



**TENDER PW 2019-09  
ONE NEW 2018 OR 2019 WHEEL LOADER**

**PLEASE NOTE: BID REGISTRATION**

**Bid Registration is provided and mandatory to assist in the issuance of any addendum/addenda (via fax or email), should the need arise. Prospective Proponents are required to register and also check the Municipality's Website for any addendum(s) that may have been issued prior to submission of their final documents. The Municipality of Brighton is not responsible for the Proponent's failure to register for updates or addendum/addenda to the originally posted Bid; it is the Proponent's responsibility.**

**To Register Bid Please Email: [lisa@brighton.ca](mailto:lisa@brighton.ca)**



**TENDER PW 2019-09**  
**ONE NEW 2018 OR 2019 WHEEL LOADER**

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**PART I – INVITATION TO BID**

**The Corporation of the Municipality of Brighton (later referred to as “the Municipality”) invites qualified and experienced bidders to submit a Tender for ONE NEW 2018 OR 2019 WHEEL LOADER**

All inquiries are to be submitted in writing to: Murney Gibson, Mechanic  
The Municipality of Brighton  
67 Sharp Road  
Brighton, Ontario K0K 1H0  
[mgibson@brighton.ca](mailto:mgibson@brighton.ca)

Sealed envelopes, clearly marked as to the contents, will be received at the Brighton Public Works and Development Office, 67 Sharp Road, Brighton, Ontario, until **2:00 p.m.** local time on **Thursday, April 25, 2019**. The Bidders name and address are to be clearly indicated on the left top corner on the front of the envelope.

**THE MUNICIPALITY RESERVES THE RIGHT TO REJECT ANY OR ALL TENDERS WITHOUT FURTHER QUESTIONS OR REDRESS FROM ANY RESPONDENTS AND RESERVES THE RIGHT TO ACCEPT ANY TENDER OTHER THAN THE LOWEST BIDDER. ALL TENDERS ARE AWARDED BY RESOLUTION OF COUNCIL.**

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## 1.0 DELIVERY OF TENDERS

1.1 Tenders will be received at:

The Municipality of Brighton  
Public Works and Development Office  
Attention: Murney Gibson, Mechanic  
67 Sharp Road  
Brighton, Ontario K0K 1H0

Tenders will be publicly opened on **Thursday, April 25, 2019 at 2:00 p.m.** local time, at the same location.

**Note:** The use of the mail, or courier services, or any third party for delivery of a Tender will be at the risk of the Bidder. A Tender must be received at the Municipality of Brighton, Public Works and Development Office, by the closing date and time, or it will be returned to the Bidder unopened.

- 1.2 Tenders shall be submitted on the supplied Form of Tender, which shall be completed in every respect, with all blank fields filled in legibly. Tenders must be properly signed and sealed; otherwise the Tender may be rejected as informal. Sealed envelopes, clearly marked with "Tender PW 2019-09, One New 2018 or 2019 Wheel Loader", must be submitted.
- 1.3 Tenders may be withdrawn, by written notice to Murney Gibson, Mechanic, at a time no greater than two (2) hours prior to the opening of the first Tender.
- 1.4 Tenders will not be accepted if submitted by fax or email.
- 1.5 Claims for extras, on the basis that Work was noted in one or more of the Contract Documents and not shown or noted in another, shall not be entertained.
- 1.6 Tenders must be submitted without any knowledge, comparison of figures or arrangements with any other person making any Tender or estimate for the same purpose. Tenders must also be submitted without collusion or fraud and that no officer of the Municipality shall become interested, directly or indirectly, as a contracting party, partner, surety or otherwise in or in the performance of the Contract, or in the supplies, work or business to which it relates, or in any of the monies to be derived therefrom.
- 1.7 The Bidder shall give the unit price both in words and in figures, except as permitted otherwise, shall fill in all blank spaces for unit prices, item prices, Time of Completion and other information.

- 1.8 A Bidder who has already submitted a Tender may submit a revised Tender at any time prior to the official closing time. The last Tender received shall supersede and invalidate all Tenders previously submitted by that Proponent.
- 1.9 Tenders which are unbalanced, incomplete, conditional or obscure, or which contain additions not called for, erasures, alterations or irregularities of any kind, may be rejected as informal.

## **2.0 OVERVIEW**

- 2.1 The purpose of this Tender document is to solicit interested parties to provide all services necessary to supply the Municipality with One New 2018 or 2019 Wheel Loader.
- 2.2 Materials and work which are not specifically described, or shown, in the Contract Documents, but the necessity of which can be reasonably inferred from the Contract Documents, shall be supplied and performed by the Bidder at no additional cost to the Municipality and the Bidder shall not claim extra payment, or an extension of the time for completion on account thereof.

## **3.0 INQUIRY**

- 3.1 Any questions regarding this Tender must be received in writing, by email, no later than **2:00 p.m. on Thursday, April 18, 2019** and must be directed to Murney Gibson, Mechanic, Municipality of Brighton, at [mgibson@brighton.ca](mailto:mgibson@brighton.ca). Inquiries with a response that may result in a change(s) of the interpretation of the Tender will be addressed in an addendum, a copy of which all plan takers can obtain from the municipal website after 2:00 p.m. on Friday, April 19, 2019.

## **4.0 DEFINITIONS**

- 4.1 See Appendix 'A' for definitions that apply hereto.

## **5.0 PREPARATION OF PLANS AND SPECIFICATIONS AND SUPERVISION OF WORK**

- 5.1 Should a Tenderer find discrepancies, omissions, or ambiguities, or not agree that the materials and construction methods specified will provide an installation which meets the requirements of the intended vehicle, the Tenderer shall notify the Municipality in writing at least seven (7) calendar days prior to the Tender opening date. No oral interpretation made by the Municipality will be effective to modify any aspect of the Contract Documents. Each addendum (if any issued) shall be acknowledged by the Tenderer, signed and included with the Tender.

## **6.0 ITEMS**

- 6.1 All items are contained in the Form of Tender. Please provide a unit price and total cost for each item and a cost for the project completion.

## **7.0 SUBCONTRACTORS**

- 7.1 Should the Bidder choose to employ subcontractors to perform work under this Project, a list of proposed subcontractors shall be included with the Tender submission for approval from the Municipality.
- 7.2 Bidders are to complete the attached Subcontractor Form and submit it with their Tender package. The Municipality reserves the right, in its sole discretion, not to recommend an award to any Bidder whose named subcontractor(s) is/are deemed to be unsuitable, or has/have an unsatisfactory health and safety record and/or record of performance. Proponents using subcontractors shall be responsible for the subcontractor's quality of work and rectification of substandard work.
- 7.3 The successful Bidder will be responsible to the Municipality to guarantee that each Subcontractor carries the required amount of insurance, subject to the inclusive limits, as noted in this document. The Bidder will obtain, for the benefit of the Municipality as requested, certificates of insurance from each subcontractor. Each certificate of insurance is to be submitted with the Tender package.

## **8.0 RIGHT TO ACCEPT OR REJECT TENDERS/SUB-CONTRACTORS**

- 8.1 The Municipality reserves the right to reject any or all Tenders or to accept any Tender if it is in the best interest of the Municipality to do so.

- 8.2 By submitting a Tender, the Bidder acknowledges that there shall be no claims against, or entitlement to damages from, the Municipality by reason of the Municipality's rejection of any bid or all bids.

## **9.0 ABILITY AND EXPERIENCE OF BIDDER**

- 9.1 The Municipality does not intend to award the Contract to any Bidder who does not furnish satisfactory evidence that the Bidder has the ability and experience required in this class of work and that the Bidder has sufficient capital to execute the Work successfully and to complete it in the time required by the Contract. The appropriate schedule in the Form of Tender must be completed; otherwise the Tender may, but shall not necessarily, be rejected as informal.

## **10.0 UNBALANCED OR INCORRECT TENDERS**

- 10.1 The unit price on the Form of Tender shall be a reasonable unit price for each item. The Municipality shall be the sole judge of such matters. Any Tender considered by the Municipality to be unbalanced may be rejected.
- 10.2 When the amount for an item does not agree with the extension of the estimated quantity and the Tendered unit price, the unit price shall govern and both the item amount and the total Tender price shall be corrected accordingly. If the unit price is left blank, but a total price is shown for the item, then the unit price shall be determined by dividing the total price by the estimated quantity.
- 10.3 If both the unit price and the total price for an item are left blank, then the Tender submission shall be considered unbalanced.
- 10.4 Notwithstanding the values that may have been read out at the Tender opening, the corrected Tender values, as determined by the procedures contained herein, shall be used to establish the ranking of the Tender submissions.

## **11.0 TENDER LEFT OPEN**

- 11.0 The Bidder shall keep its Tender submission open for acceptance for thirty (30) days after its submission, unless the submission has been withdrawn in accordance with article 1.3.



## **12.0 AWARD AND EXECUTION OF CONTRACT**

- 12.1 For the purpose of this Contract, the date of award of the Contract shall be deemed to be the date when the Municipality has, in writing notified the successful Bidder by registered mail, courier or fax that the Condition Precedent to Award has been satisfied. Award of this Contract will be by Council Resolution and the date that it will be presented to Council, will be on or about **May 6, 2019**.
- 12.2 Without limitation and to summarize the requirements of other paragraphs of the Information for Bidders, the following documentation is required from the Contractor prior to execution of the Contract:
- i. Bidder's HST Registration Number;
  - ii. List of sub-contractors, if applicable; and
  - iii. Proof of insurance.
- 12.3 The successful Bidder will be required to execute three (3) copies of the Contract within ten (10) working days of the date of award of the Contract.
- 12.4 If the Bidder refuses or fails to execute the Contract within ten (10) working days of the date of award, it will be considered that the Bidder has abandoned all rights and interests in the Contract. The Municipality shall, in such event, be free to award the Contract to another Bidder or to re-bid the Work.

## **13.0 PAYMENTS**

- 13.1 The Municipality will receive an invoice/payment certificate from the successful Proponent once the vehicle(s) has/have been delivered to the Municipality of Brighton, complete with all equipment, with no defects and deficiencies, as well as after inspection by our Equipment Supervisor. Payment will be made 30 days after delivery to the Municipality.

## **14.0 ALTERATIONS, EXTRAS, DEDUCTIONS AND CLAIMS**

- 14.1 Any extra work must be approved by the Municipality in writing prior to commencing the extra work.
- 14.2 In the event of any circumstances arising at any time which, in the Proponent's opinion would entitle the Proponent to additional compensation and which are not fully provided for herein, the Proponent shall at once, on the discovery of such circumstances, notify the Municipality, in writing and

shall state clearly and fully the circumstances, and the additional sum or compensation demanded, or otherwise there shall be no claim in respect thereof.

## **15.0 DEFAULT AND TERMINATION**

15.1 In the event the successful Proponent does not follow the work specified in the Contract Documents, then:

15.1.1 the Municipality reserves the right to terminate any Contract, in whole or in part, and in the event of such termination no payment will be owing by the Municipality on account of said Contract and the Proponent will be liable for any and all expenses or loss resulting from such failure or delay and will return all monies paid by the Municipality; or

15.1.2 If the Municipality does not terminate this Contract for lateness, the Municipality may deduct and setoff from any payments owing to the Proponent all additional costs the Municipality reasonably incurs on account of the lateness.

15.2 The Municipality may, by written notice at any time, cancel the Contract with respect to the item which, as of the date of cancellation, has not been received, and/or completed.

15.3 If the Municipality terminates the Contract, then the Municipality may:

15.3.1 Enter into contracts with other persons to complete the vehicle;

15.3.2 Withhold payment of any amount owing to the Proponent under the Contract for the performance of the work;

15.3.3 Setoff the total cost of completing the Work incurred by the Municipality against any amounts owing to the successful Proponent under the Contract, and at the completion of the Work pay to the Proponent any balance remaining; and

15.3.4 If the total cost to complete the Work exceeds the amount owing to the successful Proponent, charge the Proponent the balance, which amount the Proponent will forthwith pay.

## **16.0 DELIVERY OF VEHICLES**

- 16.1 Delivery of the completed Wheel Loader to be **no later than July 30, 2019**, and will be delivered to the Municipality of Brighton, 67 Sharp Road, Brighton, Ontario, K0K 1H0.

## **17.0 CANADIAN MOTOR VEHICLE STANDARDS**

- 17.1 The item offered should meet or surpass the mandatory requirements of the "Canadian Motor Safety Regulations" and the latest applicable S.A.E., I.E.M.C. and O.S.H.A. recommended practices, where the use of such item may be covered by these regulations.

**PART III – FORM OF TENDER**

**COMPANY INFORMATION**

NOTE: PLEASE USE INK OR PRINTER

Name of Company: \_\_\_\_\_

Address/City/Town: \_\_\_\_\_

\_\_\_\_\_ Postal Code

Telephone Number: \_\_\_\_\_ Fax Number: \_\_\_\_\_

E-Mail Address: \_\_\_\_\_

Name of Person Signing for Company: \_\_\_\_\_

Position of Person Signing for Company: \_\_\_\_\_

Name of Contact Person: \_\_\_\_\_

HST Number: \_\_\_\_\_

**TENDERS RECEIVED BY:**

The Municipality of Brighton  
Public Works and Development  
Attention: Murney Gibson, Mechanic  
67 Sharp Road  
Brighton, Ontario K0K 1H0

Date: \_\_\_\_\_

We acknowledge that we have received addenda numbered \_\_\_\_ to \_\_\_\_ inclusive, and the prices Tendered include provisions set out in such addenda.

**NOTE: Your Tender will be rejected in its entirety if the addenda, if any, are not acknowledged and provided for in the prices submitted.**  
**Respondents must include ALL APPLICABLE SECTIONS of the Quotation Package at the time of closing.**

THIS PAGE TO BE INCLUDED WITH YOUR QUOTATION PACKAGE

**To: The Corporation of the Municipality of Brighton, Public Works and Development  
67 Sharp Road  
BRIGHTON, Ontario  
K0K 1H0**

The undersigned, being a body corporate, duly incorporated and authorized to carry on business in the province of Ontario, hereinafter called the Bidder, having carefully examined the Specification, the plans attached thereto, all addenda thereto and all other information and documents pertaining to the proposed project covering the work requirements and being aware of all the conditions affecting the cost of the work, hereby offer to furnish all labour, supervision, materials, tools, construction equipment and other facilities (other than those specifically stated in the specification as being supplied by others) and to perform all necessary work and proper for or incidental to the project and associated work at the site together with the guaranteeing of same in conformity with the Contract to be entered into upon acceptance of this Tender.

Make \_\_\_\_\_

Model \_\_\_\_\_

Price for Wheel loader and all other Options ( <b>Basis of Award</b> )	\$ _____
H.S.T.	\$ _____
TOTAL	\$ _____

TOTAL AMOUNT IN WORDS, FOR THE STIPULATED SUM OF:

\_\_\_\_\_ DOLLARS

All of which is submitted and duly executed under the corporate seal, this \_\_\_\_\_ day of \_\_\_\_\_, 2019.

\_\_\_\_\_  
\_\_\_\_\_

The total has been calculated using Part IV, specifications of a Wheel Loader. The final valuation of the vehicle will be made on the basis of the specifications.

**PART IV – Specifications for One New 2018 or 2019 Wheel Loader**

The successful Bidder shall supply and deliver manufacturer’s standard equipment for One New 2018 or 2019 Wheel Loader.

**Option packages attached to items must include a detailed outline of all options. Brochures are not acceptable for outlining options.**

**Options, weights and dimensions must be included in separate list as brochures do not clearly identify the items.**

**1.0 YEAR, MAKE, MODEL**

State year, make and model of wheel loader.

YEAR \_\_\_\_\_

MAKE \_\_\_\_\_

MODEL \_\_\_\_\_

**2.0 STANDARD EQUIPMENT**

Wheel loader must be delivered with all manufacturer’s standard equipment in regards to comfort, utility, safety and convenience.

### 3.0 REQUIRED OPTIONAL EQUIPMENT

In addition to the standard equipment, the wheel loader must be equipped with the following options:

Compliant?    **SPECIFICATIONS:**

- Y\_\_\_ N\_\_\_ Engine rated net power shall be at least 162 hp (119 kW) according to ISO 9249 at 1800 RPM.
- Y\_\_\_ N\_\_\_ Engine maximum net power shall be at least 166 hp (122 kW) according to ISO14396.
- Y\_\_\_ N\_\_\_ Machine width over tires shall be 8'4" (2540 mm)
- Y\_\_\_ N\_\_\_ Machine wheelbase length shall be 9'10" (3000 mm).
- Y\_\_\_ N\_\_\_ Machine height shall be 10'11" (3340 mm)
- Y\_\_\_ N\_\_\_ Machine bucket clearance at maximum lift and level bucket shall be 11'8" (3580mm)
- Y\_\_\_ N\_\_\_ Machine bucket pin height shall be 12'9" (3907 mm)
- Y\_\_\_ N\_\_\_ Machine overall length with 2.7 CYD (2.1 m3) Fusion general purpose bucket shall be 24'8" (7530 mm).

#### **BUCKET**

- Y\_\_\_ N\_\_\_ 3.0 CYD (2.3 m3) General Purpose Fusion hook on bucket. Machine shall meet the following specifications:
  - Minimum full turn static tipping load of 18,497 lbs (8390 kg) per ISO 14397-1
  - Minimum breakout force of 25,790lbs (11,698 kg)
  - Minimum dump clearance of 9'1" (2779 mm) at full lift and 45 degree discharge
  - Minimum reach of 3'7" (1102 mm) at full lift and 45 degree discharge
  - Maximum total cycle time of 9.3 seconds
  - Minimum dig depth of 4" (100 mm)
  - Minimum rackback angle of 54 degrees
  - Minimum machine operating weight of 30,962 lbs (14,044 kg)

## ENGINE

- Y\_\_\_ N\_\_\_ Engine shall be manufactured by the equipment manufacturer.
- Y\_\_\_ N\_\_\_ Engine shall be US EPA Tier 4 Final / EU Stage IV compliant and Tier 4 final compliance certificate shall be available upon request.
- Y\_\_\_ N\_\_\_ Engine aftertreatment shall be equipped with a system that uses, Exhaust Gas Recirculation (EGR), a Diesel Oxidation Catalyst (DOC), a Diesel Particulate Filter (DPF) and Selected Catalytic Reduction (SCR)
- Y\_\_\_ N\_\_\_ DPF service Life shall extend to the life of the engine
- Y\_\_\_ N\_\_\_ Engine aftertreatment system shall use Diesel Exhaust Fluid (DEF) to meet emission requirements
- Y\_\_\_ N\_\_\_ DEF tank shall be located away from the diesel fuel tank to prevent fluid mix up
- Y\_\_\_ N\_\_\_ Machine shall allow DEF fluid to be purged automatically even when the machine power disconnect key is switched to the OFF position.
- Y\_\_\_ N\_\_\_ Machine shall also be able to run on up to B20 Bio-Diesel
- Y\_\_\_ N\_\_\_ Emissions requirements shall meet or exceed worldwide requirements and be Tier 4 Final compliant.
- Y\_\_\_ N\_\_\_ Regeneration shall be passive and not require any input from operator or disrupt work.
- Y\_\_\_ N\_\_\_ Engine shall be 7.01 L six-cylinder, with electronically controlled fuel injection for precise timing.
- Y\_\_\_ N\_\_\_ Engine bore shall be 4.13" (105 mm) and stroke shall be 5.3" (135 mm).
- Y\_\_\_ N\_\_\_ Engine shall be direct injection turbocharged with waste gate turbocharger for reliability, durability and performance.
- Y\_\_\_ N\_\_\_ Engine shall have a high pressure common rail fuel system with an oil lubricated fuel pump.
- Y\_\_\_ N\_\_\_ Machine shall be standard with two 1000 CCA (minimum capacity) maintenance free batteries mounted in bolt-on battery boxes.
- Y\_\_\_ N\_\_\_ Engine shall have the capability to operate in multiple modes based on operator choice. Full Power and Engine speed, or reduced power and engine speed, to save fuel.
- Y\_\_\_ N\_\_\_ Engine shall be able to provide different maximum power levels depending which speed range (gear) it is in
- Y\_\_\_ N\_\_\_ Machine shall have optional cold start package which adds 2 additional 1000 CCA batteries for easy cold weather starting
- Y\_\_\_ N\_\_\_ Machine shall have optional engine block heater and automatic ether starting aid for easy cold weather starting
- Y\_\_\_ N\_\_\_ Automatic Electronic Fuel priming pump and fuel/water separator shall be standard. Fuel filters should be replaced as dry and primed automatically to minimize fuel contamination.



- Y\_\_\_ N\_\_\_ Easily accessible ground level Emergency Engine Shutdown switch shall be standard.
- Y\_\_\_ N\_\_\_ Machine shall have automatic idle engine shutdown feature as standard.
- Y\_\_\_ N\_\_\_ Machine shall have a standard 110 amp alternator and optional 150 amp Heavy Duty brushless and filtered alternator
- Y\_\_\_ N\_\_\_ Machine shall have a standard backup alarm.
- Y\_\_\_ N\_\_\_ Machine shall have a standard master battery disconnect switch.
- Y\_\_\_ N\_\_\_ Machine shall use an air-to-air-aftercooler (ATAAC).
- Y\_\_\_ N\_\_\_ Engine shall have a 4 valve per cylinder crossflow head.
- Y\_\_\_ N\_\_\_ Machine shall use gear driven water and oil pumps.
- Y\_\_\_ N\_\_\_ Machine ECM shall automatically derate the engine for protection during overheating.
- Y\_\_\_ N\_\_\_ Engine and cooling compartments shall be completely separated.

### **POWER TRAIN/TRANSMISSION**

- Y\_\_\_ N\_\_\_ Machine shall have a forward/neutral/reverse switch standard on the implement control joystick.
- Y\_\_\_ N\_\_\_ Machine shall have four forward and four reverse speed ranges with a maximum of 25 mph (40 kph).
- Y\_\_\_ N\_\_\_ Machine shall have ground accessible ports to sample engine and transmission oil.
- Y\_\_\_ N\_\_\_ Machine shall have transmission oil sight gauge and fill spout on the same side of the machine.
- Y\_\_\_ N\_\_\_ Machine shall have independent control for ground speed and engine RPM
- Y\_\_\_ N\_\_\_ Machine shall have operator-selectable Rim Pull Control feature to minimize tire slip and wear in various ground conditions
- Y\_\_\_ N\_\_\_ Machine shall have operator-selectable Creeper Control feature to control ground down speed from 0.6 mph (1 kph) to 8 mph (13kph) independent of engine RPM.
- Y\_\_\_ N\_\_\_ Machine shall have the ability to change operation modes so it can feel like a Torque Convertor machine or a Hystat machine
- Y\_\_\_ N\_\_\_ Machine shall have the ability to electronically adjust the directional shift aggressiveness to suit the operator need.

## **STEERING**

- Y\_\_\_ N\_\_\_ Steering articulation angle shall be 40°.
- Y\_\_\_ N\_\_\_ Machine shall have two steering cylinders with a bore of 2.8" (70 mm).
- Y\_\_\_ N\_\_\_ Steering cycle time from full left to right or full right to left at maximum RPM shall be less than 2.9 sec
- Y\_\_\_ N\_\_\_ Steering system shall use a dedicated load sensing variable displacement pump with dual double acting cylinders.
- Y\_\_\_ N\_\_\_ Steering torque shall be 37,155 ft-lb (50,375 N-m) at 0 degree turn 27,747 ft-lb (37,620 N-m) at 40 degree turn
- Y\_\_\_ N\_\_\_ Maximum steering working pressure shall be 3,500 psi (24,130 kPa).
- Y\_\_\_ N\_\_\_ High impact rubber steering stops shall be standard.
- Y\_\_\_ N\_\_\_ Steering console shall be adjustable including tilting and telescoping steering column
- Y\_\_\_ N\_\_\_ Secondary steering system shall be available.
- Y\_\_\_ N\_\_\_ Machine shall have optional Dual mode steering allowing operator to turn steering wheel only 50 degrees left or right of center to reach full articulation reducing operator effort

## **BRAKES**

- Y\_\_\_ N\_\_\_ Service brake shall feature completely closed and sealed standard inboard oil-immersed disc brakes on front and rear axles that are adjustment free.
- Y\_\_\_ N\_\_\_ Audible alarm and Indicator light shall alert operator if brake pressure drops below normal operating parameters.
- Y\_\_\_ N\_\_\_ Machine shall have continually charged nitrogen accumulators to provide stopping capability after loss of engine power.
- Y\_\_\_ N\_\_\_ Machine shall feature an electronic park brake switch mounted in operator station on instrument panel.
- Y\_\_\_ N\_\_\_ Parking brake shall be disk and caliper type on driveline for positive operation which is spring applied and hydraulically released. The transmission shall be automatically neutralized when parking brake is applied.
- Y\_\_\_ N\_\_\_ Single floor mounted pedal shall function as ground speed control and a brake so the operator can maintain high engine rpm for full hydraulic flow and fast cycle times.

## **HYDRAULIC SYSTEM**

- Y\_\_\_ N\_\_\_ Maximum working pressure shall be 3,626 psi (25,000 kPa).

- Y\_\_\_ N\_\_\_ Minimum hydraulic output at 1800 engine RPM shall be 50 gal/min (190 L/min).
- Y\_\_\_ N\_\_\_ Machine shall have optional 3rd and 4th function hydraulics available for use with work tools that require hydraulic power
- Y\_\_\_ N\_\_\_ Machine shall have an adjustable 4th function flow feature allowing flow adjustability from 20% to 100% of maximum as standard.
- Y\_\_\_ N\_\_\_ Total hydraulic cycle time shall be no more than 10 seconds.
- Y\_\_\_ N\_\_\_ Double acting lift cylinders shall be 4.7" X 28.7" (120 X 728 mm).
- Y\_\_\_ N\_\_\_ Double acting tilt cylinder shall be 5.9" X 21.9" (150 X 555 mm).
- Y\_\_\_ N\_\_\_ Hydraulic implement system shall detect when the lift and tilt kick outs approach the setting automatically reducing cylinder velocity to provide a smooth stop.
- Y\_\_\_ N\_\_\_ Machine shall feature an operator selected electric safety valve to disable implement functions.
- Y\_\_\_ N\_\_\_ Machine shall feature a heavy-duty hydraulic oil cooler standard with 6 Fins per In.
- Y\_\_\_ N\_\_\_ Implement hydraulics shall be load-sensing.
- Y\_\_\_ N\_\_\_ Seat mounted low effort joystick control shall offer simultaneous lift and tilt functions.
- Y\_\_\_ N\_\_\_ Bucket lift circuit shall have four positions: raise, hold, lower and float.
- Y\_\_\_ N\_\_\_ Tilt circuit shall have three positions: tilt back, hold and dump.
- Y\_\_\_ N\_\_\_ Machine shall use XT3 hoses with 4,000 psi (27579 kPa) working pressure.
- Y\_\_\_ N\_\_\_ Steering and implement pumps shall be separate.
- Y\_\_\_ N\_\_\_ Machine shall have pressure taps to allow quick diagnosis of complete hydraulic system.
- Y\_\_\_ N\_\_\_ Machine shall have a hydraulically driven demand fan.
- Y\_\_\_ N\_\_\_ Machine shall have two section implement control valve for lift and tilt functions and up to two additional valve sections optional.
- Y\_\_\_ N\_\_\_ Hydraulic couplings shall have O-ring face seals.
- Y\_\_\_ N\_\_\_ Biodegradable hydraulic oil shall be available as an alternative to mineral-based oils.
- Y\_\_\_ N\_\_\_ A Ride Control system shall be available for smooth operation in rough roading conditions. Ride Control system shall incorporate multiple accumulators for maximum performance at multiple load levels.

## **AXLES**

- Y\_\_\_ N\_\_\_ Front axle shall be rigidly mounted to the front loader frame.
- Y\_\_\_ N\_\_\_ Rear axle shall have a remote trunnion lubrication fitting to simplify maintenance.
- Y\_\_\_ N\_\_\_ Front axle shall contain a means of locking the front differential with a joystick mounted control, without stopping the machine. Axle shall automatically stay locked until equal torque is sensed on both wheels.
- Y\_\_\_ N\_\_\_ Limited Slip Differentials shall be available on rear axle.
- Y\_\_\_ N\_\_\_ Seals on the axle and housing shall keep oil in and lock contaminants out to prevent contamination of internal components.
- Y\_\_\_ N\_\_\_ Axle shall have fully-enclosed brakes and final drives.
- Y\_\_\_ N\_\_\_ Machine shall have axle seal guard's standard.
- Y\_\_\_ N\_\_\_ Planetary final drives shall be lubricated from the main oil sump.
- Y\_\_\_ N\_\_\_ Final drives shall have high contact ratio gears for quiet, durable operation.

## **WHEELS**

- Y\_\_\_ N\_\_\_ Standard tire size shall be 20.5 X 25 with 3 piece rim

## **OPERATOR STATION**

- Y\_\_\_ N\_\_\_ Rear Hinged door shall lock open 180 degrees with the capability to open and close door from the operator's seat.
- Y\_\_\_ N\_\_\_ Personal storage areas shall include places to store a lunch box, thermos, cup, coat rack and a lockable storage area.
- Y\_\_\_ N\_\_\_ Seat mounted joystick control shall operate both lift and tilt functions. Joystick shall integrate forward/reverse direction switch, and adjustable 3rd function hydraulic control (if so equipped)
- Y\_\_\_ N\_\_\_ An Engine Speed Control feature shall be available to set engine RPM which can be set and maintained with a switch in the cab.
- Y\_\_\_ N\_\_\_ Standard seat shall include cloth with fully adjustable fore/aft position, seat back angle, bottom cushion height, and armrest angle and suspension stiffness.
- Y\_\_\_ N\_\_\_ Automatic temperature and blower control shall be standard
- Y\_\_\_ N\_\_\_ Air suspension seat options shall be available with more deluxe options.

- Y\_\_\_ N\_\_\_ Seat shall include a 3" (75 mm) wide retractable seat belt.
- Y\_\_\_ N\_\_\_ Front and rear wipers with washers shall be standard.
- Y\_\_\_ N\_\_\_ Steps shall be at a 12-degree incline for easy entry and exit. Large aggressive-tread steps shall keep debris buildup to a minimum.
- Y\_\_\_ N\_\_\_ Machine shall be equipped with programmable in-cab kick outs for lift, lower, rack and dump kickouts with on the fly adjustments at any linkage position.
- Y\_\_\_ N\_\_\_ (2) 12V outlets for powering electronics, 5 V USB outlet, a radio installation package with Bluetooth and remote auxiliary input, adjustable sun screen for front and rear window, external mirror package with heat and electronic adjust.
- Y\_\_\_ N\_\_\_ External Mirrors should allow visibility to the ground to the side of the machine, by use of additional parabolic mirrors
- Y\_\_\_ N\_\_\_ Machine cab shall meet ROPS and FOPS criteria as well as regulations for sound exposure.
- Y\_\_\_ N\_\_\_ Seamless front windshield standard with side sliding glass windows.
- Y\_\_\_ N\_\_\_ Rear window shall have an electric defroster with timer.
- Y\_\_\_ N\_\_\_ Glass panels shall extend from cab roof to floor allowing visibility to ground on the front windshield
- Y\_\_\_ N\_\_\_ Machine shall have gauges including hydraulic, engine and transmission temperatures as well as fuel level.
- Y\_\_\_ N\_\_\_ Warning/indicator and diagnostic functions shall include: Primary steering malfunction, electrical system voltage low, coolant temperature, engine oil pressure low, parking brake applied, brake charge pressure low, transmission oil temperature, transmission oil filter bypass, and hydraulic oil filter bypass.
- Y\_\_\_ N\_\_\_ Machine shall have two additional mounting provisions with a power connection in cab for auxiliary equipment as standard
- Y\_\_\_ N\_\_\_ Rear facing grill mounted lights shall have an "AUTO" mode which will allow them to come on when the machine is in reverse as standard.
- Y\_\_\_ N\_\_\_ Auxiliary LED front and rear working lighting packages shall be available.
- Y\_\_\_ N\_\_\_ Auxiliary LED Engine enclosure service lighting shall be available.
- Y\_\_\_ N\_\_\_ Stop, tail, and turn signal lights shall be LED and mount in rear counterweights for extra protection
- Y\_\_\_ N\_\_\_ Machine shall have a standard toolbox when not configured with a cold start package.
- Y\_\_\_ N\_\_\_ Machine shall have a 7" color LCD display in the cab with capabilities of enhanced diagnostics, fine machine control adjustments, and detailed system parameters for machine and engine including fuel consumption.
- Y\_\_\_ N\_\_\_ Machine shall have an optional factory installed rear camera system with rear camera fully protected from rear impact damage, and a secondary color LCD screen in the cab with capability to have up to 3 camera inputs

- Y\_\_\_ N\_\_\_ Machine shall have the option of a Rear Radar detection system that uses two (2) radars in conjunction with the rear view camera to provide both visual and audible warnings of items behind the machine
- Y\_\_\_ N\_\_\_ Machine shall have a coded start security feature preventing machine start until a security code is entered
- Y\_\_\_ N\_\_\_ Machine shall have the ability to provide Preventative Maintenance reminders based on hours of operation.
- Y\_\_\_ N\_\_\_ Machine shall be capable of automatically changing machine settings based on operator selected application choice, (Wheel loader loading, Fine Grading, Rooding, Material Handling, etc...)
- Y\_\_\_ N\_\_\_ Machine shall warn the operator if the seat belt is not engaged
- Y\_\_\_ N\_\_\_ Operators station shall expose the operator to sound pressure of no greater than 68 dB(A) per ANSI/SAE J1166 May 90 procedures to provide maximum operator safety.

### **LOADER LINKAGE**

- Y\_\_\_ N\_\_\_ Electronic "quick coupler" shall be available.
- Y\_\_\_ N\_\_\_ Machine shall have a parallel lift linkage with a maximum variation from parallel of 9 degrees, with an additional electronic feature that can provide parallelism to within 2 degrees.
- Y\_\_\_ N\_\_\_ Standard machine should be equipped with constant pressure vertical engagement wear compensating coupler
- Y\_\_\_ N\_\_\_ High lift option shall be available for both pin on and coupler machines providing an additional 1'11" (593 mm) of lift height over standard boom.

### **SERVICEABILITY**

- Y\_\_\_ N\_\_\_ Radiator, oil coolers, and ATAAC shall be in a single plane with clean out access doors as standard.
- Y\_\_\_ N\_\_\_ Radiator, oil coolers, and ATAAC shall be 6 fins per inch or less as standard.
- Y\_\_\_ N\_\_\_ Cooling system shall have a 4.5 mm or smaller screen to filter the large particles out of the intake air as standard.
- Y\_\_\_ N\_\_\_ All service points shall be accessible from ground level, on the same side of the machine.
- Y\_\_\_ N\_\_\_ Radiator coolant and transmission and hydraulic oil levels shall have sight gauges.
- Y\_\_\_ N\_\_\_ Spin on filters for engine oil and hydraulic oil shall be vertically mounted for easier servicing.
- Y\_\_\_ N\_\_\_ Scheduled oil sampling ports shall be factory installed for improved access to engine, transmission and hydraulic oils.

- Y\_\_\_ N\_\_\_ Machine shall have easy access to engine and cooling compartments through two (2) gull wing doors that swing up and are held in place with lockable gas struts.
- Y\_\_\_ N\_\_\_ Cooling fan shall be hydraulically driven and separate from the engine compartment.
- Y\_\_\_ N\_\_\_ Machine shall have an optional automatic reversing fan with manual override switch.
- Y\_\_\_ N\_\_\_ Machine error codes shall be accessible from the primary display or the optional secondary 7" color LCD screen
- Y\_\_\_ N\_\_\_ Machine shall have easily accessible jumper studs to aid in jump starting machine or other machines.
- Y\_\_\_ N\_\_\_ Standard service features shall include: Standard hydraulic oil cooler; adjustment free brakes; adjustment free engine fuel system; grouped grease fittings; positive torque hose clamps; braided, color coded and numbered wiring.
- Y\_\_\_ N\_\_\_ Machine shall have a maintenance free driveshaft.
- Y\_\_\_ N\_\_\_ Machine shall have an Auto greaser system on all components except drive shafts.
- Y\_\_\_ N\_\_\_ Machine shall be equipped with a **LOADRITE SCALE system to weight material in the bucket.**

#### **5.0 WARRANTY (basic warranty)**

All Bidders must attach warranty details with the Tender submission.

**A PREBUILD MEETING WITH MUNICIPAL STAFF IS MANDATORY BEFORE SUCCESSFUL BIDDER COMMENCES SOURCING OR BUILDING WHEEL LOADER.**

**SUCCESSFUL BIDDER MUST PROVIDE OPERATOR AND MAINTENANCE PERSONNEL WITH TRAINING ON WHEEL LOADER - COST TO BE INCLUDED IN FINAL PRICE OF WHEEL LOADER.**

**PART V – EXPERIENCE and SUB-CONTRACTORS**

**1. Experience Summary**

Provide a list of vehicles similar size and type that have been completed by your company during the past five (5) years.

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**2. Sub-Contractors**

Provide a list of sub-contractors for the approval of The Municipality that you propose to use on this contract.

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**3. Completion of the Projects**

Delivery of completed Wheel Loader to be no later than July 30, 2019.

We, (Bidder's Name) \_\_\_\_\_ agree to commence work within \_\_\_\_\_ calendar days from the date of entering into an agreement with the Municipality of Brighton.



## **APPENDIX 'A' – DEFINITIONS**

**Contract/Contract Documents** – collection of documents representing a commitment from both the successful Bidder and the Owner to complete Work as described in the documents

**Contractor** – successful Bidder

**Engineer** – Municipal Director of Public Works and Development, or designate

**The Municipality** – the Corporation of the Municipality of Brighton

**Sub-contractor** – person or corporation having a contract with the Contractor or another sub-contractor, for execution of a part or parts of the Work included in the Contract

**Work** – the supply of all material, equipment and labour as described in the Contract Document(s), including provisional items, where appropriate