

MOTION NO. M2018-116
Automatic Passenger Counts Research Consulting Services

MEETING:	DATE:	TYPE OF ACTION:	STAFF CONTACT:
Operations and Administration Committee	10/04/2018	Final Action	Don Billen, Executive Director Planning, Environment and Project Development Michael Couvrette, Service Planning Manager Susan Mason, Senior Planner, Office Planning & Innovation

PROPOSED ACTION

Authorizes the chief executive officer to execute a contract with IBI Group to provide consulting services, to review and certify data from the Automated Passenger Counter systems for Sound Transit's rail modes, in the amount of \$428,630, with a 10% contingency of \$42,863, for a total authorized contract amount not to exceed \$471,493.

KEY FEATURES SUMMARY

- Under this contract, the consultant will conduct an analysis of the existing Automatic Passenger Counts (APC) data collection, processing, and reporting methodology as well as quality control procedures for Link, Tacoma Link, and Sounder.
- The outcomes will ensure reporting requirements are met for Link, Tacoma Link, and Sounder for the 2019 Federal Transit Administration (FTA) mandatory reporting year, as well as for upcoming years with the addition of new APC equipment on the Link and Tacoma Link light rail vehicles.
- There are six primary tasks to be completed under the contract:
 - Provide a comprehensive review and documentation of APC sampling and data quality processes for Link, Sounder, and Tacoma Link to assess areas in need of focus for improvements.
 - Develop a new sampling plan and review certification for Link as new light rail vehicles will be added to support future Link extensions.
 - Establish recommended data cleaning procedures for APC data to ensure consistent, accurate APC data is included in ridership count calculations and reporting for Link and confirm and improve ridership count methodologies for Sounder and Tacoma Link.
 - Develop refined and expanded on-going maintenance plans for Link, Tacoma Link, and Sounder APC systems to ensure quality data in the future.
 - Enhance and clarify appropriate use of granular ridership count data including establishing guidelines and best practices for staff to use when sharing information about detailed ridership count data internally and externally
 - Determine the appropriate ridership count estimation methodologies for Link, Sounder, and Tacoma Link and provide a certified statistician, compliant with FTA requirements, to certify the methods and calculations reported to the National Transit Database (NTD) by April 2020.

BACKGROUND

As a recipient of federal funding for transit operations, Sound Transit is required to collect and report unlinked passenger trips (UPT) and passenger miles traveled (PMT). Each year, Sound Transit reports UPT data to the National Transit Database (NTD) via the annual report. The UPT data determines service utilization and travel patterns of Sound Transit customers. Sound Transit uses an alternative sampling procedure to estimate ridership counts and passenger miles traveled for Link light rail, Tacoma Link light rail, and Sounder commuter rail. The alternative sampling procedures must be determined by a qualified statistician to meet 95 percent confidence and ± 10 percent precision levels and any applicable NTD requirements.

As part of calculating ridership each month, Sound Transit monitors the amount of data each APC equipped vehicle returns and applies an assortment of rules to screen and normalize APC data. APC systems for the three Sound Transit rail modes were implemented separately and have evolved over time to fit the unique operational considerations of each mode. As a result, rules and processes for cleaning APC data vary from mode to mode. Sound Transit is seeking a comprehensive review and documentation of APC sampling and data quality processes for Link, Sounder, and Tacoma Link in anticipation of the 2019 federally mandated reporting year and changes to the Link light rail system.

Beginning in 2019, new light rail vehicles will be delivered to support future Link extensions. All vehicles in the new fleet will be equipped with APC equipment. The new APC system on the new Siemens Link vehicles will be different than the existing APC system on the Kinkisharyo Link vehicles. Additionally, a new Link Operations & Maintenance Facility will begin operation in 2023. These changes will need to be taken into account as the agency collects and reports ridership data.

The ridership data generated from the APCs and data expansion methodologies are used to generate required reporting to the FTA, periodic performance reporting, Board communications, and answers to public disclosure requests. Ridership data is used in policy level decisions such as fare policy changes or analysis of special event service. The accuracy and quality of the data are important for many aspects of the systems operation, performance measurements, and to meet federal reporting requirements.

PROCUREMENT INFORMATION

Sound Transit issued Request for Proposals (RFP) No. RTA/RP 0193-18 in August 2018. Three proposals were received, and a cross-functional committee evaluated the proposals. After evaluating the proposals, IBI Group was determined to be the highest ranked firm who best met the evaluation criterion and offered the best value to Sound Transit.

FISCAL INFORMATION

The authorized budget allocation to date for the Innovation and Technology program is \$106,604,000. Within that amount, \$79,954,000 has been allocated to the preliminary engineering phase. This proposed action would commit \$428,630 plus a 10% contingency for a total commitment of \$471,493, leaving a remaining uncommitted budget balance of \$79,445,607.

Innovation and Technology Program
(in thousands)

Project Phase	2018 Authorized Project Allocation to Date*	Board Approvals		This Action	Board Approved Plus Action	Uncommitted / (Shortfall)
		Board Approvals	This Action			
Agency Administration	\$26,650	\$566	\$	\$566	\$566	\$26,084
Preliminary Engineering	79,954	37	471	508	508	79,446
Total Current Budget	\$106,604	\$603	\$471	\$1,074	\$1,074	\$105,530
Phase Detail -Preliminary Engineering						
PE Land EIS Planning	\$53,302		\$	\$	\$	\$53,302
PE Research and Technology	\$26,652	\$37	471	508	508	\$26,144
Total Phase	\$79,954		\$	\$	\$508	\$79,446
IBI Group Contract Detail						
	Board Approvals to Date	Current Approved Contract Status	Proposed Action	Proposed Total for Board Approval		
Contract Amount	\$	\$	\$429	\$429		
Contingency Amount			43	43		
Total Contract Amount	\$	\$	\$471	\$471		
Percent Contingency	0%	0%	10%	10%		

Notes:

Amounts expressed above are as of August 2018

Amounts are expressed in Year of Expenditure.

Board Approvals = Committed To-Date + Contingency and includes pending Board actions.

For detailed project information, see page 66 of the Proposed 2018 Transit Improvement Plan (TIP).

This action is within the authorized project allocation to date and sufficient monies remain after approval of this action to fund the remaining work in the preliminary engineering phase.

SMALL BUSINESS/DBE PARTICIPATION

Sound Transit promotes and encourages small business participation, which also includes Disadvantaged Business Enterprises (DBEs). Consistent with Sound Transit Policies and Federal Regulations, Sound Transit has established Small Business/DBE goals for this contract. These goals are based upon an examination of subcontracting opportunities contained in the work of this contract and the number of Small Businesses/DBEs available to perform such subcontracting work.

Sound Transit determined that there were few subcontracting opportunities based upon the work described in this contract, so DBE/Small Business goals were not established.

PUBLIC INVOLVEMENT

Not applicable to this action.

TIME CONSTRAINTS

A one-month delay would not adversely affect project implementation.

ENVIRONMENTAL REVIEW

KH 9/27/18

LEGAL REVIEW

AJP 9/28/18

MOTION NO. M2018-116

A motion of the Operations and Administration Committee of the Central Puget Sound Regional Transit Authority authorizing the chief executive officer to execute a contract with IBI Group to provide consulting services, to review and certify data from the Automated Passenger Counter systems for Sound Transit's rail modes, in the amount of \$428,630, with a 10% contingency of \$42,863, for a total authorized contract amount not to exceed \$471,493.

BACKGROUND:

As a recipient of federal funding for transit operations, Sound Transit is required to collect and report unlinked passenger trips (UPT) and passenger miles traveled (PMT). Each year, Sound Transit reports UPT data to the National Transit Database (NTD) via the annual report. The UPT data determines service utilization and travel patterns of Sound Transit customers. Sound Transit uses an alternative sampling procedure to estimate ridership counts and passenger miles traveled for Link light rail, Tacoma Link light rail, and Sounder commuter rail. The alternative sampling procedures must be determined by a qualified statistician to meet 95 percent confidence and ± 10 percent precision levels and any applicable NTD requirements.

As part of calculating ridership each month, Sound Transit monitors the amount of data each Automatic Passenger Counts (APC) equipped vehicle returns and applies an assortment of rules to screen and normalize APC data. APC systems for the three Sound Transit rail modes were implemented separately and have evolved over time to fit the unique operational considerations of each mode. As a result, rules and processes for cleaning APC data vary from mode to mode. Sound Transit is seeking a comprehensive review and documentation of APC sampling and data quality processes for Link, Sounder, and Tacoma Link in anticipation of the 2019 federally mandated reporting year and changes to the Link light rail system.

Beginning in 2019, new light rail vehicles will be delivered to support future Link extensions. All vehicles in the new fleet will be equipped with APC equipment. The new APC system on the new Siemens Link vehicles will be different than the existing APC system on the Kinkisharyo Link vehicles. Additionally, a new Link Operations & Maintenance Facility will begin operation in 2023. These changes will need to be taken into account as the agency collects and reports ridership data.

The ridership data generated from the APCs and data expansion methodologies are used to generate required reporting to the FTA, periodic performance reporting, Board communications, and answers to public disclosure requests. Ridership data is used in policy level decisions such as fare policy changes or analysis of special event service. The accuracy and quality of the data are important for many aspects of the systems operation, performance measurements, and to meet federal reporting requirements.

MOTION:

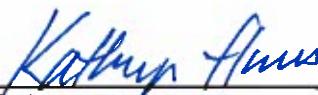
It is hereby moved by the Operations and Administration Committee of the Central Puget Sound Regional Transit Authority that the chief executive officer to execute a contract with IBI Group to provide consulting services, to review and certify data from the Automated Passenger Counter systems for Sound Transit's rail modes, in the amount of \$428,630, with a 10% contingency of \$42,863, for a total authorized contract amount not to exceed \$471,493.

APPROVED by the Operations and Administration Committee of the Central Puget Sound Regional Transit Authority at a regular meeting thereof held on October 4, 2018.



Paul Roberts
Operations and Administration Committee Chair

ATTEST:



Kathryn Flores
Board Administrator