

SOUTH DAKOTA NRCS CIVIL 3D 2010 DRAFTING NOTE

DAM – EXPORTING AN ALIGNMENT

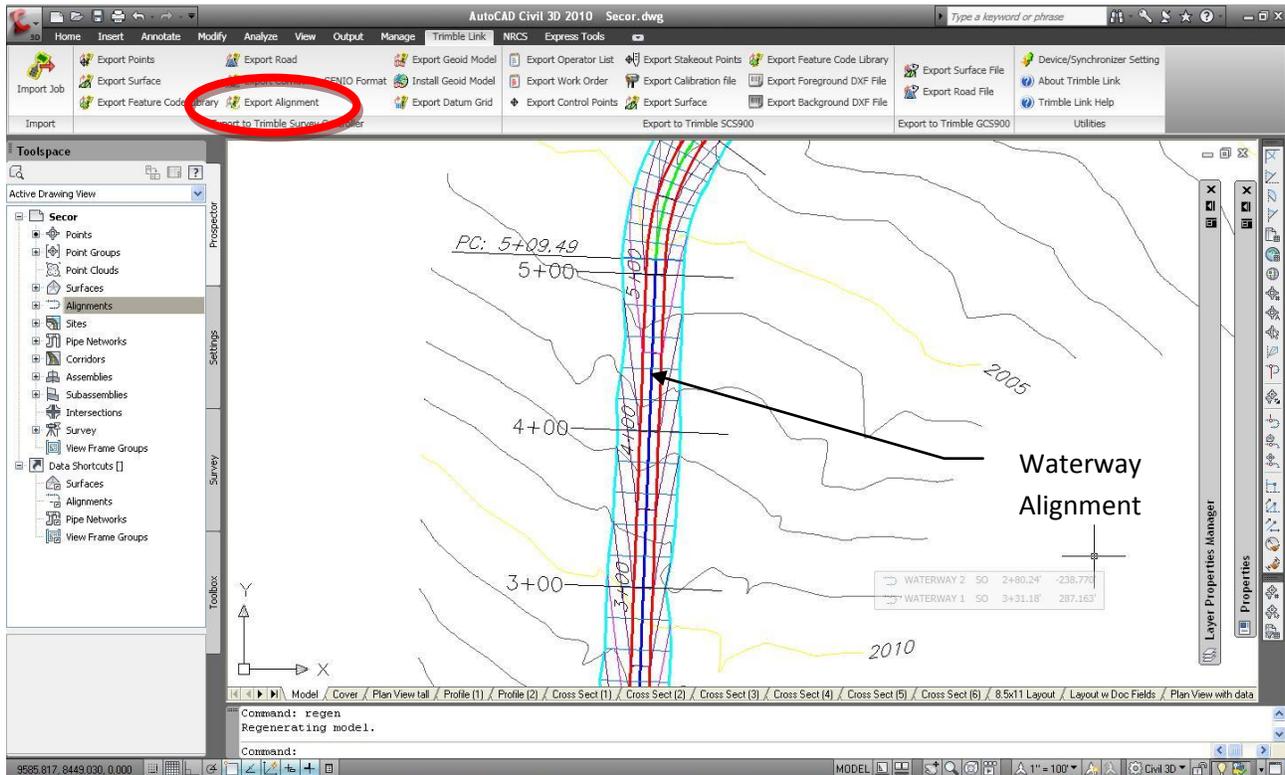
EXPORTING AN ALIGNMENT TO THE GPS FOR CONSTRUCTION STAKEOUT

In this example, an alignment is exported from AutoCAD Civil 3D to a Trimble TSC2 survey controller with Trimble Access software with the Roads module installed. The alignment has horizontal and vertical coordinates associated with it. In this example, a waterway alignment is used; however, an alignment from a dam or other practice can be exported. For more information on surveying using a Trimble TSC2, see [MN NRCS AutoCAD Civil 3D Quick Reference Guide Section 100](#), Survey.

Export an Alignment

Connect the Trimble TSC2 survey controller to the computer using its USB cable and open up the project file on the TSC2. Click on the Trimble Link ribbon to open up the Export to Trimble Survey Controller tab. Click on Export Alignment as shown in Figure 1.

Figure 1: The Trimble Link ribbon.



Now select the alignment and the associated profile in Figure 2. Note that the corridor surface shown in this example has a profile surface associated with the alignment. A graded object, such as a dam embankment created in SD NRCS Drafting Note, *Dam – Grading*, will not have a profile associated with it, so the elevations will not be exported into the survey controller. It will just have the horizontal alignment.

Figure 2: The Export Alignment Dialog Box.

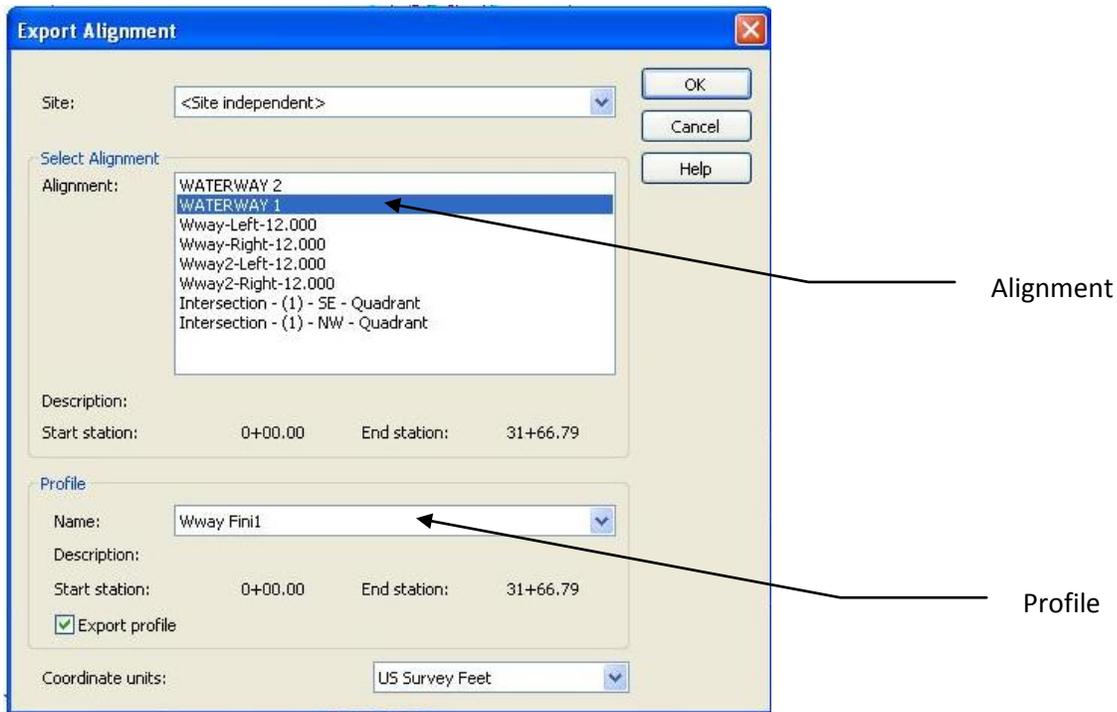


Figure 3: Click OK for this warning.



Figure 4: Select the device to save the alignment. Use TCS2 with Access.

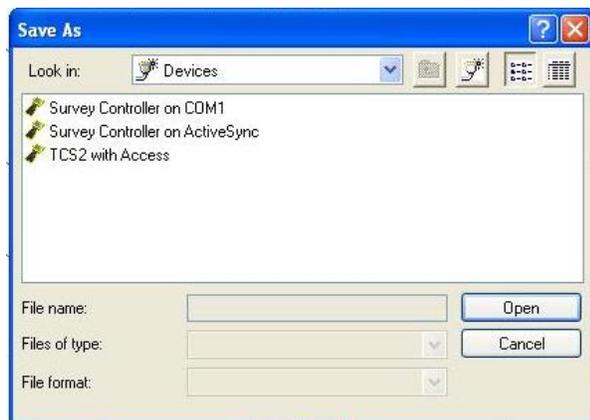
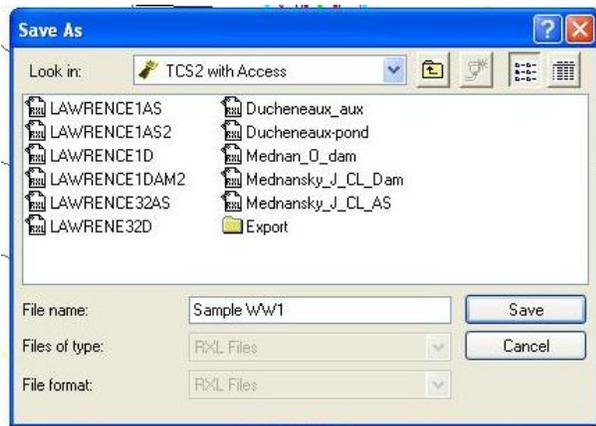


Figure 5: Save the Sample WW 1 alignment file on the Trimble TSC2 data collector.

To view the alignment file on the Trimble TCS2 survey controller, open up the Roads module on the Trimble Access menu. In the Roads module, click on Define. Select the file, Sample WW1. This will display the Horizontal Alignment, Vertical Alignment, Templates, Template Position, Superelevation & Widening, and Station Equations. The horizontal alignment and vertical alignment should have the coordinates and elevations from the Civil 3D design. The user will need to enter cross-sectional information, bottom width and sideslopes in the Templates and Template Position along the alignment. Superelevation & Widening and Station Equations are not needed for this example. The road (waterway) is set for construction stakeout.