

FORM A: BID
(See B8)

1. Contract Title SUPPLY AND DELIVERY OF 39 FT. AERIAL DEVICE VEHICLES

2. Bidder

Name of Bidder

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

Street

City

Province

Postal Code

Email Address of Bidder

Facsimile Number

(Mailing address if different)

Street or P.O. Box

City

Province

Postal Code

GST Registration Number (if applicable)

The Bidder is:

(Choose one)

a sole proprietor

a partnership

a corporation

carrying on business under the above name.

3. Contact Person

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

Contact Person

Title

Telephone Number

Facsimile Number

Email Address

4. Definitions

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

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

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

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

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

No.	_____	Dated	_____
	_____		_____
	_____		_____

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

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

Signature of Bidder or
Bidder's Authorized Official or Officials

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

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

FORM B: PRICES
(See B9)

SUPPLY AND DELIVERY OF 39 FT. AERIAL DEVICE VEHICLES

UNIT PRICES

ITEM NO.	DESCRIPTION	SPEC. REF.	UNIT	QUANTITY	UNIT PRICE
1.	39 ft. Aerial Device	17067	Each	2	
2.	19,500 lbs. GVWR Extended Cab and Chassis	17068	Each	2	

Name of Bidder

FORM N (R1): DETAILED SPECIFICATIONS 17067

39 ft. AERIAL DEVICE VEHICLE

1. INTENT

- 1.1 It is the intent of these specifications to describe a centre-mounted mounted, telescopic aerial device vehicle complete with a hydraulically operated, two boom configuration, a fibreglass service body and other equipment as described herein. The aerial device and equipment shall be installed on an extended cab and chassis to be supplied by the Contractor (see Detailed Specifications 17068 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-M10 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 Standard (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 (CSA) W47.1-03 and W59-03.
- 2.5 The completed vehicle shall be complete with a National Safety Mark, NSM.
- 2.5.1 **State NSM Number:** _____

3. QUALIFICATIONS OF MANUFACTURER

- 3.1 The manufacturer of the aerial device shall have a minimum of five (5) 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 For the purposes of Warranty repairs, the Bidder shall have an authorized service 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 equipment being offered.
- 4.3 Further to B11.1, 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 forty-eight (48) hours of the request of the Contract Administrator.
- 4.4 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-M10.

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, 2017 or 2018 extended cab and chassis complying with Detailed Specifications 17068 in accordance with the instructions given.

8. AERIAL DEVICE

- 8.1 Type – articulating, telescopic, continuous rotation aerial device, capable of raising one (1) workman 39 ft., bottom of platform height. _____
- 8.1.1 **State** make and model being bid. _____
- 8.2 Overall travel height – 120 in. **State** height. _____
- 8.3 Horizontal reach form centreline of rotation – 27 ft. **State** reach. _____
- 8.4 Rated platform capacity – 350 lbs. based on stability CSA C225-10. **State**. _____
- 8.5 Booms – dielectrically designed and tested to 46 KvAC. A factory test document shall be supplied prior to the delivery of the aerial device stating that the boom has been dielectrically tested to 46 KvAC. _____
- 8.5.1 The completed unit, shall be tested by the Contractor, at their expense. _____

- 8.5.2 Boom materials – steel lower boom with a fiberglass insert, fiberglass upper boom. _____
- 8.6 Lower boom articulation – 0° to 72°, **state**. _____
- 8.7 Upper boom articulation – -14° to 80°, **state**. _____
- 8.8 Rotation – continuous with shear-ball type rotation bearing and spring applied, hydraulically released rotation brake. _____
- 8.9 Boom stow protection system required to prevent excessive down force being applied to the boom rest. _____
- 8.10 Boom locks – hydraulically or manually operated provision to lock booms while in the stored position. _____
- 8.11 Slope indicator – Rieker Inc. model 1017 SPL, located in a visible location before accessing the bucket to show side and fore/aft slope angles. _____

9. AERIAL DEVICE EQUIPMENT

- 9.1 **Personnel bucket – one (1), side-hung, pin-on, fiberglass platform with one hinged door, accessible from the passenger side.** _____
- 9.1.1 Further to 8.5.1, **state** expected dielectric results with “hinged door” style bucket. _____
- 9.1.2 Nominal bucket dimensions – 24" x 30" x 42". _____
- 9.2 Platform capacity – 350 lbs., **state** capacity. _____
- 9.3 Platform levelling system – automatic mechanical/hydraulic type. Cable type bucket levelling systems are not acceptable. _____
- 9.4 Platform dump system – bucket to manually tilt 100°. _____
- 9.5 Bucket cover – required. _____
- 9.6 Bucket label – the bucket shall have a visible label stating “Do Not Drill Holes In Bucket”. _____
- 9.7 Safety lanyard attachments – two (2) anchor points required, to meet CSA 225-10. _____
- 9.8 Bucket support – shock absorbing type, mounted on rear tailshelf. _____

10. OUTRIGGERS/STABILIZERS

- 10.1 Outriggers – the unit shall be designed with proper stability without the use of outriggers. _____
- 10.2 Stabilizer system – Level Ride Mfg. torsion bar suspension stabilizer system on the front and rear axles. **State** make and model being bid. _____
- 10.3 Stability requirements – to meet CSA Standard CAN/CSA-C225–M10. _____

11. HYDRAULIC CONTROLS

11.1 Function controls – two (2) sets required, one master control group and one single lever control located at the bucket end of the boom. _____

11.1.1 Master control group – located at turntable for all boom functions. The controls shall be capable of completely overriding the upper controls. _____

11.1.2 Upper control – single lever control located at the bucket end of the boom. Multi-function control must be proportional and incorporate a “dead-man” function. _____

11.2 Hydraulic bucket rotators – 0°-180° in a horizontal plane, **state** rotation. _____

11.3 Bucket dump system – required from lower controls, bucket tilt (pivot) of 100° for rescue and clean-out purposes. _____

11.4 Automatic engine throttle control activated when platform controls are utilized. _____

11.5 Start/stop system – aerial device must include a start/stop system accessible from the upper and lower controls. _____

11.5.1 Emergency stop button – red palm button, designed to instantaneously stop all motion from upper and lower controls (engine shutdown not acceptable). _____

11.6 Emergency operating system – 12-Volt auxiliary power pack, must provide hydraulic power to all aerial device functions including elevation and rotation, accessible from both lower and upper controls. _____

11.7 Hydraulic test port – located to be readily accessible without removing panels or covers. _____

11.7.1 Test coupler – Parker/Bruning with metal cover and sized for circuit flow. _____

11.7.2 Test port labelled “Test Port Only”. _____

11.8 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, readily accessible for servicing. **State** make and model. _____

12.1.1 Electric shift with in-cab controls, operable from a normal driving position. _____

12.1.2 Park brake must be set for PTO activation. _____

12.2 Pump – high pressure piston pump or gear pump to meet aerial device requirements. State make and model. _____

12.3 Hydraulic oil reservoir – steel construction, baffled as required, complete with breather type filler cap with filter, filler strainer, sight gauge (or dipstick) and drain plug. **State** location and capacity. _____

12.3.1 Drain plug valve – ball-type shut-off valve required on 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 Univis HVI13, with certified rating of 25 kV.** _____
- 12.8.1 **Tank label – the hydraulic reservoir shall be labelled “Esso Univis HVI13 Hydraulic Oil Only”.** _____
- 12.9 Stainless steel hydraulic tubing – plated type, required where practical except where flexibility is required, properly routed and secured along truck frame. _____
- 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 gauges – silicone filled, located at lower controls for each system. _____
- 13. **FIBREGLASS SERVICE BODY**
- 13.1 Compartment layout, general – one (1) front vertical compartment, one (1) horizontal compartment over wheel well, and one (1) rear vertical compartment each side of body. _____
- 13.1.1 State make and model of service body being bid. _____
- 13.2 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.
- 13.3 General dimensions:
- 13.3.1 Body height – 42 in. approx. _____
- 13.3.2 Body length – 108 in. approx. _____
- 13.4 Compartment layout, **right (curb) side:**
- 13.4.1 Front vertical compartment (C1) – heated compartment, 33"L x 42"H x 21"D approx. with three (3) height adjustable shelves. _____
- 13.4.2 Horizontal compartment (C2) – 40"L x 15"H x 21"D approx., bottom hinged with eight (8) swivel material hooks. Six to be evenly spaced on rear wall, one left-side wall, one right side wall. _____

- 13.4.3 Rear vertical compartment (C3) – 33"L x 42"H x 21"D approx. with three (3) height adjustable shelves. _____
- 13.5 Compartment layout **left (street) side:**
- 13.5.1 Front vertical compartment (S1) – 33"L x 42"H x 21"D approx. with three (3) height adjustable shelves. _____
- 13.5.2 Horizontal compartment (S2) – 40"L x 15"H x 21"D approx., bottom hinged with two (2) full width, small parts trays. Trays shall be approx. 2 in. high with fifteen (15) removable dividers per tray. The upper tray shall be slide-out type. Lower tray shall be fixed, fastened to compartment bottom. _____
- 13.5.3 Rear vertical compartment (S3) – 33"L x 42"H x 21"D approx. with three (3) height adjustable shelves. _____
- Note: no hot stick door/compartment is required.
- 13.6 Compartment door handles – Tri-Mark or Eberhard stainless steel paddle type, with locks that are keyed alike. _____
- 13.7 Door hinges and latches – stainless steel with adjustable striker plates. _____
- 13.8 Door/bin locks – auto locking system with in-cab control switch. _____
- 13.9 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. _____
- 13.10 Shelf and compartment lining – bottom of all service body compartments (with the exception of horizontal compartments) shall be lined with interlocking matting, Dri-deck or equal. _____
- 13.11 All hooks shall be located approximately 2 in. from the top of the compartment. _____
- 13.12 All compartment door openings shall be sealed using automotive, bulb type, rubber gaskets. _____
- 13.13 Vertical doors shall have rigid type door springs. Horizontal doors, do not require door springs, or check chains. _____
- 13.14 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. _____
- 13.15 Wheel well area shall incorporate a fibreglass or rubber fender flare. _____
- 13.16 Drip moulding – installed along the full length of the body above the door openings. _____
- 13.17 All body seams shall be caulked with an automotive grade elastomeric sealant. _____
- 13.18 Kick plate, front – 1/8 in. aluminum checker plate to protect lower front area of body protruding past chassis cab, each side, 8 in. kickplate height. _____

14. MAIN DECK ASSEMBLY

- 14.1 Deck – $\frac{3}{16}$ in. aluminium plate, full width, full length, between fibreglass side packs.

- 14.2 Deck width – 54 in. approx. between fiberglass side packs.

- 14.3 Deck sides – $\frac{1}{8}$ in. aluminum checker plate, designed to provide additional support to the fibreglass side packs. Deck sides to extend up the full height of fibreglass body sides.

- 14.4 Tie-down eyes – Buyers Products B901, four (4) total, flush mounted in deck floor, located near corners of deck floor. The rear mounted tie-down eyes shall be installed slightly ahead of rear tailboard.

- 14.5 Front headboard – aluminium construction, 21 in. height approx. Top of headboard shall not protrude higher than the lower portion of the rear truck window.

- 14.5.1 Backrack – bolted on top to front headboard, aluminium construction, 20"H x 72"W approx., height to match top of cab, tapering towards the top to match cab design, covering rear window.

- 14.6 Rear tailboard – 6 in. composite black plastic material, between the sidepacks on the deck at rear. Design shall include formed channels mounted vertically on deck risers c/w load securement pins. Tailboard shall include two (2) hand holes. Tailboard shall not interfere with bucket storage.

- 14.7 Tire/deck clearance – 3 in. clearance with full spring deflection.

15. REAR TAILSHELF

- 15.1 Rear tailshelf – aluminium construction, 34" x 96" approx. located aft of service body for access to bucket and deck area.

- 15.2 Grab handle – one (1) required, passenger side at rear of tailshelf for ergonomic access to deck area. The handle shall be 1 in. round steel or aluminium material, bolted to the rear tailshelf, bent to approx. 30"H x 19"D dimensions.

16. REAR BUMPER

- 16.1 Rear bumper – heavy duty step bumper, suitable for rear access to deck area, approx. 14 in. depth with grip-strut step surface and tapered ends, full width, approx. 19 in. step height.

Note: the rear bumper does not require towing provisions.

- 16.2 Mid-height step – approx. 7"D x 54"W, grip-strut surface, width to be approx. the dimension between the side pack walls, 12 in. step height between top surface of rear bumper to top of mid-height step.

17. ELECTRICAL & LIGHTING

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

- 17.2 Supplier installed lighting shall be LED Truck-Lite (except where otherwise

noted) and shall include the following components:

- 17.2.1 Combination stop/turn/tail lights – P/N 44302R, one (1) per side with P/N 40700 mounting grommets, flush or recess mounted in rear tailshelf. _____
- 17.2.2 Turn signal flash rate – 70-90 flashes per minute. _____
- 17.2.3 Back-up lights – P/N 44206C, one (1) per side with 40700 mounting grommets. _____
- 17.2.4 3-light cluster – three (3) P/N 10250R with P/N 10700 mounting grommets or P/N 33250R. _____
- 17.2.5 Clearance lights – P/N 10250R and 10250Y with P/N 10700 mounting grommets or P/N 33250R/Y. _____
- 17.2.6 Licence plate lamp – P/N 36140, c/w P/N 36710 license plate bracket, right side mounted. _____
- 17.2.7 Lighting harnesses – Truck-Lite 50 Series Harness system, properly routed and secured, protected from damage. _____
- 17.2.8 All harnesses shall be internally grounded, no exceptions. _____
- 17.3 Junction box – P/N 50400, complete with necessary compression fittings, required for all vehicle lighting harness connections, located inside rear of truck frame, protected from road debris including all harness connections. _____
- 17.4 All plug in connectors shall be coated with Truck-Lite NYK Compound prior to assembly. _____
- 17.5 Mini light bars – two (2), Whelen R2LPPA, near front of service body, one (1) per side, metal post mounted. Exact location to be determined at pre-production meeting. _____
- 17.5.1 Warning lights – six (6) Whelen RSA03ZCR lights, mounted horizontally, as follows:
 - i) Two (2) – front facing in truck grille. _____
 - ii) Two (2) – rear facing on outside corners of rear tailshelf. _____
 - iii) Two (2) – rear facing on top/outside of side packs. _____
- 17.5.2 Mini light bars and warning lights shall be wired “hot” (i.e., able to use without the key on), wired through a single, chassis manufacturer’s OEM dash mounted switch, labelled “Beacon” with a permanent type label. _____
- 17.6 Traffic Advisor, rear facing – one (1) SWS 57336, centre mounted in rear tailshelf c/w a full width metal guard on top for protection of accidental damage. _____
- 17.6.1 Traffic Advisor, front facing – one (1) SWS 57336, centre mounted on an aluminium roof rack, Stealth by Carr or equivalent. _____
- 17.6.2 Controller – in-cab mounted in an ergonomic location, wired “hot”. _____
- 17.7 Deck lights – two (2) Truck-Lite 81360, mounted to backrack at front of body, _____

- rear facing c/w in-cab, OEM dash mounted switch, labelled, wired through the ignition. _____
- 17.8 Compartment lights – LED continuous “rope” style lighting in all service body compartments, properly secured to prevent damage, wired through chassis manufacturers OEM dash mounted switch labelled “Bin Lights”. _____
- 17.9 Power take-off engagement switch – truck manufacturer’s OEM dash mounted switch c/w warning light or PTO manufacturer’s dash mounted switch c/w warning light, labelled. _____
- 17.10 Boom stow warning light – required, 1 in. red diameter, dash mounted indicator light, normally on when the boom is not in fully stored position. A micro switch is required to trigger the light. _____
- 17.11 PTO hourmeter – dash mounted, energized by engagement of PTO, labelled. _____
- 17.12 All switches and warning lights shall be identified with permanent engraved type labels or chassis manufacturer’s OEM labels. No labels allowed on upper surface of dash. _____
- 17.13 Inverter – Xantrex 813-3000-UL, mounted in curb-side, rear vertical compartment, wired through ignition through chassis manufacturer’s OEM dash mounted switch, labeled. _____
- 17.13.1 All exposed inverter terminals shall be coated with a dielectric grease and completely covered with shrink wrap tubing or rubber fittings. _____
- 17.13.2 Duplex receptacle – one (1) required, mounted near rear of service body, curb-side. The receptacle shall be GFI, CSA approved, weather-proof type, with hinged cover. Exact location of duplex receptacle shall be determined at pre-production meeting.** _____
- 17.14 Cord reels – two (2) retractable heavy duty cord reels, Optik 782-7113. Mounting locations to be determined at pre-production meeting. _____
- 17.15 All wiring installed by body manufacturer/installer (including accessories, work lights, etc.) shall be colour coded, loomed, properly secured and protected from damage. _____
- 17.16 All electrical connectors shall be crimped & soldered, then sealed with heat shrink tubing. _____
- 17.17 All joining of wires shall be soldered and sealed using heat shrink tubing (crimp-on electrical connectors for joining wires are not acceptable). _____
- 17.18 Any holes required to run wires through body, cab, steel sections, etc. shall be drilled (not punched), grommeted and sealed. _____
- 18. INSTALLATION**
- 18.1 The Contractor shall install the aerial device and fibreglass service body on the chassis specified in Detailed Specifications 17068. _____
- 18.2 Aerial device shall be installed in accordance with CAN/CSA C225-M10 and in accordance with aerial device, manufacturer’s guidelines. _____
- 18.3 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. _____
- 18.3.1 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. _____
- 18.3.2 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. _____
- 18.4 Welding to truck chassis frame is not permitted. _____
- 18.5 Mounting brackets shall be bolted to chassis frame using Grade-8 fasteners. _____
- 18.6 Any holes required in chassis frame web must be drilled and reamed to fit bolts. _____
- 18.7 All non-continuous body seams (joints) shall be caulked with an automotive grade elastomeric sealant. _____
- 18.8 Departure angle of completed unit – 18° approx. **State** angle. _____
- 18.9 Overall height decal – engraved type, installed in chassis cab. _____
- 18.10 Isolators – all interfaces between aluminium and steel are to be separated by $\frac{1}{16}$ in. thick rubber or neoprene sheet to prevent galvanic corrosion. Bolts used on aluminium or between aluminium and steel shall be bolted through with stainless steel bolts and non-conductive bushings. _____
- 19. MISCELLANEOUS**
- 19.1 Mudflaps – no name, fabric reinforced, black rubber, mudflaps installed fore and aft of rear tires, Fleetline 033-00078 or Nu-Line N2620-Z zinc plated steel bar anti-sail brackets. _____
- 19.2 Wheel chocks – four (4), high density rubber construction with steel or rope handles. _____
- 19.2.1 Wheel chock holders – four (4) fiberglass or aluminium, fender skirt mounted, two per side. _____
- 19.3 Storage compartment – located above side pack, rear curb side, aluminium checkerplate construction, Weatherguard Model 654-0-01. _____
- 19.4 Ladder rack – provision for a 10 ft. ladder located on top of the side pack, driver's side, aluminium checkerplate construction. Loading and unloading of the ladder shall be from the rear. _____
- 20. COLOUR AND FINISH**
- 20.1 Aerial device steel boom sections – sandblasted, primed with a suitable primer, and painted with a Polyurethane paint or powder coated, applied to components prior to assembly so that all surfaces are coated. _____
- 20.1.1 **State** details of finish on steel boom sections. _____
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20.1.2 Insulated (upper) fibreglass boom shall be coated with white, colour impregnated gel-coat. _____

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

20.3 Steel components such as bumper, boom rest, etc., shall be sandblasted, properly cleaned, free of oil, dirt, rust etc., primed and finished with the Endura paint process including Endura EP32 Intermix Epoxy Primer and 2-4 mils of Endura EX-2C Topcoat, black or equivalent paint process. _____

20.4 Deck surface and deck area sides – properly cleaned and coated with Davis Frost LX-00097 Black Sure Foot Enamel. _____

20.5 Floor, underside – steel and aluminium sections of deck, sub-frame and under body shall be undercoated with an asphalt and rubber based material, Proform or equivalent, applied as per manufacturer's recommendations. _____

20.6 Kick plates, shall be aluminum checkerplate, unfinished. _____

21. TECHNICAL DOCUMENTS AND MANUALS

21.1 Bidders shall provide the following, within forty-eight (48) hours of the request of the Contract Administrator:

21.1.1 Two (2) sets of three (3) view drawings showing complete unit including chassis, aerial device and service body. _____

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

21.1.3 Service facility description (see 4.3). _____

21.1.4 Body and deck mounting plans (see 18.3.2). _____

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

a) Weigh scale ticket of the completed unit including two (2) operators. _____

b) Certification letter (see 4.4). _____

c) Dielectric test certificate (see 8.5). _____

d) Operator's manuals for aerial device – two (2) sets required. _____

e) 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. CD format preferred.

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

22. DELIVERY

22.1 The completed unit shall be serviced, ready for operation and delivered F.O.B with the freight prepaid to the City of Winnipeg, Winnipeg Fleet Management Agency, 185 Tecumseh Street, Winnipeg, Manitoba within **forty (40) calendar weeks** from the date of award of Contract. The Contractor shall contact the Contract Administrator prior to delivery of the equipment. Equipment shall be delivered within 8:00 am and 3:00 pm on Business Days.

22.2 A pre-delivery inspection shall be performed by the Contractor on all equipment.

23. PERFORMANCE RELIABILITY

23.1 The responsibility for the design of the complete aerial device vehicle, its performance, and reliability shall rest upon the Contractor.

23.2 The term "*repeated failures*" as used herein is defined to mean that the same component, subassembly, or assembly develops repeated defects, breakdowns and/or malfunctions rendering the vehicle inoperative, or requiring repeated shop correction, service, and/or replacement during the Warranty period applicable for said component, subassembly, 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.

23.2.1 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.

24. WARRANTY (Aerial)

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

1. 100% replacement parts and labour for the complete unit for a period of two (2) years.
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) Pedestals. _____
 - e) Sub-bases. _____
 - f) Turntables. _____
3. Provide details on any extended Warranty coverage available. _____
- _____
- _____

24.1.1 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 23.0 Performance Reliability). The new Warranty period shall be effective from the date of acceptance of the repaired or replaced article. _____

24.2 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. _____

25. FIRST SERVICE PREVENTATIVE MAINTENANCE KIT

25.1 In order to assure minimum downtime of the equipment in future servicing, the Contractor shall provide one (1) complete replacement set of new OEM filters (chassis and aerial) for each unit purchased. The set of required filters shall include air, cabin, fuel, oil, and hydraulic filters required for the first preventative maintenance servicing. _____

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

FORM N: DETAILED SPECIFICATIONS 17068

19,500 lbs. GVWR EXTENDED CAB AND CHASSIS

1. TYPE

1.1 Shall be a Model Year 2017 or 2018, 19,500 lbs. GVWR, 4wd, Extended Cab & Chassis suitable for use as an aerial device truck without outriggers. The cab & chassis shall be furnished complete and ready for use with all features and equipment as described herein.

1.2 **STATE YEAR, MAKE AND MODEL BEING BID:** _____

2. OTHER SPECIFICATIONS AND STANDARDS

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

Society of Automotive Engineers, SAE:
http://en.wikipedia.org/wiki/Society_of_Automotive_Engineers

2.2 The completed unit and all its components shall comply with all C.M.V.S.S. and Manitoba Highway Traffic Act regulations and requirements including, but not limited to, a Manitoba Government Inspection with Safety Sticker on the driver's side window.

3. SERVICE FACILITY

3.1 For the purpose of warranty repairs, the manufacturer 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 type equipment being offered. Further to B11, Bidders shall provide a description of the service facility including, but not limited to, number of qualified service staff, years of service experience, and general service capabilities within three (3) Business Days upon request of the Contract Administrator.

4. 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 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.**

ITEM	SPECIFICATION	BIDDER TO STATE "YES" OR STATE DEVIATION
5.	GVWR	19,500 lbs., state _____
6.	GAWR, front	7,000 lbs. approx., state _____
7.	GAWR, rear	13,500 lbs. approx., state _____
8.	Cab configuration	Extended cab _____
9.	Wheelbase	167 in. approx., state _____
10.	CA	60 in. nominal _____
11.	Engine	6.0 L class gasoline, state displacement _____

12.	Engine cooling	Maximum factory cooling package	_____
13.	Coolant	Extended Life Coolant, -37°C (-35°F)	_____
14.	Block heater	Required, submersible coolant type, with cord through grille	_____
15.	Alternator	200 Amp	_____
16.	Battery	650 CCA capacity	_____
16.1	Auxiliary Battery	OEM supplied and installed c/w isolator, state CCA and mounting location	_____
17.	Transmission	Automatic with PTO provision	_____
18.	Transmission cooling	Maximum factory cooling package	_____
19.	Front axle	4wd	_____
19.1	SPPP	Snow plow prep package required	_____
20.	Rear axle	Limited slip or locking type	_____
21.	Rear axle ratio	4.88 approx., state ratio	_____
22.	Shock absorbers	Standard, front and rear	_____
23.	Tires	Standard size to match GVWR, maximum traction tires, suitable for aerial device without outriggers, 225/70Rx19.5 approx.	_____
23.1	Front	G-rated, traction tread radials, state make, model and size	_____
23.2	Rear	G-rated, traction tread radials, state make, model and size	_____
24.	Wheels	Steel rims with wheel nut indicators installed on every second wheel nut, front and rear	_____
25.	Mudflaps	Required front mounted, OEM, moulded	_____
26.	Brakes	Power with ABS	_____
27.	Steering	Power	_____
28.	Cab steps	Custom made running boards extending entire length of underside of doors, each side. Constructed of AGS 6061 alum grip strut, 9-½" x 2" x .08", c/w 1/8" alum checkerplate as an inside kick plate. Support brackets shall consist of 1½" x 1½" x 1/8" RC alum square tubing with ¼" alum support plates.	_____
28.1	Cab steps, mounting	Cab steps shall be mounted using the existing holes in the body with 3/8"-16 nut inserts to secure the mounting brackets to the body.	_____
28.2	Isolators	All interfaces between alum and steel shall be separated by 1/16" rubber to neoprene sheet and shall be bolted through with stainless steel bolts and non-conductive bushings	_____
29.	Seats, front	Split bench, cloth or cloth w/vinyl trim	_____
29.1	Seats, rear	Bench, cloth or cloth w/vinyl trim	_____
29.2	Seat covers	Required, front and rear, heavy duty vinyl material or equivalent, charcoal grey or black, specifically designed for make and model of	_____

		chassis seats being bid	_____
30.	Floor covering	Rubber matting throughout with throw-in, winter type rubber floor mats	_____
31.	Air conditioning	Required	_____
32.	Tilt steering	Required	_____
33.	Cruise control	Required	_____
34.	Door locks	Power	_____
35.	Remote keyless entry	Two (2) required	_____
36.	Auxiliary switches	Four (4) min. dash mounted switches	_____
37.	Ignition keys	Three (3) keys required	_____
38.	Windows	Power	_____
39.	Air bags	Required, front driver's and passenger	_____
40.	Windshield	Tinted	_____
41.	Windshield wipers	Intermittent	_____
41.1	Wiper blades	Winter blades with heavy duty rubber boot or Reflex style	_____
42.	Mirror, interior	Rearview, windshield mounted	_____
43.	Mirrors, exterior	Electric power mirrors, dual exterior, black polycarbonate, 5" x 8" approx., manually folding and telescoping, integrated turn signal indicators	_____
44.	Cab interior lights	Interior dome with door switches	_____
45.	Flasher circuit	Suitable for installation of LED style body lighting	_____
46.	Radio	Factory installed AM/FM with CD or aux. IN and USB port	_____
47.	12-Volt power point	Required	_____
48.	120-Volt Outlet	Required, front seat area duplex.	_____
49.	Bluetooth [®] technology	Required for use with cellular phones, "hands-free" capable, voice command activated through vehicle's radio circuit	_____
50.	Back-up alarm	Required, STAR 99901 or OEM back-up alarm, 97 dB(A) rating, installed at rear of body, located to be protected from damage	_____
51.	Colour:		
	- Exterior	Bright white	_____
	- Interior	Blue or grey	_____
	- Wheels	Grey, argent or white	_____
52.	Fuel tank	150 L capacity approx., fully fuelled upon delivery	_____
53.	Bumper, front	Chrome	_____
54.	License plate bracket	Required, front bumper mounted w/license plate mounting hardware	_____
55.	Tow hooks	Two (2) front tow hooks attached to frame	_____

56.	Flare kit	Three triangular reflectors, CVSA approved, Truck-Lite 798 or equal	_____
57.	Fire extinguisher	5 lbs. short, ABC type, shipped loose	_____
58.	First aid kit	Required, Manitoba Provincial approved kit, P36, supplied loose	_____
59.	Operator's manual	Required, one (1) per vehicle	_____
60.	Warranty:		
60.1	Basic vehicle	Three (3) years or 60 000 km	_____
60.2	Batteries	Three (3) years or 60 000 km	_____
60.3	Drivetrain	Three (3) years or 60 000 km	_____
60.4	Cab structure	Three (3) years or 60 000 km	_____
60.5	Cab corrosion	Five (5) years, unlimited km/miles	_____
60.6	Frame & crossmembers	Three (3) years or 60 000 km	_____
60.7	Cab paint	Three (3) years or 60 000 km	_____
60.8	Engine	Five (5) years or 100 000 km	_____
60.9	Towing coverage	Three (3) years or 60 000 km	_____
60.10	Transmission	Five (5) years or 100 000 km	_____
60.11	Axles, front & rear	Five (5) years or 100 000 km	_____
60.12	Exhaust system	Three (3) years or 60 000 km	_____
61.	Manuals	Parts, repair and technical service manuals including preventative maintenance schedules for life of unit, CD or online format preferred	_____
62.	Delivery point	Vehicles shall be serviced, ready for operation and delivered F.O.B. with the freight prepaid, including invoice and N.I.V.S. to the WFMA 185 Tecumseh Street, Winnipeg MB	_____
63.	Delivery time	Within 40-calendar weeks from the date of award of contract. Equipment shall be delivered within 8:00 am and 2:00 pm on Business Days	_____
64.	Delivery contact	The Contractor shall contact the Contract Administrator prior to delivery of the equipment	_____
65.	PDI	A pre-delivery inspection shall be performed by the Contractor on the equipment. Proof upon inspection including completed check list	_____