

30 May, 2006

Para Jayasinghe, P.E.  
Boston Department of Public Works  
1 City Hall Plaza  
Boston, MA 02201

Dear Mr. Jayasinghe:

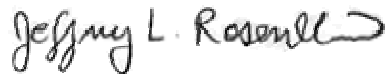
LivableStreets Alliance appreciates the opportunity on May 17, 2006 to be briefed on the Massachusetts Avenue reconstruction project (#600636). We again appreciate the opportunity to participate early enough in the process to make it possible to work with you to improve the project. We have prepared comments that have the consensus of WalkBoston, Adaptive Environments, and MassBike. Our comment (Attachment A) address: (1) a new typical cross section, featuring wider sidewalks and bike lanes, (2) an improved street crossing at the Southwest Corridor/Orange Line T stop, (3) identification of crosswalk/ sidewalk design concerns, and (4) design speed concerns. The comments should not be construed as an exhaustive technical review, instead they are illustrative of our concerns. We also strongly advocate that the City engage a firm to review the final designs to ensure not only compliance with minimum ADA standards, but also current best practice for universal accessibility.

We believe that the drawings presented to us represent essentially the same project proposed to the public in 1995, having undergone only minor modifications. Concerns regarding the cross section presented then are still of concern today. Relatively small changes to crosswalks, signalization, bus stop locations, and other design details will only result in minor improvements to the current plans. The opportunity to truly improve accommodation for all current and future users of this street that passes through a densely populated mixed urban neighborhood should be seized during this costly public works project. We believe that aspects of the current design do not conform to the detail or spirit of Boston's "Streetscape Guidelines" published in 1999, and hope that it will be possible to make these guidelines a reality.

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We hope that our comments are helpful and that we can work together on the shared purpose of making this a successful project equitably serving all users of this street, those who live, work, or play in the City of Boston, for now and into the future. We acknowledge this must be placed within the context of process and financial constraints in front of us, and will be pleased to continue to assist in any way we can.

Best Regards,

A handwritten signature in black ink that reads "Jeffrey L. Rosenblum" followed by a stylized flourish.

Jeffrey L. Rosenblum, P.E.  
Executive Director, LivableStreets Alliance

cc: Jim Gillooly, Kimberly Sloan, Wendy Landman, Valerie Fletcher, David Watson  
attachment (1)

## ATTACHMENT A—

### LivableStreets comments on Massachusetts Avenue reconstruction project (#600636)

☞ “The objective of these Streetscape Guidelines is to encourage the creation of an urban environment that supports the co-existence and equitable sharing of various modes of travel.” *Mayor Thomas Menino, 1999.*

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#### i. Executive Summary

The comments in this memo represent a preliminary consensus review by LivableStreets Alliance, WalkBoston, Adaptive Environments, and MassBike. LivableStreets has identified concerns and presents several recommendations for the Massachusetts Avenue design that we believe will add substantial public benefits, improving accommodation for pedestrians, persons with disabilities, cyclists, and motorists alike. The key recommendations follow:

- 1. Cross sections.** Both “typical” and “intersection” cross sections are included. Key recommendations: eliminated median, wider sidewalks, and bicycle lanes.
  - 2. Street crossing at Southwest Corridor / Orange Line T stop.** Key recommendations: removed median, much wider crosswalks, bicycle crossing area, wider ramps.
  - 3. Sidewalk and Crosswalk Design.** Key recommendations: level sidewalks crossing alleys and low-volume streets, perpendicular curb cuts (handicapped ramps) at intersections, crosswalks aligned with pedestrian flow. Use concrete for sidewalk surface and bricks for feature strip along curb only.
  - 4. Design speed.** Key recommendations: Design speed of 25 MPH with signals set for a 20 mph progression.
  - 5. Miscellaneous as designs develop.** Key items to revisit: Landscaping plan; Location of poles, signs, and boxes on sidewalk and intersections; Signal timing; Bicycle racks; Public art; Wayfinding.
  - 6.** We strongly advocate that the City engage a firm to review the final designs to ensure not only compliance with minimum ADA standards, but also current best practice for universal accessibility.
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## 1. Typical Cross Section

There are ways to achieve a sidewalk of sufficient width and bicycle lanes to accommodate the current and future demand of this urban space. These concerns were raised in a public forum in 1995, and the design does not seem to have been modified to address these needs. A possible cross section that would better balance all modes is provided below.

Figure 1 proposes a recommended cross section for typical street segment that includes an eliminated median, wider sidewalks, and a bike lane. Figure 2 proposes a recommended cross section for typical intersections that includes one 10' left-turn-only lane, bike lanes, and no parking on one side. Figure 3 proposes a recommended cross section through Chester Square Park that includes an eliminated median, wider sidewalks and bicycle accommodation.

Figure 3 also proposes two conceptual design alternatives worth taking into consideration because of the park context. These concepts are very preliminary, and would require significantly more work and community input, but we feel it is important to consider all alternatives.

- Concept A utilizes the “managed parking” technique, similar to that used on the new Rose Kennedy Greenway. Under current conditions, parking is only residential and only permitted during off-peak hours. Concept A would allow for two travel lanes each direction during peak times, and one through lane during off hours. This provides for significant improvement to the park cross section. This would allow for trees to be planted along the roadside, improving the park setting. Road striping should be developed to ensure proper bicycle accommodation during both types of lane usage.
- Concept B utilizes the “cycle track” model similar to that used extensively in Europe. This concept places the bike accommodation next to the sidewalk on the other side of the parked cars—a 2-foot buffer is provided for those entering and exiting their vehicles. This provides for a more enjoyable park setting for the cyclists. A concern of this concept is snow clearing—but if the cycle track and sidewalk are at the same elevation, this concept could be advantageous because a standard-width snowplow would be able to clear both the sidewalk and cycle track at the same time.

**FIGURE 1 Cross section for typical roadway segment (92' building to building)**

**Boston Plan**

Sidewalk	park/bus	bike	travel	travel	median	travel	travel	bike	park/bus	sidewalk
8'	8'		14'	11'	10'+(2')	11'	14'		8'	8'

**LivableStreets Alliance proposal**

Sidewalk	park/bus	bike	travel	travel	median	travel	travel	bike	park/bus	sidewalk
11'	9'	5'	10.5'	10.5'	0	10.5'	10.5'	5'	9'	11'

**FIGURE 2 Cross section for typical intersection with left-turn-only lane (92' building to building)**

**Boston Plan**

Sidewalk	park/bus	bike	travel	travel	turn	travel	travel	bike	park/bus	sidewalk
8'	8'		14'	11'	10'	11'	14'		8'	8'

**LivableStreets Alliance proposal**

Sidewalk	park/bus	bike	travel	travel	turn	travel	travel	bike	park/bus	sidewalk
12'	9'	5'	10.5'	10.5'	10'	10.5'	10.5'	5'	0'	9'

**FIGURE 3 Cross section for segment within Chester Square Park (90' park edge to park edge)**

**Boston Plan**

Sidewalk	park	bike	travel	travel	median	travel	travel	bike	park	sidewalk
6'	8'		14'	11'	10'+(2')	11'	14'		8'	6'

**LivableStreets Alliance proposal**

Sidewalk	park	bike	travel	travel	median	travel	travel	bike	park	sidewalk
10'	9'	5'	10.5'	10.5'		10.5'	10.5'	5'	9'	10'

\* **LivableStreets Alliance Conceptual Design Alternative A (managed parking) – note that 10' of the sidewalk dimension could be returned to the park on either side of Chester Square for additional planting**

Sidewalk	mgd pkg	travel	travel	mgd pkg	sidewalk
19'	15.5'	10.5'	10.5'	15.5'	19'

\* **LivableStreets Alliance Conceptual Design Alternative B (cycle track)**

Sidewalk	bike	buffer	park	travel	travel	travel	travel	park	buffer	bike	sidewalk
8'	5'	2'	8'	10.5'	10.5'	10.5'	10.5'	8'	2'	5'	8'

**1.1 Sidewalk widths.** The current design generally leaves 8' of total sidewalk width on each side (except at intersections where bulb-outs provide additional space). In some places, though, it appears that only 6' total width is planned. Trees, therefore, cannot be properly accommodated with this plan; though they exist, they do not provide for adequate pedestrian clearance. Assuming 8' total width: 0.5' is for curb 4' for furnishing zone including the tree pits — this leaves only 3.5' "clear zone". The BTD Streetscape Guidelines (1999)—"SGs"— indicate that, "it is desirable that sidewalk widths accommodate a minimum 8-foot unobstructed or clear zone for pedestrians in the public right-of-way... Ideally, sidewalks should be 12-13 feet wide without trees, and 13-15 wide with trees." The 2006 MassHighway Project Development and Design Guidebook indicate a minimum of 5' "clear zone" is required, although a 3 foot clear width is sufficient to bypass occasional obstructions.

The cross section proposed by LivableStreets increases typical sidewalk widths to 11', which should be able to provide close to 7' "clear zone". This extra sidewalk width also helps mitigate the impact of large traffic volumes on the adjacent dense housing.

**1.2 Median:** The SGs state that, "Medians should be installed only if there are pedestrian and vehicular safety concerns or as a beautification element to enhance the streetscape." LivableStreets strongly believes that the space currently allocated to the median will better serve public interest if allocated in other ways. Eliminating the median will: improve the streetscape with additional space between homes and vehicles; provide for wider sidewalks; provide additional space that could support sidewalk trees; shorten pedestrian street crossing distance and therefore required signal phase; provide space for bike lanes; and improve throughput of vehicles.

The community, based on the transcript from the 2003 public hearing, voiced considerable desire for the median to provide for a "pedestrian refuge" at intersections to improve pedestrian safety and comfort. The current plans do not include medians at intersections.

According to the SGs, the current design for an 8' median will not support trees, one of the most valuable benefits of a median. "Medians 6 feet in width and wider are suitable for turf and low landscape plantings. Medians at least 10 or 12 feet wide are suitable for columnar trees. Medians at least 18 or 20 feet wide are suitable for larger shade trees." The current maintenance of trees in the median is poor. The community, based the 2003 public hearing, overwhelmingly voiced the desire for improved landscaping. Concerns were raised regarding the potential for landscaping and maintenance given the narrow width of the median. LivableStreets believes that eliminating the median and using that space for landscaping against the sidewalks provides better potential for overall streetscape.

The public has weighed in on the desire for "increased safety" and "increased aesthetic through landscaping". For this project, this desire is best served without the median.

**1.3 Bike Lanes.** The SGs state, "Designated and marked lanes should be the preferred means of accommodating bicycles." This is supported by the Boston Bicycle Plan (2001), published by BTD as part of the Access Boston 2000-2010 project. This, along with Mayor Menino's 1999 Executive Order reestablishing the Boston Bicycle Advisory Committee indicates a formal commitment to improve bicycling conditions in the city. The 2006 MassHighway Project Development and Design

Guidebook also recommends bike lanes as the preferred treatment. We note that the context for bike lanes should be treated on a case-by-case basis, and should not be considered the only method for improving bicycle accommodation—for example, traffic calming can provide significant improvement to bicycling conditions.

The SGs state, “As an absolute minimum, along all major arterials, when it is not possible to provide a bicycle lane, bicycles should be accommodated by sharing the curb lane of 15 feet.” The current Boston design does not even meet this guideline.

The Bicycle Plan includes Mass Ave. as part of the City’s “vision of an improved citywide bicycle network.” A focus on improves bicycle accommodation for this stretch of Mass Ave. also lays the foundation for connections to the multi-use path along the Charles River for future reconstruction projects, including the planned reconstruction around Symphony Hall where Massachusetts Avenue intersects with Huntington Avenue, another important bicycle network corridor identified in the Bicycle Plan.

The segment of Massachusetts Avenue affected by the current project intersects the existing Southwest Corridor as well as the planned South Bay Harbor Trail, and therefore should be considered an important component of a developing network of bicycle routes. Coordination with Save the Harbor/ Save the Bay and bicyclist advocacy organizations and user groups regarding connections to the South Bay Harbor Trail should be done before finalizing these plans. The designs for the Massachusetts Avenue reconstruction project should reflect the current and future needs of cyclists through this corridor by planning ahead for future street reconstruction.

Transitions for cyclists in and out of this project area should be taken into consideration, as bicycle lanes will, for the moment, need to merge back into wide outside lanes at either end of the project. Appropriate lane markings and signage should be used.

**1.3.1 Bike Lanes at intersections.** Details of bicycle accommodation at intersections must be taken into consideration to minimize the “right-turn-hook” of vehicles taking a right turn in the path of the bicycle lane— MassBike and LivableStreets are available to work with you and your consultants on these details.

Initial guidance is provided by the 2006 MassHighway Project Development and Design Guidebook states, Section 6.7.9, which states, “The bicycle lane marking is a 6-inch wide white solid stripe. Near intersections, the solid stripe should be replaced by a broken line stripe (two-foot-long stripes separated by six-foot-long spaces) where bicycles and vehicles merge. The outer bicycle lane marking is skip striped all the way to the stop bar at controlled intersections, and to the extension of the property line at uncontrolled intersections. The skip stripe alerts bicyclists to the potential for motorists to be crossing their path and encourages safe merging in advance of the intersection. The lanes should resume on the far side of the intersection.”

**1.3.2 Bike lanes at bus stops.** Section 6.7.9.1 states, “Intersections with Bus Stops where there is a bus or other transit stop, either near side or far side, the 6-inch solid line should be replaced by two-inch dots separated by six- foot spaces for the length of the bus stop.”

**1.4 Signal actuators.** On Massachusetts Avenue at Albany St the drawings show 3 bicycle actuator symbols where there are no loops underneath. Otherwise, bicycle traffic loop actuator symbols are all correctly positioned, and the traffic loop actuator sign is the standard one from the Manual on Uniform Traffic control devices rather than one of the several different kinds that have been used to date in Massachusetts.

However, bicycle actuators should be relocated based on the new cross section to ensure that the actuators are located in the path of bicycles.

**1.5 Bus stops.** The 2006 MassHighway Project Development and Design Guidebook states, “Buses require a minimum width of 10 feet. Therefore, if there is significant bus activity along a corridor and it is desirable to allow through traffic to pass unimpeded, a wider parking lane should be provided.” “Parking lane widths of 10 feet are desirable in areas with substantial amount of truck parking or bus stops.” “Bus bay widths should be 12 feet, although 10 feet is sufficient when traffic speeds are 30 mph or less.” The 8’ allocated in the current design for bus bays is insufficient. The proposed cross section would have the bus stop at a far-side location in the travel lane. This is considered by many traffic planners and transit operators to be the most efficient for low-volume bus stops in terms of maximum arterial throughput, and is also safer because the crosswalk is behind the bus where pedestrians are visible to approaching motorists.

Bus shelters are typically 5 to 6 feet wide, and therefore current design with sidewalk widths of 8’ will not allow for them. The LivableStreets cross section with wider sidewalks will allow for bus shelters.

**1.6 Bulb-outs.** LivableStreets is pleased to see sidewalk bulb-outs (neckdowns) at most intersections throughout the project. They are properly designed to extend 2’ shy of the 8’ parking width. Nevertheless, additional thought must be put into this detail. As currently designed and because bus-bays are used, there is a concern that buses will not be able to easily pull into the bus stop such that both front and rear doors are against the curb.

The 2006 MassHighway Project Development and Design Guidebook states, “A bus stop, whether near-side or far-side, requires 50 to 70 feet of curb space unencumbered by parking...The designated bus loading area should not extend closer than 20 feet to the pavement corner radius. These dimensions apply to both near-side and far-side bus stops.”

We feel strongly that bulb-outs should be retained in order to minimize pedestrian crossing distance. We advocate that any design optimize both pedestrian and transit accommodation.

**1.7 Albany Street intersection.** From the beginning of project area to Albany Street, the cross section does not fit into either scenario does not fit into either cross-section scenarios shown in Figure 1-1 or 1-2. Changes to these cross sections should be made to improve accommodation for bicyclists. The turning radii at the southern and western corners are excessive, and should be reduced. Lane striping inbound and outbound on Albany Street should be modified to provide better accommodation for cyclists through the intersection.

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## 2. Improved street crossing at Southwest Corridor/Orange Line T stop

We note that a traffic signal has been added at this location, which is a very positive improvement for pedestrians, transit riders, and cyclists traveling along the Southwest Corridor. It should be automatically recalled without need for a pushbutton with a short cycle length to encourage proper pedestrian behavior— at least at peak times.

While LivableStreets supports the positive changes incorporated into the new designs for this intersection, we feel that the intersection as currently designed is inadequate for the context in which it exists. The following crossing movements must be taken into consideration: (1) transit riders transferring between subway and bus should be provided minimal walk distance, (2) pedestrians traveling along the Southwest Corridor and crossing Massachusetts Avenue should be provided as straight as possible, (3) bicyclists using the Southwest Corridor who are crossing Massachusetts Avenue must be accommodated.

With all of the above activity, it is clear that the proposed 8' crosswalk and the current design are inadequate.

The current median width in the vicinity of the Massachusetts Avenue Orange Line station is only 3', and therefore specifically discouraged by the SGs, "When medians are provided they should be a minimum of 6 feet in order to provide adequate areas of refuge for pedestrians crossing the street." This minimum dimension also provides a refuge long enough for a bicycle, baby stroller etc. Boston's "Traffic Signal Operations Design Guidelines" (2004) concurs with the 6-foot minimum for medians. Especially in this area specifically redesigned for improved pedestrian crossing, this median should be eliminated.

The design should include a much wider striped crosswalk, and designated and marked path for bicyclists aligned with the Southwest Corridor park. In addition, wider ramps should be provided. The crosswalk location needs to be coordinated with precise determination of where the bus will stop.

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## 3 Sidewalks and crosswalks

**3.1 Driveways through sidewalks.** Streetscape guidelines indicate, "Vehicle crossings of the sidewalk at driveways should be designed level with and of the same material as the sidewalk." LivableStreets advocates that the current design be modified to utilize this treatment at alleys and low-volume streets (e.g., Public Alley #715, and Parmalee Street).

**3.2 Furniture Zone.** The SGs state, "Sidewalk width should accommodate a furniture zone to be located between the pedestrian zone and the roadway pavement for trees, signs, signal control boxes, fire hydrants, etc." Though bulb-outs are incorporated at many intersections, the current design appears to keep the mast arms in the same location which places them in the middle of the sidewalk. The current drawings provided to LivableStreets does not indicate the precise locations of

other utility boxes, poles, trees, etc.— final plans should be reviewed to ensure that the maximum possible “clear zone” is achieved.

**3.3 Handicapped ramps.** “Accommodate two handicap ramps at each corner aligned with crosswalks, rather than a single ramp at the center of the curve. Locate the handicap ramps to be aligned suitably with the right-of-way on the sidewalk.” The Architectural Access Board CMR (Feb, 1996) also clearly states that curb cuts must be perpendicular, that diagonal curb cuts serving two street crossings is not allowed. This guidance was not followed in the current design.

**3.4 Crosswalks.** The SG’s state that “Crosswalks should be aligned with connecting sidewalks.” The current design does not align the crosswalks with the desire-line of pedestrians. In most places, the current design does meet the SGs minimum standard that “Crosswalks should be at least 10 feet wide.” Section 2 above comments on improvements to the currently proposed design the crossing at the Southwest Corridor/ MBTA Orange Line station stop.

Based on the current design, the signals will "rest in walk" (be automatic) in movements lateral to Massachusetts Avenue, which we support.

**3.5 Sidewalk material.** Current conditions include sidewalks in very poor condition, especially those that are bricked. LivableStreets is pleased that sidewalk reconstruction is included in the scope of this street reconstruction project. When sidewalks are rebuilt, it is imperative that the walking surface be built with all users in mind. Rough cut brick is undesirable for the walking surface for the safety and comfort of many users, such as those in wheelchairs, the elderly, and many whose disabilities are not readily apparent. Many new sidewalk design options are available that provide the desired aesthetic while maintaining functionality, including the use of traditional brick as an accent on the side of the walking path. If brick is ever used for a walking surface, only wire-cut brick should be used, and careful attention should be given to installation.

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#### 4. Design Speed

The SGs state that “In high density areas speed limits should be set at 30 Mph... the City of Boston Supports the Act to Amend the Speed Limit from 30 Miles Per Hour to 25 Miles Per Hour... A 25 mile per hour speed limit will help reduce the overall speed of vehicles, increase public safety and improve the quality of life for Boston’s residents.”

LivableStreets advocates that any design for this street should be conducted for a design speed of 25 MPH; the current plan has a 40 MPH design speed.

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## 5. Miscellaneous as designs develop

The following items should be taken into consideration as the designs for this project develop.

**5.1 Signal timing.** We note and support the fact that traffic signals all have concurrent pedestrian phases, and that signals will "rest in walk" (be automatic) in movements lateral to Massachusetts Avenue. The plans should be reviewed after cross-section changes are made to ensure that a minimum of 4 ft/sec standard is used for crossings.

**5.2 Bicycle Racks.** SGs indicate that "bicycle racks should be appropriately spaced and located so as to facilitate access while not blocking bus stops, sidewalks, pedestrian crossings and other facilities." Bike racks are required throughout, especially near St. Botolph & Huntington and near the Orange Line station.

**5.3 Art.** Encouraged by the SGs, "Art in the public right-of-way is strongly encouraged. Sidewalks are viable spaces for artwork that is interesting and engaging for pedestrians and enhances the streetscape. Sculptures, sidewalk inlays and kiosk displays are examples of public art. Other examples of public art can include: paintings, murals, photography, tapestry, glass and works on or of paper."

**5.4 Wayfinding.** The SGs state that, "Signage improves pedestrian orientation and movement, as well as adds visual interest and character to the streetscape." This should especially be developed for the Southwest Corridor, South Bay Harbor Trail and the Silver Line and Orange Line station.

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## ADDITIONAL COMMENTS

LivableStreets encourages urban transportation planners and engineers to take a broader perspective when designing our streets. The Massachusetts Avenue redesign plans as presented reflect a traditional emphasis on accommodation of future vehicular traffic in 2020. Any street reconstruction should be evaluated using criteria closely linked to economic growth and quality of life for current and future users of the street. Economic development as it relates to transportation depends on many elements in addition to the flow of single-occupancy vehicles.

According to the MAPC, non-white and elderly population ratios will increase significantly over time— this demographic depends more on transit and walking. Society values elders' maintaining their independence for as long as possible, and this goal requires a focus on pedestrian accessibility, safety, and comfort in their neighborhoods. As mass transit is able to move more people per vehicle space, transit prioritization and improved access to stops should be an integral part of any design. Additionally, numerous state, regional and city policies encourage greater use of bicycling for transportation and recreation.

