

BID SOLICITATION



City of Chattanooga
101 East 11th Street, Suite G13
Chattanooga TN 37402

BID OPENING DATE AND TIME:
05/07/2008 2:00 PM
BID NUMBER: B0005142

BUYER: Norwood, Shea
PHONE #: (423) 757 - 5184 ext.
DELIVERY REQUIRED: 05/07/2008 2:00 PM

MAIL TO
City of Chattanooga
101 East 11th Street, Suite G13
Chattanooga TN 37402

SEALED BIDS
Mail or submit two (2) signed copies of bid form to this office in the enclosed envelope. Retain one copy for your file.

VENDOR
TN

Item	Class-Item	Quantity	Unit	Unit Price	Total
	Requisition No.: R0108098 Ordering Dept.: Fleet Management Buyer: Shea Norwood Phone No.: 423.757.4759 ***** Items Being Purchased: 12 YD Garbage Truck ***** ATTACHMENTS: Specifications Affirmative Action Plan ***** Payment Terms: _____ Estimated Delivery: _____ Bid As Specified: Yes _____ No _____ ***** City of Chattanooga (COC) Terms and Conditions posted on Website http://www.chattanooga.gov/finance/66_standardtermsandconditions.htm If you can't download, call buyer for a copy. NOTE: ALL BIDS MUST BE SIGNED All bids received are subject to the terms and conditions contained herein and as listed in the above referenced website. The undersigned Bidder acknowledges having received, reviewed, and agrees to be bound to these terms and conditions, unless specific written exceptions are otherwise stated. **** ALL ITEMS MUST BE QUOTED F.O.B. DESTINATION ****				

NOTE: ALL BIDS RECEIVED ARE SUBJECT TO THE TERMS AND CONDITIONS.

ALL BIDS MUST BE SIGNED: The undersigned offers the above quoted prices under the conditions contained herein.

Exempt from all Federal and State Tax.
received at the above mentioned address.

COMPANY: _____

SIGNATURE: _____

NAME AND TITLE: _____

PAYMENT: _____
NUMBER: _____

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	<p>***** Pre-Bid: City Purchasing Conference Room City Hall G13 - 9:00 AM, April 30, 2008. ***** *** BIDS MUST BE RECEIVED NO LATER THAN *** *** 2:00 PM EST on May 7, 2008 *** *****</p> <p>Any manufacturer's names, trade names, brand names, or catalog numbers used in the specifications are for the purpose of describing and establishing general quality levels. Such references are not intended to be restrictive. Bids will be considered for any brand which meets or exceeds the quality of the specifications listed for any item.</p> <p>The City of Chattanooga reserves the right to reject any and/or all bids, waive any informalities in the bids received, and to accept any bid which in its opinion may be for the best interest of the city.</p> <p>The City of Chattanooga will be non-discriminatory in the purchase of all goods and services on the basis of race, color, or national origin.</p>				

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TERMS OF PAYMENT: _____

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Item	Class-Item	Quantity	Unit	Unit Price	Total
	<p>***** NOTE *****</p> <p>PLEASE PROVIDE US WITH THE FOLLOWING INFORMATION:</p> <p>Company Name _____</p> <p>Address _____</p> <p>Phone/Toll-Free No. _____</p> <p>Fax No. _____</p> <p>eMail Address _____</p> <p>Contact Person's Name _____</p> <p>Employer's ID No. _____</p> <p>Estimated Delivery _____</p> <p>Minority-Owned Business ___ Small Business ___ Veteran ___</p> <p>Minority Woman Owned Business ___ Disabled Veteran ___</p> <p>Women-Owned Business ___</p> <p>***** ALL ITEMS MUST BE QUOTED F.O.B. DESTINATION ****</p>				
1.0	12 YARD REFUSE REMOVAL TRUCK(GARBAGE) EQUIPMENT SHOULD BE NEW, UNUSED AND OF THE MANUFACTURER'S ACCEPTABLE SPECS. (11 PAGE SPECIFICATIONS ATTACHED)	2.00	EA		
				TOTAL:	

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Two (2) - 12 Yard Automated Refuse Truck Specifications

INTENT

The intent of these specifications is to describe the minimum requirements for two (2) fully automated side loading twelve (12) yard refuse removal trucks. Bidder shall state any exceptions with specifications. These specifications are considered the minimum acceptable specifications. The equipment shall be new, unused and of the manufacturer's current production design. Bidder shall state any exceptions with specifications.

Standard Convention Cab and Chassis

Engine Specifications:

1. Diesel six (6) cylinders, fully electronic, in-line turbocharged, air to air interlocked, wet sleeve, electronic controlled unit injectors.
2. 245 HP (minimum) 620# Ft torque @ 400 RPM (minimum)
3. All engine and fluid checks to be on the same side Block heater, 1250 Watt (minimum) with socket receptacle located, clearly visible, below drivers door.
4. Hand throttle, electronic, (throttle must be programmable for both variable and tow stationary pre-set engine speeds)
5. Heavy duty cooling-516 sq. in. (minimum) and 270 sq. in charge air cooler (minimum) with in tank transmission cooler.
6. Silicone radiator and heater hoses NO EXCEPTIONS,
7. Single serpentine belt with automatic tensioner

Engine oil cooler

1. Engine oil pan is to be finished with chip resistant "powder coat" paint NO EXCEPTIONS
2. Automatic on/off "Two speed" type with residual torque device with nylon fan blades, Horton Drivemaster (or an approved equivalent)
3. Air cleaner, single element with dash mounted restriction indicator.
4. Magnetic oil drain plug on oil pan
5. Fuel/Water separator, with thermostatic fuel temperature controlled electric heater

- 47 and fuel filter in a single assembly, mounted on engine.
48
49 6. Electronic shutdown system, automatic with warning lights and audible alarm for
50 oil pressure, coolant temperature and coolant level. System must include
51 automatic 30-second override
52
53 7. Electronic engine speed control for PTO, remote mounted for body builder
54 access.
55
56 8. Anti-freeze, extended life type-40 degrees F protection with “low coolant” level
57 warning lights and audible alarm.
58

59 Electrical System

- 60
61 1. Electrical wiring system with computer self diagnostics and data link connector in
62 cab for vehicle programming.
63
64 2. If using a multiplex system, chassis builder will have a remote power module with
65 6 latch switches.
66
67 3. Wiring shall be color coded and continuously number coded.
68
69 4. Jump-start terminal-remote mounted with clear access (vehicles requiring the
70 removal of the battery box cover or connection of jumper cables directly to
71 battery studs will not be considered.
72
73 5. Batteries-Two (2) 12volt 1300 CCA (minimum) NOTE: battery mounting shall
74 not interfere with the installations of body components. Battery terminal shall be
75 sealed.
76
77 6. Alternator-100 amp (minimum)
78

79 Lights

- 80
81 1. Cab marker three (3) LED
82 2. Headlamp two (2) halogen
83 3. Daytime running lights
84
85 4. Directional marker (2) from corner of hood, (2) top of fender tail with integral
86 stop, turn, backup and license plate interior dome light, door activated.
87
88 5. Flasher-40 amps, rated no load, solid state flasher with self protection and self
89 diagnostics
90
91 6. Electrical diagnostics system in dash, driver accessible, with fault code reading
92 capability.

- 93
94 7. Turn signal switch electronic with “flash-to-pass” feature
95
96 8. Circuit protectors automatic reset, SAE type III.
97
98 9. Body builder electrical connector-connection plug is to be located at back of cab
99 for body builder connection to stop, tail, and marker light circuits, ignition
100 controlled auxiliary fee to ground
101
102 10. NOTE; THE BODY BUILDER WILL NOT BE PERMITTED TO SPLICE
103 INTO ANY CHASSIS WIRING HARNESS
104
105 11. Back up alarm -chassis supplied, 102 DBA
106

107 EXHAUST SYSTEM

- 108
109 1. Single exhaust positioned in such a way that it does not interfere with the body
110 builder installations. Exhaust with vertical pipe mounted on left hand side with
111 bright finish.
112

113 FRAME

- 114
115 1. Frame rails heat treated alloy steel (120,000 psi yield) 10.250” x 3.610” x 0.375”
116
117 2. Huck bolted frame
118
119 3. Front tow hooks—two (2) frame mounted
120
121 4. Front bumper powder coat painted, full width steel with swept back ends
122
123 5. NOTE: body builder shall not weld to or burn holes in the bumper
124

125 FUEL TANK

- 126
127 1. 50 gallon capacity (minimum) polished aluminum.
128

129 TRANSMISSION

- 130
131 1. Automatic 5 speed Allison Model 3000 RDS
132
133 2. PTO provisions (NO EXCEPTIONS)
134
135 3. Input/Output electrical connections provisions must be provided
136
137 4. Transmission oil temperature gauge dash mounted, with visual and audible
138 warning

- 139
- 140 5. Synthetic lube
- 141
- 142 6. Spin on oil filter
- 143
- 144 7. Magnetic oil drain plug
- 145
- 146 8. Shift control, push button type-dash mounted (NO EXCEPTIONS)
- 147

148 FRONT AXLE AND RELATED EQUIPMENT

- 149
- 150 1. 14,000 lbs capacity front axle
- 151
- 152 2. 1-Beam type
- 153
- 154 3. Wheel seals, oil lubricated includes wheel bearings
- 155
- 156 4. Front shock absorbers
- 157
- 158 5. Power Steering.
- 159 6. Minimum 50 degree cam angle and 28 feet curb-to-curb
- 160
- 161 7. Front suspension 14,000 lbs capacity, parabolic taper leaf springs
- 162

163 REAR SUSPENSION

- 164
- 165 1. 26,000 lbs capacity axle with 200 wheel ends, with differential lock
- 166
- 167 2. Single vari-rate leafsprings, 31,000 lbs capacity with 4500 rubber overload block
- 168

169 BRAKE SYSTEM

- 170
- 171 1. ABS brake system—Four Channel Control (NO EXCEPTIONS)
- 172
- 173 2. Air brakes-Front, S-cam type 15x5
- 174 a. Rear, S-cam type 16.5x7
- 175 b. 24x30 Long stroke brake chambers are to be included
- 176
- 177 3. Air compressor-13.2 CVM gear driven, with air supply piped from air cleaner
- 178
- 179 4. Automatic slack adjusters front and rear
- 180
- 181 5. Brake lines all color codes
- 182
- 183 6. Dual air pressure gauges
- 184

- 185 7. Low air pressure gauge, warning light and alarm
186
187 8. Air activated, spring loaded parking brake with dash mounted control
188
189 9. Automatic oil and moisture drain valve ejector with heater
190
191 10. Dual air reservoirs with auto spitters
192
193 11. Cab and related equipment
194
195 12. Conventional style standard cab, galvanized steel, with tilting multi-piece hood
196 construction. Fenders are to be replaceable, independent of hood.
197
198 13. Grill assembly. Bright finish
199
200 14. Horn-Both electric and air horn shall be provided. Horn activation shall be located
201 on the steering wheel for both. NOTE-the air horn shall be mounted under the
202 hood, Cab roof mounting is not acceptable
203

204 Cab
205

- 206 1. All cab glass shall be tinted. Vent window shall be provided and must pivot open.
207
208 2. Mirrors—Two black powder coated, rectangular heads, approximately 16”x7”
209 with additional integral convex mirrors, mounted on a breakaway type “C”
210 bracket. Both the main and convex mirrors are to be heated and thermostatically
211 controlled.
212
213 3. Radio—AM/FM stereo with electronic tuning and clock
214
215 4. Windshield wipers—2 speed electric, single motor with intermittent switch
216
217 5. Gauges—air pressure (2), oil pressure, voltmeter, engine coolant temperature,
218 fuel, hour meter, tachometer, transmission oil temperature,
219
220 6. Odometer, trip hours, trip miles, ammeter.
221
222 7. Warning lights and alarms—Low air pressure, low fuel, low oil pressure, low
223 coolant level, high coolant temperature, low battery voltage, low windshield
224 wiper fluid
225
226 8. Seating—Driver’s side air suspension. Passenger’s side to be stand up right hand
227 steer with back cushion and flip down seat
228
229 9. Air conditioning and heater—chassis manufacturer installed
230

- 231 10. Sun visors-right and left, with center extenders
232
233 11. Overhead storage console with dual storage pockets
234
235 12. Full headliner and padded door panels
236
237 13. Steering on driver and passenger side
238
239 14. Paint-Cab shall be painted with high quality, high solid content, White Dupont
240 #N6431 base coat with clear coat overcoat
241
242 15. Everything below the top of the frame shall be powder coat painted
243

244 TRIM AND WHEELS

- 245
246 1. Front-Low Profile-255/70r22.5 tubeless type radial 16 ply hwy tread Michelin
247 22.5 painted steel 10 stud, hub piloted, flange nut, metric mount 8.25 rims
248
249 2. Rear- Low Profile-255/70r22.5 tubeless type radial 16 ply hwy tread Michelin
250 22.5 painted steel 10 stud, hub piloted, flange nut, metric mount 8.25 rims
251

252 MISCELLANEOUS

- 253
254 1. Gear ratio—Vehicle shall be geared to obtain speed of 65 MPH and shall be
255 programmed not to exceed 60 MPH
256
257 2. Wheelbase of 197 and 130 CA is approximant. It is the winning chassis
258 manufacturer to get with the body company to determine the correct wheel base
259 and cab to axle
260
261 3. Air dryer—Bendix AD-9 (for approved equivalent)
262
263 4. Automatic neutral transmission shifts to neutral when parking brake is engaged
264
265 5. Brake Chambers—spring relocated to rear of axle for maximum ground clearance
266

267 **BODY**

- 268
269
270 1. Capacity-12 cubic yard
271
272 2. Body floor shall be 3/16" AR 400 plate, heat treated to pass a brinnel hardness
273 test of 400 Minimum. The plate shall cover 2" x 2" x 1/4" cross members on 16"
274 centers welded over 4"x2-1/4" tubing longitudinal.
275
276 3. Body sides shall be 3/16" Hi Tensile, ASTM A 572 sheet metal rolled into a

277 broad radius for added strength 3"x2" tubing posts shall be provided at each end
278 of the body sides.

279

280 4. Body roof shall be 12 GA Hi Tensile, ASTM A 607, Grade 50 sheet metal
281 bordered by two (2) each 3"x2" tubing cross members, front and back, and one
282 2"x2" tubing down the middle from front to back .

283

284 5. Tailgate shall be one (1) piece, bubble style, top hinged. Tailgate shall be 10 GA
285 AR 234 sheet reinforced with 3"x2"x3/16" rectangular tubing. It shall be secured
286 to the body using two sets of hinges with 1½" hinge pins at the roofline. The
287 floor is secured in the closed position by means of a self-loading tailgate feature.
288 A heavy duty rubber seal shall be installed along the bottom and partially up the
289 side to prevent leakage.

290

291 HOPPER AND PACKING MECHANISM

292

293 1. Capacity-Three (3) cubic yard hopper capacity

294

295 2. Hopper floor and sides shall be formed from 3/8" T-I, ASTM A 514, Grade B
296 plate. The hopper clean out trough shall be located at the front of body for safety
297 reasons and to expedite clean out from behind packer. Cleaning is done from
298 ground level without the need to enter hopper area.

299

300 3. The hopper shall be lined with nine (9) ¼" AR 500 wear strips to match wear
301 strips on packer frame. Plow steal wear strips are not acceptable.

302

303 4. Packer measurements are 24" high and 74" wide.

304

305 5. The packer frame shall be formed from 3/8" T-I, ASTM A 514 Grade b, plate.
306 Packer shall be lined with no less than nine (9) ¼" AR 500 wear strips. A
307 minimum of two (2) on each side and five (5) on the floor.

308

309 6. Packer cylinders shall be installed horizontal, scissor design and will be a 5 ½"
310 bore, three (3) stage telescopic.

311

312 7. A packer follower plate with a rubber wiper shall be installed to prevent dumping
313 behind the packer. Plate shall be built from ½" plate, ASTM A 36. No sliding or
314 roll-up follower plates are acceptable.

315

316 AUTOMATED-ARM

317

318 1. The arm shall be mounted on the body to save cab to make space and relieve
319 chassis frame of undo stress.

320

321 2. Full cycle time for arm shall not exceed (6.5) seconds from side of truck.

322

- 323 3. Arm will reach a container, centered, 96" from the side of the truck.
324
325 4. Maximum height from the bottom of a 100 GA. Cart to the ground in full dump
326 position shall be less than 150".
327
328 5. Universal grippers shall be capable of picking up 32-45 gallon cans. Grippers
329 shall be lined with rubber pads for protection.
330
331 6. A cart Size Selector Switch will be installed in the cab
332

333 CONTROLS

- 334
335 1. ARM: a four (4) position single metering air controller (joystick) with a three (3)
336 position electric toggle switch on top for grippers.
337
338 2. Separate push button switch mounted on side of joystick controls will be used to
339 "shake" cart to protect joystick assemble.
340
341 3. Packer cycles continuously. An emergency stop and retract button shall be
342 provided. Packer controls and switch shall be pneumatically operated. No
343 electrical components will be accepted.
344
345 4. Other controls, hoist, and tailgate shall be operated with three (3) positions, 4-way
346 air toggle valves. Safety features on tailgate toggle shall be provided.
347

348 HYDRAULICS

- 349
350 1. Pump; front mounted tandem unloader pump, rated at 28&34 GPM and 1500
351 RPM.
352
353 2. The hydraulic reservoir shall have minimum 50GA capacity. It shall include a
354 shut-off valve, sight glass and temperature gauge, 6" clean out ports, 100 micron
355 suction strainer, magnetic drain plug and a 10 micron breather filter.
356 3. Breather caps are not acceptable.
357
358 4. Valve: Commercial shearing type A-35 air shifters.
359
360 5. Cylinders
361 i. Packer (2) each, 5 1/2 " bore x 155" stroke
362 ii. Tailgate (2) each 3" bore x 42" stroke
363 iii. Arm (reach) 2 1/2" bore x 72" stroke
364 iv. Arm (grip) 2" bore x 8" stroke
365 v. Arm (dump) 3" bore x 20" stroke
366 vi. Arm (elevate) 2" bore x 24" stroke
367
368 6. All cylinders shall have chrome-plated rods, straight thread o-ring ports and

369 adjustable cushioning where needed.

370

371 7. Hydraulic hoses shall be SAF 100-R2 used with crimp fitting that bite into hose
372 wire. Parker hose with 3 to 1 burst pressure ratio

373

374 8. Any exposed hose shall be guarded with a hose protector.

375

376 MISCELLANEOUS

377

378 1. A red pilot light shall be installed to indicate “pump on,” “hoist up,” and “tailgate
379 open.” An audible buzzer will sound when tailgate is open and/or hoist is raised.

380

381 2. All controls shall be permanently labeled using heavy plastic or metal signs.

382

383 3. Paint

384 (1) coat etching primer

385 (2) coats epoxy primer

386 (3) coats Dupont Imron 5000

387

388 4. A fire extinguisher shall be installed in a convenient location. All safety
389 equipment to be included.

390

391 WARRANTY

392

393 1. Warranty period shall be for five (5) years on the automated side loading refuse
394 body and all of it’s components with no exceptions.

395 2. Warranty shall start on in service date.

396 3. All warranty registrations shall be completed by the vendor and copies provided.

397 4. Factory service manuals, electrical schematics and component loators to be
398 supplied for body and chassis.

399

400 5. Warranty period to be “bumper to bumper” for five (5) years on the chassis,
401 engine, transmission and drive train, excluding wear items.

402

403 6. Five (5) workday repair completion guarantee. The primary vendor will pay \$400
404 per day of each day after the fifth day turnaround period has elapsed. Partial days
405 will be prorated based upon an eight (8) hour work day, beginning at 8:00 am.

406

407 7. Instead of the \$400 per day Five (5) work day repair completion guarantee
408 penalty, the vendor can provide a loaner vehicle of equal to or better quality
409 specifications of the automated truck that has exceeded the five day repair limit.

410

411 8. Bidder shall include copy of warranty terms and conditions and a list of any
412 exceptions from the warranty.

413

414 9. All warranty work for cab, chassis, and body shall be the responsibility of the
415 bidder.

416

417 OPTIONS

418

419 1. Three (3) camera system with 7" color monitor for Rear of truck, Arm, and
420 Hopper

421

422 2. Two (2) high power reverse flood lights

423

424 3. Electronic touch-button control keypad with build in diagnostics

425

426 4. Crusher panel

427

428 5. Work light on the body at the automated arm

429

430 6. Body shall be equipped with highly reflective tape outlining the sides and rear of
431 the body and hopper.

432

433 7. Vehicle to be equipment with a Lincoln (or equivalent) auto-lube for the purpose
434 of lubricating all lube points for garbage body and chassis.

435

436 Warning Lights

437

438 1. Provide LED lights for rear turn signals and auxiliary lighting. Brake, turn and
439 tail lights use Whelen 200 series maximum intensity 20R00XRR, back up
440 lighting use 200 series Whelen 20C00WCR equal to or better.

441

442 2. Provide LED 360 Super-LED Beacon Whelen Model L31-Class 1, SAE and
443 California Title XIII Certified equal to or better. Mounted to the rear of body
444 and mounted on the front top center of the cab for safety.

444

445 3. All electrical and lighting components shall conform to DOT standards.

446

447 4. (4) Amber LED alternating flashing lights at rear of truck. (Whelen 4" Round
448 Super-LED® Lighthoods or better)

449

450 5. Two (2) amber LED flashing light heads, one on each side of truck body
451 (Whelen 400 Series Linear-LED® Super-LED) or equivalent.

452

453 6. Two (2) amber high intensity LED alternating flashing light heads mounted
454 on the front grill

455

456 7. All warning lights controlled on single switch.

457

458 8. All lighting to meet or exceed OSHA and state requirements and be in
459 accordance with Motor Vehicle Safety Standard 108. All brake, turn signal
lights, taillights, marker lights and strobe light shall be LED. All warning
lights shall be mounted with a single in-cab switch.

456

457 9. Body shall also be equipped with duplicate stop, turn and taillights above and
458 below the hopper (LED).

459

458 10. Reflective yellow decal at rear of truck in minimum 8" black lettering stating
459 "Frequent Stops."

460 11. All flashing lights should be amber

461

462

463 COLOR

464 1. Body color shall be solid white Dupont #N6431

465

466 AVL

467

468 1. Must include the following;

469 2. One (1) Location Technologies brand LT5 Mobile GPS/AVL Modem unit with
470 Control Head Interface Cable.

471 3. One (1) LT Battery Guard Vehicle Power Timer and cables

472 4. One (1) Location Technology permanent mount GPS Antenna (positioned on top,
473 center of cab) and cables

474 5. One (1) Modem Interface Assembly and cables

475 6. Data-only Radio: Motorola CDM-750, 4 channel UHF, 25 watt dash mount with
476 3.5 db gain antenna for the GPS/AVL system and cables

477 7. All equipment must work with current AVL system used by the City of
478 Chattanooga, Department of Public Works, Division of City-Wide Services. All
479 wires and parts to make AVL fully functional on the vehicle must be included.

480 8. Installation specifics to be determined by City personnel.

481 9. Contact Information:

482 Location Technologies, Inc.

483 5207 NW Crooked Road, Parkville, MO 64152

484 <http://www.loctech.com>

485

486 RADIO

487 Motorola Two-way radio compatible with the City of Chattanooga's current radio
488 operating system.

489

490 Delivery

491 90 Days

492

493 TRAINING

494 Minimum of 2-hour professional training for operators.

495

496 Minimum of 2 day training on body to be available to on site shop personnel.