



North Washington Street Bridge Replacement Project

Boston, Massachusetts

Nazzaro Community Center – 30 N. Bennet St. – April 19, 2017



Design Project Team

MassDOT
Highway

Michael O'Dowd, Project Manager

City of Boston

Para Jayasinghe, City Engineer
Benjamin Sun, Chief Structural Engineer

Federal Highway Administration



Bridge Engineer: Benesch

Bridge Architect: Rosales +



Project History

1898 Existing Bridge Constructed - 12 spans, 1087' in Length

1956 Bridge is Reconstructed

1961 Swing Span Closed Permanently

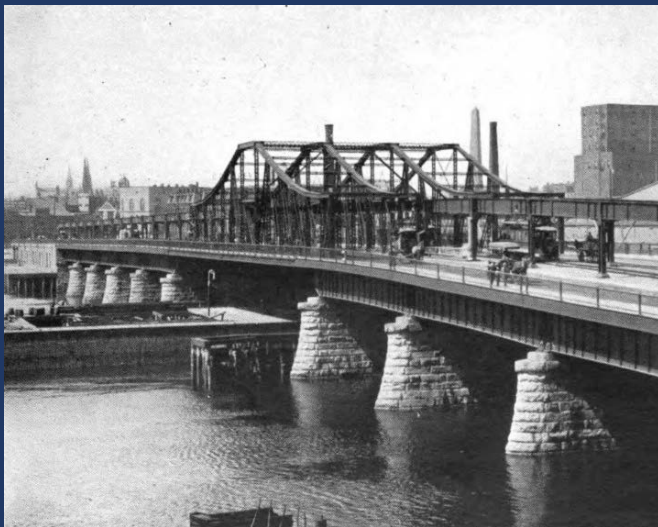
1977 Elevated Street Railway Structure Removed

1992 Adjoining Warehouse Bridge Structure in Charlestown is Replaced

2003 Center Truss Bay Lanes Closed

2004-2017 Ongoing Maintenance and Repairs

October, 2017 Additional Outbound Lane Removed from Service Due to Ongoing Deterioration



- Replace Structurally Deficient Bridge
- Provide Multi-Modal Bridge as a Complete City Street over Water
- Improve Deficient Bike and Pedestrian Accommodations
- Improve Intersections Safety and Functionality
- Improve Navigation Channel
- Provide Context Sensitive Bridge Design in an Important Waterfront and Historic Bridge Location
- Provide Visually Appealing Bridge Design Complementing the Zakim Bridge
- Maintain Traffic, Residential and Economic Needs during Construction

Project Progress and Schedule

- Completed Conceptual Design: Spring 2015
- Preliminary Design: Fall 2015
- Environmental Permits: 2016 to 2017 (updated)
- Final Design: Spring 2017
- 19 public outreach meetings through design period
- Bid opening: February 2018
- Anticipated Construction Activity: Spring 2018 to late 2022



Construction Team

- MassDOT
 - Public Involvement: Howard Stein Hudson
- Successful Bidder - General Contractor (GC)
 - JF White Contracting Co.
- Boston Public Works Department

Coordinating Agencies

- City of Boston
 - PWD
 - BTB
 - BPS
- Boston Police, Boston Fire, Boston EMS
- MBTA
- DCR
- National Park Service
- MA State Police
- US Coast Guard
- Army Corps of Engineers

Coordination Meetings

- Emergency Services Coordination Meetings:
 - October 5, 2016
 - October 18, 2017
- Project has full awareness of emergency access concerns in Charlestown – EMS to station additional forces in Charlestown
- Continuing coordination with Boston Public Schools and METCO regarding PM peak bus traffic
- Close coordination with TD Garden beginning
- Outreach to major shuttle operators beginning

Latest News

Contract process complete by mid-April, then:

- Field office set-up (Location TBD)
- Contractor-initiated plan & schedule submittals
- MassDOT review and acceptance of contractor plans
- Early work by late spring – utility company coordination & early relocation, identifying traffic impacts (if any)

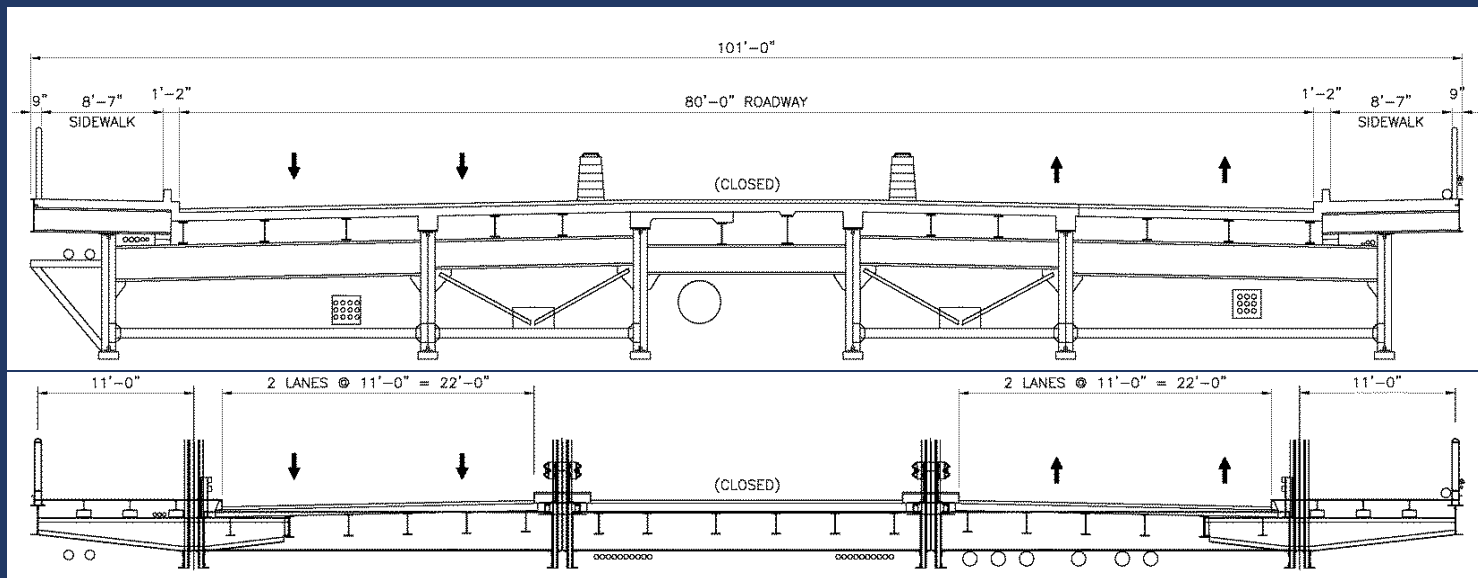
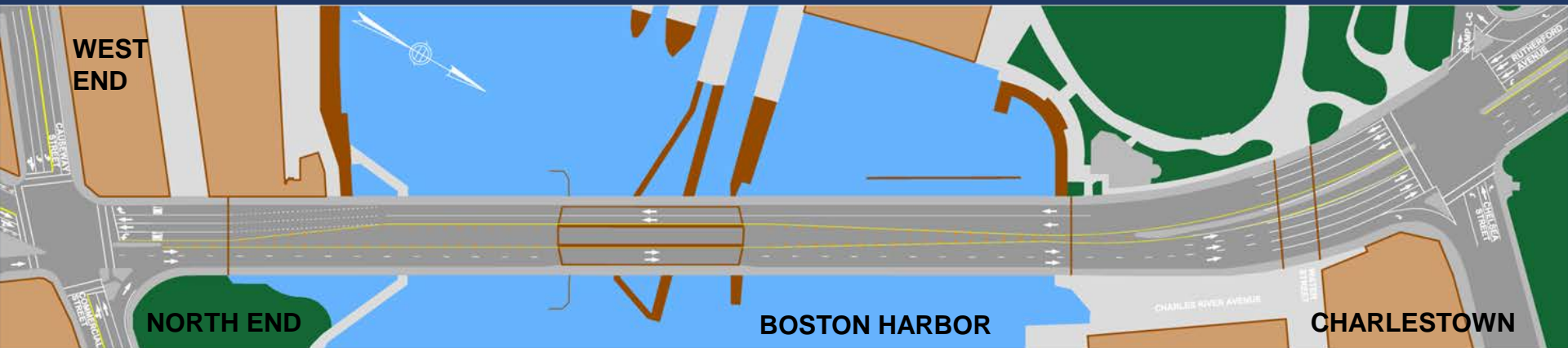
Construction



Before Construction Starts

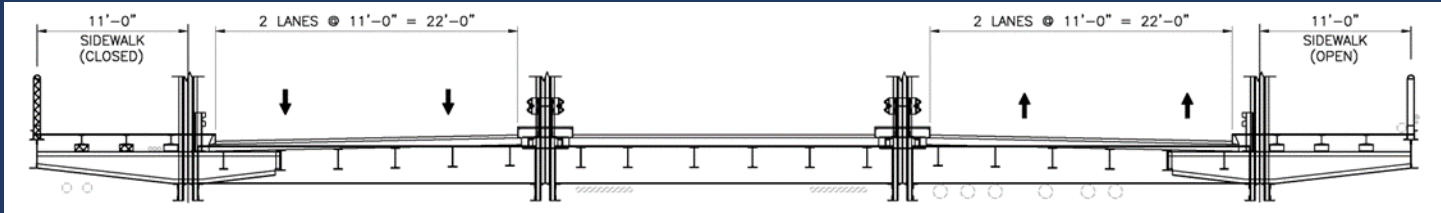
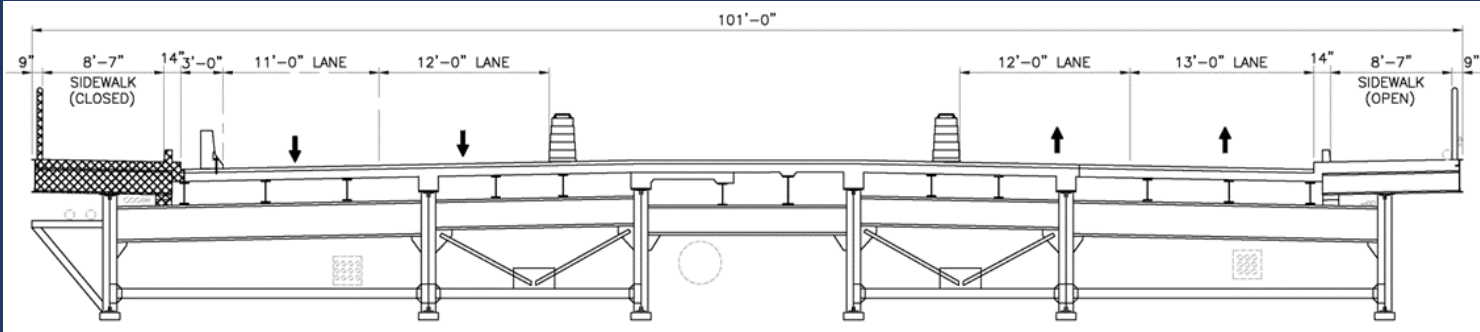
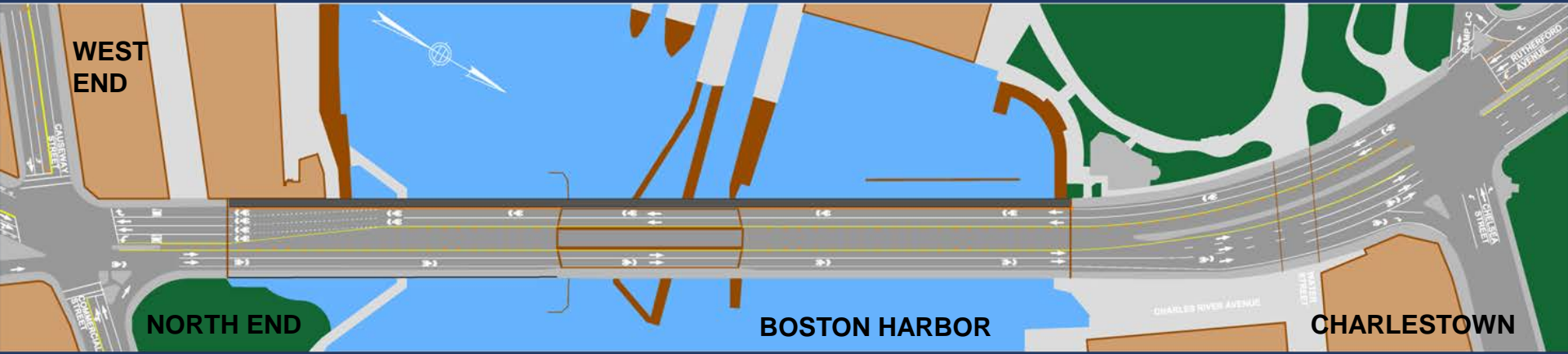
- Contractor submits traffic management plans
- Ongoing coordination among project team and
 - Boston Police
 - Boston Fire Department
 - Boston EMS
 - Boston Public Schools
 - METCO

Existing Bridge



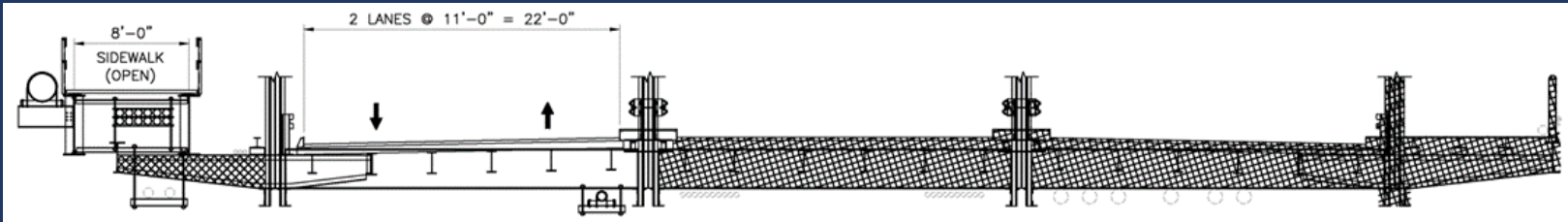
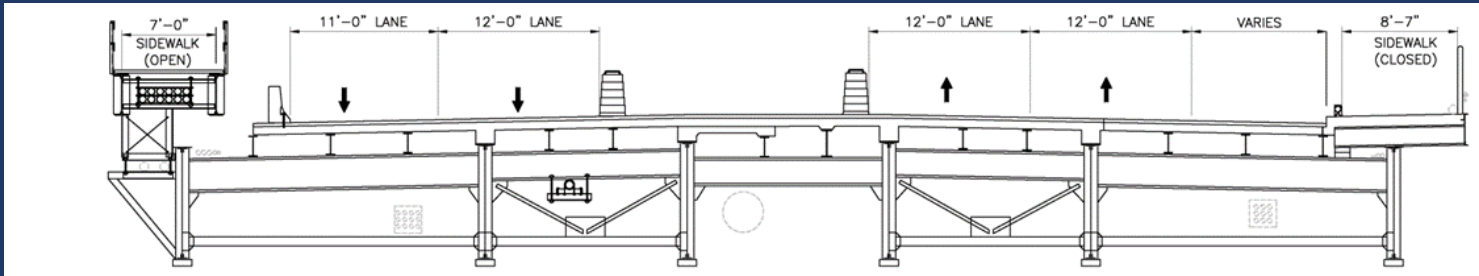
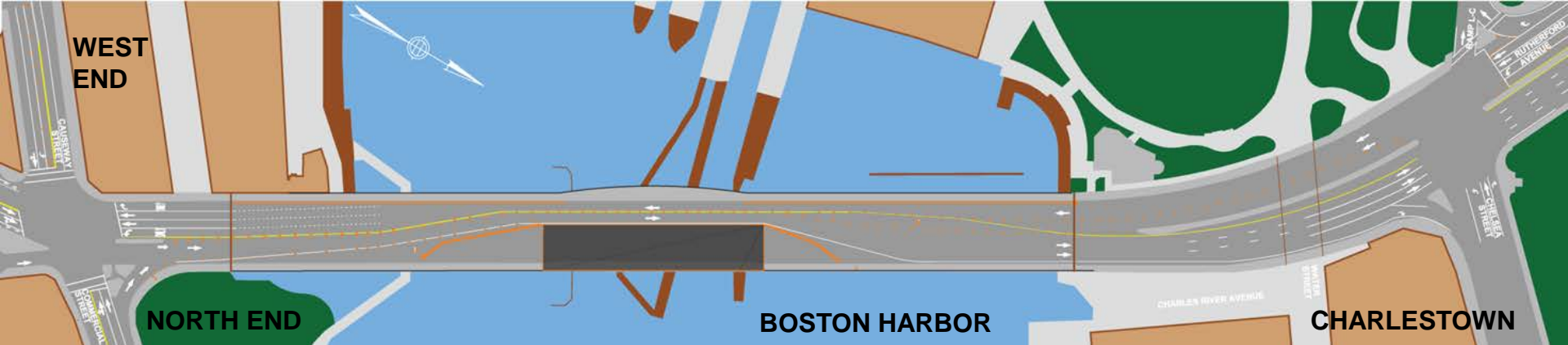
Stage 1A

6 months

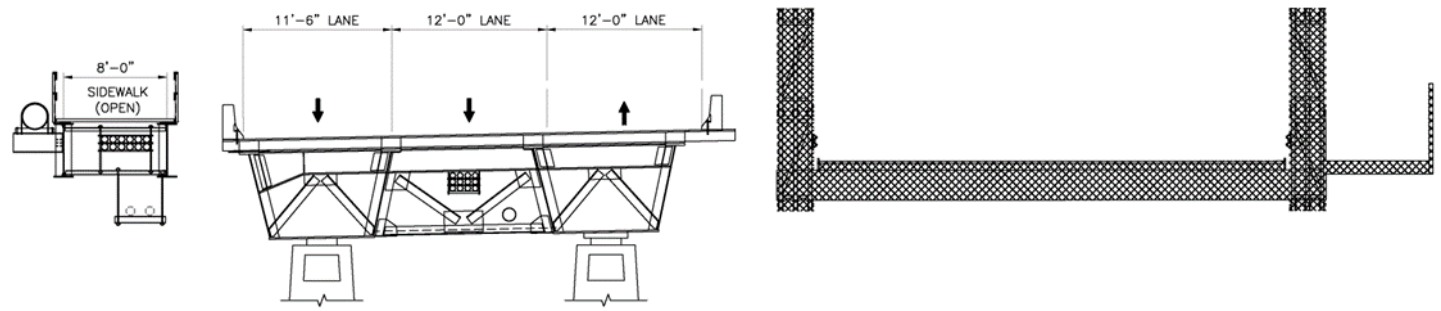
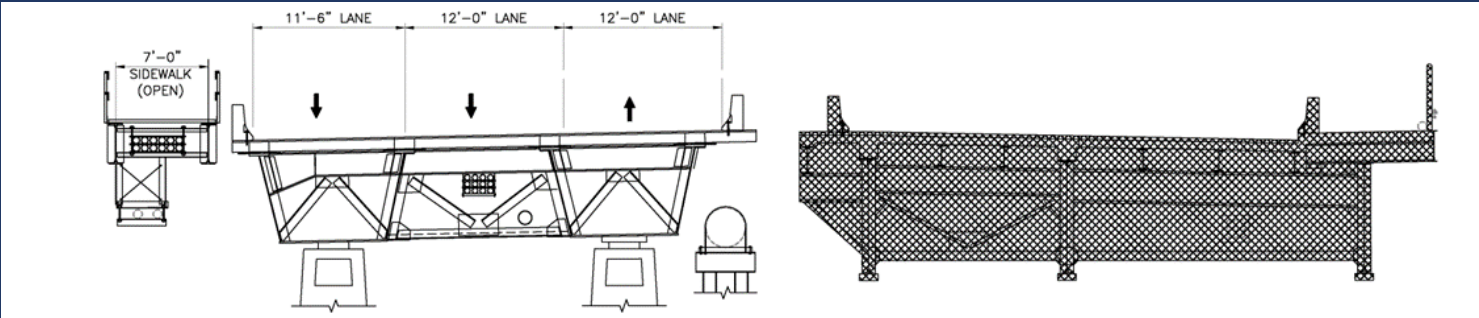
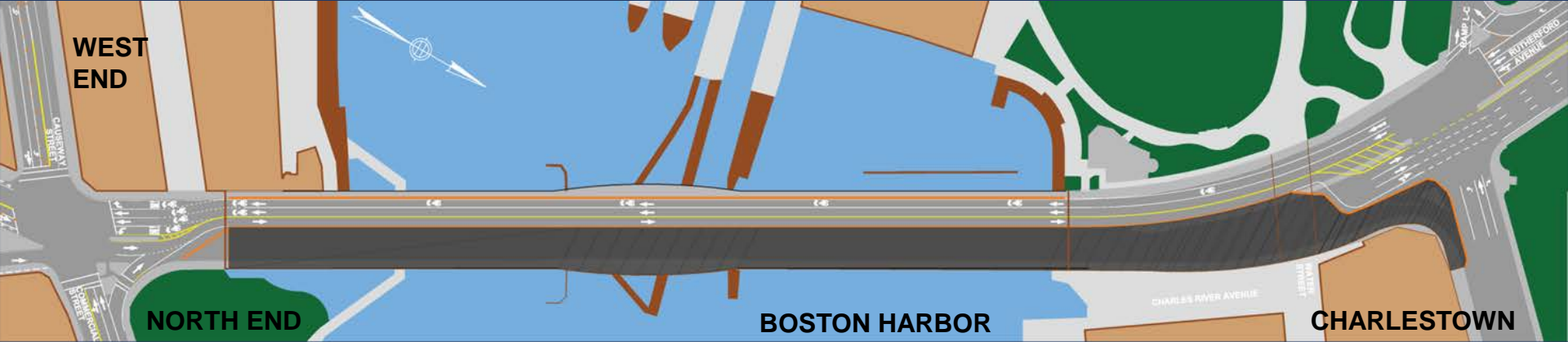


Stage 1B

12 months

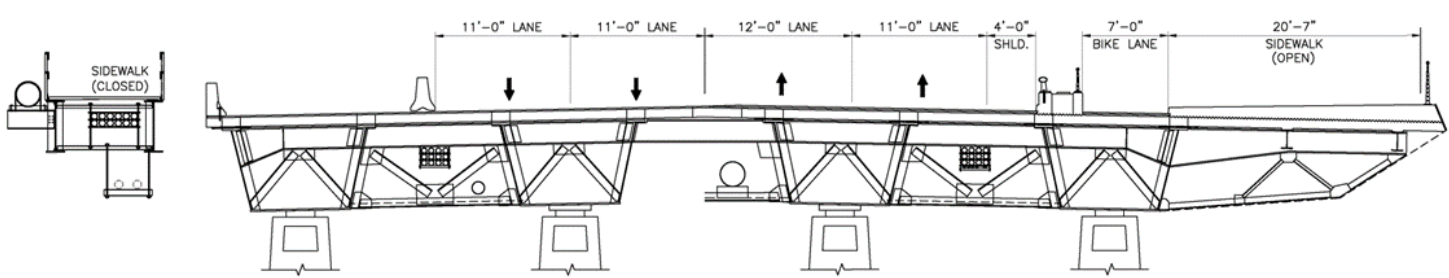
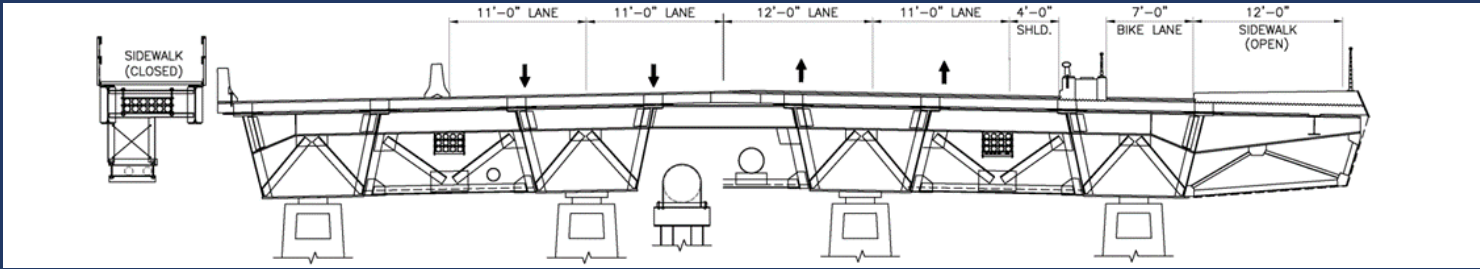
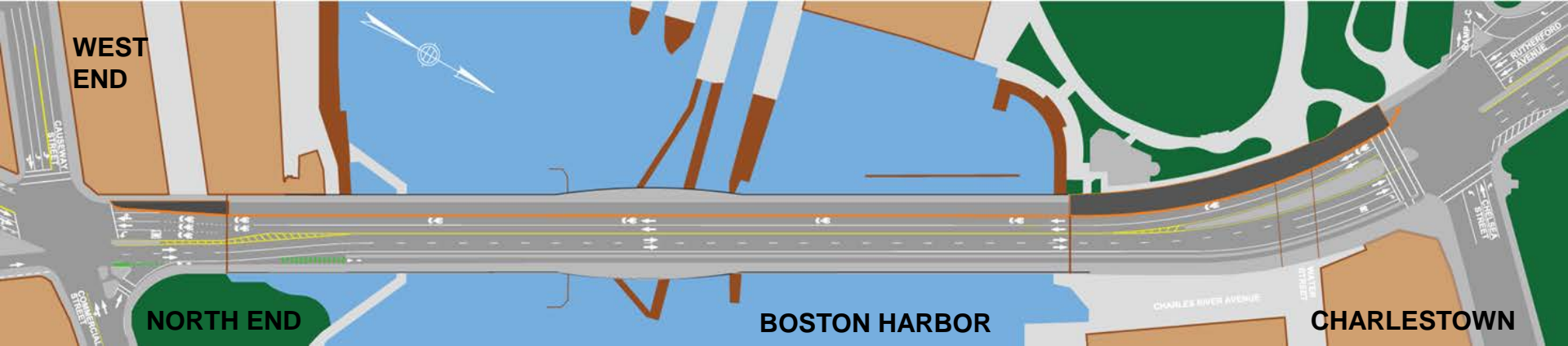


Stage 3 18 months



Stage 4B

3 months

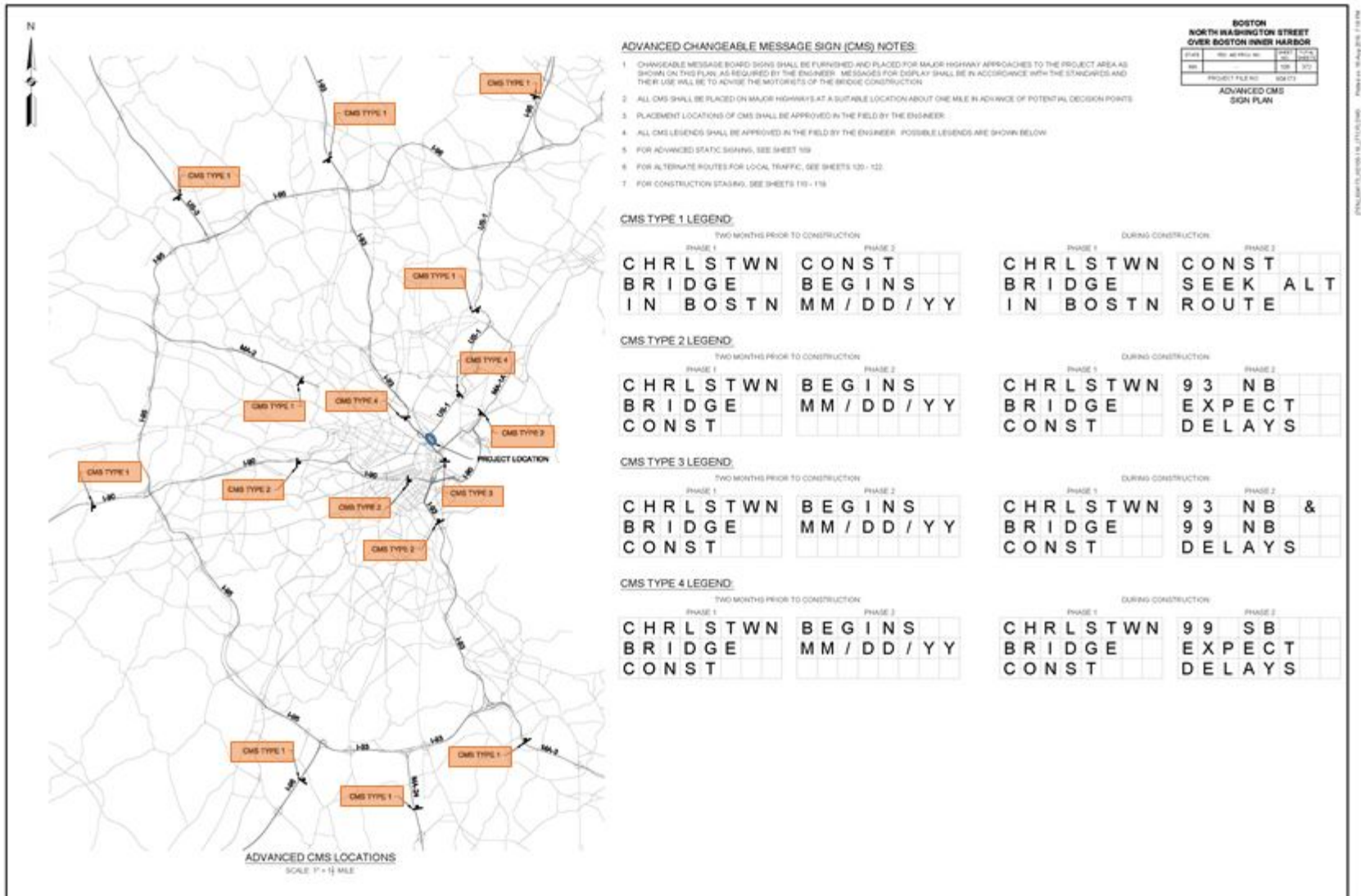


Traffic Management Goals



1. Provide early and accurate information so drivers make smart decisions
2. Reduce regional traffic to maximize limited bridge capacity
3. Provide traffic details at major intersections:
 - Keany Square
 - City Square
 - Along Chelsea Street

Advanced Changeable Message Signs

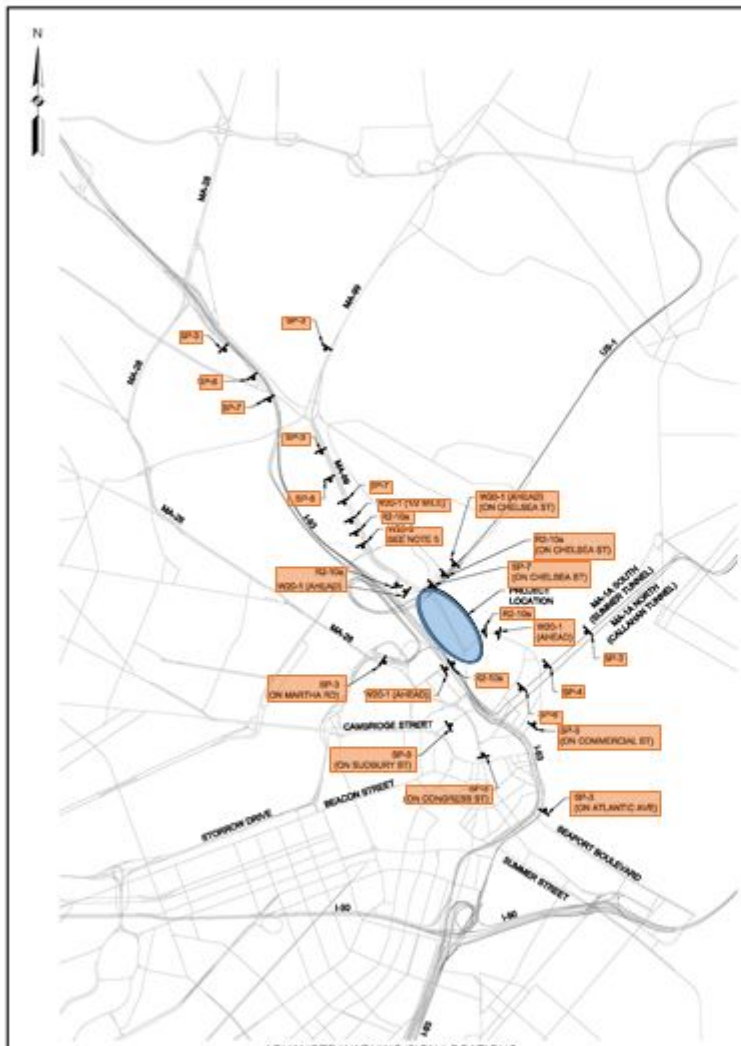


Advanced Warning Signs

**BOSTON
NORTH WASHINGTON STREET
OVER BOSTON INNER HARBOR**

DATE	ISSUE NO.	DATE	ISSUE NO.
08/14/18	001	08/14/18	001
08/14/18	002	08/14/18	002
08/14/18	003	08/14/18	003

PROJECT FILE NO. 608173
**ADVANCED WARNING
SIGN PLAN**



ADVANCED WARNING SIGN NOTES:

1. ALL SIGNS SHALL BE PLACED AT A SUITABLE LOCATION CONFORMING TO MUTCD STANDARDS, AS SHOWN BELOW.



RECOMMENDED ADVANCED WARNING SIGN MINIMUM SPACING (MUTCD TABLE 6E-1)

ROAD TYPE	DISTANCE BETWEEN SIGNS		
	A	B	C
URBAN LOW SPEED	150 FT	150 FT	150 FT
EXPRESSWAY/FREEWAY	1,000 FT	1,500 FT	2,500 FT

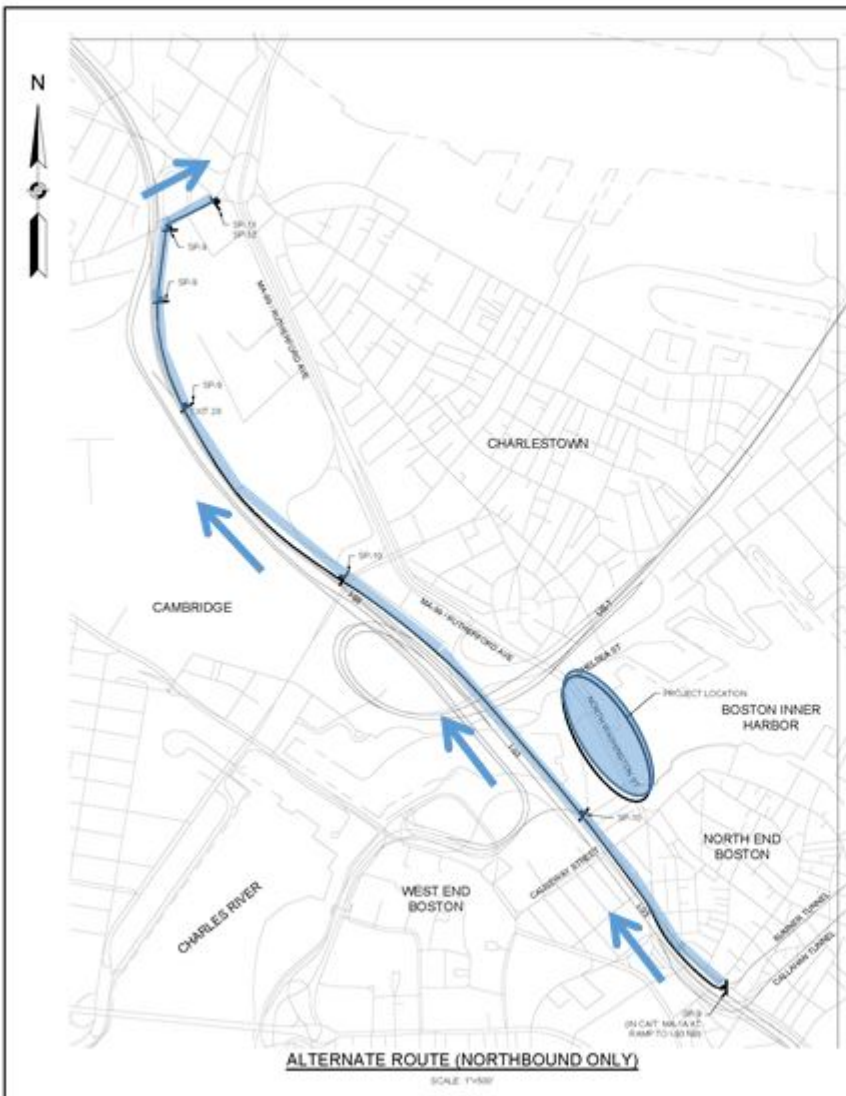
2. PLACEMENT LOCATIONS OF ADVANCED WARNING SIGNS SHALL BE APPROVED IN THE FIELD BY THE ENGINEER.
3. ALL SIGN LEGENDS SHALL BE APPROVED IN THE FIELD BY THE ENGINEER. POSSIBLE LEGENDS ARE SHOWN BELOW.
4. ALL SIGN PANELS AND TEXT SIZES SHALL CONFORM TO THE MUTCD AND MASSDOT STANDARDS.
5. THE CURRENT CONSTRUCTION STAGE SHALL DETERMINE IF THE W95-3 SIGN DISPLAYS A LEFT OR RIGHT LEGEND. THE SIGN LEGEND SHALL BE APPROVED IN THE FIELD BY THE ENGINEER.
6. THE CONTRACTOR SHALL FURNISH AND INSTALL ADVANCED SP-4 NO WIDE LOADS SIGNS IN ADVANCE OF THE PROJECT GRE AT KEY LOCATIONS. THE CONTRACTOR IS FULLY RESPONSIBLE TO COORDINATE THE LOCATION AND DIRECTION OF THESE SIGNS. THE CONTRACTOR SHALL COORDINATE WITH BOTH MASSDOT DISTRICT 6 OFFICE AND THE MASSDOT COMMERCIAL TRANSPORT PERMIT OFFICE. POSSIBLE SIGN LEGEND IS SHOWN BELOW.
7. FOR ADVANCED CMS SIGNS, SEE SHEET 118.
8. FOR ALTERNATE ROUTE PLANS, SEE SHEETS 119 - 122.
9. FOR CONSTRUCTION STAGING AND ADDITIONAL ADVANCED WARNING SIGNS NOT SHOWN ON THIS PLAN, SEE SHEETS 110 - 115.

<p>SP-3 LEGEND:</p> <p>CHARLESTOWN BRIDGE CONST. EXPECT DELAYS</p>	<p>SP-4 LEGEND:</p> <p>FOR CHARLESTOWN USE ALT ROUTE</p>	<p>SP-5 LEGEND:</p> <p>ALT ROUTE USE I-93 NORTH</p>
<p>SP-6 LEGEND:</p> <p>FOR NORTH END OR TO GARDEN USE ALT ROUTE</p>	<p>SP-7 LEGEND:</p> <p>ALT ROUTE USE LEVERETT CONNECTOR</p>	<p>SP-8 LEGEND:</p> <p>NARROW BRIDGE NO WIDE LOADS SEEK ALT ROUTE</p>

ADVANCED WARNING SIGN LOCATIONS
SCALE 1" = 1/4 MILE

SCALE 1" = 50'

Alternate Route Northbound



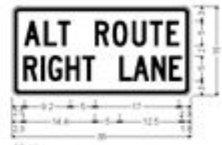
BOSTON
NORTH WASHINGTON STREET
OVER BOSTON INNER HARBOR

DATE	ISS. APPROVAL	PROJECT	SCALE
08/13	08/13	102	20%
PROJECT FILE NO.		S04713	

NORTHBOUND ALTERNATE ROUTE
PLAN & SIGN SUMMARY



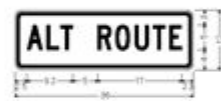
SP-8
 1.5" Radius, 0.5" Border, 0.4" Inset, Back on Orange,
 "ALT ROUTE" 0.75% spacing,
 Standard Arrow Custom 18.0" x 12.0" H"



SP-10
 1.5" Radius, 0.5" Border, 0.4" Inset, Back on Orange,
 "ALT ROUTE" C,
 "RIGHT LANE" C, 75% spacing



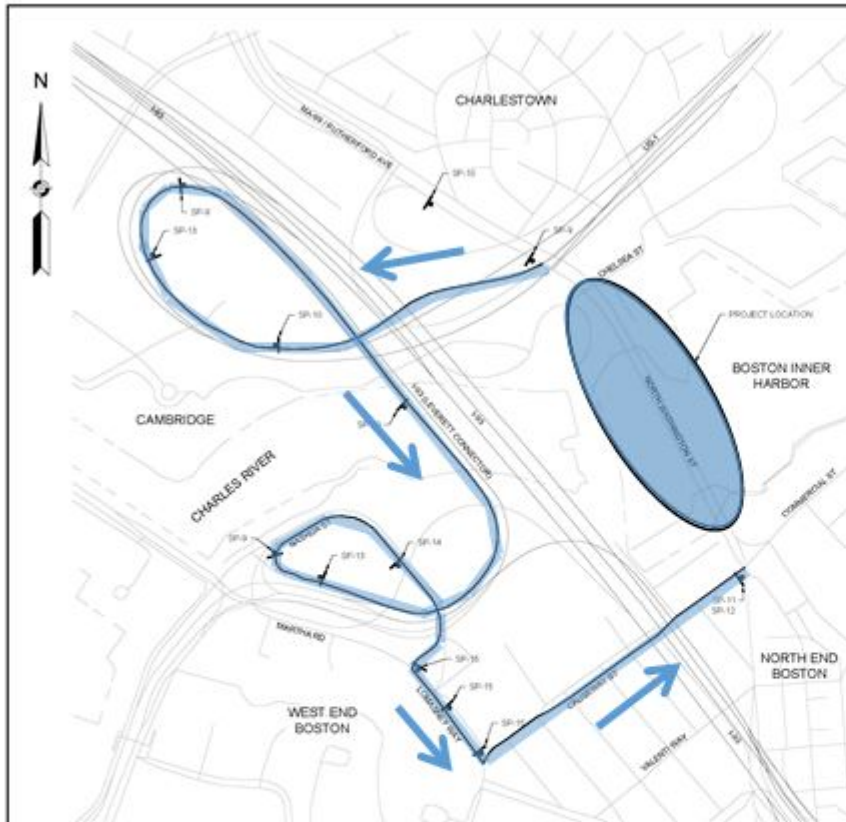
SP-11
 1.5" Radius, 0.5" Border, 0.4" Inset, Back on Orange,
 "END" C



SP-12
 1.5" Radius, 0.5" Border, 0.4" Inset, Back on Orange,
 "ALT ROUTE" C

P:\10\102\102113\102113_0101_0101_0101.dwg 2/28/2013 10:08 AM

Alternate Route Southbound

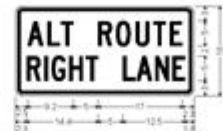


ALTERNATE ROUTE (SOUTHBOUND ONLY)
SCALE: 1"=50'

**BOSTON
NORTH WASHINGTON STREET
OVER BOSTON INNER HARBOR**

DATE	ISSUE	DESCRIPTION
08/13	001	ISSUE FOR PERMITS
08/13	002	REVISED
08/13	003	REVISED

PROJECT FILE NO: 84473
**SOUTHBOUND ALTERNATE ROUTE
PLAN & SIGN SUMMARY**



SP-13
1.5" Radius, 0.6" Border, 0.4" Indent, Black on Orange,
"ALT ROUTE" - C,
"RIGHT LANE" - C, 75% spacing,
Standard Arrow Custom 18.0" x 12.0" (R)



SP-9
1.5" Radius, 0.6" Border, 0.4" Indent, Black on Orange,
"ALT ROUTE" - C, 75% spacing,
Standard Arrow Custom 18.0" x 12.0" (R)



SP-14
1.5" Radius, 0.6" Border, 0.4" Indent, Black on Orange,
"ALT ROUTE" - C,
"LEFT LANE" - C, 75% spacing



SP-10
1.5" Radius, 0.6" Border, 0.4" Indent, Black on Orange,
"ALT ROUTE" - C,
"KEEP RIGHT" - C, 75% spacing



SP-15
1.5" Radius, 0.6" Border, 0.4" Indent, Black on Orange,
"ALT ROUTE" - C, 75% spacing,
Standard Arrow Custom 18.0" x 12.0" (R)



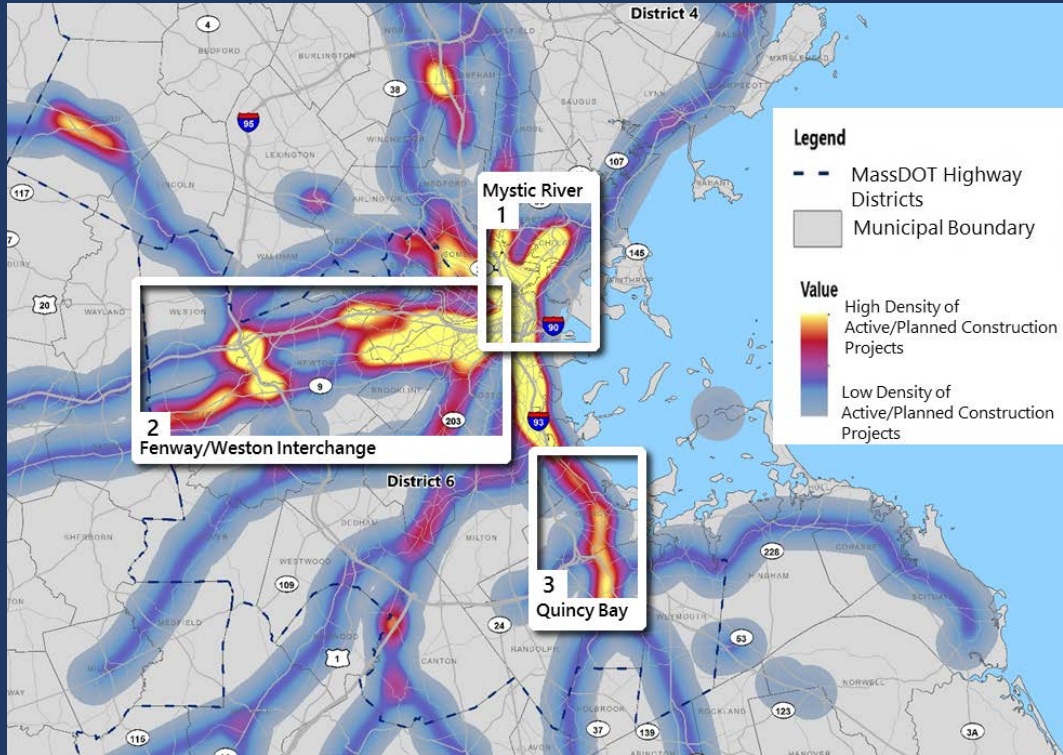
SP-12
1.5" Radius, 0.6" Border, 0.4" Indent, Black on Orange,
"ALT ROUTE" - C



SP-11
1.5" Radius, 0.6" Border, 0.4" Indent, Black on Orange,
"END" - C

P:\Projects\130111\130111_01\130111_01.dwg - 08/13/13 10:58 AM

Construction Coordination & Management Planning

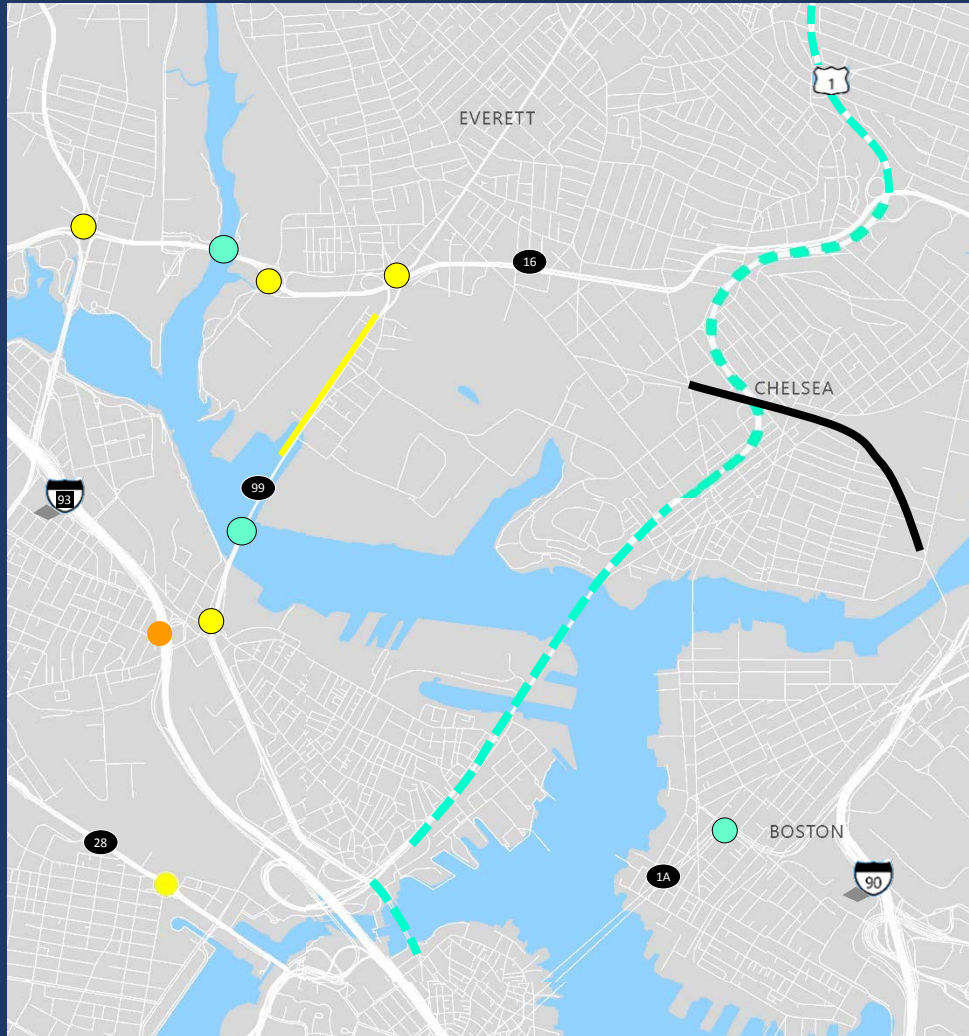


246 projects for 2018

- Joint effort between Highway Division and MBTA to identify potential schedule conflicts and impacts to the public during the 2018 construction season
- Results will allow the Highway Division to focus on improved safety and public outreach strategies



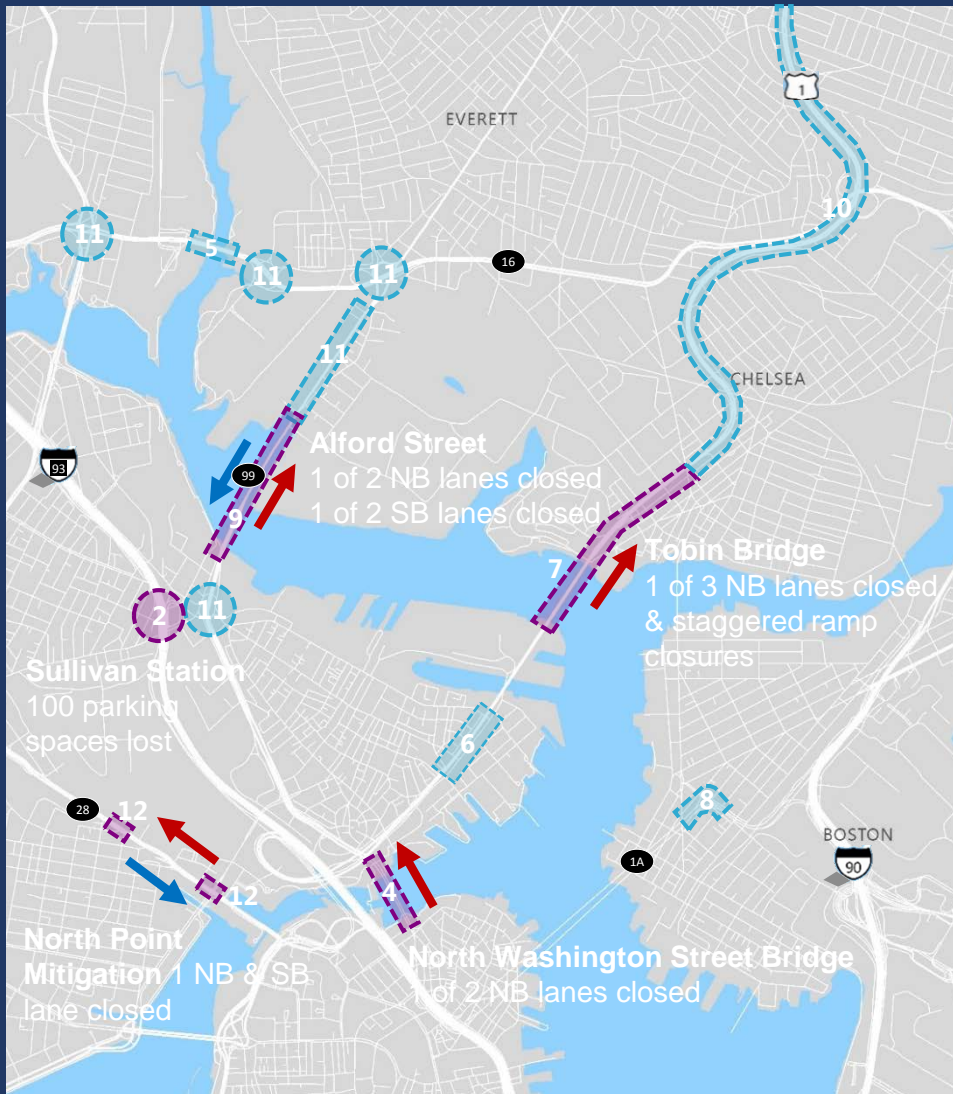
2018 Hot Spot #1 Mystic River



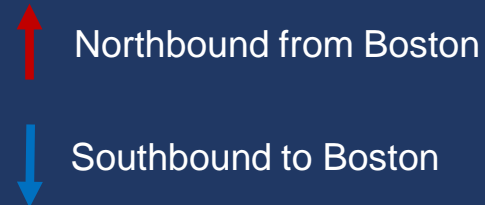
- MBTA (2)** ● —●—
- Sullivan Square Lower Busway
- Silverline Gateway Phase 1
- Private (2)** ●
- Wynn Casino Mitigation
- North Point Route 28 Improvements (Phase 1)
- MassDOT (7)** —●—
- North Washington Street Bridge
- Woods Memorial Bridge (Revere Beach Parkway Bridge Replacement)
- Route 1 Resurfacing and Related Work
- Tobin Bridge Deck Rehabilitation
- Tobin Bridge Painting & Repairs
- Sumner Tunnel Legacy Toll Plaza
- 30 Demolition
- Alford Street (Route 99) Bridge (City of Boston Bridge)



Transportation Schedule Impacts



- Tobin Bridge Closures will have operational impacts to the MBTA Bus Route #111
- Additional MBTA Bus operational/routing impacts related to North Washington Street, Alford Street and North Point mitigation requirements



Numbers refer to project descriptions on previous slide

- Active Construction with Track/Lane Impacts - 24 hours
- Active Construction with Track/Lane Impacts - Off-Peak Hours Only

Outreach

- Continuous updating of MassDOT website to support construction phase, and email updates to project subscribers:
 - Regular 3-week look ahead
 - Notification of major operations and/or night work
- Public information meetings:
 - 30 days before commencement of major work
 - As needed thereafter or upon major project milestones
- MassDOT social media to broaden outreach
- MassDOT will answer all inquiries in timely fashion
- Regional outreach and specific messaging to specific users

Community Protections

- MassDOT Resident Engineer enforces contract specifications for:
 - Dust control
 - Noise control
 - Rodent control
- Dust
 - Contractor will propose process for controlled demolition
 - Common industry methods: shearing steel, wetting concrete
- Noise control
 - Adherence to noise mandated maximum levels for day, evening, and nighttime
 - Means and materials – machinery used, shielding, etc.
- Rodent control
 - baiting/trapping program

FAQs

- Will any part of the bridge remain open while construction is taking place? If so, will both vehicles and pedestrians be accommodated?
 - Generally, there will always be crossings open in both directions; sometimes the lanes will be reduced
- Where will any excess traffic be channeled?
 - As shown tonight: divert regional & optional traffic so local & needed capacity remains
 - Contractor may suggest alternative plans for MassDOT approval

FAQs

- During what hours will construction take place?
 - Typically standard hours (7am-10pm), but there will be times where contractor uses double-shift or 24hr operations to speed construction
 - Earlier start times would have nighttime noise specs
- Are there any plans for noise mitigation?
 - Yes. DOT standards include maximum noise and mitigations; Resident Engineer on-site throughout job to monitor and enforce

FAQs

- How will cyclists be accommodated?
 - Generally sharrow with traffic
 - During some stages, sharing with pedestrians (similar to Longfellow Bridge) may be required
- How will pedestrians be accommodated?
 - One sidewalk will always be available on either the locks or harbor side of the bridge
 - Two sidewalks will be available whenever construction phasing and public safety permit

FAQs

- What about ferry service?
 - MassDOT and MBTA coordinating to explore options
 - Strong local and elected support acknowledged
 - Safety challenge in transiting in-water work zone
 - Cannot unduly hamper contractor means and methods
- Where will the contractor's workers park?
 - Contractor must secure off-site parking; not on nearby residential streets
 - Active work vehicles will park within the workzone

Jim Kersten, MassDOT
Government & Public Affairs
James.a.Kersten@state.ma.us

Contact

massdot.state.ma.us/highway/HighlightedProjects/NorthWashingtonStreetBridgeReplacement

keepbostonmoving.org/portfolio/north-washington-street-bridge/

public.govdelivery.com/accounts/MADOT/subscriber/new?topic_id=MADOT_126



Thank you

Q & A

North Washington Street Bridge Replacement Project Boston, Massachusetts

