

Bridge Rehabilitation: Boston's Historic Longfellow Bridge



Kurt Jergensen, Historic Bridge Specialist

MassDOT Highway Division

Longfellow Bridge, at a glance

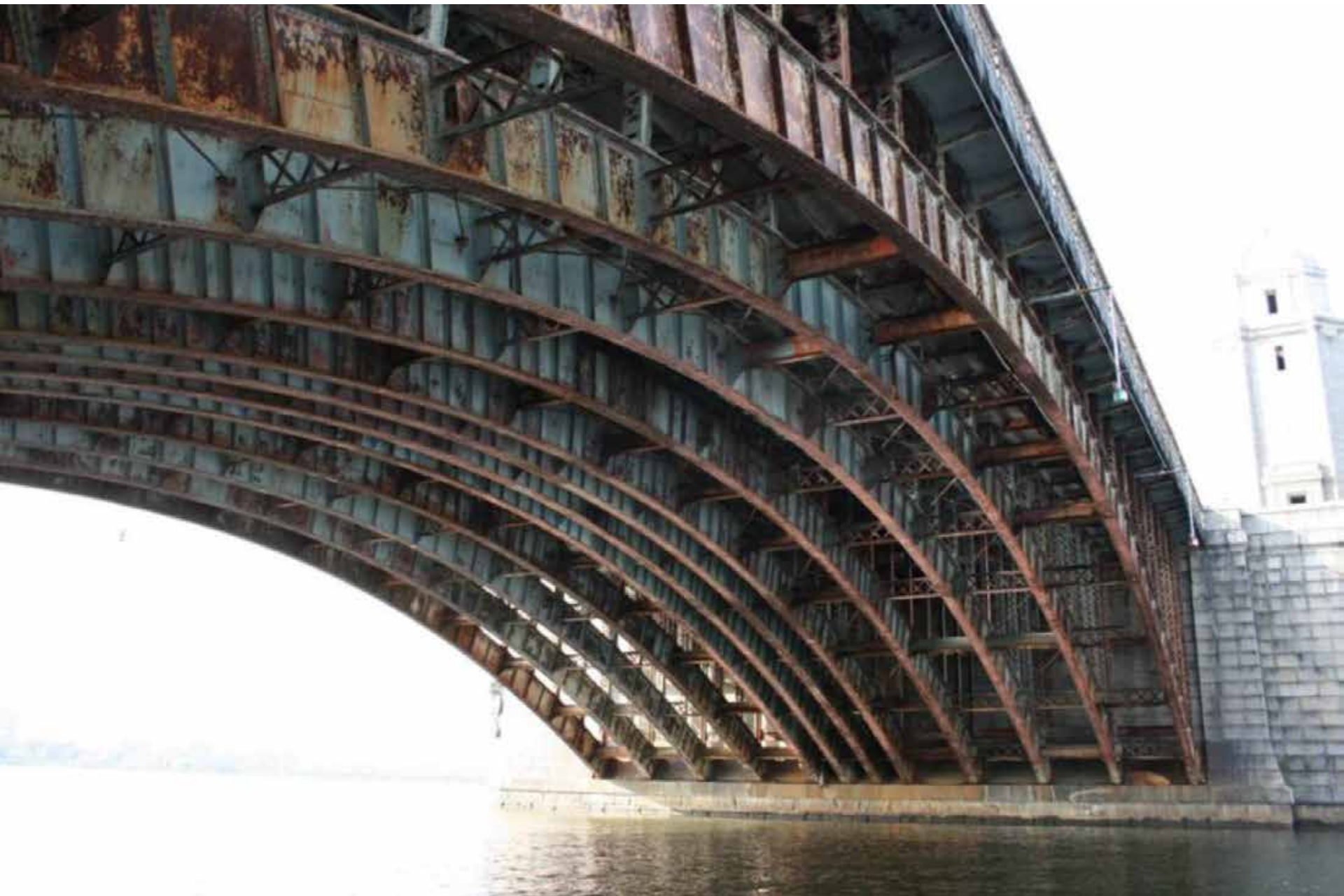
- Originally called either the Cambridge Bridge, or the West Boston Bridge; renamed and dedicated to Henry Wadsworth Longfellow in 1927
- Construction began in 1900 and was completed in 1907
- The bridge designed and constructed to carry the double-tracked Boston Elevated Railway Co. rapid-transit line (now the MBTA Red Line), though the line was not actually completed and put into service until 1912
- Designed for the Boston and Cambridge Bridge Commission by engineer William Jackson and architect Edmund Wheelwright
- Bridge steel fabricated and assembled by Phoenix Bridge Company; substructure built by Holbrook, Cabot & Daly
- 2,135' total length, consisting of eleven open-spandrel steel rib arch spans, springing from granite-clad hollow piers and abutments of similar construction. The arch spans are graduated in length, rising to a crest over the 188'-long central span



Repairs to Longfellow Bridge

- Major repairs were completed in 1959, focusing on the repair or replacement of deteriorated elements of the superstructure and floor system
- Minor repairs and other emergency repairs took place over the past decade, intended to keep the bridge open until the present major rehabilitation project could begin
- Structural elements that are in particularly deteriorated condition include the steel floorbeams, stringers, deck buckle plates and steel spandrel posts
- Another structural issue involves the settlement and tilting of the four 58'-high towers on Piers 5 and 6; the downstream tower on Pier 6 is the worst, with a 6.3" lean to the north





A yellow rectangular sign with black text is mounted on a rusty metal bridge structure. The sign reads "CLEARANCE 11 FT 0 IN". The bridge has a decorative cast-iron railing on top and a complex steel truss structure underneath. A green street lamp is visible in the upper right background.

CLEARANCE 11 FT 0 IN

Why pursue sensitive rehabilitation?

Longfellow Bridge is listed in the National Register of Historic Places as part of the Charles River Basin Historic District. The bridge is an iconic landmark within Boston and Cambridge, and is a monument to civic pride in both cities during the City Beautiful era.

Accordingly, MassDOT has sought to avoid any adverse impacts on this significant historic resource, in compliance with Section 106 of the National Historic Preservation Act and Section 4(f) of the National Transportation Act. This rehabilitation project was developed in coordination with the Federal Highway Administration, Massachusetts Historical Commission, MA Dept. of Conservation and Recreation, and the Local Historical Commissions for Cambridge and Boston.

