

Reference Nos.: 16-066, 067, 068, 069, 070

**CITY AND COUNTY OF DENVER**  
**Technical Specifications and Request for Proposal Items**  
 For a  
**Tandem Axle Multi-Purpose Dump Truck with Options**

**1.0 General Description**

A new current model year, Class 8, 64,000 GVWR (plate certified) business class tandem axle truck. The cab and chassis sections 3.0 thru 3.9 is intended to have installed on the cab and chassis the body equipment and accessories in the Section 11.0. The cab and chassis shall be compatible and suitable for the installation of the body equipment listed in Section 11.0 and optional equipment without modifications to the provided cab and chassis. The cab and chassis shall be powered by a turbo-charged diesel engine with charge air cooling, a 64,000 GVWR axle/suspension rating less tires for installation of a multi-purpose live-bottom dump body configuration and options. The cab and chassis and final completed version of the truck shall be suitable for 1) snow plowing and salt/sand spreading, 2) hauling materials from dirt and debris to asphalt for paving operations.

**1.1 Standard Factory Equipment**

All standard factory equipment shall be included with the vehicle/equipment; no deletions of standard factory equipment will be permitted unless specifically superseded in these specifications. Accessories not specifically mentioned herein but necessary to furnish a complete unit ready for use shall also be included.

**1.2 Government Requirements (where applicable)**

The vehicle/equipment shall be built to, and perform in accordance with, all the requirements of the latest edition of the following standards and specifications:

- FHWA, Federal Highway Administration
- SAE, Society of Automotive Engineers Specifications
- FMVSS, Federal Motor Vehicle Safety Standards
- DOT, Department of Transportation Regulations
- AWS, American Welding Society Standards
- PUC, Public Utilities Commission (Colorado)

**1.3 Workmanship and Durability**

Workmanship throughout the vehicle/equipment shall conform to the highest standards. Durability shall be sufficient to allow safe and efficient operation of the equipment/vehicle.

**1.4 Completion of Bid Items and Alternates**

Vendor shall complete each line item in "Offered Equipment" and "Cost" columns in the following manner:  
 A. Provide vehicle/equipments technical information: in "Offered Equipment" provide technical information as requested and provide cost of item in "Cost" column.

Reference Nos.:

1

Vendor/Sub Vendor: \_\_\_\_\_

**0750A-2012  
SPECIFICATION AND PRICING TEMPLATE**

- B. Included Standard Equipment: in "Offered Equipment" column provide technical information as requested for standard equipment in, "Cost" column write NC for "No Charge".
- C. Differences: in "RED" ink in "Offered Equipment" column adjacent to Description of Equipment provide information on the item being offered, in "Cost" column provide cost if there is a bid item cost.
- D. Vendors shall break out and list costs for each specification section. Failure to break out proposed costs may cause proposal to be non-responsive. Breakout costs will be used for comparisons clarifying cost issues and if deletions to the specifications need to be made.

**1.5 Major Areas of Concern**

	Description of Concern
A.	<p>Operator Cab Area to include:</p> <ol style="list-style-type: none"> <li>1. Steering wheel belly room.</li> <li>2. Shoulder leg and hip room.</li> <li>3. Head room.</li> <li>4. Operator's vision.</li> <li>5. Floor height and step distances.</li> <li>6. Ergonomic layout of vehicle and all body controls.</li> <li>7. Ease and speed of operation of all functions.</li> </ol>
B.	<p>Mirror width for use in narrow and obstructed areas to include:</p> <ol style="list-style-type: none"> <li>1. Overall extended mirror width.</li> <li>2. Minimum mirror width.</li> <li>3. Ability for mirrors to be hit by obstructions (branches etc) and absorb the hit with out damage.</li> <li>4. Ability for mirrors to be reset or adjusted into position without operator leaving operator's station.</li> </ol>
C.	<p>Dual Function Ability:</p> <ol style="list-style-type: none"> <li>1. Primary functions are to efficiently and safely:               <ol style="list-style-type: none"> <li>a Plow City streets of snow and ice during and after snow storms.</li> <li>b Distribute granular de-icing agents onto the City streets in prescribed tons/mile and record dispensed amounts.</li> </ol> </li> <li>2. Secondary function is to efficiently and safely transport hot asphalt to City paving projects and discharge the asphalt into the City paving machines efficiently and at proper temperature for efficient mat lay down of the asphalt.</li> <li>3. Ability to easily and quickly switch between primary and secondary functions.</li> </ol>
D.	<p>Warranty:</p> <ol style="list-style-type: none"> <li>1. Ability and cost to obtain a 5-year warranty on cab and chassis.</li> <li>2. Ability and cost to obtain an extended warranty on dump body, hoist, snowplow/spreader controls and hydraulic system.</li> <li>3. Location of warranty providers.</li> </ol>
E.	<p>Service Ability:</p> <ol style="list-style-type: none"> <li>1. Ability to easily service cab and chassis items that require regular (yearly or less) servicing and maintenance.</li> <li>2. Ability to easily service dump body, snowplow, hydraulic system and spreader body components/items that require regular (yearly or less) adjusting, servicing and maintenance.</li> </ol>

Reference Nos.:

Vendor/Sub Vendor: \_\_\_\_\_

SPECIFICATION AND PRICING TEMPLATE

0750A-2012

**2.0 Build Status of Vehicles:**

**2.1 Contractor and all sub vendors after receipt of the City's purchase order shall:**

The primary Contractor (prime vendor) shall be responsible for providing within 15 business days to the City a "Preliminary Build Status Plan" to include but not limited to:

1. The "Build Status Plan" shall include sufficient detail to assure that the ordered units will meet specifications and be built to the highest quality standards and be delivered on time.
2. Placement date of initial order with the cab and chassis manufacture.
3. Cab and chassis manufacturer's date of order acceptance. Written order confirmation is required.
4. Placement date of initial order with the body manufacture.
5. Body manufacturer's date of order acceptance. Written order confirmation is required.
6. Build date for cab and chassis to include start date and completion date.

**2.2 The Contractor shall contact all sub vendors:**

The Contractor shall contact all sub-contractors providing accessories and equipment for the vehicle (s) and provide all the contractors with the list of all accessories and equipment, manufacturer's order confirmation, order number, vehicle specifications, build date and delivery date to dealer from the vehicle manufacturer on the ordered vehicle. It is the cab and chassis selling dealer's responsibility to notify Fleet Management, Purchasing and the body contractor so the body contractor can timely order required components, the accessories, and equipment and has the items in stock and is prepared to install the body, accessories and equipment items when the vehicle arrives at their facility.

**3.0 Basic Requirements or Approved Equal.**

**3.1 Basic Vehicle or Approved Equal**

A.	Description of Equipment	Offered Equipment	Cost
1.	Construction type tandem axle straight truck with setback front axle, left-hand steering with stainless steel multi-purpose, live-bottom dump body or approved equal. Front axle shall be setback 38" from front of bumper, approximate. Wheelbase: 205" approximate. Usable Cab-to-Trunnion: 126" approximate. Usable After Frame: 64", approximate Front tire cut angle 50°, approximate Wall-to-wall turning diameter: 67'-0", approximate. Maximum cab height: 9'-6", approximate. Vendor shall verify that wheelbase cab to axle and rear frame length is appropriate for application. Rear of frame shall extend to rear of body.	Make: <u>Freightliner</u> Model: <u>114SD</u> GWR Rating: <u>66,000</u> lbs Front Axle Setback: <u>48</u> in Wheelbase: <u>192</u> " C to T: <u>186</u> " A F: <u>64</u> " Cut Angle: <u>50</u> ° Turn Di: <u>67.8</u> ' Height of Truck Cab: <u>122</u> "	\$ <u>82,454</u>

Reference Nos.:

Vendor/Sub Vendor: City

0750A-2012  
SPECIFICATION AND PRICING TEMPLATE

B.	Description of Equipment	Offered Equipment	Cost
<p>1. Rating 64,000-lbs. GVWR minimum, 2. Heavy-duty 120,000-psi full channel heat-treated steel, with main frame 2,086,000 in-lb. 3. RBM and deep frame section 3,217,000 in-lb. minimum. 4. Frame extension for snowplow installation.</p>	<p>Frame Rating: <u>66,000</u> -lbs Yield Strength: <u>180,000</u> psi Section Modulus/rail: <u>88.7</u> in<sup>3</sup> Frame RBM/rail: <u>3,217,200</u> lb-ft-in Yes No</p>	<p><u>1mcl</u></p>	
<p>Towing Provisions: 1. Tow hooks, two front and two rear, frame mounted. 2. Air brake 3/8" female quick-connect hook up system on right front of the vehicle for wrecker air brake connection. Quick-connectors shall be easily accessible and protected behind the bumper and angled rearward away from the bumper so that hose connection is not difficult. 3. A check valve shall be provided at the vehicles air tank to prevent air loss.</p>	<p>Type of connection: <u>Quick Connect</u> Yes No</p>	<p><u>\$672</u></p>	
<p>Keying: 1. Keys keyed alike Ignition, Door, (same) and Toolboxes (same), 7 sets per vehicle. 2. If the City has similar make and model trucks in the fleet the trucks shall be keyed the same as existing trucks.</p>	<p>Yes No Yes No</p>	<p><u>\$ N/C</u></p>	

3.2 Engine or Approved Equal

A.	Description of Equipment	Offered Equipment	Cost
<p>Engine: 1. Cummins ISX-11.9 liter, VGT turbocharged diesel engine, rated at 370 hp @ 2,100 rpm, torque 1,450 lb/ft @ 1,200 rpm, 2,100 rpm governed includes: 2. Engine shall utilize DEF (diesel exhaust fluid) to meet current EPA regulations and reduce NOx. 3. Engine shall meet the EPA, 50-State Clean Idle Certification 4. Engines shall be electronically controlled with following components: a. Engine protection system to monitor low oil pressure, high coolant temperature and low coolant level that will prevent component damage with manual over-ride on truck engine. b. Low oil pressure. c. High oil temperature. d. High coolant temperature. e. Low coolant level.</p>	<p>Make: <u>Detroit</u> Model: <u>DD13</u> HP: <u>380</u> @ <u>1800</u> rpm Torque: <u>1450</u> @ <u>1100</u> rpm Yes No Yes No Yes No Yes No Yes</p>	<p><u>\$240</u> <u>\$ 1mcl</u> <u>\$ 56</u> <u>\$ N/C</u> <u>\$ N/C</u></p>	

Reference Nos.

Vendor/Sub Vendor: Wly

0750A-2012  
SPECIFICATION AND PRICING TEMPLATE

Description of Equipment	Offered Equipment	Cost
<p>B.</p> <p>Retardation:</p> <ol style="list-style-type: none"> <li>Transmission output shaft retarder (preferred Option) No External Drive/line Retarders.</li> <li>Engine and exhaust/turbo brake combination that does not raise exhaust noise (no Jacobs brakes).</li> <li>Retardation shall be activated into 1<sup>st</sup> stage when the driver removes their foot from the throttle pedal. Stages 2, 3 and 4 shall be progressively activated by the brake pedal before the foundations brakes are engaged.</li> <li>Retarded control switches dash mounted with easy access for the driver.               <ol style="list-style-type: none"> <li>On/Off switch.</li> <li>High/Low retardation range.</li> </ol> </li> </ol>	<p>Provide Specs _____</p> <p>Provide Brake Horsepower: _____</p> <p>Provide Brake Horsepower: _____</p> <p>Transmission Retarder</p> <p>Yes No</p> <p>Yes <input checked="" type="radio"/> No</p> <p>Yes <input checked="" type="radio"/> No</p> <p>Yes <input checked="" type="radio"/> No</p> <p>Make: <u>Delco Remy</u> Model: <u>28SI 160</u></p> <p>Make: <u>Delco Remy</u> Model: <u>39MT OCP</u></p>	<p>\$ <u>STD</u></p> <p>\$ <u>STD</u></p> <p>\$ <u>STD</u></p> <p>\$ <u>STD</u></p> <p>\$ <u>N/A</u></p> <p>\$ <u>N/A</u></p> <p>\$ <u>N/A</u></p> <p>\$ <u>STD</u></p>
<p>C.</p> <p>Filtration:</p> <ol style="list-style-type: none"> <li>Fleetguard LF3000 full flow/bypass oil filter.</li> <li>Fuel: Racor 690RP12 fuel/water separator with thermostatically controlled fuel line heater.</li> </ol>	<p>Make: <u>Detroit</u> Model: <u>Full Flow</u></p> <p>Make: <u>DAVCO</u> Model: <u>482</u></p> <p>Yes <input checked="" type="radio"/> No</p> <p>Yes <input checked="" type="radio"/> No</p> <p>Yes <input checked="" type="radio"/> No</p>	<p>\$ <u>STD</u></p> <p>\$ <u>360</u></p> <p>\$ <u>STD</u></p>
<p>D.</p> <p>Engine Air Intake:</p> <ol style="list-style-type: none"> <li>The air intake shall be under the hood.</li> <li>The air intake shall be positioned so that the air filter can be easily serviced.</li> <li>Air filter dual element dry type.</li> <li>Air inlet restriction indicator located in cab.</li> </ol>	<p>Make: <u>Donaldson</u> Model: <u>12X8PC</u></p> <p>Yes <input checked="" type="radio"/> No</p> <p>Yes <input checked="" type="radio"/> No</p> <p>Trap Make: <u>Detroit</u> Model: <u>1 Box</u></p> <p>Location: <u>Under Passenger Door</u></p> <p><u>Vertical Pipe</u></p>	<p>\$ <u>STD</u></p> <p>\$ <u>520</u></p>
<p>E.</p> <p>Exhaust Meeting 2010 EPA Standards:</p> <ol style="list-style-type: none"> <li>Exhaust discharge shall be on the right side of the vehicle below the dump body cab protector.</li> <li>The exhaust after treatment device shall be vertically mounted behind the cab so as to not obstruct maintenance/repairs underneath the truck.</li> </ol>		<p>\$ <u>520</u></p>

Reference Nos.:

Vendor/Sub Vendor: Clay

Description of Equipment	Offered Equipment	Cost
3. Vertical chrome stack and stainless steel exhaust guard curved out 60° elbow. The exhaust stack/60° elbow shall easily fit up to Denver's exhaust gas evacuation system. 4. Exhaust discharge shall be below the dump body cab protector and exhaust gases shall not discolor the dump body. The exhaust turn out shall extend out enough to prevent exhaust noise reverberation into the cab and shall also have approximately 6" of clearance to the headache board.	<input checked="" type="radio"/> Yes <input type="radio"/> No <input checked="" type="radio"/> Yes <input type="radio"/> No <input checked="" type="radio"/> Yes <input type="radio"/> No	
F. Fuel Tank: 1. Capacity 80-gallons 2. The fuel tank shall be frame mounted on left side of chassis.	Fuel Take Volume: <u>80</u> gallons Location: <u>AH</u>	\$ <u>84</u> \$ <u>N/E</u>
G. Diesel Enhancement Fluid Tank: 1. Location behind fuel tank 2. Size 6-gallons minimum 3. Tank fill opening shall be easily identified as "DEF Fluid Only" and shall not accept the entrance of a standard diesel fuel nozzle.	Location: <u>AH</u> DEF Tank Volume: <u>6</u> gallons <input checked="" type="radio"/> Yes <input type="radio"/> No	\$ <u>STD</u>
H. Coolant Hoses: 1. Gates "Blue Stripe" hoses 2. Hose clamps constant torque hose clamps.	Make: <u>Gates</u> Type: <u>Blue Stripe</u> <input checked="" type="radio"/> Yes <input type="radio"/> No	\$ <u>STD</u> \$ <u>STD</u>
I. Fan Clutch: 1. Horton Drive Master fan clutch with automatic fan control. 2. The fan shall operate off of engine coolant and transmission coolant temperature.	Make: <u>Kysor</u> Model: <u>ON10FF</u> <input checked="" type="radio"/> Yes <input type="radio"/> No	\$ <u>STD</u>
J. Air compressor: 1. Engine mounted with no belts. 2. Bendix Westinghouse 15.5 cfm minimum.	Make: <u>Bendix</u> Model: <u>BA-9A1</u> Size: <u>19</u> cfm	\$ <u>STD</u>
K. Cold weather starting aids on truck engine. 1. Block heater, Phillips "Zero-Start" 120VAC, 1500 Watt, engine coolant temperature controlled to: a. Turn "on" at 40°F engine coolant temperature. b. Turn "off" at 55°F engine coolant temperature. 2. The plug-in station shall have 2 LED indicator lights to: a. Light when plugged into "hot line" to show "hot line is energized." b. Light when engine coolant drops below 40°F. 3. Plug-in shall be mounted under driver's door, protected from mechanical and weather damage. Heater plug shall be a male standard grounded 15 amp rated plug.	Make: <u>Phillips</u> Model: <u>Temro</u> On Temperature: <u>40</u> Off Temperature: <u>55</u> <input checked="" type="radio"/> Yes <input type="radio"/> No <input checked="" type="radio"/> Yes <input type="radio"/> No Location: <u>AH</u> <u>Driver Door</u>	\$ <u>600</u> \$ <u>1incl</u> \$ <u>STD</u>

Reference Nos.:

Vendor/Sub Vendor: Wdy

Description of Equipment	Offered Equipment	Cost
4. A decal or information plate shall be provided describing how the system functions. The decal/plate shall be heavy-duty UV protected and capable of withstanding pressure washing and other normal vehicle functions.	<input checked="" type="radio"/> Yes <input type="radio"/> No	\$ <u>25</u>
5. Cold weather starting assist (no either allowed).	Type: <u>STD</u>	\$ <u>STD</u>

3.3

**Transmission and Drivetrain or Approved Equal**

Description of Equipment	Offered Equipment	Cost
<p>A. Transmission:</p> <ol style="list-style-type: none"> <li>Allison New World HD4500-RDS-P, wide ratio, 6-speed rated for 1,550 lb/ft torque with the following components:</li> <li>Transmission and rear differential gearing shall be optimized for "Best" fuel economy; speed shall not be more than 67 mph at maximum engine rpm.</li> <li>Transmission computer unit shall talk with snow fighting computer providing accurate ground speed information for accurate chemical; spread rates.</li> <li>Deep pan transmission sump with "Gold Series" filter kit rated for severe duty of 75,000 miles or 36 months.</li> <li>Retarder, See Section 3.2. B retarder shall be activated for 1<sup>st</sup> stage when the driver removes their foot from the throttle pedal (if transmission retarder is purchased).</li> <li>Transmission retarded control switches dash mounted with easy access for the driver (if provided)</li> <li>On/Off switch.</li> <li>High/Low retardation range.</li> <li>Electric push-button transmission controls dash mounted.</li> <li>Transmission interface wiring for Allison MD/HD transmission.</li> <li>Allison TransSynD transmission fluid.</li> <li>Transmission water-to-oil cooler.</li> <li>Magnetic drain plug.</li> </ol>	<p>Make: <u>Allison</u>    Model: <u>4500 RDS</u></p> <p>Speeds: <u>6</u>    <input checked="" type="radio"/> Yes    <input type="radio"/> No</p> <p><input checked="" type="radio"/> Yes    <input type="radio"/> No</p> <p><input checked="" type="radio"/> Yes    <input type="radio"/> No</p> <p><input checked="" type="radio"/> Yes    <input type="radio"/> No</p> <p><input checked="" type="radio"/> Yes    <input type="radio"/> No</p> <p><input checked="" type="radio"/> Yes    <input type="radio"/> No</p> <p><input checked="" type="radio"/> Yes    <input type="radio"/> No</p> <p><input checked="" type="radio"/> Yes    <input type="radio"/> No</p> <p><input checked="" type="radio"/> Yes    <input type="radio"/> No</p> <p><input checked="" type="radio"/> Yes    <input type="radio"/> No</p> <p><input checked="" type="radio"/> Yes    <input type="radio"/> No</p> <p>Fluid Type: <u>Synthetic</u></p>	<p>\$ <u>13,800</u></p> <p>\$ <u>42</u></p> <p>\$ <u>STD</u></p>

Reference Nos.:

Vendor/Sub Vendor: Wdy

0750A-2012  
 SPECIFICATION AND PRICING TEMPLATE

Description of Equipment	Offered Equipment	Cost
<p><b>B.</b> Power Take Off (PTO)</p> <ol style="list-style-type: none"> <li>Transmission direct mounted "Hot Shift" Chelsea 890 series with hydraulic pumps direct mounted to Chelsea 890 PTO at rear of the transmission</li> <li>PTO speed limiter shall be connected to the engine computer not to an external overspeed box (EOS).</li> <li>PTO shall efficiently operate all hydraulic systems at engine "low idle" 750 rpm or less. Increasing engine speed above 800 rpm shall not improve hydraulic operations.</li> </ol>	<p>Make: _____ Model: _____</p> <p>Yes No</p> <p>Yes No</p> <p>PTO Idle rpm: _____</p>	<p>\$ _____</p> <p>\$ _____</p> <p>\$ _____</p>
<p><b>C.</b> Rear Axles:</p> <ol style="list-style-type: none"> <li>Eaton single reduction, capacity 46,000-lbs.</li> <li>Driver controlled main power divider locking differential.</li> <li>Oil pump.</li> <li>Axle temperature sensor.</li> <li>Axle ratio for 67-mph top speed in 6th gear at maximum engine rpm for "Best" Fuel Economy.</li> <li>Oil seals, Union 76 Triton EP 75W-90 synthetic gear lubricant.</li> <li>Magnetic drain plug.</li> </ol>	<p>Make: <u>Meritor</u> Model: <u>RT 46 160P</u></p> <p>Gear ratio: <u>5.63</u></p> <p><input checked="" type="checkbox"/> Yes No</p> <p><input checked="" type="checkbox"/> Yes No</p> <p>Top Speed: <u>67</u> mph level</p> <p>Axle Ratio: <u>5.63</u></p> <p><input checked="" type="checkbox"/> Yes No</p> <p><input checked="" type="checkbox"/> Yes No</p>	<p>\$ <u>2100</u></p>
<p><b>D.</b> Front Axle:</p> <ol style="list-style-type: none"> <li>Eaton, capacity 20,000-lbs. minimum</li> <li>Oil seals and Union 76 Triton EP 75W-90 synthetic gear lubricant.</li> </ol>	<p>Make: <u>Detroit</u> Model: <u>DA F 20</u></p> <p>Capacity: <u>20,000</u></p>	<p>\$ <u>2300</u></p>
<p><b>E.</b> Springs:</p> <ol style="list-style-type: none"> <li>Front leaf with graphite impregnated spring pin bushings. Front capacity 20,000-lbs. minimum with shock absorbers.</li> <li>Rear Hendrickson RTE-463 walking-beam, multi-leaf spring system, dual spring rate.                     <ol style="list-style-type: none"> <li>The leaf spring suspension shall utilize an extended leaf/multi-hanger design to allow for smoother ride when the truck is empty or lightly loaded and full suspension when fully loaded.</li> <li>Transverse rods for better cornering</li> <li>Rear capacity 46,000-lbs minimum</li> <li>Suspension shall have inboard mounted HD shock absorbers.</li> </ol> </li> </ol>	<p>Make: <u>See</u> Model: <u>Appendix A</u></p> <p>Capacity: _____ - lbs</p> <p>Make: _____ Model: _____</p> <p>Capacity: _____ - lbs Ride Height: _____</p> <p>Axle Spacing: _____ inches</p> <p>Yes No</p> <p>Yes No</p> <p>Capacity: _____ lbs</p> <p>Yes No</p>	<p>\$ _____</p> <p>\$ _____</p> <p>\$ _____</p> <p>\$ _____</p>

Reference Nos.:

Vendor/Sub Vendor: WJ



0750A\_ADDENDA #2 REPLACEMENT SECTION 3.3.E

Mandatory for Pre-Qualification and due as required in the Revised Schedule of Events (Specifications Due Date) indicated in addenda #2 document.

3.3	Description of Equipment	Offered Equipment	Cost
<p>E.</p> <p>1. Springs: Front leaf with graphite impregnated spring pin bushings. Front: capacity 20,000-lbs. minimum with shock absorbers.</p> <p>2. Rear Suspension: a. Suspension shall be designed for high-articulation for transversing bumps, ridges and washboard without bottoming out the suspension even during cross articulation b. The suspension shall be 2-stage with a softer spring rate for unloaded/light load operation and a full heavy suspension for operating at maximum load. c. The suspension shall have a combination elastomer rubber center bearing and parabolic tapered leaf springs to support and control the axle movements. d. The suspension shall use transverse and torque rods for differential positioning and controlling axle wind-up. e. Rear suspension capacity 46,000-lbs minimum f. Suspension shall have inboard heavy-duty shock absorbers a. If drum brakes are provided the brake chambers shall be forward mounted to provide asphalt paver clearance.</p>	<p>Offered Equipment</p> <p>Make: <u>FTL</u> Model: <u>Flat Leaf</u> Capacity: <u>20,000</u> - lbs</p> <p>Make: <u>Hendrickson</u> Model: <u>Haulmax</u> Excellent Articulation for Intended Purpose/Application: <input checked="" type="radio"/> Yes <input type="radio"/> No Suspension 2-Stage: <input checked="" type="radio"/> Yes <input type="radio"/> No</p> <p>Describe Suspension Design: <u>Rubber Center Bearing Tapered Leaf Springs</u> Type of Axle Locators Used: <u>U-Hpru Rods</u> Weight Capacity: <u>46,000</u> lbs HD Shock Absorbers: <input checked="" type="radio"/> Yes <input type="radio"/> No If Drum Brakes Brake Chamber Location: _____</p>	<p>Cost</p> <p>\$ <u>21e</u></p> <p>\$ <u>2900</u></p>	

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Description of Equipment	Offered Equipment	Cost
<p>F. Brakes:</p> <ol style="list-style-type: none"> <li>Bendix, 17" disc front, model ADB22x extended service brakes with non-asbestos brake pads.</li> <li>Bendix, 17" disc rear, model ADB225 extended service brakes with non-asbestos brake pads.</li> <li>Brake chambers type 2824, size 24 chamber.</li> <li>All brake components shall provide adequate clearance for asphalt/paver operations</li> </ol>	<p>Front Make: <u>Bendix</u> Model: <u>ADB 22x-V</u>                      Disc Size: <u>17</u> in                      Rear Make: <u>Bendix</u> Model: <u>ADB 22x-V</u>                      Front Chamber: <u>24</u>                      Rear Chamber: <u>24</u>  <input checked="" type="radio"/> Yes    <input type="radio"/> No</p>	<p>\$ <u>2012</u></p>
<p>G. Anti-Lock Brake System / Automatic Traction Control system:</p> <ol style="list-style-type: none"> <li>Anti-Lock Brake System (ABS): Eaton 6S/6M with ATC, 6-channel with (6 sensors &amp; 6 modulators) and 5-9 psi crack pressure relay valve. System shall control all wheels/axles for safe braking.</li> <li>Automatic Traction Control (ATC) shall work in conjunction with the Eaton ABS brake system in low traction situations limiting torque to least loaded tire allowing most loaded tire to receive torque and pull the vehicle. The ATC system in conjunction with the Interaxle Driveline Lock shall provide traction control very similar to the Driver Controlled Differential Lock system.</li> <li>Interaxle Driveline Lock (IADL) to lock front and rear drive axles together. The interaxle differential lock shall be automatically locked via the ATC or manually locked by the driver. The IADL switch shall activate a flashing LED warning light.</li> <li>Air lines shall be color-coded nylon type.</li> </ol>	<p>Make: <u>WABCO</u> Model: <u>4S/4M</u>  <input checked="" type="radio"/> Yes    <input type="radio"/> No  <input checked="" type="radio"/> Yes    <input type="radio"/> No  <input checked="" type="radio"/> Yes    <input type="radio"/> No</p>	<p>\$ <u>131</u>                      \$ <u>1hck</u>                      \$ <u>STD</u></p>
<p>H. Air Dryer: (No Approved Equal)</p> <ol style="list-style-type: none"> <li>Bendix AD-1P with heated steel reservoir, automatic moisture ejector and cable operated air tank drain valves accessible from outside of vehicle. No Approved Equals.</li> <li>Air dryer shall be installed on the outside of the frame rail in a location that is easy access and does not exceed 15-minutes to service unit.</li> </ol>	<p>Make: <u>Bendix</u> Model: <u>AD-1P</u>                      Location: <u>RA Rail</u></p>	<p>\$ <u>N/E</u>                      \$ <u>N/E</u></p>
<p>I. Driveline:</p> <ol style="list-style-type: none"> <li>Heavy-Duty, 2-piece,</li> <li>Eaton Permalube type U-joints.</li> </ol>	<p>Make: <u>Meritor</u> Model: <u>extended</u>  <u>kube</u></p>	<p>\$ <u>N/E</u></p>
<p>J. Power Steering:</p> <ol style="list-style-type: none"> <li>TRW</li> <li>Reservoir 2-qt minimum.</li> </ol>	<p>Make: <u>TRW</u> Model: <u>THP60 w/</u>  <u>RCH 45</u></p>	<p>\$ <u>N/E</u></p>

Reference Nos.:

Vendor/Sub Vendor: Calby

3.4

Electrical System or Approved Equal

Description of Equipment	Offered Equipment	Cost
<p>A. Alternator: 1. Delco-Remy 22SI heavy duty, internally regulated, output 160-amp minimum.</p>	<p>Make: <u>Delco</u> Model: <u>2851</u> Output: <u>160</u> amps</p>	<p>\$ <u>STD</u></p>
<p>B. Batteries: 1. Batteries, Group 31 with a total CCA of 1,950 minimum. 2. Battery location frame mounted right side. 3. Battery shut-off switch easy to see and access. 4. Jump start provision easy to access. 5. Battery cables (00) stranded copper minimum. 6. Battery box enclosure shall be steel or aluminum (no plastic)</p>	<p>Make: <u>Alliance</u> Model: <u>1231</u> Quantity: <u>3</u> Location: <u>2A Under cab</u> <input checked="" type="radio"/> Yes <input type="radio"/> No Size: <u>00</u> Material: <u>Steel</u></p>	<p>\$ <u>170</u></p>
<p>C. Circuit Protection: 1. Circuit breakers with manual reset, no fuses. 2. Circuit breaker panel shall be easy to access. 3. Circuit breaker panel shall be clearly labeled for easy identification.</p>	<p>Circuit Protection Type: <u>Solid state</u> <u>and circuit protection</u> <u>and fuses</u> <input checked="" type="radio"/> Yes <input type="radio"/> No</p>	<p>\$ <u>STD</u></p>
<p>D. Wiring: 1. Wiring shall be color coded with hot stamped wire numbers. 2. All wiring shall be run in sealed wiring looms to reduce corrosion from magnesium chloride products.</p>	<p>Color coded: <input checked="" type="radio"/> Yes <input type="radio"/> No Hot Stamped: <input checked="" type="radio"/> Yes <input type="radio"/> No Wiring sealed: <input checked="" type="radio"/> Yes <input type="radio"/> No</p>	<p>\$ <u>STD</u></p>
<p>E. Body Builder Junction Box: 1. Body builder's junction box shall be provided in cab to prevent corrosion from magnesium chloride. 2. Terminal shall be marked for easy identification.</p>	<p>Location: <u>Firewall</u> <input checked="" type="radio"/> Yes <input type="radio"/> No</p>	<p>\$ <u>41</u></p>
<p>F. Back Up Alarm: 1. The back up alarm shall be 112 dB, SAE type B, fully sealed, back-up alarm system with: 2. Wired into vehicle's backup light system using OEM plug-in adapter. 3. The alarm shall be mounted out of the vehicle's rear wheel splash area and shall be shielded.</p>	<p>dBa rating: <u>112</u> <input checked="" type="radio"/> Yes <input type="radio"/> No <input checked="" type="radio"/> Yes <input type="radio"/> No</p>	<p>\$ <u>73</u> \$ <u>STD</u> \$ <u>STD</u></p>

Reference Nos.:

Vendor/Sub Vendor:

*W. J. [Signature]*

Description of Equipment	Offered Equipment	Cost
G. Lights: (No Approved Equals) 1. Halogen sealed beam headlights, 12v. 2. Daytime running lights. 3. Wiring shall be sealed modular plug-in type. 4. All lights shall be Truck-Lite "Lifetime Warranty" 12VDC, LED type, flush mount, sealed lexan body, grommet insulated with Fit' N Forget multi-pin plugs where possible. 5. Integral Stop/Turn/Tail/ Lights mounted in the rear corner post of the dump body model Super 44 P/N 44302R or model 60 P/N 60250R. 6. Back up lights, Truck-Lite LED, flush mount, sealed lexan body, grommet insulated, multi-pin units model 44 P/N 44206C. 7. Marker lights Truck-Lite LED 3 per side model 10 P/N 10250R or 10250Y or model 30 P/N 30250R or 30250Y. 8. Rear ID bar Truck-Lite LED model 35 P/N 35741R or 35740R. 9. License plate light, Truck-Lite model 15 P/N 15040	Offered Equipment Yes <input checked="" type="checkbox"/> No Yes <input checked="" type="checkbox"/> No Yes <input checked="" type="checkbox"/> No Make: <u>FTL</u> Model: <u>LED</u> Make: <u>FTL</u> Model: <u>LED</u> Make: <u>FTL</u> Model: <u>LED</u> Make: <u>FTL</u> Model: <u>LED</u> Make: <u>FTL</u> Model: <u>LED</u> Make: <u>FTL</u> Model: <u>LED</u>	\$ <u>STD</u> \$ <u>8</u> \$ <u>STD</u> \$ <u>85</u> \$ <u>1mch</u> \$ <u>1mch</u> \$ <u>1mch</u> \$ <u>1mch</u>

3.5

Cooling System or Approved Equal	Offered Equipment	Cost
A. Description of Equipment Cooling system with coolant recovery tank capable of maintaining engine manufacturer's recommended operating temperatures at an elevation of 6,800' in 120° F low humidity ambient conditions shall be provided.	Offered Equipment Yes <input checked="" type="checkbox"/> No Protection Temperature: <u>-34</u>	\$ <u>STD</u>
B. Coolant protection shall be -34° F.	Protection Temperature: <u>-34</u>	\$ <u>STD</u>
C. Fleetguard coolant filter WF2071.	Make: <u>Detroit</u> Model: <u>DDWF</u>	\$ <u>STD</u>

Reference Nos.:

Vendor/Sub Vendor

*[Signature]*

3.6 Tires and Wheels or Approved Equal

Description of Equipment	Offered Equipment	Cost
<p>A. Tires:</p> <ol style="list-style-type: none"> <li>1. Tires 315/80R22.5, tubeless, 20-ply, load range L.</li> <li>2. Front: Michelin XZUS, Steer Tires.</li> <li>3. Rear dual: Michelin XZUS, Steer Tires</li> </ol>	<p>Size: <u>315 80R 22.5 20</u>            Make: <u>Michelin</u> Model: <u>XZU-S2</u>            Make: <u>Michelin</u> Model: <u>XZU-S2</u></p>	<p>\$ <u>18440</u>            \$ <u>4900</u>            \$ <u>644</u></p>
<p>B. Wheels:</p> <ol style="list-style-type: none"> <li>A. Disc, 10-hole, Hub piloted type, Single nut, Meets ISO Standard 4107.</li> <li>B. White powder epoxy coated finish.</li> <li>C. Front 22.5" x 9".</li> <li>D. Rear 22.5" x 9".</li> </ol>	<p>Make: <u>Hayes</u> Model: <u>Kemmerz</u></p> <p><input checked="" type="radio"/> Yes    No            Size: <u>22.5</u> x <u>9</u>            Size: <u>22.5</u> x <u>9</u></p>	

3.7 Interior or Approved Equal

Description of Equipment	Offered Equipment	Cost
<p>A. Steering Controls Left Side:</p> <ol style="list-style-type: none"> <li>1. All critical controls required to operate the vehicle shall be easy to reach and operate from left seat.</li> <li>2. Tilt and telescoping steering wheel to accommodate operators with large variations in sizes.</li> </ol>	<p>Make: <u>FTL</u> Model: _____</p> <p>Tilt: <input checked="" type="radio"/> Yes    No            Telescoping: <input checked="" type="radio"/> Yes    No</p>	<p>\$ <u>STD</u>            \$ <u>240</u>            \$ <u>1 inch</u></p>
<p>B. Cab Interior Design:</p> <ol style="list-style-type: none"> <li>1. The cab shall be configured to be ergonomic, comfortable and with ample room to minimize operator fatigue and discomfort. The City has operators of varying statures and adjustable seating and controls will increase safety and minimize on-the-job related physical problems and fatigue.</li> <li>2. The interior design and seat position shall provide for installation of snowplow joystick and controls in an ergonomic and functional design.</li> </ol>	<p><input checked="" type="radio"/> Yes    No            If "No" Explain: _____</p> <p><input checked="" type="radio"/> Yes    No            If "No" Explain: _____</p> <p>Provide Materials: _____</p>	
<p>C. Required Submittals with Bid:</p> <ol style="list-style-type: none"> <li>1. Requested information must be submitted with bid for evaluation. Failure to submit the requested information may make bid non-responsive.</li> <li>2. Interior left side dimensions measured:               <ol style="list-style-type: none"> <li>a. Belly Room: seat back to steering wheel.</li> <li>b. Leg Room: seat front edge to brake pedal.</li> <li>c. Head Room: seat cushion to ceiling.</li> <li>d. Seat fore/aft travel:</li> </ol> </li> </ol>	<p>Seat full forward: <u>16</u> "    Seat full back: <u>25</u> "            Seat full forward: <u>13</u> "    Seat full back: <u>22</u> "            Seat full lowered: <u>43</u> "    Seat full raised: <u>39</u> "            Travel: <u>9</u> "</p>	

Reference Nos.:

Vendor/Sub Vendor: WJ

SPECIFICATION AND PRICING TEMPLATE

Description of Equipment	Offered Equipment	Cost
e. Seat height travel: f. Steering Wheel "Knuckle Clearance": distance to closest object g. Floor Height: measured ground to cab floor. h. Cab Step Heights: measured from ground. i. Steering Wheel Tilt and Telescoping: 3. Location of the transmission shifter:	Travel: <u>4</u> " Knuckle Clearance: <u>8</u> " Height: <u>52</u> " 1 <sup>st</sup> Step: <u>18</u> " 2 <sup>nd</sup> Step: <u>36</u> " Tilt: <u>20</u> ° Telescoping distance: <u>3</u> "	\$ <u>170</u>
D. Seats: 1. Driver's seats shall be air suspension Bostrom, Talladega 910 high back driver's seat, gray vinyl with gray cloth insert and arm rests. 2. Passengers seat Bostrom high back non-suspension seat with gray vinyl.	Make: <u>Bostrom</u> Model <u>T910</u> Arm Rest: <input checked="" type="radio"/> Yes No Make: <u>Bostrom</u> Model: <u>NON-SUSP</u>	\$ <u>STD</u>
E. Upfitter's Switch Panel: 1. The vehicle manufacturer shall provide for the snowplow and salt/sander body manufacturer an upfitter's switch panel with a minimum of 10 switches for sundries equipment control switches. 2. The panel location shall be in an ergonomic location and shall not require more than 30° head movement and be within easy reach of driver's of various sizes and physiques. 3. The switch panel shall have permanently labeled and lighted rocker switches for all optional sundries equipment and lights etc.	<input checked="" type="radio"/> Yes No Number of Switches: <u>10</u> <input checked="" type="radio"/> Yes No <input checked="" type="radio"/> Yes No 2016 Reduced to 6: \$168 Net Reduction: -\$112	\$ <u>280</u>
F. Instrumentation: 1. Instrumentation shall include speedometer, engine hourmeter, tachometer, voltmeter, coolant temperature, oil temperature, oil pressure, transmission oil temperature, fuel level, front/rear differential temperature gauges and air pressure with low air-pressure alarms (light, audible).	<input checked="" type="radio"/> Yes No No Explain: _____	\$ <u>STD</u>
G. Floor Covering: 1. Floor covering shall be heavy-duty black rubber/vinyl flooring.	Flooring Type: <u>Heavy Duty Black Rubber</u>	\$ <u>STD</u>
H. Air Conditioning: 1. Factory installed cab R134A air conditioning 2. Cab shall be insulated to include floor, firewall, roof and walls.	<input checked="" type="radio"/> Yes No <input checked="" type="radio"/> Yes No	\$ <u>STD</u>
I. Windshield Wipers: 1. Wipers 2-speed self parking. 2. Intermittent wiper mode.	Speeds: <u>2</u> <input checked="" type="radio"/> Yes No Self Park: <input checked="" type="radio"/> Yes No	\$ <u>STD</u>

Reference Nos.:

Vendor/Sub Vendor:

*Calby*

	Description of Equipment	Offered Equipment	Cost
J.	Radio: 1. Radio AM/FM stereo with speaker balance. 2. Speakers two required.	Make: <u>Panasonic</u> Model: <u>Am/Fm</u> <input checked="" type="radio"/> Yes <input type="radio"/> No	\$ <u>150</u>
K.	Fire extinguisher: 1. Extinguisher ABC, 5-lb. dry type rechargeable 2. Installed in cab. 3. Location labeled with 1" letters on outside of the cab.	<input checked="" type="radio"/> Yes <input type="radio"/> No <input checked="" type="radio"/> Yes <input type="radio"/> No <input checked="" type="radio"/> Yes <input type="radio"/> No	\$ <u>51</u>
L.	Grab Handles: 1. One each on exterior of cab for operator and passenger assist and one interior for passenger. 2. Grab handles shall provide adequate clearance to other objects to provide easy access and clearance to prevent pinch or other hazards.	<input checked="" type="radio"/> Yes <input type="radio"/> No <input checked="" type="radio"/> Yes <input type="radio"/> No	\$ <u>21</u>

3.8

Exterior or Approved Equal:

	Description of Equipment	Offered Equipment	Cost
A.	Paint: 1. Polyurethane paint equal to DuPont Imron 5000, "Bright White", applied following manufacturer's procedures to include: 2. Color top coat, 2 coats, applied to all non-stainless steel components following manufacturer's procedures. 3. Removing all mill scale and slag. 4. Variprime 6-15S self-etching primer or approved equal. 5. Treating bare metal with manufacturer's conditioners and conversion coatings or approved equal.	Make: <u>Imron</u> Type: <u>6000</u> Color: <u>White</u> <input checked="" type="radio"/> Yes <input type="radio"/> No <input checked="" type="radio"/> Yes <input type="radio"/> No <input checked="" type="radio"/> Yes <input type="radio"/> No <input checked="" type="radio"/> Yes <input type="radio"/> No	\$ <u>STD</u>
B.	Engine Hood: 1. Engine fully accessible and serviceable. 2. Front hood and fenders shall easily tilt forward for access.	<input checked="" type="radio"/> Yes <input type="radio"/> No <input checked="" type="radio"/> Yes <input type="radio"/> No	\$ <u>STD</u>
C.	Cab Design: 1. Cab steel or aluminum heavy-duty body, Construction Type 2. Air suspension 3. The hood shall have a 10" minimum slope for improved driver visibility. 4. Molded 1-piece fiberglass hood and fenders with painted hood and stationary mounted grill. 5. Rubber fender extensions. 6. Exterior sun visor full width. 7. Right lower door window. 8. Electric windows left and right sides.	Cab Material: <u>Aluminum</u> <input checked="" type="radio"/> Yes <input type="radio"/> No Hood Slope: <u>10</u> inches <input checked="" type="radio"/> Yes <input type="radio"/> No <input checked="" type="radio"/> Yes <input type="radio"/> No <input checked="" type="radio"/> Yes <input type="radio"/> No <input checked="" type="radio"/> Yes <input type="radio"/> No	\$ <u>STD</u> \$ <u>STD</u> \$ <u>STD</u> \$ <u>57D</u> \$ <u>48</u> \$ <u>132</u> \$ <u>140</u> \$ <u>110</u>

Reference Nos.:

Vendor/Sub Vendor:



0750A-2012  
SPECIFICATION AND PRICING TEMPLATE

9. Door and ignition keyed the same.	<input checked="" type="radio"/> Yes <input type="radio"/> No	
D. Mirrors: "No Approved Equal" 1. Rear view mirrors Moto Mirror Model 7-5400 "Flat Back Traditional" 7" x 16" motor head, remote, heated, stainless steel left and right mounted on the cab. 2. Convex 8" stainless steel mirrors mounted under primary mirrors. 3. Right hand down mirror shall also be provided. 4. Convex mirror on right front fender to show small objects along the right side of the truck.	Make: <u>West Coast</u> Model: <u>Dual Axis HTD/Remote</u> Make: <u>FTK</u> Model: <u>8"</u> Provide Mirror Width: <u>102</u> <input checked="" type="radio"/> Yes <input type="radio"/> No	\$ <u>240</u>
E. Bumper Guides: 1. Front outer bumper guides steel chrome 30" high with top indicator light' 2. The bumper guides shall not interfere with the opening and closing of the tilt hood.	Make: <u>FTK</u> Model: <u>lighted</u> <input checked="" type="radio"/> Yes <input type="radio"/> No <b>REMOVED FOR 2016</b>	<del>\$ <u>260</u></del>
F. Air Horns: 1. Dual Hadley 26" air horns with shields 2. Mounted on top left side of cab.	Make: <u>Hadley</u> Model: <u>26"</u> Location: <u>Top of cab LH</u>	\$ <u>47</u>
G. Undercoating: 1. A protective non-asphaltic base undercoat 2. Undercoating shall be applied to all exposed undercarriage parts and components, which are subject to corrosion.	Brand: _____ Type: _____ <input type="radio"/> Yes <input type="radio"/> No	\$ _____

Reference Nos.:

Vendor/Sub Vendor: WJ



0750A-2012  
 SPECIFICATION AND PRICING TEMPLATE

VEHICLE SUB TOTAL COST \$ 177,336

3.9 Optional Equipment

Do not include Optional Equipment in the total price of the vehicle; however an equipment price must be provided. The City will determine if the equipment is to be purchased.

Description of Equipment	Offered Equipment	Cost
<p>A. Optional Rear Air Suspension:                      1. Hendrickson Tuf-Trac rear Multi-Leaf HAS460-55 4-air bag air-ride spring system with 9.5" ride height and inboard mounted shock absorbers. Rear: capacity 46,000-lbs. Minimum.</p>	<p>Make: <u>FTL</u> Model: <u>TUFFTRAC</u>                      Ride Height: <u>12.8</u> inches</p>	<p>\$ <u>N/A</u></p>
<p>B. Spare Tire and Wheel:                      1. Tire and wheel assembly: 1 per vehicle.                      2. Tire: Michelin XZUS, Steer Tire.                      3. Wheel: Size 22.5" x 9", disc, 10-hole, hub piloted type, single nut, meeting ISO Standard 4107. "White" powder epoxy coated finish.</p>	<p>Make: _____ Model: _____                      Make: _____ Model: _____</p>	<p>\$ <u>1396</u></p>
<p>C. Optional Undercoating:                      1. Provide additional undercoating choices over and beyond the basic factory OE undercoating.                      2. Include any additional warranties that are applied if the Optional Undercoating is selected.                      3. Provide benefits of the optional undercoating over and beyond the "Standard Factory" undercoating.</p>	<p>Make: _____ Model: _____                      Type: _____                      Additional Warranties: _____                      Benefits: _____</p>	<p>\$ <u>N/A</u></p>
<p>D. Zonar System (No Approved Equals)                      The Zonar system shall be the model EVIR-GPS-GSM (Electronic vehicle information reports- global position system- global systems mobile communications) and provide the following functions minimum:                      1. The system shall be fully compatible with and fully interface with:                      a. CCG Faster fleet maintenance software                      b. Kronos time keeping system for reporting employee data                      2. Webb based reporting.                      3. The system shall provide the following functions:                      a. Ties the operator to the vehicle.                      b. Pre and Post trip vehicle inspection information and compliance.                      c. Send inspection information to Fleet Maintenance for an automatic "work order" generation.                      d. Track vehicle time out of the yard, time on route, and return to yard time.                      e. Tracks engine idle time.</p>	<p>Make: <u>ZONAR</u> Model: <u>EVIR-GPS-GSM</u> \$ <u>950</u></p> <p> <input checked="" type="radio"/> Yes No  <input checked="" type="radio"/> Yes No  <input checked="" type="radio"/> Yes No  <input checked="" type="radio"/> Yes No  <input checked="" type="radio"/> Yes No  <input checked="" type="radio"/> Yes No  <input checked="" type="radio"/> Yes No  <input checked="" type="radio"/> Yes No  <input checked="" type="radio"/> Yes No  <input checked="" type="radio"/> Yes No                 </p>	<p>\$ <u>incl</u>                      \$ <u>incl</u>                      \$ <u>incl</u>                      \$ <u>incl</u>                      \$ <u>incl</u>                      \$ <u>incl</u>                      \$ <u>incl</u></p>

Reference Nos.:

16

Vendor/Sub Vendor: Wly

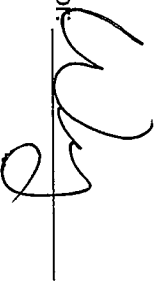
0750A-2012  
SPECIFICATION AND PRICING TEMPLATE

<p>f. Monitors route pick-ups/work stops, show the vehicles route and work stops on a real time basis. g. Uses the City's own maps of Denver area. h. Captures meter readings (odometer, engine hours) reports for PM scheduling. i. Has five (5) additional electronic inputs 8 to 30 VDC for monitoring and reporting vehicle functions and information. 4. The system shall be fully contained in an injection molded, impact resistant plastic case that is water-tite and insulated. 5. The system shall have passed SAE J-1455 vibration test</p>	<p><input checked="" type="radio"/> Yes    No <input checked="" type="radio"/> Yes    No <input checked="" type="radio"/> Yes    No <input checked="" type="radio"/> Yes    No <input checked="" type="radio"/> Yes    No <input checked="" type="radio"/> Yes    No Provide information:</p>	<p>\$ <u>Incl</u> \$ <u>Incl</u> \$ <u>Incl</u> \$ <u>Incl</u> \$ <u>Incl</u> \$ <u>Incl</u></p>
<p>E. Inspection Trip: 1. The City and County of Denver reserves the right to inspect at the cab and chassis during the construction of the first (1st) article prior to paint and delivery. 2. When the fabricating plant is located further than 200 road-miles from the City and County of Denver, the bidder shall include in the bid price all travel expenses to the manufacturing plant for the inspection. 3. The City may select to send 4 representatives to inspect the 1<sup>st</sup> article. The provided costs shall be based on one (1) person per day and the City will determine how many representatives the inspection will require and how many days the inspection will require. 4. Inspection Trip Costs to include: a. Air fare per person: b. Surface transportation costs: c. Lodging per person per day: d. Meals per person per day: 5. Total cost per person for 1st article inspection trip:</p>	<p>Distance to fabrication plant: <u>1550</u> miles Plant Location: <u>MT Holly, N.C.</u> Air Fare: \$ <u>450</u>, Airline: <u>TBD</u> Surface Transportation: \$ <u>80</u>, Mode <u>shuttle</u> Lodging / day: \$ <u>100</u> Hotel: <u>TBD</u> Meals / day: \$ <u>50</u></p>	<p>\$ <u>450</u> \$ <u>80</u> \$ <u>100</u> \$ <u>50</u> \$ <u>680</u></p>

Reference Nos.:

17

Vendor/Sub Vendor



0750A-2012  
 SPECIFICATION AND PRICING TEMPLATE

5.0

Manuals/Equipment

Item	Description of Equipment	Offered Equipment	Cost
Training Tape	One VHS tape, DVD or CD demonstrating and explaining the safe and proper use of the vehicle/equipment. 1. Cab and chassis.	Yes <input checked="" type="radio"/> No	\$
Operators Manual Paper	One book per vehicle/equipment with "safe equipment operation" section for each component. 1. Cab and Chassis.		\$ <u>N/A</u>
Service/ Maintenance Manual Paper	Two complete sets per Contract (not per vehicle); binder required. 1. Manuals shall be provided for: A. Cab and Chassis 2. Manuals shall include complete and detailed information for maintenance of the equipment, including general information, specifications, troubleshooting guide, lubrication and required adjustments. 3. The hydraulic and electrical sections of the manuals shall be provided in a separate electrical/hydraulic binder. Both the hydraulic and electrical circuits shall have separate color coded schematics for each equipment function to show the flow of both electrical current and hydraulic oil.	<input checked="" type="radio"/> Yes <input checked="" type="radio"/> No  Yes <input checked="" type="radio"/> No	\$ <u>500</u>
Service/ Maintenance Manual on CD rom or DVD	One complete set; per Contract (not per vehicle) 1. Manuals shall be provided for: A. Cab and Chassis 2. Manuals shall include complete and detailed information for maintenance of the equipment, including general information, specifications, troubleshooting guide, lubrication and required adjustments. 3. The hydraulic and electrical sections of the manuals shall be provided in a separate electrical/hydraulic binder. Both the hydraulic and electrical circuits shall have separate color coded schematics for each equipment function to show the flow of both electrical current and hydraulic oil.	<input checked="" type="radio"/> Yes <input checked="" type="radio"/> No  Yes <input checked="" type="radio"/> No	\$ <u>500</u>

Reference Nos.

Vendor/Sub Vendor:



0750A-2012  
 SPECIFICATION AND PRICING TEMPLATE

	<p>4. New CD roms or DVDs shall be provided when information is updated, superseded or changed.</p>	<p><input checked="" type="radio"/> Yes    <input type="radio"/> No</p>	<p>\$ <u>500</u></p>
<p>Service/ Maintenance Manual on Internet Access, or Other Electronic Media</p>	<p>One complete set; per Contract (not per vehicle)</p> <ol style="list-style-type: none"> <li>1. Vendor shall provide access to the site for the length of time that the City owns the vehicle/equipment at a one time up front cost to the City.</li> <li>2. Internet information shall include complete and detailed information for maintenance of the equipment, including general information, specifications, troubleshooting guide, lubrication and required adjustments.</li> <li>3. The hydraulic and electrical sections of the manuals shall be provided in a separate electrical/hydraulic binder. Both the hydraulic and electrical circuits shall have separate color coded schematics for each equipment function to show the flow of both electrical current and hydraulic oil.</li> </ol>	<p><input checked="" type="radio"/> Yes    <input type="radio"/> No</p> <p>If other Specify: _____</p> <p>Yes    <input checked="" type="radio"/> No</p>	<p>\$ <u>500</u></p>
<p>Parts Manual Paper</p>	<p>Two complete sets, per Contract (not per vehicle) binders required,</p> <ol style="list-style-type: none"> <li>1. Manuals shall be provided for:                     <ol style="list-style-type: none"> <li>A. Cab and Chassis</li> </ol> </li> <li>2. Illustrated parts book shall be furnished containing data so that part numbers can be readily found for each system.</li> </ol>	<p><input checked="" type="radio"/> Yes    <input type="radio"/> No</p> <p><input checked="" type="radio"/> Yes    <input type="radio"/> No</p>	<p>\$ <u>500</u></p>
<p>Parts Manual on CD rom or DVD</p>	<p>One complete set, per Contract (not per vehicle) illustrated parts book shall be furnished containing data so that part numbers can be readily found for each system.</p> <ol style="list-style-type: none"> <li>1. Information shall be provided for:                     <ol style="list-style-type: none"> <li>A. Cab and chassis</li> </ol> </li> <li>2. Parts manuals shall include complete and detailed information for replacement parts for the equipment, including general information, specifications ordering guide lines and superseded parts information.</li> <li>3. New CD roms or DVDs shall be provided when information is updated, superseded or</li> </ol>	<p><input checked="" type="radio"/> Yes    <input type="radio"/> No</p> <p><input checked="" type="radio"/> Yes    <input type="radio"/> No</p> <p><input checked="" type="radio"/> Yes    <input type="radio"/> No</p>	<p>\$ <u>500</u></p>

Reference Nos.:

Vendor/Sub Vendor



0750A-2012  
 SPECIFICATION AND PRICING TEMPLATE

<p><b>Parts Manual on Internet Access, or Other Electronic Media</b></p>	<p>One complete subscription; per Contract (not per vehicle) changed.</p> <ol style="list-style-type: none"> <li>Internet information shall allow the City 24 hour 7 days/week including holidays access from its main maintenance facility and all its satellite maintenance facilities.</li> <li>Internet information shall include complete and detailed information for parts for the:                     <ol style="list-style-type: none"> <li>Cab and Chassis</li> </ol> </li> <li>Internet information shall cover vehicle/equipment, shall include general parts information, parts specifications, ordering guide lines and superseded parts information.</li> <li>Vendor shall provide access to the site for the length of time that the City owns the vehicle/equipment at a one time up front cost to the City.</li> <li>Parts manuals shall include complete and detailed information for replacement parts for the equipment, including general information, specifications ordering guide lines and superseded parts information.</li> </ol>	<p>Access Information:                  7 days/week including holidays <input checked="" type="radio"/> Yes <input type="radio"/> No</p> <p><input checked="" type="radio"/> Yes <input type="radio"/> No</p> <p><input checked="" type="radio"/> Yes <input type="radio"/> No</p> <p>If other Specify: _____</p> <p>_____</p> <p>_____</p> <p>_____</p>	<p>\$ <u>N/A</u></p>
<p><b>New Equipment Check-in Form:</b></p>	<p>The successful vendor shall complete the City's "New Equipment Check-in Form" completely and accurately with all requested information.</p>	<p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p>	<p>\$ <u>N/A</u></p>

Reference Nos.:

Vendor/Sub Vendor: Wly

5.1

Operator and Mechanics Training

Item	Description of Equipment	Offered Equipment	Cost
On Site Equipment Manufacturers Training	On site the vendor shall insure that the equipment manufacturers training representative, after delivery of the equipment Contacts Fleet Maintenance training manager to coordinate equipment training.	ON SITE WAHAROUND	\$ N/A
Fleet Maintenance Training Manager	Mr. Felix Espinosa, Telephone: 720.865.3912 Contact time: 8:00 am to 3:00 pm M-F		
Training Requirements	Training shall consist of factory training materials, classroom and actual field training on the equipment for the equipment operators and supervisors.	Training Facility & Dealership	\$ N/A
On Site Mechanics Training	On site mechanics training shall be 2 classes, approximately 8 hours, 2 shifts total provided at City facilities. The training shall cover maintenance and service procedures, trouble shooting and use of manuals.	AVAILABLE	\$ 1,000

6.0

Repair Parts Delivery-See Main Bid Document Section B.4 Line 6

Reference Nos.:

23

Vendor/Sub Vendor:



7.0 Warranty

7.1 General Warranty Provisions **WARRANTY (Table 1) Class 7 & 8 Vehicles**

		Complies (Y or N/A)
A.	Express warranty is to be a minimum of 12 months on the vehicle/equipment. The standard factory warranty plan shall be provided as an attachment to your bid proposal	Y
B.	The Warranty is to include at no cost to the City of Denver, all parts and labor, and no charge for work performed at the vendors facility	Y
C.	Warranty shall start when the City places the vehicle into service <b>NOT</b> on the delivery date. Taking an exception may make bid non compliant.	Y
D.	Warranty plans shall consist of the total unit and be broken out to a separate plan for each warranty item if applicable, such as engine warranty plan, transmission warranty plan, electrical, etc.	Y
E.	Options listed shall be bid and provided as factory installed under the terms of the full factory-backed warranty. This includes, but is not limited to: air conditioning, radios, cruise control, bumpers, towing packages etc. Dealer-installed options will not be permitted unless pre-approved by the City in writing and, where applicable, indicated on bid sheet as a "dealer installed" non-factory item.	Y
F.	Bidder will be responsible for warranty repair of all installed options/auxiliary equipment included in the bid that has a standard warranty that is less than the standard warranty for the base vehicle/equipment	Y
G.	Bidder shall use a single, local factory authorized dealership that will accomplish or coordinate required warranty work. The dealership must have a minimum of 1-year experience as a factory authorized vendor for like equipment being bid. Warranty parts shall be available and supplied within 24 hours	Y
H.	If applicable, bidder shall provide a plan for the City to be reimbursed if the work can be done by the City on site. The current shop rate is \$71.00/hour, not to exceed \$85.00/hour. (Enter a response of N/A if not available)	N/A
I.	The bidder shall respond to request for warranty assistance within twenty-four (24) hours.	Y
J.	Warranty work shall be accomplished within an appropriate length of time (generally less than 3 working days for everything other than major component repair such as a transmission rebuild) and shall be coordinated with an authorized City representative	Y
K.	During the entire warranty period, if the unit requires transportation to a repair facility, the vendor/sub-vendors shall be responsible for all transportation at "NO COST" to the City and County of Denver. This includes transporting the unit back to the City's domicile location after repairs are complete. If an alternate is bid, charges to the City of Denver shall be listed (e.g. mileage, travel, labor, etc.). Even if an alternate is bid, in NO CIRCUMSTANCES will the City and County of Denver be responsible for transporting a unit greater than 25 miles from the center of Denver. For purposes of these warranty provisions, the center of Denver is defined as the City and County Building located on the corner of Colfax and Bannock Street.	Y

Reference Nos.

24

Vendor/Sub Vendor

**SPECIFICATION AND PRICING TEMPLATE**

0750A-2012

<p>L. The item(s) procured by the City pursuant to this Bid Proposal shall, in addition to being subject to the express warranties referenced above, be subject to all implied warranties arising by operation of law under State of Colorado and Federal law, including but not limited to the implied warranty of merchantability and, to the extent applicable, the implied warranty of fitness for a particular purpose arising under the Colorado Uniform Commercial Code, Title 4, Colorado Revised Statutes. The bidder shall in no event attempt to limit or disclaim any of such implied warranties under this Bid Proposal, and any attempt to do so will render the bidder's bid non-responsive under this Bid Proposal.</p>	<p>Y</p>
<p>M. This warranty in Table 1 and Table 2, is IN ADDITION to factory warranties on the vehicle and components</p>	

7.2

**Fleet Defects**

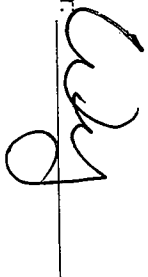
**WARRANTY - (Table 2) Fleet Defect Clause, Class 7 & 8 Vehicles**

<p>A. <b>Definition:</b> If during the warranty period, thirty percent (30%) of the total number of units delivered have the same part(s) and/or components failure requiring replacement and/or modifications, caused by defects in Design, Testing, Material, and/or Workmanship, then this "Fleet Defect Clause" goes into effect.</p>
<p>B. <b>Remedy:</b> Following notification of a Fleet Defect, the vendor shall develop and implement a plan that either reengineers, modifies, or replaces the defective parts/ systems, such that the identified problem is cured and the operation of the vehicle/equipment is not altered. When alterations are required to cure the defect, those alterations that change or modify the original bid specifications must be approved by the City and County of Denver prior to execution. The vendor will pay for all necessary labor and materials to repair, modify, and/or "update" all vehicles/units in this group. The vendor shall also propose a work schedule that is mutually agreed upon by the City of Denver that corrects the fleet deficiency within 30 days or a mutual agreed upon schedule.</p>
<p>C. <b>Exceptions:</b> Fleet defects will not apply to minor aftermarket accessories specified by the City of Denver and installed per instructions/specifications. Examples include: toolboxes, spotlights, bed-liners, etc.</p>
<p>D. <b>Mitigation:</b> Should the vendor become non responsive to the City's notification of a Fleet Defect, the City may employ several options. (1) After notifying the vendor in writing of The City's intent to mitigate its circumstances, the City may choose to perform its own warranty work and seek reimbursement for both parts and labor. (2) On major components, such as engine, transmission, air conditioning, etc., the City may choose to have the repairs performed by an authorized dealer and vendor shall reimburse the City for any parts or labor not covered by other warranty.</p>
<p>E. <b>Outside Metro-Denver:</b> Vendor will pay for all transportation costs if unit(s) must be sent out of the Denver area for repairs. The City and County of Denver reserves the right to inspect unit(s) before returning back to Denver. The City and County of Denver also reserves the right to send at least one employee, without cost to the City, to inspect the repair(s) before unit is released back to the City.</p>
<p>F. <b>Expired Warranties:</b> Units that have mutually agreed upon warranty defects during the warranty period will continue to be repaired until completed. If an on-going remedy continues past the warranty date the repairs will continue under warranty until completed or cease at a time agreed upon by the vendor and City and County of Denver.</p>

Reference Nos.

25

Vendor/Sub Vendor:





7.3

Warranty Options

Warranty Options		WARRANTY Options (Table 3) Class 7 & 8 Vehicles		
Cost of Factory Extended Warranties		Please indicate in the columns below the additional cost of an extended warranty for all applicable components listed in the left hand column.		
		Inc = Included	N/A = Not available	
		Two Years	Three Years	Five Years
A. Cab and Chassis		1558	2931	5311
B. Engine		Included	1500	3150
C. Transmission		Included	Included	885
D. Drive Train		Included	1885	3500
E. Suspension		152	821	458
F. Air Conditioning		736	941	1150
G. Hydraulics				
H. a. Pumps				
	b. Cylinders			
	c. Tanks			
	d. Valves			
	e. Controls			
I. Attached Body				
J. Joystick				
K. Electrical Components				
L. Other				
M. Notes:				

Reference Nos.:

Vendor/Sub Vendor:



0750A-2012  
SPECIFICATION AND PRICING TEMPLATE

7.4 **Warranty Service Locations:** Warranty repair parts and service shall be available locally at an established factory authorized dealership meeting requirements of Table 1 Section 7.

A. Cab & Chassis:

Dealership Name: Transwest Trucks Telephone #: 303-289-3161  
Street Address: 7649 Brighton Rd City: Commerce City

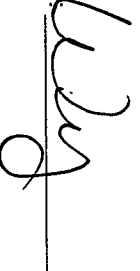
B. Sundries:

Dealership Name: Transwest Trucks Telephone #: 303-684-3400  
Street Address: 7550 E 1-25 Frontage Rd, City: FREDERICK, CO

Reference Nos.:

27

Vendor/Sub Vendor:



0750A-2012  
SPECIFICATION AND PRICING TEMPLATE

8.0

**Heavy Duty Vehicle Delivery Documentation:**

<b>Delivery Documentation (GWR 26,001-Lbs and Above Heavy Duty)</b>	
A.	<b>Vehicles ordered under this specification shall be complete and delivered to CITY AND COUNTY OF DENVER, Fleet Management Division.</b> All prices quoted must be quoted at a firm price F.O.B. Denver, Colorado, 5440 Roslyn St. Building C.
B.	<b>Vendor shall supply at acceptance and delivery of vehicle.</b> <ol style="list-style-type: none"> <li>1. Bill of Sale (aka invoice, buyers order)</li> <li>2. Original MSO (Manufacturers Statement of Origin)</li> <li>3. Application for Title and/or Registration, Colorado Dept of Revenue form DR2395 (02-22-11)</li> <li>4. Odometer Disclosure Statement, Colorado Dept of Revenue form DR2407 (09-07-05)</li> <li>5. Letter of Certification on Vendor Letterhead (Required for Incomplete Vehicles) with added bodies etc, describes the final configuration of the vehicle)</li> <li>6. Air Brake inspection form required for any vehicle with air brakes or truck units capable of towing trailers greater than 10,000-Lbs</li> <li>7. Standard Sales Tax Receipt.</li> <li>8. DOT inspection form.</li> <li>9. Temporary License Plate.</li> <li>10. New Equipment Check-in Form/ Vendor Supplied Information on the Vehicle. Form provided by Fleet contact Dolores @ 720.865.3903</li> <li>11. Copy of City Purchase Order.</li> <li>12. All Keys ordered for the Vehicle and Sundries, i.e. toolboxes etc.</li> <li>13. All Manuals repair, parts, owners and/or CD's/DVD's etc</li> <li>14. Vehicle Warranty information and receipt for optional warranty.</li> <li>15. Receipts and Warranty information for vendor installed/supplied components (lift gates, snowplows, lighting equipment etc)</li> </ol>
C.	For an "Incomplete Vehicle" (cab & chassis) add the following: <ol style="list-style-type: none"> <li>16. Verification of Vehicle Identification Number (VIN), Colorado Dept. of Revenue form DR2087.</li> <li>17. Statement of Fact for Incomplete vehicles with added bodies etc, describes the final configuration of the vehicle.</li> <li>18. Original weight slip.</li> </ol>
D.	Delivery: Monday through Friday between 8:00am and 1:00pm. Location: CITY AND COUNTY OF DENVER Fleet Management 5440 Roslyn St. Building C Denver, CO 80216 Contact person to coordinate delivery: Dolores Gallegos at (720) 865-3900 ext. 03 or direct line (720) 865-3903.

Reference Nos.:

28

Vendor/Sub Vendor:



## **Romero, Michael P. - Purchasing**

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**From:** Will Schafer [whschafer@transwest.com]  
**Sent:** Wednesday, May 29, 2013 12:58 PM  
**To:** Romero, Michael P. - Purchasing  
**Cc:** Bales, Gary D. - PW Fleet; Legg, Doug - PW Street Maintenance; Cooper, Tony L. - PW Fleet  
**Subject:** Freightliner chassis options  
**Attachments:** DENVER SINGLE FRAME.doc; DENVER DOUBLE FRAME.doc

**Categories:** Important

Michael,

The option for a 13 gallon DEF tank with factory fill is \$ 92.00

We also have an option for a single frame rail with over 3,000,000 RBM(specs attached). Eliminate wear issues between the double channel frame rails.

\$ 496.00 and adds only 5 LBS including PARTIAL INNER FRAME REINFORCEMENT AT FRONT SUSPENSION for the snow plow.

Thanks,

***Will Schafer***

**Government/Fleet Manager**



**303-301-7509** Direct  
**303-907-1357** Cell  
**303-288-2310** Fax

[whschafer@transwest.com](mailto:whschafer@transwest.com)

9.0 Vehicle Delivery  
 9.1 Delivery of Cab and Chassis to Body Vendor

PROVIDE NUMBER OF DAYS REQUIRED FOR DELIVERY OF CAB AND CHASSIS AFTER PURCHASE ORDER IS ISSUED 90-120 DAYS

10.0 Complete Vehicle Cost

Include: o Cab & Chassis Total Cost o Optional Equipment o Warranty Cost (s) o Manual Cost (s) o Informational Items in Section 11.0 of the specifications (Below) • Dump Body Total Cost • Snowplow System Total Cost • Spreader System Total Cost • Optional Items Total Cost	TOTAL COST, CAB and CHASSIS  \$ <u>117,336</u>
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PRICE: \$117,336 {ORIGINAL}  
 REMOVE: < - \$281 > (Block Heater)  
 DEF TANK: +\$92  
 FRAME OPTION: +\$496  
 REMOVED BUMPER GUIDES: < -260 > (NEW FOR 2016)  
 REDUCE UPHITTER SWITCHES TO 6: < \$-112 >  
 PPI ADJUSTMENT: +\$11,294  
 PRICE ADJUSTED TO : \$128,565(2016)

Reference Nos.:

29

Vendor/Sub Vendor:

