

**FORM A: BID**  
(See B8)

1. Contract Title SUPPLY AND DELIVERY OF A WHEELED EXCAVATOR WITH HI-RAIL

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 Documents 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 By submitting a bid in response to this Tender, the Bidder certifies that it has read, understands, and agrees to the terms and conditions of this Tender and that the Tender, 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. Indigenous Self-Declaration The City is requesting that Bidders identify if their business is at least 51% owned by one or more Indigenous persons of Canada.

YES, 51% or more Indigenous ownership

NO, it is not

This information is being gathered for statistical purposes only and will not be used for purposes of evaluation.

11. 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 AND DELIVERY OF A WHEELED EXCAVATOR WITH HI-RAIL

**UNIT PRICES**

ITEM NO.	DESCRIPTION	SPEC. REF.	UNIT	QUANTITY	UNIT PRICE
1.	Wheeled Excavator	19019	Each	1	
1a.	Hi-Rail Assembly	19019	Each	1	
1b.	Tilt Ditching Bucket	19019	Each	1	
1c.	Digging Bucket	19019	Each	1	
1d.	Thumb	19019	Each	1	
1e.	Tamper	19019	Each	1	

\_\_\_\_\_  
Name of Bidder

## FORM N (R1): DETAILED SPECIFICATIONS 19019

### WHEELED EXCAVATOR WITH HI-RAIL

#### 1.0 DESCRIPTION OF EQUIPMENT

- 1.1 These specifications describe a Wheeled Excavator with Hi-Rail and other equipment and features as specified herein.
- 1.2 The Wheeled Excavator with Hi-Rail shall be a new 2019 model year or newer.
- 1.3 The Wheeled Excavator with Hi-Rail 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 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.
- 1.4 It will be the responsibility of the Bidder to inform the City of any errors or omissions in these specifications, for under this Contract the Contractor shall be held responsible for the satisfactory operational function of the equipment.

#### 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 Where applicable, the Wheeled Excavator with Hi-Rail shall comply with the applicable regulations:

Transport Canada, National Safety Mark, NSM:  
<http://www.tc.gc.ca/eng/acts-regulations/acts-road.htm>

Manitoba Safety and Health Regulation, Parts 12, 16, 22:  
<http://web2.gov.mb.ca/laws/regis/current/217.06.pdf>

Canadian Motor Vehicle Safety Standards C.M.V.S.S.:  
[http://laws-lois.justice.gc.ca/eng/regulations/C.R.C.,\\_c.\\_1038/section-sched3.html](http://laws-lois.justice.gc.ca/eng/regulations/C.R.C.,_c._1038/section-sched3.html)

Manitoba Highway Traffic Act regulations and requirements including, but not limited to, a Manitoba Government Inspection with Safety Sticker:  
<http://web2.gov.mb.ca/laws/regis/index.php?act=h60>

Canadian Standards Association, CSA:  
<http://www.csagroup.org/>

Under Writers of Canada, U/L:  
<http://www.ulc.ca/>

Society of Automotive Engineers, SAE:  
<http://www.sae.org/>

City of Winnipeg Lighting Visibility Standard:  
<http://winnipeg.ca/matmgt/pdfs/PublicWorksEquipLightingVisibility.pdf>

Manitoba Building Code:  
[https://web2.gov.mb.ca/laws/regis/current/\\_pdf-regis.php?reg=31/2011](https://web2.gov.mb.ca/laws/regis/current/_pdf-regis.php?reg=31/2011)

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.

**3.0 SERVICE FACILITY**

3.1 For the purpose of warranty repairs, the Bidder shall have an authorized service facility. The facility, or a portion thereof, shall be dedicated to the service and maintenance of the type equipment being offered. 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) references where this equipment is used in a working environment where climatic conditions are similar to the City of Winnipeg.

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**5.0 MAKE & MODEL**

5.1 **State** year, make and model 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 and/or equivalents shall be clearly stated and fully detailed. Deviations and/or equivalents will be considered subject to evaluation. In every instance where a brand name or design specification is used, the City will also consider deviations and/or equivalents.

**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 **Wheeled Excavator with Hi-Rail** 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 **Wheeled Excavator with Hi-Rail** 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 Where applicable, all equipment must be fully fueled upon delivery (no exceptions).

**9.0 QUALIFICATIONS OF MANUFACTURER & CONTRACTOR**

- 9.1 The manufacturer of the Wheeled Excavator with Hi-Rail shall have five (5) years continuous experience manufacturing Wheeled Excavator with Hi-Rail.
- 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 Wheeled Excavator with Hi-Rail of the type being offered.

10.0 **SPECIFICATIONS:**

**Requirement:**

The City of Winnipeg requires one (1) Wheeled Excavator with Hi-Rail meeting the following specifications:

- Model year: 2019 or newer
- Machine Operating Weight of approximately 40,000 – 45,000 lbs.
- One-Piece Boom
- HP: 150 – 175 HP
- High flow hydraulics to operate all attachments
- 30-foot reach
- 13,500 lbs. Lift Capacity over Front at Ground Level 20 ft. (6.1 m) Reach
- 8000 lbs. Lift Capacity over Side at Ground Level 20 ft. (6.1 m) Reach
- Front dozer blade with rear outriggers
- Hi-Rail installed

**Background:**

The Excavator will be used year-round in all types of terrain and extreme weather conditions

The Excavator will be used for:

- Brush cutting
- Drainage improvements
- Railway improvements

The following attachments will be required:

- Hi-Rail
- Tilt Ditching Bucket
- Digging Bucket
- Brush Cutter
- Thumb
- BTE 2-Motor Tamper
- BTE Extendable Tie Talon
- R60 Rototilt complete with PG-65 Coupler

**Note:**

The City of Winnipeg has four seasons with ambient temperatures ranging from approximately 90°F (32°C) to -40°F (-40°C)

**Make and Model**

10.1	Make	<b>State:</b>	_____
10.2	Model	<b>State:</b>	_____
10.3	Model Year	<b>State:</b>	_____

**Independent Travel System**

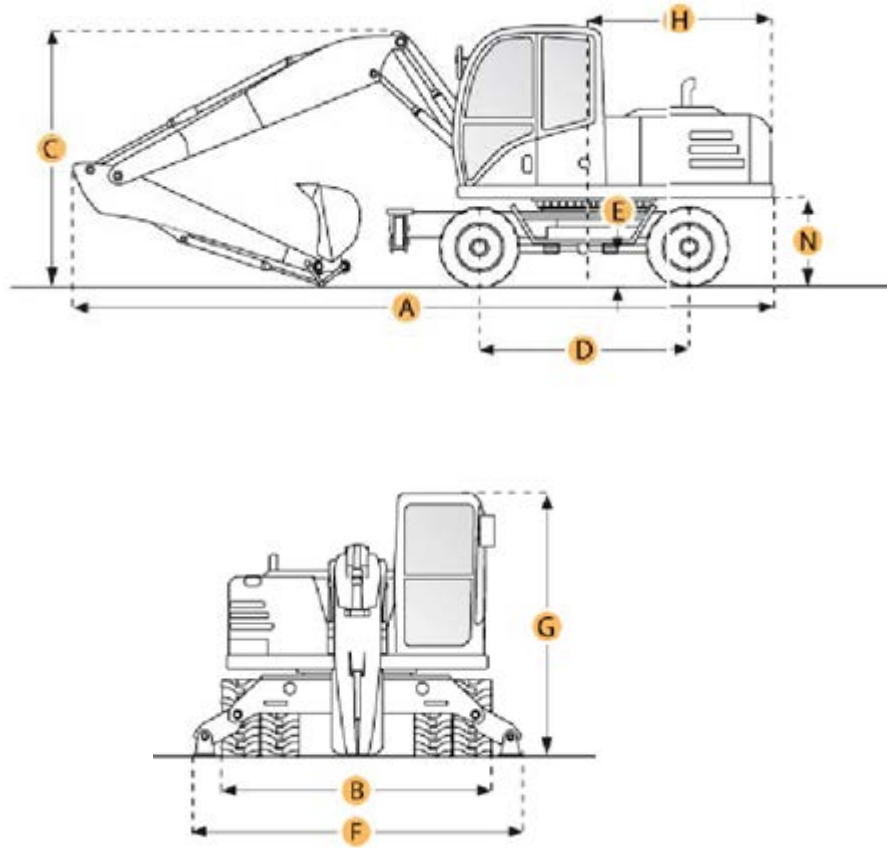
10.4	<b>Independent Travel:</b> Excavator to be equipped with an Independent Travel System or equivalent, which allows the machine to move, lift and swing simultaneously without experiencing a loss of power.	_____
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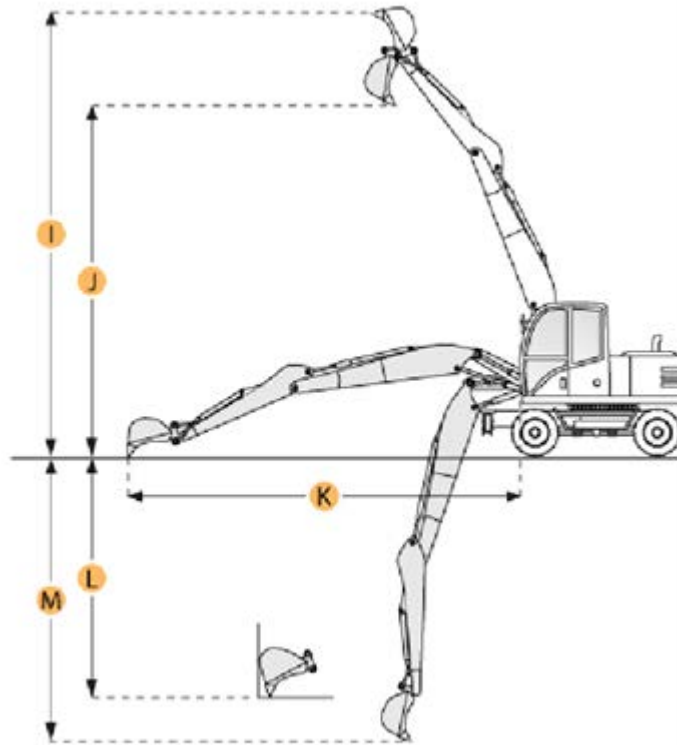
**State:** How the Excavator will achieve this requirement if not already stated in these specifications



### Working Ranges

Use the diagrams for specifications 10.5 to 10.18





10.5	Dimension A: Overall Length	<b>State:</b>	_____
10.6	Dimension B: Overall Width	Approximately 8 ft. 4 in. <b>State:</b>	_____
10.7	Dimension C: Overall Height	Approximately 10 ft. 3 in. <b>State:</b>	_____
10.8	Dimension D: Wheelbase	Approximately 8 ft. 8 in. <b>State:</b>	_____
10.9	Dimension E: Ground Clearance	Approximately 360 mm (1 ft. 2 in.) <b>State:</b>	_____
10.10	Dimension F: Overall Width – Outriggers Down	Approximately 3700 mm (12 ft. 2 in.) <b>State:</b>	_____
10.11	Dimension G: Height to Top of Cab	Approximately 3080 mm (10 ft. 1 in.) <b>State:</b>	_____
10.12	Dimension H: Tail Swing Radius	Approximately 2440 mm (8 ft.) <b>State:</b>	_____
10.13	Dimension I: Cutting Height	<b>State:</b>	_____
10.14	Dimension J: Dump Height	<b>State:</b>	_____
10.15	Dimension K: Reach Along Ground	Approximately 30 ft. <b>State:</b>	_____

10.16	Dimension L: Vertical Wall Dig Depth	<b>State:</b>	_____
10.17	Dimension M: Digging Depth	<b>State:</b>	_____
10.18	Dimension N: Upper Structure Clearance	<b>State:</b>	_____
10.19	Boom Length	Approximately 5350 mm (17 ft. 6 in.) <b>State:</b>	_____
10.20	Dipper (Arm, Stick) Length	Approximately 2500 mm (8 ft. 2 in.) <b>State:</b>	_____
<b>Performance</b>			
10.21	Operating Weight	Approximately 40,000 – 45,000 lbs. <b>State:</b>	_____
10.22	Arm Force	Approximately 20,000 lbf. (89 kN) <b>State:</b>	_____
10.23	Digging Force	Approximately 22,000 lbf. (98 kN) <b>State:</b>	_____
10.24	Lift Capacity over Front at Ground Level 20 ft. (6.1 m) Reach.	Approximately 13,500 lbs. (5900 kg) <b>State:</b>	_____
		The above lifting capacities are in compliance with SAE J/ISO 10567. They do not exceed 87 % of hydraulic lifting capacity or 75 % of tipping load.	
10.25	Lift Capacity over Side at Ground Level 20 ft. (6.1 m) Reach	Approximately 8000 lbs. (3630 kg) <b>State:</b>	_____
		The above lifting capacities are in compliance with SAE J/ISO 10567. They do not exceed 87 % of hydraulic lifting capacity or 75 % of tipping load.	
<b>Engine</b>			
10.26	Engine	Diesel <b>State:</b> Make: _____ Model: _____	_____
10.27	Emission Rating	Tier 4 Final Emission Compliant	_____
10.28	Diesel Exhaust Fluid (DEF) System	<b>State:</b>	_____
10.29	DEF Tank and Lines	Heating elements or equivalent system designed to thaw the DEF and keep it from freezing while the machine is in operation	_____
10.30	Horsepower (SAE Net Power)	Approximately 150 - 175 hp <b>State:</b>	_____

10.31	Cylinders	4 Cylinders <b>State:</b>	_____
10.32	Displacement	<b>State:</b>	_____
10.33	Torque	<b>State:</b>	_____
10.34	Auto Idle Feature	To reduce engine speed when hydraulics are not in use to reduce fuel consumption and noise <b>State:</b>	_____
10.35	Work Modes	<b>State:</b> number of work modes available	_____
10.36	Water Separator	Factory Installed <b>State:</b>	_____
10.37	Cold Weather Package	<ul style="list-style-type: none"><li>• All weather fluids</li><li>• Low temperature hydraulic oil</li><li>• Extended life coolant</li><li>• Block heater and cord</li><li>• Cold aid starts i.e. glow plugs</li><li>• Heavy duty maintenance free batteries</li></ul> <b>State:</b>	_____
10.38	Starter	24V starter motor <b>State:</b>	_____
10.39	Coolant	Extended life, protected to -40 <sup>0</sup> C <b>State:</b>	_____
10.40	Lubrication Pressure System	Full flow <b>State:</b>	_____
10.41	Oil Filter	Spin-on and removable <b>State:</b>	_____
10.42	Fuel Filter	<ul style="list-style-type: none"><li>• Removable</li><li>• Spin-on</li><li>• With water separator</li></ul> <b>State:</b>	_____
10.43	Air Filter	<ul style="list-style-type: none"><li>• Heavy Duty</li><li>• Two (2) stage dry air filter</li><li>• Replaceable elements</li><li>• Automatic ejector</li><li>• Restriction indicator located in cab</li></ul> <b>State:</b>	_____
10.44	Hydraulic Fan	<ul style="list-style-type: none"><li>• Factory installed</li><li>• Time adjustable</li></ul> <b>State:</b>	_____

**Brakes**

10.45	General	<ul style="list-style-type: none"><li>• On all four (4) wheels</li><li>• Wet disc</li><li>• Hydraulic</li></ul> <b>State:</b>	_____
10.46	Parking Brake	<b>State:</b>	_____
10.47	Propel Brakes	Hydraulically operated <b>State:</b>	_____
10.48	Swing Brakes	Hydraulically operated with 100% brake hold to upper structure when engine is off <b>State:</b>	_____
10.49	Travel Motor	3 modes 1. Inching 2. Slow 3. Fast	_____
10.50	Brake Accumulators	<b>State:</b>	_____

**Controls**

10.51	Controls	Pilot operated controls for: <ul style="list-style-type: none"><li>• Boom</li><li>• Dipper (Arm, Stick)</li><li>• Bucket</li><li>• Swing</li><li>• Travel</li></ul>	_____
10.52	Control Pattern	<ul style="list-style-type: none"><li>• ISO or SAE</li><li>• Changeable</li></ul> <b>State:</b> type	_____

**Capacities**

10.53	Fuel Tank	<b>State:</b> capacity	_____
10.54	Diesel Exhaust Fluid Tank	<b>State:</b> capacity	_____
10.55	Cooling System	<b>State:</b> capacity	_____
10.56	Hydraulic Oil Tank	Approximately 100 – 200 L (26.4 – 52.8 US Gal) <b>State:</b> largest capacity tank that is available	_____
10.57	Hydraulic System Capacity	Approximately 180 – 340 L (47.5 – 90 US Gal) <b>State:</b> capacity	_____

### Electrical

10.58	Alternator	Approximately 80 amps <b>State:</b> rating	_____
10.59	Batteries	<ul style="list-style-type: none"><li>• Qty two (2)</li><li>• 12V</li><li>• Heavy duty cold weather rated</li><li>• Maintenance Free</li><li>• Approximately 900 CCA</li></ul> <b>State:</b> CCA	_____
10.60	Voltage	24V	_____
10.61	Battery Disconnect Switch	<ul style="list-style-type: none"><li>• Protected from the elements</li><li>• Lockable with pad lock</li></ul>	_____

### Gauges, Instruments and Alarms

10.62	Message System	Display all standard gauge and alarm information including: <ul style="list-style-type: none"><li>• Emergency stop</li><li>• Fuel level and low fuel</li><li>• DEF low level indicator</li><li>• Coolant temperature and low coolant</li><li>• Battery level</li><li>• Air filter condition</li><li>• Low oil pressure</li><li>• Oil gauge</li><li>• Engine overheat</li><li>• Hydraulic system overheat</li><li>• Alternator</li><li>• Electrical faults</li><li>• Engine hour meter</li><li>• RPM</li><li>• Service information</li><li>• On-board diagnostics</li></ul>	_____
10.63	Monitor	<ul style="list-style-type: none"><li>• Approximately 7 in. colour monitor</li><li>• Full screen or split screen capabilities</li><li>• Shows all camera feeds</li><li>• Acts as the message system display</li></ul>	_____
10.64	Hydraulic Oil Sensor	<ul style="list-style-type: none"><li>• Electric low-level sensor</li><li>• Mounted inside tank, activating a light and buzzer located inside the cab.</li><li>• The alarm shall be activated when oil level is low</li></ul>	_____
10.65	Overload Warning	An overload warning device to warn operators when a too heavy load has been lifted <b>State:</b> method	_____

10.66	Outrigger Warning System	Warning light and buzz system shall be installed on the dash and shall be actuated when outriggers are not in the fully stowed position <b>State:</b> method	_____
10.67	Back-Up Alarm	<ul style="list-style-type: none"><li>• Approximately 97 – 112 dB</li><li>• Protected from damage</li></ul> <b>State:</b> rating	_____
10.68	Back-Up Camera	Protected from damage <b>State:</b>	_____
10.69	Side View Camera	<ul style="list-style-type: none"><li>• If equipped</li><li>• Protected from damage</li></ul> <b>State:</b>	_____
10.70	Horn	Electric <b>State:</b>	_____
<b>Hydraulic System</b>			
10.71	Hydraulic system including <b>high flow</b> designed to operate the following attachments which are described in these specifications: <ul style="list-style-type: none"><li>• Ditching bucket</li><li>• Digging bucket</li><li>• Brush Cutter</li><li>• Thumb</li><li>• BTE 2-Motor Tamper</li><li>• BTE Extendable Tie Talon</li><li>• R6 Rototilt complete with PG65-200 Coupler</li></ul>		_____
10.72	Summation System	Combines the flow of both hydraulic pumps to ensure quick cycle times and high productivity <b>State:</b>	_____
10.73	Boom Priority	Gives priority to the boom operation for faster raising when loading of deep excavation <b>State:</b>	_____
10.74	Arm Priority	Gives priority to the arm operation for faster cycle times in leveling and for increased bucket filling when digging <b>State:</b>	_____
10.75	Slew Priority	Supplies priority to the slew operation for faster slew simultaneous operations <b>State:</b>	_____
10.76	Regeneration System	Prevents cavitation and provides flow to other movements during simultaneous operations for maximum productivity <b>State:</b>	_____

10.77	Holding valves	Boom and arm holding valves prevent the digging equipment from creeping <b>State:</b>	_____
10.78	Main Pumps	<ul style="list-style-type: none"><li>• Two (2) - variable displacement axial piston pumps</li><li>• Maximum Flow Rating of approximately 200 L/min (52.8 gpm)</li></ul> <b>State:</b> Minimum Flow <b>State:</b> Maximum Flow	_____
10.79	Pilot Pump	Two (2) Gear pumps: <ul style="list-style-type: none"><li>• One (1) for pilot</li><li>• One (1) for Steering and Brakes</li></ul> <b>State:</b> Maximum flow <b>State:</b> Pressure setting	_____
10.80	Hydraulic Motors	Travel <b>State:</b> type	_____
		Slew <b>State:</b> type	_____
10.81	Power Boost	Hydraulic system to have a momentary boost pressure control to boost hydraulic pressure for short period of time <b>State:</b>	_____
10.82	Dedicated Swing Pump	Separate swing pump Variable displacement <b>State:</b>	_____
10.83	Swing Priority System	Arm and swing systems <b>State:</b>	_____
10.84	System Operating Pressure	<b>State:</b> Implement circuits <b>State:</b> Travel circuits <b>State:</b> Swing circuits	_____
10.85	Auxiliary Hydraulics	<b>State:</b> flow	_____
		<b>Note:</b> must be able to combine and prioritize pump flow to operate the brush cutter and other attachments	
10.86	Auxiliary Hydraulic Circuit	<ul style="list-style-type: none"><li>• Qty two (2) additional circuits</li><li>• Capability to add additional auxiliary hydraulic circuits</li></ul> <b>State:</b>	_____
10.87	Priority Flow Valve	Required in order to operate cutter heads and other rotary equipment	_____
10.88	Medium Pressure Hydraulic Lines	Required <b>State:</b>	_____



10.89	High Pressure Hydraulic Lines	Required <b>State:</b>	_____
10.90	Auxiliary Lines	To be supplied to end of Dipper (Arm, Stick) <b>State:</b>	_____
10.91	Multi-Functional Valve	Allows the operator to select pre-set tool parameters (hydraulic flow and pressure), eliminating the need to re-set these hydraulic parameters each time a tool is changed <b>State:</b>	_____
10.92	Sensitivity	Adjustable hydraulic sensitivity <b>State:</b>	_____
10.93	Accumulator	Provide pilot pressure to lower attachments in case of engine shut down <b>State:</b>	_____
10.94	Hydraulic Oil Cooler	<b>State:</b>	_____
10.95	Oil Filtration	<b>State:</b>	_____
10.96	Sight Gauge	Hydraulic tank <b>State:</b>	_____
10.97	Safety	Hydraulic safety system designed to lock-out any of the booms during transport <b>State:</b>	_____
	<b>Hydraulic Cylinders</b>		
10.98	Boom	<b>State:</b> Qty _____ Bore _____ Rod Diameter _____ Stroke _____	_____
10.99	Dipper (Arm, Stick)	<b>State:</b> Qty _____ Bore _____ Rod Diameter _____ Stroke _____	_____
10.100	Bucket	<b>State:</b> Qty _____ Bore _____ Rod Diameter _____ Stroke _____	_____

### Lighting

10.101	LED Work Lights	<ul style="list-style-type: none"><li>• High Intensity LED Works Lights located front and rear</li><li>• Qty four (4)</li><li>• Work lights shall have lighting guards</li></ul> <b>State:</b>	_____
10.102	Beacon	<ul style="list-style-type: none"><li>• SAE Class 1 Amber LED beacon</li><li>• Mounted for 360-degree visibility</li><li>• Dash mounted on/off switch wired through ignition</li><li>• Beacon to be protected by a ramped guard</li></ul> <b>State:</b>	_____
10.103	Turn	LED <b>State:</b>	_____
10.104	Brake	LED <b>State:</b>	_____
10.105	Hazard	LED <b>State:</b>	_____
<b>Operator Cab</b>			
10.106	Type-ROPS	<ul style="list-style-type: none"><li>• Integrated</li><li>• Fully enclosed</li><li>• All weather</li><li>• Pressurized</li><li>• Roll-Over Protective Structure</li></ul> <b>State:</b>	_____
10.107	Visibility	Floor to ceiling glass for operator visibility <b>State:</b>	_____
10.108	Climate Control	Air conditioning, heater and defroster with adjustable fan speeds <b>State:</b>	_____
10.109	Seat	<ul style="list-style-type: none"><li>• Adjustable bucket type with arm rests</li><li>• Cushioned</li><li>• Heavy duty cloth upholstery</li><li>• Air Suspension seat</li><li>• Retractable seat belt</li></ul> <b>State:</b>	_____
10.110	Steering Column	Tiltable and telescopic for easy entry and exit and comfortable operating <b>State:</b>	_____
10.111	Ride Control	Factory installed <b>State:</b>	_____

10.112	All Windows	Tinted safety glass with appropriate markings for all panes and opening type where applicable <b>State:</b>	_____
10.113	Ignition Keys	<b>State:</b> qty available	_____
10.114	Doors	<b>State:</b>	_____
10.115	Interior Rear-View Mirror	Adjustable <b>State:</b>	_____
10.116	Exterior Mirrors	Two exterior mirrors mounted on either side of cab <b>State:</b>	_____
10.117	Windshield Wipers with Washer	Intermittent <b>State:</b>	_____
10.118	Steps	<b>State:</b>	_____
10.119	Lighting	<ul style="list-style-type: none"><li>• Instrument panel lights</li><li>• Cab dome light with switch</li></ul> <b>State:</b>	_____
10.120	Radio	AM/FM Complete with: Bluetooth® Technology - For use with cellular phones, "hands-free" capable, voice command activated through vehicle's radio circuit <b>State:</b>	_____
10.121	Radio Installation Provision	12 volt, 20Amp independent circuit available at a spare circuit breaker, suitable for installation of a 2-way mobile radio <b>State:</b>	_____
10.122	12V Port	<b>State:</b>	_____
10.123	Cab Mounts	Integrated fluid and spring suspension mounts to reduce noise, vibration and operator fatigue <b>State:</b>	_____
10.124	Noise Suppression	<b>State:</b> cab sound levels - dBA	_____
10.125	Vandalism Protection	<ul style="list-style-type: none"><li>• A lock or locked cover shall be provided to protect the instrument panel, cab doors, engine side panels, hydraulic oil reservoir cap, fuel cap and radiator cap</li><li>• All locks to be keyed alike</li></ul> <b>State:</b>	_____
10.126	Toolbox	Lockable <b>State:</b>	_____

10.127	Grab Handles	For cab entry and exit <b>State:</b> _____
	<b>Outriggers</b>	
10.128	<b>Dozer Blade</b>	<ul style="list-style-type: none"><li>• Front</li><li>• Independently controlled</li><li>• Complete with guide wheels per specification 10.153</li></ul> <b>State:</b> <ul style="list-style-type: none"><li>• Width: _____</li><li>• Height: _____</li><li>• Lift above ground: _____</li><li>• Below ground level: _____</li></ul> <b>Note: Excavator to be delivered with guide wheels installed on dozer blade</b>
10.129	Outriggers	<ul style="list-style-type: none"><li>• Rear</li><li>• Independently controlled</li></ul> <b>State:</b> _____
	<b>Swing Mechanism</b>	_____
10.130	Swing Speed	Approximately 12 rpm <b>State:</b> _____
10.131	Swing Torque	Approximately 30,000 lb.-ft. <b>State:</b> _____
10.132	Swing Rotation	360 degree <b>State:</b> _____
	<b>Tires</b>	
10.133	Type	10.00-20 Dual pneumatic <b>State:</b> _____
	<b>Transmission</b>	
10.134	Type	AWD 2-Gear Power-shift <b>State:</b> _____
10.135	Number of Forward Gears	Two (2) <b>State:</b> _____
10.136	Number of Reverse Gears	Two (2) <b>State:</b> _____
10.137	Creeper Mode	<b>State:</b> _____
10.138	Creeper Speed	<b>State:</b> _____
10.139	Gradeability	Approximately 60% <b>State:</b> _____

10.140 Drawbar Pull **State:** \_\_\_\_\_  
**Undercarriage**

10.141 Travel Speed Approximately 35 km/h (21.7 mph)  
**State:** \_\_\_\_\_

10.142 Steering Angle Approximately 35 degrees  
**State:** \_\_\_\_\_

10.143 Turning Radius Approximately 6550 mm (21 ft. 6 in.)  
**State:** \_\_\_\_\_

10.144 Oscillating Front Axles **State:** \_\_\_\_\_

10.145 Oscillation Angle Approximately 9 degrees  
**State:** \_\_\_\_\_

10.146 Front Axle Oscillation Lock Lockable  
**State:** \_\_\_\_\_

**Lubrication**

10.147 Grease Zerks \_\_\_\_\_

Due to operator safety requirements and convenience:

- All manual grease zerks shall be accessible to the operator (Excluding driveline)
- Hard to access and/or near a heat sources, a remote block with hydraulic lines shall be mounted to accommodate manual lubrication
- Remote block to be fitted with hydraulic lines with an approximately maximum working pressure of 5000 psi using #4 JIC fittings

**State:** quantity and locations

**ATTACHMENTS**

**Note:** Attachments to be priced only as indicated on Form B: Prices

**Hi-Rail**

10.148 Hi-Rail Make **State:** \_\_\_\_\_

10.149 Hi-Rail Model **State:** \_\_\_\_\_

10.150 Hi-Rail Style **State:** \_\_\_\_\_

10.151 Rail Travel Speed **State:** \_\_\_\_\_

10.152 Suspension **State:** \_\_\_\_\_

10.153 **Guide Wheels**

- **Steel**
- **Guide wheels with a mechanical lock pin (stowable) to be installed permanently on the dozer blade. Refer to specification 10.128**

\_\_\_\_\_

**State:**

**Note: Excavator to be delivered with guide wheels installed on dozer blade**



**Engaged**

**Stowed**

10.154	Safety Pins Locks	<b>State:</b>	_____
10.155	Raise / Lower Operation	<b>State:</b>	_____
10.156	Track Gauge	56.5 in. <b>State:</b>	_____
10.157	Track Signal Insulation	<b>State:</b>	_____
10.158	Steering Wheel Lock	<b>State:</b>	_____
10.159	De-Rail Guards	<b>State:</b>	_____
10.160	Front Rail Sweeps	<b>State:</b>	_____
10.161	Hydraulic Power Pack	<b>State:</b>	_____
10.162	Electrical Controls	<b>State:</b>	_____
10.163	Brakes	<b>State:</b>	_____

**General (Attachments)**

- |        |                     |   |       |
|--------|---------------------|---|-------|
| 10.164 | Compatibility       | All attachments shall be compatible with the proposed machine   | _____ |
| 10.165 | Interference        | The Thumb shall not to interfere with the operation of the Rototilt and Couplers  | _____ |
| 10.166 | Quick Change System | <ul style="list-style-type: none"><li>• System does not require the operator to leave the cab</li><li>• Compatible with all attachments</li></ul> | _____ |

**Attachments**

- |        |                      |   |       |
|--------|----------------------|---|-------|
| 10.167 | Tilt Ditching Bucket | <ul style="list-style-type: none"><li>• Approximately 60 inches</li><li>• Tilt approximately 30 - 45 degrees each way</li><li>• 3-way taper to eliminate binding</li><li>• Hydraulic tilt/twist wrist universal quick coupler</li></ul> <b>State:</b> | _____ |
| 10.168 | Digging Bucket       | 36 inch<br><b>State:</b>  | _____ |
| 10.169 | Thumb                | <ul style="list-style-type: none"><li>• Hydraulic operated</li><li>• Progressive link</li><li>• Thumb not to interfere with the operation of the Rototilt and couplers</li></ul> <b>State:</b>  | _____ |
| 10.170 | Tamper               | <ul style="list-style-type: none"><li>• BTE 2-Motor Tamper</li><li>• Model Number BTE-302790</li><li>• Rotation 270 deg</li><li>• Tilt 40 degree either side</li></ul>  | _____ |



- State:**
- make: \_\_\_\_\_
  - model: \_\_\_\_\_

**State Optional Pricing for:**

10.171 R6 Rototilt complete with PG65-200 Coupler \$ \_\_\_\_\_

- R6 Rototilt Tiltrotator complete with PG65-200 coupler
- High flow circuitry
- Large heavy-duty pins
- Compatible with both the Tamper and Extendable Tie Talon

**State:** Rototilt

- make: \_\_\_\_\_
- model: \_\_\_\_\_

**State:** Coupler

- make: \_\_\_\_\_
- model: \_\_\_\_\_

10.172 Extendable Tie Talon \$ \_\_\_\_\_

- BTE Extendable Tie Talon
- Model No. 302285-450
- Required for safe, effective tie insertion or extraction

**State:**

- make: \_\_\_\_\_
- model: \_\_\_\_\_
- warranty: \_\_\_\_\_

10.173 Brush Cutter \$ \_\_\_\_\_

- Brush Wolf 72X-HD or equivalent
- Rotary type
  - Designed for Excavators
  - Cut width of approximately 72 in.
  - Cutting capacity of approximately 10 in. diameter
  - Heavy Duty
  - Low Flow
  - Include case drain

**State:**

- make and model: \_\_\_\_\_
- cut width: \_\_\_\_\_
- cutting capacity: \_\_\_\_\_
- hydraulic flow required: \_\_\_\_\_
- warranty: \_\_\_\_\_

11.0 **WARRANTY:**

11.1 All warranty information shall be detailed and **include all exclusions.** \_\_\_\_\_

The Contractor shall provide all published warranty information upon delivery of the equipment

Bidder shall state all warranty information

11.2 Basic **State:** \_\_\_\_\_

11.3 Powertrain **State:** \_\_\_\_\_



- 11.4 Structural **State:** \_\_\_\_\_
- 11.5 Electrical **State:** \_\_\_\_\_
- 11.6 Hydraulics **State:** \_\_\_\_\_
- 11.7 Hi-Rail **State:** \_\_\_\_\_
- 11.8 Tamper **State:** \_\_\_\_\_
- 11.9 R6 Rototilt **State:** \_\_\_\_\_

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.V.I.S. (if applicable) to the WFMA 185 Tecumseh Street, Winnipeg MB.

12.2 **Delivery Time:** \_\_\_\_\_

Equipment shall be delivered between 8:00 am and 2:00 pm on Business Days.

**State:** earliest delivery time from date of award: \_\_\_\_\_

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 **Operator's Manual:** \_\_\_\_\_

Two (2) per unit shall be supplied with the units when delivered

14.0 **PARTS/LABOUR PRICING:**

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 must provide 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, transmission, oil, cab and hydraulic, or otherwise all known necessary common replacement filters required for the first preventative maintenance servicing and first transmission service.

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15.2 The Contractor must 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.

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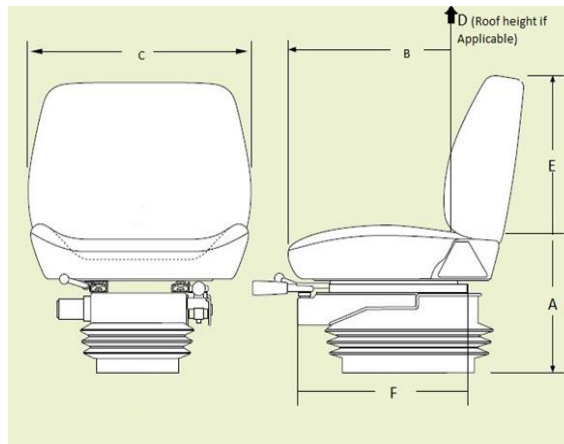
16.0 **ERGONOMIC SPECIFICATIONS**

**Entry/ Exit**

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

**Seat**

16.6 Use diagram to answer questions.



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

**Operation**

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

**Cargo Area**

- |       |  |  |       |
|-------|--|--|-------|
| 16.21 | Lid opens to provide<br>adequate space | Adequate space provided <b>(Y or N)?</b> | _____ |
| 16.22 | Loading Height                         | <b>State:</b> trunk height in inches     | _____ |

**Environment**

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

**Maintenance/ Inspection**

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