

**Contract Specifications**

**New Tandem Conventional Cab, 2020 or newer Model, 76,000 GVW, Set-Back Axle, Cab and Chassis with Chain Operated Roll-ON/Roll-Off Hoist System**

<u>DESCRIPTION</u>	<u>MINIMUM REQUIREMENTS</u>	<u>COMPLY YES/NO</u>
ENGINE	Minimum 370 horsepower with 1350 pounds of torque.	_____
	State torque at 800 rpm, 1000 rpm	_____
	State max torque and RPM	_____
	Full variable speed governor	_____
	18.7 cubic feet air compressor, gear driven with air intake plumbed to the clean side of the main engine air filter	_____
	Oil filters – spin-on type	_____
	Fuel filters – spin-on type	_____
	Engine Coolant Filter, spin-on	_____
	Heaviest duty radiator (1500 sq in) available with no coverage by cab or etc., with maximum cooling - heavy duty top and bottom bolted tanks	_____
	Stationary Grille	_____
	Racor 1000 FH fuel filter and heater to be mounted as close to engine as possible, or equal.	_____
	Block Heater, 120v – 1500 watt	_____
	Anti-freeze to 34° below zero	_____
	12 volt, 160 amp minimum alternator	_____
	3 - 12 volt maintenance free batteries 3375 c.c.a. External mounted	_____
	Battery disconnect to kill all power from battery at the battery	_____
	Exhaust, vertical mounted, maximum silence rated at latest U.S. Government Specifications	_____
	Back-of-cab Diesel Particulate Filter (DPF) proven for successful use with refuse vehicles.	_____
	Air cleaner, two stage, Donaldson 16" Cycloflo - outside air intake, or equal	_____

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	Fuel tank 70-gallon minimum	_____

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TRANSMISSION	Allison automatic 4500 RDS with synthetic transmission fluid.	_____
	Power take-off opening	_____
BRAKES	S-Cam type "Q" Series front & rear air brake with Arvin Meritor automatic slack adjusters with brake backing plates, or equal	_____
	Bendix air dryer/with replaceable spin-out element with heater, or equal	_____
	Racor thermostatically controlled automatic "spitter" valve on primary air tank, or equal	_____
	Central manifold with petcocks for air tank drains	_____
	Emergency air brakes and dash mounted with dash-mounted warning light	_____
Suspension	Front Axle, Arvin Meritor MFS20, or equal 20,000 lb capacity with 23,000 lb springs	_____
	Heavy duty front shocks	_____
	Power steering, extra heavy duty with right-hand ram	_____
REAR AXLE	Arvin Meritor RT46-160 or equal with a gear ratio to be determined based upon engine	_____
	Rear axle Hendrickson HMX 460 46,000 lb. rating	_____
	Main drive line to be 1810 series, or equal	_____
	Rear axle to have power divider lock-out with dash-mounted light	_____
	Transverse torque rods	_____
TIRES	Three (3) Michelin 315/80R22.5 (L) XZU or equal, 10-hole piloted wheels, steel hubs.	_____
	Ten (10) Michelin 11R22.5 (H) XDE US or equal, 10-hole piloted wheels, steel hubs.	_____
CAB	Air ride cab	_____

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	Fresh air heater and defroster	_____
	Integral air conditioner (not roof mounted)	_____
	Dual windshield wipers, variable	_____
	Auxiliary cab fan (one)	_____
	Air ride type drivers seat on left side. Right hand side to have standard passenger seat	_____
	Full coverage fender with rubber fender flares	_____
	Door windows roll-down type, both sides	_____
	Two (2) motorized and heated west coast mirrors, with dash switch	_____
	Six inch convex mirrors mounted below west coast mirrors	_____
	Air horns mounted under cab	_____
	Fully insulated and sound deadened. Must be insulated between cab and engine. Padded door liners and head liner required.	_____
	Grab handle - both sides	_____
	Engine hour meter	_____
	Water temperature gauge - direct reading	_____
	Oil gauge - direct reading	_____
	Voltmeter - direct reading	_____
	Air pressure gauge - direct reading	_____
	Transmission temperature gauge - direct reading	_____
	Fuel gauge - direct reading	_____

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CAB (cont)	Audio alarm for low radiator, high water temperature (205 degrees), low oil, and transmission temperature (225 degrees)	_____
	Audio alarm shutdown system	_____
	Audio warning - low brake pressure	_____
	Back up alarm	_____
	AM/FM Radio w/ Bluetooth connectivity	_____
FRAME	Extra heavy duty to match or exceed G.V.W. Frame rails 1/2" steel, variable drop, No exceptions. Frame must meet RBM of 3,200,000 in/lb without the addition of a liner	_____
	Clear frame for pusher installation	_____
	Standard front bumper	_____
	Two (2) front frame mounted extra heavy-duty tow hooks or pins	_____
ELECTRICAL & LIGHTING	Two (2) rear hooks	_____
	All lights (LED where applicable) and reflectors to conform to Montana Vehicle and Federal Specifications	_____
	All wiring harnesses under body or frame shall be sealed where connections are made	_____
PAINT	One Dupont P3131 Teal or equal	_____
WARRANTY CAB & CHASSIS	One year minimum on all parts and labor except glass, lubrications, and filters. <u>Two years minimum on all parts &amp; labor on engine and transmission.</u> Warranty shall be by a company in Billings. Show Name and address _____	_____
STEERING	Steering Gear, Ross TAS65 or equal, to provide minimum 50° turning cut.	_____

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PUSHER AXLE	Watson & Chalin SL Series (or equal) steerable axle lift suspension, air lift, air suspension with single tires and budd rims, suspension and tire capacity of 10,000 lbs & axle capacity of 13,500 lbs. Unit to be installed complete in a pusher configuration compatible with roll-off hoist unit. Axle layout shall be in accordance with State of Montana GVW regulations and shall provide a minimum of 46,000 lb. legal capacity on the rear axles and optimum weight distribution to front axle. Controls mounted in cab.	_____
HOIST TYPE	The hoist shall be chain drive, ASA 200 with medium Hook #AAM 640 200-M  Hoist capacity shall be 50,000lbs or more	_____ _____
CONTROLS	Located in cab within reach of driver to allow engaging, loading, and unloading of container without leaving cab. "Hoist up" warning light	_____
HYDRAULICS	35-gal tank, truck frame mounted with 10" clean-out port  10 micron spin-on type, return line Filter element  Standard PTO, air-over-air direct mount, gear driven hydraulic pump. Overspeed feature to shut off pump above set RPM  All piping shall be held in place by neoprene shock absorbing clamps  Cylinders shall be 5" outside truck frame mounted  Unit purchased shall be capable of loading and unloading containers where weight of the roll-off system and 3-axle chassis will equal or exceed maximum legal loads on a 3-axle unit. Unit shall be fully capable of engaging a 22'6" container skid and shall have spring loaded container locks.  Heavy-duty filter in return line with shut-off valve	_____ _____ _____ _____ _____ _____ _____
LIGHTING	Combination stop-turn-tail lights – LED All lights and reflectors to conform to Montana Vehicle and Federal codes	_____
FENDERS	Full coverage frame mounted with mud flaps	_____

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	both behind and ahead of rear wheels	_____
MISCELLANEOUS	Shall meet all DOT and OSHA regulations	_____
	One (1) set of operating, service, & parts manuals with wiring diagrams <u>for each truck cab &amp; chassis</u>	_____
	Truck shall include a Body Builders Junction Block	_____
	Unit shall be from a standard recognized manufacturer who has been manufacturing roll-off units for a minimum of two years and is recognized in the industry as such.	_____
	A light and audible alarm shall be provided in cab to indicate when the hoist is raised, and remain activated until it is completely lowered	_____
WET LINE	A hydraulic line shall be provided to the back of the truck to allow for connection to refuse containers that require hydraulics in order to be dumped. All lines to be protected and have quick connect fittings.	_____
EQUIPMENT BOX	Box shall have minimum dimensions of 48" long, 18" wide, and 20" deep. Box to be constructed of steel with overlapping hinged lid, mounted on driver's side of truck	_____
	Two complete sets of wiring diagrams, parts manual, operating manual, and service manual shall be provided for the hoist unit	_____
	Paint color of roll-off hoist shall match truck or be black	_____
HOIST WARRANTY	Warranty shall be 12-month minimum of all parts and labor, except for lubrication and filters. The City shall be furnished (at no charge) copies of invoices for all work performed under warranty. They shall show all parts and labor charges.	_____
	All Warranty Work shall be done by a company located in Billings. Bidder shall state name and location of warranty dealer: _____ _____	_____

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TARP SYSTEM	Automatic truck tarp system operated from hydraulics on truck. Tarper shall be capable of covering all height/length containers. State brand and model number.	_____												
OPTIONAL (Show Price)	Bidder shall show price to provide 100% 5 year warranty on the hoist cylinders.	\$ _____												
OPTIONAL (Show Price)	Bidder shall show price to provide additional 12 month warranty for all parts & labor except for lubrication and filters for the unit	\$ _____												
OPTIONAL (Show Price)	All other optional equipment available shall be quoted. Use additional sheet.	\$ _____												
OPTIONAL WARRANTY (show prices)	In addition to the warranty specified earlier, bidder shall show prices to purchase extended parts and labor warranties on the engine and transmission as follows:													
	<table border="0"> <thead> <tr> <th></th> <th><u>Transmission</u></th> <th><u>Engine</u></th> </tr> </thead> <tbody> <tr> <td>Full 3 year</td> <td>\$ _____</td> <td>\$ _____</td> </tr> <tr> <td>Full 4 year</td> <td>\$ _____</td> <td>\$ _____</td> </tr> <tr> <td>Full 5 year</td> <td>\$ _____</td> <td>\$ _____</td> </tr> </tbody> </table>		<u>Transmission</u>	<u>Engine</u>	Full 3 year	\$ _____	\$ _____	Full 4 year	\$ _____	\$ _____	Full 5 year	\$ _____	\$ _____	
	<u>Transmission</u>	<u>Engine</u>												
Full 3 year	\$ _____	\$ _____												
Full 4 year	\$ _____	\$ _____												
Full 5 year	\$ _____	\$ _____												

Prior to any award being made under this proposal, bidders shall be required to manifest satisfactory evidence to the City that there will be available in the City of Billings an adequate supply of such replacement parts as may be required for the repair and maintenance of any units which may be purchased as a result of their bid. The inability of any bidder to produce such satisfactory evidence when called for shall cause unfavorable consideration of this bid.

Consideration will be given in comparing proposals and in awarding a contract, not only to the amount of the proposal, but also the kind and quality of equipment offered, its suitability, for the use in purposes intended, as well as the lowest ultimate cost to the City and delivery date. Bidder must have recently performed a demonstration of model bid to be considered. Previous history of poor performance, parts availability and warranty service will exclude a bidder from consideration.

END: SPECIFICATIONS – SCHEDULE II







## TRADE UNIT GENERAL INFORMATION SHEET

STYLE	<u>#0189</u> ROLL-OFF
HOIST	
YEAR/MAKE	2014 FREIGHTLINER 114SD
# OF AXLES	Tandem w/ Tag
VEHICLE ID	1FVHG3CYXEHF1681
CURRENT METER	11,318 HRS
ENGINE	CUMMINS 370 HP
TRANSMISSION	Allison HD4560
REAR AXLE	Arvin Meritor RT46-160?
FRONT AXLE	FL943?
FRONT TIRES	315/80R22.5 Caps
REAR TIRES	11R22.5 Caps
LIFT AXLE TIRES	255/70R22.5
GENERAL	Cab & Body Fair

**Bidder to verify condition of trade units before submitting bid. The City of Billings will continue to operate these trucks until new units are delivered and ready to be placed into service. Trades will be released when new units are able to provide 40 hours of continuous service without a breakdown.**