

**Geotechnical Rotary Drill-Rough Terrain Crawler Carrier Mounted**

Geotechnical rotary drill-rough terrain crawler carrier mounted (Drill), new and of current model, equipped as advertised by the manufacturer, to meet or exceed the following **MINIMUM** specifications:

Proposed Drill: Make: \_\_\_\_\_ Model: \_\_\_\_\_

Proposed Carrier: Make: \_\_\_\_\_ Model: \_\_\_\_\_

Proposed Fluid Pump: Make: \_\_\_\_\_ Model: \_\_\_\_\_

Non-Restrictive Clause: Any use of brand name or equal within this specification is to be considered a reference for the purpose of describing the standard of quality, performance, and characteristics desired. It is not intended to limit or restrict competition.

**The vendor must respond to each of the following statements.** Specifications listed are **minimum** requirements that must be met for a vendor to qualify for an award. A "YES" response means the vendor guarantees that they meet this requirement. A "NO" response means the vendor cannot meet the requirement and will not be considered. The vendor must supply printed literature that shows compliance with each requirement of the Equipment Specifications and, if on inspection, an item is found not to comply, the bid will be rejected.

**Descriptive literature shall be furnished to substantiate the details specified in the bid.**

**SPECIFICATIONS**

This equipment shall be used for geotechnical drilling, soil sampling, foundation testing, and installation of instrumentation, cone penetrometer testing and other subsurface exploration work. The Drill machine shall be capable of performing auger borings in unconsolidated formations with conventional flight or hollow-stem augers. The Drill shall have the capability of productively using currently popular geo-exploration methods and techniques that include Dutch cone, Shelby tube or continuous tube sampling, and standard penetration testing. The Drill shall be capable of coring or rotary drilling applications. The Drill shall have direct push capabilities. The Drill shall be self-contained with all-terrain capabilities allowing access to difficult off-road sites. The Drill shall have the capability to be driven by remote control.

The Drill shall be an integral part of a rough terrain rubber-tracked carrier having a single or dual engine power source. The power shall be appropriately directed to the carrier, hydraulic system, and hydraulically driven drill head. A hydraulically actuated folding upright drill frame shall be supplied.

**Comply Yes/No:** \_\_\_\_\_

**Dimensions:**

Maximum Width: 7-feet

Width (feet): \_\_\_\_\_

Maximum Transport Length: 18-feet

Transport Length (feet): \_\_\_\_\_

Maximum Operating Length: 15-feet

Operating Length (feet): \_\_\_\_\_

Maximum Transport Height: 10-feet

Transport Height (feet): \_\_\_\_\_

Maximum Operating Height: 24-feet

Operating Height (feet): \_\_\_\_\_

Maximum Total Weight: 13,000-pounds

Total Weight (pounds): \_\_\_\_\_

Maximum Total Ground Pressure: 7 pounds per square inch (PSI)

Total Ground Pressure (PSI): \_\_\_\_\_

**Comply Yes/No:** \_\_\_\_\_

**Drill Head Assembly:** The drill head assembly shall operate at six (6) speeds, shift from left to right with a horizontal displacement (stroke) of 28-inches and include a 140-pound automatic drop hammer.

Speeds (number of): \_\_\_\_\_

Horizontal Displacement (inches): \_\_\_\_\_

Drop Hammer Weight (pounds): \_\_\_\_\_

**Comply Yes/No:** \_\_\_\_\_

**Drill Mast:** The drill mast shall have a minimum vertical displacement (stroke) of 105 inches and a minimum crowd force of 36,000 pounds with a minimum pullback force of 48,000 pounds.

Vertical Displacement (inches): \_\_\_\_\_

Crowd Force (pounds): \_\_\_\_\_

Pullback Force (pounds): \_\_\_\_\_

**Comply Yes/No:** \_\_\_\_\_

**Stabilization System:** The Drill shall be supplied with a stabilization system comprised of two (2) front hydraulically actuated outrigger jacks and one (1) rear stabilizer blade.

**Comply Yes/No:** \_\_\_\_\_

**Powertrain/Hydraulic System:** The Drill shall be powered by a single diesel engine with a power output of 65 horsepower. The engine shall meet U.S.E.P.A. Tier 4 emissions regulations. The hydraulic system shall consist of a primary pump with a minimum pressure rating of 4,000 psi and flow rate of 40 gallons per minute (gpm). The secondary pump shall have a minimum rating of 4,000 psi with a flow rate of 18 gpm.

Engine Power (horsepower): \_\_\_\_\_

Primary Pump Pressure Rating (psi): \_\_\_\_\_

Primary Pump Flow Rate (gpm): \_\_\_\_\_

Secondary Pump Pressure Rating (psi): \_\_\_\_\_

Secondary Pump Flow Rate (gpm): \_\_\_\_\_

**Comply Yes/No:** \_\_\_\_\_

**Drilling Fluid Pump:** The Drill shall be supplied with a progressive cavity style pump with an output rate equal to or greater than 50 gpm at 225 psi. The pump shall be mounted on the deck of the rig in an accessible location.

Output Rate (gpm at 225 psi): \_\_\_\_\_

Pump Type (progressive cavity/other): \_\_\_\_\_

**Comply Yes/No:** \_\_\_\_\_

**Hoisting System:** The Drill shall be supplied with a telescoping winch mast supporting three (3) winches with the following minimum hoisting capabilities: Winch One - 1,100 lbf. (pound force), Winch Two - 1,800 lbf., Winch Three - 6,800 lbf.

Winch One Hoisting Capability (lbf): \_\_\_\_\_

Winch Two Hoisting Capability (lbf): \_\_\_\_\_

Winch Three Hoisting Capability (lbf): \_\_\_\_\_

**Comply Yes/No:** \_\_\_\_\_

**Hydraulic Rod Holder and Breakout Device:** The Drill shall be supplied with a hydraulically actuated rod holder and breakout wrench. The minimum size of the rod holder shall be 7-inches.

Rod Holder Size (inches): \_\_\_\_\_

**Comply Yes/No:** \_\_\_\_\_

**Sample Extruder:** The Drill shall be supplied with a hydraulically actuated sample extruder. The extruder shall be a minimum length of 5-feet.

Extruder length (feet): \_\_\_\_\_

**Paint:** Manufacturer's standard color

**Comply Yes/No:** \_\_\_\_\_

#### **ADDITIONAL REQUIREMENTS**

**Service:** The Drill shall be delivered fully assembled and ready to operate. Factory-trained dealer representative is to inspect the Drill upon delivery and provide receiving MDOT equipment manager with information on operational, service, and maintenance requirements.

Bidder shall maintain a representative inventory of replacement parts and service facilities as well as all necessary diagnostic tools/equipment/software and software licenses needed for diagnosis, repair, service, and maintenance.

**Acknowledge Yes/No:** \_\_\_\_\_

**Warranty:** Clearly stated terms and conditions of all manufacturer warranties shall be included with the bid package. All materials, specialty equipment, or accessories that prove defective in normal operation within the warranty period shall be replaced or repaired by the manufacturer free of any and all cost to MDOT, including all material, labor, and transportation costs. Warranty replacement and/or repairs shall be furnished promptly by the successful bidder within a time not to exceed thirty (30) calendar days. **The bidder shall provide written assurance with the bid package regarding warranty repairs.**

The delivering dealer will have sole warranty responsibility (**all components**) for the first ninety (90) calendar days after acceptance of equipment.

The manufacturer shall provide, with the bid package, a list of warranty service locations within the State of Mississippi for all components of the Drill (body, chassis, electrical, etc.) which may need warranty repair beyond the first ninety (90) calendar days.

**Acknowledge Yes/No:** \_\_\_\_\_

**Workmanship:** Workmanship throughout shall conform to the highest standard of commercially accepted practice for the class of work and shall result in a neat and finished appearance. The design which the manufacturer proposes must be of substantial and durable construction in all respects.

All parts shall be new. Used, reconditioned, or obsolete parts will not be accepted.

**Acknowledge Yes/No:** \_\_\_\_\_

**Parts Availability:** Dealer name and contact information located closest to the point of delivery:

Dealer Name: \_\_\_\_\_

Telephone: \_\_\_\_\_

Street Address: \_\_\_\_\_

City, State, ZIP: \_\_\_\_\_

**Acknowledge Yes/No:** \_\_\_\_\_

**Tests and Testing:** The complete unit and all working and moving parts and operating devices shall be thoroughly tested and put in operating condition by the manufacturer.

Prior to acceptance by MDOT, the manufacturer shall service and adjust the unit for operation.

**Acknowledge Yes/No:** \_\_\_\_\_

**Literature:**

**Technical manuals:** Operator's manual, service/maintenance manual, and parts book are to be made available in both hard copy and electronic (PDF file format on USB flash drive) versions. One set of technical manuals shall be provided with each Drill upon delivery. Additional manuals may be ordered later.

**Technical service bulletins:** Successful bidder shall provide TSBs (technical service bulletins) for all Drill(s) delivered to MDOT as they are published, regardless of the date of delivery. TSBs may be furnished in paper or electronic format and shall be updated regularly.

The following additional information shall be provided by the vendor at time of delivery (electronically if possible):

- Manufacturer's recommended service/preventive maintenance intervals
- Recommended fluids, lubricants, and their SAE equivalents

**Two (2) copies of descriptive literature shall be furnished to substantiate the details specified in the bid.**

**Acknowledge Yes/No:** \_\_\_\_\_

**Certification:** The manufacturer(s) shall furnish certification that the Drill meets or surpasses current U.S. Department of Labor Occupational Safety and Health Administration (OSHA) Regulations, U.S. Department of Transportation Federal Motor Vehicle Safety Standards (FMVSS), and any other applicable Federal regulations.

**Acknowledge Yes/No:** \_\_\_\_\_

**Vehicle Title or Certificate of Origin:**

**Assignment:** State of Mississippi/DFA – 941

**Mailing address:** Mississippi Department of Transportation, 9301  
P.O. Box 1850  
Jackson, MS 39215

**Acknowledge Yes/No:** \_\_\_\_\_

**Lienholder:** Upon award, if MDOT issues a **Notice to Proceed** instead of a **Purchase Order**, the Drill is being purchased through the State's Master Lease Purchase Program, and the following shall be shown as the **1<sup>st</sup> Lienholder on the Title Application:**

U.S. Bank National Association  
Attention: Jacqueline McNeil  
6810 Crumpler Blvd., Suite 200  
Olive Branch, MS 38654

Lienholder Number: 90018867500

**Acknowledge Yes/No:** \_\_\_\_\_