

**STATE OF MINNESOTA
EQUIPMENT SPECIFICATION**

1.0 SCOPE

HIGH PRESSURE WATER JETTER / SEWER VAC / HYDRO EXCAVATION UNITS

This unit shall be the most current advertised production model as modified per specifications and approved by Mn/DOT furnished with all standard equipment advertised whether or not specifically called for here, except where the item is replaced by optional over standard equipment or conflicting equipment is specified. The unit shall be complete with all equipment required and ready for immediate operation to function as listed below. The unit must meet applicable codes and standards.

All trailers for MnDOT shall have the trailers wired as per the attached wiring diagram and the trailers with air brakes shall have long stroke brake chambers.

There are separate sets of pricing pages for submitting information for these units. For optional items in lieu of standard items, the price shall be the difference paid to achieve the upgrade rather than full purchase price. If making downtime offering and extended warranty, a copy of all terms and conditions pertaining to the agreement must be submitted as part of Responder's response.

Trailers and trucks must pass manufactures, federal and state laws pertaining to weight ratings of chassis suspension and bridge laws. It's assumed the fresh water tanks will haul a full load of fresh water (at 8.4 Lbs. per gallon), and the debris tanks will haul a full load of wet sand or wet dirt or mud (at 3,240 lbs. per cubic yard). It is also assumed that what the tanks are listed as is what the tanks hold when full. It's assumed both tanks will not be full at the same time. When used the fresh water tank contents will decrease as the Debris Tank is filled.

If the truck or trailer base unit will not pass these requirements as installed, the base unit description must state the base unit will not pass the requirements, and provide the required equipment modifications (option, components, parts, and labor, to modify the base unit so it will pass the manufactures, federal and state requirements. The required items may include smaller tanks, additional axles, a longer wheelbase, etc. Or any other equipment option needed. Each Responder is expected to offer at least one model that meets the weight requirements.

2.0 HIGH PRESSURE WATER JETTER REQUIREMENTS

- 2.1 Unit shall be trailer, skid, self-propelled or truck mounted.
- 2.2 The Responder must include suggested truck chassis requirements on the pricing pages for each truck mounted model submitted. Information should include the Year, Make, Model, Engine, Transmission, etc.
- 2.3 Truck mounted units shall not include cab and chassis in the base price. Cab and chassis may be offered as an option in section 9.0 of the pricing page for truck mounted jetters or State agencies and Cooperative Purchasing Venture members may purchase cab and chassis using the state contract for cab and chassis.
- 2.4 Unit shall be either engine or PTO powered.
- 2.5 Trailer units shall have a tongue jack.
- 2.6 Units shall have lighting that meets ICC specifications.
- 2.7 Water pump must have protection from cold weather.
- 2.8 On units having an auxiliary engine, a protective shroud that is easily removable shall be provided.
- 2.9 Auxiliary engines shall have sound suppression/muffler system.
- 2.10 Jet hose must exceed pump P.S.I. rating.
- 2.11 Tank fill shall have an anti-siphon device.

- 2.12 Manufacturer's standard color is acceptable but paint must be lead free.
- 2.13 The Contract Vendor shall ensure the equipment meets all current Federal and State of Minnesota safety codes.
- 2.14 All Strobe lights and LED lights must be able to be certified as system component to SAE & California Title 13 Specifications
- 2.15 The Contract Vendor shall give adequate training in operation, safety, maintenance, mounting and removal of supplied equipment
- 2.16 Each unit shall be supplied with one set of parts, service, repair and operations manuals.
- 2.17 The Contract Vendor shall furnish a standard manufacturer's warranty. The Contract Vendor shall be responsible for the cost of any inspections, adjustments, parts, labor, travel, pickup and/or delivery charges that are a result of equipment failure(s) during the warranty period as per the standard manufacturer's warranty. This warranty shall commence when the unit is put into service. The Responder shall state the warranty for the base unit and for all items offered on pricing page on the base model description page.

3.0 COLLECTION BASIN AND COLLECTION BASIN/JET RODDER TRUCK REQUIREMENTS

- 3.1 The Responder must include **suggested truck chassis requirements on the pricing pages for each model submitted.**
- 3.2 Collection basin and collection basin/jet rodder unit shall be submitted as separate models. There are two separate sample pricing pages for submitting information and pricing for these units.
- 3.3 Vacuum system shall be a fan type or positive displacement blower.
- 3.4 Positive displacement blower units shall have stainless steel micron strainer to 10 microns minimum.
- 3.5 Unit shall be supplied with one more clamp than the number of pickup tubes.
- 3.6 Debris body shall be cylindrical/elliptical in shape.
- 3.7 Overhead vacuum hose boom shall have 180° or greater rotation.
- 3.8 Vacuum hose shall be 6" diameter or greater.
- 3.9 **Water pump must have cold weather recirculation system.**
- 3.10 On units having an auxiliary engine, a protective shroud that is easily removable shall be provided.
- 3.11 Auxiliary engines shall have sound suppression/muffler system.
- 3.12 Jet hose must exceed pump P.S.I. rating.
- 3.13 Tank fill shall have an anti siphon device.
- 3.14 When offering attachments, such as but not limited to, air vacuum breaker system, auto debris body washout system, and footage counter, etc., price must include everything needed so unit is complete, installed and ready to use by the operator.
- 3.15 Collection basin truck and collection basin/jet rodder truck shall be delivered with 1 complete additional set of O.E.M. air and fluid filters for truck and/or auxiliary engine.
- 3.16 Manufacturer's standard color acceptable but paint must be lead free.
- 3.17 The Contract Vendor to ensure equipment meets all current federal and Minnesota safety codes.
- 3.18 All Strobe lights and LED lights must be able to be certified as system component to SAE & California Title 13 Specifications
- 3.19 The Contract Vendor to give adequate training in mounting and removal, operation, safety and maintenance of supplied equipment.
- 3.20 The Contract Vendor shall furnish a standard manufacturer's warranty. The Contract Vendor shall be responsible for the cost of any inspections, adjustments, parts, labor, travel, pickup and/or delivery charges that are a result of equipment failure(s) during the warranty period as per the standard manufacturer's warranty. This warranty shall commence when the unit is put into service. The Responder shall state warranty for the base unit and for all items offered on pricing page on the base model description page.
- 3.21 Each collection basin truck and collection basin/jet rodder truck shall be supplied with one set of parts, service, repair and operations manuals.

4.0 VACUUM/HYDRO EXCAVATION UNIT REQUIREMENTS

- 4.1 Unit shall be trailer or skid mounted. There is a separate set of sample pricing pages for submitting information and pricing for these units.

- 4.2 Trailer units shall have a tongue jack.
- 4.3 Trailer units shall have lighting that meets ICC specifications.
- 4.4 Vacuum system shall be a fan type or positive displacement blower.
- 4.5 Positive displacement blower units shall have stainless steel micron strainer to 10 microns minimum.
- 4.6 Unit shall be supplied with one more clamp than the number of pickup tubes.
- 4.7 Debris body shall be cylindrical/elliptical in shape.
- 4.8 Overhead vacuum hose boom shall have 180° or greater rotation.
- 4.9 Water pump must have cold weather recirculation system.
- 4.10 Engines shall have sound suppression/muffler system with a protective shroud that is easily removable.
- 4.11 Jet hose must exceed pump PSI rating.
- 4.12 Tank fill shall have an anti-siphon device.
- 4.13 When offering attachments, such as but not limited to, air vacuum breaker system, auto debris body washout system, and footage counter, etc., price must include everything needed so unit is complete, installed and ready to use by the operator.
- 4.14 The vacuum/hydro excavation unit shall be delivered with one complete additional set of OEM air and fluid filters.
- 4.15 Manufacturer's standard color acceptable but paint must be lead free.
- 4.16 The Contract Vendor shall ensure equipment meets all current federal and Minnesota safety codes.
- 2.17 All Strobe lights and LED lights must be able to be certified as system component to SAE & California Title 13 Specifications
- 4.18 The Contract Vendor shall give adequate training in mounting and removal, operation, safety and maintenance of supplied equipment.
- 4.19 Each vacuum/hydro excavation unit shall be supplied with one set of parts, service, repair and operations manuals.
- 4.20 The Responder must include **suggested truck chassis requirements on the pricing pages for each model submitted if offering a model that goes on a truck.**
- 4.20 The Contract Vendor shall furnish a standard manufacturer's warranty. The Contract Vendor shall be responsible for the cost of any inspections, adjustments, parts, labor, travel, pickup and/or delivery charges that are a result of equipment failure(s) during the warranty period as per the standard manufacturer's warranty. This warranty shall commence when the unit is put into service. The Responder shall state warranty for the base unit and for all items offered on pricing page on the base model description page.

5.0 Rodder units

- 5.1 Rodder units must be mechanical units that do not need to use water to function.
- 5.2 Rodder units can be truck or trailer mounted, skid mounted or some other vehicle mounted such as a track unit.
- 5.3 The unit must have changeable tips
- 5.4 The rod can be continuous or sections

6.0 Valve Exercisers

- 6.1 Made to turn valves in lift stations and other underground valves and fire hydrants
- 6.2 Shall have adjustable valve turning torque
- 6.3 Shall be made to be trailer or skid mounted to fit back of truck.
- 6.4 Can use truck hydraulics or have own power unit for hydraulics
- 6.5 Must have display showing turning force being applied to valve.
- 6.6 Trailer units may have Hydro vacuum excavation option.