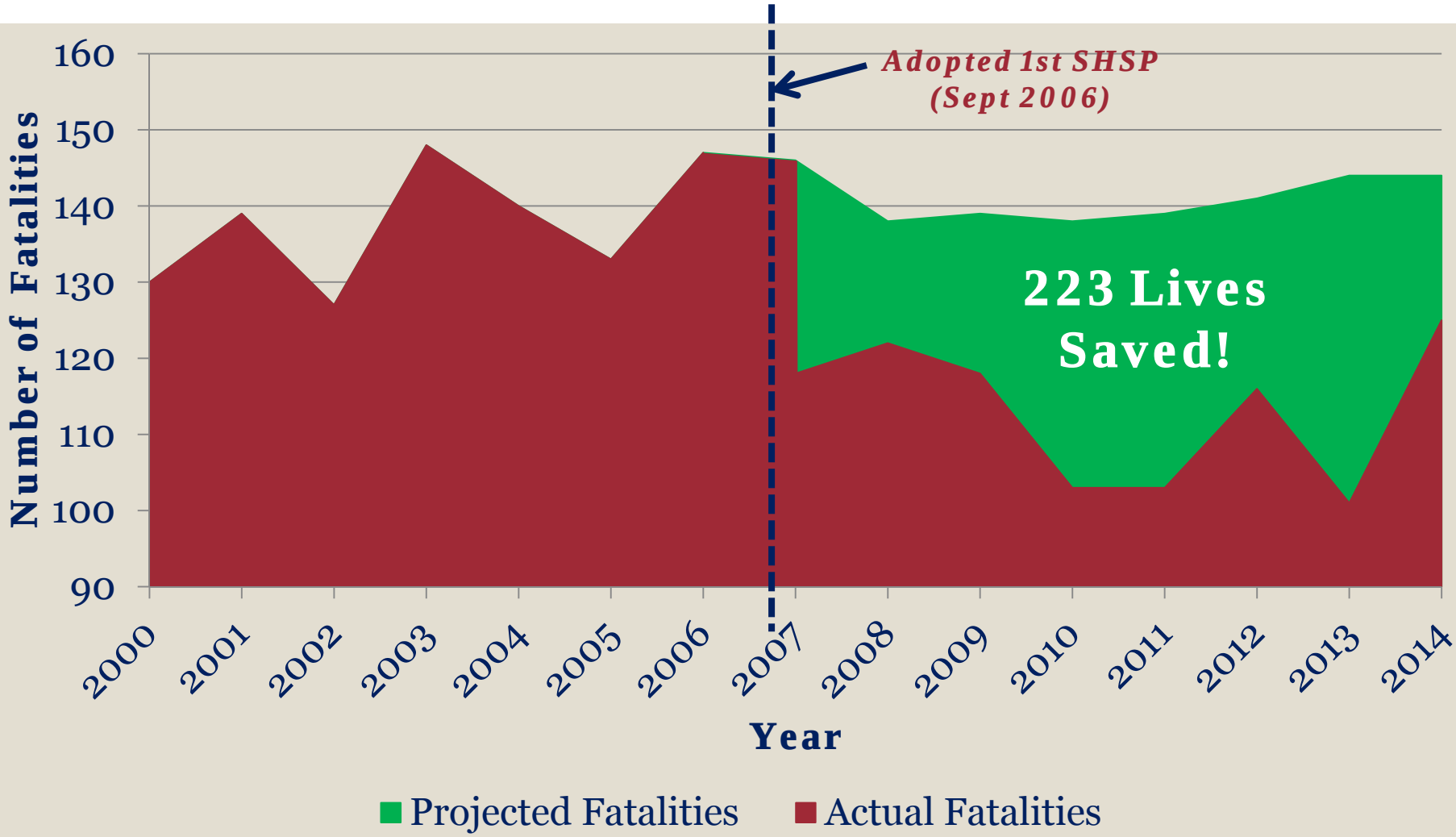
Strategic Highway Safety Plan

- SHSP Initiatives
  - High-Tension Cable Barrier
    - Successfully implemented two runs of cable barrier
    - Looking at additional locations on I-95 for future installation
  - Rumble Strip Installation
    - Expanding installation to rural collectors and locals
      - Based on SHSP data review
    - Open-end project awarded
  - High Friction Surface Treatment
    - Implemented test location in Sussex County
    - Open-end contract to be advertised
  - Pedestrian/Bicycle Safety Working Group
    - Address continued increase in vulnerable users crashes
    - Identify corridors for pedestrian safety audits
    - Develop countermeasures for addressing pedestrian crashes

Lives Saved Since First SHSP



Projected Fatalities assuming 2000 – 2006 average crash rate remained the same

Delaware's SHSP History

SAFETEA-LU (August 2005)

MAP-21 (July 2012)

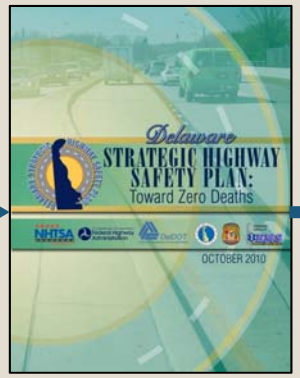
2006 *First Plan Adopted*

2008 *First Plan Update*

2010 *New Plan Adopted*

2015 *Rewriting Plan*

2020 *Update Plan*



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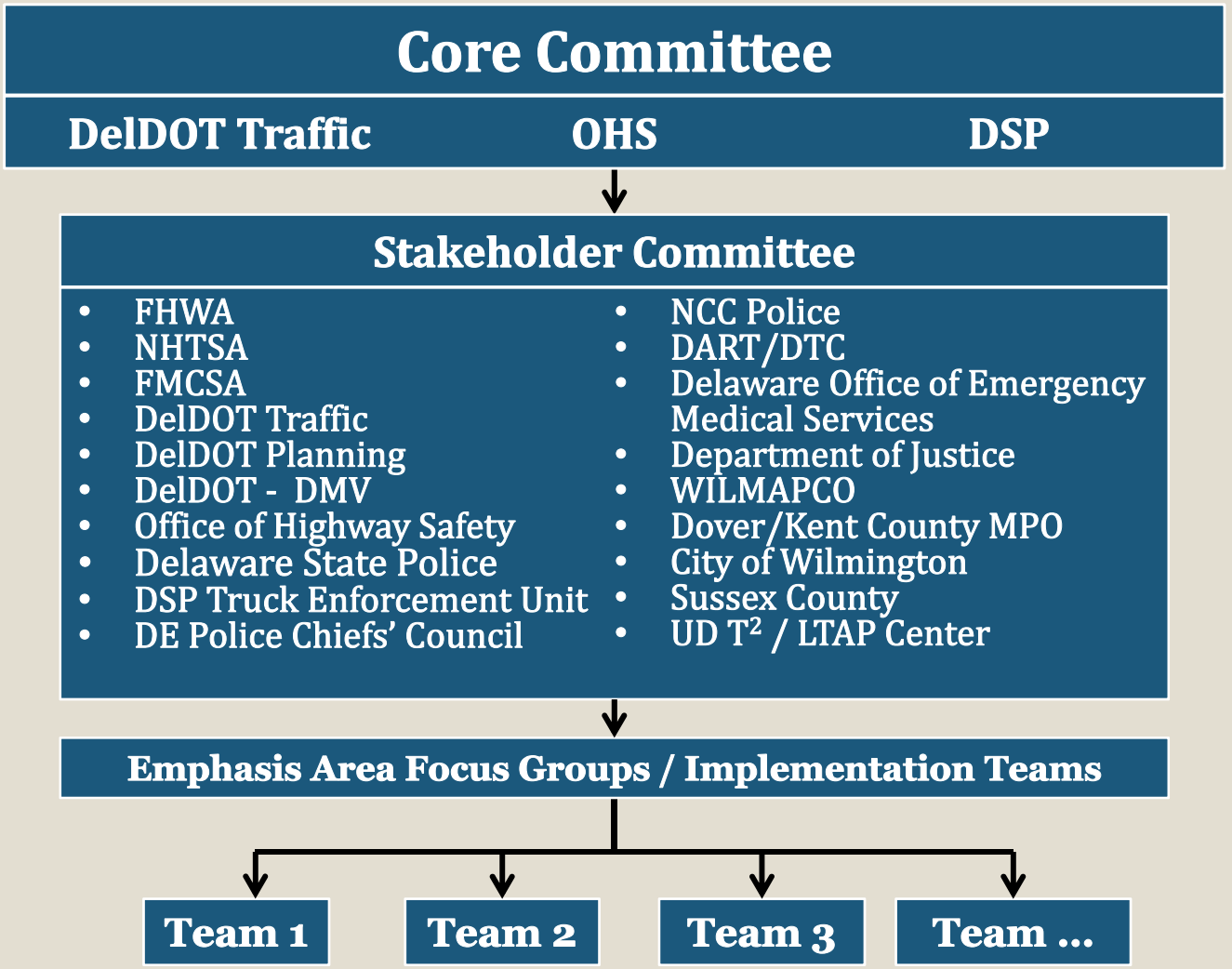
DE SHSP 2015 Committee Members

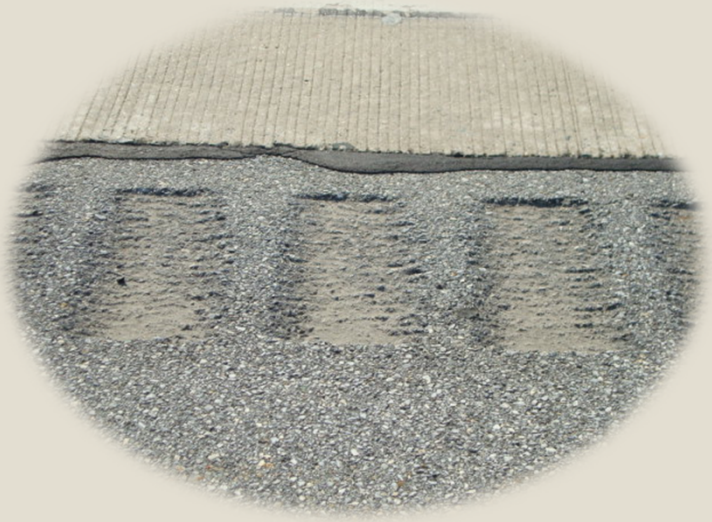


Systemic Improvements

- System Safety Improvement Program is currently under development
- Change in how we think about safety improvements
  - Identify problems based on system-wide data
    - Use SHSP to identify problem areas
    - Examples:
      - Road departure crashes
      - Pedestrian crashes
      - Wet weather related crashes
    - These types of crashes are spread across the road network, not clustered at specific locations
    - Look at roadway characteristics that are frequently present in severe crashes
      - Geometry
      - Traffic volume
      - Location

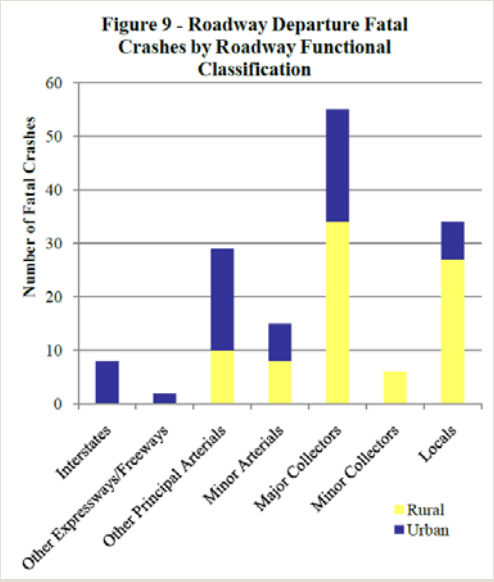
Systemic Improvements

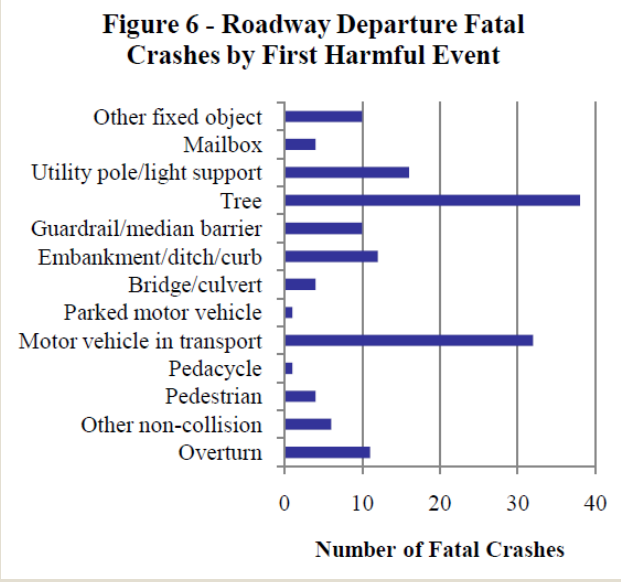
- Focus on deploying one or more low-cost countermeasures
  - Address specific types of crashes on specific types of roadways
- Example improvements
  - Longitudinal rumble strips
  - Median barrier
  - Horizontal curve signage
- Program development/Next steps
  - Developed a draft process memorandum
    - Currently being finalized
  - Identify roadway types and crash types to be addressed
    - Road departures on locals and collectors
  - Identify low-cost safety improvements
    - Longitudinal rumble strips
    - High-friction surface treatment
  - Implement, implement, implement

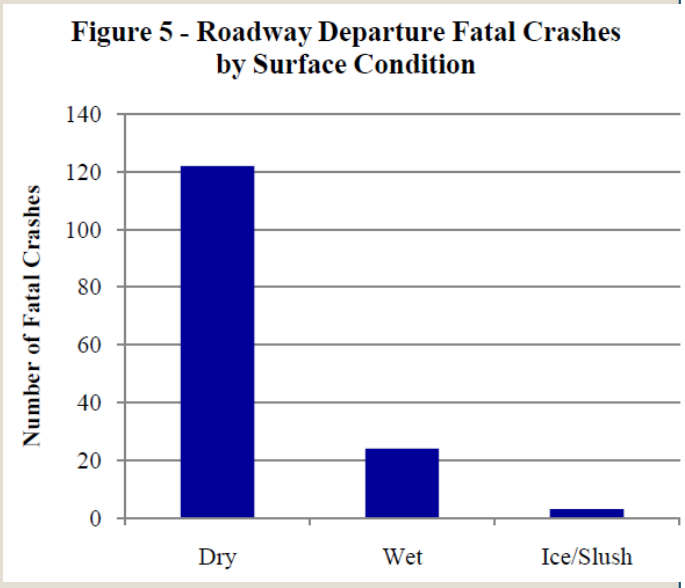


Longitudinal Rumble Strips

- Addresses SHSP Roadway Departure Emphasis Area
  - Top emphasis area in Delaware
  - 47% of all fatals involve a roadway departure
- Site selection based on crash data analysis



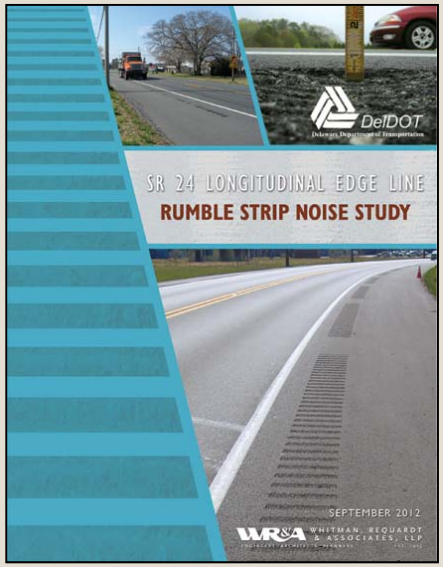


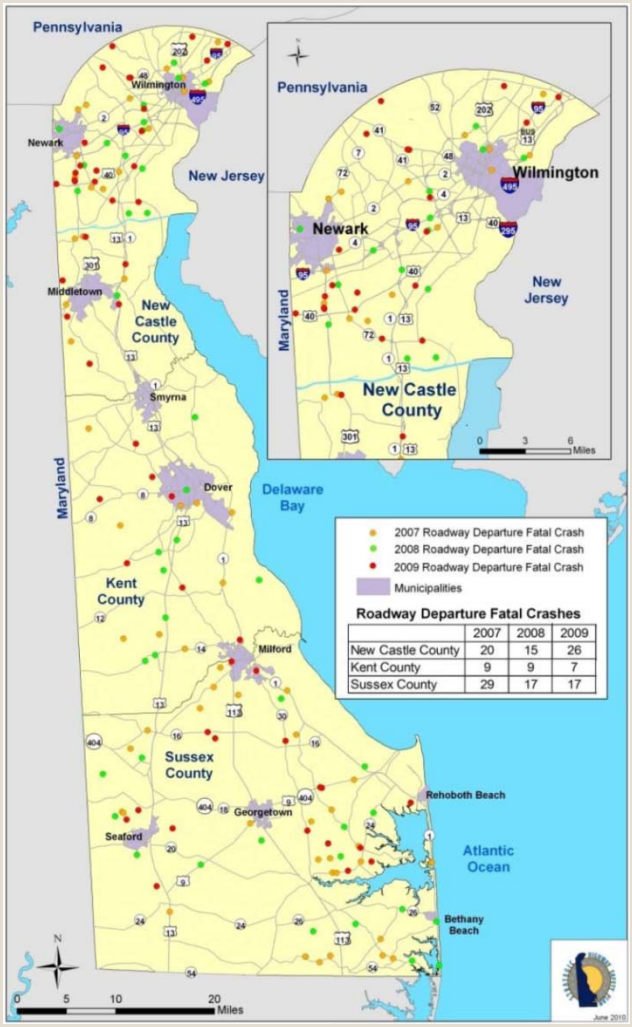


SOURCE: 2010 Delaware SHSP

Longitudinal Rumble Strips

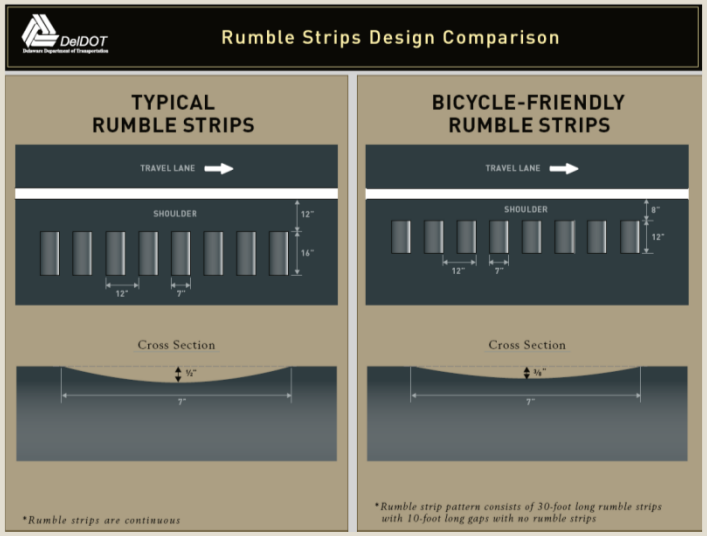
- Location Selection
  - Focus on rural collectors and locals
  - Account for residential noise impacts
  - Shoulder vs. no shoulder
    - Presence of bike lanes
    - Rumble strip vs. rumble stripe
  - Divided vs. undivided





Longitudinal Rumble Strips

- Contract development
  - Three-year open-end location
    - Statewide contract
  - Identified 8 initial locations
    - Included in contract documents
  - Remaining locations identified throughout life of contract
    - To date, 5 additional locations added with more to come
    - Currently developing systemic methodology for additional site selection
  - Awarded value = $1,299,880.00
    - Funded with HSIP, HRRRP and Section 54 Penalty Transfer Funds
    - Awarded on January 19, 2013
  - Contractor: Safety Improvements, LLC



Longitudinal Rumble Strips

- Challenges
  - Contractor mistakes
    - Installed within marked bike lane
    - Usable shoulder width less than 4-feet in some areas
      - Details call for 4-ft minimum usable shoulder beyond rumble strip
  - Major outcry from cycling community
    - Worked with contractor for quick fix solution
    - Incorrect rumble strips were patched with Aquaphalt or FloMix material
      - Aquaphalt requires compaction with a roller
      - Products allowed for a very quick repair method
    - To address concerns from cycling community, DelDOT modified standard design of bike-friendly rumble strips

Longitudinal Rumble Strips

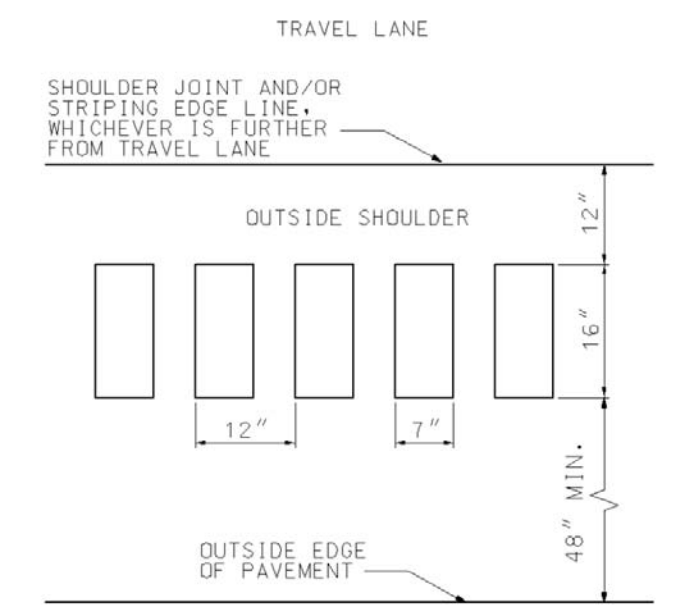


Figure 2A - Bicycle-Friendly Edgeline Rumble Strip Detail

NOT TO SCALE

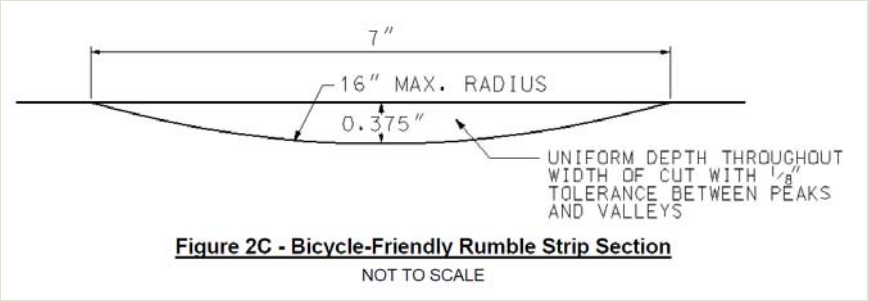


Figure 2C - Bicycle-Friendly Rumble Strip Section

NOT TO SCALE

Details are consistent with FHWA recommendations

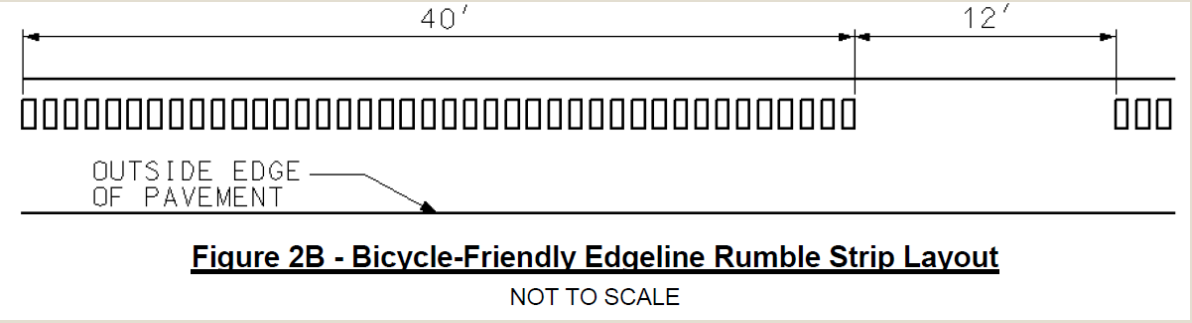
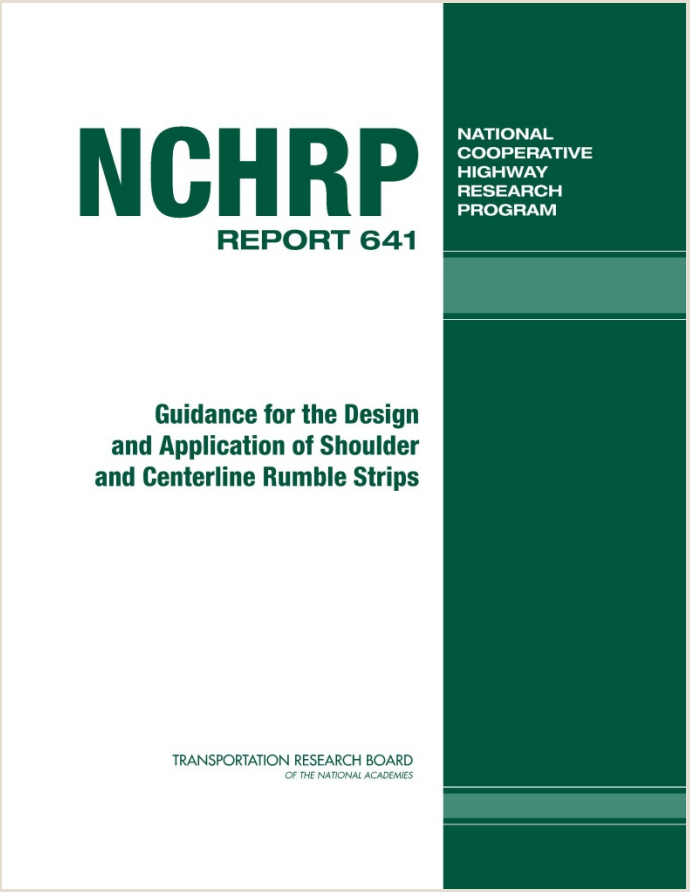


Figure 2B - Bicycle-Friendly Edgeline Rumble Strip Layout

NOT TO SCALE

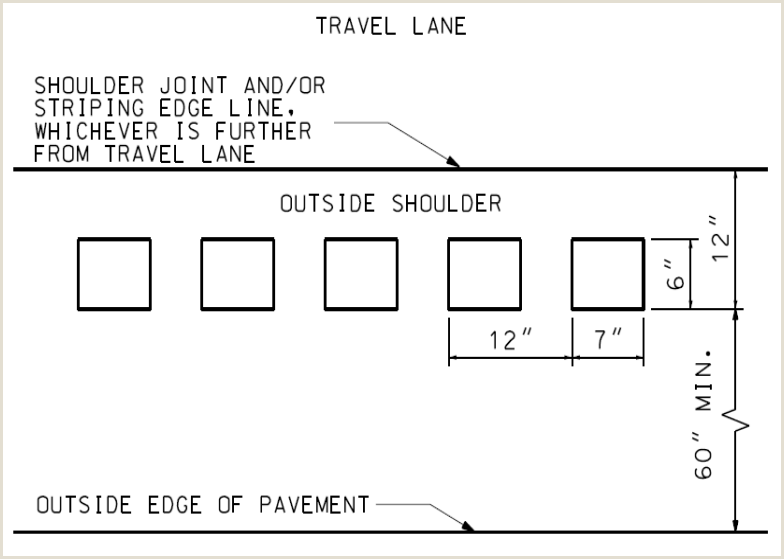
Longitudinal Rumble Strips

- Research of current practices from other states:
  - Including but not limited to AZ, CA, MD, MT, NJ, NY, OR, PA, VA and WA
  - Varying, inconsistent design of rumble strips across the nation
  - Most states range from 6” – 16” wide rumble strips
  - Many states have details for bicycle-friendly rumble strips as well as conventional rumble strips



Longitudinal Rumble Strips

- Proposed modifications include:
  - Reduction of offset from edge line or pavement joint to 6”
  - Reduction of width to 6”
  - Increase in required shoulder width behind rumble strip to 60”
    - A 48” shoulder may be permitted with concurrence from the Traffic Safety Section
    - If a 48” or greater shoulder cannot be maintained, bicycle-friendly rumble stripes may be used
  - DelDOT Pavement Management will be notified prior to the installation of all rumble strips
  - DelDOT’s Bicycle Coordinator will be notified prior to the installation of all rumble strips

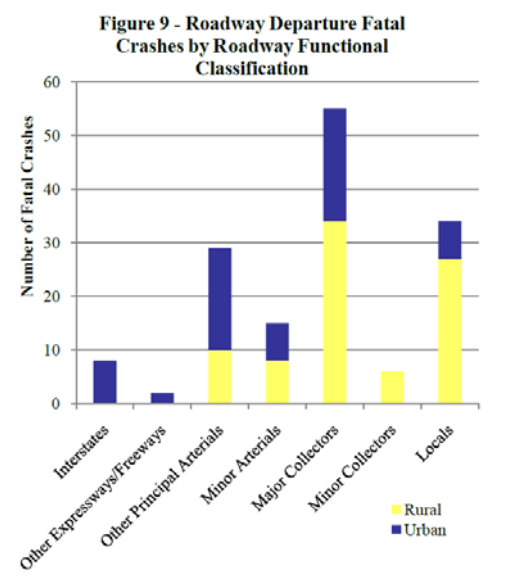


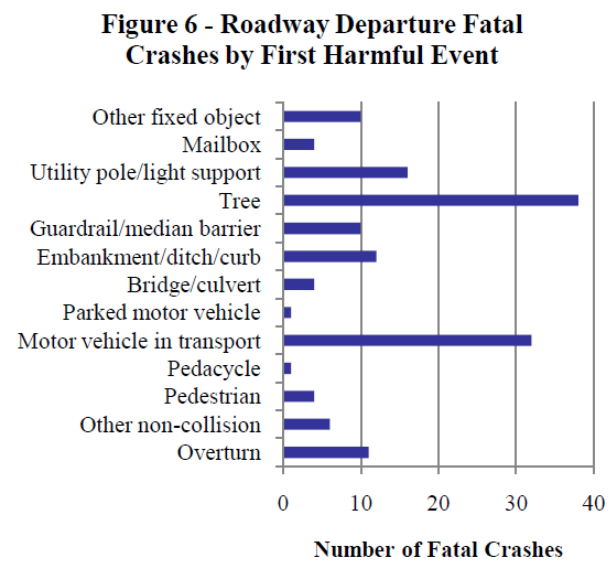
Longitudinal Rumble Strips

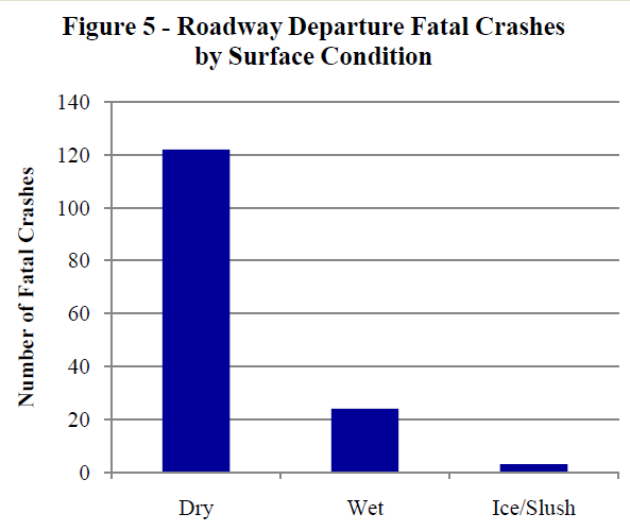
- Test Location
  - DE Route 71 from US 13 to Noxontown Road

High-Friction Surface Treatment

- Addresses SHSP Roadway Departure Emphasis Area
  - Top emphasis area in Delaware
  - 47% of all fatals involve a roadway departure
- Site selection based on crash data analysis



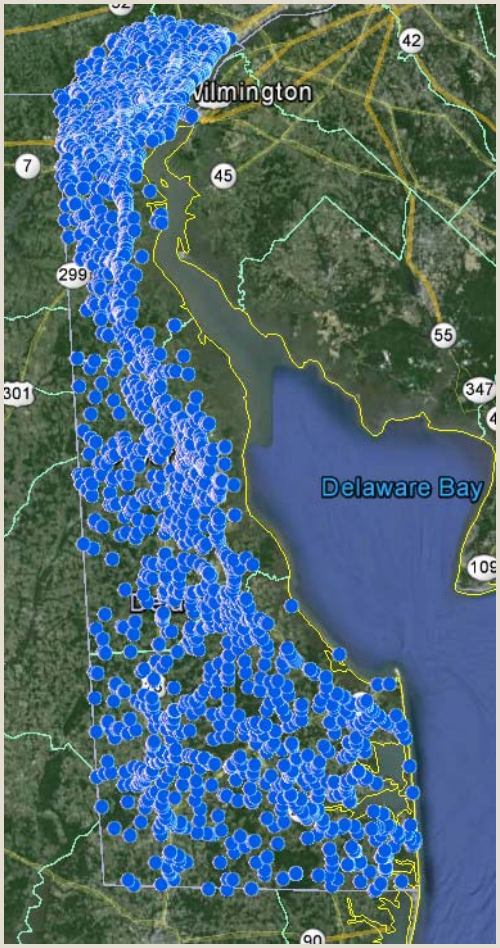




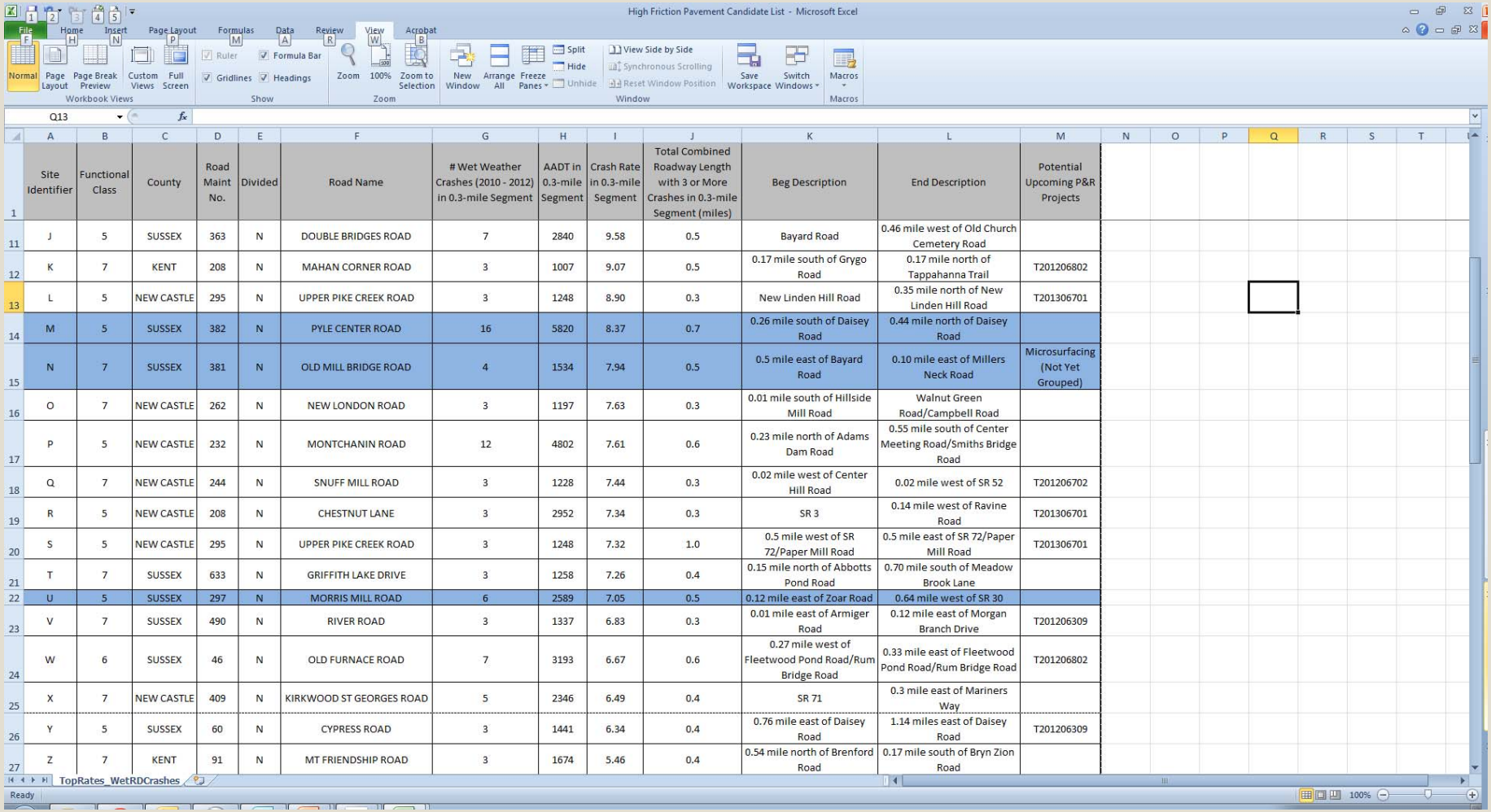
SOURCE: 2010 Delaware SHSP

High-Friction Surface Treatment

- Location Selection
  - Road Departure Crashes on wet roadways
  - Focus on rural collectors and locals
  - Horizontal curve locations
  - Location not included in any paving program
    - Pave & Rehab
    - Microsurfacing



High-Friction Surface Treatment

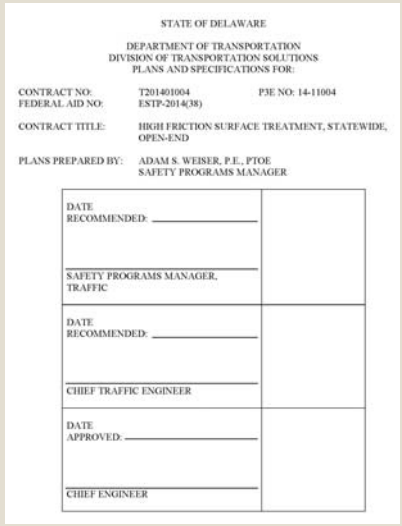


High Friction Pavement Candidate List - Microsoft Excel

Site Identifier	Functional Class	County	Road Maint No.	Divided	Road Name	# Wet Weather Crashes (2010 - 2012) in 0.3-mile Segment	AADT in 0.3-mile Segment	Crash Rate in 0.3-mile Segment	Total Combined Roadway Length with 3 or More Crashes in 0.3-mile Segment (miles)	Beg Description	End Description	Potential Upcoming P&R Projects
J	5	SUSSEX	363	N	DOUBLE BRIDGES ROAD	7	2840	9.58	0.5	Bayard Road	0.46 mile west of Old Church Cemetery Road	
K	7	KENT	208	N	MAHAN CORNER ROAD	3	1007	9.07	0.5	0.17 mile south of Grygo Road	0.17 mile north of Tappahanna Trail	T201206802
L	5	NEW CASTLE	295	N	UPPER PIKE CREEK ROAD	3	1248	8.90	0.3	New Linden Hill Road	0.35 mile north of New Linden Hill Road	T201306701
M	5	SUSSEX	382	N	PYLE CENTER ROAD	16	5820	8.37	0.7	0.26 mile south of Daisey Road	0.44 mile north of Daisey Road	
N	7	SUSSEX	381	N	OLD MILL BRIDGE ROAD	4	1534	7.94	0.5	0.5 mile east of Bayard Road	0.10 mile east of Millers Neck Road	Microsurfacing (Not Yet Grouped)
O	7	NEW CASTLE	262	N	NEW LONDON ROAD	3	1197	7.63	0.3	0.01 mile south of Hillside Mill Road	Walnut Green Road/Campbell Road	
P	5	NEW CASTLE	232	N	MONTCHANIN ROAD	12	4802	7.61	0.6	0.23 mile north of Adams Dam Road	0.55 mile south of Center Meeting Road/Smiths Bridge Road	
Q	7	NEW CASTLE	244	N	SNUFF MILL ROAD	3	1228	7.44	0.3	0.02 mile west of Center Hill Road	0.02 mile west of SR 52	T201206702
R	5	NEW CASTLE	208	N	CHESTNUT LANE	3	2952	7.34	0.3	SR 3	0.14 mile west of Ravine Road	T201306701
S	5	NEW CASTLE	295	N	UPPER PIKE CREEK ROAD	3	1248	7.32	1.0	0.5 mile west of SR 72/Paper Mill Road	0.5 mile east of SR 72/Paper Mill Road	T201306701
T	7	SUSSEX	633	N	GRIFFITH LAKE DRIVE	3	1258	7.26	0.4	0.15 mile north of Abbotts Pond Road	0.70 mile south of Meadow Brook Lane	
U	5	SUSSEX	297	N	MORRIS MILL ROAD	6	2589	7.05	0.5	0.12 mile east of Zoar Road	0.64 mile west of SR 30	
V	7	SUSSEX	490	N	RIVER ROAD	3	1337	6.83	0.3	0.01 mile east of Armiger Road	0.12 mile east of Morgan Branch Drive	T201206309
W	6	SUSSEX	46	N	OLD FURNACE ROAD	7	3193	6.67	0.6	0.27 mile west of Fleetwood Pond Road/Rum Bridge Road	0.33 mile east of Fleetwood Pond Road/Rum Bridge Road	T201206802
X	7	NEW CASTLE	409	N	KIRKWOOD ST GEORGES ROAD	5	2346	6.49	0.4	SR 71	0.3 mile east of Mariners Way	
Y	5	SUSSEX	60	N	CYPRESS ROAD	3	1441	6.34	0.4	0.76 mile east of Daisey Road	1.14 miles east of Daisey Road	T201206309
Z	7	KENT	91	N	MT FRIENDSHIP ROAD	3	1674	5.46	0.4	0.54 mile north of Brenford Road	0.17 mile south of Bryn Zion Road	

High-Friction Surface Treatment

- Contract development
  - Three-year open-end location
    - Statewide contract
  - Identified 15 initial locations
    - Included in contract documents
  - Remaining locations identified throughout life of contract
  - Engineer's Estimate = $1,087,820.80
    - Funded with HSIP, HRRRP and Section 154 Penalty Transfer Funds
    - PS&E on November 15, 2014
    - Awaiting advertisement
  - Contractor: TBD



STATE OF DELAWARE

DEPARTMENT OF TRANSPORTATION
DIVISION OF TRANSPORTATION SOLUTIONS
PLANS AND SPECIFICATIONS FOR:

CONTRACT NO: T201401004 P3E NO: 14-11004
FEDERAL AID NO: ESTP-2014(38)

CONTRACT TITLE: HIGH FRICTION SURFACE TREATMENT, STATEWIDE, OPEN-END

PLANS PREPARED BY: ADAM S. WEISER, P.E., PTOE
SAFETY PROGRAMS MANAGER

DATE RECOMMENDED: _____
SAFETY PROGRAMS MANAGER, TRAFFIC

DATE RECOMMENDED: _____
CHIEF TRAFFIC ENGINEER

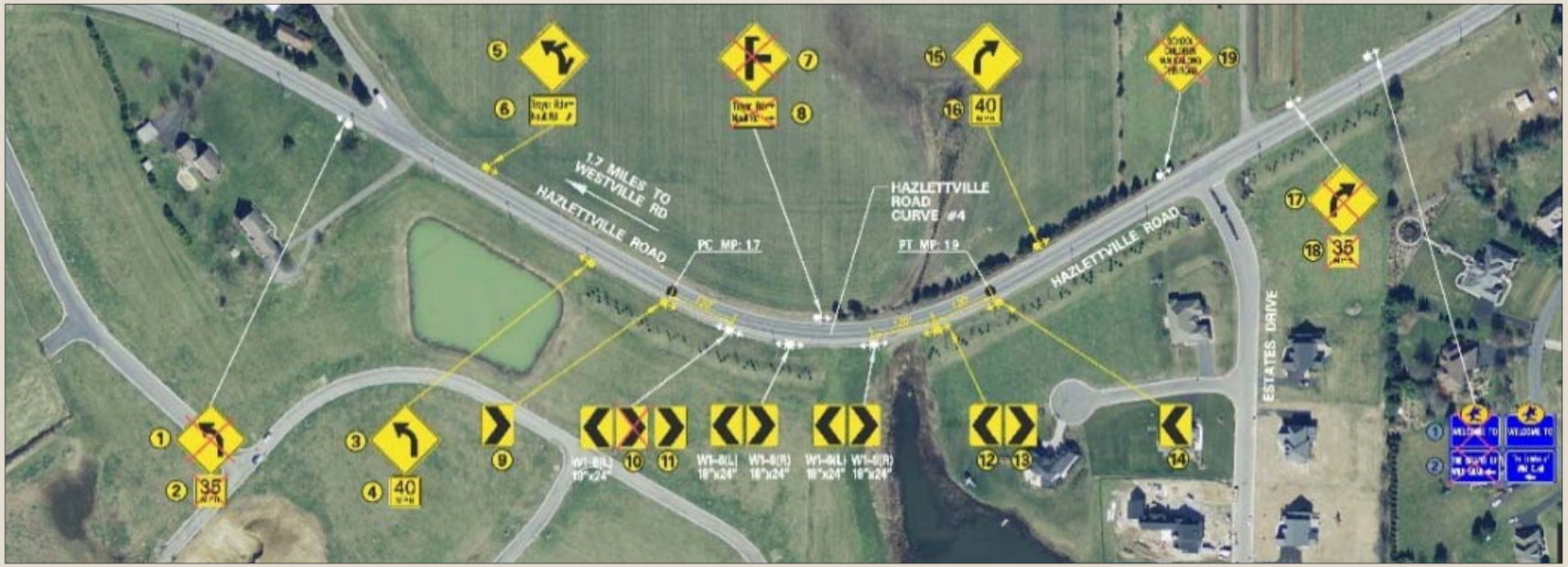
DATE APPROVED: _____
CHIEF ENGINEER

Other Systemic Programs

- Median Barrier Installation
  - Freeway median installations
  - Considering high-tension cable barrier
  - Three year contract to address remaining freeway medians in New Castle and Kent Counties
  - Prioritization of remaining I-95 and SR 1 locations without median barrier. Ranking system developed based on:
    - ADT
    - Horizontal Curvature (higher rating for higher degree of curvature)
    - Head On and Cross Median Crashes / Mile
    - Head On and Cross Median Crashes / 100 MVMT
    - Head On, Cross Median, Roadway Departure to Left Crashes / Mile (Weighted by Crash Severity)

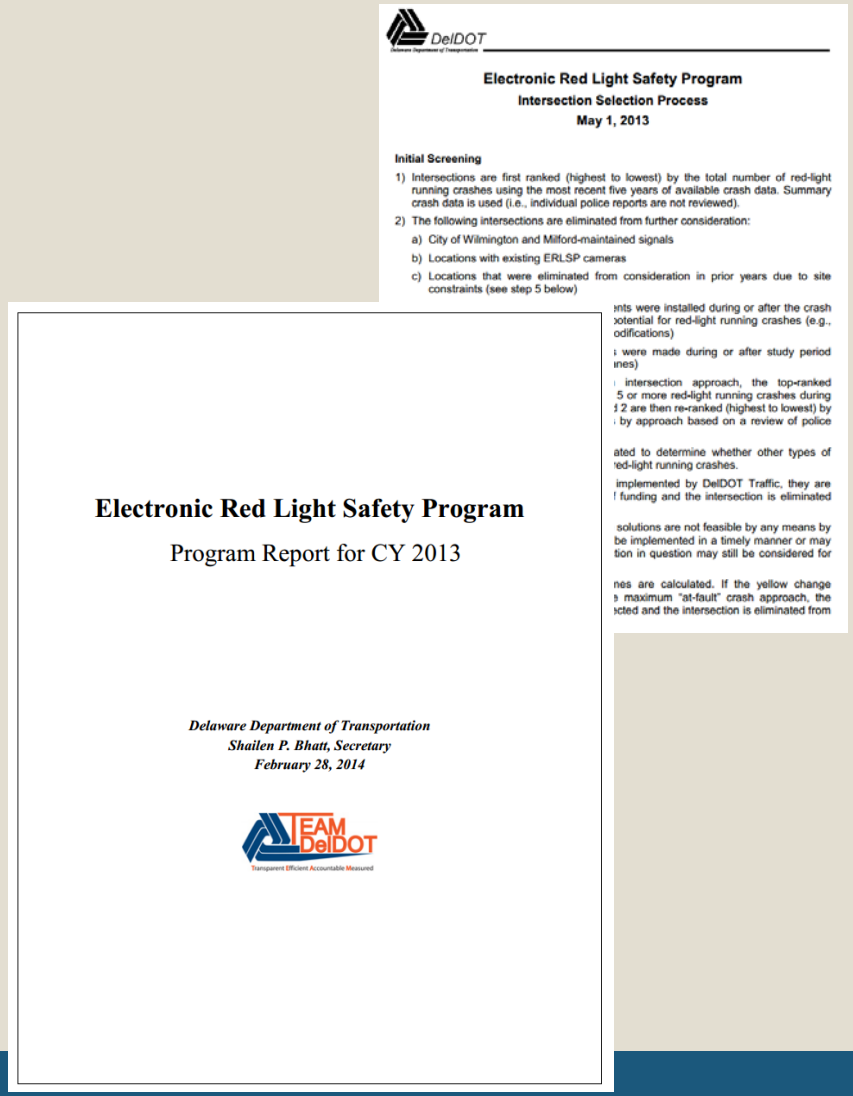
Other Systemic Programs

- Horizontal Curve Warning Sign Upgrades
  - Address MUTCD compliance date
  - Ongoing project will evaluate every curve on freeways, arterials and collectors
  - Future plans to address local roadways



Electronic Red Light Safety Program (ERLSP) Lessons Learned

- Program overview
  - Statewide program launched in 2004
  - 51 monitored approaches at 30 intersections
  - Lease agreement with “turnkey” vendor
  - Data-driven selection process, pending legislator approval
  - Transparent reporting



DelDOT

Electronic Red Light Safety Program
Intersection Selection Process
May 1, 2013

Initial Screening

1) Intersections are first ranked (highest to lowest) by the total number of red-light running crashes using the most recent five years of available crash data. Summary crash data is used (i.e., individual police reports are not reviewed).
2) The following intersections are eliminated from further consideration:
   a) City of Wilmington and Milford-maintained signals
   b) Locations with existing ERLSP cameras
   c) Locations that were eliminated from consideration in prior years due to site constraints (see step 5 below)

nts were installed during or after the crash
otential for red-light running crashes (e.g.,
odifications)
were made during or after study period
nes)
intersection approach, the top-ranked
5 or more red-light running crashes during
2 are then re-ranked (highest to lowest) by
by approach based on a review of police

ated to determine whether other types of
ed-light running crashes.
implemented by DelDOT Traffic, they are
funding and the intersection is eliminated

solutions are not feasible by any means by
be implemented in a timely manner or may
tion in question may still be considered for

nes are calculated. If the yellow change
maximum “at-fault” crash approach, the
cted and the intersection is eliminated from

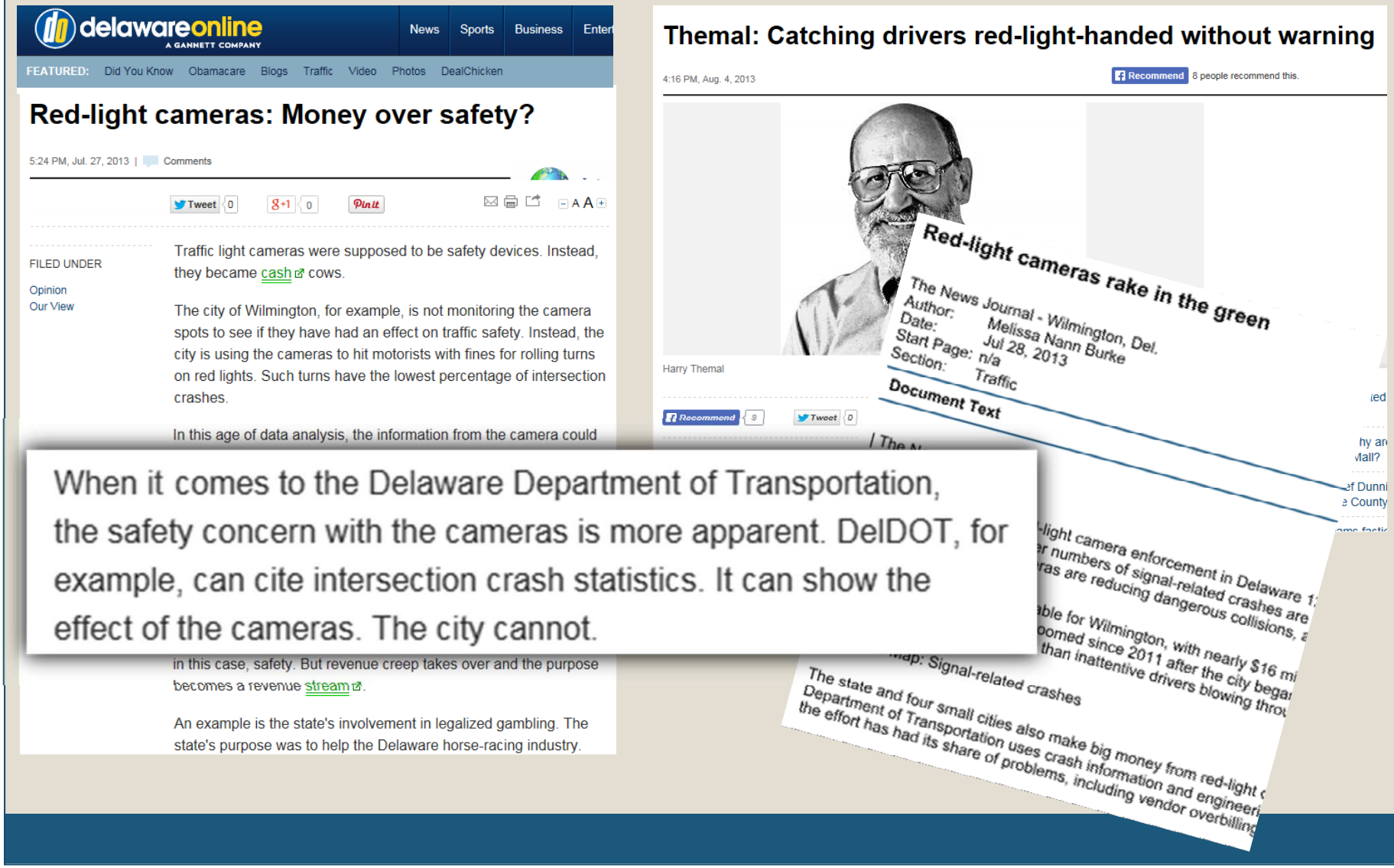
Electronic Red Light Safety Program

Program Report for CY 2013

Delaware Department of Transportation
Shailen P. Bhatt, Secretary
February 28, 2014

TEAM DelDOT
Transparent Efficient Accountable Measured

Electronic Red Light Safety Program (ERLSP) Lessons Learned



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Red-light cameras: Money over safety?

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Opinion
Our View

Traffic light cameras were supposed to be safety devices. Instead, they became cash cows.

The city of Wilmington, for example, is not monitoring the camera spots to see if they have had an effect on traffic safety. Instead, the city is using the cameras to hit motorists with fines for rolling turns on red lights. Such turns have the lowest percentage of intersection crashes.

In this age of data analysis, the information from the camera could

When it comes to the Delaware Department of Transportation, the safety concern with the cameras is more apparent. DelDOT, for example, can cite intersection crash statistics. It can show the effect of the cameras. The city cannot.

in this case, safety. But revenue creep takes over and the purpose becomes a revenue stream.

An example is the state's involvement in legalized gambling. The state's purpose was to help the Delaware horse-racing industry.

Themal: Catching drivers red-light-handed without warning

4:16 PM, Aug. 4, 2013

Recommend 8 people recommend this.

Harry Themal

Recommend 9 Tweet 0

Red-light cameras rake in the green

The News Journal - Wilmington, Del.
Author: Melissa Nann Burke
Date: Jul 28, 2013
Start Page: n/a
Section: Traffic

Document Text

light camera enforcement in Delaware 1
r numbers of signal-related crashes are
as are reducing dangerous collisions, a

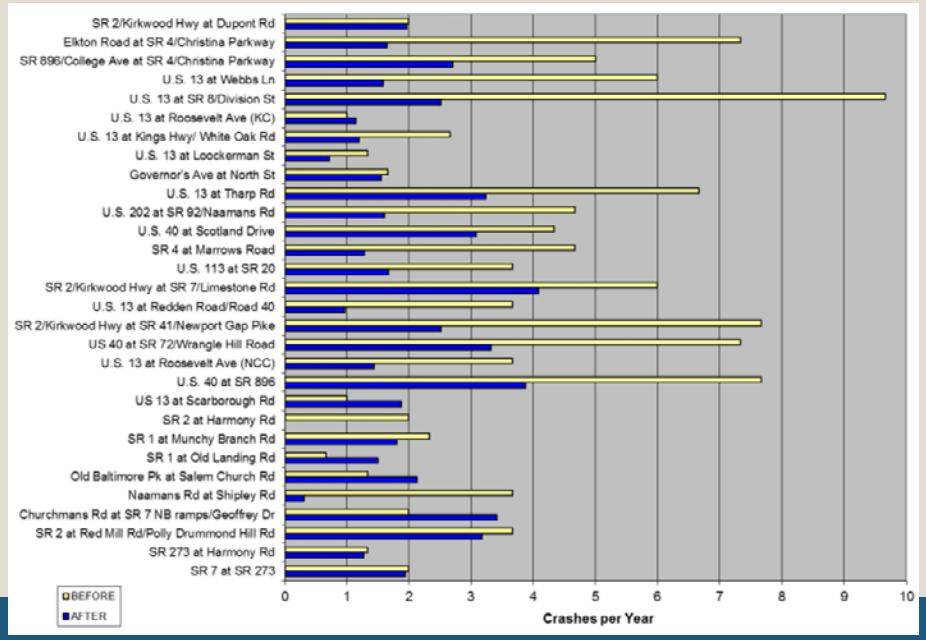
able for Wilmington, with nearly $16 mi
oomed since 2011 after the city begar
than inattentive drivers blowing throu

ap: Signal-related crashes

The state and four small cities also make big money from red-light
Department of Transportation uses crash information and engineeri
the effort has had its share of problems, including vendor overbillin

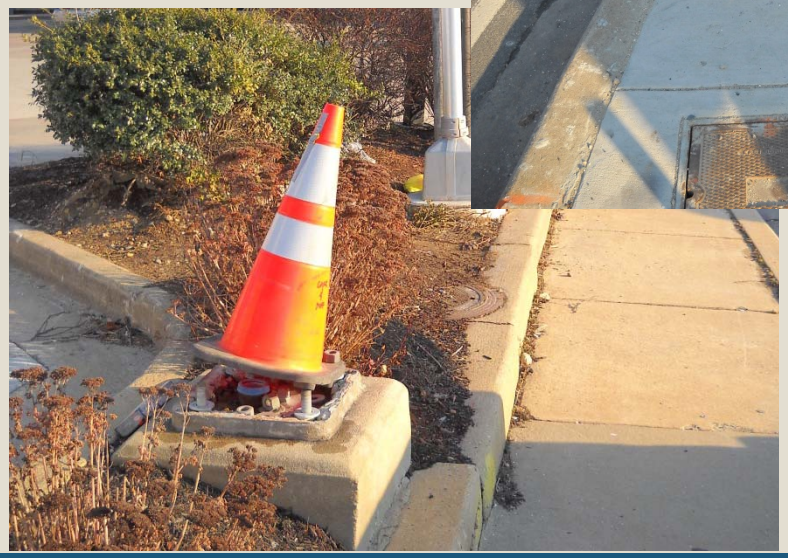
Electronic Red Light Safety Program (ERLSP) Lessons Learned

- Results
  - Angle crash reduction of 47%
  - Red light running crash reduction of 29%
  - Rear end crash increase of 3%
  - Approx. $4M to $5M annual revenue



Electronic Red Light Safety Program (ERLSP) Lessons Learned

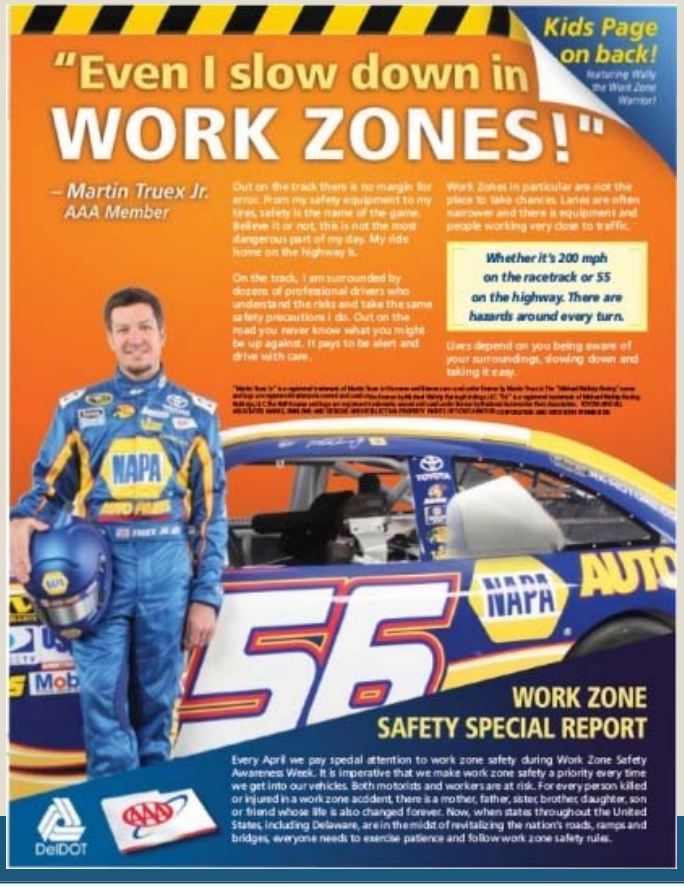
- "Turnkey" vendor challenges
  - Foresight for exit strategy
  - Lack of contractual "hammer" with outgoing vendor
  - Turf wars over existing infrastructure
  - Data retention



Work Zone Safety Initiatives

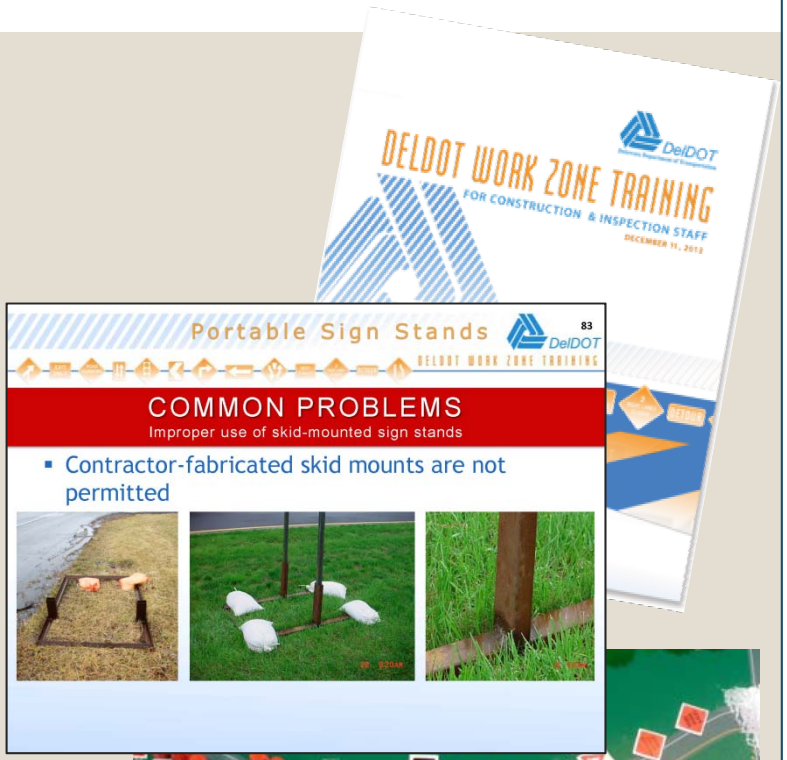
- Annual Work Zone Awareness Week

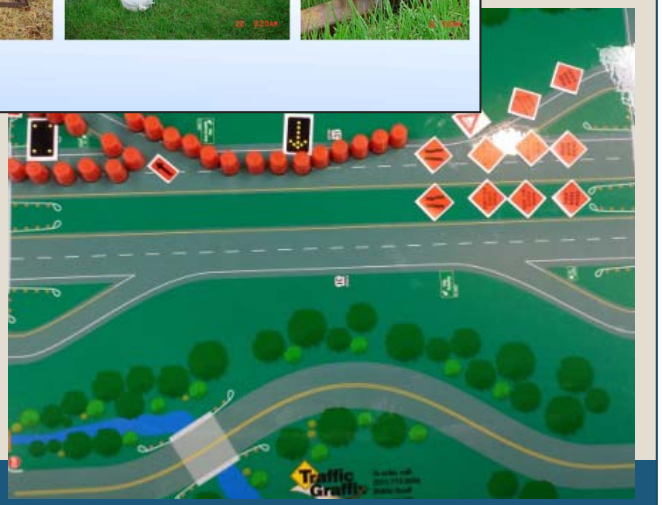
Wally the Work Zone Warrior



Work Zone Safety Initiatives

- Work Zone Safety & Mobility Training Series
  - Construction and Inspection staff
    - Trained 200 DelDOT inspectors and consultants
  - Equipment Operators
    - Trained 102 employees including management, supervisors and operators
  - Law Enforcement Officers
    - Working to get course integrated into normal academy training program
  - Utility companies (Delmarva Power)
  - Office staff (field awareness)
  - Design staff (course development underway)





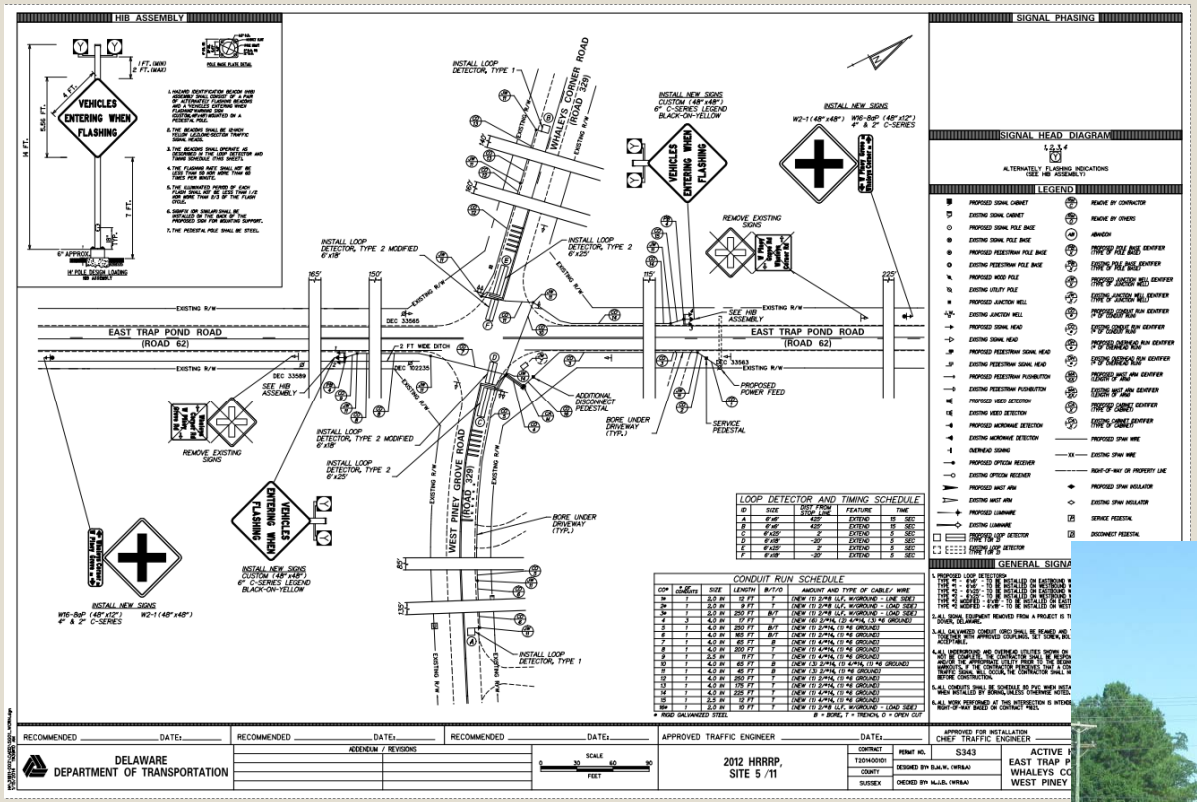
Through-Route Activated Warning System

- Whaleys Corner Road at Trap Pond Road
  - 2012 High Risk Rural Roads Program location
  - Existing conditions
    - Oversized STOP signs with CROSS TRAFFIC DOES NOT STOP
    - Transverse rumble strips on side street approaches
    - 50 mph speed limit with 85th percentile speeds over 60 mph
  - Crash data – 16 crashes (2008 – 2012) with 14 angle crashes
  - Options considered
    - Multi-way stop
    - Roundabout
    - ICB / warning beacons
    - Through-route activated warning system

Through-Route Activated Warning System

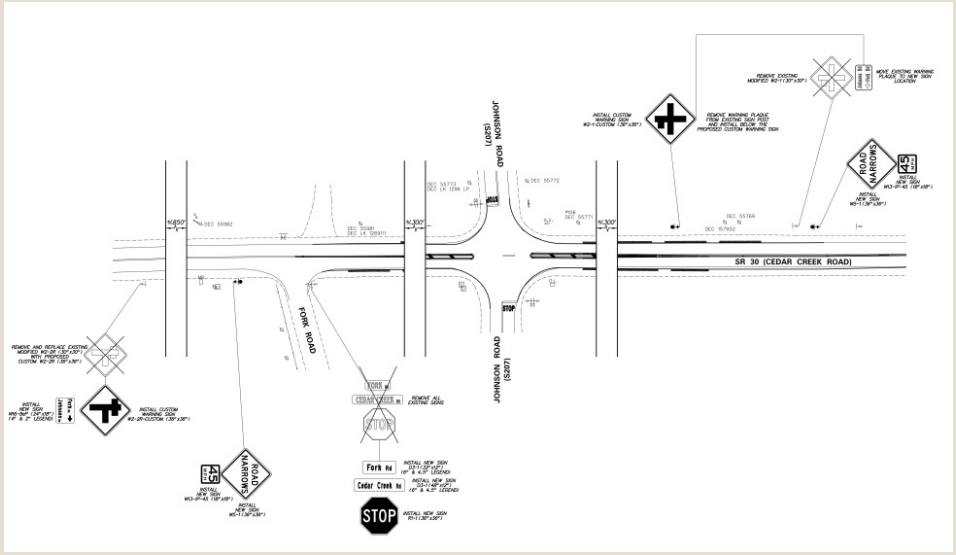
- Whaleys Corner Road at Trap Pond Road
  - Warn mainline motorists of a vehicle on the minor street with actuated flashing beacons
  - "Before / after" crash studies indicated 51% reduction of total crashes and 58% reduction of angle crashes
  - General Guidelines (FHWA Publication)
    - Where signals are not warranted and a roundabout is not appropriate → **MET**
    - Rural areas or where speed limit is ≥45 mph → **MET**
    - ≥ 10 total crashes in 5 years → **MET**
    - ≥ 5 angle crashes in 5 years → **MET**
    - Where substantial sight distance limitations either cannot be readily mitigated or are too costly to correct → **MET when vehicles are positioned at the stop line**
  - Through route-activated warning system installed in 2014
    - Crash monitoring to be performed
    - Three detectors installed on the side street approaches

Through-Route Activated Warning System



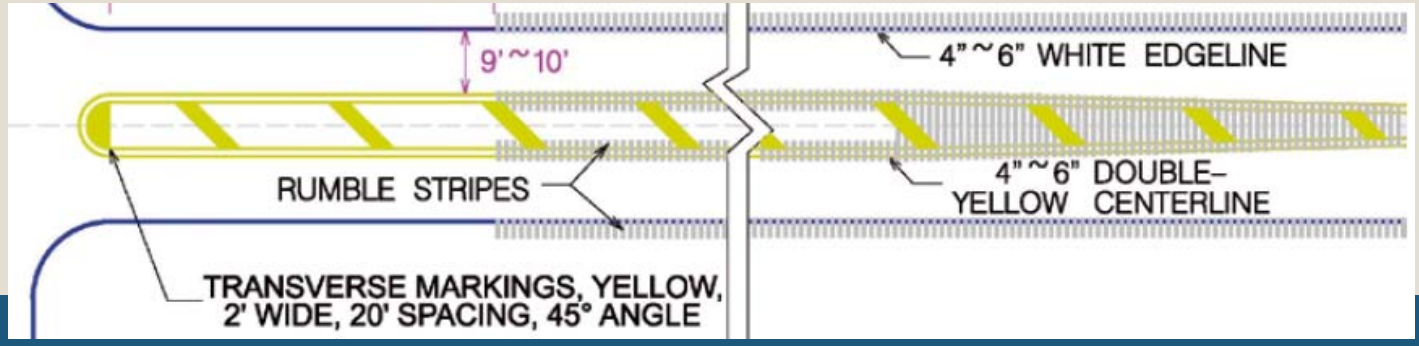
Lane Narrowing

- SR 30 at Johnson Road
  - 2012 High Risk Rural Roads Program location
  - Existing conditions
    - Oversized STOP signs with CROSS TRAFFIC DOES NOT STOP
    - 50 mph speed limit with 85th percentile speeds 55/56 mph
  - Crash data – 18 crashes (2008 – 2012) with 14 angle crashes & 3 left-turn crashes
  - Options considered
    - Signalization
    - Multi-way stop
    - Roundabout
    - ICB / warning beacons
    - Through-Route activated warning system
    - Speed reduction through lane narrowing ***(recommended and installed)***



Lane Narrowing

- SR 30 at Johnson Road
  - FHWA's *Crash Impact of Smooth Lane Narrowing with Rumble Strips at Two-Lane Rural Stop-Controlled Intersections*
    - 32% reduction in total intersection crashes
    - 4 of 8 test locations experienced an increase in rear end crashes
  - 38-foot pavement width along SR 30
  - RPMs may be installed in lieu of rumble stripes where noise is a concern



Grade Crossing Fire/EMS Monitoring System

- Concerns
  - Trains in excess of 2 miles block multiple arterials and diversion routes (including US 40)
  - Grade crossing blockage times in excess of 20 minutes
  - Slow-moving trains
  - Motorists attempt erratic and abrupt diversion maneuvers
  - Delayed response for Fire/EMS emergencies
  - Public and legislative firestorm

Delaware crude train counts expected to increase

Jeff Montgomery, The News Journal 11:19 p.m. EDT August 1, 2014

(Photo: GARY EMEIGH/THE NEWS JOURNAL)

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Crude-oil rail deliveries to the Delaware City Refinery could jump by as much as 80 percent in volume in coming months as PBF Energy ramps up shipments to take advantage of a newly completed offloading complex expansion.

Company officials went back to the crude-by-rail complex several times Friday morning during a relatively upbeat second-quarter earnings report for investors that emphasized the company's third-straight positive quarter, with $34.2 million in adjusted net income for the quarter ended June 30.

Grade Crossing Fire/EMS Monitoring System

- Devices
  - Three integrated warning assemblies / flashers
  - One exempt signal with advance diversion signs
  - Two standalone monitoring interconnections (under construction)
  - Compatible at all railroad preemption locations

Rail crossing upgrades, repairs underway near refinery

Melissa Nann Burke, The News Journal 10:34 p.m. EDT August 9, 2014

(Photo: WILLIAM BRETZGER/THE NEWS JOURNAL)

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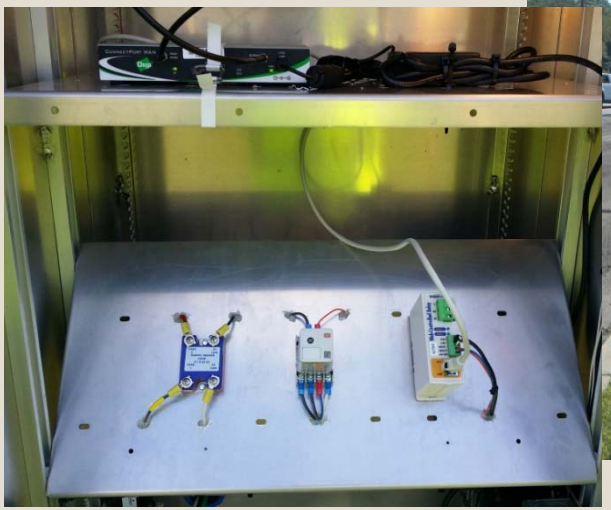
Safety upgrades at highway-railroad crossings near the Delaware City Refinery are underway, including a full replacement of the crossing at Del. 7/Bear-Corbitt Road north of Wrangle Hill Road.

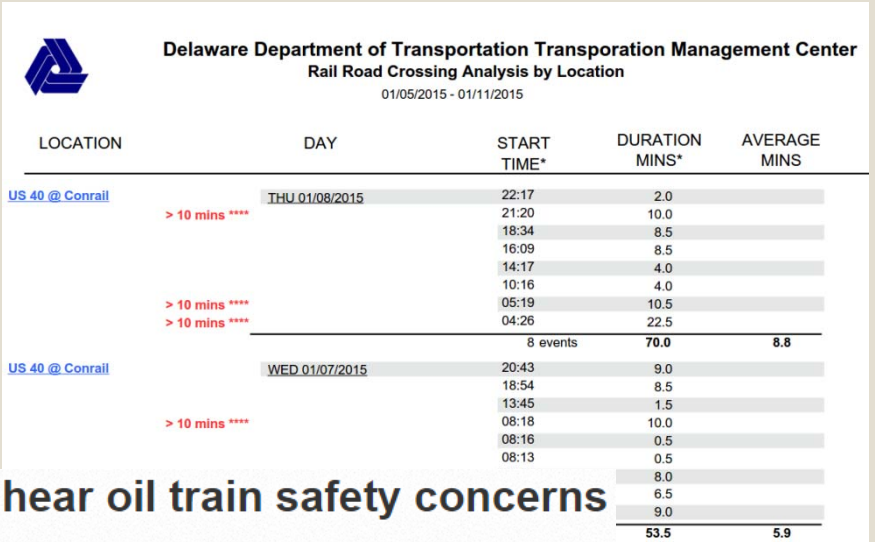
Crews are installing new warning devices such as gates and signal lights, and the roadway is expected to reopen by Friday at the latest.

A similar upgrade is planned in September for the crossing on Del. 9/River Road where it passes between refinery operations.



Grade Crossing Fire/EMS Monitoring System

- Information and tracking
  - Real-time reporting to 911 Center and Fire Board
  - Motorist information available via DelDOT App
  - Weekly reports and documentation for DE Code enforcement, fines, elected officials, et al.



Delaware Department of Transportation Transporation Management Center
Rail Road Crossing Analysis by Location
01/05/2015 - 01/11/2015

LOCATION	DAY	START TIME*	DURATION MINS*	AVERAGE MINS
US 40 @ Conrail	THU 01/08/2015	22:17	2.0	
> 10 mins ****		21:20	10.0	
		18:34	8.5	
		16:09	8.5	
		14:17	4.0	
		10:16	4.0	
> 10 mins ****		05:19	10.5	
> 10 mins ****		04:26	22.5	
		8 events	70.0	8.8
US 40 @ Conrail	WED 01/07/2015	20:43	9.0	
		18:54	8.5	
		13:45	1.5	
> 10 mins ****		08:18	10.0	
		08:16	0.5	
		08:13	0.5	
			8.0	
			6.5	
			9.0	
			53.5	5.9

Officials hear oil train safety concerns

Jeff Montgomery, The News Journal 8:51 a.m. EDT March 11, 2014

(Photo: KYLE GRANTHAM/THE NEWS JOURNAL)

STORY HIGHLIGHTS

- About 150 came to hear experts Monday in Delaware City

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Panelists fielded questions on topics ranging from oil train hazards to late-night horn blowing Monday, during a legislative forum in Delaware City focused on crude-by-rail traffic bound for the Delaware City Refinery.

About 150 people turned out for the session, sitting through nearly an hour of introductions and summaries from more than 20 panel members before taking questions. The forum was moderated by House Majority Leader Valerie Longhurst, D-Bear.

Thank you!

Questions???

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