

To: Secretary of Transportation Pollack

CC: Legislative Delegation, Somerville, Medford, Cambridge; Somerville Mayor, City Council, City Transportation staff; Medford Mayor, City Council, Transportation Staff; Cambridge Mayor, City Council, Transportation Staff; GLX WG members; John Dalton, GLX Team members

From: Members of the GLX Working Group: Jennifer Dorsen (Ball Square, Somerville), Laurel Ruma (College Ave), Jim Silva (Ball Square, Medford)

Re: Public and Economic Health and the Green Line Construction Process

Please find below a proposal to provide the GLX-C with more daytime hours in which to complete their work.

The proposal below sketches a plan to

- Speed up construction timeline
- Reduce nighttime work on bridges and in the ROW
- Open bridges earlier than planned
- Potentially reducing nighttime noise and disruptions
- Potentially save the GLX costs by shifting to daytime hours, reducing work interruptions from trains, and shortening phases of construction.

We are in the thick of construction for the long-awaited Green Line stations through the three cities north of Boston. Every day neighbors see trucks, cranes, workers, special equipment and dozens of people building the infrastructure that will create economic growth and be a key piece of our plans for the health of the community through accessible transit. It's exciting, and residents have been very patient with the construction-related disruptions.

Unlike prior to the start of construction, we have experience with the disruptions and pain being born by local and regional residents. But there are economic costs and human health costs to neighbors, abutters, and visitors to Somerville and Medford. The number of people impacted dwarfs the number of people taking the commuter rail service and the outcry of frustration, disruption to daily life and economic process is loud and clear. Thousands of people are being impacted every day in which roads and bridges are closed. It is imperative that every solution be considered to speed up work and resume normal circulation while ending nighttime work.

**This memo proposes a plan to Speed Up Construction, Reduce Harm and Off-set the Current Impacts to our Communities.** We propose replacing the Lowell Commuter Rail line with bus service during off-hours, allowing work in the Right of Way to move more quickly, thereby alleviating the impacts discussed in detail below. Prior proposals related to bus service were proposed in the absence of clear impact data. We now have clear data on the impact and, below, a reasonable way to address them. We look forward to a discussion about how to implement this plan (or similar) as a reasonable alternative for the communities the MBTA serves with all due haste. While we do not discuss specifics in this letter, one alternative plan would be to replace the Lowell Line service with bus service all day every day between Thanksgiving and Jan 5<sup>th</sup>. 5.5 weeks of uninterrupted work on the tracks and bridges would accomplish the same goals.

## DISCUSSION

### IMPACT 1 – Businesses are suffering.

In Ball Square four storefront businesses (1 dry cleaner, 2 restaurants and 1 gift shop. One new restaurant has opened.) have closed and many more actively talk about the challenges of the closed bridge. Businesses in Powderhouse Circle, Union Square, and other areas have also reached out to customers for support. While construction is on track to open the Ball Square bridge on time (March 2020), there are three other important bridges closed or closing simultaneously (Washington, Medford St, School St). Our cut-through traffic has become unbearable as cars clog arteries designed for many fewer cars. The sooner roads and bridges can reopen, the better. These small businesses are run by our neighbors and friends, and create the economic health and character of our community. While the city looks for new minority or women owned businesses to support, the existing businesses many of which fit that criteria, need relief from construction disruptions now.

### IMPACT 2 – Public health is suffering during nighttime work.

Thousands of people live within earshot of the construction in the Right of Way and are currently being awoken throughout the night during construction. Common sense tells us that the impact of frequent waking is dire. The medical literature adds details: “Sleep plays a vital role in brain function and systemic physiology across many body systems. . . . Sleep disruptions have substantial adverse short- and long-term health consequences. . . [and can include] increased stress responsivity, somatic pain, reduced quality of life, emotional distress and mood disorders, and cognitive, memory, and performance deficits. . . . Long-term consequences of sleep disruption in otherwise healthy individuals include hypertension, dyslipidemia, cardiovascular disease, weight-related issues, metabolic syndrome, type 2 diabetes mellitus, and colorectal cancer”. (<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5449130/>). Furthermore, lack of sleep has far-reaching consequences for the entire community: “[About] 20% of the serious injuries that result from car accidents can be associated with driver sleepiness, independent of the effects of alcohol” (Ibid).

### IMPACT 3 – Increased traffic and congestion is causing dangerous roads and lost productivity.

As traffic is consolidated onto other streets, commute times are suffering, tempers are flaring and the climate of moving around our cities is suffering. Small streets not intended for increased cars are becoming dangerous, while larger intersections are failing regularly through gridlock and dangerous conditions. Recent traffic accidents with pedestrians, cars and property attest to the increased strain current conditions place on our communities. The burden is felt throughout the cities of Medford and Somerville, as well as by anyone who travels through these towns.

### Service change proposal

We are proposing the Lowell Commuter rail line cease train operation in the right-of-way from the end of morning rush (at 9 A.M.) until the evening rush at 3 P.M. This will provide 6 hours of uninterrupted work time. Additionally, there is an opportunity to have a second train-free shift from 7 pm until 1 am to replace train service with buses and gain an *additional* 6 hours of uninterrupted work time.

During these 12 hours, the West Medford station would become the southern terminus for the Lowell Commuter Rail line. Shuttle buses would meet the trains to bring passengers to/from Wellington Station (Orange Line) and Davis Square (Red Line). Additionally, West Medford Station is served by the 94 bus to the Davis Square Station, the 95 bus to Sullivan Station, and the 80 bus to Lechmere Station. Signs and personnel will aid passengers at North Station to find the bus service to West Medford. A similar shuttle was deployed July – Dec, 2018 for track improvements and so many riders will be familiar with the bus service already. Currently, weekend trips are already replaced with shuttle service.

Amtrak trains do not need to be rerouted since they already use an alternative Haverhill Line. The dates of this shuttle replacement can be discussed with the engineers at GLX, and should cover the core times of predicted night time work and bridge closures. However, it is imperative that a plan be deployed ASAP.

Summary of potential (negative) impacts:

We understand that Lowell Line riders will have their commute disrupted if this proposal is adopted. However, remember that many thousands of commuters – both in Somerville/ Medford and from communities farther north – have their commute disrupted by the street-level disruptions, too. We all have an interest in completing the GLX construction as quickly as possible.

An informal (and admittedly, amateur) assessment of ridership, using MBTA data found on line (<https://www.mass.gov/lists/2018-commuter-rail-counts>) suggests the following numbers of passengers who ride, in either direction, after the morning commute, before the evening commute, and after the evening commute.

Time period	Specific time window	In bound or out bound	Number of trains impacted	Total number of riders impacted
After morning commute	9:00 – 3:00	In bound	6	487
After morning commute	9:00 – 3:00	Out bound	7	427
After evening commute	6:30 pm – 12:30 am	In bound	6	184
After evening commute	6:30 pm – 12:30 am	Out bound	5 (4)	544 (307, if we wait till after the 7:30 train, #339)
		<b>Totals</b>	<b>24 (23) trains</b>	<b>1642 (1405)</b>

As a point of comparison, the six trains running in bound prior to the 9:15 train carry a total of 3123 people, or an average of 521 per train.

Under this proposal:

GLX-C will have 6 hours mid-day and 6 evening hours of uninterrupted work time not currently available. 1642 people are impacted total, and only 1405 if the 7:30 pm outbound train goes through and bus service starts with the following train at 8:40 pm.

Ridership on these 24 trains ranges from a low of 2 to a high of 237 (or 142 if we remove the 7:30 pm out bound train.) Only 5 trains carry more than 100 people at any time. The average number of passengers on the remaining 19 (18) trains is 68 (61).

For most times, two buses will suffice to move passengers to/from either Davis or Wellington, since MBTA buses have 39 seats, and have room for 16 people standing before they feel crowded, for a total of 55 people each bus (MBTA Website).

While bikes are allowed on all of these off-peak routes, there was not data available about how many bikes were typically on the Lowell Line trains. We suggest that any buses deployed be fitted with bike racks.

Only trains that stop at West Medford and carry through to North Station were included in this analysis.

#### COSTS OF IMPLEMENTATION

We can calculate the costs of this replacement service and ask that the GLX-C provide details about what savings would come from shifting work to daytime (rather than nighttime at a higher rate) and reducing the length that these current work phases would take.

A dispatcher costs \$75/ hour. We assume 5 dispatchers: 2 at North Station, 1 at Wellington, 1 at Davis, 1 at West Medford.

Bus + driver costs \$180/ hour. Because there are times when the predicted ridership would not fit on one bus, we budget 2 buses at all times.

During mid-day, we assume 6 hours of bus service. Additionally, there are an additional 6 hours after the evening rush hour before the end of service for the day, for two shifts per day.

Putting that all together, we calculate: (5 dispatchers \*\$75/hour\*6 hours) + (2 buses \*\$180/hour \*6 hours) \* two shifts per day

Total cost per 12 hour work day:  $(5*75*6) + (2*180*6) * 2 = \$4410 * 2 = \$8820$

Summary of potential benefits:

- 6+ (or even 12+) hours of uninterrupted construction time.
- GLX Contractors could shift heavy construction work to the day.
- Lessen the amount and duration of disruptive overnight work needed.
- Noise /construction relief for thousands of residents in Somerville and Medford, lesson health impacts to residents.
- This is a temporary service interruption.
- Construction may be finished earlier than scheduled, restoring normal traffic and economic activity.
- GLX cost savings as they work more efficiently during the daytime hours.
- “Hidden” costs to the cities would be reduced, such as police detail needed along detour routes, time lost to traffic congestion, and shuttle bus service around closed bridges.

We look forward to hearing from you to find out how to move this proposal into action and provide relief for thousands of residents across the region.