

SUBGRADE GRANULAR EMBANKMENT, SPECIAL (Tollway)

Effective: October 29, 2012

DESCRIPTION

This work shall consist of the furnishing, placement and compaction of a layer of granular embankment material on the finished subgrade to the lines, dimensions, and cross sections shown on the Plans, and in accordance with this special provision.

MATERIALS

The materials used for SUBGRADE GRANULAR EMBANKMENT, SPECIAL shall be gravel, crushed gravel, or pit/bank run gravel or gravelly sand capable of developing a compacted maximum dry density, as determined by methods outlined below, of not less than 105 pounds per cubic foot. Not more than 16 percent or less than 4 percent of the materials shall pass a No. 200 sieve determined in accordance with AASHTO T-11; and the plasticity index of the material passing a No. 40 sieve determined in accordance with AASHTO T 90 shall not exceed 6, unless the use of other materials is authorized in writing by the Engineer. The material shall not contain aggregate particles larger than 3 inches, nor an excessive amount of soft or friable particles with mineral aggregates, as determined in accordance with AASHTO T-112, which may readily break down into fine material. The combined content of such soft particles with mineral aggregate plus the content of material passing the No. 200 sieve by the wet sieving process shall not exceed 20 percent of the total sample.

If materials meeting the foregoing requirements cannot be obtained from excavations of existing granular subbase aggregate within the project limits or from borrow areas developed by the Contractor, the material shall be obtained from other sources selected by the Contractor and approved by the Engineer, at no additional cost to the Tollway.

The use of air-cooled blast furnace slag or steel slag will not be allowed. No reinforcement, subgrade soils, or organic material shall be present.

GENERAL REQUIREMENTS

Any existing subbase aggregate that is to be reused as Subgrade Granular Embankment, Special shall be excavated and stockpiled in accordance with the Special Provision "Excavation of Existing Granular Material" or windrowed after which the subgrade shall be prepared in accordance with Section 301 of the Standard Specifications. Prior to final approval for placing of the Subgrade Granular Embankment, Special, the subgrade shall be prepared and checked for specified density in accordance with Article 301.04 of the Standard Specifications. Placing of loose material on the finished subgrade shall not proceed until the subgrade has been approved by the Engineer for a distance of not less than 500 feet in advance of the laying of the granular embankment, special material. No material shall be placed upon overly moist, muddy or otherwise unstable subgrade or on material containing frost at any depth. Should the subgrade be dry to the point of being dusty, it shall be moistened by sprinkling as may be directed by the Engineer.

After the granular embankment, special material has been spread uniformly on the prepared subgrade, any portion of the layer in which segregation has occurred shall be removed and replaced with satisfactory material, or shall be remixed as directed by the Engineer.

If the material is too dry, it shall be uniformly moistened by sprinkling and by manipulating the material in a manner approved by the Engineer, such that the moisture will be evenly distributed throughout the depth of the material. If the material is too moist, it shall be allowed to dry and, if necessary to achieve uniform distribution of moisture throughout its depth, it shall be manipulated in a manner approved by the Engineer.

The granular embankment, special shall be constructed in layers, each having a compacted thickness not to exceed six (6) inches; except that the Contractor may construct the granular embankment, special in one layer by using vibratory equipment for compacting, providing he can show to the satisfaction of the Engineer that he is able to obtain the required density.

During preparation, construction, and after completion of the Subgrade Granular Embankment, Special, adequate drainage shall be provided at all times to prevent water from standing on the granular embankment, special surface. The granular embankment, special shall be so constructed that it will have, as nearly as possible, uniform density throughout.

The finished surface of the granular embankment, special shall not vary more than one-tenth (0.1) foot below the elevation shown on the Plans. No tolerance above the Plan elevations will be allowed. Any deviation in excess of this amount shall be corrected by loosening, adding or removing materials, reshaping and recompacting or sprinkling and rolling, all at the Contractor's expense.

No hauling shall be done nor equipment moved over the granular embankment, special when its condition is such that undue distortion will result. If these conditions prevail, the granular embankment, special shall be protected with adequate plank runways, mats, or other satisfactory means, if hauling is done thereon.

COMPACTION

The granular embankment, special shall be compacted to 95 percent of the maximum dry density as determined by AASHTO T 99, Method C. The granular embankment, special thus compacted shall cover the full width of the section as shown on the Plans. Additional water shall be added when needed during compaction operations to obtain the specified density and optimum moisture content.

Compaction of the granular embankment, special shall be obtained using equipment conforming to the requirements of Section 1101 or by other equipment approved by the Engineer.

Compacting shall start at the edges and progress towards the center, and shall continue until the required density as herein specified is obtained. When the proper cross-section has been obtained and compaction is completed, the surface shall be rolled with a flatwheel roller to seal the surface.

METHOD of MEASUREMENT

Aggregate used for SUBGRADE GRANULAR EMBANKMENT, SPECIAL will be measured for payment in square yards of the thickness specified.

Water required to be added for compaction of the grade will not be measured for payment, but shall be considered as included in the cost of the item of work being constructed.

BASIS of PAYMENT

Payment for SUBGRADE GRANULAR EMBANKMENT, SPECIAL, measured as specified, will be made at the Contract unit price per square yard of the thickness specified, which payment shall constitute full compensation for furnishing, transporting, and placing the material as specified.