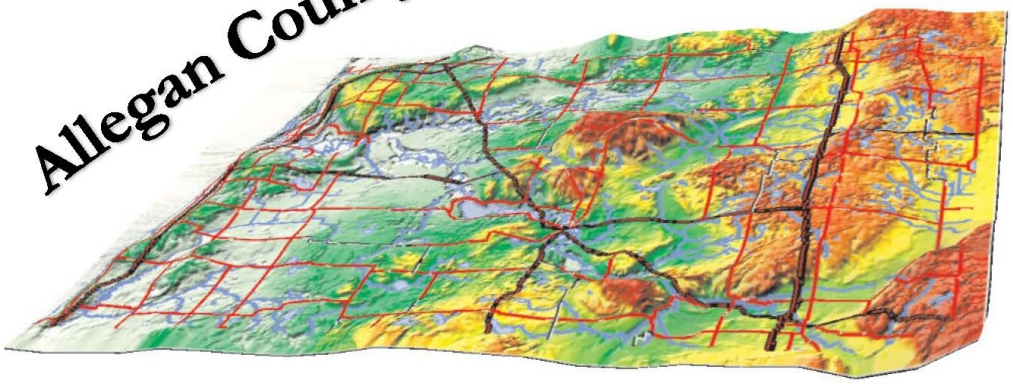
Allegan County GIS Services



Parcel Editing with COGO in ArcGIS

WWW.ALLEGANCOUNTY.ORG/GIS

NOVEMBER 23, 2020

Contents

Contents **i**

COGO Tools in ArcGIS 1
COGO Workspace Setup 1
The COGO Mapping Document(mxd) 1
Full Extent Button 2
Editor Setup for COGO 3
Snapping Setup 4
Enable Classic Snapping 4
Enable Snap Tips 4
Configure Snapping Window 5
Find starting point for COGO sketch 6
Using the Find Tool 6
Begin COGO Sketch 10
Start Editing 10
Use the Traverse Tool on the COGO Toolbar . . . 11
Example Legal Description 12
Select Starting Point for the Sketch 12
Enter COGO Inputs 14
More Examples of Direction Distance Inputs . . 15

COGO Workspace Setup

Navigate to the COGO Mapping document (MXD)

`J:\Departments\Treasury\gis\COGO`

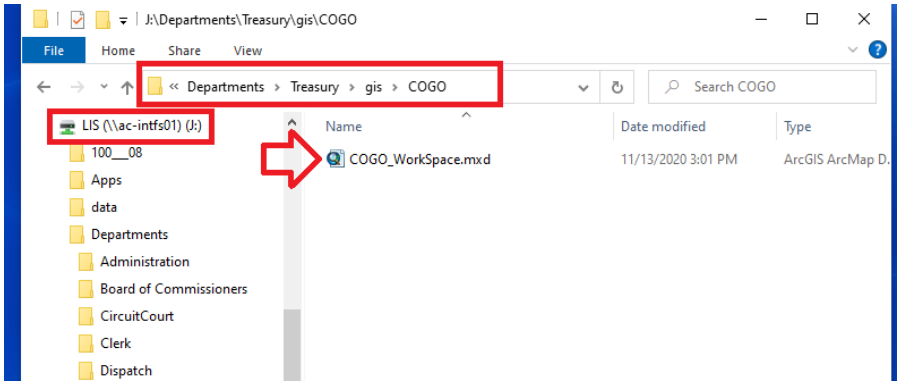


Figure 0.1: COGO Map File

Copy the file to your personal workspace

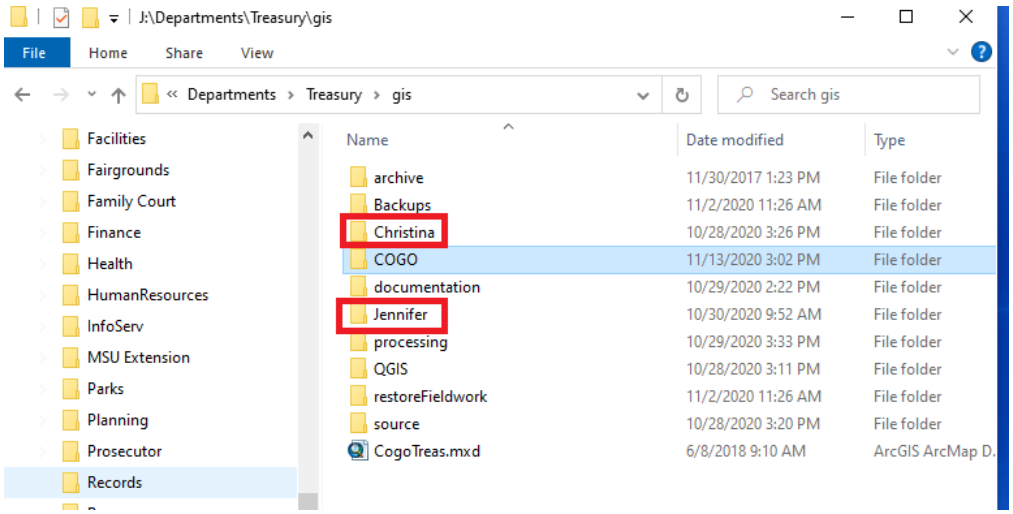


Figure 0.2: User Folder

Double click on COGOWorkSpace.mxd to open it

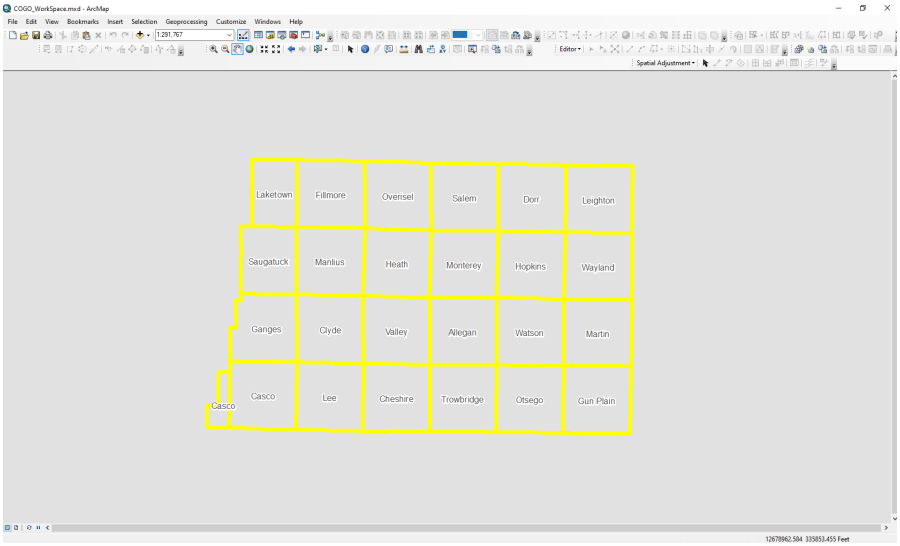


Figure 0.3: First Screen

Zooms out to show all features in the broadest layer

Push Full Extent Tool

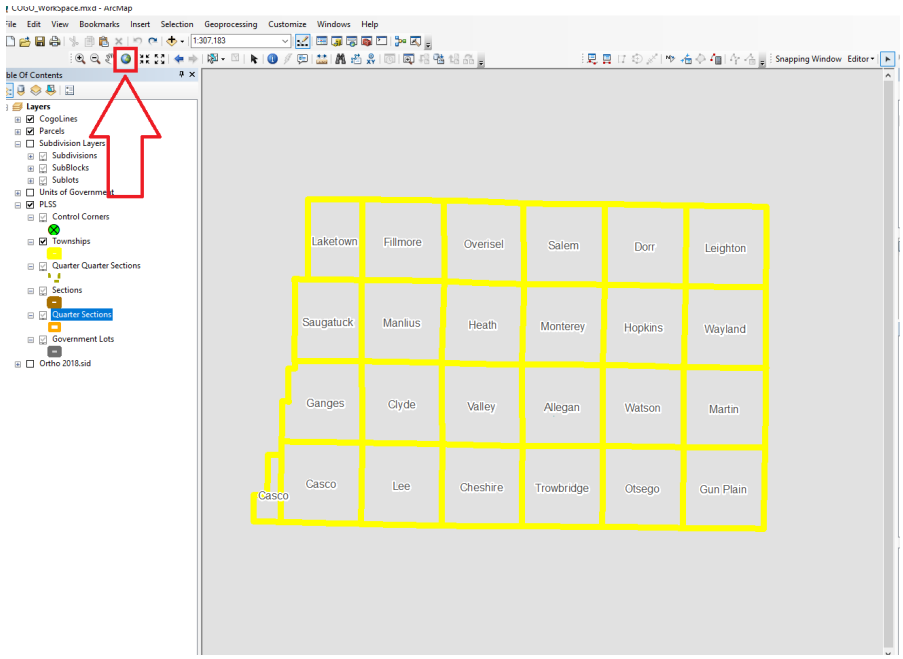


Figure 0.4: Full Extent Tool Result

Set up editor options for COGO:

Push Editor Toolbar Button to get the dropdown

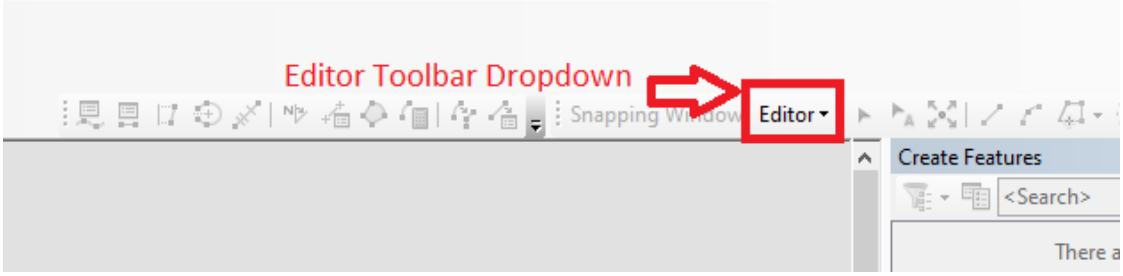


Figure 0.5: Editor Toolbar Button

Set units for COGO:

Editor ⇒ Options ⇒ Units

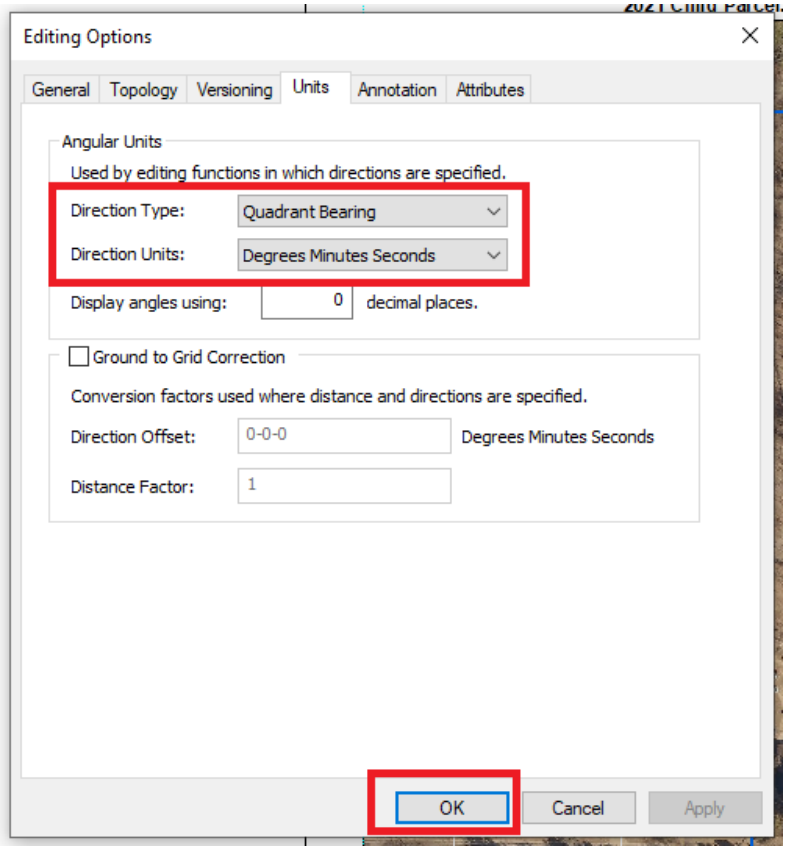


Figure 0.6: Editor Options

Snapping Setup

Snapping settings are important for accuracy and precision in editing GIS data

Enable Classic Snapping

Editor ⇒ Options ⇒ General ⇒ Use Classic Snapping

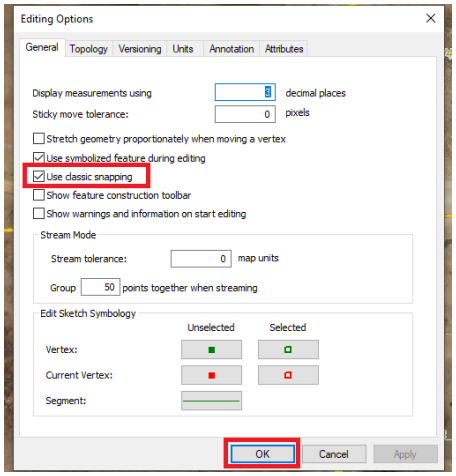


Figure 0.7: Enable Classic Snapping

Enable Snap Tips

Snap Tips are text that show what you are snapping to

Editor Dropdown ⇒ Snapping ⇒ Options

- Check the box for Show Snap Tips

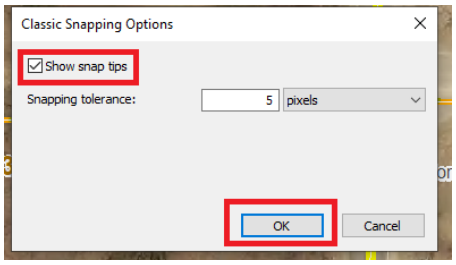


Figure 0.8: Enable Snap Tips

Configure Snapping Window

For each feature layer in the map there are 3 options for snapping:
Vertex, Edge,and End Snapping

Open the Snapping Window
Editor ⇒ Snapping ⇒ Snapping Window
These settings are a good start:

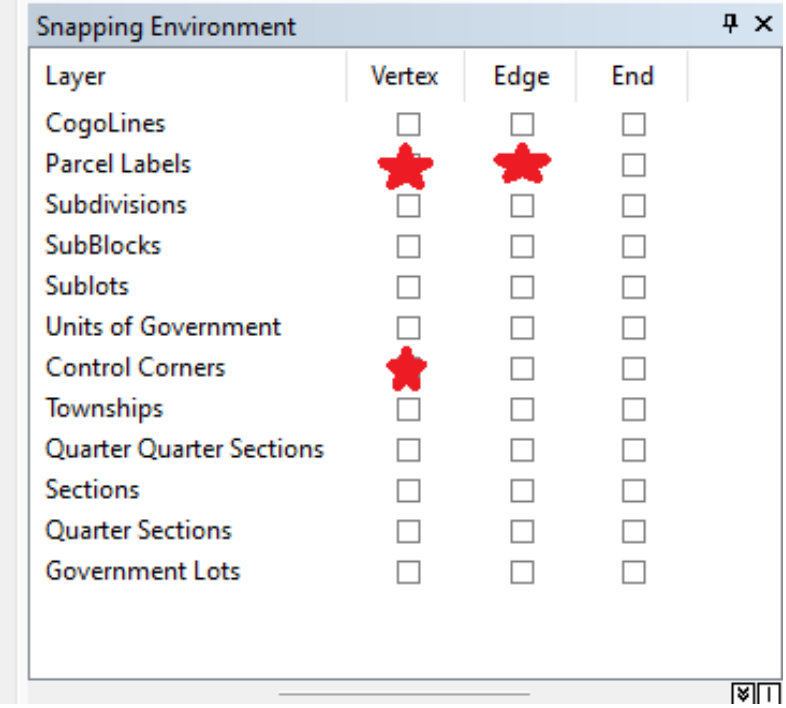


Figure 0.9: Snapping Window

For more information on Snapping:

Link to Documentation on Classic Snapping

Find starting point for COGO sketch

Using the Find Tool

If you have a parcel number near your area of interest, you can use the find tool to get there.

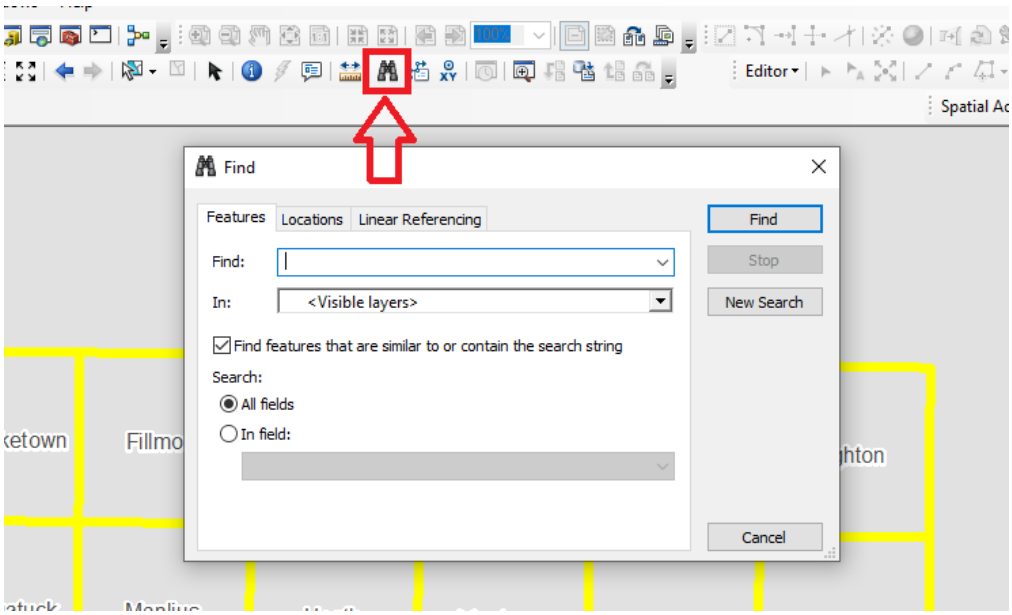


Figure 0.10: Find Tool

Enter a parcel number into the Find Tool

Input the:

- Parcel Number
- Layer to search
- Field to search

Push Find

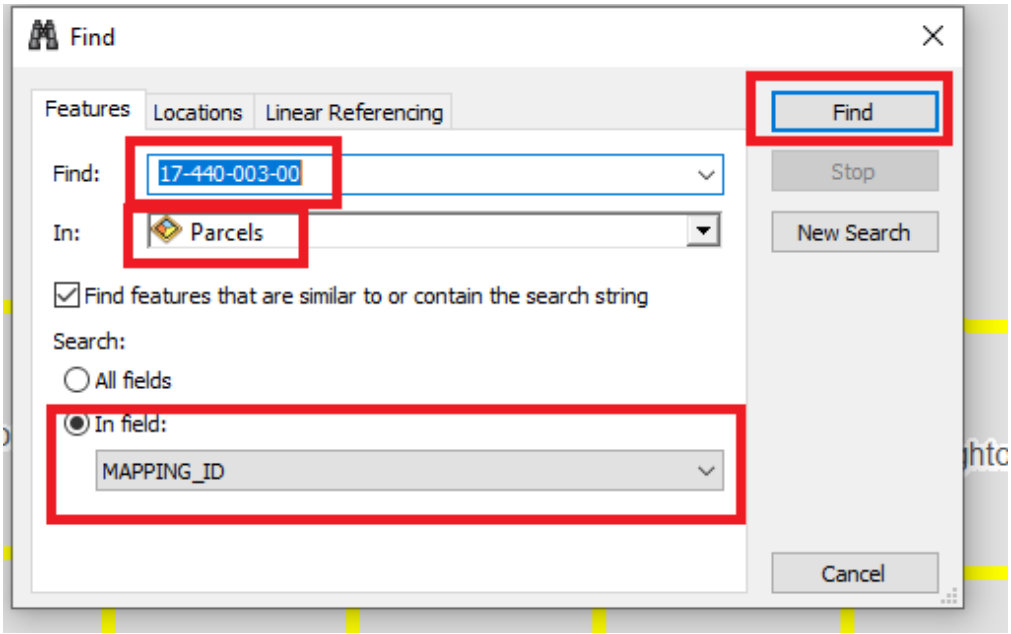


Figure 0.11: Tool Data

If find tool finds a match:
right click on it and select zoom to

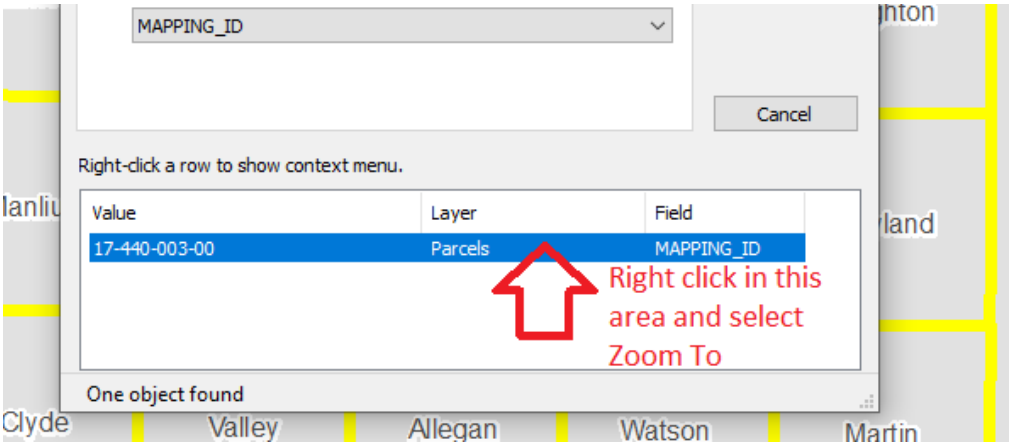


Figure 0.12: Match

Find a starting point for mapping by:

- Using the mouse wheel to zoom in or out
- Toggle layers on or off in the table of contents

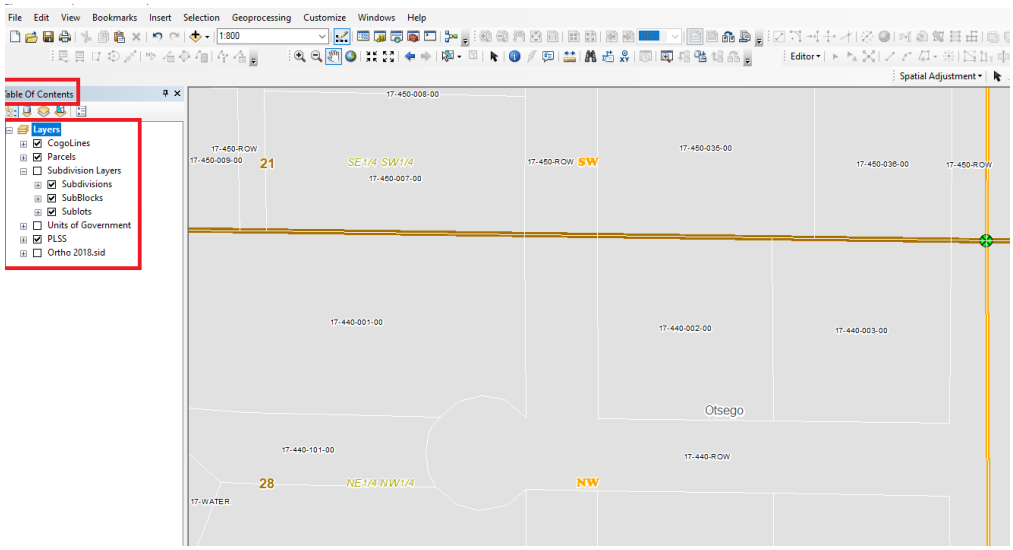


Figure 0.13: Reference Point

Begin COGO Sketch

Start Editing

Editor ⇒ Start Editing

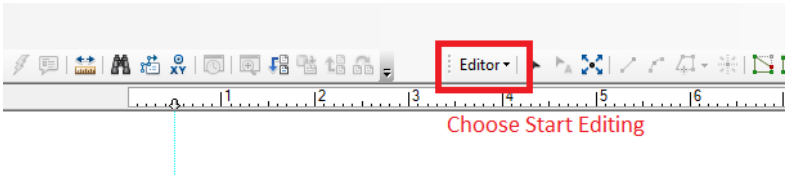


Figure 0.14: Editor Toolbar

In the start editing box, under source, select the Shareddata connection

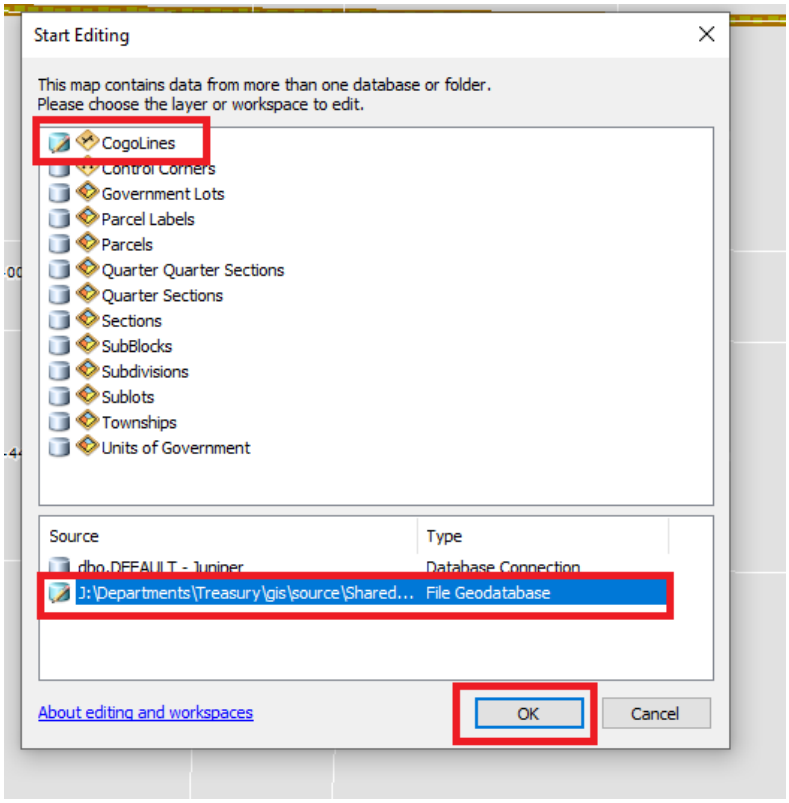


Figure 0.15: Start Editing

Use the Traverse Tool on the COGO Toolbar

Once you have your starting point:

Push Traverse on the COGO toolbar

Push Template and select CogoLines

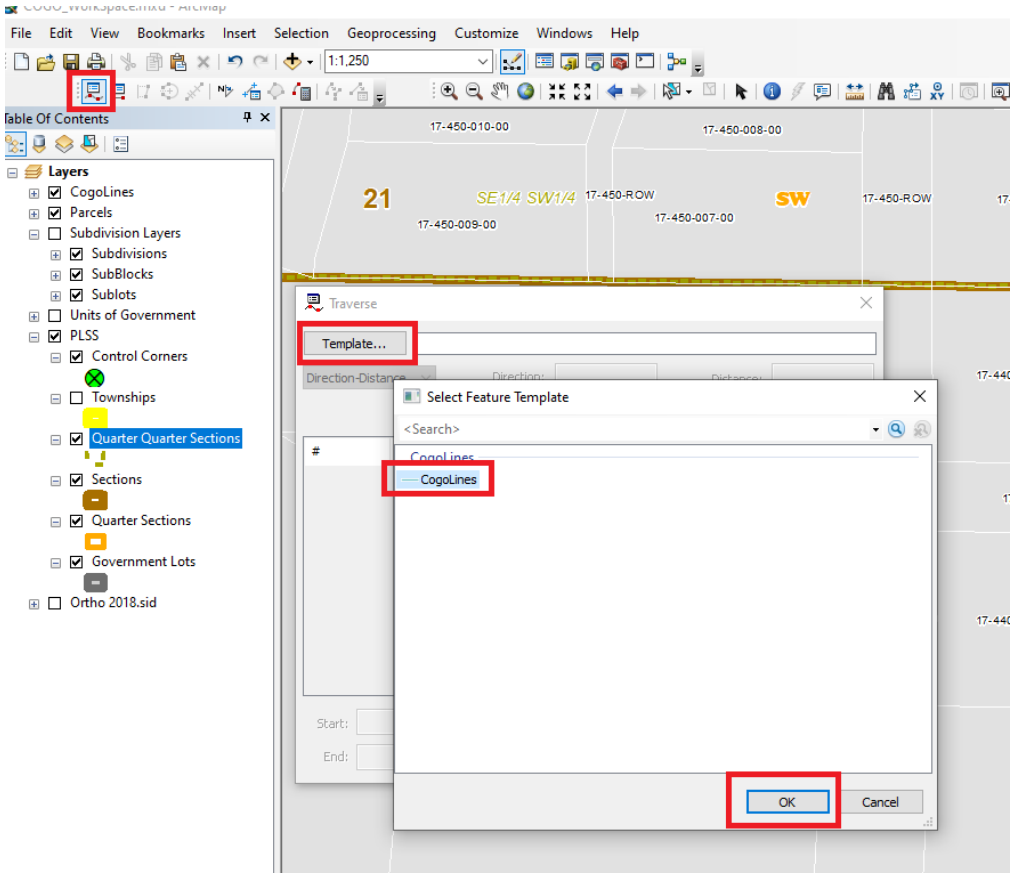


Figure 0.16: Launch COGO Toolbar

Example Legal Description

Commencing at the South Quarter post of Section 17, Town 1 North, Range 15 West; thence South 88° 28' 49" East on the South section line, 654.51 feet to the West line of the East Half of the Southwest Quarter of the Southeast Quarter and the place of beginning of this description; thence North 00° 44' 38" East on said West line, 295.00 feet; thence South 88° 28' 47" East 295.36 feet; thence South 00° 42' 30" West parallel to the East line of the Southwest Quarter of the Southeast Quarter, 295.00 feet to the South section line; thence North 88° 28' 49" West on same, 295.54 feet to the place of beginning.
Subject to any and all easements and restrictions of record, or otherwise. Subject to the rights of the public and of any governmental unit in any part thereof taken, used, or deeded for street, road, or highway purposes.

Figure 0.17: Sample Description

For this parcel, you can use the find tool to get to a nearby parcel or navigate to Lee Twp Section 17.

Once there, locate the South Quarter Post for the starting point for sketching.

Select Starting Point for the Sketch

To the right of the Start box: Push arrow+

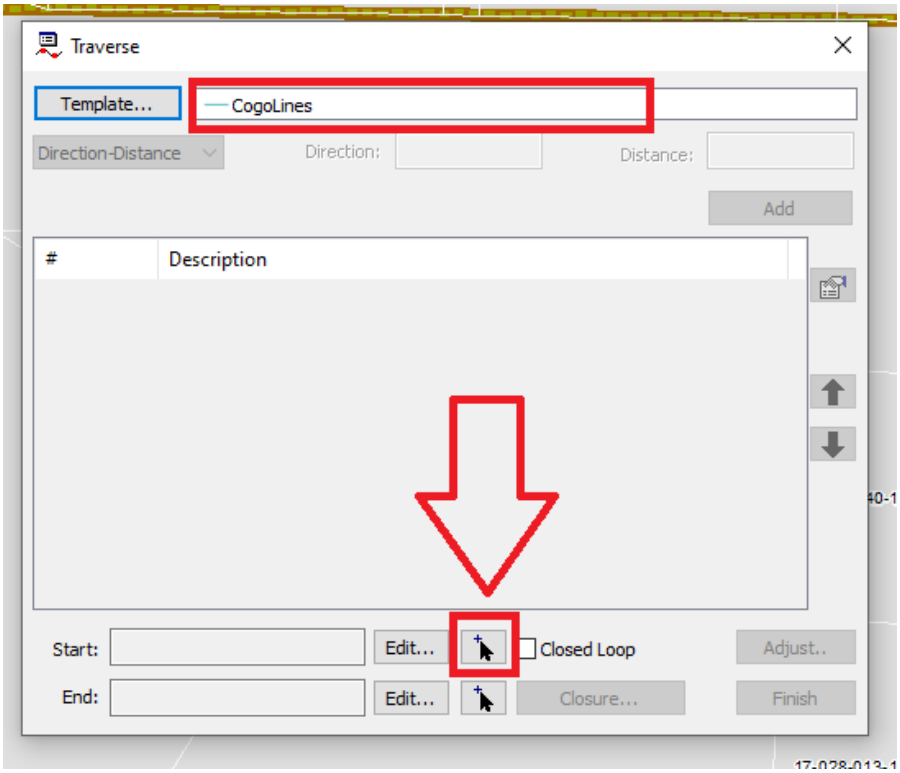


Figure 0.18: Start COGO

Click a starting point in the map

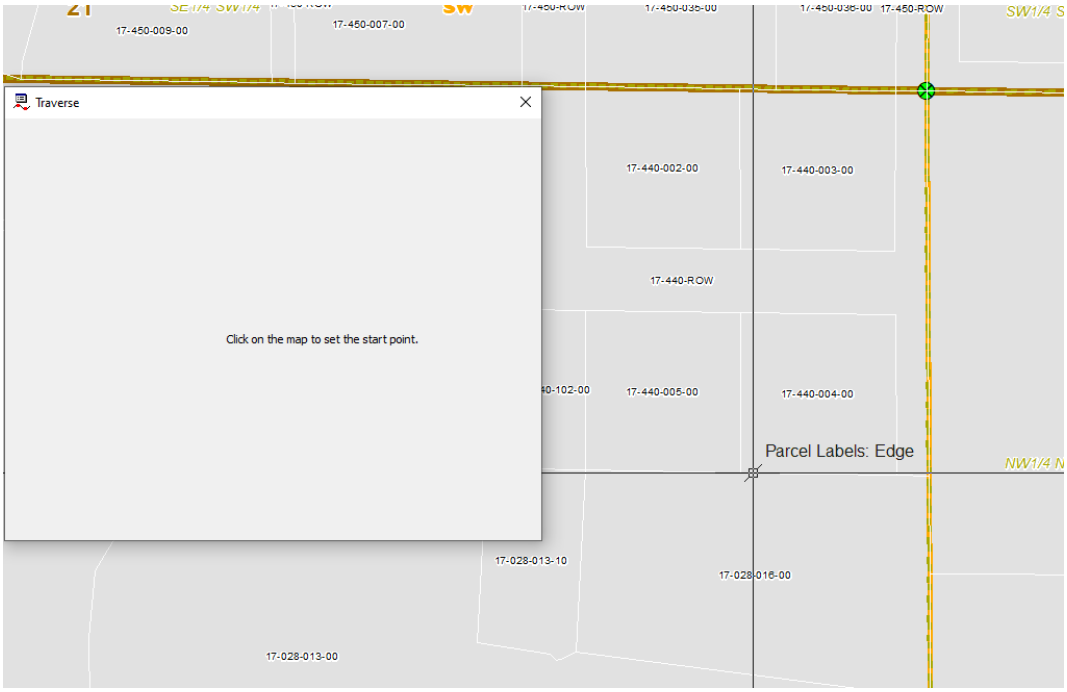


Figure 0.19: Click Starting Point

Note: The cursor should snap to points specified in the Snapping Window.

Enter COGO Inputs

Enter Direction and Distance

i.e.

From the South Quarter post of Section 17

One Direction Distance can be entered or the **entire traverse** can be entered at one time.

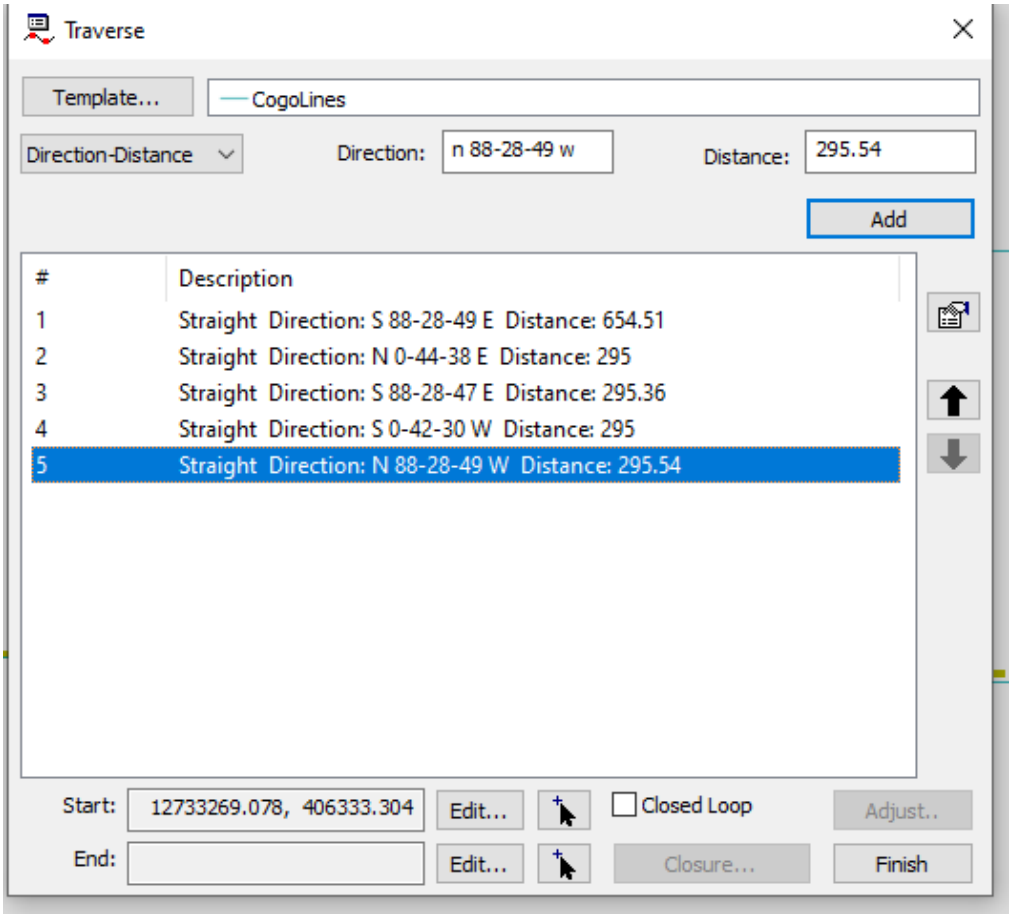


Figure 0.20: Sample Traverse

Push Finish and the lines are added to the data

More Examples of Direction Distance Inputs

To go straight North:

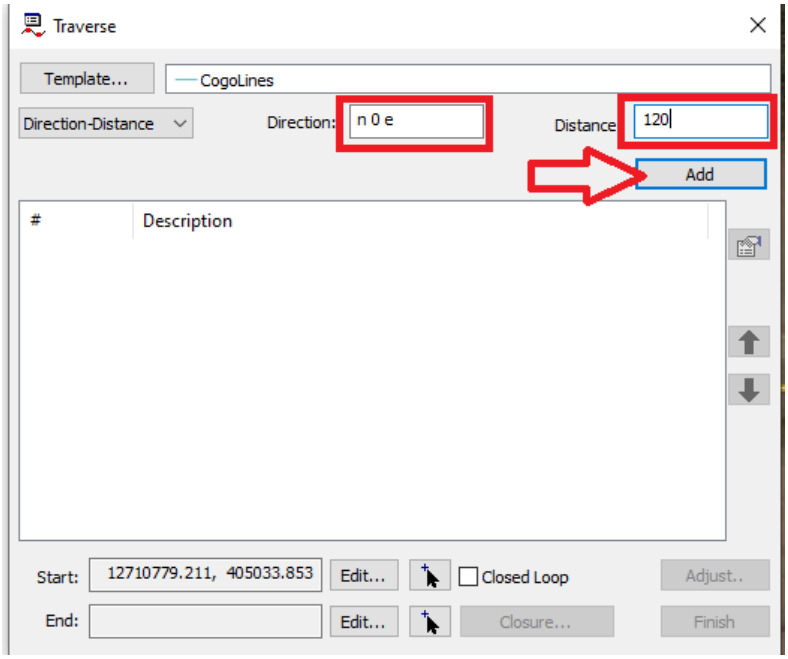


Figure 0.21: North Direction Distance

Push Add and the line is added to the sketch

Note: the sketch is only temporary at this point, lines can be reordered added and removed.

To go straight West:

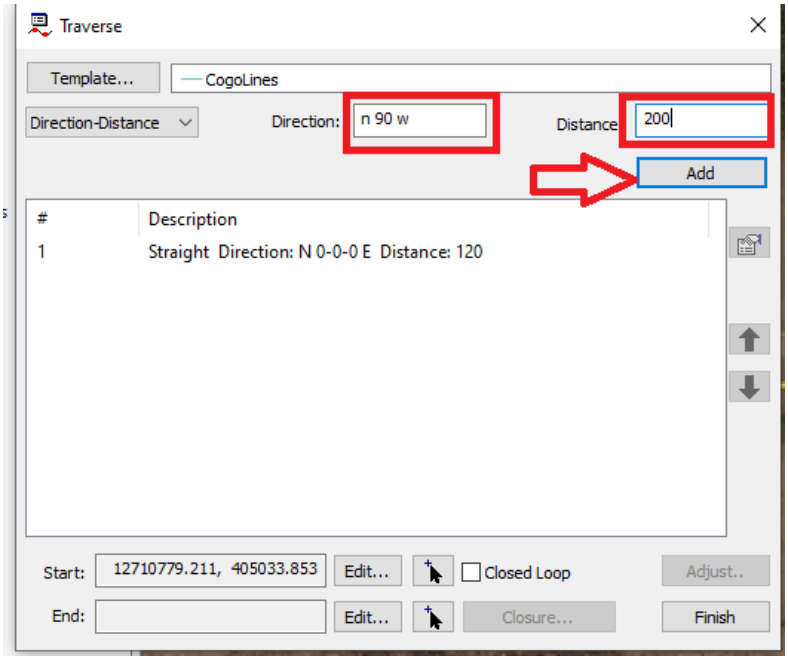


Figure 0.22: West Direction Distance

To go straight South:

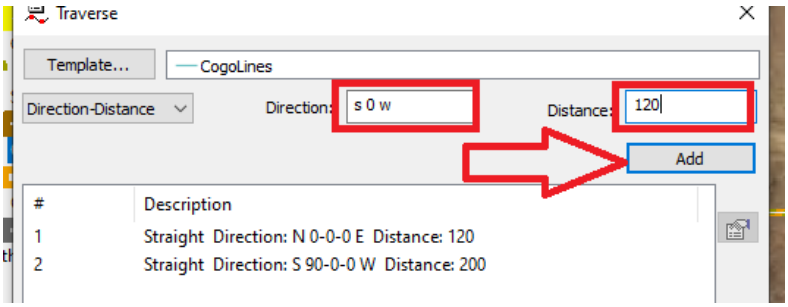


Figure 0.23: South Direction Distance

To go straight East:

Figure 0.24: East Direction Distance

Note: anytime before you push finish you can add or remove lines and reorder lines.

Push Finish and the lines are added to the data