



Region 2000 Services Authority

Invitation for Bids (IFB)

Region 2000 Services Authority is accepting sealed bids for all labor, materials, equipment and incidentals required to provide a completely automated wheel wash system.

Issue Date: June 25, 2017

Bids Due: No later than 2:00 pm July 17, 2017

Bids shall be addressed as follows:

Region 2000 Services Authority
Attn: Larry Hall
361 Livestock Road
Rustburg VA 24588

Sealed envelopes shall be clearly marked "Wheel Wash Bid"

Bid opening will take place at the Services Authority offices located at 361 Livestock Road, Rustburg, Virginia 24588. Sealed bids must be received by 2:00 pm Monday July 17, 2017 at which time they will be opened and read aloud. Bids received after 2:00pm by the official clock at our main office located at 361 Livestock Road Rustburg Virginia 24588 will not be considered.

For full bid package please go to:

<http://www.region2000servicesauthority.org/procurements.html>

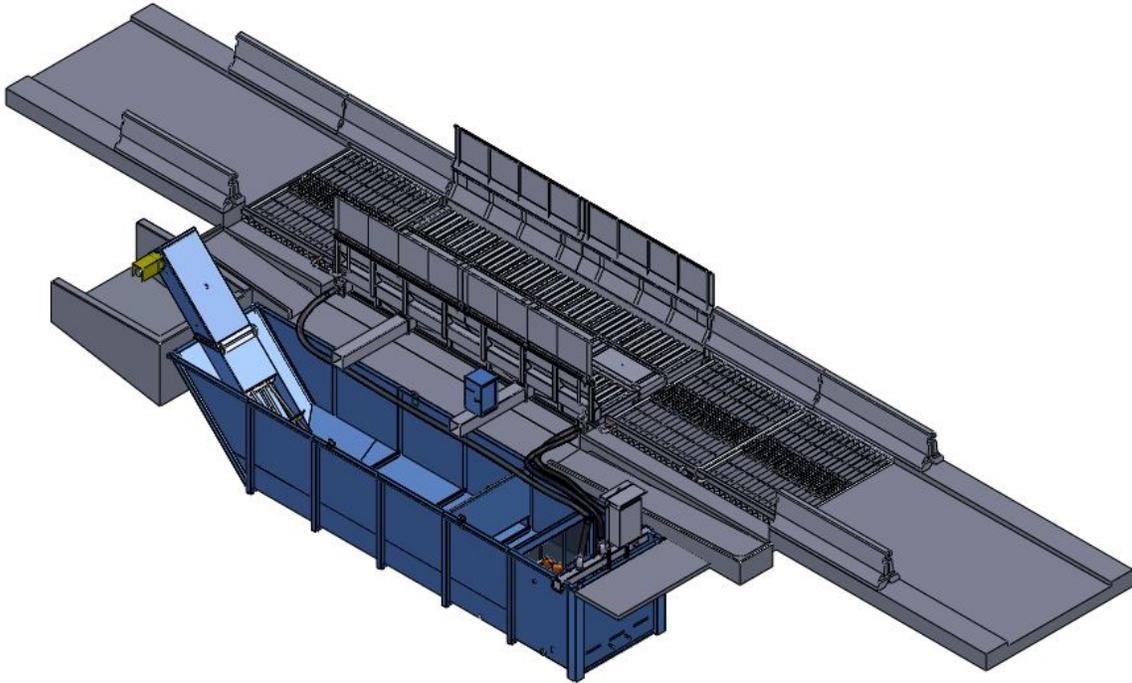
Or,

contact Larry Hall, Operations Manager, (434) 455-6334, lhall@region2000.org



Specifications:

Wheel Wash Systems



LEADING THE
CLEAN ROAD
REVOLUTION



DETAILED DESCRIPTION

MAXIMUS II - AUTOMATED WHEEL WASH SYSTEM TWO (2) FULL TIRE REVOLUTION DESIGN WITH WATER MANAGEMENT or equivalent

1.01 GENERAL NOTE

- A. Contractor will furnish all labor, materials, equipment & incidentals required to provide a completely automated wheel wash system as specified herein.
- B. Contractor is responsible for obtaining all required building permits.

2.01 GENERAL SYSTEM DESCRIPTION

2.1 Wash Unit

1. The Neptune Automated Drive through Wheel Washing System, Model Maximus Two Standard Tire Revolution System is a modular wheel wash system that is suitable for all wheeled commercial vehicles and trailers. The Maximus II is designed for temporary or permanent application and is designed to easily interface with Neptune's prefabricated tank(s) or customer provided water recycling and solid separation tank(s). The use of dewatering tanks should not be permitted in this application due to the abrasive nature of the solids.
2. The operation of each system is simple and requires no operator. As the vehicle approaches the wheel wash system, the wash cycle is automatically activated via Vehicle Sensor. A technically engineered spray system creates an effective washing result for the complete length of the vehicle as it slowly progresses through the wheel wash system at a walking speed. The Tread Blade construction of the drive surface in the wash area flexes open the tire profiles in combination with the spray wash system compliments the cleaning process. Neptune Wash Systems are specifically engineered using the principle of High volume and Low pressure to eliminate track out while offering the most rugged, dependable, and easily maintained system on the market to eliminate track out.
3. The length of the wash cycle is determined by the operation conditions and the site requirements of the individual customer. The length of the cycle is easily and infinitely adjustable using a timer located at the electronic control cabinet. A wash cycle can be completed in 45 seconds to 1 ½ minutes depending on the amount of soil on the tires. The control panel is manufactured in the United States using American standard nonproprietary components that are configured specifically for each site in regards to timing, adjustability, and size of system.

Design Advantage of the Maximus Series Wash Plants: Neptune Maximus systems are designed to utilize a portable and highly versatile wash platform that incorporates internal drainage pans directly below industry leading 42" wide wash tread platforms. The 42" wash treads are 6" wider than competitor systems and allow for superior cleaning advantages due to the trajectory of the water spray. The internal drainage pans manage the flow of spent water





through the system in a superior fashion compared to other systems. **Please see section 3.0.1 for more information about the Wash Platform.**

2.2 Water Management

1. The Maximus System specified herein has been designed with internal channels that run perpendicularly underneath the center wash areas. Each wash element on the system is constructed with an integrated, sloped floor that is designed to capture and discharge the wash water as the system is running. **As the system runs, the wash water gravity flows from the unit into the customer supplied adjacent settling basin via Two (2) return flumes that are supplied with the system.**
2. Each wash element on the Neptune System is constructed with an integrated sloped steel pan that is designed to capture and discharge the wash water as the system is running. Each 12-foot section of the wash elements has a discharge point into the support structure. As the system runs, the wash water gravity flows from the return flume(s) into the water recycling and solid separation tank. **Please note: The Neptune systems are equipped with two (2) discharge points on the 24 foot expanse to allow for rapid evacuation of the solids.**
3. Each Neptune Automated Wheel Wash Systems utilizes closed loop water recycling and solid separation technologies. The Wash Systems are most commonly coupled with a permanent or temporary water recycling and solid separation tank. These tanks can be either prefabricated metal or poured in place concrete structures. The prefabricated tanks are offered in a variety of layouts and functions and are easily installed. In the instance of pre-existing site water recycling pond(s), the system can be modified to take full advantage of most existing site assets.

Design Advantage of the Maximus Series: Neptune systems are designed to utilize a custom manufactured flocculent which greatly increases and optimizes the sedimentation process. **More information about Flocculent can be seen in section 3.5.**

4. As the water is deposited into the water recycling and solid separation tank, the flocculent shall be dispensed automatically in a small amount that causes the solids to bind together instantly, adding weight and causing the solids to fall to the bottom of the tank; allowing the clean water to be recycled.

NOTE: Flocculent shall be offered in two different types, wet and dry. The wet flocculent is cost effective and easy to use, while the dry flocculent provides optically clear water and does not have to be kept from freezing. The flocculent shall help the tank to separate the solids and allow the water to be recycled. The solid waste settles out in the main chamber while the surface water flows over an overflow weir into the pump chamber to be re-used in the system. At installation, water recycling and solid separation tank is to be plumbed directly to the system and to the fresh water source to ensure a continued flow of fresh water.

5. The solids shall then need to be removed from the water-recycling tank. The method of removal will vary based on the customer's requirement. Prefabricated tanks allow for easy integration with the wash system, they are available with and without automatic solid removal.



3.01 DETAILED SYSTEM DESCRIPTION

3.1. Wash Unit

1. Facility Description

- a. The wheel wash system shall be designed to have a drive-through range designed for permanent site applications. The system shall deliver Two (2) full tire revolutions of cleaning power and will be suitable for all wheeled commercial vehicles and trailers that are permitted to drive on public roads. The system shall be supplied with an optimal water recycling system that will handle a throughput of up to sixty (60) vehicles per hour with a medium degree of soiling. The (G) Gravity flow system shall be designed to be fully installed into the ground. Other configurations are available.

Design Advantage of the Maximus Series: The width of the each wash element (one left/ one right) is 42". **This far exceeds the wash capacity of 36 inch washes offered on other systems.** This allows for the wash element to effectively wash the whole wheel assembly as it passes through the wash system.

- b. The System shall be designed to be fully automated so that as a vehicle approaches the wash system, the wash cycle will automatically activate via an electronic vehicle sensor. (The wash cycle time shall be variably adjustable depending on specific site conditions, which will be typically less than one (1) minute per cycle. A technically coordinated nozzle system consisting of both bottom and side nozzles shall be designed to effectively wash the entire tire profile, inner and outer wheel surface and part of the under chassis as the vehicle slowly drives through the wheel wash system. The use of angled rumble grids shall be integrated into the wash element construction to provide adequate flexing to open the tire profile to supplement the cleaning effect.
- c. The Maximus wheel wash system is designed to use high water volumes through a high velocity nozzle system at low pressures to create the optimal cleaning effect while minimizing overspray during the wash cycle.

2. Construction

- a. The wash elements shall consist of two (2) hot-dip galvanized wash elements, one left and one right side of a complete platform. Each element will be no less than 288" in length and no less than 42" in width allowing for two (2) full revolutions of an 11R24 tire. Each wash element shall be constructed of 4in Schedule 40 pipe with 4in schedule 40 stub-in for clean water supply.
- b. The wash element framing base shall be constructed with W4 I-Beam and three (3) 12-inch x 12-inch center discharge tubes which tie the two sides together, creating the wash plant platform. Fresh water runs from one side to the other using 3" Con-ag piping with Hammerlock clamps.

- c. Each left and right side platform elements shall be designed to flange together at the 12"x12" discharge tubes. The robust steel structure of the Maximus Series guarantees the systems will never twist, bend nor buckle.

DESIGN FEATURE: The round tubing eliminates the velocity drag on the water which increases the water delivery efficiency as well as eliminating a potential of frozen piping underneath the wash platform.

- d. Each wash element shall contain an integrated, steel internal sludge and water drainage sloped steel pan for rapid discharge of the wash water. **Each sloped steel pan shall be no longer than 12 feet to allow for rapid removal of the solids.**
- e. The elements shall be designed to take a maximum axle load of 32,500 lbs.
- f. The wash elements shall include galvanized plate steel center and end covers manufactured from ¼" checker plate which lock onto the wash element frame.
- g. Each wash element shall be designed to be installed 21" into the ground to allow for unimpeded ground-level access.
- h. **Each wash element shall be designed for use on a flat surface and shall have an interior track width of no less than 120 inches.**

Design Advantage of the Maximus Series: Water Management of the system: The Maximus System specified herein shall be designed with internal channels that run perpendicular underneath the center wash areas. Each wash element on the system is constructed with an integrated, sloped floor that is designed to capture and discharge the spent water as the system is running. **As the system runs, the wash water gravity flows from the unit into an adjacent settling basin via two (2) discharge chutes that are provided with the system.**

3. Nozzles and Spray

- a. The system shall incorporate two hundred eighty eight (288) stationary ¼" spray nozzles providing a complete coverage of the tire profile, outer and inner wheel surfaces and part of the chassis.

DESIGN ADVANTAGE: The side curtains of the Maximus Series are constructed with an internal header that conveys the water to the nozzles eliminating external piping that can easily be damaged by the vehicles as the travel through the wheel wash system.

- b. Two (2) sets of side spray nozzles shall be inset into the sidewalls to eliminate the possibility of damage from over width vehicles. Each side spray shall consist of twelve (12) one half (½) inch nozzles that are manufactured as a three part ball nozzle assembly. The three-part ball nozzle assembly that will allow for easy field-adjustment of the spray path.
- c. Each set of nozzles shall be mounted at a minimum height of 31 inches and will be fully adjustable. Fixed nozzles should not be allowed in this application.



Design Advantage: Side spray nozzles can be adjusted for a site specific spray pattern customized to suit customers' needs.

4. Pump(s)

1. General

- a. The Maximus II Tire Revolution wash system shall incorporate two (2) Heavy Duty Submersible HOMA WASTE WATER Pumps; Model No. AMX 434 for the wash cycle. Please Note: Dewatering Pumps are not suitable to this application due to the caustic and abrasive nature of the solids.
- b. Each pump shall have a maximum capacity of 815 gallons per minute, with an actual delivery capacity at the nozzle of 520 gpm for a total of 1,040 gallons per minute (given 2 pumps) at rate of 28 to 40 psi. **(Our stated pump capacity is actual volume delivered at the nozzles vs. the competitors theoretical calculation)**

2. Detailed Description

- a. Each pump shall be 7.5 Horsepower, 480 Volt, three phase power for cost efficient operation. Soft starters will be used to minimise the amperage draw.
- b. Each pump shall have a Five (5) Year guarantee from manufacturer; 18 months full replacement; remaining years; pro-rata replacement based on use.
- c. In the event of a failure, the pump must be able to be rebuilt. HOMA pumps are the only wheel wash pumps that are capable of being rebuilt that offered in the wheel wash industry.
- d. Each pump shall have bearings that are designed to meet B-10 life of 50,000 hours
- e. Each pump shall be provided with a standard ANSI 150# Flanged Connection; the use of NPT connections shall not be permitted
- f. Each pump shall include a Factory Dynamically Balanced impeller as in accordance with the National Hydraulic Institute.
- g. Pump components shall consist of the following materials
 - i. Motor housing – Cast iron ASTM A48, Class 40B
 - ii. Shaft – AISI 430F stainless steel
 - iii. Fasteners – AISI 304 stainless steel
 - iv. Volute – Cast iron ASTM 48, Class 40B
 - v. Mechanical seals (2) – Silicon carbide vs. silicon carbide
 - vi. O-Rings – Nitrile rubber
 - vii. Impeller – Cast iron ASTM A48, Class 40B
 - viii. Upper bearing – deep groove ball bearing
 - ix. Lower bearing – double row angular ball bearing

- h. Each pump shall be driven by a submersible squirrel cage induction motor. Motor shall be NEMA MG30, design B for continuous duty, and capable of sustaining 10 starts per hour. Motor shall operate without brushes or arc producing devices. All stator sidings and leads shall be insulated with moisture resistant Class F insulation, capable of withstanding 155 degrees C. maximum temperature, dipped and baked three times. Upon assembly the stator shall be heat-shrink fitted into the stator housing.
- i. Each stator phase of winding shall contain an embedded temp. sensor wired in series, which will be used to disconnect electric power if winding temp. exceeds 140 degrees C., and will automatically reset when the winding temp. returns to normal. Motor shall have a service factor of 1.15.
- j. Guide rails, chain, and piping inside wet wells shall be 304 stainless steel. Shutoff valves will be Val-Matic plug valves as shown on the plans. Check valves shall be Val-Matic. Check valves shall be equipped with tapped bosses to accommodate the addition of back-flush mechanisms and valve position indicators or position switches.

Design Advantage of Auto-Coupler

The HOMA Auto Coupling System is designed to mount in the bottom of the tank to serve as the Coupling station for each pump. Each coupler is attached to dual stainless steel rods that run from the coupler to the top of the tank and is designed to allow the pump to run up and down the rail. This allows a pump to be removed or added without the need to dewater the tank. Pumps that require the operator to enter the tank should not be permitted in this application.

This option includes:

- i. Two (2) HOMA Auto Couplers and check valves
 - ii. Two (2) sets of dual rails, constructed to match the depth of the clear water chamber of the water recycling and solid separation tank.
 - iii. Two (2) 4" Full Port Ball Valves
 - Like used for isolation on the Tracinators, only larger
 - One on each pump discharge right off the header
5. Prefabricated Steel Water Recycling and Solid Separation Tank

a. General Description

- i. The Maximus II series is coupled with a Prefabricated water recycling and solid separation tank with a TRUE useful volume of 10,000/15,000/20,000 gallons.

DESIGN ADVANTAGE: The useful gallons of the Maximus Series Water Recycling and Solid Separation Tank is calculated at a distance of 12 inches from the top of the tank which allows for protection from overflow in the event of a large rain and delivers a FULL stated gallon capacity. (10,000, 15,000, 20,000)

- ii. The tank is constructed to be self-supporting consisting of ¼ inch channel frame and steel plate supported by and I beam base.

- iii. The tank in an empty condition is capable of withstanding the ground pressures and forces resulting from a passing by, fully loaded truck and can be used above ground as needed.
- iv. Includes two (2) overflow weir walls to help increase the tanks effectiveness to settle out solids.
- v. Inner and outer surfaces are painted.
- vi. The pump station and water delivery unit in the tank shall include a steel header to mount onto the top of the water recycling tank allowing for a streamlined installation and unrestricted water flow
- vii. The tank shall include automatic water-level controls via a ball float valve, (Note 2" NPT Fresh Water Connection).
- viii. Grease Zerk hose extensions are run from the pumps to a bolt on flange/header for Zerk fitting accessibility while the tank is full.
- ix. External dimensions:
 - 10k = 88" wide, 442" in length, 88.87" in height
 - 15k = 98" wide, 527.56" in length, 95" in height
 - 20k = 97.9375" wide, 436.125" in length, 124.375" in height

DESIGN ADVANTAGE: The Scraper Conveyor for the Maximus Series is constructed with a dual paddle conveyor and a 1 ½ HP motor for added stability and to avoid downtime.

6. Electrical Control Panel

1. General

- a. Each Panel shall be manufactured in the United States per each customer's order and can easily be customized to meet site- specific requirements.
- b. It shall employ electrical technology in accordance with Standard EN 60 439.
- c. The panel shall be equipped with the following additional features: Chase Controller for ease of operation. U.L. 508A listed for Enclosed Industrial Control Panels; Minimum 1KVA transformer (480 volt only); 120V or 480V chemical pump or auger; Elapsed time meter; Seal failure light; Phase failure protection (3 phase only); Swing dead front door with non-fused disconnect; Easy pump hook up; Thermal pump shut down; and Seal fail pump shut down.

DESIGN ADVANTAGE: The Chase Controller supplied with the system was designed specifically for this application. The Controller allows the operator to easily adjust the operation of the system. In the event of a failure within the panel, the Controller can be replaced in a matter of minutes.

- d. The system manufacturer shall supply a Model 101 carsense sensor, which shall be hardwired to the control panel, and remotely mounted underground alongside the entrance.
- e. The panel shall include Automatic Reset of Sensor to eliminate inaccurate counts due to trucks entering the system too close together.

- f. The wash system shall include a control center as part of the complete package and shall be supplied by the wheel wash system manufacturer.
- g. The control center shall be manufactured in the United States and shall be constructed to meet each site-specific requirement as recommended by the wash system manufacturer to meet the specifications herein.
- h. The control center will be made of Stainless Steel in accordance with Standard EN 60 439-1 and shall be for 480 volt, 3 phase, 60 hertz service.
- i. The control center shall be equipped with the following additional features;
 - i. U.L. 508 Listed for Enclosed Industrial Control Panels.
 - ii. Minimum 1 KVA Transformer (480 volt only).
 - iii. 120 or 480 volt variable speed motor, Elapsed Hour Meter, Seal Failure Light, Phase Failure Protection (480 volt only)
 - iv. The enclosure shall be supplied with non-fused disconnect.
 - v. The exterior controls shall include, but are not limited to: Pump H.O.A. Switches, Pump Run Lights, Pump Seal Fail Lights, Elapsed Hour Meters for each pump, exterior Alarm Strobe Light for Pump Failure & Exterior 120 volt GFI Receptacle.

2. Detailed Description

- a. The controls for the pump shall be contained in a stainless steel enclosure meeting NEMA 4X requirements with a hinged door, neoprene gasket and drip shield. The sub-panel shall be painted steel. electronic technology for protection against over-voltage peaks, impermeability to electromagnetic interference, and reverse polarity. LED and pilot lens shall be same color in order to maintain increased brightness and maintain color purity.
- b. All pilot lights and switches shall be properly labeled as to function. The labels shall be ¾" by 3" two layer laminated plastic, white on black background. The labels shall be custom engraved by the control panel manufacturer and fastened to the dead front with corrosion-resistant screws.
- c. Pump control panel shall incorporate seal failure relays into control operation. Should water penetrate the lower seal of the pump, an adjustable seal failure relay shall be energized via the pump manufacturer's seal fail probe, alerting the operator of impending pump failure. The relay shall energize a pilot light on the operator dead-front. The relay shall be 120VAC and be adjustable to 100k ohms.
- d. The incoming power shall be 480 volts, 3 phase, 60 hertz service. Terminal blocks with box type lugs shall be supplied to terminate all wiring for floats and heat and seal sensors for the pump, if required. The pump leads shall be terminated at the overload relay or at box type terminal blocks. The terminal blocks for the float connections shall be on the pump controller.

- e. A circuit breaker shall be used to protect from line faults. The panel shall have a main power disconnect interconnected with a handle on the dead front for safety, and to disconnect the pump from the incoming power. Circuit breaker shall be thermal magnetic and sized to meet NEC requirements for motor controls.
- f. The magnetic starters shall include a contactor with a minimum mechanical life of 3,000,000 operations and a minimum contact life of 1,000,000 operations. A definite purpose contactor shall not be acceptable. Contactor shall be sized for 125% of pump full load amps.
- g. The magnetic starter shall include an overload relay which is ambient temperature compensated and bimetallic. The overload relay shall have test and reset buttons. The overload relay shall be capable of being set in either manual or automatic reset mode. In The enclosure shall have provisions for padlocking. A nameplate shall be permanently affixed to the panel and include the model number, voltage, phase, hertz, ampere rating and horsepower rating. A warning label against electric shock shall be permanently affixed to the outer door.
- h. Hand-Off-Auto switches shall be provided for each pump. All switches and push buttons shall be mounted on a corrosion-resistant operator safe dead front with a corrosion resistant, full-length hinge. The hand-off-auto switch shall be 3 position, NEMA 4, industrial heavy-duty oil-tight type. Pilot lights shall be furnished for each pump for run status and seal failure. All pilot lights shall be mounted on the corrosion-resistant operator safe dead front. The pilot lights shall be the LED push-to-test type, NEMA 4, industrial heavy-duty oil-tight type. All pilot lights shall be full voltage LED type for long life. LED's shall use opto-electronic technology for protection against over-voltage peaks, impermeability to electromagnetic interference, and reverse polarity. LED and pilot lens shall be same color in order to maintain increased brightness and maintain color purity.
- i. The manual mode, reset shall be accomplished only by the operator by means of a push button reset mounted on the dead front. Overload push button reset shall match the pilot lights and switches. At 6 times full load amps the overload relay shall trip within 10 seconds or Class 10 rated overload relays shall be required.
- j. Control voltage shall be 120 VAC and may be accomplished by the means of a transformer or available line voltage. A control fuse and on/off switch shall protect and isolate the control voltage from the line. Control transformer shall have primary and secondary circuit protection.
- k. Wire ties shall be used to maintain panel wiring in neat bundles for maintenance and to prevent interference with operating devices. All wiring shall be color-coded to facilitate maintenance and repair of the control panel. Where a color is repeated, number coding shall be added. A schematic shall be permanently attached to the inside surface of the front door.
- l. All ground connections shall be made with ring tongue terminals and star washers to assure proper ground.



m. The Control panel should be built in the United States with non-proprietary components and shall be equipped with the following additional features.

- i. U.L. 508A listed for Enclosed Industrial Control Panels. (Standard construction only)
- ii. Minimum 1KVA transformer (480 volt only)
- iii. Elapsed time meter
- iv. Seal failure light
- v. Phase failure protection (3 phase only)
- vi. Swing dead front door with non-fused disconnect
- vii. Easy pump hook up
- viii. Thermal pump shut down
- ix. Seal fail pump shut down

7. Plumbing Package

1. General

- i. All waterlines, connections, and waste water discharge channels. Please note that all piping must be installed to allow for drainage back to the pumps.

2. Detailed Description

- i. The pipe and plumbing shall include; header system for the tank, auto couplers, check valves, stainless rail assemblies, plumbing, valves, flanges, and gaskets per finalized plans (site specific).
- ii. Note that the plumbing package components shall include all plumbing that is required at the site per the finalized drawing. If field adjustments are made and additional parts are required, then it is the responsibility of the contractor to supply the additional materials.
- iii. Please note that during installation the system is designed to have positive drainage back to the pumps, per the finalized plans.

8. Additional Features of The Wash System

a. Undercarriage Wash

- i. This feature shall consist of an array of nozzles located in the center cover of the wheel wash and will focus directly on the undercarriage of the vehicles.
- ii. This feature shall include one (1) additional 7.5 HP HOMA pump.

b. Clean out Ports

- i. Series of pipe outlets provided access for cleaning to each wash cross tube.





ii. Each outlet includes a galvanized plug for ease of maintenance.

9. Flocculent

1. Dry Flocculent Dispensing Systems

- a. The flocculent delivery system shall include a screw conveyor and hopper system that will provide adjustable, metered amounts of dry flocculent.
- b. The flocculent shall be discharged from the screw conveyor and be fed into the water system where it can be optimally mixed, thus ensuring good sludge settlement.
- c. The polymer provided shall be specially manufactured to be water soluble to facilitate the solid separation process and shall require a minimal amount per wash cycle.
- d. The feature shall include one (1) front opening, footed stainless steel flocculent box for the storage of the hopper .
- e. The wheel wash system manufacturer shall offer flocculent for sale to the end user on an "as needed" basis.

10. Features for Water Recycling and Solid Separation Tank

- a. Grating for Tank
 - i. The water recycling and solid separation tank shall include welded floor grating that will cover the tank. The grating shall consist of 3/16" x 1-1/2" floor grating and steel grating edge tracks which slide over the wall of the tank allowing the grating to set flush with the top of the tank. Galvanized grating shall be optional per customer request.
- b. Scraper Conveyor Extension
 - i. Offers additional time for dewatering the solids before they exit the tank.
 - ii. The extension adds 4 feet which delivers 2 additional feet of distance from the tank for discharge and 2 additional feet in height.
- d. Integrated Safety Steps for Recycling tank
 - i. Designed for safe entrance and egress
 - ii. Includes safety rail
- e. Exit Stop Light
 - i. Includes panel actuation for a red/green stop light to be mounted on the exit of the wash platform.
 - ii. Includes red/green stop light with mounting pole to be installed by others at a convenient locaton

4.01 Customer Satisfaction

A. WARRANTY





- a. The system includes a One year warranty from the date of delivery to the job site. The guarantee will encompass the replacement of defective parts and components. The manufacturer may exclude worn items and electrical components.
- b. The pumps carry a factory warranty for 5 years; 18 months full replacement and the balance pro-rated based on use.
- c. Installation of replacement, parts and subsequent cost will be the responsibility of the end user.

B. MANUFACTURER

- a. The specified Wheel Wash System is a Maximus II Series, as supplied by Innovative Equipment Solutions, Hot Springs, AR.
- b. The delivered system shall be designed, built, & provided by a Innovative Equipment Solutions, Inc. a manufacturer located within the continental United States.
- c. IES will supply references and drawings for installation at the time of the award.
- d. IES shall make itself accessible to support the installation team preferred by the customer.

C. QUALITY ASSURANCE

- a. The Wheel Wash System, pump equipment, and all electrical controls have been designed and provided by one supplier.
- b. The supplier shall provide a general delivery schedule for delivery of the system to the job site.
- c. The supplier shall provide a minimum of one (1) day start-up and training.