

## **SECTION 919 -- EQUIPMENT RENTAL**

### **919.01 -- Description**

The Contractor shall furnish, maintain, provide fuel, and operate equipment when the contract requires work on an "equipment rental" basis.

### **919.02 -- Equipment Requirements**

1. Motorgraders shall be the self-propelled type, either tandem or all wheel drive, equipped with pneumatic tires. They shall be equipped with a moldboard at least 3.65 m long with a suitable cutting edge, a scarifier with 9 or more teeth having minimum dimensions of 75 mm x 25 mm x 400 mm, and power-operated controls. They shall be propelled by engines having a manufacturer's rating of at least 85,755 brake watts.

2. Multiple-wheel, pneumatic-tired rollers shall be constructed so that they can be loaded to a gross mass of 3.6 kg/mm of tire width. The internal pressure in the tires shall be at least 172 kPa, and the tires on the front and rear axles shall be staggered so that they will cover the entire area over which the roller travels.

3. Tamping or sheepsfoot rollers shall consist of a cylindrical metal roller, drum, or shell studded with tamping feet projecting not less than 175 mm from the surface of the roller, drum, or shell. The tamping feet shall be spaced not less than 150 mm or more than 250 mm measured diagonally center to center in any direction, and the face area of each shall be not less than 2500 mm<sup>2</sup> nor more than 7725 mm<sup>2</sup>.

4. Wheel tractors shall be a farm or industrial type tractor equipped with pneumatic tires and capable of pulling the rollers and trailer type rotary tillers described herein. The tractors shall be propelled by engines having a manufacturer's rating of at least 34,300 belt watts.

5. Crawler tractors and scrapers shall be crawler-type tractors and scrapers that are designed to operate as a unit. The crawler tractors shall be propelled by engines having a manufacturer's rating of at least 74,570 drawbar watts. The scrapers shall be equipped with pneumatic tires and shall have a minimum struck capacity of 10.3 m<sup>3</sup>.

6. Tractors and scrapers shall be pneumatic-tired tractors and pneumatic-tired scrapers that are designed to operate as a unit. The tractors shall be propelled with engines having a manufacturer's rating of at least 75,300 brake watts. The scrapers shall have a minimum struck capacity of 5.0 m<sup>3</sup>.

7. Loading equipment shall be a unit or units capable of excavating soil in its original position and loading the excavated material into dump trucks. The equipment shall be of such size and capacity that it can excavate and load at least 40 m<sup>3</sup> of soil each hour.

8. Draglines shall be the full-revolving type with booms not less than 10 m long, a manufacturer's rated capacity of at least 0.6 m<sup>3</sup>, and a Power Crane Shovel Association rating of at least 13.6 Mg. The bucket shall in no case be larger or smaller than that for which the machine is designed.

9. Crawler tractors and bulldozers shall consist of crawler-type tractors and bulldozers, or angle-doers, that are designed to operate as a unit. The crawler tractors shall be propelled by engines having a manufacturer's rating of at least 75,540 drawbar watts.

10. a. Dump trucks shall be standard make trucks having a manufacturer's rating of at least 2 Mg. They shall be equipped with power-operated hoists and steel dump boxes of the end dump type having a volumetric struck capacity of at least 3.8 m<sup>3</sup>.

b. Dump trucks shall be properly licensed and shall not exceed the statutory limitations in dimensions or wheel and axle loads.

c. Dump trucks shall have all applicable insurance coverage.

11. Rotary tillers shall be pulverizing and mixing units consisting essentially of a power-driven rotor fitted with tines or teeth. The rotor unit may be mounted on either a pneumatic-tired tractor or a trailer. Each unit shall include 2 rotor assemblies fitted with tines made of spring steel. One rotor shall be designed for pulverizing and the other for mixing. Each rotor shall have a minimum effective width of 1.8 m. Sufficient power shall be provided to drive the rotor at efficient speeds for both pulverizing and mixing operations. Suitable devices shall be provided to allow easy and positive adjustment of the depth of cut and the lowering and raising of the rotor to and from the cutting position.

12. Disc harrows shall be of the construction type with off-set discs having a diameter of not less than 560 mm.

13. Skid loaders shall be loaders or tractors with pneumatic tires and a minimum operating lifting capacity of 500 kg.

### **919.03 -- Construction Methods**

Equipment shall be operated within all manufacturer's operating parameters.

### **919.04 -- Method of Measurement**

1. a. The hours of equipment rental shall be measured as the time the equipment is required by the Engineer at the site, even though the actual operation of the equipment, at times, may be intermittent.

b. The Engineer shall exclude from the measured time:

(1) Time expended in moving to and from the work, other than necessary travel time within the project limits.

(2) Time when no crew is available to operate the equipment.

(3) Time expended in repairing and servicing the equipment.

2. Delivery of the equipment is measured by the each for equipment item rented.

#### 919.05 -- Basis of Payment

1.	<u>Pay Item</u>	<u>Pay Unit</u>
	Rental of _____	Hour (h)
	Deliver _____	Each (ea)

2. The cost of all repairs, depreciation, insurance, taxes, and other incidental costs, including all wage expense incurred for operators, forepersons, supervisors, and timekeepers, is subsidiary to equipment rentals.

3. Payment will be made to the Contractor for delivery of equipment that is ordered as equipment rental in accordance with these *Specifications* when such equipment is not normally required in the performance of the other major items of work in the contract.

4. When the contract includes items of equipment rental and does not include a corresponding item for delivery of the equipment, the furnishing, delivery, and operation of the equipment is subsidiary to the contract unit price for rental of that equipment.

5. Payment is full compensation for all work prescribed in this Section.