

SR 519 Intermodal Access Project

Design-Build in an Urban Environment

By Mark Johnson, PE
CH2M HILL
Bellevue, WA

CH2MHILL

Outline

- Background and Overview
- Project Challenges
- Design-Build Project Approach
- Royal Brougham Overpass
- Atlantic Ramp



Project Overview

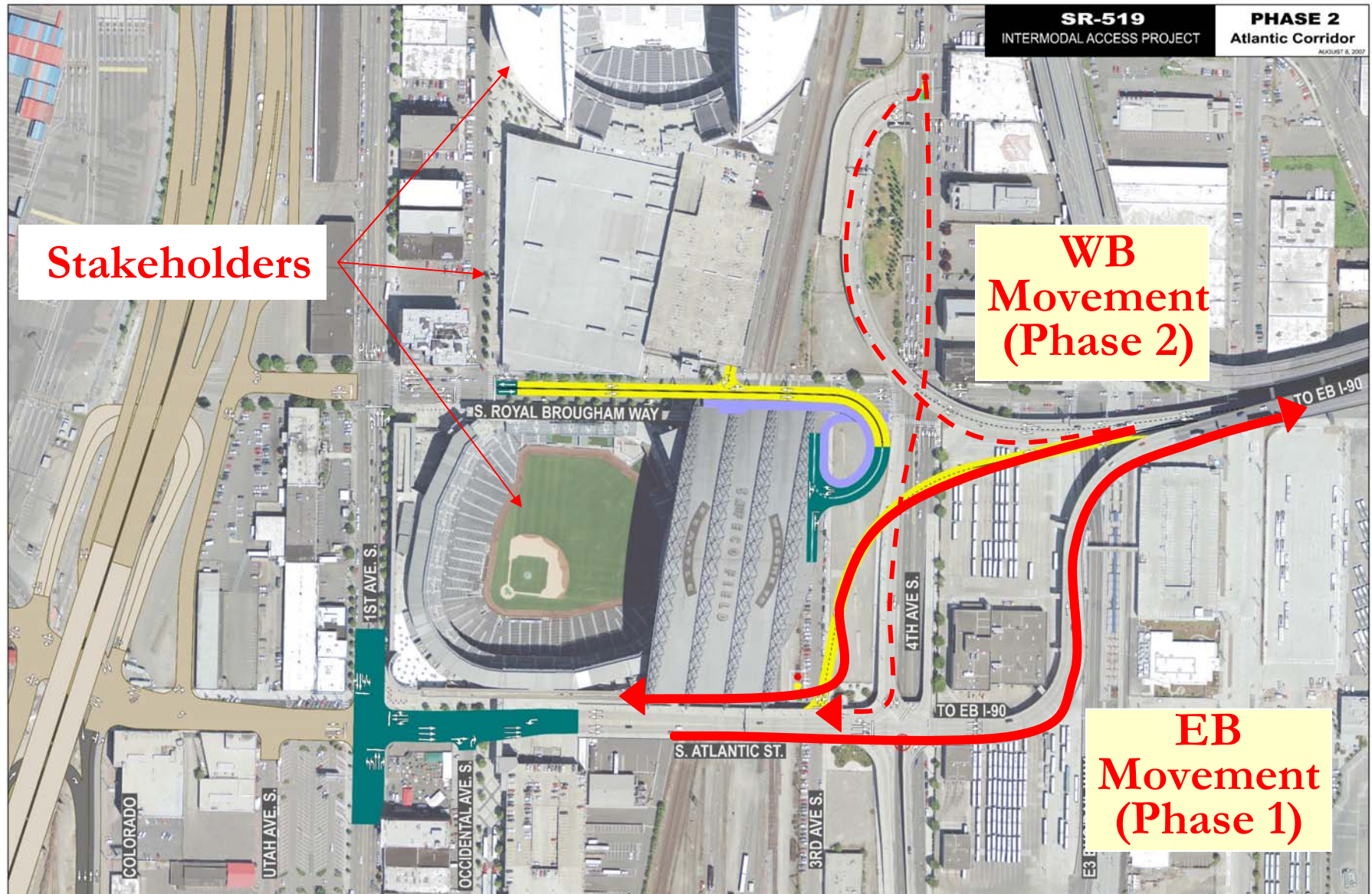
- Downtown Seattle stadium district
- Provides direct access to Seattle waterfront and Port of Seattle
- First project for Alaska Way Viaduct program
- Visible project with many stakeholders



Project Elements



Project Purpose



Project Challenges

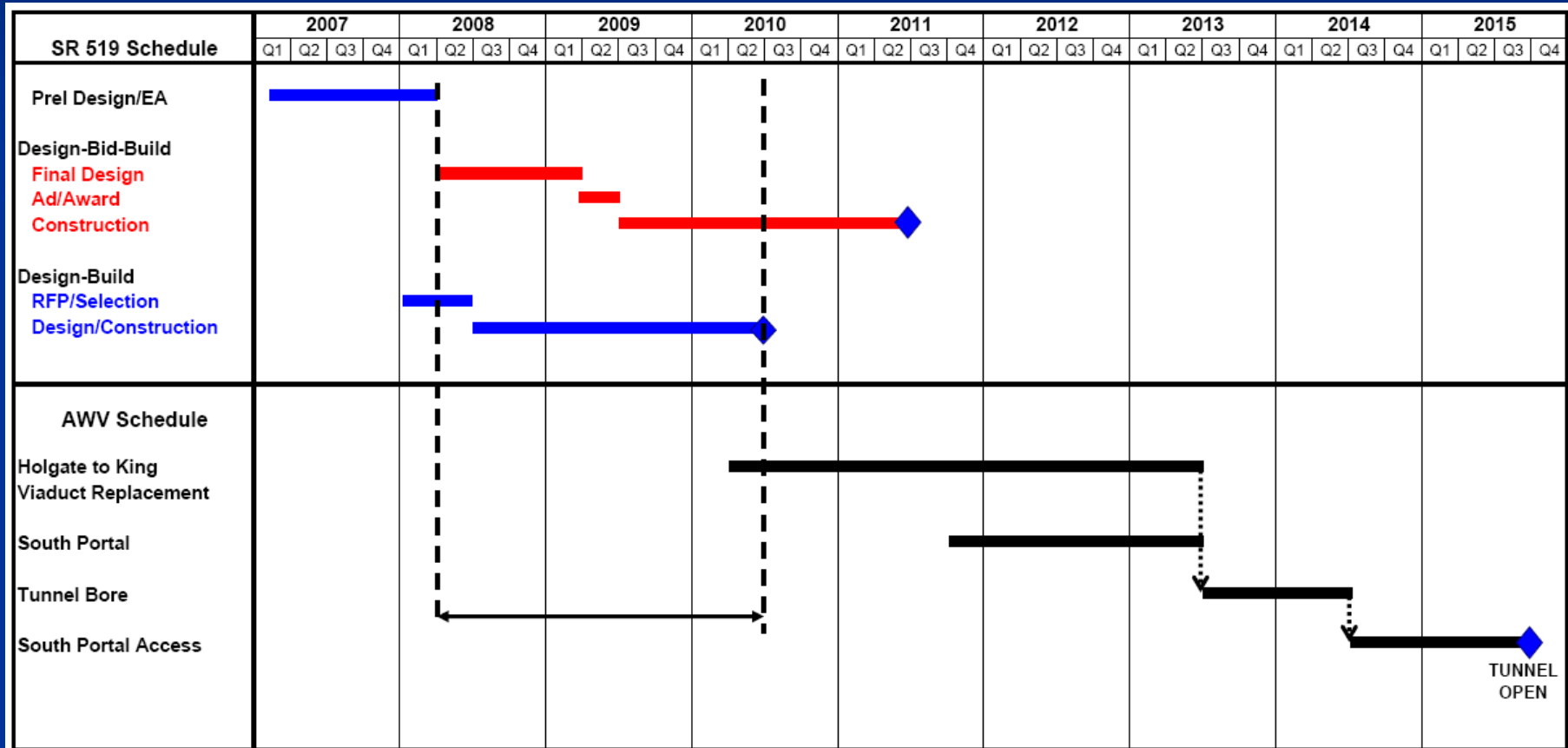
Technical

- Constrained Site
- Poor Soils
- Utilities
- Aesthetics in stadium district

Policy Level

- Multi-agency lead
- Many stakeholders
- Short schedule to complete project

Project Schedule & Delivery Options



Royal Brougham Overpass

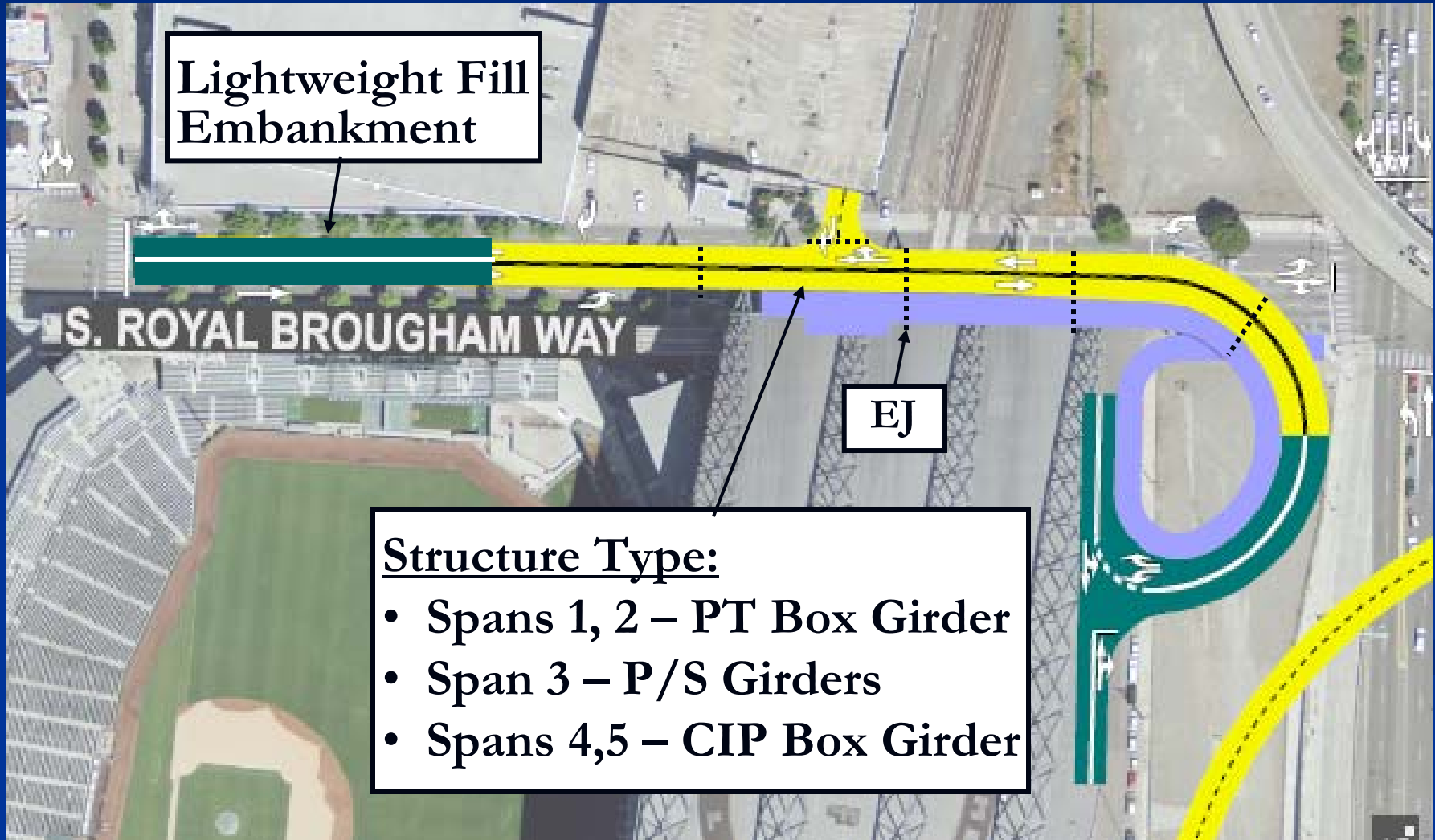


Challenges:

- Soils
- Utilities
- ADA Compliance
- Work over railroad
- Aesthetics

Royal Brougham Overpass

Structure Type Solutions



Royal Brougham Overpass



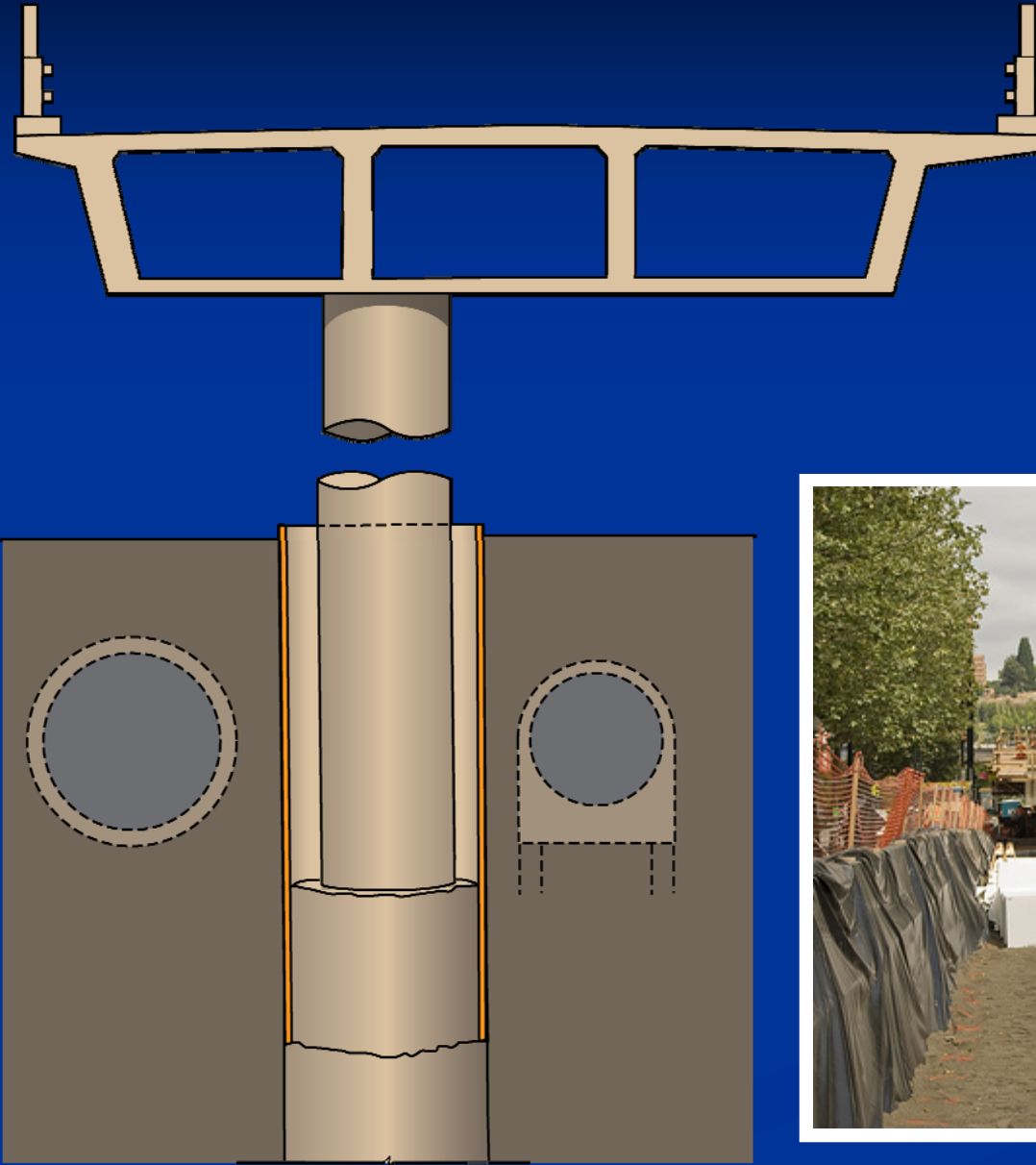
Solutions

- Use of haunched P/S girders over railroad tracks

Royal Brougham Overpass

Solutions

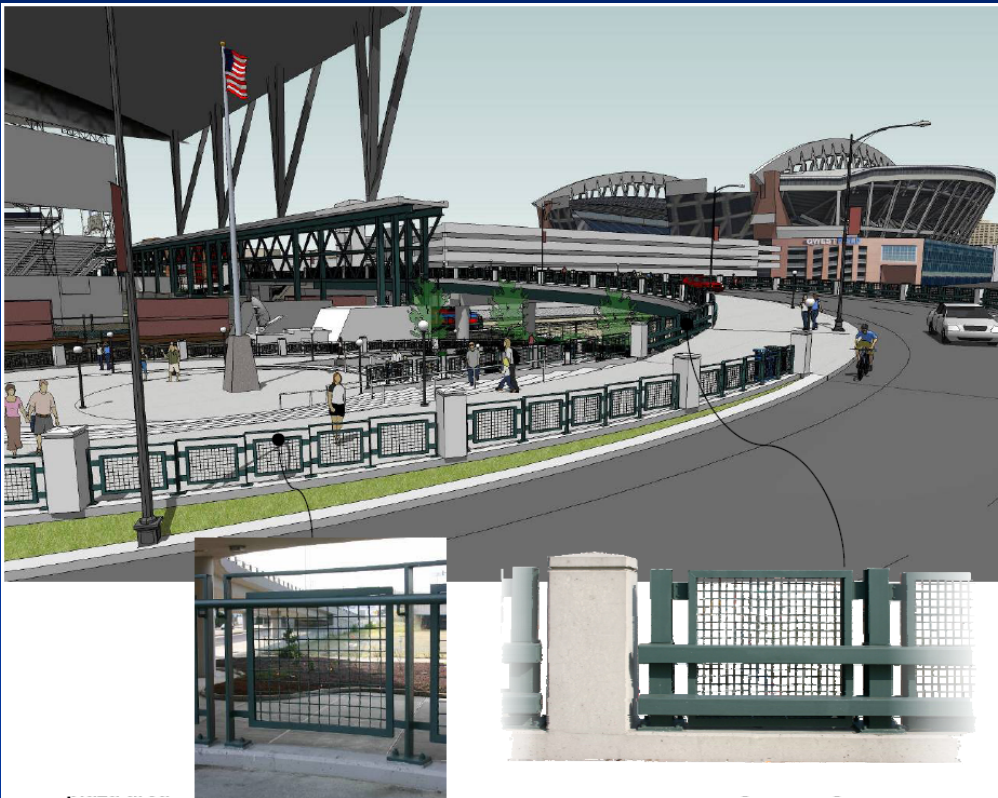
- Mitigate utility constraints
- Lightweight Fill



Royal Brougham Overpass

Solutions

- Urban design (UD) guidelines
- UD Task Force



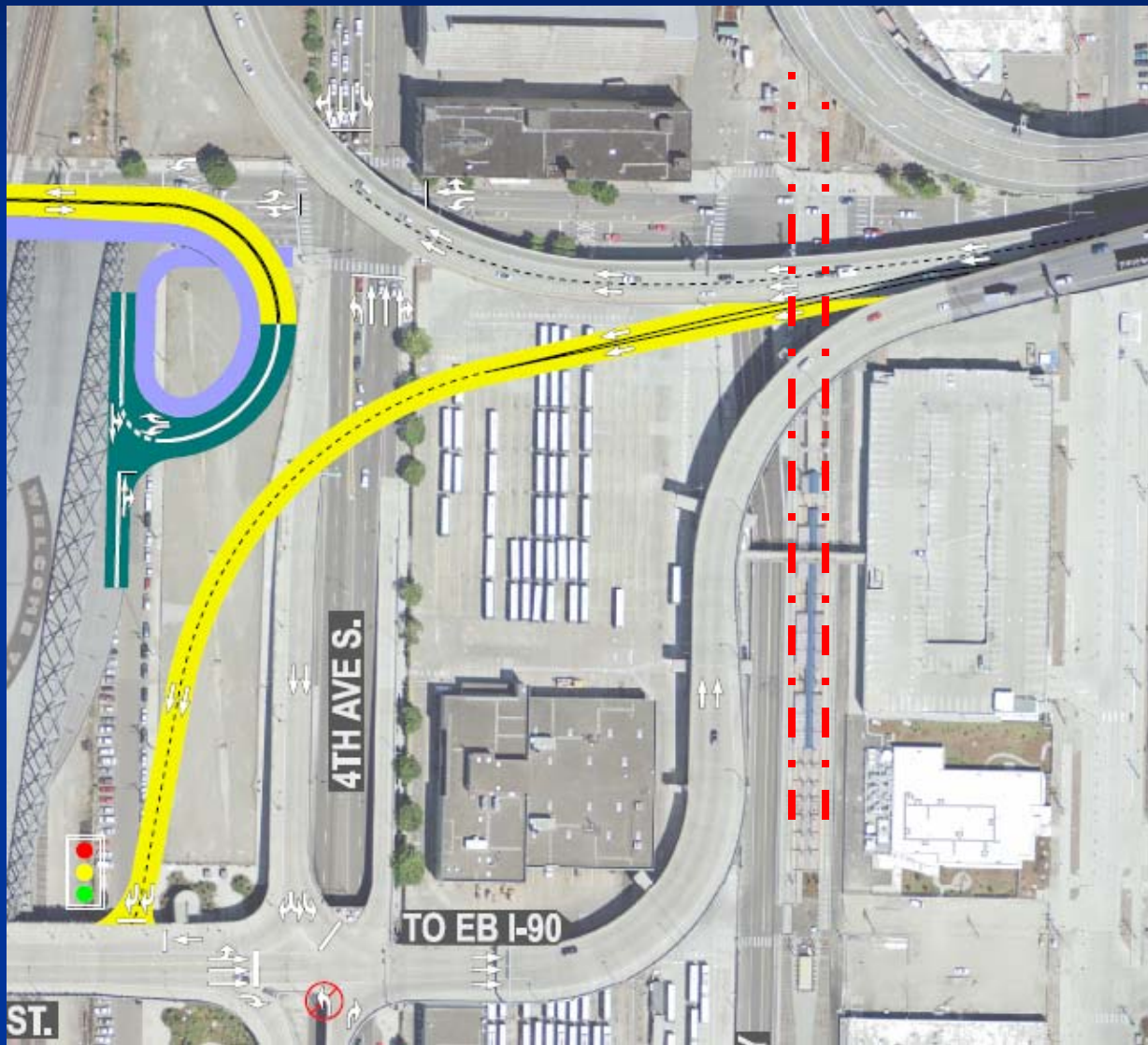
Royal Brougham Overpass

Solutions

- Urban design (UD) guidelines
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Atlantic Ramp



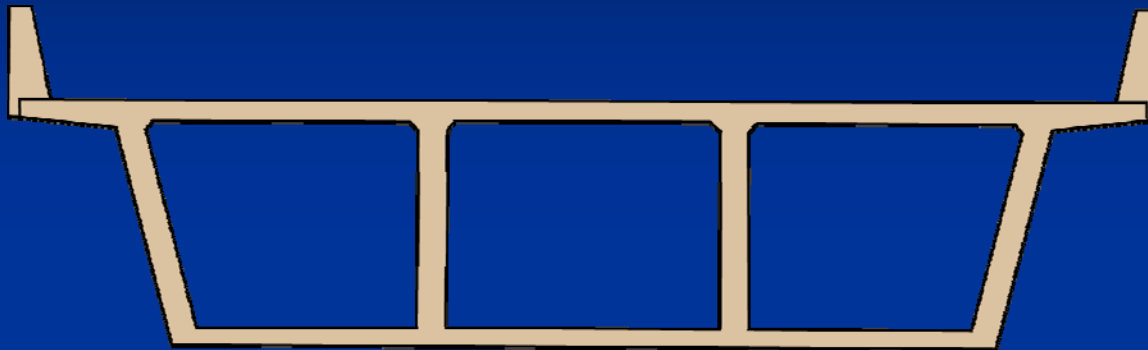
Challenges

- Soils
- Connection to existing structures
- Variable width structure

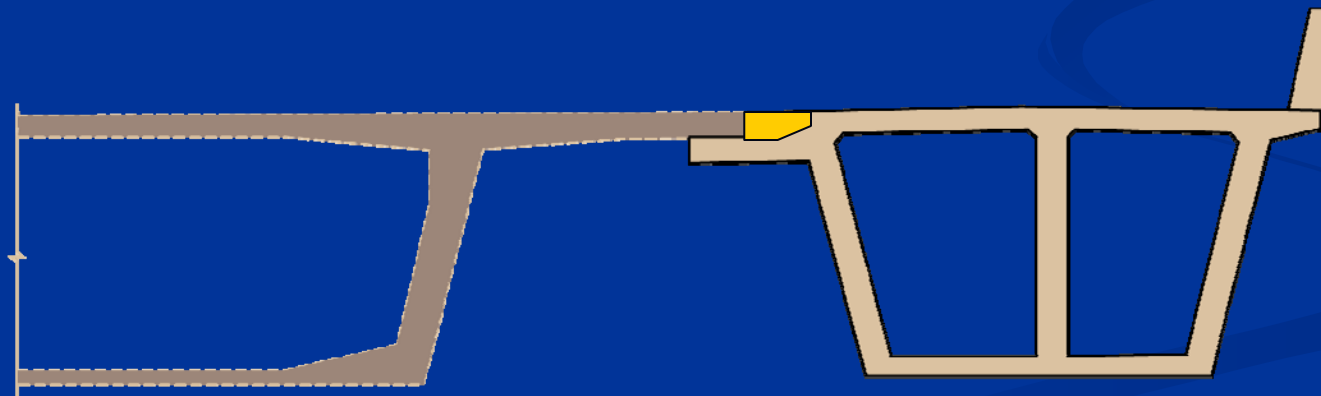
Atlantic Ramp

Solutions

- Structure type
- Reduced moment section
- Seismic fuse



Typical Cross Section



Cross Section at Existing Structure

Design-Build Delivery

Advantages

- Accelerated project schedule
- Allowed for innovative design solutions

Requirements

- Advanced the bridge design for D-B RFP contract
- Incorporated stakeholder requirements in D-B RFP contract

Acknowledgments

- Owners – WSDOT, City of Seattle
- Preliminary Urban Design – Makers
- General Contractor – Kiewit
- Design Subcontractor – AECOM

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