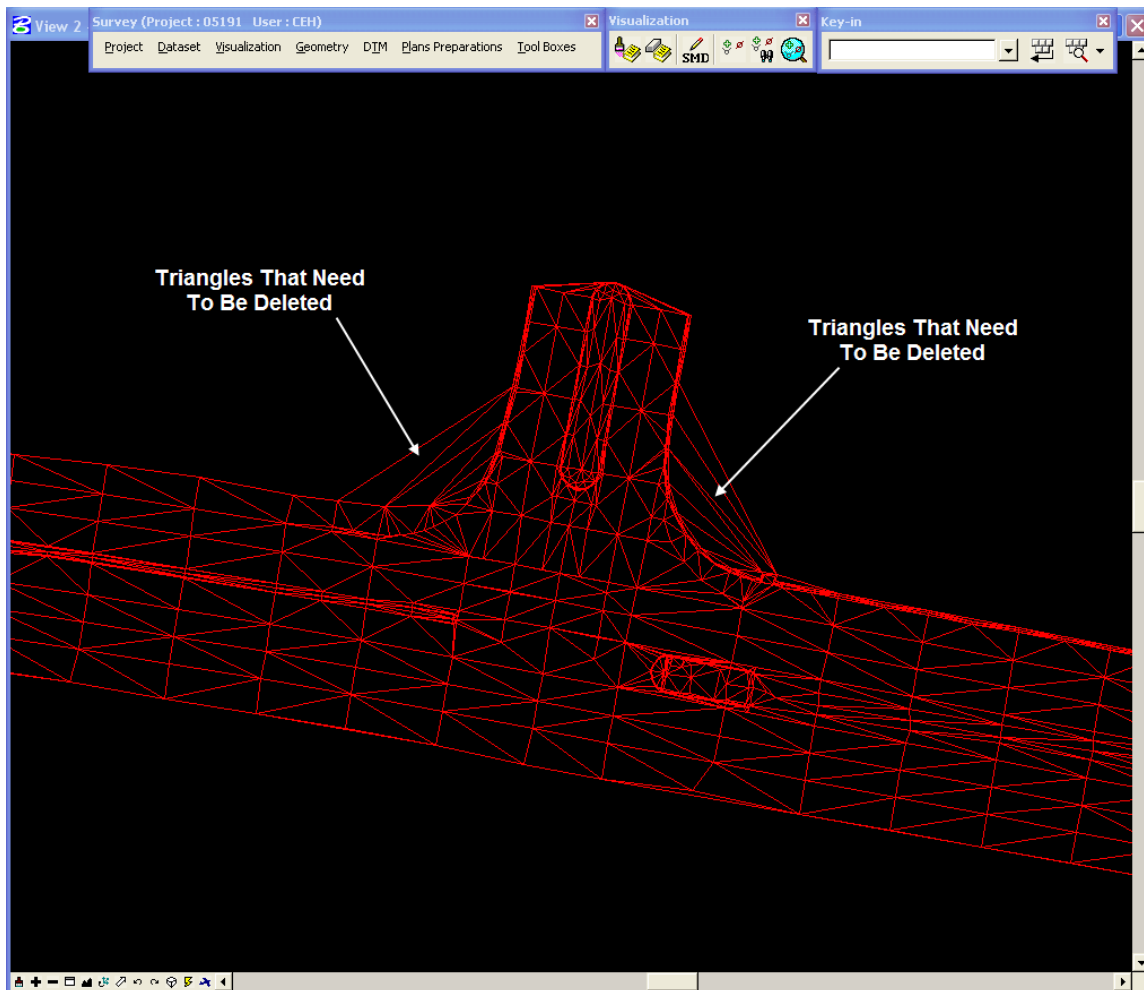




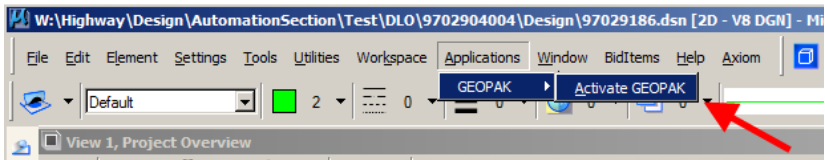
Editing the DTM

Most of the time when creating a **TIN** file, the maximum side length that is set for the triangles provides a compromise between drawing all of the triangles necessary to adequately show the area, while eliminating as many unwanted and unnecessary triangles as possible. The picture below shows a **Field_DTM** model displaying the **TIN** triangles. The triangle side length was set so that all necessary triangles were drawn. But, around the intersection, some unnecessary triangles were also drawn. These triangles should be eliminated due to the fact that they are showing existing ground details in the **TIN** where existing ground was not surveyed.

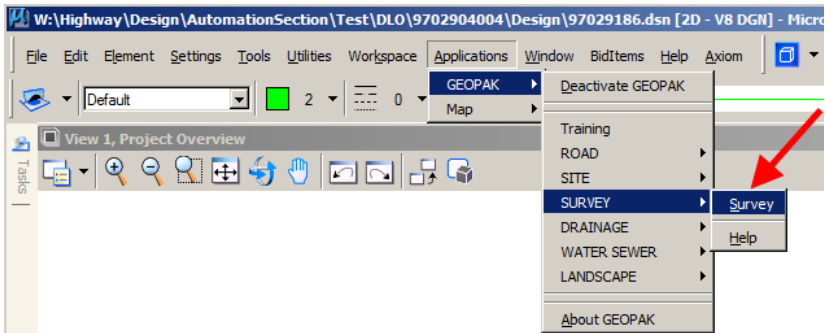


Geopak Survey Menu

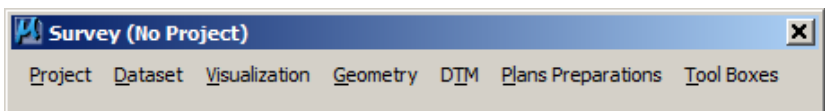
Start GEOPAK from the MicroStation menu by selecting **Applications > GEOPAK > Activate GEOPAK**, as shown at the right.



After GEOPAK has been activated, access the GEOPAK **Survey** menu from the MicroStation menu by selecting **Applications > GEOPAK > SURVEY > Survey**, as shown at the right.



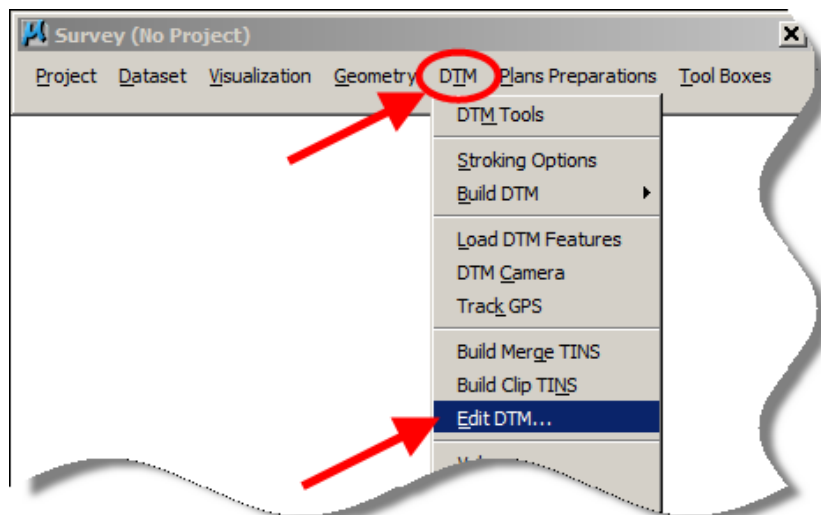
The **Survey** tool bar should display, as shown at the right.



To remove the unwanted triangles -

1. On the **Survey** menu bar select **DTM > Edit DTM....**

This will open both the **Display Settings** dialog box and the **TIN Edit Tools** dialog box.



2. You must take care of the **Display Settings** dialog box before you can move on to editing the **TIN**.

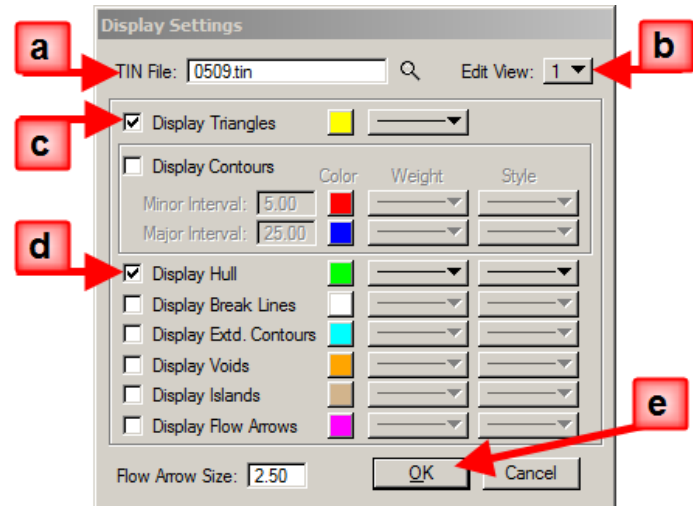
a) Make sure that the name of the **TIN File** to be edited is correct.

b) Change the **Edit View** value to **1**.

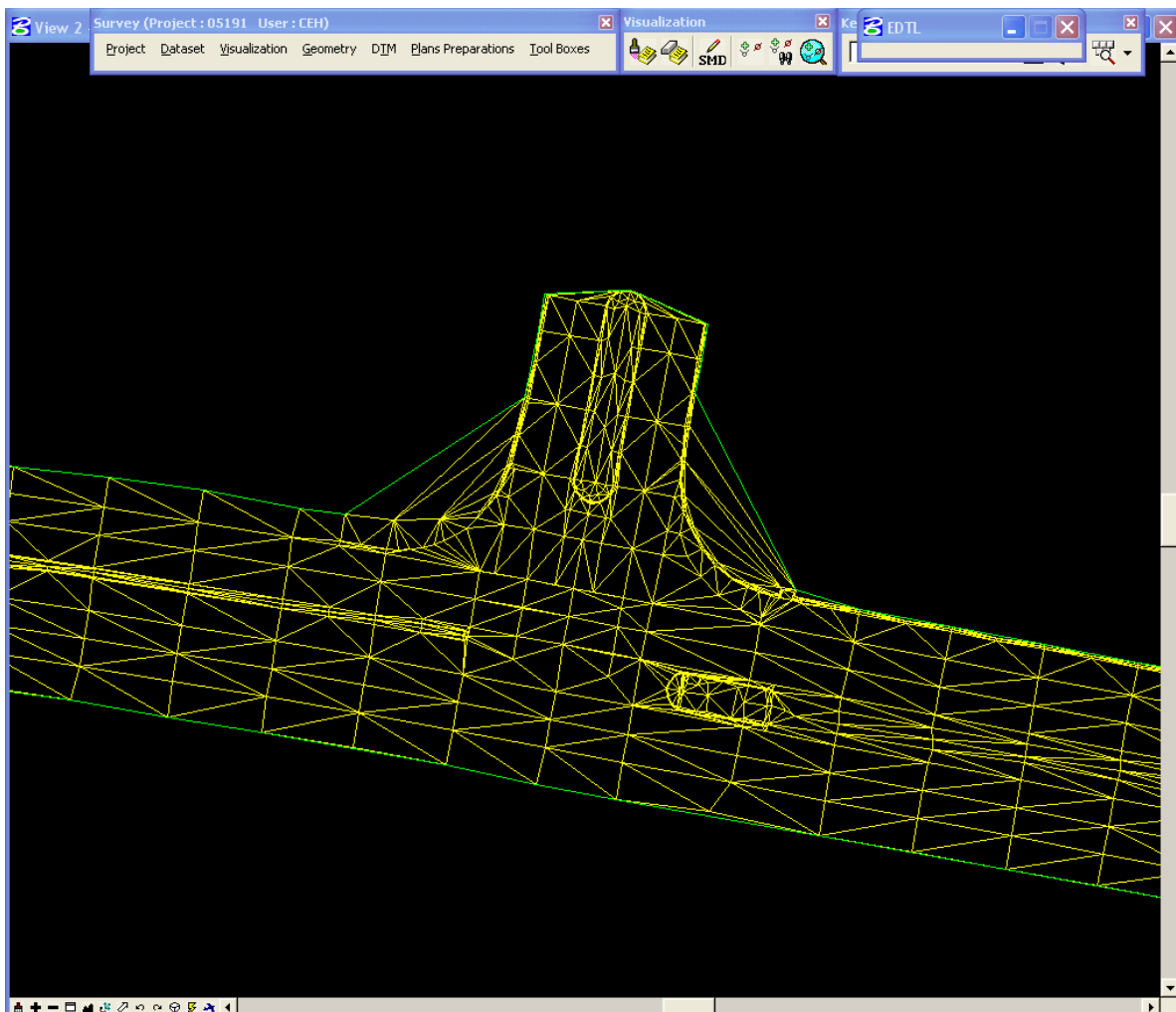
c) There should be a **check mark** () next to **Display Triangles**, as this will make the triangles visible for editing.

d) Another **check mark** () should be next to **Display Hull**. The **TIN “Hull”** is the outermost boundary of the **TIN**. You can change the attributes, such as color and weight, of any of these objects to suit your preferences.

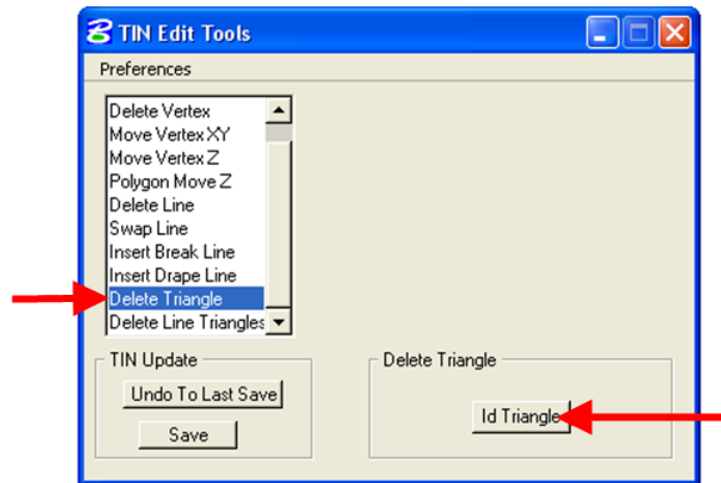
e) *Click* the **OK** button.



3. The “yellow triangles” and the “green hull” that were set in the **Display Settings** dialog box now appear in the file. These items are only temporarily visualized and are not actually drawn into the file. You can turn some MicroStation levels off to make the triangles easier to see and to edit.

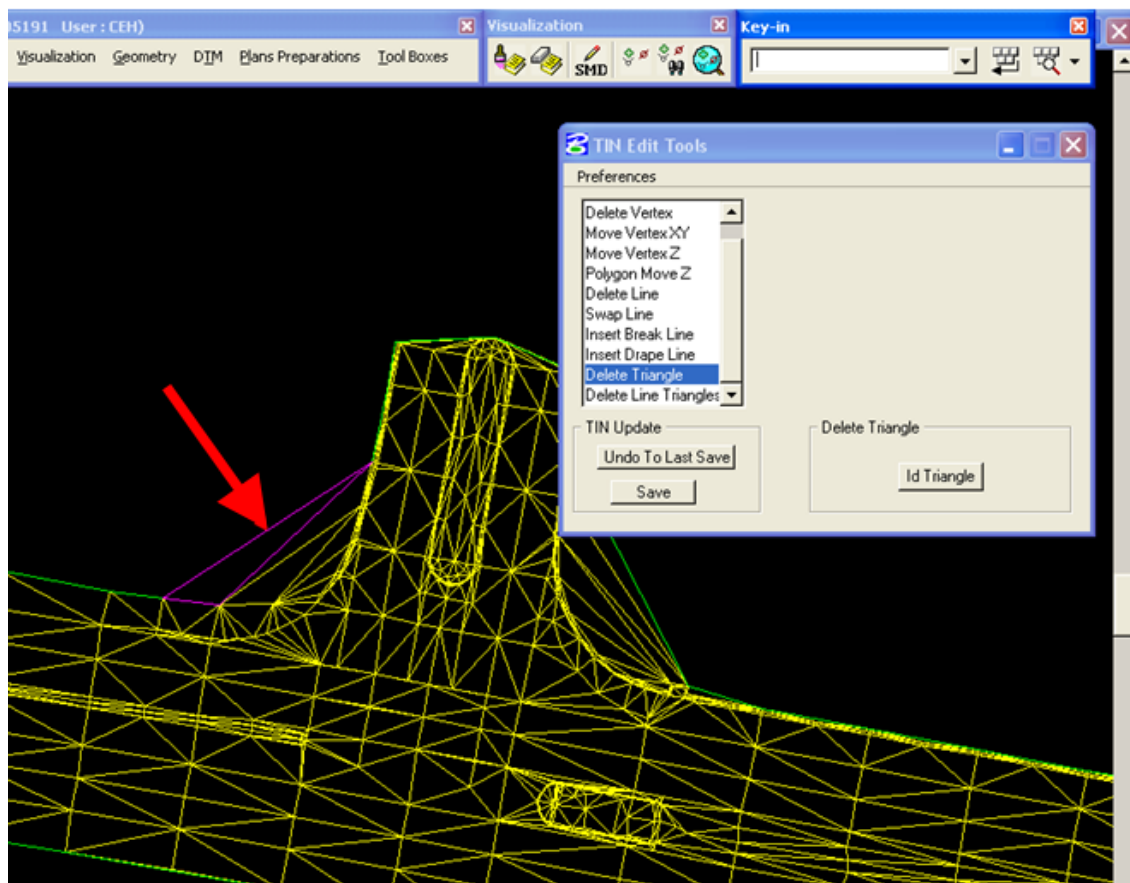


4. To delete the unwanted triangles, *select* the **Delete Triangle** option in the **TIN Edit Tools** dialog, then *click* the **ID Triangle** button, as shown at the right.

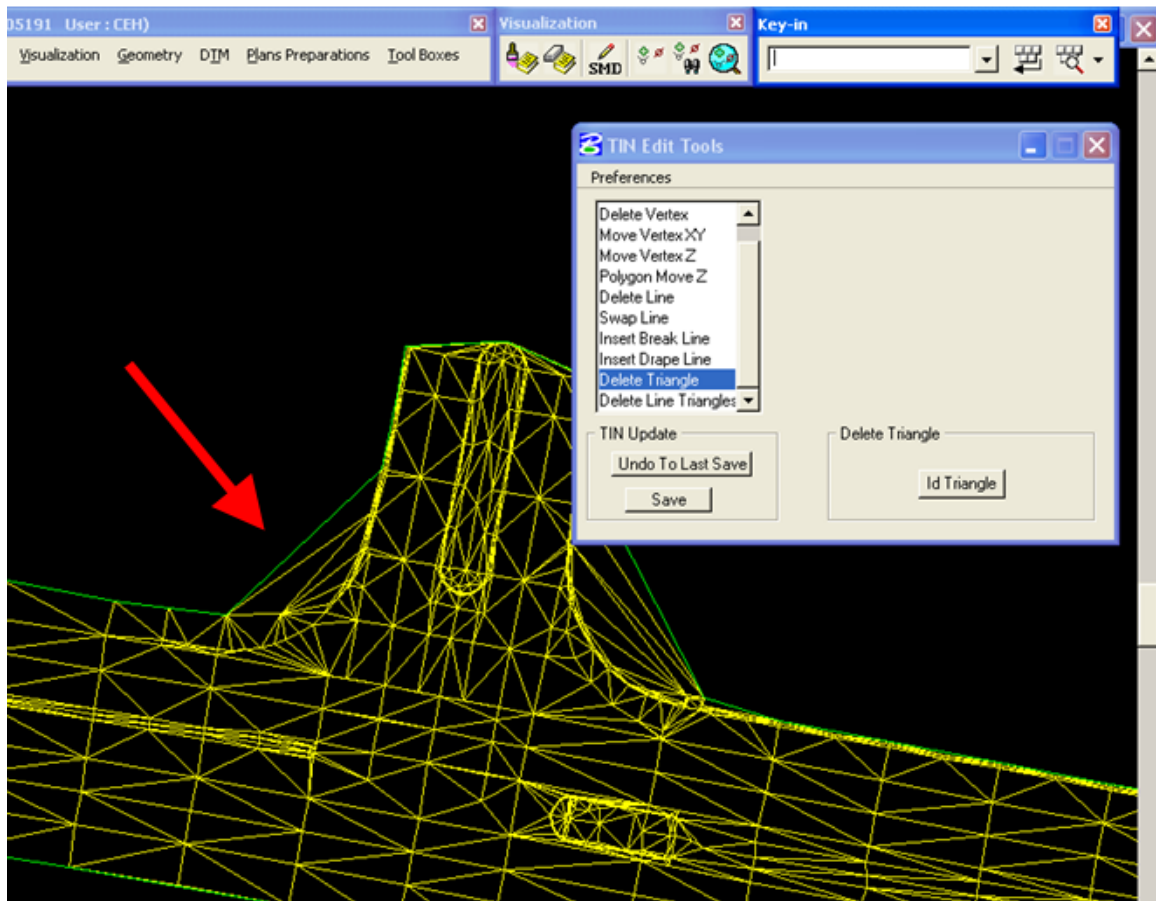


5. *Left-click (select)* one edge of an unwanted triangle that is to be deleted and the selected triangle will become *highlighted*, as shown below. After the correct triangle has been *selected*, accept it by *left-clicking* anywhere else in an empty area of the MicroStation window, (not on top of another MicroStation element), and the selected triangle will be removed. An easy way to *select* elements from the unwanted triangles is to start *selecting* at the outside edge of the outermost triangle, as shown by the arrow below. It is more difficult to *select* the correct element from the internal lines in the triangulated drawing because each visual element consists of two sides from adjacent triangles. If you *left-click (select)* the wrong triangle, then *un-select* it by *right-clicking* the mouse, (which is the reset button). This will cause the highlighted element to become un-highlighted.

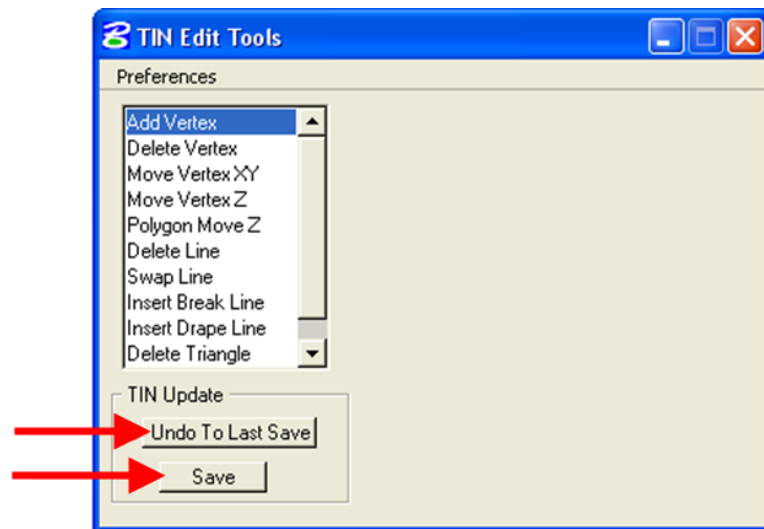
The **ID Triangle** button must be *clicked* again to delete another triangle.



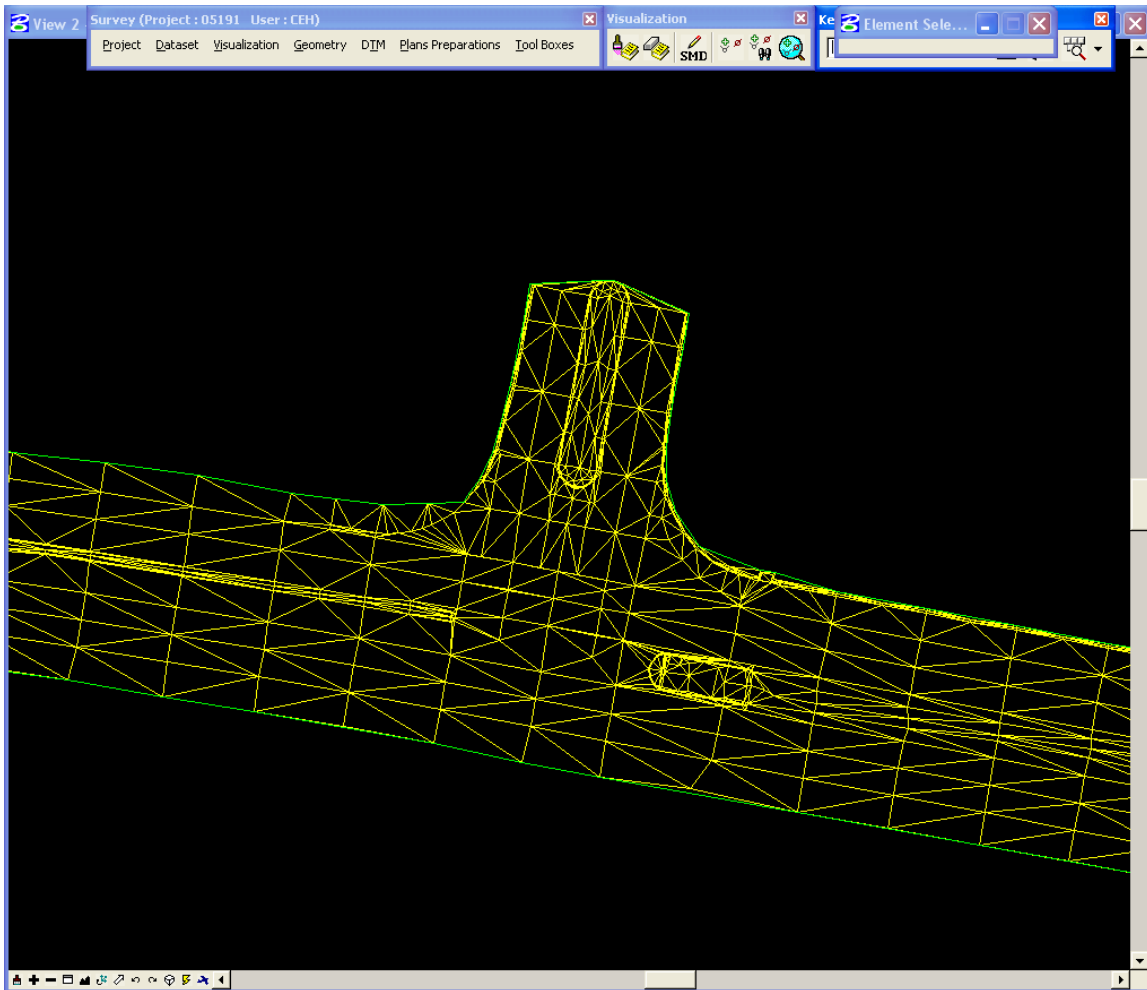
6. After you have *accepted* the highlighted triangle by *clicking* for the second time, the triangle will disappear, as shown by the arrow below. If you are trying to delete the outermost triangle you can use the green **TIN Hull** as a guide to determine if you deleted all of the triangles. If the **hull** shifts to a new position, all triangles are gone. If the **hull** does not move, there may be a small triangle on the outside edge that is covered up by the **TIN Hull** and you will have to locate and delete it also.



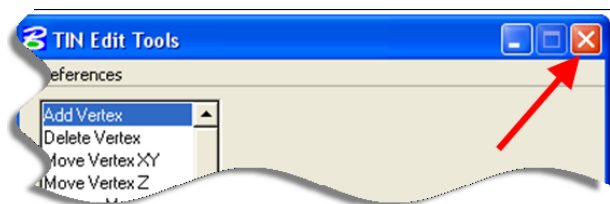
7. The yellow triangles are not actually drawn into the MicroStation file and the changes being made are being done to the **TIN** file. The changes must be saved to the **TIN** file by *clicking* the **Save** button on the **TIN Edit Tools** dialog. If you delete the wrong triangle, you can use the **Undo To Last Save** button to bring it back. But, it will also bring back all other triangles that have been deleted after you saved the last time. Make sure to *click* the **Save** button often when you are satisfied that that your **TIN** edit is progressing correctly.



8. The intersection with all unnecessary triangles removed is shown below.



9. After you are done editing the **TIN**, click on the “**X**” in the upper right corner of the **TIN Edit Tools** dialog to close it.



10. As soon as you update the MicroStation window, the yellow triangles and green hull will disappear. You must delete the old **TIN** triangles if they are drawn into the **DTM** model on MicroStation level **phoSurveyTin**. You can then redraw the triangles into the model using the **Load DTM Features** dialog box.

Chronology of Changes to Design Manual Section:

040D-010 Editing the DTM

9/30/2011	NEW
	New