



Board Report

File #: 2022-0103, File Type: Contract

Agenda Number: 26.

OPERATIONS, SAFETY, AND CUSTOMER EXPERIENCE COMMITTEE APRIL 21, 2022

SUBJECT: HR4000 CONSULTING SERVICES FOR HEAVY RAIL VEHICLE ACQUISITION, TECHNICAL SUPPORT SERVICES INCREASE OF CONTRACT MODIFICATION AUTHORITY (CMA)

ACTION: APPROVE RECOMMENDATIONS

RECOMMENDATION

AUTHORIZE the Chief Executive Officer to:

- A. EXECUTE Modification No. 14 to Contract No. OP16523-30433487 with LTK Engineering Services for Technical Support Services for HR4000 Heavy Rail Vehicle Acquisition to extend the Period of Performance through April 30, 2024, and increase the Not-to-Exceed Total Contract Price by \$5,618,956, from \$14,228,248 to \$19,847,204; and
- B. INCREASE the Contract Modification Authority (CMA) to \$6,180,852 to execute Modification No. 14 in Recommendation A, which provides an additional \$561,896 CMA or 10% for future changes.

ISSUE

In June 2016, the Board approved a 5-year contract with LTK Engineering (OP16523-30433487) to support Metro's Project Manager in the technical and engineering oversight of the manufacture of the HR4000 Heavy Rail Vehicle (HRV) by CRRC MA corporation.

Due to unforeseen circumstances, including a global pandemic, final acceptance of all 64 rail vehicles has been pushed to mid-2024. To ensure continuity of consultant support for the HR4000 Heavy rail vehicle project, it is recommended that Metro extend the existing HR4000 consultant contract.

BACKGROUND

On June 15, 2016, the Board approved the contract to be awarded in response to RFP No. OP16523-30433487, HR4000 Consulting Services for Heavy Rail Vehicle Acquisition, Technical Support Services to provide technical program management support to Metro staff engaged in the management of the HR4000 contract for the acquisition & on-time time delivery of a base order of 64 Heavy Rail Vehicles (HRV) and up to five (5) Option orders totaling 282 HRVs for future line

extensions and replacement of the aging A650 Red Line fleet.

LTK Engineering is tasked to support Metro's Project Manager with the engineering and technical oversight of the rail vehicle contractor to ensure performance consistent with the delivery requirements of the HR4000 HRV procurement. The consultant provides staff support in the following disciplines as directed:

- Systems Engineering
- Systems Integration
- Quality Assurance
- Value Engineering
- Design Conformance Tests
- Inspection/Audit of Fabrication and Assembly Site Activities
- Commissioning and vehicle acceptance efforts.

All work and assignments are as needed and directed by the Metro HR4000 Project Team through written task orders to the consultant contracts, using not to exceed prices based on the fixed labor rates in the contract. The consultant's staff is managed daily by Metro's HR4000 Project Manager.

DISCUSSION

Findings

Since contract award of the HR4000 HRV Procurement Project in June of 2016, LTK Engineering has been providing the Metro's Project Team with unique technical support, including review of all technical documents, oversight of system and combined-system level integration efforts, witness of verification and validation of various levels of designs, and inspection and identification of vehicle assembly matters. The project is now entering the vehicle level Design Conformance/Qualification Testing phase, an essential prerequisite to approving shipment of HRV's to Metro.

Further, to mitigate pandemic related issues, the majority of project activities took longer to resolve as in-person meetings were no longer possible. More time and effort were, and are, required to perform design reviews, validate testing, and conduct first article inspections. In several cases major tests had to be repeated as the project teams acclimated to the new restrictions imposed as a result of the pandemic. Additionally, to mitigate delays, as much Metro on-site testing as possible is being relocated to China, requiring additional staff to be stationed at vendor and manufacturing locations for much longer than originally anticipated.

Approval of the recommendations modifies the LTK Engineering Contract, which will allow for continued technical support of the HR4000 HRV project 206037. Metro staff requires this project support to navigate the remaining technical issues and delays to achieve the final delivery and acceptance of the 64 base HR4000 HRVs in June of 2024.

DETERMINATION OF SAFETY IMPACT

The approval will ensure the HRV Procurement Project's continuity and maintain overall system safety, service quality, system reliability, and customer satisfaction.

FINANCIAL IMPACT

The source of funds for this action is within the adopted LOP budget the Westside PLE Section 1 project which includes Federal New Starts Section 5309, CMAQ, State STIP/RIP, Measure TIFIA Loan and Measure R. These funds are designated for the procurement and delivery of design and construction of the project. The funding sources for this project is sufficient to award this recommendation.

Separately, a portion of this action is funded within the LOP of the HR4000 Rail Vehicle Procurement project which includes

Measure R 2%, Cap and Trade, Federal, State, and other Local funds as made available. Staff is actively pursuing additional Federal funding sources such as MAP-21 and other eligible federal sources. Staff is also pursuing additional State and Local funding sources as they become available to meet the funding needs of project 206037. The funding sources for this project is sufficient to award this recommendation.

Impact to Budget

Funding for this recommendation is included in the FY22 budgets under the HR4000 Heavy Rail Procurement project and Westside Purple Line Extension Section 1 project. Budget allocations are included under Costs Centers 3043 and 8510 and within account 53105 - Acquisition of Vehicles. Since multi-year projects are funding this recommendation, the Chief Operating Officer, Chief Program Management Officer, and respective Project Managers will be responsible for future fiscal year budgeting.

EQUITY PLATFORM

This is an existing professional support contract needed to ensure continuity and proper project closeout of the HR4000 Heavy Rail Vehicle Acquisition Project and does not have any impacts on the previously approved LOP. In addition, approving the two recommended items ensures successful completion of the HR4000 project, which provides accessible and affordable transportation for all who ride our heavy rail system.

Part of the new HR4000 rail vehicles will be used to replace the existing aged A650 rail cars and the remaining will be used on Purple Line Extension Line. Approving the decisions in this board report allows for successful delivery of these new vehicles on Metro's existing heavy rail vehicle lines that are currently serving majority Equity Focus Communities who rely on public transportation. Based on the 2019 Customer Survey, the Red and Purple heavy rail lines serve the following ridership:

- 27.7% below the poverty line
- 56.4% had no car available
- Rider Ethnicity: Latino 38.9%; Black 13.1%; White 25.8%; Asian/Pacific Islander 15.2%; Other

6.5%

In addition, areas include Union Station to Downtown LA, Koreatown (Wilshire/Western), Hollywood, Universal City, and North Hollywood. Approving the decisions in this board report will ensure non-interruptions on professional services that support the ongoing HR4000 New Heavy Rail Vehicles Procurement project.

LTK Engineering Services (LTK) made a 22.62% Disadvantaged Business Enterprise (DBE) commitment. Based on payments reported to-date, the contract is 78% complete and the current DBE participation is 12.21%, representing a 10.41% shortfall. LTK submitted its initial shortfall mitigation plan in August 2021 and a subsequent update in March 2022.

IMPLEMENTATION OF STRATEGIC PLAN GOALS

The recommendations support strategic plan goal # 1.2 - Optimize the speed, reliability, and performance of existing system by revitalizing and upgrading Metro's transit assets. The completion and roll out of the HR4000 HRVs are state -of-the-art assets which will significantly reduce trip disruptions on rail networks and improve the integrity of the overall network.

ALTERNATIVES CONSIDERED

The Board may choose not to increase the CMA authority or extend the current contract. This is not recommended as critical project activities being supported by consultant staff will be interrupted, likely impacting the project schedule. These activities include but are not limited to; auditing manufacture and assembly site activities, witnessing Qualification and commissioning tests, reviewing test procedures and test reports, providing vehicle acceptance and warranty support, reviewing safety certification checklists before submittal to CPUC and review of car history books with CPUC prior to approval of placing vehicles in service, and conducting schedule and milestone reviews. The Metro project team currently does not have the resources to absorb all the works.

Additionally, disapproving the two recommended items will adversely impact the HR4000 project completion due to the loss of the technical expertise provided through this professional support contract. The adverse impacts may result in insufficient vehicles to meet passenger demand and rollout schedules. This would negatively impact providing transportation services due to being unable to provide sufficient vehicles to all who ride our Heavy rail system and will negatively impact the rider experience.

NEXT STEPS

Upon Board approval, staff will increase the CMA amount and execute Contract Modification No. 14 to extend the performance period and increase the Contract amount with LTK Engineering Services.

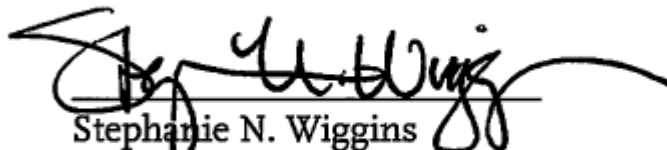
ATTACHMENTS

Attachment A - Procurement Summary
Attachment B - Contract Modification Log

Attachment C - DEOD Summary

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Stephanie N. Wiggins
Chief Executive Officer

PROCUREMENT SUMMARY

**CONSULTING SERVICE FOR HEAVY RAIL VEHICLE ACQUISITION –
TECHNICAL SUPPORT SERVICES
CONTRACT NO. OP16523-30433487**

1.	Contract Number: OP16523-30433487		
2.	Contractor: LTK Engineering Services		
3.	Mod. Work Description: First Article Inspections, Resident Inspector to be stationed in China, Quality Audits ; Testing and Commissions of Rail Car Vehicles		
4.	Contract Work Description: Technical and engineering oversight of the Vehicle Contractor (CRRC) to ensure that performance is consistent with the delivery requirements of the HR4000 Contract.		
5.	The following data is current as of: February 19, 2022		
6.	Contract Completion Status		Financial Status
	Contract Awarded:	6/15/2016	Contract Award Amount: \$13,028,744
	Notice to Proceed (NTP):	9/05/2016	Total of Modifications Approved: \$ 1,199,504
	Original Complete Date:	11/4/2021	Pending Modifications (including this action): \$ 5,618,956
	Current Est. Complete Date:	4/30/2022	Current Contract Value (with this action): \$19,847,204
7.	Contract Administrator: Roxane Marquez		Telephone Number: 213-922-4147
8.	Project Manager: David McDonald		Telephone Number: 213-922-3221

A. Procurement Background

This Board Action is to approve Contract Modification No.14 issued in support of the HR4000 Heavy Rail Vehicle Acquisition, providing technical and engineering oversight of the Vehicle Contractor to ensure that performance is consistent with the delivery requirements of the HR4000 Contract. The Scope of Services shall include, but not be limited to, oversight of testing and inspection activity, oversight of the Vehicle Contractor's supply chain process, reviewing and preparing correspondence in response to technical submissions, supporting Project Reviews, document control, and other technical support services as directed by Metro.

In June 2016, the Board approved Contract No. OP16523-30433487 with LTK Engineering Services for a not-to-exceed amount of \$13,028,744 for Base Years and five (1) year Options for a Total Contract Value of \$21,706,022.

Contract Modification No. 14 extends the period of performance for Base Years for an additional 24-months for continuation of technical services until it has been determined that Options for HR4000 will be exercised. This Contract Modification will be processed in accordance with Metro's Acquisition Policy and the contract type is a cost-plus fixed fee.

B. Cost Analysis

The recommended price has been determined to be fair and reasonable based upon an independent cost estimate, cost analysis and technical evaluation.

Proposal Amount	Metro ICE	Negotiated Amount
\$5,618,956.00	\$5,864,380.00	\$5,618,956.00

CONTRACT MODIFICATION/CHANGE ORDER LOG

**CONSULTING SERVICE FOR HEAVY RAIL VEHICLE ACQUISITION –
TECHNICAL SUPPORT SERVICES
CONTRACT NO. OP16523-30433487**

Mod. no.	Description	Status (approved or pending)	Date	\$ Amount
1	Add/Replace Personnel	Approved	08-24-16	\$.00
2	Addition of Sharefile Fees/Reduction in International Travel	Approved	01-13-17	\$.00
3	Add/Replace Personnel, add resident engineers in Changchun	Approved	01-29-18	\$.00
4	Add/Replace personnel	Approved	07-01-18	\$.00
5	Add/Replace personnel	Approved	01-28-19	\$.00
6	Add/Replace personnel	Approved	02-28-19	\$.00
7	Add/Replace personnel	Approved	08-01-19	\$.00
8	Add/Replace personnel	Approved	11-07-19	\$.00
9	Add/Replace personnel	Approved	06-04-20	\$.00
10	Add/Replace personnel	Approved	03-03-21	\$.00
11	Extend POP 10/01/21 to 12/31/21	Approved	10-29-21	\$.00
12	Extend POP to 3/31/22, Additional Resources, Replace Attachment A – Advanced Cost Agreement	Approved	12-31-21	\$ 1,199,504
13	Extend POP to 4/30/21	Pending	TBD	\$.00
14	Modification No. 14 to extend POP for 24 months to 43/310/2024	Pending	TBD	\$ 5,618,956
	Modification Total:			\$ 6,818,460
	Original Contract:			\$13,028,744
	Total:			\$19,847,204

DEOD SUMMARY

**TECHNICAL SUPPORT SERVICES FOR THE HEAVY RAIL VEHICLE (HRV)
ACQUISITION/OP16523-30433487**

A. Small Business Participation

LTK Engineering Services (LTK) made a 22.62% Disadvantaged Business Enterprise (DBE) commitment. Based on payments reported to-date, the contract is 78% complete and the current DBE participation is 12.21%, representing a 10.41% shortfall. LTK submitted its initial shortfall mitigation plan in August 2021 and a subsequent update in March 2022.

LTK Services contends that the shortfall is due to the inability to use the resources of Virginkar & Associates, Inc. (VAI) to perform inspection services in China as originally planned. Due to three main components to this impact: CRRC delays and late initiation of manufacturing of the six pilot cars which started in January 2019; One VAI inspector started work in China in March 2019, almost 18 months later than LTK’s original engagement plan; and due to the COVID-19 situation, the China-based VAI inspector left China at the end of January 2020.

LTK further reported that the shortfall will be mitigated with the addition of a second VAI inspector in CRRC’s Springfield, MA facility in April-May 2022 and additional VAI staff starting mid 2022 in Los Angeles to be part of the commissioning effort of the vehicles. LTK projects that the DBE participation level at the end of the base contract term (March 2024) will be approximately 23%. LTK stated that they are fully committed to meeting their commitment.

Notwithstanding, Metro Project Managers and Contract Administrators will work in conjunction with DEOD to ensure that LTK Engineering Services is on schedule to meet or exceed its DBE commitment. Additionally, key stakeholders associated with the contract have been provided access to Metro’s web-based monitoring system to ensure that all parties are actively tracking Small Business progress.

Small Business Commitment	DBE 22.62%	Small Business Participation	DBE 12.21%
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	DBE/SBE Subcontractors	Ethnicity	% Committed	Current Participation¹
1.	Ramos Consulting Services, Inc	Hispanic American	3.60%	9.58%
2.	Virginkar & Associates, Inc.	Asian-Pacific American	19.02%	2.63%
	Total		22.62%	12.21%

¹Current Participation = Total Actual amount Paid-to-Date to DBE firms ÷ Total Actual Amount Paid-to-date to Prime.

B. Living Wage and Service Contract Worker Retention Policy Applicability

The Living Wage and Service Contract Worker Retention Policy is not applicable to this contract.

C. Prevailing Wage Applicability

Prevailing wage is not applicable to this contract.

D. Project Labor Agreement/Construction Careers Policy

Project Labor Agreement/Construction Careers Policy is not applicable to this Contract. PLA/CCP is applicable only to construction contracts that have a construction related value in excess of \$2.5 million.