



2011 – SR 303 Manette Bridge

Description

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Abc Construction Equipment : High-capacity crane(s)

Prefabricated Bridge Elements : Precast caisson caps

Contracting : Design-Bid Build

Longitude : -100

Latitude : 47.5693016

Nbi # : 0017926A

State Id # : 303/4A

Construction Equipment : Other ABC Method

Total Bridge Length Ft : 1550

Max Span Length Ft : 250

Beam Material : Concrete

Spans : > Three-span

Location : Urban

Owner : State

State : WA

Year Abc Built : 2011

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Contacts : Bijan Khaleghi, P.E. State Bridge Design Engineer Washington State Department of Transportation khalegb@wsdot.wa.gov 360-705-7181 **Designer:** Jed Bingle P.E. Accelerated and Innovative Bridge Construction (ABC) Specialist Washington State Department of Transportation binglej@wsdot.wa.gov 360-705-7222 **Designer:** Washington State Department of Transportation Patrick Clark PE clarkep@wsdot.wa.gov 360-705-7220 **Contractor:** MANSON-MOWAT, A JOINT VENTURE

Construction Method : The drilled shafts were constructed with permanent casing which extended above the waterline. A support was attached to the outside of the steel casing below water to support the precast caisson cap. The precast caisson cap was lowered onto the casing support and sealed for water tightness. After pumped dry, reinforcement for the cap and columns was placed and concrete was placed to continue the pier construction.

Replacement Or New Bridge : This replacement bridge was constructed over the Port Washington Narrows waterway. The bridge's foundation was drilled shafts, utilizing precast caisson cap to

construct the concrete column to shaft connection. The multi-column piers were CIP. The contract provided precast and CIP options for the crossbeams; CIP was chosen. The superstructure consisted of precast post-tensioned concrete I-girders. Girder segments were either supported by temporary shoring tower, pier or strongback prior to post-tensioning and CIP concrete deck placement.

Existing Bridge Description :

Thirteen spans (one-span steel through-truss, three-span steel deck-truss, eight-span steel girder), approximately 1,570 ft in length

Traffic Management :

The new bridge was constructed adjacent to existing bridge w/o significant impact

Average Daily Traffic At Time Of Construction : 6500

Dimensions : Seven-span precast, post-tensioned concrete variable depth I-girder with CIP deck. One 160-ft span, five 250-ft spans and one 140-ft span. 32-ft roadway width and 12-ft sidewalk.

Primary Drivers : Reduced traffic impacts - communities on both ends of the bridge

Impact Category : Tier 1 (within 1 day)

Mobility Impact Time : The existing truss bridge was open to traffic during construction and closed after the new bridge was opened.

Project Location :

Kitsap County

Project Summary :

Precast cofferdams/shaft cap shells were used at the waterline of this bridge to provide a dry work zone to construct the remainder of the shaft cap and columns.