

## **NOTICE TO BIDDERS**

October 30, 2018  
Bolivar, MO 65613

Sealed bids will be received until 2:00 p.m. on November 13, 2018 and then publicly opened and read at 345 S. Main, Bolivar City Hall, Polk County, Missouri, for a new Excavator for the Public works Department.

Specifications and Bid Documents are on file and may be examined and obtained between the hours of 8:00 a.m. & 5:00 p.m. Monday thru Friday at the Offices of the Public Works Director or City Clerk, at Bolivar City Hall, PO Box 9, Bolivar, MO 65613, 417-326-2489.

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Paula Henderson, Deputy City Clerk

<b>Bid Spec Sheet / Submissions can be of Similar Specifications</b>		
November 13th, 2018 2:00 p.m.		
City of Bolivar / 345 S. Main / Bolivar, MO 65613		
Hydraulic Excavator		
<b>GENERAL INFORMATION</b>		
The hydraulic excavator must be new, unused current production track mounted model.		
It shall have all standard equipment as shown in the manufacturer's printed literature.		
Modifications of existing models to meet these specifications will not be permitted.		
<b>BASIC SPECIFICATIONS</b>		
Operating weight shall be at least 35,114 lb. equipped with a 4600 mm 15'1" one-piece boom, 2500 mm 8'2" arm, SAE heaped 0.67 cubic yard bucket (0.50 cubic meter), rated capacity of lubricants, coolant, full fuel tank, operator, 700mm shoes, and standard equipment.		
Lift capacity at 15' (4.6 m) over the front at ground level shall, with a blade, be not less than 13,110 lbs. Equipped with a 3000 mm (9'10" stick), 700mm pads, without bucket		
Lift capacity at 15' (4.6 m) over the side at ground level shall be not less than 7,910 lb. Equipped with a 3000 mm (9'10" stick), 700mm pads, blade on ground and without bucket		
Machine shall have a ground clearance of at least 1' 4".		
Shipping height shall be 10'6" with a 9'10" stick.		
Shipping length shall be 23' 11" with a 9'10" stick.		
Tail swing radius shall be 5'1" (1545 mm)		
Long track length shall be 12'8" (3870 mm)		
Transport width shall be 9'2" equipped with 700mm track		
Maximum digging depth shall be 19' 4" (5900mm) with a 9'10" (3000 mm) stick.		
Track frame shall have provision for blade as standard equipment		
<b>ENGINE SPECIFICATIONS</b>		
The engine shall be manufactured by the equipment manufacturer.		
The engine shall be a 4 cycle, 4 cylinder, turbo charged, , EPA emission certified Tier 4 final, and have a 16 valve cylinder head.		
The engine, including engine cooling fan, and all necessary accessories, shall deliver at least 97 hp (72.5 kW) at the flywheel (SAE J1349 rated).		
Engine air filter shall have a restriction indicator on the instrument panel.		
Standard equipment to include an air cleaner with two stage filtering, water pump, fuel pump with hand primer, fuel pre-filter with water separator, muffler with guard and lubricating oil pump.		
Primary Fuel filter shall be rated to 10 micron filtration and have standard water separator.		
The engine shall meet the US EPA Tier 4 Final exhaust emission certification and use a diesel oxidation catalyst with no diesel particulate filter and have 100% passive regeneration capability.		
Engine shall be direct injection with electronically controlled high pressure common rail injection system with 200 MPa injection pressure.		
Engine displacement shall be at least 199 in <sup>3</sup> (3.26 L).		
Peak power shall be rated at 2050 rpm		
Machine shall be equipped with 24-volt electrical starting and operating system.		
The alternator shall be a minimum of 60 amps, 24V		
The engine shall provide full hp up to 7,546 ft. (2,300 m) before altitude deration.		
Fuel tank capacity shall be no less than 52.8 gal (2000 L) and include a filler neck strainer.		
The engine shall be equipped with a grid heater as a starting aid in cold weather.		
Engine air filter shall have a restriction indicator on the instrument panel.		
The engine shall be equipped with a 24 volt starting and charging system.		
The engine shall be equipped with a variable flow turbocharger.		
The engine shall be equipped with an auto decelerator function. Auto Idle Stop shall be standard and programmable through the monitor.		
Cooling fan must have a variable speed design to reduce parasitic engine loads		
<b>UNDERCARRIAGE</b>		
Machine shall have a maximum ground pressure of 4.77 psi (35.3 kPa) with 700 mm shoes.		
Each track shall be driven by one independent, axial-piston motor via integral planetary final drives.		
Machine shall have a max travel speed of 3.2 mph / 5.1 kph.		
Machine shall have 8 track rollers and 2 carrier rollers.		
Track tension shall be grease adjusted.		

An audible alarm shall indicate when machine travel is engaged.		
The travel system shall be fully hydrostatic with auto shift 2 speed settings.		
The machine shall have a drawbar pull of 27,560 lbs. (123kN)		
<b>HYDRAULIC SYSTEM</b>		
Hydraulic system shall be a closed-center system with load sensing valves and pressure compensated valves.		
Hydraulic system shall have a flow of 64 gal/min (242 L/min).		
Pilot system pressure shall be achieved by pressure reducing valves.		
Maximum pressure for the implement circuit shall be at least 5,050 psi (34.8 MPa)		
Maximum pressure for the travel circuit shall be at least 5,050 psi (34.8 MPa)		
Maximum pressure for the swing circuit shall be at least 3920 psi (27.1 MPa)		
The machine shall have a standard lock lever, which deactivates the hydraulic function and prevents start-up when lever is in free position.		
The hydraulic system shall operate on one, variable displacement, load sensing, piston pump.		
The hydraulic system attachment lines and piping shall contain O-ring face seals.		
The hydraulic system shall include a pattern change valve for switching between excavator and backhoe control patterns.		
<b>SWING SYSTEM</b>		
Swing effort shall be provided to the upper structure by a hydraulic motor through double reduction planetary gearing		
The swing system shall have a swing torque of 21,627 ft-lbs (2991 kg-m).		
The holding brake shall be a mechanical lock disc brake released by pilot pressure.		
The swing speed shall be at least 11.0 rpm		
<b>OPERATOR CAB</b>		
The operator compartment shall protect the operator from the environment and shall have an integrated ROPS design meeting ISO 12117-2 and OPG Level 1, (ISO 1262)		
The front windshield shall be mounted on tracks and be able to be raised up into a secure position in the cab ceiling by the operator in order to provide improved visibility forward and down.		
The cab door shall be mounted on slides and slide open in a direction parallel to the side of the cab.		
The hydraulic implement system shall use pilot-operated controls for low-effort, smooth modulation.		
The cab shall be mounted on multi-layer viscous cab mounts for comfort and noise reduction.		
The seat shall have a high back rest and be fully adjustable for height, weight, fore/aft, seat back, and armrests.		
The cab shall utilize a 7" TFT LED high resolution color monitor panel with 25 language options.		
The cab shall have a standard lock lever that does not allow for travel, blade, swing or boom articulation while in locked position.		
Machine shall have a skylight that can be opened and is rated to OPG-1 (ISO 10262)		
Monitor panel shall have a landscape display and machine equipped with a rear view camera positioned to view the work area behind the counterweight. Default mode should display with both Gauges and Review camera Image.		
Monitor panel shall have 6 working modes for implement system and be shall capable of both work and fuel priority modes when set in attachment mode		
Any system abnormalities detected shall be displayed on TFT LED monitor.		
Automatic climate control that maintains a constant temperature setting shall be available as standard equipment.		
The cab shall have an AM/FM radio and a 3.5mm auxiliary input jack for connecting and MP3 player.		
The cab shall contain 2 speakers for audio playback.		
The cab shall have a ground level access secondary engine shut off switch.		
<b>WORK EQUIPMENT</b>		
The work equipment shall contain full castings on the boom foot, boom tip, and bucket linkage for uniform toughness and strength.		
Maximum reach at ground level shall be at least 28'3" (8600 mm) with a 9'10" (3000 mm) stick.		
Maximum dumping height shall be at least 24'1" (7350 mm) with a 9'10" (3000 mm) stick.		
Bucket digging force (ISO) shall not be less than 19,840lb with a 9' 10" (3000 mm) stick.		

Stick digging force (ISO) shall not be less than 12,570 lb. with a 9' 10" (3000 mm) stick.		
<b>SERVICEABILITY</b>		
The hydraulic tank shall have an oil level sight gauge that allows checking the fluid level without removing the filler cap.		
A cartridge-type hydraulic return filter shall be located inside of the hydraulic tank.		
Anti-skid material or equivalent shall cover the normal walking surface of the machine's upper structure.		
Fuel level shall be monitored in the TFT LED Monitor		
DEF level should be displayed in the TFT LED monitor and must have a Low DEF level warning system in the monitor.		
Left rear service door shall allow access to the engine radiator and hydraulic oil cooler		
Grease lubricated seals shall protect the track link		
The machine shall include a manufacturer authorized scheduled maintenance program for the first 3 years or 2,000 hours, whichever occurs first.		
<b>OTHER/GENERAL</b>		
A fusible link which can cut out the current from the battery instantly must be installed.		
The electric wire connectors must be fixed to the structural members of the machine body.		
An engine cooling fan guard must be installed.		
A muffler guard must be installed.		
machine must be equipped with 3-inch seat belts		
The machine shall include a manufacturer designed telematics system with equipment management and monitoring capability, maintenance tracking, abnormality display with error codes, diagnostics, fuel consumption and machine location. Information shall be accessible through the web or a smart phone application and be provided free of charge.		
The electrical system shall include a 24V to 12V converter with 2 12V power ports in the cab.		
A track frame undercover (swivel guard) shall be provided.		
The machine shall be equipped with an electric travel alarm and warning horn.		
<b>SERVICE FILL CAPACITY</b>		
The fuel tank shall have a capacity of at least 52.8 gallons (200 L).		
The cooling system shall have a capacity of at least 4.6 gal (17.7 L)		
Engine oil shall have a capacity of at least 3 gal (11.5 L)		
Swing drive shall have a capacity of at least 0.7 gal (2.5 L)		
Each final drive shall have a capacity of at least 0.55 gal (2.1 L)		
Hydraulic tank shall have a capacity of at least 18.2 gal (69 L)		