Expert Review Panel

Meeting Summary

July 20 and 21, 2006

(with revisions from the Panel meeting on 1/4/07)

Hilton Hotel, Seattle, WA

Panel Members Present: Darlene Cimino-DeRose, Alan Kiepper, William Lorenz, Steve Lundin, Mike Meyer (Chairperson), Thomas Schmitt, Alonzo Wertz; John Howell (Panel Administrator)
Absent: Siim Sööt

Speakers:
Sound Transit staff – David Beal, Don Billen, Sheila Dezarn, Joni Earl, Roger Hansen, Ric Ilgenfritz, Paul Matsuoka, Brian McCartan, Matt Shelden, Eric Chipps, Andrea Tull
WSDOT staff **–** Mark Bandy, Patrick Clarke
Consultants –Art Borst (Parsons Brinckerhoff Quade and Douglas); Roger Kaester (Parsons Transportation Group); Mike Morrison (Value Management Consulting, Inc.)

Thursday, July 20

Panel Chairperson Mike Meyer called the meeting to order at 8:45 AM and welcomed all participants. Panel Administrator John Howell called attention to several additional materials for the meeting notebooks. Mr. Meyer reviewed the agenda.

Correction to Prior Meeting Summary

There was a correction to the summary of the last Panel meeting, held on January 5 and 6, 2006. On page 18, the first full sentence on the page should read: "The total capital cost estimate range is $1.152 – $1.267 billion in 2005 dollars." The Panel approved the meeting summary as corrected.

Major Events Since the Last Panel Meeting

Ric Ilgenfritz (Sound Transit)

Seattle Monorail: In the November 2005 election, voters opted not to continue the Seattle Monorail project. Since then, the agency has been working to liquidate its assets, which consist mainly of real estate. It appears that they will be completed with the liquidation a month ahead of their schedule. Sound Transit has not acquired any real estate from the Monorail agency.

Legislative Session: The legislature enacted a bill in March that sets a statutory schedule for the Sound Transit Phase 2 (ST2) measure to come to the ballot in November 2007, along with a ballot measure from the Regional Transportation Investment District (RTID) for road improvements. The legislation further requires that for either the ST2 or the RTID ballot measure to take effect, both must pass. Therefore, Sound Transit is no longer considering a fall 2006 ballot measure, but will coordinate with RTID for the fall 2007.

The RTID had been created by the legislature in 2002 to develop a proposal for improving transportation on the most congested highways and bridges in King, Pierce and Snohomish counties. While Sound Transit's district is also in these counties, RTID's Snohomish boundary extends farther east than Sound Transit's does.

The 2006 legislation did not affect Sound Transit's revenues—the agency can still levy up to 0.5 percent sales tax. But the legislature capped the sales tax available to RTID at 0.1 percent, and increased its authority to impose a motor vehicle excise tax (MVET).

The legislature also set up an Expert Review Panel to review the Alaskan Way Viaduct and Highway 520 renovation plans, with a required report to the Governor in November 2006.

Sound Transit Phase 1: There has been significant progress on Central Link since the January Panel meeting. Construction of the initial segment has advanced to nearly 50 percent. Sound Transit has received bids on extending south to the airport, and is starting final design for University Link to the north.

ST2: The Sound Transit Board decided to get public comment on three scenarios for the ST2 package: at 0.3 percent, 0.4 percent and 0.5 percent sales tax. The plan is to begin in the latter part of 2006 to fashion a ballot package with the RTID.

Other Ballot Measures: There are some other transportation-related issues that may be put on the ballot in November 2006. (1) There is an initiative about weight fees that would impact WSDOT's revenues, which, in turn could impact how Sound Transit puts its package together. (2) The Mayor of Seattle has proposed a revenue package to fund street improvements. The revenue sources would include property tax, and employer tax (employee head tax), and increased parking fees. This will be on the ballot if the City Council approves. (3) The King County Executive has approved a Metro bus improvement plan based on a 0.1 percent sales tax increase. This proposal is before the County Council and could be on the fall ballot. (4) An possible advisory ballot measure in Seattle may ask voters' preference for the Alaskan Way Viaduct: rebuild it as a viaduct or create a tunnel. Each of these measures may have an impact on Sound Transit's ability to put a ballot package together.

Questions from the Panel

Coordination

Q. Why did the legislators tie Sound Transit and the RTID together?
A. Members of the legislature wanted to encourage supports of roads and transit improvements to work together to submit a coordinated package to voters. Also, some legislators felt that in this region transit improvements may help secure approval of a roads package.

Q. How is Sound Transit coordinating with RTID?
A. There are significant challenges in integrating the program development and finances of the two. The RTID Executive Committee has begun meeting with the Sound Transit Board. Sound Transit is also working with all the groups involved, which include Washington Department of Transportation (WSDOT), the Puget Sound Regional Council (PSRC), and the consultant who staffs the RTID Board.

Q. Is the Expert Review Panel expected to review the “joint” ballot measure with the RTID?
A. It does not appear so.

Mr. Howell suggested that the Panel might want to review and comment on the coordination with RTID and project sequencing, however.

Funding Sources

Q. Given that RTID is partly funded by an increase in the MVET, are voters likely to approve? Why is there public antipathy to the MVET?
A. Recent experience suggests that voters look for a good value. The supporters of RTID need to research the public view of the value the RTID will provide for the money. Until the 1990s the state MVET was used only to fund non-transportation uses. Beginning in the 1990s a portion of the state MVET was earmarked for transportation purposes. The MVET was an excise tax based on the value of the vehicle. The tax could be $100 or more per car. So the MVET was a large tax, for which people had to write a separate annual check, and it was not being used exclusively for roads at a time when road conditions were getting worse. However, a citizens’ initiative eliminated the state MVET and substituted a flat $30 per year per vehicle charge, without regard to the value of the vehicle. Proceeds from this fee were earmarked for transportation purposes.

Q. What is the maximum MVET charge?
A. The maximum charge for the state is now $30/year. In the Sound Transit district, there is an additional 0.3 percent tax for Sound Transit.

Q. Is there a limit on the sales tax local jurisdictions can levy?
A. There is a limit per agency or jurisdiction. Since Washington has no income tax, the primary tax revenues are from sales and property taxes. The current sales tax in Seattle is 8.8 percent.

ST2-Related Activities Since the January Panel Meeting

Paul Matsuoka (Sound Transit)

Candidate Projects: In January there were more than 80 proposed projects for ST2. The Sound Transit Board asked the staff to suggest ways to trim the list. Based on criteria approved by the Board, the staff recommended that 18 to 19 projects be set aside. The Board did set aside most of these, leaving 63 proposed projects. The Board asked for comments on the list from jurisdictions and the public.

Since then, a number of jurisdictions have written letters commenting on the project scopes. They also have suggested changes in the scope of some projects. This means that while there are 63 basic projects, there are now variations on some of the projects, so the total number of projects is higher than 63. The staff is now analyzing the scoping based on comments from the jurisdictions. Also, based on comments from the Panel, the staff is reviewing estimates for the Level 3 projects.

ST2 Scenarios: In early June, the staff brought to the Board five scenarios for ST2: no tax, and a 0.1 percent, 0.3 percent, 0.4 percent, and 0.5 percent sales tax increase. Leading up to this, the Board held a series of meetings to discuss policy choices that would be embedded in the scenarios. Examples of these choices are: focus on service vs. capital improvements; use light rail or Bus Rapid Transit (BRT) convertible to rail on the Eastside; and use tunnels or aerial for light rail on the Eastside.

At the July 13 meeting, the Board reviewed the five scenarios, and set aside the no-cost and low cost (0.1 percent) scenarios. They directed staff to get public comment on the 0.3, 0.4 and 0.5 percent sales tax increase scenarios. They also said that the projects in the scenarios are for illustration. That is, the Board will not be screening out additional projects at present.

I-90 Mode Choice: At the July 13 meeting of the Sound Transit Board, the Board also chose the light rail option, instead of the rail-convertible BRT, for high-capacity transit in the I-90 corridor. Last year they had left both modes on the table. Leading up to this decision, the Board reviewed issue papers on the cost of converting from BRT to light rail, a load study on the floating bridge, information on how the bridge transition joints could accommodate light rail, a summary of the past studies on transit in the I-90 corridor, and a traffic study conducted by WSDOT of the impacts from dedicating the center roadway on the I-90 bridge to high capacity transit.

Questions from the Panel

Q. Are there any formal agreements with jurisdictions on ST2 projects?
A. Not yet. Since the work is only at 5 percent engineering, it seems too early to make formal agreements. However, Sound Transit is much closer now to a joint understanding with a number of jurisdictions about the scope of the projects.

Q. Why did the Board make a mode decision now for I-90?
A. Sound Transit staff has provided all the information the Board asked for. The Board thought they would get the best public comment on the scenarios if the mode decision were made. This decision is an indication of the Board's preference, though. They would like to get public comment on this preference, and will then make a final decision in early 2007.

Q. How is the public review and comment to take place?
A. Sound Transit is using a variety of means, including open houses, Web site information, direct mail, a speakers' bureau, and information booths at fairs and festivals. The goals are to educate the public about the options, and to get comment and participation. Sound Transit will also hold as many public meetings as the Board would like.

The materials Sound Transit is providing to the public include a brochure about the scenarios, the evaluation results, and travel information. They provide more background and details on the scope and cost estimates on the Web site, and will mail information on request. They will also include information about what the levels of sales tax mean in practical terms.

Q. Are the PowerPoints the Panel is seeing today the ones that were presented to the Board before they made the mode choice decision? It is important for the Panel to see what the Board saw in the format in which it was presented so that the Panel can say whether the information presented reflects the analysis behind the options.

A. In prior Panel meetings, Sound Transit has shown the Panel several draft reports on methods that the Board saw. The PowerPoints the Panel will see later in this meeting about I-90 are the same ones the Board saw.

Requests from the Panel

- Mr. Meyer asked that presenters at the Panel meeting indicate whether their presentation was shown to the Sound Transit Board.
- Mr. Howell asked for a written summary to the Panel about the process for public comment.

Introductory Comments

Joni Earl (Sound Transit)

Sound Move Progress: The Link initial segment is approximately 50 percent complete and is still about 9 percent under budget. The Board just approved some small increases for design support. For Airport Link there is now a signed contract for the elevated portion. University Link is in final review with the Federal Transit Administration (FTA). Target dates for opening are July 2009 for the initial Link segment, and December 2009 for Airport Link.

A concern looking ahead to ST2 is cost escalation and the capacity in the region to construct Sound Transit’s projects. Airport Link was an approximately $90 million contract. There were three bidders, and only a $1 million swing between the engineer’s estimate and the winning bid. The South Everett Park-and-Ride came in approximately $1 million over the engineer’s estimate of $30 million. There were three bidders for that project, also. Some of the smaller park-and-rides have come in higher than the engineer’s estimate. The challenge, as with all construction programs, is that there is less interest in bidding on smaller projects.

Board Action on ST2: Regarding the Sound Transit Board’s decision to state a mode preference for the I-90 corridor, Ms. Earl said that the Board has gotten more actively involved, and, after reviewing the information and studies on modes for I-90, felt that the jurisdictions and the public wanted to know the Board’s preference so that it could be part of the public discussion. The Board decided it was ready to state a preference and that this would help the process of holding a clear public dialogue.

However, Ms. Earl stated that the Board’s decision on I-90 mode should not keep the Panel from providing its view on the options. The Board’s decision is not yet final.

Subarea Equity: Sound Transit staff and Board continue to consider the system benefits to an entire corridor, while keeping subarea equity in mind. The Board is now discussing subarea equity on a *benefit* basis, not a dollar-for-dollar basis. Board members recognize that some projects share system benefits across subarea boundaries.

Discussion with Jurisdictions on Proposed ST2 Projects: The Panel’s recommendation that Sound Transit talk now with the jurisdictions about individual ST2 projects was very helpful. The discussions have resulted in a good deal of scope reduction. Some jurisdictions have provided detailed comments. Some have indicated their priorities for Sound Transit’s work, and which projects the jurisdiction can take on itself.

Questions from the Panel

Current Work

Q. What is the status of the downtown tunnel?
A. The tunnel is on-schedule to reopen in September 2007. The rails are complete in both tunnels. Sound Transit will aim to complete most of the paving and surface work before the holidays.

Q. Have contractors wanted you to package smaller projects together for bids?
A. The contractors are holding back for the larger projects or were so busy they didn't need the smaller ones. They have not been asking for packages.

Q. Are you seeing materials cost increases?
A. Yes. We're assessing the engineer's estimates to keep up with national prices. Also, existing contractors are requesting increases to cover higher materials costs and gas prices.

Q. How is subarea equity different when assessed from a benefits viewpoint compared to a dollar-for-dollar approach?
A. In Sound Move, the principle was that revenues created in a subarea should stay in that subarea (more of a dollar for dollar approach). Historically there were concerns that King County north subarea projects (e.g. downtown Seattle) would dominate and revenues from surrounding areas would be used in that sub area. An exception in Sound Move was Snohomish County revenues being used for Sounder improvements in King County – as a means to extend Sounder service to Snohomish County. Over time, the Board has come to believe that for some corridor projects, dollars raised in one county may be spent in another, but create significant long-term benefit for the country where the revenues originated. Board members will need to talk with each other further about benefits to the local population for corridor projects.

Coordination with RTID

Q. What is your perspective on what Sound Transit needs to do now with the RTID?
A. We hope to end up with a simple map to present to the public that includes both road investments and transit investments, and the target date for each. The public needs to be able to see what they will get for their investment.

The two big challenges for Sound Transit are financing and sequencing. Both RTID and WSDOT have longer timelines, while some Sound Transit projects are ready to get started. Planning the construction sequencing is critical so the traffic can keep moving, and one construction project doesn't tear up what was just completed in another project. The financing package must be put together carefully and with an eye to staying within what is acceptable to the public.

Q. Who will facilitate communication and coordination between Sound Transit and RTID, and who will decide on the package to go to the voters?
A. The executive committees of the Sound Transit Board and of RTID will meet quarterly, with the meetings set so far for June and September. There also are two Board members who serve on both Boards.

Q. Is there any discussion about expanding the Sound Transit Board and area further east in Snohomish County to correspond with the RTID boundaries?
A. This is a major conundrum. Sound Transit's service and plans don't have many benefits for eastern Snohomish County, while the RTID road improvements would benefit this area. Work is underway to find a solution to this issue.

Follow-up from the January Panel Meeting

Sound Transit's Response to the Panel's Letter

David Beal (Sound Transit)

Mr. Beal reviewed Sound Transit's response of March 31, 2006, to the Panel's letters of December 2005 and March 2006. (See Tab 6 of the meeting notebook.)

Since the response letter was written, the number of proposed ST2 projects has increased again through the discussion with jurisdictions. The increase stems from breaking some of the longer lengths into smaller segments, and some variations on projects, which jurisdictions have proposed. For example, the City of Auburn has asked Sound Transit to consider an alternative for project S18 - a different property for the site of a parking garage. So now there is a project S18b to reflect that option.

Also since the March response letter, Sound Transit has revised its cost estimating methods for level 3 projects. The revised methods have resulted in level 3 project estimates lowered on average by 15 percent. To test the approach, the staff did backcasting for Sound Move's costs.

Question from the Panel

Q. What does the letter mean in saying that the legislatively required ST2 schedule will allow the First Hill work plan to "mesh" with ST2?
A. Because the ST2 vote will now take place later (in November 2007 instead of 2006), the schedule for First Hill work will catch up to coordinate with the ST2 decision process.

Real Estate Cost Comparison: Sound Move Budget to Actual Costs

Roger Hansen (Sound Transit)

Mr. Hansen presented a spreadsheet, "Link Real Estate Cost Comparison: Sound Move Budget versus Actuals" (see meeting handout). For this comparison, the Sound Move budget has been adjusted to 2004 year-of-expenditure dollars, since this is the mid-point for the acquisition process. Although there have been changes in the alignment and station locations since the Sound Move budget was created, the comparison uses the original budgeted alignment compared to the real estate costs for the actual alignment. Actual costs and the estimated costs to complete also include purchases of remainder properties by request of the owners and to meet federal requirements. Mr. Hansen noted that the Sound Move budget used a 10 percent contingency for real estate costs, while more recent budgets have used a 40 percent contingency.

The spreadsheet shows that estimated final expenditures for real estate would be $69 million more than budgeted for real estate in the initial segment of Link light rail. Factors that have an impact on the costs included: (1) a two-year delay in right-of-way acquisition at a time when real estate values were going up rapidly; and (2) requests from the affected jurisdictions.

Questions from the Panel

Implications for ST2

Q. Since the difference is approximately 53 percent, would a 40 percent contingency factor have made the budget closer to the expected costs?
A. Yes.

Q. Is this analysis affecting Sound Transit's analysis for ST2?
A. Yes. Sound Transit is involving the agency's real estate group earlier in the process to help estimate ST2 costs. The real estate staff has already been on the internal review teams. Once project staff has estimated construction costs for a representative alignment, they send the alignment information to the real estate group for their analysis. ST2 is also using higher contingencies for real estate.

Q. Are any agreements with local jurisdictions affecting development plans?
A. We have coordinated with the City of Seattle about upcoming development they plan, and how it would impact Sound Transit.

Q. What is the status of Safeco's property in the University District that Sound Transit was interested in, given Safeco's decision to relocate to downtown Seattle?
A. Safeco is now selling all their properties in the University District. The company owns properties on both sides of the street that Sound Transit would need for the station box. The costs of acquisition may depend on who buys these properties.

Business Relocation

Q. Is business relocation assistance factored in? Are there many relocations?
A. Sound Transit uses an experienced business relocation consultant, who develops relocation costs. In the Rainier Valley, several hundred businesses needed to relocate.

Q. How do you estimate business relocation costs when you have only a representative alignment?
A. For ST2 light rail, Sound Transit is using representative alignments that are likely a high-end choice. The staff uses a geographic information system (GIS) to identify every parcel that touches the alignment. The real estate consultant then analyzes which parcels need to be acquired completely, and which are only partly touched. The relocation costs are based on types of business that have higher-than-average relocation costs, such as a doctor's office or drycleaner. So the representative alignment does not mean the least expensive.

Right of Way

Q. Is there a cost to Sound Transit to place projects in WSDOT right-of-way, or an agreement on those costs?
A. Sound Transit has a "land bank" agreement with WSDOT. Sound Transit gets credit with WSDOT when constructing something that benefits the roads. The agency uses these credits when using WSDOT right-of-way.

Q. Does Sound Transit pay for use of city and county road right-of-way?

A. With Link light rail in the Rainier Valley, we agreed with the City of Seattle to buy an equivalent right-of-way on the edge of the project that the City can use for streets.

Q. Does Sound Transit have condemnation authority? What percent of acquisition is done through condemnation?
A. Sound Transit has condemnation authority. Out of 700 acquisitions, fewer than six have gone to trial. In the last three to four that have gone to court, the verdicts have been favorable for Sound Transit.

Letters from Jurisdictions on Project Scope

Sheila Dezarn (Sound Transit)

Sound Transit took the Panel's advice to contact local jurisdictions as early as possible to seek understanding on project scopes. The agency asked two questions: Are there elements in the scopes that are missing? Is there anything that should be removed? The staff followed up with e-mails and calls to the city managers/mayors and local technical staff. By late June, the agency had received 25 letters from jurisdictions. Some said they supported the project as stated, some identified simple changes, and some identified significant changes. In June the staff gave the Board all the letters, Sound Transit's written responses and a matrix of key issues raised by the jurisdictions. (See Tab 7 in the meeting notebook.)

North Corridor Changes. The Edmonds Sounder station is a multi-modal station with a ferry connection. The original project assumed that Sound Transit might have to cover all the costs of the station. However, the letter from the City of Edmonds noted that the station is an RTID project. So Sound Transit staff met with Washington State Ferries staff, and was able to reduce the Sound Transit portion of the project. Edmonds has sent a letter saying that the revised scope seems adequate.

Another example is the First Hill Connector streetcar, which would connect light rail (International District station) with First Hill. Sound Transit has defined this project to be consistent with the City of Seattle's planned Lake Union streetcar. Seattle is working with Sound Transit through this scope definition process.

South Corridor Changes (Eric Chipps).
Two cities in the south corridor have taken two approaches on parking: Auburn for parking connected with commuter rail and express bus service, and Burien for express bus service. Both projects are in urban centers targeted for employment growth, and where current parking is near or at capacity.

For Auburn, the Sound Transit project assumed building a 600-space garage. The city was not interested in having additional land downtown consumed for parking, so suggested that siting the garage on the existing Sound Transit surface parking lot. This changed the scope to use property Sound Transit already owns. However, the city zoning would need to change to allow the height of the garage. The city expects to be able to get the zoning change.

The conversations with Burien have resulted in a draft Memorandum of Understanding. The project in Burien was to add parking, but a transit-oriented-development group had identified the location as likely for development, since it is next to the existing transit center (shared with Metro), which is being expanded. The Memorandum of Understanding describes what Sound Transit would contribute to the planed facility.

East Corridor Changes (Andrea Tull): Bellevue's letter focused on the issues of costs and ridership. They expressed hope that cost will come down as the project becomes more defined. They estimated a higher level of ridership in downtown Bellevue, and urged Sound Transit to conduct cost estimates for alternative alignments and to do more public involvement.

Questions from the Panel

Q. Is there any city that has clearly not responded?
A. Yes, Tacoma. And only one of the counties has responded.

Q. How does this process compare to scoping for Sound Move?
A. Sound Transit did not do this kind of detailed scoping for Sound Move or try to reach a common understanding of the scope with jurisdictions at this phase of the plans. In some cases, the jurisdictions' expectations were different from what Sound Transit had planned.

Q. The letters from jurisdictions are good, but formal agreements would be better, especially for stations.
A. It is hard to get a Memorandum of Agreement at the project-level planning stage. Detailed engineering and design studies have not yet been done.

Q. There were comments from Federal Way and Des Moines on the light rail line alignment. When will the planning study be done to compare the representative alignment (along I-5) with a route along SR-99? Will these be alternative planning options?
A. The studies will be done at the end of this month. From the work so far, it appears that the cots for the I-5 and SR-99 alignments would be similar.

Q. What ridership assumptions is Bellevue using?
A. They use an AM-peak single-hour model and start with a higher base. They are also using different growth factors from the PSRC models, and more flexible assumptions on downtown parking costs.

Panel Comments

Bill Lorenz suggested that Sound Transit seek agreements with jurisdictions in the form of a "term sheet." This would spell out, for example, whether a parking project will be surface parking or a parking structure, whether there will be road signal improvements, etc. It is good to have these assumptions spelled out before taking the package to the voters.

John Howell reminded the Panel that one of the lessons learned from Sound Move was that requests for project scope changes from jurisdictions later in the process have tended to drive up project costs.

Follow-Up on ST2 Methodologies

David Beal (Sound Transit)

Capital Cost Methodology

This methodology is complete (see Tab 8 in the meeting notebook). One change from the draft the Panel saw previously is in the estimates for Level 3 projects. Sound Transit had received a number of comments that these estimates looked high. Upon review, the staff found that contingency was factored in twice: first in the construction estimates themselves, then in the total project calculation. So they eliminated this duplication. The basic calculation establishes the low end estimate, and adding a 15 percent contingency establishes the high end. The methodology for Level 1 and Level 2 projects did not change.

Panel Comment

It might be of concern if the conservative estimates lead communities to think that their projects are not part of the plan because the costs are too high. However, it is reasonable at this stage to be sure the agency is not underestimating the costs.

Questions from the Panel

Q. If the costs turn out lower than estimated, would local jurisdictions look to Sound Transit to add improvements to embellish projects?
A. The Board has said they would rather overestimate than underestimate project estimates. The Board is considering including a list of provisional projects in the ST2 plan that could be funded if final costs on the approved projects run low.

Q. Would adding provisional projects be a problem for subarea equity?
A. Sound Transit conducts subarea audits every year, so any imbalance would be found.

Q. Have there been any questions about the quality of materials and design assumed? The facilities will need to last for 20 to 30 years.
A. Sound Transit is generally recognized as having a high quality standard.

Q. What are the assumptions about the underground stations? These need creative design and architecture, since they are much harder to modify later than other aspects of the project.
A. The stations are very individual to suit the conditions, community, etc.

Evaluation Methodology

There have been no changes since January to the basic methodology that the Panel reviewed. The measures added most recently to quantify criteria are: the tie to local land use plans (for the criterion of Environmental Benefits) and percent of boardings at high-capacity transit stations, which generally provide a higher quality of service (for the criterion of Customer Experience).

The last page of the “Project and System/Scenario Evaluation Methodology” (Tab 8) shows how the evaluation criteria apply to the scenarios for ST2 that were presented to the Sound Transit Board in June.

I-90/East Corridor High-Capacity Transit

(See Tab 9 in the meeting notebook.)

Panel Call re I-90 Bridge

Tom Schmitt (Expert Review Panel)
The Panel held a follow-up conference call on July 7 to discuss several issues related to light rail on the I-90 Bridge. The key point is that any future modifications to the bridge that would add weight would not be acceptable because with light rail operations the bridge will be very close to its maximum allowable weight.

I-90 Bridge Operations with Light Rail

Patrick Clarke (WSDOT)

Load: The maximum capacity for a floating bridge is calculated differently from that of other bridges. There is *local* stress from the forces of the walls and bottom, which are handled with normal reinforcement. There is *global* stress from wind and wave forces from the sides, the traffic load on top, and the tension on the whole bridge. And there is *tortional* stress that tends to twist the bridge. When WSDOT ran the live load test using trucks to simulate light rail, they looked at the combinations of these stresses that adding light rail would exert.

Statements about the bridge capacity are in terms of the “allowable” capacity. The ultimate capacity is 50 – 60 % higher than the allowable capacity.

Lake Level: The bridge design takes into account changes in the level of the lake over the course of a year – typically a two foot fluctuation. Anchor cables connected to the pontoons hold the bridge in place on the water and can be adjusted to different lake levels. Normally there are four to six rises of the lake per year. The transition span includes an accordion bellows function that allows the bridge to expand and contract.

Questions from the Panel

Bridge Conditions
Q. Is the horizontal movement in other bridges the same as in a floating bridge?
A. For a suspension bridge, the angle change is in one direction. In a floating bridge, it is an angle point and reverse angle point. These motions need to be taken into account.

Q. Is it correct that storms with northerly winds are the most likely to shut down the bridge, but they happen less frequently?
A. Yes that is the case, because the bridge to the south (carrying eastbound traffic) protects the center roadway from southerly winds. The maintenance staff watches how the bridge is riding in any storm and acts based on the conditions of the storm, per the operations manual.

Light Rail on the Bridge
Q. Has there ever been rail on a floating bridge?
A. There was a floating drawspan for a railroad in Milwaukee in the 1800s, but it was de-ballasted when the train was not in operation.

Q. Will construction of light rail on the bridge prohibit other changes from occurring?
A. Bicyclists have asked for a solid barrier on the pedestrian traffic path. However, this would act like a wind sail and would add to the load. WSDOT might not want to implement this change in any event, since there would be a danger of having the barrier break and wash over the bridge in high wind conditions.

Q. Do you have a criterion for the expansion joint?
A. Sound Transit will need to provide information on how tight the expansion joint needs to be.

Q. In sum are you saying that nothing precludes use of the bridge for light rail operation, but what would be precluded is doing anything in addition to the light rail that would add weight, and that the joint issues and operational issues just need to be worked out?
A. Yes.

Q. Will having trains on the bridge lead you to do more checking of the pontoons for cracks and leaks?
A. We watch the I-90 bridge more often than any other bridge. There is a complete inspection every year. Maintenance crews are working on the bridge every day. Adding light rail would not call for more maintenance. We just need to do our due diligence to estimate operation levels.

Q. Do you mean that adding trains will require the bridge to be shut down more often but you don't yet know how much more often?
A. In the design process, there will need to be meteorological work completed.

Q. What is your view of the 97 percent of allowable capacity?
A. Ninety-seven percent is within acceptable standards. But this is why we did a full-scale load test and did not just rely on computer modeling.

Q. Is there any relative danger of bus rapid-transit versus light rail in terms of stress on the bridge?
A. It depends on the bus. The keys are the total axel weight and the axel spacing. The current Metro double bus is over the axel weight allowed.

Q. The design of light rail is constantly changing. If the current design puts the load at 97 percent allowable, is Sound Transit concerned that it might not be able to make changes in the future to get the most comfortable and efficient trains?
A. (from Don Billen, Sound Transit) The trains are being designed now to meet Sound Transit's specifications.

Expansion Joint on I-90 Bridge

Art Borst (Parsons Brinckerhoff)

At the ends of the bridge is an expansion joint that connects it to land. There are three kinds of movements on the bridge that impact the expansion joint: (1) longitudinal – expansion and contraction; (2) vertical rotation – as the lake level rises and falls; and (3) horizontal rotation – at the middle of the lake, which moves the bridge north and south (side to side).

Parsons Brinckerhoff studied other bridges that have the same kinds of movement at the expansion joint. The two most similar are on the Tagus River in Lisbon, Portugal, and the Sky Train bridge in Vancouver, B.C. The Tagus River bridge is a suspension bridge with two decks—autos traveling on the upper deck and trains on the lower deck. The bridge moves up to 5 feet at the transition joint. This is a 3½ degree angle change, compared to the 2 degrees in the expansion joint on the I-90 bridge. The Sky Train bridge is a cable stay bridge. The expansion joint has 1 foot of movement. The angle change has a series of springs to turn the angle into a curve. The design and technology used on these bridges would translate to the I-90 bridge.

Parsons Brinckerhoff has also talked with the manufacturer Sound Transit is using for light rail. They have confirmed that their vehicles can accommodate these movements.

Roger Kaester (Parsons Transportation Group)
Mr. Kaester's company designed the Tagus River bridge. That bridge has more movement than the I-90 bridge would have. He has studied the joint over six months and is confident that it can work with light rail. He will develop computer and conceptual modeling to test it.

Questions from the Panel

Q. What is the length of the transition?
A. In the floating bridge there are two points with transition issues over 150 feet. The vehicles are 90 feet long, so one car will never be over both joints. On the Tagus bridge there is just one transition over approximately 50 feet.

Q. Is the lake level movement the most challenging?
A. The maximum horizontal rotation is during a one-year storm. The maintenance crew checks and adjusts for the lake level regularly. If there is too much rotation, they shut the bridge down.

I-90 Travel Analysis

Mark Bandy (WSDOT)

This presentation is the same as given to the Sound Transit Board. (See Tab 9 in the meeting notebook.) I-90 is a complex corridor, including major interchanges to I-5 and I-405. There is a three-hour westbound AM peak starting east of Issaquah, with traffic added in the Bellevue area. Some traffic exits at Mercer Island, some enters. A fairly large volume goes north on I-5 to Lake Union, the University of Washington, and points north.

The travel analysis looked at three scenarios: (1) No action; (2) Exclusive (the center roadway of I-90 for high-capacity transit only); and (3) Non-exclusive (high-occupancy vehicles and high-capacity transit in outer lanes). There is not an obvious choice among the three scenarios in terms of roadway operations. The westbound traffic is more likely to get loaded to capacity than the eastbound partly because of the nature of the road—eastbound traffic has a narrower start, since it comes from I-5 in Seattle and downtown feeder streets. I-90 will be nearly at capacity in peak hours by 2015. Improvements to I-405 and SR-520 will be critical to performance of I-90.

Questions from the Panel

Q. How congested are the HOV lanes?
A. The demand forecast shows some capacity for growth. WSDOT might want to consider whether there is a role of high occupancy toll (HOT) lanes.

Q. Would bottlenecks at I-405 and I-5 make the performance of the I-90 bridge appear better?
A. System interchanges are always inefficient. One possibility is to add HOT lanes to I-405.

Q. Will you look at HOT lanes on the I-90 center roadway?
A. We are not planning to. If we did, we would look at extending these lanes to Issaquah.

I-90/East Corridor Past and Present High-Capacity Studies

Andrea Tull (Sound Transit)

A presentation on this history was given to the Sound Transit Board in June. (See the last section of Tab 9 in the meeting notebook.) The information is from the issue paper that the Panel reviewed in January.

Questions from the Panel

Q. Descriptions of light rail on the I-90 bridge have said it's in the center roadway. But the illustration looks like it's on one side.
A. The I-90 bridge is a two-bridge system. The light rail would be in the center lanes of this system. These lanes are physically on the side of one of the bridges.

Q. Why isn't the light rail in the middle of the bridge structure? As you move to the outside of the structure, you lose stability.
A. (from Mark Bandy) In 2001, WSDOT looked at a series of positions for light rail tracks and concluded that the position did not make a significant difference for stability. The center of the bridge structure has hatches to the pontoons and drains, which bridge maintenance crews need access to. Tracks could not be placed over these hatches.

Finance Model for ST2

Brian McCartan (Sound Transit)

(See meeting handout, "Additional Financial Plan Information.") Since the last presentation to the Panel about Sound Transit's financial model, University Link has been added to the baseline 2006 financial plan. The FTA gave the project its highest rating. Sound Transit is now seeking engineering approval.

To finance ST2, the Board is seeking public review of three levels of revenue: 0.3 percent, 0.4 percent and 0.5 percent sales tax. The other financial work to develop ST2 revenue is to update forecasts, and estimate revenue from fares, grants and other sources.

A chart in the handout shows the results of sensitivity tests of financial variables for construction cost growth, higher inflation, and a one-year schedule delay. The cost growth test shows that Sound Transit could sustain about $1 billion in 2005 dollars in cost increase. The inflation test shows the agency could withstand 0.5 percent more inflation per year than planned. The agency could also withstand a one-year delay in schedules. Although costs would increase, more revenues would be collected.

Key financial assumptions for ST2 are the same as for the current plan, except for two that are more conservative (debt structure and interest deferral). The ST2 financial plan presumes 10 years of interest-only payments on debt. The current Sound Transit policy suggests 5 years.

Questions from the Panel

Grants

Q. When do you anticipate full funding for the second federal grant agreement?
A. In 2008.

Q. Does this mean Sound Transit can't get another grant for ST2?
A. The first grant ends in 2009, which is when the second one would start. There are no plans to seek another grant for ST2. However, the agency could apply again toward the end of the second grant.

Indexes

Q. How do the CPI, BCI, and ROW indexes compare to the agency's experience with real estate costs so far?
A. The Consumer Price Index in the early 2000s was 2 percent; our assumption is 3.7 percent. The Building Cost Index has been between 5 – 6 percent in the last two years; our assumption is 3.4 percent. The Right-of-Way Index in recent years has been higher than our assumption of 4.5 percent.

Q. If these indexes are higher, should the planning assumptions increase?
A. This is a long-term forecast for 20 years. We don't expect price rises higher than these rates each year for 20 years. The forecasts we use are localized. Real estate is high now, but over the long-term, we don't expect the high rate to continue. This is an area of risk, though.

Q. It seems especially important to get more information about the real estate index.
A. We will ask for more detail.

Financial Plan and Modeling

Q. Will the end product financial plan for ST2 spell out each project in terms of timing and cost?
A. In general, yes, so as to cash-flow the project. We will leave some flexibility, perhaps identifying some projects as provisional depending on schedule, other funding, etc.

Q. Were sensitivity tests similar to the ones shown here done for Sound Move?
A. The current planning is probably more robust than for Sound Move.

Q. The finance model assumes that there will be revenue from the MVET. What if the initiative passes to limit the MVET? Has the Supreme Court ruled yet on the MVET?
A. Passage of the initiative would put Sound Transit in a different financial world. The lower court has decided we can continue to collect on our bonds. The case has been argued before the Supreme Court, but there has been no decision yet.

Q. Over time there are maintenance and replacement costs for track, ties, transit cars, etc. Have you increased maintenance cost over time?
A. We have identified the useful life of each asset and reserved funds each year for replacement. The adjustment to get University Link built was not to set aside capital replacement funds. But later, we will need to put more into the replacement fund to make up for this.

Q. The Citizens' Oversight Panel has questioned your growth assumption, saying that historically it has been 8 percent to 10 percent.
A. Historically, the growth in O&M is larger when introducing a new facilities and service. But once the service is established, the rates of growth are consistent with the assumptions used in the ST2 financial plan. The numbers cited by the COP reflect several years when new facilities and services were brought on line. We did an analysis cost increases associated with our transit partners and the range was an average of 3.3 percent to 5 percent. Even with the current high fuel costs and issues on benefits, the cost growth is not over 4.4 percent. The underlying concern is valid, so this is something we are watching.

Q. Is there any sensitivity analysis on the threshold for operations and maintenance cost?
A. We have $140 million to $150 million capacity to service the buses. We believe the 5 percent in the financial plan is sufficient to cover cost increases. We did discuss with the Board a policy issue regarding whether to have service enhancement funding in each of the three scenarios.

Q. What mix of debt and equity is assumed? Isn't it a legislative requirement to establish a debt-equity ratio?
A. There is half as much debt as tax collection. We drive planning off of debt service calculations, not debt equity ratio. We will look at the debt-equity ratio.

Q. Was your financial model constructed by a consultant? Has there been other review?
A. The first version was created by a banker, and has been altered by Sound Transit finance staff and others. There has been review by the FTA, the Citizen Oversight Panel and a peer review group.

Panel Comment

There is a difference between capital replacement and maintenance costs. Sound Transit should give careful consideration to major maintenance needs.

Panel Information Requests

- The Panel would like to have the information that was presented to the Sound Transit Board identified as such, particularly as it relates to the Board's statement of preference for mode on I-90.
- The Panel asked Andrea Tull or someone else to walk through the presentation to the Board in June about I-90. The slides are in the meeting notebook, but the Panel would like to see and hear the presentation.
- The Panel asked for staff from WSDOT for clarification about placing light rail on the edge of one of the I-90 bridge spans instead of in the center.

The meeting adjourned for the day at 4:45 PM.

Friday, July 21

Panel Chairperson Mike Meyer called the meeting to order at 8:35 AM.

Answer to a Panel Question

There had been a question about the recent legislation and governance of transportation. Paul Matsuoka explained that the legislature set up a new commission to look at transportation governance. With roadways, transit and ferries, there are 200 to 250 agencies involved. The commission is to look at the transportation agencies and come up with options for consolidation. One option they must include is a directly elected body. This is focused on Central Puget Sound. The commission is to report to the Governor.

East Corridor High-Capacity Transit

Andrea Tull (Sound Transit)

This presentation was made to the Sound Transit Board at their June 22, 2006, meeting. The Panel asked for this presentation because it provided the Panel with an understanding of the information presented to the Board before they made their decision about light rail as the preferred alternative for the I-90 corridor. (See PowerPoint in Tab 9 of the meeting notebook.)

The Seattle-Bellevue-Redmond-Overlake corridor was chosen earlier by the Board to connect major employment centers. The presentation summarizes the 40-year body of research and regional actions toward bringing high-capacity transit to this corridor. There was a Memorandum of Agreement among affected cities, transit agencies and the state in 1976, and an amendment to that agreement in 2004, which identified high-capacity transit in the center lanes of I-90.

Sound Transit has been winnowing the alternatives. The Board narrowed the alternatives to two: light rail and rail-convertible BRT. For eastside passengers heading north in Seattle, the BRT would include a transfer in the Seattle downtown tunnel. For southbound passengers, a transfer would be required for both BRT and light rail riders. The presentation slides provide comparisons of these two alternatives in terms of cost, travel times, and benefits, and show what the stations and line might look like in Bellevue under each alternative. The slides also describe issues related to the conversion from BRT to light rail.

Questions from the Panel

Q. Was the Board informed of the uncertainties regarding costs and ridership?
A. They had been briefed on these topics and variables in an earlier meeting. When Sound Transit shifted between the long-range planning model and the ST2 model with the changes in parking cost, the Board was briefed on these issues.

Q. Was there any discussion of land use?
A. There was discussion that the model does not capture the interest in development around a light rail station when it is constructed. .

Q. What seemed to be the Board’s reasoning in making the mode choice?
A. The light rail better integrated with Central Link and the development of a regional light rail system. It allows riders from the Eastside to connect easily to the University of Washington. The

Board was concerned about the cost of light rail, but also concerned that converting from BRT would be more costly in future years. They were also concerned about the disruption of converting, and what would happen to buses and traffic during the conversion.

Q. Was there any understanding by the Board about the possibility of federal funding for the east corridor?
A. Sound Transit staff talked about this topic with some of the Board members, and let them know there is no intent to seek federal funds except for University Link.

Q. What number of cars is assumed for a light rail train?
A. Four cars. The stations in the downtown tunnel are limited to four-car trains. The staff is planning for four-car trains for the north corridor and they will be able to handle anticipated passenger loads.

Q. Are there concerns about four-car trains being able to handle the passenger load? Without enough cars, there could be a risk of station overcrowding, which is dangerous.
A. Four-car trains are typical in light rail systems in the United States; some use only two-car trains. Link staff has been working with ridership projections of 100,000/day in 2030 for the north-south line and 30,000/day on the Eastside. Four-car trains can handle this volume.

I-90 Study

Paul Matsuoka (Sound Transit)

The June Board briefing presented data from the last two years about I-90 mode choice to prepare the Board for its July meeting. These studies and reviews included the following. Sound Transit had contracted with the Puget Sound Regional Council to do a land-use forecast, which was completed in 2004. In 2005 Sound Transit produced a series of issue papers that included the experience elsewhere in the country on developing rail-convertible bus systems. Based on comments from the Expert Review Panel that the cost of the HOV alternative seemed high, Sound Transit corrected an error on this cost.

The Board had asked for some hybrid alternatives—light rail in some corridors and BRT in others. Review of these alternatives led to the July 2005 Board decision on the long-range plan. The Board asked for additional studies to be done on I-90, such as the load test.

Last fall WSDOT completed the load test on the I-90 bridge, and in the spring completed a study of the expansion joint. These results were reported to the Board. In December 2005, Sound Transit published a large notebook of all the proposed ST2 projects with templates for both light rail and rail-convertible BRT in the east corridor.

For all these studies, the Board received information in three forms: a lengthy technical memo, a two-page summary in more general language, and a PowerPoint.

In addition, Sound Transit conducted extensive public involvement. There were public meetings in each subarea, with five in the East subarea because of the high interest. Board members have been getting hundreds of letters and e-mails from constituents asking for light rail on the

Eastside. The cities of Bellevue, Redmond and Issaquah have written letters to the Board supporting light rail. Board members have spent much time reviewing needs in the East corridor.

Panel Comments

- While recognizing the challenges of scheduling, in the future, the Panel should meet before the Sound Transit Board meeting, so that the Panel can provide input to the Board. The Panel's job is to review and comment on the methods and analysis that go into the Board's decisions.
- Panel members expressed the need for additional discussion on I-90 bridge issues.
- It is important to have a clear understanding of the terms "allowable stress" and "allowable capacity." These are standard terms in engineering, but may be misunderstood by the public. When a bridge's allowable capacity is reached, more load can still be put on the bridge, but the load starts to reach into the safety factor that engineers allow. Ninety-seven percent capacity is not close to structural failure. Even "maximum capacity" does not mean that the bridge will fail, but that there is a limit to any additional load.
- In short, the 97 percent capacity is by no means a worrisome issue in terms of the ability of the bridge to handle the load. But it is a limiting factor for the future. For example, if Sound Transit wants to change the vehicle technology on Central Link in the future to use heavier vehicles, those heavier cars would not be able to use the bridge. So there would have to be different cars for the Eastside from those in the central corridor.
- It will be important to find clear and crisp ways to communicate these issues to the public so as not to raise alarm.

Panel Information Request

A Panel member asked for more information on the location of the rails on the I-90 bridge, and what the effect would be of placing them in a different location. Since the WSDOT engineers were unable to attend today's Panel session, this may need to be the topic of an email response or a conference call.

Round 1 Project Evaluation and Screening

Paul Matsuoka (Sound Transit)

The Board chose four criteria for the Round 1 screening of the more than 80 proposed projects. These criteria were ridership, cost, risk and system integration. The screening results were presented to the Panel in January. The Board reviewed the screening work and agreed with the staff's recommendations on projects to be set aside, with one exception. That exception was for a project in Burien for which the City of Burien was starting to develop a partnership. Burien has come back to the Board with a proposal on that project.

Questions from the Panel

Q. Most of the projects set aside were for express bus service?
A. Yes, partly because Sound Move has already put in 19 express bus routes. Most of the bus routes the staff recommended setting aside had a local rather than regional focus, and would carry fewer than 10,000 riders. These routes may be needed in the local community, but do not fit Sound Transit's mission of regional service.

Round 2 Scenario-Level Screening

ST Express

Matt Shelden (Sound Transit)

This presentation was given to the Sound Transit Board in May. (See Tab 11 in the meeting notebook.)

The express bus service is contracted out to the local bus companies. There is all-day, two-way service. The system is close to being built out. Many of these routes filled a niche that wasn't served by local transit. But as the Sound Transit light rail service is built out, it would replace much of the bus service. The decisions for ST2 are on additional service, base investment, fleet investment and Sound Transit system evolution.

The bus program has seen average annual cost growth of 4 percent per year. The financial plan assumes 5 percent growth. One of the decisions the Board could make to manage cost growth is to change the service delivery model, such as competitively contracting out the service or operating it by Sound Transit.

There is not much money in the ST2 budget to add new service. But the proposed ST2 Service Enhancement Fund is one way the bus service could expand capacity. There are also ways to improve service efficiency, but these would require hard choices, such as eliminating some routes or not providing all-day service. The subarea equity policy also makes it challenging to manage the investments as a system.

The ST2 package includes assumptions about shifting funds from routes that duplicate light rail and that will be deleted when light rail comes on line. Money for fleet replacement is built into the budget, but not for equipment to add new service. ST2 also includes a regional bus base, since the contractors are already out of room for buses at their bases.

Questions from the Panel

Board Decisions

Q. What kind of decision will the Board be making on express bus service?
A. This is not yet determined, but the staff is suggesting that the Board consider express bus service as a pot of investments, rather than making decisions route-by-route.

Q. Is BRT being considered?
A. There are both limited-stop buses on the freeway and some buses on arterials that have a priority in traffic. The goal is to reach BRT on as many routes as possible, especially those that will not be replaced by light rail.

Operating Costs

Q. Is the cost growth curve steeper for 2004-2005?
A. Yes, primarily because of increased fuel prices, and increased benefits costs for the operators (the local transit agencies). It is possible that the trend line will continue at the steeper rate instead of the 4 percent average. This is a risk factor.

Q. The contracts with the transit operators expire in 2009. Is this another risk factor?
A. Yes.

Q. Is this a contractual arrangement with the operators or a pass-through?
A. It is a pass-through based on a negotiated rate each year. Each operator provides a three-year budget and an annual budget. Their goal is to cover their costs so they do not subsidize Sound Transit service.

Q. Are there performance measures for the operators? If so, has any service been terminated so far?
A. Yes, there is a detailed set of performance measures and service standards, approved by the Sound Transit Board. A couple of routes were terminated because of low performance. The resources were put back into other bus service.

Q. What are the proposed uses for the service enhancement fund?
A. To add new service, fleet replacement, and as a cushion for increased operation and maintenance costs.

Fares
Q. What is the farebox recovery rate?
A. For the express bus system it is 20 to 25 percent. The targets for other modes are higher.

Q. Is there Board discussion about increasing fares?
A. Yes, the first fare increase took place this year—a 20 percent increase for ST Express Bus service. As the Board hones in on ST2, they will consider targets for farebox recovery throughout the system.

Q. How do fares compare in the region?
A. The base fare for ST Express is $1.50, with variations by zone. King County Metro’s fare is $1.50 for one-zone, off-peak.

Q. Is there a potential to raise fares? The average farebox recovery in the United States is 30 to 35 percent.
A. That recovery rate probably includes rail. Bus operations in the United States generally target recovery at 20 to 25 percent (in the low 20s if you take New York City out of the mix).

ST2 and Subarea Equity

Paul Matsuoka (Sound Transit)

There was a Board briefing in late May on subarea equity to prepare the Board members for policy choices for ST2. (See Tab 11 in the meeting notebook.) Only one of the current Board members was on the Board in 1996 when the subarea equity policy was developed. The Board presentation reviewed the statutory basis for subarea equity, the definition in the long-range plan, changes the Board has made, and the lessons learned is applying subarea equity on Sound Move projects.

The Board has looked at several options for calculating the benefit of a project. Since 1996, the Board has used a negotiated approach to subarea equity decisions. This process seems to have been satisfactory for those involved, but the decisions are not always consistent.

The central question for the Board for ST2 is whether they want to continue the same policy. After nearly an hour's discussion, the Board decided they liked the method of negotiating individual deals based on what they believe are the benefits in their own subarea. They did not want to be locked into a pre-made allocation. One possible variation they explored was for combining resources, such as North King and Snohomish for the north corridor, and South King and Pierce for the south.

Questions from the Panel

Past Practice and Experience

Q. How are the negotiated agreements on subarea equity issues formalized?
A. Generally the discussions are informal, with notes recorded in the board minutes. Cost drivers are put into the financial plan to make the policy agreements explicit. There is an annual review of expenditures by auditors that includes a review for subarea equity.

Q. Is there a review of the financial plan by the communities?
A. There is an appendix of projects in the Sound Move plan listing the capital costs each subarea is expected to pay and the allocation by subarea. Anyone interested from the subarea had to look at this appendix—and did.

Q. Do the subarea agreements cover just capital costs or also operations and maintenance?
A. Both. This is part of what makes it challenging to operate an efficient system.

Q. How do you deal with systems-level costs, such as in the tunnel?
A. The cost of the control center, which controls the entire system in the tunnel, is paid by North King.

Q. Is there any concern about North King paying for the downtown tunnel?
A. Yes. This will no doubt be the subject of negotiation in future projects.

ST2 Plans

Q. Has there been any interest in putting the Ballard station back into the ST2 plan given the demise of the Seattle Monorail?
A. It was on the list of 83 projects in Round 1, but was screened out.

Q. Are there sufficient revenues in the East subregion to fund the plan for I-90?
A. Depending on the level of tax revenue selected, the decision about a tunnel or aerial structure in downtown Bellevue, there would be sufficient revenue to construct light rail to the Eastside. The question is where the end point for construction in this phase will be.

Q. How do you model without agreements in place?
A. In the cost estimating process, the staff makes assumptions about which subarea takes on the cost. We have reminded the Board that they can change these staff assumptions.

Q. Give an example on the I-90 East Link how costs would be allocated to different subareas.
A. We assumed the capital cost of light rail from downtown Seattle is 100 percent East King, and the operating cost from East King to Northgate is divided between East King and North King. There is some desire from East King that North King pay for the line to mid-lake, but the North King representatives point out that they have already paid for the tunnel and signals completely, so that is their contribution to the east line.

Investment Scenarios

Sheila Dezarn (Sound Transit)

This presentation was given to the Sound Transit Board in June. The Board had directed the staff to develop sample scenarios for ST2 investments at different levels of sales tax increase. The staff also created a scenario at 0 percent tax increase as required by statute. The scenarios are: Do Nothing (0% increase), Low (0.1% increase), Medium (0.3% increase), Medium-High (0.4% increase) and High (0.5% increase). The Board also directed that Sound Move projects where additional capacity is needed (such as Sounder station park-and-ride lots that are nearly full) be a high priority for ST2, and that each scenario provide an integrated system.

The scenarios do not assume any grant agreements, just the resources Sound Transit has or could draw on. The scenarios also assume simultaneous construction in all corridors. All the scenarios include two features: a 10 percent subarea program reserve for ST Express Bus and Sounder, and $150,000 for bus base expansion.

The presentation highlighted the assumptions, benefits and costs of each scenario. Based on the Board's comments, the staff developed a second High sample scenario that extends north to Lynnwood, south to the Port of Tacoma/Fife, and east to Overlake Transit Center/Redmond. To do these extensions meant taking out some other projects, such as Tacoma Link extension to the community college.

At the July 13 meeting, the Board adopted this alternative as the High (0.5%) scenario, and voted to take it and the Medium (0.3%) and Medium-High (0.4%) scenarios out for public comment.

Questions from the Panel

Subarea Equity

Q. Once a project is built, are the subarea benefits re-cast?
A. No. The set of investments needs to provide subarea equity. The phasing is not part of that.

Q. Has there been any attempt to revisit equity if a project cost more than anticipated?
A. If the subarea can pay the increased cost, they do.

Q. If subarea equity is based on *projected* costs and benefits, has anyone ever asked what the *actual* benefits were?
A. This issue has only come up once—for the Tukwila station, which is on the boundary between East King and South King. There was a brief attempt by South King to convince East King to renegotiate the deal. But there is no formal process to assess the final project costs and benefits.

The Board members do get reports on the final project costs. There are also subarea project reserves to cover cost overruns.

Planning

Q. Would you expect to implement projects in all corridors simultaneously? This is important because it assumes the availability of enough contractors and labor.
A. Project sequencing plans will be developed. We have flagged the issue of labor supply for the Board.

Q. In the financial plan, there is 5 percent growth for operation and maintenance costs. But the Medium scenario shows growth for service enhancements.
A. The 5 percent growth in the financial plan is to maintain service and schedule. There might also be room for some service growth. The question is whether more should be budgeted for actual service enhancement.

Q. Is there a requirement to put savings into the right-of-way fund?
A. No. This could be done by Board policy and decisions by subarea.

Q. Since money from ST1 is paying for planning for ST2, is it advisable to acknowledge that some ST2 money will go into planning for ST3?
A. Yes. Board members are very interested in making this clear. Some of the scenarios are explicit about these planning projects.

Q. Did any of the scenarios include the Everett Link?
A. No, there was not strong interest in it. However, the project is not screened out, so will be in the set of projects for public review.

Tax Revenues

Q. When would the sales tax be increased? Does the legislature need to endorse the increase?
A. After the vote in the fall of 2007 if the voters approve the plan. It does not need to be endorsed by the legislature.

Q. Is there capacity to go higher on the auto leasing tax?
A. There is no assumption of change since this tax is a very small part of Sound Transit's potential revenue base.

Board Decisions

Q. Did the Board express a preference on any other policy choices besides the I-90 mode choice?
A. No, except that they took the No Action and the Low (0.1%) tax increase off the table.

Q. Was there other feedback from the Board?
A. They asked staff to explore what it would take in the High scenario to extend light rail all the way to Tacoma, and to keep in mind the Sound Move parking issues. Staff reported to the Board in June that it did not appear feasible to extend the light rail line all the way to downtown Tacoma, but it would be feasible to get to the Port of Tacoma/Fife. The Board said that it preferred this alternative for the High scenario.

Scenario Evaluation

David Beal (Sound Transit)

This presentation was given to the Board in June. (See Tab 11 of the meeting notebook.)

The staff evaluated and compared the five scenarios by the evaluation criteria the Board has approved for ST2. The presentation slides for each criterion show how each scenario rated.

Questions from the Panel

Q. Related to the criterion of connectivity, does the “opportunity to restructure bus routes” metric include the elimination of routes where rail will duplicate bus?
A. Under Board policies, any duplicated route will be eliminated. Of the 13 to 15 routes that would be restructured under the Medium-High and High scenarios, two would be eliminated.

Q. In the customer experience category is there a metric on cost efficiency—the dollars per new rider or the dollars per increase in customer experience? The question is: what do you get for that next increment of investment between the Medium-High and the High scenarios? If it is a small benefit, the Board might not want to spend the extra dollars.
A. We have stayed away from a cost per new rider because we are not yet ready to analyze the plans using the FTA measures. We have tried to get a sense of this, however, in the capital cost measures where we look at capital cost divided by boardings.

Q. It might be helpful in the decision process to have some metrics that show the benefits from the relative investment of dollars.
A. No matter how many scenarios and studies we do, the results always show more ridership and, therefore, effect, in the core area.

Financial Summary of Scenarios

Brian McCartan (Sound Transit)

Financial review of the scenarios shows that the Low scenario does not tap much of Sound Transit’s reserves. (See one-page meeting handout, “Financial Summary of Scenarios.”) The Medium is comparable to the existing programs. The Medium-High provides a little bit better results. The initial High would require lower bonding and debt service with a higher tax. But the revised High involves significantly more bonding.

Questions from the Panel

Modeling

Q. Which projects affect ridership and, therefore, fares? How do you account for the difference in ridership in the different scenarios?
A. The staff included ridership where it would make a difference in the packages. But ridership is not part of the financial model at this point. We will factor it in once the model is further along.

Q. Does the financial model include numbers for fares?
A. Not yet. Fare revenue will affect our downstream ability to pay bonds.

Q. Does the finance plan assume simultaneous construction in all corridors?
A. Yes. But as a practical matter, with subarea equity, you build when the dollars come in. The Board has asked staff to look at project sequencing, and we will do that over the summer, including the implications for the size of the agency staff, etc.

Q. Were these numbers shown to the Board?
A. Yes, all but the numbers of net and gross coverage.

Q. Most of the Sound Move bonds will be gone by the time ST3 starts. Is there a potential to use taxes that were paying off Sound Move bonds to pay for new projects for ST3?
A. By 2030, there will be this potential. Sound Transit could also lower the tax rate at that point.

Operating Costs
Q. Why does the summary show the operating costs for the Medium scenario as higher than for the Medium-High and High?
A. This is a function of which projects are in each scenario and when each one starts.

Q. What are the assumptions for the much higher operating costs of the revised High (rail emphasis)?
A. A lot of the operating cost is from the light rail system. Staff will review this summary to make certain it is accurate.

Subarea Equity
Q. How do the higher capital costs in the revised High scenario work in terms of subarea equity?
A. Under the original High, Pierce had a large cash balance, which it could save for ST3. Under the revised High, Pierce would spend most of that balance in ST2 for light rail construction in both King and Pierce counties.

Q. Where are the other subareas in terms of cash?
A. At the start of ST2, East King has cash and bonding capacity, while North King is stretched. Under the original High, Pierce and Snohomish would end with money in reserve for ST3.

Board Action

Paul Matsuoka (Sound Transit)

The Board took action on the scenarios at its July 13 meeting. See pages 6–7 of the resolution (#2006-15) that describe the choice of light rail for the I-90 corridor.

Cost Estimating Analysis

Mike Morrison (Value Management Consulting, Inc.)

Panel Administrator John Howell retained Mr. Morrison on behalf of the Expert Review Panel to conduct an independent assessment of the cost estimating methodology and of sample budgets for several projects. Mr. Morrison reviewed with the Panel a draft of the first section of his report—on the Sound Transit cost estimating methodology. (See meeting handout: “Draft Report for the Expert Review Panel for the Assessment of Cost Estimating Methodology and Sample Cost Estimates for Sound Transit Projects.”)

The report makes general observations about the cost estimating methodology, then addresses: unit costs, quantities, allowances, contingency, cost estimate presentation, project scope, conformance to best practice, and risks. In general, Mr. Morrison found the methodology sound. His report makes some specific suggestions for procedures, and to enhance documentation and clarity.

Questions from the Panel

Q. Contingencies have been a concern. It is important to have an adequate contingency, but if an estimate is too conservative, some projects might be ruled out. What do you think of Sound Transit's level of contingencies?
A. A good technique is range estimating—estimating the minimum possible cost and the maximum probable cost. To build these estimates, you get information from experts (owners, contractors, etc.), then use statistical tools to develop a range of estimates. Another tool is the cost estimation validation process (CEVP), which WSDOT has been using.

Q. Another challenge is the escalating costs on some materials. If the owner assumes more risk, lower bids are possible.
A. One method to address this issue is to let contractors bid key commodities according to a standard index.

Summary of Issues and Points for Panel Findings Letter

Chairperson Meyer asked each Panel member for questions and suggested topics for the Panel's findings letter.

William Lorenz

- Third party agreements: Sound Transit has done an excellent job in contacting the local jurisdictions, and now needs to move to developing "term sheets" with them to clarify project scope. This will help avoid later surprises in expectations.
- Cost indices: The building cost index and right-of-way index seemed low. Sound Transit might look at those again.
- Project sequencing: It is important to address sequencing and to support that analysis. The Board needs to get information on sequencing and which subareas have the funds to start work immediately. Strategies need to be developed for the challenge of having enough contractors and a competitive environment.

Darlene Cimino-DeRose

- Sound Transit does have a good financing model and sensitivity analysis. But there is not enough stress testing on revenue declines and the assumptions about interest rates.
- Scope development is good to estimate costs, but with costs escalating, the predictions are less certain.
- Debt to equity relationship is required by statute, but the Panel has not yet seen how Sound Transit is addressing it.
- Political considerations need to be considered with respect to the initiative on MVET and the need to coordinate with RTID regarding sales tax revenue planning.

Alonzo Wertz

We need more information on two topics:

- The 97 percent allowable load on the I-90 bridge – a fuller explanation of what this means and the implications; and
- The issue we saw today in the variation of operating costs among the scenarios.

Thomas Schmitt

- Contracting: There are concerns about getting enough bids when contractors are not interested in small projects. Sound Transit might try to reduce the risk to contractors, and look for incentives or stipends to offset bid costs. There may be other ideas to make bidding more attractive.
- Right-of-way: Early acquisition is desirable. Sound Transit should identify local jurisdictions and get into the development process as soon as possible to be sure they can acquire the land needed.
- I-90 bridge: We need a definition of what is unacceptable in terms of stress. We need more information on the location of the tracks on the bridge span, how other locations would change the loading and stress, also on the frequency of storms and of shutting down the bridge. The rotation of the bridge itself as a stress needs further exploration. Any concerns about the bridge study and design need to be addressed as early in the process as possible. The consequences of running light rail on the bridge need to be spelled out more clearly in terms of the limits on future options.
- Contingencies and realistic cost estimates
- Project coordination with other agencies (such as WSDOT and local jurisdictions' streets and transit agencies) needs to be addressed to lessen the impact on businesses and the public.

Steve Lundin

- I-90 bridge: Clarify to nontechnical audiences the meaning of the 97 percent. The public may be confused by a term like "allowable capacity."
- Responses from local jurisdictions: Some replied but were not specific. There should be follow-up with them as well as with those who did not respond.
- Sequencing of projects: Further work should be done.
- Capacity of the subareas: There should be discussion of the remaining capacity of each subarea at the end of Sound Move, and why it is a good thing to have money set aside. It is important to be absolutely candid about where the money is coming from and where any dollars will go. The idea of having two project lists seems good: one list that Sound Transit will fund, the second list that will be funded if there is money available after the first is completed.

Mike Meyer

- Capital cost methodology and evaluation reports: The Panel needs to comment on the final reports of these methodologies.
- WSDOT study of I-90: The Panel needs to comment on what WSDOT's study did or did not say.

- 5 percent cost escalation factor for operations and maintenance and the service enhancement fund: The Panel should make observations.

Chairperson Meyer asked Panel members to draft their respective sections. Mr. Meyer will write the comments on the final methodology reports and the WSDOT studies.

Information still to come:

- Further information from Sound Transit on the operation and maintenance estimates in the scenarios (to Alan Kiepper)
- Further information from WSDOT about their bridge studies (to Tom Schmitt)
- An explanation from Ric Ilgenfritz about the public outreach process (to Mike Meyer)

Next Panel Meeting

The Panel members agreed that they prefer to meet a month before critical decisions by the Sound Transit Board. Paul Matsuoka said that the Board would like to have identified a preferred alternative by the end of 2006, but there are a number of issues in the November election that could affect the plan. The Board has a meeting the second week of November and early in December. So the Panel might look for a meeting date in mid-November.

[**Note:** After the meeting, the next Panel meeting was set for Thursday January 4th and Friday January 5th.]

Chairperson Meyer thanked the Sound Transit staff for the quality of their presentations.

The meeting adjourned at 3:20 PM.

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