

FORM A: BID
(See B8)

1. Contract Title SUPPLY & DELIVERY OF A CLASS 7 TRUCK WITH A CONTRACTOR BODY AND ARTICULATING CRANE

2. Bidder

Name of Bidder

Usual Business Name of Bidder as it appears on Invoice (if different from above)

Street

City

Province

Postal Code

Email Address of Bidder

Facsimile Number

(Mailing address if different)

Street or P.O. Box

City

Province

Postal Code

GST Registration Number (if applicable)

The Bidder is:

(Choose one)

a sole proprietor

a partnership

a corporation

carrying on business under the above name.

3. Contact Person

The Bidder hereby authorizes the following contact person to represent the Bidder for purposes of the Bid.

Contact Person

Title

Telephone Number

Facsimile Number

Email Address

4. Definitions

All capitalized terms used in the Contract shall have the meanings ascribed to them in the General Conditions and D3.

5. Offer The Bidder hereby offers to perform the Work in accordance with the Contract for the price(s), in Canadian funds, set out on Form B: Prices, appended hereto.

6. Commencement of the Work The Bidder agrees that no Work shall commence until he/she is in receipt of a notice of award from the Award Authority authorizing the commencement of the Work.

7. Contract The Bidder agrees that the Bid Opportunity in its entirety shall be deemed to be incorporated in and to form a part of this offer notwithstanding that not all parts thereof are necessarily attached to or accompany this Bid.

8. Addenda The Bidder certifies that the following addenda have been received and agrees that they shall be deemed to form a part of the Contract:

No.	_____	Dated	_____
	_____		_____
	_____		_____

9. Time This offer shall be open for acceptance, binding and irrevocable for a period of sixty (60) Calendar Days following the Submission Deadline.

10. Signatures The Bidder or the Bidder's authorized official or officials have signed this _____ Day of _____, 20_____.

Signature of Bidder or
Bidder's Authorized Official or Officials

(Print here name and official capacity of individual whose signature appears above)

(Print here name and official capacity of individual whose signature appears above)

FORM B: PRICES
(See B9)

**SUPPLY & DELIVERY OF A CLASS 7 TRUCK WITH A CONTRACTOR BODY AND ARTICULATING
CRANE**

UNIT PRICES

ITEM NO.	DESCRIPTION	SPEC. REF.	UNIT	QUANTITY	UNIT PRICE
1.	33,000 lbs. GVWR Extended Cab and Chassis	17037	Each	1	
2.	13 ft. x 8 ft. Contractor Body	17037	Each	1	
3.	30,000 ft-lb Articulating Crane	17037	Each	1	

Name of Bidder

FORM N: DETAILED SPECIFICATIONS 17037

33,000 LBS. GVWR EXTENDED CAB AND CHASSIS TRUCK WITH A CONTRACTOR BODY AND ARTICULATING CRANE

1.0 DESCRIPTION OF EQUIPMENT/APPLICATION

- 1.1 These specifications describe a 33,000 lbs. GVWR Extended Cab and Chassis Truck complete with a 13' x 8 Contractor Body and 30,000 ft-lb Articulating Crane. This unit is an integral portion of the City of Winnipeg's Civil Maintenance of the Water and Waste Department. This vehicle is will be tasked with responsibilities of transporting, hauling and lifting of equipment, pump motors, shafts, pipes, gates and valves, within the City of Winnipeg. This unit is also required to tow a trailer i.e. skid steer trailer. Below are photos of the current service truck and similar type of trailer.



- 1.2 The **Truck** and all other items/components shall be new 2017 model year or newer.
- 1.3 The **Truck** and all other items/components shall be the manufacturer's latest model. The equipment shall be furnished complete and ready for operation. Any parts or accessories not specifically mentioned, but which are required to complete and place the equipment and associated attachments in successful operation shall be furnished as though specifically mentioned in these specifications. The equipment and associated and attachments, and all parts thereof, shall conform in strength and quality of material and workmanship, to the best standards and engineering practice of the industry.

2.0 OTHER SPECIFICATIONS AND STANDARDS

- 2.1 All applicable SAE standards form an integral part of these specifications and shall have precedence in any conflict concerning minimum acceptable standards.

- 2.2 The **Truck** shall comply with the applicable regulations:

- Highway Traffic Act
- Manitoba Motor Vehicle Act
- Canadian Motor Vehicle Safety Standards, CMVSS Transport Canada
- National Safety Mark, NSM
- Manitoba/Winnipeg Safety and Health Act, Parts 12, 22
- Canadian Standards Association, CSA
- Under Writers of Canada, U/L
- Society of Automotive Engineers, SAE
- City of Winnipeg Lighting Visibility Standard=<http://winnipeg.ca/matmgt/pdfs/PublicWorksEquipLightingVisibility.pdf>.

- 2.3 It will be the responsibility of the Bidder to inform the City of any deficiencies in these specifications, for under this Contract the Contractor shall be held responsible for the design, performance, reliability and satisfactory operational function of the units.

- 2.4 The manufacturer/installer shall be a certified vehicle completer and must affix their National Safety Mark (NSM) certification sticker on each unit.

State: NSM number: _____

3.0 SERVICE FACILITY

- 3.1 For the purpose of warranty repairs, the supplier shall have an authorized service facility located within 10 kilometres of the boundaries of the City of Winnipeg. The facility, or a portion thereof, shall be dedicated to the service and maintenance of the type equipment being offered. Further to B11, Bidders shall provide a description of the service facility including, but not limited to, number of qualified service staff, years of service experience, and general service capabilities within three (3) Business Days upon request of the Contract Administrator.

4.0 REFERENCES

- 4.1 If available, please provide five (5) Canadian references where this equipment is used in a working environment where climatic conditions are similar to the City of Winnipeg.

5.0 MAKE & MODEL

- 5.1 **State** make and model of the **Truck** being bid: _____

6.0 INSTRUCTIONS FOR COMPLETION OF SPECIFICATIONS

- 6.1 Each bid will be evaluated based on adherence to all terms, conditions and requirements outlined in the Bid Opportunity package.

- 6.2 All items in these specifications must be answered indicating compliance or non-compliance. **BIDDERS SHALL STATE: "YES" FOR COMPLIANCE OR STATE: DEVIATION**, or give reply where requested to do so. Deviations shall be clearly stated and fully detailed. Alternatives will be considered subject to evaluation.

- 6.3 **EACH BIDDER IS REQUIRED TO FILL IN EVERY BLANK. FAILURE TO DO SO MAY BE USED AS A BASIS FOR REJECTION OF BID**

7.0 PERFORMANCE RELIABILITY

- 7.1 The responsibility for the design of the **Truck**, its performance and reliability shall rest upon the Contractor.

- 7.2 The term "repeated failures" as used herein is defined to mean that the same component, subassembly, or assembly develops repeated defects, breakdowns and/or malfunctions rendering the vehicle inoperative, or requiring repeated shop correction, service and/or replacement during the warranty period applicable for said component, subassembly, of assembly. Minor items or ordinary service adjustments are not included, or considered under the scope of "repeated failures", as well as other factors, such as operational damage due to accidents, misuse or lack of proper maintenance, service and lubrication attention by not following the manufacturer's preventative maintenance schedule.

- 7.3 Where the **Truck** develops “repeated failures” in service, the Contractor shall make any necessary engineering changes, repairs, alterations or modifications in order to guarantee reliability of performance.
- 7.4 The equipment shall be capable of consistent top performance in City of Winnipeg Environment. **Note: The City of Winnipeg has four seasons with ambient temperatures ranging from approximately 90°F (32°C) to -40°F (-40°C)**

8.0 FUEL

- 8.1 The **Truck** must be fully fuelled upon delivery (**no exceptions**).

9.0 QUALIFICATIONS OF MANUFACTURER & CONTRACTOR

- 9.1 The manufacturer shall have five (5) years continuous experience manufacturing **Trucks** of the type being offered.
- 9.2 The manufacturer shall have in effect a documented quality control program ensuring that the quality of materials and workmanship, including welding, conforms to the best standards and engineering practice of the industry.
- 9.3 The Contractor shall have five (5) years continuous experience servicing, repairing and maintaining **Trucks** of the type being offered.

10.0 SPECIFICATIONS:

CHASSIS: _____

- 10.1 Weights: _____

The Trucks shall not exceed the City of Winnipeg’s limit for gross vehicle weight, axle and tire loads

Note: The City of Winnipeg and the Province of Manitoba limits the gross vehicle weight and axle and tire loads to:

- Front axle (steering axle) – 7300 kg (16,094 lbs.)
- Rear axle (tandem axle) – 9100 kg (20,056 lbs.)
- Tire load – 9 kilograms for each millimeter width of tire (approximately 500 lbs. per inch of tire width).

- 10.2 Weigh Scale Ticket: _____

The Contractor shall provide a certified weigh scale ticket upon delivery of the completed unit. The scale ticket shall include front and rear axle weights including two (2) operators, and all attachments and full of fuel.

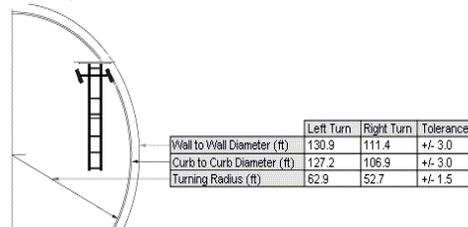
- 10.3 GVWR
 - GVWR Total 33,000 lbs.
 - GVWR Front 12,000 lbs.
 - GVWR Rear 21,000 lbs. _____

- 10.4 Cab **Extended Cab** w/corrosion inhibitor _____

- 10.5 Cab to Axle As required for a 13' x 8' Contractor Body and a HIAB 055 CLX crane _____
State:

- 10.6 Wheelbase As required for a 13' x 8' Contractor Body and a HIAB 055 CLX crane
State: _____
- 10.7 After-Frame As required for a 13' x 8' Contractor Body and a HIAB 055 CLX crane
State: _____
- 10.8 Bumper to Back of Cab BBC: Approximately 132 in.
State: _____
- 10.9 Turning Radius Turning Radius.
State: the vehicle turning radius _____

Example:



- a) **Wall to Wall (ft.)**
- b) **Curb to Curb(ft.)-**
- c) **Turning Radius (ft.)-**

- 10.10 Engine Tier IV Final Diesel, inline 6-cylinder _____
- 10.11 Horsepower 300 HP gross _____
- 10.12 Torque 860 lb-ft torque _____
- 10.13 Engine Shut Down Low oil pressure / high water temperature _____
- 10.14 Air Intake Warmer / Glow Plugs **Required:** _____
- 10.15 Fuel Shut-off Electric solenoid type _____
- 10.16 Air Intake Dual Stage type _____
- 10.17 Air Cleaner Dual stage air cleaner _____
- 10.18 Air Intake Restriction Dash mounted restriction indicator _____
- 10.19 Oil Drain Plug Magnetic type _____
- 10.20 Oil Filter Full flow, spin-on type _____
- 10.21 Fuel Filter Spin-on type _____
- 10.22 Fuel/Water Separator Heated, drainable under hood _____
- 10.23 Fuel Line Primer Pump Manual or Electric
State: _____
- 10.24 Block Heater Immersion type, 1000 Watt with covered recessed male plug, located under driver's side door _____
- 10.25 Radiator Aluminum 1000-1200 square inch _____

10.26	Coolant	Extended Life coolant, antifreeze to -35°F 37°C)	_____
10.27	Coolant Filter	Required:	_____
10.28	Coolant Hoses	Silicone type or Gates Blue Stripe	_____
10.29	Fan Drive	Thermostatically controlled, automatic type with dash switch	_____
10.30	Air Compressor	Water cooled, pressure lubricated, 15-18 cfm	_____
10.31	Electrical Connectors	Plug-in, sealed type	_____
10.32	Anti-Corrosion Electrical Package	Preferred: Controllers and sensitive electrical components (PCM, Harnesses etc.) mounted in cab State: locations	_____
			
10.33	Alternator	160-190 Amp brushless type	_____
10.34	Starter	With over crank protect and thermal protection	_____
10.35	Circuit Breakers	Auto-reset, readily accessible	_____
10.36	Batteries/Battery Location	Three (3) batteries, 12-volt, group 31, approx. 2700-2850 CCA combined Preferably located under steps. Batteries not to impede with the installation of a 13' x 8' Contractor Body and a HIAB 055 CLX crane State: location	_____
10.37	Battery Disconnect	Required: In-cab mounted outboard of driver's seat on the floor State: location	_____
10.38	Battery Boost Terminal(s)	Remote battery boosts terminal(s) Located to protect from road spray. Outside of Battery Box to face front of the body State: location	_____
10.39	Cab Marker Lights	LED Cab or Sun Visor Marker lights	_____
10.40	2-way Radio Circuit	Independent 20 Amp circuit, ignition powered, wired under dash loose, labelled	_____
10.41	Accessory Switches	Six (6) required. All switches complete and wired for body installation, labeled and backlit	_____

10.42	Exhaust	Passenger side under chassis exhaust. Configuration as required for a 13' x 8' Contractor Body and a HIAB 055 CLX Crane. Not to impede with the HIAB functionality	_____
		State: type and location	
10.43	Transmission	<ul style="list-style-type: none">Allison 3500 RDS with 6-speed programmingRatio shall be as per inter-city transport application.Transmission shall come with load base Management Programming.Bidder shall provide Allison SCAAN with bid.	_____
10.44	Transmission Fluids	Synthetic	_____
10.45	Shift Selector	Digital push-button type, dash mounted	_____
10.46	Cooling Capacity	Water to oil transmission cooler, as per manufacturer's recommendation for severe duty cycle	_____
10.47	Oil Level Dipstick	Bayonet type with high and low level markings	_____
10.48	Transmission Drain Plug	Magnetic type	_____
10.49	Front Axle	Set back axle , Meritor 12,000 lbs. capacity, with synthetic fluid.	_____
10.50	Rear Axle	Meritor 21,000 lbs. capacity, with synthetic fluid.	_____
10.51	Ratio	For 110 km/hr State: ratio	_____
10.52	Inter-Axle Lock	Required w/dash mounted switch	_____
10.53	Differential Lock	Required for drive axle with dash mounted switch	_____
10.54	Hub Seals	Oil lubricated front and rear type	_____
10.55	Front Suspension	Multi-leaf spring suspension, 12,000 lbs. capacity	_____
10.56	Rear Suspension	Air ride suspension, 21,000 lbs. capacity, axle, shall be as recommended for a 13' x 8' Contractor Body and HIAB 055 CLX crane application	_____
10.57	Suspension Control Valve	Manual dump valve for air suspension complete with dash mounted switch, indicator light, gauge and buzzer	_____

10.58	Front Wheels	Aluminum, hub piloted, rated for requested GVWR	_____
10.59	Rear Wheels	Aluminum, hub piloted, rated for requested GVWR	_____
10.60	Hubs	Aluminum material	_____
10.61	Wheel Nut Indicators	Required: on all wheel nuts	_____
10.62	Front Tires	11R 22.5 16 ply, snow, mud and ice rated for requested GVWR and application	_____
10.63	Rear Tires	11R 22.5 16 ply, snow, mud and ice rated for requested GVWR and application	_____
10.64	Frame	Single rail	_____
10.65	Frame/Cross Member Rust Inhibitor	Required: State: make and type	_____
10.66	Chassis Fasteners	Grade-8 threaded hex headed frame fasteners	_____
10.67	Steering	Tilt and telescopic, power, rated for front GVWR rating. Reservoir approx. 2 quart with see through tank.	_____
10.68	Brakes	Air Brakes	_____
10.69	Dust Shields	Required: front and rear	_____
10.70	Air Tank(s)	Shall be aluminum air reservoirs	_____
10.71	Moisture Ejector	Wabco, heated, required in all air tanks	_____
10.72	Drain Valves	Manual, chain or cable operated, required on each air tank	_____
10.73	Air Dryer	Wabco Heated System Save 1200	_____
10.74	Fuel Tank	Single 50 US gallon (190 L) fuel tank. Tank shall be fully fuelled upon delivery. Shall not impede in the installation of a 13' x 8' Contractor Body and a HIAB 055 CLX crane State: fuel capacity	_____
10.75	Tank Straps	Aluminum or Steel straps with 1/16 in. rubber or neoprene isolators to prevent galvanic corrosion	_____
10.76	Cab Construction	Aluminum or galvanized steel construction	_____
10.77	Cab Mounts	Air suspension	_____
10.78	Hood	High visibility hood	_____

10.79	Hood Fender Extensions	2 – 3 in. front fender extensions	_____
10.80	Front Grille	Stationary mounted to hood	_____
10.81	Cab Interior / Trim	Extreme climate insulation including cloth or vinyl headliner on roof, door panels and rear interior of cab	_____
10.82	Cab Silencer Package	Required for minimal decibel level	_____
10.83	Hood/Firewall/Engine Insulations	Insulated hood liner, engine cover and firewall	_____
10.84	Floor Covering	Rubber mat with under-padding	_____
10.85	Floor Mats	Winter, heavy duty floor mats for front and back seats	_____
10.86	Driver's Seat	High back, air suspension w/foldable armrests, heavy-duty cloth upholstery, Cordura or equal	_____
10.87	Passenger Seat	High back, air suspension w/foldable armrests, heavy-duty cloth upholstery, Cordura or equal	_____
10.88	Rear Seat	Rear Bench	_____
10.89	Sun Visors	Dual flip-up type	_____
10.90	12-Volt Power Outlet	Two (2) required with independent circuit	_____
10.91	Radio	Factory installed AM/FM/ with "hand free" Blue Tooth capability	_____
10.92	Starter Switch	Key operated c/w three (3) sets of keys	_____
10.93	Interior Light	Dome light with driver and passenger door switches	_____
10.94	Heater / Defroster	High output, capable of keeping all windows clear at an outside temperature of (-40°C)	_____
10.95	Air Conditioning	Required:	_____
10.96	Brake, Accelerator, Pedals	Floor or hanging type brake and accelerator pedal. State:	_____
10.97	Horn	Dual electric	_____
10.98	Exterior Mirrors	Mirrors heated, lighted, 4-way motorized adjustment (with convex mirrors), suitable for 102 in. equipment width	_____
10.99	Down-View Mirror	Required over passenger door Approximately 5 in. x 4 in.	_____
10.100	Windows & Windshield	Tinted	_____

10.101	Power Windows	Power driver and passenger side	_____
10.102	Doors	Power door locks	_____
10.103	Windshield Wipers	Electric intermittent	_____
10.104	Wiper Blades	Heavy duty reflex style	_____
10.105	Windshield Washers	Electric, required with spray nozzles on wiper blades	_____
10.106	Grab Handles	Dual exterior	_____
10.107	Grab Handles	Dual Interior	_____
10.108	Entrance Steps	Dual each side, open grate / grip type	_____
10.109	Winter Front	Heavy-duty vinyl with twist lock or snap type fasteners	_____
10.110	Exterior Sun Visor	Required	_____
10.111	Strobe LED Lights	Roof mounted amber SAE J845 compliant LED light round or rectangular in shape	_____
10.112	Instrumentation	<ul style="list-style-type: none"> • Oil Pressure Gauge • Coolant Temperature Gauge • Transmission Oil Temperature Gauge • Voltmeter Gauge • Air Reservoir Pressure Gauge with LAP Warning Light And Buzzer • Low Oil Pressure • High Water Temperature Warning Light and Buzzer • Non-Resettable Type Engine Hour-Meter 	_____
10.113	Tow Hooks	Front and Rear mounted	_____
10.114	Exterior Colour	White	_____
10.115	Interior Colour	Grey	_____
10.116	Flare Kit	Three (3) triangular reflectors, CVSA approved. Kit must be mounted or secured.	_____
10.117	Fire Extinguisher	5 lbs. Fire Extinguisher ABC type installed and secured. State: location	_____
10.118	Back-up Camera	Required with dash mounted monitor.	_____

CRANE

10.119 Requirements: _____

HIAB 055 CLX

All Dimensions are approximate

Lifting capacities

- 8'2" – 4280 lbs.
- 12'10" – 2780 lbs.
- 17'9" - 1940 lbs.
- 23'7" - 1460 lbs.

Hydraulic outreach – 23'11"

Working pressure – 3480 psi

Stewing speed – 15 degrees / second

Lift speed at hydraulic outreach – 4'3" ft. / second

Height in folded position – 75"

Width in folded position – 79"

Crane to be sold, installed and serviced by an authorized dealer

- | | | | |
|--------|---|---|-------|
| 10.120 | Make and Model | State: | _____ |
| 10.121 | Crane Rating | State: | _____ |
| 10.122 | Mounting Space | Approximately 86 cm (34 in)
State: | _____ |
| 10.123 | Overall Width
Outriggers Retracted | State: | _____ |
| 10.124 | Overall Width
Outriggers Extended | State: | _____ |
| 10.125 | Installed Weight | State: | _____ |
| 10.126 | Stowed Height Above Truck Frame | State: | _____ |
| 10.127 | Horizontal Reach – From
Centreline of Rotation | Hydraulically extendable to
approximately 7.0 m (23 ft.)
State: | _____ |
| 10.128 | Vertical Lift Above Ground | State: | _____ |
| 10.129 | Rotation | Power, 360 degrees | _____ |
| 10.130 | Outriggers | Hydraulically controlled extendable out
and down | _____ |
| 10.131 | Outrigger Controls | Required: outrigger control station on
each side of vehicle | _____ |
| 10.132 | Crane Controls | Complete control station on each side of
vehicle with wireless remote including the
cable attachment for the remote | _____ |
| 10.133 | Crane Control Labels | All crane controls to labelled with
permanent labels | _____ |
| 10.134 | Control Levers | Horizontally positioned, self-centering,
mounted at truck frame height | _____ |

- | | | | |
|--------|--|--|-------|
| 10.135 | Boom Hook | Required at boom tip
Capacity to meet or exceed maximum lifting capacity of crane, complete with safety latch | _____ |
| 10.136 | Crane Hydraulic Cylinders | Equipped with holding and/or counterbalance valves | _____ |
| 10.137 | The crane shall be installed with frame spacers and additional cross members as required | | _____ |

CONTRACTOR BODY SPECIFICATIONS

BODY

- | | | | |
|--------|---------------------|--|-------|
| 10.138 | Outside Body Length | Nominal 4.0 m (13 ft.) | _____ |
| 10.139 | Inside Body Length | Approximately 3.8 m (12 ft. 6 in) approx. | _____ |
| 10.140 | Outside Body Width | To match chassis track width.
Nominal 244 cm (8 ft.) | _____ |
| 10.141 | Inside Body Width | Approximately 229 cm (7 ft. 6 in) | _____ |
| 10.142 | Material | All material used in construction of the body to be 3/16 in., Hardox or equivalent | _____ |

10.143 **FLOOR**

- | | | | |
|--------|---|--|-------|
| 10.144 | Standard:
7 in. structural channel on long sills
4 in. I-Beam Cross-members on approximately 12 in. - 16 in. centres
3/16 in. Smooth Steel Floor | | _____ |
| 10.145 | Front and Side Rails | 5 in. x 3 in. x ¼ in. Angle Iron | _____ |
| 10.146 | Rear Rail | 7 in. C-Channel inverted to protect lights | _____ |
| 10.147 | Mounting Beams | 8 in. C-Channel | _____ |
| 10.148 | Rear Corner Posts | Formed 10 Gauge | _____ |

FRONT

- | | | | |
|--------|-------------------|---|-------|
| 10.149 | Construction | Heavy duty steel front with angled corners with 3/16 in. sheeting on 3 in x 3 in x .150 tubular frames. | _____ |
| 10.150 | Front Section | Constructed without a cab shield and shall have vertical and/or horizontal reinforcement ribs | _____ |
| 10.151 | Top Rail | Structural or formed top reinforcement rail | _____ |
| 10.152 | Front Wall Height | Approximately 106 cm (42 in.) measured from the frame
Not to impede with crane operation.
State: | _____ |

SIDES

10.153	Type	Two (2) fold-down sides per side, 12 gauge steel c/w front, middle and rear corner pillars	_____
10.154	Sides	Fold-down for ease of access to payload from the side of the body operated by a single lever per section	_____
10.155	Construction	Sides shall have vertical or horizontal formed reinforcement ribs	_____
10.156	Side Wall Height	Approximately 46 cm (18 in.) measured from the floor State:	_____
10.157	Top Rail	Heavy duty, approx. 4 in. x 6 in. x 3/16 in	_____
10.158	Bottom Rail	Self-cleaning	_____
10.159	Corner Pillars	Approximately 15 cm x 10 cm (6 in. x 4 in.) min., heavy duty formed or structural steel	_____
10.160	Latches	Each side section shall have a double latch design, latching on each side of the section	_____
10.161	Plank Pockets	Approximately 9 in.	_____
10.162	Plank Gussets	5 cm x 15 cm (2 in. x 6 in.) planks with 13 mm (0.5 in.) diameter bolt holes	_____
10.163	Planks	5 cm x 15 cm (2 in. x 6 in.) composite planks, installed in gussets	_____
10.164	Rear Post Material	3 in. x 3 in. steel tubing	_____
10.165	<u>TAILGATE</u>		
10.166	Fold Down Tailgate	Tailgate able to open from the top only. Hinged at bottom	_____
10.167	Construction	Formed construction with one or two equally spaced horizontal rib(s), and a self-cleaning bottom rail.	_____
10.168	Reinforcement	Shall be reinforced as required with either heavy duty (min. 3/8 in.) end plates, or 6.35 mm (1/4 in.) steel tubing.	_____
10.169	Gaps	Shall be no gap between tailgate and the floor and sides when tailgate is in the closed or horizontal position	_____

10.170	Location	Shall not protrude above floor in horizontal or full down position.	_____
10.171	Tailgate Height	Approximately 71 cm (28 in.) measured from the floor State:	_____
10.172	Inner Panel	Approximately 10 Gauge	_____
10.173	Outer Panel	Approximately 14 Gauge	_____
10.174	Trip Lever	Driver's side with adjustable linkage	_____
10.175	Locking Mechanism	Shall be adjustable to ensure adequate lock-up with tailgate closed	_____
10.176	Support and Spreader Chains	3/8 in. transport grade 70, adequately fastened c/w chain storage and two (2) removable links per chain and equipped with a protective cover	_____
10.177	Top Tailgate Anchor Pins	32 mm (1 1/4 in.) diameter. Greaseable	_____
10.178	Top Tailgate Anchor Pin Release	One (1) manually actuated release lever releasing both upper pins. Greaseable	_____

TIE DOWNS AND LADDERS

10.179	Tie Downs	Six (6) required, three (3) per side located on inside of body. Tie downs shall be counter sunk with D-rings. Exact locations to be determined upon a pre-production meeting.	_____
10.180	Access Ladders	Two (2) required, bolt-on design One (1) located front curb-side corner One (1) located front driver's side corner.	_____
10.181	Ladder Rungs	Traction type rungs 13-gauge steel, 2 1/4 in. width 2 or 4-hole design Traction Tread Products or equal.	_____
10.182	Ladder Rungs Location	First rung to be 18-22 in. from ground level Approximately 14 in. rung spacing to top of body. Exact location to be determined upon pre-production meeting.	_____
10.183	Grab Handles	Located for ergonomic access to top of box.	_____

HYDRAULICS

10.184	Hydraulic System	Shall be designed to accommodate the crane	_____
10.185	PTO	Muncie electric/hydraulic power shift	_____
10.186	Electric/Hydraulic Power Shift	Operable from a normal driving position	_____
10.187	Warning Light	Shall show PTO engaged	_____
10.188	Hydraulic Pump	Sufficient capacity to operate all crane functions	_____
10.189	Hydraulic Pump	State: Make and Model	_____
10.190	Hydraulic Pump	State: GPM and Pressure Rating	_____
10.191	Pump Drive	Close coupled or drive shaft driven State:	_____
10.192	Hydraulic Oil Reservoir	Steel construction, baffled as required State: Capacity	_____
10.193	Location	Chassis frame mounted State: Location	_____
10.194	Level Gauge	Glass sight type, mounted in readily visible location	_____
10.195	Suction Strainer	100 micron, replaceable, in tank mounted	_____
10.196	Oil Filler	Top mounted with steel strainer and snapping retainer	_____
10.197	Filler Cap	Breather type with filter	_____
10.198	Drain Plug	13 mm (½ in.) diameter min	_____
10.199	Reservoir	Shall be clearly labelled "Hydraulic Oil" with a permanent type, engraved style label	_____
10.200	Relief Valve	State: Pressure setting	_____
10.201	Return Oil Filter	10 micron, spin-on type return line filter, serviceable without oil loss, sized to match hydraulic requirements of crane	_____
10.202	Shut-Off Valve	Ball type, located between reservoir and pump, secured in open position with a bracket and bolt	_____
10.203	Hydraulic Hoses	Wire braid reinforced, rated for system operating pressure with 4 to 1 safety factor for burst pressure	_____
10.204	Hydraulic Hoses	To be protected at wear and scuff location	_____

- 10.205 Hose Fittings Hydraulic full flow, crimp-on (non-reusable) type _____
- 10.206 Hydraulic Oil Supplied in accordance with crane manufacturer's recommendations and requirements _____

ELECTRICAL & LIGHTING

- 10.207 Conformance All lighting to conform to C.M.V.S.S. and Manitoba Highway Traffic Act. _____
- 10.208 Lighting Supplier installed shall be **high count** Class 1 LED lighting and shall be Truck-Lite, Grote, Whelen **or equivalent** _____
- 10.209 Grommets Rubber grommets required. _____
- 10.210 Combination Turn/Stop And Taillights One (1) per side with mounting grommets _____
- 10.211 Back-Up Lights One (1) per side with mounting grommets. _____
- 10.212 Light Cluster Three (3) with mounting grommets, located to be protected from damage. _____
- 10.213 Rear Light Mounting Location Taillights, back-up lights, 3-light cluster and rear-corner mounted clearance lights shall be mounted in the rear sill of the body. _____



- 10.214 Clearance Lamps High count LED with mounting grommets. _____
- 10.215 Clearance Lamp Mounting Locations
 Front – two (2), located one on each bottom corner _____
 Sides – two (2) per side, located on front and rear bottom corners. _____
 Rear – two (2), located one on each bottom corner. _____
- 10.216 Standard No clearance light shall protrude beyond the body. _____
- 10.217 Standard Taillights and back-up lights shall be fully visible when tailgate is lowered to horizontal position. _____

10.218	Licence Plate Lamp	LED and complete with licence plate bracket mounted on rear sill	_____
10.219	Harnesses	Harness system, properly routed and secured. All harnesses shall be internally grounded, no exceptions.	_____
10.220	All Plug-In Connectors	All plug-in connectors shall be coated with NYK compound prior to assembly.	_____
10.221	Back-Up Alarm	97 dBA installed near rear of body, located to be protected from damage.	_____
10.222	Wiring	All LED strobe lights shall be wired "Live", wired through a single OEM dash mounted switch or on the control panel enclosure, labelled "Strobes" with a permanent type, engraved style label. All wiring for back-up alarm, warning lights, strobes and trailer connector shall be colour coded, loomed and properly secured.	_____ _____
10.223	Trailer Connector	SAE J560 6-way round pin primary trailer receptacle. Wired through chassis manufacturers OEM auxiliary circuit, and installed in rear trailer hitch plate	_____
10.224	Electrical Connectors	All electrical connectors shall be <u>crimped and soldered</u> , and then sealed using heat shrink tubing.	_____
10.225	Joining of Wires	All joining of wires shall be <u>soldered</u> and sealed using heat shrink tubing or approved OEM weather tight connections (crimp on electrical connectors for joining wires are not acceptable).	_____
10.226	Wiring Routing	Any holes required to run wires through shall be drilled (not punched), grommeted and sealed as required.	_____
	<u>WELDING</u>		
10.227	Standard	All welds shall be continuous welds. All welding performed shall conform to CSA Standard W47.1-03 and W59-03.	_____

INSTALLATION

10.228 Drilling Any holes required in the chassis frame web must be drilled and reamed to fit bolts. _____

10.229 Standard Drilling on chassis frame flanges is not permitted.
Welding on the chassis frame is not permitted, with the exception of installation of body pivot support. _____

10.230 Tire Clearance Three (3) inches with rear suspension air bags lowered. _____

MISCELLANEOUS

10.231 Rear Hitch Plate ½ in. thick solid steel, (laminated plates unacceptable) installed to chassis frame. _____

Preferred: No Over Hang



Design and installation to be determined at pre-production meeting.

10.232 "A" Frame Hitch Reinforcement 3 in. x 3 in. x ¼ in. angle iron, welded to back of hitch plate and bolted to chassis frame web. _____

Design and installation to be determined at pre-production meeting.

10.233 Rear Hitch Plate – Optional Design

Fabricate and bolt-on _____



Design and installation to be determined at pre-production meeting.

10.234 Pintle Hitch/Ball

Combination Pintle/Ball Hitch, adjustable in height type, installed on hitch plate at approximately 24 in. height. _____



10.235 Lunette Eyes For Trailer Safety Chains

One (1) each side of hitch, Buyers Products or equal. _____

10.236 Rear Fenders

Heavy Duty rear poly half-moon fenders. _____



10.237 Mud Flaps

Black rubber, no-name, required front and rear of back tires c/w anti-sail bracket on each mud-flap. _____

10.238 Rear Mud Flaps

Required: _____

10.239 Front bumper Markers

Front bumper extensions _____

10.240 Grease Fittings

Required on side and tailgate release mechanisms, pivot points and tailgate as required. _____

10.241 Isolators

All interfaces between aluminium and steel shall be separated by approximately 1/16 in. thick rubber or neoprene sheet and are to be bolted through with stainless steel bolts and non-conductive bushings

TOOLBOXES

10.242 Tool Boxes

Two (2) Aluminum Tool Boxes required mounted on driver and passenger side frame.

Approximately 24 in. x 24 in. x 48 in. Barn Door style doors.

State: dimensions, material, and recommended location as set by the manufacturer



FINISH

10.243 Finish

All hitch plates, reservoirs, steel brackets, etc. shall be sandblasted, properly cleaned, primed and finished with the Endura paint process as follows:

10.244 Primer

DuPont or Endura EP32 Intermix Epoxy Primer. Thickness 3 – 5 mils

10.245 Paint

3 - 5 mils of Endura EX-2C Topcoat or DuPont, black for a total paint profile spec of 6 – 10 mils

12.0 **DELIVERY**

12.1 Delivery Point: The complete unit shall be serviced, ready for operation and delivered F.O.B. with the freight prepaid, including invoice and N.I.V.S. (if applicable) to the WFMA 185 Tecumseh Street, Winnipeg MB. The successful bidder shall be notified by the Contractor Administrator the delivery address prior to issuance of the purchase order _____

12.2 Delivery Time: Equipment shall be delivered between 8:00 am and 2:00 pm on Business Days no later than **November 15th, 2017**. _____

12.3 Delivery Contact: The Contractor shall contact the Contract Administrator prior to delivery of the equipment. _____

12.4 P.D.I: A pre-delivery inspection shall be performed by the Contractor on the equipment. Proof upon inspection including completed check list _____

13.0 **MANUALS**

13.1 Manuals supplied under this Contract shall cover the complete equipment including all components thereof, CD or USB flash drive is preferred where available. _____

13.2 The following manuals shall be supplied with the units when delivered:

a) Operator's Manual – Two (2) per unit (one operator manual shall be sent to the Equipment Operator Training Branch) _____

b) Parts and Service Manuals – One (1) complete set including preventative maintenance schedules. CDs or USB flash drive are preferred. _____

14.0 **PARTS/LABOUR DISCOUNT**

14.1 Bidder to provide City of Winnipeg Parts Discount % Pricing from retail parts pricing. **State: percentage discount** _____%

14.2 Bidder to provide City of Winnipeg Labor Discount % Pricing from Retail shop labor rate. **State: percentage discount** _____%

15.0 **FIRST SERVICE PREVENTATIVE MAINTENANCE KIT**

15.1 In order to assure minimum downtime of the equipment in future service, the Contractor shall provide for **the chassis only** one (1) complete replacement set of new OEM filters for each unit purchased. The set of required filters shall include (if applicable to the equipment type) air, fuel, oil, cab and hydraulic, or otherwise all known necessary common replacement filters required for the first preventative maintenance servicing. _____

15.2 The Contractor shall provide a list of factory recommended lubricants to be used with the equipment, as well as a complete cross reference guide for all warranty approved lubricants and filters that can be used during preventative maintenance servicing. _____

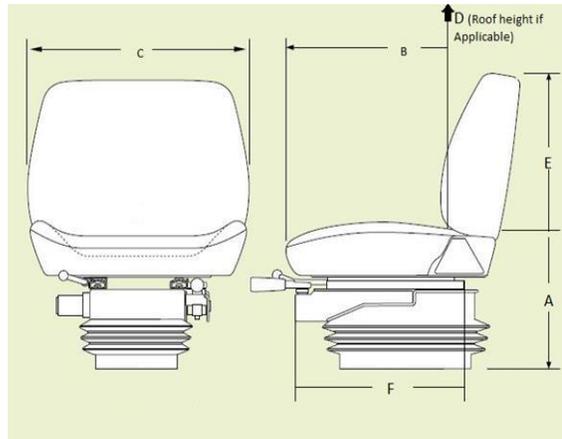
16.0 **ERGONOMIC SPECIFICATIONS**

Entry/ Exit

- | | | | |
|------|------------------------------|--|-------|
| 16.1 | First step entry height | State , height of first step in inches | _____ |
| 16.2 | First handhold entry height | State , first handhold entry height in inches | _____ |
| 16.3 | Access to equipment | State , door opening height in inches | _____ |
| 16.4 | Access to equipment | State , door opening width in inches | _____ |
| 16.5 | Designed to prevent slipping | Anti-slip steps/handholds (Y or N)? | _____ |

Seat

16.6 Use diagram to answer questions.



- | | | | |
|-------|---|---|-------|
| 16.7 | Sitting Height Range (from floor (where feet rest) (A)) | State , seat height range in inches | _____ |
| 16.8 | Seat Length/Depth (B) | State , seat length/depth in inches | _____ |
| 16.9 | Seat Width (C) | State , seat width in inches | _____ |
| 16.10 | Cab Height (from seat to roof (if applicable) (D)) | State , cab height range in inches | _____ |
| 16.11 | Back Rest Height (E) | State , back rest height in inches | _____ |
| 16.12 | Seat Travel Range (F) | State , seat travel in inches | _____ |
| 16.13 | Lumbar Support | Is lumbar support provided (Y or N)? | _____ |
| 16.14 | Head Rest | Is head rest provided (Y or N)? | _____ |
| 16.15 | Seat is made of breathable material | State , type of seat material | _____ |

Operation

- | | | | |
|-------|---|--|-------|
| 16.16 | Reaching Distance
(to usual work) | State , reaching distance in inches | _____ |
| 16.17 | Maximum Reaching
Distance | State , maximum reach distance in inches | _____ |
| 16.18 | Adjustable Pedals
(accelerator/brake/clutch) | Are pedals adjustable (Y or N)? | _____ |
| 16.19 | Adjustable Steering
Wheel | Is steering wheel adjustable (Y or N)? | _____ |
| 16.20 | Adjustable Shoulder Belt | Is belt adjustable and anchored (Y or N)? | _____ |

Cargo Area

- | | | | |
|-------|--|--|-------|
| 16.21 | Lid opens to provide
adequate space | Adequate space provided (Y or N)? | _____ |
| 16.22 | Loading Height | State , trunk height in inches | _____ |

Environment

- | | | | |
|-------|--|---|-------|
| 16.23 | Operator compartment is
insulated from equipment
noise (while operating) | State , dB inside cab while operating | _____ |
| 16.24 | Operator insulated from
equipment vibration | Is operator insulated from vibration (Y or N)? | _____ |
| 16.25 | Heating/Cooling Systems | State , cab temperature range | _____ |
| 16.26 | Cab Lighting | State , lumens inside cab | _____ |

Maintenance/ Inspection

- | | | | |
|-------|--|--|-------|
| 16.27 | Lift Assistance
(when necessary) | Is lift assistance provided (Y or N)? | _____ |
| 16.28 | Easy Access
(to compartment doors) | Is easy access provided (Y or N)? | _____ |
| 16.29 | Include any other relevant ergonomic specifications and applicable range of adjustment | | _____ |