SR520 FLOATING BRIDGE AND LANDINGS (FBL)

SEATTLE, WA

SDI Scope

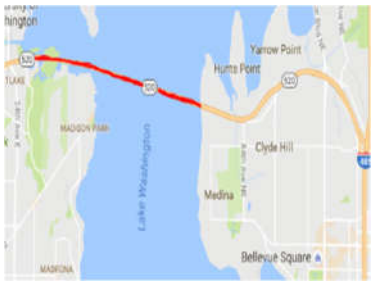
Furnish & Install Post-Tensioning

Contractor

Kiewit General Mason JV (KGM)

Owner

Washington Department Of Transportation (DOT)



SR520 FLOATING BRIDGE AND LANDINGS PROJECT DESCRIPTION

The SR520 Floating Bridge is a multiple contract project located east of Seattle, WA on Lake Washington. The 12.8 mile long project begins at I-5 and extends to SR202 in Redmond. The main structure across the lake is constructed with floating concrete pontoons. There were a total of 21 longitudinal pontoons and two landing/approach pontoons that required PT prior to towing to Lake Washington. This multiple-contracts project began casting construction cycle 1 of 6 for the first four pontoons in late 2011 and finished in March of 2015. Performing the PT work scope was challenging considering the consistent wet weather conditions as well as the limited working durations allotted to SDI. SDI was able to plan, organize and execute the PT work without a single schedule delay or recordable incident and accrued over 26,000 man-hours by the completion of the first contract.

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SEATTLE, WA

SDI'S SCOPE OF WORK

SDI was awarded the PT contract by the general contractor, Kiewit General mason JV (KGM). The contracted included the following scope of work for SDI:

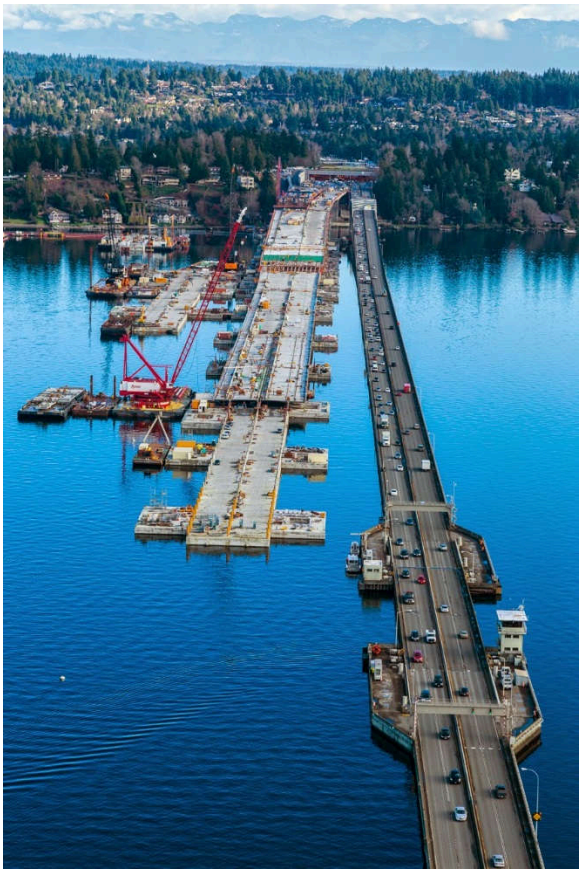
1. Furnish, install and grout post tensioning for the East Approach Segmental Bridge Superstructures.
2. Furnish, install and grout post tensioning for the Pontoon to Pontoon Joining.
3. Furnish post tensioning materials for the Low-rise Precast Segmental Deck Sections.
4. Install and grout post tensioning for the Low-rise Precast Segmental Super Structure after deck erection.

The project consisted of both pre-cast and cast-in-place concrete construction methods utilizing permanent multi-strand anchorages and HS Bars. There were at total of two parallel, 3-span CIP balance cantilever bridges. The bridge structure utilized a double-cell cross section with varying finished deck widths. The design required typical transverse, cantilever, in-span, and future PT tendons.

HDPE pipe was used inside the cantilever ducts to provide additional stiffness to limit potential duct movement during concrete placement. All transverse tendons and vertical HS bars were prefabricated. SDI developed test plans and performed mock-ups of the pipe installation process prior to performing any on-site work.

PROJECT HIGHLIGHTS AND FACTS

- There was a total of 54 SSP pontoons assembled alongside 15 longitudinal pontoons. The pontoon connection required PT tendons running from each end of the pontoon.
- This project required 719 packs of 0.6" strand measuring and 24,000 pre-packaged grout bags.
- SDI Plastic Duct was used for all PT.
- SDI executed their work without any KGM schedule delays or major quality issues.



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