

SECTION 01 57 13 - EROSION AND SEDIMENT CONTROL

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and Site Work provisions of Contract, including Site Work and General Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes but is not limited to the following:
 - 1. Installation and maintenance of permanent and temporary soil erosion and sedimentation control measures
 - 2. Removal of temporary soil erosion and sedimentation control measures when no longer required.
- B. This work consists of procedures and measures to effectively reduce or prevent soil erosion, sedimentation, and other pollutants from entering streams, lakes, public roads, and adjacent public and private property during the entire construction period. The provisions contained herein shall be applied to all areas of the work, shall comply with the rules and regulations of the Department of Environmental Protection and Lancaster County Conservation District (LCCD), and shall assure economical, effective, and continuous erosion control throughout the construction and post-construction period.
- C. The measures and procedures referred to include, but are not limited to, the use of inlet protection, temporary filter fabric fence or silt soxx, tree protection fence, stone filter barrier, erosion control mats, diversion swales, pipe outlet protection, mulches, grasses, etc. as shown on the Drawings, indicated herein, and/or directed by the Architect, as required.
- D. The Contractor shall incorporate all erosion and sedimentation control features into the project at the earliest practicable time and in strict conformance with construction sequencing indicated in the Drawings.
- E. The cost of additional erosion control measures and fines imposed by governing authorities as a result of the Contractor's failure to comply with regulations governing Erosion and Sedimentation Control shall be the responsibility of the Contractor.

1.3 QUALITY ASSURANCE:

- A. Where indicated, materials and workmanship shall conform to the latest requirements of The Commonwealth of Pennsylvania Department of Transportation Specifications, Publication 408, latest edition, and these requirements shall form a part of these specifications as if physically attached hereto. Reference to these specifications is hereinafter noted as PDT-408.
- B. The Contractor shall be responsible for completing and submitting all paperwork, permits, etc., in conjunction with soil and erosion control procedures enforced by DEP and LCCD.

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- C. The Contractor shall become thoroughly acquainted with and comply with all other terms and conditions specified in the Pennsylvania Underground Utility Protection Act, as amended from time to time. Furthermore, the Contractor shall complete the site excavation in full compliance with all applicable standards, codes, laws, ordinances, regulations and/or requirements of any applicable state, federal or governmental agency.

1.4 PROJECT CONDITIONS

- A. Prior to performing excavation and grading, install the erosion and sediment controls as downslope of utility installation work as required by local and state agencies.
- B. Maintain erosion and sediment control measures during the construction period to include periodic removal of sediment and repairs as may be required and as further indicated on the Drawings.
- C. Upon completion of the project, remove control measures not otherwise indicated to remain (subsequent to approval by the County Conservation District), clean up the area, regrade if required, and seed, mulch and stabilize disturbed areas.

PART 2 – PRODUCTS (Not Applicable)

PART 3 - EXECUTION

3.1 EROSION AND SEDIMENTATION CONTROL MEASURES

- A. Provide erosion control methods in accordance with requirements of authorities having jurisdiction and as described in these specifications and as indicated in Drawing notes and applicable construction details.

3.2 TEMPORARY AND PERMANENT MEASURES

- A. Utility excavation and installation shall be limited to that which can be completed in a single day. Any disturbed area that is not completed at the end of day shall be mulched and silt soxx shall be installed downslope to prevent sedimentation damage to downslope or protected areas.
- B. Roads, drives and parking areas should be rough graded as early as practical and receive the specified pavement base course in order to reduce exposed soil area. As construction progress permits, areas completed before others shall be stabilized by paving or seeding and mulching. A temporary cover crop or mulch shall be applied to reduce exposure of an area which may otherwise be detained in an exposed condition longer than twenty (20) days. During the non-germinating periods a mulch must be applied.
- C. After final site stabilization has been achieved, the Contractor shall remove temporary erosion and sedimentation controls and dispose of offsite immediately. Stabilize areas disturbed during removal of controls.
- D. Jute Erosion Control Mats or sod shall be installed in areas of concentrated runoff flow as deemed necessary to control scouring and at locations shown on the Drawings. Erosion control matting shall be installed at the time of both temporary and permanent seedings.
- E. Temporary filter fabric fence, silt soxx, stone filters and stone filter outlets shall serve as temporary erosion

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and sedimentation control measures to trap sediment and reduce velocity of runoff until disturbed areas are stabilized with new grass/ground cover. Filter fabric fence shall be installed and inspected for sturdiness after each storm event. Silt shall be removed upon reaching depth accumulations of 1/2 the above ground height of the fence. Adhere to manufacturers' recommendations for replacing filter fabric fences due to weathering. All undercutting or erosion of the toe anchor shall be repaired immediately with compacted backfill materials.

- F. The formation of concentrated flows on the drainage slope above a silt soxx or filter fabric fence installation is not permitted. If concentrated flows do occur, stone filter outlets shall be provided at regular intervals not to exceed 100 feet.
- G. Filter fabric fences or silt soxx shall not be placed in any area of concentrated flows such as ditches, swales, channels, etc. Filter fabric fences or silt soxx shall not be used in any areas where rock or rocky soils prevent the full and uniform anchoring of the fence toe. Filter fabric or silt soxx material shall not be placed across the entrance to pipes or culverts and shall not be wrapped around the principle spillway structures of sediment traps or basins.
- H. Temporary stone filters shall be removed and replaced with approved erosion control matting in swales at time of seeding, as shown on the Erosion and Sedimentation Control Drawings.
- I. Stormwater inlets and other drainage structures shall have temporary filtering devices installed as early as possible to serve during the construction period.
- J. Sediment to be removed once accumulations reach 1/2 the soxx or fence height. Sediment to be disposed of in accordance with LCCD/PA DEP requirements.

3.3 EARTHMOVING ACTIVITY

- A. All disturbed areas shall be carefully managed for runoff control. Existing vegetation shall remain undisturbed in areas outside the area of construction. Contractor to field delineate/stake limit of earth disturbance as shown on plans prior to construction.
- B. Topsoil shall be stripped and stockpiled where concentrated runoff flows can be diverted away from the stockpile within the tract boundaries. Topsoil storage piles shall be completely seeded and encircled with temporary filter fabric fence or silt soxx.

3.4 MAINTENANCE

- A. Maintenance of all storm water and erosion and sedimentation control facilities shall be performed in accordance with the requirements outlined in the approved E&SPC Plan and shall commence immediately after construction begins. Accumulated sediment deposits shall be regularly removed after each storm event in order to maintain proper performance.
- B. The Contractor shall conduct regular inspections of the drainage swales, slopes, and generally the entire construction area in order to detect erosion problems which shall be corrected and eliminated before they develop into unmanageable problems.
- C. It shall be the Contractor's responsibility during construction to prevent soil pollution from contaminating, neighboring property, public streets and streams. Soil dropped from construction equipment and sedimentation shall be immediately removed from roads, public and private property and streams.
- D. Seeded areas shall be repaired, reseeded, and mulched as soon as possible after being damaged.

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E. Public Road Protection

1. The Contractor shall be responsible to implement proper and adequate temporary soil erosion controls to prevent mud and dirt "wash on".
2. The Contractor may provide and maintain, during the construction period, a temporary water and hose facility at the site entrance for use of all contractors for washing their respective construction vehicles prior to exiting onto public roads. Cost to install, maintain and remove shall be the responsibility of the Contractor. Should Contractor utilize a tire wash instead of a stabilized construction entrance, they will be required to adhere to the PA DEP Erosion Control Manual.

END OF SECTION 01 57 13