

**PART A**

**BID SUBMISSION**

**FORM A: BID**  
(See B7)

1. Project Title SUPPLY & DELIVERY OF A TELESCOPIC, MATERIAL HANDLING AERIAL DEVICE VEHICLE

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

4. Definitions

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

Template Version: G320040301

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 A TELESCOPIC, MATERIAL HANDLING AERIAL DEVICE VEHICLE**

**UNIT PRICES**

ITEM NO.	DESCRIPTION	SPEC. REF.	UNIT	APPROX. QUANTITY	UNIT PRICE	AMOUNT
1	Telescopic, Material Handling Aerial Device	04026	Each	2	\$ _____	\$ _____
2	1 in. Impact Wrench	04026	Each	2	\$ _____	\$ _____
3	Cab & Chassis	04027	Each	2	\$ _____	\$ _____
TOTAL BID PRICE (GST and PST extra) (in figures) \$ _____ (in words) _____ _____						

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

## **FORM N: DETAILED SPECIFICATIONS 04026**

### **TELESCOPIC, MATERIAL HANDLING AERIAL DEVICE** *(Traffic Signals)*

#### **1. INTENT**

- 1.1 It is the intent of these specifications to describe a rear corner mounted, telescopic, material handling aerial device vehicle complete with a hydraulically operated, three stage, telescopic boom having hydraulically operated second and third stages, a fiberglass service body and other equipment as described herein, installed on a crew cab and chassis to be supplied by the Contractor (see Detailed Specifications 04027 attached).
- 1.2 The aerial device shall be the manufacturer's latest model, as may be modified by these specifications. The aerial device, including all auxiliary equipment, shall be furnished complete and ready for use. All parts not specifically mentioned but which are required for the complete unit shall conform in strength, quality of material and workmanship, to the best standards and engineering practice in the industry.
- 1.3 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 to ensure that the manufacturer will be 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, not implying that those values are sufficient for the design of the particular equipment being bid.

#### **2. OTHER SPECIFICATIONS AND STANDARDS**

- 2.1 Canadian Standards Association Standard CAN/CSA-C225-M00 Vehicle Mounted Aerial Devices, ANSI A10.31 (Latest Edition) Digger Derricks – Safety Requirements, Definitions and Specifications, and Canadian Standards Association Standard Z150-1974 – Safety Code for Mobile Cranes, form an integral part of these specifications and shall have precedence in any conflict concerning minimum acceptable standards.
- 2.2 All applicable SAE Standards form an integral part of the chassis specifications and shall have precedence in any conflict concerning minimum acceptable standards.
- 2.3 The completed aerial device shall comply with the Canadian Motor Vehicle Safety Act (CMVSS) and the Manitoba Highway Traffic Act and all regulations thereunder.
- 2.4 All welding and welding designs of the load supporting elements shall conform to the requirements of the Canadian Standards Association Standard W47.1-03 and W59-03.

#### **3. QUALIFICATIONS OF THE MANUFACTURER**

- 3.1 The manufacturer of the aerial device shall have a minimum of five years continuous experience manufacturing and installing aerial devices of the type being offered. The manufacturer shall have in effect a complete and documented quality control program ensuring the compliance with all applicable standards.
- 3.2 The manufacturer of the aerial device shall be ISO 9002 Certified.

#### **4. QUALIFICATIONS OF THE BIDDER**

- 4.1 The Bidder shall be a manufacturer or authorized distributor/supplier of aerial device equipment.

- 4.2.1 For the purposes of Warranty repairs, the Bidder shall have an authorized service and final assembly facility located within 10 km of the boundaries of the City of Winnipeg. The facility, or major portion thereof, shall be dedicated to the installation, service, and maintenance of aerial device vehicles and derrick equipment being offered.
- 4.2.2 Further to B9.1, Bidders shall include a description of the facility within including, but not limited to, number of qualified staff, years of service experience on aerial and digger derrick equipment, and general service capabilities within three (3) days of the request of the Contract Administrator.
- 4.2.3 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 will be charged back to the Contractor.
- 4.2.4 The Contractor shall furnish a letter, stamped by a registered professional engineer, indicating that the completed aerial device vehicle complies with CAN/CSA Standard C225-M00.
- 4.2.5 All welding and welding design of the load supporting elements shall conform to the requirements of the Canadian Standards Association (CSA) W47.1-03 and W59-03.

## 5. INSTRUCTIONS FOR COMPLETION OF SPECIFICATIONS

- 5.1 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 shall be considered subject to evaluation.
- 5.2 Each Bidder is required to fill in every blank. **Failure to do so may be used as a basis for rejection of bid.**

## 6. PERFORMANCE

- 6.1 The aerial device vehicle shall be capable of operating safely and efficiently in any working position and in confined areas while performing traffic signal construction and maintenance functions, during summer and winter conditions normal to the City of Winnipeg.

## 7. CAB AND CHASSIS

- 7.1 The cab and chassis shall be a new, 2004 or 2005 crew cab and chassis complying with Detailed Specifications 04027 in accordance with the instructions given.

## 8. AERIAL DEVICE

- 8.1 Type – 47 ft. Hydraulic Derrick, rear corner mount, three (3) stage, hydraulic, aerial device with two (2) pin-on personnel platforms with a nominal raised platform height of 40 ft.. \_\_\_\_\_

- 8.1.1 State make and model being offered. \_\_\_\_\_

- 8.2 Overall travel height not to exceed 145 in. maximum at any point. State height. \_\_\_\_\_

- 8.3 Boom – three (3) stage telescopic with full capacity, hydraulically extendable, fiberglass, third stage. \_\_\_\_\_

- 8.4 State length of each boom stage:
- a) Second stage (intermediate). \_\_\_\_\_
  - b) Third stage (upper). \_\_\_\_\_
- 8.5 Horizontal reach from centreline of rotation – 37 ft. minimum.  
State reach. \_\_\_\_\_
- 8.6 Fiberglass boom – dielectrically tested to 100 KvAC. A factory test document shall be supplied prior to the delivery of the derrick stating that the boom has been dielectrically tested to 100 KvAC. \_\_\_\_\_
- 8.6.1 The completed unit, shall be tested by the Contractor, at their expense. \_\_\_\_\_
- 8.7 Boom elevation shall have a range of -20° to +80° from horizontal. \_\_\_\_\_
- 8.8 Bare boom capacity, booms retracted – 18,000 lbs. minimum. \_\_\_\_\_
- 8.9 Bare boom capacity, 2<sup>nd</sup> & 3<sup>rd</sup> stages extended – 10,500 lbs. minimum. \_\_\_\_\_
- 8.10 Rotation – continuous with shear-ball type rotation bearing and spring applied, hydraulically released rotation brake. \_\_\_\_\_
- 8.11 Boom stow protection system required to prevent excessive down force being applied to the boom rest. \_\_\_\_\_
- 8.11.1 Boom side-load protection system required. \_\_\_\_\_
- 8.11.2 Boom overload protection system – required to prevent excessive loading of boom when using winch up, 2<sup>nd</sup> & 3<sup>rd</sup> stages extended, and boom lower functions. \_\_\_\_\_
- 9. AERIAL DEVICE EQUIPMENT**
- 9.1 Hydraulic winch – mounted at end of 2<sup>nd</sup> stage boom tip. \_\_\_\_\_
- 9.1.1 Winch – state make and model. \_\_\_\_\_
- 9.1.2 Winch lifting capacity, bare, drum – minimum 15,000 lbs.. State capacity. \_\_\_\_\_
- 9.1.3 Winch brake – oil cooled. \_\_\_\_\_
- 9.1.4 Winch rope – synthetic type 2 in 1 stable braid, 7/8" diameter X 80' long, 28,000 lbs. breaking capacity. \_\_\_\_\_
- 9.1.4.1 Shackle – 5/8 in. diameter, 6,500 lbs. working load limit with 5:1 safety factor. \_\_\_\_\_
- 9.1.4.2 Lifting hook with safety latch – 5,600 lbs. working load limit, with 5:1 safety factor. \_\_\_\_\_
- 9.2 Material handling jib – fibreglass, minimum 4 ft. long, with manual articulation, utilizing, multiple pinning positions. \_\_\_\_\_
- 9.3 Personnel platforms – two (2) only, side-hung, pin-on, fibreglass platforms. Each, with one (1), interior to exterior long formed step, \_\_\_\_\_

approximately, 12 in. x 5 in., each with abrasive, non-slip surfaces. The platforms shall have, toe space on three (3) sides.

9.3.1 Nominal, platform dimensions – 24" x 24" x 42".

9.3.2 Platform capacity – minimum 300 lbs. each.

9.3.3 Platform levelling system – gravity type with disc style brake.

9.3.3 Platform dump system – bucket to manually tilt minimum 100°.

9.4 Safety lanyard attachments – two (2) required.

## 10. OUTRIGGERS AND SUBFRAME

10.1 Outrigger stabilizer supports – two (2) sets required with a capacity to support all rated loads.

10.2 Base set – welded to aerial device pedestal and to sub-frame. State type of outriggers being supplied.

10.3 Auxiliary set – mounted behind chassis cab on top of chassis frame, welded to sub-frame.

10.4 Outrigger hydraulic cylinders shall be equipped with pilot operated check valves, fully protected from damage.

10.5 Outrigger shoes – rigid type, minimum 12 in. x 12 in.. State.

10.6 All outrigger supports shall be designed to form an integral part of the sub-frame.

10.7 Sub-frame – plated type, full length, fastened to top of chassis frame.

10.7.1 Method of attaching sub-frame to be detailed in manufacturer's mounting plans and specifications to be supplied within forty eight (48) hours of the request of the Contract Administrator.

10.8 Stability requirements – to meet CSA Standard CAN/CSA-C225 –M00. The use of ballast is not acceptable.

## 11. HYDRAULIC CONTROLS

11.1 Controls – full metering with separate levers for each function. Control levers shall be protected to prevent accidental actuation of any boom or winch functions.

11.1.1 Controls shall permit the multiple simultaneous boom movements, and shall be fully featherable and meterable.

11.2 Platform controls – complete controls for all functions shall be transferable from end of 2<sup>nd</sup> to end of 3<sup>rd</sup> stage booms or to the end of the personnel jib when it is installed.

11.2.1 Must be accomplished by means of an easy and simple re-pinning method.



- 11.3 Automatic engine throttle control activated when platform controls are utilized. \_\_\_\_\_
- 11.4 Emergency stop button – red palm button, designed to instantaneously stop all motion (engine shutdown not acceptable). \_\_\_\_\_
- 11.5 Master control group – located on the rear of the pedestal with controls for all boom functions, winch and emergency stop button. \_\_\_\_\_
- 11.5.1 Controls shall be mounted on a swivel arm assembly, designed to permit operator to face sideways when operating the unit. \_\_\_\_\_
- 11.5.2 Lower controls shall be capable of overriding the platform controls. \_\_\_\_\_
- 11.5.3 Master control group shall include the following:
  - a) winch circuit pressure gauge \_\_\_\_\_
  - b) aerial pressure gauge \_\_\_\_\_
  - c) load indicator gauge \_\_\_\_\_
  - d) engine start/stop switch \_\_\_\_\_
  - e) lower/upper control selector switch \_\_\_\_\_
- 11.6 Throttle control – foot operated, rod style, approximately 12 in. wide. \_\_\_\_\_
- 11.7 Operator platform – fold-down type with grip strut surface, located at rear of unit on right side, designed to provide a comfortable standing position. \_\_\_\_\_
- 11.8 Outrigger control levers – located at rear of unit, fully protected from damage and accidental actuation. Each control set to operate the outriggers on its respective side only. \_\_\_\_\_
- 11.8.1 Outrigger functions to be isolated from all other functions by a selector valve located with the right outrigger controls. \_\_\_\_\_
- 11.8.2 Outrigger down interlock – required on each outrigger, to prevent derrick operation if any outrigger is not in the down position. \_\_\_\_\_
- 11.9 Interlock override switch – toggle switch with flip-up protective cover and red indicator light when activated, located with the master control group. \_\_\_\_\_
- 11.10 All controls must be clearly identified with permanent, engraved type labels. Glued labels will not be accepted. \_\_\_\_\_
- 12. HYDRAULICS**
- 12.1 PTO – Constant mesh, Muncie Powerclutch or Chelsea equivalent. State. \_\_\_\_\_
- 12.1.1 Electric shift with in-cab controls, operable from a normal driving position. \_\_\_\_\_

- 12.2 Pump to meet aerial device requirements – state make and model. \_\_\_\_\_
- 12.3 Hydraulic oil reservoir – bulkhead type, steel construction, baffled as required, complete with breather type filler cap with filter, filler strainer, sight gauge (or dipstick) and drain plug. \_\_\_\_\_
- 12.4 Suction strainer – 100 micron with magnetic suction separator, in tank mounted, flow capacity of 2-times pump capacity. \_\_\_\_\_
- 12.5 Shut-off valve – ball-type, located between reservoir and pump, secured in open position with bracket and bolt. \_\_\_\_\_
- 12.6 Return line filter – 10 micron, spin-on type, serviceable without oil loss. \_\_\_\_\_
- 12.7 Relief valve(s) – provided to adequately protect the system and provide hydraulic, overload protection to all functions of the aerial device. \_\_\_\_\_
- 12.8 Hydraulic oil – Esso, J-13, with certified rating of 25 kV. \_\_\_\_\_
- 12.9 Steel hydraulic tubing – plated type, required where practical except where flexibility is required. \_\_\_\_\_
- 12.9.1 Hydraulic tubing shall be guarded as required. \_\_\_\_\_
- 12.10 Hydraulic hoses – burst rated at 4 times working pressure, protected at all wear and scuff locations. \_\_\_\_\_
- 12.11 Hydraulic cylinders, aerial device – double acting type, equipped with integral holding valves. \_\_\_\_\_
- 12.12 Hydraulic tool outlets – required at boom tip and tailshelf, set to operate at 8 gpm @ 2000 psi, suitable for use with open and closed centre tools. \_\_\_\_\_
- 12.12.1 Boom tip circuit – separate from all other functions, complete with one (1) set of quick disconnect couplers. \_\_\_\_\_
- 12.12.2 Tailshelf circuit – separate from all other functions, connected to hose reel (see 12.12.3). Control handle shall be spring centred with a detent in one (1) direction. \_\_\_\_\_
- 12.12.3 Hose reel – spring rewind, under deck mounted at the rear of unit on the left (street) side, complete with two (2) only, 45 ft. lengths of hose, with quick couplers installed. \_\_\_\_\_
- 12.13 All hydraulic tool outlets shall be fitted with Bruning dripless quick couplers. Bruning outlet covers required for all fittings. \_\_\_\_\_
- 13. JIBS - MATERIAL HANDLING AND PERSONNEL**
- 13.1 Jib – fibreglass, 4.8 ft., material handling, two (2) piece telescopic, extendable from 3.6 feet to 4.8 feet, manual articulation. \_\_\_\_\_
- 13.2 Jib – fibreglass, 8 ft. personnel, one (1) piece, manual articulation, utilizing three (3), pinning positions. \_\_\_\_\_

13.3 Jib bracket – shall have three (3) pinning positions providing 24° of manual articulation. The bracket shall accommodate both jibs.

---

**14. FIBREGLASS SERVICE BODY**

14.1 Compartment layout, general – two (2) front vertical compartments and one horizontal compartment over wheel well, each side of body.

---

14.1.1 State make and model of service body components being bid.

---

14.2 For the purpose of this specification:  
L – Length, along or parallel to chassis frame rails.  
H – Height or vertical.  
D – Depth on horizontal plane across chassis.

14.3 General dimensions:

14.3.1 Body height – 48 in. approx..

---

14.3.2 Body length – 110 in. approx..

---

14.4 Compartment layout, right (curb) side:

14.4.1 Front vertical compartment (C1) – 27”L x 48”H x 18”D approx. with four (4) height adjustable shelves.

---

14.4.2 Front vertical compartment (C2) – 27”L x 48”H x 18”D approx., with two (2) fixed hooks per side (4 total) and one material rail with five (5) hooks on the back wall.

---

14.4.3 Horizontal compartment (C3) – 56”L x 24”H X 18”D approx. with three (3) full width, small parts trays. Trays shall be 2 in. high with nine (9) removable dividers per tray. The upper two trays shall be slide-out type. Lower tray shall be fixed, fastened to compartment bottom.

---

14.5 Compartment layout left (street) side:

14.5.1 Front vertical compartment (S1) – 27”L x 48”H x 18”D approx. with three (3) height adjustable shelves located below one (1) full length through shelf.

---

14.5.2 Front vertical compartment (S2) – 27”L x 48”H x 18”D approx. with three (3) height adjustable shelves located below through shelf.

---

14.5.3 Horizontal compartment (S3) – 56”L x 24”H x 18”D approx. with two (2) full width small parts trays. Trays shall be 2 in. high with nine (9) removable dividers per tray. The upper two (2) trays, shall be slide out type. Lower tray shall be fixed, fastened to bottom of compartment.

---

14.5.4 Hotstick door – required in the back of compartment S3 providing access to a full length, through shelf.

---

14.6 Compartment door handles – Tri-Mark stainless steel paddle type, with locks that are keyed alike.

---

- 14.7 Door hinges and latches – stainless steel with adjustable striker plates. \_\_\_\_\_
- 14.8 Shelving – fibreglass with a 2 in. front face lip. Dividers shall be fibreglass. All edges shall be finished. Adjustable shelving shall be adjustable in 2-3 in. increments. \_\_\_\_\_
- 14.9 All hooks shall be located approximately 2 in. from the top of the compartment. \_\_\_\_\_
- 14.10 All compartment door openings shall be sealed using automotive, bulb type, rubber gaskets. \_\_\_\_\_
- 14.11 Vertical doors shall have rigid type door springs. Horizontal doors, do not require door springs, or check chains. \_\_\_\_\_
- 14.12 Rubber bumpers – installed on the body below the horizontal compartments, to prevent contact between the compartment door and the body. Two (2) bumpers per door. \_\_\_\_\_
- 14.13 Wheel well area shall incorporate a fibreglass or rubber fender flare. \_\_\_\_\_
- 14.14 Wheel chock openings – two (2) per side, required in fender skirt panels. \_\_\_\_\_
- 14.15 Drip moulding – installed along the full length of the body above the door openings. \_\_\_\_\_
- 14.16 All body seams shall be caulked with an automotive grade elastomeric sealant. \_\_\_\_\_
- 14.17 Kick plate – 1/8 in. aluminium smooth or checker-plate, required below deck floor level. \_\_\_\_\_
- 15. MAIN DECK ASSEMBLY**
- 15.1 Deck – 3/16 in. steel checker-plate, full width, full length, between fibreglass side packs, c/w Morgan NS anti-skid coating. \_\_\_\_\_
- 15.2 Deck sides – 1/8 in. steel checker-plate, designed to provide additional support to the fibreglass side packs. Deck sides to extend up the full height of fibreglass body sides. \_\_\_\_\_
- 15.3 Tire/deck clearance – bumper pad clearance plus 3 in. minimum. \_\_\_\_\_
- 16. BOOM SUPPORT & CAB GUARD**
- 16.1 Boom support – “A” frame type, padded, anchored directly to the subframe and located immediately behind the cab. \_\_\_\_\_
- 16.2.1 Cab guard – full width, extending from front bumper to back of cab, constructed of 2” x 2” x ¼” wall HSS tubing. Walking surface to be ¾” G9 standard, expanded metal, reinforced as required. \_\_\_\_\_
- 16.2.2 Rubber mats – heavy duty, installed on cab guard to protect platforms from damage during transport. \_\_\_\_\_

16.2.3 Front of cab-guard supported by two (2) supports bolted to front bumper. \_\_\_\_\_

**17. REAR BUMPER & HITCH**

17.1 Rear bumper – heavy duty step bumper, approximately 12 in. wide with grip-strut step surface and a recess for a pintle hitch mount. \_\_\_\_\_

17.1.1 Bumper shall incorporate a fold-down operator platform on the right side (see Section 11.7). \_\_\_\_\_

17.1.2 Rear bumper insert – quick removable (without the use of tools), grip-strut surface, designed to fill area recessed for pintle hitch clearance (when hitch not in use). \_\_\_\_\_

17.2 Mid-height step – mounted between bumper and deck above pintle hitch, approximately 7" x 24", with grip-strut surface and tapered ends. \_\_\_\_\_

17.3 Hitch plate – ½ in. thick solid steel, (laminated plates unacceptable) installed to chassis frame. \_\_\_\_\_

17.4 Pintle hitch – Premier 130, Altec Model T22 or approved equal, mounted to hitch plate at a 26½ in. height from ground level. \_\_\_\_\_

17.4.1 "A" frame hitch reinforcement – min. 3" x 3" x ¼" angle iron, welded to back of hitch plate and bolted to chassis frame web. \_\_\_\_\_

17.4.2 Pintle hitch and "A" frame secured with Grade-8 bolts, washers on both sides and lock-nuts. \_\_\_\_\_

17.4.3 Lunette eyes – two (2) Buyers Products B56729 or equal, mounted 12 in. either side of hitch. \_\_\_\_\_

**18. ELECTRICAL & LIGHTING**

18.1 All vehicle lighting shall conform to C.M.V.S.S. (latest revision) and Manitoba Highway Traffic Act requirements. \_\_\_\_\_

18.2 Supplier installed lighting shall be LED Truck-Lite (except where otherwise noted) and shall include the following components:

18.2.1 Combination stop/turn/tail lights – P/N 44302R, one (1) per side with P/N 40700 mounting grommets, flush or recess mounted in rear kick plate. \_\_\_\_\_

18.2.2 Turn signal flash rate – 70-90 flashes per minute. \_\_\_\_\_

18.2.3 Back-up lights – P/N 44206C, one (1) per side with 40700 mounting grommets. \_\_\_\_\_

18.2.4 3-light cluster – three (3) P/N 10250R with P/N 10700 mounting grommets. \_\_\_\_\_

18.2.5 Clearance lights – P/N 10250R and 10250Y with P/N 10700 mounting grommets. \_\_\_\_\_

18.2.6 Licence plate lamp – P/N 15040, complete with license plate bracket. \_\_\_\_\_

18.2.7 Lighting harnesses – Truck-Lite 50 Series Harness system, properly routed and secured, protected from damage. \_\_\_\_\_

Template Version: G320040301

- 18.3 Junction box – P/N 50400, complete with necessary compression fittings, required for all vehicle lighting harness connections, located inside rear of truck frame. \_\_\_\_\_
  - 18.4 All plug in connectors shall be coated with Truck-Lite NYK Compound prior to assembly. \_\_\_\_\_
  - 18.5 Trailer plugs – one (1) Grote 82-1058 or equal and one (1) Grote 82-1016 or equal, each wired to code. \_\_\_\_\_
  - 18.6 Back-up alarm – STAR 62-097, 97 dB(A) rating, installed at rear of body, located to be protected from damage. \_\_\_\_\_
  - 18.7 Warning beacons – three (3), Preco Model 3614AD, two (2) mounted to the cab-guard at the front corners, one (1) mounted on top of the service body at rear, complete with in-cab switch wired through the ignition and accessory circuit. Beacons shall be protected from damage by metal guards. \_\_\_\_\_
  - 18.7.1 Oval LED warning lights – two (2) Grote 77363 lights, rear mounted. Exact location to be determined at time of installation. \_\_\_\_\_
  - 18.8 Deck Light – Truck-Lite 80394, mounted to the boom rest, complete with in-cab switch with indicator light, wired through the ignition and accessory circuit. \_\_\_\_\_
  - 18.9 Spotlight – Sparton remote spotlight with clear cover, mounted to rear right hand corner of cab-guard, wired through the ignition and accessory circuit. Remote control unit shall be located in the chassis cab. \_\_\_\_\_
  - 18.10 Power take-off engaged warning light – O.E.M. warning light. \_\_\_\_\_
  - 18.11 Boom stow warning light – 1 in. minimum diameter red lens mounted on the instrument panel, normally on when the boom is not in fully stored position. A micro switch is required to trigger the light. \_\_\_\_\_
  - 18.12 Outrigger warning light – 1 in. minimum diameter red lens mounted on instrument panel, normally on when any outrigger is not in fully stored position. Micro switches are required to activate lights and must be enclosed to prevent damage. \_\_\_\_\_
  - 18.13 All warning lights (except PTO) shall be Cole Hersee #PI-86-RC double contact, wired so that switch is on the ground side of the lamp. \_\_\_\_\_
  - 18.13.1 All wiring for locally installed accessories and trailer plug shall be colour coded, loomed, and properly secured and protected from damage. \_\_\_\_\_
- Note:** Pre-wired systems such as Wired Rite are acceptable in lieu of dash mounted warning lights specified in 18.10, 18.11 and 18.12.
- 18.14 All electrical connectors shall be crimped & soldered, then sealed with heat shrink tubing. \_\_\_\_\_
  - 18.15 All joining wires shall be soldered and sealed using heat shrink tubing (crimp-on electrical connectors for joining wires are not acceptable). \_\_\_\_\_

Template Version: G320040301

- 18.16 Any holes required to run wires through shall be drilled (not punched), grommeted and sealed as necessary. \_\_\_\_\_
  
- 18.17 Compartment lights shall be continuous “rope” style lighting properly secured to prevent damage, wired through a single master switch in the cab. \_\_\_\_\_
  
- 18.18 Hourmeter – dash mounted, energized by engagement of PTO. \_\_\_\_\_
  
- 18.19 All switches and warning lights shall be identified with permanent engraved type labels. No labels allowed on upper surface of dash. \_\_\_\_\_
  
- 18.20 Inverter – 110Volt, Xantrex R5200, supplied and installed in accordance with Manitoba Department of Labour Standards. Mounting location to be determined at pre-production meeting. \_\_\_\_\_
  
- 18.20.1 Duplex receptacles – one (1) required below rear hot-stick door and one (1) on front right side of body, approximately 54 in. above ground level. The receptacles shall be GFI, CSA approved, weatherproof type, with hinged covers. \_\_\_\_\_
  
- 18.21 The complete 110V electrical system installation shall be certified by the Manitoba Department of Labour and the necessary approval sticker shall be supplied. \_\_\_\_\_
  
- 19. INSTALLATION**
  
- 19.1 The Contractor shall install the aerial device and fibreglass service body on the chassis specified in Detailed Specifications 04027. \_\_\_\_\_
  
- 19.2 Aerial device shall be installed in accordance with CAN/CSA C225-M00 and in accordance with aerial device, manufacturer’s guidelines. \_\_\_\_\_
  
- 19.3 Mounting of the fibreglass body and deck shall be in accordance with the chassis manufacturer’s guidelines for body mounting including, but not limited to, guidelines for tire and suspension clearance. \_\_\_\_\_
  
- 19.3.1 The fibreglass body shall be mounted to the steel deck using stainless steel carriage bolts and fender washers. Bearing plates shall be used in high stress areas. \_\_\_\_\_
  
- 19.3.2 Main body compartment supports – cross sill outriggers directly attached to the sub-frame. \_\_\_\_\_
  
- 19.3.3 Bidders shall supply within forty eight (48) hours of the request of the Contract Administrator, a diagram and description showing the manufacturer’s recommended body and deck to chassis mount. \_\_\_\_\_
  
- 19.4 Welding to truck chassis frame is not permitted (except hitch plate). \_\_\_\_\_
  
- 19.5 Mounting brackets shall be bolted to chassis frame using grade-8 fasteners. \_\_\_\_\_
  
- 19.6 Any holes required in chassis frame web must be drilled and reamed to fit bolts. \_\_\_\_\_

19.7 All non-continuous body seams (joints) shall be caulked with an automotive grade elastomeric sealant. \_\_\_\_\_

19.8 Departure angle of completed unit – 18° minimum. State angle. \_\_\_\_\_

19.9 Overall height decal – engraved type, installed in chassis cab. \_\_\_\_\_

**20. MISCELLANEOUS**

20.1 Mudflaps – no name, fabric reinforced, black rubber, mudflaps installed fore and aft of rear tires, Buyers Products steel bar anti-sail brackets, or equal, required. \_\_\_\_\_

20.2 Outrigger pad storage compartments – steel construction, for two (2) pads each side with nominal pad dimensions of 24" x 24" x 3". \_\_\_\_\_

20.3 Compartments shall have a raised front lip and shall be located beneath service body ahead of rear axle. \_\_\_\_\_

20.4 Wheel chocks – four (4), high density rubber construction with steel or rope handles. \_\_\_\_\_

20.5 Bucket access steps from deck to top of fibreglass service body to cab guard required on each side to permit safe and efficient access to and from each personnel platform. Step frame shall be made of heavy duty tubular aluminum. Steps shall be 4 in. heavy-duty gripstrut, reinforced as required. \_\_\_\_\_

20.6 Grab handles – supplied as required to provide safe access on and off deck and cab guard. \_\_\_\_\_

20.7 Bucket covers – two (2) required. \_\_\_\_\_

20.8 Traffic cone holders – eight (8) total, two (2) located at the rear of the main deck, two (2) mounted on the front bumper, four (4) mounted on top of the outriggers where exposed. \_\_\_\_\_

20.9 Tie-down provisions – two (2) Buyers Products B-801 required, located at the rear of the main deck. \_\_\_\_\_

20.10 Storage tray, right side – located above side pack, steel construction 110"L x 18"W with 3 in. high sides and Dri-deck on the entire tray. \_\_\_\_\_

20.10.1 Grip-strut walkway – 110"L x 18"W located 13 in. above tray, supported by four (4) vertical uprights on each side. Centre two (2) uprights to include one (1) swivel hook each. A steel pan shall be installed below the walkway. \_\_\_\_\_

20.11 Ladder rack, left side – located above the side pack, steel construction, suitable for independent storage of two (2) ladders with each storage provision measuring 110" x 18" with 3 in. high sides. A grip-strut walkway grip-strut walkway, 132" x 18", shall be located 13 in. above side pack, supported by six (6) vertical uprights on each side. Centre four (4) uprights to include one (1) swivel hook each. \_\_\_\_\_

20.12 Storage box – steel construction, sized to accommodate a hydraulic impact wrench. The box shall have a vertically hinged front door, with an \_\_\_\_\_



opening for hydraulic hoses, lockable by padlock. The box shall be deck mounted at the left rear corner.

20.10 File box – Weatherguard Model R8861, installed between the front seats of the chassis.

## 21. COLOUR

21.1 Aerial device steel boom sections – painted using powder coat paint process, electrostatically applied to components prior to assembly so that all surfaces are coated.

21.1.1 Insulated third (upper) fibreglass boom shall be coated with white, colour impregnated gel-coat.

21.2 Service body – colour impregnated Gel-coat to match chassis cab colour.

21.3 Cab-guard, bumper, boom rest, outriggers, storage racks, trays, etc., shall be painted white to match cab using polyurethane enamel, no substitutes.

21.4 Deck surface, painted with grey, Safetex, Ferrox non-skid coating.

21.5 Kick plates, shall be aluminum checkerplate.

21.6 All metal surfaces to be painted shall be free of oil, dirt, rust etc.. Chemical pre-treatment such as multistage cleaners are acceptable. Blast cleaning of steel surfaces preferred.

## 22. OPTIONS

**Note:** Options shall be price separately as indicated in the Schedule of Prices.

22.1 Option #1: Hydraulic impact wrench – Stanley Model IW16, 1 in. square drive impact gun c/w 18 in. whip hoses and Bruning quick couplers.

## 23. TECHNICAL DOCUMENTS AND MANUALS

23.1 Bidders shall include the following, within forty-eight hours of the request of the Contract Administrator:

23.1.1 Two (2) sets of three (3) view drawings showing complete unit including chassis, aerial device, service body, cab-guard, etc..

23.1.2 Estimated front and rear axle weights of the complete unit (chassis, aerial device, body, etc. and full fuel and hydraulic tanks).

23.1.3 Service facility description (see section 4.2.2).

23.1.4 Subframe mounting plans (see section 10.7.1).

23.1.5 Body and deck mounting plans (see section 19.3.3).

23.2 Prior to final inspection the Contractor shall provide the following;

Template Version: G320040301

- a) Scale weight ticket of the completed unit. \_\_\_\_\_
- b) Certification letter (see Section 4.2.4). \_\_\_\_\_
- c) Subframe mounting plans (see Section 10.7.1). \_\_\_\_\_
- d) Dielectric test certificate (see Section 8.6). \_\_\_\_\_
- e) Operator's manuals for aerial device – two (2) sets required. \_\_\_\_\_
- d) Parts and maintenance manuals – two (2) sets required with the following comprising a set:
  - i) Aerial device lubrication chart. \_\_\_\_\_
  - ii) Maintenance manual. \_\_\_\_\_
  - iii) Unit parts book. \_\_\_\_\_
  - iv) Electric wiring diagram (as built) of the completed unit. \_\_\_\_\_
  - v) Hydraulic circuit diagram (as built) of the completed unit. \_\_\_\_\_

**NOTE:** The manuals supplied with this Contract must be in English and shall be specifically for the unit supplied. General purpose manuals are not acceptable. Contract will not be considered complete until these sets of manuals have been delivered. Manuals must be supplied at the time the unit is delivered.

**Bidder shall provide information on any manuals that are available in an electronic format.**

---

---

---

## 24. PERFORMANCE RELIABILITY

- 24.1 The Contractor shall assure the City of Winnipeg that the manufacturer shall be responsible for the design of the complete aerial device vehicle, its performance, and reliability. \_\_\_\_\_
- 24.2 The term “repeated failures” as used herein is defined to means 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, 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 schedule. \_\_\_\_\_
- 24.2.1 Where the vehicle develops “repeated failures” in service, the Contractor shall make any necessary engineering changes, repairs, alterations or

modifications in order to guarantee reliability of performance. \_\_\_\_\_

**25. WARRANTY (Aerial)**

25.1 The Warranty on the aerial device shall include the following:

1. 100% replacement parts and labour for the complete unit for a period of one (1) year. \_\_\_\_\_
2. The following components shall carry a lifetime, major structural components limited Warranty (wear components excluded). Warranty shall include parts and labour;
  - a) booms \_\_\_\_\_
  - b) boom articulation links \_\_\_\_\_
  - c) hydraulic cylinder structures \_\_\_\_\_
  - d) outrigger weldments \_\_\_\_\_
  - e) pedestals \_\_\_\_\_
  - f) sub-bases \_\_\_\_\_
  - g) turntables \_\_\_\_\_
3. Provide details on any extended Warranty coverage available. \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

25.1.1 A new one (1) year Warranty period shall be provided for any component, subassembly or assembly that is repaired or replaced under the terms of the "repeated failures" clause (Section 24.0 Performance Reliability) The new Warranty period shall be effective from the date of acceptance of the repaired or replaced article. \_\_\_\_\_

25.2 All Warranty items brought to the attention of the Contractor by the City shall be addressed within forty eight (48) hours. The City reserves the right to effect Warranty repairs to the vehicle, at full cost to the Contractor, should the Contractor fail to commence repairs within forty eight (48) hours. \_\_\_\_\_

**26. MANUFACTURER'S LITERATURE**

26.1 Bidder shall include manufacturer's literature within forty eight (48) hours of the request of the Contract Administrator on all equipment being offered. \_\_\_\_\_

Template Version: G320040301

**27. CHASSIS – DETAILED SPECIFICATIONS 04027**

27.1 35,000 lbs. GVWR Crew Cab & Chassis required for Detailed Specification 04026, Telescopic, Material Handling Aerial Device.

27.2 STATE MAKE AND MODEL BEING BID: \_\_\_\_\_

**28. G.V.W.R.**

28.1	Total	35,000 lbs. minimum	_____
28.2	Front	12,000 lbs. minimum	_____
28.3	Rear	23,000 lbs. minimum	_____
28.4	C.A.	102 in. approximately. State requirement	_____
28.5	Wheelbase	217 in. approximately	_____

**29. ENGINE**

29.1	Engine Type	Cat C7	_____
29.2	Horsepower	250 gross minimum	_____
29.3	Torque	800 lb.-ft. gross minimum	_____
29.4	Fuel shut-off	Electric solenoid type	_____
29.5	Air cleaner	Dry type w/restriction indicator in dash.	_____
29.6	Oil filter	Full flow, spin-on type	_____
29.7	Fuel filter	Primary, secondary, spin-on type required.	_____
29.8	Fuel/water separator	heated/drainable required	_____
29.9	Fuel line primer pump	Required	_____
29.10	Air Restriction Indicator	Dash mounted indicator preferred	_____
29.11	Block heater	Immersion type, 1000 watt minimum with covered, recessed male plug	_____
29.12	Radiator & coolant	Standard cooling, antifreeze rated to -40°C	_____
29.13	Fan drive	Thermostatically controlled	_____
29.14	Coolant hoses	Silicone or Gates Blue Stripe	_____
29.15	Exhaust system	Horizontal discharge to left side rear	_____

**30. ELECTRICAL SYSTEM**

30.1	Electrical connectors	Plug-in, sealed type	_____
30.2	Alternator	Delco 33-SI, 130 Amp minimum	_____
30.3	Circuit breakers	Auto-reset, located in a readily accessible fuse box	_____
30.4	Batteries	Two (2) min., 12 volt, 1850 CCA combined capacity	_____
30.5	Battery box	Under cab, step type. Battery box shall be vented, protected from environment.	_____
30.6	Radio	AM/FM required	_____
30.7	2-way radio circuit	20 ampere circuit, ignition powered, wired under dash loose, labelled.	_____

**31. TRANSMISSION**

31.1	Transmission	Allison 3500 RDS	_____
31.2	Shift selector	Push-button type	_____
31.3	Cooling capacity	As per manufacturer's recommendations for severe duty cycle	_____
31.4	Power take-off	Required with maximum clearance from exhaust	_____

Template Version: G320040301

31.5	Oil level dipstick	Bayonet type with high and low level markings	_____
31.6	Trans. drain plug	Magnetic type	_____

**32. AXLES/SUSPENSION**

32.1	Front axle	12,000 lbs. minimum capacity	_____
32.2	Rear axle	23,000 lbs. minimum capacity	_____
32.3	Ratio	For 110 km/h top speed	_____
32.4	Differential drain plug	Magnetic type	_____
32.5	Hub seals - front & rear	Oil lubricated	_____
32.6	Springs, front	12,000 lbs. minimum capacity	_____
32.7	Rear suspension	23,000 lbs. minimum capacity plus auxiliary	_____

**33. WHEELS/TIRES**

33.1	Rims, wheels - front	22.5 x 9.00, steel disc	_____
33.2	Rims, wheels - rear	22.5 x 8.25, steel disc	_____
33.3	Tires, front	14 ply, Michelin XZE,	_____
33.3.1	Size	315/80R22.5G	_____
33.4	Tires, rear	14 ply, Michelin XDE, M/S,	_____
33.4.1	Size	11R22.5G	_____

**34. FRAME**

34.1	Frame rails	Single rail, 1,500,000 in.-lb. RBM minimum, outside frame clear or as recommended by OEM	_____
34.2	Application	Suitable for aerial/derrick installation	_____
34.3	Colour	Black	_____

**35. STEERING**

35.1	Steering	Power	_____
35.2	Turning Radius	Minimum 52°	_____

**36. BRAKES**

36.1	Brakes	Air, Anti-Lock Braking System. State type and Model	_____
36.2	Slack adjusters	Haldex/Eaton (clearance sensing), automatic type	_____
36.3	Parking brake	Spring set	_____
36.4	Dust shields	Required	_____
36.5	Moisture ejector	Bendix DV-2, heated, in wet tank	_____
36.6	Drain valves	Manual, chain or cable operated, required on each air tank except wet tank	_____

**37. AIR COMPRESSOR/AIR DRYER**

37.1	Air Compressor	Water cooled, pressure lubricated, minimum 12 cfm	_____
37.2	Air drier	Heated, Wabco System Saver 1200	_____

**38. FUEL TANK**

38.1	Type	Aluminum step tank	_____
38.2	Capacity	170 L min. capacity, fully fuelled upon delivery	_____

**39. CAB (c/w Cold Climate/Silencer Package)**

39.1	Type	4-door crew cab	_____
39.2	Construction	Aluminum required	_____
39.3	Driver seat	High back, air suspension, cloth upholstery, c/w fold down arm rest, right side of seat only.	_____
39.4	Passenger seat	High back, air suspension, cloth upholstery, c/w fold down arm rest, left side of seat only.	_____
39.5	Rear seat	Bench, cloth upholstery	_____
39.6	Interior trim	Cloth or vinyl headliner, door and back panels	_____
39.7	Floor covering	Heavy Duty Rubber mat with under-padding throughout	_____
39.8	Engine cover	Insulated	_____
39.9	Sun visors	Flip-up type	_____
39.10	Radio	Factory installed AM/FM	_____
39.11	Starter switch	Key operated with three (3) sets of keys	_____
39.12	Interior light	Dome with door switches on all doors	_____
39.13	Heater/defroster	High output	_____
39.14	Air Conditioning	Required	_____
39.15	Heater hoses	Silicone or Gates Blue Stripe	_____
39.16	Mirrors	OEM, Dual West-Coast, lighted, heated, breakaway type	_____
39.17	Convex mirrors	6 in. auxiliary, stainless steel	_____
39.18	Windows & windshield	Tinted	_____
39.19	Windshield wipers	Intermittent	_____
39.20	Windshield washers	Electric	_____
39.21	Grab handles	Required for all four (4) doors	_____
39.22	Entrance steps	Open grate type, each side	_____
39.23	Air Ride	Required	_____
39.24	Colour - Exterior	White	_____
39.24.1	- Interior	Blue or grey	_____
39.24.2	- Winter front	OEM required	_____

**40. INSTRUMENTATION**

40.1	Oil pressure	Gauge	_____
40.2	Coolant temperature	Gauge	_____
40.3	Trans. oil temperature	Gauge	_____
40.4	Low Oil Pressure	Warning light and buzzer	_____
40.5	Hot water temperature	Warning light and buzzer	_____
40.6	Voltmeter	Gauge	_____
40.7	Air reservoir pressure	Gauge with LAP warning light and buzzer	_____
40.8	Engine hourmeter	Required	_____

**41. BUMPER/TOW HOOKS**

41.1	Front bumper	Steel, swept back design preferred	_____
41.2	Colour	White or argent	_____
41.3	Tow hooks	Font mounted	_____

**42. SAFETY/FLARE KIT**

42.1	Flare Kit	Three (3) triangular reflectors, CVSA approved	_____
------	-----------	--	-------

**43. WARRANTY**

43.1	Basic vehicle	Two (2) years, unlimited km	_____
43.2	Batteries	One (1) year or 100 000 km	_____
43.3	Drivetrain	Two (2) years, unlimited km	_____
43.4	Cab structure & corrosion	Five (5) years, unlimited km	_____
43.5	Frame rails and cross- members	Five (5) years, unlimited km	_____
43.6	Cab paint	One (1) year or 100 000 km	_____
43.7	Engine	Three (3) years or 240 000 km	_____
43.8	Transmission	Two (2) years, unlimited km	_____
43.9	Axles, front and rear	Three (3) years or 240 000 km	_____

**44. TRAINING**

44.1 The Contractor shall be required to provide up to eight (8) hours of training by qualified staff, for City of Winnipeg maintenance personnel and operating personnel. All costs associated with the training, shall be at the Contractor's expense. The training session/s shall be sufficient in duration and shall provide adequate familiarization and orientation of the equipment, to the satisfaction of the Contract Administrator. All particulars surrounding the specified time required to perform the training shall be provided to the Contract Administrator by the Contractor, four (4) weeks prior to the delivery of the completed equipment. The training shall be coordinated through the Contract Administrator.

\_\_\_\_\_

**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:

---

---

---

4.0 **STATE** the location of the cab & chassis service facility:

---

4.1 **STATE** the location of the aerial device 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:

---

---