

ArcGIS .SHP to AutoCAD .DXF

For points follow 1 only; insertion points created in step 1 are adequate markers for point features. For polygon and line features follow all listed instructions.

1. Create the text annotation (ArcGIS Pro)

Use the Feature To Point tool to create a new point feature class from an existing polygon feature layer (necessary for polygons and lines only).

- First locate the toolbox under the analysis tab, which is where you will be able to find all the necessary tools for these steps.
- Drag the polygon feature class from the table of contents or **Catalog** window into the **Input Features** text box or use the browse button to navigate to the source data and click **Add**.
- Click the **Output Feature Class** browse button, navigate to a geodatabase, type a name for the new feature class, and click **Save**.

Add reserved CAD fields to the attribute table of the newly created layer. The CADType field specifies the type of CAD entity to be generated. You will use the **Field Calculator** to specify the keyword "TEXT".

- Right-click the feature layer in the table of contents and click **Open Attribute Table**.
- Click **Add Field** to open the dialog box.
- Type the field name **CADType** in the **Name** text box.
- Click the **Type** drop-down arrow and click **Text** to assign the data type.
- Click **SAVE, which can be found in the top ribbon**, to close the dialog box and create the field.
- Right-click the **CADType** field name in the attribute table so that the entire column is highlighted blue and select Calculate Field on the shortcut menu.
- Type **"TEXT"**, including the double quotes, in the **Expression** text box. - Click **OK** to run the tool.
- The CADType field now displays the value TEXT for all records.

Adding the field TxtValue. The TxtValue field specifies the value to be generated for each text entity. You will use the **Field Calculator** to calculate a value from an existing attribute.

- In the same attribute table, select **Add Field** to open the dialog box.
- Type the field name **TxtValue** in the **Name** text box.
- Click the **Type** drop-down arrow and click **Text** to assign the data type.
- Click **SAVE** to close the dialog box and create the field.
- Right-click the **TxtValue** field name and click Calculate Field on the shortcut menu.
- Clear any existing values in the Expression text box.
- Double-click or enter the field name that contains the values you want to export as text. - Click **OK** to run the tool.
- The TxtValue field now displays the attribute values you will export as CAD text for each feature record.

Run the Export to CAD tool to export annotations

- Within the toolbox, find and open the Export to CAD tool.
- Drag the new point feature layer containing the reserved CAD fields from the table of contents to the **Input Features** text box.
- Click the **Output Type** drop-down arrow and choose a CAD format.
- Click the **Output File** browse button, navigate to a folder, type a name for the new CAD file, and click **Save**.
 - Or, accept the default path and filename.
- Click **OK** to run the tool and generate the CAD file.
- Verify your results by examining the CAD annotation feature class in the newly created CAD file dataset.

2. Export the polygons or lines associated with the text annotation (ArcGIS Pro)

Use the Export to CAD tool to export the polygons


- Select altered layer from the Input Features drop down.
- Select DWG version 2018.
- Leave the “Ignore Paths in Tables” checkbox selected.
- Under the Environments tab, select the current map coordinate system as the Output Coordinate System for the DXF.
- Select Run.

Double check to output DWG in available Autodesk software to ensure all of the data transferred correctly.

3. Place all entities on the same layer if needed (AutoCAD)

- If each text entity is on its own separate layer, they all need to be brought into the same layer. This can be accomplished easily by creating a new layer called something like "labels", then selecting all the text entities, right-clicking on them to open the **Properties** pane, and changing the **Layer** attribute to the newly created "labels" layer.
- Then, delete all the superfluous empty layers.
- If needed, do the same for the drawing containing the polygons.

4. Merge Layers (AutoCAD)

- Open one of the two drawings.
- Type “insert” in the command prompt.
- Browse for a file using this icon: 
- Select the other drawing you are trying to merge.
- On the prompt, specify insertion point as: 0,0,0

- NOTE: All the entities on the inserted drawing will be grouped. Make sure to explode them into separate entities by selecting them and typing “explode” on the command prompt.

5. Create DXF from DWG (AutoCAD)

- Type “saveas” in the command prompt.
- Under **Files of Type** dropdown, select: AutoCAD R 12/LT2 DXF (*.dxf)
- Files will now be saved in the location you chose.