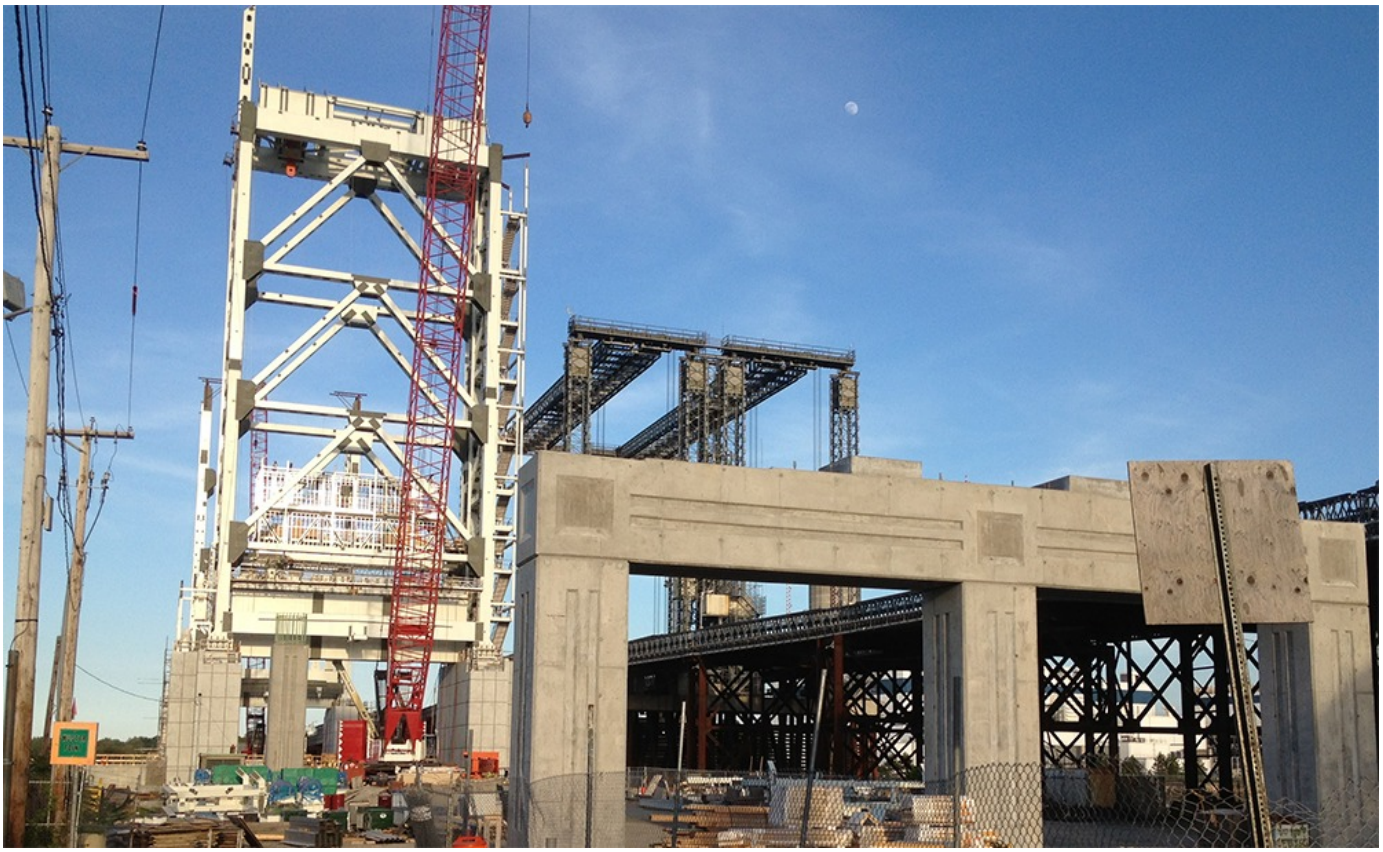

Project

Our geotechnical experts design enduring bridge foundation under tight schedule

32,000

vehicles per day that new bridge supports

Summary

- The Massachusetts Department of Transportation relied on Haley & Aldrich's geotechnical engineers to design a replacement for a deteriorated bridge built in 1936.
- Our team brought prior site experience, extensive local geological knowledge, and a deep bench of skilled, local geotechnical staff familiar with deep, high-capacity drilled-shaft design and construction.
- In addition, our strong project management approach enabled us to review proposed design solutions and solve challenges quickly while maximizing safety and limiting disruptions.

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Client challenge

The Fore River Bridge, a Massachusetts landmark built in 1936, is a critical element of the state's local highway system that by 2002 had deteriorated beyond the point of restoration. The Massachusetts Department of Transportation (MassDOT) needed a new permanent vertical-lift bridge to carry 32,000 vehicles per day to reduce the commute time between the cities of Quincy and Weymouth. MassDOT's key success metrics for the bridge construction were safety and limited disruption to public, business, and marine communities.

Haley & Aldrich's contribution to MassDOT's selected design-build team was prior site experience, extensive local geological knowledge, and a deep bench of skilled local geotechnical staff familiar with deep, high-capacity drilled-shaft design and construction.

Our approach

Haley & Aldrich implemented a staffing plan featuring a strong project manager leading a large, local team of geotechnical experts to support both design and field work. Our one-company team approach pulled together senior-level design and management staff from throughout our firm to review proposed design solutions and project challenges quickly and comprehensively.

We also partnered with the design-build team members to enhance the entire team's ability to resolve challenges throughout each project phase, including construction, to keep the bridge foundations off the critical path.

Value delivered

- Provided on-time, as-needed geotechnical design recommendations that met applicable federal and state design requirements yet allowed for innovation and flexibility
- Streamlined the design phase by obtaining the state's water agency approval early and performing a 3-D analysis of the foundation system to demonstrate negligible applied stresses on an existing deep rock water tunnel
- Collaborated with the lead designer, lead contractor, and drilled shaft subcontractor to resolve a casing installation issue through redesign and telescoping casing, avoiding the switch to a new installation method and any project delays as a result

For more information, contact:

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