

2D SVSlope Output Visualization

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Introduction

Hi, my name is Murray Fredlund. Welcome to the session 2D SVSlope Output Visualization within the *SVOffice 2009 Next Generation* geotechnical software suite.

We're going to open this particular model called **Project>Slopes_Group_1>VS_13**. This particular model is a classic grid and radius type of search mechanism with three layers in the model. The green dots represent pore water pressures in the model. We are not going to analyze this because it has previously been analyzed. If your model has not yet been analyzed, you can press the **Play** button to analyze it or **Solve>Analyze**.

Customizing the Display

We're going to move straight to the AcuMesh visualization back-end of the software. Once the model is brought up, we can adjust some of the legends displayed on the screen. In this case we're going to display the Spencer method (**Method>Spencer**). We can move the legends around to get a better representation of the screen. You can see the plotted factor of safety contours in the Grid of Centres and you can see the trial slip surfaces which are plotted and the colors correspond to the factor of safety level that these slip surfaces represent. So right away you can get a pretty good idea for where the lower factors of safety are in any particular analysis.

Filtering Slip Surfaces

The first thing you can do with this analysis is change which slip surfaces you see (**Slip>Slip Surfaces**). By default there are a lot of slip surfaces displayed and you may want to reduce that somewhat to clean up the display. You can constrain which trial slip surfaces are displayed on the screen by selecting items under **Filter Slip Surfaces**. For example, all slip surfaces can be displayed which have a factor of safety below 1.5 or between 1 and 2. Or we can pick 20 slip surfaces with the lowest factor of safety and display those. There are a lot of good methodologies for customizing the display of the results.

Further Customization

By selecting **Slips>Slices** you can see the slices through the model at any place. Then, by selecting **Slips>Slice Information**, you can see the resulting force polygons being drawn and the details surrounding the forces of that slice. There are a lot of different ways of customizing the display and getting high quality results. You can also plot graphs along slip surfaces by selecting **Slips>Slice Graph** to plot one particular value along a slip surface by clicking on that value and the plot of that value is shown. As another small trick, you can hold down the SHIFT key to select multiple plots and they are all displayed on the same graph. There is certain amount of flexibility in how to visualize the results. Selecting **Slips>View Information** will output a text file to show detailed information showing all of the calculations. The software is very transparent in how it does the calculations. You can dress up your output further and display it specifically and then export it as a PDF (**File>Export As...**) which allows for a very high quality image output which can be included in a consulting report and is very useful for extremely high quality output.



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