SP-096015
(NEW)

Iowa Department of Transportation

SPECIAL PROVISIONS

FOR

BIOSWALES

Linn County

ESL-4775(620)--7S-57

Effective Date:

December 15, 2009

THE IOWA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR HIGHWAY AND BRIDGE CONSTRUCTION, SERIES 2009, ARE AMENDED BY THE FOLLOWING ADDITIONS, OR MODIFICATIONS. THESE ARE SPECIAL PROVISIONS AND SHALL PREVAIL OVER THOSE PUBLISHED IN THE STANDARD SPECIFICATIONS.

Part 1 - DESCRIPTION

Bioswales consist of vegetated channels which contain conditioned planting soil beds and planting materials that are used to filter stormwater runoff. Bioswales combine physical filtering and absorption with biological processes. Bioswales decrease speed of flows, act as a stormwater detention structure, and allow suspended solids in runoff to settle out.

Construction of bioswales shall consist of furnishing necessary materials, preparing the swale side slope surfaces, excavating for and installing the swale bottom filter media zone which consists of engineered soil, geotextile fabric, perforated and non-perforated subdrains, gravel filter, and amended subgrade as shown in the contract documents. All bioswales shall be installed at the locations and to the grades and elevations shown in the contract documents. Mass excavation for the swale channel, furnishing and installation of the wood excelsior mat, seeding, fertilizing, and watering of the swale are not included in this item.

Part 2 - MATERIALS

Engineering fabric shall meet the requirements of Article 4196.01,B of the Standard Specifications.

Gravel filter shall be porous backfill material and shall meet the requirements of Section 4131 of the Standard Specifications.

Pipe for subdrains shall be of the size and type shown in the contract documents and shall meet the requirements of Section 4143 and Section 2502 of the Standard Specifications.

Engineered soils mix shall be a combination of the specified sand, topsoil, and compost at the ratios shown in the contract documents.

Amended subgrade shall be a combination of the specified sand and native soil as shown in the contract documents.

Part 3 - CONSTRUCTION

Construction of bioswales shall be as shown in the contract documents. Contractor shall make all efforts to limit soil compaction of the surface soils within the bioswale side slopes and bottom.

Part 4 - METHOD OF MEASUREMENT
The length of bioswales will be measured by the Engineer to the nearest foot along the center line of the bioswale. The length of non-perforated subdrain pipe connections beneath the intercepting side roads will not be measured and will be incidental to this bid item. The non-perforated subdrain outlet pipe between the bioswales and the drainage ways will not be measured and will be incidental to this bid item.

Part 5 - BASIS OF PAYMENT
For the number of lineal feet of bioswale of the size specified, furnished, and installed, the Contractor will be paid the contract unit price per lineal foot.

This payment shall be full compensation for excavating, furnishing material, labor and tools necessary for placement of the bioswale bottom filter media zone, preparing the swale side slopes, removal of excess excavated material from the project, furnishing and placing the engineered soils, furnishing and placing the geotextile fabric, furnishing and placing perforated subdrain, non-perforated subdrain, outlets, subdrain end caps, elbows, tees, and other necessary subdrain connections, and furnishing and placing the amended subgrade as shown in the contract documents as directed by the Engineer.

For bioswales built in accordance with the contract documents, no extra compensation will be allowed for over-depth, rock excavation, tamping backfill, and removal of surplus material from the project.

END OF SECTION