



[www.RCIC-Charlestown.org](http://www.RCIC-Charlestown.org)

October 2, 2017

Lower Mystic Regional Working Group  
c/o Massachusetts Department of Transportation  
10 Park Plaza, Room 4160  
Boston, MA 02116

Re: Impact of BTD's Rutherford Avenue / Sullivan Square Redesign on Regional Traffic

Dear Members:

The Lower Mystic Regional Working Group (LMRWG) is commended for identifying alternatives designed to enhance and increase use of transit services, expand walking and bicycling opportunities, and establish transportation demand management (TDM) programs as mechanisms to reduce traffic in the region and along the Rutherford Avenue/Sullivan Square (RA/SS) corridor. The alternatives identified are very effective strategies to reduce the use of single occupancy vehicles, and mitigate the impact of future residential and commercial growth.

However, for the LMRWG's efforts to be successful, the underlying road network must be designed with the same goals in mind. Unfortunately, the Boston Transportation Department's (BTD) current design for the RA/SS corridor appears to make accommodating single occupancy vehicle use as its highest priority, in contrast to the GoBoston 2030 Vision and Action Plan, Imagine Boston 2030, and the Citywide Resilience Strategy, which all recognize the importance of and seek to implement multiple modes of travel.

BTD's preferred design for the corridor, unveiled on May 18, 2017, does not prioritize pedestrian and bicycle access to Charlestown's two T Stations, and does not promote alternative strategies for moving people through the corridor. In addition, it fails to fully accommodate transit oriented development in the RA/SS area, as envisioned in the 2013 MAPC-funded Sullivan Square Disposition Study. We fear that BTD started with an end goal in mind, which Mayor Walsh appeared to hint at when he joined Charlestown residents at a community gathering this summer.

We write now to articulate our concern that Underpass Option fails to align with the Working Group's goals and alternatives. We are hopeful the Group will encourage BTD to reassess and improve the preferred design, in light of a MAPC representative's observation on September 25<sup>th</sup> that there is no measurable difference in regional traffic flow between the Surface and Underpass options. This indicates local conditions, such as quality of life, should receive predominant weight in the design outcome.

We believe surface alternatives do exist and should be explored. We have, therefore, attached Exhibits A and B. The first addresses concerns about BTD's designs for Rutherford Avenue and Sullivan Square,

and the second includes suggestions for further study by the Lower Mystic Regional Working Group, in coordination with the City of Boston.

We strongly believe it is in the interests of the Commonwealth, the City of Boston, and the Charlestown neighborhood to examine significantly more effectively options for the RA/SS area. We urge the LMRWG to take a close look at our suggestions.

Thank you for your consideration.

Nate & Gitte Blanchet  
Washington Street

Amy Branger & Andrew Klein  
Tremont Street

Pam Daley  
First Avenue, Charlestown

H David & Liz Hennessey  
Monument Square

Kate Kennan & Chris Mian  
Rutherford Ave, Charlestown

Monica Lamboy  
Pearl Street, Charlestown

Elizabeth & Chuck Levin  
Bunker Hill Street, Charlestown

Robert Pelechaty  
Washington Street

Ivey St. John  
First Avenue, Charlestown

Emma & David Yashar,  
Union Street, Charlestown

ccs:

Stephanie Pollack, Secretary, MassDOT

Jay Ash, Secretary, EOHED

Matthew Beaton, Secretary, EOE

David Mohler, MassDOT and Eric Bourassa, MAPC, MPO Co-Chairs

Congressman Michael Capuano

Mayor Martin Walsh, Boston

Mayor Carlo DeMaria, Everett

Mayor Joseph Curtatone, Somerville

Marc Draisen, Executive Director, MAPC

Rick Dimino, A Better City

Mary Skelton Roberts and Lisa Jacobson, Barr Foundation

Becca Wolfson, Boston Cyclists Union

Rafael Mares, Vice President, Conservation Law Foundation

Stacey Thompson, LivableStreets

Chris Dempsey, Transportation for Massachusetts (T4MA)

Wendy Landsman, WalkBoston

## EXHIBIT A

Shortcomings in BTB's designs about which we are concerned include:

1. The Underpass Option design has excess capacity that will draw vehicles to the area. In BTB's analysis, of the 14 intersections north of Chelsea Street, 8 intersections at the AM peak and 9 PM peak will operate at LOS A or B, levels that fail to reflect a typical urban environment. Off peak conditions will allow for speeding. (See Attachments A and B).
2. In accounting for changing driving patterns, BTB used a Peak Hour Factor (PHF) of 0.94, and not the MassDOT standard of 0.92, and should be complimented for doing so. However, the McGrath Boulevard project ultimately used a PHF of 0.98, (after receipt of feedback from stakeholders) due to high levels of predicted congestion. BTB should have done the same with the Sullivan Square traffic model as high levels of congestion leads to less "peakiness" and a PHF closer to 1.0.
3. BTB should account for "disappearing traffic" in the same way the McGrath Boulevard project accounted for disappearing traffic (aka "Traffic Evaporation"). The Embarcadero Project in San Francisco was used as a model for that project.
4. Data we received from BTB was generated by Synchro modeling software that has limitations for large projects with complex geometry such as at Sullivan Square. VSSIM modeling includes allowing drivers to make alternate routes decisions in the face of congestion, whereas Synchro modeling does not. Given the complexity of Sullivan Square, we would recommend a VISSIM model be used to evaluate alternatives.
5. BTB has not differentiated between "big LOS F" and "small LOS F", as MassDOT did for the McGrath project. Instead, it should allow for "small LOS F". Indeed, from an efficiency perspective, LOS E is the most efficient use of roadway space and that approach should be included for this project.
6. BTB projected exceedingly large traffic volumes to and from the now vacant area around the intersection of Arlington and Beachum. This suggests that they anticipated new development in this area, but input the new development into standard "trip generation" factors to determine that 500 cars per hour would be coming from and going there.

The Arlington/Beachum Street area will be a transit oriented development, with fewer than standard vehicle trips. Experience in Kendall Square reveals that with strong TDM, total trips will not increase due to a combination of low-auto use in new development and increasing transit and bicycle use. It appears that the traffic volumes BTB is analyzing are unnecessarily pessimistic.

7. BTB did not adequately study Sullivan Square surface alternatives that could distribute traffic via a series of multi-lane roads. Instead, BTB inefficiently increased lanes on only two roadways - Maffa Way and Rutherford Avenue - to address its demand calculations, while keeping the other roadways constrained. This drives a poor LOS when one 6-7 lane roadway intersects with a second 6-7 lane roadway, and both roads allow left turns. It appears BTB did not study other surface configurations, such as one-way couplets, in a search for ways to distribute the traffic.

## EXHIBIT A

8. BTD's recent design for the Rutherford Avenue and Austin Street intersection does not appear to have had significant study, despite the fact that this intersection was the subject of much controversy and discussion in 2012 and 2013, when Mayor Menino supported the Surface Option design, and it was included in the State's the 10 year TIP plan.

BTD's design for RA reduces the stacking capacity for southbound vehicles turning onto the Gilmore Bridge, while the Menino-approved version had two right turning lanes adjacent to the Bunker Hill Community College, thus separating the turning lanes from the southbound through-lanes to downtown. The current BTD design has 3 surface lanes along the length of Rutherford Ave, with one lane converting into the right turn lane onto the Gilmore Bridge. If the turn lane backs up, which it regularly does, vehicles will begin stacking in the right through lane – a very unsafe situation. As designed by BTD, this intersection has a LOS of F. In addition, no data has been provided that supports the need for an underpass north and southbound at Austin Street.

9. BTD's presentation on May 18<sup>th</sup>, on page 16, showed only an AM peak delay of 3.2 minutes and a PM peak delay of only 2.7 minutes along the entire length of the study area in 2040 between the surface design and the underpass design. Those figures are from studies prepared by the Working Group.
10. BTD has not shown cost estimates as yet for the Underpass Option and has provided no comparison to the cost of the Surface Option. Those figures are critical to an informed design decision.
11. Significant community benefits can be found in the 2013 Surface Option approved design and in BTD's current 2017 Surface Option, including greatly expanded green space along the entire length of Rutherford Avenue, from the North Washington Street Bridge to the Mystic River. These designs allow for a generous shared use path, an adjacent sidewalk, and significant amounts of green space which provide excellent access to the T Stations.

The width of the shared use path is critically important to encouraging neighborhood residents and workers to use transit. Studies have shown that people are willing to walk much farther in a pleasant environment than in an uncomfortable environment. Section drawings reveal that the Surface Option moves vehicles at least 50+ feet away from neighborhood homes, and perhaps as much as 65 feet away. In contrast, the Underpass Option is highly constrained at key locations such as Mishawum Street, near the Sullivan Square T Station and Austin Street near the Community College Station.

The constraints near Sullivan Square occur at a location where: 1) multiple pedestrians and cyclists will likely be waiting to cross Rutherford Avenue or Maffa Way to get to the T Station, 2) pedestrians and cyclists are not protected from moving traffic since the existing parking lane is being eliminated, and 3) they will be next to the open underpass – a location likely to ice over easily. Although both alternatives improve the conditions that exist today, an opportunity to dramatically transform access to the T Stations will largely be missed with the Underpass Option. (See Attachments D and E.)

12. BTD's current Sullivan Square Underpass design virtually eliminates several development parcels, which were developed in the Disposition Study of 2013. These parcels were designed to greatly enhance biking and pedestrian access to the T station and as effective people movers to various destinations. BTD indicates that some blocks shown on the Underpass Option will be available for

## EXHIBIT A

air rights development, but in most circumstances that type of development is cost prohibitive. In the meantime, large open cuts will exist above the underpass areas in a location that is intended to be pedestrian friendly.

13. Although investigation into the impact of sea level rise is underway and suggests that the addition of berms in the area can address potential overflows of the Mystic River, severe rain storms present a threat that a berm cannot address. The recent lessons of Houston, west Florida, and Puerto Rico show how quickly intense rainfall can flood an area. Closer to home, in July 2010, a rapid rainstorm caused more than 15 feet of water to flood into the McGrath Underpass to Assembly Row, requiring the rescue of a trapped driver by an off duty firefighter (see photo<sup>1</sup>). The Rutherford Avenue corridor – the site of the former Lowell Canal - has a high water table, making inadvisable a sub-surface construction intended to move large numbers of people.



McGrath Underpass Rescue, July 10, 2010

14. A Surface Option offers flexibility in the event of extraordinary traffic volumes generated by sporting events at the Garden, concerts at the future casino, and other large public gatherings. Specifically: a) contemporary traffic signals can be programmed to change signal timing automatically to alleviate heavy demand in a particular direction; b) a Surface Option can be designed to allow center lane direction to be changed by the police in order to allow large volumes of traffic to exit an area to rapidly; and, c) Instituting parallel parking in Sullivan Square area, would allow eliminating it at times when event traffic would be anticipated. Electronic traffic meters have the ability to communicate with parkers, informing when vehicles must be removed or be towed. This flexibility is impossible in an Underpass Option.

---

<sup>1</sup> Retrieved from <http://www.pictureboston.com/blog/tag/flash-flooding/>, October 1, 2017.

## EXHIBIT B

Based on the concerns above, we would like to respectfully request that the LMRWG perform further analysis of transportation alternatives so that the design for Sullivan Square and Rutherford Avenue reflects its regional goals of mitigating and reducing traffic, and reflects strategies that move people instead of just vehicles. We specifically request that the working group analyze:

1. At least two additional surface design alternatives at Sullivan Square:
  - a) A two-way grid concept with expanded capacity at streets other than Maffa Way and Rutherford Avenue and reductions in left turn movements— In BTD’s Underpass Option, Rutherford Avenue flows directly into Maffa Way, thereby eliminating a left turn. A similar shift should be considered in the Surface Option.
  - b) A one-way grid concept - In this alternative, vehicles would be dispersed through a north-south one-way couplet (Rutherford Avenue and Alford Street) and an east-west one-way couplet (Maffa Way and Main Street), with expanded capacity at nearby streets. (Attachment F)
  
2. At least four additional surface design alternatives at Austin Street:
  - a) Elimination of the underpasses, yet inclusion of effective stacking capacity for southbound vehicles turning right onto the Gilmore Bridge. In concert with this alternative analysis, the timing of the light at the bridge and McGrath Highway should be studied to understand whether or not the phasing should be changed because of the narrowing of McGrath Boulevard.
  - b) Inclusion of elements of Continuous Flow Intersection – In this type of intersection, vehicles turning left do so several hundred feet before the intersection. We suggest this study for vehicles traveling from Cambridge into Charlestown on the Gilmore Bridge who then turn left (northbound) on Rutherford Avenue. A visual depiction of a continuous flow intersection can be found at <https://www.youtube.com/watch?v=E-gpAnP0nrU>.
  - c) Inclusion of a Michigan left - In this type of intersection, the left turn is moved up half a block. It is our understanding that this design was used in the Casey overpass project.
  - d) Southbound underpass only at Austin Street – if Alternatives A-C above are not viable for Austin Street, a southbound underpass could be studied.

In addition, we would like to suggest that VSSIM modeling software be used for alternatives analysis. Given the number of roadways and alternatives, and the neighborhood’s desire to prevent cut through traffic, modeling software that accounts for driver choices seems wise.

We also believe a Peak Hour Factor (PHF) of 0.98 should be used, as it was for the McGrath Boulevard study.

We hope that BTD will prepare a Traffic Impact and Analysis Study (TIAS) and make public its assumptions for mode split and annual traffic growth. It would appropriate for the public to have a chance to examine and comment upon the City’s estimates of future traffic growth.

## **EXHIBIT B**

We also hope that the LMRWG and/or BTM will model and publish anticipated pedestrian delays at all intersections in the RA/SS study area for each of the roadway alternatives. In light of Charlestown's proximity to the Bunker Hill Community College and the Sullivan Square T Stations, and the LMRWG's goal of increasing transit use, it seems wise to focus on ensuring pedestrian and biking experience is enhanced and successful.