# Drawing an Empty Grid, Adding Ticks and Dots Polyline Reporting

The following instructions will guide you through the process of creating an empty grid for profiles and cross sections, adding ticks and dots to grids and creating a profile report. SurvCADD modules are displayed as **{Section-Profile}**, main menus are displayed as **[Profiles]**, and submenus and menu commands are displayed as **<Profile from Grid>**.

## Drawing An Empty Grid

1) Draw the grid: **{Profiles-Sections}** → **[Profile]** → **<Profile Grid>** → **<Draw Profile Grid>**
2) The "*Draw Grid*" window opens. Set the following options:
   a. *Direction*: **Left to right**
   b. *Station Text Orientation*: Orients the text on the x axis either **vertically** or **horizontally**.
   c. *Axis Text Only*: **Unchecked**. Will only draw axis text.
   d. *Ticks and Axis Text*: **Unchecked**. Draws only axis text and ticks.
   e. *Offset Horiz. Axis Annotation*: **Checked**. Lowers text below the X axis.
   f. *Text Size Scaler*: Set to **0.125**
   g. *Grid Text Layer*: **XS–Text**
   h. *Index Grid Line Layer*: **XS–Grid**
   i. *Intermediate Grid Layer*: **XS–Grid**
   j. *Horizontal Scale*. Determine horizontal scale based on available paper space (divide length by available paper length, round up). **Enter calculated or desired value**.
   k. *Horiz Text Interval*: This specifies the frequency of the text along the horizontal axis. **Set the same as the Horizontal Grid Interval** or a multiple of it.
   l. *Horiz Grid Interval*: Specify an even grid line spacing on the horizontal axis, typically the **same as Horizontal Scale** or multiple of it.
   m. *Vertical Scale*: Vertical scales are calculated by dividing the horizontal scale by the exaggeration factor (10, 5, 2, 1). **Enter a vertical scale**.

n. *Vert Text Interval*: This specifies the frequency of the text along the vertical axis. **Set the same as the Vertical Grid Interval** or a multiple of it.

o. *Vert. Grid Interval*: Specify an even grid line spacing on the vertical axis, typically the **same as the Vertical Scale** or a multiple of it.

p. *Starting Station*: Station that gird will start with.

q. *Ending Station*: Station that the grid ends with.

r. *Starting Elevation*: The lowest elevation that will be on the grid

s. *Ending Elevation*: Highest elevation on the grid

3) Click "**OK**" when done setting options

4) **Click a spot** in your drawing were the empty grid will be drawn. The spot clicked will be the lower left corner of the grid.

## Adding Ticks and Dots

A profile or grid needs to be drawn first since ticks and dots are added to an existing profile.

1) Start the function: **{Profiles-Sections} → [Profile] → <Profile Grid> → <Add Grid Ticks & Dots>**

2) The "Add Grid Ticks and Dots" window opens. Set the following options:

   a. Draw Ticks: **Checked** to draw tick marks on the grid

   b. Tick Resolution:

      i. **.1 for more marks** (10 per division)

      ii. **.2 for less marks** (5 per division)

   c. Draw Dots: Checked to draw dots on the grid.

   d. Dot Resolution:

      i. **.1 for more marks** (10 per division)

      ii. **.2 for less marks** (5 per division)

   e. Horizontal Scale: **Match the horizontal scale to the profile** horizontal scale

   f. Horiz Grid Interval: **Match the horizontal grid to the profile** horizontal grid

   g. Vertical Scale: **Match the vertical scale to the profile** vertical scale.

   h. Vert Grid Interval: **Match the vertical grid to the profile** vertical grid

3) Click "OK" when done setting options

4) Click the lower left corner of the grid you want to add ticks/dots to. Use osnaps to align to the grid.

5) Click the upper right corner of the grid you want to add ticks/dots to. Use osnaps to align to the grid.

6) Ticks and/or Dots should be added to the grid

## Profile Report

Generates a report of the slope at specified intervals along a profile.

1) Start the function: **{Profiles-Sections} → [Profile] → <Profile Report>**
2) The "Specify a Profile (.pro)" window opens. Select the existing profile you wish to report on.
3) The Profile Report options window opens. Set the following options:
    a. *Decimals*: Set to what you need (**0.00 is typical**)
    b. *Specify User-Entered Stations to Report*: Allows the user to specify stations along the profile in which to report the slope.
    c. *Report Stations At Centerline Points*: Reports slope at points along the centerline of the profile using a centerline file.
    d. *Report Cut/Fill From Second Profile*: Can compare two profiles and find the cut and fill between the two.
    e. *Report Profile Data Points*: Points on the profile are reported. (**Useful function**).
    f. *Report Station/Elevation At Intervals*: Switches on boxes to type in the Station Interval and Station to Begin Intervals. (**Most useful function**)
    g. *Report Elevation To Vertical Offset*: Will add a second elevation column to output with elevations offset by the value entered.
4) Click "**OK**" when done.
5) The report is shown on the screen and can be saved and printed out.
6) Click "**Exit**" when finished.