

Request for Proposal Dump Box, Plow and Wing August 15, 2017

City of Fargo Request for Proposal

The City of Fargo is requesting proposals for one (1) Dump Box, Snow Plow and Wing. Sealed proposals will be received by the City of Fargo Auditor's Office at 200 3rd Street North, Fargo, ND 58102, for the purpose of evaluating costs and operating parameters on one new Dump Box, Snow Plow and Wing. Upon completion of the evaluation by the selection committee an order may be placed. Proposals will be received until **2:00 P.M. Central Standard Time Friday, August 25, 2017.**

CITY OF FARGO RIGHTS

The City reserves the right to cancel this RFP in writing or postpone the date and time for submitting proposals at any time prior to the proposal due date. The City by this RFP does not promise to accept the lowest cost or any other proposal and specifically reserves the right to reject any or all proposals, to waive any formal proposal requirements, to investigate the qualifications and experience of any Proposer, to reject any provisions in any proposal, to modify RFP contents, to obtain new proposals, to negotiate the requested services and contract terms with any Proposer, or to proceed to do the work otherwise.

The City hereby notifies all proposers that it will affirmatively insure that in regard to any contract entered into, pursuant to this request, minority business enterprises will be afforded full opportunity and are encouraged to submit proposals in response to this invitation and will not be discriminated against on the grounds of race, color, sex, or national origin in consideration for an award. The City reserves the right to accept or reject any and all bids that is in the best interest of the City. All questions and inquiries will be addressed to:

Public Works Dept Operational Questions:

Ben Dow Director of Operations Public Works Department 402 23rd St. N Fargo, ND 58102

Email: bdow@cityoffargo.com

Phone: (701) 241-1453 Fax: (701) 241-8100 Vehicle Specifications:

Allan Erickson Fleet Management Specialist Public Works Department 402 23rd St. N Fargo, ND 58102

aerickson@cityoffargo.com

(701) 241-1439 (701) 298-6971

GENERAL SPECIFICATION

MODEL: Unit shall be a new current year model.

WARRANTY: Shall be stated in **writing** on the form provided.

DELIVERY: Proposers must perform a complete pre-delivery service prior to delivery

of equipment. All units are F.O.B., Fargo Central Garage.

Proposers must state the number of days for delivery from time of order and a \$150.00 per day will be accessed against the purchase price with the total not to exceed 2.5% of purchase price.

MANUALS: One (1) complete service manual, digital or printed

One (1) complete part manual, digital or printed

Two (2) operator's manuals

One (1) training video (if available)

TRAINING Upon delivery to end-user Proposer will provide instruction to operators on

proper operation and daily maintenance.

Two days of training on repair procedures to be provided by a Factory Qualified representative to repair technicians. Onsite training at the City of Fargo Central Garage should be scheduled at time of order.

PROPOSER There shall be \$500,000.00 minimum of product Liability coverage by the manufacturer and minimum of \$500,000.00 liability coverage by the product installers to protect the City of Fargo. Certification shall be provided with proposal.

Preference may be given to Proposer who has a local dealer with a reasonable amount of parts inventory for the unit that has been proposed and a complete service facility. On new models or equipment not previously purchased by the City of Fargo, the selection committee may elect to have a demonstration of the models being considered.

Dump Box and Plow Bidding Specifications

1.0 INTENT

It is the intent of this specification to provide for the purchase of one (1) new and unused Dump Box, Snow Plow and Wing to be used by the Public Works Department.

The City of Fargo Public Works Department has evaluated different styles of Dump Box, Snow Plow and Wing determined that this published specification is best suited for the PWD needs in terms of quality and features. This specification shall not be interpreted as restrictive but rather as a measure of quality and performance against which all other Dump Box and Snow Plows will be compared.

In comparing proposals, comparison will not be confined to price only. The successful proposer will be one whose product is judged as best serving the interests of the PWD when price, product, quality and delivery are considered. The PWD also reserves the right to reject any or all proposals or any part thereof, and to waive any minor technicalities. A contract will be awarded to the proposer submitting the lowest responsible proposal meeting the requirements.

2.0 EQUIVALENT PRODUCT

Proposals will be accepted for consideration on any make or model that is equal or superior to the Dump Box, Snow Plow and Wing specified. Decisions of equivalency will be at the sole interpretation of the PWD. A blanket statement that equipment proposed will meet all requirements will not be sufficient to establish equivalence. An original manufacturer's brochure of the proposed product is to be submitted with proposal.

3.0 INTERPRETATIONS

In order to be fair to all proposers, no oral interpretations will be given to any proposer, as to the meaning of the specification documents or any part thereof. Every request for such a consideration shall be made in writing. Based on such inquiry, the PWD may choose to issue an Addendum in accordance with local state laws.

4.0 GENERAL

The specification herein states the minimum requirements of the PWD. All proposals must be regular in every respect. Unauthorized conditions, limitations, or provisions shall be cause for rejection. The PWD will consider as irregular or non-responsive any and all proposals that are not prepared and submitted in accordance with the proposal document and specification, or any proposal lacking sufficient technical literature to enable the PWD to make a reasonable determination of compliance to the specification. It shall be the proposer's responsibility to carefully examine each item of the specification. Failure to offer a completed proposal or failure to respond to each section of the technical specification (COMPLY: YES NO) will cause the proposal to be rejected without review as non responsive. All variances, exceptions and/or deviations shall be fully described in the appropriate section. Deceit in responding to the specification will be cause for rejection

5.0 SPECIFICATIONS

<u>5.1 SN</u>	NOW PLOW	<u>YES</u>	<u>NO</u>
1.	The snow plow shall be fitted with a moldboard having a cutting edge length of 12' and overall plow length of 12'10", which is capable of automatically altering its contour so to form a tapered shape.		
2.	The tapered moldboard shall assume inside heights of 33" at the intake side and 51" at the discharge side, whenever angled to the extreme left or right position of center.		
3.	It shall be possible to alter the discharge end from 51" to 33".		
4.	It shall be possible for the moldboard to assume the conventional contours of a straight reversible plow. It shall further be possible to increase or decrease the degree of curvature of these non-tapered contours, while respectively altering the inside height of the moldboard anywhere between 51" and 33".		
5.	Moldboard material shall be a minimum of 3/8" thick ultra high molecular weight polymer material.		
6.	The upper leading edge shall have a torque tube that runs the entire length of the moldboard, and will be attached to four (4) evenly spaced pads.		
7.	The torque tube shall attach to a left and right pivoting rib assembly, attached to the lower main frame. Movement of the pivoting ribs shall be done by two double acting cylinders.		
8.	The cutting edge shall be $\frac{3}{4}$ x 8 x 12', center punched.		
9.	Trip edge shall be a single trip, torsion spring design.		

			YES	NO
	10.	The drive frame & reversing mechanism shall consist of an "A" frame, truss frame, and two (2) single acting hydraulic cylinders.		
	11.	The truss frame shall include a main drive member that is a minimum 4 ½" O.D. 3/8" thick wall pipe.		
	12.	The truss frame shall pin to the moldboard at not less than four (4) points over a span of not less than 100".		
	13.	The "A" frame shall be fitted with a three (3) point lift chain arrangement.		
	14.	Plow shall include adjustable mushroom skid shoes.		
<u>5.2</u>	PL	OW HITCH		
	1.	Preferred hitch shall be a pin and loop (Gledhill® QCP) style.		
	2.	Factory bumper shall be modified and remounted to the left and right factory mounts. Modified ends shall be treated to prevent rust.		
	3.	Mounting shall be done according to manufacturer's recommendations and City of Fargo approval.		
<u>5.3</u>	W]	<u>ING</u>		
	1.	The wing shall be designed to be rear mounted.		
	2.	Mounting shall be done according to manufacturer's recommendations and City of Fargo approval.		
	3.	When in stored position shall have a 12" front and 90" rear ground clearance.		

		YES	NO
4.	Wing post shall be of a trailing link style with 12" of lift and designed to allow the moldboard to float up a minimum of 8" to 12" when in the plowing position.		
5.	The post front structure shall be no more than 24" high and 14" wide. Post weldment shall be manufactured with a .750" inside mounting plate and a matching .500" outer plate.		
6.	A .375" Ex-Ten 50 front base plate will set the width of the post, support the .500" inner lower hinge brackets and the .750" bottom cylinder mounts.		
7.	Internal reinforcement with a .500 HSLA radius plate shall be welded to both side plates and the front base plate.		
8.	The post weldment will serve as the anchor for three trailing link assemblies. The upper and lower link arms shall be .750" radius bar with a 1.750" machined hole on each end.		
9.	Lift cylinder shall be minimum 3" ID x 5" stroke with a 1.5" industrial hard chrome rod.		
10.	The heel and toe of the wing shall operate in a float function.		
11.	Cab-controlled hydraulic lift cylinder.		
12.	Wing Loc or equal shall be installed on both tow and heel lift cylinders.		
13.	Moldboard will be constructed of 50,000 PSI 10-gauge EX-TEN 50 (Mild Steel Not Acceptable).		
14.	Overall moldboard length shall be 10'.		
15.	The ³ / ₄ " thick frog to be square hole punched and spaced to accept two (2) 3' and one (1) 4' carbide edges.		

		YES	<u>NO</u>
16	6. Moldboard shall have an intake and exit height of 29".		
17	7. Push tube shall be spring cushioned with a shear pin.		
18	3. Right side, rear mounts to be flange mounted for easy removal.		
19	P. Front post assembly positioned in front of the rear axles with adequate plate brace from side plate to wing post to stabilize the post from forward-backward and side to side motion, braces and gussets shall be made with a minimum of 3/8" material.		
20). Front post cross brace to both frame rails shall allow clearance for the drive shaft.		
21	The rear of the push tube shall be attached to the rear push tube brace with a ½" grade 5 bolt that will act as the shear point for the wing. The rear push tube brace shall allow the push tube to fall away if bolt shears.		
22	2. Push tube shall be adjustable to as close to a 90° angle as possible and not to exceed 18" from the outside end of the moldboard.		
23	3. When in transport, the moldboard shall rest against a rubber cushion and shall not contact any portion of the box.		
5.4 H	YDRAULICS		
1.	The system shall communicate over a CAN Open system bus using CAN Open protocol and not a proprietary communication protocol.		
2.	The system is completely expandable and allows for additional modules to be added to the system.		
3.	All components of the system are software upgradeable using a laptop and interface cable.		

		YES	NO
4.	The configuration file of the calibrated system can be saved for transfer to other systems or as a backup providing the ability to use specific configurations for varying vehicle use or operator skill level.		_
5.	The in-cab control system panel can support up to 6 rocker switch inputs and up to 4 joysticks. Configuration will be determined post award and approved by the City of Fargo. Opticon and strobe switch shall be mounted in this control panel. Switch labels shall be printed by the manufacture and approved on final drawing.		
6.	The optional display can be attached to the system panel.		
7.	The joystick function shall be clearly labeled on a graphic overlay providing the basic operator instructions.		
8.	The system control panel will be floor mounted and adjustable so that it can be positioned for operator comfort. The mounting points shall be braced to insure minimal vibration of the control panel and failure of cab structure.		
9.	Hydraulic pump shall be pressure compensated load sense type with a bolt on pressure compensator.		
10.	Pump shall have a minimum displacement of 74cc per revolution.		
11.	Hydraulic pump shall be configured to utilize a front crankshaft driven system.		
12.	Shaft shall be SAE keyed, and a companion flange shall be provided at the pump for ease of service.		
13.	An electrically actuated shut down manifold shall be provided attached to the pressure port of the hydraulic pump.		

	YES	NO
14. The actuator cartridge shall be normally closed, energize to open. Control for the circuit shall be through the specified integrated control system.	e	
15. Hydraulic valve shall be constructed of cast iron and be pressure and flow compensated across all valve sections.		
 16. Sections shall be provided as follows: Plow Lift (Double Acting) Plow Angle (Double Acting) Plow Curl Left (Double Acting) Plow Curl Right (Double Acting) Wing Toe (Double Acting) Wing Heel (Double Acting) Hoist (Double Acting) with downside relief Auger spinner manifold Hydraulic pre-wet Cartridge 		
17. Wing toe should have a 500 PSI down side adjustable relief and the wing heel shall have a 2100 PSI adjustable relief on the raise side.		
18. Valve sections must be capable of operating all mounted equipment per the equipment manufacturer's specifications.		
19. A combination valve / tank enclosure shall be frame mounted in the manufacturer's recommended location and approved by the City of Fargo.	у	
20. The tank enclosure shall have a capacity of 40 gallons and be constructed of stainless steel.		
21. Return filter, "Service Filter switch" and low level float to be provided as part of the tank assembly.		
22. An oil level sight gauge / thermometer shall be provided on the reservoir.		

		YES	NO
23.	The valve portion must be of weather-tight design and utilize a gasket to seal the stainless steel lid to the body of the unit.		
24.	No hoses shall enter the weather-tight area of the enclosure.		
25.	The operator panel shall be a molded silicone rubber keypad utilizing high life magnetic snap action switches. Three (3) high life magnetic 16 position detented encoders used for separate control of rate, lane and liquid application.		
26.	The operator panel provides input capabilities to support RS232, RS422, truck speed input, and multiple digital input/outputs.		
27.	The panel shall have a built in LED backlight that automatically dims the display for night viewing.		
28.	The panel shall also incorporate mode, product and select switches.		
29.	The hydraulic valve driver shall be mounted to the valve enclosure providing both interior and exterior electrical connections.		
30.	The valve driver shall have up to 14 channels and be software configurable.		
31.	The valve driver module shall have a built in over temp, over current and low voltage shutdown protection.		
32.	All electrical connections shall be a sealed, threaded connection.		
33.	Hydraulic oil shall be Rando HD246 or approved equal.		

<u>5.5 Hy</u>	ydraulic Hoses and Plumbing	<u>YES</u>	<u>NO</u>
1.	A single handle, hydraulic quick disconnect shall be mounted on the plow hitch for ease of connection and leak prevention. Hydraulic connection shall have a spring loaded cover for protection when not in use. FASTER® brand.		
2.	All hydraulic lines and plumbing shall be of sufficient capacity so as not to create heat or turbulence within the hydraulic system.		
3.	All pressure hoses shall have swivel fitting on both ends and minimum SAE 100-R2 Rating.		
4.	Hydraulic lines shall be routed to minimize interference with equipment and chassis components requiring periodic servicing. Support brackets, grommets, and tie wraps shall be provided where appropriate to protect lines from damage by abrasion, curing, or impact.		
5.	Hoses shall not be routed near exhaust system, bolts, or sharp edges to prevent wear, fatigue, or fire. Pipe fittings shall not be used in any high pressure lines. Maximum distance between support clamps on all hydraulic lines shall be 24".		
6.	Proper plumbing shall be routed to appropriate truck equipment with plow and wing lines equipped with quick couplers to accommodate equipment removal. Hydraulic lines for sander operations shall be plumbed to rear of chassis with quick couplers and dust caps/plugs.		
<u>5.7 EI</u>	LECTICAL		
1.	All electrical wire connections shall be of weather and moisture resistant type.		
2.	All wiring shall be encased in protective loom and securely fastened.		

			YES	NO NO
	3.	One (1) cab mounted LED warning beacon (Federal Signal #454201 or approved equal) shall be installed.		
	4.	All stop, tail, turn and reverse lights shall be LED and mounted in a rear light bar.		
	5.	Two (2) LED amber strobe lights shall be installed to the rear of the box, mounted to the upper most location, left and right.		
	6.	One (1) LED flood light shall illuminate the wing area and (1) LED flood for the sander area.		
	7.	One (1) surface mount LED warning light mounted on the outside rear of the wing. Whelen TIR3 WPLOW1A or approved equal.		
	8.	In cab hoist up indicator light shall be mounted in clear view of the operator.		
	9.	Hood mounted front plow lights shall be Boss TM MSC11100, Western Night Hawk TM or approved equal. Lights shall be mounted to the hood convex mirrors using Tow Master bracket numbers 1913404 and 1913405.		
	10.	A roof mounted laser guide system shall be installed to the strobe mount. The laser guide shall have a heated lens and air puffer to keep lens free of frost and debris.		
	11.	A City supplied Opticom shall be installed in conjunction with laser guide system.		
	12.	Install an AVL system provided by the City of Fargo.		
<u>5.8</u>	RE	AR HITCH		
	1.	Must be made using ³ / ₄ " material for the plate and gussets.		
	2.	2" receiver tube, flush mtd.		

		YES	NO
3.	Must provide a non-air Holland PH410 Pintle hitch rated at 20,000lb vertical load and 100,000lb gross trailer weight installed with grade eight bolts and lock nuts.		
4.	Two (2) D-rings on each side of the Pintle hitch rated for 100,000lb of gross trailer weight between the two. Glad hands included.		
5.	Pull plate must be properly braced and welded to be rated for 100,000lb gross trailer weight.		
6.	A Pollak 7-way connector (11-720) shall be installed and wiring sealed to prevent corrosion.		
7.	Forward and rear mud flaps shall be installed.		
<u>5.9 Du</u>	mp/Spreader Body		
1.	14' long x 84" inside width.		
2.	44" side height with 50" end height.		
3.	Floor and tailgate shall be fabricated from minimum 7 gauge 50,000 PSI yield strength steel.		
4.	Sides and front shall be fabricated from minimum 3/16 50,000 PSI yield strength steel.		
5.	The longsills shall be fabricated from ¼" A569 Steel, 14"deep.		
6.	 Sections of 4" x 5.4# channel are welded every two feet the length of the spreader at the base of the longsills, where the longsills are then boxed in with ½" A569 steel. Then there shall be 3/16" x 3" structural angle welded every 12" the full length of the conveyor at the top of the longsills. 		
7.	The unit shall have a 1/4" A569 steel replaceable floor with 3/16" removable chain guards.		

Q	The sides shall be brake formed from minimum	<u>YES</u>	<u>NO</u>
ο.	3/16" steel to a radius of 43".		
9.	The boxed top rail shall be a minimum of 3/16" formed channel.		
10.	The front shall be sloped to accommodate a head lift cylinder with partial doghouse and conform to the radius of the body and shall be 100% welded on the inside and outside.		
11.	The rear of the body shall be supported by two pieces of 3/16" A569 steel plate contoured to the radius of the body and welded 100% on both sides.		
12.	Additional reinforcement will be provided by a 3/16" formed box section, placed at the rear of the spreader body and tied to two rear posts formed from 3/16" A569 steel. Together, they shall provide support at the rear of the body.		
13.	Side supports shall be added for bodies 13' and longer in length. The side supports shall have 3/16" x 4" x 4" tube extending thru long members with a 3/16" boxed section welded 100% from top rail of the body to cross tube.		
14.	The tailgate shall be a minimum of 6" higher than the sides of the body.		
15.	The tailgate shall be manufactured from 3/16" A569 steel with a boxed perimeter of 10 gauge formed channels.		
16.	The tailgate shall be double acting with a squared perimeter, having two horizontal braces of 10 gauge material full width of the tailgate.		
17.	The material door shall extend 16" into the interior of the body to prevent material from escaping through the partially opened door over the conveyor.		

		YES	NO
18.	The door opening shall be 21" in width by $8\frac{1}{2}$ " in height and shall be manufactured of $3/16$ " material.		
19.	The tailgate shall have 1"x4" bar stock tailgate hardware with 1 1/4" hardened pins.		
20.	The tailgate latches shall be 1" flame cut, with each latch being adjustable with threaded 3/4" clevis and keeper pins.		
21.	The latch shall be an over center type.		
22.	The body conveyor shall be 34" in width and shall have 28,000 lb. tensile strength per strand pintle chain, with 1 ½" x ½" bar flights on 4 ½" centers.		
23.	On rear discharge bodies from 10' thru 13' in length, the conveyor shall be driven by one 6:1 spur gear box and high torque/low speed hydraulic motor. On bodies 14' in length and greater, the conveyor shall be driven by two 6:1 spur gear boxes/Hydraulic motors.		
24.	Conveyor drive shaft shall have heavy duty, dust sealed self-aligning four bolt flange bearings.		
25.	There shall be a heavy-duty idler assembly that will provide adjustment for proper conveyor chain tension by use of slide rail style adjusters.		
26.	Tailgate shall incorporate an air latch system with switch in cab.		
27.	A weld on cab shield shall be attached to the dump body and painted to match.		
28.	A removable material shoot shall be installed for proper material placement on the spinner.		
29.	Install a removable asphalt rear shelf.		
30.	Stationary swing-up ladder assembly.		

		YES	NO
31	. A removable floor/Chain cover shall be included to convert the system to a dump body. Drop in bolted preferred.		
<u>5.10 S</u>	<u>pinner</u>		
1.	Spinner shall be mounted via means of one 2" receiver tube. Spinner body is manufactured from 12 gauge material. There shall be three adjustable spinner deflectors, for directing material from the spinner disc. The material spread pattern shall be controlled by means of a center diverter located above the spinner disc, and with adjustment of the spinner body that is directed by holes drilled in the receiver mounts that can move the spinner assembly either forward or back of the conveyor.		
2.	The spinner motor shall be high torque/low speed mounted directly to the spinner disc with a cast hub.		
3.	The spinner disc shall be 24" in diameter and manufactured of polyurethane with six replaceable fins.		
<u>5.11 P</u>	re-Wet System		
1.	Construction and components used shall be non-ferrous and/or Corrosion resistant.		
2.	System supplied shall be complete with pump, nozzles, hoses, tank fittings, wiring and mounting hardware as required.		
3.	All components shall be mounted in a sealed, corrosion resistant housing.		
4.	Two (2) 270 Gallon polyurethane liquid tanks, one per side.		
5.	Tanks shall be properly vented for fast filling and placed in a manor to prevent spillage from sloshing.		

6.	Reservoir tank is angled to allow for mounting on the side of a radius shaped box.	YES	<u>NO</u>
7.	A 20 mesh suction strainer shall be installed prior to the liquid pump.		
8.	The Hydraulic motor shall be integral with the liquid pump. Hydraulic pump shall be capable of working on a fixed gear pump system or load sensing systems.		
9.	A Seametrics brand, in-line turbine style liquid flow meter rated .5 to 5 GPM, shall provide liquid flow information to the hydraulic control system for precise gallon/ton metering.		
10.	Tanks shall have 2" bulk fill couplings with a cross fill tube between tanks.		
11.	Tank filling must be accomplished from the ground level.		
12.	Check valve(s) shall be installed to prevent siphoning of the liquid chemical.		
13.	A ¼ turn ball valve and flushing tee shall be installed to isolate the tank from pre-wet pump.		

Exceptions & Deviations
Proposers shall fully describe every variance exception and/or deviation. List the item number here and fully explain any items in non-compliance with specification.
Additional sheets may be used if required.

Warranty *Please fill out all applicable lines. "See Enclosed" is not acceptable*
Dump Body, Snow Plow and Wing:
Base Manufacture
Hydraulics
Other Warranties that apply:

<u>Price</u>	
Hoist Make:	Model:
Plow Make:	Model:
Wing Make:	Model:
Box Make:	Model:
Total equipment price	\$
Delivery Date	
Number of days for delivery from date of order:	
any	
Name)	
Title)	