

**Metro**Los Angeles County  
Metropolitan Transportation AuthorityOne Gateway Plaza  
Los Angeles, CA 90012-2952213.9.0000 ext.  
metro.net**SYSTEM SAFETY AND OPERATIONS COMMITTEE  
OCTOBER 17, 2013****SUBJECT: P865/P2020 LIGHT RAIL VEHICLE POWERED AXLE ASSEMBLY  
OVERHAUL****ACTION: APPROVE CONTRACT AWARD****RECOMMENDATION**

Authorize the Chief Executive Officer to award a 60-month firm fixed price unit rate contract under Bid No. 13-0030 with ORX, the lowest responsive and responsible bidder, for the overhaul of 280 Nippon-Sharyo P865/P2020 light rail vehicle powered axle assemblies for an amount not-to-exceed \$6,610,682.

**ISSUE**

This procurement is for the acquisition of powered axle assembly overhaul services which are required for the safe and reliable operation of the Nippon-Sharyo P865/P2020 vehicles.

**DISCUSSION**

The Nippon-Sharyo P865/P2020 Light Rail Vehicle (LRV) fleet is in its twenty-third year of operation. To ensure a continued level of safety and reliability, the powered axle assembly must be overhauled in accordance with the Original Equipment Manufacturer's (OEM) suggested overhaul interval. The powered axle assembly consists of axle, traction gear unit, brake disc, wheels, ground ring assembly and journal bearings. Wear and tear on these parts in normal service requires both ongoing maintenance, which is performed by our personnel, and periodic overhaul, which is beyond the level of in-house maintenance capability.

The overhaul is designed to provide safe and reliable LRV operation, prolong equipment life, and increase the Mean Time between Failures (MTBF). The contractor will perform services in accordance with our specifications and Rail Fleet Services' scheduled requirements.

## **DETERMINATION OF SAFETY IMPACT**

The powered axle assembly is safety sensitive and one of the primary systems on the car that if defective will impact passenger comfort and ride quality, and cause mainline delays and passenger evacuations. The powered axle assembly overhaul minimizes such occurrences and ensures that the system is working as designed.

## **FINANCIAL IMPACT**

The total contract amount is \$6,610,682. Funding of \$400,000 for this procurement is included in the FY14 budget in Rail Cost Center 3941 - Rail Fleet Services Maintenance Blue Line, line item 50441 - Parts - Revenue Vehicle, project number 211018 – P865/P2020 Component Overhaul.

Since this is a multi-year contract, the cost center manager, project manager, and Executive Officer, Rail Fleet Services will ensure that the funds are budgeted in future fiscal years.

### **Impact to Budget**

The funding for this acquisition will come from local funds. These funds are eligible to be used for rail operations and rail capital projects. No other sources of funds were considered for this project because these are the designated funds available for rail operations. This procurement is part of the on-going maintenance costs of the rail program.

## **ALTERNATIVES CONSIDERED**

An alternative is to postpone the powered truck assembly overhaul. This is not recommended due to affected components reaching end of service life and will affect fleet availability and reliability. Unscheduled maintenance repairs on a per component level results in higher operating costs for the agency versus reduced costs performing this work on a scheduled program. Award of a contract for powered axle assembly overhaul services will improve fleet availability and reliability while ensuring compliance with the OEM's recommended overhaul cycle.

## **NEXT STEPS**

Overhaul of the powered axle assembly system on the Nippon-Sharyo P865/P2020 light rail vehicles will continue in accordance with Rail Fleet Services' scheduled requirements. If approved, the project is scheduled to commence in November 2013.

## **ATTACHMENTS**

- A. Procurement Summary
- B. Bid Tabulation

Prepared by: Nick Madanat, Director, Rail Vehicle Acquisition and Maintenance  
Richard Lozano, Executive Officer, Rail Vehicle Maintenance

Questions: Michelle Stewart, Transportation Planner I  
(213) 922-7270



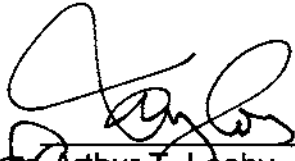
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Michelle Lopes Caldwell  
Chief Administrative Services Officer



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Frank Alejandro  
Chief Operations Officer



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Arthur T. Leahy  
Chief Executive Officer

## PROCUREMENT SUMMARY

## POWERED AXLE ASSEMBLY OVERHAUL

1.	Contract Number: 13-0030	
2.	Recommended Vendor: ORX, One Park Ave., Tipton, PA 16684	
3.	Type of Procurement (check one) : <input checked="" type="checkbox"/> IFB <input 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: 2/28/13	
	B. Advertised/Publicized: 3/03/13	
	C. Pre-proposal/Pre-Bid Conference: N/A	
	D. Proposals/Bids Due: 6/03/13	
	E. Pre-Qualification Completed: Yes	
	F. Conflict of Interest Form Submitted to Ethics: 9/20/13	
	G. Protest Period End Date: 10/23/13	
5.	Solicitations Picked up/Downloaded: 15	Bids/Proposals Received: 2
6.	Contract Administrator: Otto Ojong	Telephone Number: (213) 922-1454
7.	Project Manager: Brian Rydell	Telephone Number: (310) 816-5504

**A. Procurement Background**

Procurement of overhaul services for 280 light rail vehicle powered axle assemblies was conducted as a formal sealed bid, competitive acquisition, in support of awarding a Master Agreement in order to ensure availability and price stability.

IFB 13-0030 was issued February 28, 2013 and advertised March 3, 2013. Contract type is Firm-Fixed Price (FFP).

Three amendments were issued during the solicitation phase of this IFB:

- Amendment No. 1 issued on April 16, 2013 and Amendment No. 2 issued on May 2, 2013, extended the bid due date.
- Amendment No. 3 issued on May 9, 2013, provided formal responses to questions and requests for clarifications received from prospective bidders.

Two bids were received on June 3, 2013.

**B. Evaluation of Proposals/Bids**

A total of 2 bids were received June 3, 2013. The firm recommended for award, ORX, was found to be in full compliance with the bid requirements.

	<b>Bidder/Proposer Name</b>	<b>Bid/Proposal Amount</b>
1.	ORX	\$6,610,682
2.	Pamco Machine Works	\$8,612,830

**C. Cost/Price Analysis Explanation of Variances**

The recommended bid price of \$6,610,682 has been determined to be fair and reasonable based upon adequate price competition and selection of the lowest responsive and responsible bidder.

**D. Background on Recommended Contractor**

ORX is based in Tipton, Pennsylvania, and has been in business since 1979. ORX supplies new and remanufactured wheel set assemblies, axles, gear units and trucks to light rail and heavy rail car builders and transit authorities throughout United States and Canada. ORX was the OEM wheel set supplier for the Breda A650 and Siemens P2000 cars.

ORX does business with other transit agencies including Bay Area Rapid Transit (BART), Chicago Transit Authority (CTA), Metropolitan Atlanta Rapid Transit (MARTA), New Jersey Transit, New York Transit, Utah Transit Authority and Washington Metropolitan Area Transit Authority (WMATA). In the past, ORX has provided satisfactory service and delivery to Metro.

**E. Small Business Participation**

The Diversity and Economic Opportunity Department (DEOD) established a 5% Disadvantaged Business Enterprise (DBE) Anticipated Level of Participation (DALP) for this solicitation. ORX made a 2.12% DBE commitment.

<b>SMALL BUSINESS GOAL</b>	<b>DALP 5%</b>	<b>SMALL BUSINESS COMMITMENT</b>	<b>DBE 2.12%</b>
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	<b>DBE Subcontractors</b>	<b>% Committed</b>
1.	Vobecky Enterprises	2.12%
	<b>Total DBE Commitment</b>	<b>2.12%</b>

**ATTACHMENT B  
BID TABULATION**

**Bid No: 13-0030 P865/P2020 LRV Powered Axle Assembly Overhaul**

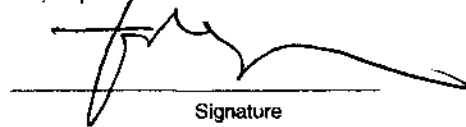
Bids Out: 02/28/13 Total 15  
 Bids Opened: 06/03/13 Total 2  
 Advertisement Date(s): 03/03/13  
 Newspaper: LA Daily News

				ORX		Pamco Machine Works Inc.	
Item	Description	Qty	Unit	Unit Price	Total Price	Unit Price	Total Price
<b>POWERED AXLE ASSEMBLY OVERHAUL</b>							
P865/P2020 LRV Powered Axle Assembly Basic Overhaul		280	EA	\$14,915.00	\$4,176,200.00	\$20,592.00	\$5,765,760.00
Subtotal					\$4,176,200.00		\$5,765,760.00
<b>Repair/Replacement</b>							
1	Axle	112	EA	\$2,714.00	\$303,968.00	\$4,933.00	\$552,496.00
2	Brake disc hub	84	EA	\$814.00	\$68,376.00	\$752.00	\$63,168.00
3	Wheel center	28	EA	\$2,596.00	\$72,688.00	\$2,669.00	\$74,732.00
4	Journal bearing	560	EA	\$1,189.00	\$665,840.00	\$1,509.00	\$845,040.00
5	Rubber Star of motor coupling	280	EA	\$171.00	\$47,880.00	\$151.00	\$42,280.00
6	Pinion gear (High Speed)	14	EA	\$2,103.00	\$29,442.00	\$3,030.00	\$42,420.00
7	GKA Flexible coupling	8	EA	\$2,775.00	\$22,200.00	\$2,352.00	\$18,816.00
8a	Spherical Rubber Bearings	280	Set	\$2,605.00	\$729,400.00	\$2,515.00	\$704,200.00
8b	Cardan Hollow Shaft	14	EA	\$4,086.00	\$57,204.00	\$4,500.00	\$63,000.00
9	Gear set	30	EA	\$8,297.00	\$248,910.00	\$7,574.00	\$227,220.00
10	Quill shaft replacement	6	EA	\$6,424.00	\$38,544.00	\$8,770.00	\$52,620.00
11	Repair quill shaft bearing housing	16	EA	\$2,228.00	\$35,648.00	\$1,451.00	\$23,216.00
12	Repair pinion shaft bearing housing	16	EA	\$1,699.00	\$27,184.00	\$150.00	\$2,400.00
13	Labyrinth seal	30	EA	\$1,573.00	\$47,190.00	\$1,123.00	\$33,690.00
14	Labyrinth seal flange	30	EA	\$418.00	\$12,540.00	\$1,452.00	\$43,560.00
15	Threaded hole repair	126	EA	\$218.00	\$27,468.00	\$462.00	\$58,212.00
Subtotal					\$2,434,482.00		\$2,847,070.00
<b>Grand Total</b>					<b>\$6,610,682.00</b>		<b>\$8,612,830.00</b>

I hereby certify ORX as being the lowest responsive, responsible bidder and recommend the award to them for a total price of \$6,610,682.00.

9/17/13

Date



Signature