



Deviation No.	TS Section Ref.	Page No.	Specification	Proposed Language & Deviation Description	Rationale (Pros/Cons)	Agency action
1	1	2	BEB Demonstration Program, per Proposer and Interviews	Proposer requests approval to provide our Battery Electric Bus demonstration the week of August 28th through September 1st , 2023. Please advise if approved.	Due to staff availability, MATA will schedule Proposer for the week after, September 4, 2023	See response
2	3.5 Title and Warranty of Title.	40	Adequate documents for registering the bus in Shelby County, Tennessee shall be provided to MATA not fewer than 10 business days before delivery to MATA.	Proposer wishes to advise the Agency that we will provide documents for registering the bus 10 business days after delivery of the buses. Proposer requests concurrence.		Approved
3	4.1.1.2.4 Reimbursement for labor.	58	MATA shall be reimbursed by the Contractor for labor. The amount shall be determined by the Agency for a qualified mechanic at a straight time wage rate of \$110.00 per hour, which includes fringe benefits and overhead adjusted for MATA's most recently published rate in effect at the time the work is performed, plus the cost of towing in the bus if such action was necessary.	Proposer requests clarification regarding the current published hourly wage rate for a qualified MATA mechanic.	The rate for a MATA certified mechanic is \$50.00 per hour	See response
4	6.10 Interchangeability	91	Unless otherwise agreed, all buses and components procured under the resulting contract, whether provided by the awarded Contractor's suppliers or manufactured by the Contractor, shall be duplicates in design, manufacture, and installation to ensure interchangeability among buses in each order group in this procurement	Proposer agrees that all coaches to be manufactured within a given production run will be duplicates in design, manufacture, installation, etc., as required by this section. However, since this solicitation includes an option for additional coaches, Proposer requests approval that any such optional coaches may include regulated or legislated changes or product improvements initiated by Proposer and/or vendors without obligation to retrofit previous builds. For example, the engine manufacturer might change engine emission components in order to assure a more reliable system or to meet regulatory requirements that might have changed. Proposer agrees to advise the Agency with regard to any significant variations of design or cost between coaches in the basic award and those exercised as part of an option. Proposer requests concurrence.		Denied
5	6.12.1.1 Training	94	The Contractor is responsible to train MATA personnel in accordance with its detailed training proposal, submitted by the Contractor and agreed to by MATA.	Proposer requests clarification as to how many MATA students will be required for training.	Will need to provide amount of training classes.	Request more information


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6	6.18.2 Fire Suppression.	99	The bus shall be equipped with a suitable means of automatically detecting and extinguishing fires and/or over-temperature situations that may cause unreliable or unsafe operation.	Proposer respectfully wishes to clarify that currently, there are no known fire suppression systems available that will fully extinguish a battery fire. Fire suppression systems on a Battery Electric vehicle are strictly a means to help delay and suppress a fire long enough for passengers to safely exit the vehicle. Proposer requests concurrence.		Request more information
7	Table 6-6: Ramp Angle Clearances	101	Approach 8.6 deg (min.)	Proposer wishes to clarify that the Approach Angle for our 40ft Battery Electric Bus is 8.3 degrees. Proposer requests approval.	Will clarify during demonstration	Request more information
8	6.27.7.2	109	The ESS shall be measured periodically during the 12-year design life of the buses following protocol below by a bus manufacturer representative at an interval of once per year.	Proposer wishes to clarify that that our Telematics system includes the ability to pull the "State of Health" of the ESS system upon request. Since this contract includes a 12-year subscription of this system , there is no need to have a Proposer representative provide this service. Proposer requests concurrence.		Approved
9	6.27.10 Battery Management System	110	The battery management system must be designed to ISO 26262 safety principles to control state of charge, voltage, current and temperatures on a cell-to-cell level and provide diagnostic output at the lowest field-serviceable element. The diagnostic output must easily be available to mechanics	Proposer wishes to advise the agency that currently that both Proposer and Cummins are not applying the ISO 26262 standard in the Proposer Battery Electric Bus. However, both Proposer and Cummins are being trained on this standard and will be working to apply on future designs. Furthermore, we address this issue using different methods such as applying SAE Standards such as J1455 and J1939 as well as other methods to accomplish a similar review of electric bus related components and possible malfunctions. Various methods can be used to provide a suitable product. ISO 26262 is a "developing" standard and both Cummins and Proposer are working to apply this standard in the near future. Proposer requests approval to remove this requirement.		Denied
10	6.27.12.1 & 6.48.8	112	The bus shall support an SAE-approved charging standard (SAE J1772 DC and/or SAE J3068 AC).	Proposer wishes to clarify that our Battery Electric bus meets the SAE J1772 DC requirement but does support or provide 3-phase AC charging (SAE J3068). Proposer requests approval.		Approved


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11	6.32.4	117	All exposed metal surfaces under the bus shall be both E-coated and powder coated.	<p>Proposer requests approval to provide our standard Corrosion prevention package in lieu of the specified requirement (see attached for more information).</p> <div style="display: flex; justify-content: space-around; align-items: center;"> <div style="border: 1px solid black; padding: 2px; text-align: center;">  27b Corrosion Protection - Materials.pdf </div> <div style="border: 1px solid black; padding: 2px; text-align: center;">  27d Corrosion Protection - Locations.pdf </div> </div>	Will need to verify during demonstration. Please provide the attachments.	Request more information																								
12	6.34	118	Jacking pads located on the axle or suspension near the wheels shall permit easy and safe jacking with the flat tire or dual set on a 6-inch-high run-up block not wider than a single tire.	<p>Proposer will provide jacking points located on the front and rear axles rather than the jacking pads requested in this specification.</p> <p>These are standard on Proposer coaches and is consistent with coaches recently delivered to the Agency.</p>		Approved																								
13	6.36.1.1	118	The vehicle floor in the area of the entrance and exit doors shall have a lateral slope not exceeding 2 degrees to allow for drainage.	<p>Proposer wishes to advise the Agency that the floor slope at our rear door is 4 degrees.</p> <p>This is consistent with Proposer buses recently delivered to the Agency.</p> <p>Proposer requests approval.</p>		Approved																								
14	6.40.1 Wheels.	122	All wheels shall be interchangeable.	<p>Proposer wishes to advise the Agency that due to the weight and increased GVWR of our Battery Electric Bus, the front wheels will be 22.5" x 9.0" in lieu of our standard 22.5" x 8.25" wheel.</p> <p>This is because in order to achieve full passenger capacities, along with adequate battery packs for the best possible range, we want to ensure that we do not exceed axle capacity.</p> <p>With that said, not all wheels are not interchangeable on our Battery Electric bus.</p> <p>This is also consistent with buses recently delivered to the Agency.</p> <p>Proposer requests concurrence.</p>		Approved																								
15	MATA RFP 23-13 PAGE 124 Table 6-8: Steering Wheel Height Relative to Angle of Slope	124	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="2">At Minimum Telescopic Height Adjustment (29")</th> <th colspan="2">At Maximum Telescopic Height Adjustment (5")</th> </tr> <tr> <th>Angle of Slope</th> <th>Height</th> <th>Angle of Slope</th> <th>Height</th> </tr> </thead> <tbody> <tr> <td>0 deg</td> <td>29 in.</td> <td>0 deg</td> <td>34 in.</td> </tr> <tr> <td>15 deg</td> <td>26.2 in.</td> <td>15 deg</td> <td>31.2 in.</td> </tr> <tr> <td>25 deg</td> <td>24.6 in.</td> <td>25 deg</td> <td>29.6 in.</td> </tr> <tr> <td>35 deg</td> <td>22.5 in.</td> <td>35 deg</td> <td>27.5 in.</td> </tr> </tbody> </table>	At Minimum Telescopic Height Adjustment (29")		At Maximum Telescopic Height Adjustment (5")		Angle of Slope	Height	Angle of Slope	Height	0 deg	29 in.	0 deg	34 in.	15 deg	26.2 in.	15 deg	31.2 in.	25 deg	24.6 in.	25 deg	29.6 in.	35 deg	22.5 in.	35 deg	27.5 in.	<p>Proposer requests approval to provide a Douglas steering column with a telescopic adjustment of 1.875". The maximum telescopic range with 0 degree tilt is 30.75" inches and a low-end telescopic adjustment of 28.87".</p> <p>This is standard with the Douglas steering column and consistent with buses recently delivered to the Agency. Proposer requests approval.</p>		Approved
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16	6.48.9 Master Battery Switch.	130	Turning the master switch "OFF", with the power plant operating, shall not damage any component of the electrical system.	<p>Proposer wishes to clarify that turning off the master switch with the propulsion system can and will damage the electrical system. This information is also available in our Service manual as well.</p> <p>This is consistent with coaches recently delivered to the Agency.</p> <p>Proposer requests concurrence.</p>		Approved
17	6.50.2.2 Programmability (Software).	135	The drivetrain level components shall be programmable by MATA with limitations as specified by the sub-system supplier.	<p>Proposer wishes to advise the Agency that Proposer engineering and Cummins have worked together over the past few years to provide the best overall performance of our Battery Electric bus while also maximizing battery life, range and the efficiency of the acceleration and deceleration rates.</p> <p>With that being said, any additional programming of these systems are handled on a case-by-case basis through both Cummins and Proposer Field Service.</p> <p>Proposer requests concurrence.</p>		Approved
18	Table 6-9: Transit Bus Instruments and Alarms	139-142	Entire table	<p>Proposer respectfully wishes to clarify that Table 6-9 is a guideline for switches and controls that may be located in the driver's cockpit area. However, not all items listed in Table 6 are required by this contract and final determination will be made at the preproduction meeting.</p> <p>Proposer requests concurrence.</p>		Approved
19	6.57.1.2	148	The HVAC unit should be an all-electric roof-mounted unit; Thermo King or approved equal.	<p>Proposer proposes to provide the TE18 Rear Mounted All Electric Thermo King HVAC system with 98,000 BTU capacity, brushless motors and R407c refrigerant in lieu of the specified system.</p> <p>This is inherent to the Proposer design and is consistent with coaches recently delivered to the Agency.</p> <p>Proposer requests approval.</p>		Approved

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20	6.57.1.7	149	System capacity testing, including pull down/warm up, stabilization and profile, shall be conducted in accordance with the APTA's "Recommended Instrumentation and Performance Testing for Transit Bus Air Condition System." Using this protocol, the interior temperature of the bus must reach 70° F within 30 minutes when subjected to any outside ambient temperatures with a range of 40 to 105 ° F and at any ambient relative humidity levels between 5% to 50%.	<p>Proposer wishes to clarify that the All Electric TE18 Thermo King HVAC system in Battery Electric bus can reach 70 degrees F in about 39.83 minutes.</p> <p>Please note that with an electric HVAC the system, it provides the same performance regardless of engine speed. While a engine driven belt driven compressor provide less output at low engine speed and higher output at high engine speeds. At engine speeds idling at a stop, slow traffic the Battery Electric bus All Electric HVAC out performs the belt driven system.</p> <p>Furthermore, in our experience the All Electric TE18 Thermo King HVAC system performs as good or better than a conventional system.</p> <p>Proposer requests approval.</p>		Approved
21	6.58.7 Roof Ventilators.	151	Two manually operated roof ventilators shall be provided in the roof of the bus, one approximately over or just forward of the front axle and the other, approximately over the rear axle.	<p>Proposer wishes to clarify that we can only provide a rear roof hatch when over-head charge rails are required. This configuration is compliant with FMVSS for escapability.</p> <p>Proposer requests concurrence.</p>		Approved
22	6.60.3 Bike Rack.	153	Each bus shall be equipped with a three-position bike rack. The bike rack shall be brushed stainless steel from mounted transit bike rack with heavy duty quick disconnect type mounting bracket, which is integral with the front bumper of the vehicle to include a warning light, mirror and sensors.	<p>Proposer respectfully requests approval to provide a front 2-position bicycle rack from Sportworks rather than the 3- position bicycle rack specified which creates a non-compliance with FMVSS 108.</p> <p>FMVSS 108 is the motor vehicle standard for headlamps and it does not allow the installation of equipment that could obstruct or impair the vehicle's headlamps, and the 3-position bicycle rack does position bicycle's wheels so that they would interfere with the headlamp beam. Accordingly, Proposer cannot install a 3-postion bicycle rack as it would constitute a violation of Federal law.</p>		Approved

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23	6.61 & 6.61.4 Finish and Graphics	155	Proper adhesion between the basic surface and successive coats of the original paint shall be measured using an Elcometer adhesion tester as outlined in ASTM D4541-85. Adhesion shall be a minimum of 300 ft-lb. The bus manufacturer shall supply test samples of the exterior surface for each step of the painting process that may be subject to adhesion testing per ASTM G4541-87 and ASTM D4145-85. ASTM D4541-93 may be used for inspection testing during assembly of the vehicle.	Proposer wishes to clarify that upon request, we can provide a "Test Traveler" type test samples for the testing requirements . These "Test Traveler" samples would be attached to the bus during the paint process and will reflect the same preparation and painting as done on the bus. Please note that we would expect to only do these samples on a limited number of buses to confirm the paint process meets the requirements of the Agency. Proposer requests concurrence.		Approved
24	Bus Exterior Graphics.	155	The Contractor shall provide pricing based upon a full bus wrap. A final Exterior Graphic Be Provided by MATA	Proposer wishes to clarify that a "full bus wrap" is not included as part of the base bus price and will be quoted as an option once MATA provides all the final graphics, colors and artwork needed to provide as such. Proposer requests concurrence.		Approved
25	6.68 Interior Access Panels and Doors.	162	All fasteners that retain access panels shall be captive in the cover	Proposer respectfully wishes to clarify to the agency that our hinged panels and doors are either latches or captive screws. Some cover plates with low usage or geometrics which preclude captive hardware are not. This is consistent with coaches recently delivered to the Agency. However, if we are the successful bidder of this contract, we can work with agency to determine if any changes are desired on individual panels and/or doors during the preproduction meeting. Proposer requests approval.		Approved
26	6.69.11.4 Vestibule.	166	The aisle side of the driver's barrier, the wheel housings, and when applicable the modesty panels shall be fitted with vertical passenger assists that are functionally continuous with the overhead assist and that extend to within 36 inches of the floor.	Proposer respectfully wishes to advise the Agency that our vertical stanchion located on the Driver's Barrier extends to within 46" of the floor. This is standard on the Proposer Low Floor bus and is consistent with recently delivered buses. Proposer requests approval.		Approved
27	6.69.11.6 Overhead.	166	Grab straps or other extensions as necessary shall be provided for sections where vertical assists are not available and for the use by passengers that cannot reach 70 inches. Grab straps shall be fabric. Overhead assists shall simultaneously support 150 lbs. on any 12-inch length.	Proposer requests clarification as to how many grab straps are required per bus?	This will not be included.	See response

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28	6.69.12.4 Dimensions.	167	The rear doors shall leave an opening height of 75.75 inches and the clear width shall be a minimum of 34inches with the doors fully open.	<p>Proposer respectfully wishes to clarify that the clear opening on our standard 34" rear exit doors is 26.52".</p> <p>This is standard on all of our buses and consistent with buses recently delivered to the Agency.</p> <p>Proposer requests approval.</p>		Approved
29	6.70.2 Wheelchair Accommodations	171	On sight securement training with supplied training video of operation - training to all safety and training or pertinent personnel. Onsite maintenance training shall be included.	Proposer requests clarification as to how many students would MATA like to be trained for the seat securement?	Will verify during the demonstration program.	See response
30	6.73.2.1 Speakers.	172	Mounting shall be accomplished with rivnuts and machine screws.	<p>Proposer respectfully wishes to clarify that our interior passenger speakers are a part of our interior lighting kit and can only be serviced from inside the kit. However, we do provide large hinged panels for servicing.</p> <p>This is consistent with buses recently delivered to the Agency.</p> <p>Proposer requests approval.</p>		Approved
31	6.73.2.2 Radio.	172	Two-way radio communication equipment shall be provided.	<p>Proposer requests explicit details of said radio equipment required for this contract. Without this information, we will not be able to include the Two-way radio communication equipment as part of the base bus price.</p> <p>Proposer requests concurrence.</p>		Approved
32	6.73.9 Incident Warning-Recording System	173	A system shall be provided that utilizes acceleration/motion sensors, camera(s), and software to trigger a warning to the operator in advance of a collision/accident. This system shall be able to record and store video 15 seconds before and 30 seconds after when a bus has a collision, accelerates aggressively, turns sharply, or stops aggressively. If alternative approaches are proposed, they are subject to the approval of the Engineer.	<p>Proposer proposes to provide the Mobileye Shield+ system to satisfy in lieu of the specified system.</p> <p>This system does include video, however it is equipped with a telematics telematics module which records and stores Mobileye-triggered events (i.e., data) on the cloud-based FMS platform which can also be accessed remotely via real-time monitoring.</p> <p>Proposer requests approval as there are no other approved options for our buses at this time.</p> <p>See attached for more information.</p> <div style="text-align: center;">  Rosco Mibileye Shield+ Brochure.pdf </div>		Approved

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33	6.74.6.1 Water Test.	175	The roof, windows, windshields, and all doors of all buses shall be water tested for a minimum of 30 minutes continuous.	<p>Proposer wishes to clarify that due to current production rates, our water test is 15-minutes. Our test includes total bus saturation mimicking sustained driving rain is provide adequate test criteria for finding any leaks and/or related issues.</p> <p>This testing is consistent with buses recently delivered to the Agency.</p> <p>Proposer requests approval.</p>		Approved
34	7.1.1.7 Extended Warranty	180	Extended warranties available from component and subcomponent OEMs must be provided as an option by the Contractor.	Proposer requests confirmation that all extended warranties are not included as part of the base bus price and if available, are separate line items,	Will verify during pre-production	See response
35	7.1.1.7 Extended Warranty	180	Extended battery warranty for 12 year or 500,000 miles.	<p>Proposer requests approval to provide our standard six (6) year battery pack/energy storage system warranty per attachment. The max energy throughput limit is 175 MWh for charging currents up to 65A or 150 MWh for charging currents up to 120A. This is the maximum warranty extended to us by the ESS manufacturer.</p> <p>The rationale behind this request is due to the fact that our ESS supplier is unable to determine the future battery pack replacement cost due to the extreme volatility associated with the precious metals utilized in the manufacturing of the cells. This lack of pricing certainty precludes our supplier from reasonably determining the costing of this extended warranty.</p> <p>Proposer expects battery technology to continue to improve and when the first set of batteries requires replacement better options may be available which could extend the useful life beyond 12 years, and/or provide more range, and/or reduce the overall cost of ownership compared to a 12-year warranty which provides only a minimum usable energy at 12 years rather than an optimum value during the useful life of the bus.</p> <p>If not approved, this may prevent Proposer's ability to further participate in this RFP.</p> <p>We look forward to a positive response that will allow Proposer to move forward with a proposal submission. Please see attached.</p> <div style="text-align: center;">  <p>7.1.1.7 - Warranty.pdf</p> </div>	Will verify during pre-production	See response
36	7.1.1.8 Extended Warranty Options.	180	Option for one year base extended coverage to include complete power train warranty (up to two yearly options).	<p>Proposer wishes to clarify that the Cummins Powertrain warranty has a (24) month/150,000 miles extended warranty option that can only be purchased one-time prior to buses being placed into service.</p> <p>Proposer requests concurrence.</p>	Will verify during pre-production	See response

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37	7.1.3.4 Pass-Through Warranty	181	Should the Contractor elect to not administer warranty claims on certain components and wish to transfer this responsibility to the sub-suppliers, or to others, the Contractor shall request this waiver.	<p>Proposer wishes to clarify that major component suppliers (i.e. Cummins, Batteries, Thermo King, Meritor, ITS etc.) will administer their own warranty.</p> <p>This is standard practice for warranty through Proposer and is consistent with coaches recently delivered to the Agency.</p> <p>Proposer requests concurrence.</p>		Approved
38	6.27.10.2 Battery Management System	111	The Contractor shall provide an FMEA for the Battery Management System for MATA's review and approval.	<p>Proposer wishes to clarify that FMEA information by the battery supplier is considered confidential and a protected trade secret.</p> <p>With that being said, Proposer requests clarification as to what explicit details MATA is looking for and we may be able to provide this at the preproduction meeting if we are the successful bidder.</p> <p>Proposer requests concurrence.</p>	Will verify during demonstration program	See response
39	6.30.2 Fluid Lines	115	In addition, piping, plumbing, and hoses located in an area of heat sufficient to cause smoke or ignition and carrying a combustible shall be equipped with fire sleeving and/or a means of directing rupture and/or leaks to a less hazardous area.	<p>There are only two piping systems containing combustible materials on our Battery Electric bus. They are the power steering piping in the front of the bus. Please note that these are not located in an area of heat sufficient to cause smoke or ignition.</p> <p>Furthermore, if a Proposer Battery Electric bus is equipped with a diesel-fired coolant heater, there are only have a few short fuel lines that are used. Since these are not located in an area of heat sufficient to cause smoke or ignition, there would be no need for fire sleeve.</p> <p>Proposer requests concurrence.</p>		Approved
40	6.30.2 Fluid Lines	115	All hydraulic line routings shall be supported by click-bond supported Hellermann-Tyton fittings and clamps designed for this application.	<p>Proposer wishes to clarify that the only hydraulic piping in our Battery Electric bus is for the power steering pump and steering gear (located in the front of the bus). Due to the location and very short line lengths no hose clamping is used.</p> <p>Proposer requests concurrence.</p>	Will verify during demonstration program	See response

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41	6.27.12.4 Charge Ports	112	Two CCS Type 1 charging receptacles shall be located, one on each side at the rear of the bus and located between 36 and 40 inches above level grade.	<p>Proposer wishes to clarify that the rear plug-in charge port locations, both streetside and curbside are approximately 44 inches above level ground.</p> <p>This is inherent to the Proposer design and there are no options at this time.</p> <p>This is also consistent with buses recently delivered the Agency.</p> <p>Proposer requests approval.</p>		Approved
42	6.40.1 Wheels.	122	All wheels shall be interchangeable. Wheels shall be compatible with tires in size and load-carrying capacity. Front wheels and tires shall be balanced as an assembly per SAE J1986. Wheels shall be hub-piloted, brushed aluminum, and shall resist rim flange wear. Wheels shall have a low maintenance special finish, Alcoa Dura-Bright, or approved equal.	<p>Proposer wishes to advise the Agency that due to the weight and increased GVWR of our Battery Electric Bus, the front wheels will be 22.5" x 9.0" in lieu of our standard 22.5" x 8.25" wheel and are not interchangeable with the rear wheels.</p> <p>Because of this, Alcoa has limited finishes for this wheel (see below):</p> <p>Option 1 - High Polished (both sides) with NO surface treatment OR</p> <p>Option 2 - Mirror Polished (outside surface only) with Dura-Bright (Dura-Flange is not available)</p> <p>Proposer requests approval.</p>	Will discuss during pre-production	See response
43	Table 6-11: Required Bus Certifications Deliverable Schedule	174	Battery Cycle Testing Certification	<p>Proposer wishes to clarify that battery life-cycle testing is performed by both Borg Warner and Proposer along with other simulations. The methods and results from these tests are considered proprietary.</p> <p>Furthermore, the results from these tests were used to define the approved charging rates for different applications, battery life and warranty of our Battery Electric buses.</p> <p>Proposer requests deletion of this requirement.</p>		Denied

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44	6.74.7 Post Delivery Tests	176	<p>Table 6-16: Required Post-Delivery Tests (entire table)</p> <table border="1"> <thead> <tr> <th>Spec. Section</th> <th>Requirement</th> </tr> </thead> <tbody> <tr><td>6.24</td><td>Acceleration Test</td></tr> <tr><td>6.22</td><td>Top Speed Test</td></tr> <tr><td>6.25</td><td>Operating Range</td></tr> <tr><td>6.23</td><td>Gradeability Test</td></tr> <tr><td>6.45.3</td><td>Service Brake Test</td></tr> <tr><td>6.45.6</td><td>Parking Brake Test</td></tr> <tr><td>6.42.1</td><td>Turning Effort Test</td></tr> <tr><td>6.44</td><td>Turning Radius Test</td></tr> <tr><td>6.73.2</td><td>Propulsion System Qualification</td></tr> <tr><td>6.27.12</td><td>Battery Charging</td></tr> <tr><td>6.45.2</td><td>Regenerative Braking Action</td></tr> <tr><td>6.2.11</td><td>Weight – Individual Axle</td></tr> <tr><td>6.74.6.1</td><td>Water Test</td></tr> <tr><td>6.66</td><td>Interior Lighting</td></tr> <tr><td>6.69.12</td><td>Front and Rear Door Systems</td></tr> <tr><td>6.65</td><td>Flooring Installation</td></tr> <tr><td>6.69</td><td>Passenger Seat Capacity, Dimensions, Material</td></tr> <tr><td>6.54</td><td>Operator Seat Capacity, Dimensions, Material</td></tr> <tr><td>6.70</td><td>Wheelchair Ramp System</td></tr> <tr><td>6.70.2.2</td><td>Wheelchair Securement</td></tr> <tr><td>6.18.2</td><td>Fire Suppression System</td></tr> <tr><td>Various</td><td>Electrical System Audit</td></tr> <tr><td>6.56</td><td>Window Systems-Escape Portals</td></tr> <tr><td>6.57.1</td><td>HVAC Pull Down/Heat</td></tr> <tr><td>6.58</td><td>HVAC – Air Flow</td></tr> <tr><td>6.2.28</td><td>Standing Capacity</td></tr> <tr><td>6.51.4.4</td><td>Speedometer</td></tr> <tr><td>6.51.4.4</td><td>Silent Alarm</td></tr> <tr><td>6.51.4</td><td>Operator Control Panel/Alarm-Indicator</td></tr> <tr><td>6.73.6</td><td>ITS, Displays</td></tr> <tr><td>6.73.2</td><td>PA Function Tests</td></tr> <tr><td>6.16</td><td>Noise Tests</td></tr> <tr><td>6.70</td><td>Wheelchair Ramp Installation & Deployment</td></tr> <tr><td>6.17</td><td>Exterior Noise</td></tr> <tr><td>6.63</td><td>Exterior Lighting</td></tr> <tr><td>6.62</td><td>Decals</td></tr> <tr><td>6.61</td><td>Paint</td></tr> <tr><td>6.39.6</td><td>Kneeling</td></tr> <tr><td>6.47.1</td><td>Air Compressor Charge</td></tr> </tbody> </table>	Spec. Section	Requirement	6.24	Acceleration Test	6.22	Top Speed Test	6.25	Operating Range	6.23	Gradeability Test	6.45.3	Service Brake Test	6.45.6	Parking Brake Test	6.42.1	Turning Effort Test	6.44	Turning Radius Test	6.73.2	Propulsion System Qualification	6.27.12	Battery Charging	6.45.2	Regenerative Braking Action	6.2.11	Weight – Individual Axle	6.74.6.1	Water Test	6.66	Interior Lighting	6.69.12	Front and Rear Door Systems	6.65	Flooring Installation	6.69	Passenger Seat Capacity, Dimensions, Material	6.54	Operator Seat Capacity, Dimensions, Material	6.70	Wheelchair Ramp System	6.70.2.2	Wheelchair Securement	6.18.2	Fire Suppression System	Various	Electrical System Audit	6.56	Window Systems-Escape Portals	6.57.1	HVAC Pull Down/Heat	6.58	HVAC – Air Flow	6.2.28	Standing Capacity	6.51.4.4	Speedometer	6.51.4.4	Silent Alarm	6.51.4	Operator Control Panel/Alarm-Indicator	6.73.6	ITS, Displays	6.73.2	PA Function Tests	6.16	Noise Tests	6.70	Wheelchair Ramp Installation & Deployment	6.17	Exterior Noise	6.63	Exterior Lighting	6.62	Decals	6.61	Paint	6.39.6	Kneeling	6.47.1	Air Compressor Charge	<p>Proposer wishes to clarify that our Battery Electric bus was designed to meet or exceed the requirements of the APTA Whitebook specification. The results of the Altoona test will be included with our proposal.</p> <p>Furthermore, we will work with the Agency to provide confirmation that our bus meet these requirements during the requested Post-Delivery testing. However, any Post-Delivery testing that differs from our Altoona submittal or Proposer standard configuration and testing may or may not be provided. This criteria would need to be developed and approved prior to agreeing to such testing and any and all costs associated with said testing will be at the expense of MATA.</p> <p>Proposer requests concurrence.</p>		Denied
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45	6.67 Fare Collection.	161	The farebox is to be included as part of the scope of the bus. The design and model to be agreed upon with MATA.	Proposer requests the make, model and part number of the required Farebox for this contract. Without this information, we can only provide mounting and power provisions.	MATA will provide our own fare box	See response																																																																																
46	6.11 Manuals	91	6.11.1 The Contractor shall develop and deliver a comprehensive set of technical manuals for the buses. Refer to Table 6-1	Proposer shall provide all requested information in one or more of the following custom manuals: Parts, Service/Maintenance, Schematics, and Drivers/Operators. (Diagnostic information is embedded in the Service/Maintenance		Approved																																																																																


Deviation No.	TS Section Ref.	Page No.	Specification	Proposed Language & Deviation Description	Rationale (Pros/Cons)	Agency action
47	6.11.2	91	Proposer shall provide all requested information in one or more of the following custom manuals: Parts, Service/Maintenance, Schematics, and Drivers/Operators. (Diagnostic information is embedded in the Service/Maintenance	<p>Proposer’s Technical Publications timeline carefully balances the need for timeliness with the availability of accurate source documentation from Proposer and our many vendor partners. To ensure that the most complete and current information goes into the manuals, work in Publications begins once the first bus of an order is complete and shipped. This allows Proposer to capture on-line order modifications or late-stage paperwork processing. Digital Driver’s, Service, and Schematics manuals are supplied in PDF format and delivered within two weeks of the first bus shipping, while the Parts Manual PDFs are delivered within four weeks of the first bus shipping. Hard copy manuals, if specified, are shipped within four weeks of PDF delivery. USBs, if specified, include all FTP-provided technical manual documentation and are provided within four weeks of completion of all technical manuals.</p> <p>As such, Proposer typically creates manuals for the 2nd bus, in order to more efficiently capture changes made during the pilot bus build and evaluation period.</p> <p>Proposer requests approval.</p>		Approved
48	6.11.3	92	The manuals shall be identically bound.	<p>The Parts, Service, and Schematics Manuals are bound in matching, heavy-duty, three-ring binders. The Driver’s Handbook is presented in pocket-sized format and is spiral bound. The Contractor</p> <p>Proposer requests approval.</p>		Approved
49	6.11.3	92	A copy of all source files shall be provided to MATA	<p>Proposer requests clarification as to what is meant by "Source Files".</p> <p>Proposer provides PDFs of the manuals, which include all content and images.</p>		Approved
50	6.11.3.2.6	92	Parts lists shall minimally define serviceable parts by system, assembly, noun name of part, the major component the part relates to, original equipment manufacturer, the OEM part number, life expectancy (in years or usage), unique part number, and quantity per associated assembly.	<p>Proposer wishes to clarify that our Parts Manual will provide serviceable parts by system, assembly, noun name of part, the major component the part relates to, unique part number, and quantity per associated assembly.</p> <p>Proposer requests approval.</p>		Approved

Deviation No.	TS Section Ref.	Page No.	Specification	Proposed Language & Deviation Description	Rationale (Pros/Cons)	Agency action
51	6.11.3.2.7	93	The Contractor shall also provide MATA with parts manuals in electronic source format. The parts manuals in electronic format shall be duplicate in content and organization to the bound sets of parts manuals. Electronic manuals shall be compatible with the MATA's parts catalog documentation software. Manuals shall be text selectable. Parts lists and associated parts graphics are preferred to be received in Excel format to facilitate seamless integration or parts lists with the MATA's system and its relational database.	Proposer wishes to advise the Agency that our Parts Manual will be provided electronically in PDF format. Proposer requests approval.		Approved
52	6.11.3.4 Diagnostic Procedures Manual	93	6.11.2.4.16.11.3.4.1The Diagnostic Procedures Manual shall be a comprehensive troubleshooting guide, which shall include step-by-step procedures emphasizing fault isolation	Proposer wishes to advise the Agency that this information is be provided in the Proposer Service Manual or an OEM Manual will be referenced and provided. Proposer requests approval.		Approved
53	6.11.3.4 Diagnostic Procedures Manual	93	6.11.2.4.36.11.3.4.3All necessary testing procedures, charts, wiring diagrams, logic diagrams shall be included.	Proposer wishes to clarify that this information will be provided in the Proposer Service and Schematics Manuals. Proposer requests approval.		Approved
54	6.11.2.56.11.3.5D rawings and Schematics	93	6.11.2.4.16.11.3.4.1The Diagnostic Procedures Manual shall be a comprehensive troubleshooting guide, which shall include step-by-step procedures emphasizing fault isolation	Proposer wishes to clarify that this information will be provided in the Proposer Service Manual or an OEM Manual will be referenced and provided. Proposer requests approval.		Approved
55	6.11.2.56.11.3.5D rawings and Schematics	94	6.11.2.4.26.11.3.4.2The procedures provided in these manuals shall be from a systems level	Proposer wishes to advise the Agency that this information will be provided in the Proposer Service Manual. Proposer requests approval.		Approved
56	6.11.2.56.11.3.5D rawings and Schematics	94	6.11.2.4.36.11.3.4.3All necessary testing procedures, charts, wiring diagrams, logic diagrams shall be included	Proposer wishes to clarify that this information will be provided in the Proposer Service and Schematics Manuals. Proposer requests approval.		Approved
57	6.11.2.56.11.3.5D rawings and Schematics	94	6.11.3.5.3 Exploded view of each system or sub-system components and orientation on the vehicle.	GILIG wishes to advise the Agency that this information shall be provided in the Proposer Service Manual		Approved
58	6.11.2.56.11.3.5D rawings and Schematics	94	Overview of major wiring harnesses	GILIG wishes to advise the Agency that this information shall be provided in the Proposer Service and/or Parts Manuals.		Approved
59	6.11.2.56.11.3.5D rawings and Schematics	94	Overview of Propulsion System, major components	GILIG wishes to advise the Agency that this i nformation shall be provided in the Proposer Service Manual.		Approved

Deviation No.	TS Section Ref.	Page No.	Specification	Proposed Language & Deviation Description	Rationale (Pros/Cons)	Agency action
60	6.11.2.56.11.3.5D rawings and Schematics	94	Overview showing all systems	GILIG wishes to advise the Agency that this information shall be provided in the Proposer Service Manual.		Approved
61	6.11.2.56.11.3.5D rawings and Schematics	94	Controller Ladder Logic	GILIG wishes to advise the Agency that this information shall be provided in the Proposer Schematics Manual.		Approved
62	6.11.1.1 Component Repair Manual	94	The Component Repair Manual shall include the repair procedures for all major components and systems.	GILIG wishes to advise the Agency that this information shall be provided in the Proposer Service Manual.		Approved
63	6.11.1.1 Component Repair Manual	94	Assembly procedures shall each include pertinent assembly criteria, including clearances, backlash dimensions, torque values, recommended tools, required supplies, and similar data.	GILIG wishes to advise the Agency that this information shall be provided in the Proposer Service Manual.		Approved
64	6.11.1.1 Component Repair Manual	94	Additionally, the manuals shall include schematics and wiring diagrams for every component.	GILIG wishes to advise the Agency that this information shall be provided in the Proposer Schematics Manual.		Approved
65	6.11.1.1 Component Repair Manual	94	The Contractor shall provide a listing of all tools required to perform maintenance on the bus, including both special and commercially available tools.	GILIG wishes to advise the Agency that this information shall be provided in the Proposer Service Manual.		Approved
66	4.7.6 Safety and Security Certification	67	MATA is in the process of developing a Safety and Security Management Plan (SSMP) and a corresponding Certification Plan (SSCP). The MATA SSMP and SSCP will be developed in compliance with Circular 5800.1 and FTA Handbook for Transit Safety and Security Certification (FTA-MA-90-5006-02-01). The Contractor will provide appropriate resources and support, as needed, to ensure the Contractor's compliance with the MATA SSMP and SSCP (to fulfill the responsibilities required).	<p>Proposer wishes to clarify that our primary expertise lies in designing and manufacturing buses.</p> <p>Furthermore, safety and security management planning and certification.</p> <p>Proposer has limited control over the entire transit system's safety and security processes; we deliver a single component (the bus) within that transit system. Our role should be limited to producing reliable and safe buses that meet FMVSS standards.</p> <p>However, once MATA has completed their Safety and Security Management Plan (SSMP), we will work with the Agency to determine what (if any) resources can be provided by Proposer for support of said plan and what cost impact it will be to MATA.</p>	MATA is requesting that Proposer agree to be a willing participant in the FTA-required Safety & Security Certification process specifically to ensure that the procured buses are reliable, safe, and built to the agreed-upon specifications	Approved

Deviation No.	TS Section Ref.	Page No.	Specification	Proposed Language & Deviation Description	Rationale (Pros/Cons)	Agency action
67	4.7.8 Certifiable Elements List/Certifiable Items List.	67	<p>MATA has prepared a preliminary Certifiable Elements List (CEL). The Contractor will develop and expand the CEL and provide a Certifiable Items List (CIL) for their proposed bus design, manufacturing, and testing. The Contractor will submit the updated CEL no more than 30 calendar days after NTP. The contractor will submit a detailed CIL no more than 60 calendar days after submittal of the CEL</p>	<p>Proposer has been building buses for MATA since 2003.</p> <p>Proposer believes that strict adherence to predefined certifiable elements and items limits our flexibility to optimize the design of the bus. By being bound to a predetermined list, this could inhibit and constrain us in exploring innovative solutions or incorporating new technologies that could enhance the performance, efficiency, or safety of the bus.</p> <p>We custom build each bus to a customer specification and review each order during the preproduction meeting. Before final design release, we send the seat, dash and paint layout to the customer for review and approval. Any discrepancies or questions can be resolved at that time.</p> <p>In addition, Proposer will supply customized Parts, Service, Schematics and Operators manuals that will be based on the final BOM of the agency's build.</p> <p>With that being said, Proposer does not have or plan to develop any CEL list and requests approval to accept our standard business practices.</p> <p>Failure to accept this approved equal request may preclude Proposer from participating in this</p>		Approved
68	4.7.9 Preliminary Hazard Analysis.	67	<p>MATA has completed a Preliminary Hazard Log (PHL) which will be provided to the Contractor (see Appendix D). The Contractor will review the MATA-provided PHL and create a corresponding Preliminary Hazard Analysis (PHA) for the Contractor's design. The Contractor will describe, through corrective actions tabulated in the PHA, how the completed design - including design criteria, technical specifications, drawings, required testing and O&M procedures - addresses the identified hazards. The PHA is a living document and Contractor will monitor and update risk levels and risk mitigation throughout the Contract. The Contractor will host a PHA workshop with MATA no later than 60 calendar days after NTP; Contractor will submit a draft PHA with 10 calendar days after the workshop along with updates on a monthly basis through the design process.</p>	<p>Proposer wishes to advise the Agency, that Appendix D is empty with no information.</p> <p>Proposer has trained all employees that work with the Battery Electric bus about the specific hazards associated with manufacturing electric transit buses.</p> <p>Furthermore. We have contractual obligations to meet safety and regulations standards.</p> <p>We believe these obligations should be sufficient to ensure the safe design and manufacturing of our Battery Electric buses. Adding an additional layer of analysis and reporting is unnecessary considering Proposer is already legally bound to comply with applicable safety requirements.</p> <p>Please note that our Service Manuals provides most of the requested information and we do offer Proposer and OE training to assist Agency personnel with properly maintaining and servicing our buses.</p> <p>Failure to accept this approved equal request may preclude Proposer from participating in this procurement.</p>	MATA will not require Proposer to conduct a Preliminary Hazard Analysis.	Approved

Deviation No.	TS Section Ref.	Page No.	Specification	Proposed Language & Deviation Description	Rationale (Pros/Cons)	Agency action
69	4.7.10 Threat and Vulnerability Analysis	68	<p>The Contractor will perform and provide a Threat and Vulnerability Analysis (TVA) for the Contract. The Contractor will work MATA to obtain security incident, data, trends, and other pertinent information to ensure severity risks are pertinent to Memphis and to MATA's threats and vulnerabilities. The Contractor will host a TVA workshop with MATA no later than 60 calendar days after NTP and submit draft TVA following workshop for MATA review. The Contractor will submit to MATA the final TVA prior to delivery of the first vehicle.</p>	<p>Proposer wishes to clarify that our primary expertise lies within designing and manufacturing buses.</p> <p>Furthermore, Threat and Vulnerability Analysis and planning is not our core competency.</p> <p>Proposer has limited control over the entire transit system's threats and vulnerabilities; we deliver a single component (the bus) within that transit system. Our role should be limited to producing reliable and safe buses that meet FMVSS standards.</p> <p>It may be more beneficial for MATA to engage a specialized security firm or consultant with expertise in conducting Threat and Vulnerability Analyses. These external entities are often better equipped to provide in-depth analysis, identify potential risks, and recommend appropriate security measures.</p> <p>Failure to accept this approved equal request may preclude Proposer from participating in this procurement.</p>	<p>MATA will not require Proposer to perform a Threat and Vulnerability assessment; however, Proposer must be willing to alter design specifications to address some of the results of the TVA</p>	Approved
70	4.7.11 Design Criteria Conformance Checklist.	68	<p>The Contractor will prepare a Design Criteria Conformance Checklist (DCCC), which records requirements generated from Project technical requirements (including safety and security design criteria) and design mitigations developed through the PHA and TVA. The Contractor will submit the DCCC and verifications on a monthly basis, for MATA review. Verification documentation may include design drawings, analysis or calculation sheets, and other supporting design documents.</p>	<p>Proposer wishes to clarify that we review the entire scope of work and design criteria during the preproduction meeting with each Transit Agency (including safety and security design criteria).</p> <p>The Agency specifies desired components and products from a variety of vendors and any assessment required to better understand MATA's criteria and needs should be handled by said vendor prior to the Agency specifying their system and/or components.</p> <p>Once the scope of work is agreed to with the Agency, further definition is detailed out during the preproduction meeting and any additional questions or concerns, will be addressed with the Agency prior to production of the buses.</p> <p>Therefore Proposer requests removal of this requirement and allow our standard business practice in lieu of these requirements.</p> <p>Failure to accept this approved equal request may preclude Proposer from participating in this procurement.</p>	<p>MATA will remove the requirement to develop the Design Criteria Conformance Checklist (DCCC). Proposer will receive the developed Design Criteria Conformance Checklist to be aware of how the finished product will be evaluated.</p>	Approved

Deviation No.	TS Section Ref.	Page No.	Specification	Proposed Language & Deviation Description	Rationale (Pros/Cons)	Agency action
71	4.7.12 Construction Specification Conformance Checklist.	68	<p>The Contractor will develop a Construction Specification Conformance Checklist (CSCC) from the DCCC. The Contractor will identify the appropriate means of verification for each certifiable item on the CSCC. Within 30 calendar days of MATA's acknowledgement that all comments are closed following testing and commissioning activities Contractor will submit the CSCC, including means of verification for all items, for review and acceptance. Verification documentation may include fabrication approvals, inspection reports, test results, manufacturing photos, certificates, or other supporting manufacturing testing, and commissioning documents. MATA will not enter buses or systems into revenue operations without a completed and approved CSCC.</p>	<p>Proposer wishes to clarify that we do not have or use a Construction Conformance Checklist (CSCC).</p> <p>We have been in business for over 100 Years and have a defined business model and practice that produces transit buses of the highest quality in the world.</p> <p>Upon request, we can provide vendor certifications for any items where available and can work with Agency to review any component or design upon request.</p> <p>Therefore, Proposer requests removal of this requirement and accept our standard business practices that we been utilizing during every MATA bus we have built and delivered over the past many years.</p> <p>Failure to accept this approved equal request may preclude Proposer from participating in this procurement.</p>	<p>MATA will remove the requirement to develop Construction Specification Conformance Checklist however, as mentioned, MATA will request vendor certifications that may include fabrication approvals, inspection reports, test results, manufacturing photos, certificates, or other supporting manufacturing testing, and commissioning documents.</p>	See response
72	6.65.3	160	<p>The area of the front ramp platform as well as the floor area under and around the ramp in the vestibule area may be LineX sprayed-on polyurethane, or approved equal, non-skid surface. The step edge shall be LineX yellow or approved equal.</p>	<p>The forward chassis structure features a tubular bridge section, which includes a large stainless steel shear panel, over the front axle. The front structure that supports the bumper and the "A"-posts is a twelve inch high stainless steel channel. This channel is supported by fabricated I-beams and the stainless steel driver's platform.</p> <p>Corrosion protection is fortified with an application of Hydro Armor 7790 (see attached) to the underside of the completed chassis assembly.</p> <p>Furthermore, the Ramp is covered in Altro Flooring in which offers excellent anti-skid safety for entering as we as exiting the bus. This is standard on all Proposer buses and is consistent with buses recently delivered to the Agency.</p> <p>Proposer requests approval.</p> <div data-bbox="1367 1501 1538 1683" style="border: 1px solid black; padding: 5px; text-align: center;">  HydroArmor 7790.pdf </div>		Approved