

FORM N: DETAILED SPECIFICATIONS 24017

SUPPLY AND INSTALLATION OF SERVICE BODIES

INSTRUCTIONS FOR COMPLETION OF SPECIFICATIONS

- 1.1 All items in these specifications should be answered indicating compliance or non-compliance.
- 1.2 **Bidder shall state “yes” for compliance or state “deviation”**, or give a reply where requested to do so. Deviations and/or equivalents shall be clearly stated and fully detailed. Deviations and/or equivalents will be considered subject to evaluation. In every instance where a brand name or design specifications is used, the City will also consider deviations and/or equivalents.
- 1.3 Lengthy explanations of deviations may be included in a separate document and must reference the appropriate Detailed Specification.
- 1.4 Each Proponent is required to fill in every blank. Failure to do so may be used as a basis for rejection of bid.
- 1.5 It will be the responsibility of the Proponent to inform the City of any errors or omissions in these Detailed 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.

2.0 DESCRIPTION OF EQUIPMENT

- 2.1 These specifications describe the supply and installation of a **Supply and Installation of Service Bodies** and other equipment and features as specified herein.
- 2.2 The **Supply and Installation of Service Bodies** shall be a new **2024** model year or newer.
- 2.3 The **Supply and Installation of Service Bodies** and all other items/components shall be the manufacturer's latest model. The equipment shall be furnished complete and ready for operation. Any parts or accessories not specifically mentioned, but which are required to complete and place the equipment and associated attachments in successful operation shall be furnished as though specifically mentioned in these specifications. The equipment and associated attachments, and all parts thereof, shall conform in strength and quality of material and workmanship, to the best standards and engineering practice of the industry.
- 2.4 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.

3.0 OTHER SPECIFICATIONS AND STANDARDS

- 3.1 All applicable SAE standards form an integral part of these specifications and shall have precedence in any conflict concerning minimum acceptable standards.
- 3.2 **Where applicable**, the **Supply and Installation of Service Bodies** shall comply with the applicable regulations:

Standard - Specification/Regulation

Internet URL

Transport Canada, National Safety Mark, NSM:

<http://www.tc.gc.ca/eng/acts-regulations/acts-road.htm>

Manitoba Safety and Health Regulation, Parts 12, 16, 22:

<http://web2.gov.mb.ca/laws/regs/current/217.06.pdf>

Canadian Motor Vehicle Safety Standards C.M.V.S.S.:

http://laws-lois.justice.gc.ca/eng/regulations/C.R.C.,_c._1038/section-sched3.html

Standard - Specification/Regulation

Internet URL

Manitoba Highway Traffic Act regulations and requirements including, but not limited to, a Manitoba Government Inspection with Safety Sticker:

<http://web2.gov.mb.ca/laws/regs/index.php?act=h60>

Canadian Standards Association CSA:

<http://www.csagroup.org>

Under Writers of Canada U/L:

<http://www.ulc.ca>

Society of Automotive Engineers SAE:

<http://www.sae.org>

City of Winnipeg Lighting Visibility Standard:

<http://winnipeg.ca/matmgt/pdfs/PublicWorksEquipLightingVisibility.pdf>

Manitoba Building Code:

https://web2.gov.mb.ca/laws/regs/current/_pdf-regs.php?reg=31/2011

3.3 Where applicable, the completed unit shall include a Manitoba Government Inspection with Safety Sticker.

3.4 Where applicable, the manufacturer/installer shall be a certified vehicle completer and must affix their National Safety Mark (NSM) certification sticker on each unit.

State NSM number: _____

4.0 FUEL

4.1 Where applicable, the equipment shall be fully fuelled upon delivery (no exceptions).

5.0 REFERENCES

5.1 If available, please provide five (5) references where this equipment is used in a working environment where climatic conditions are similar to the City of Winnipeg.

6.0 MAKE & MODEL

6.1 State year, make and model being bid:

Model Year: _____

Make: _____

Model: _____

7.0 PERFORMANCE RELIABILITY

7.1 The responsibility for the design of the **Service Bodies** its performance and reliability shall rest upon the Contractor.

- 7.2 The term “repeated failures” as used herein is defined to mean that the same component, subassembly, or assembly develops repeated defects, breakdowns and/or malfunctions rendering the vehicle inoperative, or requiring repeated shop correction, service and/or replacement during the warranty period applicable for said component, subassembly, of assembly. Minor items or ordinary service adjustments are not included, or considered under the scope of “repeated failures”, as well as other factors, such as operational damage due to accidents, misuse or lack of proper maintenance, service and lubrication attention by not following the manufacturer’s preventative maintenance schedule.
- 7.3 Where the **Service Bodies** develops “repeated failures” in service, the Contractor shall make any necessary engineering changes, repairs, alterations or modifications in order to guarantee reliability of performance.
- 7.4 The equipment shall be capable of consistent top performance in City of Winnipeg Environment. **Note: The City of Winnipeg has four seasons with ambient temperatures ranging from approximately 90°F (32°C) to -40°F (-40°C).**

8.0 SERVICE FACILITY

- 8.1 For the purpose of warranty repairs, the Bidder shall have an authorized service facility. The facility, or a portion thereof, shall be dedicated to the service and maintenance of the type equipment being offered. Bidders shall provide a description of the service facility including, but not limited to, number of qualified service staff, years of service experience, and general service capabilities within three (3) Business Days upon request of the Contract Administrator.

9.0 QUALIFICATIONS OF MANUFACTURER & CONTRACTOR

- 9.1 The manufacturer of the **Service Bodies** shall have five (5) years continuous experience manufacturing **Service Bodies**.
- 9.2 The manufacturer shall have in effect a documented quality control program ensuring that the quality of materials and workmanship, including welding, conforms to the best standards and engineering practice of the industry.
- 9.3 The Contractor shall have five (5) years continuous experience servicing, repairing and maintaining **Service Bodies** of the type being offered.

Representative Pictures - Typical Completed Service Body on Truck Chassis, Pictured below

Driver's Side View (L1)



Passenger's Side View (R1)



Rear View



10.0 **SPECIFICATIONS**

Scope

10.1 Supply and Delivery of **Service Bodies** complete with steel deck which will be mounted on a City owned cab and chassis. _____

The **Service Bodies** shall be capable of consistent top performance for loading and hauling varying payloads year-round in conditions normal to the City of Winnipeg.

- Body and accessories to be mounted by a CMVSS certified installer in accordance with CMVSS regulations as well as the chassis and body manufacturers recommendations.

Note:

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

Make and Model – Service Body

Make **State:** make: _____
10.2 Model **State:** model: _____
10.3 Model Year **State:** model year: _____

Body Weights

10.4 Body Weight – Service Body **State:** estimated weight of service body _____

10.5 **Weight Scale Ticket**

Weigh Scale Ticket: _____

- The Contractor shall provide a certified weigh scale ticket upon delivery of the completed unit
- The scale ticket shall include front and rear axle weights including two (2) operators, all attachments and full of fuel.

Manitoba Inspection (MGI)

10.6

- The Contactor shall provide completed/valid MGI upon delivery of the completed unit. _____
- MGI documentation shall be valid upon release in accordance with an approximate 12-month period application or effectiveness.

Installation

Service Bodies will be installed on the following City owned cab & chassis vehicles: _____

Department: WSTWTR-INTERCEPTION
Vehicle Type/Style: 2024 Ford Super Duty
Qty: three (3)
Description: 19,500 GVWR Gasoline 4WD Crew Cab 60CA
City Unit Numbers: 2204355, 2204356 and 2204357

- | | | | |
|------|--------------|--|--|
| 10.7 | Availability | The cab chassis are available | |
| 10.8 | Pick-Up | <ul style="list-style-type: none">• The Contractor shall be responsible for picking-up the chassis cab vehicles from the City upon commencement of the Contract
• The vehicles will be available for pick-up at the Winnipeg Fleet Management Agency, 185 Tecumseh St., Winnipeg, Manitoba
• Pick-up times will be between 8:00 am and 2:00 pm on any Monday to Friday Business Day
• The Contractor shall be responsible for any related fuel and Insurance costs to and from their facility | |

Note: The vehicles will be fully fuelled at the time of pick-up by the Contractor

Drawings

- | | | | |
|------|------------------------------------|---|--|
| 10.9 | Drawings – Contractor shall supply | <ul style="list-style-type: none">• The Contractor shall supply multi-view CAD drawings to the Contract Administrator upon Award of Contract• Drawings will be reviewed and approved as part of the Pre-Production planning stages• Contractor to provide a weight analysis after pre-production meetings• Drawings are to include all dimensions, materials, and specifications as required• Drawings are to be revised as requested by the City• Multiple drawing iterations may be required• Construction of the service body shall not commence until approval is granted
• <u>Note:</u> Drawings can be supply as hard copies, PDF's or electronically | |
|------|------------------------------------|---|--|

Aluminum Service Body

- | | | | |
|-------|-------------------|--|--|
| 10.10 | Aluminum Material | <ul style="list-style-type: none">• High impact resistant Aluminum service body side packs and compartment doors• Primed and painted with two (2) coats of plastic urethane paint• Colour impregnated to match chassis cab colour (Ford Oxford White Z1) | |
|-------|-------------------|--|--|

- | | | | |
|-------|----------|--|-------|
| 10.11 | Material | <ul style="list-style-type: none"> • Corrosion-resistant 10 gauge 5052-H32 marine grade aluminum • The <u>mill certification</u> for the material grade 10 gauge 5052-H32 aluminum marine grade shall be provided or available to the inspector upon request or Contract Administrator • Double sided construction • Internally reinforced compartment doors | _____ |
|-------|----------|--|-------|

State: material thickness: _____

- | | | | |
|-------|-----------------------|--|-------|
| 10.12 | Compartment Interiors | <ul style="list-style-type: none"> • Left in natural unpainted finish | _____ |
|-------|-----------------------|--|-------|

- | | | | |
|-------|--------------------|--|-------|
| 10.13 | Compartment Layout | <p>Each side of vehicle to have:</p> <ul style="list-style-type: none"> • one (1) front vertical compartment • one (1) horizontal compartment over the wheel well • one (1) rear vertical compartment | _____ |
|-------|--------------------|--|-------|

General Dimensions: _____

For the purpose of these specifications:

- L – Length along or parallel to chassis longitudinal axis.
- H – Height, vertical.
- D – Depth on horizontal plane across vehicle

Note: Unless otherwise specified, all dimensions are in inches and are the nominal sizes.

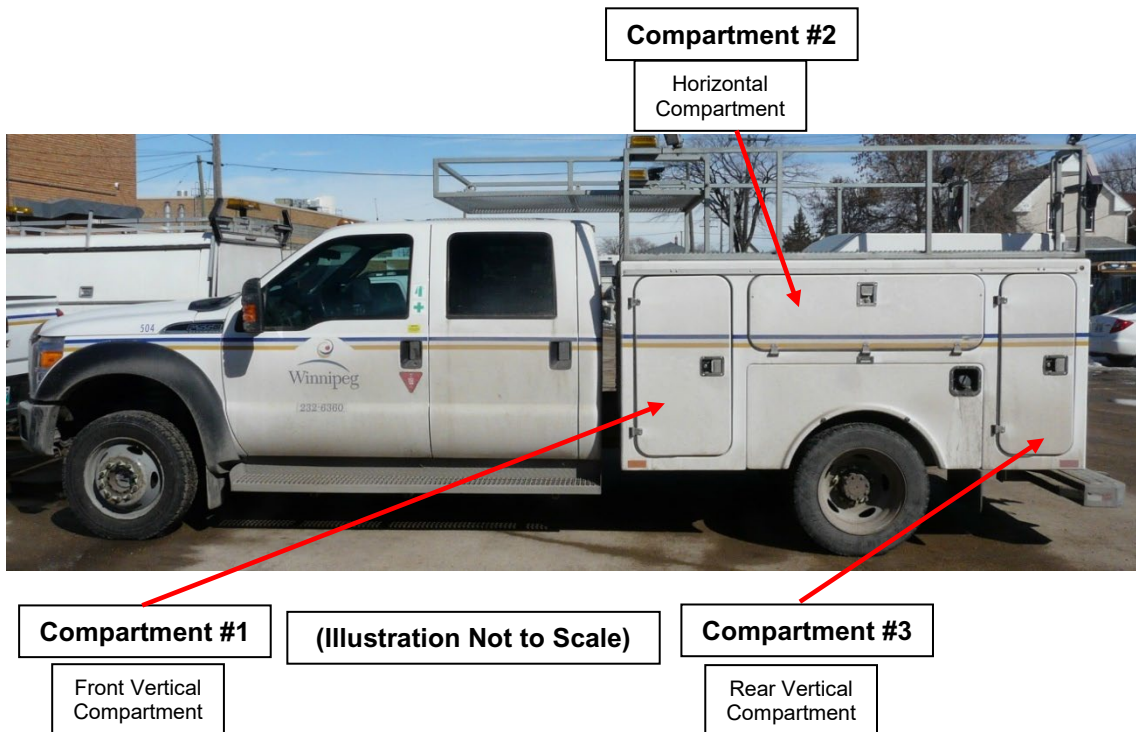
- Left and right is always based on perspective when sitting in the vehicle, so:
- Driver side is the left - L1
- Passenger side is on the right – R1.
- The designations for the driver's side may be referred to as L1 within the documentation.
- The designations for the passenger's side may be referred to as R1 within this documentation.

- | | | | |
|-------|-------------|---|-------|
| 10.14 | Body Height | <p><u>Driver's Side – L1</u></p> <p><u>Approximately 48-1/2 inches L1 side</u></p> <p><u>Passenger's Side – R1</u></p> <p><u>Approximately 48-1/2 inches R1 side</u></p> <p>State: Body Height: _____</p> | _____ |
|-------|-------------|---|-------|

- | | | | |
|-------|-------------|---|-------|
| 10.15 | Body Length | <p>Approximately 108" inches</p> <p>State: Body Length: _____</p> | _____ |
|-------|-------------|---|-------|

- | | | | |
|-------|------------|---|-------|
| 10.16 | Body Width | <p>Approximately 90" – 96" inches</p> <p>State: Body Width: _____</p> | _____ |
|-------|------------|---|-------|

Service Body Compartment Layout, Driver's Side (L1)



Compartment #1

Front Vertical
Compartment

(Illustration Not to Scale)

Compartment #3

Rear Vertical
Compartment

The present configuration of the service body compartment. (Driver's Side – L1)

COMPARTMENT SIZES – Approximate Dimensions (Inches)		
Compartment No.	Length x Height	Depth
1	29-1/4 X 48-1/2	20
2	53-1/2 X 28	20
3	24-1/4 X 48-1/2	20
Length 108	Height range 48-1/2	Width 90 – 96
Approximate Estimated Weight 2,125 lbs.		

Compartment #1

10.17

Front Vertical
Compartment #1
(Behind Truck Cab)

- Invertor and battery compartment
- Floor of compartment to be lined with 3/16" inch smooth aluminum with a 1/16" inch rubber lining and Dri-Deck material or equal material with same functionality
- 250 lbs. minimum load capacity

State:

Compartment Size: _____

Compartment #2

10.18

Horizontal
Compartment #2
(over wheel well)

- Two (2) pullout drawers
- Approximately 24L x 2H x 16D
- Mounted to one side of compartment
- Each drawer shall include dividers, full depth along the "D" plane, i.e. across vehicle at 4" inches increments
- One (1) fixed shelf full length of compartment with 1 in. lip
- Remaining portion of compartment to have two (2) adjustable shelves with 1 in. lip
- Floor compartment to be lined with 3/16" smooth aluminum with a 1/16" rubber lining and Dri-Deck material or equal material with same functionality 250 lb. minimum load capacity
- 250 lbs. heavy duty draw sliders

State:

Compartment Size: _____

Compartment #3

10.19

Rear Vertical
Compartment #3

- Compartment # 3
- **Configured to store components of a Davit Hoist System**
- Approximately 16" inches width x 40" inches height x 20" inches depth
- Three (3) locking swivel hooks mounted to rear wall and each side wall; total (9) hooks.
- Floor compartment to be lined with 3/16" smooth aluminum with a 1/16" rubber lining and Dri-Deck material or equal material with same functionality

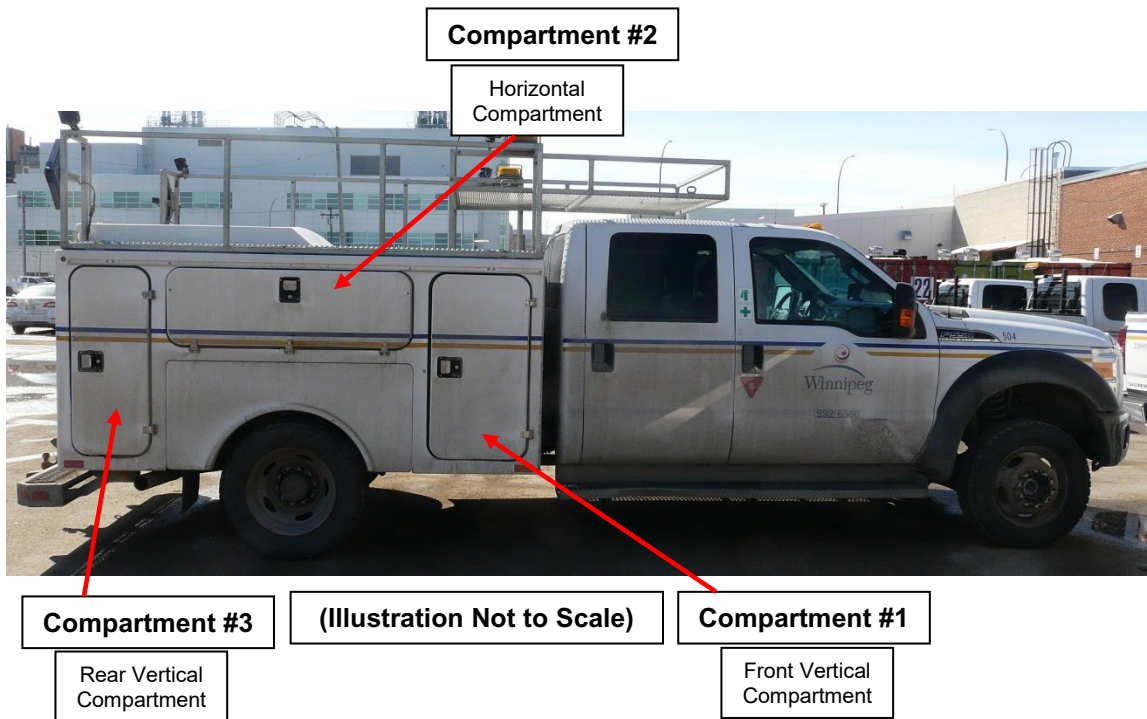
Notes:

- To accommodate the storage of the Davit Hoist System components, compartments # 1 and 2 sizes may need to be altered.
- Final design and layout to be confirmed at a pre-production meeting

Davit Hoist System



Service Body Compartment Layout, Passenger's Side (R1)



The present configuration of the service body compartment. (Passenger's Side – R1)

COMPARTMENT SIZES – Approximate Dimensions (Inches)		
Compartment No.	Length x Height	Depth
1	29-1/4 X 48-1/2	20
2	53-1/2 X 28	20
3	24-1/4 X 48-1/2	20
Length 108	Height range 48-1/2	Width 90 – 96
Approximate Estimated Weight 2,125 lbs		

Compartment #1

10.20 Front Vertical
Compartment # 1
(Behind truck cab)

- Heavy Duty Pullout, 7-drawer
- 16 L x 16 D x 3-6H x 4-2H
- 250 lbs. minimum load capacity
- 250 lbs. heavy duty draw sliders



State:

Compartment Size: _____

Drawer sizes: _____

Compartment #2

10.21 Horizontal
Compartment #2
(over wheel well)

- Two (2) pullout drawers
- Approximately 24L x 2H x 16D
- Mounted to one side of compartment
- Each drawer shall include dividers, full depth along the "D" plane, i.e. across vehicle at 4" inches increments
- One (1) fixed shelf full length of compartment with 1 in. lip
- Remaining portion of compartment to have two (2) adjustable shelves with 1 in. lip
- Floor compartment to be lined with 3/16" smooth aluminum with a 1/16" rubber lining and Dri-Deck material or equal material with same functionality 250 lb. minimum load capacity
- 250 lbs. heavy duty draw sliders

State:

Compartment Size: _____

Compartment #3

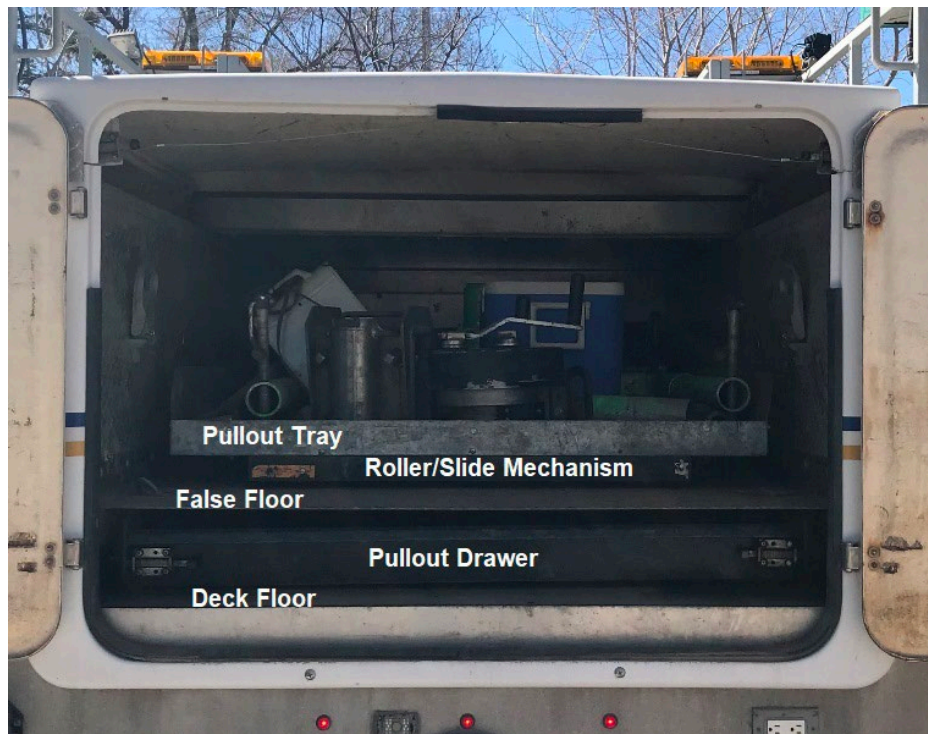
10.22 Rear Vertical
Compartment #3

- Qty two (2) adjustable shelves
- Full width and depth
- 2-inch front lip
- Floor compartment to be lined with 3/16" smooth aluminum with a 1/16" rubber lining and Dri-Deck material or equal material with same functionality

Rear Compartment

10.23	Finish	All steel components of the Main Deck assembly including the Under-Deck Compartments shall be primed and finished with rust preventative coating/ membrane	_____
10.24	Deck Width	Approximately 54 in. between side packs	_____
10.25	Deck Floor	1/8 in. steel plate	_____
10.26	Pullout Drawer	<ul style="list-style-type: none"> • Heavy duty steel pullout drawer • Roller/slider mechanism • Locking mechanism • Approximately 48W x 72L • 4-inch lip all around • 3/4 in. drain holes required at front 	_____
10.27	False Floor	3/16 in. steel checker plate	_____
10.28	Pullout Tray	<ul style="list-style-type: none"> • Heavy duty steel pullout tray • Locking mechanism • Approximately 48W x full length • 4-inch lip all around • Roller/slider mechanism - Cargo Bed International Inc. HD3670 or suitable equivalent to achieve desired design 	_____

Rear Compartment Layout

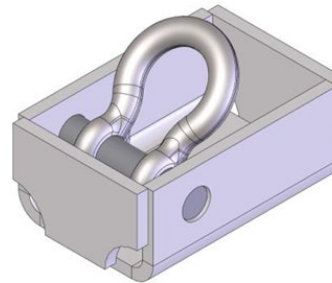
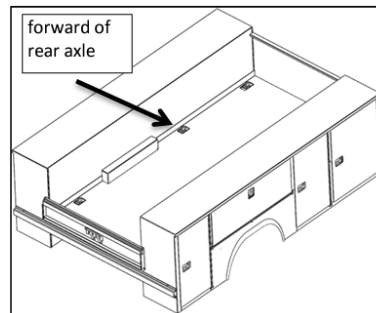


Tie Downs

10.29 Tie Downs

Floor of Service Body:

- Qty six (6)
- Two (2) near top/front of each side
- Two (2) middle of each side
- Two (2) near top/rear of each side
- D-Ring
- Tie downs shall be counter sunk
- Two (2) hook to be installed on the front panel of service body in the box
- Tie downs eyes to have a lifting capacity rated for full box weight for lifting box during installation



Walls of Service Body:

- Qty six (6)
- One (1) mounted near each corner of the inside wall of service body, flush mounted is possible
- One (1) mounted in the middle of inside wall of service body, flush mounted if possible

Roll Top

10.30 Roll Top

- 2 or 3-piece aluminum construction
- Top-mounted
- Full height and width of "inside" of side packs

Rear Doors

10.31 Rear Doors

- Aluminum construction
- Barn door style

Catwalk Structure

10.32	Regulations (Railings)	<p>Manitoba Workplace Safety and Health Regulation, MR 217/2006, Part 14 Fall Protection</p> <p>Guard Rails must be:</p> <p>(a) is at least 900 mm (35.5 in.) high and not more than 1,060 mm (42 in.) above the working surface, with an intermediate rail at between 450 and 530 mm (18 and 21 in.) above the working surface;</p> <p>and</p> <p>(b) is constructed and secured to resist a static load of 900 N in any direction in which the load may be applied at any point on the top rail and on any intermediate rail</p>	_____
10.33	Construction	<ul style="list-style-type: none">• 1 in. square steel tubing construction• Wrap around the front, sides and partial rear of the body	_____
10.34	Finish	<ul style="list-style-type: none">• Galvanized finished all components• All galvanized parts which move must be smoothed, cleaning or conditioning after the galvanizing process to ensure function and appearance requirements are met which may include removal of sharp edges, lumps and repair	_____
10.35	Walkway	<ul style="list-style-type: none">• Galvanized Grip Strut Safety Grating• Installed to top of side packs• Full length x full width• 4-Diamond + 3-Diamond Grip Strut• Bolt holes sealed as required	_____

RAILINGS

Representative Pictures of Railings

Note: These images shown for illustration purposes only and may not be an exact representation of the final product.

Current Set-Up



New Requirement to Meet Codes



Roof Top Storage Rack

10.36

Roof Top Storage Rack

- Approximately 67 L x 62.5 W
 - 1 in. square steel tubing construction
 - Steel mesh
 - Galvanized
 - Railing approximately 10 in. high wrapped around the front and sides
-

Representative Pictures of Roof top Storage Rack

Note: This image shown for illustration purposes only and may not be an exact representation of the final product.



Rear Bumper and Hitch

10.37 Rear Bumper

- Heavy duty step type bumper
- Tubular steel construction
- Galvanized
- Tapered at outer ends
- 12 in. steel grip strut surface
- Recess for a Pintle hitch mount
- Approximately 16 in. step height from ground

Note: Final design and layout to be confirmed at a pre-production meeting

10.38 Auxiliary Step

- Aluminum grip strut
- Approximately 7 in. L x full width of deck
- Located equidistant between bumper and deck level

Note: Final design and layout to be confirmed at a pre-production meeting

Representative Pictures of Rear Bumper and Auxiliary Step

Note: This image shown for illustration purposes only and may not be an exact representation of the final product.



10.39 Combination Hitch

- Premier Model 150 with 2 in. ball
- Integrated into rear bumper design



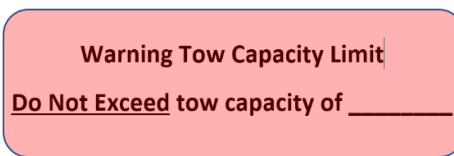
10.40 Eye Bolt or Welded Shackle
(Required for Trailer Safety
Chains)

- One (1) each side of hitch
- Eye bolt or welded shackle on bumper or equivalent style and functionality



- | | | | |
|-------|-----------------------------|--|-------|
| 10.41 | Dock Bumpers | <ul style="list-style-type: none">• Rear mounted• One (1) on each side of bumper <p>Exact mounting location to be determined at pre-production meeting</p> | _____ |
| 10.42 | Tow Capacity Safety Sticker | <ul style="list-style-type: none">• A weather-resistant tow capacity sticker must be attached to the back bumper or service body deck.• This sticker will indicate the maximum tow capacity for both the bumper and/or hitch, which should not be surpassed during operations | _____ |

SAMPLE TOW STICKERS



Trailer Equipment

- | | | | |
|-------|-------------------|---|-------|
| 10.43 | Trailer Connector | <p>SAE J560 7-Way Flat trailer receptacle mounted and installed complete with all necessary wiring</p> <p>Note: <u>The cab and chassis will be supplied (unattached) with Ford OEM Trailer Plug Socket and Electric Trailer Brake Controller</u></p> | _____ |
|-------|-------------------|---|-------|

Grab Handles

- | | | | |
|-------|--------------|---|-------|
| 10.44 | Grab Handles | <ul style="list-style-type: none">• Located for ergonomic access to deck• Qty two (2)• Diameter 1-1/4 in. (32 mm) – 1-1/2 in. (38 mm)• Spacing behind grab bars approximately 3 in. (76 mm)• Slip resistant• Bolt-on construction• Primed and painted safety yellow | _____ |
|-------|--------------|---|-------|

Design and installation to be determined at a pre-production meeting

Running Boards

- | | | | |
|-------|--------------|---|-------|
| 10.45 | Construction | <p>Custom made:</p> <ul style="list-style-type: none">• Extending entire length of underside of front and rear doors, each side• AGS 6061 aluminum grip strut, 9-1/2" inches x 2.0" inches x 0.08" inches• Inside kick plate shall consist of 1/8" inches aluminum checker plate• Support brackets shall consist of 1-1/2" inches x 1-1/2" inches x 1/8" inches RC aluminum square tubing with 1/4" inches aluminum support plates | _____ |
| 10.46 | Mounting | <ul style="list-style-type: none">• Cab steps to be mounted using the existing holes in the frame and body where applicable• Use 3/8-16 nut inserts to secure the mounting brackets to the body | _____ |

Representative Picture of Running Boards

Note: This image shown for illustration purposes only and may not be an exact representation of the final product.



Rear Fenders

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|-------|--------------|---|-------|
| 10.47 | Rear Fenders | <ul style="list-style-type: none">• Heavy Duty rear poly half-moon fenders complete with steel mounting hardwareor• Aluminium wheel well covers | _____ |
|-------|--------------|---|-------|

Rear Air Suspension Kit

10.48 Ford F550 Rear Suspension Chassis – Air Suspension Installation

- Supply and installation of rear air suspension on Ford F550 Chassis
- Air suspension should be able to operational and function in the City of Winnipeg **four seasons with ambient temperatures ranging from approximately 90°F (32°C) to -40°F (-40°C).**
- Controls in the truck cab for leveling and with air dryer and tanks mounted in chassis away from debris spray

Standards – Service Body (Where Applicable)

10.49 Service Body/Truck Chassis

Service body must be attached to the truck chassis and properly supported. i.e. bolted and automotive grade U-bolts used to secure service body to truck chassis main frame members.

Mounting of the service body and any equipment shall be in accordance with the chassis manufacturer's guidelines for body mounting including, but not limited to, guidelines for tire and suspension clearances.

Note: in some cases, the following must be conducted in accordance with service body manufacturers specifications for installation.

Body and accessories to be mounted by a CMVSS certified installer in accordance with CMVSS regulations as well as the chassis and body manufacturers recommendations.

EXAMPLE: Ford & Ram Specific Requirements – The under structure of the service body must be attached to the truck frame using a minimum of four points. The front two mounts closest to the cab of the truck must be spring mounted.

Exception for Aerial/Crane Device equipped Service Bodies:

If an aerial/crane device is involved, the body is to be spring mounted at the opposite end of the device at the two-service body under structure to truck frame attachment points.

After the installation of the body to the chassis verify:

- Doors shut and seal correctly, if not, adjust striker assembly
- Master Lock Rod System, if equipped, functions as advertised, if not, adjust components
- After the adjustments are made, perform a water intrusion test

10.50 Isolators

- All interfaces between aluminium and steel are to be separated by an approximately 1/16 in. thick rubber or neoprene sheet
- Shall be bolted through with stainless steel bolts and non-conductive bushings

10.51 Drain Holes

All body compartments to include a 1/2 in. drain hole complete with plug

10.52 Doors Design and Weather Stripping

Automotive door design with neoprene seals or equivalent seals having same specifications to minimize moisture and dust intrusion. Automotive grade weather stripping.



10.53 Doors

All vertical compartments doors to vertically hinged

10.54 Door Latches

- Flush mounted with locks for all compartment doors
- All locks shall be keyed alike

10.55	Compartment Door Handles	<ul style="list-style-type: none">• Tri-Mark door handles, Chrome plated or stainless-steel paddle style handles or equivalent model having same specifications• Barn door handles which shall be chrome plated or stainless-steel D-ring type	_____
10.56	Door Hinges and Latches	Chromed or stainless steel with adjustable striker plates	_____
10.57	Compartment Door Openings	Sealed using automotive type bulb gasket door seal	_____
10.58	Door Hold-Open Devices	<ul style="list-style-type: none">• Over-centre door holders on front and rear compartments• Detachable cables on horizontal compartments	_____
10.59	Cabinet Locks	<ul style="list-style-type: none">• Service Body cabinets to be keyed to the same key for all cabinets.• Master Locking system to be installed on both side of the service body for all compartments	_____

Representative Picture of Master Lock System for Aluminum Service Body.

Note: This image shown for illustration purposes only and may not be an exact representation of the final product.



10.60	Service Body Cabinet Light (LED) System	<ul style="list-style-type: none">• Aluminum service body cabinets, all to be illuminated with integrated high performance and long-life LED lighting.• Actuated when the doors are opened	_____
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10.61	Rubber Bumpers	<ul style="list-style-type: none"> • Installed on the body below the horizontal compartments to prevent contact between the compartment door and the body • Two (2) bumpers per door 	_____
10.62	Wheel Well Area	<ul style="list-style-type: none"> • Shall incorporate a Fibreglass or rubber fender flare • Wheel Well panels are removable 	_____
10.63	Drip Edge	<ul style="list-style-type: none"> • Installed along the full length of the body above the door openings • Designed to prevent water from entering into the storage compartments <p>State: method _____</p>	_____
10.64	Mud Flaps	<ul style="list-style-type: none"> • No name, fabric reinforced, black rubber mud flaps installed fore and aft of rear tires • ½ in. diameter steel bar anti-sail brackets 	_____
10.65	Rubber Bumpers	<ul style="list-style-type: none"> • Installed on the body below the horizontal compartments to prevent contact between the compartment door and the body • Two (2) bumpers per door 	_____
10.66	Wheel Well Area	<ul style="list-style-type: none"> • Shall incorporate a fibreglass or rubber fender flare • Wheel Well panels are removable 	_____
10.67	Drip Edge	<ul style="list-style-type: none"> • Installed along the full length of the body above the door openings • Designed to prevent water from entering into the storage compartments <p>State: method _____</p>	_____
10.68	Deck Width	Approximately 52 in. between side packs	_____
10.69	Deck Sides	<ul style="list-style-type: none"> • 3/16 in. steel checker plate • Extended full height up sides of side packs 	_____
10.70	Front Headboard	<ul style="list-style-type: none"> • 3/16" inch aluminum checker plate • Approximately full width and height of body • Top of headboard shall not protrude higher than the lower portion of the rear truck window 	_____
10.71	Kick Plate, Rear of Body	<ul style="list-style-type: none"> • 3/16" inch. Aluminum checker plate • Full width below deck floor level 	_____
10.72	Kick Plate, Front	<ul style="list-style-type: none"> • 3/16" inch. aluminum checker plate (corrosion-resistant 5052-H32 marine grade aluminum) to protect lower front area of body protruding past chassis cab • Each side • Approximately 8 in. kick plate height 	_____

10.73 Sealant Deck sides and kick plates caulked along edges using automotive grade elastomeric sealant _____

Back-Up Alarm

10.74 Back-Up Alarm _____

- SWS model 99202 or equivalent model having same specifications and functionality
- Mounted between frame rails at rear of vehicle
- Protected from damage and road spray/damage

Rear View Camera

10.75 Rear View Camera _____

- The cab and chassis will be supplied (unattached) with a rear-view camera
- Rear-view camera prep kit to include camera, screen (or displayed in rear view mirror) mounting hardware and OEM wiring harness
- To be installed by body supplier
- The installation of the rear-view camera is carried out by a professional installer in order to guarantee an unobstructed view during the process of reversing

Conspicuity Tape

10.76 Conspicuity Tape Truck-Lite 98127 or equal, affixed or equivalent model having same specifications _____

Signage

10.77 Rear Safety Signage – Service Body _____

- **CAUTION FREQUENT STOPS**
- Reflective
- Sized to fit at back of vehicle



Grease Fittings

10.78 Grease Fittings _____

Required:
On tailgate release mechanisms, pivot points and drop-down side linkages

Inverter

10.79 Inverter _____

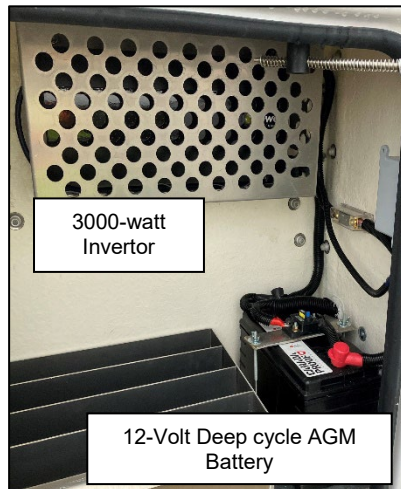
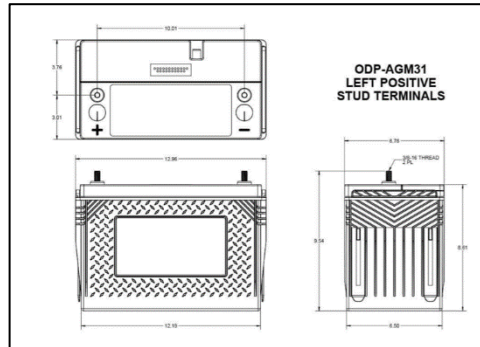
CSA approved

- 110 Volt, 3000 Watts minimum
- Make: Xantrex
- Model: XPower 3000 Inverter or equivalent rated unit model having same specifications or functionality
- Part Number: 813-3000-UL

State:
Make: _____
Model: _____

10.80 Deep Cycle Battery

- Group 31, approximately 900 CCA or equivalent Model AGM Battery/Deep Cycle
- Mounted in the same location as inverter in a reinforced compartment
- Battery - Operating temperature range-40°F / -40°C to 140°F / +60°C
- Battery Cold Start Performance S.A.E J537



10.81 Installation

- All exposed inverter terminals shall be:
- Coated with a dielectric grease
 - Completely covered with adhesive-sealant-lined shrink tubing must be used to guarantee joint integrity, waterproofing and strain relief or rubber fittings
 - The battery lid cover supplied to provide protection for the terminals, ensuring their shielding.

10.82 Wiring

- Inverter wired through ignition at the dash. Ensure to mounted inverter manufacturer remote switch
- Labeled
- Inverter to be complete with suitable solenoid and battery isolator
- The wiring should have the capability to carry approximately 14 volts of alternator charging voltage from the engine compartment (when engine running) to the deep cycle battery connected to the inverter.

10.83 Receptacle

- One (1) required
- Duplex receptacle
- Mounted inside of Compartment #1,
(Driver's Side – L1)
- Forward facing
- Mounted as high as practicable so as not to
interfere with interior shelf positioning
- The Duplex receptacle shall be minimum 20
Amp, GFI, CSA approved
- Weatherproof type with hinged covers
with automatic cover closure/spring closure
mechanism built in to the housing cover.

**Location to be confirmed at pre-production
meeting.**

Lighting

10.84 LED Lighting

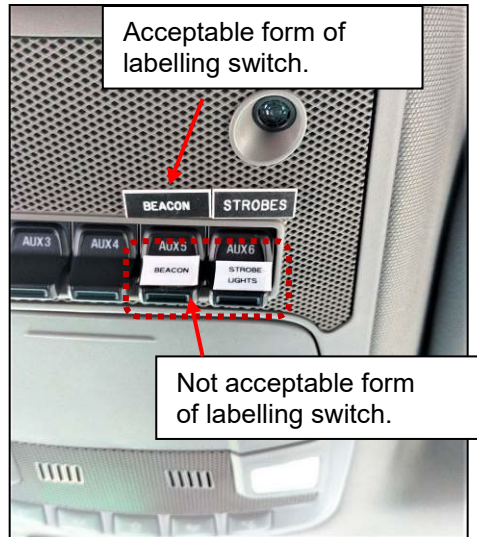
- All safety warning lights shall be Class 2 or equivalent specification and functionality

10.85 Mini Light Bar - Amber

- Qty two (2)
- Grote 79043 or suitable equivalent



- Protected by branch guard – heavy duty construction
- Mini Light Bra shall be wired “Hot” (i.e. able to use without the key on) wired through a single OEM dash mounted switch or on the control panel enclosure. labelled “Light Bar” with a permanent type engraved style label
- Mounting of labels with 3M VHB Tape or equivalent
- Switch shall be capable of amber mode



State:
Manufacturer: _____
Model: _____

10.86 Amber Strobe Lights
(Warning)

- Six (6) total
- Whelen 5GA00FAR, SWS, Grote Series Amber Strobes LED or suitable equivalent
- Mounting garments flush with service body
- Two (2) located outside of 3-Light cluster, rear facing in rear kick plate
- Two (2) located in service body facing near front
- Two (2) strobe lights in front Grille, (location to be confirmed at pre-production meeting and signed off by contract administrator).
- Amber Strobes shall be wired "Hot" (i.e. able to use without the key on) wired through a single OEM dash mounted switch or on the control panel enclosure. labelled "Strobes" with a permanent type engraved style label

Locations to be confirmed/finalized at pre-production meeting

Amber Strobe Lights Locations:

Location at rear of service body:



Location at front of service body:



Location in Front Grille



10.87 Traffic Arrows

- SWS 58056 Split LED Traffic Arrow or suitable equivalent
- Control box
- Traffic Arrows shall be wired “Hot” (i.e. able to use without the key on), wired through a single OEM dash mounted switch or on the control panel enclosure, labelled “Traffic Advisors” with a permanent type, engraved style label



10.88 Work Lights - LED

- Grote 63981 or suitable equivalent
- Four (4) total
- Work lights to be wired through the ignition, wired through two (2) OEM dash mounted switches
- Labelled “Curb Work Lights” and “Street Work Lights”

Locations to be determined at pre-production meeting

10.89 Light Switch Configuration(s)

- Amber strobes (rear ovals) controlled with one switch
- Mini Light Bar controlled with one switch capable of amber mode
- Traffic Advisor – separate controller

10.90 Combination Turn/Stop and Taillights

- Top Mounted - One (1) per side
- Bottom Mounted - One (1) per side
- P/N Truck-Lite 44302R with P/N 44710 mounting grommets

10.91 Back-Up Lights

- One (1) per side
- P/N Truck-Lite 44206C with P/N 44710 mounting grommets

10.92 3-Light Cluster

- Three (3)
- P/N Truck-Lite 10250R with P/N 10403 mounting grommets
- Located to protect from damage

- | | | | |
|-------|------------------|--|-------|
| 10.93 | Clearance Lights | <ul style="list-style-type: none">• Grote 49333 and 49332 with mounting grommets Or <ul style="list-style-type: none">• Truck-Lite 33050R and 33050Y with 3370 mounting grommets | _____ |
|-------|------------------|--|-------|

Note: The clearance light on the service body must remain within the boundaries of the body itself.

- | | | | |
|-------|---------|---|-------|
| 10.94 | Harness | Truck-Lite 50 Series or equivalent harness system, properly routed, internally grounded and secured | _____ |
|-------|---------|---|-------|

- | | | | |
|-------|---------------------|---|-------|
| 10.95 | License Plate Light | <ul style="list-style-type: none">• Complete with license plate bracket• P/N Truck-Lite 36140 (Light)• P/N Truck-Lite 36710 (Bracket) | _____ |
|-------|---------------------|---|-------|

- | | | | |
|-------|--|---|-------|
| 10.96 | Rear Light Mounting Location (Rear Sill) | <ul style="list-style-type: none">• Rear-Corner Clearance Lights, qty two (2), one per side• Combination Turn/Stop and Taillights, qty two (2), one per side• Back-Up Lights, qty two (2), one per side | _____ |
|-------|--|---|-------|

The lights shall be situated so that no debris or door opening contacts/obstructs the lights.

Location of Lights to be confirmed at pre-production meeting

- | | | | |
|-------|---|---|-------|
| 10.97 | Rear Light Mounting Location (Top-Rear of Body) | <ul style="list-style-type: none">• Combination Turn/Stop and Taillights, qty two (2), one per side• Amber Strobe Lights, qty two (2), one per side• 3-Light Cluster, qty three (3) | _____ |
|-------|---|---|-------|

Location of Lights to be confirmed at pre-production meeting

- | | | | |
|-------|-------------------------------------|--|-------|
| 10.98 | Clearance Light Mounting Locations: | <ul style="list-style-type: none">• Front – qty two (2), located one on each bottom corner of body• Sides – qty two (2) per side, located on front and rear bottom corners• Rear – qty two (2), located one on each bottom or top corner | _____ |
|-------|-------------------------------------|--|-------|

Location of Lights to be confirmed at pre-production meeting

Welding Standards

10.99	Welds	Stitch welds	_____
10.100	Standard	CSA Standard W47.1-30, (CSA W47.1, Certification of companies for fusion welding of steel) and W59-03, (CSA W59, Welded steel construction). or Certification through CWB or Trade Certification is acceptable	_____

Where Applicable:

CSA W47.2 Fusion Welding of Aluminium Company Certification,
CSA W59.2 - 2018 – Welded Aluminium Construction
Or Equivalent American Welding Society (AWS)

10.101	Weld Quality Inspection	<ul style="list-style-type: none"> • Straight and uniform • Consistent thickness • No spatter drops • No slag, cracking or holes • No dips or craters in the bead • No holes, breaks or cracks in the bead/fillet <p><u>Not Acceptable</u> – cause for rejection.</p> <ul style="list-style-type: none"> • Lack of uniformity and straightness • Visible spatter • Cracking, undercutting or breaks in the bead • Bead width inconsistent 	_____
10.102	Weld Spatter	All weld spatter must be removed prior to final finish	_____

Finish

10.103	Steel and Aluminum	Match chassis cab colour: Ford Oxford White Z1	_____
10.104	Aluminum Components	<ul style="list-style-type: none"> • Unfinished • Material Grade corrosion-resistant 5052-H32 marine grade aluminum • Mill certificates for the material utilized in the construction of the specific tender must be made accessible upon inquiry 	_____
10.105	Galvanized	<ul style="list-style-type: none"> • All galvanized parts which move must be smoothed, cleaning or conditioning after the galvanizing process to ensure function and appearance requirements are met which may include removal of sharp edges, lumps and repaired 	_____

10.106	Deck	Deck surface properly cleaned and coated with: <ul style="list-style-type: none">• Rust-Oleum AS5400 Anti-Slip Floor Covering or equivalent performance product• Color Black	_____
10.107	Preparation	All steel and aluminum components unless otherwise noted in these specifications shall be sandblasted, properly cleaned, primed and finished with the Endura, DuPont or Tristar paint process in order to prevent rust formation	_____
10.108	Primer	Required: Epoxy or Polyurethane primer Endura EP321 Intermix Epoxy Primer or DuPont polyurethane or Tristar Coatings Inc. Epoxy Primer Two (2) coats – Dry Film Thickness 3.0 – 4.0 mils	_____
10.109	Paint	Required: Polyurethane Colour: 2023 Ford Oxford White Code Z1 Endura EX-2C or DuPont Polyurethane or Tristar Coatings Inc. Polyurethane Two (2) coats: 3 - 5 mils Wet Film Thickness with a total combined overall average Dry Film Thickness of 4 – 6 mils	_____
	Clearance		
10.110	Clearance	Clearance between aluminium service body and the back of the truck cab shall be a minimum of 3” inches in accordance with the Cab & Chassis Incomplete Vehicle Manual.	_____
10.111	Tire Clearance	Aluminium service body shall provide for an approximate 4” inch clearance with rear springs fully loaded.	_____


Installation

- 10.112 Not-Permitted
 - Drilling on chassis frame flanges
 - Welding on the chassis frame

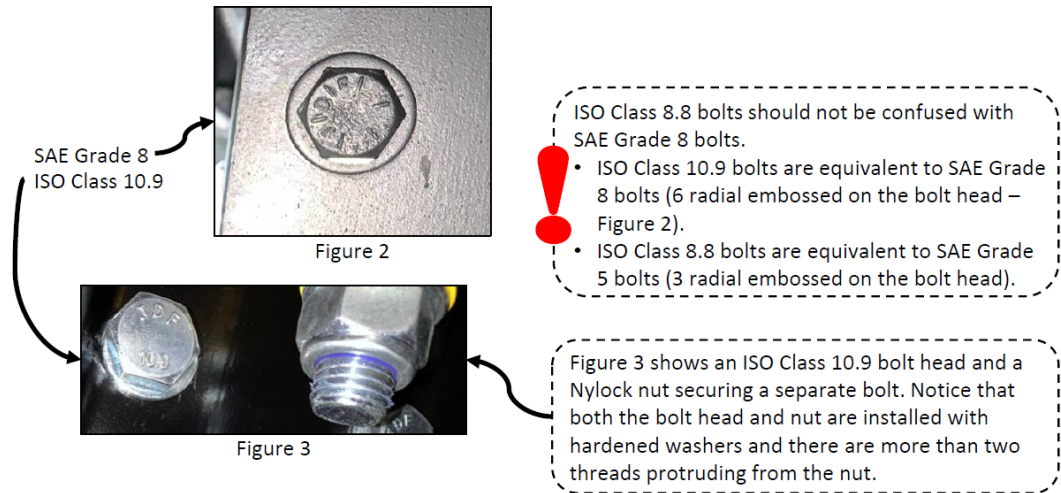
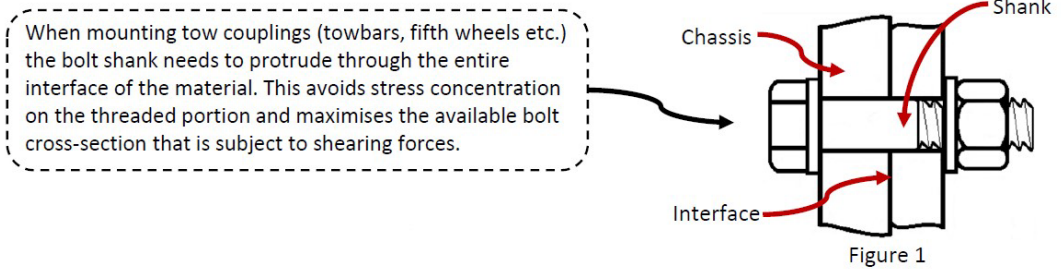
 - 10.113 Installation Guidelines
 - A comprehensive installation guide must be provided to the Contract Administrator for validation during the construction phase. These instructions/guidelines pertain to the proper installation/mounting of the body or equipment, following the chassis manufacturer's guidelines for body mounting

 - 10.114 Holes
 - When necessary and permitted in accordance with manufacturers specifications and regulations holes in the frame shall be drilled, remade and deburred to fit bolts
 - Bolt holes shall not have excessive play
 - Holes required to run wires through shall be drilled and deburred (not punched), grommeted and sealed as required when permitted

 - 10.115 Isolators
 - All interfaces between aluminum and steel are to be separated by an approximate 1/16" inch thick rubber or neoprene sheet.
 - Shall be bolted through with non-ferrous stainless-steel bolts and non-conductive bushings

 - 10.116 Mounting Brackets
 - Shall be bolted to the frame using Grade-8 fasteners
-
- | Grade Marking | Specification | Material | Bolt and Screw Size in. | Proof Load, psi | Break Strength min. psi |
|---|---------------------|--|-------------------------|-----------------|-------------------------|
|  | SAE-Grade 8 | Medium Carbon Alloy Steel, Quenched and Tempered | 1/4 thru 1-1/2 | 120,000 | 150,000 |
| | ASTM-A 354 Grade BD | Alloy Steel, Quenched and Tempered | | | |
-
- 10.117 Bolt Requirements
 - All bolts must be high tensile
 - Hardened washers must be installed under both the bolt head and under the nut
 - All nuts need to be high tensile and self locking (Nyloc, Conelock or other suitable self-locking variation)
 - At least two bolt threads must protrude from all nuts
 - Any suspension component bolts must be ISO Class10.9 or SAE Grade8
 - All bolts that have been installed to replace OEM bolts must be at least an equivalent class/grade.

Bolt Requirements



10.118	Mounting Standards	<ul style="list-style-type: none"> • Mounting of the body shall be in accordance with the chassis manufacturer's guidelines for body mounting, including but not limited to guidelines for tire and suspension clearance and fuel filler installation 	_____
10.119	Mountings Standards	<ul style="list-style-type: none"> • If applicable the aluminum side packs shall be mounted to the steel deck using cadmium plated carriage bolts and fender washers • Bearing plates shall be used in high stress areas 	_____
10.120	Mounting Standards	<ul style="list-style-type: none"> • Any holes required in the fame if permitted must be drilled, reamed and deburred to fit the bolts 	_____
10.121	Mounting Standards	<ul style="list-style-type: none"> • All non-continuous body seams (joints) shall be caulked with an automotive grade elastomeric sealant 	_____
10.122	Mounting Plates	<ul style="list-style-type: none"> • Mounting plates utilized or created for the installation or assembly of the service body must feature chamfered corners and avoid sharp right angles 	_____



The mounting plate on the truck frame, which is affixed to a service body, has a sharp corner highlighted by a red circle. It is not advisable to have this sharp corner, as it should be rounded to alleviate any stress concentration. Failure to do so may result in the early development of fatigue cracks.



10.123 Bolted Connections to Chassis Frame

- Mounting to the chassis frame is permitted however the bolt/nut assembly must have no gap or skewed connections are allowed; bolt/nut connection must be perpendicular to the clamping surface.
- **Not Recommended**, However, if hole is to be drill to accommodate bolt/nut assembly, ensure hole is drilled far enough away from any seams, splices or overlays in the chassis frame to ensure bolted and nut/washer connection will be flat, ensure total contact with chassis frame



The assembly of bolt and nut through the chassis frame must adhere to certain guidelines. In the event that the hole is situated on a curved surface or where a transition occurs in the frame, it is not recommended to utilize it as a mounting location.

However, if the hole location is to be utilized as a mounting location, the following protocol must be observed: A levelling washer must be employed to ensure that the bolt clamping force is fully applied and perpendicular to the frame, with no gaps permitted.



The bolt/nut assembly, located on the seam, is deemed unacceptable.



Lighting and Electrical Standards

- 10.124 Conformance: _____
- LED Lighting – Class 2
 - C.M.V.S.S.
 - Manitoba Highway Traffic Act.
 - City of Winnipeg Lighting Visibility Standard
<http://winnipeg.ca/matmgt/pdfs/PublicWorksEquipLightingVisibility.pdf>
- 10.125 Lighting: _____
- Supplier installed
 - LED – Class 2
 - Stop / turn / tail lights
 - Clearance lights
 - Back-up lights
 - 3-Light cluster
- 10.126 Visibility: _____
- Taillights, back-up lights and warning lights to be fully visible when tailgate is lowered to horizontal position
 - No clearance light shall protrude beyond the service body
- 10.127 Licence plates: _____
- The front license plate holder is securely installed and comes with the necessary mounting screws for the license plate.
 - The back-license plate holder is securely installed and must have an LED light to illuminate it and should be positioned on the left side at the rear of the vehicle, ensuring it is not obstructed.
- 10.128 Identification: _____
- All dash mounted warning lights and switches to be identified with permanent, engraved type labels
 - Mounting of labels with 3M VHB Tape or equivalent. To ensure adhesion to interior surfaces 3M Adhesion Promoter 06396 is a convenient liquid primer for enhancing the adhesion of 3M™ Acrylic Foam Tapes in automotive applications. This adhesion promoter works with most LSE plastics used for interior and exterior automotive trim and parts
 - No labels to be located on upper surface of dash



Not Acceptable – Not Permanently Label



Picture above shows example of permanent engraved label switches.

10.129 LED Strobe Lights: _____
• Shall be wired “Hot” (I.e. able to be used without the key on)
• All LED strobe lights shall be wired through the ignition, wired through a single OEM dash mounted switch or on the control panel enclosure, labelled “Strobes” with a permanent type, engraved style label

10.130 Connection System: _____
• Weather Pack Sealed Connection System or equivalent system having same industry specifications.
• Genuine OEM connectors, terminals, and wire seals are used to guarantee quality and 100% fitment.
• (“J-Box” and shrink tube acceptable)



10.131 Grommets: _____
• Rubber grommets unless otherwise specified



10.132 Harnesses: _____
• Harness system, properly routed and secured.
• All harnesses shall be internally grounded, no exceptions
• Colour coded or numbered

10.133 Junction box: _____
• Complete with necessary compression fittings, required for all vehicle lighting harness connections
• Securely located – inside rear of truck frame
• Waterproof
• Readily accessible for servicing
• Protected from road spray

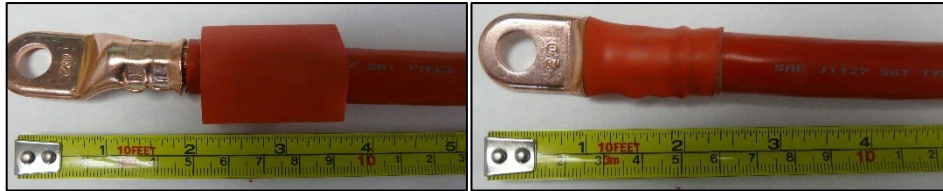
10.134 All Plug-In Connectors: _____
• All plug-in connectors shall be coated with Truck-Lite NYK Corrosion Preventive Compound prior to assembly

10.135 Compartment Lights: _____
• LED continuous “rope” style lighting in all service body compartments, properly secured to prevent damage

10.136 Wiring: _____
• All wiring to be colour coded, loomed and properly secured.
• Genuine OEM connectors, terminals, and wire seals are used to guarantee quality and 100% fitment
• All LED strobe lights shall be wired through the ignition, wired through a single OEM dash mounted switch or on the control panel enclosure, labelled “Strobes” with a permanent type, engraved style label

10.137 Electrical Connectors: _____

- All electrical connectors to be crimped, soldered and then sealed using adhesive-sealant-lined shrink tubing must be used to guarantee joint integrity, waterproofing and strain relief or rubber fittings



- Pictures above showing acceptable crimping and sealant using adhesive-sealant-lined shrink tubing must be used to guarantee joint integrity, waterproofing

10.138 Joining of Wires: _____

- All joining of wires to be soldered and adhesive-sealant-lined shrink tubing must be used to guarantee joint integrity, waterproofing and strain relief

Note: Crimp on electrical connectors for joining wires are not acceptable

10.139 Wiring Routing: _____

- Any holes required to run wires through shall be drilled and deburred (not punched), grommets and sealed

11.0 **WARRANTY:**

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

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

Bidder shall state all warranty information.

11.2 The warranty for the **Service Bodies** shall cover the complete equipment, and all parts thereof against any defects of workmanship, construction and materials. _____

Any equipment that has become defective during said warranty period and has not proven to have been caused by negligence on the part of the user shall be repaired or replaced at no cost to the City.

The warranty shall be effective from the date the equipment is put into service by the City of Winnipeg

11.3 Factory Warranty - Body **State: Terms:** _____

11.4 Invertor **State: Terms:** _____

11.5 Electrical **State: Terms:** _____

11.6 Battery **State: Terms:** _____

11.7 Paint **State: Terms:** _____

12.0 **DELIVERY:**

12.1 **Delivery Point:** _____

The complete unit shall be serviced, ready for operation and delivered F.O.B. with the freight prepaid, including invoice and N.V.I.S. (if applicable) to the WFMA 185 Tecumseh Street, Winnipeg MB.

12.2 **Delivery Time:** _____

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

State: earliest delivery time from date of award: _____

12.3 **Delivery Contact:** _____

The Contractor shall contact the Contract Administrator prior to delivery of the equipment.

12.4 **P.D.I.:** _____

A pre-delivery inspection shall be performed by the Contractor on the equipment. Proof upon inspection including completed check list

13.0 **MANUALS:**

13.1 **Manuals:** _____

The following manuals shall be supplied with the equipment when delivered:

Operator – Two (2) Copies

- One (1) copy shall be sent to the Equipment Operator Training Branch
- One (1) copy to be left with the equipment

Parts and Service

- One (1) complete set including preventative maintenance schedules

Note: CD or USB flash drive is preferred where available.

14.0 **PARTS/LABOUR PRICING:**

14.1 Bidder to provide City of Winnipeg Parts Discount % Pricing from retail parts pricing. **State percentage discount** _____

14.2 Bidder to provide City of Winnipeg Labor Discount % Pricing from Retail shop labor rate. **State percentage discount** _____

15.0 **FIRST SERVICE PREVENTATIVE MAINTENANCE KIT:**

- 15.1 If applicable, in order to assure minimum downtime of the Equipment in future service, the Contractor must provide one (1) complete replacement set of new OEM filters for each unit purchased. The set of required filters shall include (if applicable to the equipment type) air, fuel, oil, transmission, cab and hydraulic, or otherwise all known necessary common replacement filters required for the first preventative maintenance servicing and first transmission service. _____
- 15.2 The Contractor must provide a list of factory recommended lubricants to be used with the equipment, as well as a complete cross reference guide for all warranty approved lubricants and filters that can be used during Preventative Maintenance servicing. _____