

MTA LONG ISLAND RAIL ROAD / METRO-NORTH RAILROAD
(JOINT PROCUREMENT)

SUPPLEMENTAL REQUEST FOR INFORMATION (“RFI”) No. 81908

M-9 AND M-9A RAIL CAR PROCUREMENT

Date: September 1, 2011

To: Interested Carbuilders and Suppliers:

- Attachment:
- (1) Carbuilder/Supplier Specification Survey
 - (2) DRAFT Leader/Follower Requirements
 - (3) SRFI Comments Form

Introduction

The Long Island Rail Road Company (“LIRR”) and Metro-North Railroad (“MNR”) (collectively, the “Railroads”) are finalizing their new M-9 Rail Car procurement in connection with plans to purchase up to 236 Base Order married-pair EMU Cars including 76 MTA-Funded (Leader) M-9 LIRR Cars and 160 FTA-Funded (Follower) M-9A LIRR Cars and up to 600 additional M-9 Cars (MTA-Funded) for LIRR and MNR cars. Some of the MNR cars may be a different configuration than the Base Order LIRR Cars. The Railroads intend to utilize the responses to this RFI to finalize the M-9 and M-9A Rail Car procurement documents.

Interested Carbuilder and Supplier Comments

Please be advised that the MTA has retained a consulting firm to assist in investigating various areas where the Railroads can achieve savings in the M-9 procurement process. As such, the Railroads are requesting that interested Carbuilders and Suppliers review this document including attachments and provide the Railroads with informal comments, concerns and/or recommendations regarding the proposed M-9 and M-9A Rail Car procurements. Specifically, the Railroads request that interested Carbuilders and Suppliers provide the Railroads with comments relating to:

- Life Cycle Costs
- Carbuilders’/Suppliers’ Survey
- Leader/Follower Provisions

Life Cycle Cost

The Railroads are interested in buying equipment at the overall lowest Life Cycle Cost (LCC) defined as the sum of the total acquisition project cost and the cost to operate and maintain (O&M) all purchased equipment for their estimated useful lives. O&M cost shall take into account, among other things, Reliability as measured by car and major system Mean Distance Between Component Failures (MDBCF); Maintainability as measured by the useful life of system lowest replaceable units (LRUs) in connection with the Railroads; RCM programs and Mean Time to Repair System LRUs; and Sustainability as measured by weight reduction and other energy saving features. To assist Carbuilders and Suppliers in developing their life cycle cost, the Railroads are interested in understanding the following:

Have Carbuilders and Suppliers completed LCC estimate in other RFP processes, and how was it approached?

- a. For capital cost estimates, what operating parameters and activity information would be needed to produce more robust LCC and MDBCFC estimates?
- b. For operations and maintenance cost estimates, what energy, spare parts, labor constraints, scheduled and unscheduled maintenance information would be needed?
- c. To assist in the alignment of the Railroads' understanding of useful lives, Carbuilders and Suppliers are asked to comment on how Maintainability, Reliability, and Sustainability of major systems and related LRUs are defined by their organizations.

Carbuilder/Supplier Survey

The Railroads are endeavoring to better understand how key system specifications (both functional and technical) drive the costs of Carbuilders and their sub-system suppliers. In the tables included on Attachment 001, key systems are identified and we request that Carbuilders and Suppliers complete this form as described therein.

Leader-Follower Provisions

The M-9 Rail Car procurement is currently contemplated to be a joint procurement between the Railroads utilizing a competitive Request for Proposal ("RFP") process. Due to the different funding sources for this procurement and the associated contract requirements related thereto, two separate RFPs will be issued and two separate and distinct contracts will be awarded. The first award (the "Leader Contract"), which will be MTA-Funded, will be awarded by the Railroads to the Leader for the design and manufacture of the M-9 Cars, and the second award (the "Follower Contract"), which will be FTA-Funded, will be awarded by LIRR only to the Follower for the design and manufacture of the M-9A Cars. Carbuilders may propose (and are eligible for award) as a Leader, Follower, or both.

L/F Award to a Single Carbuilder

If the Leader and Follower M-9 and M9A Car contracts are awarded to the same Carbuilder, then unless otherwise approved by LIRR or required by FTA procurement requirements, the Carbuilder shall use the same designs and a consolidated schedule for both M-9 and M-9A, without separate pilot testing. Due to a need to use FTA funding, the Railroads will require that the 160 M-9A Cars be delivered first as part of LIRR's 236 Base Car Order. Additionally, in this event, separate design qualification of the M-9A Cars shall not be required if, in the opinion of the Railroads, the M-9A designs are fully qualified as part of the M-9 design qualification activities.

L/F Award to Separate Carbuilders

If the Railroads award the Leader and Follower Contracts to two different Carbuilders, the Carbuilders will be obligated to comply with additional contract and technical requirements, as further described in Attachment 002 annexed hereto, which shall apply to the both the Leader and Follower and shall be verified via integrated testing, as applicable. Among other things, the Railroads' technical specification for their M-9 and M-9A Rail Cars will require interoperability (ie. the ability to operate cars together in mixed consists without restriction) between Leader/Follower built cars and interchangeability of parts and systems (i.e. requirement that where major systems and subsystems are not identical, that they have form, fit and function aspects and common software/hardware interfaces so as to allow the Railroads, to the maximum extent possible, to use such systems/subsystems in either the M-9 or M-9A Cars.

Information on Comments

Please advise the Railroads no later than **September 14, 2011** if you intend to respond fully to this SRFI, to allow the Railroads to schedule follow up meeting currently planned to be held in early October. The Railroads currently plan to release the formal Request for Proposal in November 2011. Carbuilders and Suppliers are advised to forward their comments and completed attachments to the draft M-9 Rail Car procurement documents electronically in the format provided herein as Attachment 3, and no later than **September 30, 2011**, to Ms. Maura

Kelly, Contract Specialist, (makelly@lirr.org). Carbuilders and Suppliers should contact Ms. Kelly at (718) 725-2641 or email if they have any questions. Also note, the Railroads may also conduct meetings to further discuss the Leader/Follower concept and any other topic contained in this RFI with proposed Carbuilders for this procurement.

Very truly ours,

LONG ISLAND RAIL ROAD

J.W. Allen

Deputy Chief Procurement Officer

Attachment 001

CARBUILDER/SUPPLIER SPECIFICATION SURVEY

The Railroads are endeavoring to better understand how key system specifications drive the costs of Carbuilders and their sub-system Suppliers.

In Table A below, key systems are identified and we request that Carbuilders and Suppliers benchmark the Railroads' specifications (both functional and technical) as presented in the table.

1. For system specifications identified in Table A, rank proposed M-9 specifications of major systems in the M-9 column. Enter the appropriate number on a scale of 1 to 4 that most accurately reflects your views regarding the M-9 specification where:
 - A. "1" would equate to maximum flexibility: Limited specifications beyond fulfilling legal requirements.
 - B. "2" would equate to moderate flexibility: Reasonable specifications beyond fulfilling legal requirements.
 - C. "3" would equate to restricted flexibility: Ample specifications beyond fulfilling legal requirements.
 - D. "4" would equate to Minimum Flexibility: Highly specified with limited degrees of freedom for design and technical solutions beyond fulfilling legal requirements.
2. Benchmark specifications of major systems you have delivered in other US, European and Asian markets. Please enter the appropriate geographic region (e.g., US, Other America, Europe, Asia) and benchmark number (from 1 to 4) that most accurately reflects your experience with those other transit systems.

Table A: Specification Ranking

		Geographic Region =>	M-9	Other-1	Other-2	Other-3	Other-4	Other-5
		Benchmark Range	US					
System	Propulsion	1-4						
	Trucks	1-4						
	Controls	1-4						
	Body	1-4						
	Doors	1-4						
	Lighting	1-4						
	Communications	1-4						
	HVAC	1-4						
	Power/APSE	1-4						
	Interiors	1-4						
Other: _____	1-4							

1 = Maximum flexibility: Limited specifications beyond fulfilling legal requirements.
2 = Moderate flexibility: Reasonable specifications beyond fulfilling legal requirements.
3 = Restricted flexibility: Ample specifications beyond fulfilling legal requirements.
4 = Minimum Flexibility: Highly specified with limited degrees of freedom for design and technical solutions beyond fulfilling legal requirements.

3. Please provide any written comments or feedback below in Table A regarding your views on industry best practice (simplest design, lowest cost, highest reliability) for the systems identified in Table A. What specifications would be best practice? What specifications are the highest cost drivers and how would we have to change that to unlock cost savings within that system? Please indicate if comments refer to a functional or technical specification.

A. Propulsion:

B. Trucks

C. Train Control

D. Body

E. Doors

F. Lighting

G. Communications

H. HVAC

I. Power/APSE

J. Interiors

K. Other: _____

Attachment 002

DRAFT LEADER/FOLLOWER REQUIREMENTS

A. Leader/Follower Relationship

1. The Leader and Follower will be required to work together to ensure that they achieve, to the maximum extent possible, the Railroads' goals of interoperability of the M-9 and M-9A Cars and compatibility of design.
2. The Railroads intend to award the Leader and Follower Contracts simultaneously and will require the Leader and Follower to proceed with the work under their respective Leader/Follower Contracts following the Railroads' award of the Contracts. Alternatively, the Leader will be required to commence work under the Leader Contract following the Railroads' award of the Contract and the Follower shall be required to commence performance of its work under the Follower Contract no later than six (6) months after award of that contract.
3. In either instance, the Leader and Follower will be required to meet monthly (the "Carbuilder Meetings") to exchange information and resolve compliance with their obligations under the Leader/Follower Contracts including all issues related to interoperability and compatibility of the M-9 and M-9A Cars. The Leader shall be responsible for conducting the Carbuilder Meetings, which shall commence no later than six (6) months after the Railroads' award of the Leader Contract.

B. Interoperability and Compatibility of M-9 and M-9A Cars

1. To facilitate interoperability and compatibility of design, the Carbuilders of the M-9 and M-9A Cars shall, within 30 days of execution of the Leader/Follower Contracts:
 - a. Execute a confidentiality agreement agreeing to use any proprietary information they receive from the other Carbuilder solely for the purpose of achieving interoperability and compatibility of design between the M-9 and M-9A Cars; and
 - b. Execute a licensing agreement that grants to each Carbuilder and each Carbuilders' subcontractors, Suppliers and manufacturers (as to whom the M-9 and M-9A Carbuilders represent and warrant that it has the power and authority to grant such sublicense) an irrevocable, perpetual, royalty-free, nonexclusive license and sublicense to use all proprietary rights to the technology, software and form, fit and function data that the Carbuilders incorporate into the M-9 and M-9A design(s) in accordance with the requirements of the Contract (such rights to be limited to use for the M-9 and M-9A Contracts and for future manufacture of M-9 and M-9ACars if interoperability and compatibility of design with such cars is a requirement of such future procurement).
2. The following requirements shall apply to the Leader (M-9 Cars) and Follower (M-9A Cars) and shall be verified via integrated testing, as applicable, if the Leader and Follower are not the same Carbuilder:
 - a. All design qualification tests required for M-9 components, subsystems, systems and Cars shall be repeated for the M-9A components, subsystems, systems, and Cars.
 - b. The Cars shall be fully interoperable with no restrictions, i.e. be able to operate in the same consist without any degradation of performance requirements.
 - c. The placement and usage of all controls, indicators, and screens shall be nearly identical, and shall be so similar that a crewmember trained on one car can operate the other car without additional training.
 - d. The exterior and interior appearances shall be similar in all respects so that only the

attentive observer could distinguish between the two car types.

- e. Infrastructure interfaces, including maintenance facilities, shall be the same on both the M-9 and M-9A Cars.
- f. The maintenance intervals and practices shall be the same for the M-9 and M-9A Cars, unless specific approval of any substantive difference is obtained from the Railroads in advance of those differences being incorporated into the M-9A designs.
- g. The Leader shall provide sufficient definition of any configuration change by either Carbuilder such as may affect the interoperability/interchangeability of the Cars or any apparatus, for as long as the Carbuilders are involved in the process.

C. Sharing of Design Information

1. The Leader shall provide the Follower with sufficient design information (collectively, the "Design Interface Documents") to allow the Follower to meet the interoperability requirements of the M-9 Specification. The Design Interface Documents shall be collected and distributed as a single book or set of books and shall include all information required for the Follower to build a M-9A Car that is compliant with the M-9 Specification requirements and fully interoperable with the Leader's M-9 Cars.
2. Any information that is provided independently shall ultimately be included in the book(s), such that the Design Interface Documents contain sufficient information to allow the Railroads to procure future rail cars that are fully interoperable with both the M-9 and M-9A Cars.
3. The books shall be regularly updated as new information becomes available or modifications are made to the Cars that impact the contents of the Design Interface Documents.
4. The Design Interface Documents shall be supplemented by amendments to the M-9 Specification to reflect Railroads' approved differences, if any, between as built M-9 and M-9A Car configurations.
5. The Design Interface Documents shall become the property of the Railroads for their unrestricted future use as part of the M-9 Rail Car procurement or for future rail car procurements.
6. The Leader and Follower shall communicate any design modifications, resolution of open items and/or warranty work to one another to ensure configuration control between the M-9 and M-9A Cars to maintain interoperability and compatibility.

D. Pilot Car and Bench Testing

1. The Leader and the Follower shall participate in joint compatibility and interoperability integrated tests, both static and dynamic, of pilot cars and critical systems/sub-systems as set forth in the M-9 Specification. The Leader and Follower shall (1) perform critical evaluations of M-9 and M-9A systems and subsystems, respectively, to demonstrate functionality of those systems/sub-systems prior to production ("Bench Tests"); and (2) verify proper operations of M-9 and M-9A Cars in Railroad approved representative train-build combinations and arrangements. ("Pilot Car Tests")
2. Test procedures for Bench and Pilot Car Tests (the "Test Procedures") shall be developed by the Leader and shall be reviewed by the Follower. Any issues or concerns of the Leader or Follower with respect to the Test Procedures shall be (i) resolved between the Leader and Follower prior to such procedures being submitted to the Railroads for approval, or (ii) in the event the Leader and Follower reach an impasse, specifically identified in their submittal letter to the Railroads as a matter needing final resolution by the Railroads.

3. Each Carbuilder shall instrument and record data for its own tests and provide technicians as required to identify and make adjustments needed to facilitate completion of the Bench and/or Pilot Tests. If adjustments alone are insufficient to facilitate successful completion of any portions of the integrated tests, then the Railroads shall deem the test(s) failed.
4. If the M-9 or M-9A Cars do not pass the approved integrated tests, then the Follower shall make the necessary changes in its designs to allow the tests to pass. Costs related to such design changes shall be borne by the Follower. Notwithstanding the foregoing, if the Design Interface Documents provided by the Leader are determined by the Railroads to be insufficient to allow the Follower to properly design its M-9A Car, then the costs of any changes to the Follower's design that are a direct result of deficiencies in the Leader's Design Interface Documents shall be borne by the Leader.
5. The Railroads are contemplating the use of an extended Pilot Car Testing Program for the M-9 and M-9A Cars (the "Extended Pilot Program"), which will last for approximately 3 to 6 months and may precede formal authorization to proceed with the production of the Base Order. The Railroads believe that the Extended Pilot Program will allow for a majority of design and operational issues to be resolved prior to Carbuilders commencing full production thereby reducing risks to both the Railroads and the Carbuilders. The Extended Pilot Program will also have the added benefit of reducing the need for an extensive car modification program after commencement of production.

E. Changes Orders

If there is a change in the scope of work as determined in the sole discretion of the Railroads, the Railroads and the Leader will negotiate a change order to include engineering and material costs for the change. The Leader will generate and transmit to the Follower a change order package with sufficient details (i.e. technical specification changes) to allow the Follower to implement the change.

The Railroads will also negotiate a separate change order with the Follower for the material costs associated with the change.

F. Dispute Resolution

Disputes between Leader and Follower shall be determined by an expedited Dispute Resolution Procedure. An independent third party selected by the Railroads and the Carbuilders shall be appointed as the final arbiter (the "Arbitrator") of any disputes between Leader and Follower. The determination of the Arbitrator shall be final and conclusive.