Results

The preliminary conclusions of the engineering analysis are as follows.

- No fatal flaws have been identified that would rule out any of the restoration alternatives as completely infeasible from an engineering point of view.
- For any of the alternatives, it is recommended that the main channel of the restored estuary be dredged before the tide is restored, and that the dredged materials are placed along Deschutes Parkway. In addition to the habitat benefits, this would decrease the quantity of navigation dredging required at the marinas along Percival Landing and at the Port of Olympia in the years immediately following the restoration of tidal flow in the restored estuary. See back page of this Fact Sheet.
- Construction for all alternatives could be achieved within three to four years, under the assumption that only the Chinook salmon and bull trout windows for in-water work are observed.

Cost Estimates

Table 1 shows the preliminary cost estimates for each estuary restoration alternative. Ranges of costs are provided, including a minimum (most optimistic), average (most likely), and maximum (pessimistic but excluding very remote eventualities). Approximately half of the variability in project costs is associated with initial dredging of the basin and placement of the dredged materials along Deschutes Parkway to provide intertidal habitat. These figures include both the raw construction costs and "soft" costs such as engineering, permitting, and the acquisition of the project right-of-way.

	Low Cost	Avg. Cost	High Cost
Alternative A			
Construction Cost	$46.3	$53.3	$61.0
Total Project Cost	$65.9	$76.1	$87.2
Alternative B			
Construction Cost	$55.9	$63.3	$71.6
Total Project Cost	$79.6	$90.3	$102.3
Alternative D			
Construction Cost	$65.9	$74.5	$84.1
Total Project Cost	$93.8	$106.2	$120.0

Table 1. Preliminary cost estimate ranges for estuary restoration in millions of 2006 dollars.

The project costs are given in 2006 dollars, but the actual year in which the project is implemented affects the total cost of the project. An annual inflation rate of 3.5% is based on the average inflation rate experienced for construction projects between 1990 and 2005, and can be applied to the values in Table 1 to estimate how costs may change if the project is implemented in future years. This average rate can be recalculated as more recent data about average inflation rates for heavy construction becomes available.

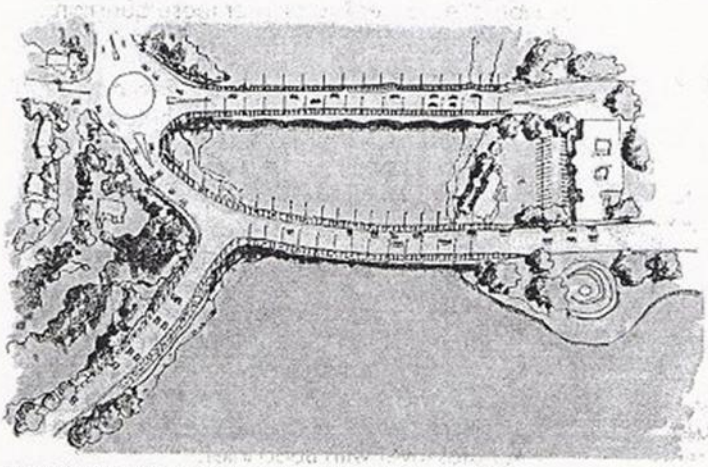

Figure 1. Alternative A: New 5th Ave. Bridge (also included in Alternatives B and D).

New Fifth Avenue Bridge

The main element common to all alternatives is a new Fifth Avenue Bridge with a 500-foot span to allow free tidal flow. The aesthetics of the new Fourth Avenue Bridge are continued in this plan, creating an architecturally unified impression. The new bridge provides four lanes of traffic, bicycle and pedestrian lanes on each side, and crossing for all current utilities. This new configuration addresses traffic and pedestrian congestion issues that exist in the current Fifth Avenue configuration. In addition, the plan accommodates City of Olympia plans to construct a pedestrian trail along the abandoned railroad corridor. A separate pedestrian trail will pass over the bridge to downtown Olympia. Figure 1 illustrates a possible bridge and roadway alignment that would allow for a 500-foot opening and minimize effects on surrounding land use and commerce.

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