Public Facilities Committee Report

City of Newton
In City Council

Wednesday, July 19, 2023

Present: Councilors Leary (Chair), Kalis, Crossley, Kelley, Laredo and Danberg

Absent: Councilors Norton and Gentile

Also Present: Councilors Humphrey, Downs and Bowman

City Staff: Jason Sobel, Director of Transportation, Jonathan Yeo, Chief Operating Officer, Cassidy Flynn, Deputy City Clerk and Evan Cudmore, Committee Clerk.

#255-23 **Eversource petition for Grant of Location in Boylston Street**
EVERSOURCE ENERGY petitioning for a grant of location to install 1350'+ of conduit east of Hammond Pond Parkway and relocate pole 418/8-S approximately 3 feet west of current location to support road construction in the area. (Ward 7)

Action: **Public Facilities Held 6-0**

Note: It was concluded that there was a scrivener's error in the language of this docket item. Councilors agreed to hold the item, and revisit during August 14th Public Facilities meeting.

Councilor Laredo moved to hold the item which passed unanimously.

#134-23 **Approval on roadway infrastructure improvements for Elliot Street Traffic Calming Project**
HER HONOR THE MAYOR requesting the approval to make changes to roadway infrastructure as part of the Elliot Street Traffic Calming Project in Newton Upper Falls. The installation of a new crosswalk with a flashing beacon, intersection realignment, changes to roadway width, and creation of sidewalk-level bike lane requires the approval of the Public Facilities Committee.
Public Facilities Held 8-0 on 5/17/23

Action: **Public Facilities Approved 4-0-2 (Councilors Kelley and Kalis abstaining)**

Note: Jason Sobel, Director of Transportation joined the committee to discuss the approval of roadway infrastructure improvements for Elliot Street Traffic Calming Project. The project goals include improved safety in the area for all users of road, reduce vehicle speeds on Eliot Street, improved pedestrian access and to maintain and improve space for bicyclists.

Mr. Sobel explained that since the Committee last spoke about this item, there was a well-attended community meeting held on June 22nd. Those in attendance included interested residents, City of Newton DPW Staff, Parks and Recreation staff, Assistant Fire Chief Mike Bianchi and Captain Doucette from the Newton Police. It was also noted that Ward 5 City Councilors were in attendance. Mr. Sobel explained that the meeting held a good discussion regarding the project, and since that time the department has made some modifications based on this feedback.

There were two primary changes made to the original concept presented at the 5/17/23 Public Facilities meeting.

The first change was to shift the original proposed crosswalk location. The shift will be from the originally proposed location between Cottage Street and Weatherall Street, to the new proposed location along the east side of Weatherall Street. Mr. Sobel told the committee there was a broad consensus at the meeting that this was a preferred location. There is a mature 14-inch Ash Tree that will likely need to be removed during the construction of the accessible ramp, but the department will look at options to see if there is any way to preserve the tree. Mr. Sobel also explained they will continue to work closely with the design consultant and the City's Tree Warden Mark Welch to identify other locations in the area to plant new trees if needed.

The second change to the original concept is to include a 12-inch-wide rumble strip along the double yellow center line of the road. The proposed strips would be placed into the asphalt grooves that the double yellow center lines will then be painted on top of. Mr. Sobel mentioned that at the meeting, there was a healthy discussion about using scored concrete islands versus rumble strips. He explained that in this specific area of Eliot Street, there isn't enough roadway width for scored concrete islands, even if they were flush. The concept is only proposing to install rumble strips in the raised sidewalk level bike lanes around the curve, so vehicles will not be able to infringe the space of bicyclists around this corner.

Mr. Sobel noted as they continue to progress beyond the concept stage of this project, they will be working closely with the fire department on exact details and lane widths, but overall, the department is in support of the concept.

<u>Councilors asked the following questions</u>:

Q: Were attendees of the Community Meeting on June 22nd informed about tonight's Committee meeting?

A: Yes.

Q: Did the attendees of the Community meeting see the revised plans and had the opportunity to comment on them?

A: It was confirmed that the attendees of the meeting were sent the new concept via email. Mr. Sobel also noted that he has not personally received any feedback on the revised plans from residents.

Q: Is there any increase in cost in the new proposed concept with these changes?

A: There is no increase in cost. There is no additional material needed to be purchased for this new design concept.

Q: Has the City's Tree Warden Marc Welch gone out to examine this Ash tree that has been proposed to be taken down?

A: Mr. Sobel has been in email correspondence with Marc Welch and had asked him to take a preliminary look. Marc has gone out to examine the tree, and he concluded that this tree has not been attacked by ash borer.

Q: Do you believe this is a wide enough curve for large vehicles to drive safely on with proposed concept?

A: Yes. Mr. Sobel noted he has begun conversations with Assistant Chief Mike Bianchi of the Newton Fire Department, and they will continue to be in contact with them to make sure they are comfortable with the proposed travel language.

Q: Are there other large vehicles or trucks that travel on this section of Eliot Street?

A: There could be. It is currently an MBTA bus route, and this street connects to Route 9 which has no truck restrictions.

<u>Councilors made the following comments</u>:

It was noted that Ward 5 Councilors who were in attendance for the Community meeting received overall positive feedback from residents regarding the new design concept of the plan and are in unanimous support of moving the project forward.

It was noted that there are many communities across the region with road widths narrower than this proposed concept, and that fire trucks and large vehicles have not had issues with traverse.

Councilors agreed with the new location for the cross walk, although it may be further away from where people might want to cross, it will make the sight lines much better.

Councilors expressed concerns with the limited width of the roadway along the curve of Eliot Street, especially wide vehicles. Concerns were also raised regarding the mirrors of vehicles overlapping the rumble strips.

Councilors expressed their appreciation for all the work the Transportation Department did on reaching out to residents and other Departments within the city for input and suggestions regarding this project.

Councilor Crossley motioned to approve which passed 4-0-2 with Councilors Kelley
Kalis abstaining.

#254-23 **Reappointment of Jonathan Kantar to the Citizens Commission on Energy**
HER HONOR THE MAYOR reappointing Jonathan Kantar, 672 Chestnut Street, Waban to the Citizens Commission on Energy for a term of office to expire June 15, 2026. (60 days: 09/08/23)
Action: **Public Facilities Approved 6-0**

Note: Councilors noted that Kantar has served on three city Committees in the City of Newton, and that he has done a tremendous job during his tenure.

Councilor Crossley motioned to approve which passed unanimously.

The Committee adjourned at 7:45 PM.

Respectfully Submitted,

Alison Leary, Chair

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134-23

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April 10, 2023

Honorable City Council
Newton City Hall
1000 Commonwealth Avenue
Newton, MA 02459

Honorable City Councilors:

I respectfully submit this docket item to this Honorable Council requesting changes to roadway infrastructure as part of the Elliot Street Traffic Calming Project in Newton Upper Falls. Certain aspects of the proposed design require the approval of the Public Facilities Committee, specifically installation of a new crosswalk with a flashing beacon, intersection realignment, changes to roadway width, and creation of sidewalk-level bike lane.

The portion of Elliot Street that is included as part of this traffic calming effort is between Linden Street and Wetherell Street, with the focus being the sharp curve at the Mechanic Street intersection. The goals of this project include:

- Improved safety for all users;
- Reduced vehicular speed on Elliot Street;
- Improved pedestrian accessibility and connectivity;
- Maintain and improve space for bicyclists riding along Elliot Street

DPW utilized an engineering consultant to develop and evaluate conceptual options and make a recommendation for a preferred alternative. Our consultant evaluated two different alternatives in the Linden Street area, six alternatives in the Mechanic Street area, and three alternatives in the Cottage St / Wetherell St area. Our consultant then created 12 different "packages" with various combinations of the alternatives in each area of the project. Each of the conceptual alternatives were reviewed and discussed in detail with City staff and the City's Complete Streets Working Group (comprised of City staff from DPW, Planning, Newton Police, Newton Fire, Parks & Rec, Schools, the Transportation Advisory Group (TAG), and Safe Routes to School (SRTS)). The complete conceptual evaluation is detailed in the attached memorandum from BETA Group, Inc., dated February 20, 2023.

Based on the work completed to date, the preferred alternative is "Package 11" and includes:

- Elliot Street and Linden Street Alternative 2. The preferred alternative provides a new crosswalk across Elliot Street, with pedestrian-actuated Rectangular Rapid Flashing Beacons (RRFB's)
- Elliot Street and Mechanic Street Alternative 3A. The preferred option for the Mechanic Street intersection proposes to:
    - Realign Mechanic Street to create a more typical intersection. The simpler intersection will reduce driver confusion and will provide clear guidance to all users to safely travel through the intersection.

  - Reduce roadway width in immediate vicinity of the intersection to reduce vehicle speeds.
  - Creates sidewalk level bike lanes.
  - Reduces pedestrian/vehicle conflicts, with only one short crosswalk across Mechanic Street, approximately 20-24 ft long. Pedestrians crossing Mechanic Street today must cross two roadway openings and are in conflict with vehicles for a total of 50 ft)
- Cottage Street Alternative 1. The preferred option provides:
  - A new crosswalk across Elliot Street between Cottage Street and Wetherell Street
  - Proposed to construct curb bump-outs to narrow the travel lanes and reduce pedestrian crossing distance
  - Creates sidewalk level bicycle infrastructure for safe bicycle travel.
  - Provides pedestrian-actuated Rectangular Rapid Flashing Beacons (RRFB's) at the new crosswalk.

The conceptual construction cost estimate for the traffic calming improvements described above is $390,000. DPW is anticipating that both the engineering design work and construction would be funded with the Traffic Calming line item in DPW Transportation Division's operating budget.

Please see the attached memo from DPW Commissioner McGonagle and the detailed concepts development memo from the City's consultant Beta Group, Inc.

Thank you for your consideration of this matter.

Sincerely,

Ruthanne Fuller

Mayor Ruthanne Fuller

NORTH

Elliot Street Traffic Calming Preferred Concepts

City of Newton

June 2023

Newton, MA

BETA

IMPROVING COMMUNITIES TOGETHER

MEMORANDUM

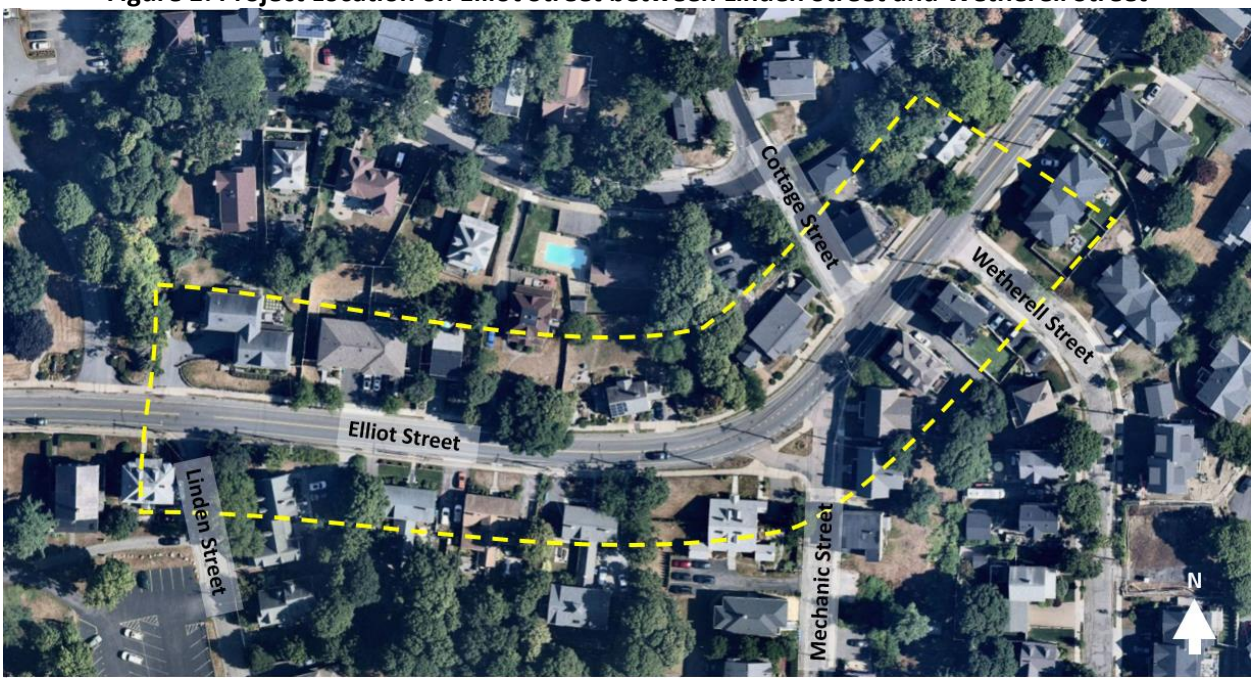
Date:	February 20, 2023	Job No.:	10482
To:	Jason Sobel, P.E, PTOE, Department of Public Works		
Cc:	Complete Streets Working Group		
From:	Jeff Maxtutis, Senior Associate and Anna Sangree, Transportation Planner		
Subject:	**Elliot Street Traffic Calming Concepts Development**		

BETA Group, Inc. (BETA) was contracted by the City of Newton to develop concept plans for traffic calming measures on Elliot Street between Linden Street and Wetherell Street. This memorandum describes project priorities, existing conditions, concepts developed by BETA, feedback received from the City of Newton Complete Streets Working Group and identifies a preferred concept.

1.0 PROJECT LOCATION

The project location is an approximately 700-foot-long segment of roadway including the sharp curve on Elliot Street in Newton between Linden Street and Wetherell Street. The segment of Elliot Street is located in the Upper Falls neighborhood in western-central Newton and generally follows a southwest to northeast alignment through the neighborhood, connecting on the west to Central Avenue in Needham at the Charles River and on the northeast to Route 9 in Newton.

Figure 1: Project Location on Elliot Street between Linden Street and Wetherell Street



2.0 PROJECT PRIORITIES

The following project priorities were shared with the project team by the City of Newton during the conceptual design phase.

- Slow vehicles entering the Elliot Street curve, and improve safety at the Elliot Street / Mechanic Street intersection
- Provide consistent separated bicycle accommodation
- Provide safe pedestrian crossings across Elliot Street to the east and west of the curve at Mechanic Street
- Implement green infrastructure (environmentally conscious streetscape elements), in the form of native plantings and trees
- Minimize ongoing maintenance needs

3.0 EXISTING CONDITIONS

3.1 SITE VISITS:

The project kicked off with a site visit between the BETA project team and Newton City staff on June 27, 2022. After the first visit, the project team visited the project location on multiple times to measure the stopping sight distance to proposed crosswalk locations, roadway widths, and identify the location of utility poles, catch basins, lighting, trees, and other constraints. During the visits, the team also made informal travel behavior observations.

3.2 ROADWAY CHARACTERISTICS:

Elliot Street between Linden Street and Wetherell Street is characterized by dense residential land uses on both sides, is classified as a major collector roadway, and is under City jurisdiction. Elliot Street accommodates a single 10-foot-wide travel lane in each direction divided by a solid double yellow center line, with 4- to 4.5-foot shoulders on each side through most of the project area. A 45-degree curve in the road exists at the Elliot Street intersection with Mechanic Street. At the curve in the roadway, the travel lanes widen to between 12 and 13 feet, the shoulders narrow to two to three feet, and the double yellow centerline becomes dashed.

Continuous five-foot-wide concrete sidewalks with a two-foot-wide grass buffers are provided along both sides of the corridor and pedestrian ramps are provided at the side street crossings. There are no existing crosswalks across Elliot Street in the study area. Bicycle accommodation is not provided. On-street parking is permitted on Elliot Street in the study area except on the stretch of roadway 100 feet to the west of Cottage Street, but on-street parking on Elliot Street is uncommon. The MBTA 59 bus runs along Elliot Street through the project area, and one bus stop is provided on each side of Elliot Street at the intersection of Cottage Street and at the intersection of Linden Street. The speed regulation on Elliot Street is 25 MPH for eastbound travelling vehicles from the Needham Town Line until around Wetherell Street, where the speed regulation increases to 30 MPH. For westbound travelling vehicles, the speed regulation is 30 MPH from Route 9 to around Cottage Street where the speed regulation decreases to 25 MPH. The posted speed limit signs within the study area align with Elliot Street's speed regulation. Elliot Street carries around 7,500 vehicles per day, according to data collected by the City in August of 2017.

Within the project area, Elliot Street intersects with Linden Street, Mechanic Street, Cottage Street and Wetherell Street as unsignalized T-intersections. All four intersecting streets are classified as local roadways and under City jurisdiction. Linden Street intersects Elliot Street from the south to form a three-way unsignalized intersection, stop controlled at the Linden Street northbound approach. Linden Street is 20 feet wide and provides one lane in each direction, but no centerline is marked. At the intersection with Elliot Street, Linden Street has sidewalks on both sides. Linden Street follows a north-south alignment, connecting to the Upper Falls Greenway to the south.

Mechanic Street intersects Elliot Street from the south. Mechanic Street follows a north-south alignment connecting to the Upper Falls Greenway to the south. At the Elliot Street intersection, Mechanic Street splits, creating two separate intersections, separated by a triangular landscaped traffic island. The Mechanic Street approaches are stop controlled. Mechanic Street provides one lane in each direction, but no centerline is marked. Sidewalks are provided on both sides of the roadway. **Figure 2** shows the current configuration of the intersection.

Figure 2: Mechanic Street and Linden Street

Cottage Street intersects Elliot Street from the north to form a three-way unsignalized intersection, stop controlled at the Cottage Street southbound approach. Cottage Street follows a north-south alignment and connects Elliot Street to the residential neighborhoods to the north. At the intersection, Cottage Street provides one lane in each direction, but no centerline is marked. Sidewalks are provided on both sides of the roadway. At the Elliot Street intersection, Cottage Street has a steep downward grade towards the intersection.

Wetherell Street intersects Elliot Street from the southeast to form a three-way unsignalized intersection, stop controlled at the Wetherell Street approach. Wetherell Street connects with Mechanic Street to the west. The road provides one lane in each direction, but no centerline is marked. Sidewalks are provided on both sides of the roadway.

On-street parking is permitted on Mechanic Street, Cottage Street, Wetherell Street and Linden Street, but “No Parking here to the Corner” signs exist on all the side streets prohibiting parking close to the Elliot Street intersections.

3.3 CRASHES

MassDOT reported eight crashes in the study area on Elliot Street between 2015 and 2022, averaging one crash per year. Of the crashes, three crashes were single vehicle crashes, involving a vehicle colliding with a tree, and two crashes were rear end crashes. Two of the reported crashes resulted in a suspected injury. No crashes were reported involving pedestrians or bicyclists. A crash summary is provided in **Table 1**.

Table 1: Project Corridor Crash Summary (2015-2022)

	Number of Crashes
Collision Type	
Angle	1
Rear-End	2
Head-On	1
Sideswipe	1
Pedestrian / Bicycle	0
Single Vehicle Crash	3
Rear-to-rear	0
Crash Severity	
Property Damage	5
Non-Fatal Injury	2
Unknown	1
Weather	
Clear	5
Cloudy	1
Snow	1
Unknown	1
Time of Day	
Morning Peak (06:00-9:59)	1
Midday (10:00-15:59)	3
Evening Peak (16:00-19:59)	3
Overnight (20:00-05:00)	1
Time of Year	
December – February	2
March – May	2
June – August	2
September – November	2
Year	
2015	1
2016	0
2017	1
2018	2
2019	0
2020	2
2021	1
2022	1
Summary	
Total crashes 2015 – 2022	8
Average crashes per year	1

Source: MassDOT IMPACT Portal

4.0 Concept Alternatives

4.1 Alternatives Description

In order to develop concept alternatives reflecting the City of Newton priorities, BETA evaluated the best practices in traffic calming facility types, examined the feasibility of different facilities within the project corridor, created concept alternatives for each project intersection, developed cost estimates for the concepts, considered how traffic calming alternatives could be combined toward maximizing safety while minimizing cost, and worked with the City's Complete Streets Working Group to identify a preferred concept.

Facilities considered during the conceptual design process included street level bicycle lanes separated from traffic by vertical flex posts or bollards, grade separated (e.g., sidewalk-level) bicycle lanes, curb extensions, rapid rectangular flashing beacons (RRFBs), curb ramps with detectable warning panels, raised crosswalks, narrowed travel lanes, intersection realignment, and speed feedback radar signs.

One concept was developed for the crossing of Elliot Street at Wetherell Street, two concepts were developed for the crossing at Elliot Street and Cottage Street, two concepts were developed for the crossing at Elliot Street and Linden Street, and six concepts were developed for the curved section of the corridor at Mechanic Street. The preliminary project concepts were presented to the Complete Streets Working Group on August 11, 2022, and revised concepts on December 1, 2022. The concept alternatives are summarized in **Table 2**.

Table 2: Summary of Concept Alternatives

Elliot Street at Linden Street	
Alternative 1	Separated bike lanes, a new crosswalk, curb extensions, RRFB, and upgraded curb ramps.
Alternative 2	A new crosswalk, RRFB, and upgraded curb ramps.
Elliot Street at Mechanic Street	
Alternative 1A	Narrowed travel lanes, a north side bollard separated bike lane, and south side curb separated bike lane through the existing traffic island.
Alternative 1B	Same as 1A with shortened crossing distance.
Alternative 2A	Narrowed travel lanes, a north side sidewalk level bike lane, and a south side bollard separated bike lane.
Alternative 2B	Narrowed travel lanes, a north side sidewalk level bike lane, and a south side curb separated bike lane through the existing traffic island.
Alternative 3A	Intersection realignment, narrowed travel lanes, a north side and south side sidewalk separated bike lane, shortened crossing distances, and additional landscaped areas.
Alternative 3B	Same as 3A with raised crosswalk on side street.

Table 2: Summary of Concept Alternatives (Continued)

Elliot Street at Cottage Street	
Alternative 1	Separated bike lanes, a new crosswalk, curb extensions, RRFB, and upgraded curb ramps.
Alternative 2	Same as 1 with raised crosswalk on side street.
Elliot Street and Wetherell Street	
Alternative	Separated bike lanes, a new crosswalk, curb extensions, RRFB, and upgraded curb ramps.

A detailed description of each concept is provided below.

Elliot Street at Linden Street

Alternative 1 for the Linden Street and Elliot Street intersection eliminates the shoulder in the immediate vicinity of the intersection to accommodate a four-foot-wide bike lane separate from traffic, a curb extension, and a new high visibility crosswalk with a rapid rectangular flashing beacon (RRFB). To reduce conflict between people biking and people crossing the street, the bike lane is positioned at the back of the curb ramp within the curb extension. A detectable warning strip is used to delineate the separation between the sidewalk area and the bike lane for people with limited vision.

Alternative 2 was developed as a less expensive option for the intersection. This option adds a new crossing across Elliot Street at Linden Street including an RRFB and reconstructed curb ramps but does not provide curb extensions or a separated bicycle facility at the intersection. **Figure 3** and **Figure 4** show concepts for Alternatives 1 and 2, respectively.

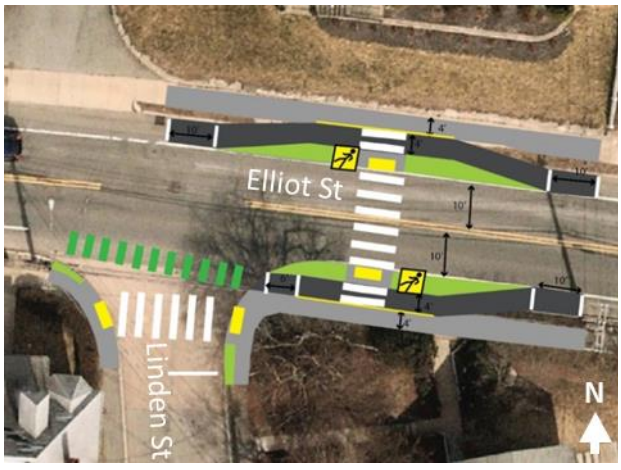


Figure 3: Elliot Street at Linden Street Alternative 1

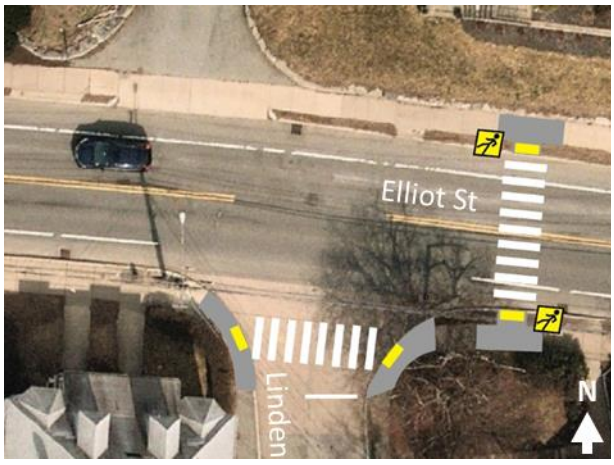


Figure 4: Elliot Street at Linden Street Alternative 2

Elliot Street at Mechanic Street

At the intersection of Elliot Street and Mechanic Street, the project team examined multiple alternatives. The alternatives differed in the type of protection utilized for the bike facilities, the location of crosswalks, the utilization of raised crosswalks vs. traditional crosswalks, and the location of the bike lanes. The bike treatments considered included both street level and grade-separated (or sidewalk-level) bike lanes. The bike lane on the south side of the intersection either stayed in the roadway or moved south into the existing traffic island through widening of the existing sidewalk area. The utility pole on the island was considered in all alternatives and no concept is expected to require the relocation of the pole. All bike lanes at sidewalk level required bike ramps to get cyclists from the existing shoulder bike facility to the raised facility. The concepts include lower and higher cost and maintenance alternatives.

Figure 5 and **Figure 6** show **Alternatives 1A and 1B** for the Mechanic Street intersection. Alternative 1A and 1B both include a vertical flex-post or bollard protected bike lane on the north side of the intersection and a bike lane on the south side through the existing traffic island. Neither alternative moves the curb on Elliot Street or the existing guardrail on the southeast side of the intersection. The introduction of the flex-posts/bollards narrows the roadway to reduce vehicle speeds and creates a more comfortable space for bicyclists separated from traffic. The only difference between these two alternatives is the location of the crosswalk on the south side of the intersection. Alternative 1A extends the crosswalk to the existing gap in the guardrail, and Alternative 1B shortens the crosswalk by moving the crosswalk to meet the sidewalk south of the guardrail.

Figure 5: Mechanic Street Alternative 1A

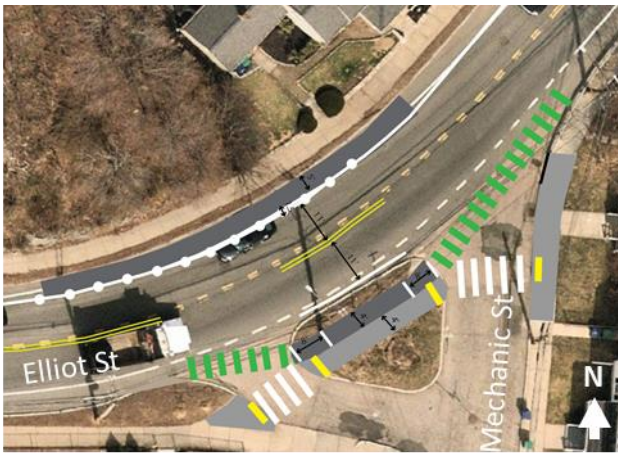


Figure 6: Mechanic Street Alternative 1B

Alternative 2A, shown in **Figure 7**, introduces a sidewalk-level bike lane on the north side of the intersection and a flex-post/bollard protected bike lane on the south side of the intersection the same as in Alternative 1A. It is noted that a sidewalk-level bike lane has a lower stress level and higher comfort level for bicyclists compared to street level bike lanes. This alternative requires moving the curb on both the north and south side of the intersection to accommodate the bike lanes. The guardrail stays in the same place in this alternative. **Alternative 2B**, shown in **Figure 8**, maintains the sidewalk level bike lane on the north side of the intersection shown in Alternative 2A and has the same treatment on the south as Alternative 1B. Both Alternatives 2A and 2B have narrowed travel lanes.

Figure 7: Mechanic Street Alternative 2A

Figure 8: Mechanic Street Alternative 2B

Elliot Street at Mechanic Street and Cottage Street

Alternatives 3A and 3B for Mechanic Street include the Cottage Street intersection, shown in **Figures 9 and 10**. These concepts show the most significant geometric changes to the Elliot Street at Mechanic Street intersection. Both alternatives realign the Mechanic Street intersection to meet Elliot Street at a right angle to reduce pedestrian and bicycle crossing distance and improve sight lines for all modes. The alternatives provide a sidewalk level bicycle facility on both sides of the roadway. Both Mechanic Street alternatives allow for the removal of the guardrail on the east side of the intersection. The intersection realignment also eliminates the Mechanic Street (west) intersection with Elliot Street to reduce the number of turning vehicle conflicts and simplify the operations of the intersection. The private residential driveway in this area is reconfigured to provide access/egress at Mechanic Street (east). Cottage Street is configured similarly to Alternative 1 at the Linden Street and Elliot Street intersection, with a new crosswalk across Elliot Street, an RRFB, and a bike lane provided at sidewalk level behind the new crosswalk. The crosswalk at this location is at an existing pedestrian desire line. Alternative 3B differs from Alternative 3A by raising the crosswalks and bike lane crossings across Mechanic Street and Cottage Street for improved visibility and a consistent level. Both alternatives reduce impervious pavement area, add greenspace, and narrow travel lanes.

Figure 9: Mechanic Street Alternative 3A

Figure 10: Mechanic Street Alternative 3B

Elliot Street at Wetherell Street

The final concept in **Figure 11** shows a crosswalk across Elliot Street at Wetherell Street, an alternative to the Cottage Street crossing shown in **Figures 9 and 10.** The stopping sight distance to a potential new crosswalk on Elliot Street at Wetherell Street is longer (340 feet) than the sight distance to a potential new crosswalk at the Cottage Street intersection (250 feet), providing more time for vehicles traveling eastbound on Elliot Street to stop. The alternative again mimics the design of Alternative 1 at the Linden Street and Elliot Street crossing including a new crosswalk, RRFB, curb extensions, and bike lanes in back of the accessible ramps. The concept requires the removal of a mature large tree on the north side of Elliot Street and does not provide crossing at the existing pedestrian desire line.

Figure 11: Elliot Street and Wetherell Street

4.2 Alternatives Evaluation

To decide which alternatives to include in the final package of preferred corridor improvements, BETA evaluated the advantages and disadvantages of each alternative, created cost estimates for each alternative, and conducted a discussion with the Complete Streets Working Group and the City of Newton to determine the package of improvements that best advances the project goals within the limits of the project budget.

Table 3 summarizes the advantages and disadvantages of each concept alternative as identified by the BETA project team, City staff, and members of the Complete Streets Working Group.

Table 3: Evaluation of Advantages and Disadvantages and Cost Estimate (2022) of Each Alternative

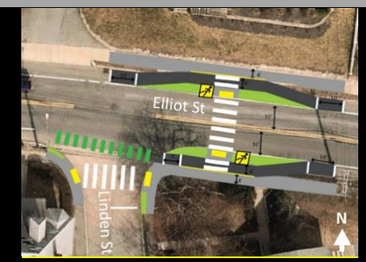
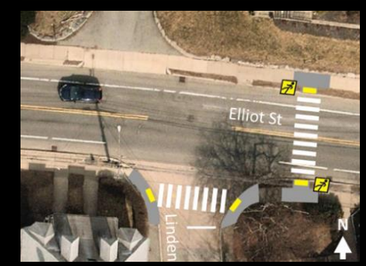
Alt.	Advantages	Disadvantages	Cost	Concept Image
Elliot Street and Linden Street				
1	• Slows vehicle speeds and creates a Gateway area • Shortens pedestrian crossing distance • Separates bicycles from traffic and pedestrians • Adds new crosswalk • Provides RRFB, signaling pedestrian presence • Serves existing pedestrian desire line connecting south to the Upper Falls Greenway	• Expensive • Separated bike lanes are short	$136,000	
2	• Adds new crosswalk • Provides RRFB, signaling pedestrian presence • Inexpensive • Serves existing pedestrian desire line connecting south to the Upper Falls Greenway	• Does not shorten crossing distance or significantly slow vehicle speeds	$46,000	
Elliot Street and Mechanic Street				
1A	• Separates bicycles on south side of curve • Adds bike lane on north side of the roadway • Narrows travel lanes • Inexpensive	• On-going maintenance of flex-posts/bollards • Wintertime flex-post/bollard removal seasonally eliminates benefit of bollards • No significant pedestrian benefit	$58,000	
1B	• Separates bicycles on south side of curve • Adds bike lane on north side of the roadway • Narrows travel lanes • Inexpensive • Shortens crossing distance	• On-going maintenance of flex-posts/bollards • Wintertime flex-post / bollard removal seasonally eliminates benefit of bollards	$73,000	

Table 3: Evaluation of Advantages and Disadvantages and Cost Estimate (2022) of Each Alternative (continued)

2A	• Creates permanent vertically separated bicycle accommodation on the north side of the curve • Narrows travel lanes • Formalizes bike lanes on south side of the curve	• Flex-posts/bollards require on-going maintenance • Wintertime flex-post/bollard removal seasonally eliminates benefit of bollards	$128,000	
2B	• Creates permanent vertically separated bicycle accommodation on both sides of curve • Narrows travel lanes	• More expensive than 2A	$135,000	
3A	• Creates permanent vertically separated bicycle accommodation on both sides of curve • Narrows travel lanes • Shortens crossing distances, reducing conflicts, and improves vehicle sight lines • May allow for removal of the guardrail	• Expensive	$211,000	
3B	• Creates permanent vertically separated bicycle accommodation on both sides of curve • Narrows travel lanes • Shortens crossing distances, reducing conflicts, and improves vehicle sight lines • Adds raised crossings across side street • May allow for removal of the guardrail	• Expensive	$235,000	

Table 3: Evaluation of Advantages and Disadvantages and Cost Estimate (2022) of Each Alternative (continued)

Elliot Street and Cottage Street				
1	• Slows vehicle speeds and creates a gateway area • Shortens crossing distance • Separates bicycles • Adds new crosswalk, with RRFB, signaling pedestrian presence • Crossing at existing pedestrian desire line	• Expensive	$136,000	
2	• Slows vehicle speeds and creates a gateway area • Shortens crossing distance • Separates bicycles • Adds new crosswalk with RRFB, signaling pedestrian presence • Provides raised crosswalk across side street • Crossing at existing pedestrian desire line	• Expensive	$146,000	
Elliot Street and Wetherell Street				
1	• Slows vehicle speeds and creates a Gateway area • Shortens crossing distance • Separates bicycles • Adds new crosswalk with RRFB, signaling pedestrian presence • Longer sight distance to curve than at Cottage Street	• Removes mature tree • Does not provide crossing at an existing pedestrian desire line • Expensive	$139,000	

Following the initial evaluation of the concept alternatives, BETA created 12 packages of improvements (shown in **Table 4**), combining the alternatives. The advantages and disadvantages, costs, and trade-offs of each package were discussed with the Complete Streets Working Group and City staff on December 1, 2022. During the conversation, the Complete Streets Working Group and the City expressed the importance of prioritizing packages that included alternatives 3A or 3B with the realignment of the Mechanic Street intersection which provide a significant pedestrian and bicycle improvement. The Working Group noted the importance of shortened pedestrian crossing distances, increased green space, improved sight lines, and sidewalk level bike lanes at the curve at this location. The Working Group also noted the importance of reducing ongoing maintenance costs associated with the alternatives that included flex posts/bollards. This led the Working Group to narrow the packages down to #5, #6, #11, and #12.

Table 4. Considered Packages of Improvements with 2022 Cost Estimates

#	Packages	Cost (2022)
1	Linden 1 + Mechanic 1A + Wetherell (or Cottage 1)	$333,000
2	Linden 1 + Mechanic 1B + Wetherell (or Cottage 1)	$348,000
3	Linden 1 + Mechanic 2A + Wetherell (or Cottage 1)	$403,000
4	Linden 1 + Mechanic 2B + Wetherell (or Cottage 1)	$410,000
5	Linden 1 + Mechanic 3A/Cottage 1	$480,000
6	Linden 1 + Mechanic 3B/Cottage 2	$514,000
7	Linden 2 + Mechanic 1A + Wetherell (or Cottage 1)	$243,000
8	Linden 2 + Mechanic 1B + Wetherell (or Cottage 1)	$258,000
9	Linden 2 + Mechanic 2A + Wetherell (or Cottage 1)	$313,000
10	Linden 2 + Mechanic 2B + Wetherell (or Cottage 1)	$320,000
11	Linden 2 + Mechanic 3A/Cottage 1	$390,000
12	Linden 2 + Mechanic 3B/Cottage 2	$424,000

5.0 Preferred Alternative

The Complete Streets Working Group reached consensus on **Package #11** as the Preferred Alternative. This package of improvements prioritizes safety and operations at the Mechanic Street and Cottage Street intersections, and is the most cost effective option that achieves the primary project goals.

Package #11 includes Elliot Street and Linden Street Alternative 2 (new crossing with an RRFB), Elliot Street and Mechanic Street Alternative 3A (intersection realignment with sidewalk level bike lanes and shortened crossings), and Cottage Street Alternative 1 (new crosswalk, curb extensions, and RRFB). While this package does not include a curb extension at the new Linden Street crosswalk, this modification is offset by the significant benefits provided at Mechanic Street.

The Working Group meeting discussion concluded that Package #11:

- Provides a high level of safety and mobility benefits for all modes at Elliot Street and Mechanic Street, viewed as the most critical location in the study area.
- Realigns an unconventional intersection and reduces impervious area by increasing green space.
- Incorporates two additional crossings across Elliot Street at Cottage Street and at Linden Street following existing pedestrian desire lines - with curb extensions at the Cottage Street crossing and RRFBs at both locations.
- Does not require ongoing maintenance costs (including staff time) associated with flex posts/bollards.
- Preserves a mature tree located at the Wetherell intersection.
- Provides a high level of traffic calming benefit by providing a pinch point at the Cottage Street intersection.
- Generally, falls within the budget allocated for this project.

Full details on the Complete Streets Working Group discussion including cost estimates are provided in the Appendix.

6.0 Next Steps

The City will move into the design phase of the preferred alternative and meet with the public and stakeholders. Once the project is designed, the City can move towards construction.

APPENDIX

A. COMPLETE STREETS WORKING GROUP MEETINGS

During the conceptual design process, the BETA project team met with the Newton Complete Streets Working Group two times; August 11, 2022, and December 1, 2022, to discuss the alternative concepts.

Concept Review on August 11, 2022

At this meeting, BETA presented preliminary concepts for the intersection of Linden Street and Elliot Street, the intersections of Mechanic Street and Cottage Street, and the intersection of Wetherell Street and Elliot Street. During the conversation, we received the following feedback.

- If the level landing area for the curb ramp is in the bike lane, consider where people will activate the RRFB.
- The roadway width is narrow to accommodate all of the amenities planned.
- Consider tactile separation between bike lane and sidewalk for people with limited vision.
- Consider pavement markings like shark teeth and signage as a visual cue to drivers to slow down on both sides of the gateway.
- If speeds are reduced, removing the guardrail would be preferred.
- Snow removal should be considered when deciding on the type of bike lane separation. Sidewalk level bike lanes would allow for plowing of sidewalks and bike lanes at the same time.
- The Cottage Street crosswalk alternatives would require moving the bus stop.
- Raised devices should be considered on the side streets but not on Elliot Street, as these receive scrutiny by the fire department.
- General consensus was in favor of Alternative 3B with the Linden and Cottage Streets curb extensions.

Concept Review on December 1, 2022

At this meeting, BETA presented updated concepts, cost estimates and a cost benefit analysis to the Complete Streets Working Group for comment. During the conversation, BETA received the following feedback:

- Consider the pros and cons of each of the alternatives, as this will assist with the public process.
- Consider the cost of maintenance when evaluating alternative concepts, and generally, any means of lowering maintenance is preferred.
- When considering tradeoffs, a more significant investment at Mechanic Street and Cottage Street is more important than a higher investment at Linden Street.
- Desire to remove the guardrail if possible.
- Consider the width of any grass strips, for ease of maintenance.
- Alternatives that increase green space are more desirable.
- Importance of engaging the public and local stakeholders early in the process.
- General preference for Mechanic Street Alternative 3A, Alternative 1 for Cottage Street, and Alternative 2 for Linden Street.

B. Elliot Street Conceptual Cost Estimates

DRAFT

CONCEPTS	COST
Elliot/Linden 1	$136,000
Elliot/Linden 2	$46,000
Elliot/Mechanic 1A	$58,000
Elliot/Mechanic 1B	$73,000
Elliot/Mechanic 2A	$128,000
Elliot/Mechanic 2B	$135,000
Elliot/Mechanic 3A/Cottage	$344,000
Elliot/Mechanic 3B/Cottage	$378,000
Elliot/Wetherell	$139,000

CONCEPT COMBINATIONS	COST
Linden 1 + Mechanic 1A + Wetherell	$333,000
Linden 1 + Mechanic 1B + Wetherell	$348,000
Linden 1 + Mechanic 2A + Wetherell	$403,000
Linden 1 + Mechanic 2B + Wetherell	$410,000
Linden 1 + Mechanic 3A/Cottage	$480,000
Linden 1 + Mechanic 3B/Cottage	$514,000
Linden 2 + Mechanic 1A + Wetherell	$243,000
Linden 2 + Mechanic 1B + Wetherell	$258,000
Linden 2 + Mechanic 2A + Wetherell	$313,000
Linden 2 + Mechanic 2B + Wetherell	$320,000
Linden 2 + Mechanic 3A/Cottage	$390,000
Linden 2 + Mechanic 3B/Cottage	$424,000

Ruthanne Fuller
Mayor

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May 30, 2023

Honorable City Council
Newton City Hall
1000 Commonwealth Avenue
Newton, MA 02459

To the Honorable City Councilors:

I am pleased to reappoint Jonathan Kantar of 672 Chestnut Street, Waban 02468 as a member of the Citizens Commission on Energy. His term of office shall expire on June 15, 2026 and his appointment is subject to your confirmation.

Thank you for your attention to this matter.

Warmly,

Ruthanne Fuller
Mayor

Newton, MA Boards & Commissions

Submit Date: Apr 06, 2023

Application Form

Profile

Jonathan
First Name

A
Middle Initial

Kantar
Last Name

jonathan@sagebuilders.com
Email Address

672 CHESTNUT ST
Home Address

Suite or Apt

WABAN
City

MA
State

02468
Postal Code

What Ward do you live in?

☑ Ward 5

[redacted]
Primary Phone

[redacted]
Alternate Phone

Sage Builders LLC
Employer

Principal
Job Title

Which Boards would you like to apply for?

Citizens Commission on Energy: Submitted
Design Review Committee: Submitted

Interests & Experiences

Please tell us about yourself and why you want to serve.

Why are you interested in serving on a board or commission?

I want to help Newton build better buildings and community

JAK_Resume.pdf
Upload a Resume

Jonathan A. Kantar

672 Chestnut Street
Newton, MA 02468
[redacted]

Professional Experience

Eplus Solutions LLC, Founder 2016 - present
Manage and direct energy positive homes development. Most recent project, in collaboration with the Boston Planning and Development Agency and the Department of Neighborhood Development, consists of 4 E+ housing units in Fort Hill, Boston.

Sage Builders LLC, Principal 2012 – present
Responsibilities include all aspects of sales, production, and management. Building on the foundation established by Sage Builders LLP, multi-award winning Sage Builders LLC is a recognized leader in sustainable design and construction. Projects include renovations, additions and new home construction.

Sage Builders LLP, Principal and Managing Partner 2000 - 2012
Responsibilities included general management, sales and marketing, estimating, employee management and development, business planning and financial management, and client relations. A multi-award winning residential design-build company, Sage Builders LLP specialized in sustainable renovations and additions.

KMC Construction, Inc., President 1992 - present
Founded and managed residential and light commercial construction company operating in the metropolitan Boston area. Responsible for and organized all aspects of the company, including execution of the work.

The Boston Company, Associate 1989 - 1992
As a member of the elite real estate investment group within The Boston Company, worked in small teams to identify, evaluate, and develop various real estate investment vehicles for major pension funds. Responsibilities included market and investment analysis and various types of financial analysis.

The Beacon Companies, Project Manager and Analyst 1986 - 1989
Provided financial analysis on investment opportunities; developed cash flow projection models and valuations for development projects. Provided development project management on the South Station, Boston inter-modal transportation center. Responsible for overseeing code compliance issues and development and construction of the retail program at South Station.

Community Leadership

Member (appointed), Governor's Zero Net Energy Buildings Advisory Council
Planner/Presenter, BuildingEnergy, the leading annual U.S. energy conference for design and construction, other industry forums, and public and private speaking engagements
Member (appointed), Newton Citizens' Commission on Energy
Member (appointed), Newton Design Review Committee
Board Member, Historic Newton
Chair, Newton High Performance Buildings Coalition
Former Chair, Remodeling Council, Builders Association of Greater Boston

Education

BA, History, Magna Cum Laude, The University of Michigan
MA Certificate, Sustainable Design and Construction, Boston Architectural Center