



**Metro**

Metropolitan Transportation Authority

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**OPERATIONS COMMITTEE**

**JUNE 16, 2005**

**SUBJECT: AUTOMATED GUIDEWAY VEHICLES AND PROGRAMMABLE LOGIC CONTROL UPGRADE**

**ACTION: AWARD A CONTRACT FOR AUTOMATED GUIDEWAY VEHICLES (AGV) AND PROGRAMMABLE LOGIC CONTROL UPGRADE AND APPROVE INCREASE TO THE BUDGET**

**RECOMMENDATION**

- A. Increase the Automated Guideway Vehicles life-of-project budget, CP 202000, by 184,706 increasing the life-of-project budget from \$1,600,000 to \$1,784,706.
- B. Authorize the Chief Executive Officer to award a firm fixed price contract under RFP No. OP33431614 with HK Systems, Inc. for Automated Guideway Vehicles and Programmable Logic Control Upgrade for a firm fixed price not to exceed \$1,713,567, inclusive of sales tax.

**RATIONALE**

The Central Warehouse & Distribution Operations depend on Automated Guideway Vehicles (AGV) to be fully operational to perform the automatic task of delivering and picking-up pallet size material loads to and from various shop operations at Regional Rebuild Center (RRC); and deliver and pick-up material to and from various material work processing stations (receiving, storage, order processing, shipping points, etc.) to support RRC rebuild program, heavy maintenance activities and Service Sector maintenance operations. AGV Replacement is critical to maintaining efficient and effective material support to Metro Operations.

The AGV units are digitally controlled by the Automated Storage and Retrieval System (ASRS) and communicate with the main ASRS Central Computer through embedded floor wire. The wire guidance system instructs and controls AGV movements to their material pick-up and deposit destinations, but the outdated floor wire guidance system is also prone to frequent communication failures requiring manual transport of materials necessitating redeployment of labor and equipment resources to minimize material service delays to Metro Maintenance Operations. In addition, many replacement parts are now obsolete and it is becoming difficult to repair and maintain the vehicles in operational condition.

The Automated Guideway Vehicles (AGV) and Programmable Logic Upgrade replaces Metro's aging fleet of eleven computer controlled material transport vehicles. The AGVs have been in continual service since 1986 and have exceeded their useful life. Their operating performance is unreliable and degraded to the point of constant breakdown resulting in rising maintenance costs, higher parts costs due to obsolescence and increasing labor resources to manually offset poor AGV performance with forklifts. The delivery period for the AGVs is scheduled to be 180 days from notice to proceed.

The Board at its June 2002 meeting approved the The Automated Guideway Vehicles (AGV) and Programmable Logic Upgrade project and authorized staff to conduct a competitive negotiated procurement under Public Utilities Code Section 130238. A solicitation was issued on December 12, 2002, however, budgetary constraints forced delay of procurement action before an award could be made.

In November of 2004, the procurement was re-solicited with the original scope of work and resulted in a proposed amount of \$1,713,567, which reflects price inflation over the three-year period and increase in material and equipment costs. The Project funding in FY 06 is based on the \$1,600,000 initial proposal received in 2002 and the increase costs were not factored into the FY 06 funding requirements for this project. Thus an increase in the LOP budget is required.

#### **FINANCIAL IMPACT**

The project was funded in FY 05 for \$1,600,000 but deferred until FY 06 due to expense reduction efforts by Metro during the fiscal year. The deferred funding of \$1,600,000 for this project is included in the FY 06 proposed budget under CP 202000 Automated Guideway Vehicles Project in Cost Center 3340, Facilities Maintenance.

The LOP increase is necessary because the bid received was higher than the original cost estimate. In addition to the contract award, the LOP budget includes funding for project administration, support labor, close-out and a contingency reserve.

The LOP increase will be augmented by deferring another FY 06 capital project: CP 209010 EZ Tilter Project for \$184,706 under cost center 6350. Due to the critical funding need of the AGV project, the EZ Tilter Project will be cancelled in FY 06 and readdressed in future capital requests. The EZ Tilter is an ergonomic material-handling device designed to mechanically tilt a shipping container, allowing personnel to more effectively remove material from a container with minimal strain to the body.

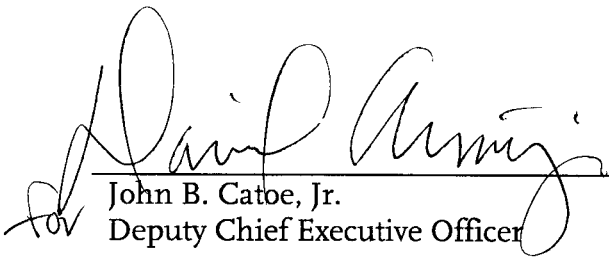
#### **ALTERNATIVES CONSIDERED**

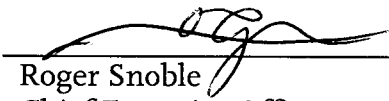
Staff considered continuing maintaining the current AGVs, their related hardware and a complete repair and replacement of existing floor wire guidance hardware at over \$100,000, but the alternative does not address the upgrade to current technology, or provide a permanent solution to communications failures. With escalating maintenance costs and many electronic components becoming obsolete, staff does not recommend this alternative.

## ATTACHMENTS

- A Procurement Summary
- A-1 Procurement History
- A-2 List of Subcontractors

Prepared by: Dieter Hemsing, Director, Inventory Management  
David Vila, Contracts Administration Manager

  
John B. Catoe, Jr.  
Deputy Chief Executive Officer

  
Roger Snoble  
Chief Executive Officer

**BOARD REPORT ATTACHMENT A  
PROCUREMENT SUMMARY**

**AUTOMATED GUIDED VEHICLES AND PROGRAMMABLE LOGIC CONTROL  
UPGRADE**

1.	Contract Number: OP33431614		
2.	Recommended Vendor: HK Systems, Inc.		
3.	Cost/Price Analysis Information:		
	A. Bid/Proposed Price: NTE \$1,713,567	Recommended Price: NTE \$1,713,567	
	B. Details of Significant Variances are in Attachment A-1.D		
4.	Contract Type: Firm Fixed Price		
5.	Procurement Dates:		
	A. Issued: November 10, 2004		
	B. Advertised: November 12, 2004		
	C. Pre-proposal Conference: November 23, 2004		
	D. Proposals Due: December 29, 2004		
	E. Pre-Qualification Completed: January 11, 2005		
	F. Conflict of Interest Form Submitted to Ethics: May 13, 2005		
6.	Small Business Participation:		
	A. Bid/Proposal Goal: 0%	Date Small Business Evaluation Completed: N/A	
	B. Small Business Commitment: N/A		
7.	Invitation for Bid/Request for Proposal Data:		
	Notifications Sent: 6	Bids/Proposals Picked up: 12	Bids/Proposals Received: 1
8.	Evaluation Information:		
	A. Bidders/Proposers Names: HK Systems, Inc.	<u>Bid/Proposal Amount:</u> NTE \$1,713,567	<u>Best and Final Offer Amount:</u> NA
	B. Evaluation Methodology: Negotiated, Best Value		
9.	Protest Information:		
	A. Protest Period End Date: June 21, 2005		
	B. Protest Receipt Date: TBD		
	C. Disposition of Protest Date: TBD		
10.	Contract Administrator: Otto Ojong	Telephone Number: 213-922-1454	
11.	Project Manager: Jon Lyle	Telephone Number: 213-922-5925	

**BOARD REPORT ATTACHMENT A-1  
PROCUREMENT HISTORY**

**AUTOMATED GUIDED VEHICLES AND PROGRAMMABLE LOGIC CONTROL  
UPGRADE**

**A. Background on Contractor**

HK Systems, Inc. is a systems integrator company based in Salt Lake City, Utah, and has been in business for more than 20 years. HK Systems has been providing Automated Guided Vehicles (AGV) systems to a broad line of companies in North America including Hewlett Packard, American Honda, Ford Motor Company, IBM and Anniston Army Depot. In the past, HK Systems has provided satisfactory service to Metro.

**B. Procurement Background**

At its June 27, 2002 meeting, the Board found that the Automated Guideway Vehicles (AGVs) consist of highly specialized hardware, equipment, communication technology and software, and authorized staff to conduct a competitive negotiated procurement under Public Utilities Code Section 130238. A solicitation was issued on December 12, 2002, however, budgetary reduction efforts subsequently delayed procurement action before an award was made. The factual basis of the Board's finding, however, remained unchanged.

A second Request for Proposals (RFP) No. OP33431614 was released on November 10, 2005 and advertised on November 12, 2005. A pre-proposal conference was held on November 23, 2004, and four firms were in attendance. The proposal deadline was December 29, 2004. One firm, HK Systems, Inc., submitted a proposal prior to the stated deadline. Shortly thereafter, the project was again deferred due to budgetary constraints, and is now authorized in the FY 2006, budget.

The Diversity & Economic Opportunity Department (DEOD) did not recommend a DBE goal for this procurement. Based on industry practice, the Prime (HK Systems) is expected to complete the entire scope with its own workforce. However, pursuant to the DBE Program, if HK Systems utilizes the services of subcontractors, they are expected to afford maximum opportunities to DBE firms in all subcontracting and supply services areas throughout the life of the contract.

**C. Evaluation of Proposals**

The solicitation is in compliance with Procurement policies and procedures. The project proposal was evaluated by a Source Selection Committee, and ranked based upon the evaluation criteria established in the RFP. Although HK Systems was the only proposer, the committee evaluated and scored the firm based on the stated evaluation criteria. Staff inquiries of the other potential firms indicated that the firms could not cost effectively meet the requirements of the Statement of Work.

**C. Cost/Price Analysis**

The recommended unit price has been determined to be fair and reasonable based upon a price analysis conducted by staff, comparing product pricing with recent, similar sales to Anheuser Busch and the Anniston Army Depot. Both Metro and the supplier anticipated there would be more than one acceptable proposal submitted, based on pre-solicitation market research and attendance at the pre-proposal conference and site walkthrough. Pricing reflects this anticipated competition.

**BOARD REPORT ATTACHMENT A-2  
LIST OF SUBCONTRACTORS**

**AUTOMATED GUIDED VEHICLES AND PROGRAMMABLE LOGIC CONTROL  
UPGRADE**

**PRIME CONTRACTOR – HK Systems, Inc.**

**Small Business Commitment**

**Other Subcontractors**

N/A

N/A

**Total Commitment 0.0%**