

INDEPENDENT COST ESTIMATE

PROJECT TITLE: BOC Low-Floor

CONTRACT ADMINISTRATOR: Avery Daugherty

PROCUREMENT NUMBER: IFB 4504

ORIGINAL PROCUREMENT: Yes No, Option: Yr.1 Yr. 2 Yr. 3 Yr. 4

Method. The above estimate has been developed as follows (check all that apply).

- Publish catalog or price list (attached pertinent catalog or price list pages).
- Recent prices for the same or similar item/service (identify contracts, purchase orders, sources, and additional helpful information (e.g. dates of award), and attach any pertinent documents).
- In-house engineering or technical estimate (see details below).
- Independent Third Party estimate developed by _____ (attach the estimate).
- Other (specify): _____
- If appropriate, the estimate/prices herein have been made current by adjusting for inflation using the following Producer or Consumer Price Index: _____ -

Cost Estimate Details. Details for the estimated price/cost identified are shown below.

Cost of Standard Items

	Product	Unit Cost	Unit Cost	Notes/Data Source
		Delivered	No Freight	
A	ARBOC Spirt of Mobility LF BOC 17 Passenger		\$138,775	NY DOT State Contract PC68997 1-21-2020

Cost of Services, Repairs, or Non-Standard Items

	Item/Task:	Please see attached for complete cost comparison breakdown.						
	Materials	Other Direct Cost	Labor (rate, hours)	Labor Class	Allocated Overhead	SG&A	Profit	Total
B								

NOTE: For complex projects or tasks, attach additional supporting documentation, as appropriate.



08/18/2021

Contract Administrator

Date

**Group 40523– Award 23170, BUSES, TRANSIT (Adult Passenger)
Alliance Bus Group Inc. Contractor Information
January 21, 2020**

Contract # / MWBE/SB	Contractor & Address	Centralized Contract and Sales Contact	Federal ID NYS Vendor ID
NYS Contract: PC68997	Alliance Bus Group, Inc. 1926 Hyannis Court, College Park, GA 30337	Name: Teresa Smeriglio Title: Sales Coordinator 51 Kero Rd., Carlstadt, NJ 07072 Phone: 201-806-2765 Toll Free: 800-272-6521 Fax: n/a teresasmeriglio@alliancebusgroup.com	Federal ID 27-4466560 NYS Vendor ID 1100078851
Business Hours: M- F 8:00AM- 4:30PM			

**ADDITIONAL CONTACTS
(Sales Questions, Expediting Orders, and Emergencies After Business Hours)**

Sales Questions and Orders; Expediting Orders: Name: Andrew G. Rolfe Title: Exec VP 51 Kero Rd., Carlstadt, NJ 07072 Phone: 201-806-2313 Toll Free: 800-272-6521 Fax: 201-806-2313 AndyRolfe@alliancebusgroup.com	Emergencies After Business Hours Name: Jeff Krane Title: General Manager 51 Kero Rd., Carlstadt, NJ 07072 Phone: 201-507-8500 Toll Free: 800-272-6521 Fax: n/a jeffkrane@alliancebusgroup.com
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PAYMENT/ORDERING INFORMATION

Does Contractor offer a prompt payment discount for payments made in less than 30 days after receipt of a proper invoice? If yes, please detail the additional discounts by providing the percentage of discounts and the specific number of days within which payment must be made for the discounts to apply (for example: 2% / 15 days; 1% / 20 days).	No
Does Contractor accept the NYS Purchasing Card (see Appendix B, Purchasing Card) at no additional charge, for orders up to and including \$50,000?	No

CONTINUED

Contractor:	Alliance Bus Group Inc.
LOT F	
Low Floor Cutaway, 17 Passenger [15A/2WC]	

PART 1: Product information for the Base Item awarded		
Chassis Model Year	The year used to designate a discrete Chassis Model, irrespective of the calendar year in which the Chassis was actually produced.	2020
Chassis Make	The OEM company name of the Chassis Model.	Chevrolet
Chassis Model	A particular brand of Chassis sold by an OEM.	Express 4500 GM Cutaway
Chassis Model Code	The OEM code used to identify a particular subset of a Chassis Model.	CG33803
Body Model Year	The year used to designate a discrete Body Model, irrespective of the calendar year in which the Body was actually produced.	2020
Body Make	The OEM company name of the Body Model.	ARBOC
Body Model	A particular brand of Body sold by an OEM.	Spirit of Mobility
Body Model Code	The OEM code used to identify a particular subset of a Body Model.	LB696

PART 2: Base Item Unit Price		
Base Item Unit Price	"Base Item Unit Price" is the per unit NYS Contract Price for the Transit Bus described in the Base Item Specifications and includes any OEM fees, all customs duties and charges, all vehicle preparation and clean-up charges, NYS DMV and DOT inspection, installation charges, delivery and all other incidentals normally included with providing a Transit Bus, but excludes Optional Equipment. Pursuant to Appendix B §33, Shipping/Receipt of Product, freight terms are F.O.B. Destination. See Contract Section 3.1.1 Price and 3.1.4 Contract Pricelist for additional information about Contract pricing.	\$138,775.00

PART 3: Base Item Specifications
 The terms and conditions in Contract Section 3.2 Transit Bus Requirements shall be considered minimum requirements for the Transit Bus provided by the Contractor. Supplemental required specifications for the Transit Buses awarded for this Lot are listed below. The actual Transit Bus awarded may exceed the minimum specifications listed below.

Category	Specification	Information provided in Column D	Spec for Equipment Provided
General	Capacity: Minimum fifteen (15) adult passenger seats, plus two (2) wheelchair stations	Capacity:	15 & 2
General	Floor plan matches "Figures" tab. The floor plan shall provide a minimum of 27.5" hip-to-knee for all seated positions, with the wheelchair footprint a minimum of 50" x 30".	Manufacturer Floor Plan #:	1206331-2
General	Drive configuration: Minimum forward control dual rear wheel (DRW)		
General	Have completed federal STURAA (Altoona) bus testing of not less than five (5) years/150,000 miles or have been certified as exempt as specified under FTA provisions.		
General	GVWR: 14,000 lb. minimum. The OEM's original rating and no other rating for the GVWR shall be used.	GVWR /Artifact BDC [lb.]:	14200
General	Wheelbase: 195" (plus or minus 15")	Wheelbase /Artifact BDC [inches]:	191"
General	Minimum 75" continuous passenger aisle headroom	Headroom /Artifact BDC [inches]:	77" minimum
General	Shall include an "Electronic Stability Control" system that improves stability by detecting and reducing loss of traction.		
Chassis (see specifications below)			
Cab	A standard sedan door on the driver's side shall be OEM Chassis supplied.		
Engine	Minimum 6.0 liter, V-8 gasoline engine rated minimum 300 HP x 300 lb. ft. torque.	Number of Cylinders:	8
		Liters:	6
		Horsepower and Torque:	HP: 341 @ 5400 Torque: 373 @ 4200
Engine	Ready access to engine compartment is required for servicing and routine maintenance of engine and engine components.		
Fuel Tank	Nominal (plus or minus 5 gallons) 60-gallon tank	Tank Size /Artifact BDC [Gallons]:	60
Cooling System	Chassis manufacturers heaviest duty cooling system available for Chassis supplied and protected to minus 30°F		
Electrical	145 amp OEM alternator		
Electrical	Dual Heavy Duty Batteries, minimum 1300 CCA total, which shall have protective rubber jacket at connection terminals (pigmented red to indicate positive and black to indicate negative);	Rating of Batteries /Artifact BDC [lb.]:	1540
		CCA each battery:	(2) 770
		Minutes RC:	120RC
Electrical	Manufacturer's standard dash-mounted gauges (not lights)		
Transmission	Transmission shall include an automatic transmission with heavy duty or additional oil cooler.	Transmission Model #:	MYD
Front Axle	Minimum Front Gross Axle Weight Rating (FGAWR) 4,600 lb.	FGAWR /Artifact BDC [lb.]:	4600
Rear Axle	Minimum Rear Gross Axle Weight Rating (RGAWR) 9,500 lb.	RGAWR /Artifact BDC [lb.]:	9600
Suspension	Chassis manufacturer's heaviest duty suspension system (front and rear) available for GVWR specified.		
Suspension	Front /rear air suspension with engine driven or electric driven compressors that shall automatically kneel a minimum of 4".	Front Suspension Rating /Artifact BDC [lb.]:	4600
		Rear Suspension Rating /Artifact BDC [lb.]:	9600
Shock Absorbers	Heavy Duty	Make and Model #:	Front: OEM
Brakes	ABS power brakes meeting FMVSS 49CFR571.105	Service Brakes /Artifact BDC [sweep area] both front & rear:	Front: 12.8 x 1.5" Rear: 13.58 x 1.6"

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Parking Brake	Foot-operated parking brake		
Tires	Manufacturer's standard all-season radial tread or rib tread w/mud and snow rear, as required to meet the GVWR specified	Radial Tires /Artifact	1.26/15R16E
		Radial Tires /Artifact	BDC [load]: Front-115, Rear-112
		Radial Tires /Artifact	BDC [range]: E
		Radial Tires /Artifact	BDC [manufacturer]: OEM
		Front Tires /Artifact	BDC [tread design]: All Weather
		Front Tires /Artifact	BDC [capacity/tire]: 2680
		Rear Tires /Artifact	BDC [tread design]: All Weather
Front Bumper	Shall be made of, or covered with, a rust proof material. Front bumper may be OEM chrome or high density rubber/plastic (i.e. HELP bumper) and shall be affixed to Body using corrosion resistant material hardware with rustproofing applied to finished installation.	Front Bumper /Artifact	BDC [material]:
		Front Bumper /Artifact	BDC [manufacturer]: OEM
Steering	Power steering	Turning Diameter /Artifact	34'6"
Steering Wheel	Tilt steering wheel		
Interior Equipment	OEM dash air conditioning, defroster, and heating system		
Radio	Chassis Manufacturer's standard AM/FM Digital Clock Radio, with one driver speaker and two cabin speakers.	Manufacturer:	OEM
		Model #:	UOF
Exterior Equipment	Rear tow hooks		
Exterior Equipment	Standard OEM horn(s)		
Head Lights	OEM standard includes daytime running headlights		
Exterior Equipment	Reflectors		
Exterior Equipment	Exhaust system shall be at the rear of the Transit Bus and shall exit on the street side, aft of the rear axle. The system shall meet current USEPA emission requirements.		
Miscellaneous	Minimum two (2) OEM keys or fobs		
Body (see specifications below)			
Body Structure	Shall consist of a heavy-duty integral steel Body roll cage structure (from curbside to street side floor connections) fabricated of square or rectangular tubing (or structurally equivalent hat section member) and be in full compliance with Title 17 NYCRR Part 720.4(b)(1). Roll cage shall extend forward sufficiently to protect driver in the event of rollover. Documentation consisting of detailed explanation and dimensional drawing supporting the Body structures compliance shall be supplied with bid submission for each vehicle classification, including current substantiating documentation (not older than 5 years unless the structure has not been significantly modified as defined by 49 CFR 665) confirming compliance with FMVSS 220, and 214.		
Body	Minimum 90" interior Body width (from sidewall to sidewall). Exterior shall be smooth and free of any visible fasteners. Exterior Siding shall be 25-gauge protected (i.e. galvanized) steel (or 24-gauge aluminum) with smooth surface or laminated fiberglass composite (0.090" -0.095" thick) reinforced with insulation that is foamed in place or resin hardened honeycomb. Body shall be compliant to all stated General Body specifications. Interior sidewalls shall be fiberglass, vinyl clad aluminum or Compatible Equivalent material. Insulation in walls and ceiling shall be fiberglass, resin-hardened honeycomb (FRP) material, polyurethane, or closed cell EPS foam. Vinyl padding may be used for finish to the drivers area, modesty panels, or other interior trim. All cover materials must meet FMVSS 302 flammability requirements.	Exterior Siding /Artifact	BDC [material]: 1.0mm FRP laminated to 2.7mm Azdel for a
		Interior Paneling /Artifact	BDC [material]: 1.0mm FRP laminated to 2.0mm Azdel for a total of 3.0mm (.118")
		Insulation /Artifact	BDC [material]: Closed cell EPS foam / R9
Drive Shaft Guard(s)	Metal Guard(s) in accordance with NYSDOT Title 17 720.4 (Y) (1) (h)	Drive Shaft Guards /Artifact	BDC [quantity]: 2
Exterior Equipment	Reverse alarm		
Exterior Equipment	Back up radar alarm with four (4) bumper mounted sensors. Alarm shall provide an audible alert plus include a dash area mounted LED distance display.	Manufacturer:	Intermotive
		Model #:	Hawkeye
Exterior Lighting (Brake; Turn Signal; Clearance; Back Up; Tail; License Plate)	All exterior Body lights (non-OEM Chassis) for these purposes must meet current SAE standards and shall be sealed Light Emitting Diode (LED) type lights on an active regulator circuit that assures uniform illumination of all the LED lighting down to eight (8) volts. All exterior clearance lights shall be armored (or low-profile design or sufficiently body-recessed) to provide protection from impact of branches, etc. Rear brake lights include a third light installed over the rear emergency door. A mid-ship turn signal shall also be installed on each side of the Transit Bus Body.		
Batteries	One (1) auxiliary battery shall be mounted in an easily accessible fully enclosed and properly ventilated battery box with stainless steel (or an acceptable non-corrosive material) slide out (with roller track) battery tray, and shall include a clearly labeled disconnect switch that shuts off all current to the Transit Bus Body. Battery Box shall be accessible through a hinged door access which shall be labeled in conformance with Title 17 NYCRR Part 720.6(a). Door shall be affixed with stainless steel fasteners. One (1) OEM battery shall be located under the hood.		
Gutters/Drip Molding	Shall be installed above all windows and doors, preventing water from draining onto doors and windows.		
Mud Flaps (Front and Rear)	Shall be manufacturers standard. Labeling and advertising is prohibited, other than for necessary safety information		
Rear Bumper	Shall be made of, or covered with, a rust proof material. Rear bumper shall be stainless steel or high density rubber/plastic (i.e. HELP bumper) and shall be affixed to Body using corrosion resistant material hardware with rustproofing applied to finished installation.	Rear Bumper /Artifact	BDC [material]: Rubber
		Rear Bumper /Artifact	BDC [manufacturer]: Transpec
License Plates	Provisions shall be made for the mounting of standard U.S. license plates on the front and rear of the Transit Bus and shall comply with SAE J686.		
Exterior Mirror Frames	Mirror Frames and Extension Arms shall be made of rustproof material (i.e. stainless steel/durable plastic) and shall be adequate to prevent excessive vibration of the mirror(s).	Manufacturer:	Velvac
		Model #:	2020XG

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Exterior Mirrors	Driver's side and curbside exterior mirrors shall be heated and remote controlled, with the switch(s) to be installed at a prior approved location. In no case shall the switch be mounted above the windshield. Each mirror head shall be constructed of high impact ABS and include a flat and convex feature. Extension Arms shall be provided on mirrors to allow for a clear and unobstructed view to rear regardless of Transit Bus width.	Manufacturer:	Velvac
		Model #:	2020XG
Interior Mirror	Rear view mirror 6" x 30" flat or 6" x 9" convex shall be provided	Mirror Size /Artifact	BDC [inches]: 6" x 9" Convex
Windows	Passenger windows shall be "T" slider top ventilating or push-out horizontal transit slider type with a minimum 28% tint (light reduction in the passenger compartment). Side and rear windows shall be metal frame construction (painted black) with tempered safety or laminate glass and shall meet FMVSS 217 retention requirements.	Passenger Window /Artifact	BDC [type]: T-Slide
		Passenger Window /Artifact	BDC [size]: 36 x 36" and 20 x 36"
Windows	Twin rear windows are required and shall be manufacturer's standard (6" x 18" minimum) on each side of emergency exit door or special service door. Emergency exit door, when located in rear of Transit Bus, shall include an upper and lower window		
Windows	Window placement shall conform to manufacturer's standard spacing for length of Transit Bus offered. Placement and installation of the windows shall not diminish the structural integrity of Transit Bus. Windows installed as emergency exits as required by FMVSS shall also comply with Title 17 NYCRR Part 720.5 requirements.		
Floor Assembly	Shall be single piece insulating 5/8" thick marine grade plywood with sealed edges and underside of flooring completely sealed from moisture and debris using poly-urea coating, or Compatible Equivalent, and seamless transit grade flooring surface material, or Compatible Equivalent. Low floor must be sufficiently insulated to protect Interior Noise Level, which may not exceed 83 dBA anywhere within passenger compartment area. Floor covering that shall meet FMVSS 302 and ADA requirements for slip resistance.		
Floor Aisle	Any fixed ramp or inclined plane within the cabin shall conform to NYCRR 720.8 (A) (9) aisle requirements. A separate step up aft of the entry stepwell is not acceptable.		
Entrance Step	Shall be a low height, front entrance step (lowest practical) and shall comply with ADA 1192.	Top of first step above ground /Artifact	10.5" kneeling
Steps	Passenger steps are not permitted		
Entrance Door(s)	A "walk through" minimum 74" high headroom right front entrance door with a minimum clear entry opening of 28" constructed with top and bottom (or length of door) viewing windows and a heavy duty electric opener shall be provided. An interlock (Intermotive Gateway or Compatible Equivalent) shall be installed and programmed that prevents the door from being opened or closed unless the Transit Bus speed equals zero (0). Door leading and sectional edges shall be equipped with approximately 2" extruded rubber edges to form weather-tight seal. Door shall be affixed with hinges that provide corrosion protection and fasteners or hex rod (aluminum or zinc die cast hinge with stainless steel pin also acceptable). Entrance door surround (portal) and step well shall be constructed from stainless steel or material with Compatible Equivalent corrosion resistant properties. Entrance door shall comply with FMVSS 217.	Entrance Door clear opening /Artifact	39" x 75"
Door Entry Grab Rails (right and left side)	Shall be installed on each side of entry, parallel to the steps, securely fastened and a minimum 1 1/4" diameter made of stainless steel powder coated material, or non-slip Compatible Equivalent, and shall be a high visible yellow in color, accessible from first step to floor of Transit Bus.		
Emergency Exit Door	Shall be at the rear center of the Transit Bus, in compliance with FMVSS and Title 17 NYCRR Part 720.5 requirements. An interior locking device (vandal lock) shall be provided for emergency exit door(s) and an LED driver station warning light shall be provided to indicate when door is locked. A device shall be installed to prevent the engine from starting when the door is locked. Exterior door handle shall be non-locking. Door shall be constructed with two (minimum 12" x 18") windows situated at the top and bottom of door. Door surround (portal) shall be stainless steel or material with Compatible Equivalent corrosion resistant properties. Door shall be affixed with stainless steel hinges and fasteners or hex rod (aluminum or zinc die cast hinge with stainless steel pin also acceptable).		
Overhead Hand Rail	Two (2) full-length overhead (ceiling) handrails shall be provided and securely attached to roof structure, which shall be continuous except for a gap at the rear doorway, in accordance with Part 38 of the ADA.		
Driver Barrier	Driver Barrier constructed of a vertical and horizontal stanchion, a padded modesty panel, and transparent durable plastic material, or Compatible Equivalent, shall be installed directly behind driver seat. A gap between the ceiling and top of the plexiglass shall be 2" (plus or minus .5").		
Padded Panels	Shall be provided attached to a vertical and horizontal stanchion behind the step well. The gap between the floor and bottom of the panel shall meet NYS DOT specifications.		
Intentionally Omitted	Intentionally Omitted		
Insulation	Fiberglass, resin-hardened-honeycomb (FRP) material, polyurethane, or closed cell EPS foam insulation in walls and ceiling (minimum R-value of R-6).		
Wheelchair and Passenger Access	Modify Transit Bus to provide a power (and manual in event of power failure) transit ramp at entrance door. All items, including lighting, shall be in compliance with ADA,		
Ramp	The ramp shall meet the requirements of Part 38 of the ADA relating to vehicle ramps. Power switches for ramp shall be provided and easily accessible on both the driver console and Body exterior near passenger entry opening. Ramp shall deploy through the main passenger entry opening and be protected from moisture and debris from underside and sufficiently insulated to protect interior noise level. The ramp shall be of aluminum or stainless steel construction, with stainless steel housing. The ramp must have a fail safe system that allows stowing if any solenoid seizes. A manual method to raise and stow the lift shall be provided in the event of a power failure.	Manufacturer:	Braun
		Model #:	RA300
Ramp slope	Maximum ratio of 1:4 slope when ramp is deployed to sidewalk or roadway		
Interlock	A transmission interlock system that utilizes intermittent fault filter technology shall be installed to prevent operation of the ramp unless door(s) are opened and transmission is in park with parking	Manufacturer:	I/O Controls
		Model #:	G2 Module

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	brake applied. A manual override system in case of power failure shall also be provided. Ramp electric system shall be protected with fuse or circuit breaker.		
Wheelchair Ramp Barrier	Protective panel with vertical stanchion (consistent with Door Entry Grab Rail specifications), constructed of durable material, shall be installed directly adjacent to the passenger entrance to prevent shearing action between the ramp and Transit Bus floor or door jams in conformance with Title 17 NYCRR Part 720.8(a)(3)(b).		
ADA Compliance	All features required for a demand-response application shall be included in accordance with 49 CFR Subtitle A Subpart B (excluding paragraphs 38.33 Fare box, 38.35 Public information system, 38.37 Stop request, and 38.39 Destination and route signs).		
Lighting- Driver Dome Light	An independently controlled LED overhead dome light over driver area producing six (6) foot candles when measured at the steering wheel.		
Lighting (Interior)	Overhead, entrance, step well, and lift lights shall provide no less than two (2) foot-candles of illumination on the entrance step tread, or lift or ramp platform with the door open. Outside light(s) shall provide at least one (1) foot-candle of illumination on the street surface with three (3) feet of step tread outer edge. This system shall provide illumination automatically when the door is open and meet ADA requirements.		
Lighting (Interior)	Overhead entrance and step well lights shall be wired to and be automatically activated by a door controlled switch. Lights shall operate any time the ignition key is on and the door is opened.		
Lighting (Interior)	Interior lighting shall be LED and provide a minimum of two (2) foot-candles of illumination at reading level. Interior lighting fixtures shall be reasonably flush with the interior walls and ceiling so no hazard exists for passengers. All interior lights shall be grounded by an in-harness ground attached in the fuse panel to a common grounding point.		
Interior Trim and Padding	All interior panel joints shall be covered with matching trim strips or moldings and all sharp edges, protrusions, corners etc. shall be finished in such a manner to prevent possible injury. (If vacuum lamination is used, joints shall be securely bonded and provide a finished appearance). Any exposed wheelchair ramp support brackets, air conditioner units or other similar items shall be padded to prevent injury.		
Heater(s)	An OEM dash air conditioning system plus two (2) rear heaters shall be provided. Sufficient BTU capacity of front and rear under seat heaters shall be provided to attain a 50°F temperature rise from a mean ambient winter temperature of 21°F. A dash mounted (or other approved location) circulating fan shall be provided for increased circulation of heating and defrosting in driver area. Interior temperature shall be uniform throughout passenger compartment area. Shut-off valves shall be provided for shut-off of main and auxiliary heaters. The first valve shall be located below or behind the driver's entry step well. The second valve shall be located downstream of the second heater. Both shall be labeled providing clear indication of the shut-off valve locations to the driver. Passenger compartment heater hoses shall be equipped with full-flow quarter-turn valves located in a protected location. Location of valves shall be indicated with a label stating "Heater Shutoff Valves" and located to be visibly obvious. All heater hoses shall be supported at a maximum of twenty-four (24) inch intervals by clamps.	Manufacturer:	ProAir
		Model #:	435
Air Conditioning	Air conditioning system that shall be designed with sufficient BTU cooling capacity to provide a balanced cooling system capable of maintaining a 75°F inside temperature vs. an outside temperature 95°F and a relative humidity of 50%, with ability to continuously decrease temperature inside vehicle (as measured from the approximate vehicle center) a minimum of 1°F for every ninety (90) seconds. (Air Conditioner Manufacturer's Certification that performance requirement for vehicle type can be met must be submitted with bid).		
Air Conditioning	Air Conditioning shall be designed as two (2) independent systems. One system shall be OEM Chassis supplied, dedicated for cooling and moisture removal from the windshield and drivers area. The second system shall function separate from the OEM dash, with separate controls, engine driven compressor, roof mounted condenser, and passenger cabin evaporator. BTU and CFM capacities (rear system and front system together) considered minimum required are 68,000BTU and 1,600CFM.	Manufacturer:	Trans/Air
		Model #:	TA73
		A/C Capacity /Artifact BDC [C	15K
		A/C Capacity /Artifact BDC	55K
		A/C Airflow /Artifact BDC [Cab CFM]:	400
A/C Airflow /Artifact BDC [Body CFM]:	1480		
Air Conditioning	The cabin evaporator shall include directional and adjustable discharge ports. The evaporator shall be installed so as not to intrude from the rear bulk head under or less than 12" horizontally into the passenger compartment. Any sharp edges and/or exposed metal associated with the AC unit must have these edges/surfaces appropriately padded to provide for passenger head protection. Aisle height requirements will be measured from a point directly in front of the AC unit. Side mounted evaporators are not permitted.		
Air Conditioning	Each air conditioning system shall use R134A refrigerant. All system components subject to corrosion from moisture shall be aluminum, copper, stainless steel, galvanized, or epoxy coated. All exterior exposed air conditioning electrical connections must utilize weather pac plugs or Compatible Equivalent. An air intake screen shall be installed on the skirt of the Transit Bus to ensure sufficient airflow through the skirt mounted condenser coil. All hoses shall be supported at a maximum of twenty-four (24) inch intervals by clamps.		
Safety Vent (three way)	Shall be installed and centered on the roof of the passenger compartment. Vent shall provide for fresh air ventilation, static type exhaust with fresh air ventilation and static type exhaust; and shall be equipped with release handle to provide for emergency exit. Size shall be minimum of 24" x 24".	Make:	Transpec
		Model #:	#T1176-016-101
		Size /Artifact BDC [inches]:	24" x 24"
Driver Seat	Driver's seat shall be high back; fully adjustable (vertically and horizontally with electric or air power seat pedestal); include lumbar support; suspension seating (minimally spring suspension); foam padded; fabric upholstered; w/retractable 3-point lap/shoulder seat belt (in compliance with FMVSS 209 & 210). Seat color shall complement interior seating color.	Manufacturer:	Freedman
		Model #:	Shield Sport
Seating	Upholstered transit type seats for a minimum of fourteen (14) adult passengers. See specifications below and floor plan attached (Figures).		

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Seating	Seat assemblies and components of identical seats shall be mechanically interchangeable.		
Seating	Mid-high back, fixed and 3-step foldaway adult passenger seats shall be supplied in individual passenger modules, Freedman model "GO Seat ES", "GO-ES Seat Space Saver Foldaway", or other Compatible Equivalent. All ambulatory seats shall be forward facing. Seat cushions per passenger shall be a minimum of 17" in width and 17" in depth, and seat back shall be a minimum of 24" in height, excluding the grab handle. All cushions and seat back covers shall have easily removable covers, replaceable without removing the seat from the Transit Bus. All seat cushions shall have identical upholstery and a spring suspension system. Seats shall have a swing-up armrest securely attached to the aisle end of each seat.	Manufacturer:	Freedman
		Model #:	GO ES 3 PT
Seating	Minimum seat widths shall be 17" single and 34" double seats. Aisle width shall be a minimum of 14".	Single Seat Width /Artifact	BDC [inches]: 17"
		Double Seat Width /Artifact	BDC [inches]: 34"
		Minimum Aisle Width /Artifact	16"
Seating	Entire seat frame, except mounting brackets, shall be enclosed in energy absorbing materials. Seat covers shall be transit grade vinyl, 36 oz. per linear yard (Cameo/Predictions), or Compatible Equivalent, or transit grade fabric produced from Marquesa Lana Yarns-Interweave, Regions, or Bus Textil Level 3, or Compatible Equivalent. All cover materials must meet FMVSS 302 flammability requirements. Seat foam must meet ASTM D-3675 Radiant Flammability Test.		
Seating	An approved retractable style integrated 3-point lap and shoulder seat belt shall be provided for each seating space and shall be in compliance with FMVSS 209 & 210. Belt retractors must not interfere with seating space, and two (2) seat belt extensions shall be provided with each Transit Bus.		
Seating	Molded Top Grab handles/grab rails shall be provided on seat backs of all forward facing seats (including flip seats) and shall be mounted/welded to seat frame structure. This does not apply to single seat positioned immediately forward of the wheelchair lift.		
Wheelchair & Wheelchair Occupant Restraints	Two (2) Wheelchair Restraint System (Wheelchair and Wheelchair Occupant) shall be provided and installed and designed for "L" track systems. Occupant restraint system (including lap belt, shoulder belt with height adjustment, floor inserts, retractable wheelchair restraint/tidowns, and restraint mounting hardware) meeting the required 30" wide x 48" long ADA envelope (or amendments thereto) adjacent to lift at rear of Transit Bus and ADA wheelchair space maneuvering clearances (or any amendments thereto). Wheelchair restraint/tie-downs (retractable), lap belt, and shoulder belt with height adjustment shall be in compliance with FMVSS 209 210, shall be forward facing, and shall be a Q-Strait Q-10007 or Sur-Lok AL812S-4C, or Compatible Equivalents. Individual storage pouch shall be provided to completely secure belts/straps on Transit Bus sidewalls when not in use. All items shall be installed in accordance with manufacturer's standards and be in compliance with ADA, SAE Standard J2249, ANSI/RESNA WC-18, and ISO Standard 10542. Instructions on use of the wheelchair restraint system shall be affixed to the Transit Bus interior at a minimum of one (1) restraint position.	Manufacturer:	Q'Strait
		Model #:	Q-10007
Miscellaneous	Provide and install an electronic post-trip interior inspection system that emits an audible tone once the ignition is turned off, requiring the driver to walk to the rear interior bulkhead and depress a button to deactivate.	Manufacturer:	Child Check Mate
		Model #:	EP 1
Miscellaneous	Fire Extinguisher (2.5 lb. U/L or Factory Mutual Laboratories approved), First Aid Kit (10 unit), ICC Reflectors, Fire Blanket (bagged and mounted), and a Seat Belt Cutter shall be provided and shall be in compliance with FMVSS regulations and Title 17 NYCRR Part 720.7(a). Items shall be located in a readily accessible location to the driver (seat belt cutter must be accessible while driver is in belted driver's seat position) in the front entry area of the Transit Bus. Equipment location shall be clearly identified.		
Miscellaneous	Storage compartment with door shall be provided and recessed in the center front cap portion of the Transit Bus or positioned over the driver's area if the front cap portion is not used for destination signage or air conditioner evaporator placement. The compartment must be sealed and must not have any exposed wires, protrusions or sharp edges		
Equipment Warranty	All equipment furnished under this contract (unless otherwise noted) must have a minimum warranty period of one (1) year regardless of mileage.		
Chassis Warranty	Minimum of three (3) years, 36,000 miles	Chassis Warranty /Artifact	BDC [years]: 3 years
		Chassis Warranty /Artifact	BDC [miles]: 36,000
Body Warranty	Covering the integrity of the Transit Bus Body internal steel frame structure (including corrosion damage) and/or fatigue failure for a period of five (5) years or 150,000 miles.	Body Warranty /Artifact	BDC [years]: 5 years
		Body Warranty /Artifact	BDC [miles]: 150,000
Air Conditioning Warranty	The cabin air conditioning system shall be supported by a two (2) year, unlimited mileage warranty. The Chassis OEM air conditioning system coverage falls under the Chassis warranty.	Air Conditioning Warranty /Artifact	3 years
Wheelchair Ramp Warranty	The ramp shall be fully guaranteed by the manufacturer for three (3) years (with no mileage or hour limits) and any in-warranty service required shall be performed without charge to using agency.		

PART 4: Optional Equipment Specifications and Pricing

An Authorized User may choose one (1) or more of the Optional Equipment from the list of below, for the Transit Bus awarded for the Lot. The Contractor shall be required to honor all such requests, provided that adding the requested combination of Optional Equipment results in a Transit Bus that meets the minimum specifications stated in Contract Section 3.2 Transit Bus Requirements. See Section 3.1.3 Optional Equipment Unit Price for pricing information relative to Optional Equipment.

Optional Equipment	Specification	Information provided in Column D	Spec for Equipment Provided	Optional Equipment Unit Price
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Contractor:		Alliance Bus Group Inc.		
LOT F				
Low Floor Cutaway, 17 Passenger [15A/2WC]				
Hybrid System Propulsion	Add a hybrid propulsion system to the Base Item. The hybrid system will be installed downstream of the OEM engine and transmission, conserving energy through regenerative braking, and storing that energy in ultracapacitor(s) or battery(s) for an assist launch. The hybrid system installation and operation shall not void the OEM Chassis warranty. The hybrid system shall provide a minimum 2 year/36,000 mile warranty. Compliant with SAE J2343 and NFPA 52, if applicable.	Hybrid Propulsion System Make and Model #:	XL Fleet Electrification - Model: XL-XLH-GM3500-4500	\$24,800.00
Additional Wheelchair Restraint System	Delete the minimum number of seats required for proper spacing (4 maximum) and price one (1) additional wheelchair station above the quantity required in the Base Item. Price is per position to include all belts, floor/ shoulder hardware, and storage container			-\$500.00
Optional Wheelchair Restraint System	For each wheelchair position in the Base Item, plus additional optional restraint systems, if ordered, install complete "Omni" style floor securements and complete belts kits, Q-Straint Q-10008 or Sur-Lok AL860S-4C-SNC, or Compatible Equivalent.	Manufacturer:	Q'Straint	\$25.00
		Model #:	Q-10008	
Continuous "L" track	Install five (5) lanes of continuous "L" track (four (4) lanes floor mounts, one (1) lane shoulder harness) for a single wheelchair position (48" length each)			\$275.00
Additional Seat (3-Step Fold Away; and Forward Facing)	When not included in the Base Item, provide and install one (1) forward facing fold-away flip seat at a wheelchair station area which shall be a Freedman model "GO ES Space Saver" seat or other Compatible Equivalent. Flip seat may be lowered to accommodate two (2) ambulatory passengers, when not in use as a wheelchair station. Seat shall be of the same type (including grab handles) and color as standard seats measuring (per passenger) a minimum of 17" in width x 17" in depth x 24" in height as measured from the edge of the cushion. Raising/lowering of the seat shall be accomplished manually and shall include a lock to secure the seat in the raised position. Raised seat plus wheelchair shall not block legal aisle. Integrated 3-point lap and shoulder belts shall be provided at each seating location to accommodate an adult ambulatory passenger and shall be in compliance with FMVSS 210. Seats shall have a swing-up armrest securely attached to the aisle end of each seat.			\$1,350.00
Delete four (4) Passenger Seat Option	Reduce Body length and wheelbase as referenced in the floor plan shown in the "Figures" tab for LOT F, "Delete 4 seat option". Remove four (4) passenger seats on the curb side and forward of the rear wheel well and replace with a dedicated wheelchair station. The capacity will be reduced to thirteen (13) adults (11 seats plus 2 wheelchairs), exclusive of ordering optional foldaway seats.	Body Model #:	SOM	-\$3,250.00
		Overall Body Length :	23'	
		Wheelbase:	165"	
Supplemental ADA Transit Package	Provide and install the following items (All items to be in compliance with ADA): Front and side electronic destination signs – LED type (14 rows and 72 columns minimum) and programmable with a USB key, Twin Vision Mobi-Lite or Compatible Equivalent, interior/exterior PA system, pull cord and touch strips chime signal system (at wheelchair positions), two-way radio pre-wire with 30 amp fused circuit, consisting of roof mounted antenna location access, antenna cable conduit with pull cord, and a dedicated circuit with electrical wire terminating in drivers area.			\$5,500.00
Camera Security System- 6 monitor	Provide and install a complete camera recording system, including software kit. Components include an eight (8) channel DVR capable of vertical or horizontal installation, plus simultaneous video recording for all camera heads. DVR shall be "user" programmable to record a minimum of five (5) Transit Bus functions (signals) such as brake lights, turn signal, wheelchair lift, etc. A driver trip feature shall also be included. Camera heads to include a minimum of two (2) exterior heads @ 600 TV lines resolution, with infrared feature and no audio, plus four (4) interior camera heads @ 600 TV lines resolution, with infrared and audio. Install kit shall be universal for one (1) or more Transit Buses with matching camera system. Minimum components include software, mouse, 5-6" monitor (or DVR viewing software), HDD USB docking station, HDD adapter, and BNC F-RCA adapter. A compatible system is acceptable provided all functionality is maintained.	Manufacturer and Model # of DVR:	AngelTrax V12-1200	\$3,980.00
		Manufacturer and Model # of interior camera head:	AngleTrax HD2100V, HD2500V & HD1700V	
		Manufacturer and Model # of exterior camera head:	AngleTrax HD3600V	
Fiberglass Seating	Provide and install FMVSS certified fiberglass transit style seating (4ONE Gemini model, American Seating (Metropolitan and Insight) models, Freedman CitiSeat model or Compatible Equivalent) in lieu of previously specified Base Item seating. Seats shall include a plastic back shell, anti-microbial grab rails, and padded, tough to cut vandal resistant inserts.			\$750.00
Fare Box (Manual)	Provide and install a fare collection system, cDiamond Model NV or Compatible Equivalent model, complete with all floor mounting hardware and spare vault.	Manufacturer and Model #:	Diamond NV	\$1,600.00
Bike Rack	Provide and install a folding device attached to the front of the Transit Bus that is designed and used exclusively for transporting bicycles. The device shall be stainless steel material and may not extend more than 36" from the front Body, and the handlebars of a bicycle transported on such device may not extend more than 42" from the front Body of the Transit Bus. A deployment warning light shall be visible to the driver whenever the bike rack is not in the stowed position.			\$2,750.00
Back Up Camera System	Upgrade the back up radar in Base Item to include a rear view camera.			\$425.00
Spare Tire and Rim	Provide a matching spare tire and rim (shipped loose).			\$375.00
Driver Side Running Board	Install a diamond plate additional step up for driver entry.			\$0.00
Alternate Transit Flooring	In lieu of standard floor covering, supply an alternate floor covering, to be a smooth slip resistant vinyl with aluminum oxide granules throughout the entire thickness of the wear layer with silicon carbide and base color quartz in the surface layer. The floor covering shall be a minimum of 2.7mm thick. The floor covering is to include a bacteriostat to prevent growth of mold and mildew for the life of the product. Term of warranty shall be 15 years.	Brand and Model #:	Altro Storm	\$625.00
		Thickness /Artifact BDC [mm]:	2.7mm	
		Warranty /Artifact BDC [years]:	15 years	

