

INFITATION FOR BIDS (IFB)

**SEND  
BIDS TO:**

**MISSOURI DEPARTMENT OF TRANSPORTATION  
GENERAL SERVICES  
830 MoDOT Drive – P.O. BOX 270  
JEFFERSON CITY, MO 65102**

REQUEST NO.	<b>9-110520</b>		
DATE	April 18, 2011		
PAGE NO.	1	NO. OF PAGES	1

SEALED BIDS, SUBJECT TO THE ATTACHED CONDITIONS WILL BE RECEIVED AT THIS OFFICE UNTIL:

**May 20, 2011 at 3:00 PM Local Time**

AND THEN PUBLICLY OPENED AND READ FOR FURNISHING THE FOLLOWING SUPPLIES OR SERVICE

BUYER: Clayton Hanks 573/522-9565

**BIDS TO BE BASED F.O.B. DESTINATION  
MISSOURI DEPARTMENT OF TRANSPORTATION**  
Submit net bid as cash discount stipulations will not be considered

**MoDOT Rural Metro Maintenance Facility  
Rt. Y at Rt. 61, Jackson, MO 63755**

[Clayton.Hanks@modot.mo.gov](mailto:Clayton.Hanks@modot.mo.gov)

DESCRIPTION		
<p>SUPPLY PRE-ENGINEERED PUMP STATION. SUPPLIES AND EQUIPMENT ONLY – NO CONSTRUCTION SERVICE IN ACCORDANCE WITH THE ATTACHED PRE-ENGINEERED PUMP STATION SPECIFICATIONS &amp; DRAWINGS.</p> <p>Enter a one time payment lump sum for supplying and delivering (F.O.B. Destination) a lift station as described herein to the MoDOT Rural Metro Maintenance Facility, Rt. Y at Rt. 61, Jackson, MO 63755.</p> <p style="text-align: center;">\$ _____</p> <p>PER-BID SUBMITTALS ARE DUE TO THE <i>ENGINEER</i> NO LATER THAN MAY 6, 2011. If awarded, award will be based on the lowest bid sum that meets the engineer’s criteria.  <b>Barry Horst</b> is the Commissions engineer for this project.                      Southeast District, 2675 North Main Street, Sikeston, MO 63801 <a href="mailto:Barry.Horst@modot.mo.gov">Barry.Horst@modot.mo.gov</a> 573-380-2652; 573-380-1833; or 573-472-5289.</p>		

**TIME FOR DELIVERY: FIFTEEN (15) CALENDAR DAY AFTER RECEIPT OF PURCHASE ORDER.**

**Liquidated Damages**

In the event the successful Contractor fails to deliver the material within the time specified, the Department and the public will sustain damages because of such delay in delivery, the exact extent of which would be difficult to ascertain, and in order to liquidate such damage in advance it is agreed that the **sum of three-hundred dollars (\$300.00) per day, per item**, for each assessable calendar day on which the delivery has not been completed, is reasonable and the best estimate which the parties can arrive at as liquidated damages, and it is therefore agreed that said amount will be withheld from payments due the Contractor or otherwise collected from the Contractor as liquidated damages.

Date: \_\_\_\_\_  
 Telephone No.: \_\_\_\_\_  
 Fax No.: \_\_\_\_\_  
 Federal I.D. No. \_\_\_\_\_

Firm Name: \_\_\_\_\_  
 Address: \_\_\_\_\_  
 By (Signature): \_\_\_\_\_

Email: \_\_\_\_\_

Type/Print Name \_\_\_\_\_  
 Title: \_\_\_\_\_

# PREFERENCE IN PURCHASING PRODUCTS

DATE: \_\_\_\_\_

The bidders attention is directed to Section 34.076 RSMo 2000 which gives preference to Missouri corporations, firms, and individuals when letting contracts or purchasing products.

Bids/Quotations received will be evaluated on the basis of this legislation.

**All vendors submitting a bid/quotation must furnish ALL information requested below.**

**FOR CORPORATIONS:**

State in which incorporated: \_\_\_\_\_

**FOR OTHERS:**

State of domicile: \_\_\_\_\_

**FOR ALL VENDORS:**

List address of Missouri offices or places of business:

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**THIS SECTION MUST BE COMPLETED AND SIGNED:**

**FIRM NAME:** \_\_\_\_\_

**ADDRESS:** \_\_\_\_\_

**CITY:** \_\_\_\_\_ **STATE:** \_\_\_\_\_ **ZIP:** \_\_\_\_\_

**BY (signature required):** \_\_\_\_\_

**Federal Tax I.D. #:** \_\_\_\_\_ **if no Federal Tax I.D. # - list Social Security #:** \_\_\_\_\_

NOTE: For bid/quotation to be considered, the "Preference in Purchasing Products" form must be on file in the General Services (Facilities Management) Division and must be dated in the current calendar year.

## MISSOURI DOMESTIC PRODUCTS PROCUREMENT ACT

The bidder's attention is directed to the Missouri Domestic Products Procurement Act, Sections 34.350 to 34/359, RsMO, which requires all manufactured goods or commodities used or supplied in the performance of this contract or any subcontract to be manufactured or produced in the United States.

Section 34.355, RsMO, requires the vendor or contractor to certify his compliance with Section 34.353 and, if applicable, Section 34.359, RsMO, at the time of bidding **and** prior to payment. Failure to comply with Section 34.353, RsMO, during the performance of the contract **and** to provide certification of compliance prior to payment will result in nonpayment for those goods or commodities.

Section 34.353.2, RsMO, specifies that it does not apply where the total contract is less than Twenty-Five Thousand Dollars (\$25,000.00). If your total bid is Twenty-Five Thousand Dollars (\$25,000.00) or more, you **must** complete this form as directed below.

**Failure to complete and return this document with this bid will cause the State to presume the manufactured goods or products listed in the bid are not manufactured or produced in the United States, and the bid will be evaluated on that basis. Please read the certification appearing below on this form.**

- [ ] If all the goods or products specified in the attached bid which the bidder proposes to supply to the State shall be manufactured or produced in the "United States" as defined in Section 34.350, RsMO, check the box at left.
  
- [ ] If only one item of any particular goods or products specified in the attached bid is manufactured or produced in the "United States" as defined in Section 34.350, RsMO, check the box at left and list the items (or item number) here:  


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- [ ] If any or all of the goods or products specified in the attached bid which the bidder proposes to supply to the State are **not** manufactured or produced in the "United States" as defined in Section 34.350, RsMO, then: (a) check the box at left; (b) list below, by item (or item number), the country other than the United States where each good or product is manufactured or produced; and (c) check the boxes to the left of the paragraphs below if applicable and list the corresponding items (or item numbers) in the spaces provided.

Item (or item number)	Location Where Item Manufactured or Produced

(attach an additional sheet if necessary)

- [ ] The following specified goods or products cannot be manufactured or produced in the United States in sufficient quantities or in time to meet the contract specifications. Items (or item numbers): \_\_\_\_\_  


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- [ ] The following specified goods or products must be treated as manufactured or produced in the United States, in accordance with an existing treaty, law, agreement, or regulation of the United States, including a treaty between the United States and any foreign country regarding export-import restrictions or international trade. Items (or item numbers): \_\_\_\_\_  


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### CERTIFICATION

**By submitting this document, completed as directed above, with a bid, the bidder certifies under penalty of making false declaration (Section 575.060, RsMO) that the information contained in this document is true, correct and complete, and may be relied upon by the State in determining the bidders qualifications under and in compliance with the Missouri Domestic Products Procurement Act.**

**The bidder's failure to complete and return this document with the bid as directed above will cause the State to presume the manufactured goods or products listed in the bid are not manufactured or produced in the United States, and the bid will be evaluated on that basis pursuant to Section 34.353.3(2), RsMO.**

**MISSOURI SERVICE-DISABLED VETERAN BUSINESS PREFERENCE**

By virtue of statutory authority, RSMo 34.074, a preference will be given all contracts for the performance of any job or service to service-disabled veteran business either doing business as Missouri firms, corporations, or individuals; or which maintain Missouri offices or places of business, when the quality of performance promised is equal or better and the price quoted is the same or less or whenever competing bids, in their entirety, are comparable.

Definitions:

**Service-Disabled Veteran** is defined as any individual who is disabled as certified by the appropriate federal agency responsible for the administration of veterans' affairs.

**Service-Disabled Veteran Business** is defined as a business concern:

- a. Not less than fifty-one (51) percent of which is owned by one or more service-disabled veterans or, in the case of any publicly owned business, not less than fifty-one (51) percent of the stock of which is owned by one or more service-disabled veterans; and
- b. The management and daily business operations of which are controlled by one or more service-disabled veterans.

If an offeror meets the definitions of a service-disabled veteran and a service-disabled veteran business as defined in 34.074 RSMo and is either doing business as a Missouri firm, corporation, or individual; or maintains a Missouri office or place of business, the offeror **must** provide the following with the proposal in order to receive the Missouri service-disabled veteran business preference over a non-Missouri service-disabled veteran business when the quality of performance promised is equal or better and the price quoted is the same or less or whenever competing proposals, in their entirety, are comparable:

- a. A copy of a letter from the Department of Veterans Affairs (VA), or a copy of the offeror's discharge paper (DD Form 214, Certificate of Release or Discharge from Active Duty) from the branch of service the offeror was in, stating that the offeror has a service-connected disability rating ranging from 0 to 100% disability; and
- b. A completed copy of this exhibit

(NOTE: For ease of evaluation, please attach copy of the above-referenced letter from the VA or a copy of the offeror's discharge paper to this Exhibit.)

By signing below, I certify that I meet the definitions of a service-disabled veteran and a service-disabled veteran business as defined in 34.074 RSMo and that I am either doing business as a Missouri firm, corporation, or individual; or maintain Missouri offices or places of business at the location(s) listed below.

**Veteran Information**

**Business Information**

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Service-Disabled Veteran's Name, (Please  
Print)

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*Service-Disabled Veteran's Signature*

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Service-Disabled Veteran Business Name

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Missouri Address of Service-Disabled Veteran  
Business

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# PRE-ENGINEERED PUMP STATION SPECIFICATIONS

## ITEM No.1 (PRE-ENGINEERED DUPLEX PUMP STATION)

### GENERAL

The bidder shall provide all materials and equipment necessary to install, test and place into service a pre-engineered duplex pump station as shown in the plans and described in this specification. The pump station package, including submersible pumps, pump control, pump station wet well and valve vault, internal piping, accessories and auxiliary equipment shall be supplied by the pump manufacturer or approved equal. After burying the wet well & valve vault, the field connection of the gravity inlet line(s), discharge line and electrical service line to control box will complete the installation of the duplex pump station.

Approved Manufacturers include:

1. ITT FLYGT
2. Engineer Pre-Approved Equal

**Listed Manufacturers will not be exempt from meeting all aspects of the specifications described herein.**

Where a bidder intends to provide other than the listed equipment, the alternate material or equipment must be approved by the engineer prior to the bid. In order for the alternate equipment to be considered an "approved equal", prospective suppliers must make a **pre-bid submittal as detailed in the following paragraph and make it available to the design engineer fourteen (14) days prior to the time of the bidding**. A list of approved equal material or alternate suppliers will be forthcoming for the engineer five (5) days before bids are taken.

Two copies of pre-bid submittals shall be provided in bound form, and shall contain full-size drawings of the proposed equipment with catalog cuts all to the of sufficient detail to allow assessment of the suitability of the equipment and the impact of the alternate equipment on other equipment.

The submittals for approval must contain an installation list of only like equipment. The installation list will be complete with the date of installation, the name and telephone number of the equipment operator and/or the name and telephone number of the design engineer. Approvals requested after the appointed time, fail to provide enough information, or fail to meet specifications will not be considered.

### REQUIREMENTS

The pre-engineered pump station package shall be capable of handling unscreened sewage, wastewater or stormwater in accordance with the design conditions defined in Table 1. of this specification.

The pump station shall have an integral, hopper-shaped pump station bottom, which is self-cleaning by virtue of its design. The flat surface area shall be minimized to an area that is directly influenced by the pump suction and shall be free of obstacles. The bottom surface area shall have a ratio of 1:4 as it relates to the cross-sectional area of the pump station. The sloping walls of the pump station bottom shall further optimize the self-cleaning features of this station

## PRE-ENGINEERED PUMP STATION SPECIFICATIONS

by directing all solids, trash and sludge, normally found in sewage and wastewater, to the suction of the submersible pumps to facilitate removal and effectively clean the bottom.

Furnish and install 2 submersible non-clog wastewater pump(s). Each pump shall be equipped with a 7.5 HP submersible electric motor, connected for operation on a 230 volt, 1 phase, 60 hertz, three wire service, with 50 feet of submersible cable (SUBCAB), suitable for submersible pump applications. The power cable shall be sized according to NEC and ICEA standards and have P-MSHA Approval. The pump shall be supplied with a mating cast iron 4 inch discharge connection and be capable of delivering 136 GPM at 56 TDH. Shut off head shall be \_\_\_\_\_ feet (minimum). The pump model shall be Flygt Model CP3085, or equivalent pump by FE MYERS and Aurora. Each pump shall be fitted with 15 feet of 1/4" stainless steel lifting chain. The working load of the lifting system shall be 50% greater than the pump unit weight.

### PUMPS

#### Pump Design

The pump(s) shall be automatically and firmly connected to the discharge connection, guided by no less than two stainless steel guide pipes extending from the top of the station to the discharge connection. There shall be no need for personnel to enter the wet-well. Sealing of the pumping unit to the discharge connection shall be accomplished by a machined metal to metal watertight contact. **Sealing of the discharge interface with a diaphragm, O-ring or profile gasket will not be acceptable.** No portion of the pump shall bear directly on the sump floor.

#### Pump Construction

Major pump components shall be of grey cast iron, ASTM A-48, Class 35B, with smooth surfaces devoid of blow holes or other irregularities. All exposed nuts or bolts shall be AISI type 304 stainless steel construction. All metal surfaces coming into contact with the pumpage, other than stainless steel or brass, shall be protected by a factory applied spray coating of acrylic dispersion zinc phosphate primer with a polyester resin paint finish on the exterior of the pump.

Sealing design shall incorporate **metal-to-metal contact** between machined surfaces. Critical mating surfaces where watertight sealing is required shall be machined and fitted with Nitrile or Viton rubber O-rings. Fittings will be the result of controlled compression of rubber O-rings in two planes and O-ring contact of four sides without the requirement of a specific torque limit.

Rectangular cross sectioned gaskets requiring specific torque limits to achieve compression shall not be considered as adequate or equal. No secondary sealing compounds, elliptical O-rings, grease or other devices shall be used.

#### Cable Entry Seal

The cable entry seal design shall preclude specific torque requirements to insure a watertight and submersible seal. The cable entry shall consist of a single cylindrical elastomer grommet, flanked by stainless steel washers, all having a close tolerance fit against the cable outside diameter and the entry inside diameter and compressed by the body containing a strain relief function, separate from the function of sealing the cable. The assembly shall provide ease of changing the cable when necessary using the same entry seal. **The cable entry junction chamber and motor shall be separated by a stator lead sealing gland or terminal board, which shall isolate the interior from foreign material gaining access through the pump**

## PRE-ENGINEERED PUMP STATION SPECIFICATIONS

**top. Epoxies, silicones, or other secondary sealing systems shall not be considered acceptable.**

### **Motor**

The pump motor shall be a NEMA B design, induction type with a squirrel cage rotor, shell type design, housed in an air filled, watertight chamber. The stator windings shall be insulated with moisture resistant Class H insulation rated for 180°C (356°F). The stator shall be insulated by the trickle impregnation method using Class H monomer-free polyester resin resulting in a winding fill factor of at least 95%. The motor shall be inverter duty rated in accordance with NEMA MG1, Part 31. The stator shall be heat-shrink fitted into the cast iron stator housing. The use of multiple step dip and bake-type stator insulation process is not acceptable. The use of bolts, pins or other fastening devices requiring penetration of the stator housing is not acceptable. The motor shall be designed for continuous duty handling pumped media of 40°C (104°F) and capable of at least 15 evenly spaced starts per hour. The rotor bars and short circuit rings shall be made of cast aluminum. Thermal switches set to open at 125°C (260°F) shall be embedded in the stator end coils to monitor the temperature of each phase winding. These thermal switches shall be used in conjunction with and supplemental to external motor overload protection and shall be connected to the control panel. The junction chamber containing the terminal board, shall be hermetically sealed from the motor by an elastomer compression seal. Connection between the cable conductors and stator leads shall be made with threaded compression type binding posts permanently affixed to a terminal board. The motor and the pump shall be produced by the same manufacturer.

The combined service factor (combined effect of voltage, frequency and specific gravity) shall be a minimum of 1.15. The motor shall have a voltage tolerance of plus or minus 10%. The motor shall be designed for operation up to 40°C (104°F) ambient and with a temperature rise not to exceed 80°C. A performance chart shall be provided upon request showing curves for torque, current, power factor, input/output kW and efficiency. This chart shall also include data on starting and no-load characteristics.

The power cable shall be sized according to the NEC and ICEA standards and shall be of sufficient length to reach the junction box without the need of any splices. The outer jacket of the cable shall be oil resistant chlorinated polyethylene rubber. The motor and cable shall be capable of continuous submergence underwater without loss of watertight integrity to a depth of 65 feet or greater.

The motor horsepower shall be adequate so that the pump is non-overloading throughout the entire pump performance curve from shut-off through run-out.

### **Motor Cooling System**

(Pumps with motors up to 10-hp) Motors are sufficiently convection-cooled by the surrounding environment or pumped media.

(Pumps with motors of 12-hp and greater) Motors shall be equipped with an integral motor cooling jacket of either an open type or closed-loop type.

### **Bearings**

The pump shaft shall rotate on two bearings. Motor bearings shall be permanently grease lubricated. The upper bearing shall be a single deep groove ball bearing. The lower bearing shall

## PRE-ENGINEERED PUMP STATION SPECIFICATIONS

be a two row angular contact bearing to compensate for axial thrust and radial forces. **Single row lower bearings are not acceptable.**

### **Mechanical Seal**

Each pump shall be provided with a tandem mechanical shaft seal system consisting of two totally independent seal assemblies. The seals shall operate in an lubricant reservoir that hydrodynamically lubricates the lapped seal faces at a constant rate. The lower, primary seal unit, located between the pump and the lubricant chamber, shall contain one stationary and one positively driven rotating, corrosion resistant **tungsten-carbide** ring. The upper, secondary seal unit, located between the lubricant chamber and the motor housing, shall contain one stationary and one positively driven rotating, corrosion resistant **tungsten-carbide** seal ring. The inner (upper) seal shall incorporate the **active seal** technology. The upper seal shall prevent liquid from entering the dry motor housing. The rotating seal ring of the inner (upper) seal shall be laser inscribed with micro-grooves on the seal face. Should fluid pass the lower seal, enter the seal buffer chamber and approach the upper seal, the inner (upper) seal shall unit shall act as a micro-pump, preventing fluid from passing the upper seal and entering the dry stator housing. Each seal interface shall be held in contact by its own spring system. The seals shall require neither maintenance nor adjustment nor **depend on direction of rotation for sealing**. The position of both mechanical seals shall depend on the shaft. Mounting of the lower mechanical seal on the impeller hub will not be acceptable. For special applications, other seal face materials shall be available.

**The following seal types shall not be considered acceptable nor equal to the dual independent seal specified:** shaft seals without positively driven rotating members, or conventional double mechanical seals containing either a common single or double spring acting between the upper and lower seal faces. No system requiring a pressure differential to offset pressure and to effect sealing shall be used.

Each pump shall be provided with an lubricant chamber for the shaft sealing system. The lubricant chamber shall be designed to prevent overfilling and to provide lubricant expansion capacity. The drain and inspection plug, with positive anti-leak seal shall be easily accessible from the outside. The seal system shall not rely upon the pumped media for lubrication. **The motor shall be able to operate dry without damage while pumping under load.**

**Seal lubricant shall be FDA Approved, nontoxic.**

### **Pump Shaft**

Pump and motor shaft shall be the same unit. The pump shaft is an extension of the motor shaft. Couplings shall not be acceptable. The shaft shall be stainless steel – ASTM A479 S43100-T.

The use of stainless steel sleeves will not be considered equal to stainless steel shafts as shaft sleeves only protect the shaft around the lower mechanical seal.

## PRE-ENGINEERED PUMP STATION SPECIFICATIONS

### **Pump Impeller / Volute**

The impeller(s) shall be of gray cast iron, Class 35B, dynamically balanced, double shrouded non-clogging design having a long throughlet without acute turns. The impeller(s) shall be capable of handling solids, fibrous materials, heavy sludge and other matter found in wastewater. Whenever possible, a full vaned, not vortex, impeller shall be used for maximum hydraulic efficiency; thus, reducing operating costs. Impeller(s) shall be keyed to the shaft, retained with an Allen head bolt and shall be capable of passing a minimum 3 inch diameter solid. All impellers shall be coated with an acrylic dispersion zinc phosphate primer.

A wear ring system shall be used to provide efficient sealing between the volute and suction inlet of the impeller. Each pump shall be equipped with a brass, or nitrile rubber coated steel ring insert that is drive fitted to the volute inlet.

Pump volute(s) shall be single-piece grey cast iron, Class 35B, non-concentric design with smooth passages large enough to pass any solids that may enter the impeller. Minimum inlet and discharge size shall be as specified.

### **Intregal Mix Flush Valve.**

Each Pump shall be equipped with a Mix Flush Valve System that automatically flushes the sump during initial operation of the pump. The system shall consist of the Flush Valve, Impeller and Volute. The operation of the valve shall depend only on the pump flow and pressure. No electrical components or cables are to be used with the valve. Thus, the valve is intrinsically safe and suitable for pumps used in hazardous locations.

### **Motor Protection**

All stators shall incorporate thermal switches in series to monitor the temperature of each phase winding. The thermal switches shall open at 125°C (260°F), stop the motor and activate an alarm.

A leakage sensor shall be available as an option to detect water in the stator chamber. The Float Leakage Sensor (FLS) is a small float switch used to detect the presence of water in the stator chamber. When activated, the FLS will stop the motor and send an alarm both local and/or remote. USE OF VOLTAGE SENSITIVE SOLID STATE SENSORS AND TRIP TEMPERATURE ABOVE 125°C (260°F) SHALL NOT BE ALLOWED.

The thermal switches and FLS shall be connected to a Mini CAS (Control and Status) monitoring unit. The Mini CAS monitoring unit shall be designed to be mounted in any control panel.

### **DAVIT CRANE**

Provide one davit crane and crane base at pump station.

Manufacturer

Davit Crane shall be as manufactured by Thern, Inc. "Model 5123M1GAL" or equal.

Components

1. Winch shall be equipped with bronze bearings for smooth and efficient operation.

## **PRE-ENGINEERED PUMP STATION SPECIFICATIONS**

Wire rope anchor shall be secured to an anchor hole in the flange of the drum, allowing rapid attachment or removal of wire rope from the crane, so that wire rope assemblies can be left permanently attached to submersed pumps and mixers while the crane is moved to a new location.

2. Boom and mast rotate 360 degrees under load, in a bearing sleeve in the base. A pivoting handle shall be provided.
3. Boom shall be adjustable to three different positions for operation, and shall fold down for storage or transport.
4. Loads shall be lifted with a stainless steel spur gear hand winch contained within the boom. The winch shall be equipped with an automatic disc brake for load control, and gear covers to protect gears and help prevent injuries. Winch components shall have zinc and iridescent dichromate plated finish for corrosion resistance.
5. Lifting Capacity: 1,000 pounds.

### Accessories

1. One (1) Thern, Inc. "Model 523" pedestal base, or equal.
2. One (1) stainless steel 1/4" diameter wire rope, with stainless steel eye hook and swagged ball fitting, with minimum length of 28 feet.
3. Galvanized steel expansion anchor bolts for anchoring base, 5/8" minimum diameter.

### Finishes

Crane and bases shall have a galvanized finish for superior corrosion protection.

## **WET WELL AND VALVE VAULT**

Bidder has the option of bidding a fiberglass wet well and valve vault or a concrete wet well and valve vault.

For Fiberglass option (A), bidder should base his bid on product from following manufacturer:

1. ITT FLYGT – TOPS 6 Prefab Fiberglass Pump Station

For Concrete option (B), bidder should refer to plans.

## **OPTION (A)**

### **FIBERGLASS PUMP STATION CONSTRUCTION**

The station cylinder shall be wound to the station bottom such that the assembly is of a monolithic design, which is capable of withstanding the full hydrostatic head from the exterior of the station while the station is completely empty.

The cylinder shall be made of FRP using the filament winding process. A safety factor of two (2) on the minimum ultimate tensile strength of the laminate bottom shall be used in designing the

## **PRE-ENGINEERED PUMP STATION SPECIFICATIONS**

basin and cylinder wall thicknesses for the station, taking into account all normally imposed loads arising from floatation, soil pressures, normal backfill, handling loads, operating loads and static loads imposed by equipment used in hoisting the pumps in and out of the station.

The cylinder is a filament wound laminate constructed by saturating continuous strand glass roving in a controlled pattern over a corrosion resistant white-pigmented resin layer that is to be 8 mils minimum thickness. The roving's shall be applied uniformly throughout the entire length of the cylinder as required to provide adequate thickness for the mechanical loads of each application. The winding pattern shall be a combination of helical and hoop wraps and shall produce a dense laminate without non-reinforced resin pockets or air bridging between the rovings. The glass content of the structural laminate shall be 60% to 70% by weight.

The station bottom is a 30% to 50% glass content, chop spray laminate, constructed by built-up layers of chop spray and chopped strand mat applied along with a catalyzed resin. Each layer shall be properly wetted out and rolled out so that it is free of air voids until the required wall thickness has been obtained.

All inside surfaces shall be smooth and free of cracks and crazing. The inside surface will be pigmented or gel coated to a bright white finish. All surfaces other than those made in contact with the mold surface shall be coated with air-inhibited resin or gelcoat, this includes any cut edges of laminate.

The station shall be provided with one (1) anti-flotation flange located near the bottom of the station. This anti-flotation flange is an integral part of the station and is sufficient in design to withstand the forces acting upon the station due to the subsoil water pressure. Once the station is inserted into the hole, concrete ballast may be required depending on the station depth, please refer to the recommendations for concrete ballast as recommended in Flygt's TOP Station

Operations and Maintenance manual. The combination of the flange and the loading of backfill material over the concrete shall provide adequate ballast against buoyancy under full hydrostatic head conditions.

### **PUMP STATION ACCESS COVER**

The TOP station cover shall be of ¼-inch thick Type-5086 aluminum diamond plate with an integral Safe-Hatch access cover. All bars, angles and shapes shall be type 6061-T6 aluminum. The access cover frame shall be a minimum of 4-inches deep and shall be adequately sized to allow for easy passage of the submersible pumps. The Safe-Hatch access cover shall be designed to support the weight of the pump unit plus pedestrian traffic. The access door(s) shall be equipped with a hold-open arm, held open in the 90-degree position. Cover door hinges shall be heavy-duty design and be cast 1/4-inch thick Type 316 stainless steel with 3/8-inch diameter stainless steel hinge pins. All fasteners shall be type-316 stainless steel. Each hatch shall be supplied with a type-316 stainless steel slam lock, having a key-way protected by a threaded plug. The plug shall be flush with the diamond plate cover. The hatch shall be equipped with an aluminum lift handle that shall be flush to the top of the diamond plate cover.

The station lid shall have an integral four-inch diameter stub-pipe connection for the purpose of venting the pump station. The inverted J-shaped vent pipe shall be schedule 40 PVC pipe and shall end at a point at least 3-foot above the elevation of the station cover. There shall also be an option for a second vent to accommodate positive ventilation of the wet well.

## **PRE-ENGINEERED PUMP STATION SPECIFICATIONS**

The access cover unit shall be equipped with a Safe-Hatch hinged safety grate to provide protection against fall-through and to control access into the confined space. Grate openings shall be sized to allow for routine maintenance inspection without having to open the safety grate. The closed safety grate shall be designed to support the weight of one pump to facilitate site pump wash-down and inspection. The hatch opening will have a 4" elevated toe board to prevent tools from being kicked into the wet well (per OSHA 1926.502 (j)).

### **VALVE VAULT**

The pre-engineered pump station shall have a valve vault that is separate from the pump station vessel. The valve vault shall be fabricated in a manner identical to the pump station and shall be large enough to allow entry for routine maintenance and inspection. The valve vault shall be equipped with an integral drain and check valve to facilitate drainage from the valve vault back into the pump station.

### **Piping and valves**

The pre-engineered fiberglass pump station and valve vault shall be furnished complete with discharge pipes, fittings, check valves and shut-off valves. Discharge piping shall be of PVC. The check valves shall be ( Flygt-HDL Type-5087 ball-type, cast iron ANSI Class 125 flanged / ValMatic flap-type ). The shut-off valves shall be ¼-turn eccentric plug-type, cast iron ANSI Class 125 flanged, with 100% port area (6" model has an 88% port opening) and shall be suitable for the intended purpose.

### **OPTION (B)**

## **CONCRETE PUMP STATION CONSTRUCTION**

### **WET WELL**

The wet well shall consist of a circular basin, minimum 6 feet in diameter and minimum 12 feet in depth, as shown on plans. The wet well shall be constructed of reinforced concrete and have walls designed to withstand the external earth loadings when the wet well is empty. The wet well shall have a reinforced concrete bottom and top, with access hatch. The base of the wet well shall be grouted at the joints on the inside at a 1:1 slope to prevent the accumulation of solids. All pipe openings for flow into and out of the wet well shall have the pipes grouted in place, inside and outside with non-shrink grout.

The wet well shall contain stainless steel guide rails for the pumps, securely fastened at the top opening of the wet well to allow the pumps to accurately mate with the pump bases, which shall be secured to the bottom with stainless steel bolts.

The pump bases shall be as specified by the pump manufacturer and have minimum 4" ductile iron (Class 200) discharge pipes, which run through the valve vault. There shall be provided stainless steel lifting chains and floats for control of the pumps as called for hereinafter and as recommended by the pump manufacturer. Floats shall be provided for the control of the pumps and alarms, and floats shall be located such that they are not affected by incoming flow.

## **PRE-ENGINEERED PUMP STATION SPECIFICATIONS**

The wet well shall have a 3" minimum diameter ductile iron or stainless steel air vent extending through the top slab with a 180 degree turn sealed by an approved insect screen.

Access to the wet well shall be through an aluminum hatch, rated for a 300 pound load. The hatch frame and cover shall be flush with the top of the concrete complete with hinges and flush locking mechanism, upper guide holder and level sensor cable holder. Doors shall open and automatically lock with stainless steel "hold open" arm with aluminum release handles.

Access to the wet well will not normally be required but steps shall be provided, embedded in the wall of the wet well at 16" vertical spacing and the steps shall be the polypropylene plastic type as manufactured by M.A Industries or approved equal.

### **VALVE VAULT**

The valve vault shall be a pre-cast box with an approved aluminum access hatch and steps, the same as for the wet well. The valve vault shall contain two 4" (min.) discharge lines from the pumps and each line shall have a horizontal swing check valve with an outside rotating arm indicator and a gate valve with a hand wheel operator. All piping and all fittings shall be flanged ductile iron and all piping shall be properly supported. Immediately beyond the valve vault, there shall be a 45 degree bend to bring the piping to a 45 degree wye and then to the force main. There shall be provided a minimum 3" schedule 40 PVC drain pipe from the valve vault to the wet well and the floor of the valve vault shall be grouted to provide a slope to the drain line.

### **PIPING AND VALVING**

All piping in the wet well and the valve vault shall be ductile iron pipe, class 250 in accordance with AWWA C-151. The connection to the PVC force main outside the valve vault shall be made with a ductile iron mechanical joint solid sleeve. Provisions shall be made for the removal and replacement of all piping, valves and fittings.

## PRE-ENGINEERED PUMP STATION SPECIFICATIONS

### ITEM No. 2 (DUPLEX PUMP CONTROL PANEL)

#### GENERAL

- A GENERAL SPECIFICATIONS: The intent of this specification is to provide a complete, integrated Pump Control System as described herein. It shall be factory assembled, wired and tested. The panel manufacturer shall supply AutoCAD submittal purposes. AutoCAD As-Wired drawings shall be supplied upon completion of construction. Two (2) copies of these drawings shall be provided inside the pump control panel for installation assistance.

An equipment data tag shall be permanently affixed on the inside of the exterior door with the station designation, power source, pump horsepower, and pump full load amps. In addition to the label requirements of UL 508A/698A an engraved legend plate shall be permanently affixed on the inside of the exterior door with the name, address and telephone of the service representative for the pumps and control panel.

The wetwell is classified as a Class I, Division 2, Group D hazardous location per NFPA Article 820. All applicable installation procedures per NEC, ANSI, EPA, and all other codes and laws for this installation requirement shall be followed. Intrinsically safe barriers shall be provided for the float switches located in the wet well. All pump and control conduits entering or exiting the Pump Control Panel shall have explosion proof conduit seals suitable for Class I, Division 2, Group D environments. These seals shall be provided and installed by the installing contractor.

- B QUALITY ASSURANCE: The pump control panel shall be supplied by the pump manufacturer and fabricated by a current UL 508A/698A Listed industrial control panel manufacturer. The panel manufacturer shall show its UL follow-up Service Procedure file number on submittals. All devices within the panel shall be UL listed and/or recognized where applicable and shall be mounted and wired in accordance with the most current edition of UL508/698A and NFPA. The panel manufacturer shall have a minimum of ten (10) years experience manufacturing systems specifically for water and wastewater applications.

The Pump Control System(s) shall be fully tested by the factory prior to shipment. It shall include testing of both power and control devices as well as for all control functions. A final inspection shall be performed prior to shipment and a copy of this form shall be provided with the panel.

The Pump Control System(s) described shall be manufactured by a Flygt Certified Facility. The panel shall be designed with the following features to operate the specified pumps. The Pumps, Pump Control Panel and related accessories shall be supplied by the pump supplier to insure compatibility and assure matching controls to pumps.

## PRE-ENGINEERED PUMP STATION SPECIFICATIONS

The naming of a manufacturer/supplier of equipment in this specification is not intended to eliminate competition or prohibit qualified manufacturers from offering equipment. Rather, the intent is to establish a standard of excellence for the material used, and to indicate a principal of operation desired. The contractor's bid shall be based on the use of the named equipment. Unless the bidder clearly indicates in his bid that he is offering an equal product approved by the engineer via a pre-bid submittal, his bid shall be considered as providing the brand name product referenced in these specifications.

- C BASIC OPERATION: The pumps shall be operated automatically or manually as a pump down, lead/lag, common off system. Each pump shall be controlled primarily through a "Hand-Off-Auto" three position maintained selector switch. Control function requirements are further defined in the control section of these specifications.

### 1. POSITION COMMANDS:

- a. OFF - In this position the applicable pump will not run under any circumstance.
- b. HAND - In this position the applicable pump shall run without regard for the level sensing commands and will rely on operator discipline to run and stop.
- c. AUTO - In this position both pumps shall be controlled by float switches. These switches will sense the appropriate level in the wet well and initiate start and stop commands to the pumps. All floats shall be interposed with intrinsically safe UL Listed relays installed per NEC Article 504, ANSI/ISA-RP12.6 and all other applicable codes.

### 2. PUMP SEQUENCE:

- a. LEVEL 4 - High Level Alarm
- b. LEVEL 3 - Start Lag Pump; both pumps running
- c. LEVEL 2 - Start Lead Pump; shall alternate on each call
- d. LEVEL 1 - Off; all pumps stop

3. UTILITY POWER: Utility power to the panel shall be 230 volts, 1 phase, 60hz.

## PRE-ENGINEERED PUMP STATION SPECIFICATIONS

- D WET WELL: The wet well is classified as a Class I, Division 2, Group D hazardous location as per NFPA Article 820 recommendation.

### CONTROL PANEL ENCLOSURE

- A. ENCLOSURE: A U.L. Listed and NEMA Type 4X enclosure properly sized to contain the required components of the control system(s) shall be applied as per the following specifications:

NEMA 4X STAINLESS STEEL: The enclosure shall be constructed of 14 GA stainless steel body and door(s) with continuous stainless steel piano hinge. Welded on mounting feet shall be provided; they shall be oversized to readily accommodate mounting the panel on 1 5/8" strut. All hardware shall be corrosion resistant. A 3-point latch with nylon rollers and padlock provisions on handle shall be provided. Oil-resistant door gasketing around all four sides of opening shall be applied. A painted white enamel steel mounting panel shall be provided for mounting of components.

All hardware shall be corrosion resistant. Voltage identification labels and comprehensive warning labels shall be provided. To maintain the Environmental rating of the specified equipment and enclosure, install in the openings only certified or recognized devices with the same integrity as the enclosure, in compliance with the installation instructions of the device. The enclosure with the installed inner swing door shall be NEMA Type 4X. The enclosure shall be designed specifically for municipal water and waste water applications as supplied by Indquip Engineering, Inc.

- B. ENCLOSURE ACCESSORIES: The enclosure shall also provide for and include the following mechanical and electrical facilities:

1. INNER SWING PANEL; Provision of a "dead front" feature shall be provided using a full size hinged inner door to mount all operator devices. Material shall be .125" aluminum with turned down flanges on all four sides for added rigidity. The inner door and components shall have a "dead back" feature in order to avoid accidental shock hazard. The inner door shall be large enough to fill the entire opening of the enclosure. The screws used to secure the inner swing door mounting hardware to the enclosure shall be UL and NEMA Type 4X rated/ listed and shall not violate the environmental integrity of the enclosure. Mounting hardware which penetrates the enclosure and violates the environmental rating of the enclosure shall not be allowed. All hardware shall be corrosion resistant. Quarter-turn latches shall be provided for securing the inner door in the closed position; captive screws are not acceptable. In addition, an inner door handle shall be provided for operator convenience.

## PRE-ENGINEERED PUMP STATION SPECIFICATIONS

2. CONDENSATION HEATER: A 100 watt (minimum), 120 VAC heater shall be provided to protect the enclosure from the harmful effects of condensation corrosion and low temperatures. The heater shall be complete with an adjustable thermostat. Branch protection shall be provided.

### HIGH VOLTAGE SECTION

- A. MAIN LUG ONLY: A power distribution block sized for the incoming power conductors shall be provided for the main power connection. A separate Fused Service Entrance Disconnect Switch shall be provided and installed by others.
- B. INDIVIDUAL BRANCH DISCONNECT AND SHORT CIRCUIT PROTECTION: Each pump shall have a Class J fused disconnect and starter sized for the pump motor to be supplied. The starter shall be IEC and UL Listed, full voltage non-reversing type complete with a Class 10 overload and bimetallic heater elements. The heaters shall be sized based on the actual pump full load amps and service factor, NOT, the NEC Table 430-150. auxiliary contacts shall be provided as required by the system.
- C. POWER DISTRIBUTION SYSTEM: Associated with this installation will require the individual branch disconnect and short circuit protection to have a U.L. interrupting rating of 14 kA at 460 VAC.
- D. CONTROL POWER: The 120 VAC, single-phase power shall be derived from (a properly sized transformer) / (one leg of the power to neutral).
  1. Control power shall have an overcurrent protection device suitable interrupting requirements of the system. Fused disconnect shall be provided in accordance with NEC and the system requirements.
- E. LIGHTNING ARRESTER: The system shall be protected by a lightning arrester for the electrical service and shall be capable of handling up to 600vac. It shall be parallel MOV design and provide protection for Category C Transient Surges as defined in ANS/IEEE C62.41 without degradation of components. The arrester shall provide protection between each phase line and the ground line. The arrester shall be UL listed as a Secondary Surge Arrester, UL category OWHX. The enclosure shall be molded UV resistant polycarbonate or equal material. All electrical connectors shall be sealed in a UL component recognized epoxy to exclude moisture, dirt and corrosion. A one-half inch conduit nipple and lock nut shall be provided. Leads shall be color coded and a minimum of 18 inches long. It shall be provided loose for mounting on the exterior of the Utility Service Entrance Disconnect by the installing contractor.

## PRE-ENGINEERED PUMP STATION SPECIFICATIONS

- F. GROUND LUGS: Ground lugs shall be provided for both incoming service and for each motor.

### CONTROL SECTION

- A. COMPONENTS: Operator control devices shall be 22mm, NEMA and U.L. listed for Types 1, 12, 3R, 4 and 4X. Contact blocks shall be self wiping and color coded bridge type rated at 10A and must have a rated insulation of 600V. Terminal connections shall be suitable for two 14 AWG control wires. All control and time delay relays shall be DPDT rated 10A @ 120VAC, 8-pin socket mount type. Sockets shall have pressure plate terminals that accept two 14 AWG wires and shall be rated a minimum of 300V. All terminal blocks supplied shall be box lug type rated at the proper voltage/ampereage and shall accept two 14 AWG wires.

All control wiring shall be minimum 16 AWG, MTW and shall be color coded in accordance with all applicable codes and laws. Spiral wrap, tie wrap, fasteners and wire duct shall be provided as required for aesthetics and safety.

All components mounted on the door shall be wired with insulated connectors (where "finger proof" terminals are not provided) to prevent accidental shock hazards. All components on the backpanel shall be mounted on DIN rail or fastened via drilled and tapped screws to facilitate easy component replacement. Pop rivets shall not be allowed. Ammeter loops shall be provided between the disconnect switch and combination starter for better heat dissipation and an easy means of meter reading.

Self-adhesive Brady BMX-C + System vinyl cloth printed adhesive wire markers shall be supplied at both ends of every wire. All components on the backpanel shall be identified by a Brady BMX-C + System metallized polyester printed adhesive label. Dymo labels are not acceptable. These labels shall include all pertinent data applicable to ratings and sizes. Components on the door of the enclosure shall be identified with custom engraved plastic legend plates. Voltage identification labels and comprehensive warning labels shall also be provided.

1. ALTERNATING RELAY: An 8-pin socket mount DPDT alternating relay shall alternate each pump on each successive start command. It shall be complete with LED indicating lights showing the status of the internal relay and a lead selector toggle switch which will allow the alternation to be cancelled and omit a disabled pump. Contacts shall be rated 10A at 120VAC.
2. MODE SELECT: Method of operation shall be by a three position green illuminated maintained "Hand-Off-Auto" selector switch for each pump which shall provide for mode selection and run indication.
3. PUMP THERMAL TRIP AND SEAL LEAK DETECTION: A seal leak and

## PRE-ENGINEERED PUMP STATION SPECIFICATIONS

overtemperature monitoring relay shall be supplied. One relay shall be provided for each pump. The relays shall monitor the shaft seal and stator temperature of the pump motor. Overtemperature shall be detected by a normally closed low temperature switch mounted on the stator. An overtemperature condition will cause immediate shutdown and the pump(s) shall remain locked out until manually reset. The overtemperature function shall incorporate a bistable relay that retains its position during power failures. Seal leakage shall be detected by a moisture sensor in the seal cavity. Detection of a seal leak occurring within the motor chamber shall not shutdown or lockout the pump. LED's located on these relays shall indicate a thermal trip or seal leak condition.

4. ELAPSED TIME METERS(S): A Six digit non-resettable type hour meter shall be provided for each pump to record hours of operation. These shall be wired with insulated connectors to prevent accidental shock hazards.
5. INTRINSICALLY SAFE RELAY(S): ISR relays will be provided per Article 504 of the N.E.C. and ANSI/ISA-RP12.6. These relays shall be interfaced with each float switch. Intrinsically safe relays shall be UL 913 Listed and shall be 8-pin socket mount style.
6. CONVENIENCE OUTLET: A 15A GFI duplex outlet shall be provided. It shall be mounted on the inner swing door. A dedicated 15A circuit breaker shall be provided for this outlet.
7. START DELAY: A time delay relay shall be provided to delay the start of the lag pump. This relay shall be adjustable from 1 to 10 seconds and shall be an 8-pin socket mount type with contact ratings as previously specified.
8. ALARMS: A weatherproof red flashing incandescent alarm light and a horn rated 90dB at ten feet shall be provided to indicate a high level alarm condition. Alarm power shall be derived from the 120V control power. They shall be mounted on the exterior of the Pump Control Panel and shall be UL recognized for NEMA 4 to maintain the environmental rating of the enclosure.
9. DIALER: A 4 Channel Telephone Alarm Dialer as manufactured by Sensaphone, Raco, or pre-approved equal.

## PRE-ENGINEERED PUMP STATION SPECIFICATIONS

### TESTING

#### Standard Pump Factory Test

Each completed and assembled pump/motor unit shall undergo the following factory tests at the manufacturer's plant prior to shipment

:

- Minimum 3-point hydraulic performance test
- No-Leak seal integrity test
- Electrical integrity test

#### Field Start-up

After installation, a pump station start-up shall be performed by the installing contractor under the supervision of the manufacturer's authorized representative. Field service shall be provided by an authorized, factory trained representative of the pump manufacturer. Services shall include, but not be limited to, inspection of the completed pump station installation to ensure that it has been performed in accordance with the manufacturer's instructions and recommendations, supervision of all field-testing and activation of the Pump Manufacturer's Warranty. The test shall demonstrate to the satisfaction of the Owner that the equipment meets all specified performance criteria, is properly installed and anchored, and operates smoothly without exceeding the full load amperage rating of the motor. The Contractor shall be responsible for coordinating the required field services with the Pump Manufacturer.

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**STANDARD SOLICITATION PROVISIONS**

- a. The Missouri Department of Transportation (MoDOT) reserves the right to reject any or all bids/quotes/proposals, and to accept or reject any items thereon, and to waive technicalities. In case of error in the extension of prices in the bid/quote/proposal, unit prices will govern.
- b. All bids/quotes/proposals must be signed with the firm name and by a responsible officer or employee. Obligations assumed by such signature must be fulfilled.
- c. By virtue of statutory authority, a preference will be given to materials, products, supplies, provisions and all other articles produced, manufactured, made or grown, within the State of Missouri.
- d. Time of delivery is a part of the consideration and, if not otherwise stated in the solicitation documents, must be stated in definite terms by the Bidder/Offeror and must be adhered to. If time varies on different items, the Bidder/Offeror shall so state.
- e. If providing bids/quotes/proposals for commodities, the Bidder/Offeror will state brand or make on each item. If bidding or proposing other than the make, model or brand specified, the manufacturer's name, model number or catalog number must be given.
- f. **For bids/proposals of \$25,000 or more**, no bids/proposals by telephone, telegram or telefax will be accepted.
- g. The date specified for the returning of bids/quotes/proposals is a firm deadline and all bids/quotes/proposals must be received at the designated office by that time. The Department does not recognize the U.S. Mail, Railway Express Agency, Air Express, or any other organization, as its agent for purposes of accepting proposals. All proposals arriving at the designated office after the deadline specified will be rejected.

**GENERAL TERMS AND CONDITIONS**

**General Performance**

- a. Bidders are encouraged to obtain minority business enterprise (MBE) and women business enterprise (WBE) participation in this work through the use of subcontractors, suppliers, joint ventures, or other arrangements that afford meaningful participation for M/WBEs. Bidders are encouraged to obtain 10% MBE and 5% WBE participation.
- b. This work is to be performed under the general supervision and direction of the Missouri Department of Transportation (MoDOT) and, if awarded any portion of the work, the Contractor agrees to furnish at his own expense all labor and equipment required to complete the work, it being expressly understood that this solicitation is for completed work based upon the price(s) specified and is not a solicitation for rental of equipment or employment of labor by MoDOT, and MoDOT is to have no direction or control over the employees used by the Contractor in performance of the work.

**Deliveries**

- a. Unless otherwise specified on the solicitation documents or purchase order, suppliers shall give at least 24 hours advance notice of each delivery. Delivery will only be received between the hours of 8:00 a.m. to 3:00 p.m., Monday through Friday. Material arriving after 3:00 p.m. will not be unloaded until the following workday. No material will be received on Saturday, Sunday or state holidays.
- b. If the prices bid herein include the delivery cost of the material, the Contractor agrees to pay all transportation charges on the material as FOB - Destination. Freight costs must be included in the unit price bid and not listed as a separate line item.
- c. Any demurrage is to be paid by the Contractor direct to the railroad or carrier.

**Nondiscrimination**

- a. The Contractor shall comply with the Regulations relative to nondiscrimination in federally-assisted programs of the Department of Transportation, Title 49, Code of Federal Regulations, Part 21, as they may be amended from time to time, (hereinafter referred to as the Regulations), which are herein incorporated by reference and made a part of this contract.
- b. All solicitations either by competitive bidding or negotiation made by the Contractor for work to be performed under a subcontract, including procurements of materials or leases of the Contractor's obligations under this contract and the Regulations, will be relative to nondiscrimination on the grounds of race, color, or national origin.
  - 1) **Sanctions for Noncompliance:** In the event of the Contractor's noncompliance with the nondiscrimination provisions of this contract, MoDOT shall impose such contract sanctions as it or the Federal Highway Administration may determine to be appropriate, including, but not limited to:
    - i. withholding of payments to the Contractor under the contract until the Contractor complies, and/or,
    - ii. cancellation, termination or suspension of the contract, in whole or in part.

**Contract/Purchase Order**

- a. By submitting a bid/quote/proposal, the Bidder/Offeror agrees to furnish any and all equipment, supplies and/or services specified in the solicitation documents, at the prices quoted, pursuant to all requirements and specifications contained therein.
- b. A binding contract shall consist of: (1) the solicitation documents, amendments thereto, and/or Best and Final Offer (BAFO) request(s) with any changes/additions, (2) the Contractor's proposal and/or submitted pricing, and (3) the MHTC's acceptance of the proposal and/or bid by purchase order or post-award contract.
- c. A notice of award does not constitute an authorization for shipment of equipment or supplies or a directive to proceed with services. Before providing equipment, supplies and/or services, the Contractor must receive a properly authorized purchase order and/or notice to proceed.
- d. The contract expresses the complete agreement of the parties and performance shall be governed solely by the specifications and requirements contained therein. Any change, whether by modification and/or supplementation, must be accomplished by a formal contract amendment signed and approved by and between the duly authorized representative of the Contractor and the duly authorized representative of the MHTC, by a modified purchase order prior to the effective date of such modification. The Contractor expressly and explicitly understands and agrees that no other method

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and/or no other document, including correspondence, acts, and oral communications by or from any person, shall be used or construed as an amendment or modification.

**Subcontracting**

- a. It is specifically understood that no portion of the material or any interest in the contract, shall be subcontracted, transferred, assigned or otherwise disposed of, except with the written consent of MoDOT. Request for permission to subcontract or otherwise dispose of any part of the work shall be in writing to MoDOT and accompanied by documentation showing that the organization which will perform the work is particularly experienced and equipped for such work.
- b. Consent to subcontract or otherwise dispose of any portion of the work shall not be construed to relieve the Contractor of any responsibility for the production and delivery of the contracted work and the completion of the work within the specified time.
- c. All payments for work performed by a subcontractor shall be made to the Contractor to whom the contract was awarded and the purchase order issued.

**Invoicing and Payment**

- a. MoDOT is exempt from paying Missouri Sales Tax, Missouri Use Tax and Federal Excise Tax. However, the Contractor may themselves be responsible for the payment of taxes on materials they purchase to fulfill the contract. A Project Tax Exemption Certificate will be furnished to the successful Bidder/Offeror upon request if applicable.
- b. Each invoice should be itemized in accordance with items listed on the purchase order and/or contract. The statewide financial management system has been designed to capture certain receipt and payment information. Therefore, each invoice submitted must reference the purchase order number and must be itemized in accordance with items listed on the purchase order. Failure to comply with this requirement may delay processing of invoices for payment.
- c. Unless otherwise provided for in the solicitation documents, payment for all equipment, supplies, and/or services required herein shall be made in arrears. The Missouri Highways and Transportation Commission (MHTC) shall not make any advance deposits.
- d. The MHTC assumes no obligation for equipment, supplies, and/or services shipped or provided in excess of the quantity ordered. Any authorized quantity is subject to the MHTC's rejection and shall be returned at the Contractor's expense.
- e. The MHTC reserves the right to purchase goods and services using the state-purchasing card.

**Applicable Laws and Regulations**

- a. The contract shall be construed according to the laws of the State of Missouri. The Contractor shall comply with all local, state, and federal laws and regulations related to the performance of the contract.
- b. The Contractor must be registered and maintain good standing with the Secretary of State of the State of Missouri and other regulatory agencies, as may be required by law or regulations. Prior to the issuance of a purchase order and/or notice to proceed, the Contractor may be required to submit to MoDOT a copy of their current Authority Certificate from the Secretary of State of the State of Missouri.
  - 1) Prior to the issuance of a purchase order and/or notice to proceed, all **out-of-state** Contractors **providing services** within the state of Missouri must submit to MoDOT a copy of their current Transient Employer Certificate from the Department of Revenue, in addition to a copy of their current Authority Certificate from the Secretary of State of the State of Missouri.
- c. The exclusive venue for any legal proceeding relating to or arising, out of the contract shall be in the Circuit Court of Cole County, Missouri.

**Executive Order**

- a. The Contractor shall comply with all the provisions of Executive Order 07-13, issued by the Honorable Matt Blunt, Governor of Missouri, on the sixth (6<sup>th</sup>) day of March, 2007. This Executive Order, which promulgates the State of Missouri's position to not tolerate persons who contract with the state engaging in or supporting illegal activities of employing individuals who are not eligible to work in the United States, is incorporated herein by reference and made a part of this Agreement.
  - 1) "By signing this Agreement, the Contractor hereby certifies that any employee of the Contractor assigned to perform services under the contract is eligible and authorized to work in the United States in compliance with federal law."
  - 2) In the event the Contractor fails to comply with the provisions of the Executive Order 07-13, or in the event the Commission has reasonable cause to believe that the contractor has knowingly employed individuals who are not eligible to work in the United States in violation of federal law, the Commission reserves the right to impose such contract sanctions as it may determine to be appropriate, including but not limited to contract cancellation, termination or suspension in whole or in part or both.
  - 3) The Contractor shall include the provisions of this paragraph in every subcontract. The Contractor shall take such action with respect to any subcontract as the Commission may direct as a means of enforcing such provisions, including sanctions for noncompliance.

**Preferences**

- a. In the evaluation of bids/quotes/proposals, preferences shall be applied in accordance with Chapter 34 RSMo. Contractors should apply the same preferences in selecting subcontractors.
- b. By virtue of statutory authority, RSMo. 34.076 and 34.350 to 34.359, a preference will be given to materials, products, supplies, provisions and all other articles produced, manufactured, made or grown within the State of Missouri. Such preference shall be given when quality is equal or better and delivered price is the same or less.

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- 1) If attached, the document entitled "**PREFERENCE IN PURCHASING PRODUCTS**" should be completed and returned with the solicitation documents.
  - 2) If attached, the document entitled "**MISSOURI DOMESTIC PRODUCTS PROCUREMENT ACT**" should be completed and returned with the solicitation documents. **Applies if bid is Twenty-Five Thousand Dollars (\$25,000.00) or more.**
- c. By virtue of statutory authority, RSMo 34.074, a preference will be given all contracts for the performance of any job or service to service-disabled veteran business either doing business as Missouri firms, corporations, or individuals; or which maintain Missouri offices or places of business, when the quality of performance promised is equal or better and the price quoted is the same or less or whenever competing bids, in their entirety, are comparable.
- 1) If attached, the document entitled "**MISSOURI SERVICE-DISABLED VETERAN PREFERENCE**" should be completed and returned with the solicitation documents.
- d. In the event of a tie of low bids, the MHTC reserves the right to establish the method to be used in determining the award

**Remedies and Rights**

- a. No provision in the contract shall be construed, expressly or implied, as a waiver by the MHTC of any existing or future right and/or remedy available by law in the event of any claim by the MHTC of the Contractor's default or breach of contract.
- b. The Contractor agrees and understands that the contract shall constitute an assignment by the Contractor to the MHTC of all rights, title and interest in and to all causes of action that the Contractor may have under the antitrust laws of the United States or State of Missouri for which causes of action have accrued or will accrue as the result of or in relation to the particular equipment, supplies, and/or services purchased or produced by the Contractor in the fulfillment of the contract with the MHTC.
- c. In the event a Contractor becomes involved in, or is threatened with, litigation with a subcontractor or supplier as a result of such direction, the Contractor may request MoDOT to enter into such litigation to protect the interests of the MHTC, and, in addition, the Contractor may request the United States to enter into such litigation to protect the interests of the United States.

**Cancellation of Contract**

- a. The MHTC may cancel the contract at any time for a material breach of contractual obligations or for convenience by providing the Contractor with written notice of cancellation. Should the MHTC exercise its right to cancel the contract for such reasons, cancellation will become effective upon the date specified in the notice of cancellation sent to the Contractor.
- b. If the MHTC cancels the contract for breach, the MHTC reserves the right to obtain the equipment, supplies, and/or services to be provided pursuant to the contract from other sources and upon such terms and in such manner as the MHTC deems appropriate and charge the Contractor for any additional costs incurred thereby.

**Bankruptcy or Insolvency**

- a. Upon filing for any bankruptcy or insolvency proceeding by or against the Contractor, whether voluntary or involuntary, or upon the appointment of a receiver, trustee, or assigned the benefit or creditors, the Contractor must notify MoDOT immediately. Upon learning of any such actions, the MHTC reserves the right, at its sole discretion, to either cancel the contract or affirm the contract and hold the Contractor responsible for damages.

**Inventions, Patents, and Copyrights**

- a. The Contractor shall defend, protect, and hold harmless the MHTC, its officers, agents, and employees against all suits of law or in equity resulting from patent and copyright infringement concerning the Contractor's performance or products produced under the terms of the contract.

**Inspection and Acceptance**

- a. No equipment, supplies, and/or services received by MoDOT pursuant to a contract shall be deemed accepted until MoDOT has had reasonable opportunity to inspect said equipment, supplies, and/or services.
- b. All equipment, supplies, and/or services which do not comply with the specifications and/or requirements or which are otherwise unacceptable or defective may be rejected. In addition, all equipment, supplies, and/or services which are discovered to be defective or which do not conform to any warranty of the Contractor upon inspection (or at any later time if the defects contained were not reasonably ascertainable upon the initial inspection) may be rejected.
- c. The MHTC reserves the right to return any such rejected shipment at the Contractor's expense for full credit or replacement and to specify a reasonable date by which replacements must be received.
- d. The MHTC's right to reject any unacceptable equipment, supplies, and/or services shall not exclude any other legal, equitable or contractual remedies the MHTC may have.

**Warranty**

- a. The Contractor expressly warrants that all equipment, supplies, and/or services provided shall: (1) conform to each and every specification, drawing, sample or other description which was furnished to or adopted by MoDOT, (2) be fit and sufficient for the purpose expressed in the solicitation documents, (3) be merchantable, (4) be of good materials and workmanship, and (5) be free from defect.
- b. Such warranty shall survive delivery and shall not be deemed waived either by reason of the MHTC's acceptance of or payment for said equipment, supplies, and/or services.

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**Status of Independent Contractor**

- a. The Contractor represents itself to be an independent Contractor offering such services to the general public and shall not represent itself or its employees to be an employee of the MHTC. Therefore, the Contractor shall assume all legal and financial responsibility for taxes, FICA, employee fringe benefits, workers' compensation, employee insurance, minimum wage requirements, overtime, etc., and agrees to indemnify, save and hold the MHTC, its officers, agents and employees harmless from and against any and all losses (including attorney fees) and damage of any kind related to such matters.

**Indemnification**

- a. The Offeror shall defend, indemnify and hold harmless the Commission, including its members and department employees, from any claim or liability whether based on a claim for damages to real or personal property or to a person for any matter relating to or arising out of the Offeror's performance of its obligations under this Agreement.