

Special Specification 6143

Radar Vehicle Sensing Device (RVSD) Unit and Pole Structure



1. DESCRIPTION

Remove and relocate existing Radar Vehicle Sensing Device (RVSD) pole structure at location shown on the plans and as directed, and remove and salvage RVSD unit. Unless otherwise shown on the plans, the Contractor must stake and the Engineer will verify RVSD pole structure location. The requirements of this specification are minimum. Strict compliance with these minimum requirements will not relieve the Contractor of the responsibility for adopting any additional provisions that may be necessary to ensure the successful completion of the work.

2. MATERIALS

All anchor bolts required for the installation of the RVSD pole structure must be supplied by the Contractor. Bolt dimensions and lengths will be as shown on the plans and as directed. The new anchor bolts must conform to all requirements of Item 449, "Anchor Bolts."

3. CONSTRUCTION

3.1 Relocate Radar Vehicle Sensing Device (RVSD) Pole Structure. Prior to removal of the existing RVSD pole structure, the Contractor must ensure that the RVSD is being powered using the solar power system. Verify that the radio and communication equipment is operational. Verify operation and communication of the RVSD with TransVista in the presence of the Engineer. The Contractor must provide documented test results.

The existing solar components must be removed. Solar components to be removed include: fuse block and fuses, solar panel(s), batteries, solar controller and the solar regulator or charger, all solar components are to be returned to the District or as directed. Ensure that batteries and solar panel(s) are disconnected and that the RVSD cabinet breaker is turned off before removing.

Remove the RVSD unit from the RVSD pole structure. This includes disconnecting all pole mounting hardware and the cabling from the cabinet to the RVSD unit and solar components.

Disconnect and isolate the electrical power supply prior to removal of the RVSD. Disconnect and remove conductors from abandoned circuits. Remove abandoned conduit and ducts to a point 6 in. below final grade.

Disconnect and remove conductors from abandoned circuits. Remove RVSD cabinet from pole. Remove abandoned conduit and ducts to a point 6 in. below final grade.

Accept ownership of unsalvageable materials and dispose of in accordance with federal, state, and local regulations.

Relocate existing RVSD pole structure to the location shown on the plans or as directed. Install existing RVSD pole structure on new foundation in accordance with Item 416, "Drilled Shaft Foundations."

Unless otherwise shown on the plans, remove abandoned foundations, battery ground box and drill shafts, including steel, to 2 ft. below the finished grade. Backfill with material equal in composition and density to the surrounding area, and replace any surfacing, such as asphalt pavement or concrete riprap, with like material to equivalent condition.

Add 100 W DC power supply in the RVSD cabinet, subsidiary to this Item. This should convert 120 V AC input power to 12 V DC output power and should be rated for external environment.

Route electrical power from existing, proposed or relocated electrical service. Each RVSD will require a new circuit with a 1P/20A branch breaker at the electrical service, subsidiary to this Item.

Test and verify operation and communication of the RVSD with TransVista in the presence of the Engineer with documented test results.

- 3.2 **Remove Radar Vehicle Sensing Device (RVSD) Pole Structure.** Disconnect and isolate existing electrical power supplies prior to removal of the RVSD pole structure. Remove existing solar components (fuse block and fuses, solar panel(s), batteries, solar controller and the solar regulator or charger), antenna, radio and pole, from existing drill shaft. Store items to be reused or salvaged without damaging and return to the Department.

Remove the RVSD unit from the RVSD pole structure. This includes disconnecting all pole mounting hardware and the cabling from the cabinet to the RVSD unit and solar components. Any RVSD units or solar components aged or lost must be replaced by the Contractor at no cost to the Department.

Disconnect and remove conductors from abandoned circuits. Remove abandoned conduit and ducts to a point 6 in. below final grade.

Accept ownership of unsalvageable materials and dispose of in accordance with federal, state, and local regulations.

Unless otherwise shown on the plans, remove abandoned foundations, battery ground box and drill shafts, including steel, to 2 ft. below the finished grade. Backfill with material equal in composition and density to the surrounding area, and replace any surfacing, such as asphalt pavement or concrete riprap, with like material to equivalent condition.

- 3.3 **Remove and Salvage RVSD Unit.** Remove the RVSD unit from the RVSD pole structure. This includes disconnecting all pole mounting hardware and the cabling from the cabinet to the RVSD unit and solar components.

Salvage RVSD unit and associated materials and return to District Maintenance Yard. Store all RVSD units removed on this project in a secure place, as approved by the Engineer. Any RVSD units damaged or lost must be replaced by the Contractor at no cost to the Department.

4. MEASUREMENT

This Item will be measured as each RVSD pole structure removed, RVSD pole structure removed and relocated complete in place, or each RVSD unit removed and salvaged.

5. PAYMENT

The work performed and materials furnished in accordance with this Item and measured as provided under "Measurement" will be paid for at the unit price bid for "Remove Radar Vehicle Sensing Device (RVSD) Pole Structure," "Remove and Relocate Radar Vehicle Sensing Device (RVSD) Pole Structure" or "Remove Radar Vehicle Sensing Device Unit."

- 5.1 **Remove and Relocate Radar Vehicle Sensing Device Pole Structure.** This price will be full compensation for removing and relocating the existing RVSD pole structure; removing existing foundations; for backfilling and surface placement; furnishing, fabricating, and installing all new components as required and replacing the RVSD on its new foundations with all manipulations and electrical work; controller; salvaging; disposal of unsalvageable material; loading and hauling; and equipment, material, labor, tools, and incidentals.

New foundations will be constructed, measured and paid for in accordance with Item 416, "Drilled Shaft Foundations."

New conduit will be constructed, measured and paid for in accordance with Item 618, "Conduit."

New Department standard electrical services installed to replace solar panel power systems will be constructed, measured and paid for in accordance with Item 628, "Electrical Services."

- 5.2. **Remove Radar Vehicle Sensing Device Pole Structure.** This price will be full compensation for removing the existing RVSD pole structure; removing the foundations; storing the components to be reused or salvaged; disposal of unsalvageable material; backfilling and surface placement; loading and hauling; and equipment, materials, tools, labor, and incidentals.
- 5.3. **Remove of Radar Vehicle Sensing Device Unit.** This price will be full compensation for removing the existing RVSD unit and all equipment, materials, tools, hauling, labor, and incidentals.