Review of Virginia’s 2013 Work Zone Crash Statistics

Overview

• Look at 2013 WZS Crash Statistical Information
• Findings of our 2014 WZS Team Reviews
2013 Work Zone Crash Statistics

The following information helps explain what occurred in 2013 with work zone crashes statewide.
2013 Work Zone Crash Statistics

WZ Crashes and Injuries

WZ Crashes: 2013 - 3404, 2012 - 3465
WZ Injuries: 2013 - 1679, 2012 - 1781
2013 Work Zone Crash Statistics

* Includes a consultant inspector and a pavement marking contractor employee.
2013 Work Zone Crash Statistics

Crashes by VDOT District

- NOVA averaged 56.4 projects/month
- HR averaged 56 projects/month
- Rich. averaged 50 projects/month
2013 Work Zone Crash Statistics

Of the 3404 crashes last year, 468 were single vehicle crashes while 2935 were multi-vehicle crashes.

Included in these numbers were 63 motorcycle crashes resulting in 67 injuries and 3 fatalities.

Combined, there were a total of 7192 motorists involved in a work zone crash in 2013.
2013 Work Zone Crash Statistics

Crashes by Age Range

Oldest driver was 91 yrs old.
Based on a study by the University of Michigan, drivers need twice as much light to see the same object with the same clarity every 13 years after the age of 20.
Two thirds of the 2013 crashes were by drivers 30 years old or older.
2013 Work Zone Crash Statistics

Crashes by Month

Average of 9.3 crashes per day for the year.
Nearly 11 crashes per day from June to December.
2013 Work Zone Crash Statistics

Roadway Type

- Interstate: 2003
- Primary: 954
- Secondary: 371
- Urban: 78
2013 Work Zone Crash Statistics

Driver Action

- Following Too Close: 1587
- Fail to Maintain Control: 543
- Improper Lane Change: 426
- Did not have ROW: 181
- Hit and Run: 138
- Avoiding Other Vehicle: 83
2013 Work Zone Crash Statistics

Collision Type

- Rear End: 1924
- Sideswipe - Same Direction: 458
- Angle: 416
- Fixed Object - Off Road: 338
- Head on: 43
2013 Work Zone Crash Statistics

Lighting Conditions

- 2340: Daylight
- 917: Dawn
- 84: Dusk
- 63: Darkness

VDOT
2013 Work Zone Crash Statistics

Nighttime vs. Daytime Fatal Crashes

- **Nighttime**
  - Total Crashes: 9
  - Total Killed: 10

- **Daytime**
  - Total Crashes: 7
  - Total Killed: 11

Legend:
- Red: Total Crashes
- Blue: Total Killed
2013 Work Zone Crash Statistics

Location in the Work Zone

- Activity Area: 2237 crashes
- Advanced Warning Area: 675 crashes
- Transition Area: 422 crashes
- Termination Area: 70 crashes
2013 Work Zone Crash Statistics

Location in the Work Zone

- **TERMINATION AREA**: lets traffic resume normal driving - 70 crashes
- **WORK AREA**: - 2237 crashes
- **BUFFER AREA**: provides protection for traffic and workers - 422 crashes
- **TRANSITION AREA**: moves traffic out of its normal path - 675 crashes
- **ADVANCED WARNING AREA**: tells traffic what to expect ahead
Observations

• Motorist population is getting older, harder to see objects at night.
• Distracted driving is on the increase.
• It’s critical that temporary traffic control devices are visible and installed correctly to provide motorist adequate time to see and respond properly:
  • Clean w/ proper sheeting
  • Spaced appropriately and weighted
  • Monitored regularly
How’s it looking in 2014?

Road worker killed while picking up construction cones
BRIAN ETHRIDGE | JULY 25, 2014

Highway worker killed when driver veers off road
BRIAN ETHRIDGE | AUGUST 8, 2014

Construction worker killed while laying asphalt
BRIAN ETHRIDGE | AUGUST 19, 2014

3 workers hit, 1 killed in highway construction zone crash
BRIAN ETHRIDGE | SEPTEMBER 23, 2014
The following were positive findings during our review this year:

1. Proper signage for lane closures and shoulder operations
2. Effective use of PCMS and Arrow Boards
3. Adequate taper lengths and placement of tapers
4. Use of High Visibility Class 3 garments by workers
5. Positive flow of traffic through the work zones
The following were deficiencies related to paving operations found during our review this year:

- Missing some “End of Day” signage (Bump, Uneven Lanes, Rough Road) on some operations and entrance ramps.
- Mixture of drums with improper sheeting.
- Nighttime glare from work lights.
- Maintenance of channelizing devices near exit ramps.
- Workers wearing high visibility garments improperly.
The following were deficiencies related to paving operations found during our review this year:

- **Failure to weigh portable sign supports adequately.**
The following were deficiencies related to paving operations found during our review this year:

- Placement of EXIT OPEN and EXIT signs for exit ramps on the left side of the roadway instead of the right.
The following are some additional areas of concern expressed by some of our WZS Coordinators:

- Channelizing devices placed into open travel lanes for the entire length of the lane closure versus moving out then back in along with the operation.
- Lane closures excessively longer than needed.
- Closing ramps too soon.
- Running ramp traffic across grass areas.
- Leaving out advanced STOP AHEAD or YIELD AHEAD signs on entrance ramps.
The following are some additional areas of concern expressed by some of our WZS Coordinators:

- Excluding a yield area as shown in TTC-39 (Work Operation in the Vicinity of an Entrance Ramp).
Review of Revision 1 of the WAPM

The Traffic Engineering Division is in the process of revising the 2011 VA Work Area Protection manual and would greatly appreciate Industry review and input on the final draft by October 30th.

http://www.virginiadot.org/business/trafficeng-WZS.asp
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David Rush
WZ Safety Program Manager
Traffic Engineering Division