



### SR 99 Bored Tunnel Alternative Design-Build Project

In December 2010, Seattle Tunnel Partners was named the apparent best-value bidder for the SR 99 Bored Tunnel Alternative Design-Build Project. The bored tunnel is the preferred alternative for replacing the SR 99 Alaskan Way Viaduct along Seattle's downtown waterfront.

WSDOT and Seattle Tunnel Partners signed the design-build contract in January 2011.

#### Key features of Seattle Tunnel Partners' proposal:

##### Roadway size

RFP Requirement: 30-foot roadway width and 15-foot vertical clearance.

Proposal: 32-foot-wide roadway and six additional inches of vertical clearance.

Benefit: Wider 8-foot safety shoulder along roadway.

##### Tunnel completion

RFP Requirement: Substantial completion by Nov. 1, 2016.

Proposal: Open tunnel by December 2015.

Benefit: Allows remaining viaduct to be demolished sooner.

##### Tunnel boring machine

Type: Earth Pressure Balance

- State-of-the-art machine will include integrated monitoring systems for operations and guidance and a survey control system.
- Belt measuring system would use radar to measure accurately the spoils and volume loss at the machine's face. This would help identify any voids around the tunnel that should be filled, reducing the possibility of sink holes at the surface

##### Portal design and construction

Proposal: Lengthen the tunnel bore at the south end and reduce the overall width of the south portal's cut-and-cover tunnel section.

Benefit:

- Significantly narrows the project footprint.
- Provides more staging area.
- Reduces construction impacts to adjacent property owners.

## **Team members:**

Seattle Tunnel Partners is a joint venture of New York-based Dragados USA, a wholly owned subsidiary of Dragados, S.A., the construction division of ACS Group of Spain; and Tutor Perini Corporation, based in Sylmar, Calif. Subcontractors include Frank Coluccio Construction and Mowat Construction for construction and HNTB Corporation and Intecsa-Inarsa for design.

- Dragados USA brings experience on large bore soft ground tunnels, including the 49.5-foot diameter Madrid M-30 South Bypass Tunnel, the 39.4-foot diameter Barcelona Line 9 Metro Extension and the 30.8-foot diameter Madrid Metro Line 11 Extension. Its current U.S. portfolio includes the \$1.2 billion I-595 Corridor Roadway Improvements project in Florida, the East Side Access projects for New York’s Metropolitan Transportation Authority and the U.S. Army Corps of Engineers’ Portugues Dam project in Puerto Rico.
- Tutor Perini Corporation is a civil and building construction company engaged in public works construction throughout the United States. Recent projects include the \$1.1 billion JFK AirTran project to construct an 8.8-mile-long light rail transit system in New York, the Bay Area Rapid Transit extension to the San Francisco International Airport, and the I-80 Bay Bridge West Approach project to remove and replace one mile of I-80.
- HNTB Corporation, in association with Intecsa-Inarsa, brings a combination of local and international design experience. HNTB has been a member of the Seattle business community for 60 years and has extensive experience with WSDOT, including delivery of such projects as the I-90 Mount Baker Ridge Tunnel and the Tacoma Narrows Bridge Design-Build Project. They are currently designing Sound Transit’s University Link 18.8-foot diameter twin bore tunnel project. Intecsa-Inarsa has worked closely with Dragados for more than 40 years and has designed key tunneling and underground projects.
- Frank Coluccio Construction and Mowat Construction are local firms that have successfully completed a number of projects in the region. Coluccio has constructed large bore tunnels and micro tunnels in the Seattle area and is successfully delivering on King County’s Brightwater tunnel projects, in addition to having been the contractor for WSDOT’s Alaskan Way Viaduct electrical line relocation project. Recent projects successfully completed by Mowat include the City of Seattle’s Fremont Bridge Approach Replacement and the Port of Seattle’s SEATAC Airport S. 160th Street Loop.

Information about the Alaskan Way Viaduct and Seawall Replacement Program is available at [www.alaskanwayviaduct.org](http://www.alaskanwayviaduct.org).