



Metropolitan  
Transportation  
Authority

One Gateway Plaza  
Los Angeles, CA  
90012-2952

**SUBJECT: THYRISTORS**

**ACTION: APPROVE SINGLE SOURCE CONTRACT AWARD FOR THYRISTORS**

**RECOMMENDATION**

- A. The Board finds that there is only a single source for procurement of Thyristors. The purchase is for the sole purpose of replenishing the MTA's existing supply. The Board hereby authorizes the procurement pursuant to Public Utilities Code 130237. (Requires two-thirds vote)
- B. Authorize the Chief Executive Officer to award a single-source, firm fixed-price contract to Bombardier Transportation to purchase 125 Thyristors to support the Metro Blue Line fleet for a total cost of \$355,872, including sales taxes.

**RATIONALE**

The thyristor assembly serves to regulate the speed of the Metro Blue Line car by controlling the acceleration and deceleration of the motor. The thyristors are an integral part of the chopper module in the propulsion circuit that was originally supplied by Asea Brown Boveri (ABB), a Swiss Company. ABB is now a subsidiary of Bombardier.

There are four thyristors per car, and they are replaced as required by MTA rail maintenance staff. The original thyristors have provided over 10 years of service, but now these units have started failing at an increasing rate due to the aging effect. To ensure uninterrupted revenue service, these thyristors must be available at all times to maintain the vehicles. It is expected that the new thyristors will provide the same length of service as the original thyristors.

Bombardier developed the thyristors under this procurement as an alternate to the original Swiss made ABB supplied thyristors that came with the vehicles. Rail Fleet Services Engineering conducted comprehensive test trials in revenue service for approximately 14 months and has now approved these thyristors for use on the entire fleet of Metro Blue Line cars.

Rail Fleet Services Engineering identified an alternate source of supply for these thyristors. However, while conducting tests, the thyristors failed before completion of the test trial, and hence we rejected them. At this time, no other known supplier besides Bombardier is available to supply the identical component. Bombardier can still supply the original Swiss made thyristor, although the cost is substantially higher.

### **FINANCIAL IMPACT**

Funding of \$355,872 is included in the FY04 budget under Cost Centers 3940, Project Number 300022, and Line item number 50441. In FY03, no funds were expended in this category.

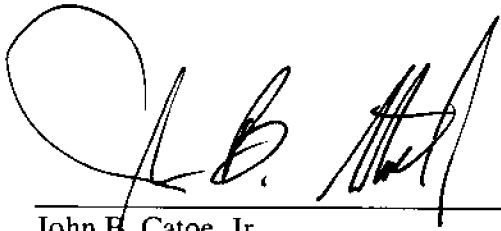
### **ALTERNATIVES CONSIDERED**

The alternative is to not award the contract and continue buying the Thyristors on an as-needed basis, using the traditional "min/max" inventory replenishing method. This approach is not recommended since it does not provide for a firm-fixed price and delivery can take eight to 12 months.

### **ATTACHMENTS**

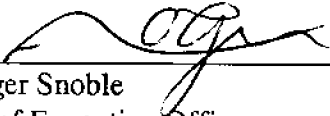
- A Procurement Summary
- A-1 Procurement History

Prepared By: Dave Kubicek, DEO of Rail Operations, Fleet Services  
Richard Bachman, Contract Administration Manager



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John B. Catoe, Jr.  
Deputy Chief Executive Officer



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Roger Snoble  
Chief Executive Officer

**BOARD REPORT ATTACHMENT A  
PROCUREMENT SUMMARY**

**THYRISTORS**

<b>1.</b>	Contract Number: TBD		
<b>2.</b>	Recommended Vendor: Bombardier Transportation		
<b>3.</b>	Cost/Price Analysis Information:		
	1. Bid/Proposed Price: \$355,872	Estimated Amount: \$575,078	
	B. Details of Significant Variances are in Attachment A-1.D		
<b>4.</b>	Contract Type: Fixed Price		
<b>5.</b>	Procurement Dates:		
	A. Issued: N/A		
	B. Advertised: N/A		
	C. Pre-bid Conference: N/A		
	D. Proposals/Bids Due: N/A		
	E. Pre-Qualification Completed: Yes		
	F. Conflict of Interest Form Submitted to Ethics: Yes		
<b>6.</b>	Small Business Participation:		
	A. Bid/Proposal Goal: No goal recommended	Date Small Business Evaluation Completed: N/A	
	Small Business Commitment: No goal recommended		
<b>7.</b>	Invitation for Bid/Request for Proposal Data:		
	Notifications Sent:	Bids/Proposals Picked up:	Bids/Proposals Received:
<b>8.</b>	Evaluation Information:		
	A. <u>Bidders/Proposers Names:</u> Bombardier Transportation	<u>Bid/Proposal Amount:</u> \$355,872	<u>Best and Final Offer Amount:</u> N/A
	B. <u>Evaluation Methodology:</u> Selection of the lowest responsive, responsible bidder.		
<b>9.</b>	Proteste Information:		
	A. Protest Period End Date: N/A		
	B. Protest Receipt Date: TBD		
	C. Disposition of Protest Date: TBD		
<b>10</b>	Contract Administrator: Richard Bachman	Telephone Number: 213/922-1016	
<b>11</b>	Project Manager: Paul Lewicki	Telephone Number: 213/922-5029	

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

A. Background on Contractor

Bombardier is a multi-national company that was founded in 1942 to manufacture tracked vehicles for transportation on snow-covered terrain. In addition to providing parts and products for the transportation industry, Bombardier is also involved in providing many other products for the aerospace and recreational industries.

On previous contracts, Bombardier Transportation has provided satisfactory service and products.

B. Procurement Background

Pursuant to Section 11.2.A.1.a of the MTA's Policies and Procedures, a sole source procurement is warranted if the item is only available from a single source. Based on information provided by the Rail Fleet Services Engineering Section, the purchase of Bombardier's thyristors meet the criteria listed in the Procurement Policy Manual. Currently, Bombardier is the only supplier that can provide a thyristor that meets all technical requirements. The original Swiss-made thyristor is still available through Bombardier from one of its subsidiaries, ABB.

MTA's Rail Fleet Services Engineering Section has tested other thyristors, but all failed prematurely during the test trials. Staff will continue to source alternate suppliers for this critical part.

The delivery schedule for these thyristors is the first 75 to be delivered in 14 weeks and the balance in 28 weeks. They are warranted for one year.

The Diversity and Economic Opportunity Department did not recommend a Disadvantaged Business Enterprise (DBE) participation goal for this procurement.

Evaluation Criteria

Single-source award based on price analysis.

D. Cost/Price Analysis Explanation of Variances

The Estimating and Price Cost Analysis Section in accordance with the MTA's Policy and Procedures covering a non-competitive procurement performed a price analysis.

<b>Line Item #</b>	<b>Proposer</b>	<b>Quantity</b>	<b>Type</b>	<b>Unit Price</b>	<b>Historical Unit Price</b>	<b>Variance *Unit Price</b>
1	Bombardier	125	Fixed Price	\$2,630	\$4,995	(\$2,365)

The recommended price of \$355,872 is the best obtainable price for this single source procurement. There was no data available for cost analysis. However, these prices are certified by Bombardier Transportation as the most favorable customer pricing.