

NHDOT Finds That Safety at Midblock Pedestrian Crossings can be Improved with Additional Lighting

As daylight increases, NHDOT is busy preparing for the start of the upcoming paving season. This effort includes sending information to the municipalities where paving projects will occur about their maintenance responsibilities for midblock crosswalks and other uncontrolled pedestrian crossings, which are those not subject to stop, yield, or signalized control. This follows an exhaustive review of all segments slated for paving to assure that these types of crossings are appropriately located, and meet minimum safety criteria. The municipalities are asked to reaffirm their willingness to accept the maintenance responsibilities, and specify whether they prefer to have NHDOT install the initial crosswalk markings or perform this work with their own forces. It is noted that all maintenance and restriping beyond the initial marking is the responsibility of the municipality.

Additional Lighting Recommended

The single-sheet agreements that municipalities are asked to sign and return by May 1, 2020 include information about a specific crossing location, and may also note that “Additional Lighting is Recommended”. NHDOT estimates that 90% of uncontrolled pedestrian crossings on the State-maintained road network fall well short of Federal guidelines¹ for street lighting at existing uncontrolled crosswalks. If this note is included in the correspondence, then these guidelines are not met at the specific location described.



Does Lighting Matter?

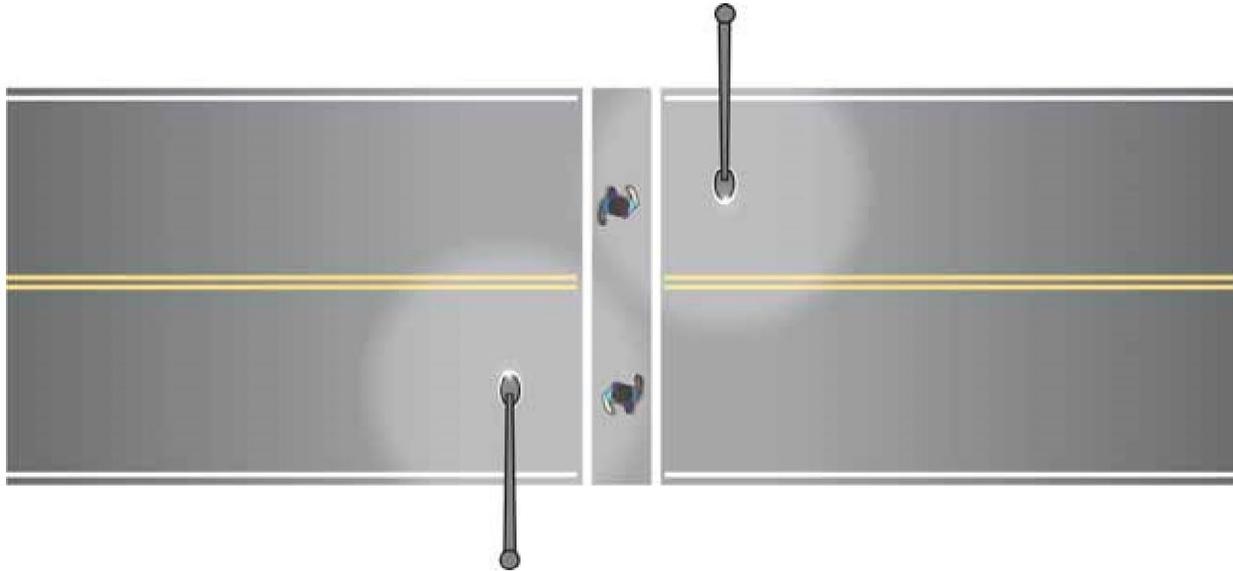
Based on 2018 data compiled by the National Highway Traffic Safety Administration² (NHTSA), pedestrian fatalities have been on the rise for the past 10 years, bucking the 40-year downward trend of overall traffic fatalities. From 2017 to 2018 alone, pedestrian fatalities increased by 3.4% to a 28-year high of 6,482 pedestrian fatalities nationally. Of these, about three-quarters occurred during the nighttime in dark lighting conditions. Street lighting that meets the Federal criteria enhances the visibility of a pedestrian as seen by an approaching motorist.

¹ Gibbons, Ronald B, Chris Edwards, Brian Williams, & Carl K Andersen. “[Informational Report on Lighting Design for Midblock Crosswalks](#).” Virginia Tech Transportation Institute. FHWA-HRT-08-05, 1-32, Office of Safety Research and Development, Federal Highway Administration, McLean, VA: 2008.

² National Center for Statistics and Analysis. (2019, October). 2018 fatal motor vehicle crashes: Overview. (Traffic Safety Facts Research Note. Report No. DOT HS 812 826). Washington, DC: National Highway Traffic Safety Administration.

What Exactly Are Municipalities Being Asked to Consider?

At the core of the recommendation is the placement of streetlights: for a typical two-lane road, provide one street light positioned at least 10 feet in advance the crossing location for each direction of vehicular traffic for a total of two streetlights per crossing in most situations. This configuration casts light on the side of the pedestrian in view of the approaching motorists. It can alert motorists to the presence of a pedestrian sooner, before the pedestrian comes into the field of their headlights.



Vertical illuminance is another important consideration. Achieving a minimum level of 20 lx in the crosswalk, measured 5 feet from the road surface can provide better contrast for visibility of pedestrians against brightly lit backgrounds. It can also help improve pedestrian detection by motorists experiencing glare from the headlights of oncoming vehicles. Most utility-grade streetlights achieve these criteria.

Next Steps

Municipalities wishing to improve pedestrian safety through street lighting at uncontrolled crossing locations should reach out to Mike O'Donnell at the NHDOT Bureau of Traffic (michael.o'donnell@dot.nh.gov). Each location where lighting is proposed will be reviewed to assure that it otherwise meets the Department's safety criteria for uncontrolled pedestrian crossings, or if an alternate location should be considered. Once the crossing location is confirmed, the municipality should contact their NHDOT Maintenance District Office to apply for any necessary permits based on the work proposed. The pole licensing procedure outlined in the NHDOT's Utility Accommodation Manual will also apply.³ Decorative street lights are becoming increasingly popular in many municipalities – note that additional review may be required where these are proposed.

³Bureau of Highway Design, Design Services. (2010, February). Utility Accommodation Manual. Concord, NH. New Hampshire Department of Transportation.