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BELMONT, MA**

DATE: August 8, 2023
TIME: 8:47 AM

Belmont Transportation Advisory Committee (TAC) Meeting

Minutes for Thursday, 1 June, 2023

Present: David Coleman (Chair), Larry Link (Vice Chair), Heather Barr, Daniel Eldridge, Chip Gaysunas, Jane Lappin, Jeffrey Roth (Secretary, arrived late).

Absent: Richard Hartley and Ken Lind.

Also present:

Town Staff: Glenn Clancy (Belmont Office of Community Development (CD) Director), Patrice Garvin (Belmont Town Manager)

Town Public Residents: Mary D. Lewis, Matt Taylor, Bill <no last name provided>, Carice Reddien, Carolyn Bishop, Corinne McCue Olmstead, Deborah Talanian, Erika Wolf, Jason <no last name provided>, Paul Mutch (Veteran's Memorial Committee)

Final minutes, compiled on 1 August 2023; finalized on 3 August 2023.

Announcements

1. Tonight's public meeting occurred online using a zoom video conference forum.

This meeting was held remotely using Zoom video conferencing technology, as permitted by the Massachusetts Act Relative to Extending Certain State of Emergency Accommodations, that became effective July 16, 2022.

The meeting was called to order at 7:07p by Chairperson David Coleman.

Review and Approval of Minutes (4 May 2023)

05/04/2023

The Committee reviewed the draft meeting minutes from the TAC meeting on the May the 4th, 2023. These TAC meeting minutes were reviewed, and minor corrections were requested by David Coleman and Larry Link.

Larry Link made a motion to approve the minutes as amended, and Heather Barr seconded the motion. The Committee voted unanimously by roll call in favor of approving the minutes as amended.

Announcement

Rich Hartley has resigned from the TAC due to increased workload, and a replacement for his position is being looked into. Anyone who expresses interest in joining TAC should put their name into the Town website application portal. The Select Board has accepted this resignation.

David Coleman (TAC Chairperson) — David Coleman said that Mary Lewis has expressed interest in applying to the TAC, and will likely be submitting an application.

Goden St. Neighborhood Turn Restrictions

Chairperson David Coleman noted that without the analysis reports yet of the speed studies discussed previously, we cannot discuss turn restrictions on Goden Street tonight. Sergeant Paul Garabedian has performed these studies, but we cannot review the reports until they are available, and that will be planned for a later meeting.

Accessible Parking on Concord Ave near the Veteran's Memorial

Briefing & Committee Discussion

David Coleman (TAC Chairperson) — Chairperson David Coleman introduced Paul Mutch. Paul worked with Mike Callahan on the Veteran's Memorial Committee. David then gave a quick synopsis of the issue using a slide presentation included in Appendix 1 that was shown on Glenn Clancy's screen. David added three slides to his presentation of the Concord Avenue protected bicycle lanes. These three slides were intended as the basis of tonight's meeting, and the entire presentation will be given to the Select Board on June 26.

Review of Slide Briefing

The request for a disabled parking space has already been discussed at the last Select Board meeting in May. David Coleman was in attendance at that meeting and pointed out that this type of request usually goes through TAC, but in this case the Veteran's Memorial Committee made the request directly to the Select Board who put it on their agenda. The Select Board did not come to a conclusion at their meeting, and asked TAC to review and come up with a design. This discussion is not a question of if there should be a spot, but where it could be placed. Mark Paolillo was highly supportive of a spot placed against the curb.

Paul Mutch (Veteran's Memorial Committee) — Paul Mutch confirmed that this was correct. His original request was for three car-parking spaces, but following the Select Board meeting they decided to start with one space.

David Coleman (TAC Chairperson) — David Coleman continued with the briefing, and said that there are three possibilities for the placement of this one space, and this meeting would review those options with the possibility of adding more in the future if needed. David gave an explanation of the first slide and described the three options below for placement of the accessible space.

1. First option: It has been suggested in the past that parking for the memorial could occupy spaces on Underwood St. The duplex house at the corner of Underwood St. has a driveway that is wide enough that residents can park without shifting cars and using street frontage. It is roughly 45 linear feet from this driveway to the crosswalk across Underwood St., and a spot could be designated here.

2. Second option: Current parking spots directly in front of the memorial, left of Underwood on the photo, on the west side. Here the parking is designated student parking and starts close to the corner with no setback. That is the spot closest to the corner where the handicap curb cut into the park exists.
3. Third option: West of Underwood St. there is a 20-foot buffer with roughly 50 feet of parking. There is break for a parking lot entrance followed by more parking and protected bicycle lane. At the end of this section is where the bike lane shifts from being on the outside of the parking to being protected from traffic on the inside of the parking. This is the first block of traffic calming, which should slow down the cars before they arrive at the student parking on the following block. This is important for tonight's discussion because we have to not only designate a parking space, but decide if the bicycle lane would need to move to accommodate the car-parking space.

Going forward David explained that these options would be discussed in order of their placement on the map from west to east:

1. Concord Avenue West of Underwood St.
2. Underwood St.
3. Concord Avenue East of Underwood St.

Dave Coleman continued that for accessibility the spot should be located as close to the corner as possible. In this case, the reason for placing it close to the curb is that people with a mobility issues do have a handicap plate but drive themselves and wish to exit their cars more easily.

Paul Mutch (Veteran's Memorial Committee) — Paul Mutch confirmed this preference. He noted that getting out of a car poses difficulty, which is why Option 1 is ideal for a disabled person. He said that the other two seemed less desirable.

David Coleman (TAC Chairperson) — David Coleman said that when a person gets out of a car at Option 1 you have ~20 feet to travel to the path, and they are exposed to the car traffic and the bicycle lane. Option 2 would only be 12 feet from the path. Underwood St. is a low-traveled street, which may change with new Middle School traffic patterns. Option 3 gives approximately 60 feet to the path, which is quite a bit longer than the other two options. David noted that using the same diagram, the following changes would be needed to accommodate the bicycle lane. Option 1 would preserve the protection of the bicycle lane east of Underwood St., and then when arriving at Underwood St. the bicycle lane would transition to being outside of the accessible space, and then gradually transition back to the inside protected area after passing the accessible car-parking space. David noted that the distances involved make such a transition feasible.

Larry Link (TAC) — Larry Link asked if you have to transition back gradually to the bicycle lane near the curb, or if it could be done more abruptly.

David Coleman (TAC Chairperson) — David Coleman confirmed that you do because this is downhill stretch and bikes go faster and cannot turn on a dime. Therefore, a more gradual transition is needed, as on any road for cars moving at speed, and that could reduce some of the regular car parking there. Other cases might have shorter transitions, but it would need to be longer here. This would be balanced with the objective to try to keep the transition shorter because car parking may become more of a premium in this area.

Jane Lappin (TAC) — Jane Lappin pointed out that transitioning over and back is a safety issue. She noted that both Concord Ave. spots are going to introduce more complexity as far as safety is concerned, whereas putting this accessible spot on the side street reduces this complexity. She asked if other locations would get the same treatment for transitioning of the bicycle lane.

David Coleman (TAC Chairperson) — David Coleman said he asked this of Select Board, and they could not answer the question.

Paul Mutch (Veteran's Memorial Committee) — Paul Mutch commented on the photo in the second slide of the briefing section on this topic in Appendix 1. This photo shows a protected area behind the accessible space, where the space was not placed next to the curb. Paul felt that there would not be enough space on the side of the car, and he thought this option would be dangerous due to the car traffic.

David Coleman (TAC Chairperson) — David Coleman asked whether we have a count of how many veterans live in Belmont that are mobility impaired and who visit the memorial?

Paul Mutch (Veteran's Memorial Committee) — Paul Mutch said no, but stated such a count would be irrelevant, because whether it is one or 100, this is a place for everyone to go regardless of whether they are a veteran or not.

Chip Gaysunas (TAC) — Chip Gaysunas stated that the issues and concerns at this location would apply for anyone who is disabled and wishes to use any of the spaces along Concord Ave.

Glenn Clancy (CD Director) — Glenn Clancy added that with the new field near the Middle School there will likely be increased car traffic, and increased need for safety for designated accessible spaces.

Jane Lappin (TAC) — Jane Lappin agreed that increased traffic post-construction could make getting out of a car in this spot more dangerous. She said that the photo does not illustrate somebody actually exiting the driver's side door, and might be somewhat misleading.

Glenn Clancy (CD Director) — Glenn Clancy confirmed that for Option 1 the bicycle lane would need to transition after entering Trowbridge St. and David Coleman confirmed that this transition would begin on the east side of Underwood St., requiring an increased buffer zone there near the intersection.

David Coleman (TAC Chairperson) — David Coleman confirmed that there would be an unavoidable complexity if this is located against the curb. This option preserves 200 linear feet or protected bike lane. In order to transition back, you would need to take a space from the student car parking.

Glenn Clancy (CD Director) — Glenn Clancy said that if the space is located west of Underwood St., additional concrete work would be needed to eliminate the grass strip. A solid ground is needed for a wheelchair. The other options would not need concrete work because there is no grass strip. He also said that we will need to do this for the MBTA bus stops.

David Coleman (TAC Chairperson) — David Coleman noted that the bicycle lane east of Trowbridge St. is not currently protected because it would interfere with parking for residents and businesses. However, this is not as safe. He said that Option 3 would continue

this lane on the outside after Trowbridge St. until the student parking begins. It is a simplification, but there would be a lot of loss of protected bicycle line, but it would be an opportunity for traffic calming.

Glenn Clancy (CD Director) — Glenn Clancy asked if we could achieve traffic calming with paint.

David Coleman (TAC Chairperson) — David Coleman responded that paint is not protective enough, and that we would need bollards because a physical obstruction is needed. David also noted that the Bright Rd. intersection is at the end of all of this and that it is not currently a safe crossing. Last year there was a serious injury of a cyclist there. This is how cyclists access the bicycle lane from Bright Rd, so it is important to consider that bicycle accessibility. David asked for any further Committee comments.

Dan Eldridge (TAC) — Dan Eldridge asked about curb cuts for Option 1, and expressed concern for how somebody with limited mobility could access the sidewalk.

Glenn Clancy (CD Director) — Glenn Clancy said that ideally there should be a ramp, but that it is expensive. He said that accessible spaces in Belmont are often located as close to existing ramps as possible.

Dan Eldridge (TAC) — Dan Eldridge noted that on the westbound side of Underwood St. is a mixed-use off-road cycle track without a direct connection to the bicycle lane. He expressed concern about how cyclists coming from this path would access the Concord Ave. bicycle lanes. He added that Option 1 could be accomplished, but that sizable infrastructure changes would be needed to implement it.

David Coleman (TAC Chairperson) — David Coleman confirmed that this path would also be used by middle school students to access the school, and that there is a need to preserve safety for those vulnerable children cycling to or from school.

Heather Barr (TAC) — Heather Barr asked if a small elevated cycle track level with the sidewalk and away from the motor-vehicle traffic could be added near the corner. She said that this could eliminate the need for the buffer, and allow easier curb access and enough space for the accessible car-parking space.

Glenn Clancy (CD Director) — Glenn Clancy said that unfortunately there is no funding for implementing an elevated cycle track solution there. This would be much more expensive, and he said we have not had luck with Complete Streets funding for that concept.

David Coleman (TAC Chairperson) — David Coleman said that there was originally consideration for a raised cycle track along the entirety of Concord Ave. in the high school / middle school construction budget, but that was eliminated a while ago.

Larry Link (TAC) — Larry Link asked Paul Mitch about his thoughts on the options. Larry suggested that the street crossings made Option 2 and 3 less appealing.

Glenn Clancy (CD Director) — Glenn Clancy said that the road Underwood was purposely narrowed to make space for the shared use path. He said that there is a possibility that Underwood will change directions when the middle school is opened.

Larry Link (TAC) — Larry Link asked when this decision would be made, and by whom.

Glenn Clancy (CD Director) — Glenn Clancy said there is an open question whether we should do something before or after September, and that this decision has not been made yet.

Larry Link (TAC) — Larry Link noted that this seemed like an oversight from the original park design, and that we should make a decision quickly on behalf of the veterans.

Jeffrey Roth (TAC) — Jeffrey Roth responded to an earlier question about the elevated cycle track in Cambridge not having buffers between the car traffic and cycle track. He said that this was in part because that section in Cambridge has no car parking. Jeffrey said that in our case, due to the on-street car parking, there would need to be some sort of buffer here, even with a raised path because of opening car doors. Jeffrey also noted that Underwood St. is a fairly quiet street that is safe because of low speeds and it has good visibility around that crosswalk. He believed that it would be a safe place to exit a car. Jeffrey also said that the safety of kids is walking and cycling to school is important, and a protected bicycle lane will be safer for a lot of students. He also asked how frequently these accessible the spots would be needed by veterans, in relation to how frequently the protected bicycle lanes are used.

Paul Mutch (Veteran's Memorial Committee) — Paul Mutch said that he did not know the answer to either of these questions, and that his concern was simply to make the park more accessible for mobility-impaired people.

Public Comments Session

The meeting now moved into a public-comment session on this agenda item.

Mary Lewis (Resident) — Mary Lewis said that she does not support the idea of removing the protected bicycle lane in this location to add this car-parking space. She said that the safety of children getting doored by a car door is a serious danger, and that she prefers the option of the accessible parking being on Underwood St. She said it is important to send a message to get people out of their cars, and provide the community with safer infrastructure that support walking and cycling.

Matt Taylor (Edgemoor St. Resident) — Matt Taylor lives on Edgemoor Rd., and said that access and safety are very important, and that we should maximize these core values. He said that the risks to a cyclist are much higher, and that driver's can choose when to open their doors. He said removing a protected bicycle lane to make car parking easier prioritizes driver convenience over community safety. Matt said that we are about to host 7th and 8th graders at this new school, and that it is hit or miss whether drivers stop for kids walking and cycling to school. He said that bicycle access to the school is a community benefit, that relieves parking demand, relieves cross traffic and left-turn traffic, and elevates the neighborhood feel of our community. He said that from the image of the overhead view of the intersections between Orchard St. and Baker St., there are very bad crosswalks with long crossing distances and they are often poorly marked and lit.

Matt said the Option 1 approach only complicates the intersection further for cyclists and pedestrians. He suggested instead of the need to make the crossings of Concord Ave. safer, especially before the opening of the school. Matt said that the Burbank walking bus comes up from Hamilton, and that more traffic calming measures are needed. He said that the new safe passing law requires 4 feet of passing space, and that this bicycle lane no longer complies with that. Matt added that deaths of non-drivers are up sharply in recent years.

Matt had two proposals to provide, that are different options from what has been proposed already: (A) On the pond side of Underwood St., modify the shared-use path to go around the car-parking space; (B) Add away-from-the-curb accessible parking, using

the as-is approach. He said that the public right-of-way access guideline has no ADA requirement for accessible street parking, and does not show this violates any regulations. He suggested raising both the through lane and the bicycle lane at Underwood St., and keeping the bicycle lane separated, and also adding bollards at the intersection would address the concerns raised. Matt also suggested adding signs for these handicap spots when drivers are approaching in the west-bound direction. Finally, he said that calming the traffic on Concord Ave. is very important.

Carice Reddien — Carice Reddien is a daily cyclist, often carrying one of their children on her bicycle. She said that she usually goes down Underwood St. She said that if Underwood St. were changed to one-way southbound (instead of northbound), then they could park on the west side of Underwood St. adjacent to the park. Carice remarked that this would be a net win in parking spots due to less curb cuts, and a net win for the safety of cyclists on Concord Ave. She said that she would not like to see the protected bicycle lane removed there.

Chip Gaysunas (TAC) — Chip Gaysunas said the crosswalk policy is something where this could be looked at. He said this could improve the crosswalks on Concord Ave., and that we need to focus on this for the kids going to the future school.

Dan Eldridge (TAC) — Dan Eldridge suggested having two options, one being a long-term addition of new parking spots, and the second being adding the accessible car-parking spot on Underwood St. in the near term.

David Coleman (TAC Chairperson) — David Coleman explained that there are limited funding sources for the various options besides what has been initially proposed in the briefing in Appendix 1. David asked each Committee member to specify which of these three options would be their recommended choice.

Dan Eldridge (TAC) — Dan Eldridge said that the best and easiest is Option 2.

Larry Link (TAC) — Larry Link said that Option 2 is the safest.

Heather Barr (TAC) — Heather Barr said that Option 2 would be the best. She said that can give us a solution now, and then we can look at additional options requiring funding later on.

Chip Gaysunas (TAC) — Chip Gaysunas said that he would also prefer Option 2 also, as it is the least busy street.

Jeffrey Roth (TAC) — Jeffrey Roth said Option 2 would be best approach to consider given all the considerations.

Jane Lappin (TAC) — Jane Lappin said Option 2 would be the best solution.

David Coleman (TAC Chairperson) — David Coleman asked that among Options 1 and 3 which both would use Concord Ave., which one would you choose as the best second, contingency approach.

Dan Eldridge (TAC) — Dan Eldridge responded that that only way it would work is if it entailed a project that moves curbs and elevates the bicycle lane.

Both David Coleman and Larry Link said they would prefer Option 1. All others on the Committee (*i.e.*, Heather Barr, Jane Lappin, Chip Gaysunas, Jeffrey Roth, and Dan Eldridge) abstained on ranking these two other options due to the earlier discussions of safety.

David Coleman (TAC Chairperson) — David Coleman said would bring the outcomes of this discussion before the Select Board at their meeting on June 26th.

Paul Mutch — Paul Mutch kindly and graciously thanked the Committee for facilitating and hosting this discussion tonight.

Crosswalk Policy: Process and Application

Review of Draft Crosswalk Policy and Application; Vote to Recommend to Select Board

Glenn Clancy (CD Director) — Glenn Clancy presented the current draft of the crosswalk policy document provided in Appendix 2, and gave an overview on the updates since the last meeting's discussion. He discussed the needs assessment rankings. He said we have been trying to align this policy with the pre-existing Traffic Calming Policy. He also said that the walkability index was taken out because it seems hard to be quantitative about that.

Jane Lappin (TAC) — Jane Lappin asked about the criteria for points, and explained that some are leading indicators and some are lagging indicators. She suggested that we should differentiate between things that are likely to lead to collisions, and the indicators that consistently cause collisions should be ranked higher. Jane said that she would like to see this recognized in the document. She also said that many crashes are not reported, and also might be rare, but still pose dangers to people walking.

Chip Gaysunas (TAC) — Chip Gaysunas agreed that making the structure consistent with the Traffic Calming Policy makes sense. He also said the Massachusetts statute for crosswalks does not cover cyclists, and that could use some clarification. He said that visibility and crossing refuges are important to consider.

David Coleman (TAC Chairperson) — David Coleman said the wording interpretation is to cover cyclists who are dismounted when crossing in the crosswalk, and therefore are protected by the Massachusetts laws governing people using crosswalks.

Larry Link (TAC) — Larry Link said the TAC should be mentioned in Sec. V.

David Coleman (TAC Chairperson) — David Coleman asked if others thought this is a workable policy. He said it overall helps to address the growing needs for vulnerable road users.

Glenn Clancy (CD Director) — Glenn Clancy says it is sensible overall. He also said that Table 2 should be fleshed out a bit further. Glenn is concerned that once the criteria are set, then how do we solve a problem becomes the next big question. He also said it is difficult to quantify whether something feels safe, and that the ideal approach is to use hard and fast quantitative metrics to assess situations.

David Coleman (TAC Chairperson) — David Coleman said he would like to move this to the Select Board, with the edits discussed tonight.

Voting Motion — **David Coleman (TAC Chair)** suggested we make a motion to adopt the Crosswalk Safety Improvement Policy as amended in the discussion tonight.

Larry Link moved this motion forward, and Heather Barr seconded the motion.

Vote by Roll-Call — A roll-call vote was held. Six members voted in favor of this motion, the only exception being Jane Lappin who abstained, and it therefore passed by majority.

Trial Application of the policy using the crossing on Washington St. at Dalton Rd./Sharpe Rd.

This was tabled for a future discussion.

Resolution to the Select Board on Crossing based on adherence to the Crosswalk Policy

This was also tabled for a future discussion.

Concluding Remarks

David Coleman (TAC Chairperson) — David Coleman said in summarizing the discussion tonight that he would present three things at the June 26th Select Board meeting: the updated crosswalk policy, the Post Office Concord Ave. proposed changes discussed previously, and the recommended accessible parking near Concord Ave. discussed tonight.

Updates on Ongoing Projects

Select Board Approval of Speed Tables on Winter St. - Marsh St. to Belmont Country Club

David Coleman (TAC Chairperson) — David Coleman said these speed tables were approved and have moved into an implementation phase.

Partridge Lane Closure: Issues with new bus stop on Marsh St. and residents moving the construction barrels

David Coleman (TAC Chairperson) — David Coleman said that the bus routes have changed, and this is being reworked with the School Department transportation coordinator.

Larry Link (TAC) — Larry Link said as Vice-Chair he would coordinate with people about summer TAC meetings, while David Coleman is away over the summer.

Glenn Clancy (CD Director) — Glenn Clancy added that funding was received for a project along Grove St. from Huron Ave. to Belmont St. He said that this could be discussed over the summer meetings, or deferred until September. Glenn said that this would be a reconstruction improvement for that roadway.

ADJOURNMENT

Heather Barr motioned to adjourn tonight's meeting, and Larry Link seconded the motion. All voted unanimously with this measure, and the meeting adjourned at 10:17p.

These minutes were respectfully submitted by Jeffrey Roth and Heather Barr.

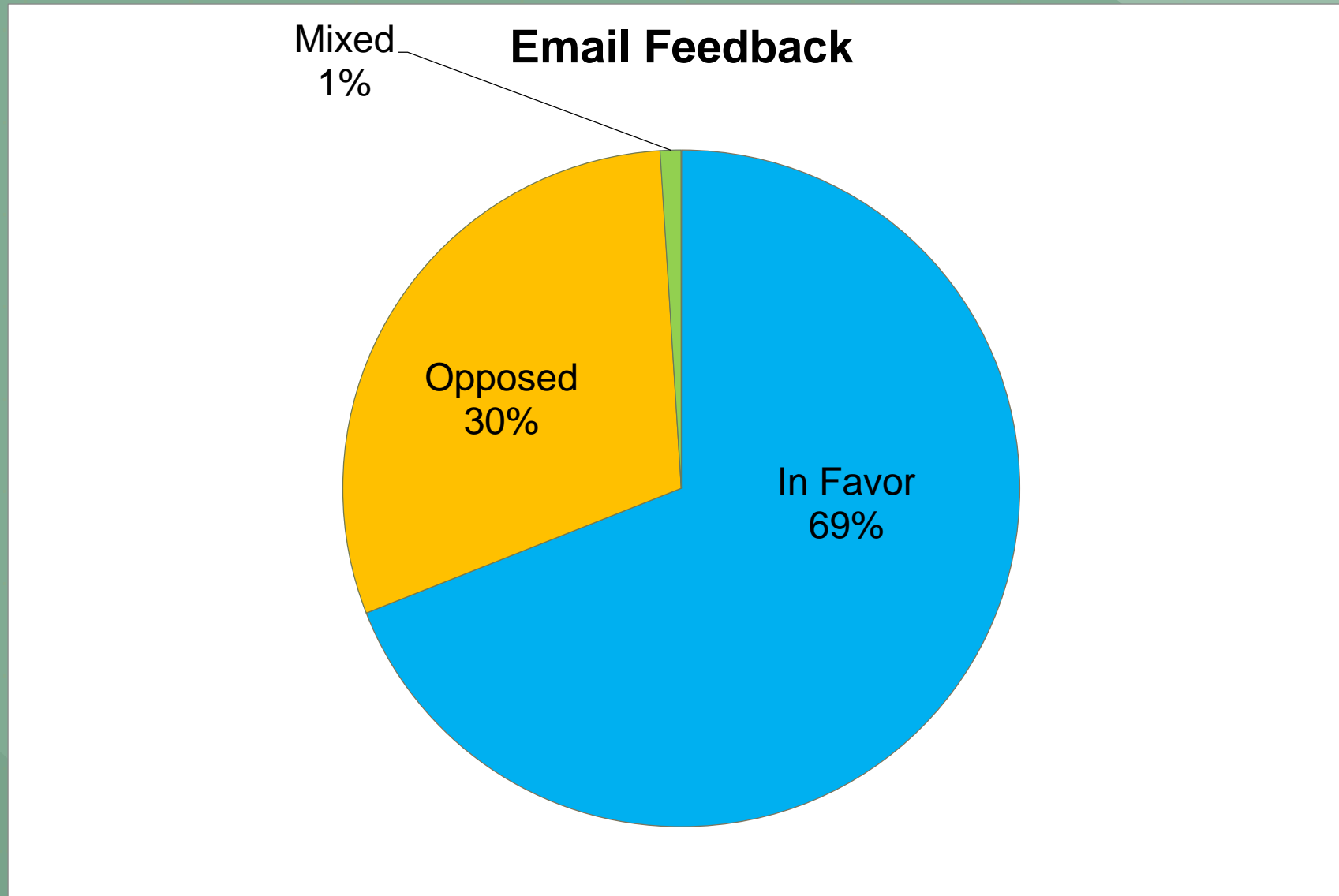
Appendix 1: Concord Ave Striping Progress Report

Concord Ave Striping Progress Report

February 27 2023

- The new striping configuration is performing as designed. A safer bicycle lane has been created with parked cars protecting the lane.
- The narrowed travel lane is helping to reduce traffic speeds closer to the 25 MPH speed limit – Belmont Police.
- There was one reported incident of a driver stopping after being “surprised” by an opening door from a parked car. Car behind first rear-ended. No contact with driver exiting car. – Belmont Police
- There have been no reported incidents involving people entering/exiting at Post Office

Feedback to the Select Board about the restriping project



Key Issues for those opposed:

- Harder to make U-turns
- Traffic backing up while a car is parallel parking
- Cannot take wide turns onto Concord Ave from side streets
- Crosswalk sight lines are more obscured**
- Redundancy when Community Path is completed
- Feeling unsafe when opening driver side door after parking**
- Harder to pull over for emergency vehicles
- Diminished visibility as a biker and as a pedestrian in a crosswalk
- Reduced visibility of oncoming traffic when turning from a side street onto Concord Ave

Key Issues for those in favor:

- Increased safety for cyclists
- The town showing support for cycling and by extension physical activity and the environment
- Reduced stress for cyclists in the new configuration
- Safer for children and family friendly
- Traffic calming / Drivers behaving safer and more predictably
- Easier to see cyclists when approaching Concord Ave from side streets
- Concord Ave itself is noticeably quieter much of the day (especially in the morning)
- No issues with parking availability (particularly for high school events)
- Easier for High School students biking to school
- Easier and quicker to parallel park when you don't have to worry about hitting the curb
- Creating an intra town/city bike network connecting Belmont shops to Cambridge
 - People who live in Somerville and Cambridge said that they specifically bike to
 - Belmont Center to shop and go out to eat now

Concord Ave: What needs improvement and what needs enforcement

- Where the lane is marked by cones compliance is good. Where cones are absent lanes and setbacks are more likely to be violated – line of sight.



Setback Enforcement is an issue for both the new and old configurations.

The line of sight issue is the same with the new or old configuration if the setback is blocked or does not exist. Setback enforcement is key to maintaining sight lines.

Old Configuration – No Setback
from crosswalk indicated/enforced



Old Configuration – Setback
from crosswalk marked in red



Additional signage, pavement markings and cones/bollards are needed to help educate public



Cyclists are required to yield to pedestrians.

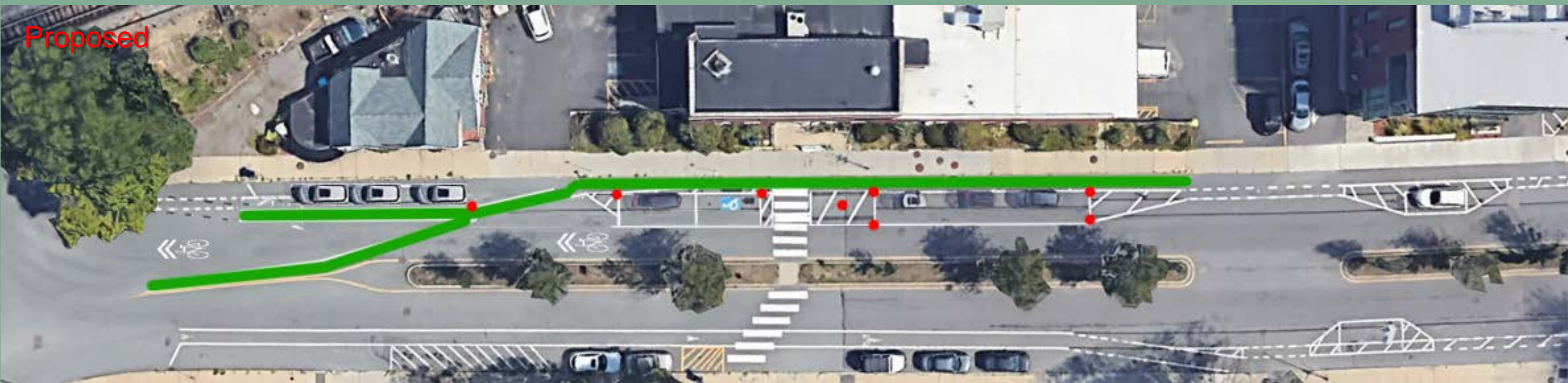
Here are example installations in front of a crosswalk and bike lane markings.



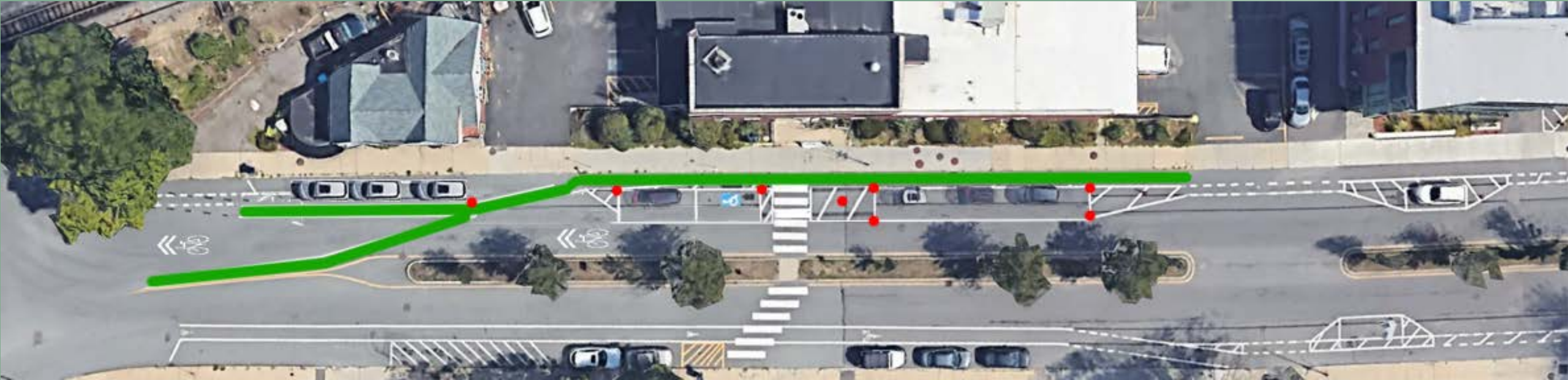
Concord Street Layout sign



Proposed changes to Post Office striping configuration



Proposed changes to Post Office striping configuration



Proposed changes include:

- Increase the width of the parking lane by reducing the buffer between Post Office parking lane and bike lane. This will make parallel parking easier and quicker with more room to open the driver side door.
- Add a parking space in front of the Flower Shop/Hair Salon and allow clearer visibility approaching the intersection by the bridge by switching the cycling and parking lane.
- Add cones/bollards to enforce setbacks. This will help protect the lane and ensure sight lines for the crosswalk.
- Green lines indicate additional paint/bike lane. Red dots indicate cones/bollards. Additional sharrows included.

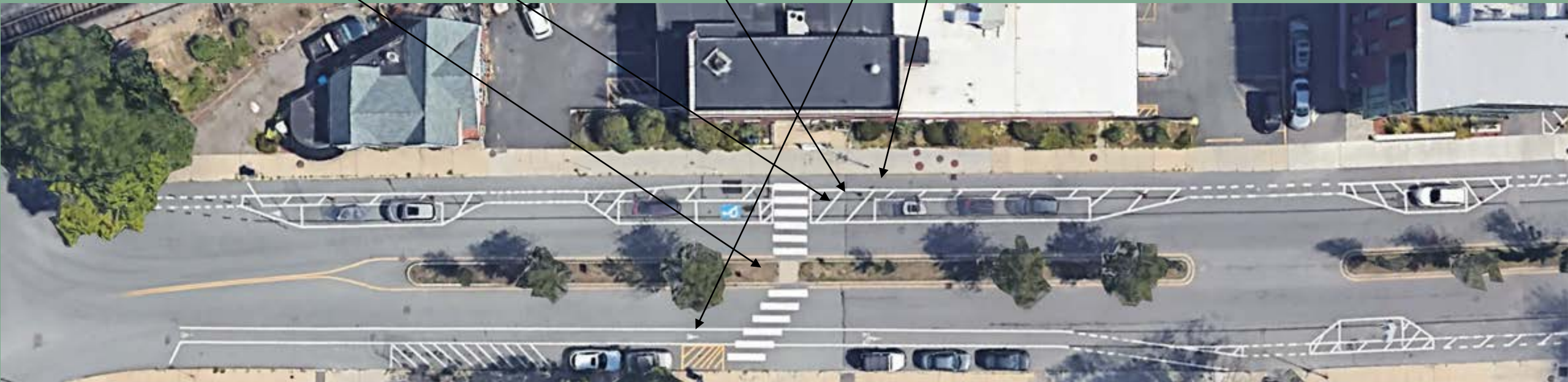
Lighted Crossing



**Bolted
Bollards/Dividers**



Stencils for Bike Lane



Bolt-Down Speed Table for Post Office



Concord Street Layout sign



Concord Current Conditions

45 feet curb space on Underwood beyond crossing

177 feet of Protected Bike Lane between Trowbridge and Underwood

90 feet transition in front of Trowbridge



Possible locations of handicap spots on Concord and Underwood

**177 feet of Protected Bike Lane
between Trowbridge and
Underwood**

**90 feet transition in
front of Trowbridge**



**Locates two Handicap spots closest to entrance of the memorial; additional parking
available on Underwood**

Handicap Space with Protected Bike Lane Configuration



Appendix 2: Crosswalk Safety Improvement Policy — DRAFT 5/31/2023

Appendix 1: Crosswalk Safety Improvement Policy – DRAFT 5/31/23

I. INTRODUCTION

This policy is modelled after the Town of Belmont Traffic Calming Policy and is focused on the promotion of pedestrian safety and improving walkability in the Town. This policy is based on the guidance for unregulated crossings as described by Mass DOT and Federal Guidance found in the Manual on Uniform Traffic Control Devices (MUTCD).

An unregulated crossing is one where there is no existing method of traffic regulation such as Stop signs and Traffic Lights. The Town approaches improving crosswalk safety with both reactive (response to alerts/complaints) and proactive (as a result of planning or project design) methods. The Crosswalk Safety Improvement Policy is meant to support both methods, making improvements while evolving a plan to make Belmont a safe walking community.

II. OBJECTIVES OF THE CROSSWALK SAFETY IMPROVEMENT POLICY

The objective of this policy is to:

- Increase driver observance of the rights of pedestrians/cyclists at designated crosswalk locations.
- Decrease delays in stopping time of drivers approaching pedestrians and cyclist in a crosswalk.
- Increase the use of walking routes in Belmont for residents and visitors by linking safer crossings to make walking/cycling more appealing across the town.

III. CROSSWALK SAFETY EVALUATION PROCESS OVERVIEW

The crosswalk safety evaluation process is meant to provide a method for making and managing requests to improve the safety of crosswalks in Belmont. The emphasis on most crosswalk improvements is on unsignalized / uncontrolled crossings; crossings that do not have full signalization, as defined by the MUTCD standards, such as traffic lights and Stop signs.

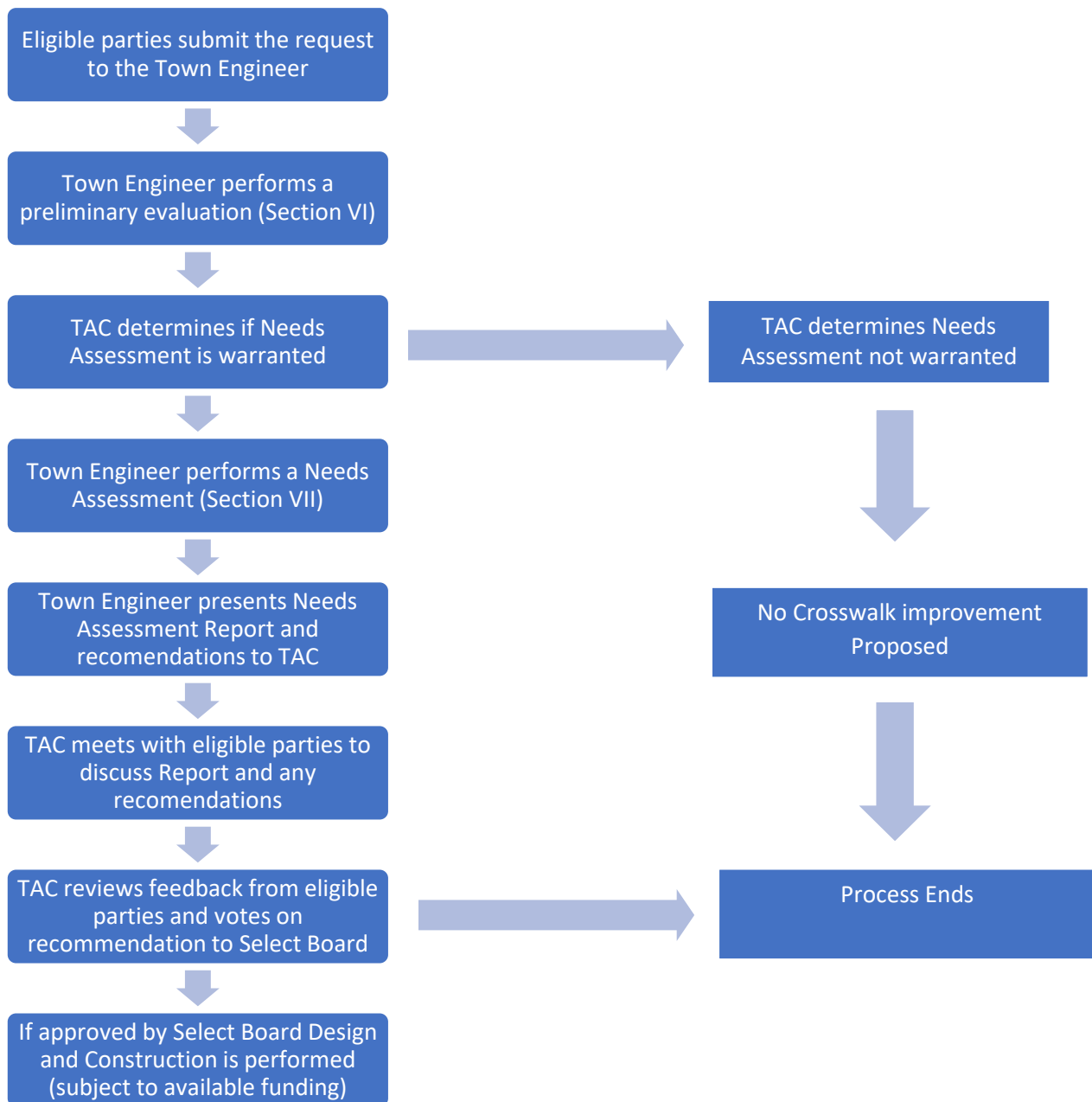
The need to address a crosswalk, as opposed to a larger traffic calming issue, should be characterized by at least one of the following:

- The issue is with a specific unsignalized / uncontrolled crossing on a specific street or intersection of streets (not with a length of the street itself).
- The improvement is needed for pedestrian/bicycle safety and to support walking routes that use the crossing.

Note: Crosswalk improvements may occur outside of this process as a result of an infrastructure project, such as:

- Recommendations included in town planning documents such as a transportation plan, Complete Streets Prioritization Plan, Safe Streets and Roads 4 All plan, or School/Town construction design documents.
- As part of a Pavement Management Program reconstruction project, or an intersection or roadway redesign within the Town.

The process is summarized in the flow chart below:



IV. CROSSWALK SAFETY IMPROVEMENT METHODS

There are several methods meeting standard engineering practice available for enhancing the safety and visibility of a crosswalk. Some examples are:

Pedestrian Warning Signs

At Uncontrolled Crossings

Pedestrian in crosswalk signs (W11A-2 with downward arrow plaque W16-7p) - installed at each end of the crosswalk location. The signs are placed in advance of the crosswalk adjacent to the travel lane and facing the driver.

Advance pedestrian warning signs (W11-2) - installed at a distance of at least 150 feet, but not exceeding 700 feet, in advance of the crosswalk. Advance pedestrian warning signs may be accompanied by supplemental plaques with the legend "AHEAD" (W16-9p) or "XXX FEET" (W16-2a).

At School Crossings

A School Crossing Warning Assembly (SCWA) consisting of a School Crossing Sign (S1-1) with a diagonal downward arrow plaque (W16-7p) - installed at each end of the crosswalk location. The signs are placed in advance of the crosswalk adjacent to the travel lane and facing the driver. The SCWA are not used at marked crosswalks other than those adjacent to schools or on established school routes. The SCWA shall not be installed on intersection approaches controlled by traffic signal or stop sign.

A School Advance Warning Assembly consisting of a School Crossing Sign (S1-1) and a supplemental plaque with the legend "AHEAD" (W16-9p) or "XXX FEET" (W16-2a) shall be installed at a distance of at least 150 feet, but not exceeding 700 feet in advance of the crosswalk, in either direction.

No Parking Zones

Restricting parking within 20 feet of a marked crosswalk, as measured by the gap between the parking space and the closest crosswalk marking, can help improve motorist visibility.

Street Lighting

The addition of street lighting, when practicable, can help to further identify the presence of pedestrians at a crosswalk.

In-Street Pedestrian Crossing Signs

In-street pedestrian crossing signs may be used at crosswalks as to remind road users of the applicable laws. The signs shall read “Yield To Pedestrians”. Signs indicating “Stop For Pedestrians” shall not be used. The signs shall include the legend “STATE LAW”. The yellow portion of the sign background shall be fluorescent yellow-green in color.

The signs shall not be used at signalized intersections and may be used seasonally to prevent damage caused by snow plowing operations. In-street pedestrian crossing signs may be installed or removed by the Chief of Police or his designee.

Pavement Markings

Refreshing existing crosswalk lines or delineating the edge of roadway on the approach to the crosswalk can help improve motorist awareness of the crossing.

Raised Elements

Raised crosswalks and the placement of speed tables in advance of a crosswalk are two methods to slow vehicles approaching a crosswalk.

V. INDIVIDUALS AND ORGANIZATIONS THAT MAY SUBMIT CROSSWALK IMPROVEMENT REQUESTS

The following individuals and organizations are eligible to submit a Crosswalk Safety Improvement request to the Town Engineer:

- Anyone who lives and/or works on Belmont Streets and is concerned about a crosswalk in their neighborhood; A neighborhood group that uses the crosswalk in question.
- Town agencies/boards such as the Belmont Police Department, the Town Engineer, Select Board, or other Town Departments.
- Community organizations concerned about pedestrian/cyclist safety in Town such as Safe-Routes-to-School groups at the schools or the Beech St. Senior Center.

Applicants should utilize the application form found at the end of this section. The same terms of process and transparency apply to crosswalk improvements as apply to traffic calming. With each completed form, the applicant must submit signatures representing either:

- At least five different street addresses or
- Fifty percent of the abutters in the directly affected area (whichever is less).

VI. PRELIMINARY EVALUATION OF CROSSWALK SAFETY IMPROVEMENT REQUESTS

Town staff will conduct a preliminary evaluation based upon the criteria shown below in Table One.

Table One: Preliminary Evaluation Criteria

Criteria	Evaluation
Wait Time: Vehicles Not Stopping	If more than 10 seconds passes before a vehicle stops, a wait time condition has been documented.
Excessive Crossing Time	If the time to cross the road exceeds 10 seconds using an average walking speed of 4 ft/sec, excessive crossing time has been determined.
Traffic Collisions	Any documented collision involving an automobile and a pedestrian (including cyclist) in the crosswalk establishes collisions as a problem.

If the preliminary evaluation documents Wait Time, Excessive Crossing Time, or Traffic Collisions, as described in Table One, then the TAC will forward the Crosswalk Safety Improvement request to the Town Engineer, who will conduct a full Crosswalk Safety Improvement needs assessment.

If the preliminary evaluation does not document Wait Time, Excessive Crossing Time, or Traffic Collisions, then the TAC will not forward the request to the Town Engineer for a Crosswalk Safety Improvement needs assessment and no further action will be pursued under the Belmont Crosswalk Safety Improvement Program. The Town may consider the extent to which the reported concerns can be addressed with regulatory controls, low-cost engineering improvements, increased enforcement, and/or improvements to public sidewalks.

VII. CROSSWALK SAFETY IMPROVEMENT NEEDS ASSESSMENT

When supported by findings in the preliminary evaluation, the TAC will request that the Town Engineer prepare a “Crosswalk Safety Improvement Needs Assessment” report for presentation at a regularly scheduled TAC meeting.

The Town Engineer, working in coordination with other Town staff (e.g. Police, Fire, DPW, etc.), will compile the following data in a standardized report for the geographic area of the crosswalk improvement request:

Roadway Attributes

- Physical Description (roadway width, grade and alignment, number and width of lanes, pavement condition, parking, sidewalks, crosswalks, school crossings, bike lanes, and other relevant descriptors)
- Street classification (e.g. local street, major collector, etc.)

- Whether the roadway is a designated route for emergency vehicles
- Posted speed limits and other regulatory signage or traffic controls
- 85th percentile Traffic Speed
- Average Traffic Speed
- Average Daily Traffic Volume
- Peak-hour traffic volume
- On-street parking
- Required / Actual Stopping Site Distance
- Existing roadway lighting
- Location and distance of nearby crosswalks

Evaluation Scoring

The Town Engineer will score each Crosswalk Safety Improvement request according to the criteria listed below in Table Two. The scoring will be used to prioritize requests approved by the Select Board.

Table Two: Needs Assessment Scoring

Criteria	Criteria Threshold/ Remediation	Score
Speeding	For each 5-mph increment that the 85 th -percentile speed is above the legal speed limit	10
Traffic Volume	For each 100 motorized vehicles that make up the average daily traffic volume (ADT)	10
Pedestrian Volume	For each pedestrian above 20 using the crossing per hour during the peak AM or PM periods of vehicular traffic	10
Stopping Site Distance	For each 10 feet less than the required stopping site distance	10
Obstructions	For each instance of an obstruction limit motor vehicle visibility (shrubs, parking space, utility pole, etc.)	10
School Walking Route	Crosswalk is located along a designated School Walking Route	20
High Use Location	Crosswalk is located within 100 feet of a commercial district	20
Collisions	For each vehicle and pedestrian or bike collision	30
Collisions	For each fatality or serious bodily injury	50

Engineering recommendations will answer the following questions:

- Is the problem area a candidate for Crosswalk Safety Improvements?
- Which Crosswalk Safety measure(s) may be appropriate?

- Could the measures be designed and implemented by the Community Development or DPW or would outside engineering services be required?
- What would be the approximate design and installation costs based on local experience or state and national averages?
- Does the problem merit experimental installation of temporary measures before a final determination is made?

VIII. REVIEW OF NEEDS ASSESSMENT AND FINAL RECOMMENDATION

The Town Engineer will present the findings of the Traffic Calming Needs Assessment and the engineering recommendations to the TAC at a public meeting and the Committee may hear additional public comment during this meeting.

The TAC will work with the Town Engineer to determine the appropriate catchment area for notification for this presentation and the Town will send advance notification for this presentation to those in the catchment area. The presentation date, time, and place will also be posted on the Town website.

After review and discussion of the Needs Assessment and the presentation of engineering recommendations, the TAC will allow two weeks for written public comment and will then vote to “Recommend” or “Not Recommend” that the requested traffic calming project be placed on the Town of Belmont’s “Priority List of Traffic Calming Projects”. In the event that the Committee does not have sufficient information to make a final recommendation, or a traffic problem first merits an initial test of experimental traffic calming measures, a vote on the matter may be tabled for a period not to exceed ninety (90) days.

Traffic calming requests that receive a “Not Recommend” vote may be resubmitted for future consideration after a one-year deferral.

IX. PRIORITY LIST OF TRAFFIC CALMING PROJECTS

The Town of Belmont may approve more traffic calming projects than it can implement in a given year. The TAC will use the Needs Assessment scoring outlined in Section IX of the Traffic Calming Policy to create and maintain a priority ranking of traffic calming projects. The Town Engineer will review the list of priority projects in the context of multiple factors, including budgetary constraints, and the timing of utility maintenance and pavement-management projects, and make a final recommendation for projects to be completed within each budget cycle. Recommended traffic calming projects that must be reviewed as part of the Town’s annual capital budgeting process will be subject to final approval and appropriation by Town Meeting.

X. Reference Standards

Sources for Crosswalk Safety Improvement Policy/Application Appendix:

- USDOT-FHA Guide for Improving Pedestrian Safety at Uncontrolled Crossing Locations: [https://safety.fhwa.dot.gov/ped_bike/step/docs/STEP Guide for Improving Ped Safety at Unsig Loc 3-2018 07 17-508compliant.pdf](https://safety.fhwa.dot.gov/ped_bike/step/docs/STEP_Guide_for_Improving_Ped_Safety_at_Unsig_Loc_3-2018_07_17-508compliant.pdf)
- SRTS Guide: Marking and Signing Crosswalks
- 2009 MUTCD guidance on Crosswalk Markings
- Main MUTCD site: <https://mutcd.fhwa.dot.gov/>
- Town of Concord Crosswalk Policy and design Guidelines