



Metro

Metropolitan Transportation Authority

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**OPERATIONS COMMITTEE
NOVEMBER 17, 2005**

**SUBJECT: CONTRACT NO. OP39201658, METRO RED LINE SEGMENT 1 REMOTE
TERMINAL UNIT (RTU) UPGRADE
ARINC INC.**

ACTION: APPROVE CONTRACT AWARD

RECOMMENDATION

Authorize the Chief Executive Officer to award a firm fixed price contract, Contract No. OP39201658, with ARINC Inc., to upgrade the Metro Red Line Segment 1 Remote Terminal Unit (RTU) for an amount not-to-exceed \$1,342,148, inclusive of a 10% contingency.

RATIONALE

The goal of the Segment-1 RTU Replacement Project is to replace the proprietary Segment-1 RTU equipment with industry-standard equipment that conforms to open-system requirements, is maintainable for at least fifteen years, with parts and services available from multiple sources in North America.

This contract award is for the procurement of equipment and services required to replace the existing Metro Red Line Segment-1 stations Remote Terminal Units (RTU) with newer technology. This requires the design, procurement, fabrication and installation of new RTU equipment for the existing Metro Rail Central Train Control and Supervisory Control and Data Acquisition (SCADA) System (Attachment B).

In SCADA systems, an RTU is a device installed at a remote location that communicates with the SCADA system to report the status of, and control, field devices. RTUs are equipped with central processing units, memory, input channels for sensing or metering, input channels for field device status, output channels for field device control, and ports for SCADA and other communications. An RTU refers to an assembly of various processing, input, output, communications and peripheral modules necessary to implement the desired functions.

Remote Terminal Units are installed at each Metro Red Line station and provide an interface to train control, traction power, and station facilities. Segment-1 RTU locations include Union Station, Civic Center Station, Pershing Square Station, Seventh and Metro Station, Westlake/MacArthur Stations, Metro Central Control Facility, and Metro Red Line Yard.

Remote supervision and control are possible from the Central Control Facility through a communications interface to each RTU. These remote supervision and control capabilities are required for the safe, efficient, and reliable operation of the rail system.

Critical functions supported by the RTU's include Supervision and control of:

- Train movement in Metro Red Line tunnel
- Station electrical power
- Rail traction power
- Station and tunnel ventilation
- Fire detection devices and gas monitoring devices
- Station elevators and escalators operation
- Security systems and rollup gates.

The Metro Red Line Segment-1 Station Remote Terminal Units are now more than ten years old. This Remote Terminal Equipment consists of proprietary, non-industry standard, hardware and communications software. The vendor no longer supports the hardware and our research indicates spare parts are not readily available from any known source. This exposes Metro to unacceptable maintenance and operational risks due to the mission critical nature of the RTU equipment.

FINANCIAL IMPACT

Funding of \$ 590,276 for this service is included in the FY 2006 budget in cost center 3960 (Transit Systems Engineering), Project 205017, Line Item/Account 50316 (Professional and Technical Services), task 09.001. This award is within the approved life-of-project budget of \$2,600,000.

Since this is a multi-year contract, the cost center manager and Deputy Chief Executive Officer will be accountable for budgeting the cost in future years.

ALTERNATIVES CONSIDERED

Metro has evaluated the possibility of not replacing the existing Metro Red Line Segment 1 RTU. This alternative is not recommended for the following reasons: Metro spare parts inventory is depleted and a reliable source for spare parts and service cannot be identified. This exposes Metro to unacceptable maintenance and operational risks due to the critical nature of the RTU equipment.

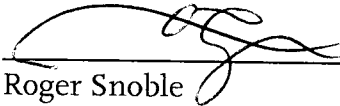
ATTACHMENTS

- A. Procurement Summary
 - A-1 Procurement History
 - A-2 List of Subcontractors
- B. Picture of RTU

Prepared by: Gerald Francis, General Manager Rail Operations
Aida Asuncion, Director, Transit Systems Engineering
Chuck Weissman, Sr. Engineer, Wayside Systems Engineering
Tom Butler, Sr. Contract Administrator



FOR John B. Catoe, Jr.
Deputy Chief Executive Officer



Roger Snoble
Chief Executive Officer

**BOARD REPORT ATTACHMENT A
PROCUREMENT SUMMARY**

METRO RED LINE SEGMENT 1 REMOTE TERMINAL UNIT UPGRADE

1.	Contract Number: OP39201658		
2.	Recommended Vendor: ARINC Inc		
3.	Cost/Price Analysis Information:		
	A. Proposed Price: \$1,220,135	Recommended Price: \$1,342,148 (inclusive of 10% contingency amount of \$122,013)	
	B. Details of Significant Variances are in Attachment A-1.D		
4.	Contract Type: Firm Fixed Price		
5.	Procurement Dates:		
	A. Issued: May 20, 2005		
	B. Advertised: May 26, 2005 and May 31, 2005		
	C. Pre-proposal Conference: June 8, 2005		
	D. Proposals Due: August 2, 2005 (revised from July 19, 2005)		
	E. Pre-Qualification Completed: August 15, 2005		
	F. Conflict of Interest Form Submitted to Ethics: October 12, 2005		
6.	Small Business Participation:		
	A. Proposal Goal: 10 % Disadvantaged Business Enterprise (DBE)	Date Small Business Evaluation Completed: October 5, 2005	
	B. Small Business Commitment: 13.22% Details are in Attachment A-2		
7.	Request for Proposal (RFP) Data:		
	Notifications Sent: 8	RFPs Picked up: 28	Proposals Received: 3
8.	Evaluation Information:		
	A. Proposers Names: ARINC Inc. Technical Systems Inc. DenBoer Engineering & Construction	Proposal Amount: \$1,162,039 \$2,752,484 \$3,104,600 ** **Non-responsive	Best and Final Offer Amount: \$1,220,135 \$2,739,601
	B. Evaluation Methodology: Best Value Competitive Negotiations Details are in Attachment A-1.C		
9.	Protest Information:		
	A. Protest Period End Date: November 22, 2005		
	B. Protest Receipt Date: TBD		
	C. Disposition of Protest Date: TBD		
10.	Contract Administrator: Tom Butler	Telephone Number: 213-922-7312	
11.	Project Manager: Chuck Weissman	Telephone Number: 323-563-5232	

BOARD REPORT ATTACHMENT A-1 PROCUREMENT HISTORY

METRO RED LINE SEGMENT 1 REMOTE TERMINAL UNIT UPGRADE

A. Background on Contractor

ARINC Inc is located in Annapolis, Maryland with branches in many cities in the United States. They are a large multi-million dollar concern and have been in business since 1929. Their initial company name was changed from Aeronautical Radio Inc. to ARINC Inc. in 1995. The major area of business is to provide engineering services for air/ground communications systems. Their local office with which Metro has been dealing with since 1988 on several projects is in Marina Del Rey, California. Those projects included various communications for all segments of the Red Line. Currently they are near completion of an \$8 million Metro contract for a Light Rail Supervisory Control and Data Acquisition (SCADA) System upgrade for the Blue Line and Pasadena Gold Line. Performance on those contracts has been satisfactory. They have also provided various communication systems to other major transit agencies including SEPTA (Pennsylvania), WMATA (Washington DC), Maryland MTA, St. Louis Metro, New York, and the City of Edmonton, Canada.

B. Procurement Background

The RTU equipment being procured is highly specialized telecommunication equipment that qualifies under Public Utilities Code Section 130238 for procurement by competitive negotiation. This method of procurement allows Metro to consider factors other than price in the award of contracts. As such, that method of procurement was presented to, and approved by, the necessary two-thirds vote of the Board at the January 27, 2005 Board meeting. In accordance with Board approval, the Request for Proposal (RFP) indicated that the evaluation criteria would include review and evaluation of technical and qualification factors as well as price.

On May 20, 2005, Request for Proposal No. OP39201658 was submitted to eight companies to solicit proposals. An additional 28 companies also picked up or downloaded the RFP from the Metro web site. Three proposals were received and presented to the Source Selection Committee for evaluation.

The Diversity & Economic Opportunity Department (DEOD) recommended a ten percent (10%) Disadvantaged Business Enterprise (DBE) goal for this procurement.

C. Evaluation of Proposals

In accordance with Procurement Policies and Procedures, the Source Selection Committee (SSC) conducted a comprehensive technical evaluation of the proposals. The SSC first reviewed the proposals to determine the responsibility and responsiveness to the RFP requirements. One of the three proposers was deemed non-responsive as the proposal did not include a technical proposal. The remaining two proposers, ARINC and Technical Systems were found to be responsive and responsible. Evaluation of the responsive proposals focused

on proposer technical capability and approach, understanding of the scope of work, management, past performance, and price. Clarification of questions asked by the proposers during the RFP process as well as proposer responses to two rounds of questions posed by Metro after the proposals were submitted contributed to the understanding of the proposals. Reference checks made of proposer references indicated that the references thought highly of both firms. Lastly, after face-to-face negotiations with both to discuss final technical clarifications and comments, both proposers were requested to provide their Best and Final Offers. The Best and Final Offers, when received, did not change either proposal significantly except for a slightly higher ARINC price proposal, primarily as a result of an ARINC misunderstanding (which was discovered during clarification discussions) of a particular Scope item.

Based on the evaluation by the Source Selection Committee it was determined that ARINC's proposal offers the best value and staff is recommending the contract be awarded to ARINC.

D. Cost/Price Analysis Explanation of Variances

The recommended price has been determined to be fair and reasonable based upon price analysis from adequate competition.

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

METRO RED LINE SEGMENT 1 REMOTE TERMINAL UNIT UPGRADE

PRIME CONTRACTOR

ARINC Inc.

Disadvantaged Business Commitment

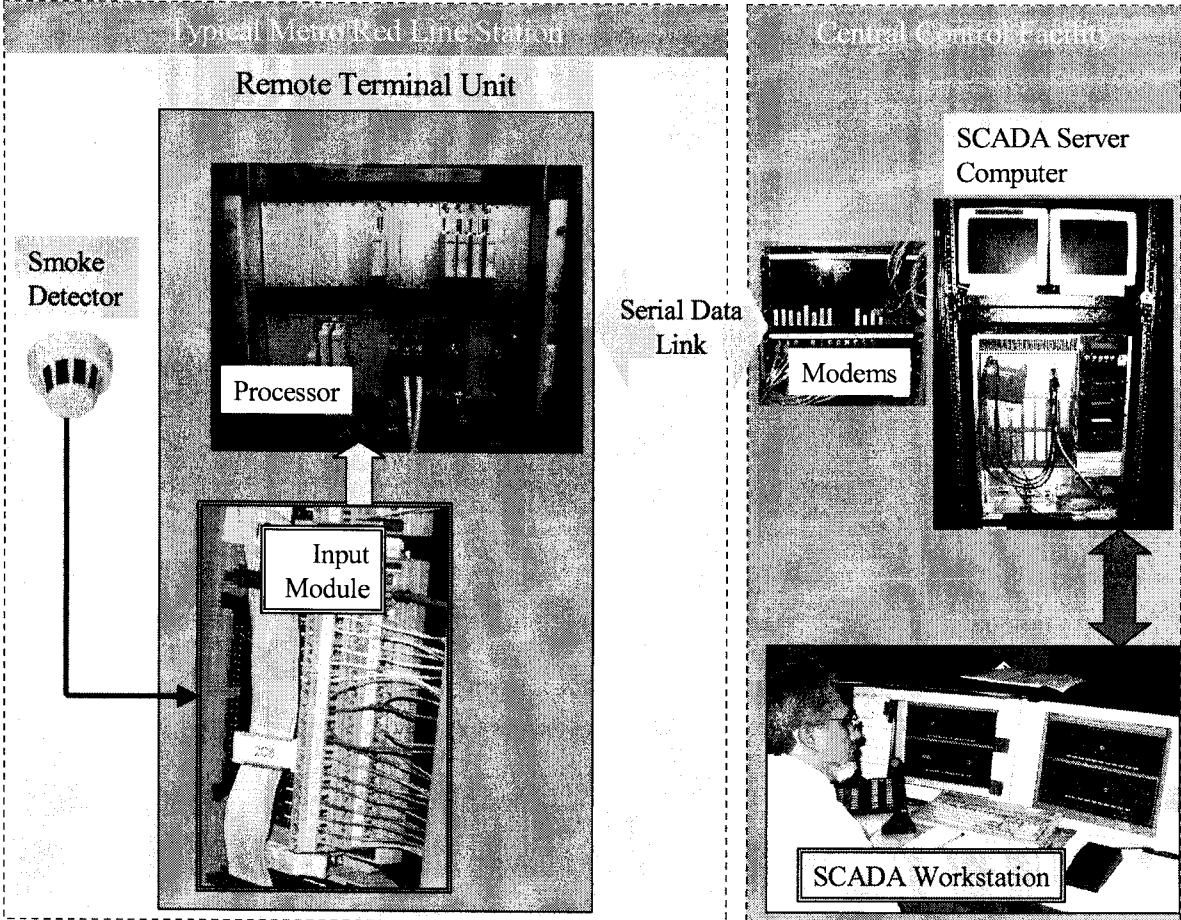
Robnett Electric Inc. 13.22%

Other Subcontractors

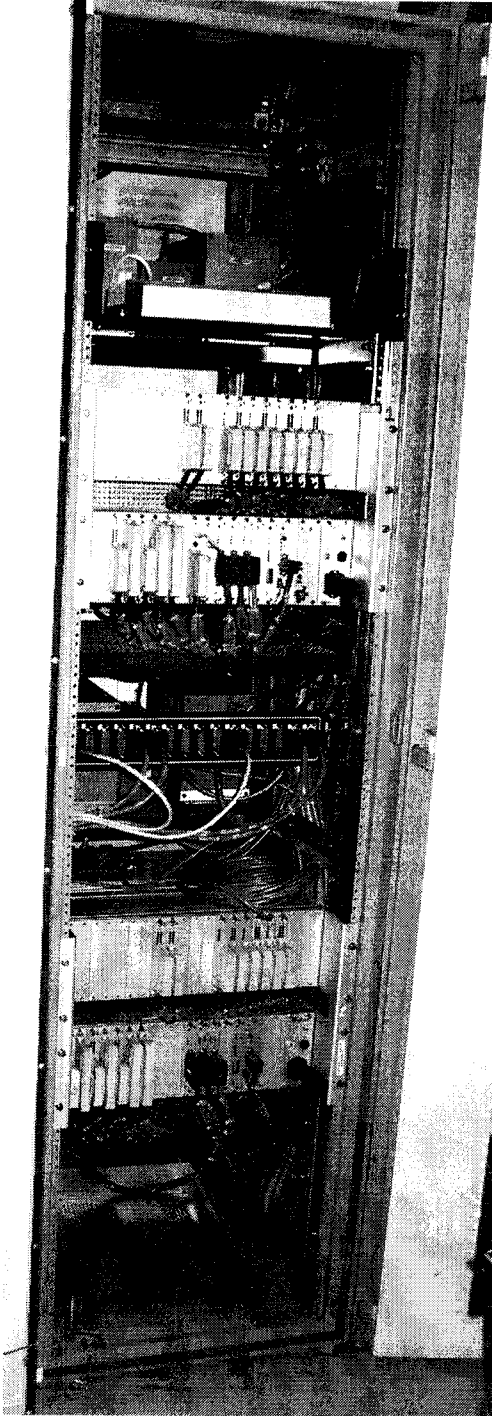
Royal Wholesale Electric

Total Commitment: 13.22%

METRO RED LINE SEGMENT-1 REMOTE TERMINAL UNITS UPGRADE



**RTU CPU and Support
Modules**



**RTU Input and Output
Modules**

