

14 February 2020

Selectperson Mahon
730 Massachusetts Ave
Arlington, MA 02476

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SELECTMEN'S OFFICE
ARLINGTON, MASSACHUSETTS
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Dear Selectperson Mahon:

Cycling has seen a surge in popularity in the past few years, as more and more people begin to act on the climate crisis, and as public health becomes a more well-known issue. Because of this, the Minuteman Bikeway has more users every day, with thousands enjoying the easy passage it allows from one town to another. The Bikeway does not come without its challenges, however. Many crossings where the Bikeway intersects with a road are quite dangerous, and one of the worst crossings is where the Bikeway crosses Lake Street, just after Spy Pond. A change is needed, and there are a few easy options: build a raised crosswalk to act as a speed bump, add flashing lights on the side of the road, or repaint the crosswalk to be more visible.

According to Wicked Local Arlington, in the months from June to November of 2019, "there were 322,241 Minuteman Bikeway trips" ("Arlington Releases Data"), which demonstrates the boom in popularity that the Bikeway has had, and the cruciality with which it serves the residents of Arlington and surrounding towns. Because of this high number of users, the Bikeway can lead to accidents. Also, the road that the Bikeway intersects can be very unsafe. When traveling down Lake St, many cars go too fast, as they do not expect to have to slow down on a road that seems more important and arterial than it is. Also, Lake Street is often backed up with traffic. Many drivers get very impatient waiting in traffic, and are therefore less likely to slow down or stop at the crosswalk, especially if they believe the crosswalk is *causing* the traffic.

These three factors (a large number of people on the Bikeway, general ignorance of the speed limit on Lake St, and a large number of impatient drivers waiting in traffic) all combine to create a dangerous situation.

Unsafe conditions like these go hand in hand with an alarming fact: that 75% of biking incidents occur at or near road junctions ("Cycling Accidents"). Junctions are the most dangerous place on a road or Bikeway for cyclists, and logically so, as a junction is the spot on the road where you have to pay the most attention. Also, biking incidents have happened on the Bikeway near Arlington. In March of 2019, a "71-year-old Arlington cyclist [died] ... on the Minuteman Bikeway" (WCVB-TV), demonstrating how severe accidents can happen even on a local, slow speed bike path. The Town is willing to take action; the crossing of the Bikeway with Mill Street has been improved incredibly over the past few years. Lines have been repainted, and two signs on either side of the road flash with lights whenever cyclists are crossing. Why not make some of those changes at Lake St as well, which is arguably more dangerous?

Here is a bill that could be proposed to try and change that intersection for the better. This bill offers three solutions for the problem:

- 1) A raised crosswalk to act as a speed bump for cars going past.
- 2) A 3-Dimensional or otherwise visually attractive crosswalk to attract driver attention (see Figure 1 for an example).
- 3) A Rectangular Rapid-Flashing Beacon (a type of sign with lights) that would also attract driver attention, and would not go down in effectiveness with time.

These solutions are plausible, and they are effective. A raised crosswalk would serve threefold: For one, it would be much easier to see than the current, fading crosswalk. Also, raised crosswalks “[improve] pedestrian safety by causing motorist speed to decrease at the crossing”.

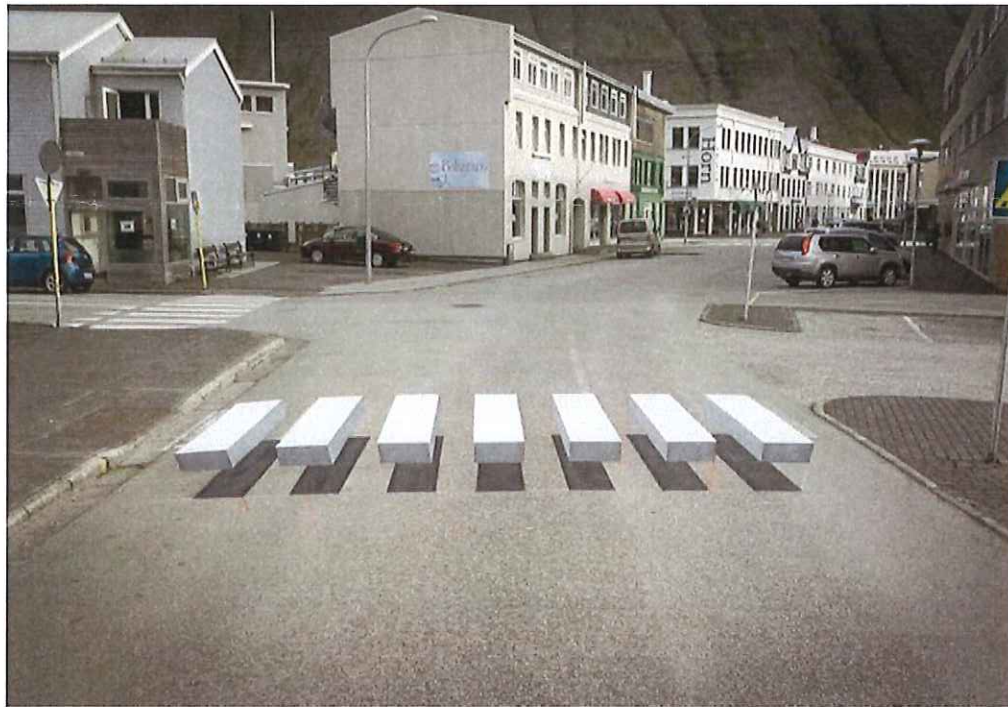


Fig 1: A 3D Crosswalk in Iceland (Rocheleau “Optical Illusions Trick Drivers”).

Lastly, a raised crosswalk would serve as an uninterrupted continuation of the Bikeway, meaning cyclists would not need to descend into the bumpy, unkempt road. One of the main critiques of raised crosswalks is that they impede emergency vehicles, however there are many alternate, fast routes to reach the surrounding areas. Also, raised crosswalks delay emergency vehicles less than regular speed bumps do, and have “less jarring [effects] on large, stiff-bodied emergency service [vehicles]” (Xu). A crosswalk painted to stand out could act as a visual shock, also causing drivers to slow down as they approach a previously unknown marking on the road. Although the visually unique crosswalk may stop being effective after a period of time, flashing

lights rarely fail to attract attention. They have also already been implemented in other spots along the Minuteman Bikeway.

All of these options are relatively inexpensive, with the raised crosswalk costing about \$8,000 (Bushell), the visually attractive crosswalk costing no more than repainting a regular crosswalk would, and the flashing lights being relatively cheap, around \$4500 (Zegeer). All of these solutions would enhance the safety of thousands of Minuteman Bikeway users, especially if they were used in conjunction with each other. Also, these crosswalk improvements are not unique, and other towns have already begun to implement techniques like these. In April of 2019, Medford “unveiled a newly painted three-dimensional crosswalk at one of its elementary schools”, and “officials said they planned to install more of them soon at other schools” (Rocheleau “Students Convince Medford”). Other towns are already racing to improve pedestrian safety, so why should Arlington lag behind?

This crossing is a problem that affects thousands of people; something needs to be done to change it. The crosswalk is faded and difficult to see, cars regularly speed along this road, and long traffic lines lead to impatient drivers. Not only that, but there are also multiple solutions readily available that are easy to implement and cost-effective. The safety of pedestrians and cyclists on the Bikeway depends on this change, and hopefully it will be considered.

Sincerely,

Alessandro Drake

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