How to Create a Map Layout ArcGIS Pro

Training

A few notes on creating map layouts in ArcGIS Pro:

- An ArcGIS Pro project file can support multiple map layouts. Layouts can be copied between projects.
- Existing ArcMap layouts can be imported into Pro (Insert > Import Map).
- ArcGIS Pro allows the creation of project templates, which can include maps, layouts, data layers, and database/server connections. For more information, refer to the ArcGIS Pro Create a project template documentation.
- A map series can be built to create a set of map pages by using a single layout and iterating over a set of map extents. For more information, refer to the ArcGIS Pro Map Series documentation.

Prepare Map

1. Before creating a map layout, review your map:
   - Review symbology. The most important layers or features should be the most prominent.
   - Review or experiment with basemap options.
   - Review layer name and wordings as they appear in the Contents pane (this is now they will appear in a legend).
   - If needed, add labels by right-clicking the layer and selecting Label.
   - On the Map tab of the ribbon, click **Bookmarks** > **New Bookmark** to create a spatial bookmark of your map extent.

Insert a New Layout and Add Margin Guides

1. On the ribbon, click the **Insert** tab.

2. Click **New Layout** and select a layout. Notice the different options.
   - If the subject of the map is wider than it is tall (e.g., Maryland), use one of the ANSI – Landscape options.
   - When the subject of the map is taller than it is wide (e.g., Baltimore County, Calvert County), use one of the ANSI – Portrait options.

3. Right-click the top ruler and select **Add Guides**…

4. Set up margins from each edge. Set the **Add Guide** dialog as shown. To set up 0.25" margins:
   a. **Orientation**: Both.
   b. **Placement**: Offset from edge.
   c. **Margin**: 0.25 in.
   d. Click **OK**.
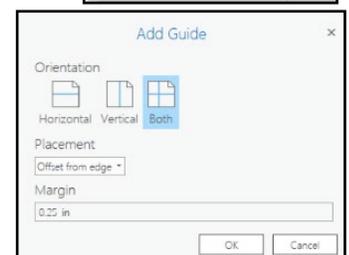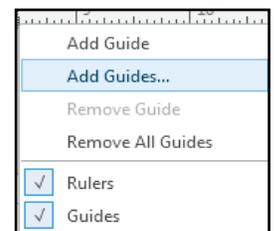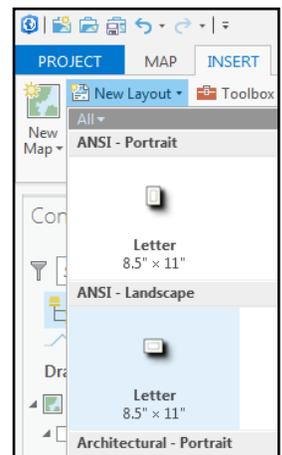
Add and Re-Size Map

1. On the ribbon, click the **Insert** tab, click the down arrow below **Map Frame:**
   a. If you've created a bookmark you will be able to select it here.
   b. Otherwise, select the image with the ratio scale. Your scale may be different than the scale represented in the image.

2. The cursor will change to crosshairs.
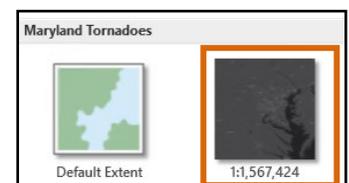
3. Hover your mouse over a corner of the layout, left-click and drag to the opposite corner margin. It can snap to the guides that were just created. The map can fully extend to all margins (but that may not be necessary depending on the extent of the map, orientation of the layout page, or other elements to be included, etc.).

4. To adjust what the map is showing, go to the **Layout** tab on the ribbon. Click **Activate**. You will now be able to use map navigation tools to zoom or pan to the desired extent.

5. When satisfied, click the ← **Layout: Map Frame** back button (top left corner of the Layout pane) to lock the map extent and return to the map layout.
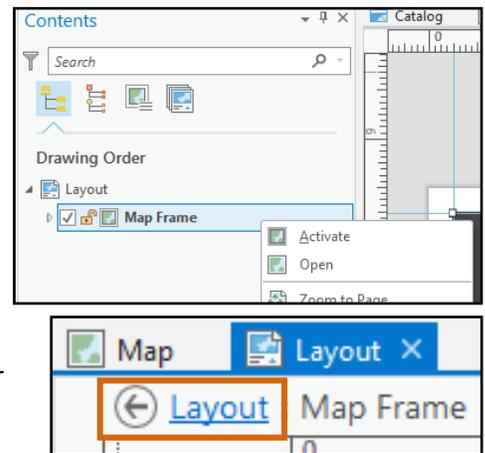
Add Map Elements

Map elements such as text, legend, and scale bar can be added to your layout. Review the tips below for working with map elements:

- Every element that is added to the map also appears as an entry in the Contents pane.
- Elements can be turned off and on like map layers.
- The lock icon in the Contents pane can be used to lock elements so they are not inadvertently moved or selected.
- Map elements can placed on top of or behind other elements by changing their order in the Contents list (List by Drawing Order).
- When map elements are selected, additional tabs, such as Format and Design, appear in the ribbon. These can be used to modify the appearance of the map element.

1. Prior to adding map elements, ensure that the map frame is not activated.
   a. When the map frame is not activated, the Insert tab of the ribbon will show map elements that you can begin to add (i.e., North Arrow, Scale Bar, Legend, Charts, etc.)

   b. When the map frame is activated, there will be a ← **Layout: Map Frame** back button (top left corner of the Layout pane). Click this to lock the current layout extent and proceed with adding map elements.

Text

This element is used to add any text to the map including title, data sources, credits, dates, and other explanatory text.

1. From the ribbon, select the **Insert** tab.

2. From the **Symbol** dropdown, scroll to the bottom and select an option for a title (from the Layout section).
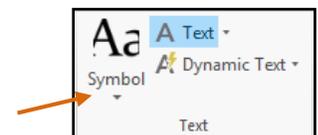
3. Select **Text** A Text . Click on the map and the word **Text** will appear in the style you selected. Delete the word Text and enter a title. Click outside the text box when finished.

Note: If Pro detects a spelling mistake while in a layout, the word will be underlined in red. Double-click the text box and right-click the word underlined to see the spelling suggestions.

4. To alter the font, size or color of the text, click to select the text box. From the ribbon, click **Format**. If desired, change the title font, color or size.
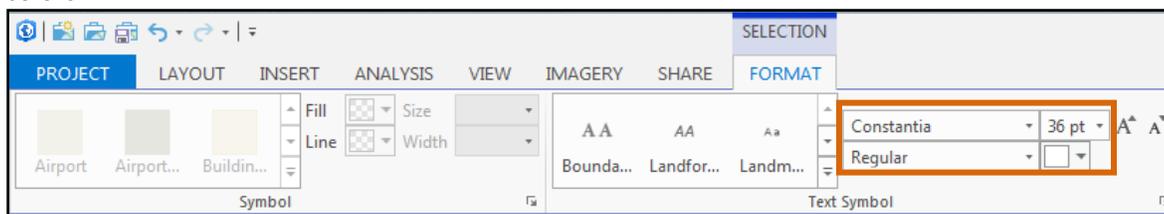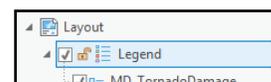
Legend

1. From the ribbon, select the **Insert** tab.

2. From the **Map Surrounds** group, click **Legend**. Click and drag a box anywhere on the layout. Release to generate the legend. The new legend will appear on the map, and as an entry in the Contents pane.

3. Customize the legend:
   a. In the Contents pane, click the arrow to the left of Legend.
   b. Uncheck layers to remove from them from appearing in the legend. The legend will update.
   c. To change how layer name and headings appear in the legend:
      i. Right-click layer under Legend.
      ii. Select **Properties.**
   iii. Uncheck the box next to **Layer Name** in the Format Legend pane.
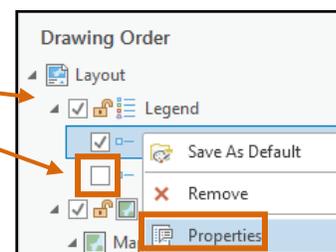
4. To further modify the legend, ensure **Legend** is selected in the Contents pane. It will be highlighted in blue. Click the **Format** tab on the ribbon to change the font, font size, and colors.

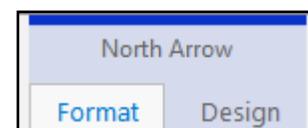5. Re-size and position the legend as needed.

Scale Bar

1. From the ribbon, select the **Insert** tab. Click the dropdown arrow below **Scale Bar**. Select a line or bar.

2. Click and drag a box anywhere on the layout. Release to generate the scale bar.

3. To modify divisions, subdivisions, frequency and position of the scale bar, click the **Design** tab on the ribbon.

4. To modify the color of the scale line and distance labels, click the **Format** tab on the ribbon.

5. Re-size and position the scale bar as needed.
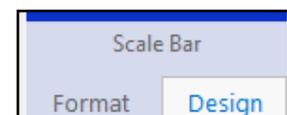
North Arrow

Note: Depending on map purpose, audience, and familiarity, a north arrow may not be needed for a map of the US or Maryland. However, if the map has been modified so that north is not 'up' as most viewers expect, a north arrow is needed!

1. Go to the **Insert** tab. Use the **North Arrow** dropdown to select a north arrow style. Click and drag a box anywhere on the layout. Release to generate the scale bar

2. To modify color, style or size, click the **Format** tab on the ribbon**.**

3. Re-size and position the north arrow as needed.

Insert Image

1. From the ribbon, select the **Insert** tab.

2. In the Graphics group, click **Picture**.

3. Click anywhere on your map. An **Insert Picture** window will appear. Navigate to the location of the image. Click **Open**.

4. Re-size and position the image as needed.

Insert Grid

Grids are evenly spaced horizontal and vertical lines used to identify locations on a map.

1. In the Contents pane, select the Map Frame. It will be highlighted in blue.

2. From the ribbon, select the **Insert** tab.

3. In the Map Frames group, click **Grid**. Select a grid to add to the map layout.
    *   A **graticule** displays coordinates in latitude and longitude.
    *   **Measured grids** are used as a reference for projected coordinates.
    *   A **reference grid** divides a map into labeled, equal-area rectangles.

Note: If the Grid button is grayed out, ensure the Map Frame is selected in the Contents pane.

4. To further customize the grid properties such as the frequency of gridlines or labels, right-click the grid in the Contents pane and select **Properties**.
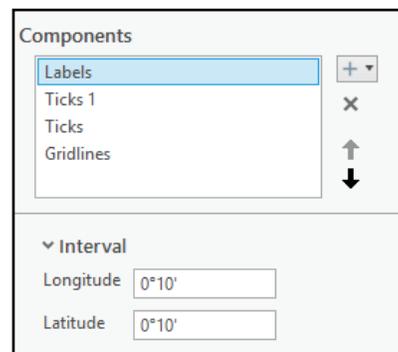
Finalize Map Layout

Take a few minutes to adjust and align the legend, scale bar, north arrow, and supplementary text items. As you move these map elements, dotted lines appear in the layout to help center or align them.

Export Map

1. From the ribbon, click the **Share** tab.

2. From Export, click **Layout**.

3. Navigate to the save location for the export, and enter a file name.

4. For **Save as type** select PDF or another image format from the dropdown. Click **Export**.