

SEATTLE POST-INTELLIGENCER

http://seattlepi.nwsourc.com/transportation/78523_overn15.shtml

Road, rail costs prone to overruns, study finds

Unforeseen expenses often add to the final price tag of projects

Monday, July 15, 2002

By LARRY LANGE

SEATTLE POST-INTELLIGENCER REPORTER

Cost overruns on major public transportation projects are hardly unique to Seattle, a new study shows, and efforts to control expenses on major public works won't eliminate the red ink entirely.

A study recently published in The Journal of the American Planning Association said project estimates between 1910 and 1998 were short of the final costs an average of 28 percent.

When predicting the expenses of transportation projects, economic forecasters and project promoters in the United States, Europe and elsewhere have a history of underestimates that have cost the public hundreds of billions of dollars, said Bent Flyvbjerg, a professor at Aalborg University in Denmark, who wrote the study.

The biggest errors were in rail projects, which ran, on average, 45 percent over estimated costs. Bridges and tunnels were 34 percent over; roads, 20 percent. Nine out of 10 estimates are low, the study said.

The study also noted that estimates are no more accurate now than they were in the early 20th century.

"It means that no learning is taking place among the professionals doing these budgets," Flyvbjerg said. "Either the people who do the budgets are incredibly stupid (or) ... they manipulated the budgets to make sure the projects are approved and then built."

In Washington state, voters have been frustrated by soaring cost estimates at Sound Transit, the agency charged with building light rail in the Seattle area.

In 2000, the agency dropped plans to build a 21-mile rail line from Northeast 45th Street in the University District to South 200th Street in SeaTac after updated estimates showed the complete system would cost \$4.2 billion -- 75 percent more than originally thought.

Inspired by Sound Transit's experience, the state has begun changing its own estimating system, subjecting major highway projects to more detailed analysis.

The new estimation method tries to account for such contingencies as changing environmental regulations, construction uncertainties, stricter earthquake-protection standards and escalating real estate prices. The exercise was initiated by state Transportation Secretary Doug MacDonald.

Sound Transit also has switched to a more detailed estimating procedure, calculating greater

amounts to cover unforeseen problems. And it has installed computerized programs to keep track of construction and real estate expenses so projects can be altered if necessary to stay within budget, said director Joni Earl.

"I don't think you'll find a project manager in the whole earth who will absolutely guarantee a price," Earl said.

Sound Transit's experience also was partly on the minds of Seattle's Elevated Transportation Co., which subjected its initial cost estimates for a proposed 14-mile monorail system to a panel of experts from five private companies with monorail and transit-system expertise.

The group critiqued the company's estimates, and suggested adding amounts to pay for city permit-processing and other contingencies. Although cost increases may be unavoidable, officials said, adequate preparation may make them manageable.

Examples of underestimated costs are everywhere.

Near Issaquah, costs are running 40 percent above budget for a new Sunset interchange with Interstate 90. Construction crews encountered more massive rocks underground than initial borings revealed, requiring more removal work and sending costs soaring \$20 million above the \$50 million budget.

The study cites a New York project, the Holland Tunnel, completed in 1927 at a cost of \$48 million. Flyvbjerg said the initial estimates for New York's project were 52 percent lower.

More recent examples include the Channel Tunnel between England and France, which was 80 percent over budget, and Boston's Big Dig -- a plan to put the city's major highways underground -- which began 15 years ago with a projected cost of \$4.5 billion and now has a price of \$14.6 billion.

Costs escalated for a car pool lane project on state Route 167 in South King County while the state searched for suitable wetlands to replace those destroyed by the construction.

Stuart Rolfe, a private developer experienced in construction, said costs can be underestimated if people involved in each project oversell themselves on it and fail to heed questions or warnings from others.

Costly new environmental regulations have caught up with some projects more quickly than designers accounted for them, said David Dye, an administrator with the state Department of Transportation.

In some cases, designers haven't gathered enough information about the working terrain, failing to detect problems like the big rocks that can increase costs later.

"It's not just about putting more in the (construction) contract for unforeseen risks. It's also having earlier knowledge of them in the design," Dye said.

Flyvbjerg's study, which took five years, recommends more openness in the estimate process. The more public awareness and participation, the closer to reality the estimate will be, he said.

Alan Altshuler, a professor of urban policy and planning at the John F. Kennedy School of Government at Harvard University, agreed.

"Structure tough debates so advocates have to defend themselves against critics," he said. "The critics rarely have the resources to do full-blown cost analyses of their own."

© 1998-2002 *Seattle Post-Intelligencer*