Florida Department of
TRANSPORTATION

Geosynthetic Products Reviewed
by the State Materials Office

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Contents

Updates

This section summarizes the updates in this document from the last posted version.

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Introduction

The Job Guide Schedule (JGS) lists the Geosynthetic Materials requirements under MAC Spec 985.

There are two types of samples for geosynthetic products. For some types, a physical sample and certification statement are required (Earthwork Lab/Field Testing Summary). For other types, an APL tracking sample is needed (APL Tracking Sample Life Cycle Instructions). MAC Spec 985 has the following category / types:

Category / Types with a Physical Sample and Certification Document

D-1:
- Revetment (Special)
- Rock, Rubble without bedding stone
- Ditch Pavement (Rubble Riprap) without bedding stone
- Other

D-2:
- Revetment (Standard)
- Articulating Block
- Gabions
- Rock, Rubble, and Broken Concrete with bedding stone
- Ditch Pavement (Rubble Riprap) with bedding stone
- Joint Cover for MSE Wall with Coarse Aggregate Backfill
- Joint Cover for MSE Wall Supporting Spread Footing Foundations
- Other

D-3:
- Underdrain
- French Drain
- Sheet Piling Filter
- Filter Fabric Jacket (Culvert)
- Box Culvert Joints
- Concrete Pavement Subdrainage
- Joint Cover for MSE Wall with Sand or Limerock Backfill
- Other

D-4:
- Slope Pavement
- Ditch Pavement (Sand-Cement Riprap or Concrete)
- Coarse Aggregate Wrap
- Other

D-5:
- Separation Geotextile
- Cast-In-Place Retaining Wall
- Other

Category / Types with a physical sample (cont.)

R-1:
Geosynthetic Reinforced Soil (GRS-IBS)

R-2:
Reinforcement of Foundations over Soft Soils

R-3:
Reinforced Soil Slopes

R-4:
Reinforced Embankment

R-5:
Construction Expedient

Category / Types no Physical Sample Requiring an APL Tracking sample

APL & BABA Tracking
- E-3 / Plastic Erosion Mat (Turf Reinforcement Mat) (Type 1)
- E-4 / Plastic Erosion Mat (Turf Reinforcement Mat) (Type 2)
- E-5 / Plastic Erosion Mat (Turf Reinforcement Mat) (Type 3)

NOTE: Do not log an APL Tracking sample unless the material is left in place permanently. Most erosion control items are considered temporary and APL Tracking samples are not required for temporary items. It is only when the erosion control product is left in place permanently that an APL Tracking sample is required.

For products requiring a physical sample, only one physical sample submittal is needed for each product when the product is used in multiple applications (refer to item 12 under Section A. Creating the Sample for additional information).

Chapter 1 – Creating a Sample with Physical Sample and Certification Document

A.   Creating the Sample

You must be in your company roles to log a sample into MAC.

1. Select the Manage Samples menu option.

2. Select the Create Sample Login option.

The Create Sample Login dialog box will appear. It defaults to the sample category of Project. Leave it as the Project option.

3. **Contract/Project** – begin typing in the project or contract ID. MAC will search on either.
MAC will return a list of entries that match the search criteria. Select the appropriate entry from the returned list.
4. **Material/Specification** – enter 985 in the Material/Specification list and select if from the returned list.

5. **Pay Items** – this field is optional and multi-select. Click on the dropdown list to select a pay item or pay items, if desired. Do **NOT** select the pay item if the contract is Lump Sum or Design Build.

Once you have selected a Material/Specification, a link to Continue to the Sample Information Screen will appear on the dialog box.

6. Click on the Continue to Sample Information Screen link to access more login fields.

7. **Category** – select the Category or Category and Type matching the geosynthetic product being used.
8. **Manufacturer** – type the name of the manufacturer of the geosynthetic product being used.

9. **APL Product** – begin typing the name of the geosynthetic product being used. MAC will return a list of entries that match the search criteria from the list of approved APL products. *Be sure to select the APL number for the product that matches the category chosen.*

10. **Date Sample Taken** – enter the date the geosynthetic material was sampled from the job.
11. **Material Description** – type a short description of the geosynthetic material being used.
12. **Intended Use** – enter a detailed description of what the geosynthetic material is being used for. If the product is being used for more than one application include a description of all uses.

NOTE: If the same material is being used for various applications under *the same category* (e.g. D-3 geotextile used for a French Drain and for Filter Fabric Jacket (Culvert) wrapping) only one MAC sample is required with all uses described under Intended Use. If the same material is used for a different application under *a separate category* (e.g. a geotextile used for a D-2 / Ditch Pavement and for a D-3 / Sheet Piling Filter), *separate* MAC samples are required so the APL number matches the category and intended use description. Tip: The *Create New Sample Login from this Sample* button in MAC can be used to expedite this process.

13. **Soil Description** – for D-1, D-2, and D-3 applications, list the class type (a, b, c, d, e, or f) based on the in situ soil type the geosynthetic material is being used with (refer to FDOT's Standard Specifications for Road and Bridge Construction, Section 985, Table 985-2 [for FY 25-26 lettings and earlier] or Section 514, Table 514-2 [for FY 26-27 and later lettings]). Verify that the APL product that is selected is approved for the class type associated with the in situ soil type in the area where the material is to be installed. Approved class type specific to each APL product can be found in the comment section of each APL product on FDOT's PATH system.

NOTE: If you are unsure of the class type of the in situ soil, it is recommended to attach a copy of any available project plans, shop drawings, or soil survey sheets in the document section along with the certification document and the SMO staff will review to ensure that you have chosen the proper class type (see step 19).

The Testing Lab ID defaults to the State Materials Office (SMO) lab ID (DSM001).

14. **Sampled From** – enter location where the physical sample was obtained.

15. **Contact Name** – enter a contact name. This is someone who can answer specific questions about the certification document and the physical sample.

16. **Cell Phone # or Office Phone Number** – enter either contact phone number in one of these fields. Only one is required. When one is entered the red asterisk will disappear by the other field.

17. **Email** – enter an email address for the contact person in the field.

18. **Comments** – enter any comments about the sample.

19. **Choose File** – select this option to upload the certification document to the sample. This document can be (1) manufacturer's unaltered original certification letter that includes contractor's and project information and material properties, (2) date stamped photos of the labels on the rolls at the jobsite that clearly show the product name, LOT number, and roll number, (3) delivery ticket/invoice that clearly shows the product and the contractor's company/address.

NOTE: The document section can also be utilized to attach a copy of any available project plans, shop drawings, or soil survey sheets if you are unsure of the soil description (see step 13).

An Open dialog box will appear.
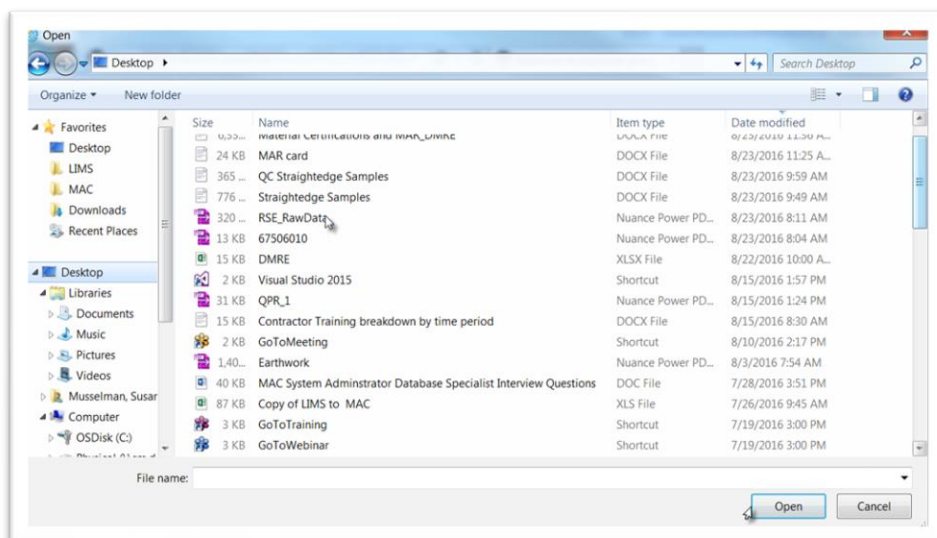
a. Navigate to the location where the document is stored.
b. Click on the document to select it.
c. Click on the Open option to upload the document to the sample.
The document will appear as attached to the sample.

20. Enter any comments about the document in the Description field.
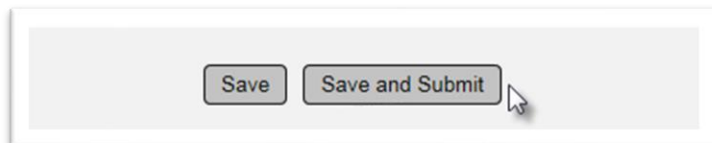
21. **Save & Submit** –
a. **Save** – select Save if you are not ready to sumbit the sample but want to save the data you have entered so far.
b. **Save and Submit** – select Save & Submit if you are ready for the SMO to review the sample.

B.   SMO Sample Processing

When the SMO receives the physical sample, we will review it for several different items:
1. Is the product the correct product?
2. Is the product correct for the specific application?
3. Are there any issues with the certification document?

During the review SMO may identify an issue with the data entered in MAC. In most cases, if there are sample data entry issues, the sample may be returned for corrections. This may include the category / type. Most of the time this is not allowed even when the system allows a user to do so. MAC Spec 985 is a rare exception where changing the category / type does not impact the list of required tests. If you are directed by SMO to revise the category / type to match the correct product and/or application, this is permitted for MAC Spec 985 samples.

Chapter 2 – Creating an APL Tracking Sample

Creating an APL Tracking Sample is described in detail in the APL Tracking Sample Life Cycle Instructions. The permanent erosion control materials' APL Tracking sample is as follows:

1. **Category** – select the appropriate APL & BABA Tracking category / type for the product being permanently installed.
2**. APL Product** – enter the APL number or product description and select the appropriate entry from the returned list.

NOTE: Make sure the appropriate number is selected. Some products have more than one APL number because they are approved for multiple applications. Project personnel must ensure that the correct APL product is being used for the specific application.

NOTE: A product may not be acceptable even though you are able to find the APL Product in this field. Per the APL Tracking Sample instructions, you must review the specific product in the PATH application to ensure there are no conditions or limitations that make it ineligible to be used on your project.

3. **Date Sample Taken** – enter the date the product was installed.
4. **Quantity Installed** – enter the total amount of the product that was (or will be) placed on the project.
5. **Unit of Measure** – enter the measure for the quantity placed and select it from the returned list; for example linear feet or square yards.
6. **Intended Use** – enter a description of the use of the product installed permanently.