

AGREEMENT FOR PURCHASE AND SALE OF GOODS

Bid/Proposal No. 016-12

Contract No. _____

Project Name **Purchase of Street Sweeper**

THIS AGREEMENT FOR PURCHASE AND SALE OF GOODS (the "Agreement") is made this **7th day of March, 2012**, by and between **Environmental Products of Florida, Corp.**, whose address is **2525 Clarcona Road, Apopka, Florida, 32703** ("Seller") and **THE CITY OF NAPLES**, a Florida municipal corporation, the address of which is **735 Eighth Street South, Naples, Florida 34102** ("Buyer"). In consideration of the mutual covenants and agreements hereinafter set forth herein, and for other good and valuable consideration, the receipt and sufficiency of which are hereby mutually acknowledged, Buyer and Seller agree as follows:

1. **Description of Goods; Sale and Delivery.** Seller shall sell, transfer, and deliver to Buyer a **Street Sweeper** as described in Exhibit "A" subject to such terms as are set in this Agreement.

2. **Acceptance; Purchase.** Buyer shall accept the goods and pay the total sum of: **\$222,156.00 with a buy back price of \$40,000.00 after 5 years and \$66,000.00 maintenance program** for the goods in accordance with the terms of this Agreement.

3. **Identification of Goods.** Identification of the goods shall not be deemed to have been made until both Buyer and Seller have agreed that the goods in question are to be appropriate to the performance of this Agreement.

4. **Rate and Time of Payment.** Unless otherwise specified, Buyer shall make payment to Seller for the goods within 30 days after the goods are received by Buyer.

5. **Receipt of Goods.** The goods shall be deemed received by Buyer when delivered to Buyer at City of Naples, **Equipment Services Attn: Buddy Bennett, 370 Riverside Circle, Naples, Florida 34102**. Delivery of the goods to Buyer shall occur on a business day and shall not occur after 3:15 p.m. on the delivery day.

6. **Risk of Loss.** The risk of loss from any casualty to the goods, regardless of the cause, shall be on Seller up to the time of receipt of the goods by Buyer at the place of delivery, but only after any proper inspection has been completed without rejection of the goods. Thereafter, such risk shall be on Buyer, including any goods thereafter returned to Seller until their receipt by Seller.

7. **Warranty Against Encumbrances.** Seller warrants that the goods are now free, and at the time of delivery shall be free, from any security interest or other lien or encumbrance.

8. **Warranty of Title.** Seller warrants that at the time of signing this Agreement, Seller neither knows, nor has reason to know, of the existence of any outstanding title or claim of title hostile to the rights of Seller in the goods.

9. **Product Warranty.** Seller provides general warranties of fitness and general warranties that the goods are free from defects, for 1 year from acceptance of the goods, except as may otherwise be set forth in the Description/Proposal, or other attached warranty.

10. **Right of Inspection.** Buyer shall have the right to inspect the goods at the time and place of delivery, and within 5 business days after delivery, Buyer must give notice to Seller of any claim for damages on account of the condition, quality, or grade of the goods, and Buyer must specify in detail the basis of such claim. The failure of Buyer to comply with these conditions shall constitute irrevocable acceptance of the goods by Buyer.

11. **Procedure as to Rejected Goods.** On receipt of notification of rejection, Seller will immediately arrange to receive back the goods for shipment and return. However, within 5 days, Seller may have an agent inspect such goods for nonconformity; otherwise, such inspection will be made on return to Seller's storage facility. When such goods are confirmed or acquiesced in as nonconforming, Seller will ship conforming goods within 30 days of the notice of rejection unless Buyer earlier notifies Seller to forgo such shipment.

12. **Governing Law.** The parties acknowledge that the transaction that is the subject matter of this Agreement bears a reasonable relation to the State of Florida and agree that the law of the State of Florida will govern their rights and duties. The parties specifically intend that the provisions of Article 2 of the Florida Uniform Commercial Code will control as to all aspects of this Agreement and its interpretation, and that all the definitions contained therein will be applicable to this Agreement except where this Agreement may expressly provide otherwise.

13. **Notices and Address of Record.** All notices required or made pursuant to this Agreement to be given by Seller to Buyer shall be in writing and shall be delivered by overnight courier, by hand or by United States Postal Service Department, first class mail service, postage prepaid, return receipt requested, addressed to the following:

To Buyer:

City of Naples
Attention: **A. William Moss**, City Manager
735 Eighth Street South
Naples, Florida 34102-3796

All notices required or made pursuant to this Agreement to be given by Buyer to Seller shall be made in writing and shall be delivered by overnight courier, by hand or by the United States Postal Service Department, first class mail service, postage prepaid, return receipt requested, addressed to the following:

To Seller:

Environmental Products of Florida, Corp.
Attention: **Jeff Haase**, Senior Vice President
2525 Clarcona Road
Apopka, Florida 32703

Either party may change its address of record by written notice to the other party given in accordance with requirements of this Article.

15. **Counterparts.** This Agreement may be executed in any number of counterparts, each of which shall be deemed to be an original as against any party whose signature appears thereon and all of which shall together constitute one and the same instrument.

16. **Effective Date.** This Agreement shall take effect on the day of execution by the last party to execute this agreement.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement on the day first written above.

ATTEST:

"SELLER":

Environmental Products of Florida, Corp.

(Corporate Seal)

(Print Name: _____)

By: _____

ATTEST:

"BUYER"

City of Naples, Florida

By: _____
Tara A. Norman, City Clerk

By: _____
A. William Moss, City Manager

Approved as to form and legal sufficiency:

By: _____
Robert D. Pritt, City Attorney

Agreement for Purchase and Sale of Goods
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EXHIBIT A

**TECHNICAL SPECIFICATIONS
FOR
SIX WHEEL PURE VACUUM STREET SWEEPER WITH BROOM ASSIST**

Seller shall provide for the purchase of one (1) new 2012 and unused vacuum street sweeper having a six wheeled, cab-over truck chassis with automatic transmission, dual diesel engines, sweeper controls and switches, 8.0 cubic yard hopper, 335 gallon total water capacity and left and right side brooms with variable down pressure controlled from the cab per the specifications below.

5.0 CHASSIS (2012 Model year Freightliner M2 (Dual Steer) OR EQUAL)

- 5.01 Chassis shall be conventional design with 33,000 GVW rating. State chassis year, make, model:_____
- 5.02 Wheelbase shall not exceed 172 inches.
- 5.03 Cab to axle shall be not more than 130 inches.
- 5.04 Yield strength of the Rail, High Strength, 80,000 PSI, 9/32" X 3 7/16" X 10 1/8".
- 5.05 For safety, the rear of the sweeper shall be equipped with a rear panel to provide under ride protection. When dumping debris, material shall not be discharged on top of the rear panel.
- 5.06 Front tow hooks shall be provided
- 5.07 One- (1) 50-gallon fuel tank shall be shared by both engines and shall be easily accessible without raising or shifting any components. A fuel gauge, in cab, shall be supplied. Sight tube is not acceptable.
- 5.08 Diesel emissions shall be EPA 2010 and have a minimum capacity of 6 U.S. gallons diesel emissions fluid

5.1 CHASSIS ENGINE

- 5.11 Truck engine shall be 2010 Emission Compliant, Cummins ISB 6.7-200 or equivalent, turbocharged diesel, 200 HP @ 2300 RPM, 520ft-lbs. @ 1600 RPM.
- 5.12 Truck engine shall be equipped with a single vertical exhaust system.

- 5.13 The cooling system shall be protected to -34° F.
- 5.14 Engine shall be equipped with block heater.
- 5.15 Radiator fan shall be viscous drive type.

5.2 TRANSMISSION, AXLES, WHEELS & BRAKES

- 5.21 An Allison 2500 RDS series (or approved equal) automatic transmission shall be provided.
- 5.22 The 2-speed rear axle shall have a ratio of 6.17/8.40:1 for proper sweeping speeds.
- 5.23 Front axle shall be 12,000 and be equipped with taperleaf front suspension and shock absorbers.
- 5.24 The rear axle shall be 21,000 lb.
- 5.25 For safety, and to allow the emergency interchange of tires at a job site, the front and rear tires and rims shall be interchangeable.
- 5.26 Tires shall be tubeless radial tires 14 ply JJR22.5 "G" load rated. The rear axle shall include dual tires for load capacity; singles will not be acceptable.
- 5.27 Rims shall be 10 hole steel hub piloted 22.5 x 8.25
- 5.28 Parking brake shall be spring applied rear wheel drum and shoe.
- 5.29 Brakes shall be full air brakes S Cam with a 18.7 CFM capacity compressor, with automatic slack adjusters and ABS.

5.3 CAB

- 5.31 Maximum visibility, forward line of sight from the chassis front bumper to the point on the ground visible to the operator shall not exceed 8 feet for an SAE 98th percentile size operator.

- 5.32 Steering shall be full power with dual operator controls.
- 5.33 Seats shall be adjustable, high back, covered with cloth for air circulation and include 3 point seat belts.
- 5.34 Sweeper shall include two (2) outside west coast type mirrors with lower 8 inch convex lens for easy viewing of the side broom during sweeping.
- 5.35 To maximize operator visibility of the curb and sweeping gear, an 12" outside RH and LH fender mirrors shall be mounted forward of the front wheels.
- 5.36 For safety during night sweeping, switches shall be illuminated so that they can be readily identified without the use of the cab dome light.
- 5.37 Switches shall be clearly identified by name and symbol.
- 5.38 Cab interior environment shall be fully air-conditioned including a fresh air heater/ventilator/defroster.
- 5.39 Cab shall have full flow through ventilation for optimal temperature control and operator comfort.
- 5.40 Wipers shall have intermittent feature.
- 5.41 Interior of cab shall have acoustical insulation for low operating noise, automotive type trim, and center sweeper console.
- 5.42 Dash shall be faced with soft molded plastic.
- 5.43 All glass shall be tinted safety glass.
- 5.44 Each operator position shall have adjustable sun visor.
- 5.45 Doors shall be keyed alike locks.
- 5.46 Door windows shall be roll up type.
- 5.47 Side windows shall have defogger.
- 5.48 Cab shall include 12V power supply

- 5.49 Cab shall include a dash mounted radio with (2) speakers, am/fm antenna shall be included.
- 5.50 Dual Electric horns shall be provided.

5.6 INSTRUMENTS

- 5.61 Chassis left side operator instrument panel shall be chassis OEM, full vision illuminated with tachometer, speedometer, odometer, trip odometer, hour meter, fuel gauge, water temperature gauge, oil pressure gauge, transmission temperature gauge, air pressure gauge, and volt gauge.
- 5.62 Chassis right side operator instrument panel shall be chassis OEM, full vision illuminated with tachometer, speedometer, odometer, trip odometer, hour meter, fuel gauge, water temperature gauge, oil pressure gauge, transmission temperature gauge, air pressure gauge, and volt gauge.
- 5.63 Chassis engine instruments shall include warning light and chime for low coolant level and high coolant temperature to warn the operator of a potential problem before any damage to the engine occurs.
- 5.64 Console shall have left/right primary driver switch.
- 5.65 Hydraulic functions shall be controlled by rocker switches located in the cab mounted control panel.
- 5.66 Truck instruments shall include warning lights for battery.
- 5.67 All console switches including transmission controls and all gauges shall be illuminated.
- 5.68 Intake mounted air restriction indicator with graduations.

5.7 ELECTRICAL

- 5.71 Batteries should be located in an enclosed accessible environment for long life and ease of service.
- 5.72 Chassis shall have two (2) maintenance free batteries rated at not less than 1850 CCA total, 12 volt.
- 5.73 Chassis engine shall have a 160 amp alternator.

- 5.74 Chassis lighting shall include sealed multi-beam halogen head-lights, stop lights, tail lights, backup lights, license plate lights, clearance lights, signal lights, illuminated gauges and instrument panel, and directional lights with hazard switch.

5.8 CHASSIS ACCESSORIES

- 5.81 All lights on truck to be LED. This shall include stop, tail, reverse and turning indicators.
- 5.82 Air dryer for the chassis to be AD-9.
- 5.83 Dual cloth air ride Bostrom high back seats shall be provided.
- 5.84 An air filter restriction indicator shall be provided.
- 5.85 A front spray bar mounted to the underside of the front bumper shall be provided on the chassis.
- 5.86 An auxiliary hydraulic pump shall be added to aid in dumping. This pump will be used as an alternate to starting the auxiliary motor to dump the truck.
- 5.87 A Midwest autolube system for the chassis and body shall be provided.
- 5.88 A five (5) pound fire extinguished shall be included.
- 5.89 A set of three (3) triangle reflectors shall be included.

6.0 SWEEPER ENGINE

- 6.1 Diesel engine shall be 4 cylinder, turbocharged, dynamically counter balanced 276 CID (John Deere 4045T or equal). Engine must be Tier 3 Emission compliant.
- 6.2 Horsepower rating shall be 115 HP (86 kW) @ 2500 RPM, torque 291 lb-ft @1400 RPM.
- 6.3 For greater heat dissipation, less noise and lower cost of maintenance, engine shall have individually replaceable wet sleeve cylinder liners.
- 6.4 Engine shall be protected by a dual safety element dry type air cleaner & restriction indicator that indicates it is time to service the filter element.
- 6.5 Engine shall be filled with 50/50 mixture anti-freeze/water for cold weather storage and or operation.
- 6.6 Sweeper engine shall drive the blower fan by a heavy-duty five (5) "V" groove power belt, without the use of a step-up auxiliary gearbox. The power belt will provide ease of maintenance and is more cost effective than using a step-up auxiliary gearbox.
- 6.7 To minimize noise and vibration, the entire joined engine, coupling and fan assembly shall be isolation mounted on the auxiliary frame.
- 6.8 The engine shall be enclosed and surrounded by the front part of the sweeper body, by two fiberglass access doors. One at the right-hand side and one at the left-hand side of the sweeper body. These doors provide access to serviceable items without tilting the hopper.
- 6.9 A fluid coupler shall be installed between the auxiliary engine and the power belt drive, which allows for smooth starting and stopping of the engine, while preventing the momentum of the fan system from driving the engine when the engine is turned off.

7.0 BLOWER

- 7.1 The blower shall be rated at not less than 20,000 CFM. The fan shall be rated by an independent test facility.

- 7.2 The blower shall be driven by a five (5) "V" groove power belt for maximum performance and simplicity of construction, with tension adjustment not requiring repositioning of the engine.
- 7.3 The blower shall be a turbine type, with 9 vanes, 31 3/8 in. diameter constructed of abrasion resistant steel and fully balanced for longevity of fan and bearing life. A die-cast aluminum alloy or steel open face blower covered with rubber or not, will not be acceptable.
- 7.4 The blower housing shall be constructed of 10 gauge abrasion resistant steel and lined with Linatex (or equal) for maximum extended wear in abrasive environments.
- 7.5 The blower housing shall have an inspection door for quick inspections without removing the blower housing or looking into the air exhaust opening. Access to this inspection door must be possible without tilting the hopper.
- 7.6 The blower housing shall not be an integral part of the hopper. Replacement of the blower housing must not require any cutting and welding of the housing and or hopper.
- 7.7 The blower shall be mounted on heavy-duty re-greasable bearings, capable of being greased from ground level. Greasing of the bearings must be possible without tilting the hopper.

8.0 SUCTION NOZZLES AND HOSES

- 8.1 The suction nozzle pick-up area shall be not less than 174 sq./in. with suction nozzle width a minimum of 30 inches.
- 8.2 The suction hose shall have a quick disconnect coupling, not requiring any tools, at the lower area, near the suction nozzle. This is to allow easy access to both the suction nozzle and suction hose for inspection and cleaning when obstructions occur. The quick disconnect must be accessible without tilting the hopper.
- 8.3 The entire suction hose quick disconnect section and hose transition piece into the suction hose gate valves must be of a bolt-on design for easy maintenance and service.
- 8.4 All metal components, nozzle, tube, etc. shall be constructed of abrasion resistant steel for longer life in an abrasive environment. Cast aluminum components or components using rubber liners are not acceptable due to shorter service life.

- 8.5 The suction hose shall be not less than 11 inches in inside diameter to allow for larger objects and large quantities of debris to enter the suction hose.
- 8.6 The nozzles shall extend 15 inches beyond the wheel track for increased performance closer to the curb and better visibility of the nozzle from the cab. The nozzles shall have a replaceable wear edge for running against the curb.
- 8.7 An integral automatic "jackknife style" gate valve shall be bolted on the top of the suction hose where the material enters the hopper. The gate valve is automatically activated with the suction nozzle activation and prevents material from dropping back down the nozzle tubes when the vacuum is stopped. The gate valve also prevents material/debris from being dropped into the suction nozzle when the sweeper is traveling.
- 8.8 The jackknife style gate valve is of such a design that it cleans itself from debris. It is operated by a heavy-duty air cylinder that activates the gate valve. This cylinder shall be similar to other air cylinders used in the air system of the sweeper for interchangeability of parts and easy service.
- 8.9 The suction nozzle shall ride on two heavy-duty caster wheels. These caster wheels shall be of a pivoting design. This allows the nozzle to move sideways, better staying in the path of debris and following road contours, as well as improving service life. Non-pivoting caster wheels are not allowed as they have a reduced service life.
- 8.10 The suction nozzle shall be equipped with a front mounted shutter. This shutter allows easy entry of large objects and large quantities of leaves. The shutter must be replaceable as a separate part, rather than replacing the entire suction nozzle. Suction nozzles that pivot in the back creating a shutter opening in the front, or suction nozzles that have no shutter as part of their design shall not be allowed.
- 8.11 Sweep path:
 - Nozzle only = 35 inches
 - Side broom and nozzle = 52 inches
 - Extension broom and nozzle = 78 inches
 - Side broom, extension broom and nozzle = 95 inches
 - Dual side brooms, extension broom and dual nozzle = 144 inches

9.0 SIDE BROOMS

- 9.1 The right and left side broom shall be a free floating trailing arm design with inward motion safety to prevent damage when sweeping and encountering a fixed obstacle. The trailing arm shall be of a parallelogram design for simple, non-binding action/motion and for constant bristle and wear pattern.
- 9.2 The side brooms shall be 28-inch diameter minimum, with hydraulically driven rotation.
- 9.3 The side brooms shall be pneumatically raised, lowered and suspended by heavy duty pneumatic cylinders that are common with other pneumatic cylinders on the sweeper for ease of service and maintenance.
- 9.4 Adjustable down pressure shall be pneumatically controlled by the operator from the cab.
- 9.5 The broom hydraulic motor drive shall provide not less than 4500 in/lbs. of torque for superior digging power.
- 9.6 The side broom assemblies shall have greaseless pivot pins for ease of maintenance.
- 9.7 The side broom assemblies shall be supported in the storage position by a transport hook.
- 9.8 Each side broom shall be controlled from in the cab by simple rocker switches.
- 9.9 To prevent exposure to accidental laceration by the bristle tips, side brooms shall retract with wire bristle tips unexposed. No exception will be allowed to this safety requirement.
- 9.10 Both side brooms shall be capable of adjusting the tilt from inside the cab. In cab adjustment will only be accepted.

9.0 EXTENSION BROOM

- 9.1 The extension broom shall be 54 inches long, 16 inches in diameter, disposable, and reversible.
- 9.2 The extension broom shall be hydraulically driven (with relief valve), pneumatically raised, lowered, and suspended.
- 9.3 The extension broom shall operate at an 18 degree windrow angle minimum for

quicker sideways movement of debris. The broom can pivot for left hand side or right hand side sweeping and is activated by a heavy duty pneumatic cylinder that is common with other pneumatic cylinders on the sweeper for ease of service and maintenance.

- 9.4 The extension broom hydraulic motor drive shall provide not less than 4500 in/lbs. of torque for superior digging power.
- 9.5 Suspension shall be by pneumatic lift with out-of-cab variable down pressure control for maximum digging power and wear control.
- 9.6 The extension broom shall have a greaseless pivot pin.
- 9.7 The extension broom rotation shall stop and all sweeping functions shall raise automatically, when transmission is placed into reverse or when the sweeper is put in transport mode.
- 9.8 A broom cover shall be provided

10.0 HOPPER

- 10.1 Volumetric capacity shall be 8 cubic yards minimum.
- 10.2 Hopper shall be constructed of 10 gauge steel sides, and ¼ in. floor.
- 10.3 A weight actuated full load indicator shall be mounted in the cab on the control panel.
- 10.4 The hopper tilt angle when dumping shall be a minimum of 50°. Dumping shall be accomplished by tilting the hopper via a two-stage telescopic cylinder. The use of multiple cylinders for tilting the hopper shall not be acceptable. The use of a moving raker bar which is attached to the rear door inside the hopper in lieu of tipping the hopper for dumping shall not be acceptable.
- 10.5 The hopper floor angle shall be a minimum of 10°.
- 10.6 A removable, replaceable and adjustable, abrasion resistant “scoop” style steel deflector shall be located at each suction inlet. This deflector is to direct material to the center of the hopper for optimal loading conditions.
- 10.7 The hopper rear door shall be hinged at the top of the door and opened by means of a hydraulic cylinder. The hopper rear door should open at a minimum angle of 90°

to be perpendicular to the hopper opening for maximum dumping action. The City has evaluated many styles and considers this design to be the most effective for dumping and cleaning.

- 10.8 Hydraulic cylinder movement shall be controlled by the use of two hydraulic valve levers on the right-hand side of the hopper to view discharging of debris out of the hopper during dumping for maximum safety.
- 10.9 For maximum operator safety the rear hopper door shall have an external door prop. No exception to this safety requirement shall be accepted.
- 10.10 The hopper rear door shall include an automatic lock mechanism for a tight fit and optimal sealing between the hopper and the rear door.
- 10.11 The rear door seal shall be a water resistant heavy-duty reinforced D style rubber seal for optimal sealing. Foam seals that can absorb moisture and freeze are not acceptable.
- 10.12 Two 34½" x 43½" screens, for a total screen area of 3000 square inches, of not less than 11 gauge steel shall be installed to allow air to move freely from the hopper into the blower area. The hopper screens shall be hinged and pinned to allow easy clean out.
- 10.13 The front section of the hopper must cover the auxiliary engine, and must be constructed of heavy fiberglass. This fiberglass consists of a roof section and two fiberglass side doors that allow access to the serviceable items for ease of maintenance. All these items must be accessible without tilting the hopper.
- 10.14 The hopper shall cover the main water tank of the water system and will provide easy access to the water system components. Water tanks that are an integrated part of the hopper shall not be allowed.
- 10.15 When raising the hopper the water tank shall not raise with the hopper. The water tank shall be mounted to the sweeper frame and shall be removable for service. Not raising the water tank when raising the hopper puts less strain on the dump system.
- 10.16 The hopper shall have hopper cut-outs at each side of the hopper. These cut-outs provide easy access to the quick disconnect section on the suction nozzle and allow the suction hose and nozzle to have side-way movement for establishing more suction power at the curb
- 10.17 The hopper shall have an inspection door located on the right hand side of the hopper, located on the rear of the hopper. There shall also be an accompanied step

and grab handle.

10.18 The hopper shall have a 6” hopper drain valve located on the rear of the door.

11.0 SPRAY WATER SYSTEM

- 11.1 The water system shall consist of two water tanks. Both shall be removable for service and shall have a total capacity of 335 gallons. Both tanks shall be constructed of rust proof polyethylene.
- 11.2 The water tanks shall be frame mounted with no part sharing any common wall with the hopper and shall not rise during hopper dumping.
- 11.3 Two electric 12 volt water pumps, 2-speed, diaphragm type pump provide 4 GPM & 40 PSI to the suction nozzle, the side broom and the extension broom. Belt driven pumps are not acceptable.
- 11.4 One water pump is fully dedicated to supplying water to the RH suction nozzle, RH side broom and extension broom for optimal dust control.
- 11.5 One water pump is fully dedicated to supplying the LH suction nozzle, LH side broom and optional front spray bar for optimal dust control.
- 11.6 The water pumps can be selectively controlled from the cab to adjust to the sweeping conditions.
- 11.7 A 25 ft. fill hose with NST coupling and anti-siphon connector with strainer shall be supplied. A quick disconnect shall also be provided.
- 11.8 A water level gauge shall be provided on the control console within the cab.
- 11.9 Two (2) water spray nozzles are located at each side broom for optimal dust control.
- 11.10 Seven (7) removable water spray nozzles are located inside the suction nozzle. Water spray nozzles that spray on the outside of the nozzle are not acceptable.
- 11.11 The water filter, located near the water pumps must be easy to access and clean without tilting the hopper. A ball valve must be provided to allow cleaning of the filter without the loss of water from the water tanks.
- 11.12 All water piping shall be external to the operator cab. For safety, no water lines

capable of leaking or bursting shall be within the cab.

- 11.13 The extension broom is supplied with four (4) rubber mounted, quick disconnect spray nozzles for easy cleaning and maintenance. Non rubber mounted and non quick disconnect water nozzles are not acceptable.
- 11.14 All water lines shall be color-coded green for easy identification. Pressure water lines shall be Nylon PFT line for maximum life. All suction and fill water hose is a synthetic rubber braid reinforced hose for maximum life. Any other materials are not acceptable.
- 11.15 All water connections are either Presto-matic push to lock or Push Lok fittings for easy assembly and maintenance and long life.
- 11.16 A 2 ½” anti-siphon air gap shall be supplied on the water tank fill to prevent contamination of supply water.

12.0 HYDRAULIC SYSTEM

- 12.1 Tandem hydraulic pumps shall be a direct gear pump for maintenance free operation, having a flow capacity of 7.7 GPM @ 2500 RPM each. A belt driven or PTO driven hydraulic pump is not acceptable.
- 12.2 Reservoir capacity shall be not less than 23 gallons and have an exterior sight gauge. The reservoir must be located in the enclosed auxiliary engine compartment for quick inspections without tilting the hopper.
- 12.3 Hydraulic oil cooler shall be standard with fresh air intake and accessible with out raising the hopper. All hydraulic circuits shall have quick disconnect pressure check ports for ease of maintenance.
- 12.4 To minimize the hazards of potential leakage, all high pressure fittings shall be “O” ring face seal (OFS) on hose ends or “O” ring boss on hydraulic ports. Other systems shall not be acceptable.
- 12.5 There shall be a 10 micron spin-on hydraulic filter. Exchange of the filter must be possible without tilting the hopper.
- 12.6 To further reduce the chance of hydraulic system contamination and joint leakage use of standard pipe threads requiring pipe dope shall not be acceptable.

13.0 PNEUMATIC SYSTEM

- 13.1 The pneumatic system shall have DOT, prestomatic push to lock fittings for ease of maintenance and service. Any other fittings are not acceptable
- 13.2 There shall be a PR4 type pressure protector for the chassis air system to protect the chassis air system at air pressures below 85 PSI.
- 13.3 A separate air tank for all sweeper air components shall be provided.
- 13.4 All pneumatic cylinders must be rated to 150 PSI and have separate rod seal and wiper to prevent contamination entering the cylinder.
- 13.5 Each cylinder shall be controlled by a single, two positions, solenoid valve mounted on a manifold with common input and exhaust. A manual override shall be provided on each solenoid valve for trouble shooting and function lockout.
- 13.6 There shall be a filter with polycarbonate bowl to filter out contaminants down to 5 microns to prevent contamination in the air system.
- 13.7 All air lines should be color-coded silver and function stamped for ease of identification maintenance. Non color coded lines are not acceptable.

14.0 ELECTRICAL SYSTEM

- 14.1 Sweeper electrical system shall be independent from the electrical system of the chassis.
- 14.2 Sweeper engine shall have one (1) 925 CCA, 12 volt battery.
- 14.3 Sweeper engine shall have a 95 amp alternator.
- 14.4 Sweeper shall have an electronic back-up alarm for additional warning and safety when chassis is in reverse.
- 14.5 Sweeper lighting shall include rear identification lights, side broom and rear clearance lights.
- 14.6 Sweeper warning lights shall include hopper up, hopper full load and hopper rear door open.

- 14.7 Sweeper wiring harnesses shall be color-coded and hot stamped with appropriate word designation labeled every four inches, i.e. "Ignition", "Side Broom" on each wire.
- 14.8 For safety, manual reset circuit breakers or fuses shall protect all electrical circuits.
- 14.9 Dual rear floods lights shall be provided.
- 14.10 A rear and left hand camera shall be provided with a LCD viewing screen mounted in the cab.
- 14.11 A LED arrowboard shall be mounted to the top of the rear door and is to be accompanied by a LED arrowstick at the rear of the door and a LED strobe mounted to the top of the hopper. The LED strobe shall be center mounted with a limb guard.

15.0 CONTROLS

- 15.1 All sweeper controls shall be mounted on a central terminal for use from either right or left positions. This allows the operator to view all important auxiliary engine information from either operating position.
- 15.2 The controls shall include all sweep, spray water, and lighting functions.
- 15.3 The controls for sweep, spray water, and lighting functions shall be conventional rocker switches.
- 15.4 Controls for auxiliary engine ignition and throttle, side broom down pressure and manual reset circuit breakers shall be located on the control console.
- 15.5 The control console shall have a quick release access cover that can be fully hinged over a pivoting hinge
- 15.6 The control console shall have integrated cup holders

16.0 INSTRUMENTS

- 16.1 Sweeper engine instruments shall include tachometer, hour meter, oil pressure, fuel, voltage, and coolant temperature for complete information for the operator on the condition of the auxiliary engine.

- 16.2 Sweeper engine instruments shall include an auxiliary engine air intake restriction gauge for ease of maintenance, a rear door "open" indicator, a "raised" hopper indicator and a "full" hopper indicator to notify the operator of hopper and hopper rear door conditions.
- 16.3 Sweeper instruments shall include diagnostic information for the sweeper engine and sweeper functional information to include sweeper engine hours, side broom hours, water level, vacuum enhancer position and hopper door position.

17.0 PAINT

- 17.1 All visible exterior metallic surfaces shall be coated prior to assembly with polyester powder coat. The paint must be a minimum of 2 mils thick. The uses of acrylic enamels and/or polyurethane's are not acceptable.
- 17.2 Color shall be the City's color of "White".
- 17.3 Vehicle shall have an accent color of Grey on the lower portions of the unit.
- 17.4 No decals shall be located anywhere on the sweeper body. The City wished to use the hopper walls for other purposes.

18.0 MANUALS

- 18.1 An operation manual shall be provided.
- 18.2 A parts manual shall be provided.

19.0 WARRANTY

- 19.1 Manufacturer's warranty shall be not less than one (1) year on entire sweeper, including all parts and labor.
- 19.2 Bidders submitting literature stating warranties which do not fully comply with warranty requirements of this specification must submit a letter from the manufacturer certifying warranty compliance as an integral part of their proposal. Failure to comply may cause the proposal shall be deemed "non-responsive" and rejected without further review.

20.0 SERVICE AND TRAINING

20.1 Vendors shall have a full parts and service facility within a reasonable distance from the City's Garage. State location and distance.

20.2 A qualified technician shall provide complete training to 0 personnel at the 0 Garage. Training shall include safety, operation, maintenance and service.

21.0 DELIVERY

21.1 Sweeper shall be delivered to the City of Naples in first class operating condition.

21.2 Acceptance shall be subject to the inspection and approval of the City.

21.3 Bidder shall state estimated delivery time after receipt of order:

22.0 QUALITY

22.1 Sweeper shall be manufactured by a company with a registered quality standard no less than ISO 9001.

23.0 OPTIONAL TRADE-IN

The City of Naples may choose, at its sole discretion, to return the purchased street sweeping unit, in "AS-IS" condition, 5-years or less from the purchase date. The Seller has agreed to a minimum return value of \$40,000 following the five year maintenance agreement.