

ITEM 615.6017 11 - SPRAY SHOWER

DESCRIPTION

This work shall consist of furnishing and installing the spray nozzles, manifold, control panel and button activator for the outdoor spray park in accordance with the contract documents and as directed by the Engineer.

MATERIALS

Materials shall meet the requirements specified in the following subsections of New York State Department of Transportation, Standard Specifications, May 4, 2006:

Portland Cement Concrete	501
Reinforcing Steel for Concrete Structures	556
Ductile Iron Water Pipe and Fittings	722-01
Water Valves	722-04
Insulation for Water Mains	722-08

Geyser: The Geyser is to be a ground spray element that emits a heavy bodied, aerated mound of water. The Geyser is to be able to withstand wet deck applications with no standing water and is to be supplied complete with the following:

- Geyser jet pod
- Non-slip cover plate
- Bronze geyser nozzle
- Vandal proof stainless steel hardware and;
- Winterization cover plate

Manufacturer: Aquatic Recreation Company, LLC
5852 Baker Road
Minnetonka, MN 55345-5903
1-877-632-0503

The Geyser jet pod is to be constructed of heavy-duty PVC plastic material with stainless steel hardware. Structure fittings and connections to be gas welded; triple bead fabrication for strength and durability. Geyser Jet pod to be suited for encasement in concrete. Cover plate to be constructed of heavy-duty PVC plastic material with a colored, non-slip coating. Cover plate to be secured to jet pod with tamper resistant stainless steel fasteners. Geyser nozzle to be a cast bronze water level dependent nozzle providing a heavy bodied, aerated mound of water to a height of 1.5 m.

Stream Jet: The Stream Jet is to be a ground spray element that emits a single stream of water upward. The Stream Jet is to be able to withstand wet deck applications with no standing water. The Stream Jet is to be supplied complete with the following:

- Stream Jet pod
- Adjustable & removable spray jet
- Jet extraction tool and winterization plug.

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The Stream Jet pod is to be constructed of heavy-duty PVC plastic material with industrial solvent welded fittings for strength and durability. Stream Jet pods to be suited for encasement in concrete. Spray Jets to be manufactured from heavy-duty PVC plastic materials. Spray Jets to be threaded into jet pod structure with a spanner jet tool. Spray Jet to provide a clear stream water effect to a design spray height of 1.5 m.

Flow Control Manifold: The flow control manifold shall be responsible for controlling and distributing the water to the water features on the spray park. The manifold shall be constructed of high strength, Schedule 80 PVC. Each outlet shall be constructed of high strength, Schedule 80 PVC and have an electrically operated solenoid valve for controlling the flow of water. The valves shall be closed until activated by a signal from the control panel. Each outlet shall have a ball valve to regulate the flow of water from the manifold body. The manifold system shall be pressure tested for 30 minutes at 8.79 kg/cm² with zero leakage. The manifold system shall have a minimum of four outlets, one - 38 mm and two - 25 mm and one outlet to allow for the entire system to be drained prior to winterization.

Control Panel: The control panel or CPU shall be housed in a NEMA 4 enclosure and mounted to the inner wall of the vault as shown on the plans. All the necessary software shall be provided for complete spray park operation, which includes the controlling, timing and frequency of water distribution automatically to the specific zones in the system. The control panel shall be equipped with a 24-hour clocking system for automatic daily activation and shutdown programming. The control panel or CPU shall shut down the water flow when the system “times out” until bollard activator is activated. It shall be equipped with controls to allow the zones to be activated for duration of 20 minutes.

Push Button Bollard Activator: The push button activator shall be suitable for installation as indicated on the plans and shall be installed in a bollard. The activator shall be a pressure-activated switch that an individual pushes to control the flow of water. The push button activator shall operate on 24 VAC and be hard wired to the control panel or CPU.

CONSTRUCTION DETAILS

The Stream Jet, Geysers, Flow Control Manifold, Control Panel and Push button activator shall be installed at the locations indicated on the plans.

The contractor shall provide catalog cuts or specifications from the manufacturer to the Engineer for approval prior to construction. The entire system shall be from the same manufacturer.

METHOD OF MEASUREMENT

This work will be measured as the number of SPRAYSHOWERS satisfactorily furnished and installed.

BASIS OF PAYMENT

The unit price bid for SPRAYSHOWER shall include the cost of furnishing all labor, materials, and equipment necessary to satisfactorily complete the work.