
DITCH LINING MEETING MINUTES

LOCATION: GDOT, Office of Design Policy and Support, 26th floor

MEETING DATE: Thursday, June 27, 2013, 9:00 AM

RE: DITCH LINING PROGRAM

ATTENDEES: Brad McManus – GDOT
Jon Griffith – GDOT
Chris King – Atkins
Chris Marsengill – McGee Partners, Inc.
Josh Sofsky – McGee Partners, Inc.
Ken McDuff – Mulkey Engineers & Consultants
Mario Macrina – Wolverton & Associates, Inc.
Daniel Taylor – Wolverton & Associates, Inc.

- The meeting began with the following in attendance: Brad McManus, Jon Griffith, Chris King, Chris Marsengill, Josh Sofsky, Ken McDuff, Mario Macrina and Daniel Taylor.
- Brad McManus welcomed everyone and gave a brief overview of the new ditch lining program. Mario Macrina summarized the reason for requesting the meeting was to discuss issues the consultant community was having with the program and look for additional guidance from GDOT.
- Brad stated that he had a conversation with Glen Foster about the soil parameters that are required for the new program but were not required in previous soil surveys. He said that Glen was working on providing guidance to GDOT designers for how to approximate these parameters. It was determined that it would be the designers' responsibility to approximate the D75, USCS classification, and Plasticity Index (PI). It was recommended that the consultant community be included on the guidance.
- Daniel Taylor then discussed a project that he was working on and how USCS soil tests were performed every 1200 feet. Josh Sofsky stated that the new soil survey requires the geotechnical consultant to determine the representative values for an entire project. He suggested this could be done on older projects as well, or separate the project into areas if the values are different enough. It was discussed and determined that the designer should use their judgment to determine what soil inputs are the best representation of the proposed ditch.
- The group then discussed the required grass parameters, which are as follows:
 - Grass type (Sod, Mixed or Bunch)
 - Stem Height (0.25', 0.50', 0.75' or 1.00')
 - Density (Excellent > 95%, Good 75% to 95% or Poor < 75%)Mario explained these parameters have a large influence on whether or not Turf Reinforcement Matting (TRM) is required but it's difficult to know with any certainty what these parameters will be for proposed ditches, because the parameters vary greatly depending on many site specific variables.
- One recommendation for the grassing was for the designer to visit the site and examine the existing ditch to assess the condition of the pre-construction grass. The group discussed how that would be infeasible for larger scale or new location projects.

- Another recommendation was to coordinate with the local GDOT District to get their opinion on what these parameters may be for the proposed ditch after construction. Ultimately it was decided that it will be the designer's responsibility to make these assumptions.
- The use of the ditch lining website was then discussed, and the following is a summary of these discussions:
 - A recommendation was made to update the Plasticity Index (PI) input to default to 0. For non-plastic soils, a user inputting only the D75 will get no value and may not know that 0 must be input before the calculations will work.
 - The calculated permissible soil shear stress value only appears after entering both PI and D75. If either or both fields are deleted, the calculated number does not disappear. The permissible soil shear stress field is misleading because it does not always change when the input values are changed.
 - For example, for a SM soil with a D75 of .08" – when 0 is input for the PI, the shear stress is not calculated. If the PI is changed to 20 then the shear stress is calculated to be 0.085 lb/sf. After changing the PI back to 0 however, this same calculated stress remains. The question was raised as to whether the program is calculating this value properly.
 - The grass types do not correspond to the GDOT grassing specifications. A recommendation was made to update the grassing types to correspond to commonly used grass types for GDOT projects (ie. bermuda, bahia, lespedeza, etc.)
 - A recommendation was made to provide photos to assist the designer in making assumptions about what grassing density and stem height will be for a proposed ditch.
 - A recommendation was made to add the capability to edit values after saving a ditch section. Currently, if any value needs to be modified all of the inputs must be re-entered and there will be multiple records.
 - A recommendation was made to give the user the ability to save the records in a directory on the user's computer rather than on a GDOT server.
 - A recommendation was made to give the user the ability to have the website be saved or downloaded and ran locally on the designer's computer.
 - A recommendation was made to give additional import/export capability that would improve the functionality of the website, such as the ability to upload a CSV file.
 - A recommendation was made to correct when CSV files are downloaded. Some of the column descriptions are out of order and must be moved to match the correct values.
 - A recommendation was made to consider adding a help button next to inputs to provide the user with additional guidance.
 - A question was asked about how TRM affects the Manning's roughness coefficient? John Griffith will investigate and let the group know.
 - A question was asked about the cost difference for each type of TRM? John responded that no data has been collected on the costs.
- Based on the outstanding questions regarding the ditch lining website, Mario asked if GDOT would be open to issuing waivers for projects currently being let until these kinks are worked out. Brad stated that he did not believe a waiver is possible, but can be discussed with the GDOT PM on a per project basis.
- Brad recommended that the consultant/designer performing the ditch lining evaluation make their best educated guess on the parameters entered into the program and document all assumptions. The assumptions should be submitted with the program results.
- The meeting adjourned around 10:00 am.