

Motion No. M2023-64

Contract Award with Mott MacDonald to provide Engineering and Inspection Services for the Series 3 Light Rail Vehicle project

Meeting:	Date:	Type of action:	Staff contact:
System Expansion Committee	08/10/2023	Final Action	Russ Arnold, Deputy CEO, Service Delivery Officer Suraj Shetty, Executive Director, Operations Shankar Rajaram, OPS Executive Project Director, Revenue Vehicles

Proposed action

Authorizes the chief executive officer to execute a three-year contract, with six three-year options to extend, with Mott MacDonald to provide engineering and inspection consultant services for the Series 3 Light Rail Vehicle project in the amount of \$7,117,000, with a 10% contingency of \$711,700, for a total authorized contract amount not to exceed \$7,828,700.

Key features summary

- This contract will furnish the consultant engineering and inspection services required to design and commission a base order of 106 light rail vehicles (LRVs) to support the future operations of the Tacoma Dome Link Extension, West Seattle Link Extension, Ballard Link Extension, Federal Way Link Extension, Everett Link Extension, and South Kirkland to Issaquah Link Extension.
- The term of the contract is three years, with the option to extend for an additional six three-year periods to provide scoped services to support the delivery of up to 186 additional LRVs if contract options are exercised by Sound Transit. The decision to extend the contract for any or all of the specified periods will be at Sound Transit's sole discretion.
- The amount requested will fund the base three-year contract and will cover the scope to provide support in the preparation of contract documents and technical specifications for the LRV procurement and to prepare reports, schedules, and cost estimates for evaluating proposals and selecting a car builder for a base order of 106 LRVs. Staff will return to request additional funding prior to the end of the given phase.
- The estimated duration for this initial procurement phase of the project is approximately 3 years. Once the car builder is selected, the team will revisit the board to receive approval for the engineering and inspection services to support the design, manufacturing, and commissioning phases of the project.
- After the initial procurement phase, the overall scope of the Consultant is to provide engineering, project management, quality assurance, and inspection support during the design, manufacturing, and commissioning phases of the project. The scope of work will include the following specific tasks to be performed by the consultant during the manufacturing and commissioning of the Series 3 LRVs: project management and control, document review and technical expertise services, quality

assurance and quality control, inspection services during final assembly, and on-site commissioning and testing of LRVs.

- The project team will return to the Board after the car builder procurement phase to request additional authorization to fund consultant support during the design, manufacturing, and commissioning phases of the project.

Background

On November 8, 2016, voters approved the Sound Transit 3 (ST3) ballot measure. ST3 provided the next phase of high-capacity transit improvements for central Puget Sound. In accordance with the ST3 plan, the light rail system will more than double again to 116 miles with over 80 stations. Light rail will expand north to Everett, south to Federal Way and Tacoma, east to downtown Redmond, south Kirkland, and Issaquah and west to Ballard and West Seattle.

Procurement of additional LRVs is necessary and authorized in the ST3 plan to provide service across the expanded system. Sound Transit has typically established one light rail vehicle order in support of each ballot measure or long-range plan: ST1 Sound Move and ST2 voter-approved capital expansions. The existing LRV fleet is made up of two types of LRV that are referred to as Series 1 or Series 2 vehicles. The LRVs procured to support ST3 expansion projects and the planned retirement of the Series 1 fleet will be referred to as Series 3 vehicles.

The scope of the Series 3 LRV project will include all steps necessary to specify, procure, manufacture, commission, and accept new vehicles over 13 years (2023 – 2036), with an option to extend the base LRV order beyond this 13-year period by executing contract options. The current planning work calls for procurement of approximately 106 vehicles in the base order, with an accompanying contract option to procure an additional 186 examples. The decision to execute the contractual option for additional LRVs is to be decided at some point prior to project baselining. Acquisition of rail vehicles for previously approved functions or programs (like ST3) is exempt from review under the State Environmental Policy Act (SEPA) and National Environmental Policy Act, per the FTA's NEPA Regulations 23 CFR 771.118(c)(7).

The subject Engineering & Inspection Services contract will furnish the consultant engineering and inspection services required to design and commission a base order of 106 LRVs to support the future operations of the Tacoma Dome Link Extension, West Seattle Link Extension, Ballard Link Extension, Federal Way Link Extension, Everett Link Extension, and South Kirkland to Issaquah Link Extension. The delivery of the new Series 3 LRVs may also allow for the retirement of Series 1 LRVs by 2041.

This motion covers the work that will be performed by the consultant during the procurement phase of the project for a duration of approximately 3 years. During this period, the consultant shall support the preparation of request for proposals (RFP) for soliciting car builders, assist Sound Transit to select a car builder and support to baseline the project. The specific tasks during this phase includes developing requirements and plans for project management, quality management, design management, safety, technical performance/specifications, cost estimates, car builder proposal evaluation strategy, and overall project delivery. The requested services may also be extended by Sound Transit for other related LRV procurement efforts during this period.

The Series 3 LRVs will play a key role in providing customer-focused, high-quality, safe, and proven light rail services to the region. If this motion is approved, a Notice to Proceed (NTP) will be issued to Mott MacDonald for the provision of project management oversight, requirements definition, design review, and inspection of the vehicles through 2036 (or longer if options for additional vehicles are exercised by Sound Transit).

Project status

Project scope, schedule and budget summary are located on page 105 of the June 2023 Agency Progress Report.

This action will authorize award of the Series 3 LRV Engineering and Inspection Services contract to Mott MacDonald. Once NTP is issued, staff will begin working with the consultant to prepare the Request for Proposals (RFP) documentation required to solicit car building firms to manufacture the LRVs. The subsequent timeline for the project is projected as follows:

- Q4 2023: Issuance of car builder Request for Qualifications (RFQ)
- Q3 2024: Issuance of car builder Request for Proposals (RFP)
- Q2 2026: Issuance of Notice to Proceed (NTP) for Series 3 LRV procurement contract
- Q2 2031: Delivery of 1st Series 3 LRV to Sound Transit
- Q2 2032: 1st Series 3 LRV ready for revenue service
- Q4 2036: Final Acceptance (FA) of Series 3 LRV base order

Procurement information

This contract (AE 0078-22) is for Series 3 Light Rail Vehicle (LRV) – Engineering and Inspection Services. A Request for Qualifications (RFQ) complying with qualifications-based architectural and engineering (A/E) contracting requirements was selected as the procurement method based on the independent cost estimate, the statement of work, and requirements for professional A/E services. The RFQ was issued October 28, 2022. On January 9th, 2023, 5 Statement of Qualifications (SOQs) were received, and all five SOQs were deemed responsive to RFQ requirements. The Evaluation Committee evaluated SOQs in accordance with the RFQ Evaluation Criteria and the Evaluation Instructions Memorandum. The maximum allowable points for the SOQ were 1000 points, plus 200 points for each round of interviews. Price is not an evaluative factor.

On March 22, 2023, the Evaluation Committee determined that three proposals were the most qualified firms within a competitive range based on qualifications and invited each of these firms for interviews. The Evaluation Committee determined that Mott MacDonald is the most qualified (top-ranked) firm to perform the work in question and best meets the evaluation criteria and is in the best interest of Sound Transit.

Contract negotiations were held with Mott MacDonald. The staffing plan/cost proposal and the direct cost rates were evaluated and determined to be fair and reasonable in the amount of \$7,117,000, with a 10% contingency of \$711,700, for a total authorized contract amount not to exceed \$7,828,700.

Additional responsibility checks were conducted including a financial review, check for federal debarment, and a check for a state excise tax registration number. Mott MacDonald was determined to be responsible. This contract contains federal clauses and is anticipated to be funded in part with federal funds.

Fiscal information

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

The authorized project allocation for the Series 3 LRV project is \$33,000,000. Within the construction services phase, \$24,611,558 has been allocated to the budget line item for LRV Engineering &

Inspection services. The action would commit \$ 7,828,700 to this line item and leave a budget balance of \$16,775,730.

The current cost estimate for the Series 3 LRV project is \$2.023 billion in 2023\$ and is affordable within the Agency’s Financial Plan. This action is in alignment with Resolution 2021-05 and does not impact the affordability of any other system expansion project. The cost estimate in the Financial Plan represents the cost of 246 system expansion light rail vehicles. (Increases to the number of system expansion vehicles required represents a risk to the Financial Plan.)

Series 3 LRV
(in thousands)

Project Phase	Authorized Project Allocation	Total Commitment to Date	This Action	Total Commitment Plus Action	Uncommitted / (Shortfall)
Agency Administration	\$7,863	\$206		\$206	\$7,658
Preliminary Engineering					
Final Design					
Third Party					
Right of Way					
Construction					
Construction Services	25,137	7	7,829	7,836	17,301
Vehicles					
Total Current Budget	\$33,000	\$213	\$7,829	\$8,041	\$24,959
Phase Detail - Construction Services					
LRV Engineering & Inspection	\$24,612	\$7	\$7,829	\$7,836	\$16,776
Other Construction Services	525				525
Total Phase	\$25,137	\$7	\$7,829	\$7,836	\$17,301
Contract Detail					
Mott MacDonald	Board Approvals to Date		Proposed Total for Board Approval		
Contract Amount		\$7,117	\$7,117		
Contingency		712	712		
Total Contract	\$	\$7,829	\$7,829		
Percent Contingency	0%	10%	10%		

Notes:
 Amounts are expressed in Year of Expenditure \$000s.
 Board Approvals = Committed To-Date + Contingency as of June 2023, and includes pending Board actions.
 For detailed project information, see page 101 of 210 of the 2023 Financial Plan & Adopted Budget.

Disadvantaged and small business participation

Participation by small businesses and disadvantaged business enterprises (DBEs)

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.

For this specific contract, the following DBE goal was set and the successful Bidder/Proposer has committed to the following DBE participation:

Small Business & Disadvantaged Business Enterprise (DBE) Goals	
Contract DBE Goal: 20%	DBE Commitment: 25.5%

Public involvement

Not applicable to this action.

Time constraints

A one-month delay would impact the project by delaying procurement and delivery activities.

Prior Board/Committee actions

Resolution No. R2022-12: Amended the adopted 2022 Budget to create the Series 3 Light Rail Vehicle project by (a) establishing an authorized project allocation in the amount of \$33,000,000 and (b) establishing a 2022 annual project budget of \$1,263,000.

Environmental review – KH 7/20/23

Legal review – AJP 7/31/23



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A motion of the System Expansion Committee of the Central Puget Sound Regional Transit Authority authorizing the chief executive officer to execute a three-year contract, with six three-year options to extend, with Mott MacDonald to provide engineering and inspection consultant services for the Series 3 Light Rail Vehicle project in the amount of \$7,117,000, with a 10% contingency of \$711,700, for a total authorized contract amount not to exceed \$7,828,700.

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and inspection of the vehicles through 2036 (or longer if options for additional vehicles are exercised by Sound Transit).

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The amount requested will fund the base three-year contract and will cover the scope to provide support in the preparation of contract documents and technical specifications for the LRV procurement and to prepare reports, schedules, and cost estimates for evaluating proposals and selecting a car builder for a base order of 106 LRVs. Staff will return to request additional funding prior to the end of the given phase. The estimated duration for this initial procurement phase of the project is approximately 3 years. Once the car builder is selected, the team will revisit the board to receive approval for the engineering and inspection services to support the design, manufacturing, and commissioning phases of the project.

After the initial procurement phase, the overall scope of the Consultant is to provide engineering, project management, quality assurance, and inspection support during the design, manufacturing, and commissioning phases of the project. The scope of work will include the following specific tasks to be performed by the consultant during the manufacturing and commissioning of the Series 3 LRVs: project management and control, document review and technical expertise services, quality assurance and quality control, inspection services during final assembly, and on-site commissioning and testing of LRVs. The project team will return to the Board after the car builder procurement phase to request additional authorization to fund consultant support during the design, manufacturing, and commissioning phases of the project.

Motion

It is hereby moved by the System Expansion Committee of the Central Puget Sound Regional Transit Authority that the chief executive officer is authorized to execute a three-year contract, with six three-year options to extend, with Mott MacDonald to provide engineering and inspection consultant services for the Series 3 Light Rail Vehicle project in the amount of \$7,117,000, with a 10% contingency of \$711,700, for a total authorized contract amount not to exceed \$7,828,700.

APPROVED by the System Expansion Committee of the Central Puget Sound Regional Transit Authority at a regular meeting thereof held on August 10, 2023.



Claudia Balducci
System Expansion Committee Chair

Attest:



Adam Montee, on behalf of
Kathryn Flores
Board Administrator