

SUPERSEDED BY EI 12-001 EFFECTIVE 9/6/12		<i>New York State</i> <i>Department of</i> <i>Transportation</i> ENGINEERING INSTRUCTION	EI 09-036
Title: REVISION TO §713-07-ROLLED EROSION CONTROL PRODUCTS AND SOIL STABILIZERS			
Distribution: ☐ Manufacturers (18) ☐ Surveyors (33) ☒ Local Govt. (31) ☒ Consultants (34) ☒ Agencies (32) ☒ Contractors (39)		Approved: <u>/s/Richard W. Lee for</u> <u>2/9/10</u> Daniel D'Angelo, P.E. Date Deputy Chief Engineer, Design	

ADMINISTRATIVE INFORMATION:

- **Effective Date.** This Engineering Instruction (EI) is effective beginning with projects submitted for the letting of 9/02/10.
- This information will reside in the next update of the Standard Specifications.
- **Superseded Issuances.** None

PURPOSE:

This EI issues revisions to §713-07 ROLLED EROSION CONTROL PRODUCTS AND SOIL STABILIZERS of the Standard Specifications dated May 4, 2006 & May 1, 2008.

TECHNICAL INFORMATION:

A second bullet was added to Class IV Soil Stabilizers-Type A, to better define a slightly different process used as a soil binding system. Class IV Soil Stabilizers-Type C has also been amended to include soil stabilizers which incorporate Cotton Fiber, known as Cotton Fiber Reinforcement Matrix (C-FRM). C-FRMs are similar to Flexible Growth Mediums (FGMs), last up to a year, and require no cure time.

IMPLEMENTATION:

Main Office Design Quality Assurance Bureau will insert a copy of the Standard Specification shelf note beginning with projects submitted for the letting of September 2, 2010.

TRANSMITTED INFORMATION:

Both US Customary and Metric shelf notes for revisions to §713-07 ROLLED EROSION CONTROL PRODUCTS AND SOIL STABILIZERS are attached.

BACKGROUND:

This revision is a result of research and guidance from various private and public sources.

CONTACT:

Direct questions regarding this Engineering Instruction to Gary Glath in the Specifications and Standards Section of the Design Quality Assurance Bureau at 518 - 457-5286 (e-mail: gglath@dot.state.ny.us).

SOIL EROSION AND SEDIMENT CONTROL

Make the following changes to the Standard Specifications of May 1, 2008:

Page 901, delete Class IV Soil Stabilizers in its entirety and replace with the following:

Class IV Soil Stabilizers. Soil stabilizers are short-term duration, erosion control products. When used alone, they shall be used on slopes 1:2 or flatter. They shall not be used in channels or in areas of concentrated flow.

Type A. A soil binding system consisting of one of the following:

- Cementitious soil binder which is added to wood cellulose fiber mulch, a Bonded Fiber Matrix (BFM). Intended to form a thick, heavy-bodied crust or mat-like barrier that controls storm water and wind induced erosion. BFMs last up to six months and require a cure time up to 48 hours, without rain, to develop intimate soil contact.
- Soil stabilizing polymer which is added to wood cellulose fiber mulch, a Polymer Stabilized Fiber Matrix (PSFM). Intended to form a matrix that is designed to work directly with soil to maintain its stability by preserving existing soil structure, flocculating fine sediment being dislodged by storm water or wind, and to prevent splash erosion. PSFMs last up to six months and require a cure time up to 24 hours.

Type B. An anionic polyacrylamide (PAM) and calcium solution intended to reduce the erodibility of bare soils during construction activities or to enhance the performance of mulching on permanent slopes. Soil stabilizers, Type B, shall bond soil particles and shall effectively increase the soil particle size to 3/64 inch or larger. Soil stabilizers, Type B, shall reduce the movement of soil due to chemical bonding, thereby increasing the particle size rendering silt fence/sediment trapping devices more effective, and increase the water absorption of the soil.

Type C. A soil binder which may be made up of wood fibers, straw fibers, cotton fibers, interlocking fibers, polymers and hydro-colloid tackifiers, a Flexible Growth Medium (FGM) or Cotton Fiber Reinforcement Matrix (C-FRM). Intended to form a thick, heavy-bodied crust or mat-like barrier that controls storm water and wind induced erosion. FGMS/C-FRMs last up to a year and require no cure time to develop intimate soil contact.

Type A, B, and C soil stabilizers may be used alone or in combination with Class III, Types A and B Turf Reinforcement Materials where those products are used on slope applications.

SOIL EROSION AND SEDIMENT CONTROL

Make the following changes to the Standard Specifications of May 4, 2006:

Page 859, delete Class IV Soil Stabilizers in its entirety and replace with the following:

Class IV Soil Stabilizers. Soil stabilizers are short-term duration, erosion control products. When used alone, they shall be used on slopes 1:2 or flatter. They shall not be used in channels or in areas of concentrated flow.

Type A. A soil binding system consisting of one of the following:

- Cementitious soil binder which is added to wood cellulose fiber mulch, a Bonded Fiber Matrix (BFM). Intended to form a thick, heavy-bodied crust or mat-like barrier that controls storm water and wind induced erosion. BFMs last up to six months and require a cure time up to 48 hours, without rain, to develop intimate soil contact.
- Soil stabilizing polymer which is added to wood cellulose fiber mulch, a Polymer Stabilized Fiber Matrix (PSFM). Intended to form a matrix that is designed to work directly with soil to maintain its stability by preserving existing soil structure, flocculating fine sediment being dislodged by storm water or wind, and to prevent splash erosion. PSFMs last up to six months and require a cure time up to 24 hours.

Type B. An anionic polyacrylamide (PAM) and calcium solution intended to reduce the erodibility of bare soils during construction activities or to enhance the performance of mulching on permanent slopes. Soil stabilizers, Type B, shall bond soil particles and shall effectively increase the soil particle size to 1.3mm or larger. Soil stabilizers, Type B, shall reduce the movement of soil due to chemical bonding, thereby increasing the particle size rendering silt fence/sediment trapping devices more effective, and increase the water absorption of the soil.

Type C. A soil binder which may be made up of wood fibers, straw fibers, cotton fibers, interlocking fibers, polymers and hydro-colloid tackifiers, a Flexible Growth Medium (FGM) or Cotton Fiber Reinforcement Matrix (C-FRM). Intended to form a thick, heavy-bodied crust or mat-like barrier that controls storm water and wind induced erosion. FGMs/C-FRMs last up to a year and require no cure time to develop intimate soil contact.

Type A, B, and C soil stabilizers may be used alone or in combination with Class III, Types A and B Turf Reinforcement Materials where those products are used on slope applications.