

Overview of NHDOT's Midblock Pedestrian Crossing Program

Presentation Notes: EDC5 - Safe Transportation for Every Pedestrian Workshop, Manchester, NH 4/9/2019

To justify approval of a crosswalk (or reinstallation after resurfacing projects), two primary criteria must be met:

- 1) That the crosswalk tells motorists where they should expect to see pedestrians; and,
- 2) That the crosswalk identifies a safe place to cross for pedestrians.

Criteria #1 is met when it appears that 20 pedestrians per hour would use the crosswalk in the typical peak period

Criteria #2 is met when there are no concerns relative to the following:

- Vehicular volume >7,000 veh/day (AADT)*
- Vehicular speeds >35mph*
- AASHTO Stopping sight distance not met or marginally met*
- Crossing 3 or more lanes of traffic*
- Rural areas where pedestrian crossings would not be expected*
- Right turn conflicts⁺
- Drainage conflicts⁺
- Crossing leads to street, driveway, or parking space (no parking within 20' of crosswalk)⁺
- Nighttime visibility⁺

* Could possibly be mitigated by using an energized device (RRFB or PHB)

⁺ Could possibly be mitigated by identifying an alternate location for the crossing

NHDOT deploys 4 types of pedestrian crossings: **marked** crossings (when BOTH above criteria #1 and #2 are met), **unmarked** crossings (when criteria #1 is met for a specific singular location, but #2 is not met), marked crossings with **RRFBs** (to mitigate safety concerns under criteria #2, or improve motorist compliance), and marked crossings with **PHBs** (when MUTCD warrants are met).

NHDOT-specific requirements

- 1) Sign color: fluorescent yellow-green for school-related activity only, fluorescent yellow for horizontal alignment warning signs only, standard yellow for everything else (including all non-school related pedestrian warning signs).
- 2) Pedestrian sign selection: S1-1 when crossing activity occurs predominantly weekday mornings and afternoons when school is in session. W11-2 should be used when crossings commonly occur evenings/weekends/summer.
- 3) Advance signs: all crosswalks to receive advance warning signs whenever feasible. For downtown commercial districts with numerous crosswalks, one advance sign is used for the first crossing with a "NEXT X MILES" plaque.
- 4) Consistent deployment along a corridor of uniform character: when an RRFB is installed at a crosswalk in a corridor with other crosswalks, all crosswalks must be have RRFBs so motorists have a uniform expectation.

Pedestrian crossing elements seen in other jurisdictions not typically permitted for use on the NH state system

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| 1) Passive pedestrian detection (for RRFBs) | 3) Flashing border signs | 5) Raised crosswalks |
| 2) Steady-flashing beacons for pedestrian crossings | 4) In-pavement warning lights | 6) Refuge islands |

Municipal maintenance responsibilities

- Pavement markings - crosswalk, stop bars (at PHB)
- Annual inspections
- Sidewalk & level landing snow removal
- Sidewalk & level landing physical condition
- Energized devices incl. attached signs and power bill
- Street lighting including power bill
- Beacon assembly and controls/emergency response

Formal request for new midblock pedestrian crossing (include location & pedestrian-generating use explanation)

Midblock Crosswalk Request
 NHDOT Bureau of Traffic
 18 Smokey Bear Blvd.
 PO Box 483
 Concord, NH 03302-0483

Preliminary non-binding discussion (optional)

Mike O'Donnell, Senior Traffic Operations Engineer
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Accessibility Design Reference: PROWAG (for curb ramps, truncated dome plates, landings, pushbutton locations, etc.)

<https://www.access-board.gov/guidelines-and-standards/streets-sidewalks/public-rights-of-way/proposed-rights-of-way-guidelines>

Street Lighting Reference: Lighting Design for Midblock Crosswalks (for street lighting ahead of midblock crossings)

<https://www.fhwa.dot.gov/publications/research/safety/08053/>

(required only for new crosswalks or crosswalks improved as part of LPA projects, otherwise recommended)

Traffic Control Devices Reference (signs, pavement markings, energized devices): MUTCD

https://mutcd.fhwa.dot.gov/kno_2009r1r2.htm