

|                                                                                                                                                                                                                                                                                                                                               |                                                                                    |                                                                                                                                                                                                                                                            |                            |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|
| <b>To: SUPERSEDED BY EI 09-035</b><br><b>EFFECTIVE 9/02/10</b>                                                                                                                                                                                                                                                                                |  | New York State<br>Department of<br>Transportation<br><b>ENGINEERING</b><br><b>INSTRUCTION</b>                                                                                                                                                              | <b>EI</b><br><b>06-005</b> |
| <b>Title: DESIGN GUIDANCE FOR STANDARD SPECIFICATIONS FOR §209 EROSION AND SEDIMENT CONTROL AND §713-07 ROLLED EROSION CONTROL PRODUCTS AND SOIL STABILIZERS</b>                                                                                                                                                                              |                                                                                    |                                                                                                                                                                                                                                                            |                            |
| <b>Distribution:</b><br><input checked="" type="checkbox"/> Manufacturers (18) <input type="checkbox"/> Surveyors (33)<br><input checked="" type="checkbox"/> Local Govt. (31) <input checked="" type="checkbox"/> Consultants (34)<br><input checked="" type="checkbox"/> Agencies (32) <input checked="" type="checkbox"/> Contractors (39) |                                                                                    | <b>Approved:</b><br><br>Philip J. Clark, P.E.<br>Deputy Chief Engineer, Design<br><div style="text-align: right;">           02/28/06<br/>           Date         </div> |                            |

#### ADMINISTRATIVE INFORMATION:

- Effective Date. This Engineering Instruction (EI) is effective beginning with projects submitted for the letting of 09/07/2006.
- The design guidance transmitted by this EI will be incorporated into a future revision of the Highway Design Manual in Chapter 8.

#### PURPOSE:

This EI issues design guidance for §209-SOIL EROSION AND SEDIMENT CONTROL and §713-07 ROLLED EROSION CONTROL PRODUCTS AND SOIL STABILIZERS of the Standard Specifications.

#### TECHNICAL INFORMATION:

EI 06-004 Revision to Standard Specifications for §209 Erosion and Sediment Control and §713-07 Rolled Erosion Control Products and Soil Stabilizers is being issued concurrently with the EI.

#### Designer Information

Class III Turf Reinforcement Mats (TRMs) are meant to be used on steeper slopes and in channels. In the past, Rolled Erosion Control Products (RECPs) and TRMs were combined in the same category. The industry has defined a clear difference and AASHTO National Transportation Product Evaluation Program is considering different testing for TRMs.

TRMs are rolled erosion control products composed of nondegradable synthetic fibers, filaments, nettings, and/or wire mesh, processed into a permanent, three-dimensional matrix which may be supplemented with natural or fiber components (composite). Note: TRMs are designed to enhance vegetation reinforcement during and after maturation. TRMs are typically used in critical hydraulic applications, such as high-flow channels, steep slopes, stream banks, and shorelines, where erosive forces exceed the limits of natural, unreinforced vegetation. TRMs need to be protected from concentrated flows of water until establishment of vegetation. Class III Type A and B TRMs are meant to be filled with topsoil immediately after installation and to be used in conjunction with a Class IV soil stabilizer, Class I or II RECP, or mulch.

Class III Type C and D TRMs, which contain a composite, do not need to be filled with topsoil unless recommended by the manufacturer. Seeding is recommended on the topsoil for most TRMs. TRMs with a composite will require seed placement in contact with the soil. Payment for soil stabilizers, Class I or II RECPs, or mulch, are to be paid for separately when used with a TRM.

Type C has been added under Class IV. It contains Flexible Growth Medium (FGM). It is a soil binder made up of wood fibers, interlocking fibers, polymer gels, and hydro-colloid tackifiers. It works similar to a bonded fiber matrix (BFM). BFMs require up to 48 hrs. without rain to cure, whereas FGMs require no curing time to develop intimate soil contact. There is a slight cost difference with FGMs being a little more expensive. BFMs provide protection up to six months. FGMs are rated for up to a year, but provide protection as soon as applied.

#### **IMPLEMENTATION:**

The Design Quality Assurance Bureau (DQAB) will insert the Designer Information in a future revision to the Highway Design Manual.

#### **BACKGROUND:**

The revisions to §713-07 ROLLED EROSION CONTROL PRODUCTS AND SOIL STABILIZERS result from changes made to conform to national testing and terminology.

#### **CONTACT:**

Direct questions regarding this Engineering Instruction to Gary Glath in the Landscape Architecture Section at 518/457-4460 (e-mail: [gglath@dot.state.ny.us](mailto:gglath@dot.state.ny.us)).