

LAB 16 - Create a Bridge General Layout Sheet at Different Scales

In this exercise, you'll create a General Layout sheet using the bridge graphics drawn earlier. The exercise will demonstrate how to create a sheet with graphics at different scales.

Chapter Objectives:

After completing this exercise you will know how to:

- Place a border at a 40-scale.
- Create saved views in the model file for referencing to the sheet.
- Reference plan graphics coincident-world at 1:1
- Reference saved-view section and detail graphics at different scales on the same sheet

Lab 16.1 - Setup Bridge Model File

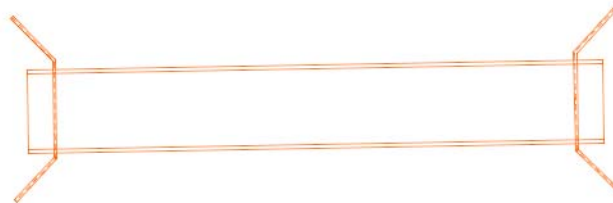
Open the bridge model file for plan

1. Start MicroStation.
2. Open the file CU12345BRDG_Model.dgn in the project's \Bridge\Working folder.

The blank bridge model file opens.

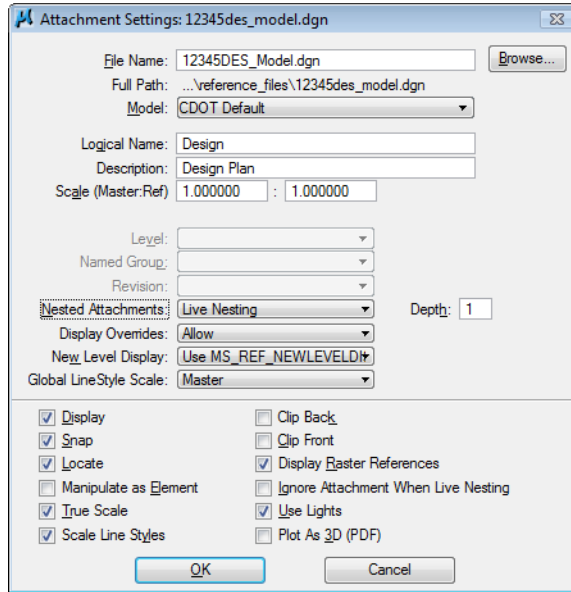
Reference the Design Model file

1. Open Level Display and turn on the BRDG_TOOLS_Outline-Bridge level.
2. Fit the view.



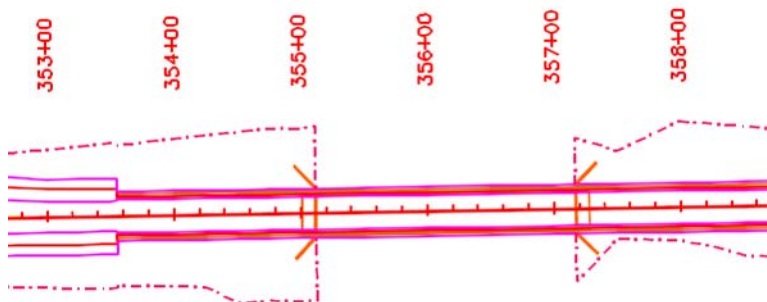
The proposed outline graphics for the bridge have been already created in plan view.

- Attach the 12345DES_Model.dgn from the project's \Design\Drawings\Reference_Files folder as shown. Attach Coincident-World at a Nesting Depth of 1. Do not attach raster references.



The design model is attached coincident to the proposed bridge graphics. A nested depth of 1 also references the Survey/Topo file (currently the Survey/Topo display is off). You will later reference the bridge plan to a sheet file.

- Zoom out** as shown.



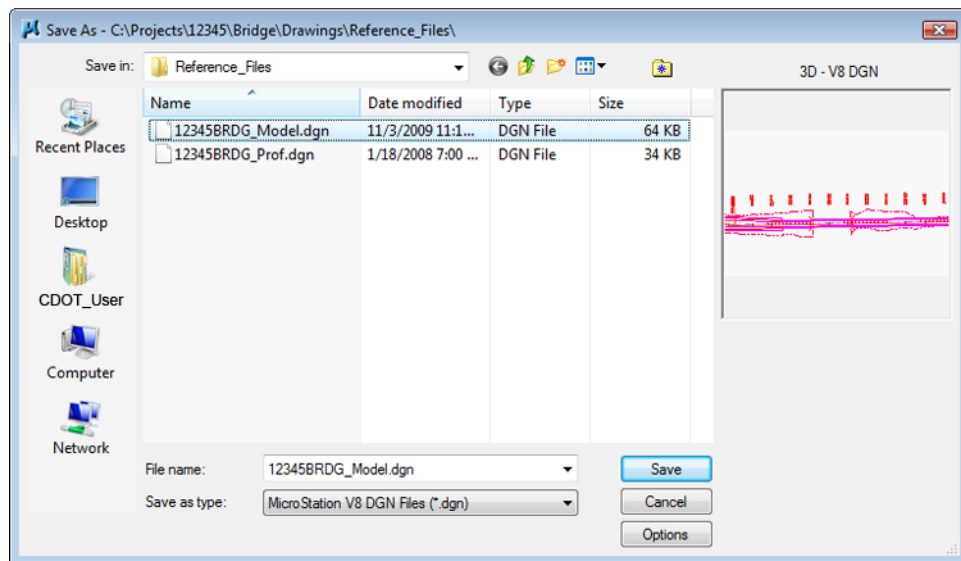
- Save Settings.**

Move the Bridge Model to the Reference_Files folder

Since the work in the model file is complete, move from the **Working** folder to the **Reference_Files** folder so that other groups can reference, if needed.

1. Select **File > Save As...**
2. Set the directory to **C:\Projects\12345\Bridge\Drawings\Reference_Files**
3. Remove the CU (CDOT User) initial prefix and rename the file to **12345BRDG_Model.dgn**.

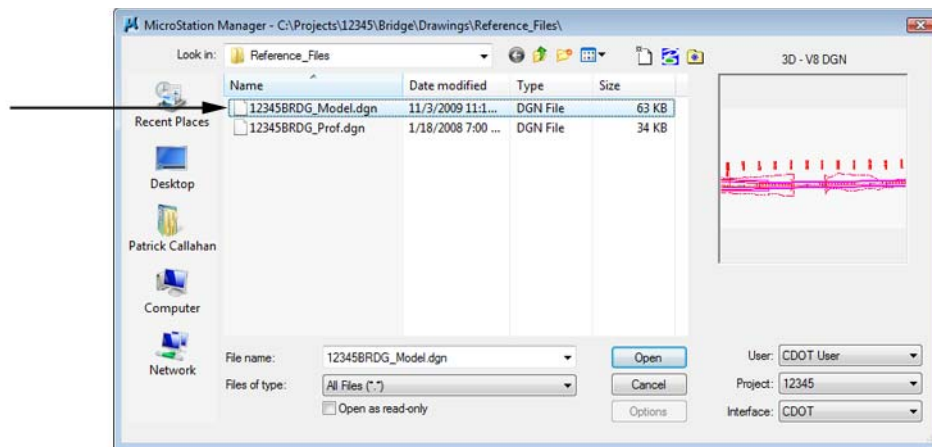
Note: Your initials are removed from the file when it is ready to transfer to the **Reference_Files** folder.



Note: The project template delivers standard dgn's for model and sheet files as starter files. You may be prompted to confirm saving over an existing file. Please use caution when performing these tasks as you could lose data. Be sure the files are empty or you are working with the latest files.

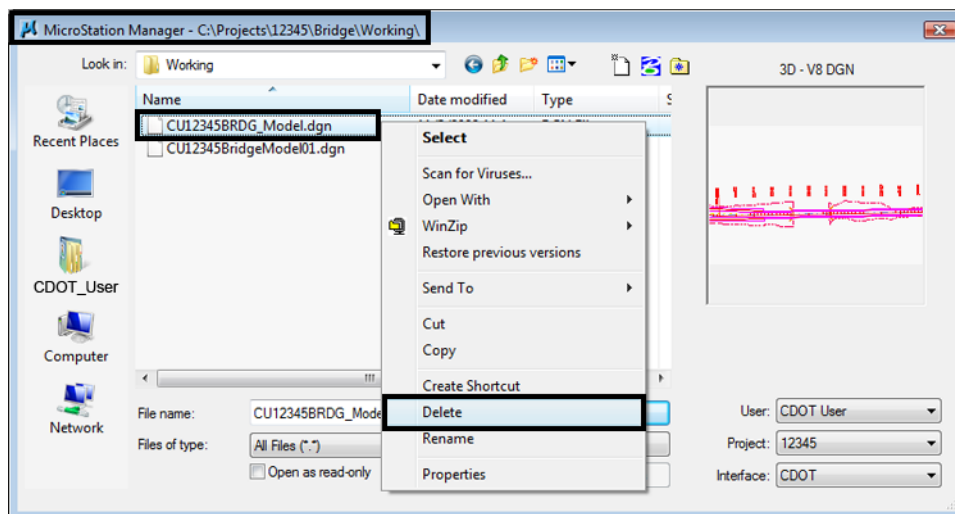
4. Select **OK** to save the file.
5. Select **File > Close** to return to the **MicroStation Manager**.

6. In the MicroStation Manager, verify your 12345BRDG_Model.dgn file was copied to Reference_Files folder.



7. Change the directory to \Bridge\Working.
8. Select the CU12345BRDG_Model.dgn from the Working folder. **Right** click on the file and select Delete.

Note: Make sure you select the BRDG_Model file and *not* the BRDG_Detail file.

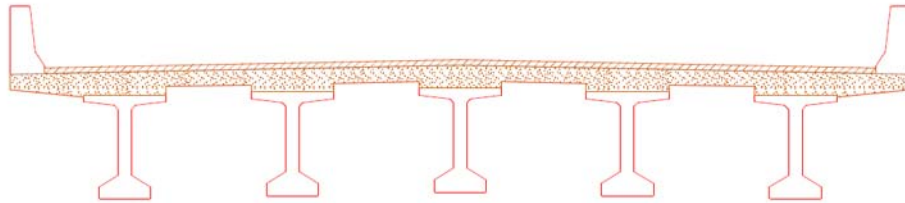


9. Select Yes to delete the working file if prompted to confirm deleting an existing file.

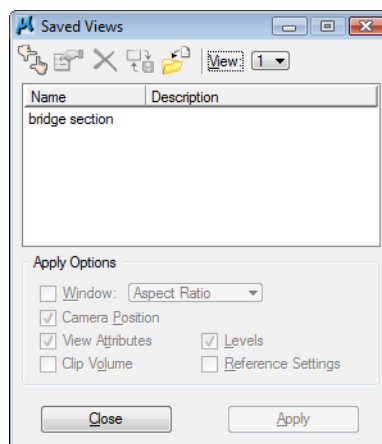
Open the bridge model file for section and details

1. Open the CU12345BRDG_Detail.dgn file from the C:\Projects\12345\Bridge\Working folder.
 - a. Create Saved Views
1. Fit the view.

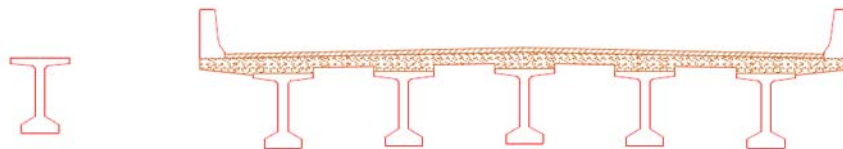
2. Make sure that only the section graphics are showing in the view. If not, **Window** around the bridge section. Be sure that the entire section encompasses the view and no other graphics are shown in the view.



3. Save the view by keying in **sv=bridge section**
4. When prompted, <D> to in the view to save it.
5. Select **Utilities > Saved Views** to open the **Saved Views** dialog box and verify that the view was saved.

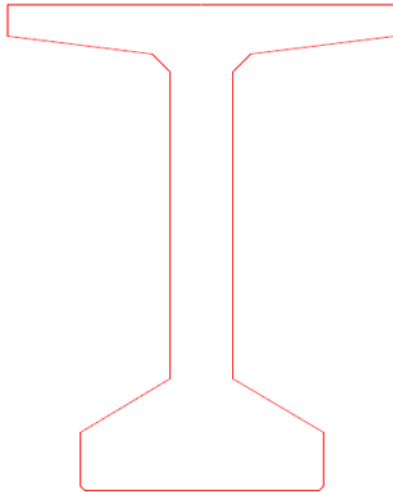


6. Make sure the **Graphic Group** lock is turned *off*.
7. Select the **Copy** command and copy one of the BT 54 girder cells to the approximate location shown (outside of the section saved view).



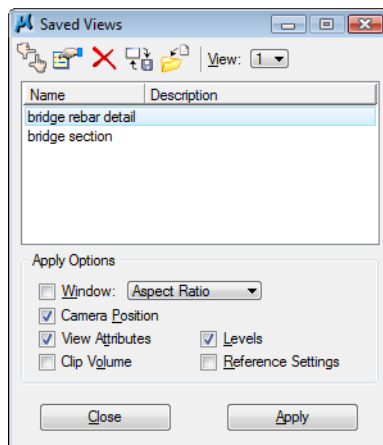
This will be used as a reference on your details sheet.

8. **Window** around the single girder you just copied to create a saved view for the girder detail. Make sure only the girder is shown in the view.



9. Key in **sv=bridge rebar detail** and <D> in the view to save.

Note: You can either use the **sv=** keyin or the dialog box option to create saved views.

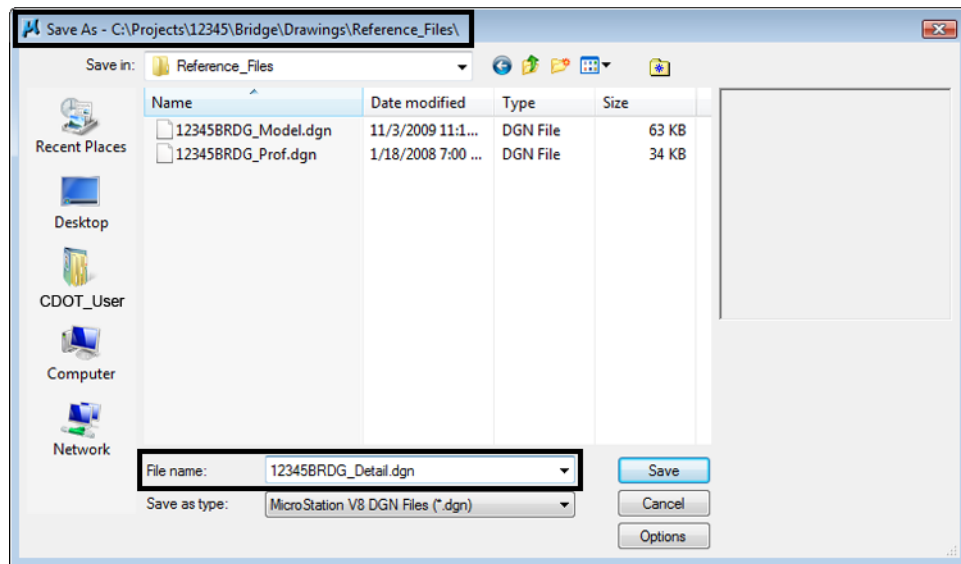


10. **Fit** the view.
11. **Save Settings**.

Move the model file to the Reference_Files folder

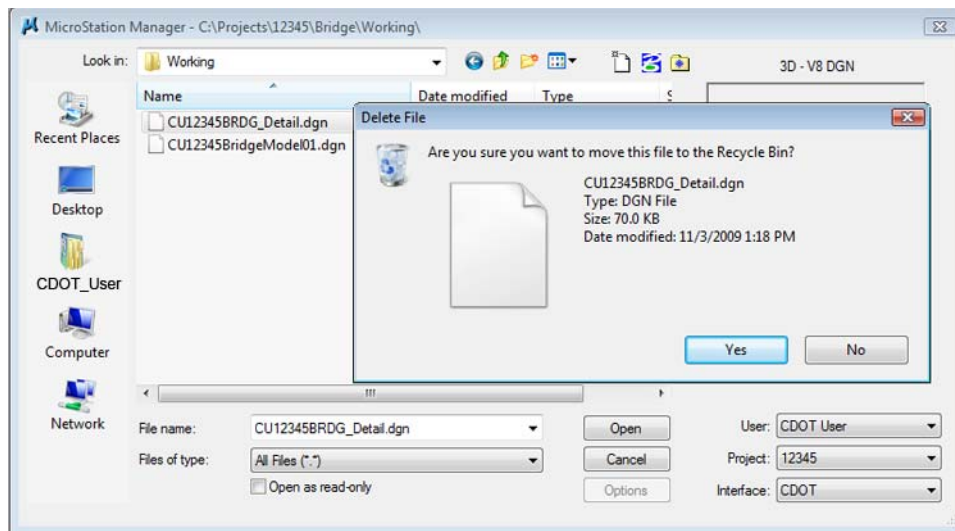
You're finished working in this bridge model file, so move it to the Reference_Files folder.

1. Select **File > Save As...**
2. Set the directory to **C:\Projects\12345\Bridge\Drawings\Reference_Files**
3. Remove the CU (CDOT User) initial prefix and rename the file to **12345BRDG_Detail.dgn**.



4. Select **Save** to save the file.
5. Select **File > Close** to return to the MicroStation Manager.
6. In the MicroStation Manager, verify your **12345BRDG_Detail.dgn** file was copied to Reference_Files folder.

- Change the directory to the **\Bridge\Working** folder. Right click on the file and select **Delete** to delete the **CU12345BRDG_Detail.dgn** file.



- Select **Yes** to delete the working file if prompted to confirm deleting an existing file.

Lab 16.2 - Create the Sheet File

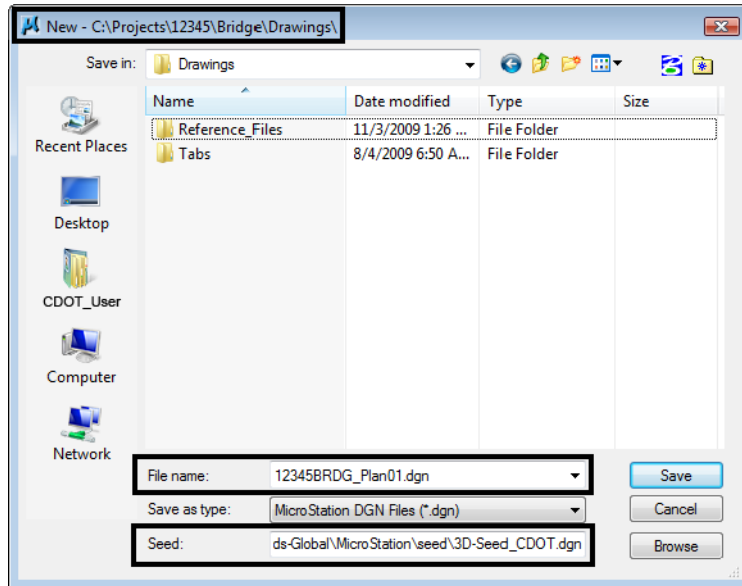
Create a new sheet file from a seed file.

- In the **MicroStation Manager**, set the folder location to **C:\Projects\12345\Bridge\Drawings**.
- Select the **New File** icon from the **MicroStation Manager**.



- In the **Seed File** section, choose the **Select** button.
- Select the seed file **3D-Seed_CDOT.dgn** and select **OK**.

5. In the Files field, key in the name **12345BRDG_Plan01.dgn**.



6. Select **Save**.

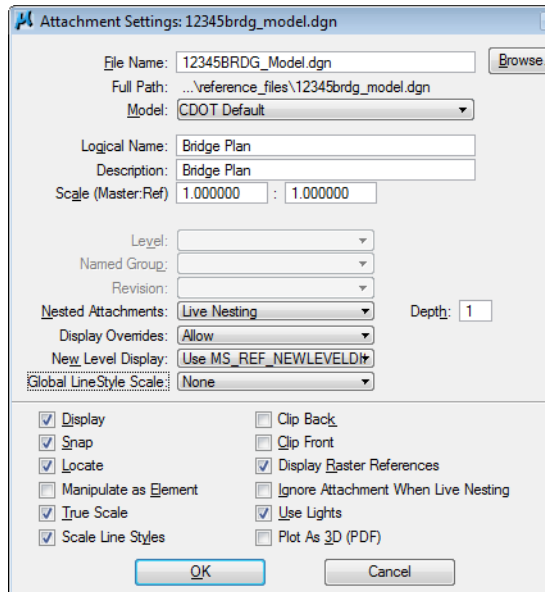
The file appears in the folder list.

7. Select **Open** to open the file.

The empty file is created with all of the Bridge default settings from the seed file.

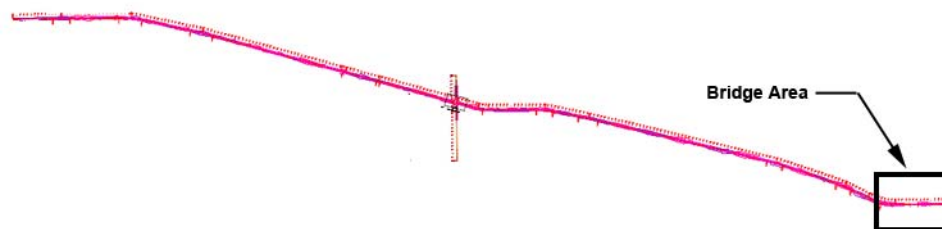
Reference the Plan graphics

1. Reference the 12345BRDG_Model.dgn file from the \Bridge\Drawings\Reference_Files folder.
2. In the **Attachment Settings** box, set the options as shown and select **OK**.

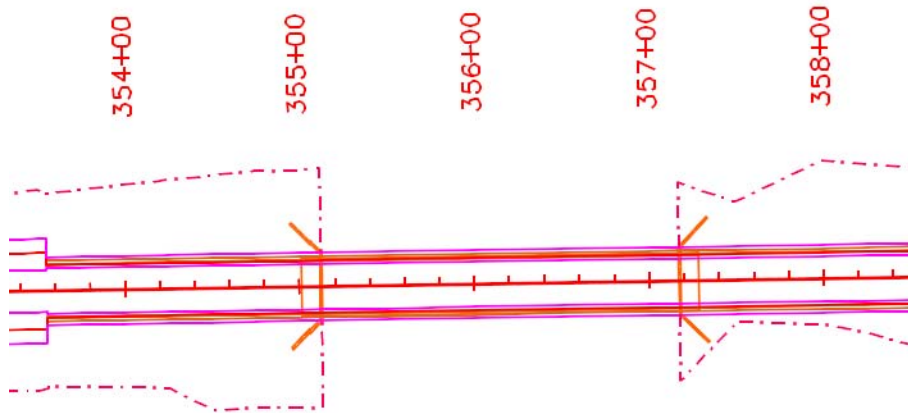


The bridge plan and the nested design reference are attached to the sheet file. Since you attached at a 1:1 scale and Coincident-World, all of the bridge plan graphics are in their true coordinate locations and actual size.

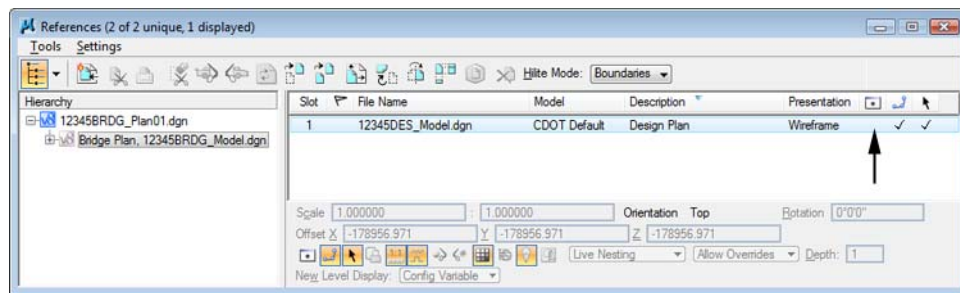
3. Fit the view.



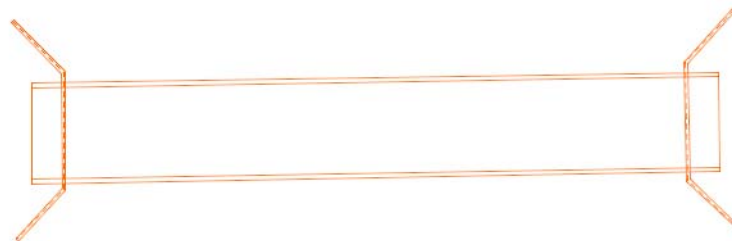
- Window in on the bridge area as shown.



- Toggle off the display of the Design reference.



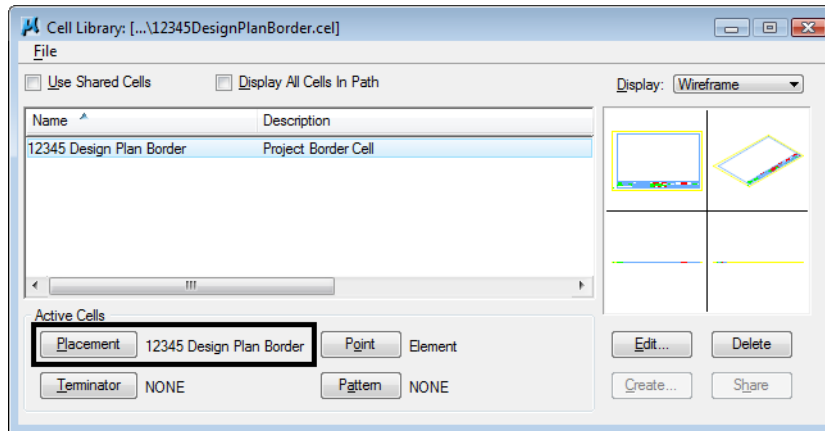
- Only the graphics from the Bridge model are shown.



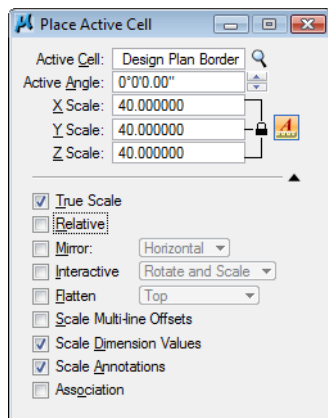
Place the border

With the bridge plan graphics in place, you can now place the border around them.

1. Select **Cells** from the **Primary** toolbar.
2. Select **File > Attach File** and attach the **12345DesignPlanBorder** cell library from the **C:\Projects\12345\Miscellaneous** folder.
3. Select the **Placement** option for this cell.

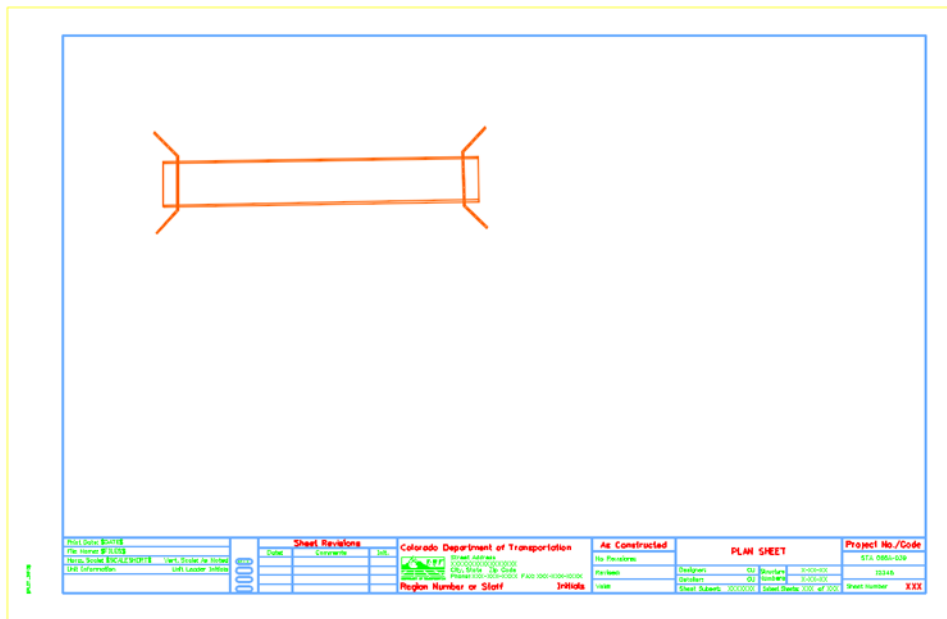


4. Select the **Place Active Cell** command and place the border at a 40 scale.

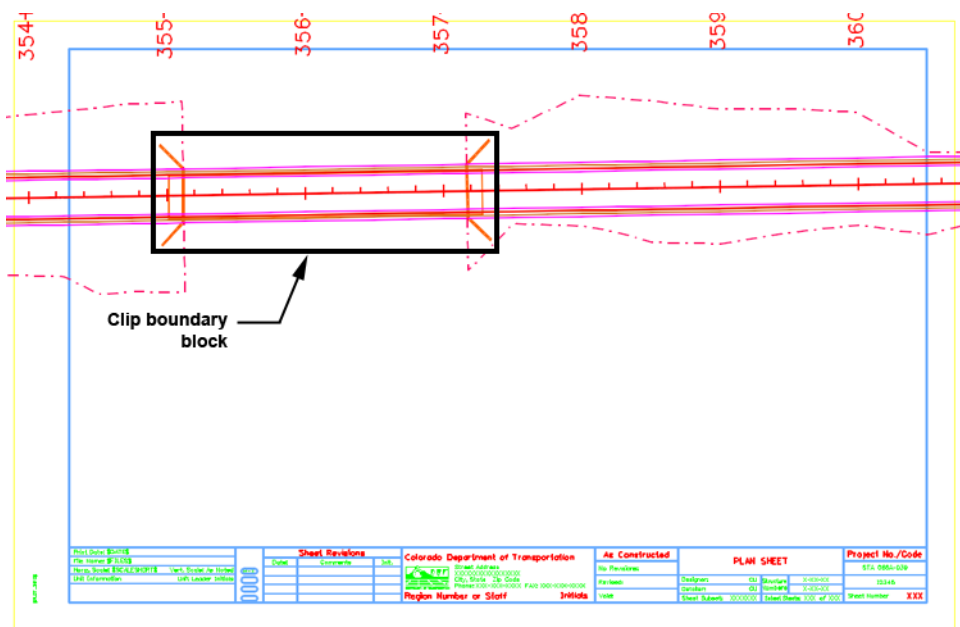


The border scale is the same as the plot scale of 1"=40'.

5. <D> to place the border in the location shown. Be sure to position the border so that the bridge plan is in the upper left corner.

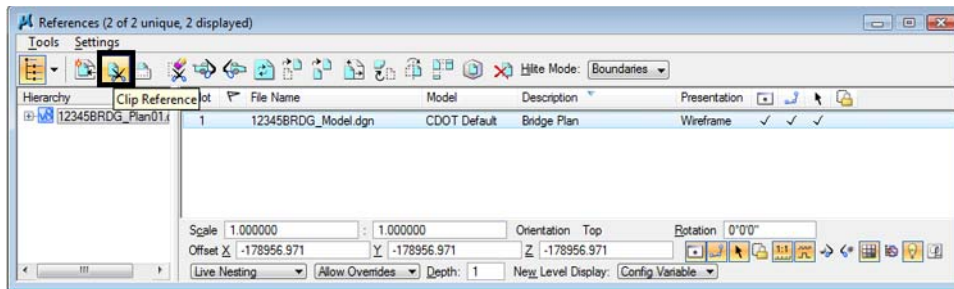


6. Turn on the display of the design reference.

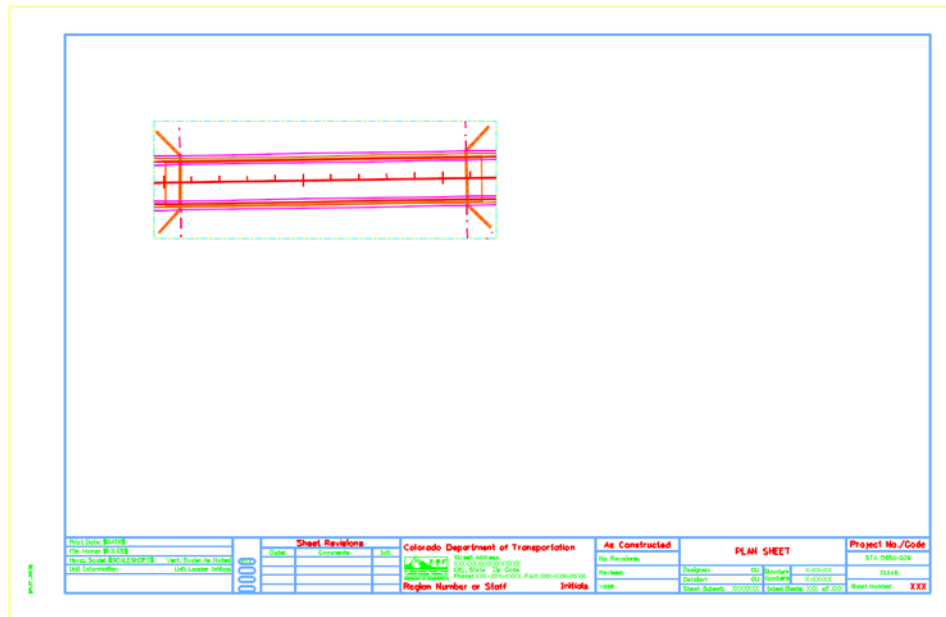


7. On the CDOT Menu Explorer, select **Drafting**.
 - ◆ Select the **Border** category.
 - ◆ Select the **Clip Boundary** item.
8. Select the **Place Block** command and place the clip boundary block as shown.

- From the **Reference** dialog box, select the Bridge model reference and then select **Tools > Clip Boundary**.



- <D>** on the clip boundary to clip the design model reference.

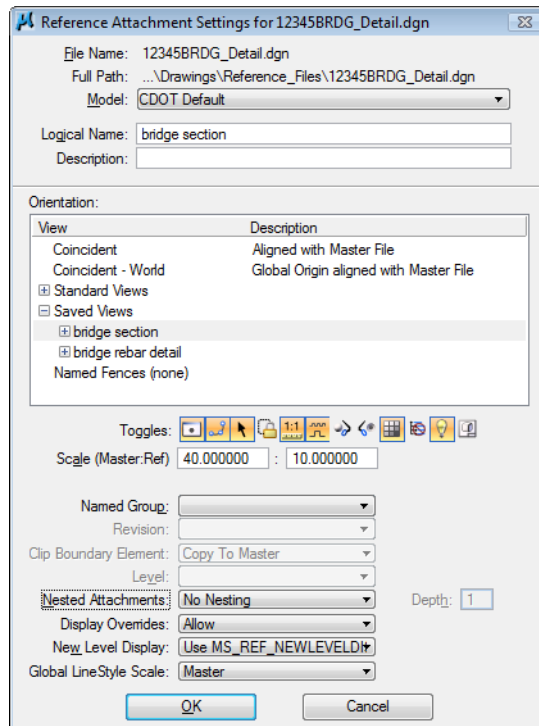


The bridge plan is now placed inside the border at the proper coordinates. Design graphics levels can be turned on/off as needed.

Reference additional graphics at various scales

Reference the typical section at a scale of 1" = 10'

1. From the References dialog, attach the file 12345BRDG_Detail.dgn from the \Bridge\Drawings\Reference_Files folder.
2. In the Attachment Settings box:

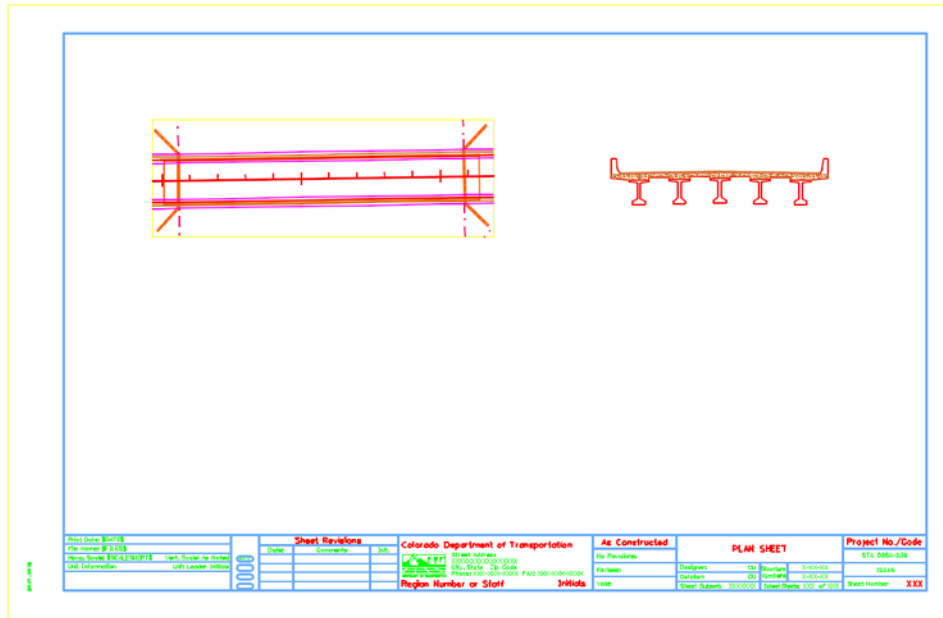


- ◆ Select the saved view **Bridge Section** (the logical name will update to the saved view name).
- ◆ Set the **Scale** to **40:10**

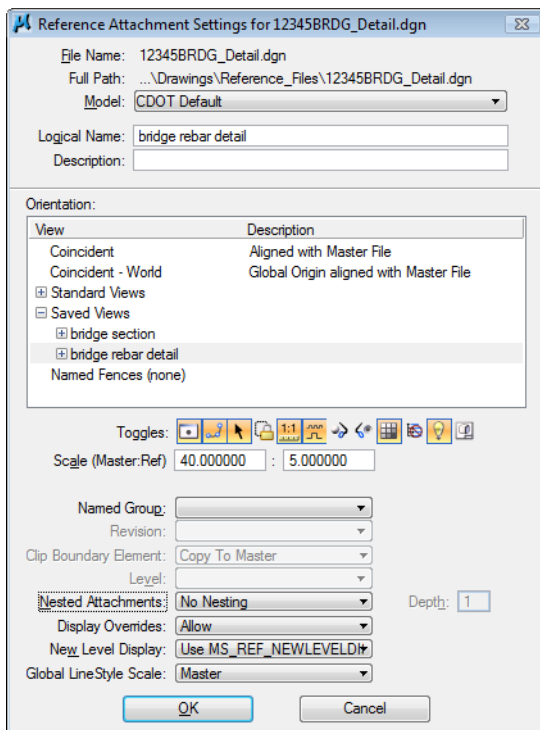
Note: When working with multiple scales, always key in the border scale in the first field (Master) and the detail scale in the second field (Ref). MicroStation will calculate the scale for you, or you could calculate it yourself and enter **4:1**.

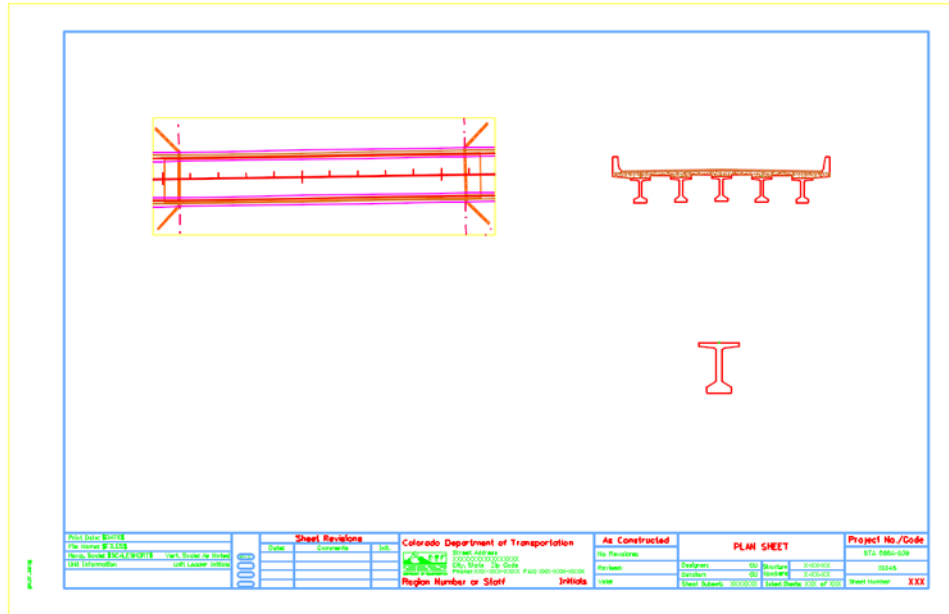
- ◆ Set the other options as shown.

3. Select **OK** and **<D>** to position the saved view reference in the location shown.



4. Reference the **12345BRDG_Detail.dgn** again and repeat the above process and reference the bridge rebar detail at a scale of 1"=5'.





Note: You'll annotate and dimension this sheet in the next lab.

5. Fit the view.
6. Save Settings.
7. Exit MicroStation.

