



City of Cheyenne - Purchasing
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ADDENDUM NUMBER ONE BID E-28-21

To: All Prospective Bidders and all others concerned

From: City of Cheyenne, Purchasing Manager, TJ Barttelbort

Date: May 17, 2021

Subject: Addendum Number One to Bid E-28-21 for furnishing Three (3) New 2021-2022 Cab & Chassis (Low Cab Forward/Cabover) With 40-Yard Front Loader Refuse Collection Body Installed, for the City of Cheyenne, Sanitation Division

The changes, clarifications, omissions, additions, and/or alterations in, on, and to the bid information and specifications shall apply to the Invitation For Bid submitted for and to the project indicated above. Except as modified by this Addendum Number One, all of the terms and provisions of the Invitation for Bid for the above listed project remain in full force and effect. This Addendum Number One supersedes all previous instructions pertaining to the items listed:

SPECIFICATIONS:

Updated Specifications are included with this Addendum One, for use by bidders.

Additions and Clarifications will be made in **BOLD & UNDERLINED**, deletions will be made in **RED & STRIKETHROUGH**.

Bidders shall utilize the specifications from the most recently issued Addendum for their Bid submission. When the City conducts a review of the submitted bids, the last issued Bid Specifications (whether from the Original Bid, or from subsequent Addenda) are the **ONLY** specifications the City will review. Bidders are instructed to ensure that their final marked Bid Line Item Specification submission is from the last issued Addendum.

ADDITIONAL BID ITEMS:

The Bid Price Sheet has been updated to include a pricing options for Remote Diagnostics. These costs shall not be included in the Bid Guarantee.

UPDATE TO DELIVERY / FLEET MIND INSTALLATION

In order to facilitate review and acceptance of the equipment awarded under this Bid, the City will allow for a two (2) phase delivery. The Delivery Time Frame shall be provided by the vendor, for the time it takes to complete and deliver all items, with the exception of the Fleet Mind System.

The City shall perform their inspection of the equipment, and shall annotate any deficiencies. Upon correction of any outstanding items, the City will consider as complete the delivery of the equipment and will stop counting liquidated damages days (if occurring).

The City will then grant a forty-five (45) calendar day period, to allow for the ordering and installation of the Fleet Mind System. If at the end of the forty-five (45) calendar day period, the Fleet Mind System is not fully installed and operational, the City will begin reassessing liquidated damages. If the vendor did not use all of the time listed in their original delivery time frame, those days may be used after the forty-five (45) day period, prior to the assessment of liquidated damages.

(i.e. If a vendor stated a 90 Day Delivery Time Frame, and the truck is accepted and delivered on day 80, the vendor can use the remaining 10 Days, to add on to their 45 Day Fleet Mind Installation Window, for a total of 55 Days to complete the Fleet Mind Installation).

The City is willing to pay for the equipment upon acceptance and signing for the equipment, but the vendor will still be liable for any Liquidated Damages which may thereafter become due pending the completion of the Fleet Mind Installation. The City will withhold Five (5%) Percent of the total amount due at the time of acceptance from the City. The City will release/pay the remaining Five (5%) Percent of the amount owed at the time the Fleet Mind Installation is completed.

ADDENDUM ONE ACKNOWLEDGED:

BY _____ TITLE _____

(Addendum **must** be signed and returned with bid or receipt of the addendum **must** be acknowledged on the Invitation to Bid).

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2021-2022 CAB & CHASSIS (LOW CAB FORWARD/CABOVER) WITH 40-YARD FRONT LOADER REFUSE COLLECTION BODY INSTALLED

Bidder to specify Make/Model/Year of Cab & Chassis

Bidder to specify Make/Model/Year of Collection Body

(Cost/Each) \$ _____

(Total Qty/3) \$ _____

Please state delivery time frame: _____ # DAYS ARO (After Receipt of Order)

The delivery time stated above will be used in the calculation of Liquidated Damages, if delivery exceeds the Number of Days ARO listed above

TRADE IN OPTIONS

Trade-In Option (Block #5909): (See paragraph 4 in the General Provisions) \$ _____

Trade-In: 2015 Peterbilt 320 / Front Load Garbage Truck

VIN #3BPZLJ0X1FF295637

City Block #5909

Mileage: 70,559 *Unit Is In Service (Mileage May Change)*

Trade-In Option (Block #5910): (See paragraph 4 in the General Provisions) \$ _____

Trade-In: 2015 Peterbilt 320 / Front Load Garbage Truck

VIN # 3BPZLJ0XXFF295636

City Block #5910

Mileage: 83,727 *Unit Is In Service (Mileage May Change)*

Trade-In Option (Block #5764): (See paragraph 4 in the General Provisions) \$ _____

Trade-In: 2009 Sterling LT7500 Rear Load Packer

VIN # 2FZHAT65X9AAE1173

City Block #5764

Mileage: 115,697 *(Not In Service) Failed Walking Beam Rear Suspension. Is drivable, but needs to be rebuilt.*

ADDITIONAL BID OPTIONS

Cost to provide remote diagnostic access/program for total quantity three (3) units.

Year One Cost \$ _____ Year Two Cost \$ _____ Year Three Cost \$ _____

GRAND TOTAL

Three (3) 2021-2022 Cab & Chassis (Low Cab Forward/Cabover) With 40-Yard Front Loader Refuse Collection Body Installed

Less Trade In Block #5909

Less Trade In Block #5910

Less Trade In Block #5764

GRAND TOTAL \$ _____

Bid Guarantee:

Bid guarantee in the amount of 5% of the total bid amount as required by Wyoming Statute 15-1-113 must be submitted w/your bid (see paragraph 15 of the General Provisions attached).

Bid Guarantee **shall** be submitted for the following bid items:

1. Three (3) 2021-2022 Cab & Chassis (Low Cab Forward/Cabover) With 40-Yard Front Loader Refuse Collection Body Installed
2. **Plus** (Not Less) Trade-In Offer on Block #5909, #5910, #5764

Resident Bidder:

If claiming to be a resident bidder, please attach a copy of your “State of Wyoming Certificate of Residency Status”.

The undersigned bidder certifies that the firm submitting this bid **IS** [] **OR IS NOT** [] a Wyoming resident bidder as defined by Wyoming Statute §16-6-101. (Please select One (1) Option with an ‘ X ’)

Marked Bid Specifications:

The Line Item Bid Specifications from this Bid, or updated Specifications provided in subsequent Addenda (If Any) **ARE** [] **OR ARE NOT** [] included with this Bid Submission for review by the City. The City will consider as **incomplete** any bid in which the marked Line Item Bid Specifications are not included, **and this will be a basis for bid rejection.** (Please select One (1) Option with an ‘ X ’)

Addendum Acknowledgement:

The Bidder acknowledges receipt of the following addenda to the Bid Documents (if none, so state). The City will consider as **incomplete** any bid in which all addenda are not acknowledged, **and this will be a basis for bid rejection.**

_____.

Addendum No. Dated

Bidder’s Name: _____	E-mail _____
Bidder’s Address: _____	City _____ St. _____ Zip _____
Phone: _____	Fax: _____
Signature: _____	Title: _____

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ADDENDUM ONE REVISED SPECIFICATIONS

Bidders **shall** select **Y** to indicate **YES** to meeting the Line Item Specification/Scope of Work, or **N** to indicate **NO** to meeting the Line Item Specification/Scope of Work. Bidders shall submit any Bid Exceptions or Substitution Requests in accordance with the instructions on Page 1 of this Bid. If a Bidder does not indicate **Y** or **N** on a Line Item, the City will assume that you do not meet the Line Item Specification/Scope of Work Description. If you do not clearly mark **Y** or **N**, or mark both **Y** & **N** the City will assume that you do not meet the Specification. **BIDDERS ARE INSTRUCTED TO RETURN THE MARKED LINE ITEMS SPECIFICATIONS WITH THEIR BID SUBMISSION FOR REVIEW BY THE CITY.** The City will consider as **incomplete** any bid in which the marked Line Item Bid Specifications are not included, **and this will be a basis for bid rejection.**

MINIMUM SPECIFICATIONS

THREE (3) NEW 2021-2022 CAB & CHASSIS (LOW CAB FORWARD/CABOVER) WITH 40-YARD FRONT LOADER REFUSE COLLECTION BODY INSTALLED

Y N 1. ***NOTE***: This front load garbage truck must be able to pick up and dump City of Cheyenne's 2-yard, 4-yard, 6-yard, and 8-yard Wastequip containers. No garbage must fall behind the packer blade.

CHASSIS

Y N 1. Front axle load – 20,000-pounds

Y N 2. Rear axle load – ~~40,000-pound~~ **44,000-pound**.

Y N 3. GVW – 60,000-pounds.

Y N 4. Road conditions – Class A (Highway) – 100-percent

Y N 5. Maximum Grade – 6-percent

Y N 6. Wheelbase – 260-inches or as needed by body manufacturer.

Y N 7. Front Axle to BOC – 0.1-inches **to 9-inches**.

Y N 8. Usable cab to trunnion – 179-inches or as needed by body manufacturer.

Y N 9. Maximum Overall vehicle height – 13-foot 6-inches. Must be placarded on dash

Y N 10. Minimum trunnion to end of frame – 60-inches or as needed by body manufacturer.

FRAME AND EQUIPMENT

Y N 1. 10 ¾-inch heat treated, steel frame rails with steel inner liners. RBM of 3,400,000 per frame.

Y N 2. FEPTO provision, ~~5-inch~~ **9-inch** bumper extension. Include 1350 series front drive PTO. If ~~5-inch~~ **9-inch** bumper extension needs to be shortened to allow clearance for lift arms and forks, the holes in bumper must line up with frame extensions so tow hooks can be installed. **Transmission mounted PTO will not be accepted.**

a. The ~~5-inch~~ **9-inch** bumper is needed and the pump will need to be located in the bumper extension.

- b. Bumper is to accommodate lift arm and hydraulic pump must be in front of cab.
- c. **Provide a guard over top of hydraulic pump to prevent trash/debris from falling and striking pump.**

Y N 3. EOF square with cross-member.

FRONT AXLE AND EQUIPMENT

Y N 1. Dana Spicer D2000F, 20,000-pound. 71-inch Kingpin setting

- a. Meritor will be accepted. **Paccar will be accepted.**

Y N 2. 3 ½-inch to 5-inch drop.

Y N 3. Taper leaf springs, 20,000-pound with shock absorbers.

Y N 4. Power steering – ~~SD110~~ Dual Gear **or Single Gear with Assist**

Y N 5. Iron hubs.

Y N 6. Air disc front brakes for use with 20,000-pound to 22,000-pound steer axle with severe service rotors and brakes.

REAR AXLE AND EQUIPMENT

Y N 1. Meritor MT44, ~~40,000-pound~~ ~~44,000-pound~~ (inter-axle diff lock, air rocker occupies the space on one gauge) and must have light to show engagement.

Y N 2. Iron hubs.

Y N 3. Parking brakes on both drive axles.

Y N 4. Severe service brakes, all axles.

Y N 5. Lube pumps on drive axles.

Y N 6. SBM valve. (Spring Brake Modulator valve)

Y N 7. Anti-lock braking system (ABS) 6S6M, with automatic traction control.

Y N 8. Synthetic axle lubricant, all axles.

Y N 9. Rear brakes to be Air Disc Brakes with severe or refuse service rotors and brake pads.

Y N 10. Ratio to be decided by successful bidder and Fleet Manager.

Y N 11. Hendrickson ~~HMX~~ **HMEX** 400 Haulmaxx with shock absorbers on both rear drive axles.

ENGINE AND ENGINE EQUIPMENT

Y N 1. 8.9-Liter, wet sleeved, Cummins Engine. 370 HP, 1250-torque. 70-mph max. speed in top gear, 65-mph maximum cruise speed, 5-minute idle shutdown timer.

- Y N 2. Current EPA and Carb Emission Certification with Selective Catalytic Reduction (SCR) and On-Board Diagnostics (OBD).
- Y N 3. The Urea system shall have a gauge in the dash that indicates the level of urea in the reservoir.
- a. Urea system to have a pump so that when truck is shut off the urea in the lines will be pumped back into the reservoir
 - b. Urea reservoir must be heated
- Y N 4. 130-amp alternator – brushless with voltage regulator. (Note: remote sense is not available or needed). At low engine RPM, alternator puts out 80-amps verses 60-amps on other alternators.
- Y N 5. Engine block heater) 110-120V and 1000-watt.
- Y N 6. Three (3) Premium 12-volt dual purpose batteries, with a total of 2100-cca with threaded stud type terminals.
- Y N 7. 18.7-CFM air compressor (furnished on engine)
- Y N 8. Primary fuel filter/water separator and heater. Frame mounted. Water in fuel sensor can be installed in either primary or secondary fuel filter with warning light in instrument panel.
- Y N 9. High efficiency cooling system with silicone hoses, extended life coolant, and all hose clamps to be constant torque. Crimp type hose clamps will not be accepted.
- Y N 10. Bug screen – removable type grille mount. Additional clips at bottom of bug screen. **Bug screen may be mounted behind the grill, if grill is easily removable via clips or pins.**
- Y N 11. FEPTO style grille
- Y N 12. Donaldson 16-inch FVG air cleaner or heavy- duty air cleaner, horizontal mounted with air cleaner restriction gauge.
- Y N 13. Vertical steel exhaust pipe, (DPF/SCR transverse mount) with a 90-degree bend with defuser, so exhaust exits below refuse body canopy and out left side of vehicle. A heat shield must be installed on left arm to protect auto grease lines and electrical harness from exhaust.
- a. Must be wrapped in heat wrap on left sidearm.
- Y N 14. Air operated two-speed fan clutch for engine cooling.

TRANSMISSION

- Y N 1. Allison 4500 RDS-P rugged duty service.
- Y N 2. Include rear transmission support
- Y N 3. Transcend automatic transmission fluid and water oil heat exchange.
- Y N 4. Include new features that monitor the transmission fluid, filter and clutch condition.
- Y N 5. Will display percent of life remaining for the transmission fluid, filter, and clutches on the shift selector. This information may be displayed using the mode and up and down buttons.

- Y N 6. A wrench icon will also be included to indicate when the transmission fluid, filter or clutches need servicing.
- Y N 7. Driveline – Heavy duty, minimum 1710 on interaxle and 1760 on main, or Spicer Life drive shaft, including inter-axle shaft. **Meritor RPL will also be accepted.**
- Y N 8. Allison 6-speed configuration – ~~Close ratio gears~~. (Allison 4500 transmission only)
- Y N 9. Allison output function “S” – neutral indicator for PTO. (Allison vocation package #115 **or #170, or equal to provide necessary functionality**) required on refuse packer applications.

ELECTRONIC PROGRAMMING FOR ENGINE AND TRANSMISSION

- Y N 1. Engine regeneration for exhaust emissions.
 - a. Engine should regen at idle.
 - b. Engine should be programmed for in town driving operation.
 - c. Engine must be programmed to run properly at city of Cheyenne, WY altitude.
- Y N 2. Updates for engine and transmission
 - a. All current updates should be completed before vehicle is delivered.
 - b. Any new updates after delivery must be done free of charge while unit is covered under warranty.

AIR EQUIPMENT

- Y N 1. Bendix ~~AD-IS-EP~~ **AD-HF EP or AD-IP EP** air dryer with heater. Extended purge (for use with higher consumption applications). Includes single-bolt desiccant cartridge and wet air tank.
- Y N 2. Berg pull cord drain valves – all air tanks.
- Y N 3. Nylon chassis air lines.
- Y N 4. Steel painted air tanks. Dealer will determine the optimal size and location of required air tanks.
- Y N 5. Outside frame air system components location, RHBOC and LHBOC to be decided by company that is awarded the bid and the body manufacturer.

TIRES AND WHEELS

- Y N 1. FF: 20-ply, 315/80R22.5 -10,000-pound per tire rating (street tread). Full rating reduces speed to 55-mph.
- Y N 2. RR: BR 16-ply 11R22.5, open block, drive axle tread
- Y N 3. Rear tire quantity nine (9) open block which includes one mounted spare.
- Y N 4. FF: Accur ~~29039~~ Pilot 22.5 x 9.00 steel wheel pilot mount, 10,000-pound load rating, Severe service
- Y N 5. RR: Accur ~~50294~~ Pilot 22.5 x 8.25 steel wheel pilot mount. Severe service
- Y N 6. Rear rim – Quantity nine (9)

FUEL TANK

- Y N 1. Aluminum 70-gallon fuel tank, LH BOC is preferred but will be decided by chassis and body manufacturer.
- Y N 2. Fuel cooler, LH side.
- Y N 3. DEF tank, fender mounted LH side.

BATTERY BOX AND BUMPER

- Y N 1. Aluminum battery box, located at body manufacturers discretion, with battery disconnect switch and jump studs mounted beside it or at OEM discretion.
 - a. Steel battery box will be accepted as long as it is powder coated inside and outside and has plastic liners, with aluminum cover and battery hold downs
 - b. Disconnect switch mounted next to drive seat will be accepted.
 - c. Jump start studs must be provided and accessible.
- Y N 2. Steel bumper, painted black, including two (2) front tow eyes with pins, swept back model with guard installed over hydraulic pump and connections.
- Y N 3. Notched top flange of bumper

CAB AND EQUIPMENT

- Y N 1. 53-inch **to 71-inch** low cab forward with left hand drive.
- Y N 2. Steel frames with aluminum and fiberglass panels
- Y N 3. All aluminum doors
 - a. Galvanealed Steel will be accepted.
- Y N 4. Dual door stops
- Y N 5. Door locks
- Y N 6. Cab and door mounted entry grab handles
- Y N 7. Cab tilt pump air assist. 65-degree hydraulic tilt.
- Y N 8. Stainless steel grille
- Y N 9. Dual rear cab fenders
- Y N 10. Service location back of cab (cab tilt pump, oil fill and dipstick, coolant fill and check, fluid fill and dipstick for auto trans)
- Y N 11. Door mounted arm rests
- Y N 12. Power windows

- Y N 13. Full insulation
- Y N 14. Rubber floor mats
- Y N 15. Ergonomic center control console
- Y N 16. Removable instrument panel
- Y N 17. Driver information display
- Y N 18. LED back lit gauges. **A combination of Digital Display and Gauges will be acceptable.**
- Y N 19. Pull down windshield sunshade or visor
- Y N 20. 16-inch steering wheel with integrated horn button
- Y N 21. Tilt/telescopic adjustable column
- Y N 22. Over-door storage
- Y N 23. USB charging port and 12 VDC charging outlet, **mounted in a position accessible by Driver.**
- Y N 24. Header includes HVAC controls. **Controls may be mounted in Dash.**
- Y N 25. Standard rear window and rear cab corner windows
- Y N 26. 18-inch bolt-on step on each side
- Y N 27. Self-canceling turn signals and front directional and side mounted turn signals
- Y N 28. Heavy-Duty automotive style door hinges that are spring loaded. Dual door stops if available. Steel full length door hinges preferred.
- Y N 29. Rain gutters over both cab doors
- Y N 30. Air ride driver seat, left side of cab. Standard jump seat for right side. Low back vinyl **or Cordura** seats with seat belts and arm rests.
- Y N 31. Gray interior color which includes gray headliner, rear cab panel and gray vinyl engine tunnel.
- Y N 32. Door pads: full molded and color keyed
- Y N 33. Heater/Air conditioner with radiator mounted condenser
 - a. Bi-level heater/defrost controls, with silicone heater hoses. Hose clamps to be constant torque.
- Y N 34. Rear view side mirror: plastic multi-plane, heated and motorized with break-a-way feature. Mount one single air horn under cab in desired location to be heard. Must have an electric horn.
- Y N 35. AM/FM radio
- Y N 36. 2-way radio wiring connection in header above windshields.

- Y N 37. Dealer shall furnish and install VHF 2-way radio and 3dB gain antenna that is narrow band capable, 45-watt, Motorola XPR 5350 digital or approved equal, with one (1) channel programmed. Please contact Dennis Pino at 307/638-4330 or at 220 North College Dr., Cheyenne, WY for radio programming information. Radio is to be powered up only when the ignition switch is in the run position.
- Y N 38. Circuit breakers to be auto-reset which replaces all fuses except 5-amp.
- Y N 39. All in-line fuses or circuit breakers must be clearly identified and clearly marked and their locations noted in wiring diagrams.
- Y N 40. Allison transmission oil temp gauge located in DIC.
- Y N 41. Warning buzzers and lights for low oil pressure, high water temperature, low air pressure.
- Y N 42. Warning light for parking brake, inter axle differential lock, PTO on and power-divider when on.
- Y N 43. Gauges: Oil pressure, fuel level, DEF level, primary and secondary air pressure, speedometer which includes odometer, trip odometer, engine hour meter, tachometer, voltmeter and water temperature.
- Y N 44. Headlights: High and low beam. LED be accepted with heaters to keep headlights from icing over.
- Y N 45. Marker lights, turn, stop, backup and tail lights all to be LED. All lights to be connected with di-electric grease and sealed connectors.
- Y N 46. Keys: Two (2) sets
- Y N 47. Front cab guard ~~with ladder/steps.~~ (see illustration)

PAINT

- Y N 1. Paint color - single stage non-metallic cab and body to be painted white.
- Y N 2. Frame to be painted black
- Y N 3. Wheels to be painted white.
- Y N 4. Cab must be clear coated.

SAFETY EQUIPMENT

- Y N 1. 10-pound fire extinguisher A, B, C type mounted in cab. **Two (2) 5-pound fire extinguishers will be accepted.**
- Y N 2. Set of three (3) emergency warning triangles in cab.
- Y N 3. One (1) first aid kit mounted in cab.
- Y N 4. Tool box – install on truck. Contact Steven Pauli and or Bryan Bell for location. Size will be dependent on where it will be placed

40-YARD FRONT LOADING BODY SPECIFICATIONS

BODY CAPACITY

- Y N 1. The minimum capacity of the body, excluding the hopper area is 28-cubic yard ~~22-cubic yard~~
- Y N 2. The hopper capacity is 12-cubic yard

BODY DIMENSIONS

- Y N 1. The body shall have a curved design to eliminate need for lateral bracing, to permit a maximum capacity and reduce the total body weight.
- Y N 2. Outside body width – 96-inches minimum. 102-inches maximum.
- Y N 3. Arm/Fork over height warning. Must have light and alarm in dash of cab.
- Y N 4. Outside body height above chassis (tailgate closed, arms down) – 112-inches maximum. Note: #9 below.
- Y N 5. Outside body height above chassis (tailgate closed, arms stowed) – 121-inches ~~120-inches~~ maximum
- Y N 6. Overall height of vehicle must be placarded on dash in front of driver in ½-inch or larger letters and numbers. Yellow or florescent orange in color.
- Y N 7. Overall length (tailgate closed, arms down, forks down) 461-inches maximum.
- Y N 8. Overall width (arms included) - 96-inches minimum
- Y N 9. Maximum frame height must be 42-43-inches to meet 13-foot 6-inches overall height regulation

HOPPER ACCESS

- Y N 1. A hinge type or sliding hopper access door is installed on curb side for safety, and allow access to hopper.
- Y N 2. If hinge type, there must be grease zerks on hinges.
- Y N 3. An interlock shall be installed on the access door to cancel all hydraulic functions if the door is open.
- Y N 4. Steps must be installed on vehicle to access hopper through hopper access door – 11.75-inches ~~12-inches~~ wide

BODY FRONT WALL

- Y N 1. Front wall of the body is fenced with perforated steel or aluminum sheets to prevent material from falling on the engine, transmission and exhaust system. **This is the same specification as listed in Canopy Construction, Line Item 4.**

CANOPY CONSTRUCTION

- Y N 1. The canopy shall have a curved shape to allow the use of a canopy sweeper to sweep material on top of the canopy back into the hopper and avoid the operator to climb on top of the canopy to remove material.
- Y N 2. Canopy shall ~~provide inside gutters to~~ drive refuse liquids inside the hopper and keep the cab clean.
- Y N 3. Canopy shall provide a front extension to allow cab tilt without interference. Cab must be able to be tilted or raised without having to raise body. **If canopy does not have front extension, or does not allow for the cab to**

be tilted without having to raise body, body shall not require removal of bolts/springs to lift body with service lift.

- Y N 4. A canopy rear fence closes the rear area of the canopy to prevent any material to fall on the engine and exhaust system.

HOPPER

- Y N 1. The hopper opening sizes to accommodate dumping of an 8 Cubic Yard dumpster, without spillage. ~~meets Wastee regulation.~~

REAR TAILGATE

- Y N 1. The rear tailgate shall be hydraulically operated with an automatic lock mechanism.
- Y N 2. No vertical move of the tailgate against the rubber seal should happen prior tailgate opening. A 2-inch slide out will be acceptable.
- Y N 3. Rubber seal shall be sliding type and located on the tailgate, not on the body seal surface.
- a. Bolt on type will be accepted.
- Y N 4. The tailgate is operated by two (2) cylinders. The cylinder pins connected to auto-lube system.
- Y N 5. Tailgate hydraulic line is equipped with flow restrictor to prevent sudden descent.
- Y N 6. Tailgate hinge pins connected to auto-lube system.
- Y N 7. A cab mounted warning light and buzzer alarm shall be provided to indicate when the tailgate is unlocked.
- Y N 8. A manual control with safety lock is installed in the cab to prevent accidental activation. **If manual safety lock cannot be provided, a Recessed Toggle Switch or Electric over hydraulic safety lock will be accepted. A two hand operation method will also be accepted.**
- Y N 9. A tailgate safety prop is provided.

PACKER

- Y N 1. The packer shall have a plow shape to improve material compaction, top of packer blade shall have 24 inch apron, and re-direct debris into the body away from the back area of the packer and reduces daily clean out time required. When garbage containers are dumped into hopper, no garbage shall fall behind packer blade.
- Y N 2. The packer blade is full-eject type.
- Y N 3. The packer is full height with crisscross double-acting telescopic cylinders.
- Y N 4. Packer is operated by two (2) telescopic hydraulic cylinders. Cylinder pins connected to auto-lube system.
- Y N 5. Packer cylinder rods are chromed (Nitride rods with shavers.)
- Y N 6. Maximum operation pressure - 2500-psi.
- Y N 7. Ejector must empty body.

- Y N 8. Pack on the go
- Y N 9. Packer panel cycle time is 27-seconds at 1500-rpm maximum
- Y N 10. Packer panel eject. Tip to dump will not be acceptable.
- Y N 11. Accelerator kit or throttle up kit is required when ~~tailgate is opening or~~ hopper is cycling, **if needed by body manufacturer, use this kit for when truck is not in motion for the tailgate and hopper to meet cycle times.** If piston hydraulic pump is used, this kit is not needed and all hydraulic functions will work correctly.
- a. If piston hydraulic pump is used, this kit is not needed and all hydraulic functions will work correctly.
- Y N 12. Packing normally packs with engine at **1500-rpm** ~~1475-rpm.~~
- Y N 13. Packer controls consist of start, retract and emergency stop.
- Y N 14. Emergency red stop button is provided to stop packer ram movement at any time.
- Y N 15. One complete set of packer controls located in cab
- Y N 16. Control buttons are heavy-duty, industrial type, color coded, corrosion proof and weather resistant. **Joystick Primary, with alternate Touchscreen Controls will be accepted.**

TOP HOPPER DOOR

- Y N 1. Sliding top door opens horizontally.
- Y N 2. Top hopper door is activated by one (1) double acting cylinder.
- Y N 3. Top hopper door cycle time is 11-seconds @ 1500-rpm
- Y N 4. A toggle switch control is installed in the cab. **Joystick Primary, with alternate Touchscreen Controls will be accepted.**

HYDRAULIC SYSTEM

- Y N 1. The hydraulic system is designed to ensure easy maintenance.
- Y N 2. Hydraulic system is composed of one front gear pump. A piston pump will be acceptable.
- Y N 3. Hydraulic pump model is Metaris Live Pak, Denison Vane, HAVA, **Muncie Live Pak, Valgen Vane,** or approved equal
- Y N 4. Pump maximum flow is 55-gpm @ 1500-rpm.
- Y N 5. The parker directional valve has five (5) sections with electric **or air** actuator.
- a. Dan Foss will be accepted.
- Y N 6. Electric **or air** joystick for arms and forks activation.
- Y N 7. Hydraulic system pressure relief valve is set to **2450 to 2500-psi maximum** ~~2450-psi minimum.~~

- Y N 8. Hydraulic tank is equipped with magnetic drain plug, oil level sight gauge, shut-off valve in suction line and check valve on return.
- Y N 9. Hydraulic Reservoir to be made of aluminum and body manufacturer will determine the size and capacity. Straps and saddles used to mount reservoir to truck frame must be lined with rubber or a material that will protect tank from getting holes rubbed in it.
- Y N 10. Pressure, return and suction filters to meet specifications of body manufacturer
- Y N 11. Return filter has a bypass valve and a differential pressure filter indicator.
- Y N 12. Reservoir is baffled.
- Y N 13. Return line filter has replaceable cartridge element.
- Y N 14. Pump drive shaft is 1310.
- Y N 15. All hoses are double braided wire minimum, high burst capacity and reinforced with nylon wrap to prevent chafing.
- Y N 16. Hydraulic tubing is used where flexibility is not needed.
- Y N 17. All pipes are zinc clear coated to prevent corrosion. Stainless steel lines will be accepted
 - a. All hydraulic tubing is securely clamped to prevent vibration, abrasion and excessive noise. All hydraulic hoses, line and electrical conduits ran in under vehicle for body must be clamped up and secured properly. Use of plumber's tape or just plastic wire ties is not acceptable. Strong clamps that are coated with anti-chafe coating must be used. Must be able to carry weight of hydraulic lines and hoses and electrical conduits covered with ice and snow. All hoses lines or electrical harnesses ran through holes, the holes must be grommited. If ran over or laying on sharp edges; hoses, lines, or harnesses must have extra protection. The clamps that are being used must be able to support and secure what is listed; they need to be heavy-duty.
- Y N 18. Hydraulic system operates at an acceptable temperature without the need for external hydraulic oil cooling devices.
- Y N 19. Quick disconnect fittings are provided so that a pressure gauge can be easily connected without the use of tools or the need to remove hydraulic fittings.

FORKS

- Y N 1. Fork assembly and lift/weight rating to meet Wastec recommendation.
- Y N 2. Forks operated by two (2) cylinders.
- Y N 3. Forks cycle time is 4-seconds @ 1500-rpm
- Y N 4. Forks cylinder pins connected to auto-lube system
- Y N 5. Connect fork hinge bushing to auto-lube system.
- Y N 6. Rubber bumpers
- Y N 7. Forks rotation – 116-degrees.

Y N 8. 56 ½-inch useable with hook

Y N 9. Fork **limiter to prevent forks from striking windshield and cab.**

LIFT ARMS

Y N 1. Variable arm sections increase strength where needed, improve visibility and reduce weight.

Y N 2. The body is protected from arm impact during container dumping with two (2) rubber “dock” type bumpers bolted to the body’s midpoint frame posts.

Y N 3. Arm lifting capacity - 8,000-pounds.

Y N 4. Arm capacity – 10,000-pounds

Y N 5. Arms are operated by two (2) hydraulic cylinders. Cylinder pins connected to auto-lube system. Hydraulic hoses, electrical harnesses and auto-lube lines that run on left side of or left arm, must have protection from heat caused by engine exhaust. 90-degree vertical exhaust – high heat wrapped.

Y N 6. Arms cycle time is 17-seconds maximum.

Y N 7. Arms torque tube is supported on each side by support bearings. Contacts are grease-lubricated steel on steel, connected to auto-lube system.

a. Bronze split bearings will be accepted.

Y N 8. Arms rotation – **101-degrees** ~~107-degrees.~~

SERVICE HOIST

Y N 1. Installed on chassis RH **or LH side, as required by manufacturer.**

Y N 2. 12-volt battery powered.

Y N 3. Independent from the body hydraulic system.

Y N 4. Controls located on service hoist.

Y N 5. Relief valve for over pressure.

Y N 6. Safety lock on hydraulic control to avoid un-intentional use. **Plug in pendant style control will be accepted.**

Y N 7. Safety props provided on both sides of the chassis.

ELECTRICAL SYSTEM

Y N 1. Multiplex System – On board diagnostics for troubleshooting body operation.

a. Can Bus System (controller area network). Relay Logic is approved.

b. Multi-modules control system (one master module and several slave modules)

i. Four (4) modules with no main will be accepted as long as training is provided.

ii. Single controller on body with no slaves will be accepted.

- c. All functions and conditions are controlled by the master module.
- d. Multiplex allows smaller and more ergonomic controls console in the cab.
- e. Simpler and lighter wiring harnesses.
- f. In cab Multiplex display shows real time system status and integrated functions.
- g. Multiplex J1939 network communication with engine and transmission (providing chassis information like selected gear, current gear, road speed, engine RPM)
- h. Multiplex system provides I/O status of body features for trouble shooting and safety: Packer, Top Door, Tailgate, Access door, Arms/forks.
- i. Multiplex system allows overriding of electronic protections in case of emergency. **(This is an E-Stop function/button)**
- j. Multiplex provides flexibility for additional functions and interlocks.
- k. Easier troubleshooting with I/O status access with only one click.
- ~~l. **70 A total capacity ILO 35 A.**~~
- m. Multiplex system modules outputs are electronically protected against overloads.
- n. Auto pack when the arm ~~tube~~ **tune** is below the top of the windshield the packer will automatically pack **or auto pack when arms are lowering after dumping can.**

Y N 2. Lights

- a. All stop, directional, tail and clearance lights are LED type, recessed mount and watertight.
- b. All lights are provided following FMVSS #108
- c. Rear lights are integrated to tailgate structure. **Upper light bar may be bolt on style.**
- d. Back-up alarm – 107 decibels
- e. Mid body turn signal are provided.

Y N 3. Circuit

- a. All circuits are properly protected by circuit breakers and the wiring is color coded and numbered.
 - i. Stamped with function will be accepted. Prefer the color coded.
- b. Wiring conforms to SAE J1128.
- c. Wiring connections with shrink tube and at some places, blue crimp sealed with epoxy.
- d. All wiring run in plastic loom, clamped, and secured.

- i. Braided with plastic loom will be accepted

SAFETY INTERLOCK SYSTEM

- Y N 1. The loader arms do not go past top of windshield until the top hopper door is completely open.
- Y N 2. There are no arms up movement above canopy when the packer panel is not in home position.
- Y N 3. Eject system is in operation only if the tailgate is open and if the operator holds the button on the console.
- Y N 4. All function disabled when the access door is open.
- Y N 5. Pressure switch on hydraulic system for over pressure protection.

WARNING LIGHT AND ALARMS

- Y N 1. Warning light and alarm when the tailgate is open.
- Y N 2. Warning light when the top hopper door is open.
- Y N 3. Warning light and alarm when access door is open.
- Y N 4. Warning light indicates arm and forks not stowed.

CONTROLS FEATURES

- Y N 1. Tailgate is activated by an electric rocker switch. **May be controlled via digital interface.**
- Y N 2. Top door is activated by an electric rocker switch. **Joystick Primary, with alternate Touchscreen Controls will be accepted.**
- Y N 3. Packer is activated by electric push buttons.
- Y N 4. Arms are activated by an electric over hydraulic joystick.
- Y N 5. Forks are activated by an electric over hydraulic joystick.

ACCESSORIES

- Y N 1. Mud flaps to be installed in front of front drive axle with anti-sail brackets and to be installed behind rear drive axle.
- Y N 2. Rear drive axle to have anti-sail brackets.
- Y N 3. No company logos on mud flaps.
- Y N 4. Roof access ladder on the right side with non-skid steps.
- Y N 5. Safety prop is provided for tailgate.
- Y N 6. Broom and shovel kit installed

- Y N 7. Strobe light mounted center rear of tailgate. Work lights mounted to illuminate hopper and front of truck. Work light for hopper must be LED and positioned to light hopper and located to not get broken. Hopper work light must have a heavy built guard to prevent breakage of the light.
- Y N 8. Rear bumper minimum height from ground to bottom of bumper is 22-inches when loaded.
- Y N 9. Guards to be installed on strobe light, cameras, work lights, and all exterior hydraulic lines, auto lube lines and electrical harness on the top sides and front. Wire guards to be installed on top of body that run from front to back to prevent wires from snagging.
- Y N 10. Switches to be installed in control panel in cab for strobe and work lights. **Button on joystick for hopper lights, and touch screen for strobes and other lighting functions will be accepted.**
- Y N 11. Backup sensor. This is to alert the driver while backing that an object is close by.

LUBRICATION

- Y N 1. Auto-lube system, Lincoln or Lube Core, installed with high strength/reinforced grease lines and fittings. (spaghetti lines or standard fittings won't be accepted).
- Y N 2. Include repair kit for auto-lube lines and fitting. (replacement fittings, line splices and line). To include: 12 of each fitting connections with clamps if used, 25-feet of line, and 12 line splices with clamps.
- Y N 3. If special tool is required to fill grease reservoir, it must be provided.
- Y N 4. All body hinges, cylinder rod ends, cylinder base, trunnion and pivot points are connected to auto-lube system.

PAINTING

- Y N 1. The truck will be properly cleaned of all dirt, grease and weld slag.
- Y N 2. One coat of polyurethane primer is applied
- Y N 3. One finish coat of polyurethane paint (white in color) is applied.

MANUALS

- Y N 1. All to be in book form, for the make/model/year of vehicle and equipment being bid, and delivered before payment will be made. If these manuals do not come in book form, please state the form they will be delivered in.
- Y N 2. Cab & Chassis:
 - a. One (1) Service and Maintenance manual, One (1) Parts manual, Two (2) Operations manuals, One (1) set of wiring diagrams for cab, chassis and body.
- Y N 3. Body:
 - a. One (1) Parts manual, One (1) Service manual, One (1) Operator's manual, and One (1) wiring diagram and hydraulic schematic.
- Y N 4. Camera
 - a. One (1) Parts book and One (1) Service manual

Y N 5. Auto-Lube System

- a. One (1) Parts book, and One (1) Service Manual

WARRANTY

Y N 1. No deductibles to be paid while under warranty. No service truck charges or mileage charges while under warranty. No Cap on warranty. **Attach a sample copy of warranty that will be provided.**

Y N 2. Cab & Chassis:

- a. Two (2) year 75,000 miles, bumper to bumper. Free towing while under warranty. No field truck mileage, per-diem, freight, or mechanic overtime to be charged while machine is under warranty. No deductibles to be charged while machine is under warranty.
- b. Engine warranty to be five (5) years or 100,000 miles and to include after-treatment.

Y N 3. Body:

- a. Length of warranty on defective parts will not be less than one (1) year
- b. Length of warranty on hydraulic cylinders and hoses will not be less than one (1) year.

TRAINING

Y N 1. All training will need to be done at the Fleet Maintenance Facility, 2731 Old Happy Jack Rd, Cheyenne, WY.

Y N 2. Cab & Chassis:

- a. In house training on (OBD) On-Board Diagnostics installed in these vehicles.

Y N 3. Body:

- a. In house training for diagnosing and troubleshooting problems with the body for technicians.
- b. Operator training for operation of the body for operators. This is to be accomplished at the Fleet Facility.

~~e. Camera system training.~~

SOFTWARE UPDATES

Y N 1. Cab & Chassis

- a. All latest software updates must be completed and any new updates while truck is under warranty, to be free of charge.

SUBSCRIPTION:

Y N 1. Cab & Chassis:

- a. Successful bidder at time of delivery must furnish the following equipment unless Fleet Maintenance already has equipment. Contact Bryan Bell at 307/637-6446 to verify:
 - i. Modem

- ii. Cables and Harnesses
 - iii. Adapters
 - iv. All diagnostic and troubleshooting programs engine, transmission, ABS, emissions and after treatment.
- b. A one (1) year subscription must be provided with this bid for all above programs.
 - c. If Fleet Maintenance has current subscription in service, new subscription must be available to us when our current subscription expires.
 - d. Complete training for the use of all the above programs to be accomplished when vehicles are delivered and accepted if above equipment.

OTHER

- Y N 1. Titles must be made out to City of Cheyenne and delivered to the City of Cheyenne Fleet Maintenance, 2731 Old Happy Jack Road, Cheyenne, WY.
- Y N 2. A list and line sheet/order sheet of standard equipment must be attached with this bid for the vehicle you are bidding.
- Y N 3. Certifications:
 - a. DOT certification paperwork

FLEET MIND SYSTEM

Y N 1. Remove system from two (2) trade-ins and install in new trucks. Purchase and install one (1) complete Fleet Mind system for third truck. Please install all new camera cables for the two (2) old systems. Each truck to have 8 cameras. (see photos)

- Y N 2. Camera Locations:
- a. Camera #1 in cab (front facing)
 - b. Camera #2 in cab (driver facing)
 - c. Camera #3 reverse (back up)
 - d. Camera #4 rear left (next to reverse camera)
 - e. Camera #5 rear right (next to reverse camera)
 - f. Camera #6 left side (body mounted)
 - g. Camera #7 right side (body mounted)
 - h. Camera #8 Hopper and arm

Y N 3. Camera viewing hopper and arm dumping, mounted on right rear side of hopper in enclosures see pictures, located where it will not get broken from falling garbage or the can being dumped. All camera wiring/coax must be in loom and clamped and secured. Extra protection for wiring coax when routed through holes over sharp edges. System monitor will be in cab as they were mounted in trades and the third system will need mount fabricated like the other two. All other equipment for fleet minds will be mounted and guarded like they were in old trucks.

Qty	Product Name	Product Code	Product Description
1	FleetLink DVR - Flat Screen KIT	VPKG-DVR	FleetLink DVR package - Trek 674 DVR with Trek 306 Flat Screen Panel running Windows 8 Embedded - Internal LTE Modem - Internal Octal Camera Switcher - Internal triaxial Accelerometer - 4 Digital Inputs and Outputs - Dual CANBus interface - OBDII Interface - J1708 Interface - Ethernet, USB and Serial ports - 4 GB RAM - 16 GB SSD drive for OS and Application - 256 GB SSD for video recording - FleetLink DVR Software Package - 2 years hardware warranty
1	On Board Camera (Interior)	VPKG-PICT	Basic color onboard camera with IR and Magnetic Base and extension cable to be installed inside the cab for connection to the flatscreen systems. The camera can be used to capture pictures of bins etc... in front of the truck.
7	On-board camera (Exterior)	VPKG-CAM	On-board camera option. Whether the standard or reverse camera has to be delivered will be identified by the FLEet Survey
7	Camera extension cable (Exterior)	VPKG-CAM-EXT	Extension option for the on-board camera. What cable length has to be delivered will be identified by the FLEet Survey
1	Generic Actuator Switch Package for Front Load Truck	VPKG-FEL-ACT	Generic product for an Actuator switch to be mounted on: - the arm of a commercial truck to be used to automatically confirm a lift. The price includes the dual angle switch, software and required cabling

Contact Frank Flores for City of Cheyenne Fleet Mind System at 1-480-247-1595 for questions and cost. Installation & Travel/Living not included in specs.