



Board Report

File #: 2016-0646, **File Type:** Contract

Agenda Number: 27.

SYSTEM SAFETY, SECURITY AND OPERATIONS COMMITTEE NOVEMBER 17, 2016

**SUBJECT: HR4000 HEAVY RAIL VEHICLE (HRV) ACQUISITION,
RAIL VEHICLE CONTRACTOR**

ACTION: AWARD CONTRACT FOR HEAVY RAIL VEHICLE ACQUISITION

RECOMMENDATION

AUTHORIZE the Chief Executive Officer to award a firm-fixed price Contract under RFP No. OP6355500HR4000, **Heavy Rail Vehicle (HRV) Acquisition, to China Railway Rolling Stock Corp (CRRC) MA Corporation** in the not-to-exceed amount of \$178,395,869 for a period of 62 months from Notice-to-Proceed (NTP) for the production and delivery of the 64 HRV Base Order, subject to the resolution of protest(s), if any.

ISSUE

The Purple Line Extension (PLE), Section 1 is anticipated to commence revenue service in November 2023. If the Board approves this Contract, CRRC MA will deliver the 34 HRVs required to support PLE Section 1 by November 2020 and the balance of the 30 HRVs to replace the original A650 HRVs by July 2021.

DISCUSSION

In July 2014, the Board authorized staff to issue a federally funded solicitation for a Best Value Request for Proposals (RFP) utilizing competitive negotiations pursuant to PCC § 20217 for the procurement of the 64 Base Order and 218 Option HRVs.

Staff's recommendation presents the firm that is most advantageous to Metro. CRRC MA's offer represents the Highest Rated and Best Value to Metro when all technical and price factors are considered in accordance with the RFP evaluation criteria, including US content and Local Employment Plan. The Best Value evaluation is inclusive of the vehicle quantities for the Contract Base and all Contract Options. The Procurement Summary (Attachment A) further provides the detailed evaluation results and rankings for all proposers, including the weighted scores associated with each evaluation factor.

Metro is currently constructing the Purple Line Extension (PLE), Section 1, completing the procurement of a design-build contract for Section 2, in January 2017 and issuance of NTP by April

2017, and performing engineering design for Section 3. This rail line extension expands service from the existing terminus of the Purple Line at the Wilshire/Western Station to Westwood.

In accordance with the Rail Fleet Management Plan FY2015-FY2040, Metro anticipates a need to expand the rail fleet to accommodate anticipated growth in ridership, support line extensions and replace vehicles reaching the end of its useful revenue service life.

The 64 HRV Base Order will address the operational service requirements of PLE Section 1 with 34 HRVs; the remaining 30 HRVs will be used to replace the 30 original A650 vehicles that will be reaching the end of its useful revenue service life in approximately six (6) years. The delivery of the new vehicles is scheduled to be completed within 62 months following issuance of NTP at a rate of up to four (4) vehicles per month. There are provisions to impose liquidated damages for late deliveries.

The Contract contains five (5) Options, up to 218 additional vehicles, as part of this procurement action, but the authority to award the Options is not included in the staff recommendation.

- Option 1 - 24 HRVs: Red Line Service Expansion
- Option 2 - 84 HRVs: System Service Expansion
- Option 3 - 20 HRVs: PLE, Section 2
- Option 4 - 16 HRVs: PLE, Section 3
- Option 5 - 74 HRVs: Replacement of existing 74 A650 vehicles

The Options may be exercised in combination or sequence as long they follow the Option expiration dates defined in the Contract. The first Option (any Option #1 through #5) may be exercised not later than 34 months following the Commencement Date or eight months following Shipment of the Pilot Cars, whichever is later. The successive Options must each be exercised within four months of when the preceding one is exercised. The dates are established to minimize impact to production and to limit escalation risks.

The Diversity and Economic Opportunity Department (DEOD) did not recommend a Disadvantaged Business Enterprise (DBE) goal for this procurement as it is not applicable (please refer to Attachment E). This procurement falls under the Federal Transit Administration's (FTA) Transit Vehicle Manufacturer (TVM) goal in accordance with 49 Code of Federal Regulations (CFR) Part 26.49. However, CRRC MA has an established DBE goal of 6.45% with the FTA.

US DOT Contracting Initiative Pilot & Enhanced U.S. Content Programs

Metro created a new Local Employment Program (LEP) that was approved for use under the U.S. Department of Transportation's (DOT) Contracting Initiative Pilot Program. This pilot program allows for the application of geographical preferences in the evaluation of Construction and Rolling Stock projects.

Metro's LEP was approved by the FTA in September 2015 for application on the HR4000 HRV Acquisition on a voluntary basis. The LEP incentivized proposers to create new jobs in the State of California and invest in local facility construction as a function of the best value evaluation process by providing preferential scoring points based on the committed wages and benefits for new workers. At least 10 percent of the new jobs are targeted for defined disadvantaged populations.

Staff's goal of creating meaningful new manufacturing local jobs was achieved as evidenced by CRRCA's commitment to creating new jobs in the State of California totaling \$38,395,972 in wages and benefits covering the period from NTP to November 2026 for the Base Order; if all five (5) Options are exercised the LEP will conclude in January 2031.

The RFP also included an additional incentive for Enhanced U.S. Content as a result of recent California law (AB 1097), which provides transit agencies with the ability to include preferential scoring provisions for proposers who offer U.S. component content in excess of the Federal Buy America requirement of 60%. The Enhanced U.S. Content program is voluntary and is not part of any direct evaluation scoring. However, the monetary value of the Enhanced U.S. Content submittal in excess of 60% was used as a Best Value trade-off against the Price factor for evaluation purposes only. The recommended Awardee committed to a 65% U.S. content for the duration of the Contract.

DETERMINATION OF SAFETY IMPACT

The approval of this contract award will have a direct and positive impact to system safety, service quality, system reliability and overall customer satisfaction. The procurement of 64 new HRVs will feature the most current safety systems and augment service levels by replacing the existing A650 series HRVs.

FINANCIAL IMPACT

The total not-to-exceed contract amount to support the Base Order is \$178,395,869. Funding for the procurement of the 64 HRV Base Order is summarized below:

64 HRV Base Order

PLE Section 1 (34 HRVs): \$160 million is budgeted in the capital LOP budget of Project 865518 - Westside Subway Extension and is included in the Full Funding Grant Agreement and is eligible for TIFIA loan proceed funding.

A650 Vehicle Replacement (30 HRVs): \$130.9 million is budgeted in the capital budget of Project 206037 - HR4000 HRV Procurement.

The FY17 planned expenditure of \$16,338,127 is included in the combined annual budgets for the two aforementioned projects in Project 206037, Cost Center 3043, Rail Vehicle Acquisition, and Project 865518, Cost Center 8510, Construction Contracts/Procurement.

Since this is a multi-year contract, the cost center Manager will ensure that costs will be budgeted in future years.

Impact to Budget

The source of funds for this action affecting PLE, Section 1 is a combination of Federal New Starts, TIFIA, and Measure R 35%, and is within the Adopted LOP and FY17 annual budgets. Funding sources for the PLE, Section 1 are planned for the design, construction and procurement efforts; these funds are not eligible for operations. Funding for the replacement vehicles share of the procurement (project 206037) is Proposition A 35% bonds.

The funding sources under this Project (inclusive of Project 865518 and Project 206037) for the 64 HRV Base Order HRVs are sufficient to award the base contract of this recommendation. Staff is actively pursuing additional eligible federal sources. Staff is also pursuing additional State and Local funding sources such as Cap and Trade and similar sources as they become available to meet the funding needs of this project.

ALTERNATIVES CONSIDERED

The Board of Directors may choose not to authorize the contract award for this project; however, this alternative is not recommended as this project is critical to support the Purple Line Extension, and retire the oldest HRVs in the fleet.

NEXT STEPS

Upon Board award approval, a Contract will be executed and a Notice-to-Proceed will be issued to CRRC MA once all insurance and bonding requirements are met. Metro and CRRC MA, will then mobilize required resources to ensure timely completion of deliverables by the Vehicle Contractor.

ATTACHMENTS

Attachment A - Procurement Summary
Attachment B - July 17, 2014 Board Authorization for Best Value Procurement
Attachment C - Funding/Expenditure Plan
Attachment D - FTA Local Pilot Hiring Program (September 30, 2015)
Attachment E - DEOD Summary

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Phillip A. Washington
Chief Executive Officer

PROCUREMENT SUMMARY

**HR4000 HEAVY RAIL VEHICLES (HRV) ACQUISITION,
RAIL VEHICLE CONTRACTOR/OP6355500HR4000**

1.	Contract Number: OP6355500HR4000	
2.	Recommended Vendor: CRRC MA Corporation	
3.	Type of Procurement (check one): <input type="checkbox"/> IFB <input checked="" type="checkbox"/> RFP <input type="checkbox"/> RFP-A&E <input type="checkbox"/> Non-Competitive <input type="checkbox"/> Modification <input type="checkbox"/> Task Order	
4.	Procurement Dates:	
	A. Issued: 05.29.15	
	B. Advertised/Publicized: 06.06.15	
	C. Pre-proposal/Pre-Bid Conference: 06.18.15	
	D. Proposals/Bids Due: 01.11.16	
	E. Pre-Qualification Completed: 10.10.16	
	F. Conflict of Interest Form Submitted to Ethics: 09.19.16	
	G. Protest Period End Date: 11.18.16	
5.	Solicitations Picked up/Downloaded: 181	Bids/Proposals Received: 2
6.	Contract Administrator: Joe Marzano	Telephone Number: (213) 922-7014
7.	Project Manager: Cop Tran	Telephone Number: (213) 922-3188

A. Procurement Background

This Board Action is to approve Contract No. OP6355500HR4000 for the purchase of new Heavy Rail Vehicles (HRVs) to support the Purple Line Extension and to replace the original 30 A650 HRVs. The Base order is for 64 HRVs: 34 vehicles are for Section 1 of the Purple Line Extension and 30 vehicles are to replace the original A650 HRVs that are expected to reach the end of its useful life. The Contract also includes options for up to 218 additional vehicles to meet future service expansions and the opening of new subway extensions. Board approval of contract awards are subject to resolution of any properly submitted protest.

The RFP was issued in accordance with Metro's Acquisition Policy and the contract type is a firm fixed unit price.

Sixteen amendments were issued during the solicitation phase of this RFP:

- Amendment No. 1, issued on 06.05.15 provided the pre-proposal conference meeting location and agenda;
- Amendment No. 2, issued on 06.19.15 established a project data repository for planholder access to reference documents;
- Amendment No. 3, issued on 07.07.15 extended the proposal due date to 10.30.15 and edited the Technical Specifications and commercial terms;
- Amendment No. 4, issued on 08.03.15 extended the proposal due date to 11.30.15, edited the Technical Specifications and commercial terms and provided edited pricing and Local Employment Program (LEP) forms;

- Amendment No. 5, issued on 08.20.15 edited the Technical Specifications and commercial terms and provided edited pricing form (PF-5);
- Amendment No. 6, issued on 09.04.15 edited the Technical Specifications and commercial terms;
- Amendment No. 7, issued on 09.18.15 edited the Technical Specifications;
- Amendment No. 8, issued on 09.18.15 edited the Technical Specifications, commercial terms and Local Employment Program;
- Amendment No. 9, issued on 10.28.15 extended the proposal due date to 01.11.16;
- Amendment No. 10, issued on 12.08.15 edited the Technical Specifications and commercial terms;
- Amendment No. 11, issued on 12.18.15 edited the commercial terms;
- Amendment No. 12, issued on 07.12.16 after receipt of proposals requested Best and Final Offers (BAFOs), established BAFO due date of 08.08.16;
- Amendment No. 13, issued on 07.18.16 after receipt of proposals extended the BAFO due date to 08.22.16 and edited the Technical Specifications and commercial terms;
- Amendment No. 14, issued on 07.21.16 after receipt of proposals edited the commercial terms and provided pricing forms in excel format;
- Amendment No. 15, issued on 08.16.16 after receipt of proposals extended the BAFO due date to 09.07.16; and
- Amendment No. 16, issued on 08.25.16 after receipt of proposals edited the technical specification.

A total of two proposals were received on January 11, 2016. A pre-proposal conference and vehicle inspection was held on June 18, 2015. An additional vehicle inspection and shop tour was provided to proposers in the competitive range during negotiations in June 2016.

Metro's responses to questions received throughout the solicitation period were made accessible to all solicitation plan holders by posting them to the Metro project data repository. There were 234 questions and answers uploaded to the Metro site from June 19, 2015 to December 18, 2015. All available drawings, manuals, and other reference material were posted to the site.

Over the course of the solicitation period there were several requests to extend the proposal due date by prospective proposers. Metro agreed to extend the proposal due date from October 1, 2015 to January 11, 2016. Proposers also requested extensions to the BAFO due date from August 8, 2016 to September 7, 2016. These extension requests were granted to ensure maximum competition from an already limited field of interested proposers.

The proposal evaluation period, from January 11, 2016, through July 11, 2016, included oral presentations, proposer capacity and capability site visits, transit agency reference verifications and face-to-face negotiations. This comprehensive

process was necessary to thoroughly assess the strengths and weaknesses of each of the proposer's technical and price proposals.

B. Evaluation of Proposals/Bids

A Proposal Evaluation Team (PET) consisting of staff from Rail Vehicle Acquisition, Rail Fleet Services, and Rail Transportation was convened and conducted a comprehensive technical evaluation of the proposals received. Furthermore, technical advisors (TAs) from Metro's Rail Fleet Services, Rail Wayside Systems, Rail Vehicle Engineering and Metro contracted technical consultants provided reports to the PET as Subject Matter Experts (SMEs).

The proposals were evaluated based on the following evaluation criteria and weights:

- | | |
|--|------------|
| • Past Experience and Past Performance | 375 points |
| • Price | 300 points |
| • Technical Compliance | 250 points |
| • Project Management Experience | 75 points |
| • Voluntary Local Employment Program | 50 points |

The evaluation criteria are appropriate and consistent with criteria developed for other, similar vehicle acquisition procurements. Several factors were considered when developing these criteria and weights, giving the greatest importance to past experience and past performance on new rail vehicle delivery.

Both proposals received were determined to be within the competitive range. The firms are listed below in alphabetical order:

1. CRRC MA Corporation (CRRC MA)
2. Hyundai Rotem U.S.A., Inc. (Hyundai Rotem)

The proposal evaluation kick-off was conducted on January 12, 2016. Technical Advisors (TAs) were used to support the PET with their expertise in the relevant subject matter. Comments from the PET and TAs were compiled during the week of February 15, 2016 and a Request for Clarification (RFC) was sent to both proposers on February 25, 2016, with a due date of March 11, 2016. A clarification due date extension request was granted, extending the clarification due date to March 25, 2016.

The proposer oral presentations and capacity and capability site visits were scheduled with each firm in April 2016. CRRC MA's oral presentation and site visit was held at its carshell manufacturing facility in Changchun, China on April 25-26, 2016. Hyundai Rotem's oral presentation and site visit was held at its carshell and truck manufacturing facility in Changwon, South Korea on April 28-29, 2016. During the oral presentation and site visit, the proposer's project managers and key team members had an opportunity to present each team's qualifications, project

management plan and facility capability and capacity at its respective manufacturing location.

In May, 2016, several in-person transit agency reference check visits were conducted to verify each proposer's past performance and past experience. During the in-person agency reference verification visits, Metro staff met with transit agency project management, operations and maintenance personnel to learn about their experience conducting business with the proposer and to witness the vehicles in its operating environment. Metro staff also verified references by telephone and through written reference verification surveys sent directly to Metro prior to the proposal due date from other transit agencies.

The PET considered the proposals, oral presentations, site visits and reference verification in its initial technical proposal evaluation score. The price proposals were then opened and pre-negotiation positions were established using Metro's Independent Cost Estimate (ICE). Prior to negotiations, the PET compiled each proposer's relative strengths and weaknesses for discussion during negotiations to provide proposers with an opportunity to improve its proposal in the BAFO.

Negotiation discussions were held from June 20, 2016, to July 1, 2016, culminating in conformed commercial terms and Technical Specifications to be used as the basis for the request for BAFO. Invitations to submit a BAFO were issued to both proposers in the competitive range on July 12, 2016, with a BAFO due date of August 8, 2016. Two BAFO due date extension requests were granted extending the BAFO due date to September 7, 2016. The final evaluations of the BAFO were completed the week of September 26, 2016, and were used as the basis of the final recommendation for award.

Metro conducted a Buy America Pre-Award Audit on both Proposers the week of October 10, 2016, in accordance with FTA guidance. Both Proposers were audited and found to exceed the FTA's Buy America requirements. The enhanced U.S. content commitment will be made a contractual requirement.

Qualifications Summary of Firms within the Competitive Range: **CRRC MA Corporation**

CRRC MA, a subsidiary of CRRC Corporation Ltd., is the largest rolling stock manufacturer in the world and has supplied vehicles to over 13 countries including Brazil, Argentina, Australia and New Zealand. CRRC MA has proposed to perform carshell manufacturing at its Changchun, China facility with final assembly occurring in Springfield, MA. Final assembly for Metro railcars will occur at CRRC MA's facility currently under construction in Springfield MA. The final assembly facility will consist of 40 acres which will include vehicle production facilities and a test track used to conduct routine and dynamic railcar testing. Construction on the facility is currently on schedule and is expected to be completed by Summer 2017. Major component manufacturing for the propulsion, heating, ventilation and air conditioning (HVAC)

and lighting systems will be performed at a facility in Los Angeles as part of its Local Employment Program where CRRC MA intends to supply these systems to all of its North American customers, including Metro.

CRRC MA's proposal strengths include lowest evaluated Price offer and the highest technically rated proposal. CRRC MA ranked highest in all technical evaluation categories including Past Experience and Past Performance, Technical Compliance and Project Management. CRRC MA also had the highest commitments for Metro's Local Employment Program and Enhanced U.S. Content Program.

Hyundai Rotem U.S.A, Inc.

Hyundai Rotem is part of the Hyundai Motor Group and has supplied rolling stock vehicles to over 15 countries including the U.S., Turkey, India, Greece, Canada, Brazil, Australia, and New Zealand. In the U.S., Hyundai Rotem has supplied rail vehicles to SEPTA, Denver RTD, MBTA, Tri-Rail (Miami) and Metrolink. Hyundai Rotem has proposed to perform carshell and truck manufacturing at its Changwon, South Korea facility with final assembly performed at a facility in Los Angeles as part of its Local Employment Program.

Hyundai Rotem's strength is that it has experience delivering rail vehicles in the U.S. However, Hyundai Rotem was two years late on the SEPTA project and over one year late on the Metrolink project. Hyundai Rotem has since improved its schedule performance record by delivering the Denver RTD vehicles on-time. Overall, its Past Performance, Technical Compliance and Project Management elements were not evaluated to be as strong as the recommended awardee. Hyundai Rotem also had a lower Local Employment Program value and higher Price offer.

1	Firm	Average Score	Factor Weight	Weighted Average Score	Rank
2	CRRC MA Corporation				
3	Past Experience and Past Performance	80.22	375	300.8	
4	Price (Base + Options) with enhanced U.S. content	100.00	300	300.0	
5	Technical Compliance	79.78	250	199.4	
6	Project Management	81.71	75	61.3	
7	Voluntary Local Employment Program Incentive	100.00	50	50.0	
8	Total		1050	911.5	1
9	Hyundai Rotem U.S.A, Inc.				
10	Past Experience and Past Performance	75.77	375	284.1	
11	Price (Base + Options) with enhanced U.S. content	95.76	300	287.3	
12	Technical Compliance	75.28	250	188.2	

13	Project Management	76.93	75	57.7	
14	Voluntary Local Employment Program Incentive	75.63	50	37.8	
15	Total		1050	855.1	2

Two important evaluation factors introduced to the RFP process were the incentives created by Metro's voluntary Local Employment Plan and its Enhanced U.S. Content Program. Both firms proposed a level of participation in the Local Employment Plan and also proposed U.S. content in excess of the FTA's 60% Buy America content requirement. This participation in both programs resulted in incentive points for the Local Employment Program, and a trade-off against the Price factor for the value of the proposed U.S. content in excess of 60%. CRRC MA proposed a higher level of commitment for new local jobs as well as enhanced U.S. content value; thus, it received more points for new local jobs and a higher trade-off value that was applied to their Price score.

Local Employment Plan

		CRRC MA Corporation	Hyundai Rotem U.S.A., Inc.
A.	Total Local Employment, Facility and Training Investment	\$38,395,972	\$29,038,721

Enhanced U.S. Content Program – Price Trade Off

		CRRC MA Corporation	Hyundai Rotem U.S.A., Inc.
A.	BAFO Price (Base & Options)	\$646,995,869	\$670,065,708
B.	Estimated Travel Costs	\$773,572	\$926,738
C.	Enhanced U.S. Content Value	\$21,512,934	\$16,983,531
D.	Proposed Price for Evaluation Purposes only (Row A + B - C)	\$626,256,507	\$654,008,915

Note: Estimated travel costs and U.S. Content Value are for evaluation purposes only.

C. Cost/Price Analysis

The recommended price has been determined to be fair and reasonable based upon adequate price competition, ICE, technical evaluation, fact finding, and negotiations. The recommended price for the Base Contract and Options, spare parts, special tools, diagnostic equipment, training aids and performance bond is \$552,991,216 or 46% lower than the ICE. The Base Contract vehicle unit price of \$2,350,000 per car is consistent with other recent contract awards to CRRC by Massachusetts Bay Transportation Authority (MBTA), and Chicago Transit Authority (CTA). The recommended Base Contract per car unit price of the HR4000 is also consistent with a recent contract awarded by New York City Transit (NYCT).

	Proposer Name	Proposal Amount	Metro ICE	BAFO Price
1.	CRRC MA Corporation	\$637,468,068	\$1,199,987,085	\$646,995,869

2.	Hyundai Rotem U.S.A, Inc.	\$683,137,887	\$1,199,897,085	\$670,065,708
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D. Background on Recommended Contractor

The recommended firm, CRRC MA, located in Boston, MA, is a wholly owned subsidiary of CRRC Corporation Ltd., headquartered in Changchun, China. CRRC was formed on June 1, 2015, with the merger of China CNR Corporation Ltd. and CSR Corporation Ltd. and is the largest rolling stock manufacturer in the world. CRRC has over 50 years of vehicle development and construction experience with an annual production capacity of 1,000 high speed rail vehicles, 1200 urban railway vehicles, 500 general railway vehicles and 6000 trucks. Since 1959, CRRC MA has produced over 30,000 railway vehicles. CRRC MA has a skilled workforce of over 13,000 workers worldwide with over 1,223 acres of manufacturing floor space. CRRC MA has recently been awarded contracts to supply MBTA for up to 284 new heavy rail vehicles including Options and CTA for up to 846 new heavy rail vehicles including Options.

**Metro**

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**SYSTEM SAFETY, SECURITY AND OPERATIONS COMMITTEE
JULY 17, 2014**

**SUBJECT: PURCHASE OF NEW HEAVY RAIL VEHICLES AND REFURBISHMENT
OF A650 HEAVY RAIL VEHICLES & P2000 LIGHT RAIL VEHICLES**

**ACTION: AUTHORIZE REQUEST FOR PROPOSAL SOLICITATIONS FOR RAIL
CAR PROCUREMENTS**

RECOMMENDATION

A. The Board finds that rail vehicle procurements in compliance with Public Utilities Code (PUC) §130232 low bid requirement, does not constitute an adequate procurement method for LACMTA needs. Pursuant to Public Contracts Code (PCC) §20217, authorize procurement by competitive negotiation for the following: 1) Procurement of new heavy rail vehicles; 2) Refurbishment of existing A650 heavy rail vehicles; and 3) Refurbishment of existing P2000 light rail vehicles.

Requires Two-Thirds Vote

B. Authorize the Chief Executive Officer (CEO) to solicit Best Value Requests for Proposals (RFPs) as competitive negotiations pursuant to PCC § 20217 and Metro's procurement policies and procedures, for contracts to purchase new rail vehicles and to refurbish existing rail vehicles.

ISSUE

Staff is developing the technical and quantity requirements for the new rail car procurement and the rail car refurbishment procurements. It has been determined that they constitute specialized rail transit equipment purchases. This determination renders it appropriate that the new heavy rail vehicles and the refurbishment of existing light and heavy rail vehicles, be procured by a competitively negotiated process in accordance with PCC § 20217. PCC § 20217 states that the Board, upon a finding by two-thirds vote of all members, may find that the competitive low bid procurement method is not adequate for the agency's needs and direct that the procurements be conducted through competitive negotiation.

DISCUSSION

It is in the public's interest to utilize competitive negotiation rather than a sealed bid process to consider factors other than price in the award of contracts for vehicles and refurbishment of vehicles as allowed under PCC § 20217. The competitive negotiation process allows consideration of factors other than price that could not be adequately quantified or considered in a strictly low bid procurement.

Staff recommends the use of Best Value solicitations for all three rail car programs to allow for the consideration of technical and commercial factors, as well as price, in the contract award selection process.

By establishing explicit factors that identify Metro's definition of best value, the solicitation can use important evaluation criteria to augment price considerations; such as past performance related to schedule adherence, quality, reliability and vehicle performance.

In addition to the ability to evaluate key technical and schedule factors, the Best Value Request for Proposal process permits direct discussions and negotiations with proposers to clarify requirements and cost prior to an award recommendation. This process minimizes the risks associated with a complex specification and scope of work by allowing the parties to clarify ambiguities and correct deficiencies.

FINANCIAL IMPACT

The requested action has no financial impact at this time. However, future activities associated with the respective procurements will be charged against the adopted Life of Project budgets for the affected heavy rail and light rail vehicle projects. Upon completion of the Request for Proposals, staff will present more detailed plan addressing financial impacts and impact to budget.

ALTERNATIVES CONSIDERED

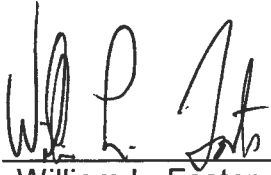
Procurement by a low bid process was considered but is not recommended. The sealed bid process does not adequately account for any technical superiority of performance, reliability, or system life cycle costs that on firm's equipment or solution may have over another since the process must award to the lowest responsive and responsible bidder. For these reasons, staff does not recommend this alternative. The competitively negotiated procurement process will provide for evaluation of critical non-price related factors in the selection process.

NEXT STEPS

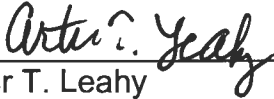
If this action is approved, staff would proceed with competitively negotiated best value solicitations for the new heavy rail vehicle and the refurbishment of the P2000 and A650 vehicles.

Prepared by: Richard Hunt, General Manager Strategic Vehicle &
Infrastructure Delivery

Questions: Carolyn Kreslake, Transportation Planning Manager IV
213-922-7420



William L. Foster
Interim Chief Operations Officer



Arthur T. Leahy
Chief Executive Officer

ATTACHMENT C - Funds Uses and Sources Tables

	From Inception to Date (ITD) thru FY14 Jun	7/1/14 - 6/30/15	7/1/15 - 6/30/16	7/1/16 - 6/30/17	7/1/17 - 6/30/18	7/1/18 - 6/30/19	7/1/19 - 6/30/20	7/1/20 - 6/30/21	7/1/21 - 6/30/22		
Use of Funds		FY15	FY16	FY17	FY18	FY19	FY20	FY21	FY22	Total	% of Project
Replacement: 30 Vehicles (CP 206037)	\$0	\$0	\$595,000	\$5,900,000	\$14,800,000	\$16,000,000	\$17,138,141	\$17,000,000	\$8,845,000	\$80,278,141	34.5%
Professional Services	\$0	\$629,759	\$405,000	\$1,123,200	\$1,500,000	\$1,500,000	\$1,500,000	\$1,200,000	\$1,367,000	\$9,225,000	4.0%
MTA Administration	\$279,343	\$157,890	\$500,000	\$775,000	\$859,568	\$812,668	\$833,068	\$839,068	\$335,295	\$5,370,188	2.3%
Contingency	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$9,885,150	\$9,845,346	4.2%
Total	\$279,343	\$787,649	\$1,500,000	\$7,798,200	\$17,159,568	\$18,312,668	\$19,471,209	\$19,039,068	\$20,432,445	\$104,718,675	45.0%
WSE Section 1: 34 Vehicles (Project 865518)	\$0	\$0	\$0	\$7,216,124	\$18,727,728	\$18,500,000	\$19,000,000	\$18,557,728	\$16,116,148	\$98,117,728	42.2%
Professional Services	\$0	\$0	\$0	\$873,803	\$2,277,881	\$2,277,881	\$2,277,881	\$1,754,073	\$1,813,481	\$11,275,000	4.8%
MTA Administration	\$0	\$50,000	\$50,000	\$500,000	\$1,197,936	\$1,197,936	\$1,198,836	\$1,198,836	\$1,196,556	\$6,563,564	2.8%
Contingency	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$12,081,850	\$12,033,200	9.4%
Total	\$0	\$50,000	\$50,000	\$8,589,927	\$22,203,545	\$21,975,817	\$22,476,717	\$21,510,637	\$31,208,035	\$127,989,492	55.0%
Base Order Total	\$279,343	\$837,649	\$1,550,000	\$16,388,127	\$39,363,113	\$40,288,485	\$41,947,926	\$40,549,705	\$51,640,480	\$232,708,167	100.0%

	From Inception to Date (ITD) thru FY14 Jun	7/1/14 - 6/30/15	7/1/15 - 6/30/16	7/1/16 - 6/30/17	7/1/17 - 6/30/18	7/1/18 - 6/30/19	7/1/19 - 6/30/20	7/1/20 - 6/30/21	7/1/21 - 6/30/22		
Base Order Summary		FY15	FY16	FY17	FY18	FY19	FY20	FY21	FY22	Total Uses	% of Project
Use of Funds											
Base Order 64 Vehicles	\$0	\$0	\$595,000	\$13,116,124	\$33,527,728	\$34,500,000	\$36,138,141	\$35,557,728	\$24,961,148	\$178,395,869	76.7%
Professional Services	\$0	\$629,759	\$405,000	\$1,997,003	\$3,777,881	\$3,777,881	\$3,777,881	\$2,954,073	\$3,180,481	\$20,500,000	8.8%
MTA Administration	\$279,343	\$207,890	\$550,000	\$1,275,000	\$2,057,504	\$2,010,604	\$2,031,904	\$2,037,904	\$1,531,851	\$11,933,752	5.1%
Contingency	\$0	\$0	\$0	\$0					\$21,967,000	\$21,878,546	9.4%
Base Order Summary Total	\$279,343	\$837,649	\$1,550,000	\$16,388,127	\$39,363,113	\$40,288,485	\$41,947,926	\$40,549,705	\$51,640,480	\$232,708,167	100.0%

	From Inception to Date (ITD) thru FY14 Jun	7/1/14 - 6/30/15	7/1/15 - 6/30/16	7/1/16 - 6/30/17	7/1/17 - 6/30/18	7/1/18 - 6/30/19	7/1/19 - 6/30/20	7/1/20 - 6/30/21	7/1/21 - 6/30/22		
Options Order Summary		FY15	FY16	FY17	FY18	FY19	FY20	FY21	FY22	Total Uses	% of Project
Use of Funds											
Option 1 - 24 Vehicles for Red Line Expansion	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$52,800,000	\$52,800,000	11.3%
Option 2 - 84 Vehicles System Expansion	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$184,800,000	\$184,800,000	39.4%
Option 3 - 20 Vehicles PLE, Section 2	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$42,000,000	\$42,000,000	9.0%
Option 4 - 16 Vehicles PLE, Section 3	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$33,600,000	\$33,600,000	7.2%
Option 5 - 74 Vehicles Replacement of existing 74 A650 vehicles	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$155,400,000	\$155,400,000	33.2%
Option Order Summary Total	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$468,600,000	\$468,600,000	100.0%

		FY15	FY16	FY17	FY18	FY19	FY20	FY21		Total Sources	%
Sources of Funds											
Measure R 35% Per WSE PLE Sec 1 (865518)	\$0	\$50,000	\$50,000	\$8,589,927	\$22,203,545	\$21,975,817	\$22,476,717	\$21,510,637	\$31,208,035	\$128,064,678	
<i>Reference the Adopted Uses and Sources for \$2,739,510,000 Life of Project Budget for WSE PLE Section 1</i>											
Measure R 2% (206037)	\$279,343	\$787,649	\$1,500,000	\$3,899,100						\$6,466,092	
Cap and Trade; Other State & Federal sources (206037)*				\$3,899,100	\$17,159,568	\$18,312,668	\$19,471,209	\$19,039,068	\$20,432,445	\$98,314,058	
<i>* Future Local, State & Federal Funds to be identified as they become available.</i>											
Total Funding Sources	\$279,343	\$837,649	\$1,550,000	\$16,388,127	\$39,363,113	\$40,288,485	\$41,947,926	\$40,549,705	\$51,640,480	\$232,844,828	

* Staff will pursue additional funding sources to supplement Project 206037 budget which may become available through MAP-21 or other federal sources for this project. Staff will also utilize other State and Local funding sources as opportunities arise such as Cap and Trade or other new sources.



U.S. Department
of Transportation
**Federal Transit
Administration**

REGION IX
Arizona, California,
Hawaii, Nevada, Guam
American Samoa,
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SEP 30 2015

Stephanie Wiggins
Deputy Chief Executive Officer
Los Angeles County Metropolitan
Transportation Authority
One Gateway Plaza
Los Angeles, CA 90012-2952

Re: Application for Inclusion in
U.S. Department of Transportation's
Contracting Initiative Pilot Program

Dear Ms. *Stephanie* Wiggins:

Thank you for the application submitted by the Los Angeles County Metropolitan Transportation Authority (LACMTA) to the United States Department of Transportation (DOT) Contracting Initiative Pilot Program.¹ The Federal Transit Administration (FTA) accepts LACMTA's proposals for inclusion in the program with certain modifications, as described more fully below.

FTA understands that LACMTA has four contracting opportunities involving rolling stock that it would like to include in the Pilot Program. These contracting opportunities include contracts for (1) the purchase of 282 heavy rail vehicles; (2) the purchase of up to 600 new buses; (3) the mid-life overhaul of 74 heavy rail vehicles; and (4) the mid-life overhaul of 82 light rail vehicles. In support of its application, LACMTA submitted the following documents: April 13, 2015 Submittal to FTA for Admission into Local Hiring Pilot Program; Local Employment Program (Mandatory) & Local Employment Program (Voluntary); P3010 US Employment Value Summary Trade-off Analysis – Attachment 1; and May 8, 2015 Response to Supplemental Questions Regarding Application for Local Hiring Pilot Program.

LACMTA proposes a mandatory Local Employment Plan (LEP) for the heavy rail contract and voluntary LEPs for the bus purchase and overhaul contracts. The LEP in both circumstances would target new and existing jobs in Los Angeles County and would provide that at least 10 percent of the jobs be targeted at disadvantaged populations. The proposed mandatory LEP would make the inclusion of an LEP a requirement of responsiveness, and would constitute 10 percent of the total points available for all RFP evaluation factors. The proposed voluntary LEP would provide the bidder with additional "bonus" points that could be awarded if the bidder includes an LEP with its bid.

¹ The DOT Contracting Initiative is described in more detail in 80 FR 12257 (March 6, 2015).

In considering whether to approve a proposed contract requirement under the Pilot Program, FTA is guided by an August 2013 opinion of the Office of Legal Counsel (OLC) of the U.S. Department of Justice.² Under that opinion, FTA may approve a proposed contract requirement that is likely to have only an incidental effect on the pool of potential bidders, or that imposes reasonable requirements related to the performance of the necessary work. Or, if a proposed specification is likely to have more than an incidental effect on the pool of potential bidders and is unrelated to the work's performance, FTA still may approve the requirement if it "promotes the efficient and effective use of federal funds in the short or long run" or "safeguards the integrity of the competitive bidding process." The OLC decision leaves to FTA discretion the determination of what constitutes the "efficient and effective use of federal funds."

FTA is concerned that the proposed voluntary and involuntary programs both may have more than an incidental effect on the pool of potential bidders – at least with respect to the heavy rail car buy and the bus buy – because they could put at a disadvantage any manufacturer who does not already have a facility in the defined geographic area, and this competitive disadvantage is not relieved by the voluntary or involuntary nature of the program. However, an appropriate modification of LACMTA's proposed requirements will address our concerns.

Generally, FTA proposes modifications to the following provisions: the voluntary versus mandatory nature of the LEP requirement; credit given for new versus existing jobs; and the geographic area eligible for LEP participation. FTA is concerned with making the LEP mandatory, as well as awarding credit for existing jobs within Los Angeles County because both terms could give an undue advantage to potential bidders already located within Los Angeles County. Additionally, FTA examined the competitive markets within LACMTA's proposed geographic focus of Los Angeles County, and determined that for two of the contracts such a geographic limitation could afford an unfair competitive advantage.

FTA evaluated each proposed program and contracting opportunity and requests the following modifications.

Purchase of 282 Heavy Rail Vehicles (Estimated Contract Cost: \$1.0558B)

The LACMTA proposal is a mandatory LEP that includes as part of the bid evaluation criteria credit for new and existing jobs in Los Angeles County. The proposal also includes a requirement that 10% of the jobs be targeted for disadvantaged persons. The LEP would constitute 10% of the available points.

Currently, there is one rail vehicle manufacturer in Los Angeles County, Kinkisharyo. Limiting the LEP to Los Angeles County and including existing jobs could provide Kinkisharyo with an unfair competitive advantage and could be an exclusionary or discriminatory specification prohibited by 49 U.S.C. § 5334(h). FTA requests that LACMTA modify the LEP for the heavy rail vehicles to make it a voluntary program, expand the geographic market to the state of California, and provide credit only for new jobs created, with 10% of the jobs targeted for disadvantaged persons.

² See *Competitive Bidding Requirements Under The Federal-Aid Highway Program*, 23 U.S.C. § 112 (August 23, 2013). The 2013 opinion is available at <http://www.justice.gov/olc/opinions>.

Purchase of up to 600 new buses (Estimated Contract Cost: \$325M)

The LACMTA proposal is a voluntary LEP that provides supplemental points for any proposer who includes an LEP. Bidders would receive credit for new and existing jobs in Los Angeles County. The proposal also includes a requirement that 10% of the jobs be targeted for disadvantaged persons.

Currently, there only is one bus manufacturer with a facility in Los Angeles County -- New Flyer. Accordingly, an LEP limited to the county could provide an unfair competitive advantage for that manufacturer, even if the program is voluntary. FTA requests that LACMTA modify the LEP for the 600 bus buy to expand the geographic market to the state of California, and provide credit only for new jobs created, and 10% of the jobs targeted for disadvantaged persons.

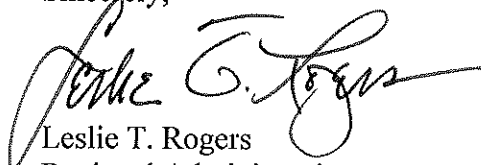
Mid-life overhaul of 82 light rail vehicles (Contract Value \$100M) and mid-life overhaul of 74 heavy rail vehicles (Contract Value \$46M)

The LACMTA proposal for the two mid-life overhaul contracts is the same: a voluntary LEP giving credit for new and existing jobs in Los Angeles County, and a requirement that 10% of the jobs be targeted for disadvantaged persons.

For overhaul contracts, the original vehicle manufacturer has an advantage for doing mid-life overhauls of its own vehicles. The original manufacturers for the vehicles subject to the contracts are not located in Los Angeles County, resulting in all potential bidders being similarly situated. Under these circumstances, limiting the geographic market to Los Angeles County does not provide an unfair competitive advantage for any one bidder. As with the other contracts, FTA requests that this LEP be limited to new jobs created and provide that 10% of the jobs be targeted for disadvantaged persons.

With the above modifications to LACMTA's proposed LEPs, FTA believes that inclusion of the four contracting opportunities in the Pilot Program would likely better promote the efficient and effective use of federal funds and safeguard the integrity of the competitive bidding process. Please let us know whether LACMTA is interested in participating in the Pilot Program under the proposed terms. If you have any questions, please contact Deputy Chief Counsel Dana Nifosi at 202-366-1643 or Dana.Nifosi@dot.gov.

Sincerely,


Leslie T. Rogers
Regional Administration

DEOD SUMMARY

**HEAVY RAIL VEHICLE (HRV) ACQUISITION,
RAIL VEHICLE CONTRACTOR/OP6355500HR4000****A. Small Business Participation**

The Diversity and Economic Opportunity Department did not recommend a Disadvantaged Business Enterprise (DBE) goal for this procurement. The Federal Transit Administration (FTA) requires that each Transit Vehicle Manufacturers (TVM) submit for approval an annual percentage overall goal. In accordance with 49 Code of Federal Regulations (CFR) Part 26.49, only those transit vehicle manufacturers listed on FTA's certified list of Transit Vehicle Manufacturers, or that have submitted a goal methodology to FTA that has been approved or has not been disapproved, at the time of solicitation are eligible to bid. CRRC MA Corporation is listed on the FTA's Eligible TVMs List.

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.

RFP No. HR4000 - New Heavy Rail Vehicle Procurement

Procurement Evaluation Team Award Recommendation



Metro

HRV Acquisition:

Scope & Plan:

- Procure 64 Base Order Cars
- Procure 218 Option Order Cars (5 Options)
- Replace Existing Fleet (104 Cars)
- Support Purple Line Extension Programs – Section 1, 2 & 3
- Add Capacity for Growth in Ridership

Coordination of HRV Projects

	A650	HR4000 (Base Order)
Existing Quantity	104	0
Replacement	(30)	30
Overhaul	74	0
Service Expansion (PLE-1)		34
Total	74	64
TOTAL FLEET	138 HRVs	



Award Recommendation Summary

Award to CRRC for \$178,395,869 as rated highest in accordance with approved evaluation criteria (reference [Appendix A](#))

- CRRC demonstrated best past performance in schedule adherence
- CRRC presented the highest technically rated proposal
- CRRC rated higher in Project Management
- CRRC presented the lowest cost offer (reference [Appendix B](#))
- CRRC will create the highest value of new local jobs and commits to purchasing a local facility (reference [Appendix C](#))
- CRRC commits to a U.S. Content percentage at 65% that exceeds the minimum Buy America requirements by 5% points

Best Technical; Lowest Price; Best LEP Commitment; Higher U.S. Content

Procurement Evaluation Team Process

- Proposals received January 11, 2016
- Initial Interviews Conducted April 2016
- Proposer Site Visits conducted April 2016
- Agency reference checks conducted May 2016
- Negotiations completed June 2016
- Best and Final Offer (BAFO) received September 2016
- Final Price & Technical Evaluation completed October 6, 2016

Scoring Result Summary

Evaluation Criteria	Total Possible	CRRC	Hyundai Rotem
Experience & Past Performance	375	301	284
Price	300	300	287
Technical Compliance	250	199	188
Project Management	75	61	58
Local Employment Program	50	50	38
Total Scores	1050	911	855

Total Price Summary including Options

	CRRC	Hyundai Rotem	ICE
Base Order – 64 Vehicles	\$178,395,869	\$201,945,983	\$242,234,271
Option 1: 24 Vehicles (Red Line Expansion)	\$52,800,000	\$51,402,442	\$97,936,471
Option 2: 84 Vehicles (System Capacity Improvement)	\$184,800,000	\$180,292,321	\$361,217,103
Option 3: 20 Vehicles (PLE Section 2)	\$42,000,000	\$42,932,118	\$83,783,969
Option 4: 16 Vehicles (PLE Section 3)	\$33,600,000	\$34,345,694	\$70,626,548
Option 5: 74 Vehicles (A650 Option Vehicle Replacement)	\$155,400,000	\$159,147,150	\$344,188,723
Total BAFO Price	\$646,995,869	\$670,065,708	\$1,199,987,085



Project Schedule – Going Forward

Milestones

Completion Date

- | | |
|---|----------------|
| • Board Award Approval | December 2016 |
| • Issue NTP | January 2016 |
| • Pilot Car Delivery & Acceptance | September 2019 |
| • Complete delivery of base order cars
(up to 4 cars /month) | July 2021 |
| • Open PLE, Section 1 | November 2023 |

Questions

Appendix A - HR4000 Evaluation Criteria

- Best Value RFP Evaluation Criteria Weight
 - Experience & Past Performance 36%
 - Price* 29%
 - Technical Compliance 24%
 - Project Management 7%
 - Local Employment Program** 5%
- *Enhanced U.S. Content Program
 - Dollar value in excess of 60% used as a trade-off against Price
 - Pre-Award Audit to confirm proposed excess U.S. Content is valid
- ** DOT Voluntary Local Employment Program
 - New wages and benefits for State of CA residents
 - Facility improvements credit
 - 10% of new wages and benefits must be disadvantaged workers

Appendix B - Base Vehicle Price Summary

	CRRC MA	Hyundai Rotem USA	Independent Cost Estimate
Base Order – 64 cars Total/Unit Price	\$150,400,000 / \$2,350,000	\$176,679,658 / \$2,760,620	\$227,732,672 / \$3,558,323
Spare Parts	\$14,670,541	\$11,562,315	\$5,416,500
Special Tools	\$3,970,646	\$3,957,825	\$139,000
Diagnostic Test Equipment	\$4,056,764	\$2,796,842	\$850,500
Training	\$264,000	\$301,600	\$250,000
Manuals	\$528,500	\$695,600	\$250,000
Cab Mock-up	\$487,500	\$810,700	\$3,215,599
Performance Bond	\$931,198	\$3,450,000	\$1,500,000
Alternative Technologies	\$3,086,720	\$1,691,443	\$2,880,000
BAFO Price	\$178,395,869	\$201,945,983	\$242,234,271

Note: Tax is not included for vehicles or spare parts.

Appendix C - Manufacturing & LEP Summary

	CRRC	Hyundai
Manufacture of HRV	Changchun, China	Changwon, S. Korea
Final Assembly	Boston, MA	Los Angeles, CA
Local Jobs Location	Los Angeles, CA	Los Angeles, CA
New Local Job Creation for Prime & Subcontractors	Prime Contractor: \$7.8M Subs: \$19.8M Total Labor: \$27.6 (52 FTEs)	Prime Contractor: \$25.2M Subs:\$0 Total Labor: \$25.2M (67 FTEs)
Facility Investment & Training	\$10.7M	\$3.8M
Total Local Employment Plan Value	\$38,395,972	\$29,038,721
LEP Value as % of Total Price	5.9%	4.3%