



CITY OF BOSTON • MASSACHUSETTS

OFFICE OF THE MAYOR  
THOMAS M. MENINO

April 8, 2008

Ms. Wendy Landman, Walk Boston  
Ms. Valerie Fletcher, Adaptive Environments  
Mr. David Watson, MassBike  
Ms. Ashley McCumber, United South End Settlements  
Mr. Jeff Rosenblum, Liveable Streets  
45 School Street  
Boston, MA 02108

Dear Sirs and Madams:

Thank you for your letter of February 22, 2007 to Mayor Menino concerning the design of the Massachusetts Avenue project that runs from St. Botolph Street to Albany Street. As you mention in your letter, this project has had a lengthy design history and now, with the design process nearing completion, the project is programmed to receive \$14.5 million in Federal and State funding in the current FFY 2008 TIP.

You made a number of specific design recommendations in your letter, some of which you previously made at a meeting hosted by MHD and another meeting at City Hall. Your specific suggestions underscore the reality that many design decisions are made to best balance the needs of pedestrians, bicyclists and motorists within the limited width of the public right of way.

The following is a restatement of each of the six major issues that you raised in your letter followed by our response, made after careful deliberation.

**Recommendation:**

**Eliminate the added left turn lanes and retain the median at intersections.**

**Response:**

The left turn lanes, many of which exist today, allow the orderly flow of the various straight and turning traffic moves through the intersections. Without them, the through moves will be impeded by those waiting for an opportunity to turn left thereby increasing congestion along the corridor and contributing to the risk of accidents. The exclusive left-turn lanes also allow more flexibility in the signal phasing (i.e.: protected only, protected/permissive) which can improve traffic safety.

DENNIS E. ROYER, CHIEF OF PUBLIC WORKS AND TRANSPORTATION

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A primary goal of this project is to increase intersection safety and capacity. Four of the seven intersections located within the project limits are included on *Mass Highway's Top 1000 High Crash Location Report 1999-2001*. The provision for left turn lanes are an integral part to achieving this project goal. Although the left turn demand at all intersections is not consistent and not always excessive, the inherent advantage of having these elements is obvious and critical to the corridor as a whole.

Measures of effectiveness (MOE's) for the network were considered for the existing configuration, the design without left turn lanes and the current design. The results indicate that during the 2023 AM Peak Hour the total signal delay experienced by drivers within the project limits (includes the seven study intersections) is 227 hours under the existing configuration, 272 with the elimination of left turn lanes and 147 hours with left turns lanes. All MOE's for the AM condition with the removal of left turn lanes indicate worse conditions than the existing condition. The current design reduces corridor delay by approximately 35% compared to the AM existing configuration condition while the removal of left turn lanes would actually increase delay by 20%. During the PM peak hour, the current design reduces corridor delay by approximately 42% compared to the existing configuration condition while the removal of left turn lanes would reduce delay by only 8%. A portion of the projects funding consists of Congestion, Mitigation and Air Quality funding (CMAQ). This funding is reserved for projects that reduce congestion and improve air quality. Left turn lanes are necessary to achieve this goal.

With regard to the length of the left turn lanes proposed, a minimum 100' length is provided exclusive of tapers. This is the minimum acceptable length for exclusive turn lanes in the City. There are two exceptions to this along the project. The first occurs along the Massachusetts Avenue southbound approach to Saint Botolph Street. This is due to the limitation of distance to the intersection to the north (Huntington Avenue). Improvements to the Huntington Avenue intersection are currently in the preliminary design stage and will be coordinated with this project. The Massachusetts Avenue southbound approach to Albany Street also has a left turn lane length that varies from the 100' minimum. The existing turn lane for this movement is approximately 200' long and the City can work with its design consultant to determine if a reduction is appropriate. Overall, the lengths of left turn lanes have been minimized in order to maximize the length of the proposed medians.

Again, the left turn lanes are provided to 1.) reduce the occurrence of blocking of the through travel lanes and improve overall progression 2.) improve driver expectancy by providing a consistent cross section throughout this project 3.) allow for the opportunity to provide protected phasing for left turns 4.) improve safety along an extremely busy arterial that carries over 40,000 vehicles per day and to 5.) either maintain or improve intersection capacity from the current configuration.

**Recommendation:**

Design for a speed of 20 miles per hour for pedestrian safety.

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**Response:**

Massachusetts Avenue is a major corridor on the National Highway System and must be designed to major arterial street standards. Pedestrian safety is accommodated through the proper design of signal controlled crossings, generally at intersections. The pedestrian crossing times planned for these intersections will allow for full crossing of the intersection approaches in one-step. A one-step crossing is preferred to a two-step crossing where pedestrians are required to take refuge in a median where live traffic may be adjacent. The new traffic signals will include Pedestrian Countdown devices to make clear to pedestrians when it is safe to start crossing at each intersection. 'Neck downs' are proposed at the intersections to reduce the overall crossing distance and to increase the visibility of pedestrians. Please also note that the design speed is the safe travel speed, not the legal speed limit.

**Recommendation:**

Establish a bicycle lane.

**Response:**

The design includes a 14 foot wide "share-a-lane". A dedicated bicycle lane would require the reduction of the designed sidewalks or the elimination of parking. The shared lane approach is a compromise that allows for improved bicycle operations in a difficult corridor design.

**Recommendation:**

Widen sidewalks.

**Response:**

The design includes sidewalks that range from 8 feet to approximately 12 feet wide. The sidewalk alongside Chester Park near the street is approximately 5 feet wide. The path of travel inside Chester Park is approximately 8 feet in width.

To generally widen the sidewalks further would require the reduction of parking, or the narrowing of the "shared-lane" intended to better accommodate both bicycles and motor vehicles. Please note that parking is already at a minimum 8' width and that waivers from Mass Highway design criteria were required to obtain the currently proposed minimum travel lane widths. Please note that the existing medians have varying widths of up to 10'. The design width for the proposed medians south of Tremont Street was kept to a minimum 8' in order to make available up to 2' of additional cross section for allocation to sidewalks and/or shared lane bicycle accommodations. Median widths less than 8' were not pursued (apart from the block from Columbus Avenue to St. Botolph Street) in order to provide median plantings that the community has identified as an important part of the project. The width of the median in the vicinity of the Orange Line crossing was further reduced in order to provide the minimum lanes widths without reducing sidewalk widths. The City has every desire to maximize sidewalk widths along this project, however, is faced with a limiting layout that needs to accommodate many elements.

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**Recommendation:**

Re-align and stripe crosswalks.

**Response:**

The concern that many crosswalks are crooked and not continuous with the sidewalks is unacceptable from a design perspective and must be resolved. We would appreciate your assistance in correcting these elements.

**Recommendation:**

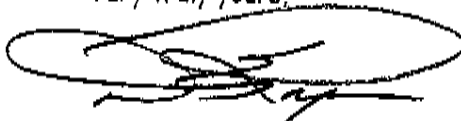
Pave sidewalks with smooth walking surfaces. Use brick only as a decorative trim band.

**Response:**

The City has been researching alternatives to the brick pavers typically used throughout Boston and has found examples that meet both the close tolerances needed for a smoother walking surface as well as the aesthetic demands of our many historic districts. In 2007, we eliminated the City Hall Paver as an acceptable design element for walking surfaces, replacing it with wire cut brick. A portion of the project is situated within an historic district, as such we will need to be cognizant of addressing historic requirements which may obligate some portions of sidewalk be installed with brick pavers.

We appreciate your ongoing attention to the balanced design of City projects and share your perspective that the streets of the City are a shared resource for all to use. The limited rights of way throughout Boston create a significant challenge in trying to balance the needs of the competing uses. It is our sincere desire that through an open, public process we will achieve a consensus on design elements for this much needed and complex project. We look forward to continuing the dialogue on these projects so we may finalize the design and proceed with construction of this much needed improvement.

Very truly yours,



DENNIS E. ROYER

Chief of Public Works and Transportation

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