

Tutorial: Entering a Deed (Title Deed)

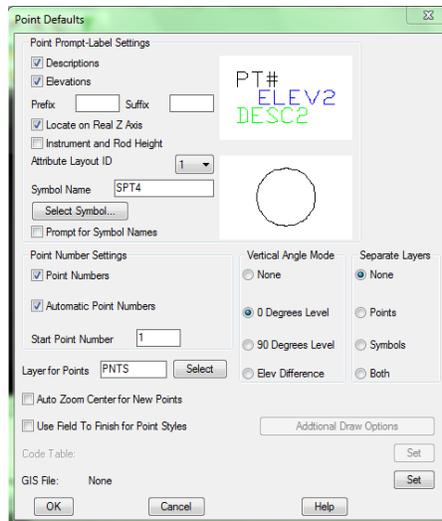
In this short lesson you will create a simple drawing. You will enter a 6-sided deed, add a title block, bar scale, and north arrow, add a title and certification text, and plot the deed area.

Note that the *Esc* key will cancel most commands, so if you choose the wrong command or enter something incorrectly and want to start over, just press Esc.

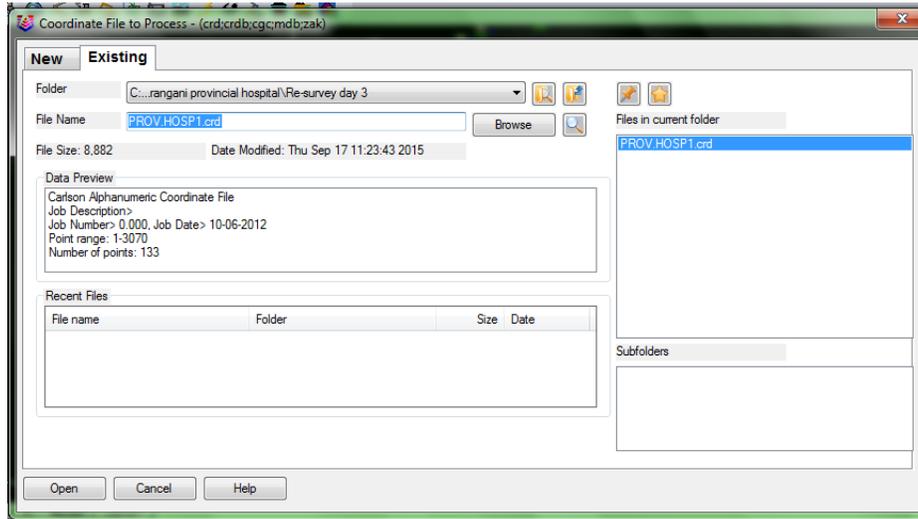
1. Click the icon for Carlson. You may be presented with a Startup Wizard dialog box. If so, click Exit.
2. Under the Settings menu, click Drawing Setup. Set the unit setting to English and the Horizontal Scale to 50. Click OK.



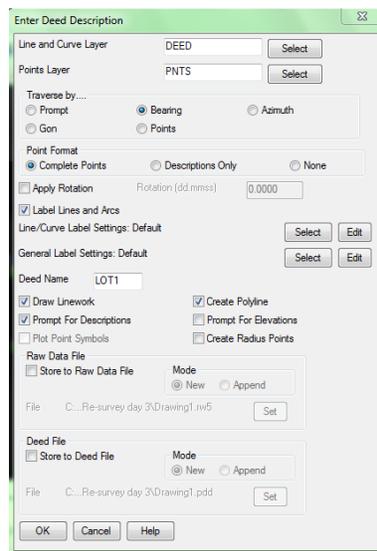
3. Choose Point Defaults from the Points menu, and, in the dialog box, click Elevations off to eliminate the Elevation prompt. Click Descriptions on and also set the point symbol name to symbol 4 (SPT4), which is the round, open circle. Click Automatic Point Numbering on. Click OK.



4. Under the Survey menu, select Enter Deed Description. The following dialog box will appear so you can specify where to store the coordinates:



Select the New tab. Then, for the File Name, type in "Deed". This creates a file called Deed.crd. All Carlson points are stored in files with the "crd" extension, which stands for "coordinates." Now use the default settings as shown in this dialog box image. Click OK.



The command line is the area below the graphics and to the left. When prompted to "Pick point or point number" at the command line, pick a point in the lower left quadrant of your screen to start the deed plotting. Respond to the command line prompts exactly as shown here:

When you are prompted for a description, enter "Fence Post".

Exit/Curve/<Bearing (Qdd.mmss)>: 125.3500

The quadrant (Q) is 1 for Northeast (2 is Southeast, 3 is Southwest and 4 is Northwest). The bearing is 25 degrees, 35 minutes, and 00 seconds. If all digits for the minutes and seconds are entered as shown above, then the deed call will be fully plotted, including the seconds. If only the degrees and

minutes were entered, as in 125.35, then the plot would appear as "N 25d 35' E".

Varas/Meters/Poles/Chains/<Distance(ft)>: 200.51

Note: You can enter old deeds in the forms of Poles and Links, Chains and Links and even Varas (a unit of measurement formerly used in the southwestern states of the U.S.).

Enter Point Description <Fence Post>: *Iron Pin*

Undo/Exit/Curve/<Bearing (Qdd.mmss)>: 189.4321

Varas/Meters/Poles/Chains/<Distance(ft)>: 225.00

Enter Point Description <Iron Pin>: *press Enter*

Pressing Enter selects the default, which is Iron Pin.

Undo/Exit/Curve/<Bearing (Qdd.mmss)>: C

Tangent-out/<Radius>: 75

Curve direction [Left(-)/<Right(+)>]? *press Enter* for right

Non-tangent/Reverse-tangent/Bearing/Chord/DeltaAng/Tangent/<Arc Len>: 118.17

If you don't know the arc length, but you know the tangent, you would choose "T" for tangent.

Enter Point Description <Iron Pin>: *press Enter*

Undo/Exit/Curve/<Bearing (Qdd.mmss)>: 200.0000 (due South)

If you were to enter just 2 (no degrees, minutes, or seconds), then the deed call would be plotted "S

000 E". Varas/Meters/Poles/Chains/<Distance(ft)>: 178.00

Enter Point Description <Iron Pin>: *Concrete Monument*

Undo/Exit/Curve/<Bearing (Qdd.mmss)>: 488.2300

This entry specifies Northwest 88 degrees, 23 minutes.

Varas/Meters/Poles/Chains/<Distance(ft)>: 300.34

Enter Point Description <Concrete Monument>: *Fence Post*

Undo/Exit/Curve/<Bearing (Qdd.mmss)>: 454.1109

Varas/Meters/Poles/Chains/<Distance(ft)>: 106.93

Enter Point Description <Fence Post>: *press Spacebar, then press Enter*

Simply pressing Enter uses the default text (Fence Post) again. To avoid drawing the text "Fence Post" twice on the end point, press the spacebar, skip a blank character, and press Enter.

You have now completed the 6-sided figure (including one curve).

Undo/Exit/Curve/<Bearing (Qdd.mmss)>: E

The following results are reported:

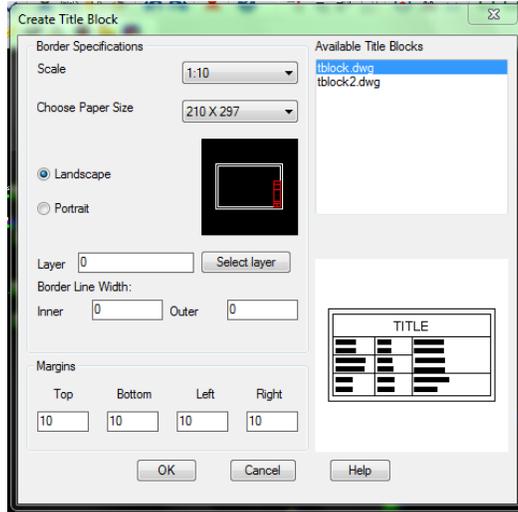
Closure error distance> 0.01709 Error Bearing> S 52d5'26" E

Closure Precision> 1 in 66076.892 Total Distance Traversed> 1128.950

The resulting deed, has a closure of 1:66077. In the initial prompt "Undo/Exit/Curve...", U for Undo would allow you to reenter the previous deed call.

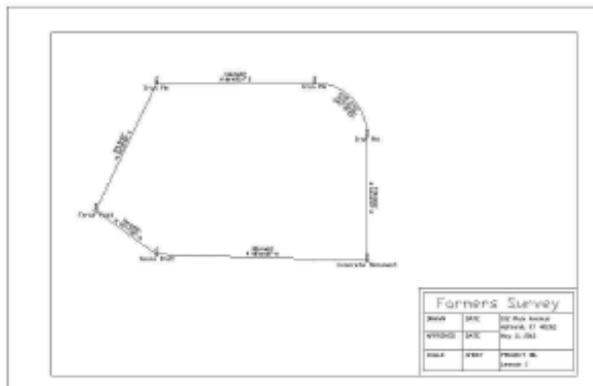
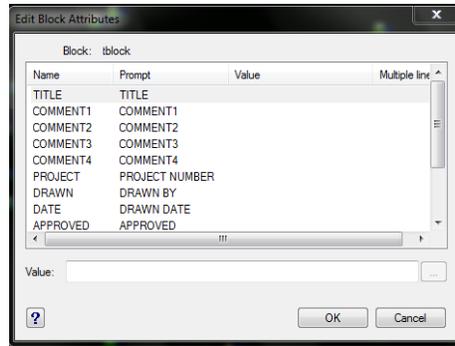
Use the Extents command on the View menu to see the entire area. Then choose Zoom Out under the View menu giving you adequate room for the next step.

5. Under the Settings menu, select Title Block.
 The dialog you will see is shown here:



Completed the title block entries, as shown above. Select Paper Size B2 (11 x 17), and enter the layer name of BORDER, then choose OK.

You will be prompted for the border location, pick a point in the lower left of the survey. Note that the title line is plotted in large text on the title block. Its length, therefore, should not exceed 15 characters.



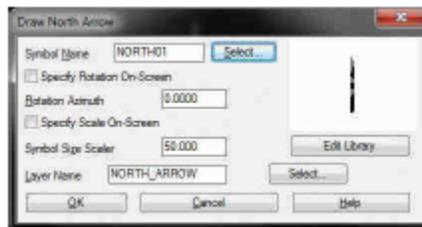
Your drawing should look like the example above at this point.

Use the Extents command, found in the View menu, to see the entire working area. If you want to move the border, use the Move command on the Edit menu. Pick the border lines and the title block objects (up to 3 picks total), press Enter (to end object selection), then pick two points representing the vector of the move.

If you want to see a margin around the working area after you use the Extents command, use the Zoom Out command on the View menu. Then use the *Window* command on the View menu to capture the view and margin you prefer.

If you make a mistake, enter U for undo, or select the back arrow icon that appears at the top of the screen.

6. On the Annotate menu, select Draw North Arrow.



Accept the default north arrow that is shown at the right side of the dialog, click OK, and place it in the upper right of your drawing. Choose Move on the Edit menu (or Enter M for move at the command line) and move it.

7. On the Annotate menu, select Draw Barscale. Accept the defaults, and then pick an insertion point below the north arrow and directly above the "a" in Farmer, and approximately the same distance from both. You can move the bar scale using the Move command on the Edit menu, if you need to do so.

8. On the Draw menu, select Standard within the Text command. Respond to the prompts as shown below:

Specify start point of text or [Justify/Style]: *J* for justify

Enter an option [Align/Fit/Center/Middle/Right/TL/TC/TR/ML/MC/MR/BL/BC/BR]: *C* for center justified

Specify center point of text: *pick a point near the top-center of the drawing*

Specify height <4.00>: *10* Entering 10 makes the title text bigger than the default.

Specify rotation angle of text <E>: *E*

Text: *Farmer Survey*

Text: *Ashland, KY*

Text: press Enter

To enter a certification in the lower-right of the drawing, again select Text > Standard from the Draw menu, or type "dtext" at the command line. If you haven't done anything else, such as Zoom or Pan, you can simply press Enter to repeat the last command. If pressing Enter does not repeat the Text

command, press Esc to cancel. Enter Dtext at the command prompt, and respond to the resulting prompts as shown below.

Pick a point above and to the left of the title block for the certification. You don't have to enter L for left-justification.

The Dtext command defaults to left-justification every time.

Height <10.00>: 4

Rotation angle <E>: *press Enter*

Text: *Surveyor's Certification*

Text: press spacebar, then press Enter

Text: *I do hereby certify that the survey shown hereon*

Text: *is a true and correct representation...*

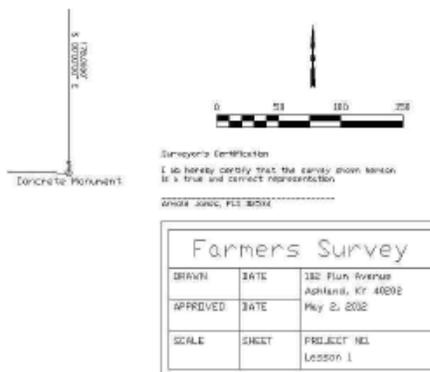
Text: *press spacebar, then press Enter*

Text:

Text: *Arnold James, PLS #2534*

Text: *press Enter twice to end*

The following is a close-up of the certification, north arrow, and bar scale that we just entered:



9. Enlarge the two title lines ("Farmer Survey" and "Surveyor's Certification") by a factor of 2.0 using the command

Text Enlarge/Reduce on the Edit menu, option Text. When prompted for Scaling Multiplier, enter 2.

Select both the Farmer Survey text (at the top of the screen, not in the title block) and the Surveyor's Certification text. When asked again to Select Objects, press Enter.

When you are selecting objects, if you select something you don't want, you can enter "R" at the next Select Objects prompt, and remove items from the selection set. If you want to add objects after you have removed an object, enter "A" at the next Select Objects prompt

10. Make the enlarged Farmer Survey text at the top of the screen bold by changing its font to the *ITALIC* font.

From the Edit menu, select Text then select the Change Text Font option.

Select Objects: *pick the Farmer Survey Text at the top of the drawing*

Select Objects: *press Enter* for no more selections

Style Name: *ITALIC*

11. Select the Edit Text command (under the Edit menu, Text option) to change.

S 00d00'00" E to S 00d E. When you are prompted, "Select Text to Edit:" pick the due South bearing text.

The degree symbol is represented as %%d. (If you had typed N 15%%d25'35" E in the Dtext command, Carlson would draw that entry as N15d25'35"E.) Click in the text to the immediate right of the quotation mark and press the Backspace key until the text reads "S 00%%d E. Click OK. Press Enter to exit the command.

12. Examine the figure shown in Step 8. Notice how the linework travels into the circle that represents point 5. To clip off the linework at the edge of the corner symbols, use the Trim by Point Symbol command on the Points menu,

Point Utilities. This command requires that all points be in view, so if you cannot see your entire drawing, use the Extents command on the View menu (sometimes referred to as Zoom Extents). Respond to the following prompts:

Select Carlson Software point symbols to trim against.

Select objects: *ALL*

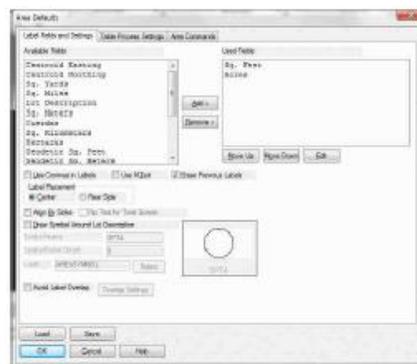
Entering "all" at the command line selects everything on the screen. Only the linework crossing into the corner symbols will be trimmed.

Select objects: *press Enter*

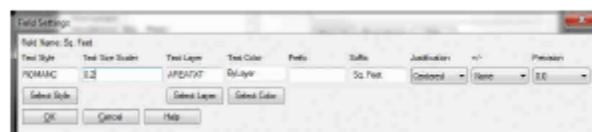
You can continue to select objects until you press Enter.

The trimming is completed.

13. Prepare for area labeling by selecting the Area Defaults command on the Area/Layout menu. The dialog box shown below appears.



Select the *Sq. Feet* item and click on the Edit button and make the Area Text Size Scaler 0.2 (doubled from the default of 0.1). Click OK when complete. Select the *Acres* item and click on the Edit button. Change the Other Area Labels and Inverse with Area decimal precision to 4 decimal places. Also, make the Area Text Size Scaler 0.2 (doubled from the default of 0.1) as shown below:



You are going to compute the area by point number. You could have chosen the Area by Lines & Arcs command. In that command, you would pick the lines and arcs that make up the figure. But since the closure was 0.017 off (the distance from point 7 to point 1), you would exceed the default Max gap tolerance. Unless you change that tolerance in this dialog box to something larger than 0.017, you would get no result using the *Area by Lines & Arcs* command.

So do not change it for this exercise because you might forget to change it back. Instead, you will compute the area by inverting from 1 through 7 and back to 1. Click OK to exit the Area Defaults dialog box.

14. Select Inverse with Area on the Area/Layout menu. Respond to the prompts as shown below:

Station/<Pick Starting point or point number>: 1

Pick point or point numbers (R-RadiusPt, U-Undo, Enter to end): 2

Pick point or point numbers (R-RadiusPt, U-Undo, Enter to end): 3

Pick point or point numbers (R-RadiusPt, U-Undo, Enter to end): R

Radius point number or pick point: *CEN* for center "snap"

Now move the cursor, without picking, to the arc and see how the center snap becomes active.

When the radius

point is found, pick on the arc.

Curve direction [Left/<Right>]? *press Enter* for the Right option

Pick End of Arc or point number (U-Undo, Enter to end): 4

Pick point or point numbers (R-RadiusPt, U-Undo, Enter to end): 5

Pick point or point numbers (R-RadiusPt, U-Undo, Enter to end): 6

Pick point or point numbers (R-RadiusPt, U-Undo, Enter to end): 7

Pick point or point numbers (R-RadiusPt, U-Undo, Enter to end): 1

Pick point or point numbers (R-RadiusPt, U-Undo, Enter to end): *press Enter* to end

A Standard Report Viewer dialog box showing the Inverse with Area results will appear. Select Exit at the top of the dialog box and respond to the prompts as shown below:

SQ. FEET: 83921.8 SQ. YARDS: 9324.6 SQ. MILES: 0.0

ACRES: 1.9266 PERIMETER: 1129.0

Pick area label centering point (Enter for none): pick a point near the center of the figure, in its interior.

The area units you chose in Area Defaults are labeled on the screen.

Erase Polyline [<Yes>/No]: Y

This erases a polyline that has been drawn over the original lines and arcs. The Inverse with Area command draws this polyline because often you are solving the area from points and want the new linework drawn.

You snapped to the radius point using the "cen" snap. Additional object snaps appear under Aperture-Object Snap command on the Settings menu. Since all plotted points have a node, you could have inverted around this figure by using the "nod" snap for points 1 through 7, and the "cen" snap to capture the radius point. Snaps are typically entered at the keyboard as 3 characters (for example, "int" for intersect and "end" for endpoint).

15. Freeze the point numbers to finish the drawing by choosing *Layer Control* on the View menu. In the PNTNO row, click the sun icon to change it to a snowflake icon, which freezes the PNTNO layer. Click OK. The point numbers remain in the drawing, waiting to be "thawed", but they are not displayed.

The final drawing is shown here:

