

The Longfellow Bridge - an Opportunity



LivableStreets

Rethinking urban transportation

 **walkBoston**



Institute for Human-Centered Design
[Adaptive Environments]



Current MassDOT plan

- Provides no increase in safety clearance for Red Line (does not meet MBTA clearance standards)
- Increases bike lanes slightly (+1-2 feet)
- Increases sidewalk widths (by 3 feet in some locations)
- Maintains 2 traffic lanes in each direction (3 at Charles Circle approach)
- During construction, reduces auto traffic to 1 lane in each direction for portions of the 4-6 year period



1907 view

Why we should modify the plan for the bridge deck

- Safety clearance should be provided for MBTA workers and emergency passenger evacuation
- Transit passenger volumes are growing - nearly 100,000 per day across the bridge
- Pedestrian and cyclist use of the Charles River Basin and the bridge is growing
- Motor vehicle traffic on the bridge decreased from 2000 - 2009
- Decline in motor vehicle traffic began before 2007-8 recession
- Traffic decline may reflect some diversion to the 14-lane Zakim Bridge where 6 new bridge lanes were added less than 1 mile away

A Better Plan for a multi-modal, sustainable transportation future

The Longfellow Bridge should take its place among wonderful transit, pedestrian and bike friendly bridges around the world.



Tower Bridge, London



Brooklyn Bridge, NY

A Better Plan for Transit:

Safety for transit passengers and MBTA employees is upgraded by adding a 2.5 foot emergency evacuation space along the tracks.



Longfellow Bridge (does not meet MBTA standards)

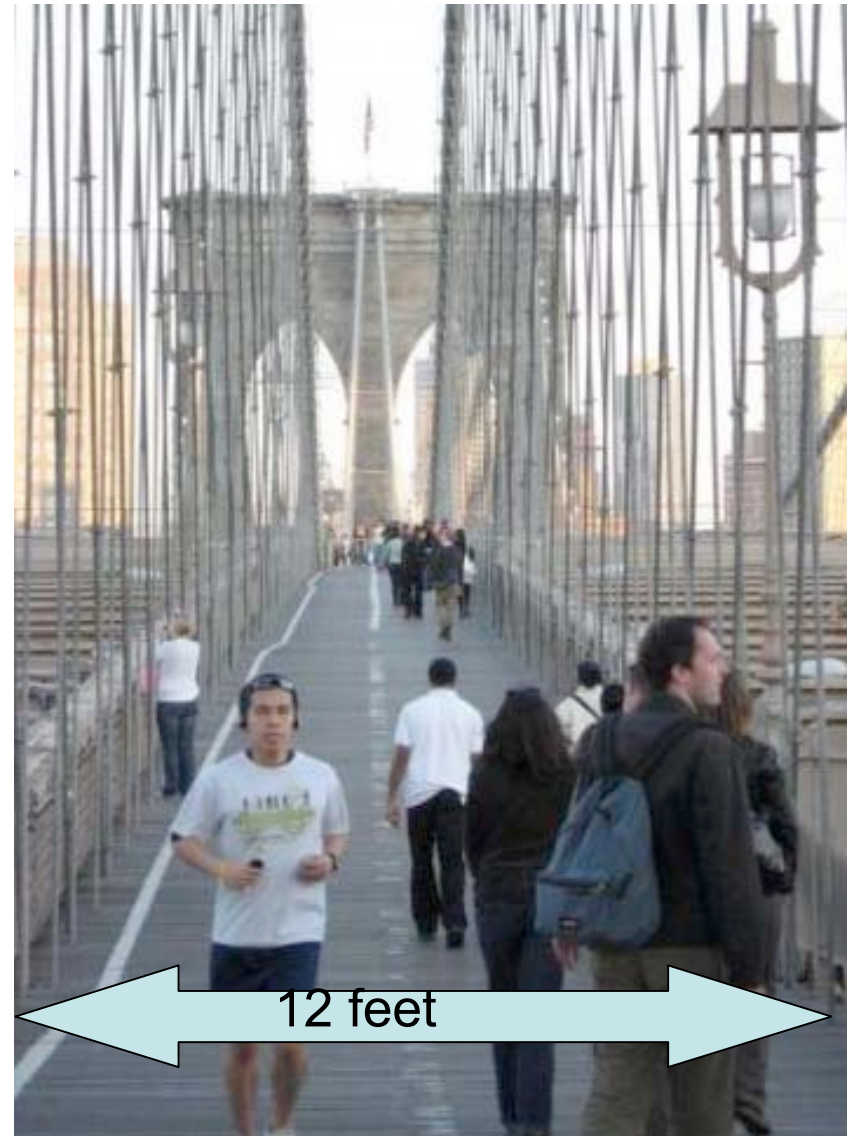
Wellington Bridge (meets MBTA standards)

A Better Plan for Walking:

12 feet of unobstructed sidewalk width is needed to accommodate runners, walkers, wheelchairs, strollers, tourists, slow walkers, people with canes or guide dogs.



MassDOT Proposal for the Longfellow Bridge



Brooklyn Bridge, NY

A Better Plan for Lighting Design:

An integrated lighting and crash barrier can be elegant and space-saving.



St. Paul, MN Freedom Bridge

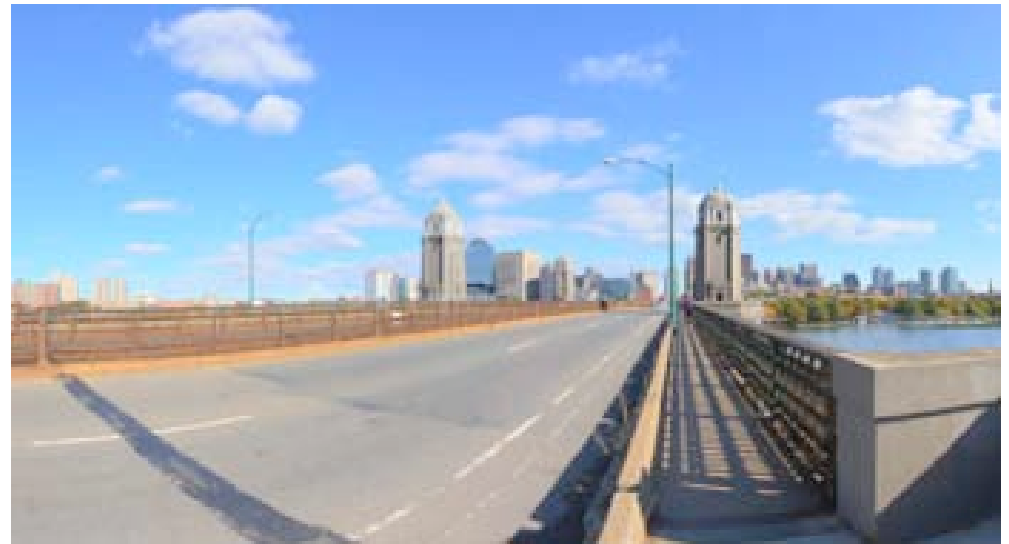
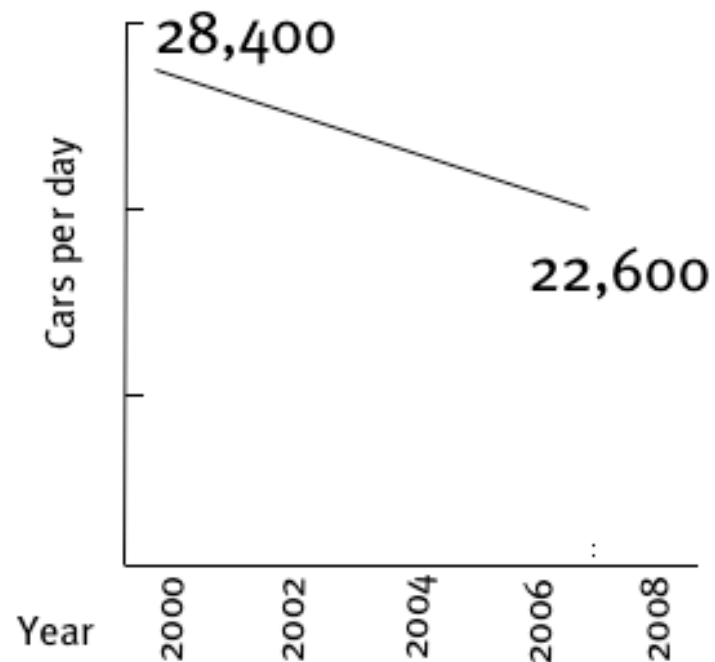
A Better Plan for Bicycles:

Bicycle lanes at least 6 feet wide with a 3-foot buffer strip separates bikes from the travel lane and protects bicyclists.



A Better Plan for Motor Vehicles:

One vehicular travel lane in each direction is sufficient to serve existing and future traffic. Volumes have been declining for the last ten years.



A Better Plan for Flexible Use:

Flexibility allows emergency vehicles to bypass traffic, temporarily using the combined width of the traffic lane, bike lane and buffer strip.



Comparison 1: Mid-Span, 90% of the Bridge

(1,700 feet where the Bridge crosses the Charles River, Storrow Drive and part of Memorial Drive)

Elements of bridge deck	MassDOT Design	A Better Plan
Transit safety way		2.5' added for safety
Offset/left shoulder	2'	1'
Travel lane	11'	11'
Travel lane	11'	
Bike lane	5'	9' (2' buffer + 7' BL)
Crash barrier	2'	2'
Sidewalk	8'	13.5'
TOTAL	39'	39'



An Opportunity to be....



Mid-span now

World class



Mid-span future

Comparison 2: The Two Pinch Points

Between the MBTA station and the Boston-side towers.

Elements of bridge deck	MADOT design (narrowest point, just prior to approach)	A Better Plan (narrowest point, just prior to approach)
Offset/ left shoulder	2'	1'
Travel lane	11'	10'
Travel lane	11'	
Bike lane	5' (No buffer)	8.5' (6' BL + 1.5' buffer)
Crash barrier	1.5	2'
Sidewalk	5'	10'
TOTAL with 4' deck widening	35.5'	
TOTAL without 4' widening		31.5'



Comparison 3: Bridge Approach to Charles Circle

Elements of bridge deck	MADOT design	A Better Plan
Offset/left shoulder	0	0
Travel lane	11'	10'
Travel lane	11'	10'
Travel lane	11'	0
Bike lane	4' (No buffer)	5' (No buffer)
Crash barrier	0	0
Sidewalk	5'	10'
TOTAL	42' requires widening the deck and moving a portion of the historic wall	
TOTAL		35' fits in the existing structure

