Drawing Creation Tutorial

Copy & Paste Views with Associations

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SESSION 5

Copy and Paste Views with Associations

Objective

By the end of this session, you will be able to:

- Copy and paste views with associated volume and filter and keep associations
- Report coordinate values from an alternate CS rather than the "default" Global CS

Overview

Smart 3D allows you to report coordinate values with reference to alternate coordinate systems than the ones used while placing objects in the model. It is a common practice to set up a plant monument coordinate system to get the desired coordinates on all deliverable documents, such as orthographic drawings, isometric drawings, and spreadsheet reports. For composed drawings, you can select the plant monument coordinate system on the property page of a graphical view.

In the previous session, we learned how to copy and paste views. If the views are associated to a volume or a filter, you can also keep the associations for a view while a view is being copied. This is useful when you need to show various views of the same set of model objects with different view properties, such as view style or orientation.

Now, we will place a view, choose a plant monument coordinate system, and associate it to a volume and filter. We will then copy and paste the view, changing the orientation. We will also use the **Align** command in SmartSketch Drawing Editor to align the views to each other in the sheet.

Define Workspace

1. Click **File > Define Workspace**.

   *The **Define Workspace** dialog box displays.*

2. Select **More** from the **Filter** list.

   *The **Select Filter** dialog box displays.*

3. Select the filter **Drawings Creation Filters\04\U01** and **U01 2 Points** on the **Select Filter** dialog box.

4. Click **OK** on the **Select Filter** dialog box.

5. Click **OK** on the **Define Workspace** dialog box.

   The software populates the workspace with modeled objects.

6. When the workspace query completes, click **Fit**  on the **Common** toolbar.

The software fits all the objects into the graphic view.

Create New Drawing

1. On the **Common Views** dialog box, select the node that changes the look direction to **Looking NE and Down**.
2. Click **Fit** .
3. Switch to the **Drawing Console** window.
4. Expand the **Creation Labs\04** folders. Right-click on the **Piping** node, and select **New Drawing**.

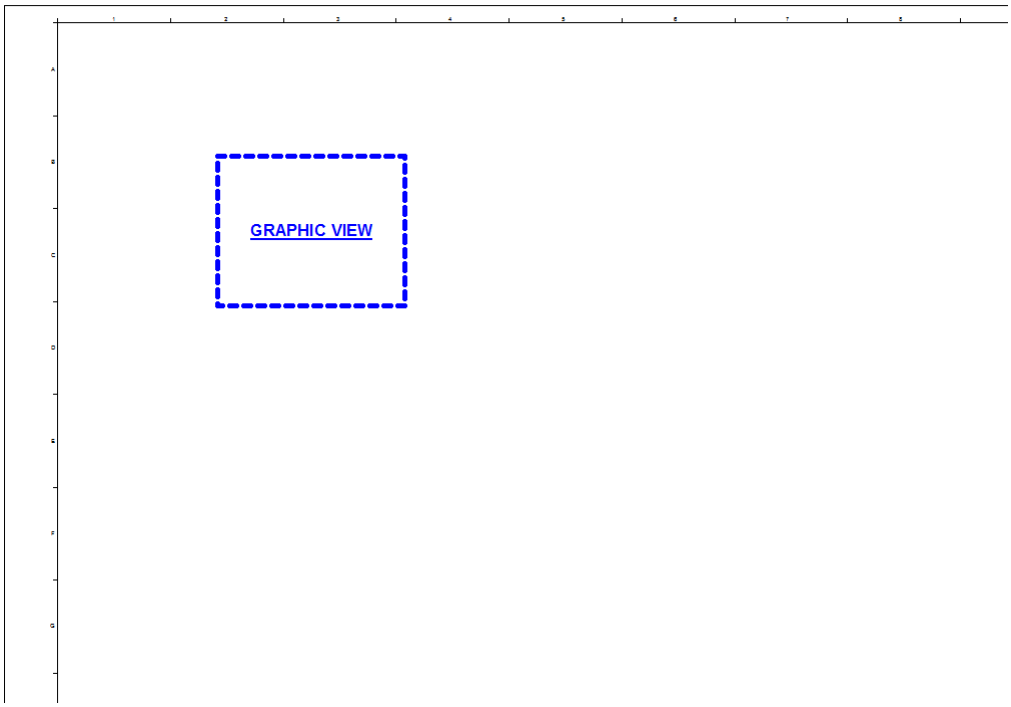
   *The **Drawing Sheet General Properties** dialog box displays.*
5. Type **U01 Views** in the **Name** field on the **Drawing Sheet General Properties** dialog box.

   TIP The **Layout Template** and **Border Template** fields remain populated, so you do not need to edit them.
6. Click **OK** on the **Drawing Sheet General Properties** dialog box.
7. The software opens the new drawing in a **SmartSketch Drawing Editor** window.

Place Drawing View

1. Maximize the drawing window in **SmartSketch Drawing Editor**.
2. Click **Fit** .
3. Click **Place View** .
4. Drag a rectangle about 4" square that is approximately centered in the top left quadrant of the drawing sheet.

*After placement of the view, the **Drawing View Properties** dialog box displays.*



5. Select **More** from the **Style** list on the **Drawing View Properties** dialog box.

   *The **Select View Style** dialog box displays.*

6. Select **Orthographic\Piping Plan Style2** on the **Select View Style** dialog box.
7. Click **OK** on the **Select View Style** dialog box.
8. Type **Piping Plan View04** in the **Name** field.
9. Select **Plant_Monument_CS** from the **Annotation Coordinate System** list.

   TIP The **Annotation Coordinate System** specifies the reference coordinate system for the labels in the view. If the field is blank, it uses the **Global Coordinate System**.

10. Select **ISO Scales** from the **Scale Family** list.
11. Select **1: 100** from the **User Selected Scale** list.
12. Click **OK** on the **Drawing View Properties** dialog box to complete the view definition.

Associate View to Volume and Filter

1. Click the view just placed, and click **Associate Objects to View** .
2. Switch to the **Smart 3D** window.

   *The **Associate Objects to View** ribbon displays in the modeling environment.*
3. Click the volume **U01 2 Points** in either the graphic window or on the **Space** tab of the **Workspace Explorer.**

   The volume in the model is outlined with heavy yellow edges.
4. Select **Drawings Creation Filters\04\U01 Drawing** from the **Filter** list on the **Associate Objects to View** ribbon.
5. Switch to the **SmartSketch Drawing Editor** window.

   The graphic view has grown about its center to resize to the scaled dimensions of the volume.
6. Right-click the view boundary once to exit the **Associate Objects to View** command.

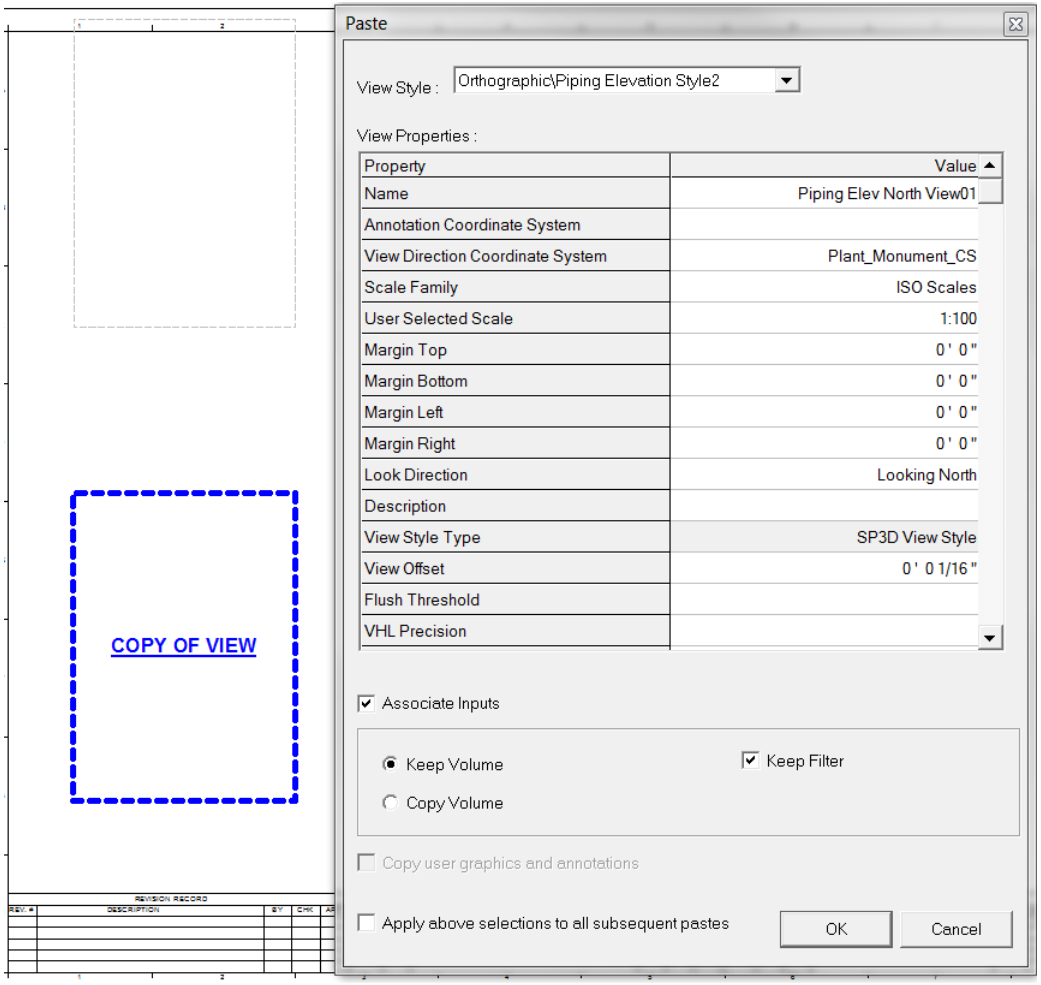
Copy and Paste Views

1. With the view still selected, click **Copy and Paste View** .
2. Click within the border area below the original view.

   *The software places the new view, and displays the **Paste** dialog box.*
3. Select **More** from the **View Style** list on the **Paste** dialog box:

   *The **Select View Style** dialog box displays.*
4. Select **Orthographic\Piping Elevation Style2 o**n the **Select View Style** dialog box.
5. Click **OK** on the **Select View Style** dialog box.
6. Type **Piping Elev North View01** in the **Name** field.
7. Select **Looking North** from the **Look Direction** list.
8. Ensure that **Associate Inputs** is selected.
9. Ensure that **Keep Volume** and **Keep Filter** are selected.

10. Clear **Apply above selections to all subsequent pastes**.



11. Click **OK** on the **Paste** dialog box.

    The software places the new view. At this point, a second view is attached to the cursor and ready to place.

12. Click within the border area to the right of the original view to place the new view.

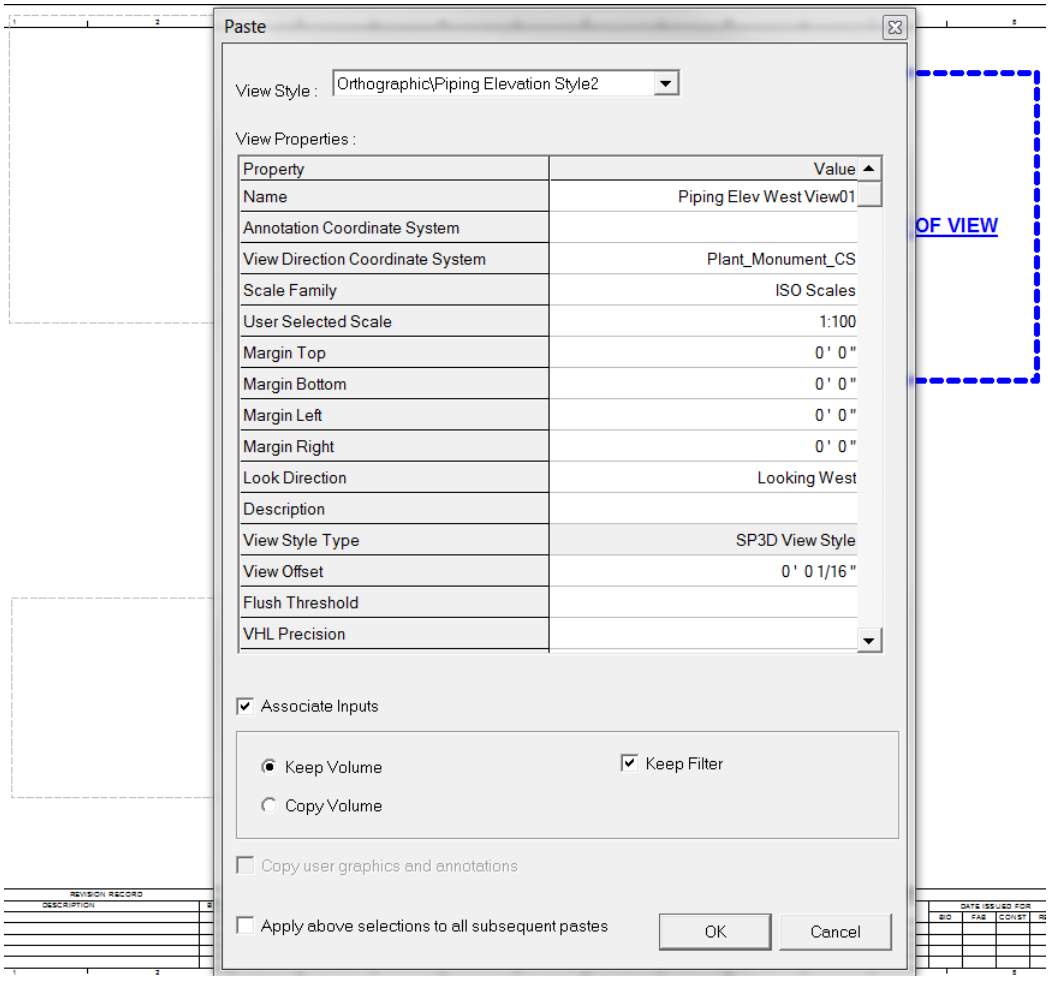
    *The **Paste** dialog box displays.*

13. Select **More** from the **View Style** list on the **Paste** dialog box.

    *The **Select View Style** dialog box displays.*

14. Select **Orthographic\Piping Elevation Style2**.
15. Click **OK** on the **Select View Style** dialog box.
16. Type **Piping Elevation West View01**in the **Name** field.
17. Select **Looking West** from the **Look Direction** list.
18. Ensure that **Associate Inputs** is selected.
19. Ensure that **Keep Volume** and **Keep Filter** are selected.

20. Ensure that **Apply above selections to all subsequent pastes** is cleared.



21. Click **OK** on the **Paste** dialog box.

    The software places the new view. At this point, a third view is attached to the cursor and ready to place.

22. Right-click to exit **Copy and Paste View**.

    The software resizes the two pasted views to match the scaled dimensions of the volume in the respective look-directions.

Align Views

1. Click **Change** on one of the horizontal toolbars.

   *The **Change** toolbar displays.*
2. Drag the **Change** toolbar to the toolbar area.

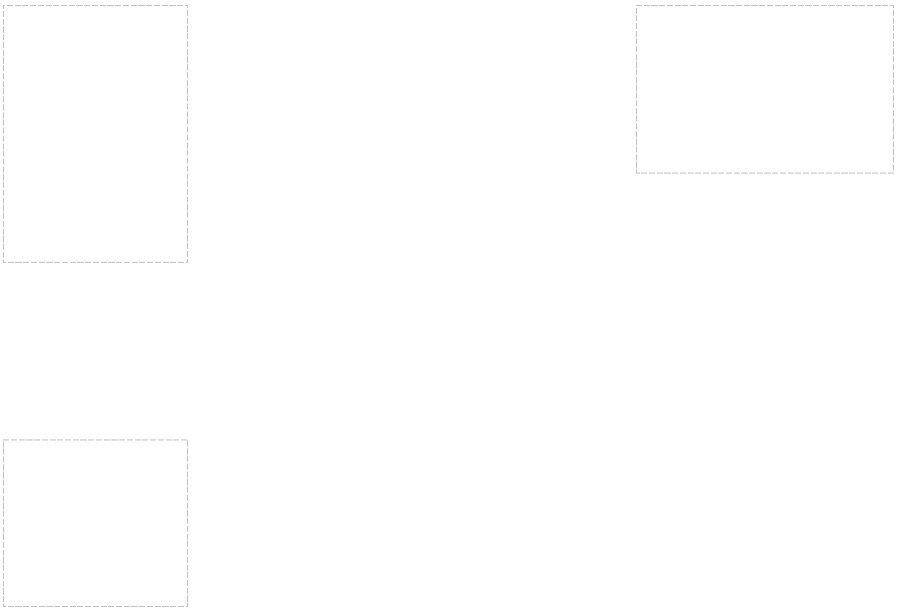
   The toolbar docks.
3. Click **Align** on the **Change** toolbar.

   *The **Align** ribbon displays.*
4. Drag a fence around the top two views to add them to a select set.

   *The buttons on the **Align** ribbon enable.*
5. Click **Align Top** on the **Align** ribbon.

   The two views align along their top edges.
6. Drag a fence around the leftmost views to add them to a select set.
7. Click **Align Left** on the **Align** ribbon.

The two views align along their left edges.



8. Click **File > Exit** to exit **SmartSketch Drawing Editor**. Click **Yes** to save the drawing.

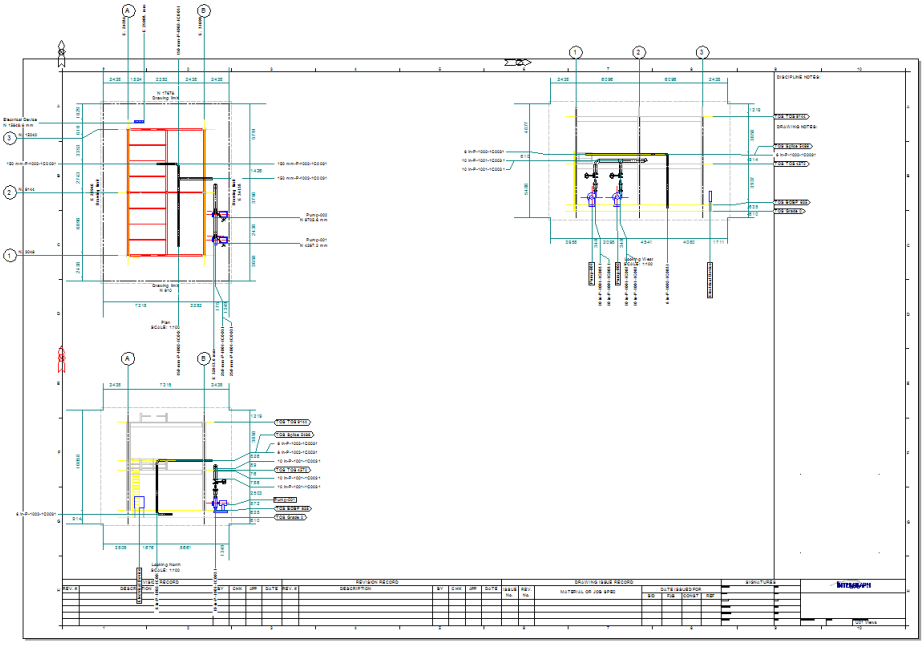
Update the Drawing

1. Switch to the **Drawing Console** window.
2. Right-click on the drawing **U01 Views,** and select **Update Now.**

   The software generates the contents of the graphic views as well as the border labels.
3. When the update completes (as shown by the status bar message in the lower left corner of the **Smart 3D** window), right-click on the drawing **U01 Views,** and select **Edit**.

   *The **SmartSketch Drawing Editor** window displays.*
4. Maximize the drawing window in **SmartSketch Drawing Editor**.
5. Click **Fit** .

The results should look similar to the picture below:



6. Click **File > Exit** to exit **SmartSketch Drawing Editor**. You do not need to save the drawing because you did not change it.