MTA - NEW YORK CITY TRANSIT 2 BROADWAY NEW YORK, NY 10004

DIVISION OF MATERIEL
web.mta.info/nyct/procure/nyctproc.htm
Vreplies@nyct.com

R34211
NOTICE
-OFADDENDUM

ADDENDUM #3

BID OPENING/DUE DATE: 10/18/2016
This addendum contains a CD which will be sent
by overnight mail



08/11/2016

R34211 ADDENDUM NO. 3

PURCHASE OF 1,025 SUBWAY CARS WITH A BASE ORDER OF 10 OPEN GANGWAY TEST CARS FOR NYCT "B" DIVISION, 75 STATEN ISLAND RAILWAY CARS AND 200 NYCT "B" DIVISION SUBWAY CARS AND AN OPTION FOR 740 ADDITIONAL NYCT "B" DIVISION SUBWAY CARS

CLOSING DATE - October 18, 2016

To Prospective Proposers:

Prospective Proposers are hereby notified of the following changes to the Proposal in the above referenced Request for Proposal (RFP).

This Addendum has been generated in order to respond to questions asked. In order to assist Proposers, Contract pages with tracked changes have been provided. The tracked documents are intended to call the Proposers' attention to where changes have been made to the Contract documents:

- The location for the pre-proposal conference scheduled for Thursday September 8 at 10:00am is 2 Broadway, Board Room 209 on the 20th Floor. Anyone wishing to attend must e-mail marian.murray@nyct.com by August 31, 2016 in order to be registered with security for admittance into the building. Please provide the name of the person attending and their company or organization name.
- Please remove pages 3, 6, 23, and 42 of the existing Overview and replace them with the revised pages 3, 6, 23, and 42 of the Overview attached. (See also the tracked version attached indicating the changes made via this addendum.)
- Please remove the existing TF-1 from Attachment 7 and replace it with the revised TF-1 forms for the R211A, R211S, R211T (Design 1), and R211T (Design 2). (See also the tracked version attached indicating the changes made via this addendum.)

Attached are the following documents providing clarification on inquiries received from Proposers:

- A question and answer sheet.
- An electronic copy of a tracked version of the Technical Specification which reflects the changes from the Technical Specification issued with the Industry Review to the version (Rev 0) issued with the RFP on 07/22/16. (See accompanying CD).
- A Word file of the TF-1 forms. (See accompanying CD).

Please be governed accordingly when submitting proposals for the above referenced Request for Proposals.

Sincerely.

Marian Murray

Assistant Chief Procurement Officer, Procurement

MTA New York City Transit is an agency of the Metropolitan Transportation Authority, State of New York

- UNITED STATES EMPLOYMENT PLAN WORKSHEET
- UNITED STATES EMPLOYMENT PLAN CERTIFICATION
- SUBCONTRACTOR DATA FORM
- MTA VENDOR CODE OF ETHICS
- PROPOSER'S EXECUTION FORM
 - TECHNICAL SPECIFICATION Separate Document
 - APPENDICIES TO TECHNICAL SPECIFICATION Separate Documents

2. PERTINENT DATES

- Release date of this RFP is July 22, 2016.
- A pre-proposal conference will be held on September 8, 2016, at 10:00 am at a 2 Broadway, Board Room 209 on the 20th floor. location TBD.
- All inquiries regarding requests for clarification must be received by the Authority by September 15, 2016.
- All proposals are due by 1:00 pm on October 18, 2016 (the "Closing Date").

3. GENERAL INSTRUCTIONS

The Authority considers any information it may have released either orally or in writing prior to the issuance of this RFP to be preliminary in nature and shall not be bound by such information.

Each Proposer should furnish the information required by this RFP. The person signing the proposal must initial all erasures or other changes.

If the proposal is signed by other than the president or general partner of the Proposer, the proposal is to include evidence of the agent's authority.

In general, the Authority seeks proposals under this RFP which are advantageous to the Authority and satisfy its overall needs. In order to afford the Authority the ability to properly evaluate and compare all proposals received, it is essential that each Proposer clearly indicate, with specificity, in what respect its proposal or alternative proposal constitutes an enhancement, a reduction or other change in the CONTRACT TERMS AND CONDITIONS and TECHNICAL SPECIFICATION, or if the Price Proposal is based upon the RFP without any changes, that such is the case. All affected provisions should be cited and any proposed modifications set forth.

4. ALTERNATIVE PROPOSALS

Each Proposer shall submit a base proposal as called for in this RFP and Proposers are encouraged to submit alternate proposals containing enhancements, reductions, or changes it wishes to offer. An alternate proposed on the assumption of changed technical specifications or contract terms must contain a corresponding alternate Price Proposal. Any alternate proposal must clearly identify the proposed contract or technical change(s)

prospective Proposers may telephone the Assistance Chief Procurement Officer at 646-252-6040.

8. PRE-PROPOSAL CONFERENCE

In order to assist Proposers in the preparation of their proposals, a Pre-Proposal Conference will take place at the time and location indicated below:

Date:

September 8, 2016

Time:

10:00 am

Place:

TBD2 Broadway, Board Room 209, 20th Floor

The Pre-Proposal Conference shall be informal. The Authority's representatives will entertain and respond to oral inquiries at the Pre-Proposal Conference; however, only a written interpretation or correction issued as an Addendum by the Authority shall be binding. Proposers should not rely on any representations, statements, or clarifications not made in this RFP or in a formal addendum.

- A. In the event of a site tour in connection with the RFP, prospective proposers who desire to attend or have a representative attend this site tour shall notify the Procurement Representative by telephoning the above number no later than noon of the working day preceding the day of the tour.
- B. No individuals shall be allowed to enter upon the Authority's property unless they shall agree to comply with all conditions imposed by the Authority in connection therewith, including signing a waiver, on behalf of themselves and the entity(ies) which they represent, of all claims against the Contracting Party and the Authority and any of their agents or employees arising on account of any personal injury (including death) or property damage occurring while on the Project Site or other Authority property, or arising out of their entrance or exit upon such property.

9. RESTRICTIONS ON CONTACT WITH AUTHORITY EMPLOYEES

Prospective Proposers are advised that until the award of any Contract pursuant to this RFP, they are not permitted to contact Authority employees about a matter related to this solicitation unless they have received the permission of the Assistant Chief Procurement Officer.

WITHDRAWAL OF PROPOSALS

Proposers may withdraw their proposals from consideration at any time prior to the award of this Contract. Proposers who decide to withdraw their proposals are asked to promptly notify the Authority in writing directed to the Assistant Chief Procurement Officer in order to avoid unnecessary expenditure of resources in reviewing such proposals. The Authority shall have the right to discard or retain for its records all copies of proposals withdrawn from consideration. All proposals shall remain the property of the Authority, whether or not withdrawn. No proposal shall be returned.

integration, testing, system assurance, warranty and field support. Describe, in detail, how much of the work force will be available and assigned to successfully complete the proposed work.

- Carbody and car assembly
- Truck and truck assembly
- Coupler system equipment
- Auxiliary electric equipment
- Propulsion system equipment
- Friction braking system equipment
- Door control and operator system
- HVAC system equipment
- Communications, including CCTV
- Information signs equipment
- Lighting system equipment
- Communications Based Train Control (CBTC) integration for carborne systems
- SIR Automatic Train Control (ATC)/Cab Signaling equipment
- Open Gangway.
- B.10 Provide design, manufacturing and assembly workflow and staffing plans for the proposed work, for each Supplier listed in Section 2.9. The workflow shall consider the parallel activities required for the design and manufacture of the OG, SIR, and NYCT Test Trains.
- B.11 What, if any, ongoing or already committed work on other projects are likely to impose workforce, facilities or financial constraints that could adversely impact the proposed work for each Supplier listed in Section B.9? What are their plans to mitigate them?
- B.12 Provide the resumes of the Project Program Manager and other key personnel listed in the organization chart for each Supplier listed in Section B.9.

29.1 **Technical Submittals and Questions**

General Requirements and Scope

- 29.1.1 Provide a set of preliminary general arrangement drawings for the proposed R211T, R211S, and R211A Car configurations defined in the Technical Specifications, including:
 - Exterior elevations of both sides
 - Exterior elevations of both ends
 - Floor plan
 - Reflected ceiling plan
 - Roof plan
 - Interior, longitudinal sections of both sides

- 29.23.5 How does the Proposer's Quality Assurance Program compare with that required by the technical specification? Are there any quality requirements which the Proposer does not currently have in place?
- 29.23.6 Have you satisfied ISO 9001: 2008 certification requirements on previous programs, and where?
- 29.23.7 Provide evidence of certifications related to standards applied to rail vehicle supply project execution, software development, and system design and integration such as IRIS, CMMI, or others as applicable.
- 29.23.8 Describe what you consider as critical material and workmanship items that are to be checked during the Pre-Shipment Inspections.

29.24 TESTING PROGRAM

- 29.24.1 Provide a preliminary Master Test and Inspection Plan.
- 29.24.2 What facilities do you have, or have access to, to support static and dynamic testing of the cars and multiple Car consists?
- 29.24.3 What facilities do you have, or have access to, for Car level environmental testing?
- 29.24.4 Where do you plan to perform high speed testing?
- 29.24.5 Describe your approach to support CBTC/ATC testing at the factory level; access to facilities to conduct dynamic testing.
- 29.24.6 Describe your approach to support the parallel testing activities associated with the supply of NYCT, SIR, and OG cars. The approach shall include, but is not limited to qualification testing of similar systems and subsystems, pre-shipment testing of NYCT and SIR cars, and testing and staffing support at SIR and NYCT during prototype and acceptance testing.

29.25 STATEN ISLAND RAILWAY CARS

- 29.25.1 Please provide details on the proposed methodology and safety level for application of ATC initiated penalty brake without modification of R211 friction brake system control hardware.
- 29.25.2 Provide details on the conceptual design to accommodate the need to cutout doors as described in 25.6.1.2 at certain stations.
- 29.25.3 Please provide details on the proposed methodology and safety level for application of ATC initiated penalty brake without modification of R211 friction brake system control hardware.

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FORM TF-1 TECHNICAL SUMMARY FORM

R211A

	osers Name:				
2.0	DATA AND DIMENSION	S (AT ZEF	RO WEIGHT, EXC	EPT AS SPECIFIE	<u>D)</u>
1.	Car weight as proposed:				
	AW0 A1 Carlbs	. A2 Car_	lbs. B Ca	arlbs	
	AW1 A1 Car lbs	. A2 Car_	lbs. B Ca	arlbs	
	AW2 A1 Car lbs	. A2 Car_	lbs B Ca	arlbs.	
	AW3 A1 Car lbs	. A2 Car_	lbs. B Ca	arlbs.	
3.0	CARBODY STRUCTURE		Drafarrad Suppliar 1	Alternate Supplier 12	Altomoto Complian 22
I.	Carbody Shell		Treiened Supplier	Atternate Supplier 12	Alternate Supplier 23
4.0	COUPLERS, DRAWBARS	AND DR	AFT GEAR SYSTE	M	
			Preferred Supplier 4	Alternate Supplier 12	Alternate Supplier 23
1.	Coupler systemSystem	Supplier			
		Туре			
2.	Link Bar	Supplier		-	***************************************
		Type			
5.0	CAB AND CAB CONTRO	<u>LS</u>	Preferred_Supplier 4	Alternate Supplier 12	Alternate Supplier 32
1.	Cab seatSeat	Supplier			
		Type	-		
2.	Console	Supplier	*		
		Type	N		
3.	Train operator-Operator displaysDisplays	Supplier			
		Type			
4.	Master controller Controller group	Supplier	-		
		Type	(1,000,000,000,000,000,000,000,000,000,0		

		SIDE DOOR SYSTEM				
				Preferred Supplier 4	Alternate Supplier 12	Alternate Supplier 23
	1.	Side door Door hangers	Supplier			
			Type			
	2.	Side door Door panels	Supplier			1
			Material			
	3.	Side door <u>Door operators Operators</u> and controls	Supplier			
		and controls	Type	New York Control of the Control of t		
	4.	End door Door panels	Supplier			
			Туре			
		HEATING, VENTILATING		Preferred Supplier 4	Alternate Supplier 12	Alternate Supplier 23
	1.	HVAC systemSystem	Supplier			
	2	11	Туре	description of the second second	·	
9	2.	Air conditioning system—System	Capacity (per car)			
			(per car)			
d	3.	Overhead heating Heating system System	Capacity (per car)			
	3. 4.	System Floor heating Heating system	Capacity			
		System	Capacity (per car)			
		System Floor heating Heating system	Capacity (per car)			
2	4.	System Floor heating Heating system	Capacity (per car) Supplier Type Capacity			
4	4.	System Floor heating Heating system System	Capacity (per car) Supplier Type Capacity (per car)			
4	4. 4.	Floor heating Heating system System HVAC Compressor, hermetic DC-AC Inverter for Compressor Motor DC-AC Inverter for Evaporator	Capacity (per car) Supplier Type Capacity (per car) Supplier Supplier			
4 4	4. 5.	System Floor heating Heating system System HVAC Compressor, hermetic DC-AC Inverter for Compressor Motor	Capacity (per car) Supplier Type Capacity (per car) Supplier			
4 4	4. 4. <u>5.</u> <u>6.</u>	Floor heating Heating system System HVAC Compressor, hermetic DC-AC Inverter for Compressor Motor DC-AC Inverter for Evaporator	Capacity (per car) Supplier Type Capacity (per car) Supplier Supplier			
4 4	4. 4. 5.	Floor heating Heating system System HVAC Compressor, hermetic DC-AC Inverter for Compressor Motor DC-AC Inverter for Evaporator Blower Motor	Capacity (per car) Supplier Type Capacity (per car) Supplier Supplier Supplier			

8.0	LIGHTING SYSTEMS				
			Preferred Supplier 4	Alternate Supplier 12	Alternate Supplier 23
1.	Light fixtures (interior)	Supplier		<u></u>	
		Type	-		
2.	Light fixtures (exterior)	Supplier			
		Type			
9.0	AUXILIARY ELECTRIC	EQUIPME	ENT AND DISTRIE	BUTION	
			Preferred Supplier 4	Alternate Supplier 12	Alternate Supplier 23
1.	Third rail Rail eurrent Current collectorCollector	Supplier			
	conector <u>Conector</u>	Type	-		()
2.	Main switch Switch and main fuse	Supplier			(
		Type			(
3.	Auxiliary inverters Inverters	Supplier			
		Type	_		
4.	Low Voltage power-Power supplySupply	Supplier		<u> </u>	
	sapp.) sapp.	Type			
5.	Storage batteryBattery	Supplier			
		Type			
10.0	PROPULSION AND BRAI	KINGSYS	ГЕМ		
			Preferred Supplier	Alternate Supplier 1	Alternate Supplier 2
1.	AC inverter Inverter	Supplier			
	No. of inverter drives per car				
	Type				
2.	Traction motor Motor	Supplier		<u></u>	
	Motor Model No.				
	Motor speed, maximum				
	Motor rating (1 hour)	*			
3.	Braking resistor Resistor	Supplier			1
		Type			-
4.	Power electronics cooling design				

5.	Control logic	Supplier			
	No. of control logic units per car			7)	
6.	Gear unitsUnits	Supplier			
		Type			
7.	Gear Ratio				-
				-	
11.0	TRUCKS IND SUSPENSE	ON CRICIO	77.5		
11.0	TRUCKS AND SUSPENSI	ON SYSTI	Preferred Supplier	Alternate Supplier 1	Alternate Supplier 2
1.	Fabricated tTruck frame and bolster (Fabricated)	Supplier	3		
2.	Wheels	Supplier			
3.	Axles	Supplier			
		Туре			
4.	Journal bearings Bearings	Supplier			
		Type			
5.	Primary suspension	Supplier			
		Туре			
6.	Secondary suspension	Supplier			
		Type	·		
7.	Leveling Valves	Supplier			
		Type			
12.0	FRICTION BRAKING AN	D AIR SU	PPLY SYSTEMS	g)	
			Preferred Supplier	Alternate Supplier 1	Alternate Supplier 2
			Freierred Supplier	Alternate Supplier 1	Alternate Supplier 2
1.	Friction brake Brake system System	Supplier			
		Type	-		
2.	Parking brake Brake system System	Supplier			-
		Type		W	
3.	Air supply Supply systemSystem	Supplier			
		Туре	-		
13.0	COMMUNICATIONS				
10.0	COMMICTACIONA		Preferred Supplier	<u>Alternate</u> Supplier <u>1</u>	<u>Alternate</u> Supplier 2

1.	PA/Intercom system	Supplier		22	
		Type			
2.	Train on On-board radio Radio	Supplier			
		Туре			
3.	Exterior Side Destination Signs	Supplier			
		Туре			
4.	Ceiling Interior Information Sign	Supplier			
		Туре			
5.	End Route Sign	Supplier			-
		Туре			
6.	Flexible Ceiling Strip Display	Supplier	-		
	, ,	Туре	-	A	
7.	Flexible Wall Displays	Supplier		-	
		Туре			
8.	CCTV Cameras	Supplier	-		-
0.	CCT v Cameras	Туре			e
9.	Network Video Recorder	Supplier			-
۶.	Network video Recorder	Туре	-	-	
		1 y DC			
140	TRAIN CONTROL SVSTI			4	
14.0	TRAIN CONTROL SYSTI				
14.0 1.	TRAIN CONTROL SYSTE				
		<u>EM</u>			2
		<u>EM</u>			2
1.	CBTC Interface management	E M Supplier	EDIODS		2
		E M Supplier	ERIORS		2
1.	CBTC Interface management	E M Supplier	-	Altamota Sumplier I	Alternate Supplier 2
1.	CBTC Interface management	E M Supplier	ERIORS Preferred Supplier	Alternate Supplier 1	Alternate Supplier 2
1.	CBTC Interface management	E M Supplier	-	Alternate Supplier 1	Alternate Supplier 2
1.	CBTC Interface management CARBODY EQUIPMENT	Supplier AND INT	Preferred Supplier	Alternate Supplier 1	Alternate Supplier 2
1.	CBTC Interface management CARBODY EQUIPMENT	Supplier AND INT Supplier	Preferred Supplier	Alternate Supplier 1	Alternate Supplier 2
1. 15.0	CARBODY EQUIPMENT Floor Covering	Supplier AND INT Supplier Material	Preferred Supplier	Alternate Supplier 1	Alternate Supplier 2
1. 15.0	CARBODY EQUIPMENT Floor Covering	Supplier Supplier Supplier Material Supplier	Preferred Supplier	Alternate Supplier 1	Alternate Supplier 2
1. 15.0	CARBODY EQUIPMENT Floor Covering Subflooring	Supplier Supplier Material Supplier Material	Preferred Supplier	Alternate Supplier 1	Alternate Supplier 2
1. 15.0	CARBODY EQUIPMENT Floor Covering Subflooring	Supplier Supplier Material Supplier Material Supplier	Preferred Supplier	Alternate Supplier 1	Alternate Supplier 2

		Type			
16.0	TRAINLINE & CAR CON	TROLS A	RCHITECTURE		
			Preferred Supplier	Alternate Supplier 1	Alternate Supplier 2
1.	Trainline and network Network	Supplier			
	controllers Controllers	Type			>
2.	Network Switches	Supplier			
		Туре			
17.0	MONITORING AND DIA	GNOSTIC	SYSTEM		
			Preferred Supplier	Alternate Supplier 1	Alternate Supplier 2
1.	Monitoring and diagnostic	Supplier		(<u> </u>	
	<u>Diagnostic</u> system System	Type		-	
2.	Event recorder Recorder	Supplier			
		Type	3	-	-
18.0	SOFTWARE SYSTEMS		Preferred Supplier	Alternate Supplier 1	<u>Alternate</u> Supplier 2
1.	For Train and Car Control	Supplier	(2 		
2.	For Propulsion Control	Supplier		*	
3.	For Auxiliary Control	Supplier			·
4.	For Doors	Supplier			
5.	For HVAC	Supplier			
6.	For Monitoring & Diagnostics System	Supplier			
7.	For Friction Brake System	Supplier			
8.	For Overall Software Management	Supplier			
	.0 <u>SYSTEM ASSURANCE SI</u> TEMS ASSURANCE	ERVICESR	RELIABILITY, MA	AINTAINABILITY,	AND
			Preferred Supplier	Alternate Supplier 1	Alternate Supplier 2
1.	Reliability requirements	Supplier			
2.	Maintainability requirements	Supplier			:
3.	Safety requirements	Supplier			

22.0	IN SERVICES ISTEM SUP	PORT	Preferred Supplier	Alternate Supplier 1	Alternate Supplier 2
1.	Training	Supplier			
2.	Manuals, IETM	Supplier			
3.	Part and device identification system	Supplier		4	
4.	Bench Test Equipment	Supplier			
		Type			
25.0	STATEN ISLAND RAILW	AY CARS			
+	ATC/Cab Signaling Equip.	Supplier Type/ Model			
26.0	OPEN GANGWAY TEST T	RAIN			
1.	Open Gangway Unit 1	Supplier			
2.	Open Gangway Unit 2	Type Supplier			
		Type			
3.	Link Bar, Drawbar for Open Gangway Unit 1 & 2	Supplier			
		Type			

FORM TF-1 TECHNICAL SUMMARY FORM R211A

	Car weight as p	ranged:					
			12.0	11	D. C	II.	
		arlbs.					
	AW1 A1 Ca	arlbs.		lbs.			
	AW2 A1 Ca	arlbs.	A2 Car_	lbs	B Car	lbs.	
	AW3 A1 Ca	arlbs.	A2 Car_	lbs.	B Car	lbs.	
3.0	CARBODY	STRUCTURE		Preferred Supplie	er	Alternate Supplier 1	Alternate Supplier 2
1.	Carbody Shell						-
4.0	COUPLERS	SSYSTEM					
				Preferred Supplie	er	Alternate Supplier 1	Alternate Supplier 2
1.	Coupler System		Supplier				
			Туре				·
2.	Link Bar		Supplier				2
			Type				2
5.0	CAB AND C	CAB CONTROL	<u>S</u>	Preferred Supplie	er	Alternate Supplier 1	Alternate Supplier 2
1.	Cab Seat		Supplier	·			
			Type				\
2.	Console		Supplier				
			Type				
3.	Train Operator D	isplays	Supplier				
			Type			(a)	-
4.	Master Controller	r group	Supplier				
			Type	·			

6.0	SIDE DOOR SYSTEM				
			Preferred Supplier	Alternate Supplier 1	Alternate Supplier 2
1.	Side Door hangers	Supplier			
		Type			
2.	Side Door panels	Supplier			
		Material			
3.	Side Door Operators and controls	Supplier			
		Type			
4.	End Door panels	Supplier			
		Type			
7.0	HEATING, VENTILATIN	NG AND AII	R CONDITIONIN Preferred Supplier	G SYSTEM Alternate Supplier 1	. Alternate Supplier 2
1.	HVAC System	Supplier			
1.	Trvic bysiciii	Туре			2
2.	Air conditioning System	Capacity (per car)			
3.	Overhead Heating System	Capacity (per car)			
4.	HVAC Compressor, hermetic	Supplier			
5.	DC-AC Inverter for Compressor Motor	Supplier			
6.	DC-AC Inverter for Evaporator Blower Motor	Supplier			
7.	Floor Heating System	Supplier			
		Type			
		Capacity (per car)			
8.0	LIGHTING SYSTEMS				
0.0	LIGHTING STSTEMS		Preferred Supplier	Alternate Supplier 1	Alternate Supplier 2
1.	Light fixtures (interior)	Supplier			

		Type			
2.	Light fixtures (exterior)	Supplier			
		Type		-	
9.0	AUXILIARY ELECTRIC	EQUIPME	NT AND DISTRIE	BUTION	
	-		Preferred Supplier	Alternate Supplier 1	Alternate Supplier 2
1.	Third Rail Current Collector	Supplier			
		Туре		8	
2.	Main Switch and main fuse	Supplier		· ·	
		Туре		A	
3.	Auxiliary Inverters	Supplier	***************************************	S	
		Type			
4.	Low Voltage Power Supply	Supplier			
		Type			
5.	Storage Battery	Supplier			
		Type			
10.0	PROPULSION SYSTEM				
			Preferred Supplier	Alternate Supplier 1	Alternate Supplier 2
1.	AC Inverter	Supplier			*
	No. of inverter drives per car		-		
	Туре		#		
2.	Traction Motor	Supplier			
	Motor Model No.				
	Motor speed, maximum				
	Motor rating (1 hour)				
3.	Braking Resistor	Supplier			
		Type			
4.	Power electronics cooling design				
5.	Control logic	Supplier	-	H	
	No. of control logic units per car				
			ALCOHOL STATE OF THE STATE OF T		
6.	Gear Units	Supplier			

		Type			
7.	Gear Ratio				
11.0	TRUCKS AND SUSPENSE	ION SYST			
			Preferred Supplier	Alternate Supplier 1	Alternate Supplier 2
1.	Fabricated truck frame and bolster	Supplier		-	
2.	Wheels	Supplier			
3.	Axles	Supplier			
		Type			
4.	Journal Bearings	Supplier		·	
		Type		2	
5.	Primary suspension	Supplier	·	-	
		Type		52	
6.	Secondary suspension	Supplier			
		Type			
7.	Leveling Valves	Supplier			
		Type			
12.0	FRICTION BRAKING AN	D AIR SU	PPLY SYSTEMS		
			Preferred Supplier	Alternate Supplier 1	Alternate Supplier 2
1.	Friction Brake System	Supplier			
		Type	-		
2.	Parking Brake System .	Supplier			
		Туре			
3.	Air Supply System	Supplier			
		Туре			
13.0	COMMUNICATIONS				
80000000			Preferred Supplier	Alternate Supplier 1	Alternate Supplier 2
1.	PA/Intercom system	Supplier			
		Type	,		
2.	Train On-board Radio	Supplier			*
				NOTE OF THE PARTY	
		Type		-	

3.	Exterior Side Destination Signs	Supplier			
		Type			
4.	Ceiling Interior Information Sign	Supplier			
		Type			
5.	End Route Sign	Supplier			
		Туре		0	
6.	Flexible Ceiling Strip Display	Supplier	-		
75.0	2,000,000	Туре		-	
7.	Flexible Wall Displays	Supplier	•		-
7.	riexible wall Displays		<u> </u>		
		Туре			
8.	CCTV Cameras	Supplier			-
		Type			
9.	Network Video Recorder	Supplier			
		Type			<u> </u>
					9
14.0	TRAIN CONTROL SYST	<u>EM</u>			
1.	CBTC Interface management	Supplier	-		
15.0	CARBODY EQUIPMENT	AND INT	ERIORS		
	¥				
			Preferred Supplier	Alternate Supplier 1	Alternate Supplier 2
1.	Floor Covering	Supplier			
		Material			
2.	Subflooring	Supplier			
		Material			
3.	Windows	Supplier	70.		
		Туре	***		
4.	Seats	Supplier			9
		Туре			100
		Lype			

16.0	TRAINLINE & CAR CON	TROL AR	CHITECTURE		
			Preferred Supplier	Alternate Supplier 1	Alternate Supplier 2
1.	Trainline and Network Controllers	Supplier			
		Type			
2.	Network Switches	Supplier	***************************************	· · · · · · · · · · · · · · · · · · ·	
		Type	4		
17.0	MONITORING AND DIAG	GNOSTICS	8		
			Preferred Supplier	Alternate Supplier 1	Alternate Supplier 2
1.	Monitoring and Diagnostic System	Supplier		T	
		Type		5	
2.	Event Recorder	Supplier			
		Туре			
18.0	SOFTWARE SYSTEMS		Preferred Supplier	Alternate Supplier 1	Alternate Supplier 2
1.	For Train and Car Control	Supplier	X.		The state of the s
2.	For Propulsion Control	Supplier			
3.	For Auxiliary Control	Supplier			-
4.	For Doors	Supplier			
5.	For HVAC	Supplier			
6.	For Monitoring & Diagnostics System	Supplier			
7.	For Friction Brake System	Supplier			
8.	For Overall Software Management	Supplier			
21	RELIABILITY, MAINTAL	NABILITY	, AND SYSTEMS	SASSURANCE	
			Preferred Supplier	Alternate Supplier 1	Alternate Supplier 2
1.	Reliability requirements	Supplier			()
2.	Maintainability requirements	Supplier		-	
3.	Safety requirements	Supplier		190	-
22.0	SYSTEM SUPPORT		Preferred Supplier	Altamata Complicat	Alternation of the Co
1	Tesining	C 1	r referred supplier	Alternate Supplier 1	Alternate Supplier 2
1.	Training	Supplier			

2.	Manuals, IETM	Supplier			
3.	Part and device identification system	Supplier	-	_	
4.	Bench Test Equipment	Supplier	200		
		Type			

FORM TF-1 TECHNICAL SUMMARY FORM R211S

Prop 2.0		DIMENSIONS			EXCE	PT AS SPECIFIE	D)
1.	Car weight as pr						
	AW0 A1 Ca	ırlbs.	A2 Car _	lbs.	B Car	Ibs.	
	AW1 A1 Ca	ırlbs.	A2 Car _	lbs.	B Car	lbs.	K.
	AW2 A1 Ca	ırlbs.	A2 Car _	lbs.	B Car	lbs.	
	AW3 A1 Ca	urlbs.	A2 Car _	lbs.	B Car	lbs.	
3.0	CARBODY	STRUCTURE		Preferred Suppl	ier	Alternate Supplier 1	Alternate Supplier 2
1.	Carbody Shell				-) -	95.77\\ 	
4.0	COUPLERS	SYSTEM					
				Preferred Suppl	ier	Alternate Supplier 1	Alternate Supplier 2
1.	Coupler System		Supplier	·			-
			Type	·			-
2.	Link Bar		Supplier	-			
			Type	n 			
5.0	CAB AND C	CAB CONTROL	<u>s</u>	Preferred Suppl	ier	Alternate Supplier 1	Alternate Supplier 2
1.	Cab Seat		Supplier				(2 <u>000)</u>
			Type				
2.	Console		Supplier				
			Type				;
3.	Train Operator Dis	splays	Supplier				:
			Type				£ 25
4.	Master Controller	group	Supplier				
			Type	7 <u>-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1</u>			

6.0	SIDE DOOR SYSTEM				
			Preferred Supplier	Alternate Supplier 1	Alternate Supplier 2
1.	Side Door hangers	Supplier			
		Type			
2.	Side Door panels	Supplier			
		Material			
3.	Side Door Operators and controls	Supplier			
		Type	-		-
4.	End Door panels	Supplier			
		Type			
7.0	HEATING, VENTILATIN	NG AND AI	R CONDITIONIN Preferred Supplier	G SYSTEM Alternate Supplier 1	Alternate Supplier 2
1.	HVAC System	C	referred Supplier	Atternate Supplier 1	Atternate Supplier 2
1.	HVAC System	Supplier Type			
2.	Air conditioning System	Capacity (per car)			
3.	Overhead Heating System	Capacity (per car)			
4.	HVAC Compressor, hermetic	Supplier		3	
5.	DC-AC Inverter for Compressor Motor	Supplier			
6.	DC-AC Inverter for Evaporator Blower Motor	Supplier			
7.	Floor Heating System	Supplier			
		Type			
		Capacity (per car)			:
8.0	LIGHTING SYSTEMS				
			Preferred Supplier	Alternate Supplier 1	Alternate Supplier 2
1.	Light fixtures (interior)	Supplier			
		Type			
2.	Light fixtures (exterior)	Supplier			
		Type			

9.0	AUXILIANT ELECTRIC	LQUIFWIE	NI AND DISTRI	BUTION	
			Preferred Supplier	Alternate Supplier 1	Alternate Supplier 2
1.	Third Rail Current Collector	Supplier			
		Type			
2.	Main Switch and main fuse	Supplier			
		Type	0		
3.	Auxiliary Inverters	Supplier			
		Type	=		
4.	Low Voltage Power Supply	Supplier			
		Type			
5.	Storage Battery	Supplier			-
	*	Type			
	×				
10.0	PROPULSION SYSTEM				
			Preferred Supplier	Alternate Supplier 1	Alternate Supplier 2
1.	AC Inverter	Supplier	P	P	
1.	No. of inverter drives per car	Supplier	-	(100 to 100 to 1	-
	Type			-	
2.	Traction Motor	Supplier			
2.	Motor Model No.	Баррие		(
	Motor speed, maximum			S ************************************	
	Motor rating (1 hour)				
3.	Braking Resistor	Supplier			-
٠.	Diaking Resistor	Туре			-
4.	Power electronics cooling design	.,,,,			
7.	Tower electronies cooling design		-	1	
5.	Control logic	Supplier			
	No. of control logic units per car	. 355			
6.	Gear Units	Supplier		· · · · · · · · · · · · · · · · · · ·	
		Туре			
7.	Gear Ratio			×	
				A	

11.0 TRUCKS AND SUSPENSION SYSTEM

			Preferred Supplier	Alternate Supplier 1	Alternate Supplier 2
1.	Fabricated truck frame and bolster	Supplier			
2.	Wheels	Supplier			
3.	Axles	Supplier			
		Type			
4.	Journal Bearings	Supplier			
		Type			
5.	Primary suspension	Supplier			
		Type			
6.	Secondary suspension	Supplier			
		Type			
7.	Leveling Valves	Supplier			
		Type			
			Preferred Supplier	Alternate Supplier 1	Alternate Supplier 2
			•	- Common Control State (2000 € • 100 (2000 € 100))))))))))))))))))	
1.	Friction Brake System	Supplier			
		Туре			
2.	Parking Brake System	Supplier			20
2		Туре			-
3.	Air Supply System	Supplier			
		Type			
13.0	COMMUNICATIONS		Preferred Supplier	Alternate Supplier I	Alternate Supplier 2
1.	PA/Intercom system	Supplier			
		Type			
2.	Train on-board radio	Supplier			
		Type			
3.	Exterior Side Destination Signs	Supplier			
		Type			
4.	Ceiling Interior Information Sign	Supplier			

		Type.			
5.	End Route Sign	Supplier	•		
		Type			
6.	Flexible Ceiling Strip Display	Supplier			
		Туре		9	
7.	Flexible Wall Displays	Supplier	-		
	, , , , , , , , , , , , , , , , , , , ,	Туре	-		
8.	CCTV Cameras	Supplier			
0.	CCTV Cameras		<u>101 = 1 </u>	1	
0	Name I Ville Book	Туре	-		
9.	Network Video Recorder	Supplier		-	
		Type		8	-
14.0	TRAIN CONTROL SYSTI				
1.	Floor Covering	Supplier			-
		Material			
2.	Subflooring				
3.	Windows	Supplier			
200		Type			
4.	Seats	Supplier			
		Type			
16.0	TRAINLINE & CAR CON	TROL AR	CHITECTURE		
			Preferred Supplier	Alternate Supplier 1	Alternate Supplier 2
1.	Trainline and Network Controllers	Supplier			
		Type			
2.	Network Switches	Supplier		19	
		Туре			
17.0	MONITORING AND DIAC	GNOSTICS		A.D	
			Preferred Supplier	Alternate Supplier I	Alternate Supplier 2

1.	Monitoring and Diagnostic System	Supplier			
		Type			
2.	Event Recorder	Supplier			
		Type			
18.0	SOFTWARE SYSTEMS		Preferred Supplier	Alternate Supplier 1	Alternate Supplier 2
1.	For Train and Car Control	Supplier			
2.	For Propulsion Control	Supplier			
3.	For Auxiliary Control	Supplier			
4.	For Doors	Supplier	San-	*	
5.	For HVAC	Supplier			
6.	For Monitoring & Diagnostics System	Supplier			
7.	For Friction Brake System	Supplier			
8.	For Overall Software Management	Supplier			
21.0	RELIABILITY, MAINTAIN	NABILITY	Y, AND SYSTEMS Preferred Supplier	Alternate Supplier 1	Alternate Supplier 2
1.	Reliability requirements	Supplier			
2.	Maintainability requirements	Supplier			
3.	Safety requirements	Supplier			
22.0	SYSTEM SUPPORT		Preferred Supplier	Alternate Supplier 1	Alternate Supplier 2
1.	Training	Supplier			-
2.	Manuals, IETM	Supplier			
3.	Part and device identification system	Supplier			
4.	Bench Test Equipment	Supplier		#	
		Туре			
25.0	STATEN ISLAND RAILWA	AY CARS			
1.	ATC/Cab Signaling Equip.	Supplier			
		Type/			

FORM TF-1 TECHNICAL SUMMARY FORM R211T – DESIGN 1

Prop 2.0		ne:			O WEIGHT 1	XCE	PT AS SPECIFIE	D)
1.		ight as proposed:			O WEIGHT,	ZI CL	TAS STECTILE	<u>D1</u>
	AW0	A1 Car		A2 Car	lbs.	B Car	lbs.	
	AW1	A1 Car	lbs.		lbs.		lbs.	
	AW2	A1 Car	lbs.	A2 Car	lbs.		lbs.	
	AW3	A1 Car	lbs.	A2 Car_	lbs.		lbs.	
3.0	CARI	BODY STRU	CTURE		Preferred Suppli	er	Alternate Supplier 1	Alternate Supplier 2
1.	Carbody	Shell						
4.0	COUL	PLERS SYST	EM					
					Preferred Suppli	er	Alternate Supplier 1	Alternate Supplier 2
1.	Coupler S	System		Supplier				
				Type	-	_		
5.0	CAB	AND CAB CO	ONTROL	<u>S</u>	Preferred Suppli	er	Alternate Supplier 1	Alternate Supplier 2
1.	Cab Seat			Supplier		_		
				Type		_		
2.	Console			Supplier	-	_		
				Type	7	_		
3.	Train Ope	erator Displays		Supplier		_		
				Type		-		•
4.	Master Co	ontroller group		Supplier				
				Type		5 65		

6.0	SIDE DOOR SYSTEM				
			Preferred Supplier	Alternate Supplier 1	Alternate Supplier 2
1.	Side Door hangers	Supplier			
		Type			
2.	Side Door panels	Supplier			
		Material			
3.	Side Door Operators and controls	Supplier			
		Type			
4.	End Door panels	Supplier			
		Type			
7.0	HEATING, VENTILATIN	G AND AII	R CONDITIONIN Preferred Supplier	G SYSTEM Alternate Supplier 1	Alternate Supplier 2
1.	HVAC System	Supplier			
**	Title sjetem	Туре			
2.	Air conditioning System	Capacity (per car)			
3.	Overhead Heating System	Capacity (per car)		% <u></u>	
4.	HVAC Compressor, hermetic	Supplier	-	1	
5.	DC-AC Inverter for Compressor Motor	Supplier			
6.	DC-AC Inverter for Evaporator Blower Motor	Supplier			
-		Committee			
7.	Floor Heating System	Supplier	-		
		Type Capacity			
		(per car)	-		
8.0	LIGHTING SYSTEMS				
			Preferred Supplier	Alternate Supplier 1	Alternate Supplier 2
1.	Light fixtures (interior)	Supplier			
	(73) S. (5)	Туре	y 		
		*********	-		

Light fixtures (exterior)	Supplier			
	Type			
AUXILIARY ELECTRIC	EOUIPME	NT AND DISTRIE	BUTION	

		Preferred Supplier	Alternate Supplier 1	Alternate Supplier 2
Third Rail Current Collector	Supplier			
	Type			
Main Switch and main fuse	Supplier			
	Type	-		
Auxiliary Inverters	Supplier			
	Туре	·		
Low Voltage Power Supply	Supplier			
	Type			
Storage Battery	Supplier		*	
	Type			
PROPULSION SYSTEM				
		Preferred Supplier	Alternate Supplier 1	Alternate Supplier 2
AC Inverter	Supplier			-
No. of inverter drives per car				
Туре				
Traction Motor	Supplier			
Motor Model No.			-	
Motor speed, maximum			(1	
Motor rating (1 hour)				
Braking Resistor	Supplier			
	Type			
Power electronics cooling design				
Control logic	Supplier			
No. of control logic units per car				8
Gear Units	Supplier			
	Type			
	AUXILIARY ELECTRIC Third Rail Current Collector Main Switch and main fuse Auxiliary Inverters Low Voltage Power Supply Storage Battery PROPULSION SYSTEM AC Inverter No. of inverter drives per car Type Traction Motor Motor Model No. Motor speed, maximum Motor rating (1 hour) Braking Resistor Power electronics cooling design Control logic No. of control logic units per car	AUXILIARY ELECTRIC EQUIPME Third Rail Current Collector Type Main Switch and main fuse Supplier Type Auxiliary Inverters Supplier Type Low Voltage Power Supply Supplier Type Storage Battery Supplier Type Supplier Type PROPULSION SYSTEM AC Inverter No. of inverter drives per car Type Traction Motor Motor Model No. Motor speed, maximum Motor rating (1 hour) Braking Resistor Supplier Type Power electronics cooling design Control logie Supplier	AUXILIARY ELECTRIC EQUIPMENT AND DISTRIP Preferred Supplier Type Main Switch and main fuse Supplier Type Auxiliary Inverters Supplier Type Low Voltage Power Supply Supplier Type Storage Battery Supplier Type Storage Battery Supplier Type AC Inverter No. of inverter drives per car Type Traction Motor Motor Model No. Motor speed, maximum Motor rating (1 hour) Braking Resistor Supplier Type Control logic Supplier Supplier Type Control logic Supplier Supplier Supplier Supplier Type Control logic units per car Gear Units Supplier	AUXILIARY ELECTRIC EQUIPMENT AND DISTRIBUTION Preferred Supplier Alternate Supplier 1 Third Rail Current Collector Supplier Type Main Switch and main fuse Supplier Type Auxiliary Inverters Supplier Type Low Voltage Power Supply Supplier Type Storage Battery Supplier Type Storage Battery Supplier Alternate Supplier Type AC Inverter Supplier Alternate Supplier Alternate Supplier I AC Inverter Supplier Supplier Alternate Supplier I AC Inverter Supplier Supplier Supplier Supplier I AC Inverter Supplier Supplier Supplier I AC Inverter Grives per car Type Traction Motor Supplier Motor Model No. Motor speed, maximum Motor rating (1 hour) Braking Resistor Supplier Type Power electronics cooling design Control logic Supplier Supplier Supplier Supplier I Control logic Supplier

7.	Gear Ratio				-
11.0	TRUCKS AND SUSPENS	SION SYSTI	EM		
			Preferred Supplier	Alternate Supplier 1	Alternate Supplier
1.	Fabricated truck frame and bolster	Supplier	*		
2.	Wheels	Supplier			
3.	Axles	Supplier			
		Type	-		
4.	Journal Bearings	Supplier			
		Type			
5.	Primary suspension	Supplier			
		Type			
6.	Secondary suspension	Supplier			
		Type			100 mg
7.	Leveling Valves	Supplier	CARAGES AND THE STREET		
		Type	·	<u> </u>	
12.0	FRICTION BRAKING A	ND AIR SUI	PPLY SYSTEMS Preferred Supplier	Alternate Supplier 1	Alternate Supplier 2
1.	Friction Brake System	Supplier			
••	Thetion Brake System	Туре	F	<u>8</u>	
2.	Parking Brake System	Supplier		21-2-2-2-2-2-2-2-2-2-2-2-2-2-2-2-2-2-2-	
70	Taking Drake Oystem	Туре			
3.	Air Supply System	Supplier			X
		Туре			·
		-31-	(%)		
13.0	COMMUNICATIONS		Preferred Supplier	Alternate Supplier 1	Alternate Supplier 2
1.	PA/Intercom system	Supplier			
		Туре			
2.	Train On-board Radio	Supplier			
		Туре			
3.	Exterior Side Destination Signs	Supplier			
					W 100 100 100 100 100 100 100 100 100 10

		Type			
4.	Ceiling Interior Information Sign	Supplier			
		Type			
5.	End Route Sign	Supplier			
		Type			
6.	Flexible Ceiling Strip Display	Supplier			1
		Type		-	
7.	Flexible Wall Displays	Supplier			
		Type		% 	
8.	CCTV Cameras	Supplier			-
		Туре			
9.	Network Video Recorder	Supplier			
		Туре			
				-	-
14.0	TRAIN CONTROL SYST	EM			
1.	CBTC Interface management	Supplier			
15.0	CARBODY EQUIPMENT	AND INTI	ERIORS		
			=		
1.	Floor Covering	Supplier			
		Material	-		
2.	Subflooring	Supplier		X	
		Material		<u></u>	
3.	Windows				
	Windows	Supplier			
	Windows	Supplier Type			
4.	Seats				
4.		Туре			
4.		Type Supplier			
4. 16.0		Type Supplier Type	CHITECTURE		
	Seats	Type Supplier Type	CHITECTURE Preferred Supplier	Alternate Supplier 1	Alternate Supplier 2
	Seats TRAINLINE & CAR CON	Type Supplier Type		Alternate Supplier 1	Alternate Supplier 2
16.0	Seats	Type Supplier Type		Alternate Supplier 1	Alternate Supplier 2

4.	Network Switches	Supplier			
		Type			9
17.0	MONITORING AND DIAG	GNOSTICS	3		
			Preferred Supplier	Alternate Supplier 1	Alternate Supplier 2
1.	Monitoring and Diagnostic System	Supplier		<u> </u>	
		Type			
2.	Event Recorder	Supplier		-	
551		Type			
18.0	SOFTWARE SYSTEMS		Preferred Supplier	Alternate Supplier 1	Alternate Supplier 2
1.	For Train and Car Control	Supplier			
2.	For Propulsion Control	Supplier			
3.	For Auxiliary Control	Supplier			
4.	For Doors	Supplier		A)	-
5.	For HVAC	Supplier			
6.	For Monitoring & Diagnostics System	Supplier			
7.	For Friction Brake System	Supplier		(1) <u></u>	
8.	For Overall Software Management	Supplier		-	
21.0	RELIABILITY, MAINTAI	NABILITY	, AND SYSTEMS	S ASSURANCE	
		© #	Preferred Supplier	Alternate Supplier 1	Alternate Supplier 2
1.	Reliability requirements	Supplier		(a)	
2.	Maintainability requirements	Supplier		-	
3.	Safety requirements	Supplier		-	
22.0	SYSTEM SUPPORT		Preferred Supplier	Alternate Supplier 1	Alternate Supplier 2
1.	Training	Supplier	(2000)	700	
2.	Manuals, IETM	Supplier			
3.	Part and device identification system	Supplier			

4.	Bench Test Equipment	Supplier			
		Туре			
26.0	OPEN GANGWAY TES	T TRAIN – D	DESIGN 1		
1.	Open Gangway Unit 1	Supplier Type			
2.	Link Bar, Drawbar for Open Gangway Unit 1	Supplier		-	
		Type			

FORM TF-1 TECHNICAL SUMMARY FORM R211T – DESIGN 2

Prop	osers Nan	ne:						
2.0	DATA	AND DIMEN	ISIONS	(AT ZER	O WEIGHT, E	XCE	PT AS SPECIFIE	<u>D)</u>
1.	Car wei	ght as proposed:						
	AW0	A1 Car	lbs.	A2 Car _	lbs.	B Car	lbs.	
	AW1	A1 Car	lbs.	A2 Car _	lbs.	B Car	lbs.	
	AW2	A1 Car	lbs.	A2 Car_	lbs.	B Car	lbs.	
	AW3	A1 Car	lbs.	A2 Car _	lbs.	B Car	lbs.	
3.0	CARE	BODY STRUC	TURE		Preferred Supplie	er	Alternate Supplier 1	Alternate Supplier 2
1.	Carbody S	Shell				5_		
4.0	COUL	PLERS SYSTE	<u>EM</u>					
					Preferred Supplie	er	Alternate Supplier 1	Alternate Supplier 2
1.	Coupler S	System		Supplier				
				Туре		13 -		-
5.0	CAB A	AND CAB CO	NTROL	<u>s</u>	Preferred Supplie	er	Alternate Supplier 1	Alternate Supplier 2
1.	Cab Seat			Supplier				
				Type				
2.	Console			Supplier				1
				Type				-
3.	Train Ope	erator Displays		Supplier				
				Type				
4.	Master Co	ontroller group		Supplier				
6.0	SIDE	DOOR SYSTI	EM.	Туре		-		
0.0	SIDE	DOOKSISH	2111		Preferred Suppli	er	Alternate Supplier 1	Alternate Supplier 2
1.	Side Door	r hangers		Supplier				

		Type			
2.	Side Door panels	Supplier	***************************************		
		Material		<u> </u>	
3.	Side Door Operators and controls	Supplier			
		Type			
4.	End Door panels	Supplier			
		Туре			
7.0	HEATING, VENTILATIN	NG AND AI	R CONDITIONIN	G SYSTEM	
			Preferred Supplier	Alternate Supplier 1	Alternate Supplier 2
1.	HVAC System	Supplier			
		Type			2
2.	Air conditioning System	Capacity (per car)		8	
3.	Overhead Heating System	Capacity (per car)		-	
4.	HVAC Compressor, hermetic	Supplier			1
5.	DC-AC Inverter for Compressor Motor	Supplier			
6.	DC-AC Inverter for Evaporator Blower Motor	Supplier			
7.	Floor Heating System	Supplier	-		
		Туре			
		Capacity (per car)			
8.0	LIGHTING SYSTEMS				
			Preferred Supplier	Alternate Supplier 1	Alternate Supplier 2
1.	Light fixtures (interior)	Supplier			
		Type			
2.	Light fixtures (exterior)	Supplier			
		Type			

AUXILIARY ELECTRIC EQUIPMENT AND DISTRIBUTION Preferred Supplier Alternate Supplier 1 Alternate Supplier 2 1. Third Rail Current Collector Supplier Type 2. Main Switch and main fuse Supplier Type 3. Auxiliary Inverters Supplier Type 4. Low Voltage Power Supply Supplier Type 5. Storage Battery Supplier Type 10.0 PROPULSION SYSTEM Preferred Supplier Alternate Supplier 1 Alternate Supplier 2 1. AC Inverter Supplier No. of inverter drives per car Type 2. Traction Motor Supplier Motor Model No. Motor speed, maximum Motor rating (1 hour) 3. **Braking Resistor** Supplier Type 4. Power electronics cooling design 5. Control logic Supplier No. of control logic units per car Gear Units 6. Supplier Type 7. Gear Ratio

9.0

11.0 TRUCKS AND SUSPENSION SYSTEM Preferred Supplier Alternate Supplier 1 Alternate Supplier 2 1. Fabricated truck frame and bolster Supplier 2. Wheels Supplier 3. Axles Supplier Type 4. Journal Bearings Supplier Type Primary suspension 5. Supplier Type Secondary suspension Supplier 6. Type Leveling Valves 7. Supplier Type FRICTION BRAKING AND AIR SUPPLY SYSTEMS 12.0 Preferred Supplier Alternate Supplier 1 Alternate Supplier 2 Friction Brake System Supplier 1. Type 2. Parking Brake System Supplier Type 3. Air Supply System Supplier Type

13.0	COMMUNICATIONS		Preferred Supplier	Alternate Supplier 1	Alternate Supplier
1.	PA/Intercom system	Supplier			9
		Type			
2.	Train On-board Radio	Supplier		2	-
		Type			
3.	Exterior Side Destination Signs	Supplier	-		
		Type			

4.	Ceiling Interior Information Sign	Supplier			
		Type			
5.	End Route Sign	Supplier			
		Type			
6. Flexible Ceiling Strip Display	Flexible Ceiling Strip Display	Supplier			
		Type			
7.	Flexible Wall Displays	Supplier			0 ,
		Туре			-
8.	CCTV Cameras	Supplier			
		Туре			
9.	Network Video Recorder	Supplier			
		Туре			

14.0	TRAIN CONTROL SYST	EM			
	THE PARTY OF THE P	2111			
1.	CBTC Interface management	Supplier		*	
					82.
15.0	CAPRODY FOURMENT	AND INT	FRIORS		
15.0	CARBODY EQUIPMENT	AND INTI	ERIORS		
15.0	CARBODY EQUIPMENT Floor Covering	AND INTI	ERIORS		
			ERIORS	d.	
		Supplier	ERIORS		
1.	Floor Covering	Supplier Material	ERIORS		
1.	Floor Covering	Supplier Material Supplier Material	ERIORS	,	
1.	Floor Covering Subflooring	Supplier Material Supplier Material Supplier	ERIORS		
1.	Floor Covering Subflooring	Supplier Material Supplier Material Supplier Type			
 2. 3. 	Floor Covering Subflooring Windows	Supplier Material Supplier Material Supplier Type Supplier	ERIORS		
 2. 3. 	Floor Covering Subflooring Windows	Supplier Material Supplier Material Supplier Type			
 2. 3. 	Floor Covering Subflooring Windows	Supplier Material Supplier Material Supplier Type Supplier Type			
 2. 3. 4. 	Floor Covering Subflooring Windows Seats	Supplier Material Supplier Material Supplier Type Supplier Type	CHITECTURE	Alternate Supplier 1	Alternate Supplier 2
1. 2. 3. 4. 16.0	Subflooring Windows Seats TRAINLINE & CAR CON	Supplier Material Supplier Material Supplier Type Supplier Type Supplier Type		Alternate Supplier 1	Alternate Supplier 2
 2. 3. 4. 	Floor Covering Subflooring Windows Seats	Supplier Material Supplier Material Supplier Type Supplier Type Supplier Supplier	CHITECTURE	Alternate Supplier 1	Alternate Supplier 2
1. 2. 3. 4. 16.0	Subflooring Windows Seats TRAINLINE & CAR CON	Supplier Material Supplier Material Supplier Type Supplier Type Supplier Type	CHITECTURE	Alternate Supplier 1	Alternate Supplier 2

		Type	*	-	
27.000					
17.0	MONITORING AND DIAG	NOSTICS	Preferred Supplier	Alternate Supplier 1	Alternate Supplier 2
1.	Monitoring and Diagnostic System	Supplier			
		Туре			
2.	Event Recorder	Supplier			
	<u>x</u>	Туре			
18.0	COETWADE CYCTEMS				4
10.0	SOFTWARE SYSTEMS		Preferred Supplier	Alternate Supplier 1	Alternate Supplier 2
1.	For Train and Car Control	Supplier			
2.	For Propulsion Control	Supplier			
3.	For Auxiliary Control	Supplier			
4.	For Doors	Supplier			
5.	For HVAC	Supplier			
6.	For Monitoring & Diagnostics System	Supplier			
7.	For Friction Brake System	Supplier			
8.	For Overall Software Management	Supplier)	
21.0	RELIABILITY, MAINTAIN	NABILITY	, AND SYSTEMS	SASSURANCE	
			Preferred Supplier	Alternate Supplier 1	Alternate Supplier 2
1.	Reliability requirements	Supplier			
2.	Maintainability requirements	Supplier			
3.	Safety requirements	Supplier			
	*				
22.0	SYSTEM SUPPORT		Preferred Supplier	Alternate Supplier 1	Alternate Supplier 2
1.	Training	Supplier			G.
2.	Manuals, IETM	Supplier			
3.	Part and device identification system	Supplier			
4.	Bench Test Equipment	Supplier			
		Type	k)		

1.	Open Gangway Unit 2	Supplier Type	
2.	Link Bar, Drawbar for Open Gangway Unit 2	Supplier	 -

OPEN GANGWAY TEST TRAIN - DESIGN 2

26.0

	Technical Specification (All) Febr	RFP Section Reference
	Technical Specification (All) Please provide the differences between the version of the Technical Specification issued with the Industry Review in Spec is attached which reflects the chang from the Technical Specification issued with the RFP on 07/22/16. Please provide the differences between the version of the Technical Specification issued with the RFP on 07/22/16. A CD with a tracked version of the Technical Spec is attached which reflects the chang from the Technical Specification issued with the RFP on 07/22/16 (Rev 0). It is being provided only to facilitate an expeditious review of the Technical Specification by potential proposers. In case of any discrepancy between the two versions, Rev 0, issued as part of the RFI	Insert Proposer Question/Comment In this Column
shan govern.	A CD with a tracked version of the Tech Spec is attached which reflects the changes from the Technical Specification issued with the Industry Review to the version issued with the RFP on 07/22/16 (Rev 0). It is being provided only to facilitate an expeditious review of the Technical Specification by potential proposers. In the case of any discrepancy between the two (2) versions, Rev 0, issued as part of the RFP, thall govern	NYCT Answer/Response

MTA - NEW YORK CITY TRANSIT 2 BROADWAY NEW YORK, NY 10004

DIVISION OF MATERIEL web.mta.info/nyct/procure/nyctproc.htm Vreplies@nyct.com

R34211
NOTICE
-OFADDENDUM

ADDENDUM #2

REVISED REQUEST FOR PROPOSALS

NON-CONSTRUCTION DOCUMENT ORDER FORM

SOLICITATION #: R34211

SOLICITATION TITLE: R34211 Purchase of 1025 Subway Cars

PRICE OF BID PACKAGE:

\$0 /PER SET

TO REQUEST BID DOCUMENTS FOR THIS PROCUREMENT

FILL OUT ALL THE INFORMATION ON THIS FORM FAX IT BACK TO THE NYCT BID RECEPTION DESK AT (646) 252-6108/6109, OR PICK IT UP IN PERSON OR MAIL YOUR REQUEST TO, THE NYCT BID RECEPTION DESK, 3 STONE STREET, NY, NY, 10004. HOURS ARE 9:00 AM - 4:00 PM, MONDAY - FRIDAY, EXCLUDING HOLIDAYS. VENDORS OBTAINING BID DOCUMENTS IN PERSON FROM 10:00 AM TO 11:00AM AND 1:30PM TO 2:30PM ON DAYS OF BID OPENINGS MAY BE SUBJECT TO DELAYS. ALL DOCUMENT FEES ARE PAYABLE BY VISA MASTERCARD, AMERICAN EXPRESS, COMPANY CHECK OR BANK CHECK. MAKE CHECK PAYABLE TO NEW YORK CITY TRANSIT. ALL PAYMENTS ARE NON-REFUNDABLE.

VENDORS MUST PRINT ALL OF THE FOLLOWING INFORMATION WHEN REQUESTING BID DOCUMENTS.

REET ADDRESS A POST OFFICE BOX ADDRESS IS UNACCEPTABLE)
TELEPHONE:
(PLEASE PRINT)
NYCT VENDOR #:
<u> </u>
<u>DATE:</u>
HE FOLLOWING ORDERING INFORMATION.
OF SETS:
ACCOUNT #:
EXPIRATION DATE:
SIGNATURE:

MTA - NEW YORK CITY TRANSIT 2 BROADWAY NEW YORK, NY 10004

DIVISION OF MATERIEL web.mta.info/nyct/procure/nyctproc.htm Vreplies@nyct.com

R34211
NOTICE
-OFADDENDUM

ADDENDUM #1

CURRENT OPENING/DUE DATE: 10/18/16



08/04/2016

R34211 ADDENDUM NO. 1

PURCHASE OF 1,025 SUBWAY CARS WITH A BASE ORDER OF 10 OPEN GANGWAY TEST CARS FOR NYCT "B" DIVISION, 75 STATEN ISLAND RAILWAY CARS AND 200 NYCT "B" DIVISION SUBWAY CARS AND AN OPTION FOR 740 ADDITIONAL NYCT "B" DIVISION SUBWAY CARS

CLOSING DATE - October 18, 2016

To Prospective Proposers:

Prospective Proposers are hereby notified of the following with respect to the above referenced Request for Proposal (RFP).

This Addendum has been generated for administrative purposes only and does not change in any way the documents issued with the original RFP on 07/22/16.

Please be governed accordingly when submitting proposals for the above referenced Request for Proposals.

Sincerely,

Marian Murray

Assistant Chief Procurement Officer, Procurement

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