

PART A

BID SUBMISSION

FORM A: BID
(See B7)

1. Project Title SUPPLY & DELIVERY OF INDUSTRIAL TRACTOR LOADER BACKHOES

2. Bidder

Name of Bidder

Street

City

Province

Postal Code

(Mailing address if different)

Street or P.O. Box

City

Province

Postal Code

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

e-mail address

4. Definitions

All capitalized terms used in the Contract shall have the meanings ascribed to them in the General Conditions and D3.1 unless the context otherwise requires.

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 is in receipt of a Purchase Order authorizing the commencement of the Work.

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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 Submission.

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

In witness whereof 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 B8)

SUPPLY & DELIVERY OF INDUSTRIAL TRACTOR LOADER BACKHOES

ITEM NO.	DESCRIPTION	SPEC. REF.	UNIT	APPROX QTY	UNIT PRICE	AMOUNT
1	100 hp Industrial Tractor Loader Backhoe	06009	Each	2	\$ _____	\$ _____
1a	24" Smooth Edge Bucket for Item 1	06009 (13.6.1(i))	Each	2	\$ _____	\$ _____
1b	30" Smooth Edge Bucket for Item 1	06009 (13.6.1(ii))	Each	1	\$ _____	\$ _____
1c	NPK 205 Hydraulic Hammer for Item 1	06009 (16.1)	Each	2	\$ _____	\$ _____
1d	Front Spare Tire & Rim for Item 1	06009 (11.1.3)	Each	1	\$ _____	\$ _____
1e	Rear Spare Tire & Rim for Item 1	06009 (11.2.3)	Each	1	\$ _____	\$ _____
1f	Operator's Manual for Item 1	06009 (18.2)	Each	2	\$ _____	\$ _____
1g	Parts, Repair and Technical Service Manuals for Item 1	06009 (18.3)	Set	2	\$ _____	\$ _____
1h	Parts, Repair and Technical Service Manual for Item 1c	06009 (18.4)	Set	2	\$ _____	\$ _____
2	90 hp Industrial Tractor Loader Backhoe	06024	Each	2	\$ _____	\$ _____
2a	24" Smooth Edge Bucket for Item 2	06024 (13.6.1(i))	Each	2	\$ _____	\$ _____
2b	30" Smooth Edge Bucket for Item 2	06024 (13.6.1(ii))	Each	1	\$ _____	\$ _____
2c	NPK 204 Hydraulic Hammer for Item 2	06024 (16.1)	Each	2	\$ _____	\$ _____
2d	Front Spare Tire & Rim for Item 2	06024 (11.1.3)	Each	1	\$ _____	\$ _____

FORM B: PRICES
 (See B8)

SUPPLY & DELIVERY OF INDUSTRIAL TRACTOR LOADER BACKHOES

ITEM NO.	DESCRIPTION	SPEC. REF.	UNIT	APPROX QTY	UNIT PRICE	AMOUNT
2e	Rear Spare Tire & Rim for Item 2	06024 (11.2.3)	Each	1	\$ _____	\$ _____
2f	Operator's Manual for Item 2	06024 (18.2)	Each	2	\$ _____	\$ _____
2g	Parts, Repair and Service Manuals for Item 2	06024 (18.3)	Each	2	\$ _____	\$ _____
2h	Parts, Repair and Technical Service Manual for Item 2c	06024 (18.4)	Set	2	\$ _____	\$ _____
TOTAL BID PRICE (GST and PST extra) (in figures) \$ _____ (in words) _____ _____ _____						

 Name of Bidder

FORM N: DETAILED SPECIFICATIONS 06009

MINIMUM 100 HP INDUSTRIAL TRACTOR LOADER BACKHOE – ITEM 1

(Water & Waste)

1.0 TYPE

- 1.1 Shall be a minimum 100 hp rubber tired, four wheel drive, industrial tractor loader backhoe with equipment and features as specified herein. The unit shall be the manufacturer's latest model.
- 1.2 The industrial tractor loader backhoe shall be furnished complete and ready for use. All parts not specifically mentioned, but which are required to complete and place the unit in successful operation, shall be furnished as though specifically mentioned in these specifications. The complete unit, and all parts thereof, shall conform in strength and quality of material and workmanship, to the best standards and engineering practice of the industry.
- 1.3 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 unit.
- 1.4 The ratings specified herein merely state the minimum values acceptable to the City. There is no intent of implying that these values are sufficient for the design of the unit being bid.

2.0 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.

3.0 QUALIFICATIONS OF MANUFACTURER / CONTRACTOR

- 3.1 The Contractor shall be an authorized distributor/supplier of the industrial tractor loader backhoe being bid.
- 3.2 The Contractor shall have an authorized service facility located within 10 km of the boundaries of the City of Winnipeg. The facility, or a portion thereof, shall be dedicated to the service and maintenance of the industrial tractor loader backhoe being offered. Further to B9.1, Bidders shall provide a description of the service facility including, but not limited to, number of qualified service staff, years of service experience on industrial tractor loader backhoe equipment, and general service capabilities. A description of the service facility shall be provided within 3-Calendar Days upon request of the Contract Administrator.
- 3.3 If a suitable warranty facility is not available within 10 km of the boundaries of the City of Winnipeg, the Bidder may propose that warranty work be performed by the City of Winnipeg Repair Facility. Any work performed by the City of Winnipeg Repair Facility shall be charged to the Contractor at the Facility's shop rate in effect at the time the work is performed (for example, shop rate for 2006: \$73.50/hour regular time, \$103.50/hr overtime and callout).

4.0 INSTRUCTIONS FOR COMPLETION OF SPECIFICATIONS

- 4.1 All items in these specifications must be answered indicating compliance or non-compliance. **Bidders shall state "yes" for compliance or state deviation, or give a reply where requested to do so.** Deviations shall be clearly stated and fully detailed. Alternatives will be considered subject to evaluation.

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4.2 Each bidder is required to fill in every blank. **Failure to do so may be used as a basis for rejection of bid.**

5.0 PERFORMANCE

5.1 Shall be capable of consistent top performance for construction, and excavation work during the summer and winter environments which are normal to the City of Winnipeg. _____

6.0 MAKE AND MODEL

6.1 **State make and model being bid.**_____

7.0 WEIGHT AND DIMENSIONS (As Bid)

7.1 Operating weight (as bid) – 24,000 lbs. minimum. State weight. _____

7.2 Overall transport width – 8 ft. approx., state. _____

7.2.1 Overall width, stabilizer spread, outside edge of pad – state. _____

7.3 Overall height (to top of cab) – 9' 6" approx., state. _____

7.3.1 Overall transport height – 13' 9" approx., state. _____

7.4 Overall transport length – 26 ft. approx., state. _____

7.5 Wheelbase – 7' 4" minimum, state. _____

7.6 Turning radius – curb clearance with brakes applied, state. _____

8.0 ENGINE

8.1 Type – diesel fuelled, liquid cooled. _____

8.2 Net horsepower as per SAE J1349 – 100 hp minimum, state. _____

8.3 Net torque as per SAE J1349 – 330 lb-ft minimum, state. _____

8.4 Fuel shut-off – electric solenoid type. _____

8.5 Fuel filter and water separator. _____

8.6 Oil filter – full flow, spin-on type. _____

8.7 Air cleaner – dry cartridge type with dash mounted restriction indicator. _____

8.8 Throttle – hand operated with foot override. _____

8.9 Exhaust – mufflered, vertical discharge with bend and 40° cut-off (rain cap unacceptable). _____

8.10 Coolant – extended life, ethylene glycol based, protected to -40° F/C. _____

8.11 Engine block heater – 750 Watt minimum. _____

8.12 Cold weather starting aid – glow plugs or air intake warmer, state type. _____

8.13 Engine protection shutdown system – shall provide visual and audible warning of principal machine systems including engine oil pressure and coolant temperature c/w engine shutdown. _____

9.0 TRANSMISSION

9.1 Type – powershift transmission with torque converter, manual shift with power reverser. _____

9.2 Shifting – fully synchronized. _____

9.3 Speeds, forward – four (4) minimum. _____

9.3.1 Speeds, reverse – three (3) minimum. _____

9.4 Powershift direction reverser. _____

10.0 AXLES & BRAKES

10.1 Front axle – driven type (4WD) with guarded drive shaft. _____

10.2 Brakes – wet disk type with individual pedals simultaneous or independent operation. _____

10.2.1 Parking brake – foot or hand operated. _____

11.0 TIRES, RIMS AND FENDERS

11.1 Front tires – minimum 15 x 19.5 tires with matching rims, state size. _____

11.1.1 Ply rating – 12-ply minimum. _____

11.1.2 Tread – lug type. _____

11.1.3 Front spare tire and rim – identical to tires and rims bid in Clause 11.1. Quantity as per Form B: Prices. _____

11.2 Rear tires – minimum 21L x 24 tires with matching rims, state size. _____

11.2.1 Ply rating – 12-ply minimum. _____

11.2.2 Tread – R4, industrial. _____

11.2.3 Rear spare tire and rim – identical to tires and rims bid in Clause 11.2. Quantity as per Form B: Prices. _____

11.3 Fenders – required front and rear, rubber or polymer, state material. _____

12.0 FRONT END LOADER

- 12.1 Lift capacity, full height – minimum 8,600 lbs., state. _____
- 12.2 Bucket breakout force – 13,800 lbs. minimum, state. _____
- 12.3 Dump clearance as bid (bucket @ 45°) – 108 in. minimum, state. _____
- 12.4 Controls – single lever with clutch disconnect button, return-to-dig and float. _____
- 12.4.1 Self-levelling bucket with level indicator. _____
- 12.5 Loader bucket – flat bottom, general purpose type with bolt-on cutting edge. _____
- 12.5.1 SAE heaped capacity – minimum 1.3 yd³, state. _____
- 12.5.2 Width to exceed machine width at rear tires. _____
- 12.5.3 Wear plate(s) – required to prevent bucket heel from rubbing on ground with bolt-on cutting edge in place. _____
- 12.5.4 Lashing ring – heavy duty, steel weld-on hook with spring mounted clasp, top-centre mounted at front of loader bucket, suitable for transporting hydraulic hammer in loader bucket. _____
- 12.6 Loader safety prop bar – required. _____

13.0 BACKHOE

- 13.1 Type – centre pivot with extendable dipperstick. _____
- 13.2 Maximum digging depth – 21 ft. minimum, state digging depth. _____
- 13.3 Digging force, bucket cylinder (SAE), with 24 in. bucket – minimum 16,200 lbs., state. _____
- 13.3.1 Digging force, crowd cylinder (SAE), with dipperstick retracted – minimum 11,000 lbs., state. _____
- 13.4 Controls – SAE excavator style, pilot operated hydraulic joystick controls. _____
- 13.5 Quick coupler attachment bracket – required for quick attachment of all buckets and hydraulic hammers, state make and model being bid. _____
- 13.5.1 Attachment bracket shall permit use of two (2) bucket positions. _____
- 13.5.2 Attachment bracket shall permit bucket, bucket position changes and hydraulic hammer changes without the use of any tools. _____
- 13.6 24" Digging bucket – 24 in. heavy duty digging bucket with replaceable pin-on teeth, complete with required attachment pin(s). Backhoe shall be delivered with the 24" Digging Bucket (w/teeth) installed. _____

13.6.1 Additional Buckets:

- i) 24" Smooth edge bucket – 24 in. heavy duty bucket, flat bottom, bolt-on cutting edge, complete with required attachment pin(s).
Quantity as per Form B: Prices. _____
- ii) 30" Smooth edge bucket – 30 in. heavy duty bucket, flat bottom, bolt-on cutting edge, complete with required attachment pin(s).
Quantity as per Form B: Prices. _____

13.6.2 All buckets to be complete with certified lifting hooks. _____

13.7 Stabilizer pads – reversible, flip-over type pads. _____

13.8 Front counterweight – supplied as required to provide proper machine balance and roading characteristics. _____

13.9 Replaceable bushings and grease fittings at all backhoe pivot points, cylinder rod and closed ends, and bucket links. _____

13.10 Auxiliary hydraulics, couplers and controls shall be provided as required on all machines to accommodate hydraulic hammers. (See Clause 16.1). _____

14.0 OPERATOR COMPARTMENT

14.1 Type – roll-over protective structure complete with pressurized cab, OSHA certified or equal. _____

14.1.1 Cab layout shall provide a comfortable seating position for a 95th percentile male in both the loader and backhoe operating positions. _____

14.2 Insulation and headliner – required for sound suppression and severe weather climate. _____

14.2.1 Floor covering – rubber matting, required throughout. _____

14.3 Seat – cushioned, adjustable bucket type with arm rests, cloth upholstery mechanical or air suspension with retractable seat belt. _____

14.4 Ride control – required, factory installed. _____

14.5 Windows – tinted safety glass with appropriate markings for all panes. _____

14.5.1 All windows shall be opening type where available. _____

14.6 Ignition keys – three (3) sets required per machine. _____

14.7 Doors – one (1) each side with spring assisted strut, lockable with common key. _____

14.8 Interior rearview mirror – required. _____

14.9 Windshield wipers – intermittent, required front and rear with washers. _____

- 14.10 Heater/defroster – heavy duty, hot water type with multi-speed fan, capable of keeping all windows clear at -40° F/C. _____
- 14.10.1 Window fans – two (2) required with guards. _____
- 14.11 Air conditioning – factory installed with underhood compressor. (Note: roof mounted air conditioners are not acceptable.) _____
- 14.12 Steps – open grate type. _____
- 14.13 Toolbox – lockable, state location. _____
- 14.14 Instrumentation:
 - 14.14.1 Coolant temperature – gauge with audible alarm. _____
 - 14.14.2 Engine oil pressure – gauge or warning light with audible alarm. _____
 - 14.14.3 Transmission oil temperature – gauge or warning light with audible alarm. _____
 - 14.14.4 Engine hourmeter – required, non-resettable type. _____
 - 14.14.5 Tachometer – required. _____
 - 14.14.6 Fuel gauge – required. _____
- 14.15 Noise level, interior – maximum 85 dB(A), measured in accordance with SAE J336, state noise level. _____
- 15.0 ELECTRICAL AND LIGHTING**
- 15.1 Type – 12-Volt, negative ground electrical system. _____
- 15.2 Electric starter – required with keyed starter switch. _____
- 15.3 Batteries – dual, minimum 1500 CCA combined capacity. _____
- 15.4 Alternator – 65 Amp minimum, state capacity. _____
- 15.5 Combination stop and tail lights – two (2). _____
- 15.6 Signal lights with warning flashers – two (2) front and two (2) rear. _____
- 15.6.1 Warning flashers shall be operable with the key removed. _____
- 15.7 Headlights – two (2). _____
- 15.8 Work lights:
 - i) Front – four (4) front mounted, adjustable, located immediately below cab roof line. _____

- ii) Rear – four (4) rear mounted, adjustable, located immediately below cab roof line.

- iii) Side – two (2) side mounted, located immediately below cab roof line.

- 15.8.1 Independent on/off switch for each pair of work lights, dash mounted, wired through ignition, labelled with permanent type, engraved style labels.

- 15.9 Cab interior light – required.

- 15.10 Radio – AM/FM, factory installed.

- 15.11 Radio installation provision – 12 Volt, 20 Amp separate/independent circuit available at a spare circuit breaker, suitable for installation of a 2-way mobile radio.

- 15.12 Horn – operable from driving position and from backhoe position.

- 15.13 Mini light bar – Grote 76813, roof mounted, 360° visibility, wired through ignition, fused, dash mounted switch c/w permanent type, engraved style label.

- 15.13.1 Mini light bar guard – ramped, heavy duty bolt-on metal guard, designed to permit servicing of the light bar without being removed.

- 15.14 Back-up alarm – 97 dB(A), factory installed, mounted to be protected from damage.

- 15.15 Wiring for all locally installed accessories shall be colour coded, loomed and properly secured.

- 15.15.1 Splicing in any factory harnesses is unacceptable. All electrical power for locally supplied electrical components shall be supplied from an OEM power distribution box.

- 15.15.2 All joining of wires and electrical connectors shall be soldered and sealed with heat shrink tubing.

- 15.15.3 All wiring for work lights and warning lights shall be supplied with no exposed wiring.

- 16.0 MISCELLANEOUS**
- 16.1 Hydraulic hammer – NPK E205 hammer c/w required attachment pins and quick couplers, quantity as per Form B: Prices.

- 16.1.1 Hydraulic hammer shall be compete with a lashing ring and suitable length heavy duty chain with forged slip hooks for safe and secure transport of hydraulic hammer in loader bucket.

- 16.2 Slow moving vehicle emblem – Grote 71152 or equal c/w bracket, mounted to rear of backhoe.

16.3 Fuel tank – fully fuelled upon delivery, state capacity. _____

16.4 Grease fittings – readily accessible with remote grease zerks as required. _____

17.0 TRAINING

17.1 The Contractor shall be required to provide, at their expense, operator and preventative maintenance training by qualified staff, for City of Winnipeg operator and maintenance personnel at or near the time of delivery of the equipment. The training shall be conducted in separate sessions for each group of personnel. The sessions shall be sufficient in duration and shall provide adequate familiarization and orientation of the equipment, to the satisfaction of the Contract Administrator. The training shall be conducted within two (2) calendar weeks from the date of delivery and shall be coordinated through the Contract Administrator. The training shall be conducted in Winnipeg at a location designated by the Contract Administrator. _____

17.1.1 Pricing should be based on two (2) working day for maintenance personnel and four (4) working days for operating personnel.

Note: Final payment of the equipment will not be issued until successful completion of training has been conducted to the satisfaction of the Contract Administrator.

17.2 State if DVD video or CD training aides on the type of equipment being offered is available. _____

18.0 MANUALS

18.1 The following manuals shall be supplied with the unit when delivered. Manuals shall be in English and shall cover the complete equipment. _____

18.2 Operator's manual – quantity as per Form B: Prices. _____

18.3 Parts, repair and technical service manuals including preventative maintenance schedules for life of the backhoe – CDs preferred, quantity as per Form B: Prices. _____

18.4 Parts, repair and technical service manuals for hydraulic breaker – CDs preferred, quantity as per Form B: Prices. _____

19.0 WARRANTY

19.1 The Contractor shall warrant **all equipment** (excluding hydraulic hammer) and all parts thereof, against any defects of workmanship, construction and materials, and agrees to repair or replace without cost to the City any article that has become defective and not proven to have been caused by negligence on the part of the user within **three (3) years or 5000 hours** from the date the equipment is put into service by the City of Winnipeg. _____

19.1.1 The Contractor shall warrant **the hydraulic hammer** as follows:

- i) Working tool – 30 days. _____
- ii) Wear items including retaining pin, both upper and lower tool bushings, impact ring and bushing – 6-months. _____
- iii) Main component including main body, tool holder and gas head – 1-year. _____

19.1.2 For the above hydraulic hammer warranties, the Contractor agrees to warrant the specified components against any defects of workmanship, construction and materials, and agrees to repair or replace without cost to the City the article(s) that has become defective and not proven to have been caused by negligence on the part of the user within the specified times from the date the equipment is put into service by the City of Winnipeg. _____

19.2 The Contractor shall provide an **extended power train warranty** on the industrial tractor loader backhoe including, but not limited to, transmission, transfer bevel gear, pinion and bevel gear, drive shafts, axles, motors, engine (excluding radiator, alternator, starter, compressor) final drive gear train, steering clutches, steering brakes, differential, universal joints, etc. against any defects or workmanship, construction and materials, and agrees to repair or replace without cost to the City, articles that have become defective and not proven to have been caused by negligence on the part of the user within **five (5) years or 7500 hours** from the date the equipment is put into service by the City of Winnipeg. _____

19.3 All incidental warranty related costs (including, but not limited to, Contractor's travel, mileage, deductibles, etc.) in executing any part of the warranty shall be the sole responsibility of the Contractor. _____

20.0 PERFORMANCE RELIABILITY

20.1 The responsibility for the design of the complete unit, its performance and reliability shall rest upon the Contractor. _____

20.2 The term "*repeat failures*" as used herein is defined to mean that the same component, subassembly, or assembly develops repeated defects, breakdowns and/or malfunctions rendering the unit inoperative, or requiring repeated shop correction, service and/or replacement during the warranty period applicable for said component, sub-assembly, or 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 schedules. _____

20.3 Where the unit develops "repeated failures" in service, the Contractor shall make any necessary engineering changes, repairs, alterations or modifications in order to guarantee reliability of performance. _____

DETAILED SPECIFICATIONS 06024

MINIMUM 90 HP INDUSTRIAL TRACTOR LOADER BACKHOE – ITEM 2

(Water & Waste)

1.0 TYPE

- 1.1 Shall be a minimum 90 hp rubber tired, four wheel drive, industrial tractor loader backhoe with equipment and features as specified herein. The unit shall be the manufacturer's latest model.
- 1.2 The industrial tractor loader backhoe shall be furnished complete and ready for use. All parts not specifically mentioned, but which are required to complete and place the unit in successful operation, shall be furnished as though specifically mentioned in these specifications. The complete unit, and all parts thereof, shall conform in strength and quality of material and workmanship, to the best standards and engineering practice of the industry.
- 1.3 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 unit.
- 1.4 The ratings specified herein merely state the minimum values acceptable to the City. There is no intent of implying that these values are sufficient for the design of the unit being bid.

2.0 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.

3.0 QUALIFICATIONS OF MANUFACTURER / CONTRACTOR

- 3.1 The Contractor shall be an authorized distributor/supplier of the industrial tractor loader backhoe being bid.
- 3.2 The Contractor shall have an authorized service facility located within 10 km of the boundaries of the City of Winnipeg. The facility, or a portion thereof, shall be dedicated to the service and maintenance of the industrial tractor loader backhoe being offered. Further to B9.1, Bidders shall provide a description of the service facility including, but not limited to, number of qualified service staff, years of service experience on industrial tractor loader backhoe equipment, and general service capabilities. A description of the service facility shall be provided within 3-Calendar Days upon request of the Contract Administrator.
- 3.3 If a suitable warranty facility is not available within 10 km of the boundaries of the City of Winnipeg, the Bidder may propose that warranty work be performed by the City of Winnipeg Repair Facility. Any Work performed by the City of Winnipeg Repair Facility shall be charged to the Contractor at the Facility's shop rate in effect at the time the work is performed (for example, shop rate for 2006: \$73.50/hour regular time, \$103.50/hr overtime and callout.

4.0 INSTRUCTIONS FOR COMPLETION OF SPECIFICATIONS

- 4.1 All items in these specifications must be answered indicating compliance or non-compliance. **Bidders shall state "yes" for compliance or state deviation, or give a reply where requested to do so.** Deviations shall be clearly stated and fully detailed. Alternatives will be considered subject to evaluation.

4.2 Each bidder is required to fill in every blank. **Failure to do so may be used as a basis for rejection of bid.**

5.0 PERFORMANCE

5.1 Shall be capable of consistent top performance for construction, and excavation work during the summer and winter environments which are normal to the City of Winnipeg. _____

6.0 MAKE AND MODEL

6.1 **State make and model being bid.**_____

7.0 WEIGHT AND DIMENSIONS (As Bid)

7.1 Operating weight (as bid) – 17,000 lbs. minimum. State weight. _____

7.2 Overall transport width – 7' 2" approx., state. _____

7.2.1 Overall width, stabilizer spread, outside edge of pad – state. _____

7.3 Overall height (to top of cab) – 9' 3" approx., state. _____

7.3.1 Overall transport height – 12' 8" approx., state. _____

7.4 Overall transport length – 24 ft. approx., state. _____

7.5 Wheelbase – 6' 10" minimum, state. _____

7.6 Turning radius – curb clearance with brakes applied, state. _____

8.0 ENGINE

8.1 Type – diesel fuelled, liquid cooled. _____

8.2 Net horsepower as per SAE J1349 – 90 hp minimum, state. _____

8.3 Net torque as per SAE J1349 – 290 lb-ft minimum, state. _____

8.4 Fuel shut-off – electric solenoid type. _____

8.5 Fuel filter and water separator. _____

8.6 Oil filter – full flow, spin-on type. _____

8.7 Air cleaner – dry cartridge type with dash mounted restriction indicator. _____

8.8 Throttle – hand operated with foot override. _____

8.9 Exhaust – mufflered, vertical discharge with bend and 40° cut-off (rain cap unacceptable). _____

8.10 Coolant – extended life, ethylene glycol based, protected to -40° F/C. _____

8.11 Engine block heater – 750 Watt minimum. _____

8.12 Cold weather starting aid – glow plugs or air intake warmer, state type. _____

8.13 Engine protection shutdown system – shall provide visual and audible warning of principal machine systems including engine oil pressure and coolant temperature c/w engine shutdown. _____

9.0 TRANSMISSION

9.1 Type – powershift transmission with torque converter, manual shift with power reverser. _____

9.2 Shifting – fully synchronized. _____

9.3 Speeds, forward – four (4) minimum. _____

9.3.1 Speeds, reverse – three (3) minimum. _____

9.4 Powershift direction reverser. _____

10.0 AXLES & BRAKES

10.1 Front axle – driven type (4WD) with guarded drive shaft. _____

10.2 Brakes – wet disk type with individual pedals simultaneous or independent operation. _____

10.2.1 Parking brake – foot or hand operated. _____

11.0 TIRES, RIMS AND FENDERS

11.1 Front tires – minimum 12.5/80-18 tires with matching rims, state size. _____

11.1.1 Ply rating – 10-ply minimum. _____

11.1.2 Tread – lug type. _____

11.1.3 Front spare tire and rim – identical to tires and rims bid in Clause 11.1. Quantity as per Form B: Prices. _____

11.2 Rear tires – minimum 21L x 24 tires with matching rims, state size. _____

11.2.1 Ply rating – 12-ply minimum. _____

11.2.2 Tread – R4, industrial. _____

11.2.3 Rear spare tire and rim – identical to tires and rims bid in Clause 11.2. Quantity as per Form B: Prices. _____

11.3 Fenders – required front and rear, rubber or polymer, state material. _____

12.0 FRONT END LOADER

- 12.1 Lift capacity, full height – minimum 7,000 lbs., state. _____
- 12.2 Bucket breakout force – 10,000 lbs. minimum, state. _____
- 12.3 Dump clearance as bid (bucket @ 45°) – 102 in. approx., state. _____
- 12.4 Controls – single lever with clutch disconnect button, return-to-dig and float. _____
- 12.4.1 Self-levelling bucket with level indicator. _____
- 12.5 Loader bucket – flat bottom, general purpose type with bolt-on cutting edge. _____
- 12.5.1 SAE heaped capacity – minimum 1.25 yd³, state. _____
- 12.5.2 Width to exceed machine width at rear tires. _____
- 12.5.3 Wear plate(s) – required to prevent bucket heel from rubbing on ground with bolt-on cutting edge in place. _____
- 12.5.4 Lashing ring – heavy duty, steel weld-on hook with spring mounted clasp, top-centre mounted at front of loader bucket, suitable for transporting hydraulic hammer in loader bucket. _____
- 12.6 Loader safety prop bar – required. _____

13.0 BACKHOE

- 13.1 Type – centre pivot with extendable dipperstick. _____
- 13.2 Maximum digging depth – 19' 6" minimum, state digging depth. _____
- 13.3 Digging force, bucket cylinder (SAE), with 24 in. bucket – minimum 14,800 lbs., state. _____
- 13.3.1 Digging force, crowd cylinder (SAE), with dipperstick retracted – minimum 8,700 lbs., state. _____
- 13.4 Controls – SAE excavator style, pilot operated hydraulic joystick controls. _____
- 13.5 Quick coupler attachment bracket – required for quick attachment of all buckets and hydraulic hammers, state make and model being bid. _____
- 13.5.1 Attachment bracket shall permit use of two (2) bucket positions. _____
- 13.5.2 Attachment bracket shall permit bucket, bucket position changes and hydraulic hammer changes without the use of any tools. _____
- 13.6 24" Digging bucket – 24 in. heavy duty digging bucket with replaceable pin-on teeth, complete with required attachment pin(s). Backhoe shall be delivered with the 24" Digging Bucket (w/teeth) installed. _____

13.6.1 Additional Buckets:

i) 24" Smooth edge bucket – 24 in. heavy duty bucket, flat bottom, bolt-on cutting edge, complete with required attachment pin(s).
Quantity as per Form B: Prices.

ii) 30" Smooth edge bucket – 30 in. heavy duty bucket, flat bottom, bolt-on cutting edge, complete with required attachment pin(s).
Quantity as per Form B: Prices.

13.6.2 All buckets to be complete with certified lifting hooks.

13.7 Stabilizer pads – reversible, flip-over type pads.

13.8 Front counterweight – supplied as required to provide proper machine balance and roading characteristics.

13.9 Replaceable bushings and grease fittings at all backhoe pivot points, cylinder rod and closed ends, and bucket links.

13.10 Auxiliary hydraulics, couplers and controls shall be provided as required on all machines to accommodate hydraulic hammers. (See Clause 16.1).

14.0 OPERATOR COMPARTMENT

14.1 Type – roll-over protective structure complete with pressurized cab, OSHA certified or equal.

14.1.1 Cab layout shall provide a comfortable seating position for a 95th percentile male in both the loader and backhoe operating positions.

14.2 Insulation and headliner – required for sound suppression and severe weather climate.

14.2.1 Floor covering – rubber matting, required throughout.

14.3 Seat – cushioned, adjustable bucket type with arm rests, cloth upholstery mechanical or air suspension with retractable seat belt.

14.4 Ride control – required, factory installed.

14.5 Windows – tinted safety glass with appropriate markings for all panes.

14.5.1 All windows shall be opening type where available.

14.6 Ignition keys – three (3) sets required per machine.

14.7 Doors – one (1) each side with spring assisted strut, lockable with common key.

14.8 Interior rearview mirror – required.

14.9 Windshield wipers – intermittent, required front and rear with washers.

- 14.10 Heater/defroster – heavy duty, hot water type with multi-speed fan, capable of keeping all windows clear at -40° F/C. _____
- 14.10.1 Window fans – two (2) required with guards. _____
- 14.11 Air conditioning – factory installed with underhood compressor. (Note: roof mounted air conditioners are not acceptable.) _____
- 14.12 Steps – open grate type. _____
- 14.13 Toolbox – lockable, state location. _____
- 14.14 Instrumentation:
 - 14.14.1 Coolant temperature – gauge with audible alarm. _____
 - 14.14.2 Engine oil pressure – gauge or warning light with audible alarm. _____
 - 14.14.3 Transmission oil temperature – gauge or warning light with audible alarm. _____
 - 14.14.4 Engine hourmeter – required, non-resettable type. _____
 - 14.14.5 Tachometer – required. _____
 - 14.14.6 Fuel gauge – required. _____
- 14.15 Noise level, interior – maximum 85 dB(A), measured in accordance with SAE J336, state noise level. _____
- 15.0 ELECTRICAL AND LIGHTING**
- 15.1 Type – 12-Volt, negative ground electrical system. _____
- 15.2 Electric starter – required with keyed starter switch. _____
- 15.3 Batteries – dual, minimum 1500 CCA combined capacity. _____
- 15.4 Alternator – 65 Amp minimum, state capacity. _____
- 15.5 Combination stop and tail lights – two (2). _____
- 15.6 Signal lights with warning flashers – two (2) front and two (2) rear. _____
- 15.6.1 Warning flashers shall be operable with the key removed. _____
- 15.7 Headlights – two (2). _____
- 15.8 Work lights:
 - i) Front – four (4) front mounted, adjustable, located immediately below cab roof line. _____

- ii) Rear – four (4) rear mounted, adjustable, located immediately below cab roof line. _____
- iii) Side – two (2) side mounted, located immediately below cab roof line. _____
- 15.8.1 Independent on/off switch for each pair of work lights, dash mounted, wired through ignition, labelled with permanent type, engraved style labels. _____
- 15.9 Cab interior light – required. _____
- 15.10 Radio – AM/FM, factory installed. _____
- 15.11 Radio installation provision – 12 Volt, 20 Amp separate/independent circuit available at a spare circuit breaker, suitable for installation of a 2-way mobile radio. _____
- 15.12 Horn – operable from driving position and from backhoe position. _____
- 15.13 Mini light bar – Grote 76813, roof mounted, 360° visibility, wired through ignition, fused, dash mounted switch c/w permanent type, engraved style label. _____
- 15.13.1 Mini light bar guard – ramped, heavy duty bolt-on metal guard, designed to permit servicing of the light bar without being removed. _____
- 15.14 Back-up alarm – 97 dB(A), factory installed, mounted to be protected from damage. _____
- 15.15 Wiring for all locally installed accessories shall be colour coded, loomed and properly secured. _____
- 15.15.1 Splicing in any factory harnesses is unacceptable. All electrical power for locally supplied electrical components shall be supplied from an OEM power distribution box. _____
- 15.15.2 All joining of wires and electrical connectors shall be soldered and sealed with heat shrink tubing. _____
- 15.15.3 All wiring for work lights and warning lights shall be supplied with no exposed wiring. _____
- 16.0 MISCELLANEOUS**
- 16.1 Hydraulic hammer – NPK E204 hammer c/w required attachment pins and quick couplers, quantity as per Form B: Prices. _____
- 16.1.1 Hydraulic hammer shall be compete with a lashing ring and suitable length heavy duty chain with forged slip hooks for safe and secure transport of hydraulic hammer in loader bucket. _____
- 16.2 Slow moving vehicle emblem – Grote 71152 or equal c/w bracket, mounted to rear of backhoe. _____

16.3 Fuel tank – fully fuelled upon delivery, state capacity. _____

16.4 Grease fittings – readily accessible with remote grease zerks as required. _____

17.0 TRAINING

17.1 The Contractor shall be required to provide, at their expense, operator and preventative maintenance training by qualified staff, for City of Winnipeg operator and maintenance personnel at or near the time of delivery of the equipment. The training shall be conducted in separate sessions for each group of personnel. The sessions shall be sufficient in duration and shall provide adequate familiarization and orientation of the equipment, to the satisfaction of the Contract Administrator. The training shall be conducted within two (2) calendar weeks from the date of delivery and shall be coordinated through the Contract Administrator. The training shall be conducted in Winnipeg at a location designated by the Contract Administrator. _____

17.1.1 Pricing should be based on two (2) working day for maintenance personnel and four (4) working days for operating personnel.

Note: Final payment of the equipment will not be issued until successful completion of training has been conducted to the satisfaction of the Contract Administrator.

17.2 State if DVD video or CD training aides on the type of equipment being offered is available. _____

18.0 MANUALS

18.1 The following manuals shall be supplied with the unit when delivered. Manuals shall be in English and shall cover the complete equipment. _____

18.2 Operator's manual – quantity as per Form B: Prices. _____

18.3 Parts, repair and technical service manuals including preventative maintenance schedules for life of the backhoe – CDs preferred, quantity as per Form B: Prices. _____

18.4 Parts, repair and technical service manuals for hydraulic breaker – CDs preferred, quantity as per Form B: Prices. _____

19.0 WARRANTY

19.1 The Contractor shall warrant **all equipment** (excluding hydraulic hammer) and all parts thereof, against any defects of workmanship, construction and materials, and agrees to repair or replace without cost to the City any article that has become defective and not proven to have been caused by negligence on the part of the user within **three (3) years or 5000 hours** from the date the equipment is put into service by the City of Winnipeg. _____

19.1.1 The Contractor shall warrant **the hydraulic hammer** as follows:

- i) Working tool – 30 days. _____
- ii) Wear items including retaining pin, both upper and lower tool bushings, impact ring and bushing – 6-months. _____
- iii) Main component including main body, tool holder and gas head – 1-year. _____

19.1.2 For the above hydraulic hammer warranties, the Contractor agrees to warrant the specified components against any defects of workmanship, construction and materials, and agrees to repair or replace without cost to the City the article(s) that has become defective and not proven to have been caused by negligence on the part of the user within the specified times from the date the equipment is put into service by the City of Winnipeg. _____

19.2 The Contractor shall provide an **extended power train warranty** on the industrial tractor loader backhoe including, but not limited to, transmission, transfer bevel gear, pinion and bevel gear, drive shafts, axles, motors, engine (excluding radiator, alternator, starter, compressor) final drive gear train, steering clutches, steering brakes, differential, universal joints, etc. against any defects or workmanship, construction and materials, and agrees to repair or replace without cost to the City, articles that have become defective and not proven to have been caused by negligence on the part of the user within **five (5) years or 7500 hours** from the date the equipment is put into service by the City of Winnipeg. _____

19.3 All incidental warranty related costs (including, but not limited to, Contractor's travel, mileage, deductibles, etc.) in executing any part of the warranty shall be the sole responsibility of the Contractor. _____

20.0 PERFORMANCE RELIABILITY

20.1 The responsibility for the design of the complete unit, its performance and reliability shall rest upon the Contractor. _____

20.2 The term "*repeat failures*" as used herein is defined to mean that the same component, subassembly, or assembly develops repeated defects, breakdowns and/or malfunctions rendering the unit inoperative, or requiring repeated shop correction, service and/or replacement during the warranty period applicable for said component, sub-assembly, or 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 schedules. _____

20.3 Where the unit develops "repeated failures" in service, the Contractor shall make any necessary engineering changes, repairs, alterations or modifications in order to guarantee reliability of performance. _____

FORM O: QUESTIONNAIRE

1.0 **STATE** the delivery time of the complete order from the date of official notification of award: (See D5.1)

2.0 **LIST** any significant features that will be supplied standard on the unit being offered, but were not specifically mentioned in the Detailed Specifications:

3.0 **LIST** three current users of the offered model including names and telephone numbers:

4.0 **STATE** the location of the service facility:

5.0 Does the equipment being offered meet or exceed the minimum requirements of the Detailed Specifications?

6.0 **LIST** any deviations that might be considered less than equal to the Detailed Specifications:
