

Calculating Cross – Section End Areas

The following instructions will guide you through the process of calculating the end area between two user selected polylines that represent existing grade and final grade sections. These instructions assume that both the existing and final grade sections have been plotted together on the same cross section grid. SurvCADD modules are displayed as {**Section – Profile**}, main menus are displayed as [**Sections**], and submenus and menu commands are displayed as <**Calculate End Area**>.

- 1) Go to: {**Section - Profile**} \implies [**Sections**] \implies <**Calculate End Area**>
- 2) The “**Calculate End Area**” dialog box opens on the screen.
- 3) Here the user will input the parameters that will be used to calculate the end area.
 - a. Horizontal Scale: Horizontal Scale of the Section
 - b. Vertical Scale: Vertical Scale of the Section
 - c. Text Scale: Sets the scale of the text for the end area labeling
 - d. Station Interval: Only available if **Write Results to EW File** is toggled on. Allows the user to specify the station interval that the station prompting will default to as the user selects the polyline/sections for computation.
 - e. Define end areas by:
 - i. Select Polylines: Allows the user to select the two lines that the end area will be calculated between
 - ii. Pick Interior Points: Allows the user to select a point within the two polylines that are being used to calculate the end area between
 - f. Extend Shorter Ends to Longer: Specifies how end areas are calculated. If **unchecked** the area will be calculated straight up and down from the ends of sections that do not intersect. If **checked** the area will be calculated between the lines as if they did intersect.
 - g. Write results to EW File: Determines whether cut and fill end areas are written to an EW file or is just used for end area labeling. If this option is **checked** the following options are available:
 - i. New: Specifies a new EW file to be written. Creates an earthwork file (.ew)
 - ii. Append/Revise: Allows the user to revise an existing file if a new station section is computed or revised if the station already exists in the file.

If the **Write Results to EW File** is selected (if not, skip to the bottom of this page):

- 4) If the new option is selected, the “**Specify Earthwork File**” dialog box appears.
- 5) Name the new file and click the “**Save**” button.
- 6) In the command line, the user is prompted to select the existing grade polyline.
- 7) Now the user is prompted to select the final grade polyline.
- 8) Pick the location on the screen for the end area label to be placed.
- 9) In the command line, enter the station to calculate the end area for.
- 10) Repeat steps 6 through 9 until all stations have been completed. Then hit “**Enter**” to exit the command.
- 11) To view the earthwork file: {**Section - Profile**} \implies [**Sections**] \implies <**Print Earthwork Report**>

If the **Write Results to EW File** is not selected:

- 12) If you only want to label the end area of the section leave the **Write Results to EW File** option unchecked and click “**OK**”.
- 13) In the command line, it prompts the user to select existing grade polyline.
- 14) Next, the user is prompted to select the final grade polyline.
- 15) Now, pick a point on the screen for the placement of the end area label.
- 16) Continue for all sections. When done hit “**Enter**”.