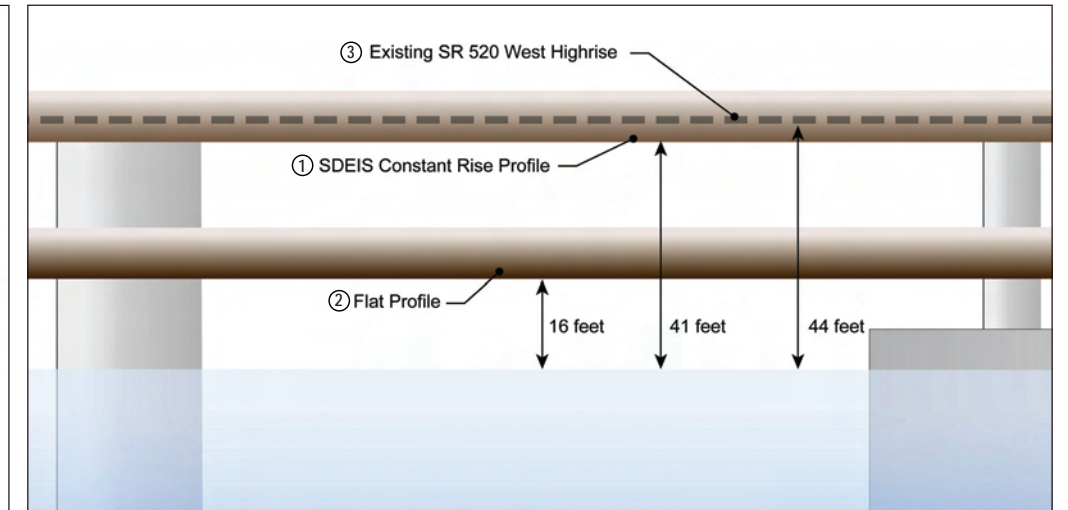
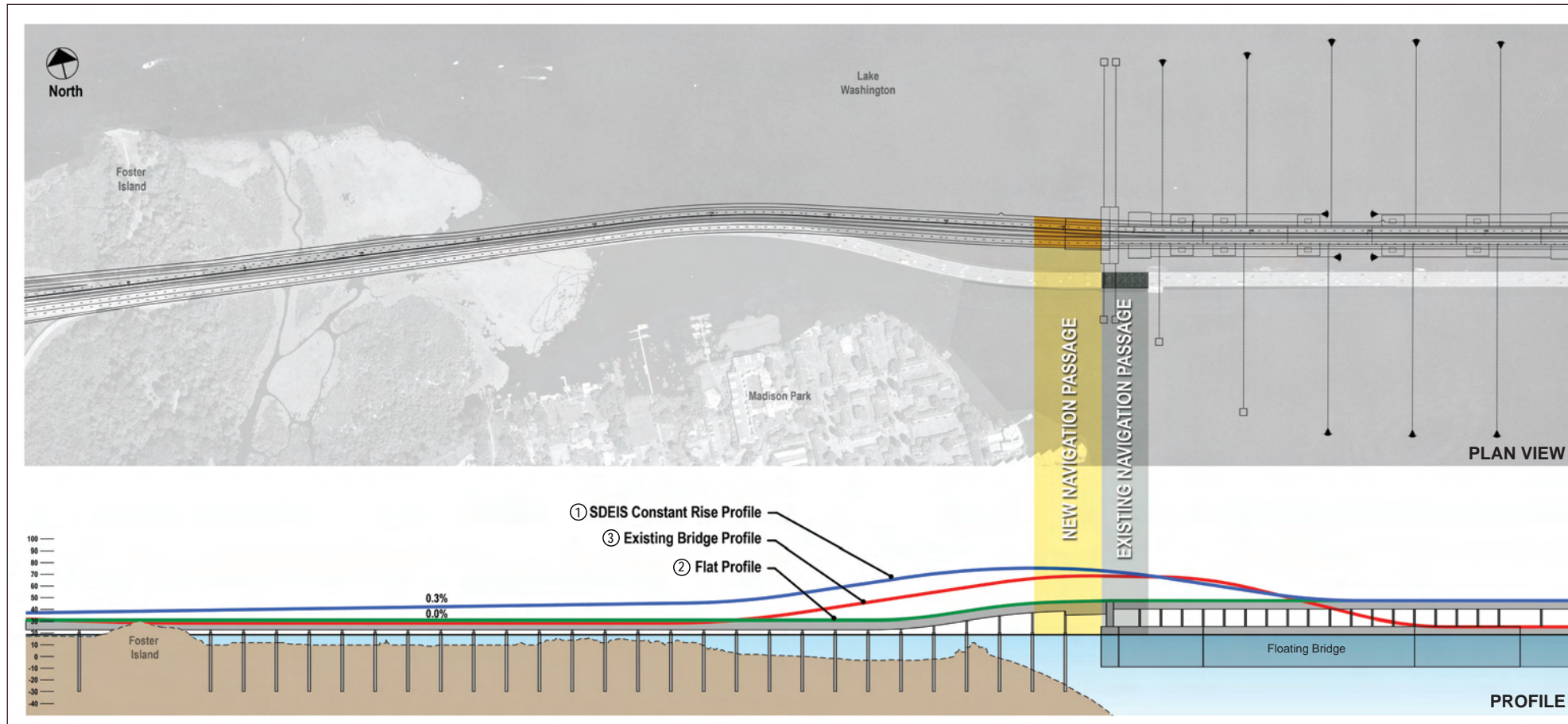


WEST APPROACH PROFILE OPTIONS: DRAFT



VERTICAL CLEARANCES FOR SR 520 WEST HIGHRISE NAVIGATION PASSAGE

CONCEPTUAL
DRAFT - THIS SECTION ONLY EXPRESS THE IDEA. ENGINEERING, ARCHITECTURE AND ENVIRONMENTAL ANALYSIS REQUIRED.
 November 16, 2009

DRAFT
 November 16, 2009

Profile Options	Navigation Considerations	Stormwater Considerations	Environmental Considerations	Cost Considerations
① SDEIS Constant Rise Profile	<ul style="list-style-type: none"> Bridge will provide a navigation channel for clearance of 41 feet vertically. As requested by the Seattle Fire Department fire chief. Bridge will accommodate passage for the Seattle Fire Department fire boat. I-90 east channel bridge has 70 feet of clearance and floating bridge approaches have 29 feet of clearance. 	<ul style="list-style-type: none"> Enhanced water quality treatment is achieved by gravity drains to land-based facility. No pumping required to convey stormwater from bridge to Montlake treatment facility. Provides enhanced treatment of water quality runoff discharged to fish migratory corridor. 	<ul style="list-style-type: none"> Bridge higher above the water reduces shading effects on fish, aquatic habitat, and wetlands. Bridge highrise would be more visible from shoreline. Bridge columns on Foster Island. Navigation channel clearances in the Supplemental Draft Environmental Impact Statement. Noise considerations in Supplemental Draft Environmental Impact Statement. 	<ul style="list-style-type: none"> Efficient design that reduces maintenance and operations costs.
② Flat Profile	<ul style="list-style-type: none"> Bridge eliminates west side navigation channel for all vessels over 16 feet in height. Taller boats must use the SR 520 east navigation channel. Seattle Fire Department fire boat passage limited to east navigation channel. I-90 east channel bridge has 70 feet clearance and floating bridge approaches 29 feet clearance. 	<ul style="list-style-type: none"> Enhanced water quality treatment could be achieved by pumping to land-based treatment facility. Pumping and piping would require additional environmental impacts due to limited space below bridge and into water. Approximate two-year storm event flow rate would be up to 2,500 gallons per minute being pumped. A lesser water quality treatment option is media filter vaults suspended under the bridge or on adjacent in-water platforms. 	<ul style="list-style-type: none"> Bridge lower to the water results in more shading effects on fish, aquatic habitat, and wetlands. Bridge would not provide a west highrise, less visible from shoreline. Effective stormwater treatment options are limited and become an Endangered Species Act concern. Greater construction disturbance in the water for low bridge. Bridge landings on Foster Island require some fill on the island. Navigation channel clearances not analyzed in the Supplemental Draft Environmental Impact Statement. Additional noise analysis needed. 	<ul style="list-style-type: none"> Increased cost of stormwater treatment with the use of pumps, alternative treatment methods, and maintenance (additional \$2-5 M construction cost). Nominal cost savings for lower bridge (< \$1 M). Possible additional cost (\$TBD) for siting a Seattle Fire Department facilities closer to SR 520 so that response time south of SR 520 on Lake Washington is maintained.