

Effective Speed Control Measures

NHDOT-ACEC
Winter Technical Exchange
February 7, 2025



Agenda

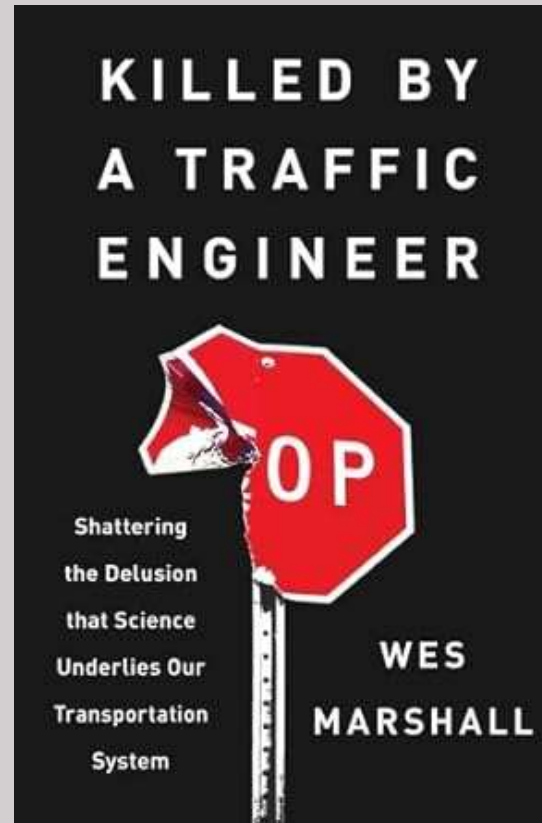
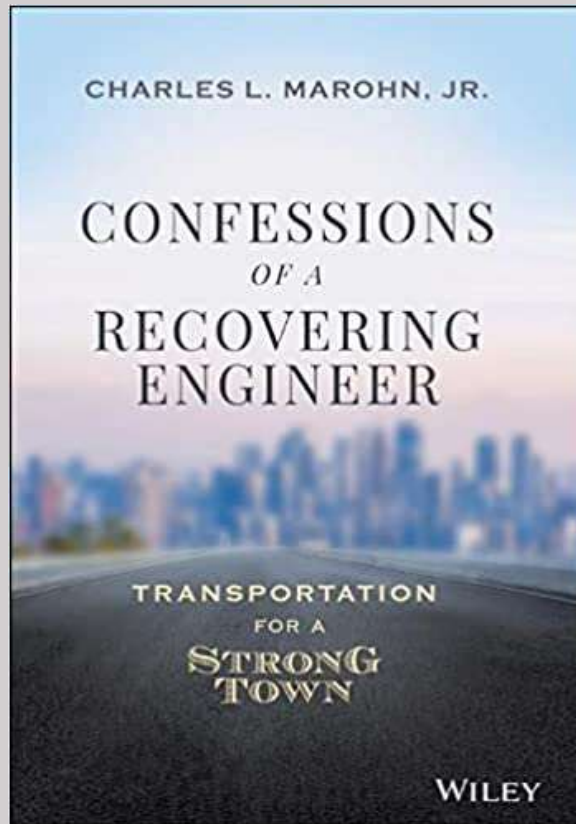
- Statutory speed limits
- State speed zones
- “Design speed” versus “target speed”
- Infrastructure features to encourage safer speeds
- Questions

Effective Speed Control Measures...

- “Safer Speeds” is one element of SSA; however, it is critical to all five elements:
 - “Safer People” can choose to drive at speeds safe for current conditions and to reduce odds of hurting others
 - “Safer Vehicles” can be made to prohibit excess speeds, or at least warn drivers when they are exceeding safe speeds
 - Excess speed at point of impact has a significant effect on “Post-Crash Care”
 - **“Safer Roads” can include features to promote self-enforcing speed limits**



Full disclosure...



Statutory Speed Limits

US4



Statutory speed limits

- Types of Speed limits



Source: FHWA

Statutory Speed Limits

- Speed limits are determined by state and local governments
 - Excepting World War II and the 1970's energy crisis
 - During WW II, the U.S. Office of Defense Transportation established a national 35-mph "Victory Speed Limit" to conserve fuel and rubber for the war effort [Wikipedia]
 - The National Maximum Speed Limit (NMSL), a provision of the 1974 Emergency Highway Energy Conservation Act, prohibited speed limits higher than 55-mph [Wikipedia]
 - The value was increased to 65-mph in 1987 **except in urban areas**
 - National maximum speed limit repealed 1995 [Wikipedia]

Statutory speed limits

- Uniform Vehicle Code (UVC)(source: 4SafeDrivers)
 - 1926: Initial national vehicle code established under the supervision of U.S. Commerce Secretary Herbert Hoover
 - 1968: Uniform Vehicle Code and Model Traffic Ordinances adopted by the National Committee on Uniform Traffic Laws and Ordinances (NCUTLO)
 - 2000: Last update of the UVC, NCUTLO subsequently disbanded
- UVC Rules of the Road
 - Provided as recommendation/guidance only, does not have the authority of the rule of law
 - Arguably, the demise of the UVC is due to state legislative disregard for the recommendations along with grass roots efforts to pass legislation

Statutory speed limits

Uniform Vehicle Code

- Section 11-802 – Establishment of State speed zones
 - The limits hereinafter specified shall be maximum lawful speeds, and no person shall drive a vehicle in excess of such maximum limits.
 - 35-miles per hour in any urban district;
 - 55-mile per hour in other locations.
- Section 11-803 – Establishment of State speed zones
 - “Whenever the (State highway commission) shall determine upon the basis of an engineering and traffic investigation that any maximum speed specified in Section 11-802 is greater or less than is reasonable or safe under the conditions found to exist at any intersection or other place or upon any part of the State highway system, the (commission) may specify a reasonable and safe maximum limit...

Statutory Speed Limits in New Hampshire

265:60 Basic Rule and Maximum Limits. –

II. Where no hazard exists that requires lower speed for compliance with RSA 265:60, I, the speed of any vehicle not in excess of the limit specified in this section or established as hereinafter authorized shall be prima facie lawful, but **any speed in excess of the limit specified in this section or established as hereinafter authorized shall be prima facie evidence that the speed is not reasonable or prudent and that it is unlawful:**

(a) In a posted school zone, at a speed of 10 miles per hour below the usual posted limit from 45 minutes prior to each school opening until each school opening and from each school closing until 45 minutes after each school closing.

(b) **30 miles per hour in any business or urban residence district as defined in RSA 259:118;**

(c) **35 miles per hour in any rural residence district as defined in RSA 259:93, and on any class V highway outside the compact part of any city or town as defined in RSA 229:5, IV;**

(d) **55 miles per hour in other locations, except as provided in (e);**

(e) **65 miles an hour on the interstate system, the central New Hampshire turnpike and the eastern New Hampshire turnpike in locations where said highways are 4-lane divided highways or other divided highways of 4 or more lanes, except that the speed limit on the portion of I-93 from mile marker 45 to the Vermont border shall be 70 miles per hour.**

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“55 miles per hour in other locations...”

(e) In a posted school zone, at a speed of 10 miles per hour below the usual posted limit from 15 minutes before each school opening until a discharge or from each school closing until 15 minutes after each school closing;

(b) 30 miles per hour in any business or urban residence district as defined in RSA 259:118;

(c) 35 miles per hour in any rural residence district as defined in RSA 259:93, and on any class V highway outside the compact part of any city or town as defined in RSA 229:5, IV;

(d) 55 miles per hour in the locations specified in (e);

(f) 75 miles per hour on the interstate system, the central New Hampshire turnpike and the eastern New Hampshire turnpike in locations where said highways are 4-lane divided highways or other divided highways of 4 or more lanes, except that the speed limit on the portion of I-93 from mile marker 45 to the Vermont border shall be 70 miles per hour.

Statutory Speed Limits in New Hampshire

“Other locations” represents the majority of segments in New Hampshire, yet 55-mph is not appropriate for rural, two-lane highways winding around lakes and mountains and along rivers and historical farm to market cart paths. That leaves most highways subject to “State Speed Zones” at the discretion of the “commissioner of transportation”.



Statutory Speed Limits in New Hampshire

265:60 Basic Rule and Maximum Limits. –

(As of January 1, 2025)

II. (d) **45 miles per hour in any unimproved rural highway as defined in RSA 259:116-a.;**

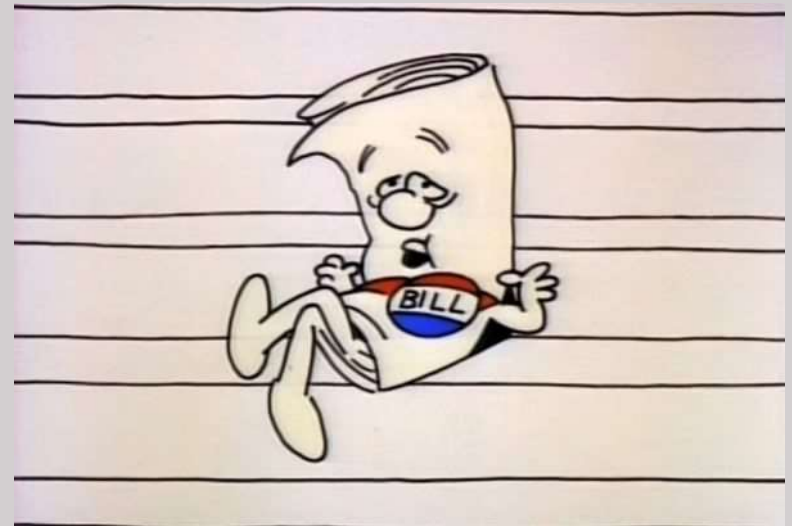
259:116-a Unimproved Rural Highway. – "Unimproved Rural Highway" means the territory contiguous to a 2-lane highway not comprising a business district, urban residence district, or rural residence district, but where reduced speeds are warranted due to highway geometry, lack of paved shoulders, or low-density presence of driveways and other accesses to the public way.

Statutory Speed Limits in New Hampshire

- Premise:
 - Elected officials determine maximum “reasonable and safe” speed based on context (statutory speed limits)
 - Modifications to statutory speed limits should be the exception, hence the requirement of an “engineering and traffic investigation”
 - Traditional “engineering and traffic investigations”, with emphasis on measured 85th percentile speeds of free-flowing vehicles, do not support lower speed limits
 - Adding an intermediate statutory speed limit establishes the legislative intent for “unimproved rural highways”

Statutory Speed Limits in New Hampshire

- SB 471 – Path to success?
 - Senate Transportation – passed unanimously (5-0)
 - Senate – passed, consent calendar
 - House Transportation
 - Inexpedient to legislate – failed 10-10
 - Ought to pass – failed 10-10
 - House Floor – laid on the table
 - Added as amendment to HB 2024 (Ten Year Transportation Improvement Plan)



Statutory Speed Limits in New Hampshire

- Intermediate 45-mph statutory speed limit, what's next?
 - No immediate plans to inventory state highways based on statutory speed limit context
 - State Traffic Engineer can consider as part of any routine speed limit evaluation
 - Some state speed zones previously reduced may increase to new statutory value, especially where previous reduction was due to “curvilinear nature of geometry”
 - Some state speed zones may be decreased to new statutory value



State Speed Zones



State Speed Zones in NH

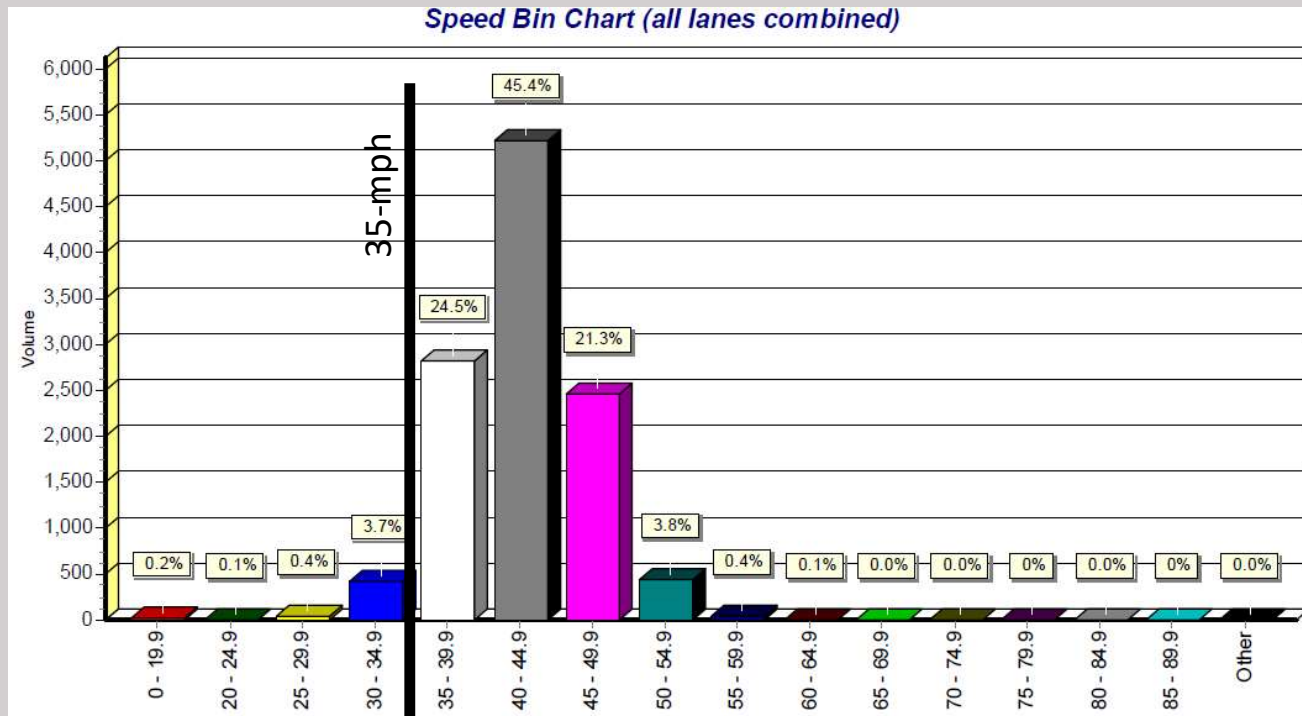
- RSA 265:62 State Speed Zones
 - I. Whenever the commissioner of transportation shall determine, **upon the basis of an engineering and traffic investigation**,...said commissioner may determine and declare a reasonable and safe prima facie speed limit thereat which shall be effective when appropriate signs giving notice thereof are erected.
 - “engineering and traffic investigation” is not defined in NH state statutes
- (RSA 265:63 provides similar authority to municipalities)



State Speed Zones in NH

- Prior to 2013
 - State speed zones determined by Highway Maintenance district engineers with support from State Traffic Engineer
 - “Engineering and traffic investigation” was not defined and may simply have been a cursory review by the “engineer” with local or state enforcement personnel
 - Speed studies may, or may not, have been included
 - Political considerations/pressure led to subjective state speed zones
 - Documented “reason for zoning” included subjective measures, including:
 - Curvilinear nature of the road
 - Entering “business district” or “rural residence district”, with no documentation to assure the segment met the statutory definition
 - When speed limits reduced, not unusual for subsequent speed studies to capture less than 10% of vehicles (i.e. 10th percentile)

State Speed Zones in NH



Candia, NH 27 (posted speed limit, 35-mph)

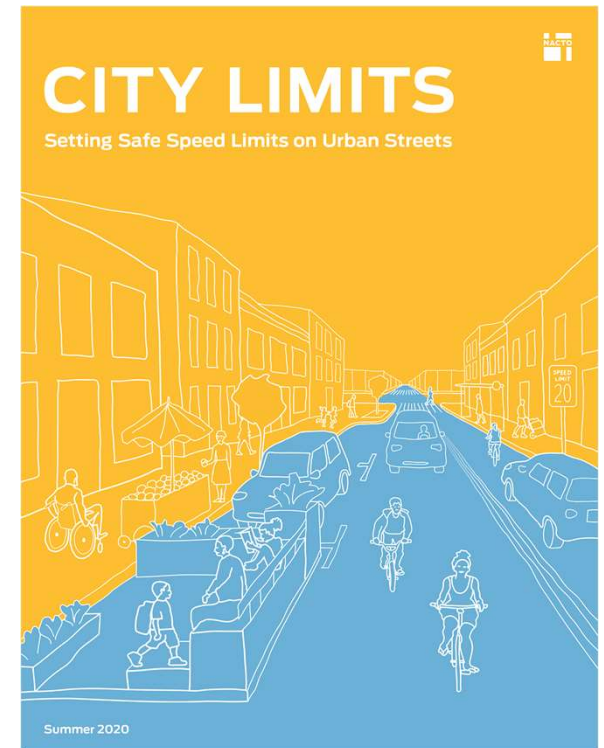
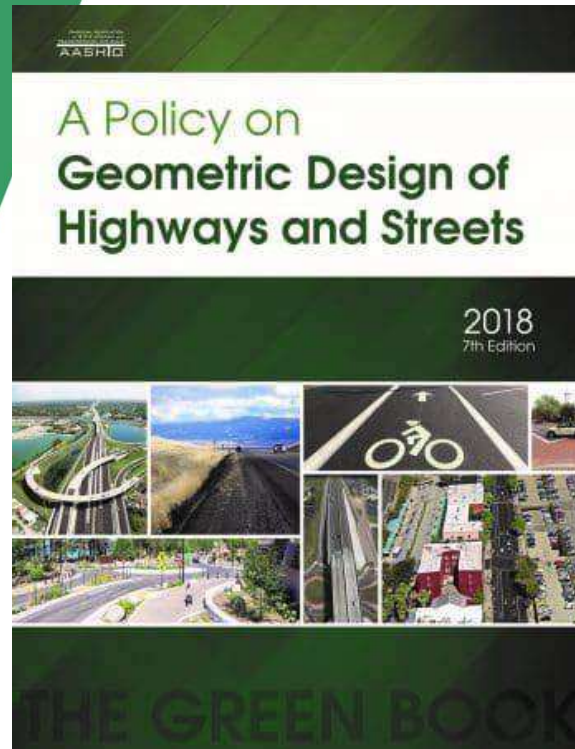
State Speed Zones in NH

- 2013 to present
 - State speed zones determined by State Traffic Engineer
 - Engineering and traffic investigation consistently includes:
 - Speed study
 - Crash history
 - Context (as input into expert system, USLIMITS2)
 - Speed limit changes:
 - Increased speed limit
 - May result in more horizontal alignment signing (posted speed limit versus measured advisory speed)
 - May result in fewer passing zones (passing sight distance for posted speed limit)
 - Coordination with local officials, including law enforcement, for approval as needed
 - Decreased speed limit
 - **May result in horizontal alignment signing, passing zones, guardrail layout, and other safety features that do not reflect actual traffic conditions**

State Speed Zones in NH

- Other resources:
 - Speed Limit Setting Handbook, FHWA, 2025
 - [Speed Limit Setting Handbook | FHWA](#)
 - USLIMITS2, FHWA
 - [USLIMITS2 | FHWA](#)
 - Setting Speed Limits, ITE
 - [Setting Speed Limits - Institute of Transportation Engineers](#)
 - City Limits, NACTO
 - [City Limits – NACTO](#)
 - Bill Lambert, NHDOT
 - william.r.lambert@dot.nh.gov

“Design speed” versus “target speed”



“Design speed” vs. “Target speed”

- Definitions:
 - Design speed (Geometric Design of Highways and Streets, AASHTO, 1984)
 - “Geometric features should be consistent with a design speed appropriate for the conditions...”
 - **“The designer should strive for higher values than the minimum where conditions of safety dictate and costs can be supported.”**
 - Target speed (Safe speeds: roadway treatment technical toolkit, MassDOT, 2024)
 - “A target speed is the highest operating speed at which drivers should ideally operate on a roadway given a specific context.”
- What does this mean?
 - When we design highway elements to meet or exceed the “minimum” for a selected design speed (generally higher than the posted speed limit), we can’t be surprised when the posted speed limit is at the low end of the speed distribution
 - Target speeds are more likely to result in “self-enforcing” speed limits

Infrastructure features to encourage safer speeds



Features to encourage safer speeds

- Intersection control

- All way stop control can create a lower speed “village” environment
- Roundabouts require all drivers to reduce speed as they enter the intersection so that crashes are at low speed and typically not at right angles



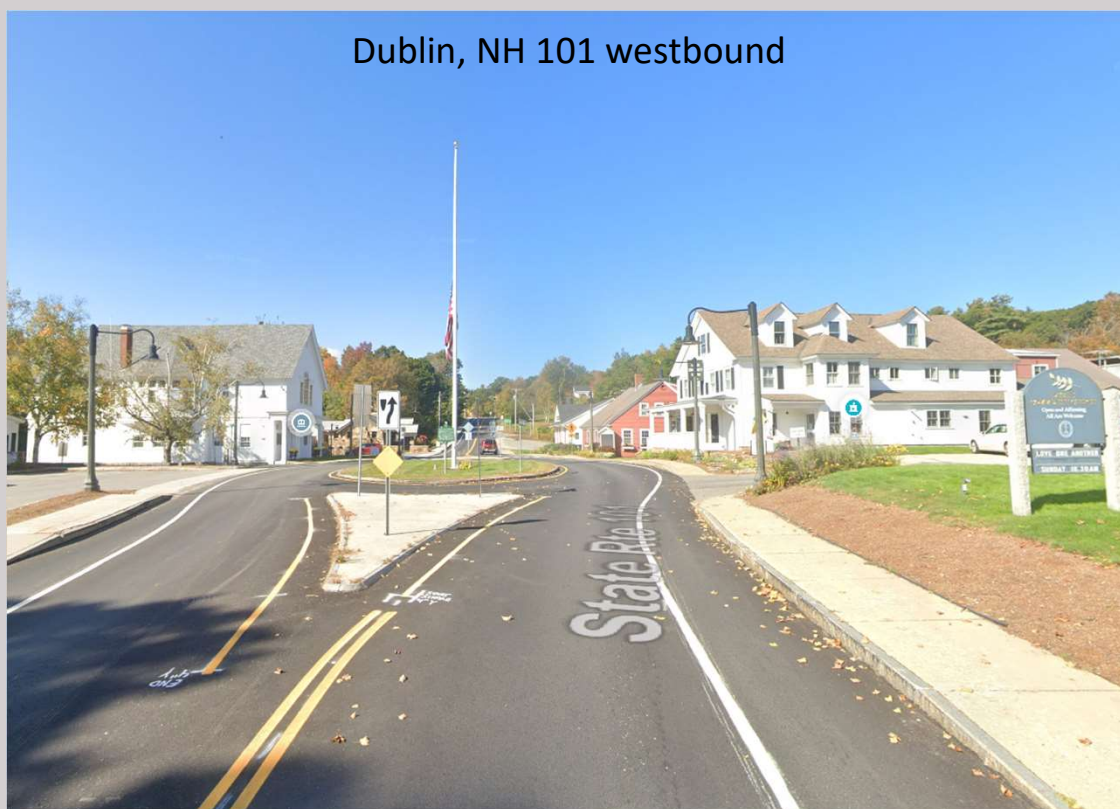
Salisbury, US 4/NH 127



Lancaster, US 2/US 3

Features to encourage safer speeds

- Gateway treatments
 - Emphasize transition zones from rural highways to village settings
 - Force drivers to make a horizontal shift as they enter the village, encouraging safer speeds



Features to encourage safer speeds

- Speed feedback signs
 - Should be used sparingly to be effective
 - Owned/maintained by municipalities on state highways through maintenance agreement with the Bureau of Traffic
 - Can be incorporated into school zone speed limit assemblies
 - Must be compliant with the MUTCD



Features to encourage safer speeds

- Seasonal speed limits
 - Introduced to address locations where pedestrian and bicycle traffic is largely seasonal so that it does not warrant year-round speed limit reduction (see RSA 265:62 and RSA 265:63)
 - Implemented by towns, as approved by NHDOT Bureau of Traffic



Hebron-Bridgewater, NH 3A

Features to encourage safer speeds

- Other features that can support safer speeds:



Lateral shifts/median island
Keene, NH 9 at Base Hill Road



Road diets
Chichester, US 4/US 202/NH 9

Non-infrastructure measures

Education and outreach



Let me introduce you to Hazel Mae

Elements to encourage safer speeds

- **Credible speed limits**

- Speed limits, especially state speed zones (or local speed zones) should reflect a reasonable and safe maximum speed to encourage self-enforcement
- Reducing the speed limit without changing the character of the segment does not reduce operating speeds
- Law abiding drivers should not be made law-breakers simply to shame the extreme violators to reduce their speed to a reasonable value (FYI, they are not likely to do so)
- Speed limits that do not reflect the prevailing speed may negatively impact other highway safety elements, such as:
 - Horizontal alignment signing
 - Passing/no passing zones
 - Roadside barriers

Questions?

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603-271-2604



Shameless plug:
New website for
submitting crash requests:
Search “[Safety Section](#)” on
dot.nh.gov