

# I-90 TWO WAY TRANSIT & HOV OPERATIONS

## MERCER ISLAND



I-90 Two-Way Transit and HOV Operations Project

Record of Decision

September 2004



Seattle to Bellevue, Washington

Washington Department of Transportation (WSDOT)  
Sound Transit Regional Express

1998 to Present (1st stage construction starts 2006)

Project Type: Urban Interstate Reconstruction – Add High-Occupancy Vehicle (HOV) Lanes

### PURPOSE

To improve regional mobility by providing reliable and safe two-way transit and HOV operations on Interstate 90 between Bellevue and Seattle, while minimizing impacts to the environment and to other users and transportation modes.

### DESCRIPTION

The I-90 corridor between Seattle and Bellevue traverses an urban and suburban environment, including a 1.5-mile long crossing of Lake Washington. The corridor includes two major tunnels and lids, two floating bridges, and extensive urban design treatments to minimize impacts on the adjacent communities. The existing roadway facility provides a total of eight travel lanes, configured as two three-lane outer roadways and a two-lane, reversible center roadway Express Lanes facility. The east-west split of traffic during peak periods has changed since the facility opened in the early 1990's, with traffic flows approaching a 55%/45% ratio – as a result, the reversible operation of the Express Lanes no longer fits the travel patterns, resulting in significant congestion for reverse-peak direction traffic. Without preferential lanes for transit and HOV traffic in the reverse-peak direction, these modes suffer from reliability problems. The Preferred Alternative identified in the FEIS and Record of Decision adds new HOV lanes to the I-90 outer roadways, preserving the Express Lanes facility for future conversion to use by high-capacity transit (HCT) modes. It also will implement new transit and HOV direct access ramps providing connections to the outer roadway HOV lanes from adjacent park-and-ride lot facilities. To mitigate safety and operational concerns associated with the reductions in lane and shoulder widths, crash reduction measures have been incorporated into the Preferred Alternative.



## PUBLIC ENGAGEMENT



A total of 12 public meetings and workshops were conducted during the 6-year long NEPA environmental process. Additional meetings and hearings were held by local agencies and interest groups. The project was guided by a Steering Committee made up of representatives of signatory agencies to a 1976 Memorandum Agreement that governs the configuration and operations of the I-90 corridor, plus representatives from FHWA and Federal Transit Administration (FTA).

Key issues identified through these processes included:

- Safety and operational concerns associated with the preferred alternative
- Impacts on a shared-use pathway on the floating bridge
- Potential re-routing of trucks hauling flammable cargo
- Potential means of mitigating existing freeway noise

## CONTEXT SENSITIVE SOLUTIONS APPROACH



The design and environmental teams have worked closely with agency staff and representatives of interest groups in potentially-affected areas. By staying within the existing I-90 roadway envelopes, the original context sensitive design of the corridor is largely preserved with the implementation of modifications to implement HOV lanes, and ultimately high-capacity transit. The design team is working closely with WSDOT's landscape architects to mitigate impacts to existing landscape and urban design treatments.

For I-90, the real story in terms of Context Sensitive Solutions is not the current Two-Way Transit and HOV project, but is that the original "I-90 Completion Project" was one of, if not the first, CSS projects in the country. This effort took place over a 20-year period starting in the early 1970's until completion of I-90 in 1993.

Key issues:

- The original design was a 14-lane section with 70 mph design speed.
- Through a number of iterations, including a trip through the court system, this was revised to the current 8-lane section with a 60 mph design speed.
- The separation of the 8 lanes into a 3-2-3 section was key in reducing impacts.
- Despite the fact that the current facility has 60 mph minimum criteria applied, it has a better safety record than most of the urban interstate freeways in Washington, many of which have "higher standards" applied to the design.
- The (expensive) Mount Baker Ridge Tunnel/Lid and First Hill Lid got a lot of press coverage. These lids certainly reduced impacts to the community but there were many other mitigation and enhancement treatments that were applied.
- The original designers (multi-discipline teams of engineers, architects, etc.) took great care to provide a consistent look and feel in the corridor. The current project is using the "I-90 Architectural Standards" developed by WSDOT for the original project's final design effort.

**OUTCOME** The project continues to progress towards implementation following a laborious alternatives development, evaluation, and consensus building process.

- CHALLENGES**
- Overcoming WSDOT and FHWA staff-level reluctance to move beyond a “No Action” alternative, due to concerns with compromises to interstate highway geometrics.
  - “East-West” politics between Seattle and more suburban communities on the east side of Lake Washington left over from the original I-90 Completion Project – they finally found common political ground on a desire to provide for future high-capacity transit on I-90 across Lake Washington. This effort was largely facilitated by upper-level management of the affected agencies.
  - Specific design and operational details remain to be worked out. Examples include a Corridor Management Plan to implement the crash reduction measures, design of screening to mitigate impacts on the Shared-Use Pathway on the floating bridge, and means of addressing concerns with flammable cargo movement through the I-90 tunnels and lids.



**FUNDING** The total project cost is estimated to be in excess of \$125 million. To date, design funding has been secured for the entire project, along with construction funding for a first of four stages of construction.

- LESSONS LEARNED**
- Old political wounds are easily re-opened, even when all parties are “at the table.”
  - Interest groups can divert the focus of decision makers (example is bicycle groups).

**KEY WORDS** *Applicable Project Delivery Stages:* Planning, Design

*Applicable Transportation Professionals:* Transportation Planners, Traffic Engineers, Transportation (Highway and Transit) Engineers, Structural Engineers, Landscape Architects

*Applicable Transportation Modes:* Highway, Transit, HOV, Bicycle

*Transportation Topics:* Visual Quality, Safety, Mobility

**WEB LINKS** <http://www.soundtransit.org/projects/co/east/st-express/i90.asp>

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