

October 20, 2006

The Honorable Christine Gregoire Governor of the State of Washington Office of the Governor 416 – 14 <sup>th</sup> Avenue S.W. P.O. Box 40002 Olympia, WA 98504-0002	Representative Edward Murray, Chairman Legislative Transportation Committee 43 <sup>rd</sup> Legislative District House of Representatives 203 John L. O’Brien Building P.O. Box 40600 Olympia, WA 98504-0600
Mr. Douglas B. MacDonald Secretary of Transportation Washington State Department of Transportation 310 Maple Park S.E. P.O. Box 47316 Olympia, WA 98501	John W. Ladenburg Board Chair Sound Transit 401 South Jackson Seattle, WA 98104-2826
Joni Earl Chief Executive Officer Sound Transit 401 South Jackson Seattle, WA 98104-2826	

Dear Madams and Sirs:

This is the fourth formal letter from the Expert Review Panel (Panel) regarding Sound Transit’s efforts to develop a package of proposed improvements, known as Sound Transit 2 (ST2), to be submitted to voters.

As you know, State law requires the creation of a panel of outside experts to provide independent review of any proposal from a regional high capacity transit system that includes voter-approved funding. The Expert Review Panel’s charge, as defined by State law, is to review and comment on the underlying assumptions and methodologies being used by Sound Transit to create a potential funding request.

Our most recent meeting in July was the Panel’s fifth meeting since our appointment in November 2004. For each of our meetings we have convened in Seattle for two days of intensive briefings and conversations with Sound Transit staff and their consultants, and

Washington State Department of Transportation (WSDOT) staff. The first two meetings focused on the update of the Regional Transit Long-Range Plan. The last three meetings have focused on the development of the Sound Transit 2 (ST2) package of improvements.

At the most recent Panel meeting on July 20 and 21, 2006, the agenda focused on Sound Transit's work to identify specific project scenarios (different groupings of projects) for possible inclusion in the ST2 proposal. We received briefings on the work Sound Transit is doing to reach agreement with local jurisdictions on project scopes; the ST2 methodologies for capital cost estimating and project evaluation; the status of planning for high capacity transit in the I-90 corridor; the financial model for ST2; and Sound Transit's assessment of five different scenarios, and funding levels, for ST2 investment.

The following provides a summary of the Panel's comments from the July meeting.

## **Cost Estimating**

### Agreements with Local Jurisdictions

Earlier this year the Panel examined Sound Transit's experience in estimating costs for Sound Move projects in order to better understand the lessons that were learned and can be applied to planning for ST2 projects. One of the major contributing factors to higher than anticipated costs for Sound Move projects (as we discussed in our March 17, 2006 letter) is that after voter approval of Sound Move the negotiations with third party governments and other public and private entities resulted in changes to project scopes and subsequent increases in project costs. In that March letter we suggested that "*Sound Transit's goal should be to make the third party agreements at this early stage of planning as formal as possible. For example, to secure approval of planning scopes...*"

In July Sound Transit staff briefed the Panel regarding efforts to work with local jurisdictions on the definition and scopes for each ST2 project. We understand that Chairman Ladenburg sent letters to the mayors of all local jurisdictions this last spring asking them to review the project scopes and provide input on the projects. Twenty-five letters were received from jurisdictions in response to the Chairman's request. These letters were shared with Panel members.

We are pleased to see the level of effort to reach agreement on the project scopes at this early planning stage. The Panel encourages Sound Transit to pursue formal responses on the projects within other jurisdictions that have not responded. The Panel understands that for most projects, in the early phase of project development, it may be premature to develop and negotiate a Memorandum of Understanding (MOU) with each jurisdiction. However, we note that several MOUs are being considered for projects that would limit future Sound Transit funding responsibility. If other jurisdictions are willing to develop an MOU with Sound Transit, the Panel encourages that action.

The Panel also suggests that Sound Transit staff begin the process of creating Term

Sheets with jurisdictions. The Term Sheets would list project scope items and identify whether the item is the responsibility of Sound Transit or the local jurisdiction. The process of developing these Term Sheets will identify project and financial obligations of each party. Later, these Term Sheets could be used to develop a more detailed Memorandum of Understanding. The Panel understands that some projects may not lend themselves to creation of a term sheet because project-specific details regarding scope or location may not be established. However, there is sufficient clarity for other projects that reaching initial agreement on planning scopes and financial obligations would be very useful. For example, Term Sheets could be used at this early stage to clarify agreements on responsibilities for parking structures, street widening, provision of land or right-of-way, or provision of project amenities. The Term Sheet may include a provision requiring local jurisdictions to notify Sound Transit if new development is being proposed on lands that may affect the construction of ST2 projects. This early notification could allow Sound Transit to appraise and acquire the property prior to development. This early right-of-way acquisition would reduce the financial obligation for Sound Transit.

### Inflation Assumptions Affecting Construction Costs

The Panel reviewed several key financial assumptions within the Sound Transit financial model regarding inflation of key construction components. We have raised questions about two of these assumptions: 1) inflation for construction costs, and 2) inflation for right-of-way acquisition.

First, the annual rate of inflation for construction costs (2007-2030), based upon the Building Cost Index, is assumed to be 3.4 percent. We appreciate that the model provides a forecast for the next twenty years, however, as the recent extreme cost increases in steel and concrete suggest, inflation of construction materials can be somewhat volatile.

At the time of the Panel's July meeting, the Expert Review Panel for the Viaduct and SR 520, formed by ESHB 2871, convened to review the key assumptions behind the financial and implementation plans for those two projects. We note that in their final report, released last month, they commented on the appropriate use of inflation assumptions in forecasting construction costs.

The Viaduct and SR 520 Panel found, among other things, that the methodology utilized to develop project cost estimates for the two projects were sound overall, but that the cost ranges stated were likely too narrow, and that the upper levels identified were likely understated. It was suggested that a higher level of inflation be assumed than the levels utilized in WSDOT's cost estimating process.

In fact, the Viaduct and SR 520 Panel suggested that the base level inflation rates of, on average, 2.4 percent for the Alaskan Way Viaduct, and 3 percent for the SR 520 Bridge project, should be increased to a base level of approximately 4 percent throughout the duration of the projects. In addition, the Panel recommended adding variation to the inflation rates, plus or minus 2 percent (approximately) to the base 4 percent, to account

for the significant variability in the construction industry inflation expected over the next several years. WSDOT reports that LMI, a management firm, has been using this level and variation, and the Panel recommended its use for these two projects' cost estimate reevaluations.

Although Sound Transit's annual forecasted fixed rate of inflation for construction is somewhat higher than the rates referenced for the Viaduct and SR 520 projects (3.4 percent compared to 2.4 percent and 3 percent) our response is similar – that the forecasted rate of inflation seems low, at least in the near term. Since the rate of inflation for construction materials during the past several years has been higher than historical trends, Sound Transit may want to consider using a higher rate to forecast construction costs for the beginning of the next decade.

Second, the Panel questions the rate of inflation used to forecast the cost of right-of-way acquisitions. Sound Transit staff has reviewed historical trends based on the Right-of-Way Index (1986 – 2004) to forecast inflation for the ST2 construction period (2007-2030). The model assumes an annual rate of inflation of 4.5 percent. Although the Panel does not have expertise in Puget Sound area real estate values, the assumed percent does appear low considering significant increases in real estate values in other West Coast cities.

In our March letter, the Panel noted that it would be helpful to understand the rate at which real estate values have increased in each of the three Sound Transit counties, to determine if regional adjustments should be made in the real estate inflation factor. It was also suggested that Sound Transit compare its inflation rates for real estate acquisition with the rates being used by WSDOT, and that the two agencies share recent experience with respect to real estate costs. This collaboration seems particularly important in light of the Legislature's directive to coordinate the ST2 and RTID capital packages. Although the July meeting included a presentation by a Sound Transit real estate professional, the agency has not yet indicated if the additional research recommended in March 2006 is being considered. We would encourage Sound Transit to take these steps before finalizing their right-of-way inflation assumptions for the financial plan.

### Methodology

As noted above, one of the principal roles of this Panel is to review and comment on the underlying methodologies used by Sound Transit. In our letter of December 22, 2005, we stated that the Panel had conducted a preliminary review of the capital cost estimating methodology and that "*in general, the methodology is sound and consistent with industry standards.*" At the July meeting we discussed the methodology again and arrived at the same conclusion.

However, we discussed the need to incorporate a more formal risk analysis/risk assessment process into the cost estimating methodology. Since ST2 is a multi-year program, the effect of changes in construction costs, right-of-way costs, mitigation

requirements, ancillary or collateral costs imposed by other jurisdictions will play a large part in the final creation of project budgets. The use of risk analysis/risk assessment tools can be very helpful in providing statistical assurances that budgets will be adequate. There are multiple methods for developing this analysis. One such program is the Cost Estimate Validation Process (CEVP) used by WSDOT, which has proven successful in assisting in the use of valid statistical analysis to set contingencies for major projects. This process is now gaining the attention of other states and the Federal Highway Administration. We encourage Sound Transit to explore the concept of using an accepted risk analysis/risk assessment process, which might be similar to CEVP, at the appropriate stage of the evolution of the ST2 program.

We also want you to know that in addition to our review of the methodology used by Sound Transit to estimate costs, we are conducting a detailed review of several selected project budgets, to see how the methodology is applied to specific project cost estimates. We will report back to you at the conclusion of that analysis.

## **Constructability Issues**

### Project Sequencing

Sound Transit Staff reported on the July 13, 2006, Board action to carry forward three higher capital investment scenarios for evaluation and public comment. The Panel was told that at this stage of planning the Financial Model assumes all of the projects are funded when dollars are available. This would result in many projects funded at nearly the same time, in the early stages of ST2. In other words, many of the projects would begin final design and construction at the same time.

During her presentation to the Panel in July, Joni Earl relayed the Board's concern about the potential for a large number of transportation projects to be under construction at the same time in the central Puget Sound region. She asked for any ideas the Panel had regarding managing that potential high volume of projects.

The Panel agrees with the Board members who expressed concerns about all of the projects beginning at the same time. There are several reasons for this concern. Financing all of the projects at one time would require extensive bonding and the assumption of significant debt repayment obligations. In addition, proceeding with project design and contract development on all projects would place a very high demand on a limited number of staff and consultant support team members. Also, beginning all projects at the same time would require a huge contractor commitment to Sound Transit's program. There are a limited number of qualified contractors available to successfully build high capacity transit projects. Additionally, with too many contracts being advertised, there could be a negative effect on the competitive bidding climate and project contract costs could rise significantly.

Therefore, the Panel strongly recommends that project sequencing be developed by staff

for review and approval by the Board. The sequencing should consider annual financial commitments, ridership, usable segments, subarea financial reserves, project readiness, etc. This project sequencing would be similar to the Sound Move project development.

### Construction Bidding Process

In addition to the Panel's comments regarding project sequencing, we have several other suggestions for Sound Transit consideration that could be used during the construction bidding process.

- Staff could meet with contractor associations, such as the Associated General Contractors (AGC), to discuss contract packaging and contractor bonding limits for larger contracts, e.g., on contracts over \$50 million. For example, the AGC may suggest that different sized contract packages may attract more bidding competition.
- Staff could coordinate the schedule of larger contracts with Washington State Department of Transportation (WSDOT) to stagger the advertisement of WSDOT and Sound Transit contracts.
- It may be advantageous to have Sound Transit assemble an Independent Review Committee composed of a contractor, material supplier, designer, Regional Transportation Improvement District (RTID), and WSDOT, to review the bid package prior to advertising the project for construction. (Of course, care would need to be taken to avoid any perceived conflicts of interest among potential bidders.) The Committee may have suggestions for ways in which Sound Transit could enhance competition for projects.
- Advertisement of multiple construction contracts at the same time could be phased. The first project scheduled to receive bids could be awarded to the lowest responsive, responsible contractor prior to accepting bids on the next contract. This process will allow other contractors to sharpen their bids on the second contract since they were not awarded the first contract.
- Most construction contracts include a Liquidated Damages Clause that would penalize the contractor for not completing the contract on an agreed schedule. Staff should consider including Incentive Clauses for the timely completion of certain key deliverables on a project. For example, one contractor may be required to complete track work prior to another contractor beginning systems work. Another example would be to have an incentive to minimize disruption to local businesses and the traveling public.
- Some of the construction contracts may be relatively small (less than \$10 million) and in a market with many construction projects, may be undesirable to contractors bidding on larger contracts. Staff should consider packaging several small contracts of similar work in order to receive several competitive bids.

- Sound Transit could explore the use of stipends to compensate contractors during the bidding process on the large projects to encourage more bidders. This practice is most typically used on Design/Build projects, but its application should be considered for other projects as well.
- Sound Transit may need to assume more risk in their construction contracts. Items of work with significant materials cost and labor cost sometimes need to be adjusted during construction, particularly on projects with a long duration. Sound Transit staff could review all items of work that are outside the control of the contractor and provide relief, if needed. By assuming some risk, it may be a win-win situation for the contractor and Sound Transit.
- Sound Transit may also want to consider allowing contractors flexibility on when they begin work on projects, to better sequence with other items of work. For example, Sound Transit could allow a contractor to begin work by coordinating the work force and equipment needed with other projects the contractor is building.

#### Constructability on the I-90 Floating Bridge

In the Panel's March letter, we described our work to understand issues regarding the constructability of light rail across the I-90 Floating Bridge. We appreciate the time that Sound Transit and WSDOT staff spent to educate and inform the Panel on issues pertaining to the I-90 Floating Bridge. The Panel has a better understanding of the issues related to light rail construction on the bridge, and a higher comfort level that light rail operation on the bridge is feasible.

In July we spent considerable time discussing the fact that light rail construction on the I-90 Bridge will bring the structure to within 97 percent of its "allowable capacity." It is important to understand that the term "allowable capacity" represents a design standard that accounts for acceptable levels of loading on a structure and provides a significant margin for safety. According to WSDOT engineers any loading (or stress on a structure) that is at or below 100 percent of its allowable capacity is an acceptable level of loading. In the case of the I-90 Floating Bridge, loading at 97 percent of the bridge's allowable capacity is within WSDOT's acceptable standard and will allow the department to meet its objective of a seventy-five year life for the structure.

However, it should be noted that based on the location of the rail on the bridge and current design assumptions (i.e., modifications to the bridge will be needed to reduce weight on the bridge to accommodate light rail), the bridge will be near its maximum allowable load carrying capacity. In other words, any future modifications that increase the weight of the bridge or the light rail system, including changes to the train, would cause the bridge to exceed its weight limits, and would not be allowed.

Although the Panel feels more assured that light rail operation is feasible on the floating bridge, it is important to remember there are no other examples of light rail spanning floating bridges in the world and more study is needed to ensure that all of the

assumptions to date will work. In particular, the Panel suggests that additional analysis should be completed to identify a storm level that would require “operational” closure of the bridge to light rail.

## **Review of ST2 Scenarios**

The Panel reviewed the six ST2 scenarios (including two High scenarios) presented to the Board for review. We were briefed about the Board discussions regarding Express Bus service after Sound Move, ST2 and subarea equity, and the evaluation of the different scenarios.

### Subarea Equity

The Panel reviewed the ST2 scenarios, particularly the three recommended by the Board for public review and comment, to evaluate their compliance with requirements regarding subarea equity.

Enabling legislation requires Sound Transit to prepare a system plan that includes an “equity element.” (RCW 81.110.030(8).) The equity element identifies benefits accruing to the residents of each county within Sound Transit arising from high capacity system facilities and services that are financed by tax revenues from each county. Amendments to this law in 2006 somewhat lessen this requirement by allowing, rather than requiring, subsequent phases of Sound Transit’s plan of implementation to include a “subarea equity element.”

Voters approved the Sound Move phase of a high-capacity transportation system for Sound Transit in 1996 including a subarea equity principle. This subarea equity principle exceeds statutory requirements. Rather than merely identifying subarea benefits, the projects and services are required to “benefit the subareas generally in proportion to the levels of revenues each subarea generates.” (Financial Policies, Appendix B to Sound Move, May 1996.) This enhanced subarea equity principle is based upon the benefits accruing to each subarea. Projects and services are not required to be located within a subarea for that subarea to benefit from the projects and services. Subarea equity is finalized in determinations made by the Sound Transit board. These decisions, and other major board decisions, must be approved by a two-thirds vote of the Sound Transit board members. (RCW 81.112.040(2).)

The only requirement in the Sound Transit subarea equity principle is that after all projects and services included within a phase (such as Sound Move or ST2) have been completed, each subarea generally benefit from these facilities and services in proportion to the level of financing it generates. No requirement exists that the various projects be simultaneously constructed. In fact, RCW 81.104.100(2)(d)(iv) requires that Sound Transit prepare a system plan of projects with a financing plan that phases investments rather than implementing all parts of a plan simultaneously. Earlier sections of this letter address the need to develop a sequencing plan for ST2 projects.

At the July meeting Sound Transit staff indicated they had not yet applied the subarea equity principles to the proposed set of ST2 projects. Once the ST2 project investment scenarios are refined, staff expects to do a qualitative analysis of benefits (in keeping with Sound Transit policy to assess whether benefits to the subareas from a project or service are generally in proportion to the levels of revenue each subarea generates).

We note that when the public assesses a proposed group of projects, they should have the information that would allow them to match subarea revenues with project expenses and benefits. For example, if revenue generated in one subarea is being allocated to a project in another subarea, the public should have an opportunity to comment on that aspect of any given scenario, as well as commenting on the list of projects. The Panel notes that it will be helpful for the public to better understand who is benefiting from these individual projects earlier, rather than later, as that information may impact the public reaction to various scenarios.

Further, it is our understanding that subarea equity negotiations take place at the Board level, as the Board has the discretion to exercise its judgment about the best way to match benefits with revenues. As part of the project approval process, the Board will determine which subarea benefits from each project. Board members negotiate publicly about which jurisdictions benefit from each project and allocate costs accordingly. Historically, minutes from the meetings, along with the adopted plan and internal financial documents, provide the record of the agreements.

Although this method does appear somewhat unique, we are not aware that it violates either the spirit or the language of Sound Transit's governing statute. The Panel recommends that staff prepare a clear written articulation of all agreements, in which revenues from one county are used in another because the benefits cross county boundaries. This documentation will provide a useful record for public review.

#### Creation of Unfunded Priorities List

At the July meeting, staff indicated that the agency is considering identification of an "eligible" projects list, including those for which funding is secured, and "unfunded" projects that could be built should sufficient revenues become available. Expert Review Panel members have experienced the successful use of provisional or aspirational project lists, providing public agencies with the ability to add projects to the capital program. This also provides the public with an understanding of how monies will be used should additional funding become available. This could provide voters with a more clear vision of the ST2 proposal that they will be asked to authorize and finance. If the Board decides to approve an unfunded project priority list, we urge the agency to ensure that all parties understand that there is no guarantee that these projects will be funded. The unfunded project list will need to account for subarea equity benefits.

## Coordination with the Regional Transportation Improvement District (RTID)

In July the Panel was briefed on the coordination that was occurring, at that time, between Sound Transit and RTID to create a coordinated ballot package. Although our charge is to focus on the creation of the ST2 package, we noted that the State Legislature has encouraged the coordination of the two measures, and in fact required the approval of both ballot initiatives for either one to be successful at the November 2007 general election. We were told that initial conversations were occurring, but that coordination of the two measures was quite complex. We encourage the two entities to continue to work toward coordination of project schedules and financial plans to ease the impacts on the public and businesses. We look forward to hearing a report on that coordination at our next meeting.

## Public Comment and Review

The Panel also observes that the public is being asked to review and comment on a list of projects under consideration, which would result in different sales tax increases. This list is considered a “representative” group of projects which may be funded. The process of getting public comment is obviously very important. However, the Panel has some concern that the public may not understand that the project scenarios that they are reviewing may not be the same scenarios that are contained in the adopted ST2 Plan. Again, subarea equity issues may be triggered if the mix of projects is altered.

## **Environmental Review**

### I-90 Travel Analysis

In July WSDOT staff briefed the Panel regarding the I-90 Travel Analysis Study. As we mentioned in our March letter, we viewed this analysis as an important source of information about the effects of dedicating the I-90 center roadway to high capacity transit (HCT) on the surrounding state highway system. Certainly the impact of exclusive HCT use of the center lanes on the I-90 Bridge during peak hour, peak direction, for both vehicular throughput and person throughput, is an important environmental consideration at this stage of project development and review.

The WSDOT analysis suggests that under either exclusive or non-exclusive scenarios, the peak direction, peak hour vehicular throughput capacity of the bridge will be nearly achieved by 2015, with the exclusive scenario throughput 5 to 10 percent less than the non-exclusive scenario. The relatively small vehicular throughput differential is a critical observation/finding for WSDOT concerning its willingness to continue consideration of the exclusive use of HCT on the I-90 center roadway.

The analysis indirectly suggests that ridership on HCT across the bridge is necessary to accommodate growth in peak hour, peak direction person-trip demand across the bridge beyond 2015. The presentation materials from WSDOT stated, "*One thing is clear, to*

*maintain or increase the person throughput on I-90, additional investments in transit are absolutely necessary."*

The Panel noted that the WSDOT traffic study did not conduct an analysis of managed lanes, that is, high occupancy toll (HOT) lanes, in the I-90 corridor. As the Panel has noted in previous letters, the I-90 corridor is a critical corridor in the ST2 proposed investments. We have pointed out the need, in this corridor in particular, to examine a full range of reasonable alternatives that might be considered as part of a future environmental review process. We understand that since our July meeting Sound Transit, WSDOT, Federal Transit Administration, and Federal Highway Administration officials have been discussing the scope and responsibilities of a joint NEPA/SEPA environmental review process. We are pleased that these conversations are occurring now, in order to clarify requirements for federal environmental review. We believe that there is a possibility that any change in operations of the I-90 Bridge will require Federal Highway Administration approval, which in turn would have to be based on the results of an assessment of possible environmental impacts across a range of alternatives.

With that one caveat, there does not appear to be anything inherent in the Evaluation Methodology, or other planning documents for ST2 that we have reviewed, that would be inconsistent with the federal NEPA processes ahead. At this "systems" level of planning and design, broadly defined, quantifiable indicators of "environmental performance" have been appropriately utilized as screening criteria in the Evaluation Methodology (see our comments on that methodology below).

## **Financial Planning**

Sound Transit has developed a financial model that will be used to assess the impact of the scenarios being considered for ST2. The model appears to be capable of supporting decision-making around the various options. According to staff, the model has been peer reviewed already, but is expected to be updated. The timeframe for that update was not provided. At the July meeting, staff presented certain key assumptions contained in the model and provided the results of certain sensitivity tests. Key model assumptions cover the major areas of revenue, expenditures (operating and capital) and funding sources.

### Review of Key Assumptions Regarding Anticipated Revenues

As noted in our earlier letters, estimating the timing and amount of the proposed ST2 revenue sources will be an essential component of the analysis of financial capacity.

*Sales and Use Taxes* - This revenue source represents an estimated 80 percent of the total agency revenues for ST2. In the Panel's March letter, we observed that Sound Transit's historic sales and use tax receipts (in nominal dollars) exceeded the original Sound Move forecast, primarily because the actual tax base, and not growth rates, was greater than was originally assumed. Future performance of this revenue source will be dependent upon growth rates. In its ST2 model, Sound Transit is assuming annual sales and use tax

growth rates of 5.2 percent through 2030. Based on information provided by staff, the historic growth of this revenue during the six-year period between 1998 and 2004 was 21.2 percent or 3.35 percent per year. If future growth rates are closer to the historic performance during this six-year period, using a 5.2 percent growth rate may present a risk to ST2. The Panel notes that Sound Transit has provided information showing that the growth rate in sales tax revenues over a longer period (1987 – 2004) has averaged 5.3 percent per year. Staff believes this longer period is more appropriate to use for forecasting purposes.

The Panel further notes that the Legislature’s action to combine ST2 with the Regional Transportation Investment District (RTID) on the Fall 2007 ballot, essentially requires Sound Transit to coordinate its sales and use tax increase strategy with RTID. Panel members will be seeking additional information about the coordination of the two tax packages in its future meetings.

*MVET* - The model also includes MVET revenue, which is projected to grow by 5 percent per year through 2028 (this revenue stream is assumed to cease after that date, reflecting the possibility that no further amounts may be legally collected following the repayment of existing bonds). Based on information provided by staff, the historic growth rate of this revenue between 1998 and 2004 was 41.9 percent or 6.98 percent per year. The Panel notes that although the effort to place a state initiative on the ballot failed to gain sufficient signatures this year, future efforts to repeal the MVET tax could add additional risk to the ST2 financial plan.

#### Review of Key Assumptions Regarding Anticipated Expenses

The model also incorporates capital and operating cost estimates for the ST2 projects. Several items warrant discussion.

*Capital Costs* – As with any transportation agency, Sound Transit is exposed to the risk that ST2 costs will escalate beyond engineers’ estimates. As discussed earlier, this is a particular concern in the current building environment, as contractor capacity is a major issue in the region, while steel, gas and concrete costs continue to rise. Previously, staff has presented information comparing its project cost estimates for Sound Move against actual costs. This comparison revealed significant shortcomings in the agency’s original Sound Move cost estimating capability, but considerable improvement in cost estimating accuracy once projects reach 30 percent engineering and design. Sound Transit has undertaken several measures in an attempt to improve its performance in estimating ST2 capital costs. We discussed the Panel’s observations about these issues earlier in this letter in the section entitled “Inflation Assumptions Affecting Construction Costs.”

*O&M Costs* - The financial model includes projected O&M costs for Express Bus service, Sounder Commuter Rail, and Link Light Rail. For bus service the model projects an average annual growth rate of O&M costs of 5.0 percent (including 3.6 percent for inflation and 1.4 percent for a ridership growth factor). Sound Transit believes this projection is in line with its historic cost growth for bus service, which it

calculates at 3.5 percent to 4.5 percent annually. The Panel notes that contracts with the regional operators for express bus service expire in 2009. Since these contract costs comprise 85 percent of the total O&M expense for bus service, the pending expiration poses a significant financial risk to Sound Transit.

Staff reported that the Board is considering establishment of a “Service Enhancement Fund” which would hold monies for potential service additions, new fleet or a cushion for cost growth. Although the Fund may mitigate some risk associated with future cost growth, the Panel also notes that the potential multiple uses for the Fund could result in confusion about the use of the Fund. For example, if the Fund is used to cover higher than anticipated costs, it may not be able to meet expectations from those anticipating the Fund to be used to enhance bus service.

### Funding Sources

In addition to estimating the timing and amount of revenues, forecasting the sources of funds for ST2 is another essential component of the analysis of financial capability. Sound Transit has assumed that there are basically two funding sources for ST2 – revenues and borrowing.

*Revenues* – Revenues, or “pay-as-you-go” funding, represent a portion of the funding for ST2 projects. Although State law requires Sound Transit to establish an optimal debt-to-equity ratio, staff indicates that the Board has not yet done so. The level of debt funding as compared to cash funding of projects can, and will, vary, which will impact the financial outcome. The Panel urges the Board to establish its ratio in the course of its financial modeling for ST2 decision-making.

*Borrowing* – As previously reported, the Panel notes that the borrowing assumptions may present some future financial challenges to the Agency. For example, the financial model assumes borrowing rates of 5 percent through 2009 and 6 percent thereafter. These rates are within the normal range. However, the Panel notes that ST2 debt is expected to be “back loaded,” with more principal amortized in the later years; this structuring assumption typically results in higher overall interest rates and limits future flexibility.

*Other Funding Sources* – Staff has indicated that the model assumes there will be no ST2 Full Funding Grant Agreement (FFGA). We understand this is based on the assumption that Sound Transit will be drawing funds under an FFGA for the Sound Move North Link project during the first portion of the ST2 construction period. In previous letters the Panel has recommended that staff pursue third party revenue opportunities. We believe it is appropriate to ignore those other funding sources until agreement(s) are in hand.

### Sensitivity Tests

At the July meeting Sound Transit staff presented the results of sensitivity analyses. When running the scenarios, staff established the following targets: 1) 1.30 times debt service coverage for each sub-area; 2) 1.50 times net debt service coverage for the entire

Agency; and 3) 2.00 times gross coverage for the entire Agency. Net debt service coverage is defined as revenues available to meet the debt service coverage requirements after expenditures for all operating costs. Gross debt service coverage is defined as revenues available to meet debt service coverage requirements before expenditures for operations. Three variables were tested – cost growth, inflation growth and a 1-year schedule delay.

Based on the sensitivity analysis, the following conclusions were reached by staff:

- *Cost Growth* – The agency can sustain a capital program cost increase of approximately \$1 billion (2005 \$) and meet its minimum debt service coverage target; this is an estimated 10 to 15 percent of the total baseline cost.
- *Higher Inflation* – The ST2 projects could sustain annual increases in inflation of 0.5 percent in all projection areas and Sound Transit can still meet its minimum coverage target.
- *Schedule Delay* – The ST2 project schedule can absorb a one-year schedule delay, without any negative financial effects, as long as the revenue growth rate exceeds the construction cost inflation rates.

Sound Transit staff indicates that no sensitivity analyses have yet been prepared relating to revenue growth rates or interest rates, but that the agency plans to undertake both. The Panel notes that it may be worthwhile preparing sensitivity analyses on multiple factors at one time. This might include combining capital cost increases with higher than expected borrowing costs; lower revenues with higher than expected O&M costs; or a schedule delay with revenue growth rates below the inflation rates for construction costs, for example.

## **Evaluation Methodology**

The Expert Review Panel reviewed the final report for the evaluation methodology used in comparing one alternative to another. The panel concluded that the methodology used was appropriate for the types and level of decisions being faced by the transportation decision makers and the public in Puget Sound. Sound Transit staff has incorporated changes previously suggested by the Panel. The Panel recommends that when the evaluation results are presented for Sound Transit Board use and public dissemination, metrics be used that help such groups understand the comparative advantage of one scenario versus another. This would also help in describing the incremental benefits associated with each scenario.

## **Conclusion**

The Panel plans to meet again after the Sound Transit Board has selected a preferred alternative. We anticipate our next meeting to occur at the beginning of 2007. If you have any questions of us prior to that meeting please let us know. You can reach the

Panel members via our Administrator, John Howell, at 206-223-7660, ext. 102, or [john@cedarrivergroup.com](mailto:john@cedarrivergroup.com)

We continue to be very pleased with the information and level of cooperation we receive from Sound Transit staff and consultants, as well as WSDOT staff. They have been very responsive to our requests for information.

Sincerely,

Michael Meyer  
Chair

cc. Expert Review Panel Members  
Senator Mary Margaret Haugen  
Bob Drewel, Executive Director, Puget Sound Regional Council