An Act Relative to Improving Safety on the Roads of the Commonwealth

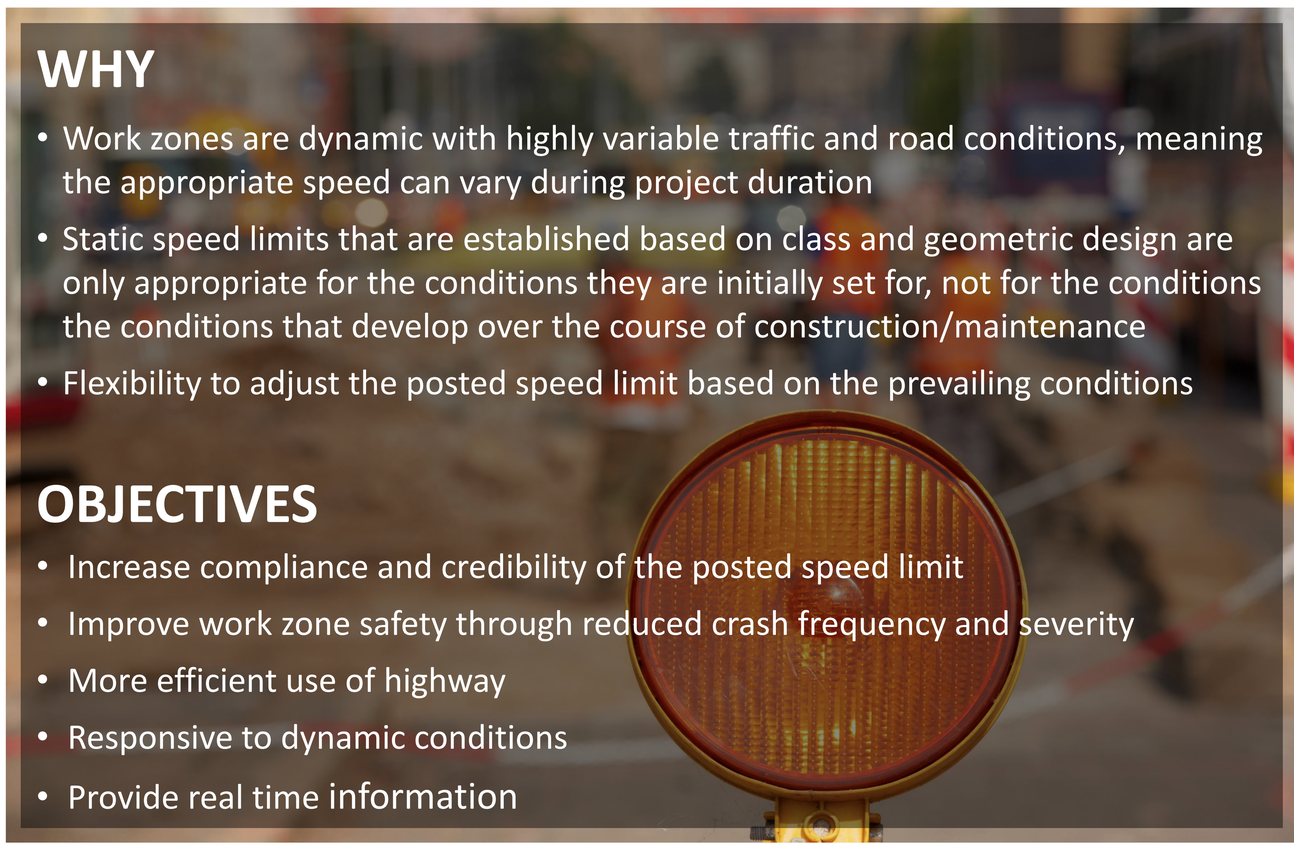
Variable Speed Limits

Would enable variable speed limits in work zones and double the penalties for motorists who are cited for speeding.

Proposed Massachusetts MGL Chapter 90 Section 17 ½

(a) For purposes of this section, the term "active construction zone" shall mean an area on a public highway or on the adjacent right of way where construction, repair, maintenance or survey work is being performed by the department, a utility company or a private contractor under contract with the department.

(b) Notwithstanding section 18, the department may establish a speed limit in an active construction zone without conducting an engineering study. A rate of speed in excess of a speed limit posted under this section shall be prima facie evidence that the speed is not reasonable and proper. The operation of a motor vehicle traveling at a rate of speed in excess of a speed limit established under this section shall be subject to a fine of 2 times the amount otherwise in effect for the violation issued. The speed limit shall be effective when signs giving notice of that speed limit are prominently displayed and construction, repair, maintenance or survey work is being performed. The signs may carry either a fixed speed limit or electronic message that displays adjusted speed limits when work is being performed. The signs shall notify motorists that a rate of speed in excess of the posted limit is subject to a fine of 2 times the amount otherwise in effect for the violation issued.



WHY

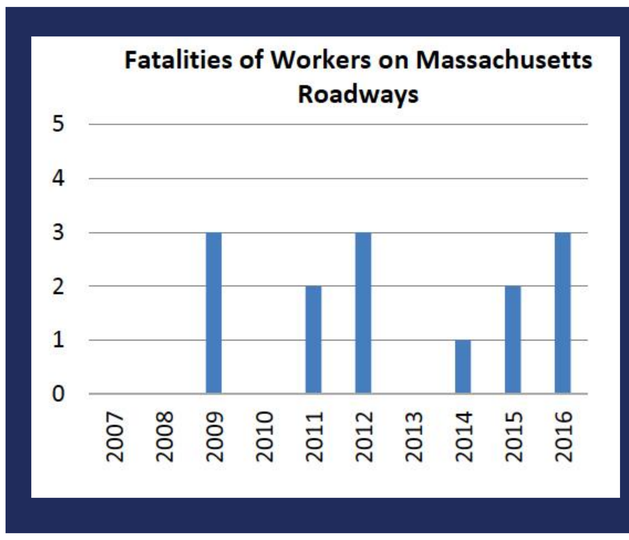
- Work zones are dynamic with highly variable traffic and road conditions, meaning the appropriate speed can vary during project duration
- Static speed limits that are established based on class and geometric design are only appropriate for the conditions they are initially set for, not for the conditions the conditions that develop over the course of construction/maintenance
- Flexibility to adjust the posted speed limit based on the prevailing conditions

OBJECTIVES

- Increase compliance and credibility of the posted speed limit
- Improve work zone safety through reduced crash frequency and severity
- More efficient use of highway
- Responsive to dynamic conditions
- Provide real time information

Work Zone Fatal Crash Characteristics

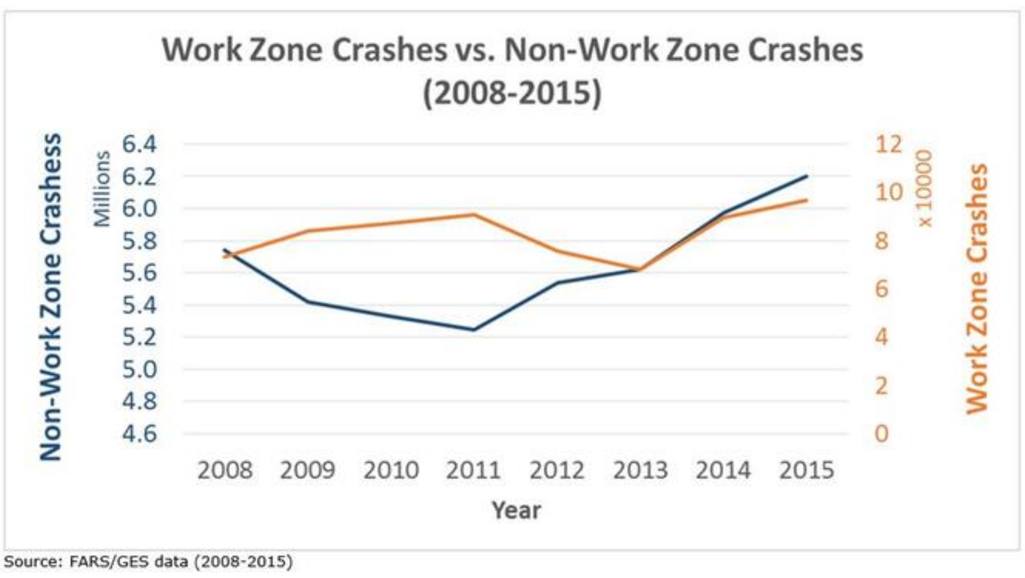
- Lack of seatbelt use was a factor in 25%
- Speeding was a factor in 28%
- Alcohol was cited as a factor in 25%
- 65% were classified as daytime crashes and 35% nighttime crashes.
- Fatal crashes occurred more frequently on Tuesday, Wednesday or Thursday.
- Fatal crashes occurred more frequently between May and September.
- Together urban freeways and arterials account for 43% of all work zone fatal crashes though they account for only 5% of the mileage of the total roadway network.
- 41% of crashes were rear-end collisions (compared to 16% of all fatal crashes).
- On average, 85% of deaths in work zones were occupants in cars.
- 25% of work zone MV fatalities involved large trucks (compared to 12% of all highway fatalities)



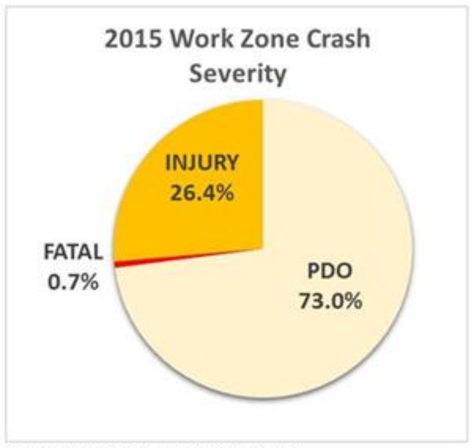
In Massachusetts, between 2012 and 2016, there was an average of 1.8 worker deaths per year – the highest of any 5-year increment in the last 10 years.

42% increase in Work Zone Crashes from 2013 to 2015.

The probability of a crash can be reduced by 5-17% through proper implementation of VSLs during "risky traffic conditions", such as work zones.



Source: FARS/GES data (2008-2015)



Source: FARS/GES data (2008-2015)

Other Success Stories

A Utah DOT study shows that the use of Variable Speed Limit signs result in both a statistically significant reduction in speeds through a work zone and a reduction in standard deviation of speeds. The decrease in mean speed can lead to reduced crash severity, while the decrease in speed variance can lead to a reduction in aggressive driving behavior.

A Washington State DOT study shows that use of VSLs on freeways has improved safety due to decreased vehicle speeds, which lead to decreased injury severity.