TABLE 1.1:   Common Toolspace symbols and meanings

SYMBOL	MEANING
	The object or style is in use. Also appears when there is a dependency to the object or if the style has child styles. For example, you will see this icon on a surface when a profile has been created from it.
	Clicking this will expand the object collection of Toolspace.
	Clicking this will collapse the object collection of Toolspace.
	Data resides in this branch, and more information can be found at the bottom of Toolspace.
	Object needs to be rebuilt or updated. Can also indicate a broken data reference.
	Civil 3D may still be processing the object, or the collection of Prospector needs to be refreshed.
	This symbol represents a data reference in a drawing, and it's shown next to the data shortcuts section of the Prospector tab.

HIT THE ROAD RUNNING: QUICK START PROJECT

Most new users are eager to get started on their first project before even getting past the basics. The following exercise will guide you through a quick workflow that will prove how easy and at the same time how complex the development of a project can be. Just think about it; even with the default settings and tools you can achieve great things, but how much more can you achieve when you use Civil 3D at its best? Well, this book will provide you the workflows that will take the complexity out of Civil 3D and make your work with the software easier.

The following exercise will give you a chance to work through a basic project. Unless otherwise specified, don't change the dialog box default options. After each relevant step, look for the pointers on where to go for in-depth explanation of the tools used.

1. Open the drawing `0101_QuickStart.dwg` (`0101_QuickStart_METRIC.dwg`). You can download this and all other files related to this book from this book's web page, `www.sybex.com/go/masteringcivil3d2015`.

   See the section "Civil 3D Templates" in this chapter, where you can read more on the importance of styles and settings and find a guide on starting your own Civil 3D drawing template.
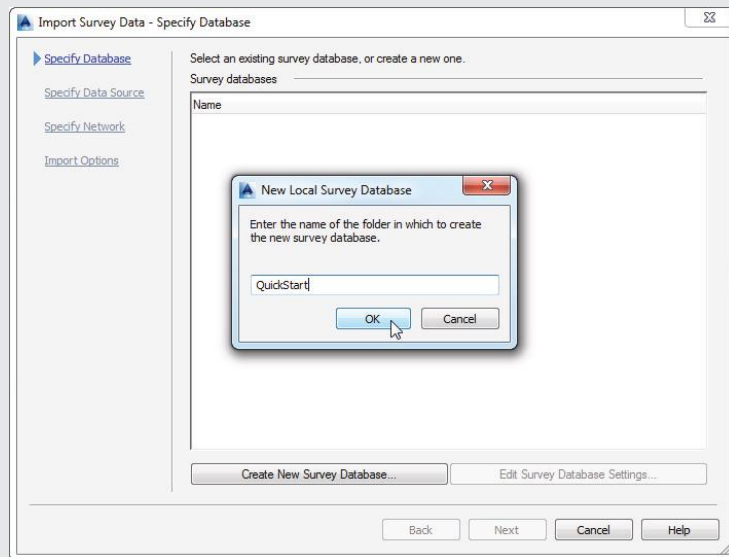
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2. From the Home tab of the ribbon, click the Import Survey Data button located within the Create Ground Data panel.

See Chapter 2 to learn more about importing survey data and the workflows associated with it.

3. Click Create New Survey Database.

**4.** In the New Local Survey Database dialog, name the new database **QuickStart** and click OK.

5. Click Next.

Where is this survey data stored? Find out in Chapter 2 in the section "Understanding the Survey Database."

6. In the Import Survey Data – Specify Data Source dialog, follow these steps:

a. Set Data Source Type to Point File.

b. Click the plus sign to the right of the Selected Files box.

c. Set your Files Of Type option to Text/Template/Extract File (*.txt), browse for 0101_QuickStart.txt (0101_QuickStart_METRIC.txt), and click OK.

   d. Set Specify Point File Format to PNEZD (Comma Delimited).

   e. Click Next.
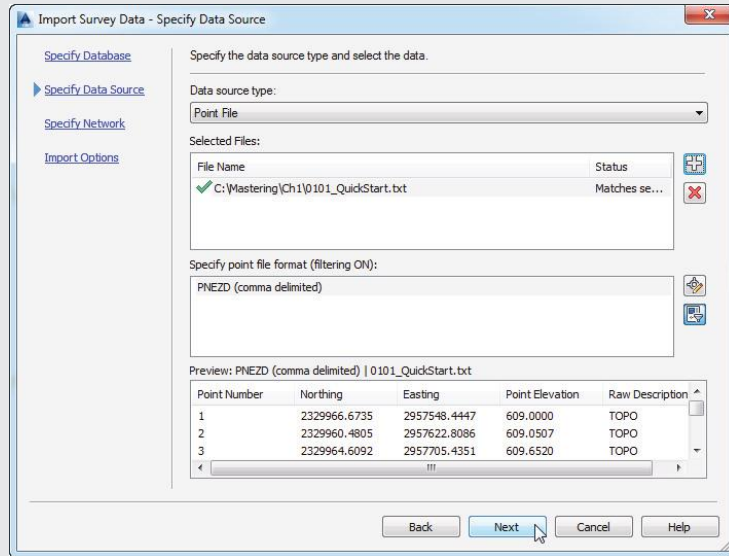
7. In the Import Survey Data – Specify Network dialog, click Create New Network.

8. Name the new network **QuickStart Network** and click OK.

9. Highlight QuickStart Network and click Next.
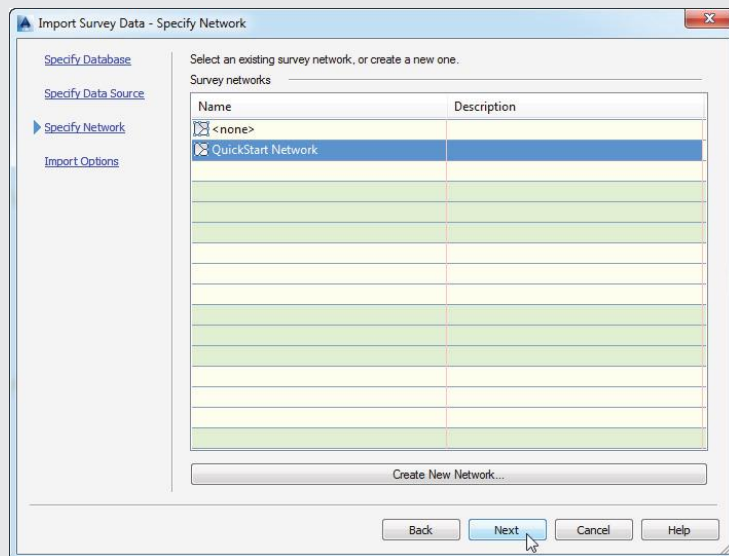
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10. In the Import Survey Data – Import Options dialog, follow these steps:

   a. Place a check mark across from Process Linework During Import.

   b. Place a check mark across from Insert Figure Objects.

   c. Place a check mark across from Insert Survey Points.

   d. Leave all other options at the default settings and click Finish.
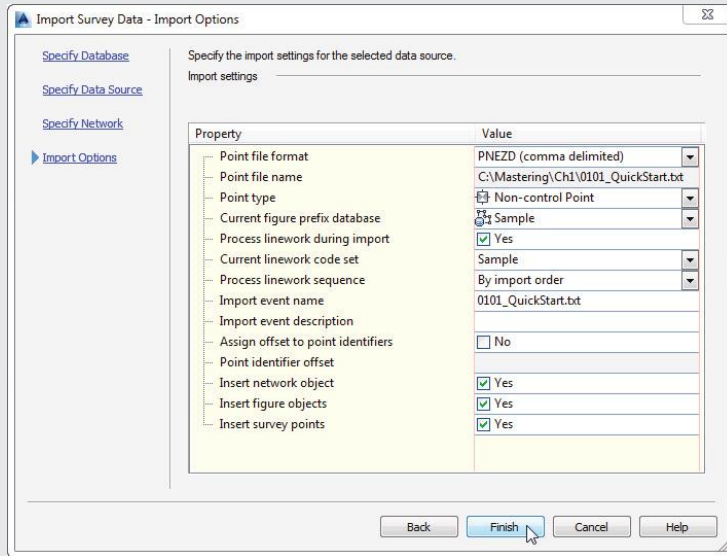
See the sections "The Figure Prefix Database" and "The Linework Code Set Database" in Chapter 2 for more information on creating figures and importing survey data.

The first thing you will notice is that when the import process is complete, Civil 3D zooms to the area of the processed data. Also, did you notice that shots with the description TOPO look different from other survey points in the drawing? Find out why in Chapter 2 in the section "Configuring Description Keys for Point Import."

11. Expand the Point Groups collection and notice that the TOPO point group that you will want to incorporate in the surface shows an exclamation mark. Remember that this is feedback from a point group that needs to be updated. So in order to have all the point groups updated, right-click the Point Groups collection and select the Update option, as shown on the left of the figure. After updating, the list of point groups will appear, as shown on the right side of the figure.
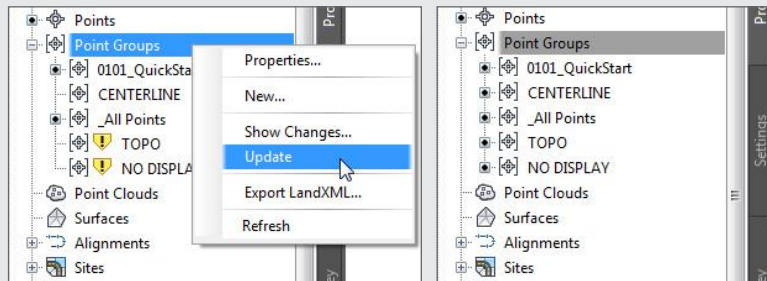
A list of Toolspace symbols and their meanings can be found in Table1.1.

12. From the Home tab of the ribbon, find the Create Ground Data panel and choose Surfaces ➤ FCreate Surface.

13. In the Create Surface dialog, change the name to **Existing** and click OK.

14. In the Prospector tab of Toolspace, expand Surfaces ➤ Existing ➤ Definition.

Chapter 4, "Surfaces," contains the section "Creating Surfaces," which describes the different types of data that can be used to define elevation in a surface model.

15. Right-click Point Groups and select Add.
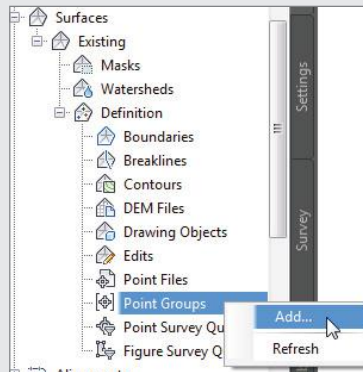
For an in-depth look at the importance of point groups, be sure to read the section "Point Groups: Don't Skip This Section!" in Chapter 3, "Points."
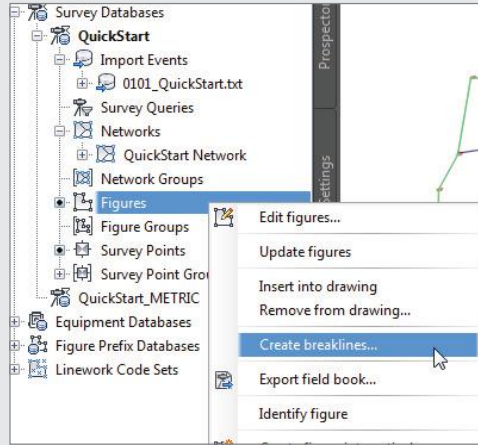
16. Select TOPO and click OK.

At this point you should see contours and the surface border. See Chapter 4 for more information on creating, editing, and displaying surfaces.
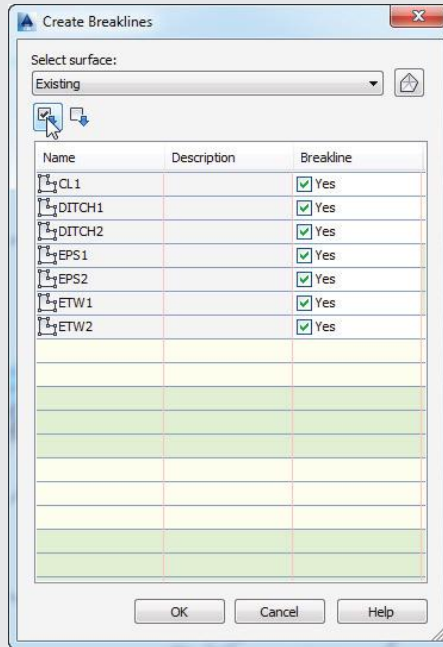
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17. On the Survey tab of Toolspace, right-click Figures and select Create Breaklines.

18. In the Create Breaklines dialog, note that you are adding breaklines to the surface you created earlier. Click the Check All option and click OK.
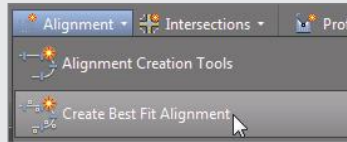

19. In the Add Breaklines dialog, click OK. You might get a Panorama error. You can dismiss it by clicking the check mark on the top-right of the Panorama window.

See the section in Chapter 4 called "Adding Breaklines" for a detailed explanation.

20. Save the drawing.

21. From the Home tab of the ribbon, in the Create Design panel, click Alignment ➢ Create Best Fit Alignment.

The many methods for creating and editing alignments are found in Chapter 6.

22. In the Create Best Fit Alignment dialog, do the following:

   a. Change the Input Type to COGO Points.

   b. Change Path 1 Point Group to CENTERLINE.

   c. Change the Alignment Name to **QuickStart CL**.

   d. Clear the check box for Show Report.

   e. Click OK.
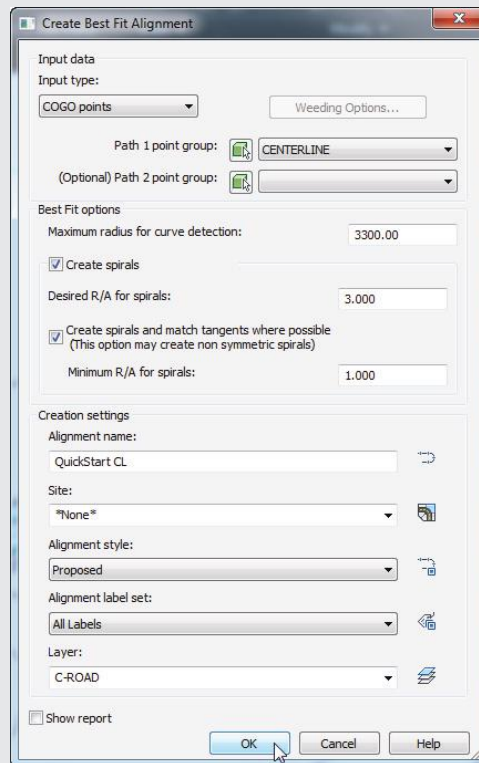
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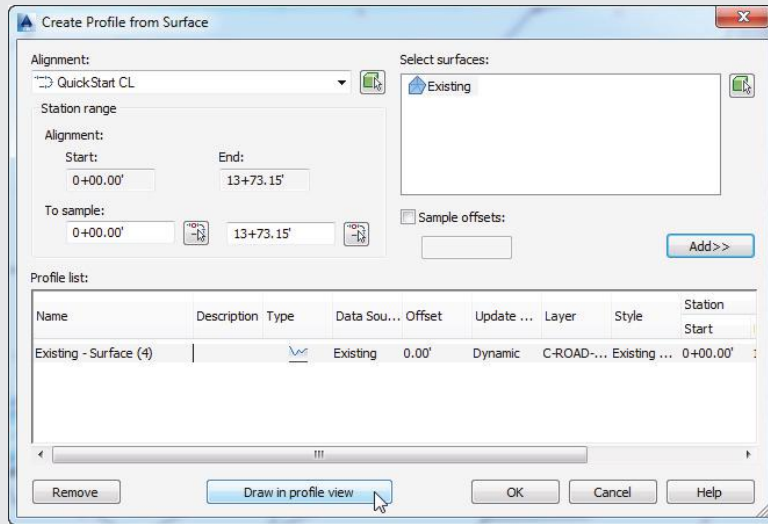**23.** Select the new alignment (the green line).

Want to know why the alignment appears green? See the section "Linear Object Styles" in Chapter 19, "Object Styles," for more information.

24. From the Alignment contextual tab ➢ Launch Pad panel, click Surface Profile.

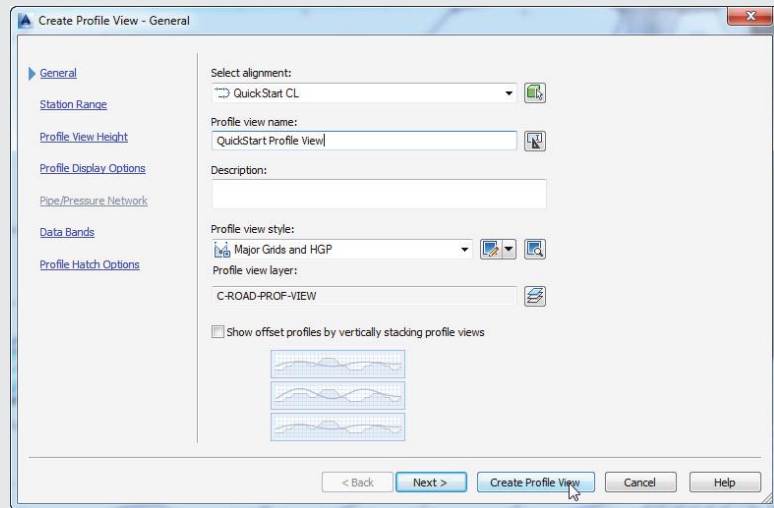**25.** In the Create Profile From Surface dialog, click Add.

**26.** Click Draw In Profile View.

27. In the Create Profile View – General dialog, change the Profile View Name to **QuickStart Profile View** and then click Create Profile View.

28. Click anywhere to the north of the site, outside the surface area, to select the origin point for the profile view.

29. Save the drawing.

You should now see the profile in the profile view. Chapter 7, "Profiles and Profile Views," will take you through the details of these objects.

30. From the Home tab of the ribbon, in the Create Design panel, click Profile ➤ Create Best Fit Profile.
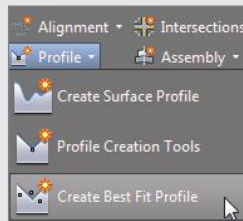

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31. When prompted to select a profile view, click the grid of the profile view you created in the previous steps.

32. In the Create Best Fit Profile dialog, follow these steps:

    a. Set the input type to Surface Profile (the surface profile will automatically go to Existing – Surface (4)). If the name for your surface profile is not the same for any reason, don't worry about it, since there is just a single surface profile available for selection.

    b. Change the profile name to **QuickStart Profile**.

    c. Change the profile style to Design Profile.

    d. Clear the check box for Show Report.

    e. Click OK.
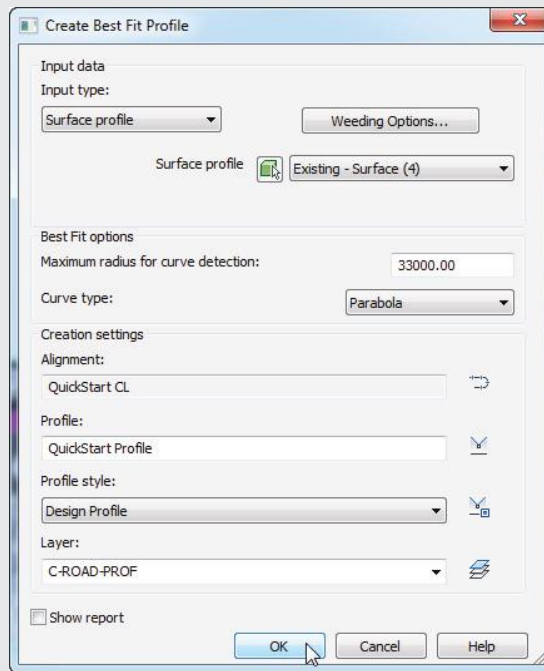
33. From the Home tab of the ribbon, in the Create Design panel, click Corridor.
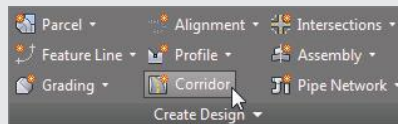
34. In the Create Corridor dialog, do the following:

    a. Set the name of the corridor to **QuickStart Corridor**.

    b. Verify that the alignment is set to QuickStart CL.

    c. Set Profile to QuickStart Profile.

    d. Set Assembly to Shoulder Widening.

    e. Set Target Surface to Existing.

    f. Clear the check box for Set Baseline And Region Parameters.

    g. Click OK.
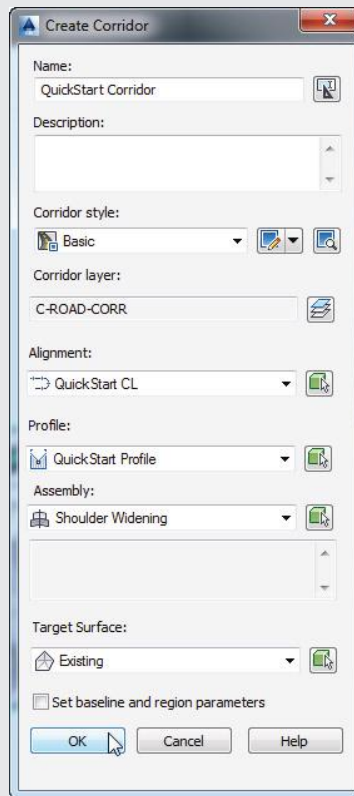
35. If you receive any Event Viewer warnings, dismiss the Panorama window by clicking the green check mark in the upper-right corner of the Panorama window.

36. Save the drawing. You can explore the objects you created by expanding the specific object collections. You can compare your drawing against the finished drawing for this exercise found on the book's web page, `0101_QuickStart_FINISHED.dwg` (`0101_QuickStart_METRIC_FINISHED.dwg`).

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