

ITEM 725

GENERAL SOURCE CONTROLS (SWPPP)

725.1 Description. This item describes erosion protection and sediment control related practices which must be utilized during construction operations.

725.2 Materials. Topsoil shall conform to the following requirements:

TABLE NO. 1

<u>Specification</u>	<u>Applicable Test</u>	<u>Applicable Test Method for</u>
pH= 5.5 – 8	(1) <u>pH</u> (Litmus)	<u>ASTM D4972,</u> <u>“pH of Soils”</u>
Sand ( <u>2.0-0.05 mm</u> ) content	(2) Sedimentation	<u>ASTM D422,</u> <u>“Particle-Size</u> <u>Analysis of Soils”</u>
Shall be <u>10-70%</u> of oven dry weight		<u>ASTM D1140,</u> <u>Amount of Material</u> <u>in Soils Finer Than</u> <u>the No. 200 (75-<math>\mu</math>m)</u> <u>Sieve”</u>
Total Organic Matter <u>2.5-10%</u>	(3) <u>Wet</u> <u>Combustion</u>	<u>ASTM D2974,</u> <u>“Moisture, Ash,</u> <u>and Organic Matter</u> <u>of Peat and Other</u> <u>Organic Soils”</u> <u>AASHTO T194,</u>

All tests shall be oven dry weight.

The Contractor is required to inform the Engineer of the location of the pit or pits from which the material is to be taken. The City of Deer Park shall have the right to have an independent testing laboratory test the material to determine if it meets these specifications.

725.3 Construction Methods. No clearing and grubbing or rough cutting, other than as specifically directed by the Engineer to allow for soil testing and surveying, shall be permitted until sediment control and erosion protection systems are in-place.

The Contractor shall prohibit equipment and vehicles from maneuvering on areas outside of dedicated rights of way and easements for construction. Damages caused by construction traffic to erosion and sedimentation control systems shall be repaired immediately.

### **Topsoil for Erosion and Sedimentation Control Systems:**

When topsoil is called for as a component of another item, Contractor shall conduct erosion control practices during topsoil operation. When applying topsoil, contractor shall maintain erosion and sediment control systems, such as swales, berms, dikes, and sediment basins. Contractor shall place the topsoil to the lines and grades and to the depths shown on the construction plans. After the areas to receive topsoil have been brought to grade and immediately prior to dumping and spreading the topsoil, the subgrade shall be loosened by disking or by scarifying to a depth of at least 2 inches, to permit bonding of the topsoil to the subsoil. Contractor shall compact by passing a bulldozer up and down the slope, tracking over the entire surface area of the slope to create horizontal erosion control slots. When grading, filling, and applying topsoil around trees, Contractor shall maintain the existing grade within the drip line of trees, unless otherwise indicated.

Topsoil shall be material free of clay, rock or gravel larger than 2 inches in any dimension, debris, waste, vegetation and other deleterious matter. Drainage fill shall be selected stone or gravel, graded to pass a 3-inch sieve and retained on a 1-inch sieve.

No sod, seed, or other vegetation shall be placed on soil that has been treated with soil sterilants until sufficient time has elapsed to permit dissipation of toxic materials.

### **Protection of Trees in Construction Area:**

Contractor shall employ protective measures to avoid damage to existing trees to be retained on the project site. Heavy equipment, vehicular traffic, and stockpiles of construction materials, including topsoil, are not permitted within 3 feet of the dripline of any tree to be retained. Specimen trees shown on the construction plans shall be boxed or fenced for protection. Contractor shall water those trees indicated to be preserved, as required, to maintain their healthy growth during the course of construction operations. Contractor shall protect tree root systems from damage due to noxious materials in solution caused by runoff or spillage during mixing and placement of construction materials or drainage from stored materials.

When called for in the construction plans, tunneling under the root system for the installation of utility lines shall be accomplished by hand digging. Contractor shall not allow exposed roots to dry before permanent backfill is placed. Tree trunks, exposed roots, and limbs of the trees designed to be retained which are damaged during construction operations will be cared for as prescribed by a forester or a licensed tree expert at the expense of the

Contractor. The Contractor shall extend the pruning operation to restore the natural shape of the entire tree. Main lateral roots, taproots, or old main branches shall not be cut or pruned. The Contractor shall cut branches and roots with sharp pruning instruments. He shall not break or chop branches and roots. Cuts over 1/2-inch in size shall be painted with tree pruning compound. Tree pruning compound shall be waterproof, antiseptic, elastic, and free of kerosene, coal tar, creosote and other substances harmful to trees.

### **Dust Control:**

Control dust blowing and moving on construction sites and roads for erosion and sediment control, to prevent exposure of soil surfaces, to reduce on and off site property damage, to prevent health hazards, and to prevent hazardous sight conditions. Control dust blowing by utilizing one or more of the following methods:

1. Mulches bound with natural or chemical binders such as Soiltac®, Terratack®, or equal, as approved by the Engineer.
2. Temporary or permanent vegetative cover.
3. Spray-on adhesive, such as Soil Master®, PennzSuppress®, Soil Sement®, or equal, on mineral soils when not used by traffic and as approved by the Engineer.
4. Tillage to roughen surface and bring clods to the surface.
5. Irrigation by water sprinkling.
6. Barriers using solid board fences, snow fences, burlap fences, crate walls, bales of hay, or similar materials.

Dust control methods shall be implemented immediately whenever dust can be observed blowing on the project site.

### **Equipment Maintenance and Repair:**

Maintenance and repair of construction machinery and equipment shall be confined to areas specifically designated for that purpose. Designated areas shall be located, designed, and maintained so as oils, gasoline, grease, solvents, and other potential pollutants cannot be washed into the storm sewer system or any other receiving stream. Contractor shall not allow oils, gasoline, waste fluids, and other potential pollutants to spill onto the soil or seep into the ground and groundwater. Adequate waste disposal receptacles shall be provided for liquid waste, as well as solid waste. Proper spill response measures and materials will be the responsibility of the Contractor. Designated maintenance areas shall be inspected and properly maintained daily.

On a site where designated equipment maintenance and repair areas are not feasible, care shall be taken during each individual repair or maintenance operation to prevent spills of potential pollutants. All applicable federal, state, and local requirements shall be followed for the proper handling, storage, and waste disposal of oils, gasoline, grease, solvents, and other designated

potential pollutants associated with the maintenance and repair of construction machinery and equipment.

**Waste Collection and Disposal:**

A plan shall be implemented for the collection and disposal of on-site general trash, as well as construction debris. Disposal of waste materials shall be in accordance with applicable federal, state, and local requirements. Trash and debris shall not be allowed to overflow its receptacle or accumulate for excessively long periods of time. Receptacles shall be located where they will least likely be affected by storm water runoff.

Special provisions shall be made for the collection and disposal of liquid, toxic, or hazardous materials.

**Sanitary Facilities:**

Adequate sanitary facilities shall be provided for workers. Sanitary collection and disposal shall be in accordance with applicable federal, state, and local requirements.

**Vehicle Washing:**

Construction equipment and vehicles, such as concrete trucks, shall be washed in designated areas only, as approved by the Engineer. These designated wash areas shall be designed and maintained such as to prevent runoff from leaving the site, as well as preventing the runoff from entering a storm sewer system or into a watercourse. The designated areas shall be located where the wash water will evaporate or infiltrate directly into the ground and where runoff can be collected in a temporary holding or seepage basin. Wash areas shall not be located immediately adjacent to a storm sewer system or other watercourse or near a designated jurisdictional wetland. Concrete waste shall be permitted to dry in a controlled pit, sump, or other, and the waste shall be removed from the project site.

**Storage of Construction Materials and Chemicals:**

Storage of chemicals, cements, solvents, paints, pesticides, herbicides, fuels, or other potential pollutants shall be stored so that they will not be in contact with storm water runoff or cause potential leachate to the soil or groundwater. These items shall not be stored adjacent to a storm sewer system or other watercourse. Storage and use shall be in accordance with all applicable federal, state, or local requirements, as well as manufacturer's guidelines.

Contractor shall have a spill response program which addresses spills of construction related hazardous and toxic materials.

**Demolition Areas:**

Demolition projects usually generate large amounts of dust with significant concentrations of heavy metals and other toxic pollutants. Dust control techniques shall be used to limit the transport of the airborne pollutants. Water or slurries used to control dust shall not be allowed to flow into the storm sewer system or other watercourse.

**Street Cleaning:**

Street cleaning, such as sweeping, vacuuming, or shoveling, shall be provided along project area roadways where erosion have deposited or construction traffic have tracked sediments, mud, or debris. Contractor shall inspect the roadways daily, and perform the cleaning on a daily basis, if necessary. Washing or flushing of sediments, mud, or debris into adjacent drainage systems is prohibited.

**Dewatering:**

The pumping of ponded storm water, or other waters, from the project site directly into an adjacent watercourse or storm sewer system shall not be permitted unless the water has been pretreated through a sediment basin or other method, and as approved by the Engineer.

**Pesticides, Herbicides, and Fertilizers:**

Contractor shall only use pesticides, herbicides, and fertilizers on the construction site as indicated in the construction specifications and plans or as approved the Engineer. Pesticides, herbicides, and fertilizers shall be stored, used, applied, and disposed of in accordance with manufacturer's guidelines and with local, state, and federal regulations. Contractor shall not dispose of the pesticide, herbicide, and fertilizer wastes, and containers, on site or in the storm sewer system or other watercourse.

725.4 Measurement and Payment. No separate payment shall be made for this item. The work performed under this item shall be paid for under the erosion protection and sediment control system(s) for which this work is a component part.

END OF ITEM 725