



REQUEST FOR PROPOSALS

Electric Transit Buses

DULUTH TRANSIT AUTHORITY

Addendum #5

Sept 9, 2024

The due date for Proposal submissions to 1:00 p.m. CDT on Monday, September 16, 2024.

1. PLEASE NOTE: THE PROPOSAL DUE DATE HAS BEEN CHANGED TO 1:00 P.M. CDT ON MONDAY, SEPTEMBER 16, 2024.

Please change all references in the RFP and Addendum 2 and 3 to reflect this new date.

1. Additional Clarifications to date:

a1. Technical Specifications, Section 1.03, subparagraph 1, "General Dimensions", please revise the Step Height From Ground-Front to **15.7** inches normal, and Step Height from Ground-Rear to **17** inches.

a2. Technical Specifications, Section 1.04, "Shell", paragraph 3, "Finish and Color", please add the following: **"Phoenix Motor Cars Finish and Color standards are accepted as an approved equal."**

a3. Technical Specifications, Section 1.05, "Body Structure", subparagraph 2, please add the following: **"Phoenix Motor Cars monocoque composite body structure is accepted as an approved equal."**

a4. Technical Specifications, Section 1.05, "Body Structure", subparagraph 3, "Strength and the Fatigue Life", please add the following: **Phoenix Motor Cars standard monocoque body structure is accepted as an approved equal.**

a5. Technical Specifications, Section 1.05, "Body Structure", subparagraph 7, "Jacking", please add the following: **Phoenix Motor Cars standard jacking plates design is accepted as an approved equal.**

a6. Technical Specifications, Section 1.06, "Interior", subparagraph 2, "Driver Barrier", please add the following: **Phoenix Motor Cars standard driver barrier design between the driver and the street-side front passenger seat is accepted as an approved equal."**

a7. Technical Specifications, Section 1.06, "Interior", subparagraph 3, "Driver Security Barrier", please add the following: **"Arow Global MV308 Operator Barrier is accepted as an approved equal."**

a8. Technical Specifications, Section 1.06, "Interior", subparagraph 4, "Modesty Panels:", please add the following: **"Phoenix Motor Cars standard interior design without a modesty panel aft of the front door opening is accepted as an approved equal."**

a9. Technical Specifications, Section 1.08, "Wheelhousing", subparagraph 1, "Construction", please add the following: **"Phoenix Motor Cars standard wheelhousing design is accepted as an approved equal."**

- a10. Technical Specifications, Section 1.08, "Wheelhousing", subparagraph 2, "Splash Aprons", please add the following: "Phoenix Motor Cars standard front mudflaps that sit 4.5-inches above the road surface and rear mudflaps that are 5-inches above the road surface and are wider than the tires but do not extend across the full width of the bus are accepted as an approved equal."
- a11. Technical Specifications, Section 1.09, "Doors", subparagraph 2, "Front Door", please add the following: "Ventura in-swinging doors with a 75-inch height is accepted as an approved equal."
- a12. Technical Specifications, Section 1.09, "Doors", subparagraph 3, "Rear Door", please add the following: "Ventura Plug Slide with a clear width of 38.6 inches and a height of 75-inches is accepted as an approved equal."
- a13. Technical Specifications, Section 1.09, "Doors", subparagraph 4, "Glazing", please add "or 4mm tempered glass." as an approved equal.
- a14. Technical Specifications, Section 1.09, "Doors", subparagraph 5, "Projection", please add the words "or a rubber seal" after "A brush type gap filler" in the last sentence.
- a15. Technical Specifications, Section 1.09, "Doors", subparagraph 6, "Control", please add the following after the last paragraph: "Ventura Doors' sensitive edge and motor feedback is accepted as an approved equal."
- a16. Clarification, Technical Specifications, Section 1.09, "Doors", subparagraph 7, "Door Interlocks", please note that non-adjustable brakes set to 45 PSI is accepted as an approved equal.
- a17. Technical Specifications, Section 1.09, "Doors", subparagraph 10, "Actuators", please add the following at the end of the paragraph: "Ventura doors powered with two actuators are accepted as an approved equal."
- a18. Technical Specifications, Section 1.10, "Service Compartments and Access Doors", subparagraph 1, "Interior", please add the following: "Access doors with a friction hinge is accepted as an approved equal."
- a19. Technical Specifications, Section 1.10, "Service Compartments and Access Doors", subparagraph 2, "Exterior", please add the following: "The Phoenix Motor Cars ZX propulsion access configuration is accepted as an approved equal."
- a20. Technical Specifications, Section 1.12, "Lighting, Controls, Instruments", subparagraphs 1 and 2, please add the following: "Phoenix Motor Cars standard exterior door lighting is accepted as an approved equal."
- a21. Technical Specifications, Section 1.12, Lighting Controls, Instruments, subparagraph 11, "Passenger Interior Lighting", please DELETE the first three

~~sentences: “Proposers are encouraged to consider novel interior lighting applications to meet the aesthetic goals of the buses as well as the needs of people with low vision and light sensitivity. The lighting will have the ability to be programmed for a minimum ambient light level while the bus is in motion and be adjustable to a brighter setting during loading and offloading. Individual passenger lights at each seat may be an option.”~~

The DTA is not seeking these items.

a22. Technical Specifications, Section 1.12, “Lighting, Controls, Instruments,” please add the following: **“Superior Interior Systems (“SIS”) is accepted as an approved equal.”**

a23. Technical Specifications, Section 1.12, “Lighting, Controls, Instruments,” subparagraph 15, “Run Switch:”, please add the following: **“A master switch with the following decals and controls is approved: “Off, Day Run, Night Run, CL/ID (layover mode where high voltage is on, but propulsion is disabled.)”**

a24. Technical Specifications, Section 1.12, “Lighting, Controls, Instruments,” subparagraph 17, “Onboard Operating System Diagnostics”, please add the following: **“Phoenix Motor Cars’ standard onboard diagnostics is accepted as an approved equal.”**

a25. Technical Specifications, Section 1.13, “Interior Trim,” subparagraph 2, “Trim Panels”, please add the following: **“Lustran ABS wall and ceiling panels and Kydex T in the driver’s compartment is accepted as an approved equal.”** and subparagraph 5, “Rear End”, please add the following: **“Lustran ABS wall and ceiling panels and Kydex T on the interior rear wall are accepted as approved equals.”**

a26. Technical Specifications, Section 1.15, “Driver’s Seat,” please add the following: **“USSC model Q910-71120601493103-00 is accepted as an approved equal.”**

a27. Technical Specifications, Section 1.16, “Floor Covering,” please add the following: **“GerFloor Tarabus Galaxy Pegasus 8780 flooring is accepted as an approved equal.”**

a28. Technical Specifications, Section 1.17, “Windows,” please add the following: **Phoenix Motor Cars standard windshield design with a tint film with 15% LT on the streetside is accepted as an approved equal.”**

A29. Technical Specifications, Section 1.17, “Windows,” subparagraph 2, “Driver’s Window”, please add the following: **“Phoenix Motor Cars standard driver’s window is accepted as an approved equal.”**

a30. Technical Specifications, Section 1.18, “Insulation,” please add the following: **“Please note that the DTA will accept a vehicle without thermal insulation provided it can demonstrate adequate R values that will ensure interior temperature meet the specifications during Duluth winter conditions. However, the requirements for the steering insulation are not waived.”**

a31. Technical Specifications, Section 1.19, “Ancillary Features,” subparagraph 2, “Exit Signal”, please add the following: “Phoenix Motor Cars standard Exit Signal without a selection switch is accepted as an approved equal.”

a32. Technical Specifications, Section 1.19, “Ancillary Features,” subparagraph 3, “Outside Mirrors”, please add the following:

Lucerix 15-inch by 8-inch exterior mirrors are accepted as an approved equal.

a33. Technical Specifications, Section 1.19, “Ancillary Features”, subparagraph 5, “Safety Equipment”, the DTA is not changing its requirements for the safety equipment. It includes a Fire Extinguisher, Safety Triangles, a First Aid Kit, a Biohazard Kit and a Seat Belt Cutter. Additional items such as wheel chocks are allowable, but should not be in place of any of the required items.

a34. Technical Specifications, Section 1.19, “Ancillary Features,” subparagraph 6, “Driver’s Security Box”, please add the following: “Phoenix Motor Cars standard Driver’s Security Box is accepted as an approved equal.”

a35. Technical Specifications, Section 1.19, “Ancillary Features,” subparagraph 1, “General Requirements”, please add the following: “Phoenix Motor Cars standard passenger assist design is accepted as an approved equal.”

a36. Technical Specifications, Section 1.21, “Entry Loading System, Wheelchair Securements,” subparagraph 1, “Loading System,” please add the following: “A Ricon 6:1 ADA Ramp is accepted as an approved equal.”

a37. Technical Specifications, Section 1.21, “Entry Loading System, Wheelchair Securements,” subparagraph 2, please add the following after the first line: “Phoenix Motor Cars standard mobility device securements that comply with Minnesota Rules 74050.0500 are accepted as an approved equal.”

a38. Technical Specifications, Section 1.24, “Primary Propulsion Unit and Traction Motors,” subparagraphs 1 and 2, please add the following: “Phoenix Motor Cars standard preconfigured selectable settings for acceleration and regenerative braking are accepted as an approved equal.”

a39. Technical Specifications, Section 1.25, “Energy Storage System and Controller,” subparagraph 4, please delete the word ~~“fully”~~. Buses should be delivered with the batteries sufficiently charged to ensure that they reach their destination but are not required to be fully charged.

a40. Technical Specifications, Section 1.27, “Propulsion System Controller,” please add the following: “Phoenix Motor Cars standard system that does not rely on a Propulsion System Controller is accepted as an approved equal.”

a41. Technical Specifications, Section 1.28, “Temperature Management Systems”, subparagraph 6, Page 45, the DTA accepts that a failure in the BTMS system does not instantly end a charge session and an audible alert is not required. Please add the

words “**when the temperature rises above the preset threshold**” after the word “disabled”, and delete the words “**and audible**” before the word “alert.”

a42. Technical Specifications, Section 1.28, “Temperature Management Systems”, subparagraph 7, page 45, the DTA accepts as an approved equal that an audible alert may not be provided, and that there will not be an audible alert reset button. Please revise the paragraph as follows:

“7) In the event of BTMS failure while the bus is in operation, an audible (**if offered**) and visual alert shall be activated on the dashboard. **If an audible alert is offered**, a reset button **shall be provided** to silence the alert. **Resetting the alert** shall require the deliberate action from maintenance personnel.”

a43. Technical Specifications, Section 1.29, “Component Thermal Management, Radiator(s)”, subparagraph 4, please add the following: “**A Modine radiator is accepted as an approved equal.**”

a44. Technical Specifications, Section 1.32, “Drive Unit”, subparagraph 1, please change the minimum number of miles the drive unit shall be designed to operate from **500,000** miles to **300,000** miles.

a45. Technical Specifications, Section 133, “Regenerative Braking,” subparagraph 5, please add the following: “**Phoenix Motor Cars standard regenerative braking system without a dynamic resister grid is accepted as an approved equal.**” In subparagraph 8, please add: **Phoenix Motor Cars standard regenerative braking system is accepted as an approved equal.**”

a46. Technical Specifications, Section 134, “Mounting”, subparagraph 9, please add the following: “**Automotive grade EPDM Rubber that meets SAE J20R1/R3 D2 is accepted as an approved equal.**”

a47. Technical Specifications, Section 134, “Mounting”, subparagraph 10, “Transmission”, please add the following: **Phoenix Motor Cars standard multi-speed transmission is accepted as an approved equal.**”

a48. Technical Specifications, Section 1.37. “Suspension”, subparagraph 4, “Kneeling”, please revise the floor height from **15.5 inches** to “**15.7 inches**”.

a49. Technical Specifications, Section 1.37, “Suspension”, subparagraph 1, “General Requirements”, please add the following: “**ZF RL-82EC independent front suspension axle is accepted as an approved equal.**”

a50. Technical Specifications, Section 1.37, “Suspension”, subparagraph 2, “Regulation and Operation”, please add the following: “**Parker Smart Suspension with ZF axles is accepted as an approved equal.**”

a51. Technical Specifications, Section 1.37, "Suspension", subparagraph 4, "Kneeling", please change the floor height from ~~45.5~~ inches to **15.7** inches.

a52. Technical Specifications, Section 1.38, "Steering", subparagraph 2, "Turning Radius", please revise the radius at the rearmost axle to 21-feet: "Outside body corner turning radius shall not exceed 45.5' at SLW and ~~47~~ **21** feet inside rearmost axle."

a53. Technical Specifications, Section 1.38, "Steering", subparagraph 3, "Design", please add **TRW Part number K213036** as an approved equal.

a54. Technical Specifications, Section 1.39, "Brakes, Wheels and Tires," second paragraph, "Actuation", please add the following: "**Phoenix Motor Cars standard service brakes actuated by a Bendix E10-P brake valve is accepted as an approved equal.**"

a55. Technical Specifications, Section 1.39, "Brakes, Wheels and Tires," second paragraph, "Actuation", please change the force to activate the brake pedal control to not exceed 75 pounds: "Force to activate the brake pedal control shall be an essentially linear function of the bus deceleration rate and shall not exceed ~~70~~ **75** pounds..."

a56. Technical Specifications, Section 1.39, "Brakes, Wheels and Tires," subparagraph 3, "Hubs and Drums", please add the following: "**Phoenix motor Cars hub and drum system using wheel bearings that are lubricated with grease is accepted as an approved equal.**"

a57. Technical Specifications, Section 1.40, "Pneumatic System," subparagraph 2, please add a "**Hydrovane air compressor is accepted as an approved equal.:**"

a58. Technical Specifications, Section 1.40, "Pneumatic System", subparagraph 4, "Air Lines," please add the following: "**Phoenix Motor Cars standard color coding is accepted as an approved equal.**"

a59. Technical Specifications, Section 1.41, "Bumper System," subparagraph 2, "Front Bumper", and subparagraph 4, "Rear Bumper", please change the bus length increase limit from ~~6~~ inches to **6.5** inches.

a60. Technical Specifications, Section 1.42, "Electrical System," subparagraph 6, "Low Voltage Batteries," please add the words "**or green**" after the word "yellow" for the color of the 12-volt battery wiring.

a61. Technical Specifications, Section 1.42, "Electrical System," subparagraph 7, "Battery Compartment," please add the following: "**Phoenix Motor Cars battery tray made of A1011 e-coated and powder coated steel is accepted as an approved equal.**"

a62. Technical Specifications, Section 1.42, "Electrical System," subparagraph 14, "Low Voltage and High Voltage Wiring and Terminals," please omit SAE ~~J1763~~, it is not applicable to this paragraph.

a63. Technical Specifications, Section 1.42, "Electrical System," subparagraph 14, "Low Voltage and High Voltage Wiring and Terminals," seventh paragraph, please add the following: "Phoenix Motor Cars standard high voltage irradiated cross-linked elastomer jacket wiring is accepted as an approved equal."

a64. Technical Specifications, Section 1.42, "Electrical System," subparagraph 17, "High Voltage Disconnect System," please add the following: "Phoenix Motor Cars standards design high voltage disconnect system is accepted as an approved equal."

a65. Technical Specifications, Section 1.42, "Electrical System," subparagraph 21, "Programmable Logic Control System," please add "Continental VDO" to the list of approved equals.

a66. Technical Specifications, Section 1.42, "Electrical System," subparagraph 23(l)(a),"Data Access", please add the following: "Phoenix Motor Cars standard diagnostic port locations without a 12-volt power outlet is accepted as an approved equal."

a67. Technical Specifications, Section 1.42, "Electrical System", subparagraph 23(l)(c), "Programmability (Software)," please add the following after the words "Change requests to the software will be provided in a timely manner." : "Contractor shall provide a written summary and supporting documentation to the DTA Director of Maintenance when, in the opinion of the Contractor, a DTA change request endangers the Contractor's ability to support the warranty or weakens the ability of the bus to meet range and functionality requirements. In the event that the DTA and Contractor do not agree on the advisability of the requested change, the DTA and Contractor may agree to test the change for a limited period to test the impacts of the change, or the DTA and Contractor may agree to indemnification language relieving the Contractor from the affected warranty support or range and functionality requirements."

a68. Technical Specifications, Section 1.42, "Electrical System," subparagraph 23(l)(d), "Noise Control," please add the following: "Full vehicle testing per CAN/VCSA-CISPR 12-10 is acceptable for demonstrating compliance with this Section."

a69. Technical Specifications, Section 1.43, "Fire Detection, Fire Suppression," please add the following: "Phoenix Motor Cars standard Kidde Suppression and Detection System with optical detectors is accepted as an approved equal."

A70. Technical Specifications, Section 1.44, "Interior Climate Control," subparagraph 1, "Capacity and Performance," please add the following: "Phoenix Motor Cars standard Valeo HVAC system with an Eberspacher auxiliary heater is accepted as an approved equal."

a71. Technical Specifications, Section 1.44, "Interior Climate Control", Subparagraph 5, "Driver's Area," please note that the system does not require fresh air or exterior air.

a72. Technical Specifications, Section 1.44, "Interior Climate Control," subparagraph 6, "Air Intakes," please add the following: "A Valeo Carbon Activated Filter, Merv 10, is accepted as an approved equal."

a73. Technical Specifications, Section 1.44, "Interior Climate Control," subparagraph 7, "Manual Control," please add the following: "Phoenix Motor Cars standard HVAC driver interface is accepted as an approved equal."

a74. Technical Specifications, Intelligent Technology specifications, AVL system, please add the following: "Please note that the DTA has specified a CAD/AVL system from Trapeze Group/Vontas. Respondents are permitted to Propose a different CAD/AVL system, including its associated antennas, PA system, APC, Radio, etc., as part of its base package. However, the DTA will evaluate the Cost Proposal with an added cost to either convert the Proposed base bus to a Trapeze Group/Vontas system, or will add to the Cost Evaluation the cost for additional software and training for a second CAD/AVL system to be added to the DTA's IT infrastructure."

a75. Technical Specifications, Intelligent Technology specifications, Roof mounted GPS antenna, WIFI and Router, please add the following: "Please note that the DTA has specified a CAD/AVL system from Trapeze Group/Vontas. Respondents are permitted to Propose a different CAD/AVL system, including its associated antennas, PA system, APC, Radio, etc., as part of its base package. However, the DTA will evaluate the Cost Proposal with an added cost to either convert the Proposed base bus to a Trapeze Group/Vontas system, or will add to the Cost Evaluation the cost for additional software and training for a second CAD/AVL system to the DTA's IT infrastructure."

a76. Technical Specifications, Intelligent Technology specifications, subparagraph 1.5(e)(vi), "Destination Sign Control," please add the following: "Please note that the DTA does not have the software to program approved equal sign manufacturers, but during the Cost Proposal Evaluation, the DTA will add the estimated cost to acquire the software and do the programming after the bus arrives."

a77. Technical Specifications, Intelligent Technology specifications, subparagraph 1.12, "Automatic Passenger Counter Installation/Integration", please add the following: "A Dialax APC is accepted as an approved equal."

a78. Technical Specifications, Intelligent Technology specifications, subparagraph 3, "Electronic Equipment Compartment", please add the following: "Phoenix Motor Cars standard Electrical Equipment Compartment is accepted as an approved equal."

a79. Technical Specifications, Intelligent Technology specifications, subparagraph 3.3, "Designation Signs," please add the following: "Luminator signs with Silver/White font, 16 x 160 sized font for the front signs, 14 x 112 sized font for the curb signs and 16 x 48 sized font for the rear signs are accepted as approved equals. Please see the note in

subparagraph 1.5(e)(vi) regarding the cost to acquire software to program the Luminator signs.”

a80. Technical Specifications, Intelligent Technology specifications, subparagraph 3.10, please add the following: “Phoenix Motor Cars standard Digital Dash Display is accepted as an approved equal.”

a81. Technical Specifications, Intelligent Technology specifications, subparagraph 4.4a, “Data Access”, please add the following: “Phoenix Motor Cars standard diagnostics port locations without a 12-volt power is accepted as an approved equal.”

a82. Technical Specification, Intelligent Technology specifications, subparagraph 4.4(c), “Programmability (Software)”, please add the following: “Contractor shall provide a written summary and supporting documentation to the DTA Director of Maintenance when, in the opinion of the Contractor, a DTA change request endangers the Contractor’s ability to support the warranty or weakens the ability of the bus to meet range and functionality requirements. In the event that the DTA and the Contractor do not agree on the advisability of the requested change, the DTA and Contractor may agree to test the change for a limited period to determine the impacts of the change, or the DTA and Contractor may agree to indemnification language relieving the Contractor from affected warranty support or bus range and functionality requirements.”

a83. Technical Specification, Intelligent Technology specifications, subparagraph 4.6, “Camera Surveillance System”, please add the following: “The Seon camera surveillance system is accepted as an approved equal. Please note that the DTA does not have the software to program and monitor approved equal camera systems, but during the Cost Proposal Evaluation, the DTA will add the estimated cost to acquire the software and do the programming after the bus arrives.”

a84. Technical Specification, Intelligent Technology specifications, subparagraph 4.7, “Transit Signal Priority,” please add the following: “Please note that the DTA will accept a Proposal for a bus without a TSP system, but during the Cost Proposal Evaluation, the DTA will add the estimated cost to install one after the bus arrives.”

a85. Technical Specification, “Intelligent Technology”, subparagraph 4.8, “Mobile Fare Collection Solution”, please add the following: “Please note that the DTA will accept a Proposal for a bus without connections to the Masabi Validator to Cellular Modems, but during the Cost Proposal Evaluation, the DTA will add the estimated cost to add the connection after the bus arrives.”

a86. Vendor Compliance Matrix 3, “Warranty”, please correct the extended warranty coverage for propulsion system components to 5 years/250,000 miles.

a87. Training costs included in the Vendor Compliance matrix are not included in the base price of the bus. The DTA is requesting separate pricing to determine the cost/benefit of the additional training.

2. Please see the revised Request for Proposals and the Revised Technical Specifications with the Approved Equals included.