

## ORMAP Tools for ArcPro/Parcel Fabric

Draft (1/2/2022)

This document summarizes the available ArcPro/Fabric ORMAP tools and discusses ways to customize them to meet local county requirements.

[illegible]

## 1. Toggle AutoUpdates - Replaced by Attribute rules using Arcade

(Can be toggled in a GeoDatabase but a managed by a database administrator in SDE. )

### Annotation Rules

Anno0100Scale - GetMapNumber - Assigns the MapNumber to the feature when it is added (trigger=insert only).

Anno0200Scale - GetMapNumber - Assigns the MapNumber to the feature when it is added (trigger=insert only).

Anno0400Scale - GetMapNumber - Assigns the MapNumber to the feature when it is added (trigger=insert only).

Anno2000Scale - GetMapNumber - Assigns the MapNumber to the feature when it is added (trigger=insert only).

TaxlotNumberAnno - GetMapNumber - Assigns the MapNumber to the feature when it is added (trigger=insert only).

TaxcodeAnno - GetMapNumber - Assigns the MapNumber to the feature when it is added (trigger=insert only).

### TaxlotRules

GetMapNumber - Gets MapNumber from MapIndex

GetCounty - Gets County Number from MapIndex

GetOrMapNum - Gets ORMAPNUM from MapIndex

CalcORTaxlot - Calc ORTaxlot from ORMAPNUM and Taxlot

CalcMapTaxlot - Calc MapTaxlot from MapNumber and Taxlot

### CargographicLines

GetMapNumber - Assigns the MapNumber to the feature when it is added (trigger=insert only)

GetMapScale - Assigns the MapNumber to the feature when it is added (trigger=insert only)

### PLSSLines

GetMapNumber - Assigns the MapNumber to the feature when it is added (trigger=insert only)

GetMapScale - Assigns the MapNumber to the feature when it is added (trigger=insert only)

### ReferenceLines

GetMapNumber - Assigns the MapNumber to the feature when it is added (trigger=insert only)

GetMapScale - Assigns the MapNumber to the feature when it is added (trigger=insert only)

### WaterLines

GetMapNumber - Assigns the MapNumber to the feature when it is added (trigger=insert only)

GetMapScale - Assigns the MapNumber to the feature when it is added (trigger=insert only)

Customizing Rules: Attribute rules can be customized by selecting design attribute rules for a specific layer and then editing the rule properties including arcade code if used.

The screenshot shows the ArcGIS interface. On the left, the 'Drawing Order' pane lists layers: Map, Anno0100Scale, Anno0200Scale, and Anno0400Scale. The 'Design' tab is active, showing options like 'Create Chart', 'New Report', 'Joins and Relates', 'Domains', 'Fields', 'Subtypes', 'Attribute Rules', and 'Contingent Values'. An arrow points from 'Attribute Rules' to the 'Calculation' tab. The 'Calculation' tab shows a table with one rule: 'GetMapNumber' with the description 'Assigns the MapNumber to the feature when it is added.'

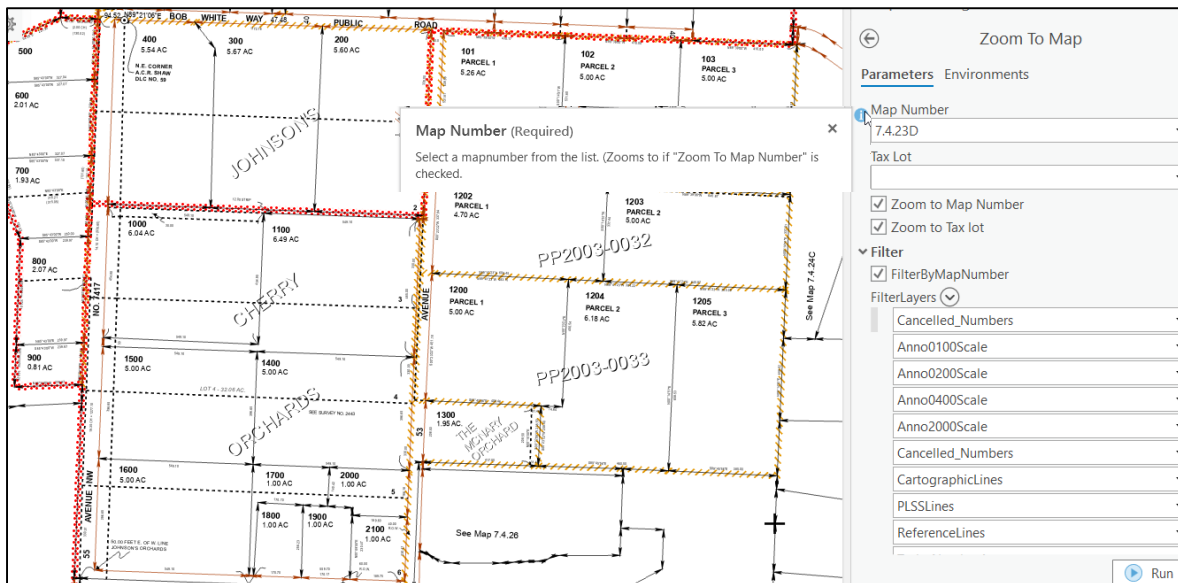
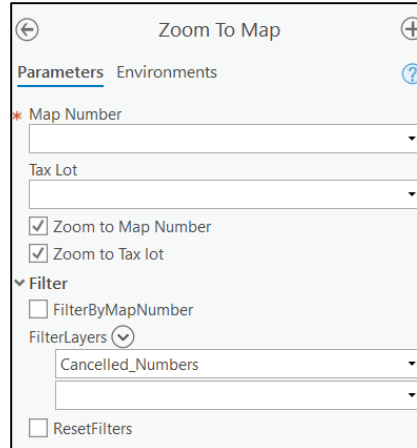
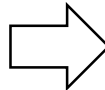
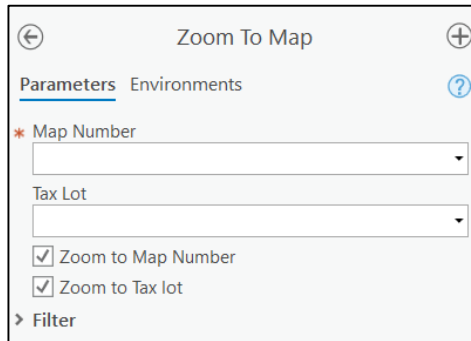
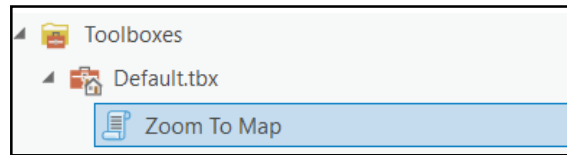
```
1// When creating a anno get map number from mapindex polygon layer
2//
3// Intersects layer with MapIndex layer to get Mapnumber
4//
5// Dean 2020
6
7var fsMapIndex = FeatureSetByName($datastore, "MapIndex", ["MapNumber"])
8var fsIntersectMap = Intersects(fsMapIndex, $feature)
9var MapIndex = first(fsIntersectMap)
10if (MapIndex == null) return {"errorMessage": "No Map Index Feature Found"}
11return MapIndex.Mapnumber
```


## 2. Zoom To Map/Taxlot – This can be done in one of two ways.

2a. Locate Menu – Standard ESRI Tool has many improvements over the ArcMap Version.



2b. ZoomToMap ORMAP Tool – This tool exists in the default toolbox and allows you to zoom to a specific map and then taxlot. There is no python script associated with this tool. The tool also allows you to filter associated layers as well.



This tool has several options that are self-explanatory by pressing the  next to the menu option.

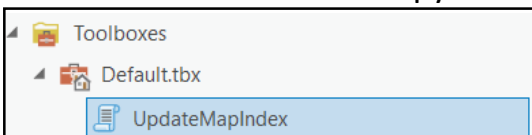
Customization: Edit the tool validation script and change layers to match your layer names for mapindex and taxlot layer or the FilterLayers (parameter5) list.

### 3. Assign Taxlots – “ArcPro Sequential Number Tool “



Tool is used to assign sequential numbers to features when they are added. Video Demo by Jack Horton (<https://www.youtube.com/watch?v=hjMoZp5lf2c>)

4. **UpdateMapIndex**– This tool exists in the default toolbox. And allows you change all attributes of a selected mapindex feature. The tool drives a python script located in the ORMAPTOOLS subdirectory.



To use this tool you must have the MapIndex Layer visible, selectable, and editable and you can ONLY have one mapindex polygon selected at a time. The map number (first parameter) is updated from the Town,Range,Section,qtrqtr subsections.

UpdateMapIndex

Parameters Environments ?

MapNumber (Updated From Twn/Rng/Sect/QtrQtr)  
8.4.7

MapScale  
4800

County  
27

ReliaCode  
0

NumberSelected (=1)  
1

☐ Reset Form For New Selection

▼ Town

Town  
08

TownPart  
.00

TownDir  
S

▼ Range

Range  
04


RangePart  
.00

RangeDir  
W

> Section

> Suffix

> MapPage

After you have made the updates of interest press the  Run button to execute the python script to make the updates to the MapTitle and ORMAPNUMBER attributes.

**Customization:** To customize this for a specific county the initial tool parameters for lists of township, range, section etc. should be updated and the Python script “UpdateMapIndex.py” located in the ORMAPTools directory should be updated to reflect and customization associated with th ORMAPNUMBER and MapTitle.

	Town	TownPart	String	Required	Input	Town	Value List
4	Town	TownPart	String	Required	Input	Town	Value List
5	TownPart	TownPart	String	Required	Input	Town	Value List
6	TownDir	TownDir	String	Required	Input	Town	Value List
7	Range	Range	String	Required	Input	Range	Value List

Learn more about script tools

Value List Filter

06  
07  
08  
09  
10

OK Cancel

## 5. **Combine Taxlots** – Combining taxlots can be completed using the ESRI Merge Tool.



This tool allows you to combine two or more features (taxlots) in the same layer together into a new feature. Video Demo by Jack Horton “ArcGIS Pro Parcel Fabric: Track History and Lineage During a Merge” (<https://www.youtube.com/watch?v=JRSP5UIEuP8>)

Please NOTE: if you are interested in the tools used to “Split” a parcel a basic summary is illustrated in the Demo by Jack Horton “ArcGIS Pro Parcel Fabric: Split out Part of a Parcel by Area” (<https://www.youtube.com/watch?v=GtRu0MGQPQxE>)

## 6. **Arrow Tool** – An ORMAP Tool Addin for adding arrows.

This tool requires the installation of the addin. Once you have downloaded the tool just double click on the tool file to “install it”. It will Automatically be available to you in your ArcPro Session. This tool is documented in the ArrowToolHelp File in the ORMAP Tools directory (ORMAP Arrow Tool.docx).

## 7. **Cancelled Numbers Tool** – An ORMAP Tool Addin manages the cancelled numbers file.

This tool requires the installation of the addin developed by Deschutes County. Once you have downloaded the tool just double click on the tool file to “install it”. It will Automatically be available to you in your ArcPro Session.

## 8. **Map Production** – Uses Layouts with MapSeries

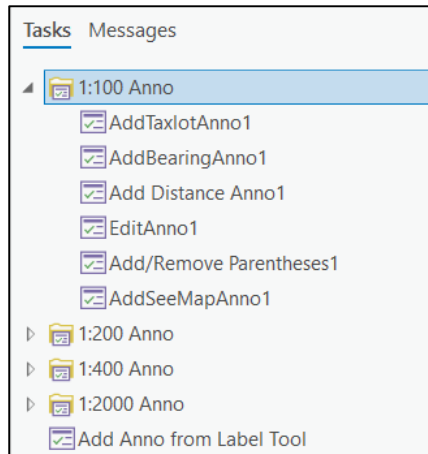
This tool requires the installation of the addin developed by Deschutes County. Once you have downloaded the tool just double click on the tool file to “install it”. It will Automatically be available to you in your ArcPro Session.

## 9. **Export to Goal2** – Not Done Yet


## 10. **Cancelled Number Tool** - (see #7)

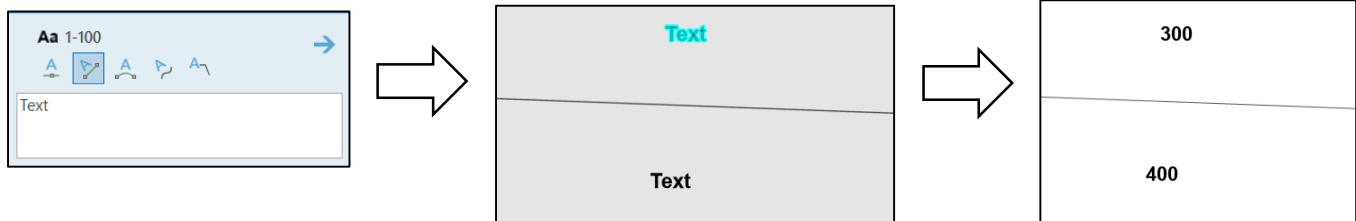
## 11. Annotation Tools –Tasks

Tasks are a new ArcPro capability that can be used to combine tools into meaningful procedures that follow consistent steps. Tasks are divided into groups, tasks and steps. The following tasks were used to simplify several different procedures for adding annotation (somewhat similar John P's tool). The Annotation tasks can be found in the Catalog View in the Tasks folder called "Annotation Tasks". The tasks, as constructed, operate on a specific annotation class. At this time four annotation task groups have been created for the standard annotation scales (1:100, 1:200, 1:400, 1:2000) as follows:




**AddTaxlotAnno:** Adds taxlot annotation.

1. Add Taxlot Anno - Sets edit/selection/visibility environments and allows you to add annotation as "Text" within each taxlot that will need annotation at that scale the press the  button for the next step.
2. Calculate – Replaces "Text" string with the value of the taxlot it is in.




**AddBearing Anno:** Adds Bearing Annotation when placed near a taxlot\_line with CoGo attributes.

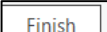
1. Display Cogo Lines - Displays taxlot\_lines with CoGo Attributes (in blue) and moves to the next step automatically.
2. Add Annotation – Sets edit/selection/visibility environments and allows you to add annotation as "Text". Press the  button when finished.

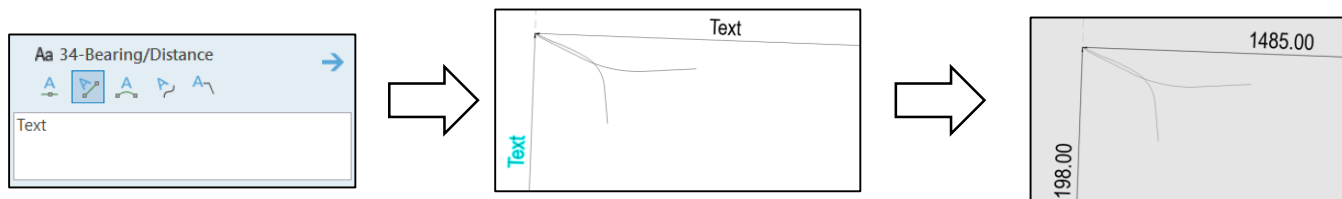


**AddBearing Anno:** Adds Bearing Annotation when placed near a taxlot\_line with CoGo attributes.

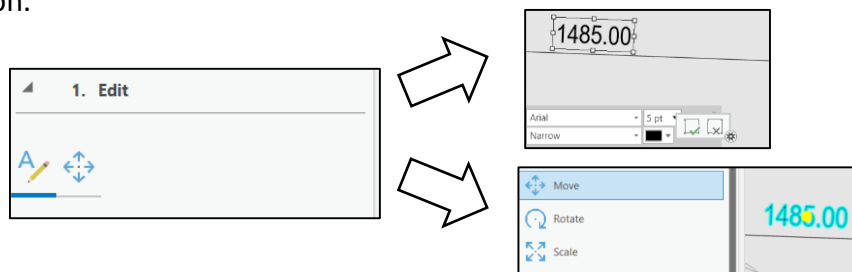
1. Display Cogo Lines - Displays taxlot\_lines with CoGo Attributes (in blue) and moves to the next step automatically.
2. Add Annotation – Sets edit/selection/visibility environments and allows you to add annotation as "Text". Press the  button when finished.

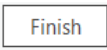
**Add Distance Anno:** Adds Distance Annotation when placed near a taxlot\_line with CoGo attributes.

1. Display Cogo Lines - Displays taxlot\_lines with CoGo Attributes (in blue) and moves to the next step automatically.
2. Add Annotation – Sets edit/selection/visibility environments and allows you to add annotation as “Text”. Press the  button when finished.




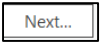

**EditAnno:** Sets the visible, selection, and display environment and allows you to move, rotate, scale, or change annotation.

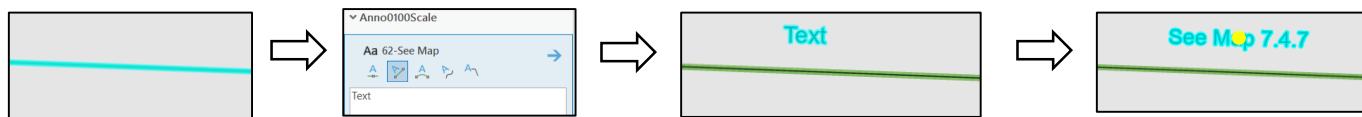


**Add/Remove Parentheses:** Select annotation then adds or removes the parentheses when  button pressed.



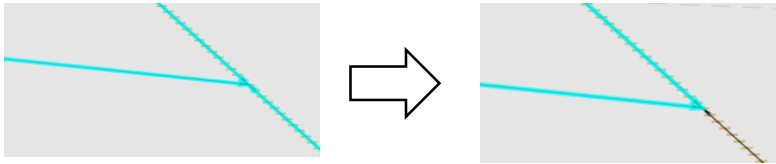
**AddSeeMapAnno:** Sets the visible, selection, and display environment and assists with adding SeeMap annotation.

1. Select Mapindex Polygon – Select the mapindex polygon of the adjacent map that will be used for the SeeMap then press  button.
2. Add the SeeMap Annotation as Text then press  button.
3. Move the Annotation then press  button.



Add Anno From Label Tool / Create DD Anno From Labels: The Add Anno From Labels Task runs the “CreateDDFromLabelsTool” and is independent of annotation feature class as the user will be able to select that the scale based on the map selected. The CreateDDFromLabelsTool uses labels saved with the Taxlot\_Lines feature class to generate annotation from selected lines of the appropriate scale and position. Once the label option has been selected tool then runs a python script (AddDimAnno.py) to add the new features to the selected annotation feature class.

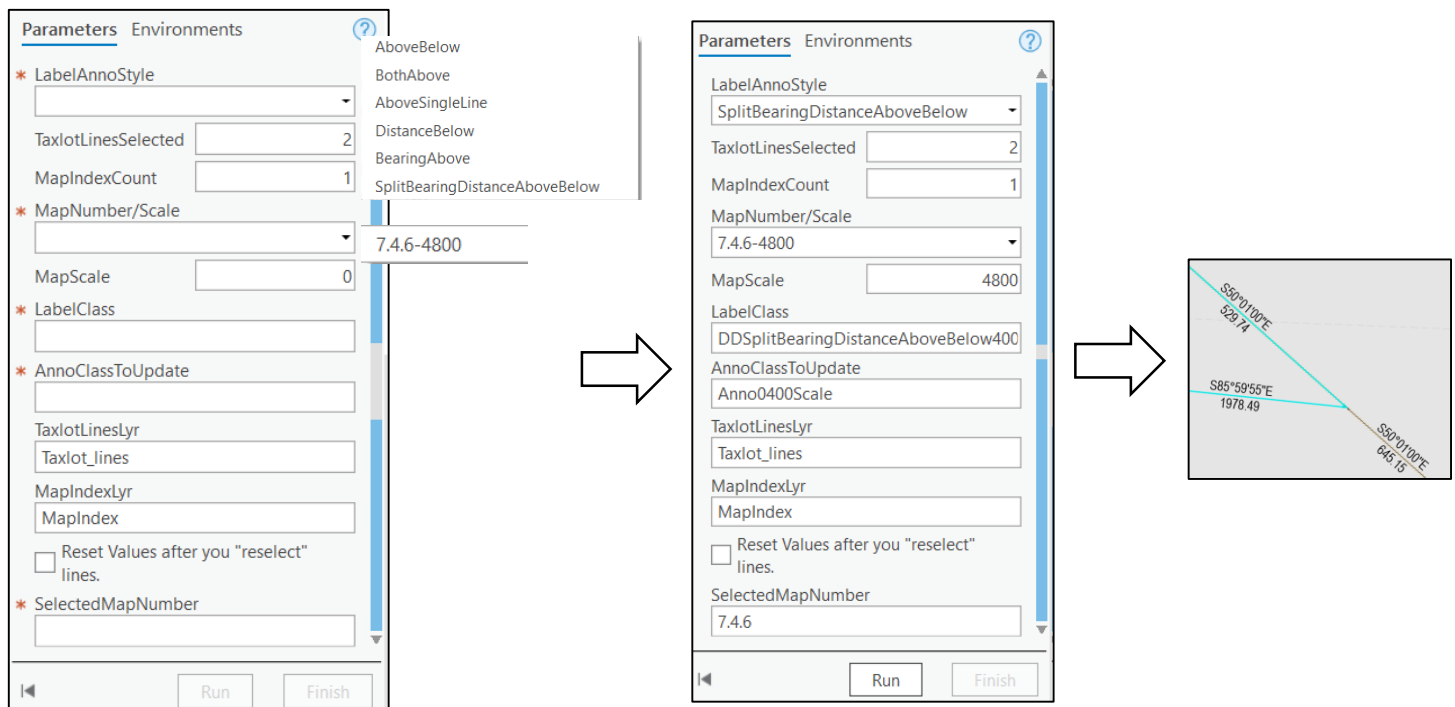
1. Select CoGO Taxlot Lines – Displays all features in the Taxlot\_lines layer that have CoGo attributes (automatically runs when task is started).
2. Select By Rectangle – Allows you to select the lines your interested in annotating and press the Next... button.



3. Enter the parameters for the CreateDDFromLabelsTool and press the Run button to execute it. While this menu appears complex there are really only TWO parameters that you can enter. The rest of the information is there a “helpful information”.

LabelAnnoStyle parameter allows you to choose what Label style from the MANY in taxlot\_lines that you can use. MapNumber/Scale Parameter lets you choose what map/scale will be used for annotating. This is important if your selected lines are on or cross a map boundary. Only one map can be used for annotating at a time.

When you have filled in these two parameters, the label select and scale will be appear on the map. You can change the style at any time. If you do not have the correct lines selected you can “reselect” the lines you wish to label and check the “Reset Values after you Reselect Lines” button. Once you have the desired map/scale and label style selected you can implement this by pressing the Run button.



Customization: You can customize this tool to include other label types by adding/modifying the labels in Taxlot\_lines and updating the parameters list in the “CreateDDAnnoFromLabels” Tool.

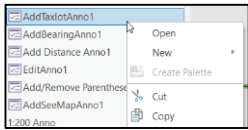


Customizing the Annotation Tasks: Making a copy of a task and changing it to work with a new feature class. Note: To change tasks you should have a basic understanding of tasks and arcade.

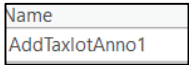
1. Option the Task Contents Menu and open the task designer.



2. Right click on the task and use copy and paste to make a copy of the desired task.



3. Use the task designer to change the name of the task and upate and documentation.



4. Open the task and edit the steps impacted. For each step change the Contents to ensure the correct feature classes are visable, selected, and editable as well as change the snap and label environments.

Anno0100Scale	✓	✗	✗	✗	—
Anno0200Scale	✓	✗	✗	✗	—
Anno0400Scale	✓	✗	✗	✗	—
Anno2000Scale	✓	✗	✗	✗	—
TaxlotNumberAnno	✓	✓	✓	✓	✓

5. Change the actions for each command so that the appropriate action acts on the correct layer. (if you are going to use an edit layer use the layer contents menu to ensure the layer of interest is the only one that is selectable and editable.



6. To change “Create” edit the action and make changes as needed.
7. If needed change the “Calculate” step actions to ensure the correct layer and and attribute are impacted.



8. Save your changes and test.