



## **TRANSPORTATION ADVISORY COMMITTEE.**

Arlington Planning Department, 730 Mass Ave,  
Arlington MA, c/o John Alessi

Date: March 13, 2024

To: The Select Board

From: The Transportation Advisory Committee (TAC)

Subject: Highland Avenue and High Haith Road Crosswalk

### **Memorandum**

#### **1 Summary of Recommendations**

A Working group from TAC considered many alternatives options to improve the crosswalk at Highland Avenue at High Haith Road and developed these recommendations:

- Repaint the advance yield lines on both approaches to the Highland Avenue to improve crosswalk visibility for drivers.
- Add pedestrian crossing signs to the right and the left side of the crosswalk facing drivers, and retroreflective surfaces to the poles.
- Replace the crosswalk ahead warning signs with new high visibility signs.
- Move the Northbound advance warning sign away from the utility pole to a more visible location.
- Add ADA detectable pads to the handicap ramps.
- Depending on availability and cost, consider this as a location for an electronic speed feedback sign for northbound travelers who are headed downhill.

#### **2 Background**

A working group from TAC has assessed the safety of the pedestrian crossing across Highland Avenue at High Haith Road in response to a petition was sent by neighborhood residents to TAC in November of 2022. One of the main issues brought by residents was feeling unsafe in the crosswalk, and failure of cars to yield to pedestrians. TAC had previously done a study of this crosswalk in 2015.

Highland Avenue is a collector street that run from Route 2 to Massachusetts Avenue. In between Spring St and Gray St there is one marked crosswalk at High Haith Road.

This makes the crossing at High Haith very desirable for pedestrians traveling east to Menotomy Rocks Park or west to Robbins Farm Park or Brackett School.

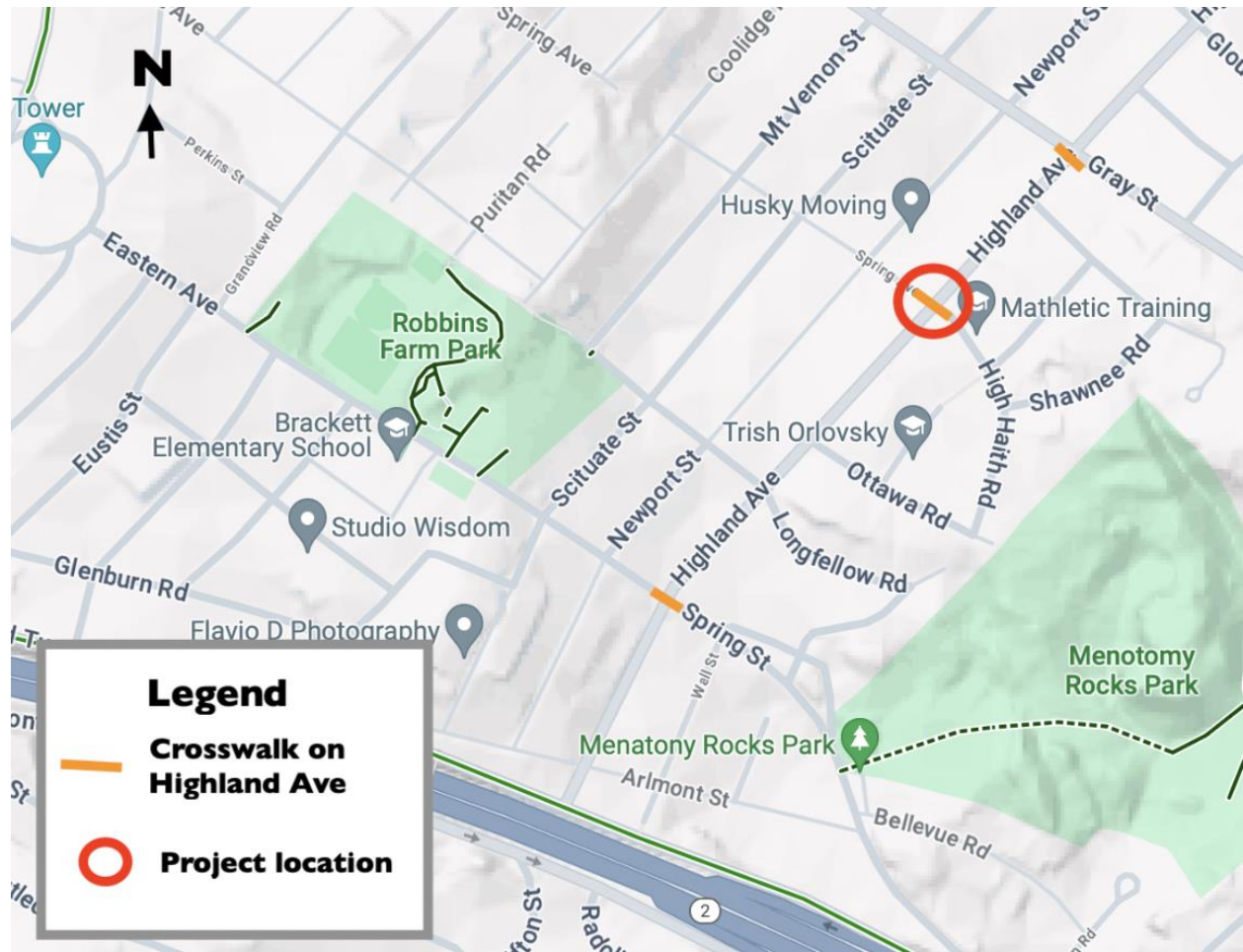


Figure 1: Project location

### 3 Existing Conditions and Analysis

The working group assessed the existing conditions around the crosswalk.

- Traffic volume, vehicle type (passenger vehicles, large trucks, buses)
  - There are many passenger vehicles on Highland Ave, but it is not a trucking route or bus route.
- Speed of motor vehicle traffic
  - The default speed limit is 25 mph.
  - APD frequently patrols this street due to the volume of traffic, but rarely tickets anyone for speed (traveling >30mph).
  - A TAC speed study in 2015 showed an 85 %ile speed of 31-32 mph.
- Width of roadway
  - The crossing distance is about 53'.
- Lighting
  - There is an existing streetlight in close proximity to the crosswalk.

- ADA accessibility
  - The two curb ramps in the west side have tactile pads, but the ones on the east side do not.
- Parking next to crosswalk
  - There is no parking immediately before the crosswalk going northbound because of the intersection.
  - In addition, there is a fire hydrant in the southeast corner preventing parking south of the intersection.
  - Cars parked illegally south of the intersection may block the view of pedestrians waiting to cross.
- Previous improvements from 2015 and before:
  - Pedestrian flags
  - In-Road Yield to Pedestrian bollard
  - New fluorescent yellow crosswalk signs
  - Yield lines before the crosswalk



Figure 2: Existing conditions facing north at High Haith and Highland Ave

### 3.1 Visibility of the Crosswalk for Northbound Drivers

The crosswalk is about 350' north from the crest of the hill, with a sight distance of approximately 400' to the bollard in the crosswalk. The AASHTO (American Association of Highway and Transportation Officials) standard for stopping distance for vehicles traveling at the 85th percentile speed of 31-32 mph is about 205 feet. The vertical curve and the geometry have made it more difficult to see exactly where the crosswalk is, though.

- Because of the downslope, it is difficult to see the painted zebra stripes of the crosswalk itself.
- The yield lines become more important because they help the drivers anticipate where they should come to a stop.
- The crosswalk ahead signs are the older yellow version that is less visible at night.

- The crosswalk ahead sign is partly obscured by a leaning utility pole.
- The in-road bollard is the first fully visible sign that northbound drivers see, but they are sometimes removed for snow plowing operations or moved out of place by vehicle collisions.



Figure 3: An approach angle headed north where the zebra stripes are less visible, and yield lines are faded.



Figure 4: Map of Existing Conditions

#### 4 Proposed Short Term Improvements

For the short term there are several improvements that can be made quickly are not require additional engineering study:

- Repaint the advance yield lines on both approaches to the Highland Avenue to improve crosswalk visibility for drivers.
- Add pedestrian crossing signs to both sides of the street at the crosswalk, and retroreflective surfaces to the poles.
- Replace the crosswalk ahead warning signs with new high visibility signs.
- Move the northbound advance warning sign a few feet south before the utility pole.



Figure 5: Existing view from 400' away



Figure 6: Photoshop rendering of same view with new signs

Other improvements that should be considered for the near term:

- Adding ADA detectable pads to the existing ramps if they meet ADA slope requirements, and considering bump outs if they need to be rebuilt.
- Speed feedback sign
  - This could be a suitable location for a Speed Feedback sign.
  - There is not a lot of observed excessive speeding, but a speed feedback sign could alert drivers going >25MPH to low level speeding.
  - As the Town develops criteria for where to install Speed feedback signs, this intersection should be evaluated.

## 5 Other Improvements Considered by the Working Group

Several other improvements were considered by the working group, and most were not suitable for this location or did not seem necessary due to the low numbers of pedestrians that cross in this location.

- Vertical elements like a raised crosswalk or intersection were considered unsuitable:
  - High volume of vehicles on Highland Ave
  - Relatively low number of pedestrians crossing
  - Existing 8% slope north of the crosswalk
- Rapid Flashing Beacon was also considered unsuitable:
  - Relatively low number of pedestrians crossing
  - The existing crosswalk sign is hard to see, and a beacon might be hard to place as well
  - Upgrading existing signage will accomplish the goal of increasing visibility

- Pedestrian Bump outs may be considered in the future
  - Would decrease the crossing distance
  - Would improve the pedestrian's sight distance, especially from the northeast corner
  - Could be challenging to construct due to the steep slope and existing retaining wall
  - Should be considered if the ADA ramps need to be reconstructed
  - Flex posts could be the first trial step