

REGIONAL TRANSIT ISSUE PAPER

Agenda Item No.	Board Meeting Date	Open/Closed Session	Information/Action Item	Issue Date
3	08/26/19	Open	Action	08/19/19

Subject: Conditionally Approving the Contract for Low-Floor Light Rail Vehicle (LRV) Procurement with Siemens Mobility, Inc.

ISSUE

Whether or not to conditionally award a Contract for Low-Floor Light Rail Vehicle (LRV) Procurement with Siemens Mobility Inc. for the purchase of light rail vehicles, spare parts and special tools.

RECOMMENDED ACTION

Adopt Resolution No. 19-08-____, Conditionally Approving the Contract for Low-Floor Light Rail Vehicle (LRV) Procurement with Siemens Mobility Inc. and Delegating Authority to the General Manager/CEO to Execute Contract Change Orders or Amendments to the Contract

FISCAL IMPACT

Siemens Contract Amounts

	Inventory	Sales Tax (8.75%)	Total
NTP#1 (4 LRVs, Engineering and Project Support, Parts)	\$ 26,604,188	\$ 2,327,866	\$ 28,932,054
NTP #2 (19 LRVs & Parts)	\$ 86,402,283	\$ 7,560,200	\$ 93,962,483
Total	\$ 113,006,471	\$ 9,888,066	\$ 122,894,537

* If SacRT needs to stop production for any reason, there will be a Production Restart Fee of \$3,000,000

Capital Budget

The FY 2020 Capital Budget currently includes adequate budget authority for this contract in the following capital projects:

- \$ 57,000,000 for Gold Line Service Expansion LRVs (R358)
- \$148,200,000 for Siemens First Series Fleet Replacement (R115)
- \$205,200,000 Total

Funding Availability

Having budget authority in the Capital Budget does not imply that the full amount of funding is available. The Board-authorized Capital Budget amount includes both funds that have been secured, as well as “to be determined” or “TBD” funds, and serves as a record of the maximum dollar amount that the Board has approved for spending on a particular project.

SacRT has a tentative funding plan in place for the initial order of 23 LRVs in this contract. This funding plan is described in further detail in the discussion section and includes a potential funding shortfall on this LRV contract ranging from \$18 million to \$91 million, depending on whether

Approved:

Presented:

Final 8/20/19

General Manager/CEO

VP, Operations

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certain funds are able to be used for LRVs versus other light rail modernization project components, including Gold Line Service Enhancement and low-floor station modifications. The funding shortfall will need to be filled in order to pay the full contract expenses and maintain a cash flow that will avoid a break in the production of the vehicles, which would result in a \$3 million production restart fee under the terms of the contract. Potential funding sources to fill the shortfall are detailed in the discussion section as well.

DISCUSSION

SacRT and the San Diego Metropolitan Transit System (SDMTS) released a joint request for proposals for light rail vehicles on December 14, 2018. On February 21, 2019, SDMTS received one proposal from Siemens Mobility Inc. (Siemens). SDMTS took a lead role in developing the solicitation documents and conducting the evaluation process, with SacRT providing feedback on the RFP and SacRT-specific Technical Specifications and participating in the evaluation process. The RFP provided for a base order of 25 LRVs for SDMTS, with a SacRT option to procure up to 76 LRVs during the 7-year contract term and an option for SDMTS to acquire an additional 22. During the solicitation process, SDMTS received one protest from Construcciones Y Auxiliar De Ferrocarriles (CAF). SDMTS, with support from SacRT, provided an initial response to the CAF protest, and the protest was not pursued further.

Consistent with federal procurement requirements when only one bid or offer is received, SDMTS conducted an evaluation to determine the adequacy of competition by following up with other manufacturers to determine their reasons for not proposing. MTS determined from the responses that the competition was adequate. SDMTS entered into a contract with Siemens for its initial order of LRVs following an approval by the SDMTS Board on June 13, 2019.

SacRT Staff has been in discussions with Siemens leading to a best and final offer specific to SacRT’s LRVs, which will be the basis of a contract including spare parts, special tools, and training. This action would conditionally approve a Contract with Siemens for a base order of up to 23 LRVs, with execution to occur following approval of a portion of the required funding by the California Transportation Commission (CTC) at its October 2019 meeting scheduled for October 9 and 10.

SacRT currently operates a fleet of 97 LRVs consisting of 36 LRVs manufactured by Siemens, 40 LRVs manufactured by CAF, and 21 LRVs manufactured by UTDC and refurbished by Siemens. SacRT is experiencing significant problems in maintaining the existing fleet due to the overall age of the fleet, availability of spare parts and support, and the high overall mileage on the LRVs. This results in reliability issues and excessive maintenance costs impacting SacRT’s ability to provide consistent light rail service. The 36 Siemens LRVs have exceeded their 25-year useful life. The 40 CAF LRVs have been in service for 16 years with approximately 9 years remaining in their useful life. The refurbishment of the 21 UTDC LRVs was intended to allow the UTDC LRVs to return to revenue service, with the hope of obtaining up to 15 years of additional service for these vehicles.

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The vehicle proposed by Siemens is the S700 model low-floor vehicle. The S700 is Siemens' designation for is long-running S70 model, with the major difference being that the seat backs are against the side walls of the car in the-low floor center section to create a larger aisle for passengers with wheelchairs, strollers, small shopping carts, and bicycles. The Siemens S70/700 has been in production for many years with over 690 vehicle deliveries to North American customers. This is a service-proven vehicle, with strong manufacturer support, a robust parts supply chain, and an extensive user base, all of which are of great benefit to SacRT.

Attached are pictures of an S700 under production at the Siemens facility in Sacramento. This vehicle is similar (with the exception of color) to the LRVs that will be produced for SacRT. Each S700 LRV has 8 doors, 4 on each side, with all boarding occurring in the low-floor center section. The floor is elevated at either end of the vehicle to accommodate the motor trucks that power the vehicle.

As stated above, this Contract would provide SacRT the option of ordering up to 53 additional LRVs, over the 7-year Contract term. The pricing specified in this Issue Paper only applies to the initial order of 23 LRVs; future orders will be subject to an option escalation formula that uses Bureau of Labor Statistics labor and materials indexes, with a minimum annual escalation factor of 2.5%. In addition, if the timing of an option order results in a break in continuous production for Siemens in orders for SDMTS and SacRT, there will be a \$3 million break in production fee to compensate Siemens for re-starting production.

This contract will be the first step in the conversion of the SacRT light rail system to a low-floor system, requiring SacRT to modify the majority of its existing light rail stations to accommodate low-floor boarding. In March, the SacRT Board approved actions allowing the design and engineering for the low-floor station conversion to proceed at the 29 stations on the Gold Line (some of which also serve the Blue and Green lines); preliminary engineering work is underway for the conversion, with final design to commence after completion of environmental review.

By joining SDMTS in this procurement, SacRT has the benefit of favorable pricing from Siemens. Siemens is currently producing S700 LRVs for SDMTS under a previous order and contract. This new Contract will continue that production for both new SDMTS and SacRT LRVs. The ability to maintain an uninterrupted production line (the differences between the SDMTS and SacRT LRVs are minor from a production perspective) reduces costs related to engineering and mobilization, resulting in a lower price per vehicle.

In working with Siemens and SDMTS, SacRT will be able to receive 4 LRVs in approximately May 2020. Delivery of the remaining 19 LRVs will begin in September 2023 and continue until May 2024. The 4 early delivery LRVs will be helpful for employee training for both operations and maintenance staff, to verify station modifications, and in a promotional capacity introducing the low floor LRVs to the community and explaining SacRT's transition to a low-floor system; because of the required station conversion activities, the early delivery vehicles would only be accessible to the disabled from a limited number of stations and, consequently, will not be operated in regular revenue service until the station conversion process is complete for an entire light rail line; these

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vehicles also will not be able to operate in combinations with SacRT's existing fleet. Any special service operated will ensure disabled accessibility. The per-vehicle pricing for the SacRT LRVs are as follows:

	Unit Cost	Extended Total excluding tax
Early Delivery LRVs 4	\$4,246,392	\$16,985,569
Base Order LRVs 19	\$4,046,524	\$76,883,956
Total 23 LRVs		\$93,869,525

The Contract would include an additional \$8,284,552 for engineering and project support, \$6,950,000 for spare parts and \$2,500,000 for special tools plus applicable sales tax. These amounts are not included in the table above, but are included in the fiscal impact section. The exact spare parts and special tools to be purchased will be determined as Contract implementation proceeds, but the allowance amounts are based: (a) on the quantities of parts, tooling and equipment that Siemens has identified as adequate to maintain and operate the base order of 23 vehicles and (b) the pricing schedules submitted by Siemens. The Siemens S700 is a completely new technology for SacRT, requiring its own stock of parts and certain specialized tooling and equipment for proper maintenance.

While the contract is intended to be firm-fixed price contract, Siemens reserves the right in the contract terms and conditions to request an increase in the total consideration due to documented cost increases resulting from changes in law that were not foreseeable at the time of submission of its price proposal.

For comparative purposes, the following table shows some recent pricing for LRVs procured by other Agencies. These costs are comparable to the unit costs proposed for the SacRT order and also do not include the cost of sales tax, spare parts, and special tools.

City	Quantity	Delivery	Total Cost	Notes
Phoenix	11	2020	\$4,792,000	S700 6 Axle 93ft.
Orange County	8	2021	\$5,375,000	S700 6 Axle 93ft
Houston	14	2022	\$4,671,000	S700 6 Axle 96ft
Portland TriMet	26	2022	\$4,644,000	S700 6 Axle 96ft
Boston	24	2017	\$4,438,000	CAF Cara2
New Jersey	18	2017	\$4,815,000	Kinki KSLFV

This Board's action approving the contract would be conditioned on the California Transportation Commission (CTC) approving SacRT's request to allocate a portion of SacRT's \$64 million awarded TIRCP grant for the Folsom corridor light rail modernization project for this procurement. The planned funding for this first order of 23 LRVs is primarily from state sources. The TIRCP funding has been awarded to SacRT, but will be released over the next several years. The action of the CTC is a necessary action to preserve SacRT's ability to use the TIRCP funds for this purchase. According to CTC Staff, this action is considered routine. After CTC action, SacRT would execute the Contract in October.

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Under the terms proposed by Siemens in its Best and Final Offer, SacRT must provide a Notice to Proceed (NTP) for the 4 early delivery LRVs no later than October 15, 2019. Because the early-delivery vehicles are already in production, the payment milestones for these vehicles call for Siemens to submit an initial invoice at the time of NTP for approximately \$17.8 million. While the CTC action will allocate the TIRCP funding, there are additional procedural steps to be undertaken before SacRT can actually draw down the allocated funding to pay incurred costs. SacRT is working with Caltrans staff to accelerate that process to ensure timely payment for Siemens. Out the remainder of the total cost of \$26,604,187.61 for the 4 early delivery vehicles, the majority of the cost will be invoiced from May to August 2020 as the vehicles are delivered and tested, with approximately \$3 million paid out in increments from September 2020 to October 2022.

The Best and Final Offer specifies that the NTP for the remaining 19 base order vehicles must occur no later than July 15, 2020, which will initiate a mobilization invoice for approximately \$1.6 million, followed in August 2020 by a payment of approximately \$19.8 million for long-lead time procurement items for the remaining vehicles. Additional payments would be deferred until the start of car shell production in April 2022.

The acquisition of these vehicles is a major capital project for SacRT requiring a very complex funding plan, drawing funding from a number of federal, state and local sources. These sources are very specific as to how and when funds are committed to a specific project. SacRT staff are working with the funding agencies to maximize flexibility in the use of the allocated and upcoming funding available for this project. At this point, the project does have a funding gap that will need to be filled prior to the issuance of second notice to proceed which must be issued by July 15, 2020. If the funding gap cannot be filled, the 19-vehicle order will need to be reduced to fit the available funding. The reduction of the order will create a break in production resulting in a \$3,000,000 production restart fee.

SacRT has a tentative funding plan in place for the initial order of 23 LRVs using the following funding streams:

- \$40,285,000 – 2018 Transit and Intercity Rail Capital Program (TIRCP) funds available as early as FY20
- \$23,815,000 – 2018 TIRCP funds available as early as FY24. SacRT staff is working with Caltrans, the California Transportation Commission (CTC) and California State Transportation Agency (CalSTA) to try to advance these funds to FY21 so that they can be used for this Base Order LRV purchase.
- \$3,950,000 Proposition 1A High Speed Rail funds
- \$14,000,000 Congestion Mitigation and Air Quality (CMAQ)
- TBD amount of Sacramento County Transportation Development Fee funds (depends on number of housing units built in unincorporated Sacramento County)

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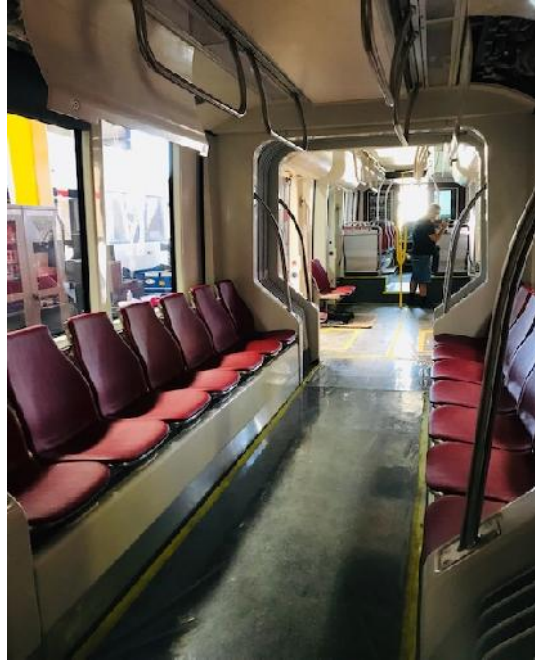
This funding plan totals \$82,050,000, which would leave a funding gap of approximately \$41 million on this \$123 million contract (including sales tax).

Staff continues to seek competitive grant funding for the light rail modernization project. Current and upcoming funding opportunities include:

- Flexibility in the use of CMAQ funding, \$22.9 million, allocated for the Folsom Service Enhancement project.
- USDOT’s 2019 BUILD Grant Program – SacRT applied for \$25 million for light rail modernization including LRVs and low-floor station modifications. Results to be announced in November 2019
- 2019 TIRCP and Congested Corridors Rounds – Applications due early 2020. SacRT intends to apply for LRVs and station modifications. Results to be announced Spring 2020 (this would be too late to receive a CTC allocation before NTP #2, so any funds awarded could not be used on this contract, but could potentially be used for station modifications)
- Measure A Sales Tax – Light Rail Station Modernization components are expected to be included in the Expenditure Plan. Voters will decide on the ballot measure in November 2020, so if the ballot measure is successful, these revenues could be used toward later payments on this contract.
- FTA Core Capacity Program - \$ TBD.
- Proposition 1A High Speed Rail funds - \$25 million that had been previously reserved for Streetcar
- TIRCP funding committed to Streetcar -\$30 million that would require reprogramming to SacRT for light rail vehicle replacement.
- Other federal and state funds

Staff recommends the Board conditionally approve the Contract for Low-Floor Light Rail Vehicle (LRV) Procurement with Siemens Mobility Inc. for the purchase of a base order of 23 light rail vehicles, training, manuals, associated spare parts and special tooling for an amount not to exceed \$113,006,471.07 plus applicable state and local sales tax, with an option to order an additional 53 vehicles through future amendments and provide a limited delegation of authority for the General Manager/CEO to approve amendments or contract change orders up to \$250,000 to account for configuration changes during production, including Protran safety equipment.

Attachment 1



RESOLUTION NO. 19-08-_____

Adopted by the Board of Directors of the Sacramento Regional Transit District on this date:

August 26, 2019

**CONDITIONALLY APPROVING THE CONTRACT FOR LOW-FLOOR LIGHT RAIL
VEHICLE (LRV) PROCUREMENT WITH SIEMENS MOBILITY INC. AND
DELEGATING AUTHORITY TO THE GENERAL MANAGER/CEO TO EXECUTE
CONTRACT CHANGE ORDERS OR AMENDMENTS TO THE CONTRACT**

BE IT HEREBY RESOLVED BY THE BOARD OF DIRECTORS OF THE
SACRAMENTO REGIONAL TRANSIT DISTRICT AS FOLLOWS:

THAT, the Contract for Low-Floor Light Rail Vehicle (LRV) Procurement by and between the Sacramento Regional Transit District (therein "SacRT") and Siemens Mobility, Inc. (therein "Contractor") whereby Siemens agrees to furnish a base order of 23 LRVs associated manuals, training, spare parts and special tooling, with a SacRT option to purchase an additional 53 LRVs, on the terms and conditions set forth therein, for an amount not to exceed \$113,006,471.07, plus applicable sales tax, is hereby approved, subject to the California Transportation Commission approving an allocation of TIRCP funding for the procurement.

THAT, the General Manager/CEO is hereby authorized and directed to execute the Contract upon satisfaction of the foregoing contingency.

THAT, the General Manager/CEO is hereby authorized to execute contract change orders or amendments to the Contract for LRV configuration changes, not to exceed \$250,000 in aggregate.

PATRICK KENNEDY, Chair

A T T E S T:

HENRY LI, Secretary

By: _____
Cindy Brooks, Assistant Secretary