

**Massachusetts Department of Transportation Highway Division
Longfellow Bridge Rehabilitation Task Force**

DRAFT RECOMMENDATIONS

These draft recommendations have been assembled by the facilitators to assist the Task Force seek feedback from the public prior to finalizing their recommendations. They are intended to highlight areas where there is a high level of agreement, areas where potential agreements exist and areas needing further discussion or, in the absence of agreement, where differences may need to be articulated such that the Administrator can make a decision regarding alternatives to be fully evaluated within the Environmental Assessment (EA) document .

Executive Summary

Owned, operated and maintained by the Massachusetts Department of Transportation, the Longfellow Bridge is a historic structure completed in 1908 and carries State Route 3, consisting of Cambridge Street in Boston and Main Street in Cambridge, over the Charles River. The Bridge spans 2,135 feet between the cities with a deck width of 105 feet. On average 90,000 passengers cross daily on the MBTA Red Line, 28,000 automobiles and trucks and over one thousand pedestrians and bicyclists cross daily on the bridge's travel lanes, bike lanes and sidewalks. The bridge consists of eleven steel arch spans, two steel stringer spans, is founded on large granite block and concrete piers and abutments, and has eight decorative masonry towers.

Over the decades the condition of the bridge has deteriorated and MassDOT has determined that its rehabilitation and restoration should be included in the Massachusetts Accelerated Bridge Program. Approximately \$255 million has been allocated to its repair and rehabilitation. MassDOT's goals are to restore the beautiful and historic structure in a manner that is sensitive to its original construction by improving its structural condition; to provide safe travel for transit, bicycle, pedestrian and vehicular travel, and to preserve an essential element of the Charles River Basin. In the spring of 2010, MassDOT withdrew a previously submitted Environmental Assessment for the Longfellow Bridge Project from the Federal Highway Administration in order to provide an opportunity for further public participation as it relates to the final configuration of the bridge. For these purposes, in June 2010, Massachusetts Department of Transportation Highway Division Administrator Luisa Paiewonsky convened the Longfellow Bridge Rehabilitation Task Force. The Task Force members were drawn from a diverse set of stakeholder groups who represent interests directly impacted by the Longfellow Bridge rehabilitation.

MassDOT engaged the Massachusetts Office of Public Collaboration at the University of Massachusetts Boston to act as a neutral forum and facilitate the Task Force process to ensure that the collaborative structures and processes were developed and conducted in an unbiased environment suitable for discussion and deliberation.

The purpose in forming the Task Force was to ensure that a wide range of views were represented in arriving at these recommendations. The Task Force process was structured to provide stakeholders with data about the bridge, the proposed rehabilitation, traffic, State and Federal design guidelines, and other parameters that could influence the design. The Task Force provided the conveners with feedback on assumptions, the scope of the project, and suggestions for design guidelines. All meetings were open to the public to observe, with time allocated for non-Task

Force members to express their points of view. The Task Force struggled with the difficult issue of attempting to address both the significant needs and the potential for improvement in a very limited space. These recommendations reflect considerable effort and significant agreement arrived at through open dialogue.

These draft recommendations include three alternatives each for the Inbound towards Boston and Outbound towards Cambridge cross-section design depicting the allocation of space among vehicles, cyclists and pedestrians. All alternatives maintain the existing MBTA Red Line Reservation at its current width. These alternatives are recommended for analysis in the Environmental Assessment to be submitted to the Federal Highway Administration. After hearing from the public and engaging in final deliberations the Task Force may prioritize or amend these alternatives in its final recommendations.

The Outbound configurations include: A) one vehicle travel lane, a 6 foot bike lane plus buffer and a 15 foot wide sidewalk; B) one vehicle travel lane, a 14 foot bidirectional bike lane and a 13 foot wide sidewalk; and C) two vehicle travel lanes, a 5 foot bike lane plus buffer and a 10 foot wide sidewalk. (Approaching Charles Circle, the sidewalk narrows to 3 feet 3 inches clear for about 55 feet without a widening of the abutment wall or to 11 feet clear with a widening. These measurements could be adjusted with modifications to vehicle and bike lane widths.)

The Inbound configurations include: A) two vehicle travel lanes, a 5 foot bike lane plus a buffer and a 10 foot wide sidewalk (8 foot clear) (the sidewalk narrows to only 4 feet clear for approximately 70 feet approaching Charles Circle) [this alternative has two other minor variations]; B) an single vehicle travel lane, a 12 foot bike lane, a 15 foot sidewalk (which narrows as it approaches Charles Circle); and C) is referred to as the "hourglass" alternative with a single lane onto the bridge at Cambridge, widening to two lanes at the midpoint and widening to three lanes at the entrance to Charles Circle. The sidewalk width varies from 15 to 10 (13 to 8 feet clear) in relation to the vehicle travel lanes and the bicycle lane varies from 5 to 6 feet plus a buffer. (The sidewalk narrows to only 4 feet clear for approximately 70 feet approaching Charles Circle.)

In addition, the Task Force saw significant opportunities to address issues at the bridge approaches to Cambridge and Boston and with the connections to the parklands for pedestrians and cyclists. In Cambridge this includes extending bike and cycle paths, improving walkways, crosswalks, adding walk signals and adjusting the geometry of vehicle turns to enhance safety. In Boston this includes a new pedestrian bridge to the Esplanade, extending the bike lane through Charles Circle to Cambridge Street, relocating or adjusting exit and entrance ramps to Storrow Drive, enhancing pedestrian and bike access to the bridge and examining adjustments to traffic signals among other improvements.

These recommendations are depicted graphically below, as are narratives of the assumptions, agreements and other work of the Longfellow Bridge Rehabilitation Task Force.

Background

The Longfellow Bridge is a historic structure completed in 1908 and carries State Route 3, consisting of Cambridge Street in Boston and Main Street in Cambridge, over the Charles River. Route 3 over the Longfellow Bridge is part of the National Highway System and is an officially designated evacuation route for both cities. The Longfellow Bridge is a state-owned structure, maintained and operated by the Massachusetts Department of Transportation. The Longfellow Bridge spans 2,135 feet between the cities with a deck width of 105 feet. It serves many modes of travel. On average 90,000 passengers cross daily on the MBTA Red Line, 28,000 automobiles and trucks and over one thousand pedestrians and bicyclists cross daily on the bridge's travel lanes, bike lanes and sidewalks. The bridge consists of eleven steel arch spans, two steel stringer spans, is founded on large granite block and concrete piers and abutments, and has eight decorative masonry towers.

Over the decades the condition of the bridge has deteriorated and MassDOT has determined that its rehabilitation and restoration should be included in the Massachusetts Accelerated Bridge Program. Approximately \$255 million has been allocated to its repair and rehabilitation. MassDOT's goals are to restore the beautiful and historic structure in a manner that is sensitive to its original construction by improving its structural condition; to provide safe travel for transit, bicycle, pedestrian and vehicular travel, and to preserve an essential element of the Charles River Basin. In the spring of 2010, MassDOT withdrew a previously submitted Environmental Assessment (EA) for the Longfellow Bridge Project from the Federal Highway Administration in order to provide an opportunity for further public participation as it relates to the final configuration of the bridge. For these purposes, in June 2010, Massachusetts Department of Transportation Highway Division Administrator Luisa Paiewonsky convened the Longfellow Bridge Rehabilitation Task Force.

The Task Force members were drawn from a diverse set of stakeholder groups who represent interests directly impacted by the Longfellow Bridge rehabilitation. The categories of stakeholders include:

- Local Businesses
- Business Associations
- Interest groups (bicycle, pedestrian, environment, parks)
- Colleges/Universities
- Federal Officials
- Hospitals
- Municipal Officials
- Neighborhood/Civic Associations
- State Officials
- Elected Officials
- Planning/Development Organizations
- Transportation Management Associations

The purpose in forming the Task Force was to ensure that a wide range of views were represented and 37 members were appointed.¹ The Task Force met ___ times between June and [October] 2010 and [held a public meeting to

¹ See Appendix 1 for a list of members appointed by the Highway Administrator. Please note that for some meetings members asked alternates to serve due to schedule conflicts.

receive input from the general public] on draft recommendations². All meetings were open for the public to observe, with time allocated for non-Task Force members to express their points of view.

The Task Force process was structured to provide stakeholders with data about the bridge, the proposed rehabilitation, traffic, state and federal design guidelines, and other parameters that could influence the design. The Task Force provided the conveners with feedback on assumptions, the scope of the project, and suggestions for design guidelines. Task Force received presentations on:

- Traffic Data
- Accessibility, Capacity Allocation, and Traffic Analysis Summary
- Compilation of the alternative cross-section options & pedestrian and bicycle approach connections incorporating input from Task Force large & small group discussions, bridge tours and other public input
- Design, operational and traffic issues associated with Charles Circle/Blossom Street/Pinch Point
- 4(f) Parkland Considerations – potential adjustments to improve Longfellow Bridge approach
- Review of criteria that guide MassDOT when evaluating alternatives within the EA to make a recommendation for a preferred alternative
- Several Task Force members made presentations on specific suggestions including
 - Esplanade Association Suggestions for Parkland Access
 - Walk Boston and others' suggested a three phased approach intended to test one alternative during the construction phase
 - MassDOT made a brief response concerning the environmental permitting implications of this phased approach

Interests of the Members

The Longfellow Bridge is an iconic and historic structure, as well as a key route in the regional transportation system. The proposed rehabilitation of the bridge provides a unique opportunity to link the parklands and urban areas on both sides of the Charles River, as well as to improve or address the needs of its multiple user groups, including pedestrians, bicyclists, transit passengers and truck and automobile drivers. The existing bridge width is 105 feet and because it has been classified as eligible for listing in the National Register of Historic Places and is part of the Charles River Historic District, the width cannot be increased over the full length of the structure. Thus the Task Force faced the difficult question of how to accommodate and improve the user experience, especially for bicyclists and pedestrians, within the limited space. In doing so, the group saw key opportunities through enhancing the approaches at either end of the bridge. The approaches were not initially within the charge of the Task Force but, through dialogue, came to be seen as essential to effective improvements on the cross-section by both the members and MassDOT.

Throughout the discussions the Task Force sought ways to integrate the need of all modes of travel. In doing so they worked to meet the interests of all users. Among the interests articulated by various Task Force members were:

- Safety for all users– Pedestrians, Bicyclists, Transit Passengers, Drivers, Boaters
- Preservation of historic nature of Bridge

² Information on the Longfellow Bridge Project and Task Force may be found on the MassDOT project website (<http://www.massdot.state.ma.us/Highway/abp/longfellow.aspx>) and a GoogleGroup established by the Task Force (<http://groups.google.com/group/LongfellowTaskForce>).

- Equity – All stakeholder groups treated in similar manner
- Accessibility – Access to Esplanade, Parks,
- Environmental Protection– Storm water runoff issues
- Efficiency – On schedule/on budget
- Openness and Transparency- public kept informed
- Congestion for egress/ingress to bridge on both sides, creating access for communities in close proximity to the bridge
- Visionary – build for the future
- Green DOT standard maintained
- Healthy/environmentally friendly
- Transportation alternatives during construction phase

There was substantial discussion among the Task Force members as to what the primary purpose of the project should be. Some felt the cross section should be designed to favor bicycle and pedestrian travel, and suggested that increasing congestion for automobiles and trucks would be acceptable as a means to encourage mode shift to transit, walking and biking. Others favored a flexible approach, creating additional bicycle and pedestrian capacity but retaining existing capacity for automobiles and trucks during peak periods. Still others suggested designs that would change the lane configuration over the length of the bridge or at different time periods. All agreed that the experience of pedestrian and bicycle users could and should be substantially improved.

Over the course of the summer and early fall, the Task Force considered more than a dozen design alternatives in four major “families,” often mixing and matching design elements to create a balanced alternative that met the needs and concerns of all members. To support the Task Force in its deliberations, MassDOT developed at least eight alternatives based both on prior alternatives for the cross section design and on the suggestions of Task Force members. Several Task Force members or coalitions of members suggested additional alternatives. Elements of alternatives also provided opportunities for discussion and variations. A variety of operational improvements to the Boston and Cambridge approaches and enhancements to Charles Circle and exits from Storrow Drive were discussed as possible measures to help alleviate the user demands of the bridge. These discussions were based on input from members’ suggestions as well as from MassDOT and its consultants.

These recommendations reflect the work of the Task Force and are delivered to MassDOT in the sincere hope that they will be included in the submission of the Environmental Assessment to the Federal Highway Administration. A number of the recommendations are displayed graphically below.

General Areas of Agreement

Some elements are common across all alternatives or should be included in any design proposed by MassDOT. In some instances these general agreements do not necessarily preclude a more expansive allocation, such as a wider sidewalk or bicycle lane.

1. The Task Force assumes that the following will be met in any design:

- Compliance with the Americans with Disabilities Act
- Compliance with all environmental regulations and requirements, and with historic preservation requirements
- Consistency with Massachusetts Project Development and Design Guide

- Improved safety for all users
- Improved structural integrity of the bridge
- Maintenance of existing utility services currently carried by the bridge and allow for future expansion of utilities
- Restore pedestrian connectivity between Boston and Cambridge on the four quadrants

[Facilitator's Note: Some members of the Task Force question whether FHWA would approve use of the construction phase to test alternatives and their related impacts in order to assess the viability of a single lane approach these members prefer. While MassDOT stated they did not think this was possible, some members feel further exploration FHWA might be warranted.]

2. Longfellow Bridge Cross-Section – General Areas of Agreement

- The design will provide the flexibility and sustainability to allow accommodation of changes in mode use in the coming decades without significant or costly reconstruction.
- MBTA Reservation should remain at 27' in width.
 - Through dialogue with the MBTA the Task Force understands that this dimension allows for safe evacuation and maintenance. The MBTA informed the Task Force that the additional space required to enhance margins for safety would require at least an additional 7 feet plus "safe havens" in the barriers every 15 feet which would significantly degrade the other modes, including needs of the MBTA for buses during service interruptions to the Red Line. The Task Force explored the viability of shifting the Red Line tracks to create additional asymmetric space but learned that the bridge's load bearing characteristics undermined the viability of this option.
- Where possible wider pedestrian sidewalks of at least 10 feet in total width (8 feet clear) should be provided on each side of the bridge. This width makes it easier for two groups to pass each other comfortably (Pedestrian advocates feel that a 10 foot clear with the appropriate width for two groups each with two people to pass comfortably.). Where a narrower width may be necessary, such as at the "pinch points" on the Boston Inbound approach the modes should share in reducing space allocation. However, the task force feels that this is an unattractive option and that MassDOT should strive to provide at least 6 feet clear for pedestrians at the narrowest areas approaching to Charles Circle. Alternatively, this may be relieved by the construction of appropriate connections to the Esplanade as described below. Many members acknowledged that, with wider pedestrian sidewalks, some younger or inexperienced cyclist may nonetheless ride on the sidewalks although cycle lanes are available.
- Bicycle lanes of at least 5 feet in width plus buffers.
- A paved width of 24 feet to ensure that the evacuation route is maintained, emergency service vehicles can be accommodated and, when necessary, accommodate MBTA busing needs during Red Line service interruptions. This also allows closure of a lane for maintenance or due to accident while permitting passage in the remaining paved area. [Note: some members feel that these goals might be met with a narrower paved width. MassDOT has expressed the opinion that 24 feet is the necessary width.]
- If and where two vehicle travel lanes are required, that a design exception be sought to further reduce the lane widths to 10 foot 6 inches. Unless some other allocation of space adequately addresses the needs of cyclists, pedestrians and the MBTA.
- Almost all members of the Task Force support a plan for outbound automobile travel lanes being reduced from two to one to provide additional capacity for bicycle and pedestrian travel.

- For safety of other non-automobile or truck users, the roadway should continue to be posted and enforced at 30 mph and the design should encourage these lower travel speeds.
- A non-traditional design approach allowing the streetlights and crash barriers to be combined into a single line.
- There should be enhancements to improve user experience and the public impression of the bridge. Paving, planting, signage, banners, benches or other furniture should be part of the infrastructure meeting both contemporary needs and reflective of the historic structure. (For example interpretive panels and plaques are being proposed on the Boston Esplanade and Cambridge approaches that communicate the history of the bridge, man, and Charles River basin.)
- The design should accommodate the needs and enhance the experience of special user groups such as:
 - Tourists desiring to view the skyline and take photographs.
 - Special events and programs – holidays, regattas, etc.

2. Approaches

The Task Force is recommending improvements to the bridge approaches and connections to the parklands on both sides of the river. The group strongly encourages MassDOT to explore and expedite the identification of funds and initiate the permitting associated process for these improvements as the acceptance of elements of the cross section design are integral to the approach and parkland treatments.

A. Boston Approach/Charles Circle/Storrow Drive

The Task Force discussed issues related to the Bridge's approach into Boston at Charles Circle. This is seen as a significantly limiting factor with traffic queuing on the bridge before navigating Charles Circle. Several years ago a significant redesign was undertaken. The Task Force considered additional adjustments that would assist improving the function of Charles Circle, the bridge approach and the entrance and exit ramps from Storrow drive. The Task Force recommends the following:

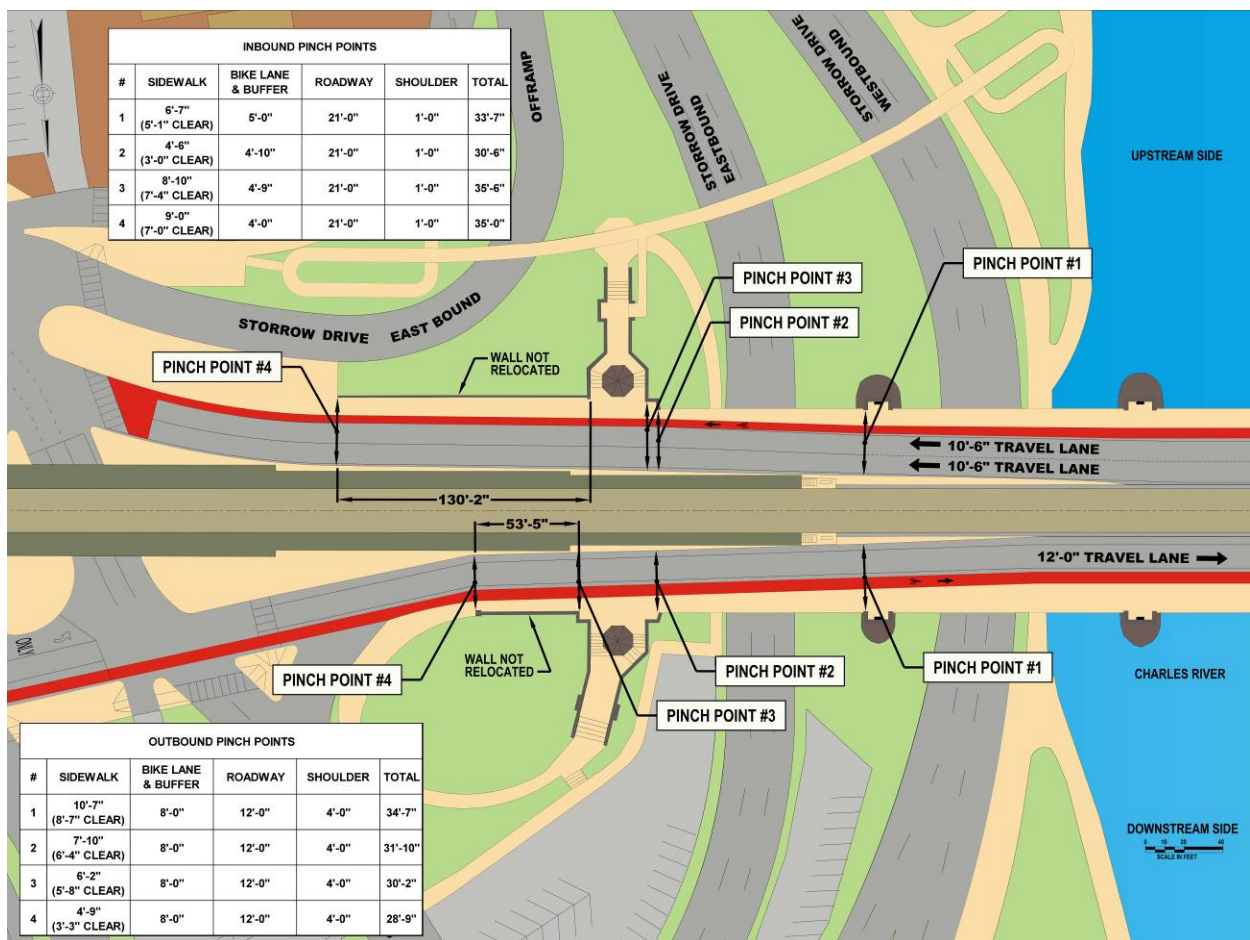
- Additional analysis of the signal timing of Charles Circle to improve movement off of the Longfellow through Charles Circle in a manner that will not degrade the other vehicle access points to Charles Circle.
- Creation of marked bike lanes between the Longfellow, Charles Circle and Cambridge Street in both directions. This should be done in conjunction with clear lane assignment markings. At the Inbound intersection this could include a "bike box" for cyclists to queue. (A bike box is an area at the front of the traffic at a traffic light. When the light is red, bicyclists can, then overtake waiting motor vehicles and come to the front of the traffic line. This type of installation provides a protected area when there is heavy bicycle traffic, and sometimes a way to allow bicyclists to get closer to the center of the street to wait to make a left turn ahead of moving vehicles. Bicyclists may go straight across or turn left when the signal changes to green.)
- Adding walk signals and reducing entrance width to the west bound entrance of Storrow Drive.
- Relocation of the Storrow Drive eastbound exit ramp away from the bridge onto Mugar Way ramp location. This recommendation creates additional attractive parklands.
- Evaluate installation of a traffic light at Blossom Street on the east-bound portion of Storrow Drive and add a turning lane to divert traffic to and from the hospital area away from Charles Circle/

Task Force members asked for options which include both a two lane release and a three lane release into Charles Circle. For the two lane release no reconfiguration of the abutment wall is necessary. For a three lane release, reconfiguration of the abutment wall is necessary, to accommodate ADA accessible sidewalks. MassDOT has

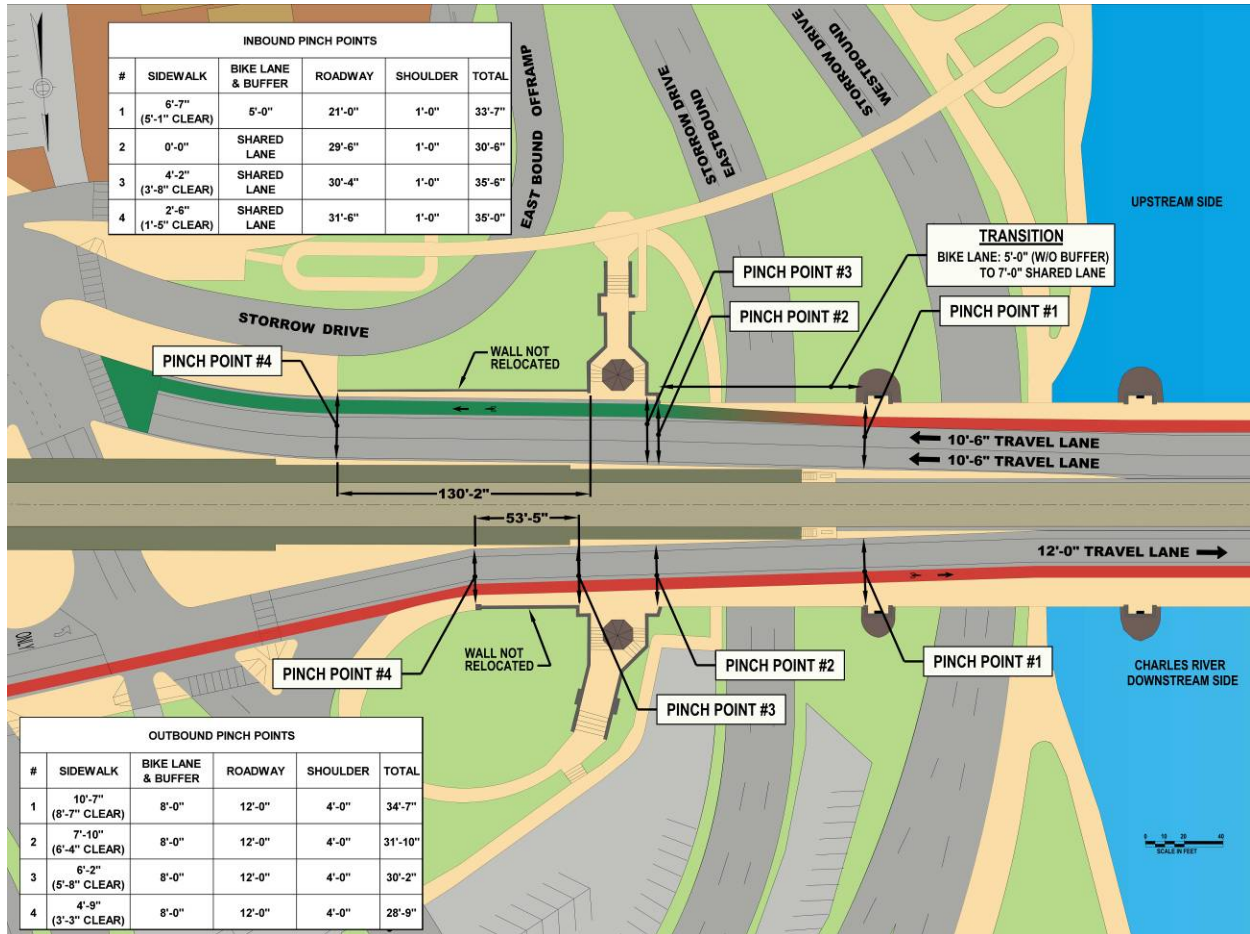
expressed a preference for relocating the abutment walls to accommodate a three lane release into Charles Circle, an ADA compliant sidewalk, and a dedicated bike lane. Furthermore, MassDOT has expressed strong confidence that it would receive all necessary approvals relating to parklands changes [often referred to as the Section 4(f) process] and has already received a “No Adverse Affect” finding relating to historic preservation [often referred to as the Section 106 process]. MassDOT and most Task Force members feel that the moving of the wall in combination with other improvements described as part of the improvements to the Cambridge approach and Esplanade connections better accommodate pedestrians and cyclists. Some members have expressed concern about whether the necessary approvals will be received.

These configurations are depicted below with the pinch point dimensions noted for each mode and the possible location of a bike box if that element is selected.

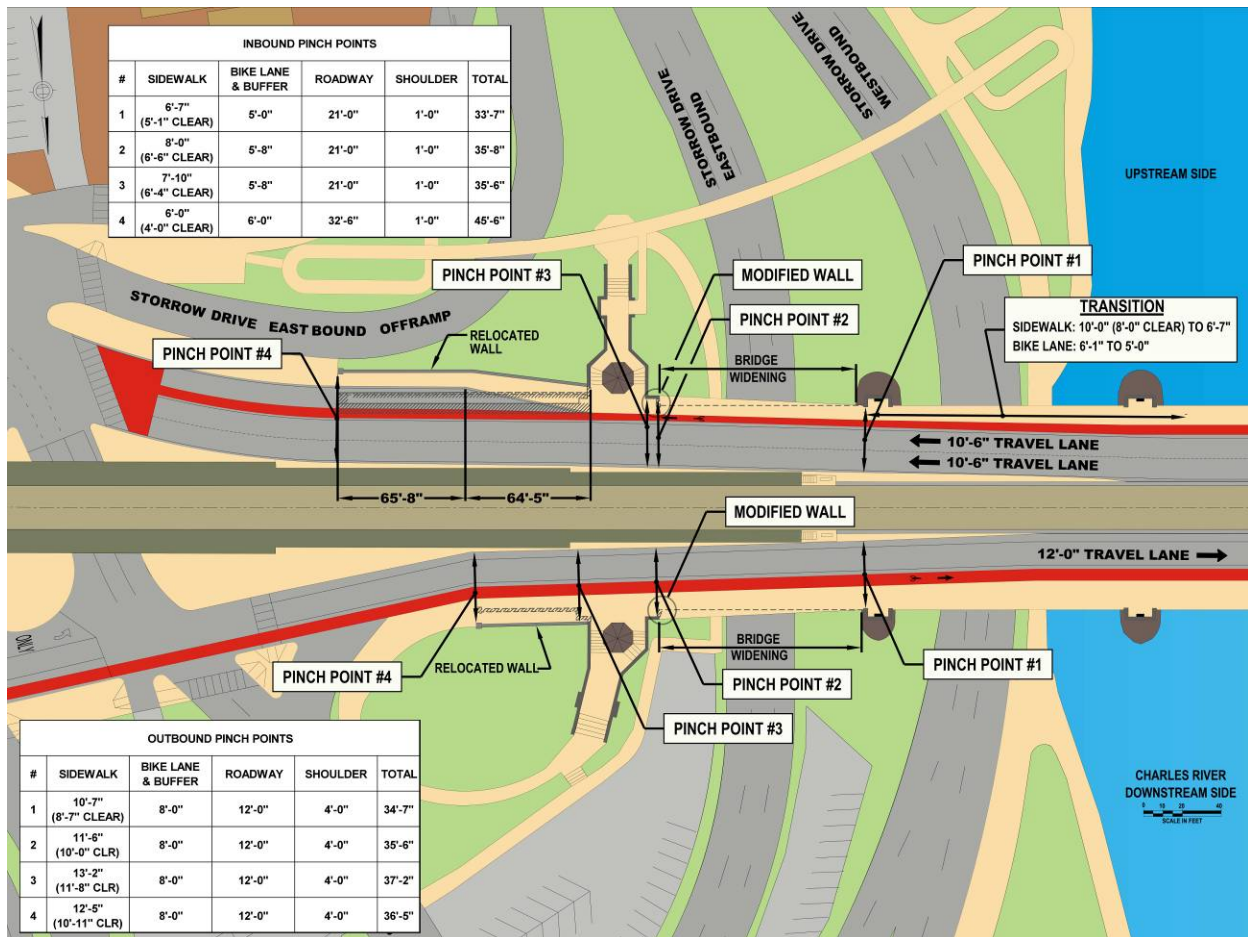
Two lane release into Charles Circle with no change in the abutment wall configuration:



Three lane release into Charles Circle with no change in the abutment wall configuration:



Three lane release into Charles Circle moving the abutment wall:



In this configuration the Task Force has yet to conclude if the cycle lane should carry forward as shown in the drawing to allow direct travel through Charles Circle or placed to the right of all traffic in a similar fashion to that shown in the previous two graphics.

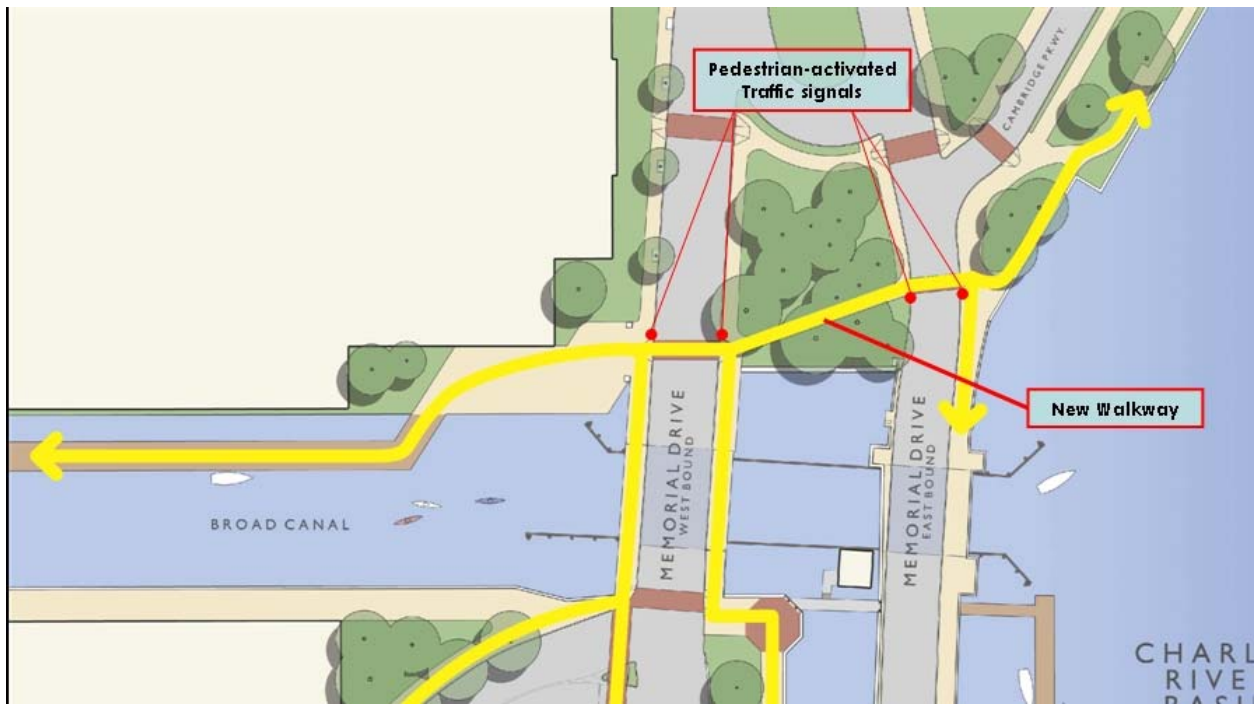
B. Cambridge Approach

A number of improvements were identified for the Cambridge approach and adjacent areas that will significantly improve the pedestrian and bicyclist experience and safety.

- The section of riverbank path running alongside the water under the Longfellow (the "missing 500 feet") be widened and finished.
- Improve the pedestrian routes from the Cambridge-bound side of Longfellow at the Bridge exit to Memorial Drive, the steps, the east Cambridge pedestrian crossing to the river bank and the pedestrian underpasses in both directions be upgraded and as appropriate painting and signaling of crosswalks. This includes renovation of the existing stairs which MassDOT has committed to.
- Narrow and tighten the turn off of the Cambridge-bound side of Longfellow on to Memorial Drive and the portion of the ramp leading from west-bound Memorial Drive on to Main Street.

- Narrow and tighten the curve leading from Boston-bound Main Street on to Memorial Drive west-bound, as well as the adjacent road leading from Memorial Drive west-bound on to the Boston-bound Longfellow Bridge.





3. Connections to the Esplanade

All Task Force members felt that significantly improved connections to the Esplanade would improve the experience of all users of the bridge and abutting neighbors and address some of the most difficult conditions for pedestrians created by the "pinch points". The Task Force was presented with a proposed design reflecting their input at meetings and individual meetings of the designer and a number of interested stakeholders. The group recommends the design concept be fully developed. The goals behind the concept are to build ADA compliant pedestrian and bike access directly between the bridge, Charles Circle and the Esplanade and to connect the upstream and downstream paths and bridge access points thereby improving the overall circulation and attractiveness. This solution also enhances the parklands abutting the bridge on the upstream side. Because of its location, the existing pedestrian connection can be maintained during the construction period.

Aerial of proposed circulation for pedestrian bridge Connection to the Esplanade.



4. Issues for further consideration

The Task Force did not address all issues related to the restoration of the bridge. However a number of members expressed concern that some items should be addressed to ensure adequate consideration. The Task Force encourages MassDOT to engage the public and key stakeholders going forward with respect to:

- Providing additional traffic analysis used in evaluation of the alternatives.
- Informing and educating stakeholders concerning project costs.
- Mitigation of traffic impacts during the construction phase.

- Regional modeling of traffic impacts and efforts at a policy and operational level to encourage mode shift away from automobile travel.
- Impacts of various alternatives on air and water quality, as well as other environmental impacts.
- How will an ongoing dialogue of the public and stakeholders with MassDOT throughout project construction and thereafter be conducted?

5. Specific Alternatives to be included.

The Task Force identified several additional alternatives for consideration At the September 29 meeting the Task Force narrowed the alternatives it believes should be considered in the EA. After hearing from the public and further discussion these will be finalized at the last meeting of the Task Force.

The Task Force considered Outbound and Inbound Alternatives independently. These are described below. In arriving at these alternatives a number of others were considered but discarded. The elements of these discarded alternatives which proved problematic included:

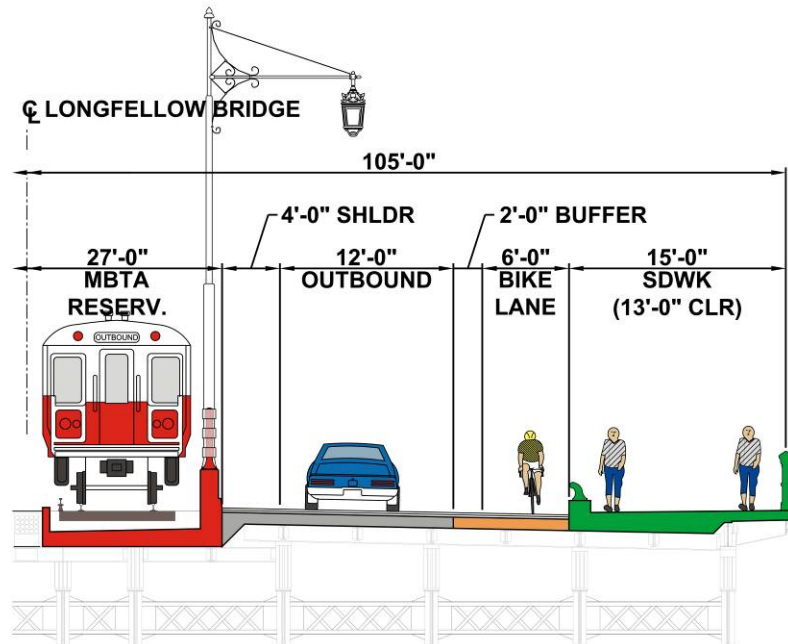
- A flexible travel lane by time of day in which the type of use would change through restriction to bicycles at certain hours and shared by cyclists and other vehicles at other hours. The signage required over the short span, concerns about enforcement difficulties and prevention of unauthorized use by autos at busy but disallowed periods, degradation to the cycle experience and safety during the “shared” period, problems relating to bike/vehicle conflicts to the transition into Charles Circle at the right turn lane.
- Creation of an inbound promenade with a widening of the sidewalk and crash barrier, and narrowing below a 24 foot paved width, was discarded for a number of reasons. These include limitations on future flexibility for modes shifts to or away from automobiles because the crash barrier is tied into the structure of the bridge making renovations expensive; snow removal and maintenance issues and limitations on emergency access at peak periods.
- Contraflow bike lane adjacent to the MBTA reservation on the Outbound side of the bridge was discarded because its narrowness for passing cyclists, difficulty in accessing Memorial drive bikeways, reduction in outbound pavement width, snow removal difficulties, and non-traditional bicycle movements.
- Cycle tracks (similar to bike lanes but usually segregated to a greater degree by way of a change in elevation or soft curb) associated with pedestrian walkways were generally not favored by most members due to narrowness for passing, snow removal and potential mixing of pedestrians and cyclists. [NOTE: This will be revisited in the final meeting of the Task Force as several members expressed renewed interest in an outbound cycle track at the close of the September 29 meeting.]

Outbound Alternatives

The outbound alternatives address the down river side of the bridge with traffic moving from Boston to Cambridge. Please note that the cross-section descriptions and graphics below describe widths in the central sections of the bridge. In some areas near the Boston approaches, referred to as "pinch points", some elements such as sidewalks may be narrower. This narrowing varies depending on the pinch point and the chosen configuration. These dimensions are displayed graphically above in the depictions of the Boston approach earlier in the recommendations.

Outbound Alternative A

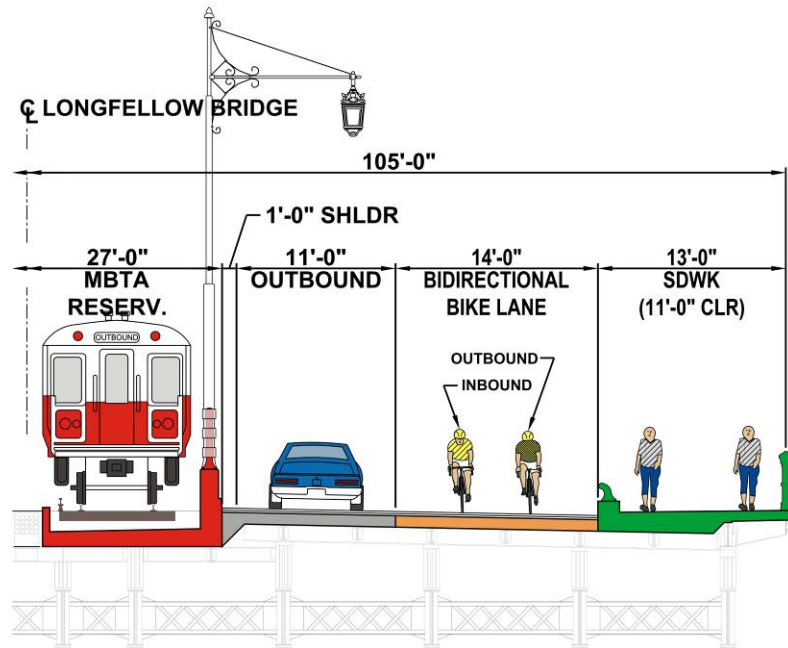
From the MBTA reservation this alternative has a 4 foot shoulder, a 12 foot vehicle travel lane, a 2 foot buffer a 6 foot bike lane and a 15 foot sidewalk (13 feet clear).



OUTBOUND ALTERNATIVE A

Outbound alternative B

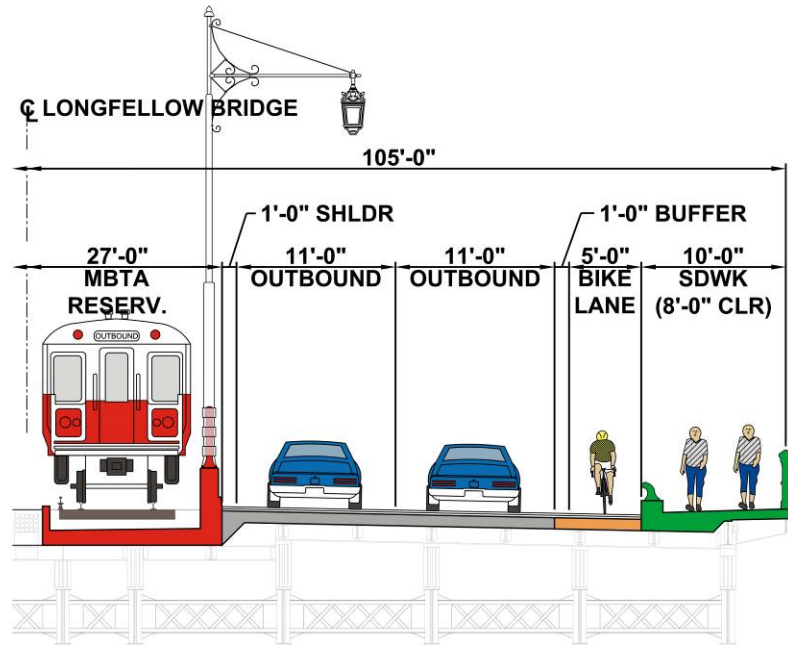
From the MBTA reservation this alternative has a 1 foot shoulder, an 11 foot vehicle travel lane, a 14' bidirectional bike lane, a 13 foot sidewalk (11 foot clear). Some members have expressed reservations about safety and connectivity issues related to a bidirectional bike lane but feel that it should receive further analysis and discussion.



OUTBOUND ALTERNATIVE B

Outbound Alternative C

From the MBTA reservation this alternative has a 1 foot shoulder, two 11 foot vehicle travel lanes, a 1 foot buffer, a 5 foot bike lane, a 10 foot sidewalk (8 foot clear).



OUTBOUND ALTERNATIVE C

Inbound Alternatives

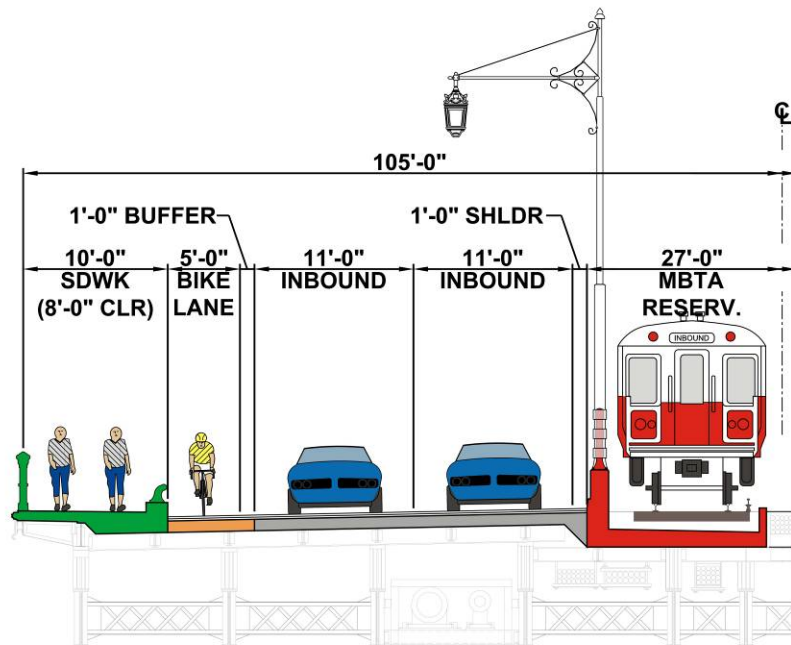
The inbound alternatives address the up river side of the bridge with traffic moving from Cambridge to Boston. Please note that the cross-section descriptions and graphics below describe widths in the central sections of the bridge. In some areas near the Boston approaches, referred to as "pinch points", some elements such as sidewalks may be narrower. This narrowing varies depending on the pinch point and the chosen configuration. These dimensions are displayed graphically above in the depictions of the Boston approach earlier in the recommendations.

Inbound Alternative A

From the MBTA reservation this alternative has a 1 foot shoulder, two 11 foot vehicle travel lanes, a 1 foot buffer, a 5 foot bike lane, a 10 foot sidewalk (8 foot clear).

Alternative A represents a design that has previously received the FHWA Design Exception to reduce the lane widths from the recommended 12 foot wide lanes to 11 foot wide lanes, which provides for the MBTA's request for 11foot wide lanes to accommodate buses for emergency service purposes, and incorporates the bike community's willingness to agree to a 1 foot buffer between the bike lane and the vehicular lane (although 2 feet is a more desired buffer width).

The possible modification to this alternative is to further reduce the vehicle lane widths to 10feet 6inches with the understanding that MassDOT has agreed to explore the idea of reducing the lane widths and applying for a Design Exception from FHWA. Additionally this would allow the sidewalk to be widened to 11 feet with a 9 feet clear width or the bike buffer to be increased to 2 feet.



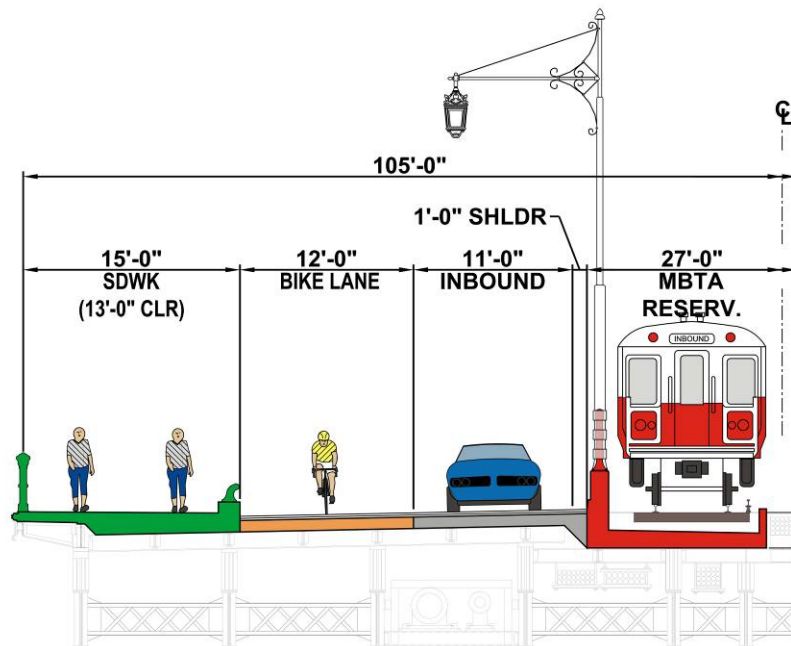
VARIATION: 10'-6" MOTOR VEHICLE LANES AND 11'-0" (9'-0" CLEAR) SIDEWALK

INBOUND ALTERNATIVE A

*Draft for Public Review
October 1, 2010*

Inbound Alternative B

From the MBTA reservation this alternative has a 1 foot shoulder, an 11 foot vehicle travel lane, a 12 foot bike lane, a 15 foot sidewalk (13 foot clear). The understanding is that emergency use by police, police and emergency service vehicles and MBTA buses for Red Line service interruptions would be accommodated in the bike lane when required. Some members have expressed reservations that pulling to the left to allow emergency service vehicles to pass on the right could create confusion.

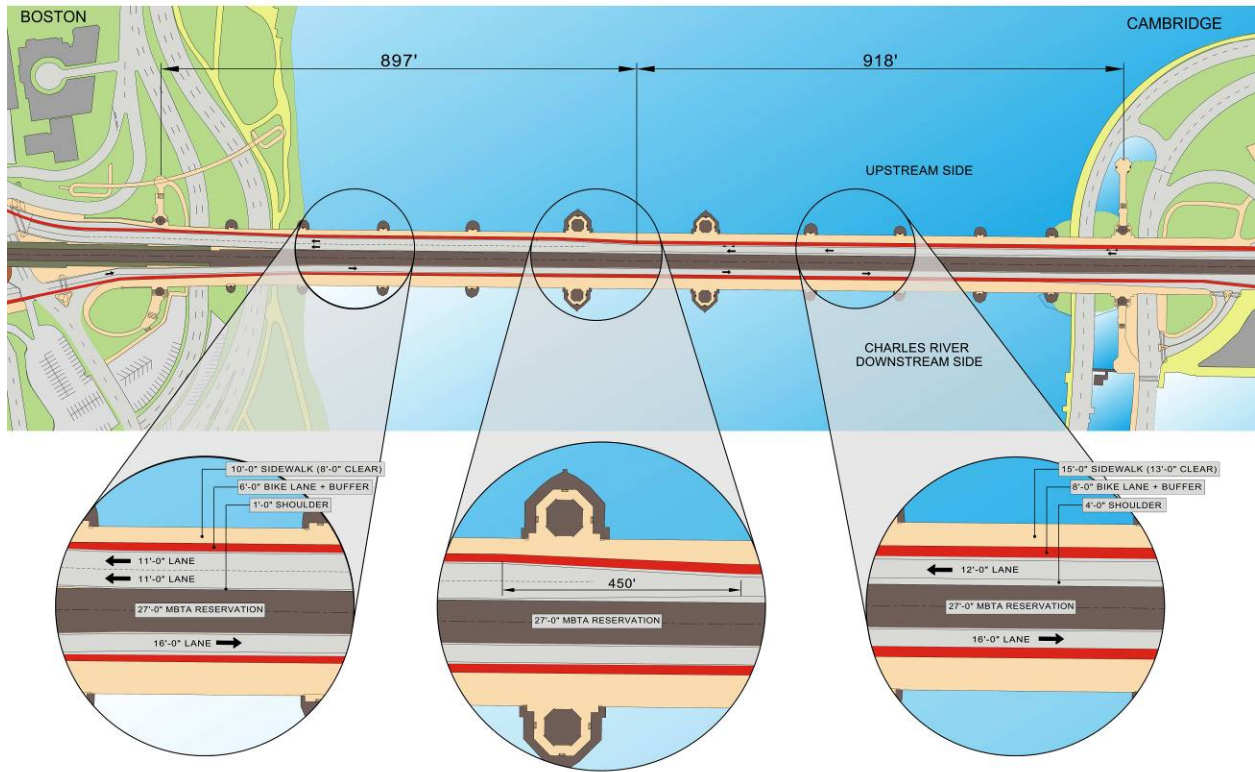


INBOUND ALTERNATIVE B

Inbound Alternative C

This alternative has a varying allocation of space distributed between the sidewalk and roadway, commonly referred to as the "Hourglass" configuration. The "Hourglass" configuration allocates bridge width according to the current vehicular demands for using the bridge, with a single lane carried onto the bridge from Cambridge, and widening to two lanes near the midpoint of the bridge, and finally widening further to three lanes at the entrance to Charles Circle in Boston. This alternative has two different distinct configurations, with a transitional zone located near the mid point of the bridge. The allocation of space from the MBTA reservation is as follows: 1) for the portion of the bridge coming

from Cambridge, this alternative has a 4 foot shoulder, a 12 foot vehicle travel lane, a 2 foot buffer, a 6 foot bike lane, and a 15 foot sidewalk (13 feet clear); 2) for the portion of the bridge on the Boston side of the bridge midpoint, this alternative has a 1 foot shoulder, two 11 foot vehicle travel lanes, a 2 foot buffer, a 5 foot bike lane, and a 10 foot sidewalk (8 feet clear).



CONCLUSION – to be inserted in Final Recommendations

Signature Page to be inserted

Appendix 1

Organization/Affiliation	Task Force Member
A Better City	Richard A. Dimino, President & CEO
Beacon Hill Civic Association	Steve Young
Boston Preservation Alliance	Sarah D. Kelly, Executive Director
Boston Redevelopment Authority	Tad Read, Senior Planner
Boston Transportation Department	Jim Gillooly, Deputy Commissioner/Tom Tinlin Commissioner
Cambridge - Traffic, Parking and Transportation	Susan Clippinger, Director/Susanne Rasmussen
Cambridge Redevelopment Authority	Joeseph Tulimieri, Executive Director
Charles River Conservancy	Renata von Tscharnner, President
Charles River Transportation Management Association	Jim Gascoigne, Executive Director
Charles River Watershed Association	Margaret Van Duesen, Deputy Director and General Counsel
Community Boating	Adam Gorlovsky-Schepp
Department of Conservation and Recreation	Jack Murray, Deputy Commissioner/Joe Orfant
Downtown North Association	Robert O'Brien, Executive Director
East Cambridge Planning Team	Barbara Broussard
Esplanade Association	Herb Nolan, Board Member
Executive Office of Environmental Affairs	Maeve Valley-Bartlett, Assistant Secretary
Federal Highway Administration, Region One	Damaris Santiago, Environmental Engineer
Institute for Human Centered Design	Chris Hart, Director of Urban and Transportation Projects
Kendall Square Association	Christopher Linssen

Livable Streets	Steve Miller, Executive Director
MASCO	Tom Yardley, Senior Planner
Mass Bike	David Watson, Executive Director/Shane Jordan
Mass Biotechnology Council	Peter Abair, Director of Economic Development/Global Affairs
Mass Eye and Ear	Robert Biggio, Vice President Support Services and Real Estate
Massachusetts General Hospital	John Messervy, Director of Capital and Facility Planning
Massachusetts Historic Commission	Brandee Loughlin
Massachusetts House of Representatives	Rep. Martha M. Walz
Massachusetts Institute of Technology	Kelley Brown, Senior Campus Planner
Massachusetts Motor Transportation Association	Anne Lynch, Executive Director
MBTA	Richard Davey, General Manager
Metropolitan Area Planning Council	David Loutzenheiser, Transportation Planner
Museum of Science	Anne Cademenos, Director, Corporate, Foundation and Government Relations
Riverside Boat Club	Kate Sullivan
TD BankNorth Garden	Brian Hayes
The Engineering Center	Abbie Goodman, CEO Task Force Chair
Walk Boston	Wendy Landman, Executive Director
West End Civic Association	Louise Thomas
MassDOT Task Force Conveners	
Luisa Paiewonsky	MassDOT Highway Administrator
Tom DiPaolo	Deputy Chief Engineer
Frank Tramontozzi	Chief Engineer