

**SOUND TRANSIT  
STAFF REPORT**

**MOTION NO. M2003-114**

**Contract for Preliminary System Design – Corridor Transit Technology Initiative**

Meeting:	Date:	Type of Action:	Staff Contact:	Phone:
Finance Committee	11/06/03	Discussion/Possible Action	Sheila Dezarn, Program Manager of Policy and Planning <b>Nick Marquardt, Research and Technology Project Manager</b>	(206) 398-5071  (206) 698-4903

Contract/Agreement Type:	✓	Requested Action:	✓
Competitive Procurement	✓	Execute New Contract/Agreement	✓
Sole Source		Amend Existing Contract/Agreement	
Interlocal Agreement		Contingency Funds Required	
Purchase/Sale Agreement		Budget Amendment Required	

**OBJECTIVE OF ACTION**

To develop a preliminary system design including requirements, specifications and estimates necessary for the first phase of the Corridor Transit Technology Initiative (CTTI) which will develop technology investments designed to enhance passenger information, the system's seamless service, operational effectiveness and efficiency, and security on Regional Express and Sounder services.

**ACTION**

Authorizes the Chief Executive Officer to execute a contract with Parsons Brinckerhoff Farradyne for a preliminary system design for Regional Express and Sound Transit facility technologies in an amount of \$292,606, with a 10% contingency of \$29,261, for a total authorized amount not to exceed \$321,867.

**KEY FEATURES**

- The Corridor Transit Technology Initiative (CTTI) project was identified by the Board as a priority technology project in its 2002 review of the Regional Fund. The project reflects the Board's direction to implement technology investments that will create tangible improvements to customer service and facilities, to increase operational efficiency, and to upgrade customer safety and security.
- This contract will carry out the first phase of the project by assessing agency requirements, operational issues, system requirements and developing cost estimates and interagency agreements. This will provide the framework to develop an RFP for a design-build contract for project implementation. For this phase, staff anticipates a schedule of 9 to 12 months.

- When fully implemented, this component of the CTTI project will enhance passenger information, customer service, and improve operational efficiency and effectiveness by:
  - Providing electronic “next stop” displays and announcements at transit centers, on vehicles and at stations.
  - Installing electronic “next bus arrival” or “next train arrival” signs at transit centers and train stations to provide passengers with a range of information – current time, whether the bus/train they are waiting for has arrived, when the next bus is scheduled, whether the next bus is early or late, and when a train or bus is arriving.
  - Create more “seamless” transfers by providing real-time arrival information en-route to passengers.
  - Providing dispatchers with “real time” information on the exact location of all transit vehicles and trains in the system.
  - Enabling agencies to more effectively monitor Sound Transit schedule adherence and make adjustments to improve services
  - Implements automated passenger-counting systems to collect better ridership and performance data.

### **BUDGET IMPACT SUMMARY**

There is no action outside of the Board-adopted budget; there are no contingency funds required, no subarea impacts, or funding required from other parties other than what is already assumed in the financial plan.

### **BUDGET DISCUSSION**

This contract for \$321,867 will be funded through the capital portion of the Research and Technology budget as part of the overall regional fund planning and development projects. The Adopted 2003 lifetime capital budget of \$12.4 million contains \$6.8 million specifically for the Corridor Transit Technology Initiative. Commitment of these funds does not endanger any other project elements that are to be funded out of the overall project.

### **REVENUE, SUBAREA, AND FINANCIAL PLAN IMPACTS**

The proposed action is consistent with the current board-adopted budget and is affordable within Sound Transit’s current long-term financial plan and the subarea financial capacity.

## **SUMMARY FOR BOARD ACTION**

### **Summary for Board Action (Year of Expenditure \$000)**

**Action Item: Contract with Parsons Brinckerhoff Farradyne for CTTI technical assistance**

	Current Board Adopted Lifetime Budget (A)	Committed and Spent To Date (B)	This Action (C)	Total Committed & Action (D)	Uncommitted (Shortfall) (D)
Research & Technology	12,414,643	1,549,376	321,867	1,871,243	10,543,400

### **Program Budget Detail**

Corridor Technology Initiative	6,825,000	408	321,867	322,275	6,502,725
Other R&T Projects	5,589,643	1,548,968	-	1,548,968	4,040,675
<b>Total Capital Program Budget</b>	<b>12,414,643</b>	<b>1,549,376</b>	<b>321,867</b>	<b>1,871,243</b>	<b>10,543,400</b>

Contract Budget	Current Approved Contract Value (E)	Spent to Date (F)	Proposed Action (G)	Proposed Total Contract Value (H)
Parsons Brinckerhoff Farradyne	-	-	292,606	292,606
Contingency	-	-	29,261	29,261
<b>Total</b>	<b>-</b>	<b>-</b>	<b>321,867</b>	<b>321,867</b>
Percent Contingency	0%	0%	10%	10%

## **M/W/DBE - SMALL BUSINESS PARTICIPATION**

### **Prime Consultant/Contractor**

Parsons Brinckerhoff Farradyne is the prime contractor. The M/W/DBE and small business participation for this contract will be 21%.

### **Utilization Breakdown Table**

Subconsultant	Business Type	% of Work	Dollar Value
Underhill Company	W/DBE	6%	\$16,390
Eiger TechSystems	Small Business	15%	\$43,125
<b>Total</b>		<b>21%</b>	<b>\$59,515</b>

### **EEO Commitment**

- Parsons Brinckerhoff Farradyne's workforce demographics include 40% women and 21% minorities.
- IBI Group's workforce demographics include 63% women and 14% minorities.
- EIGER TechSystems' workforce demographics include 50% minorities.
- Underhill Company's workforce demographics are 100% women.

Within their proposal, Parsons Brinckerhoff Farradyne has shown a strong commitment to EEO.

## **HISTORY OF PROJECT**

### **Prior Board or Committee Actions and Relevant Board Policies**

<b>Motion or Resolution Number</b>	<b>Summary of Action</b>	<b>Date of Action</b>
M2002 –101	Authorized the Executive Director to take the necessary steps to implement the Sound Transit Technology Plan for funding the development and Implementation of advanced transit technologies.	9/17/02
M2002 – 58	Approval of the recommendations of the Regional Fund Task Force to revise the work plan for the Research and Technology program.	6/13/02
M2001-116	Authorized the development of Sound Transit and Regional Transit Technology Plan, and the completion of the Alternative Transit Technology Report.	11/1/01
M98-74	Adoption of the basic program elements of the Research and Technology fund program.	10/22/98

The Research and Technology Fund was included in Sound Move to explore new technologies that could be, where practical, incorporated into the implementation of existing services and/or to provide the Board with the information which could be used in developing future programs and projects. Per Sound Move, Sound Transit will “evaluate...innovative ways to provide transit service, reduce dependency on single occupancy vehicles, improve public transportation’s cost effectiveness, and better respond to customer needs.”

In 1998, the Board established the mission of the fund: “To evaluate new ideas, services, and technological innovations that improve the comfort, convenience, and reliability of the transit ridership experience, while reducing operating expenses, environmental impacts, and reliance on single-occupancy” (Motion No. M98-74). Since this direction, the program has funded and implemented a variety of projects including the Smart Bus Demonstration Project, expanded a Traveler Information Application, and procured a Diesel/Electric Hybrid Bus for testing and demonstration purposes.

These projects and demonstrations have benefited Sound Transit and transit agency partners by providing needed information and evaluations of advanced technologies before procurements. As the program has evolved, the need to better identify and strategically determine the technology projects to fund became apparent. In 2001, the Board directed staff to develop a Transit Technology Plan (Motion No. M2001-116) that would assess and identify an array of technological advancements to existing rail and bus transit service that will be implemented by 2006.

During this plan development process, a Board-appointed Regional Fund Task Force was assembled to provide recommendations to the Board on funding levels and policy direction of the Regional Fund Projects, one of which is the Research and Technology Program. Upon recommendations of the Task Force, the Board approved Motion No. M2002-58 as follows:

- Retain the program but at a reduced funding level.

- Eliminate Alternative Transit Technologies category (\$7 million); cancel and reduce specific 2002 projects (approx. \$2 million); reduce Transit System Enhancements category (≈\$10 million); for a total reduction of approximately \$19 million.
- Complete Technology Plan and present specific scope and cost of proposed new projects for approval by the Board. Focus on projects that enhance Customer Service, Operations, and Safety and Security.

The Transit Technology Plan is comprised of two sets of technology initiatives that are traceable to high-level technology outcomes. The first set of technology initiatives, called the Sound Transit Technology Initiatives, is designed to improve customer service, customer safety and security, and operations. These initiatives will receive 93% of the remaining Research and Technology Funds. This set of initiatives primarily focus on Phase I of Sound Move (2006) and will augment both capital projects and service for bus and rail.

The second set of initiatives, called the Regional Transit Technology Initiatives, identifies an array of transit technology enhancements that require regional coordination and support. The Research and Technology Funds would earmark 7% of the funds for matching and participation along with Sound Transit's transit partners in the Regional Technology Initiatives.

This particular project is a component of one of the Sound Transit initiatives, "the Corridor Transit Technology Initiative," which includes a set of related ITS (Intelligent Transportation Systems) projects that provide advanced transit technology applications for bus and commuter rail operations in select corridors. Examples of these types of applications include:

- Expansion of transit signal priority in specific corridors;
- Automated next stop displays for passengers on ST buses;
- Automated next stop annunciation for passengers on ST buses;
- Automated passenger counting;
- Real-time passenger information at select transit centers and Sounder Stations.

### **CONSEQUENCES OF DELAY**

Delay will not cause any significant schedule delays.

### **REGIONAL PARTNERSHIP AND COOPERATION**

Sound Transit's operating agencies will be involved in the process of developing requirements and specifications. A project management team will be established to foster and manage the process.

### **PUBLIC INVOLVEMENT**

Not applicable to this action.

### **LEGAL REVIEW**

MB 10/17/03

## SOUND TRANSIT

### MOTION NO. M2003-114

A motion of the Finance Committee of the Central Puget Sound Regional Transit Authority authorizing the Chief Executive Officer to execute a contract with Parsons Brinckerhoff Farradyne for a preliminary system design for Regional Express and Sound Transit facility technologies in an amount of \$292,606, with a 10% contingency of \$29,261, for a total authorized amount not to exceed \$321,867.

#### Background:

The Research and Technology Fund was included in Sound Move to explore new technologies that provide innovative ways to deliver transit service, reduce dependency on single occupancy vehicles, improve public transportation's cost effectiveness, and better respond to customer needs. In 2001, the Board directed staff to develop a Transit Technology Plan (Motion No. M2001-116) that would assess and identify an array of technological advancements to existing rail and bus transit service. During the Plan development process, a Board-appointed Regional Fund Task Force was assembled to provide recommendations to the Board on funding levels and policy direction of the Research and Technology Program. Upon recommendations of the Task Force, the Board adopted the Plan that would implement a variety of technology based initiatives to improve Sound Transit's operating services and regional coordination.

This particular project is a component to one of the Sound Transit initiatives, "the Corridor Transit Technology Initiative," which includes a set of related ITS (Intelligent Transportation Systems) projects that provide advanced transit technology applications for bus and commuter rail operations in select corridors.


#### Motion:

It is hereby moved by the Finance Committee of the Central Puget Sound Regional Transit Authority that the Chief Executive Officer is authorized to execute a contract with Parsons Brinckerhoff Farradyne for a preliminary system design for Regional Express and Sound Transit facility technologies in an amount of \$292,606, with a 10% contingency of \$29,261, for a total authorized amount not to exceed \$321,867

APPROVED by the Finance Committee of the Central Puget Sound Regional Transit Authority at a regular meeting thereof held on November 6, 2003.

ATTEST:

  
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Kevin Phelps  
Finance Committee Chair

  
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Marcia Walker  
Board Administrator