



Metro

Metropolitan Transportation Authority

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**OPERATIONS COMMITTEE
APRIL 17, 2008**

SUBJECT: FORTY-FIVE FOOT COMPOSITE BUSES

ACTION: AWARD CONTRACT FOR FY09-10 BUS PROCUREMENT

RECOMMENDATION

Authorize the Chief Executive Officer to:

- A. Execute Contract OP33202082 with North American Bus Industries (NABI), to purchase up to two hundred sixty Compressed Natural Gas (CNG) buses including spare parts, diagnostic equipment and training aids for a Contract Value not to exceed \$170,915,626, inclusive of sales tax, and subject to completion of the required Buy America Pre-Award audit; and
- B. Negotiate and execute modifications for this procurement in amounts not to exceed \$3,454,724.

RATIONALE

This action will authorize the Chief Executive Officer to execute a new contract with North American Bus Industries (NABI) for 260 new 45' CNG composite structure buses to cover our scheduled vehicle replacement requirements in FY09-FY10. Total value of the contract will not to exceed \$170,915,626 as authorized in the life of project budget at the February 2008 Board meeting. This award is subject to successful completion of a Buy America audit.

Staff had intended to purchase gasoline-hybrid vehicles as part of this order, however, no hybrid vehicles are recommended as part of the initial contract award. During the review of proposals for hybrid vehicles, it was determined that the proposed technologies are not fully developed and tested. In addition, purchasing hybrid vehicles was not possible within the authorized life of project budget. By deferring the purchase of hybrids, it will allow for more time for hybrid technologies to be refined, tested and integrated into transit vehicles. Assuming the technical issues can be resolved and proposed pricing is reasonable, staff may recommend purchasing hybrid vehicles in a future option under this contract.

Under the court approved New Service Plan, we made commitments to expand the bus fleet's seating capacity by 2010; these buses are required to satisfy these commitments. Additionally, our service plans and bus fleet replacement plans have projected operational savings based on replacing retirement eligible 40-foot buses with these higher capacity buses during FY09 and FY10.

We purchased 100 45' composite buses during 2003-2004, and these buses are currently in active service at five operating divisions. To date, these vehicles have proven to be reliable and a cost effective option for our highest ridership lines.

Staff will undertake a new procurement to provide bus inspection support services for this contract.

FINANCIAL IMPACT

Funding for the buses will be included in the FY09-10 capital program budget under project number 201013, FY09-10 Bus Procurement, cost center #3320, Vehicle Technology. In February 2008, the Board approved life of project funding for this project in the amount of \$179,129,959. The funding identified for this project is a combination of federal, state and local funds.

ALTERNATIVES CONSIDERED

Staff considered not purchasing buses. This action is not recommended because canceling or deferring this procurement will necessitate extending the life of our oldest vehicles, and it will make it difficult to meet service commitments made under the New Service Plan.

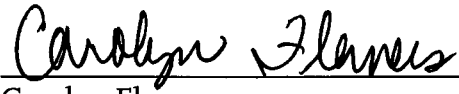
Staff considered awarding a portion of this contract as gasoline hybrid buses. This action is not recommended because these buses were too expensive to fit within our budgetary constraints, and this technology is still being developed and refined.

Staff considered purchasing articulated buses or smaller forty-foot buses. This option is not recommended because we do not currently have additional lines that are suitable for these vehicle types, and current service plans are built around operating efficiencies that result from using 45-foot high capacity vehicles.

ATTACHMENTS

- A. Procurement Summary
- A-1 Procurement History
- A-2 List of Subcontractors
- B. Life of Project Budget for Articulated Buses

Prepared by: Richard Hunt, General Manager, San Fernando Valley Service Sector
John Drayton, Manager of Vehicle Technology



Carolyn Flowers
Chief Operations Officer



Roger Snoble
Chief Executive Officer

**BOARD REPORT ATTACHMENT A
PROCUREMENT SUMMARY**

FORTY-FIVE FOOT COMPOSITE BUSES

1.	Contract Number: OP33202082		
2.	Recommended Vendor: North American Bus Industries		
3.	Cost/Price Analysis Information:		
	A. Bid/Proposed Price: \$597,475 – per CNG vehicle	Recommended Price: Not to Exceed \$170,915,626	
	B. Details of Significant Variances are in Attachment A-1.D		
4.	Contract Type: Fixed Unit Rate		
5.	Procurement Dates:		
	A. Issued: November 9, 2007		
	B. Advertised: November 9, 2007		
	C. Pre-proposal Conference: November 30, 2007		
	D. Proposals Due: February 15, 2008		
	E. Pre-Qualification Completed: March 21, 2008		
	F. Conflict of Interest Form Submitted to Ethics: March 31, 2008		
6.	Small Business Participation:		
	A. Bid/Proposal Goal: 0%	Date Small Business Evaluation Completed: Not applicable	
7.	Invitation for Bid/Request for Proposal Data:		
	Notifications Sent: 33	Bids/Proposals Picked up: 49	Bids/Proposals Received: 2
8.	Evaluation Information:		
	A. Bidders/Proposers Names:	<u>Bid/Proposal Amount:</u>	<u>Best and Final Offer Amount:</u>
	Mobile Energy Solutions – Gasoline/Hybrid vehicles only	\$ 610,00 per Gasoline/Hybrid vehicle	Not applicable
	North American Bus Industries – CNG Vehicles and Gasoline/Hybrid vehicles	\$ 611,950 per CNG vehicle \$ 799,950 per Gasoline/Hybrid vehicle	\$597,475 per CNG vehicle Not applicable
	B. Evaluation Methodology: Describe Methodology Details that are in Attachment A-1.		
9.	Protest Information:		
	A. Protest Period End Date: April 22, 2008		
	B. Protest Receipt Date:		
	C. Disposition of Protest Date:		
10.	Contract Administration Manager: Margaret E. Merhoff	Telephone Number: 922-1073	
11.	Project Manager: Mike Bottone	Telephone Number: 922-5911	

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

FORTY-FIVE FOOT COMPOSITE BUSES

A. BACKGROUND ON CONTRACTOR

North American Bus Industries (NABI) was established in 1992. It has manufacturing facilities in Budapest and Kaposvar, Hungary, and Anniston, Alabama. NABI currently produces approximately 1,000 buses per year. Its production capabilities include 30 foot – 60 foot steel frame buses and 30 – 45 ft. composite buses.

NABI has delivered 1,366 low floor CNG buses to us and is currently producing six low floor Gasoline/Hybrid buses for the Advanced Transit Vehicle Consortium. In addition, the company has produced buses for many other major transit agencies. The firm understands our expectations regarding warranty support and required training documentation. NABI has a local support services facility in Ontario, California. In 2006, the company was purchased by Cerberus Capital Management LP, a private investment firm (Cerberus also owns Blue Bird Corporation, another transit bus manufacturer). Subsequently, NABI has also purchased Optima Bus, LLC. The company is well capitalized and there is a low financial risk and performance risk with this company. The firm did not take any major exceptions to the contract terms and conditions.

B. PROCUREMENT BACKGROUND

In September 2007, the Board of Directors approved an acquisition strategy to utilize competitive negotiation rather than a sealed bid process and to consider factors other than price in the award of contracts for these buses as described in PCC §20217. The law states that, “Broadest possible range of competing products and materials available, fitness of purpose, manufacturer's warranty, vendor financing, performance reliability, standardization, life cycle costs, delivery timetables, support logistics, and other similar factors in addition to price in the award of these contracts.” The competitive negotiation process permitted discussions with the proposers to evaluate the performance and reliability of the proposed components, warranty factors, cost data, and delivery schedule to determine the bus best suited for us.

The Diversity and Economic Opportunity Department did not recommend a Disadvantaged Business Enterprise (DBE) participation goal for this bus procurement. The Federal Transit Administration (FTA) requires that each Transit Vehicle Manufacturer (TVM) submit for approval an annual percentage overall goal. The TVM goal is based on the amount of federal funding to be received by the TVM for transit vehicle contracts during the fiscal year. In compliance with 49 CFR Part 26.49, TVMs report directly to FTA, therefore, compliance with the DBE requirements is monitored at the federal level.

The Request for Proposal (RFP) was issued for the purchase of up to 260 high capacity low floor composite structure CNG and Gasoline/Hybrid transit vehicles. The RFP contained Options under which we have the right to purchase up to 740 vehicles in options with a minimum order of 50 vehicles per option order. The Option Vehicles may be any combination of CNG fueled and/or gasoline/hybrid Vehicles and the options will be valid for a period of 60 months from the date of contract execution.

C. EVALUATION OF PROPOSALS

In accordance with Procurement Policies and Procedures, the Source Selection Committee (SSC) conducted a comprehensive evaluation of the technical proposals. The SSC consisted of our staff members from various technical and operational disciplines who have significant experience with similar bus technologies and systems. Per the Source Selection Plan, a “best value” procurement process was followed. For the purposes of the procurement, all evaluation factors (other than price) when combined, were significantly more important than the cost/price area in this acquisition. Therefore, we could select a proposal other than the lowest priced proposal provided that the additional technical merit offered is determined to be worth the additional cost in relation to other proposals received. For evaluation purposes, if proposals were determined to be technically equivalent, then price would become relatively more important.

On February 15, 2008, proposals were received from Mobile Energy Solutions (MES) and North American Bus Industries (NABI). MES proposed to provide only the gasoline/hybrid vehicles while NABI proposed to provide both types of vehicles. The proposals were initially reviewed to verify compliance with the minimum qualifications contained in the RFP. The minimum qualifications were as follows:

- The proposer must be an existing vehicle manufacturer with an existing manufacturing facility.
- The proposal must be for a high capacity vehicle not to exceed 45’ in length and the vehicle must be constructed from composite material.
- The proposed vehicle must have the capability for either a CNG propulsion system or for a gasoline/hybrid propulsion system.
- The proposed vehicle must have a minimum of 46 seats.

Because one proposer did not propose on both fuel types, the SSC conducted separate evaluations based on the proposed fuel type. Both proposals were found to be compliant with the minimum requirements. (MES was considered marginal in this regard because the firm is a start up company with limited financial capacity. It has only begun to produce a limited number of vehicles but could initially be considered compliant with the manufacturing requirement.) The proposals were then evaluated by members of the SSC that including staff from Vehicle Technology and Operations.

Our primary program objectives are to procure vehicles that offer:

- Provision of high capacity (minimum of 46 seats) vehicle constructed of high strength resin laminate composite material
- Vehicle weight less than the weight of a 40 foot steel-framed transit vehicle
- Reduction in interior and exterior noise
- Advanced styling including aerodynamic body lines, large panoramic windows, larger doors and modern appearances that separates the appearance of the vehicle from our current fleet of 40 foot steel-frame vehicles.

The RFP noted that we would evaluate offers according to those meeting the greatest number of objectives that offer the greatest operating advantages to us. The technical proposals were reviewed in detail. The SSC found that each of the proposers took a number of exceptions to our technical requirements and that both proposals warranted further consideration.

Oral presentations and clarifications/discussions were then held with each firm. The purpose of the presentations was to clarify any remaining issues regarding the capability of the proposed vehicle and to determine the capability of the firms to provide the required vehicles according to our schedule. Both NABI and MES took exceptions to the proposed delivery schedule for production of the gasoline/hybrid vehicles. While the hybrid technology proposed by NABI has been used in some transit applications, the specific technologies being proposed technology had not been fully determined and would require deviations from our performance requirements. The technology proposed by MES involved using an advanced lithium battery pack that could significantly improve fuel economy, and their team includes key personnel that are experienced with hybrid buses and composite bus shell construction. Rather than exclude promising technology, the SSC decided to request pricing from both companies.

The following prices were received:

Mobile Energy Solutions	\$610,000 per Gasoline/Hybrid vehicle
North American Bus Industries	\$799,950 per Gasoline/Hybrid vehicle

North American Bus Industries	\$611,950 per CNG vehicle
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After reviewing the final offers for the Gasoline/Hybrid buses, the SSC reviewed the proposals and concluded that the proposals for these vehicles represent an unacceptable risk to us.

MES' proposed price (\$610,000/vehicle) is \$189,000 less per unit than NABI's hybrid proposal. This equates to \$9.5 million less than the NABI hybrid proposal. While the firm has key personnel with hybrid and composite structure experience, MES's proposal presents significant technical and schedule risks for a fifty-vehicle order. The firm has not yet produced a vehicle (steel structure or composite structure) that is in revenue service. They have created a "Proof of concept" vehicle to test component parts and a composite shell is being delivered for use on a bus being provided for the National Fuel

Cell Bus Program. Two other buses being built by the firm have been delayed due to funding issues. Thus, there is a significant manufacturing risk. The firm proposed using an advanced lithium battery pack that could significantly improve fuel economy. However, the proposed advanced lithium battery pack has not been demonstrated in a heavy-duty transit bus application, and this represents significant performance risk for a fifty-vehicle order. In addition, MES has requested schedule deviations that do not meet the June 2010 contract deadline. MES showed two potential schedules; the more optimistic of these schedules would have buses here in August 2010, while the other schedule would have buses here in November 2010. Because the proposed bus is a new design, Federal regulations require that the firm produce one vehicle for testing before any transit property can purchase the vehicle. This testing takes significant time and based on our prior experience with this testing, we believe that MES's schedule for this testing is at best overly optimistic. In summary, the SSC recommended rejecting the MES proposal due to the high levels of design and schedule risk inherent in their proposal.

The gasoline/hybrid proposal submitted by NABI represents a lesser performance risk to us, but the SSC also found this proposal to have risk that is unacceptable. The primary advantage to the proposed NABI system is that similar systems have been demonstrated in other transit agencies and the vehicle structure is "proven." However, NABI and its supplier could not articulate exactly what gasoline/hybrid configuration is being proposed as the supplier continues to refine the configuration. Proposed technical deviations included deviations on top speed, gradeability and acceleration, and these deviations also raised other technical concerns. In addition, the delivery of the proposed vehicles is not compliant with our proposed delivery schedule. Finally, the pricing submitted for the gasoline/hybrid configuration was found to be unreasonable.

At the conclusion of the evaluation process on the gasoline/hybrid proposals, the SSC determined that both proposed gasoline/hybrid configurations represent an unreasonable risk to us, and for this reason, the SSC does not recommend award of the gasoline/hybrid vehicles.

The SSC then reviewed the price proposal for the CNG vehicles. Based on all information submitted, the proposal submitted by NABI for the CNG buses is considered to be acceptable in all key areas and it represents the least risk to us. Based on this analysis, additional negotiations were held with NABI. The firm indicated that it could both reduce its price if the entire order were for CNG fueled buses only and adhere to the proposed production schedule. The firm submitted a revised price proposal of \$597,475 for CNG vehicles. The SSC determined that this offer is in our best interest for the following reasons.

- **Seating capacity:** The vehicle offers high capacity (minimum of 46 seats) in a vehicle constructed of high strength resin laminate composite material.
- **Vehicle weight:** The proposed vehicle weight is slightly less than the weight of a 40-foot steel-framed transit vehicle.

- **Styling:** The styling including aerodynamic body lines, large panoramic windows, larger doors and modern appearances.
- **Acceptable Vehicle technology:** The proposed vehicle has been tested and is successfully operating in our service environment.
- **Proposed technical deviations:** NABI proposed several technical deviations. The most significant deviation involves noise reduction. We requested noise levels comparable to the new articulated vehicles. NABI would only guarantee an exterior noise level of 82 dBA which is a reduction when compared to current composite vehicles. However, the firm has also agreed to work with staff to determine other ways to further reduce exterior noise.
- **Delivery schedule -** NABI proposed to comply with our delivery schedule for delivery of 260 vehicles by June 30, 2010.
- **Pricing –** Based on a comparison to the independent estimate, the proposed pricing is reasonable.

We have options to purchase up to 740 additional vehicles in either fuel configuration under this procurement with a minimum order quantity of 50 vehicles. The options are valid for five years following the date of execution of the contract. The option pricing is based on the unit price of the base order vehicles plus the increase in the Producer Price Index for Truck and Bus Bodies for that period.

As requested in the pricing forms, NABI submitted a total price of \$251,978 for spare parts for the CNG buses. These costs are comparable to similar spare parts purchased in other bus procurements. Based on the final contract, NABI will recommend special diagnostic tools and training aids that will be needed to maintain these buses. While the specific type and quantity of diagnostic tools and training aids were not identified during the procurement process, NABI and our staff will meet to identify this equipment. Funding for these items is included in the recommended NABI contract amount.

Based on the comprehensive procurement evaluation process, the SSC determined that the proposal submitted by North American Bus Industries for the CNG buses offers the best overall value at the lowest risk and the lowest total proposed price.

D. COST/PRICE ANALYSIS EXPLANATION OF VARIANCES

The recommended price has been determined to be fair and reasonable based upon a price analysis as required by PCC 20217.

BOARD REPORT ATTACHMENT A-2

**LIST OF PRIME CONTRACTORS AND SUBCONTRACTORS
FORTY-FIVE FOOT COMPOSITE BUSES**

Prime Contractor: North American Bus Industries

Subcontractor: FAB Industries

ATTACHMENT B

AUTHORIZED LIFE OF PROJECT

PROJECT NAME: Purchase 260 45 Foot Composite Buses
PROJECT NUMBER: 201013
PROPOSED LOP: \$179,129,959

DESCRIPTION OF PROJECT: New procurement for 260 45-foot composite buses in FY09 and FY10. 260 buses for delivery by June 2010. 210 CNG, 50 hybrid for FY09 and FY10. Procurement is needed to meet service needs to ensure that retirement eligible vehicles are retired and new vehicles are introduced into the fleet to maintain low average fleet age and improve service quality, fleet reliability, and customer appeal.

Expenses	FY09	FY10	FY11	FY12	FY13+	TOTAL
Labor	\$1,017,598	\$1,047,348	\$ 589,913	\$ 88,005	\$ 90,645	\$2,833,509
Acquisition	85,405,025	85,510,601	-	-	-	170,915,626
Services	525,300	525,300	-	-	-	1,050,600
Travel	437,750	437,750	-	-	-	875,500
Contingency	1,727,362	1,727,362	-	-	-	3,454,724
TOTAL	\$89,113,035	\$89,248,361	\$589,913	\$ 88,005	\$ 90,645	\$179,129,959

Sources of Revenue	FY09	FY10	FY11	FY12	FY13+	TOTAL
Prop 1B Bonds	\$10,221,035	\$9,778,965				\$20,000,000
CMAQ	78,892,000	31,176,000				116,068,000
TCRP		42,293,396	589,913	88,005	90,645	43,061,959
TOTAL	\$89,113,035	\$89,248,361	\$589,913	\$88,005	\$90,645	\$179,129,959

