FORM N: DETAILED SPECIFICATIONS 24016

DUMP BODIES

1. 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. DESCRIPTION OF EQUIPMENT

2.1 These specifications describe **Dump Bodies** and other equipment and features as specified herein.

2.2 The **Dump Bodies** shall be a new **2024** model year or newer.

2.3 The **Dump 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. OTHER SPECIFICATIONS AND STANDARDS

3.1 All applicable SAE Standards form an integral part of the vehicle specifications and shall have precedence in any conflict concerning minimum acceptable standards.

3.2 Where applicable, the **Dump Bodies** shall comply with the applicable regulations:

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:
https://www.gov.mb.ca/labour/safety/pdf/1_2016_wsh_ar_oc.pdf

Canadian Motor Vehicle Safety Standards C.M.V.S.S.
Motor Vehicle Safety Regulations (justice.gc.ca)

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:
Underwriters Laboratories of Canada (ULC)

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 affix their National Safety Mark (NSM) certification sticker on each unit.

State NSM number: _____

4. FUEL

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

5. REFERENCES

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

_____
_____
_____
_____
_____

6. MAKE & MODEL

6.1 State year, make and model being bid:

Model Year: _____

Make: _____

Model: _____

7. PERFORMANCE RELIABILITY

7.1 The responsibility for the design of the **Dump 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 **Dump 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. 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. QUALIFICATIONS OF MANUFACTURER & CONTRACTOR

9.1 The manufacturer of the **Dump Bodies** shall have five (5) years continuous experience manufacturing **Dump 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 **Dump Bodies** of the type being offered.

Typical Completed New Dump Body on Truck Chassis Pictured below.

10. SPECIFICATIONS

10.1 The Dump Body shall be capable of consistent top performance for **hauling up to 6000 lbs.** of varying payloads year-round in conditions normal to the City of Winnipeg _____

Make and Model

10.2 Make **State:** make: _____ _____

10.3 Model **State:** model: _____ _____

10.4 Model Year **State:** model year: _____ _____

Body Weight

10.5 Body Weight **State:** estimated weight of body: _____ _____

Weigh Scale Ticket

10.6 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)

10.7
- 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

10.8 The Contractor shall install the bodies on the following City owned chassis cab vehicles: _____

Department	Vehicle Type/Style	Qty	Description	Unit Number
SM-CENTRAL SERVICES	2024 Ford Super Duty	1	16,500 GVWR Diesel 2WD Crew Cab 60CA Option 2: Diesel	2154422
SM-EAST SM-SOUTH	2024 Ford Super Duty	3	19,500 GVWR Gas 4WD Crew Cab 60CA Option 1: 4WD Option 5: Crew Cab 60CA	2204401 2204402 2204424
SM-SOUTH	2024 Ford Super Duty	2	19,500 GVWR Gas 4WD Crew Cab 60CA Option 1: 4WD Option 5: Crew Cab 60CA Option 7: SPPP	2204301 2324302
SM-NORTH	2024 Ford Super Duty	1	19,500 GVWR Diesel 4WD Crew Cab 60CA Option 1: 4WD Option 2: Diesel Option 5: Crew Cab 60CA	2204204

10.9 Availability

The cab chassis will be available during the third or fourth quarter of 2024 _____

10.10 Pick-Up

- 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

Material

10.11	Material	Unless Otherwise Specified: • 10 Gauge Steel • Steel 44/50W minimum • If aluminum is specified 5052 H32 minimum	_____

Dimensions

10.12	Length (Outside)	Approximately 9 ft. 6 in. **State:** length: _____	_____
10.13	Width (Outside)	Approximately 8 ft. **Note:** to match chassis track width **State:** width: _____	_____

Front

10.14	Construction	• 10-gauge steel • Formed construction • Vertical or horizontal reinforcement rib(s) formed into front of body as required	_____
10.15	Front Height (Measured from Floor)	Approximately 53 in. **Note:** to match chassis cab height **State:** front height: _____	_____
10.16	Window	• Plasma / CNC cut window • For viewing through rear cab window **Note:** Expanded metal window not allowed	_____
10.17	Cab Shield	• Formed from a single sheet of steel • bolt-on design • Approximately 12 in. deep • Sloped @ approximately 15° **Note:** The cab shield shall maintain and have sufficient strength to accommodate: • directional arrow • mini light bar • lumber rack brackets	_____
10.18	Cab Shield Sides	• $^{3}/_{16}$ in. plate • with heavy duty reinforcement • tapered @ approximately 30° to provide adequate clearance for entry and exit of vehicle cab	_____

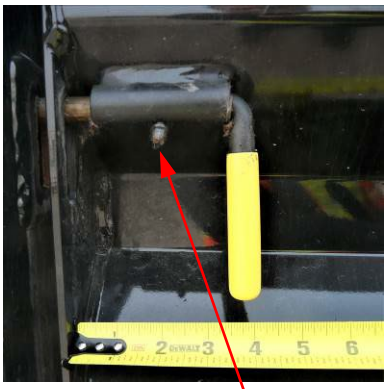
Sides

10.19	Construction	• Double Wall Design • Inner panel 10-gauge steel • Outer panel 12-gauge steel • Fold-down design • Clean side style formed sides without vertical reinforcements • Formed top rail • Formed, self-cleaning bottom rail • Welded into a 1-piece design	_____
10.20	Side Height (Measured from Floor)	Approximately 14 in. **State:** side height: _____	_____
10.21	Rear Corner Pillars	• Approximately 4" x 8" • Formed • One per side	_____
10.22	Sides	Sides shall be able to fold-down for ease of access to payload from the side of the body	_____
10.23	Grease Zerks	Fold-down sides shall incorporate greasable hinges	_____
10.24	Rubber Blocks	• Two (2) per side (one front, one rear) • Approximately 6"L x 3"H x 3"D • Prevent metal-to-metal contact when sides are in the “down” position	_____

10.25 Levers

- Dual levers per side - front and rear
- Locking pins

_____



- Greaseable hinges

10.26 Tarp Tie-Down Bar

- One per side
- Material = ½ in. Round bar

_____

10.27 Plank Gussets

- Designed for 2" x 6" wood planks
- ½ in. diameter bolt holes

_____

10.28 Planks

- 2" x 6" wood planks
- Painted black on all sides
- Bolted in gussets

_____

Tailgate

10.29 Operation

- Two-way tailgate
- Ability to open from the top and bottom
- Shall not protrude above floor in horizontal or full down position
- Minimal gap between tailgate and the floor and sides when tailgate is in the closed or horizontal position

_____

10.30 Construction

- Formed construction
- Double walled design
- Inner panel 10-gauge steel
- Outer panel 12-gauge steel
- Formed top rail
- Formed, self-cleaning bottom rail
- Welded into a 1-piece design
- Service panels for maintenance of the Upper Lever Pin Mechanisms

_____

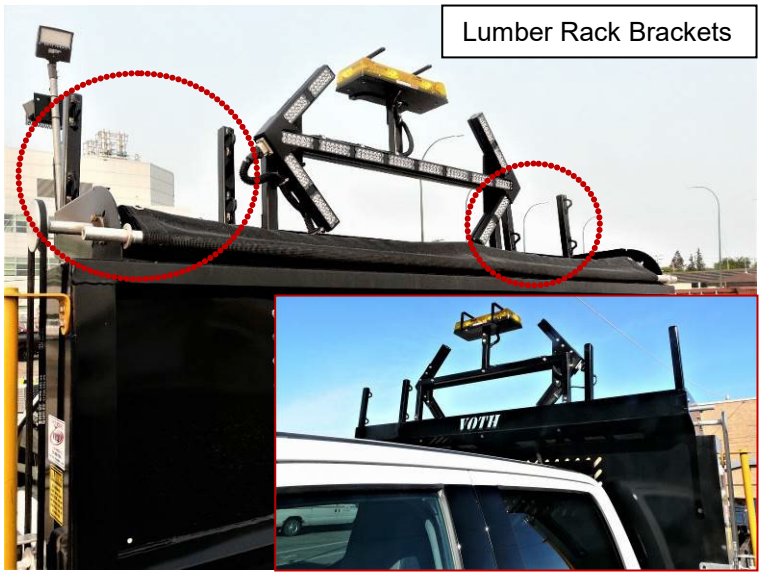
10.31	Tailgate Height (Measured from Floor)	Approximately 20 in. **State:** tailgate height: _____	_____
10.32	Reinforcement	With heavy duty approximately ⅜ in. end plates	_____
10.33	Release Mechanism - Upper	• Lever operated to release upper pins to allow the tailgate to fold-down • Service panel for maintenance	_____
10.34	Release Mechanism - Lower	• Release handle located at the front, driver's side of the body • Mechanism grease zerk lubricated	_____
10.35	Top Tailgate Anchor Pins	• Approximately 1 in. diameter • Self-locking/storing to top of side post • Greaseable	_____
10.36	Support and Spreader Chains	• 5/16 in. transport grade 70 • Adequately fastened c/w chain storage • Two (2) removable links per chain • Equipped with protective covers	_____
	Floor		
10.37	Material	$^{3}/_{16}$ in. or 7-gauge steel **State**: material thickness: _____	_____
10.38	Construction	One-piece construction **Note:** Two-piece floors accepted and shall be continuously welded	_____
10.39	Long Sills	• Formed long sills – approximately 6 in. height • Continuously welded to the floor	_____
10.40	Corrosion Prevention	Formed long sills to be coated internally with a corrosion preventative compound to deter rust and corrosion or manufacturer standard	_____
	Tie Down Eyes		
10.41	Tie Downs Eyes	**Required:** Four (4) Located on inside of dump body located on the corner pillars • Two (2) near rear of body • Two (2) near front of body **Exact locations to be determined at a pre-production meeting**	_____

Lumber Rack Brackets

10.42 Construction

- Quantity two (2)
- Approximately 16"W x 12"H
- Bracket constructed of 2" x 2" x ¼" steel angle iron and 1½" steel square tubing
- Bungee Cord rings - qty two (2) per post
- "U"-style design - welded
- Bolted to the cab shield

_____



Running Boards

10.43 Construction

Custom made:

- Extending entire length of underside of front and rear doors, each side.
- AGS 6061 aluminium grip strut, 9-½" x 2" x .08"
- Inside kick plate shall consist of $^{1}/_{8}$" aluminium checker plate
- Support brackets shall consist of 1½" x 1½" x $^{1}/_{8}$" RC aluminium square tubing with ¼" aluminium support plates

_____

10.44 Mounting

- 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

_____

Rear Fenders

10.45 Rear Fenders

- Heavy Duty rear poly half-moon fenders complete with steel mounting hardware

_____

Rear Hitch Plate

10.46 Rear Hitch Plate

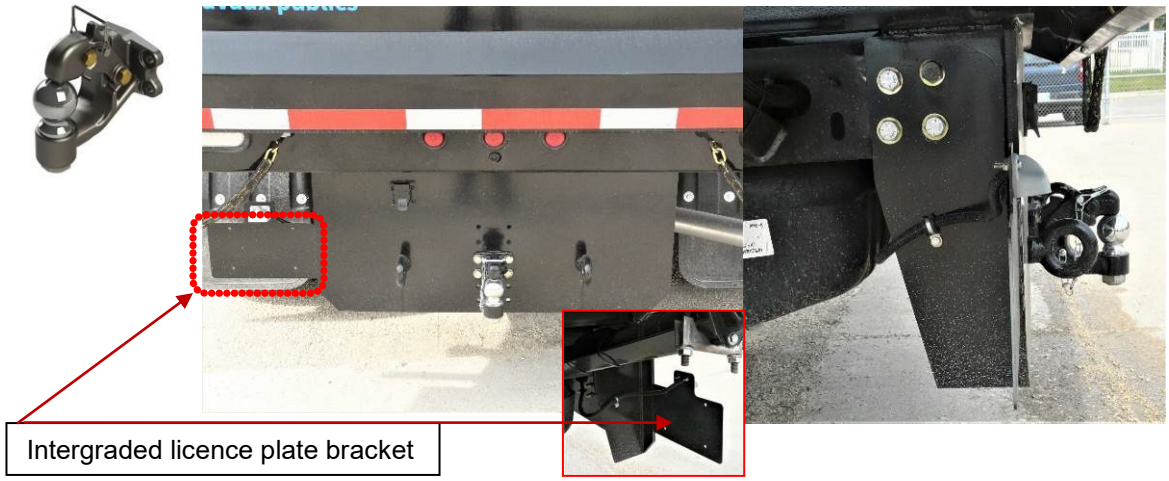
- ½ in. thick solid steel
- Installed to chassis frame

_____

Note: laminated plates not acceptable

Design (including overhang) and installation to be determined at pre-production meeting.

10.47	Hitch	• Combination hitch with 2-5/16 ball • Installed on hitch plate at a 24 in. height • Add extra holes in rear hitch plate to allow for multiple mounting positions • Wallace Forge Company DPH2516 • Wallace Forge Company 2325211 – 2” ball supplied loose • Licence plate holder. Or Equivalent • Buyers Products BH82516 • Buyers Products RB2000 – 2” ball supplied and installed (loose) **Design and installation to be determined at pre-production meeting**	_____



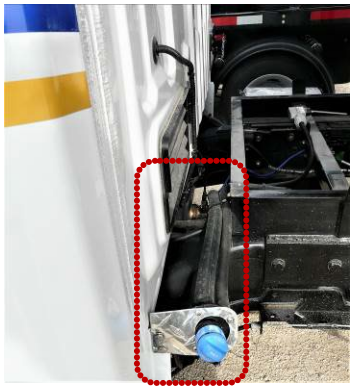
10.48	Tow Capacity Safety Sticker	A weather-resistant tow capacity sticker must be attached to the back bumper or service body deck. This sticker will indicate the maximum tow capacity for both the bumper and/or hitch, which should not be surpassed during operations **Warning Tow Capacity Limit** **Do Not Exceed tow capacity of _____**	_____
10.49	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 requirement for tower safety chains	_____

Trailer Equipment

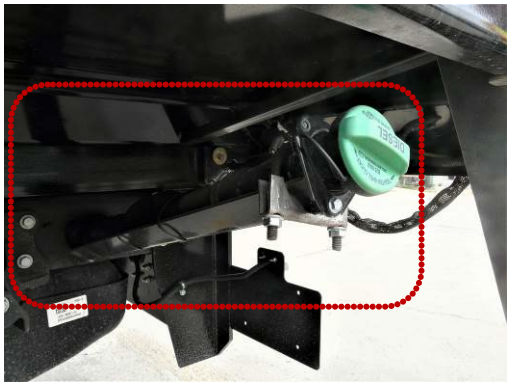
10.50	Trailer Connector	SAE J560 7-Way Flat trailer receptacle mounted and installed in rear hitch plate complete with all necessary wiring **Note:** The cab and chassis will be supplied (unattached) with Ford OEM Trailer Plug Socket and Electric Trailer Brake Controller	_____

DEF and Fuel Filler Modifications

10.51	Modifications	DEF Filler (Where applicable): • Include bracket system to allow easier access to fill and to support filler pipe Fuel Filler: • Fuel filler housing • Venting • Additional brace to support filler pipe **Design and installation to be determined at pre-production meeting**	_____



DEF Filler Modification



Fuel Filler Modification

DEF Filler Modification **Ford Approved Bracket.**

Ladders

10.52 Access Ladders

Required: Two (2)
- Bolt-on installation
- Fold-Down (Retractable) Design
- Non-slip treads
- First rung to be 18-22 in. from ground level
- 400 lbs. capacity
- one (1) located curb-side front corner
- one (1) located driver's side front corner
- Include additional bracing

Note: The ladders slide away when not in use and do not block access to truck boxes, reservoirs or other equipment

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

10.53 Outside Steps

One (1) per side
- 13-gauge steel, 2¼ in. width
- 4-hole design

And
- Galvanized Flip Down Step
- Part Number FS2797CH Large Folding Step (Large Step Platform: Measuring 7-1/4" x 6-3/4") or similar design and construction.

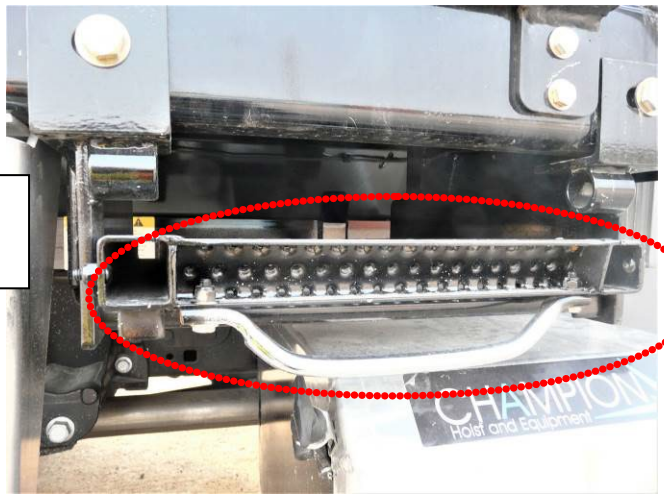
Design and installation to be determined at a pre-production meeting

Galvanized Flip Down Step (stowed in upright position).

Galvanized Flip Down Step (working flip down position).

10.54 Pull-Out Handle

Pull-Out Handle on bottom step for ease of pulling retractable ladder out _____



Highlighted in “red” pullout handle for retractable ladder

10.55 Grab Handles

- Located for ergonomic access to top of box
- 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
- Refer to below pictures for sample design

_____

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

Grab handles location: Positioned on driver and passenger side of dump body respectively, yellow painted.

Safety

10.56 Dump Body Prop

Double Prop Design

- Steel tubing construction, to support dump body in raised position and permit servicing of hoist
- Operable by a single person
- Designed so as not to interfere with hoist cylinder or surroundings
- Operating Handle to be positioned outside of chassis frame rails for operator safety (Driver's Side)
- Dump body prop to be complete with receiving bracket.
- Safety Lock Pin and Chain required to hold arms in the "Up" position (Driver Side)
- Refer to below pictures for sample design

Design and installation to be confirmed at a pre-production meeting.

Driver's Side View – Down Position

Driver's Side View – Up Position

10.57	Dump Body Prop Colours	All components (prop, handle and receiving bracket) shall be painted with **Safety Orange** for ease of identification	_____
10.58	Dump Body Stowage Warning System	**Required:** • Warning system shall be actuated when dump body is not in the fully stowed position. • Red light and/or buzzer is acceptable in-cab for when dump body not fully stowed. Buyers Product B95 or Grote 44421	_____

Dump body storage waring system installation location.

Back-Up Alarm

10.59	Back-Up Alarm	• SWS model 99202 or equivalent functionality product • Mounted between frame rails at rear of vehicle • Protected from damage and road spray	_____

Conspicuity Tape

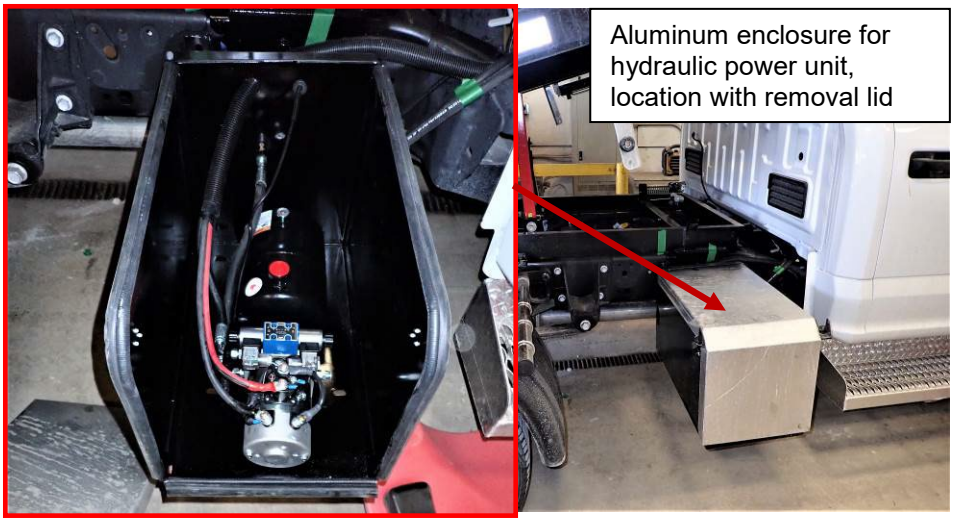
10.60	Conspicuity Tape	Truck-Lite 98127 or equivalent, affixed	_____

Grease Fittings

10.61	Grease Fittings	**Required:** On tailgate release mechanisms, pivot points and drop-down side linkages	_____

Hoist, Subframe and Controls

10.62	Hoist	• Double acting • Hydraulic scissor lift hoist • Electric pump activated **State:** Make: _____ Model: _____	_____
10.63	Capacity	Approximately Ten (10) to Fifteen (15) ton **State:** capacity: _____	_____
10.64	Dumping Angle	Approximately 45 degrees **State:** dumping angle: _____	_____
10.65	Sub-frame	Mounted to dump box	_____
10.66	Power Pack	• Hydraulic power pack • Frame-mounted aluminum enclosure with removable lid • Compartment door openings shall be sealed using automotive, bulb type rubber seal gaskets	_____



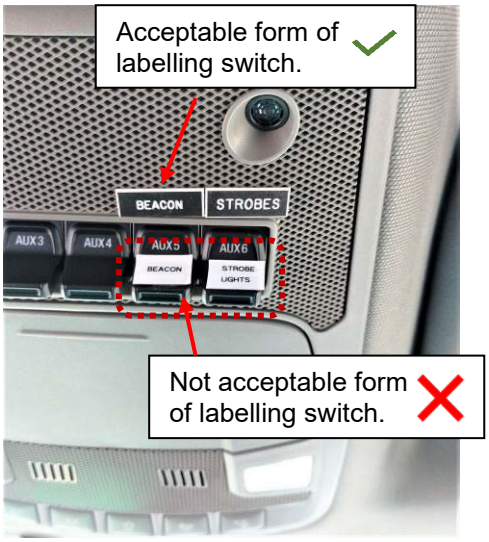
10.67	Controls	• In-cab • Up/down controls • Hand held with remote pendant • Storage bracket installed behind Driver's side seat on lower B pillar. **Storage bracket location to be confirmed at a pre-production meeting.**	_____

Example of controller and installation on B pillar.

Lighting

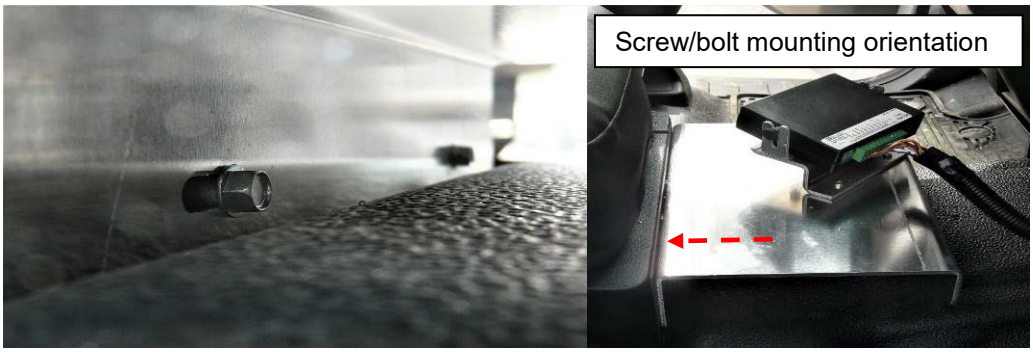
10.68

- Whelen R2LPPA Series Amber LED Mini Light Bar
- Mounted to centre top of cab
- Protected by Branch Guard – heavy duty construction
- Mini Light Bar 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.
- Switch shall be capable of amber mode.

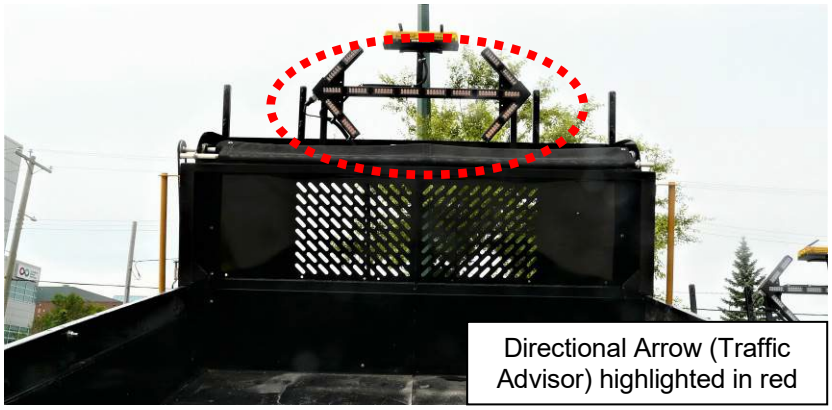


10.69 Directional Arrow (Traffic Advisor)

- SWS 57748-2
- 48 in. x 22 in.
- Cab shield mounted
- Rear facing
- Controller mounted in-cab, reference picture below for mounting location.



Mounted to the frame on the center console base. <u>DO NOT mount through center console base transmission tunnel.</u>



10.70	Light Switch Configuration(s)	<u>On Vehicles equipped with Amber:</u> • Amber strobes (rear ovals) controlled with one switch • Mini Light Bar controlled with one switch capable of amber mode • Traffic Advisor – separate controller <u>On Vehicles equipped with Amber/Blue:</u> • Amber and Blue strobes (rear ovals) controlled with one 3-way switch – Amber-Off-Amber/Blue • Mini Light Bar controlled with one 3-way switch – Amber-Off-Amber/Blue • Traffic Advisor – separate controller	_____
10.71	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	_____
10.72	Back-Up Lights	• One (1) per side • P/N Truck-Lite 44206C with P/N 44710 mounting grommets	_____
10.73	3-Light Cluster	• Three (3) • P/N Truck-Lite10250R with P/N 10403 mounting grommets • Located to protect from damage	_____

10.74	Clearance Lights	• Grote 49333 and 49332 with mounting grommets Or • Truck-Lite 33050R and 33050Y with 3370 mounting grommets **Note:** shall not protrude beyond the dump body	_____
10.75	Harness	Truck-Lite 50 Series or equivalent harness system, properly routed, internally grounded and secured	_____
10.76	Amber Strobe Lights (Warning)	• One (1) per side • Whelen 5GA00FAR • Mounting grommets	_____
10.77	License Plate Light	• Complete with license plate bracket • P/N Truck-Lite 36140 (Light) • P/N Truck-Lite 36710 (Bracket)	_____

10.78 Rear Light Mounting Location (Rear Sill) _____

- 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 contacts the lights while dumping

Location of Lights to be confirmed at pre-production meeting

10.79 Rear Light Mounting Location (Top-Rear of Body) _____

- 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

10.80 Clearance Light Mounting Locations: _____

- 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

Options
Note: Options to be priced only as indicated on Form B: Prices

10.81 **Option1**: Amber/Blue Mini Light Bar Package _____

- Whelen R2LPHM Amber/Blue LED Mini Light Bar or equivalent functionality product

- Blue Strobe Lights - Whelen L31HMF or equivalent functionality product

- Amber Strobe Lights - Whelen 5GA00FAR or equivalent functionality product

- Mini Light Bar 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 Amber/Blue” with a permanent type, engraved style label.
- Mini Light Bar to be controlled by a single 3-Way switch with the following functions: Amber – Off – Amber/Blue

Location of Mini Light Bar Package to be confirmed at pre-production meeting

10.82 **Option 2:** Heavy Duty Tarp _____

- Heavy Duty Tarp System suitable for a dump body with fold down sides
- Mesh tarp
- Lower crank handle
- Foldable crank handle for storage
- Lockable
- Steel sealed bearings
- All stainless-steel hardware

State:
Make: _____
Model: _____

Standards
(Where Applicable)

	Finish		
10.83	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. 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.	_____
10.84	Acknowledgment	**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.	_____
10.85	Preparation	<u>All steel components unless otherwise noted in these specifications shall be sandblasted, properly cleaned and primed</u>	_____
10.86	Primer	Epoxy or Polyurethane	_____
10.87	Paint	Epoxy or Polyurethane	_____
	Welding		
10.88	Welds	Continuous welds	_____
10.89	Standard	CSA Standard W47.1-30 and W59-03	_____

10.90	Weld Quality Inspection	• 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 **<u>Not Acceptable</u>** – cause for rejection. • Lack of uniformity and straightness • Visible spatter • Cracking, undercutting or breaks in the bead • Bead width inconsistent	_____
10.91	Weld Spatter	All weld spatter to be removed prior to finish	_____
	Clearance		
10.92	Clearance	Clearance between dump body and back of truck cab shall be a minimum 3 in. in accordance with the Cab & Chassis Incomplete Vehicle Manual	_____
10.93	Tire Clearance	Body shall provide for approximately 4 in. clearance with rear springs fully loaded	_____
	Installation		
10.94	Not-Permitted	• Drilling on chassis frame flanges • Welding on the chassis frame	_____
10.95	Mounting Brackets	Shall be bolted to frame using Grade-8 fasteners.	_____
10.96	Bolt Requirements	• All bolts must be high tensile • Hardened or equivalent strength 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.	_____

Grade Marking	Specification	Material	Bolt and Screw Size in.	Proof Load, psi	Tensile 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			

When mounting tow couplings (towbars, fifth wheels etc.) the bolt shank needs to protrude through the entire interface of the material. This avoids stress concentration on the threaded portion and maximises the available bolt cross-section that is subject to shearing forces.

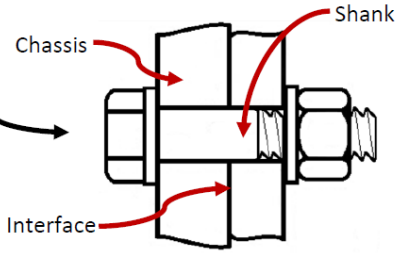


Figure 1

SAE Grade 8
ISO Class 10.9

Figure 2

ISO Class 8.8 bolts should not be confused with SAE Grade 8 bolts.

- ISO Class 10.9 bolts are equivalent to SAE Grade 8 bolts (6 radial embossed on the bolt head – Figure 2).
- ISO Class 8.8 bolts are equivalent to SAE Grade 5 bolts (3 radial embossed on the bolt head).

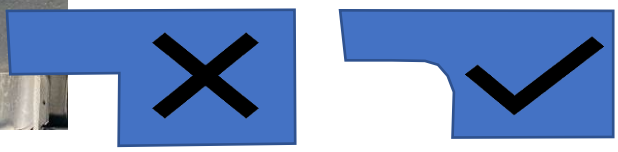
Figure 3

Figure 3 shows an ISO Class 10.9 bolt head and a Nylock nut securing a separate bolt. Notice that both the bolt head and nut are installed with hardened washers and there are more than two threads protruding from the nut.

10.97 Mounting Plates

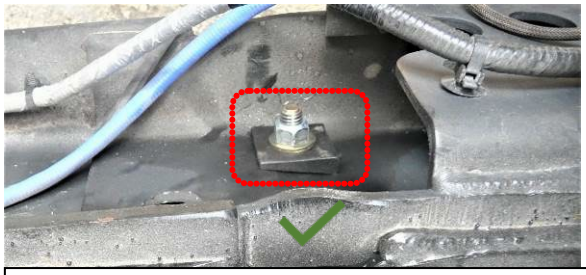
Mounting plates utilized or created for the installation or assembly of the service body must feature chamfered corners and avoid sharp right angles

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 concentrations. Failure to do so may result in the early development of fatigue cracks.



10.98 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.



Bolt/nut assembly through chassis frame. If hole is where a transition occurs or on a curved surface in the frame the hole should not be used as a mounting location. However, if the hole location is to be used as a mounting location the following must be followed:

Levelling washer must be used so that the bolt clamping force is fully applied and perpendicular to the frame; no gaps allowed.

Not acceptable bolt/nut assembly, on seam

10.99	Holes	• Holes in the frame shall be drilled/deburred and reamed to fit bolts • Holes required to run wires through shall be drilled/deburred (not punched), grommeted and sealed as required	_____
10.100	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	_____
10.94	Mounting Brackets	Shall be bolted to frame using Grade-8 fasteners.	_____
10.95	Mounting Standards	Any holes required in frame must be drilled/deburred and reamed to fit bolts	_____
10.96	Mounting Standards	All non-continuous body seams (joints) shall be caulked with an automotive grade elastomeric sealant	_____
10.97	Grab Handles/Handholds: Any safety compliance grab handles or handhold should be bolted		_____

Lighting and Electrical

10.98 Conformance: _____
- Class 2
- LED Lighting
- C.M.V.S.S.
- Manitoba Highway Traffic Act.
- City of Winnipeg Lighting Visibility Standard

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

10.101 Lighting: _____
- Supplier installed
- High count LED

10.102 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 dump body

10.103 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.

10.104 LED Strobe Lights:

- 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

10.105 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)

10.106 Grommets:

- Rubber grommets are to be utilized for passing or running wiring through holes in the chassis of panels, unless stated otherwise.

10.107 Harnesses:

- Harness system, properly routed and secured.
- All harnesses shall be internally grounded, no exceptions
- Colour coded or numbered

10.108 Junction Box:

- Complete with necessary compression fittings, required for all vehicle lighting harness connections
- Securely located
- Readily accessible for servicing
- Waterproof
- Protected from road spray

10.109 All Plug-In Connectors: _____

- All plug-in connectors shall be coated with Truck-Lite NYK Corrosion Preventive Compound prior to assembly

10.110 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

10.111 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

10.112 Joining of Wires: _____

- All joining of wires to be soldered and sealed using heat shrink tubing or approved OEM weather tight connections

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

10.113 Wiring Routing: _____

- Any holes required to run wires through shall be drilled/deburred (not punched), grommeted 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 **Dump 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 Hoist **State:** Terms: _____ _____

11.5 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 The following manuals shall be supplied with the units when delivered: _____

- Operator's Manual – Two (2) per unit. One (1) Operator Manual shall be sent to the Equipment Operator Training Branch
- Parts and Service Manuals – One (1) complete set including preventative maintenance schedules. CDs or USB Drives are preferred.

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. _____