

City of Deadwood, South Dakota - Trolley Department

Address: City of Deadwood
102 Sherman Street
Deadwood, SD 57732
605-645-8447

Please direct questions to:
tomk@cityofdeadwood.com

BIDDING REQUIREMENTS **Instruction to Bidders**

1.0 Notice for Bids:

The purpose of this specification is to provide for 3 up to 5 2021-22 trolley buses, capable of seating 32 forward-facing ambulatory adult passengers, a driver, a wheelchair lift, and two (2) wheelchair securement stations.

1.1 Vehicle Standards:

The vehicle must meet all applicable Federal Motor Vehicle Safety Standards (FMVSS) and comply with all Federal Requirements of the Americans with Disabilities Act of 1990 (ADA). The vehicle must also comply with Altoona Surface Transportation and Uniform Relocation Assistance Act (STURAA) Test. The complete Altoona test results must be provided at the time of bid opening.

1.2 Receiving and Opening of Bids:

Bids will be received as stated in Advertisements for Bids. Bid closing time is 2:00 p.m. MT **July 29th** 2021 Bids will be opened immediately following this time in Deadwood City Commission Chambers.

1.3 Modifications of Bids:

Oral, telephone, or fax bids or modifications to bids shall not be considered. Prior to submitting bids, and when corresponding by e-mail, it is suggested to ensure through verbal or e-mail confirmation that all correspondence, including pictures, links to websites, written questions, etc., have been received by the City of Deadwood.

1.4 Method of Bidding

Bids are requested for items as described in the Bid Form. Submit bids on the form included in the specifications. Bid submitted on forms other than the one provided shall not be considered.

1.5 Inquiries Regarding Project - Discrepancies or Ambiguities:

All inquiries, request for clarifications, requests for consideration or manufactures not specified and similar questions will be directed to Tom Kruzel. Should a bidder find discrepancies or ambiguities in, or omissions from, the drawings, specifications, or other Contract Documents, or should he/she be in doubt as to their meaning, he/she shall request an interpretation from the City in writing. All inquiries, requests for clarifications, requests for consideration or manufactures not specified must be received by the City seven (7) days prior to bid date and bid hour.

1.6 Examination of Documents:

Prior to submitting a bid, each bidder shall examine all of the bidding requirements, all Bid Documents, all specifications and related documents for the bid, and become thoroughly familiar with the scope of the bid and all factors which will affect his/her bid.

Each bidder shall inform himself/herself of conditions under which items will be furnished and other relevant matters, which will affect the bid or work. Submission of a bid shall be proof that such examination has been made and that bidder was satisfied himself/herself to conditions. No extras will

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be allowed as a result of bidders or vendor's misunderstanding of extent or scope of the bid as a result of his/her failure to make such examinations.

1.7 Preparation of Bid:

Submit bids to City of Deadwood (Trolley Bid) 102 Sherman Street Deadwood SD.57732 in accordance with the following requirements.

- A. Submit bid on the prescribed form, which is furnished with the specifications, with full name and address of bidder.
- B. Completely fill in all blanks on the Bid Form, in ink or type, in figures. All figures must be legible.
- C. For Bid Completion, bidder shall:
 - *State the lease price
 - *Include manufacturer's name and model number.
 - *Include all stipulations of the lease and expected condition of the vehicle when lease 4 year lease has expired.
- D. Submit bids to the designated place on or before the time and date specified. Bids received after this time will not be opened or considered.
- E. Any exceptions to the specifications must be noted on the bid specification sheets and submitted with the bid sheet.
- F. Submit bid in a sealed envelope-bearing (on the outside) name of the bidder, address, and name of the Bid Proposal. If forwarded by U.S. Mail, sealed envelope containing the bid must be enclosed in specifications or other documents.

1.8 Acceptance of Bid - Award of Contract:

The City of Deadwood reserves the right to:

1. Accept the bidder's basic bid only
2. Accept any alternate(s) plus low bid
3. Award bid based on the investigation of bidders
4. Reject all bids

1.9 Pre-Bid Evaluation:

Procedure for Proposed Alternate Bids: The word "product or equal" herein means any material, furnishing, assembly, manufacturer, brand, trade name, element, item, or similar description as applicable. Wherever a product is named in the specifications, the phrase, "or approved equal in the opinion of the City of Deadwood" shall be implied throughout the specification, whether specifically noted or not.

1.10 Warranty Obligation:

Winning bidder shall be responsible for transportation costs for warranty work performed at locations beyond 50 miles of the vehicle's base of operations, at \$.20 per mile. No meals or lodging reimbursement is required. It is fully acceptable if other arrangements can be made and fully agreed upon by winning bidder and purchasing agency. The mileage rate is commensurate with South Dakota's mileage allowance at the lowest rate

The successful bidder shall have a list of the serial/identification numbers, manufacturer's names, phone numbers and warranty information for the following items at the time of delivery:

1. Vendor Name, Contact for Warranty, telephone number
2. Chassis
3. Bus Body
4. Wheelchair Lift
5. Air Conditioning/Heating System
6. Seating (Passenger and Driver)

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The vendor shall provide a copy of the items listed above to the buyer.

1.11 Required Papers:

The successful bidder will provide, at the time of delivery, the necessary paperwork as follows:

1. Verification of Vehicle Identification Number.
2. Odometer Disclosure Statement.
3. Dealer's Bill of Sale for a Motor Vehicle.
4. (Certificate of Origin) for both the chassis manufacturer and body manufacturer so the vehicle can be titles and licensed.

1.12 Payment:

After vehicle has been inspected by Trolley Manager and delivered to leasing agency, the lease will start the day of delivery but only after any and all items that need addressed are completed.

1.13 Verbal Notification to be Given Prior to Delivery of Vehicle:

Bidder shall make verbal notification to leasing agency at least 48 business hours prior to delivery of vehicle.

1.14 Miscellaneous and Technical Specifications for All Vehicles:

1. Unit requested to be new and standard equipment unless otherwise specified. To be dealer prepared and ready to be placed in to service when delivered. To include temporary South Dakota license plate.
2. There shall be no sharp corners that will cause injury to passengers on the unit. All corners that could cause injury to passengers shall be slightly rounded and filed smooth.
3. All material installed shall be new and free of rust.
4. No wires shall be visible on the exterior or interior of the unit.
5. All units shall be thoroughly cleaned and weather-sealed before inspection and delivery. Tests shall be performed to ensure that the unit is dust-proof, watertight, and fume-proof.
6. All holes, not used by manufacturer to install OEM equipment will be covered with a cover or plug matching adjacent colors.

1.15 Vendor to familiarize agency with vehicle and all equipment and features.

At the time of delivery, it is the vendor's responsibility to ensure the lessor is familiar and has working knowledge of all features and can operate all equipment of the vehicle.

1.16 The successful bidder shall have a facility and have a written agreement with facility in Deadwood, South Dakota, or within 100 miles from Deadwood, capable of handling warranty repairs throughout the state.

1.17 Vendor to provide colored photos of the trolley being bid from the interior and exterior of the vehicle. Including, driver's console, passenger area, wheelchair lift, and fold-a-way seats, access to engine compartment on the exterior, windows, passenger entrance door). These photos to be provided at the time of bid opening.

1.18 The vehicle is to be delivered with less than 2,500 miles on it or the vehicle will be rejected during the vehicle inspection. The vendor will provide a receipt verifying that oil and filter has been changed less than 100 miles prior to delivery to the agency.

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1.19 The lease shall be a term of four years and a factory buy back option to be included at the end of the lease. However the city reserves the right to purchase the leased unit and that purchase price needs to be included in the Bid.

1.20 The required delivery date of the units will be January 15 2022.

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2.0 Chassis:

23,000 pounds GVWR minimum F53 Ford chassis or equal.

2.1 Frame:

The frame to be constructed out of 9"x2-3/4"x5/16" steel non-welded channel with riveted cross-members. Material shall be 50,000-psi minimum yield and 64,000-psi minimum tensile strength per A370 test methods. The chassis frame will be treated with primer and coated with industrial black gloss enamel.

2.2 Wheelbase:

176" minimum and 190" maximum wheelbase must be specified on Bid Form.

2.3 Rear Axle and Differential:

Truck-type, single rear axle with dual rear wheels and gear ratio to meet grad ability. The coaches must be capable of stopping on a 13% grade with a full load and then starting up again proceeding up the grade without overworking any part of the running train. Grad ability requirements shall be met on grades with a surface friction coefficient of 0.3 and above at SLW with all accessories operating.

2.4 Springs and Shock Absorbers:

The front and rear suspensions shall have a ground load rating equal to or exceeding the GVWR of the vehicle. Helper spring(s) if required, shall be installed on the lift side of the vehicle to keep the buss level when fully occupied. The front and rear springs shall have a tapered, multi-leaf, single-stage constant rate. This vehicle will also be equipped with a MOR/ryd "RL" suspension system or equal.

Shock absorbers on each chassis shall be equipped with front and rear, heavy-duty; double acting 1.63" minimum, hydraulic shock absorbers, the highest rating available.

2.5 Engine:

Engine shall be 6.8 Liter V-10 minimum with electronic fuel injection or equivalent.

The engine shall be located at the front of the vehicle and shall meet all applicable Federal and State emission standards. Shall have a replaceable pleated paper element type air cleaner. Oil filter easily reached without removal of any major component with a one-quart capacity and an internal bypass valve. The engine oil pan will be equipped with a hex head magnetic drain plug. Shall include factory oil filler extension neck. The engine compartment shall be completely sealed to prevent smoke and odors from entering the interior of the coach. The factory installed alternator, water pump, and one 10-cubic inch air conditioning compressor will be driven off the fan pulley. The engine will have an electronic protection system. The electronic integral warning and de-rate protection system shall be supplied. The system shall activate in the event of low oil pressure or high cooling temperature. The air cleaner shall be a single stage dry type with a high-grade waterproof cellulose filter element. The 10-micron filter element and housing shall be disposable. The air cleaner will pass through a 4-inch minimum diameter tube. The chassis exhaust system will use a 3-inch aluminized steel exhaust. The system will meet all Federal and State regulations. The engine and transmission that is to be proposed should be able to allow the bus to maintain a speed of 44 miles per hour on a 2.5% grade.

2.6 Transmission

Automatic with overdrive minimum, cooled by an external "transmission oil cooler" with capacity to match GVWR of vehicle and filler extension neck for adding fluid. The transmission area will be lined with a sound and heat barrier material to prevent any transmission noise to the interior of the coach.

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2.7 Driver Shaft:

Shall be guarded to prevent it from striking the floor or the ground in the event of a tube or universal failure.

The bus must be able to obtain a speed of 55 mph from a standing start at 65 seconds, on level ground at sea level under the following conditions. Having the equivalent weight on board equal to a full-seated load plus three standees based upon a weight of 150 pounds per person. All tanks shall be full; and all accessory equipment operating, including the air conditioning system.

2.8 Acceleration:

The vendor will provide the bus with performance charts showing the acceleration of the bus with the engine the vendor is proposing. Jerk, the rate of change of acceleration, shall be minimized throughout the acceleration and deceleration range and shall be no greater than 0.3g/second. This requirement shall be achieved regardless of driver actions.

2.9 Brakes:

Dual hydraulic power assisted system with disc-type brakes on front and back. A hand or foot operated parking brake shall be supplied with a warning light on dashboard. The parking brake will be a driving drum brake. The brakes will also have a 4-wheel anti-braking system and also a **Telma Braking system.**

2.10 Wheels and Tires:

Wheel and tire size and rating must be of sufficient size and strength to meet GVWR rating of chassis. Tires to be steel-belted, all season steer tires and traction tires for real duals. The tire size that will be used on the trolley is 245/70R 19.5 on the BM-55 chassis load rating of "F." The steer tires can be used are Goodyear G159LT with a load rating of "F" or equal tire brand can be used. The drive tires that can be used are Goodyear G124LT with a load rating of "G" or equal tire brand can be used. All tires will be the same size. The vehicle will also have a spare wheel and tire; the wheel must be painted Black. **All wheels must be Bright polished aluminum or stainless steel simulators** the vendor will supply a complete set of wheel chocks. The spare tire and wheel will be mounted and stored loose inside the vehicle. Spare tire will be a steer tire.

2.11 Steering:

The vehicle will be equipped with OEM power-assisted steering with tilt steering and cruise control.

2.12 Radiator/Coolant System:

Heaviest-duty extra cooling capacity radiator, water pump, and clutch-type fan. Cooling system to be winterized for 40 degrees below zero Fahrenheit.

2.13 Battery:

Two heavy-duty with reserve capacity of 160 minutes with a total of 750 CCA battery minimum to be stowed in a slide compartment outside of the vehicle, battery compartment must be blocked from the bottom and side and also have lockable door and must also have a sliding tray for batteries. This compartment must not diminish or take away from the appearance of the trolley. No battery to be mounted underneath the hood.

2.14 Alternator:

Heavy-duty alternator or approved equal, 200 amps, 12-volt minimum.

2.15 Electrical:

The electrical system shall be a 12-volt system. A wiring diagram must be submitted that will match the vehicle wiring. All switches and wiring circuits shall be protected with either fuses or circuit

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breakers. All circuit breakers and fuses shall be labeled for identification. The electrical compartment will be located on the street side and be accessible from the exterior of the coach and must be weather proofed to keep out the elements of weather or flip-up dash panel will be allowed for easy access to all fuses and circuit breakers from the driver's compartment. The compartment door shall be weather tight and lockable. The fuse panel shall be located in the electrical compartment.

2.16 Exterior Lighting:

All exterior lighting will be in compliance with Motor Carrier Safety Regulations and FMVSS. Headlights will be single-high/low, round assemblies with brass plated beauty rings. Clearance lights will be installed on the front and rear roof caps and also one clearance light will be installed on curb and street side of the vehicle on the roof. Front directional lights will be mounted above the bumper. Side directional lights will be provided on the trolley and will have a brass plated armored guards. The rear stop and tail and directional lights will be mounted above the rear bumper. A red light will be mounted in the rear of the bus in the center and be attached to the brake system only. All exterior lighting will be LED Truck Light; the only lights that will be standard lights are the clear lights (back up, entrance lights, headlights, and wheelchair lift door).

2.17 Exterior Streetcar Headlight:

A functioning authentic vintage design single headlight assembly shall be mounted in the center of the front grille. The headlight shall be a minimum of 8" in diameter with standoff design. The headlight shall be made of plated polished brass.

2.18 Interior Lighting:

The interior lights shall consist of 4-40 watt minimum globe style lights with brass bases, The dome lights will be installed along the center aisle evenly spaced along the cupola ceiling to provide lighting for safe passenger movement. The lighting will be activated by the main switch in the driver console or when the entrance door is opened. Dome lights shall be shatter proof plastic. Step-well driver and engine compartment lights will be specifically designed for each use and function.

2.19 Gauges:

Vehicle shall be equipped with the following needle-type gauges:
Amp meter or voltmeter, water temperature, oil pressure, fuel gauge, transmission pressure speedometer and odometer, **engine hour meter**, brake malfunction indicator.

2.20 Fuel Tank:

Minimum of 75 US Gallons, full at time of delivery. Prefer a center mounted gas tank between frame rails; to also **be a floor access panel inside the vehicle to the fuel pump.**

2.21 Horn:

Standard chassis dual horn, and a reproduction of the original brass streetcar bell manufactured in the 1800's shall be installed on the exterior front portion of the roof and is to be rung by the driver through a switch mounted on the drivers console. The bell shall be a solid brass bell a minimum of 10" in diameter.

2.22 Hood:

There shall be an entry to the engine compartment from inside by the driver's station and also shall be an entry to the engine compartment from outside the vehicle. The engine cover should be insulated with a foil back reflective sound insulation by Blachford or equal.

2.23 Undercoating:

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The entire underside of the body, which includes the floor members, the side panels below floor level and the fender wells, shall be undercoated at the time of manufacture, with a nonflammable resin type polyoleim or equivalent. Any equivalent undercoating must comply with MIL-C-2218A or MIL-C-0083933.

2.24 Radio:

AM/FM Bluetooth with speakers for passenger and driver area must have a digital tuner and clock. The system shall have an interior PA system. The driver should have easy access to the PA system.

2.25 Block Heater:

Minimum 800 watt, with easily accessible cord that is secured to the outside of the vehicle.

2.26 Wipers:

Three two-speed switches with delay feature, heavy-duty electric windshield wipers controlled by separate switches shall be furnished. Motors can be mounted in either bottom or top of the windshield and provisions made for ease of inspections, maintenance and removal. All controls to be within easy reach of the driver.

2.27 Back-up Alarm:

Connected with back-up lights to produce an intermittent sound to warn others when vehicle's transmission is shifted in to reverse and vehicle movement is backwards.

2.28 Exhaust:

To exit behind the street side duals or out the rear. Exhaust system must be constructed of aluminized or stainless steel piping if other than manufacturer installed system.

2.29 Construction:

Body assembly framing shall be electric mig welded and reinforced at all stress points. Body when assembled to the chassis shall be an integrated total assembly. AU frame members shall be steel tubing, structural channel, or I-beam.

The cross-members consist of 1"x3" I-beam on 22 centers, welded to fabricated steel plate mounting brackets. Floor framing will interlock with the sidewalls to form an integral structure and will transmit body loads to the floor and chassis assembly.

The steel subfloor is welded to longitudinally run-sills, constructed of 7-gauge steel, formed in 1"x4" channels. The sills are bolted in to the frame rail support brackets. These support brackets are constructed of 5/16" steel angle. Full body and passenger loads shall be transmitted to the main chassis rails through outrigger supports bolted to the web of the chassis rails with 1/2" grade 8 bolts.

Skirt panels constructed of 18-galvaneal sheet or .60" aluminum sheathing and extending from the top of the floor to the bottom of the coach body, shall be installed sections using rivets.

Front and rear, and road and curbside walls shall be designed using rectangular or square tubing, steel as needed for proper structural strength.

Roof framing shall be made of rectangular tubing, Z and C channel steel and formed in to hat sections designed to transmit loads to the walls. Roof design shall depict the curvature and lantern designs of the 1800s streetcar. The lantern section roof shall have a minimum overhang of 4" on the front. Lantern type roof will be fabricated with clear glass windows with steel basic framing insulated and covered with minimum fiberglass.

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A replica trolley pole is to be placed on the street side and curb side of the vehicle above the passenger seats running the length of the vehicle from the first passenger seat to the front of the wheelchair securement area (also mentioned in grab rails and stanchions).

Body and understructure shall be of durable construction, adequately reinforced at all joints and points where stress concentration may occur so that the vehicle will carry the required loads and properly withstand road shock. The under frame shall be stiff enough to prevent floor from flexing under normal loads. Material used in body and chassis shall be high quality, consistent with good body and chassis building practice.

2.30 Wheelwell Housing and Stepwell:

Front and rear wheel housings will be constructed of 14 gauge stainless steel, attached to the floor structure and coated with a minimum of 1/8" undercoating. Front stepwell assemblies shall be constructed of stainless steel unless provided differently by the step lift manufacturer.

2.31 Floor:

The floor will be a flat floor which means eliminating the wheel wells and must have a 3/4" marine-grade plywood floor shall be secured to the galvanized steel floor using 1/4"-20 counter-sunk self-tapping screws or the plywood can be bolted with a minimum of 6 bolts per cross member. Entire floor shall be sanded so no seams are visible.

The floor shall be constructed level, and shall be constructed in such a manner that there will be no passenger hazards, water hazards, or pockets which would endanger passenger safety. When the floor meets the walls of the trolley, the surface edges shall be blended with a circular section of radius not less than 1/4", and molding or cove shall prevent debris accumulation between the floor and wheel housings. The floor, as assembled, including the sealer, attachments, and covering, shall be waterproof, resistant to wet and dry rot, resistant to mold growth, and impervious to insects. Plywood, if used, shall be no less than 3/4" thick American Plywood Association, marine grade, A-B special, and shall be installed with the A side up and all edges sealed. Floor shall be laid in a manner as to be free from squeaks. Plywood shall be bolted or screwed securely through cross sills, and treated to resist decomposition.

Floor covering shall be RCA Transit Floor, ribbed 3/16" thick or equivalent on step treads and fare-box area, and also the wheelchair securement stations will also have a ribbed flooring or Altro flooring will also be accepted. Ribbed flooring is required by ADA in wheelchair and aisle areas 3/16" ribbed in aisle and 1/8" smooth under driver and passenger seats throughout remainder of the trolley. Yellow step nosing to be furnished. A yellow safety line shall be installed in aisle to rear of driver. Aluminum trim molding shall be provided for driver's area. All joints in floor covering shall be butt-cut joint type, properly sealed and ribs shall be properly aligned to prevent gaps or edges and to facility cleaning. The color of the floor shall be gray. The flooring must meet FTA and ADA standards and the vendor must show proof at time of bid with written documentation.

2.32 Step Treads and Stepwells:

Front step assemblies shall be covered with 3/16" ribbed black step treads with integral white or yellow edging. If a step lift is installed in the front door, all step treads shall be as provided by the manufacturer of the step lift.

Front step height from the ground (no load) shall be 12 inches (12") maximum. Individual risers shall be 10 inches (10") maximum in height and in case of more than one riser; all shall be the same height. Step tread depth to be 8.5 inches (8.5") minimum.

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The stepwell shall be modular design twelve (12) gauge stainless steel or Galvaneal smoothly and continuously welded into OEM structure. Step well shall be adequately reinforced to prevent noticeable deflection when either step is loaded over the center half with 300-pound static load.

Step edges shall be standard molded in yellow or white RCA flooring or approved equal, step edge ribbed.

Stepwell shall be completely enclosed and weather tight when passenger door is in the closed position.

2.33 Panels Sections Exterior:

The front wall will have an angled configuration and will incorporate headlight assemblies and two (2) individual windshield glass pieces. The three sections of the front cap will be constructed with the same angled configuration as the front of the coach. The rear section of the trolley is constructed similar to that of the sidewall.

The front grille will incorporate a perforated steel with a 3/4" open diamond pattern. The grille will be painted gloss industrial black. The grille will be an integral part of the center access door.

Roof panels shall be .050" anodized aluminum or 18-gauge steel or of a one-piece 3/16" thick molded fiberglass cap, secured to the steel roof framework. The roof shall be designed in a curvature depicting the original lantern roof designs of the late 1800 streetcars. The front and rear roof caps will be incorporated in to the entire roof cap assembly and will form a contoured curvature from side to side and front to back. Rain gutters will be provided to prevent water flowing from the roof on to the passenger doors. When the vehicle is decelerated, the gutters shall not drain onto the windshield, driver's side window or onto the passenger boarding areas. The front grille will incorporate a perforated steel or aluminum with 3/4" open diamond pattern. The grille will be painted gloss industrial black. The grille will be an integral part of the center access door.

2.34 Insulation and Undercoating:

The entire roof, including the lantern section, shall be totally insulated using polyurethane foam in place thermal insulation applied 1.5" nominal thickness to the interior surface of the exterior roof panels. 1/4" astrofoil with R-7.3 insulating value.

The entire underside of the coach body, wheel well housings, stepwells, passenger and driver's areas shall be sealed with an application of minimum 1/8" thick, undercoating prior to installation on the chassis.

2.35 Panels, Sections (Interior):

All interior side panels, including front and rear bulkheads and ceiling shall be paneled with .125 oak veneer panels. All perimeter edges of the ceiling are also to be trimmed with oak trim moldings.

Panels are to be thoroughly cleaned and coated finish with clear polyurethane or a two-part epoxy.

Panel sections below the windows will be .125 oak veneer panels, or tongue and groove paneling.

All wood trim will be solid grade oak, and will be attached with appropriate fasteners and will not support structural loads.

2.36 Rub Rails:

The body shall have at least two rub rails, one rub rail will be at the floor line the other rub rail will be installed below the window frames. The third rub rail will be mounted at the bottom of the skirt panels on the vehicle for protection this rub rail will be made of steel, will be 2" by 1.5", and will be painted black. There will be a minimum of two (2) advertising panels on the curb and street side of the vehicle. The size will be 24" by 40" with panels and frames made out of aluminum.

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2.37 Bumpers:

Rear bumper shall be 6" high and will have an angled configuration to match the shape of the rear cap. The rear bumper will not interfere with the operation of the wheelchair lift when loading and unloading passengers. The front bumper will have the cowcatcher style bumper. (Attachment #2)

2.38 Windows and Windshield:

The passenger compartment windows on the street and curbside shall be standard design windows with round top vintage appearance. Windows shall be designed with vertical bottom sliders. The lower portion of the window shall slide vertically upward and be retained in the open/closed position by mechanical latches. Windows shall be glazed with 1/8" tempered safety glass. The front windows on the street side and curbside shall be single density safety glass in fixed, non-openable frames. The window directly adjacent to the driver will be standard design with a bottom T-slider. The glazing material used for driver's windows shall be 1/8" tempered safety glass and should meet the FMVSS. All window frames will be of aluminum extrusions and assembled with the highest quality hardware. The windows will be glazed with safety glass and free of distortions. Side and rear windows will be cushioned with vinyl channels. All windows will have drain holes and weather seals. All windows will meet FMVSS. Streetcar windshield will be in three (3) pieces, glazed with 1/4" laminated single-density safety glass. Each windshield will be set in rubber lace-sealed weather-strip. Windshield shall meet FMVSS.

There will be two emergency exit windows installed on the street side of the vehicle and one on the curbside of the vehicle. The center window in the rear of the trolley will also be an emergency exit. All emergency exits will be marked with a sign and instructions for use. The cupola (lantern) section of the roof shall be glazed with fixed light window assemblies in black aluminum frames (camp style). These windows shall be tinted and have simulated etching appliques'. All windows shall have a 31% tint and shall meet all FMVSS. **A minimum of three windows on each side must be removable and clear curtains supplied to roll up or down as needed.**

2.39 Sun Visors:

Adjustable sun visors will be provided for the driver's side of the vehicle on the street side and then also for the windshields. Visors shall be made of a tinted acrylic material.

2.40 Entrance and Exit Door:

The front entrance door shall consist of a two piece electric operated bi-fold outward door assembly. The door will fold outward providing a minimum clear opening of 32". The double out entry door is constructed of welded tubular steel. The doors will be skinned with .063" aluminum or 20 gauge Galvaneal. The interior panels of the door will be skinned with woodgrain Formica. Each door panel will contain two (2) tempered safety glass windows on the top and bottom.

The door shall be operated by a heavy-duty momentary type switch located on the driver's control panel. The door operator assembly is to be installed in a sealed compartment over the door panels. The leading edge of each door panel shall be protected by an extruded rubber safety edge. A clearly marked red safety release lever shall be provided to disengage the door actuator in case of emergency.

There will be a vandal lock system installed for passenger entrance door. It will be operated with a toggle switch that will be mounted under the passenger side headlight. There shall be on the (rear) of the bus on the curbside of the vehicle, a wheelchair lift door to be provided. Minimum door heights to be measured from door jamb to floor directly below. Minimum door heights will be in compliance with Federal ADA Regulations. There will be a window(s) in lift door, to be smoked as are all other transit windows in the vehicle.

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2.41 Paint:

Contact Tom Kruzel of the City of Deadwood for paint colors (605)578-2622. There is a minimum of two paint colors that will be included on the bid price.

2.42 Wheelchair Lift:

The wheelchair lift will be installed on the curbside of the vehicle in the rear of the vehicle, behind the wheel wells. The securement stations will be located in the rear of the coach and there will be two wheelchair stations.

The wheelchair lift shall be electro-mechanical or electro-hydraulically powered with a minimum tested load capacity of 800 pounds and shall be totally self-contained. Braun Modal L917 or equal. The pressure should be adjusted to 2500 psi so wheelchair lift is able to operate at 700 to 750 lbs. lifting capacity.

The wheelchair lift must be of heavy-duty frame design concealing all elements of power drive. All sliding surfaces and load bearing surfaces must be constructed with sealed roller or sleeve bearing with adequate protection to prevent exposed greasy surface

The wheelchair lifting device, electro-mechanical or electro-hydraulic powered unit must operate in both up and down modes. Any failure of the drive mechanism shall cause the lift to fail in the fail-safe mode. The power unit shall be 12 Volt electric motor operated and a minimum of 1 HP of electrical power, 2 HP for intermittent operation. The drive motor and the worm gear driven connection must contribute toward a condition which will prevent any slippage, creepage, or would prevent the platform from overhauling. In the event of a power failure, the lift platform shall be able to manually or electrically be lowered with passenger or raised without passenger. The electric motor shall be solenoid operated and controlled by either a hand-held switch on a pigtail or station operated at any location of the vehicle. All switches outside the vehicle shall be weatherproof protection covered. Switches on the outside of the vehicle shall be protected, covered, and labeled as to function.

The drive mechanism must have a positive up stop that can be overridden without causing damage to vehicle or lift, and must have a fail-safe release which is capable of releasing the drive mechanism upon striking the ground or an object. Chain driven, cable driven or equipment solely dependent upon limit switches for stopping in the up or down position are acceptable. This will prevent the damage to the lift of the vehicle.

The lift platform shall have a non-slip reinforced floor, capable of carrying small or balloon tire wheelchair. The platform shall have a minimum size of 32" inches wide by 48" inches long, including the front ramp safety guard. The platform shall have a double activated safety guard system to facilitate loading and unloading and prevent roll-off while lift is in use. Platform should fold up easily and lock for storage inside the vehicle when not in use. In the stored position, platform must have easy visibility when in direct line of sight through window. When in its stored position, it should not rattle when driven over normal paved highways. Platform shall be equipped with handrails on both sides in compliance with Federal ADA Regulations.

Platform must have the capability to be manually released without wrenches in case of failure of the automatic store assembly. The lift shall be capable of operating in a temperature range of -30 and +110 F. The lift shall be installed so as to allow easy removal of the lift and shall be readily accessible for repair and maintenance.

Lift controls shall provide appropriate mechanisms to ensure that the vehicle cannot be moved when the lift is not stowed and so the lift cannot be deployed unless the interlock is engaged. Installation of the wheelchair lift shall not require vehicle alterations that diminish or change the structural integrity of the vehicle.

A complete operator's and service manual and a replacement parts list shall be provided with each lift unit. The manual shall have detailed section covering warranty, installation procedures, operating procedures, service and maintenance procedures and a trouble shooting guide.

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Restraints for two (2) wheelchairs. Restraints to be adjustable to accommodate all wheelchair types. Wheelchair restraint track must be Sure-Lok "L" Fitting Series or equal and must be mounted flush with floor running full length from curbside to street side of the coach for the two rear wheelchair stations. The shoulder harness and lap belt to meet ADA. The third wheelchair station will be on the street side of the vehicle in front the two rear wheelchair stations and the track will run from the street side to the aisle in the front and the rear track will be the same as the track that will be used by the two rear wheelchair stations. There will also be a shoulder and lap belt for the third wheelchair station and must meet the FMVSS and ADA standards. Three (3) sets of Retractable wheelchair restraints must be Sure-Lok Retractor Model FF612S-4C or equal. The restraint shall be of sufficient strength to retain an occupied wheelchair load of 5,000 pounds under crash conditions. Certified seat belts and shoulder harness shall be provided for the wheelchair occupants.

2.44 Driver's Console:

The driver's console shall be designed for safety and ease of driver operation. The console and dash panel will be constructed with plastic faceplates. The dash console and driver control center shall have a complete complement of instrumentation and controls. Consoles to contain:

Speedometer	Transmission temperature
Odometer	Tachometer
Voltmeter	High beam and directional light indication
Fuel Gauge	
Warning lights and buzzers	
Indicating hot engine	
Low engine oil	

The left hand driver's control center shall contain controls for air conditioning, dome lights, entry door, floor heaters, driver light, venter light and electrical panel light, windshield wiper controls, and interior dome lights.

2.45 Mirrors:

The trolley shall be equipped with two (2) 7" x 16" rear view mirrors, one mounted to the left corner and other on the right front corner post. The mirrors shall be finished in black. The mirror arms shall be retractable to prevent damage by drive through bus washer brushes. Adjustable arms shall be of adequate length to provide rearward vision. Right front mirror shall be mounted to prevent contact with pedestrians or boarding passengers. Both mirrors shall be equipped with a wide-angle lower mirror. The mirrors will be electrical and will be able to adjust from the driver's seat A 7" X 10" rectangular convex mirror shall be mounted inside the front header and be fully adjustable to view the passenger compartment from the driver's seat. The mirrors also need to be heated.

2.46 Fans: A minimum of two defroster fans mounted in the front corners of the trolley and must be controlled by a switch on the drivers console.

2.47 Heating and Ventilation System:

High output front heater plus two (2) auxiliary heaters located in the passenger section of the bus, auxiliary heaters must be blow-down style. Minimum 100,000 BTUs for interior of bus. NOTE: If heater lines are installed on exterior of body, they must be insulated.

There will also be a booster pump for the heater system. The booster pump will be easily accessible from either inside the vehicle or outside the vehicle and must be protected from being damaged.

2.48 Air Conditioning:

Air conditioning system for the driver area is required, the system needs to be minimum 12000 BTU and will run off of an engine mounted compressor

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Components of the air conditioning system shall be readily accessible for maintenance. All hoses shall be refrigerant type. Refrigerant fitting shall be ATCO. Hoses and fitting are qualified to SAE specifications J2064.

When the vehicle is shut-off the heating and air conditioning system shall be automatically shut off.

2.49 Passenger seating and Driver's Seat:

All passenger seats will be of vintage design and the seats will be 34" in width. Passenger seats will be contoured using cast aluminum seat ends with molded design scrollwork. Seat slats will be 3/4" inch oak fastened to the seat frames using 1/4" brass flathead carriage bolts. Seat slats will be installed so that each slat interfaces with 3/4" a top shelf slat is provided. All seating shall be secured in a 1-5/8" wind "uni-strut" channel seat track. The two back seats of the coach will be up seats (seat bottoms). The next two seats on the street side will be fold-a-way seats this will allow one more wheelchair station for the trolley. This will make a total number of 2 wheelchair stations in the trolley. **The Passenger seating shall have armrests on the aisle side of the seat.**

A "C.E. White" model ISR-1000 mechanical suspension driver's seat or equal will be provided. Seat shall include up and down, forward and back and seat tilt adjustments. The driver's seat shall include an integral shoulder harness. One padded armrest will be provided for the driver's seat on the right hand side of the seat.

2.50 Grab Rails and Stanchions with Modesty Panels:

All grab rails and stanchions will be 1-1/2 inch in O.D. X .050" polished brass tubing. Overhead grab rails on both street and curb side of the vehicle will be provided suspended from the inner edge of the cupola roof section. Grab rail brackets will be polished cast brass. Authentic tooled vintage leather grab straps of the loop design shall be installed around the overhead grab rails located on between each grab rail mounting bracket, which will provide additional assistance for standee passengers. Modesty panels will be constructed from aluminum sheet metal and will be installed in front of the first seat located directly behind the entrance door and directly behind the driver. The panels will be finished in oak veneer and will have no sharp corners the modesty panel located behind the driver's seat will have a 36-inch clear plastic panel that is shatter proof (lexan or equal) this modesty panel will be mounted one inch from the finished oak veneer panel.

2.51 Safety and Other Equipment:

20-passenger unit first aid kit

5-pound rechargeable type ABC rated fire extinguisher with metal head

Triangle warning devices

Heavy-duty tow hooks (two) each front and rear bolted not welded

Body Fluid Clean up kit. Must meet OSHA standards.

There will be a Main Fare (Treasury Style) box installed within reach from the driver's seat (Contact Tom Kruzel 1-605-645-8447 for placement of fare box)

Driver's storage compartment must be lockable

Vehicle should have all decals to meet ADA requirements.

Mud flaps for front and rear tires.

Pro vision Video security surveillance system 4 cameras also to include GPS tracking capability.

Prewire and run radio antenna for two way radio, customer to provide antenna and cable.

Pre wire the trolley for video screen with cable to area where screen will be mounted and where also to area where the camera system is installed. Contact Tom Kruzel 1-605-645-8447 for location of equipment.

Priority Seating Signage & Wheelchair location Signage:

The vehicle shall have three decals showing that the vehicle is wheelchair accessible {one on the right corner of the hood that is 4"x4" and the next on the drivers front fender right below the

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windshield that is 4"x4", and the last one will be a 12"x12" and placed on one of the wheelchair doors.

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3.0 Information to be furnished with vehicle at time of delivery:

Drawing showing wiring schematics of auxiliary circuits.

Copy of manufacturer's statement of origin for chassis, body and all other information needed to title the vehicle in the State of South Dakota. Shall be given to South Dakota DOT at time of vehicle delivery. A repair and parts manual for body, and auxiliary equipment with each vehicle. Owner's manual is not adequate.

Maintenance and inspection schedule incorporating the required maintenance and inspection schedule of the basic vehicle and its sub-system (i.e., wheelchair lift, air conditioning).

Operator's manual for vehicle and all add-on equipment

Warranty papers for chassis, body, and additional equipment. Also a list of dealerships authorized to do the warranty work in South Dakota.

MISCELLANEOUS AND TECHNICAL SPECIFICATIONS FOR ALL VEHICLES:

Inspections:

Vehicles shall be thoroughly inspected during construction and /or upon completion to ensure that all equipment is installed and operating properly.

In Line Changes shall be approved in writing by the Purchaser.

Unit requested to be new and standard equipment unless otherwise specified. To be dealer prepared and ready to be placed into service when delivered. To include current South Dakota temporary license plate.

There shall be no sharp comers that will cause injury to passengers on the unit. All comers that could cause injury to passengers shall be slightly rounded and filed smooth.

All material installed shall be new and free of rust.

No wires shall be visible on the exterior or interior of the unit.

All units shall be thoroughly cleaned and weather sealed before inspection and delivery. Tests shall be performed to ensure that the unit is dust proof, watertight, and fume proof.

All signs may be painted or vinyl decals.

3.1 Pre-award and post-delivery audits of rolling stock are required and must be completed by representative of the City of Deadwood.

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Bid Form

Bid Price: 32 passenger trolley with 2 wheelchair positions
Rear wheelchair lift
Price per Unit

FOB Rate to: Deadwood, South Dakota

End of lease purchase price

Firm: _____

Name: _____

Address: _____

City, State: _____

Phone: _____

Authorized Signature: _____