

Capital Area Transportation Authority



AMENDMENT NO. 2 TO SOLICITATION SMALL BUS PURCHASE

1. AMENDMENT NO: 2	2. SOLICITATION NO: RFP 2018-109	3. SOLICITATION NAME: SMALL BUS PURCHASE	4. AMENDMENT DATE: May 9, 2018
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5. ISSUED BY

Capital Area Transportation Authority
Purchasing and Contracts Department
4615 Tranter Street
Lansing, MI 48910

PLEASE NOTE: Contractor is required to sign this document and return it with the bid/proposal/quote.

6. DESCRIPTION OF AMENDMENT:

- a. Questions Submitted and CATA Responses, see attached.
- b. Amendments to Appendix H, Technical Specification, see Attachment A. Changes to the text are highlight in yellow.
- c. Revised Floor Plan "A", see Attachment B.
- d. Additional information regarding the procurement of the Automatic Vehicle Location (AVL) System:

CATA has been informed by Trapeze that the OBS (On Board System) is no longer available for sale. CATA does not expect vendors to supply an OBS as a part of this procurement.
- e. All other terms and conditions remain unchanged.

NAME / TITLE OF OFFEROR (Type or Print)

COMPANY NAME

(Signature of person authorized to sign)

(Date Signed)



**Request for Proposal 2018-109, Small Bus Purchase
Questions Submitted and CATA Responses:**

1. DBE: There are a number of references to DBE throughout the CATA RFP with a stated goal of 1.24%. As we are sure CATA knows, bus manufacturers must register their DBE Programs directly with the FTA as an approved TVM and are exempt from meeting state, local or federal DBE goals of individual grant recipients. Since TVM is an FTA mandate, we intend to provide a letter with our proposal from the FTA indicating our manufacturer is approved by the FTA as a TVM. We would request CATA concurrence that this letter would satisfy DBE requirements.
 - A. Yes

2. Page 17, Section 10. INSTALLATION: While we understand this is a standard term and condition, we are unsure of this provision's relevance or meaning when it pertains to a small bus purchase. A dealer certainly cannot manufacturer and deliver a bus within 10 days. Please delete or clarify this requirement.
 - A. Page 17, Section 10 of the RFP state the following:

INSTALLATION. If specified, the Contractor shall install and place in operation, subject to approval by CATA, the equipment at the Contractor's expense within thirty (30) days from issuance of a notice to install issued by CATA.

3. Page 17, Section 15. SERVICE AND WIRING SCHEMATIC: We provide a variety of standard maintenance, service and operator manuals and wiring diagrams with each bus. However, if CATA wishes to have a chassis Helms manual this is above and beyond our standard offering, and Helms manuals do cost more. If Helms manuals are required, please advise, how many.
 - A. CATA standard Terms and Conditions in the RFP does not specify Helms chassis manual.

4. Page 20, Section 29. Notice: Does a proposer need to include a copy of these CATA Standard Terms & Conditions of Procurement with our proposal with the blanks in this section filled in, or can this be done at time of contract award? Please advise.
 - A. Yes

5. Page 1, Section 2.1 Body Structure: While we have built buses for Michigan customers using 16 gauge tubular galvanized steel as specified, our standard is 18 gauge. We meet all FMVSS





requirements, including; FMVSS 220 Rollover [over both the driver and passenger compartments (some designs have only the fiberglass bubble over the driver)], FMVSS 221 Joint Strength [many designs do not meet this critical bus structure safety standard], and FMVSS 214 Side Impact [many designs do not test to this important crash test passenger safety standard]; and, we meet the 7 Year/200,000 mile Altoona Bus Test using 18 gauge. While 16 gauge may be slightly stronger, it is overkill and is not needed to meet all applicable safety standards. More importantly using 16 gauge adds unnecessary weight to the vehicle, and as noted in Section 1. Scope, the third paragraph of the specifications weight is an important consideration, especially on a propane bus with Floor Plan B. Please approve our standard 18 gauge construction.

A. Approved

6. Page 2, Section 2.1 Body Structure, 3rd Paragraph: We use our FRP gel-coated panels. Exterior panels are Vetroresina G800 2.0 mm, fiberglass reinforced plastic [FRP]. Interior panes are Kal-Lite FRP .060" and are not vinyl clad. See attached sheets for details. The panels meet operational and functional requirements. Our skins will provide years of service and are not required to meet all applicable FMVSS requirements. Please approve.

A. Approved

7. Page 3. Section 3.1 Entrance Door and Step Well: We propose to offer our electrically operated 32" wide [clear opening] by 80" high outward opening ambulatory passenger door with rubber seals on all edges and our painted white stainless steel door frame and stepwell with a Lighthouse step heater on the first step. Our door does not double fold into the stepwell but opens outward. Only our first entry step that gets all the weather is heated, not all steps and stepwell. Our stainless steel door frame and step well is not brushed and unpainted; it is painted white. See photo below. Please approve.



A. Approved





8. Page 3, Section 4. Interior: Our interior is 91" wide and 80" high for standard floor height seating plans. For seating plans that require the floor to be raised to hide the rear wheel wells our interior dimensions are 91" wide by 74" high. Please approve.
 - A. Approved

9. Page 3, Section 5. Flooring: We use ¾" instead of 5/8" thick exterior grade plywood. Thicker ¾" plywood provides a stronger structure and does not flex like 5/8" plywood. We have completed a preliminary weight analysis on Seating Plan B, and to make weight we will need to use a lighter weight floor covering material like Altro. Please approve.
 - A. Approved

10. Page 6, Section 6. Emergency Exits: Our bus meets and we certify to FMVSS 217 Bus emergency exits and window retention and release requirements. Because our super structure is built on 25.5" centers and is the strongest bus shell in its class the widest window we can offer is 24". We propose to offer our largest windows available which are, a 24" W x 30 H" window on our raised floor bus and a 24 W" x 36 H" window on the standard floor. Thus, the openings for our side window emergency exits are 720 square inches and 864 square inches. Please approve.
 - A. Approved

11. Page 4. Section 8 Farebox: Since the fareboxes need to be keyed to CATA's existing system, please provide make and model of farebox that CATA prefers or requires. Please clarify does CATA really want two fareboxes per bus, or does CATA really only want one farebox with two vaults per bus? If two fareboxes are required is one farebox to be installed and the other shipped loose?
 - A. CATA currently uses a GFI Pacemaker manual-style farebox which does not contain a cash vault. If this particular farebox is proposed, CATA is requesting two units in order to facilitate emptying the contents and returning the bus back into service as soon as possible by our utility crew. If another model which contains a vault is proposed, CATA is requesting two vaults and one farebox per bus.

12. Page 7, Section 16.2 Passenger Seats: The last sentence reads; "Aisle shall be no less than 30" wide." Our interpretation of this requirement would seem to indicate that 30" is not attainable on Seating Plan B. If the overall width of the bus interior is approximately 90" and the specified double seats are nominally 36" wide, when two double seats are across from one another, the seats when lowered take up about 72" of the width, leaving an aisle of nominally 18". Please approve or clarify.
 - A. Approved





13. Page 7, Section 16.5 Seating Arrangements:

- i. We noticed that an Espar Heater is indicated on Floor Plan A. Since, such a heater is only recommended for diesel powered vehicles and the Espar Heater is not specified elsewhere in the specifications we assume that the Espar Heater is not to be included. Please clarify.
 - A. CATA is not requesting Espar heater. The floor plan in the RFP was provided as a general guideline for proposers. CATA is requesting coolant style heaters for both propane and gasoline vehicles.
- ii. We also noticed on Floor Plan B that the last two double fixed seats on the curbside call for an Integrated Child Securement seat in the aisle side locations. There is no mention of the ICS requirement in the specifications. Are the two ICS seats, which are quite costly, required? Please clarify.
 - A. Please refer to Amendment 1, issued on April 28, 2018.

14. Page 7, Section 16.5 Seating Arrangements: Are seat back grab handles or aisle side armrests required on passenger seats? Please clarify.

- A. CATA is not requesting seat back grab handles or aisle side armrest, however CATA will consider seat back grab handles as an option. Armrests are not desired.

15. Page 7, Section 16.5 Seating Arrangements: The last paragraph reads, in part: "CATA has requirements for additional securement belt layouts for the various floor plans. The additional securement points are to secure a variety of non-standard mobility aid devices. This process requires additional floor mounted securement locations to properly secure larger mobility devices encountered in our service area. CATA will provide the desired layout of the attaching points with the vendor at pre-production time." Certainly, locations could be addressed during preproduction, but the number and type of additional securement points will add costs that need to be accounted for in pricing. Is this, just the one additional anchorage point on the single 54" long securement location referenced in the technical specifications, or are there more securement points? Please clarify, "additional securement belt layouts", and provide additional information.

- A. CATA wishes to adhere to language in the RFP regarding the number of and location of the securements. Proposals may include optional pricing for each securement points.

16. Page 8, Section 17. Grab Rail Stanchions: Please note that ceiling grab rails on a standard floor bus are more than the 74" specified in the last sentence in paragraph 3, but a raised/flat floor bus has a floor to ceiling height of 74" so the distance from the bottom of the rail to the floor will be a few inches less than 74: Please approve.





A. Approved

17. Page 10, Section 21. Heating and Air Conditioning: The specified AC Industries 553 MAX A/C system, as we understand it, is an older model Carrier AC system which is no longer available. Mobile Climate Control bought the Carrier bus AC division several years ago and now offers a comparable system to the 553 MAX AC, which is MCC AC-713-MAX AC. This system is rated at 70,000 BTUs and has the dual compressor, the specified 3 fan skirt mounted condenser and a properly sized rear ceiling and wall mounted 1W evaporator. This is the new replacement model for the old 553 MAX system. Please approve.

A. CATA will approve comparable units provided the performance specifications are met.

18. Pages 9 & 10, Section 21. Heating and Air Conditioning: On page 9, the last line, a 65,000 BTU rear heater is specified. In the second paragraph on page 10 a 35,000 BTU rear heater is specified. Because the specification does not specifically call for two rear heaters, and Lansing does get quite cold in the winter, we suspect that the 65,000 BTU heater is what is required and the 35,000 BTU heater needs to be deleted from the specifications. Or, is CATA asking for two rear heaters? We would recommend only the one 65,000 BTU heater. Please clarify.

A. Please refer to Amendment 1, issued on April 28, 2018.

19. Page 10, Section 21.1 Roof Mount Climate Control. Is this section the specification for the optional quote, "Roof Mounted Climate Control"? We are unable to offer a complete integral HVAC roof mounted unit. We are able to offer a Mobile Climate Control, equivalent system; either:

- i. A MCC roof mounted condenser and a separate rear wall/ceiling evaporator with integral heater core unit; or
- ii. A MCC roof mounted condenser, rear wall/ceiling evaporator and floor mounted heater.

Please approve one of the systems above.

A. Please refer to Amendment 1, issued on April 28, 2018.

20. Page 11, Section 22 Windows: Again, because our super structure is built on 25.5" centers the widest window available is 24". We propose to offer our largest windows at 24" W x 36" H on regular floor height buses and 24" W x 30" H on raised/flat floor height buses. Below is a photo of a bus with our 24" x 30" windows. As you can see because there are many more windows along the entire side of the bus the feeling of light and spaciousness is achieved. This design is a structurally stronger, safer design, providing a better insulated, quieter and tighter body, and allows each passenger to feel like he/she has their own window. Many large transit agencies buy this bus, including: NY MTA [NY], TARTA [Toledo, OH], Metro RTA [Akron OH], and small agencies Allegan County Transit [MI]. Please approve.





A. Approved

21. Page 19, Section 24. Insulation: We do not use urethane spray foam as an insulating material. Controlling dispersion of spray foam is difficult and allows for voids in unintended areas, and/or requires trimming depending on manufacturing process. We use a superior insulation process. We use high density, automotive grade 1.5" thick styrene, which is a solid material [like the white coffee cups but much denser] that does not lose its shape over the life of the bus. The solid styrene panels are fitted to tight tolerances between the steel superstructure and the interior and exterior body skins, eliminating voids that can allow heat transfer. Our bus offers a factor of R7 insulation and is quiet because of this design. The typical standard is only R5. Please approve.

A. Approved

22. Page 12, Section 25 Wheelchair Lift: Last paragraph. We use 18 gauge galvanized steel to construct our door frame, which is more than adequate and saves weight, placing less stress on hinges. We also use spring struts instead of gas struts. Gas struts will lose their holding power after repeated use sooner than spring hold opens/struts. Please approve our 18 gauge steel and spring struts which is a superior design.

A. Approved

23. Page 12, Section 26. Wheelchair Securement Area: Please note that on Floor Plan A, the 54" long wheelchair position will not be the closest to the lift, but instead at the rear of the bus. There isn't sufficient room to place a 54" long and then a 48" WC position behind the driver forward of the rear wheel well. The Floor Plan A drawing in the specifications seems to indicate that the longer 54" wheelchair position is center rear which will work. Please concur.

A. Acknowledged. While not desirable, CATA will consider it as part of the overall proposal.





24. Page 14, Section 27.1 Chassis: We propose to offer the Ford E450 chassis rated at 14,500 GVW. Please approve.
 - A. Approved

25. Page 14, Section 27.2 Tilt Wheel/Power Steering: Please note that Ford offers a dual note horn, not multiple horns. Please approve.
 - A. Approved

26. Page 14, Section 27.3 Wheelbase: To achieve a 190" wheelbase the chassis will need to be stretched which requires cutting and welding on the chassis. While stretching the chassis wheelbase makes sense for the propane buses or for the gasoline Floor Plan B, would CATA allow a 176" WB, if the Floor Plan A gasoline bus can meet weight requirements. Please advise.
 - A. Denied

27. Page 14, Section 27.4 Engine: Do gasoline fueled buses ordered by CATA have to be equipped with the "Alternate Fuel Prep" option, since they will be powered by gasoline? Please advise.
 - A. Gasoline buses ordered by CATA do not require the "Alternate Fuel Prep" option, however should CATA choose to exercise the propane fuel option, buses must adhere to OEM requirements.

28. Page 16, Section 31. Rear Drive Axle and Suspension: This section reads in part; "Axle gear ratio shall not be numerically lower than 4.10 to 1.0 and be limited slip design." The only limited slip ratio available from Ford on the E450 chassis is a 4.56 ratio. Please approve.
 - A. Approved

29. Page 16-18, Section 32. Electrical Body Power Distribution: The specified electrical system is not our design. It is a job shop system purchased and installed by some of our competitors. Our electrical system has been designed by our own electrical engineers and has proven to be more dependable, reliable, rugged, easier to diagnose and maintain, and less expensive to repair than the specified system. Attached is a description of our electrical system. Please approve.
 - A. Approved

30. Page 16-18, Section 32. Electrical Body Power Distribution: There are a number of equipment items mentioned in this section regarding their electrical functioning, but that are not specified elsewhere in the specifications that we could identify. Please advise if the following equipment items are required:





- i. Stop Request System
 - A. No
 - ii. Two Heaters, instead of just one. See earlier request for clarification regarding heaters.
 - A. Please refer to Amendment 1, issued on April 28, 2018.
 - iii. Rear Door: It is our understanding that rear window is required.
 - A. CATA prefers a rear window but may consider a rear door as long it does not interfere with seating layout.
31. Page, 18, Section 33. Battery: We offer the following questions for this section.
- i. Would CATA accept the two [2] Ford OEM batteries since the chassis comes from Ford with stock batteries in lieu of Type 1131 batteries? Please advise.
 - A. Approved
 - ii. Does CATA require a slide out battery tray? It is not specified. Please advise.
 - A. No.
 - iii. Placing both batteries in the battery box is not recommended since on gasoline chasses Ford places one battery under the hood. Moving this battery to the battery box will require added high amperage cabling and additional electrical connections. We would request that one battery remain under the hood and one be placed in the battery box. Please advise.
 - A. Approved
32. Page 18, Section 34. Alternator: Ford does not offer dual alternators any longer on their E Series chasses. We can provide a 225 alternator which exceeds the two 110 Amp alternator output requirements. Please approve.
- A. Approved
33. Page 18, Section 35. Fast Idle: Please delete the requirement for the manual switch. We propose to offer the Intermotive Fast Idle and Interlock system. Please approve.





A. Approved. Please see the revised information in Attachment A.

34. Page 21, Section 49. Information To Be Supplied with Each Bus, 4. We have three items.

i. Instead of Parts Manuals and Parts Price Lists for our Coach & Equipment MGF CORP bus, we now offer our customers our On Line Parts Store, where customers can find parts and current prices. Please approve

A. Approved

ii. Ford Parts manuals and price lists are not available. We would direct you to your local Ford dealer or to our Shepard Ford Division for assistance with parts and prices. Please approve.

A. Approved

iii. A Helms manual can be offered as the Ford chassis repair manual, but they are somewhat expensive. Does CATA really want one per bus, or would a specified quantity be more appropriate? Please advised.

A. Page 21, Section 49, in the RFP does not specify Helms chassis manual.

35. Page 23, Section 52. Warranty: We offer the following requests for this section.

i. This section specifies a chassis warranty of 50,000 miles or 3 years. The Ford warranty is 36,000 miles or 3 years, not 50,000 miles. Please approve the standard Ford warranty.

A. Approved

ii. Ford's power train warranty is 5 years 60,000 miles, not 100,000 miles. Please approve.

A. Approved

36. Page 23, Section 54. Miscellaneous, 1.: Please delete this requirement. Ford may not tell us within 30 days of PO when chasses will be delivered.

A. To clarify, CATA is requesting a delivery schedule/timeline by the winning vendor within 30 days of the order.

37. Page 23, Section 54. Miscellaneous: 3.b): It is not clear to us what is required by the statement in this section, which reads: "Required FTA clauses to be attached to bid quotations." Is CATA asking that we go to the FTA website and print FTA clauses and attach all FTA clauses to our proposal? The relevant clauses seem to be addressed in the RFP by reference or as stated in the





RFP, and we agree to them. Some FTA clauses do not apply to bus procurements. We sell thousands of buses to customers that use FTA funds and we understand the applicable clauses. Please provide guidance.

A. No. The RFP addresses the required FTA clauses to be attached to the proposal.

38. Page 4 - 1st Paragraph - Wheel wells - Please approve Steel Wheel Wells covered with our approved flooring material. This provides a stronger, safer and more aesthetically pleasing wheel well solution over the out dated ABS style.

A. Approved

39. Page 11 - #22 Paint – Because of the use of FRP outer panels, most manufacturers including our products use a gel-coat white rather than sanding down this material and re-applying white once again. Please approve our OEM Gel-White finish rather than repainting. Color will be provided as required so repairs can be made easily.

A. Approved

40. Page 12- Insulation – Please approve the use of bead board foam insulation rather than spray in foam. Other than application/installation, it meets all other specifications.

A. Approved

41. Page 15 - Warranty – Please accept the OEM warranties listed below.

5 Year/100,000 Miles Extended Bus Body Structure Warranty

3 Year/36,000 Miles Basic New Bus Vehicle Warranty

3 Year/36,000 Miles Ford E Series Chassis Bumper to Bumper Warranty

5 Year/60,000 Miles Ford E Series Chassis Drivetrain Warranty

5 Year/Unlimited Miles Ford E Series Chassis Corrosion Warranty

A. Approved

42. Page 18 - #34 Alternator– Please approve the use of a single OEM Ford 225 amp alternator rather than two separate smaller 110 amp after-market alternators. This is common practice now rather than retrofitting after-market alternators.

A. Approved

43. Page 19 - #38 Back-up camera - Please accept the use of a rear view mirror back up camera system as OEM cutaway chassis do not come with back-up cameras like passenger vehicles do. This will meet specification other than the monitor not being in the radio.





A. Approved

44. Page 21- #49 - Section 4 - We request removing the OEM repair manual requirement from this section.

The items listed here in section 4 can be supplied from the bus manufacturers stand point however, with regard to the OEM Chassis repair manuals, it is now common practice to remove this from specifications do to the delayed availability of these repair manuals. They are created by a third party and are often not available for over a year or more for the purchased model year and so can't be provided at delivery. Also, the availability of on-line OEM service & maintenance subscriptions for repair facilities typically makes more sense as they are updated and accurate.

A. Approved. Please see the revised information in Attachment A.



Request for Proposal 2018-109, Small Bus Purchase
Questions Submitted and CATA Responses

#	Document	Page	Section / Requirement	Description	Supporting Document Name	CATA Response
1	Section 1 Procurement Process	8	RFP1-R Pricing & Payment Price for optional future purchase / PPI Increase	<p>While PPI is acceptable for bus body portion, it is not the most equitable method to account for increases on the chassis. We respectfully request that future price adjustments be based on two criteria:</p> <ul style="list-style-type: none"> • That the PPI adjustment be applied to the body portion only. Body portion is determined by taking the most current unit price and deducting the actual cost of the chassis. This net amount is the body cost that will be adjusted per the PPI index percentage. We request that be applied on a 12 month basis, where the 1st increase be PPI adjusted 12 months after the contract award date, and subsequently adjusted each year thereafter. • That any chassis cost adjustments be allowed from one model year to the next. Such changes would be fully documented showing the increases by providing chassis factory invoices. We do not mark up chassis cost and only seek to recoup actual increases. We request that chassis increases be implement as model year changes dictate. <p>Considering that your contract award date may not be on the same time line as a model year changeover, the requested two criteria PPI increases and chassis increases may create two increases in any given 12 month period. However, we believe this is fairest method for all parties to share the true increases in the most timely and equitable fashion. This is the method used by the Indiana Department of Administration for the State Contract that Midwest Transit Equipment holds in that state. It is also the same method used in several other states where we hold contracts.</p> <p>Additionally, we request for cost adjustments as the result of any regulatory changes that may occur over the term of the contract. These would be for such things as FMVSS, ADA or any such thing that is changed by law.</p> <p>Lastly, we request that you specify Series ID WPU1413 PPI Commodity Data as the appropriate index for buses.</p>	NA	Acknowledged. CATA is committed to a mutual negotiation between CATA & the Contractor at the time an order is placed.
2	Terms & Conditions	18	18. Insurance a, b & c	For clarification "Professional Liability" is more commonly known as "Errors and Omissions" and is the terminology used in our insurance documentation.	NA	Acknowledged
3	Terms & Conditions	19	22. Liquidated Damages	While we are highly confident in meeting CATA delivery timing, \$200 per day is excessive when compared to similar bids. We respectfully request the limit be revised to \$100 per day.	NA	Denied

Request for Proposal 2018-109, Small Bus Purchase
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#	Document	Page	Section / Requirement	Description	Supporting Document Name	CATA Response
4	Appendix H Technical Specifications	1 & 5	2.1 Body Structure & 13. Rustproofing	Specifies Galvanized Steel. In lieu of galvanized steel, please approve "aluminized steel", which is steel that has been hot-dip coated on all sides with an aluminum-silicon alloy, similar to how zinc is applied to make galvanized steel. Aluminized steel is highly resistant to corrosion because the layer of aluminum and silicon keeps the underlying steel from oxidizing. This layer also keeps pit corrosion from occurring, especially during exposure to salts that affect most other metals. Aluminized steel is commonly used in exhaust components by several OEM's, including Ford, because of its resistance to heat and corrosion. The steel cage is backed by a 5 year / 100,000 mile warranty against structural failure.	4 Aluminized Steel	Approved
5	Appendix H Technical Specifications	2	2.1 Body Structure	The second paragraph of this section includes a very detailed description of the body cage construction including specific dimensions, shapes and gauges of the steel, and is specific to just one manufacturer. Our steel body construction is similar and has been tested to meet all applicable FMVSS standards, as well as Altoona tested. Please accept our standard steel cage construction as detailed in the attached literature.	5 StarTrans Construction Details	Approved
6	Appendix H Technical Specifications	2	2.1 Body Structure	Please approve our FMVSS220 Rollover Testing that was done with the interior and exterior skins attached, as is common practice for cutaway style paratransit buses, unlike school buses.	NA	Approved
7	Appendix H Technical Specifications	2	2.1 Body Structure	Last paragraph specifies the rear of the bus shall be flat across the full width of the coach. Please approve our standard molded fiberglass rear cap that offers a contemporary design and includes molded, recessed pockets for the rear lights and license plate, as shown on the attached photo	7 Rear Cap	Approved
8	Appendix H Technical Specifications	2	2.1 Body Structure	Second paragraph states the body is to be welded to under frame structure. This is not a manufacturing process we use (same for most manufactures). We use rubber body mounts provided by the chassis manufacturer. This meets Ford QVM and provides vibration isolation between the chassis frame and body structure. Please approve rubber body mounts as detailed in the attached literature.	8 Rubber Body Mounts	Approved
9	Appendix H Technical Specifications	2	2.1 Body Structure	Last paragraph specifies 116" max height. Please approve our standard max height of 116.5". If the optional roof top AC system is selected, please approve max 125.5".	NA	Both Approved

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#	Document	Page	Section / Requirement	Description	Supporting Document Name	CATA Response
10	Appendix H Technical Specifications	2 & 3	2.1 Body Structure	The 3rd paragraph on page 2 indicates 24 gauge vinyl coated metal interior panels. But on page 3. item 4. Interior, it states interior panels to be FRP. Our standard material is FRP, so we request approval for FRP. Please approve our light-gray FRP interior panels for the side walls, rear wall and ceiling.	NA	Approved
11	Appendix H Technical Specifications	3	3.1 Entrance Door and Step Well	Please approve that our standard door seals against the outside lip of the bottom step with a rubber bulb seal, in lieu of a brush.	NA	Approved
12	Appendix H Technical Specifications	3	3.1 Entrance Door and Step Well	Specifies ground-to-first step shall not exceed 11" +/- 1". Please approve our ground-to-first-step height of 12" +/- 1".	NA	Approved
13	Appendix H Technical Specifications	3 & 4	3.1 Entrance Door and Step Well 5. Flooring	3.1 Specifies stepwell and frames to be stainless steel. 5. Flooring, top paragraph of page 4, it specifies galvanized wheel wells, which due to tire spray will be exposed to much more moisture than the step well. Please approve the stepwell and frames to be aluminized, as detailed in the attached literature, and/or galvanized.	4 Aluminized Steel	Approved
14	Appendix H Technical Specifications	3	4. Interior	Specifies 78" minimum ceiling height. We meet this spec for Floor Plan A. 1. Floor Plan B requires a raised floor, so please approve a minimum ceiling height of 75". 2. For both floor plans: If the optional roof mount Trans Air RT65 AC system is selected, please approve an interior height that is reduced by 1" at the center of the aisle, and 3.75" where the ducts are located over the seats (not over the main aisle). 3. For both floor plans: If the optional roof mount ACC TC60 system is selected, please approve an interior height that is reduced by 3".	NA	All Approved
15	Appendix H Technical Specifications	3	5. Flooring	Specifies 5/8" CCA pressure treated plywood. please approve our standard 5/8" Marine Grade Plywood that has excellent water resistance properties.	NA	Approved
16	Appendix H Technical Specifications	3	5. Flooring	Specifies step tread to have stainless steel backing plate. Please approve the standard RCA Rubber cold rolled steel backing plate.	NA	Approved

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#	Document	Page	Section / Requirement	Description	Supporting Document Name	CATA Response
17	Appendix H Technical Specifications	3	5. Flooring	In lieu of rubber flooring, please approve our standard vinyl Tarabus Sirius composite flooring from Gerflor for the main floor level and the steps, as described in the attached literature. If approved, please note there is no backing plate involved. It is glued directly to the metal step well box. <u>Please note that RCA Rubber filed bankruptcy the end of April 2018. While there has been discussion that the company will be purchased, as of 5/2/7 production is currently shutdown.</u>	17 Gerflor Tarabus Sirius NT	Approved
18	Appendix H Technical Specifications	4 & 18	7. Gauges and Switches 32. Electrical Body Power Distribution	Specifies Switch panel to be mounted on the dash and not engine cover. Please approve our standard switch location suspended from the front bulkhead, as seen in the attached photo.	18 Standard Switch Panel	Approved
19	Appendix H Technical Specifications	4	8. Farebox	Please provide your current farebox manufacturer and model number so we can quote the proper model you use.	NA	CATA currently uses a GFI Pacemaker manual-style farebox.
20	Appendix H Technical Specifications	5	13. Rustproofing	Specifies floor structure to meet ASTM D3359. This is heavy duty transit bus language and we are not aware of any cutaway manufacturer doing this. We request this be deleted from the spec.	NA	Please see the revised information in Attachment A.
21	Appendix H Technical Specifications	6	15. Exterior Mirrors	This sections specifies: All exterior mirrors shall be constructed with high impact plastic or stainless steel. Based on your description, we plan to use the Rosco Accustyle 815 mirror. The head is high impact plastic, the support arms are powder coated steel and bases that attached to the bus are cast aluminum. Please approve the Rosco Accustyle 815 mirror, as detailed in the attached literature.	21 Rosco Accustyle 815 mirror	Approved
22	Appendix H Technical Specifications	6	14.1 Interior Mirrors	This section specifies 6" x 16" convex mirror. 6" x 16" mirrors are typically flat glass, and convex mirrors are typically 6" x 9". If a 6" x 16" is required, please approve 6" x 16" flat glass. If a convex is required, please approve 6" x 9" convex.	NA	Approved
23	Appendix H Technical Specifications	6	16.1 Driver's Seat	Specifies for vinyl seat cover of dark gay, black or navy color. We request approval of light gray color provided by OEM seat manufacturer.	NA	Approved
24	Appendix H Technical Specifications	7	16.2 Passenger Seats	Specifies aisle shall be no less than 30" wide. This is OK for Floor Plan A. On Floor plan B with foldaway seats down, please approve 18.5" (typical of any 96" wide cutaway and Freedman foldaway seats.	NA	Approved

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#	Document	Page	Section / Requirement	Description	Supporting Document Name	CATA Response
25	Appendix H Technical Specifications	9 & 10	21. Heating and Air Conditioning	Specifies a heater fan switch that is three speed and temperature controlled. There is no temperature control available for the rear under seat floor heater. Please approve fan controlled only for the rear under seat floor heater.	NA	Approved
26	Appendix H Technical Specifications	9 & 10	21. Heating and Air Conditioning	This specifies a conventional AC systems with the condenser skirt mounted. Please approve the Trans Air 733 Super 13, as described in the attached literature.	26 TransAir TA733 Super 13	Approved
27	Appendix H Technical Specifications	9 & 10	21. Heating and Air Conditioning	Specifies Quick Click connector system. We do not use the Quick Connect system and request approval for the Burgaflex hose connector system, as described in the attached literature.	27 Burgaflex Fitting Systems	Approved
28	Appendix H Technical Specifications	10	21.1 Roof Mount Climate Control Option	Please approve Trans Air RT65 for the rooftop system with 65k btu cooling and 56k btu heat, as described in the attached literature.	28 TransAir RT65	Approved
29	Appendix H Technical Specifications	10	21.1 Roof Mount Climate Control Option	Please approve ACC Climate Controls for the rooftop system with 65k btu cooling and 75k btu heat, as described in the attached literature.	29 ACC Climate Controls TC60H	Approved
30	Appendix H Technical Specifications	11	22. Windows	Specifies windows to be 45"w x 36" high. Please approver our standard 36" x 36". Using wider windows means fewer vertical supports in the side walls which would invalidate our FMVSS220 testing.	NA	Approved
31	Appendix H Technical Specifications	11	23. Paint	Specifies entire coach to be painted. Please approve that the chassis cab to be OEM white paint and FRP exterior to be impregnated white, no additional painting required as this would add unnecessary costs.	NA	Approved
32	Appendix H Technical Specifications	12	24. Insulation	Calls for Urethane spray foam. We do not use urethane foam spray and it is not feasible for us to offer this. Please approval for our standard high-density, polystyrene insulation in the walls and ceiling.	NA	Approved
33	Appendix H Technical Specifications	13	26. Wheel Chair Securement Area	Specifies wheelchair storage bags. Due to the numbers of wheel chairs positions on both floor plans, you may prefer to have metal TDSS (Tie Down Securement System) instead of pouches. While the TDSS are about double the cost of pouches, they will last much longer and also provide more convenience for mounting locations than pouches. This is an increasingly popular storage system used in fleet like CATA. If you would like to consider the TDSS, please make provisions in the bid to quote accordingly.	33 TDSS	Denied
34	Appendix H Technical Specifications	13	26. Wheel Chair Securement Area	The specified wheelchair position dimensions do not match some of dimensions shown on the floor plans. Please approve the included floor plans.	34 Floor Plan A 34 Floor Plan B	Approved

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#	Document	Page	Section / Requirement	Description	Supporting Document Name	CATA Response
35	Appendix H Technical Specifications	13	26. Wheel Chair Securement Area	The 3rd paragraph appears to describe Slide & Click type retractors. Please confirm this is correct and that you do not want L-Track.	35 Slide & Click	Confirmed
36	Appendix H Technical Specifications	13	26. Wheel Chair Securement Area	Specifies WC-20 compliance. Our understanding is that WC 20 is a standard for the seating device that can be used on a WC19 compliant wheel chair frame. WC20 is not the securement system. WC18 is the wheel chair retractor standard that works in conjunction with a WC 19 wheel chair. Please see the included Q'Straint provided white paper and revise this section accordingly.	36 WC18-19-20 White Paper	Acknowledged. Please see the revised information in Attachment A.
37	Appendix H Technical Specifications	14	27.4 Engine	Specifies Alternate Fuel Prep option and be capable of operating on Propane Fuel. This option will add cost to the chassis. Please clarify if the Alternate Fuel Prep also applies to non propane gasoline orders.	NA	Gasoline buses ordered by CATA do not require the "Alternate Fuel Prep" option, however should CATA choose to exercise the propane fuel option, buses must adhere to OEM requirements.
38	Appendix H Technical Specifications	15	28.2 LPG Fuel Tank Requirements	Specifies for LPG tanks to use OEM hardware and bracket system. LPG tank mounting brackets are supplied by the fuel delivery system converter, and the chassis OEM hardware and brackets cannot be used. Please revise accordingly.	NA	Please see the revised information in Attachment A.
39	Appendix H Technical Specifications	16 17	32. Electrical Body Power	Specifies 80 amp non replaceable relay, jumpers, cards, etc., all of which appears to be obsolete. Instead, modern systems use an Ignition relay to supply other individual relays for activation purposes. Please delete the sentence that begins, "It must include an 80 amp non-replaceable relay...." as this type of configuration is no longer used in most modern electrical systems. Please accept that we use an Ignition relay to supply each of the other relays for activation purposes.	NA	Approved
40	Appendix H Technical Specifications	17	32. Electrical Body Power	Paragraph in the middle specifies color-coded and number stamped in loom. Please approve color and function coded.	NA	Approved
41	Appendix H Technical Specifications	17	32. Electrical Body Power	On the 3rd paragraph from the bottom, specifies vehicle's ignition switch in both accessory mode and ignition "on" mode. Please approve the Ford E450 which does NOT provide the Accessory Mode on the ignition switch.	NA	Approved

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#	Document	Page	Section / Requirement	Description	Supporting Document Name	CATA Response
42	Appendix H Technical Specifications	17	32. Electrical Body Power	On the 2nd paragraph from the bottom, it specifies a master switch with light that shall control all accessories, overriding individual switches. This is a heavy duty transit bus spec and not available on a cutaway . However, we can offer a battery disconnect switch that will turn off power to all the aftermarket systems installed. Please delete the master switch or revise to specify the battery disconnect switch.	NA	CATA currently utilizes a master switch, however we will consider alternative options in the proposal.
43	Appendix H Technical Specifications	18	33. Battery	Specifies Type 1131. Please approve Ford's standard Group 65 batteries rated at 750 CCA each.	NA	Approved
44	Appendix H Technical Specifications	18	33. Battery 36. Grounds	Specifies Battery and Ground cables to be size 2/0. Please approve 2-gauge battery cables and ground straps. 2/0 cables are made for much higher amp draws (such as heavy duty buses) and are too stiff to allow the battery tray to slide out.	NA	Approved
45	Appendix H Technical Specifications	18	34. Alternator	Specifies chassis OEM Dual 110 Amp OEM alternators. Dual alternators are not currently available from the chassis manufacturers. Please revise to a Chassis OEM Single 220 Amp minimum Alternator.	NA	Approved
46	Appendix H Technical Specifications	18	35. Fast Idle	Specifies a chassis OEM fast idle system. The chassis are not available with a chassis OEM fast idle system. Please approve the aftermarket Intermotive GTWY505-101217 (which also includes an ADA compliant interlock), as described in the attached literature.	46 Intermotive GTWY505	Please see the revised information in Attachment A.
47	Appendix H Technical Specifications	19	38. Back Up Camera	Specifies OEM back up camera. The chassis are not available with an OEM back up camera. Please approve the aftermarket Rosco STSK4530W, as described in the attached literature.	47 Rosco STSK4530W Back Up Camera	Approved
48	Appendix H Technical Specifications	20	39.b Fuel Tank (Propane Option)	What type of LPG fill connector is required, i.e. Staubli or Acme, etc.?	NA	Gasguard GG20L for ACME connections
49	Appendix H Technical Specifications	21	48.1 2-Way Radio / GPS Antenna Provisions	Please define the quantity and locations of the antennas, as this will determine the qty of pull wires and the size of the ground plane.	NA	CATA has 3 antennas.

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#	Document	Page	Section / Requirement	Description	Supporting Document Name	CATA Response
50	Appendix H Technical Specifications	21	49. Information to be supplied <u>with each vehicle</u>	<p>3. Drawing showing wiring schematics of all electrical circuits, body, and chassis. Please submit 5 sets.</p> <p>As written, an order for 15 buses would result in 75 sets. In an effort to reduce the carbon footprint and save a tremendous amount of paper, please approve electronic files to be provided on a single flash drive per order where files can be transferred to multiple computers or printed by CATA as needed .</p>	NA	Approved
51	Appendix H Technical Specifications	21	49. Information to be supplied <u>with each vehicle</u>	<p>4. A repair and parts manual for chassis, body, and auxiliary equipment. Please submit 1 repair and 1 part manuals.</p> <p>Please note that the Helms service manuals only come in CD ROM. We request this be revised to state 1 manual on CD per order, instead of each bus. This will save you money on multiple bus orders, especially as the qty increases.</p>	NA	Please see the revised information in Attachment A.
52	Appendix H Technical Specifications	21	49. Information to be supplied <u>with each vehicle</u>	<p>4. While we can provide a bus builder body and subsystem parts manual, our understanding is that part manuals are no longer available for the chassis. Chassis parts must be obtained by Ford and up-to-date prices must be obtained from the Ford dealer at time parts are needed. We request that the parts manual for the chassis be deleted.</p> <p>Also note that there is no "up-to-date prices for body and sub-systems". This is not feasible to develop, and even if it were, prices change and it would be inaccurate. To obtain current body and subsystem prices, you will need to call our parts department at time of need.</p>	NA	Approved
53	Appendix H Technical Specifications	22	49. Information to be supplied with each vehicle	<p>6. States "Line setting ticket for chassis and body shall be installed in standard location, with no holes or rivets obscuring writing and numbers." This appears to be more like a transit bus spec, i.e. Gillig, New Flyer. Please approve a copy of the chassis invoice that shows all option codes and descriptions, and also the bus builder manufacturing order listing all options, where a hard paper copy of both will be shipped loose for each bus.</p>	NA	Approved

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#	Document	Page	Section / Requirement	Description	Supporting Document Name	CATA Response
54	Appendix H Technical Specifications	23	52. Warranty	The chassis warranty as defined in the specification does not match the Ford warranty. Please approve the standard Ford OEM warranty as defined below and as shown in the included Ford warranty summary. 3 yrs. / 36,000 Bumper to Bumper 5 yrs. / 60,000 Powertrain 5 yrs. / 60,000 Safety Restraint 5 yrs. / Unltd Corrosion (Perforation only)	54 Ford Warranty Overview	Approved
55	Appendix H Technical Specifications	23	54. Delivery	While we are highly confident in meeting CATA delivery timing, we request approval for 210 days delivery for propane equipped units to accommodate the post bus build fuel delivery system conversion. (Maintain 180 days for gasoline)	NA	Approved
56	Appendix H Technical Specifications	24	56.2 Bike Rack	Specifies for bike rack to be removed with removal of a single securement pin. Not aware of anyone offering a single pin release. Please approve Sportworks offers a Quick Release option for the DL series that uses 2 threaded bolts. See attached literature.	56 Sportworks DL2 Bike Rack	Denied
57	Appendix H Technical Specifications	24	56.1 AVL	1. Please provide contact information at Trapeze that can quote CATA equipment. Also, this section asks to quote both provisions for and installation. 2. Please clarify what is required by "provisions for". Is this "pre-wire" only? 3. For installation, are we to also quote the purchase of the equipment, or is the equipment to be supplied by CATA?	NA	Response to Q. 1: Trapeze Group Katie Phillips Inside Account Executive P 319-743-1013 katie.phillips@trapezegrup.com Response to Q. 2. & 3: Vendor will both supply and install equipment.

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#	Document	Page	Section / Requirement	Description	Supporting Document Name	CATA Response
58	Appendix H Technical Specifications	26	Floor Plan A	<p>Floor plan 'A' shows features that not in specs. Please clarify:</p> <p>1. Shows 95.00 Espar D5 Heater dimension & D5 under the 1st curbside seat .</p> <p>a. The Espar D5 is a diesel heater which is not part of the spec, nor possible with gas or propane. Please delete from Floor Plan A.</p> <p>b. Is the 65k btu heater to be located under the 1st curbside seat?</p> <p>2. Shows a NON-ADA wheelchair position in left rear corner. Please approve our Floor Plan A attached.</p>	34 Floor Plan A	<p>Response to Q. 1a: Please see the revised Floor Plan, Attachment B.</p> <p>Response to Q. 1b: Location to be determined by vendor.</p> <p>Response to Q 2: Approved</p>

ATTACHMENT A

9. SPARE TIRE:

Each vehicle shall be supplied with one additional tire and wheel to match that which is on front and rear axle of vehicle.

10. BUMPERS:

All buses ordered with bike racks shall be equipped with the OEM front bumper and energy absorbing rear bumper having anti-ride capability. All other buses shall be equipped with energy absorbing bumpers front and rear.

11. MUD FLAPS AND RUNNING BOARDS:

The vehicle shall have mudflaps behind the front and rear and shall be securely fastened with metal strips and bolts (flap shall be compressed between bracket and metal strips). Mudflaps shall be wide enough to stop splash at rear wheel openings. Rubber fender splashguards shall be installed on rear wheel well openings. Mudflaps are to be void of all printed names or advertisements of any type.

Running boards shall be provided for the drivers' door. The running board/step shall run the full length of the driver's cab area. Running board/step shall be capable to withhold the standing weight of a 200-pound individual without deflection in the running board/step. Tubular style steps will not be considered.

12. TOWING:

Two rear tow hooks shall be mounted to chassis frame. They shall be adequately braced and of sufficient strength to tow 1.2 times the curb weight of the bus. They are to be properly installed so that bus can be safely towed and lifted without damage to the bus and tow hooks and will not drag when bus is driven over an incline. The bidder shall provide a written towing procedure with their bid.

13. RUSTPROOFING:

In order to provide superior corrosion resistance, all tubular steel shall be galvanized, coated with a 99.9% pure zinc coating during the steel milling process. The steel shall have minimum 50 psi strength and three layers of corrosion prevention coatings. The body floor sub-frame assembly shall be primed to meet the 1,000-hour salt spray test per ASTM procedure B-117, with no structural detrimental effects to normally visible surfaces. ~~The floor structure shall also be rated no less than five using the crosshatch adhesion test per ASTM D3359.~~ Certification of compliance with this requirement shall be published by an independent company and be submitted with the bid. Prior to shipment, the vehicle shall be undercoated.

26. WHEELCHAIR SECUREMENT AREA:

The restraint system shall be a retractor style system and comply with ADA, SAE J-2249, and the updated 2017 WC-20, WC-20 Standards, along with all recognized government standards. The restraint system shall be a retractor style system and comply with ADA, SAE J-2249, and WC-19 compatibility standards with all recognized government standards. This system will be installed to the manufacturers supplied installation instructions and specifications and be ADA compliant in application. Certificate of crash testing must be made available if requested.

Securing retractors shall be fully automatic, self tensioning, self locking retractors. Retractors will have two zinc cast knobs as to allow the attendant to tighten the securement when necessary. Release levers shall be durable to release the retractor with the toe or tip of their foot, suggested source or approved equivalent.

All four retractors will be of the same design and have a J – hook style attachment device or approved equivalent.

Floor anchorages will be made up of individual stainless steel circular anchorages allowing attachment of the retractors in any direction. The anchorage shall also allow a 360 degree rotation of the retractors. The anchorage fastener shall have a moisture resistant dust cover as to reduce corrosion around the head of the fastener. In floor, track style anchors will not be considered.

Front anchorage points will be no less than 30 “wide.
Rear anchorages points will be 13” to 15” wide.

Front to rear anchorage measurements shall be 54 inches where space permits as to accommodate all mobility devices. In the event both locations cannot accommodate 54 inches a second securement location may be 48 to 52 inches in length but must be noted in the bid exceptions. The largest securement location must be located closest to the lift and have a fifth rear anchorage as to allow for difficult mobility devices and scooters.

The occupant restraint system shall be a retractable combination lap and shoulder belt with a manual height adjuster on the upper anchorage attached to the wall. The lower retractor can be mounted to the wall seat track in lieu of the floor provided the OEM meets the appropriate pull test per all the above recognized standards and attaches with an anti-rotation bracket or approved equivalent. All lap and shoulder belts associated with the securement system shall be auto retract types belts.

To properly secure all inactive securement belts a pouch system must be installed that can secure each device in the area it is used in and must not infringe on securement areas. Mounting location shall be approved by CATA. A drawing of the proposed locations shall be submitted with the proposals for review.

28. PROPANE (LPG) FUEL OPTION:

CATA is requesting all bidders propose pricing for both gasoline and propane (LPG) fuel. A complete conversion system includes ALL the "under-hood" components, the fuel controller, valves, actuators, brackets, hoses, all hardware, wiring and electronics and any software needed to convert the vehicle to LPG operation.

LPG conversion vendor **MUST** be a Qualified Vehicle Modifier (QVM) approved alternative fuel supplier that maintains OEM Warranty.

LPG Conversion system must be FTA ("Altoona") Bus tested for use in the vehicle being proposed. Vendor shall provide LPG conversion vehicle specifications and process overview. Before delivering a completed vehicle conversion, the vehicle **MUST** be reviewed by a CATA inspector and signed off. Only then can the vehicle be delivered to CATA.

28.1 ENGINE REQUIREMENTS

- LPG fuel system shall have a dedicated liquid injection system.
- LPG fuel system shall work with existing OEM diagnostics/OEM PCM. A separate controller will not be accepted.
- LPG fuel system shall be EPA and CARB certified.
- LPG fuel system shall meet all FMVSS, NHTSA and NFPA58 regulations.
- Once the LPG conversion process is complete, the engine shall meet or exceed the performance, horsepower and torque per the OEM specifications.

28.2 LPG FUEL TANK REQUIREMENTS

- Fuel tank must be packaged in same location as OEM gas tank that is removed and must meet all ground plane clearance.
- Fuel tank shall be designed for LPG with the largest available capacity.
- ~~Fuel tank shall mount using OEM hardware and bracket system.~~
- Fuel fill shall be protected from weather.

28.3 WARRANTY

The vendor must provide details of its warranty policies and procedures on the Price Proposal Form or as an attachment. **At a minimum, the vendor shall warrant workmanship, parts and labor for a period of five (5) years/60,000 miles at no additional cost to CATA.** The vendor shall replace any parts within the warranty period that fail due to defect in material or workmanship resulting from normal use. Deficient parts shall be replaced at no additional cost to CATA. The vendor shall indicate if the warranty provided differs from the specification requirements.

No scotch lock wire connectors will be allowed. All exterior wiring connections shall be weather tight. Terminals shall be stake-on spade or equivalent. All exterior connections shall be covered with heat shrink tubing.

Factory installed AM-FM radio in the driver's area with two speakers.

All switches shall be mounted on the dash for ease of access and operation. No switches shall be mounted on the engine cover. All switches shall be permanently marked and backlit where possible.

33. BATTERY:

Two (2) type 1131 batteries shall be furnished for the 12-volt system. Batteries shall be mounted in a skirt mounted compartment. Inside of battery compartment shall be covered with a durable insulating material to prevent electrical shorts. Vented battery compartment shall be coated with acid resistant paint. Battery compartment must be located below the floor line with adequate reinforcement brackets mounted to floor supports. Battery cables to be size 2/0 with soldered on connectors on both ends. Cable shall be long enough to provide access to the battery for service and maintenance.

34. ALTERNATOR:

Chassis OEM dual alternators, rated at a minimum 110 amps each, shall be provided. The drive belt shall be serpentine. The location of the alternator shall be consistent with OEM mounting. Any brackets modifications shall not reduce the strength of the bracket or limit on vehicle serviceability of the alternator.

35. FAST IDLE:

~~The engine shall be equipped with the chassis OEM fast idle control. The control system shall have a manual switch, volt sensor, and an indicator lights and activate automatically.~~ The system shall activate with the parking brake application and automatically deactivate when the brake is released.

36. GROUNDS:

Heavy-duty 2/0 cable with soldered on connectors shall be minimum requirement. Other grounds as required shall be furnished to handle subsystem electrical capacity.

37. BRAKES:

37.1 Hydraulic System

Bus shall be equipped with a split power design type system with four-wheel ABS (anti-lock braking) system. Brake system furnished shall be designed in manner that the front and rear axles

47. OTHER ITEMS:**47.1 Safety**

The following safety items shall be provided on each vehicle.

- a) Warning buzzer that is readily audible outside the vehicle when transmission is in reverse and shall be mounted in a protected location in the rear axle area.
- b) A master switch with light for lift at driver's station.
- c) A light at driver's station activated when lift door is open or lift is in operation.

48. DESTINATION SIGN/RADIO PREP:

All buses shall be equipped with a front electronic LED destination sign, minimum 14 x 108-8mm Amber, 12V. A list of the required destination codes will be provided to the successful bidder. Sign ODK shall be located above the driver. Side and rear mount signs are not requested.

48.1 2-Way Radio/GPS Antenna Provisions

Antenna ground plains shall be installed in the roof structure for antennas to include two-way communication and GPS. Conduit with fish wire shall be installed from the ground plain and terminate in the destination sign area. Interior roof access shall be provided below the ground plain. A separate 12 volt 20 amp ignition switch activated power supply shall be furnished in the destination sign area for the radio. Drawings of the locations in the roof structure shall be provided with the bid for review by CATA.

49. INFORMATION TO BE SUPPLIED WITH EACH VEHICLE/ORDER:

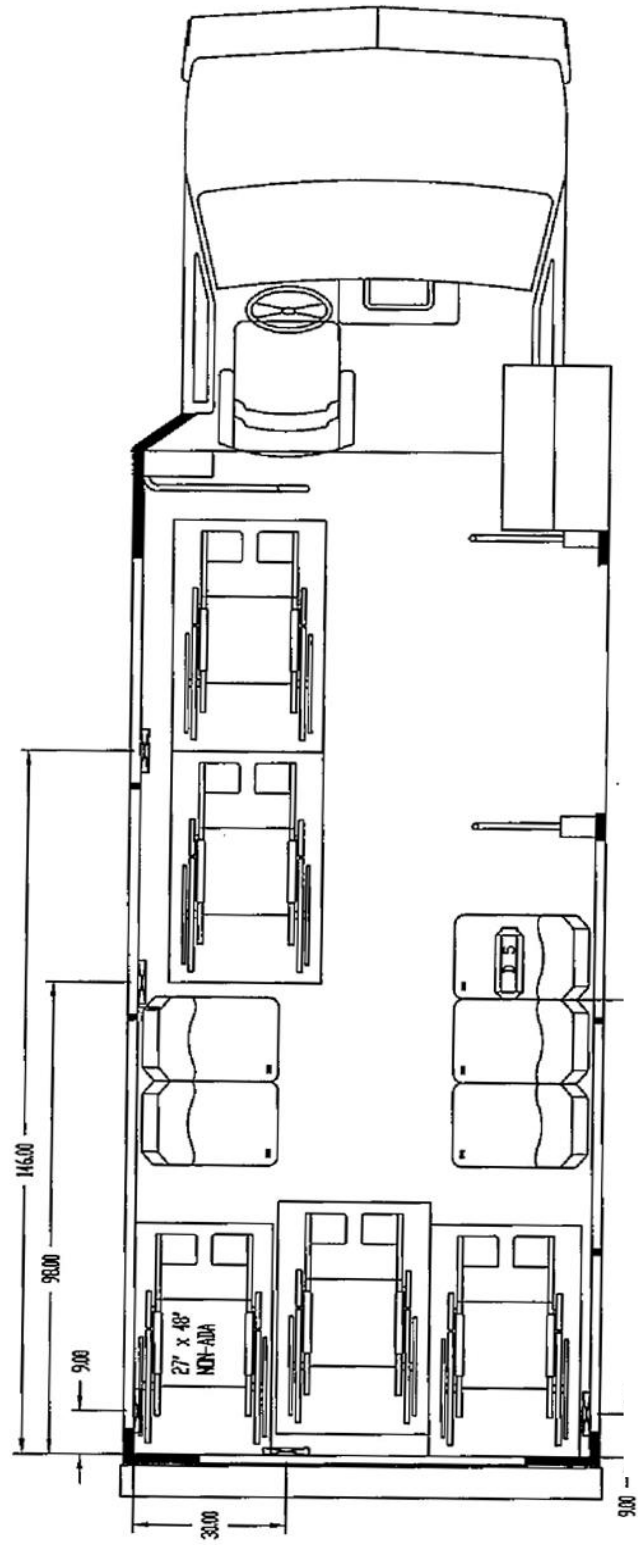
1. Copy of manufacturer's statement of origin for each vehicle to include the manufacturer's chassis specifications.
2. Warranty papers for chassis, body, and drive train and for all additional equipment.
3. Drawing showing wiring schematics of all electrical circuits, body, and chassis. Please submit 5 sets.
4. A repair and parts manual for chassis, body, and auxiliary equipment. Please submit 1 repair and 1 part manuals. This shall include a parts list with up to date prices for body and sub systems.

ATTACHMENT B

Attachment B

“Revised” Floor Plan A

Floor Plan A
• Spec-Tran Service



RETRACTABLE BELTS