

CDOT Shaded Color and Grayscale Printing



This document guides you through the set-up and printing process for shaded color and grayscale Sheet Files. This workflow may be used any time the user wants to highlight specific areas for things such as phasing plans, public meetings, ROW exhibits, etc. Please note that the use of raster images (jpg, bmp, tif, etc.) will dramatically increase the processing time during printing.

Reference File Management

Adjustments must be made to some of the reference file settings in order to achieve the desired print quality. The settings that need to be changed are the Slot Numbers and the Update Sequence. Slot Numbers are unique identifiers assigned to reference files and can be called out individually or in groups within a pen table for special processing during printing. The Update Sequence determines the order in which files are refreshed on the screen and printed on paper.

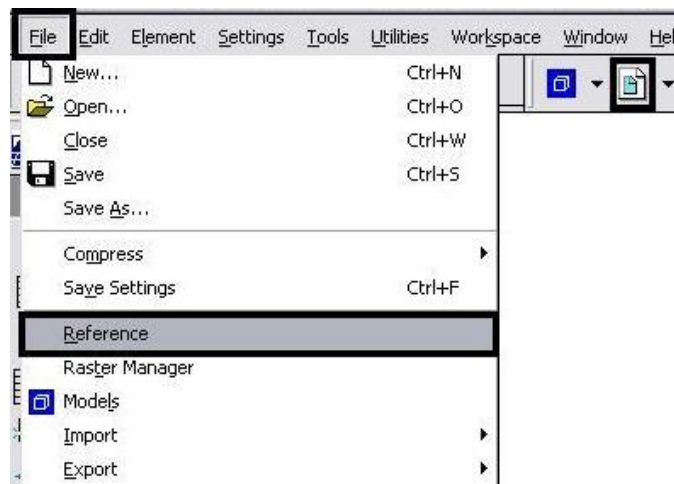
Reference file Slot Number Categories:

- 0 = Sheet File (black)(this is the active dgn file.)
- 1-99 = Proposed Primary Discipline (Black)
- 100-199 = Existing Topo (light gray)
- 200-299 = Proposed Other Discipline (dark gray)
- 300-399 = Color Shaded Areas

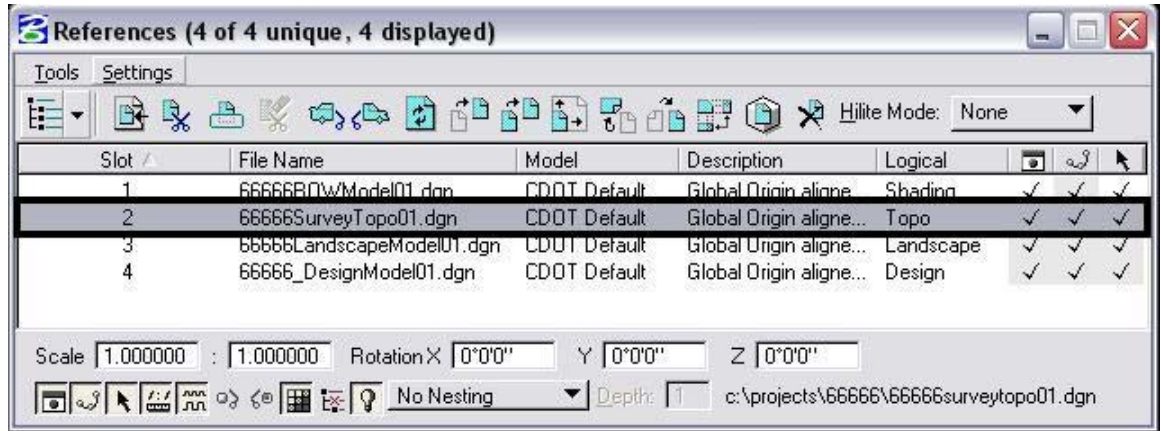
Note: All data placed in the Sheet File will be printed black. Items to be printed in color should be in their own file. Create a new file using the standard CDOT seed files and reference design elements to create color areas. If printing to a black and white printer all colors will be printed grayscale. Files can still be printed using the default printer drivers and pen tables, however shaded areas will lose their transparency and may print black depending on their level.

Assigning Slot Numbers

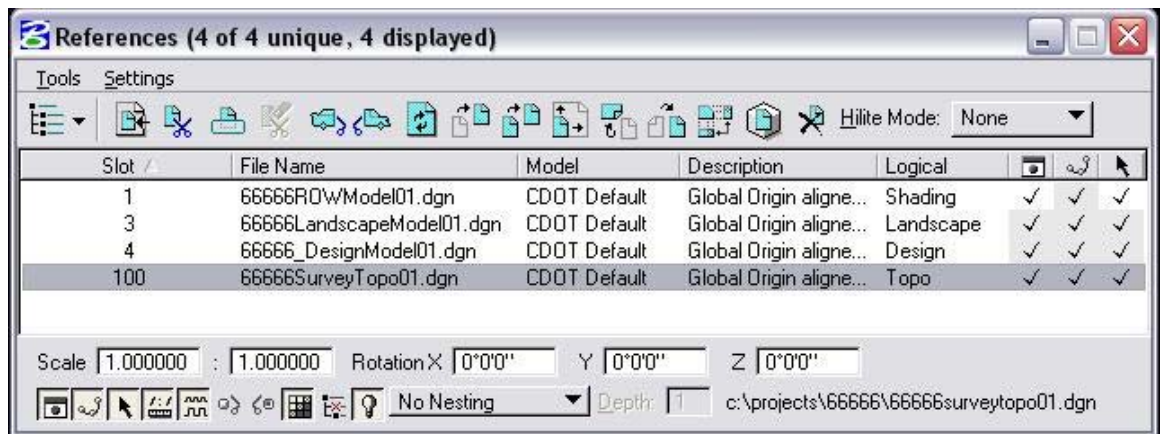
1. Open the Reference Files window by selecting **File > Reference** or select the **Reference** icon on the Primary toolbar.



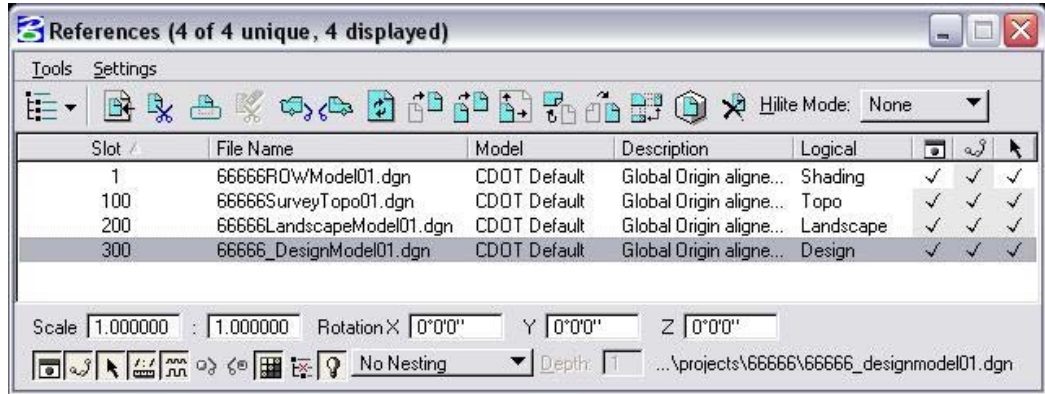
2. **Highlight** the desired reference files that you want to apply shaded color, grayscale or a combination of both for printing purposes.



3. Select the highlighted reference file's Slot Number as shown below. Refer to the Reference file Slot Number Categories on Page 1.
4. *Key-in* the desired number and press the Enter key. For this example we have chosen 100, which will be plotted as Light Gray for Existing Topography. The reference files will be re-ordered in the window based on their slot numbers after you select the Slot category.



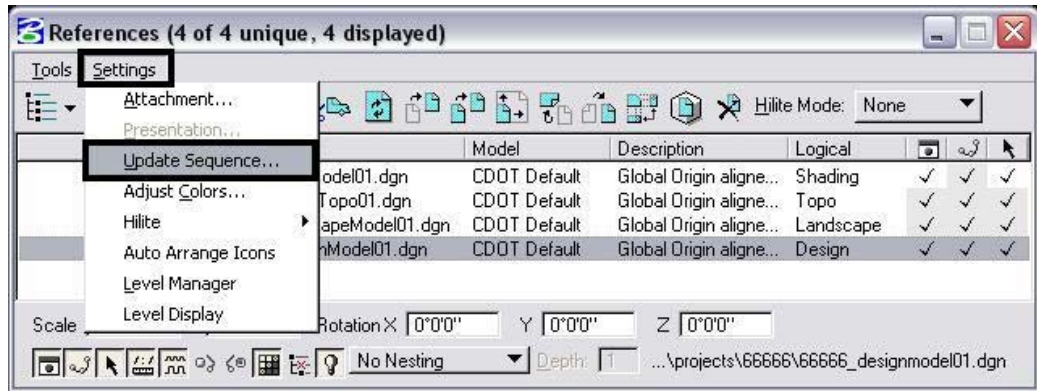
- Repeat this process for each reference file attached. The illustration below shows a group of files with updated slot numbers.



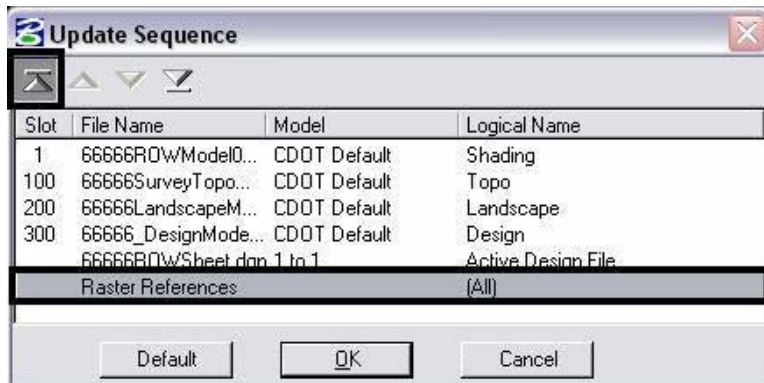
Note: Reference files whose slot numbers are not changed will print black because they will be in the 1-99 range.

Re-Ordering Update Sequence

- Select **Settings > Update Sequence**. This displays the **Update Sequence** dialog box.

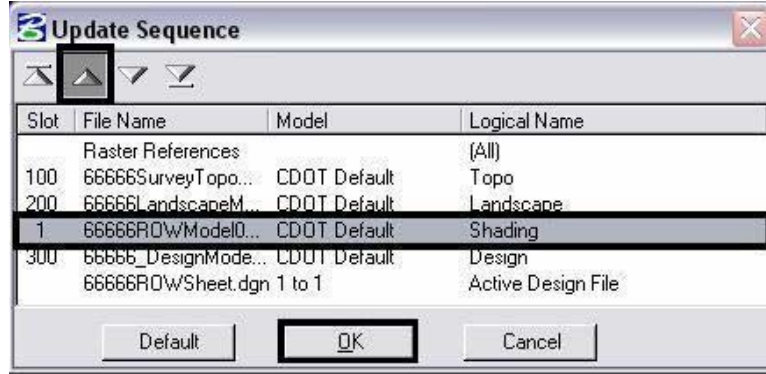


- If any Raster (jpg, bmp, tif, etc.) files are attached, they must be updated first. Select **Raster References** as shown below then select the **Move To Beginning** icon.



Note: For more information on raster files see “CDOT Printing Raster Images”.

8. Select save settings after reordering slot numbers and setting print driver so these settings will remain each time this file is plotted.
9. If there is a file containing shaded areas, move it directly below Raster References. If there are no raster references, move it to the top. Move the Active Design File to the bottom of the list. **Highlight** the desired file then select the **Move Up** icon until it is in its desired location.



10. Finally, any file containing Area Patterns should be moved under the shaded areas. **Highlight** the desired file then select the **Move Up** icon until it is in its desired location. Click OK to proceed with plotting.

Note: If area patterns are to be printed in color they should reside in the file containing shaded areas to be printed in color, or in their own file.

Selecting the Printer Drivers and Pen Table

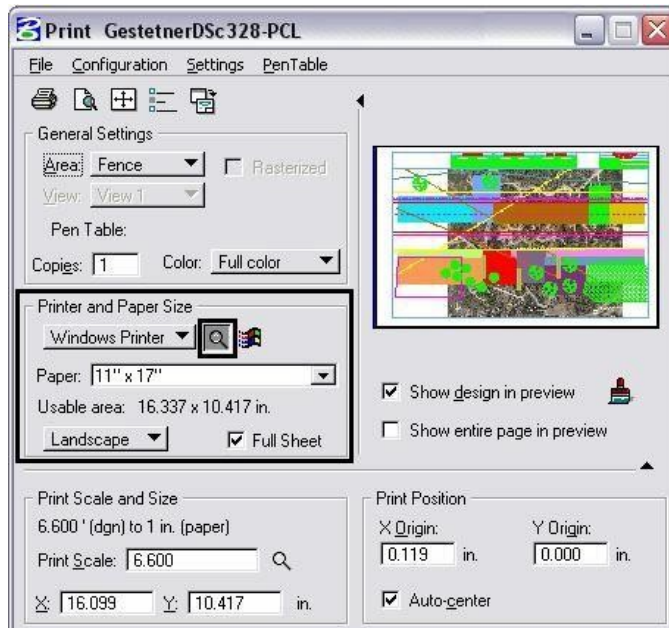
A specific printer driver and pen table combination is used, so the shaded areas do not overpower the other line work. This driver will apply transparency to the color and will allow for the blending of overlapping color along with applying grayscaled printing.

Selecting the Printer Driver

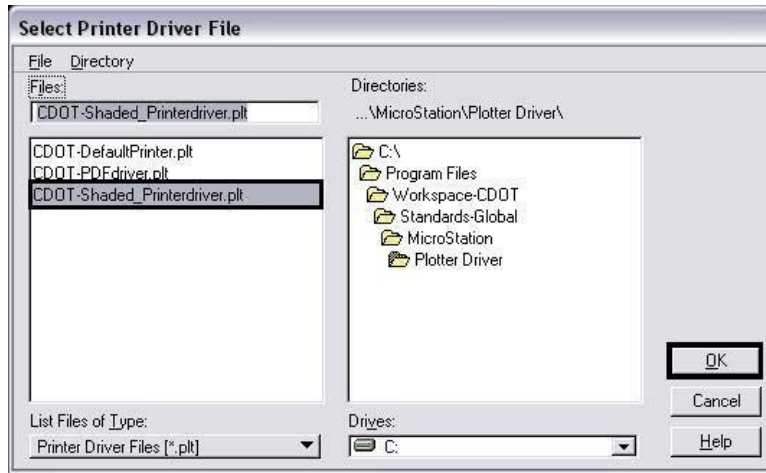
11. Select the **Print** icon from the Standard toolbar or select **File > Print** from the Menu bar.



12. In the **Printer and Paper Size** area, select the **Browse** icon.

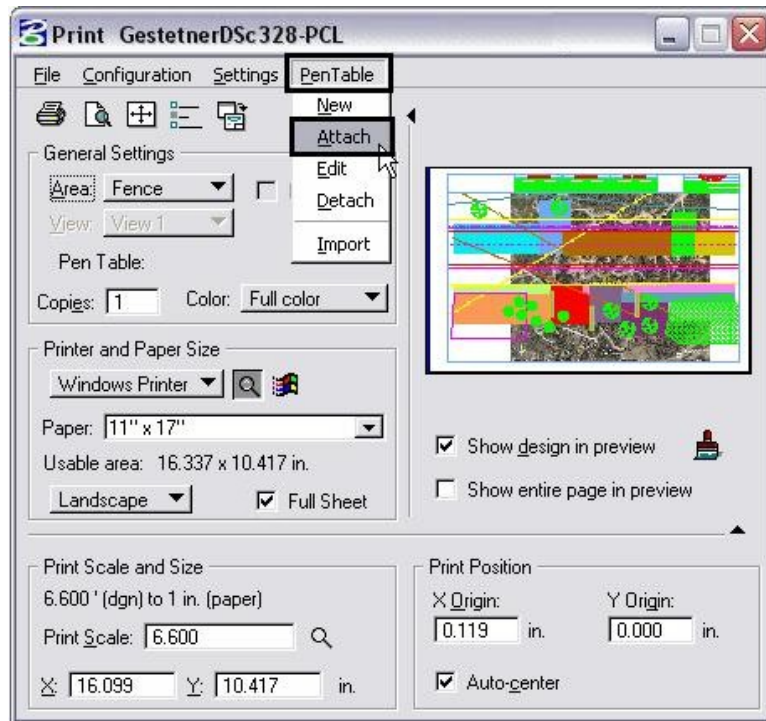


13. The **Select Printer Driver File** window will be displayed. Select the **CDOT-Shaded_PrinterDriver.plt** from the list then Select **OK**.

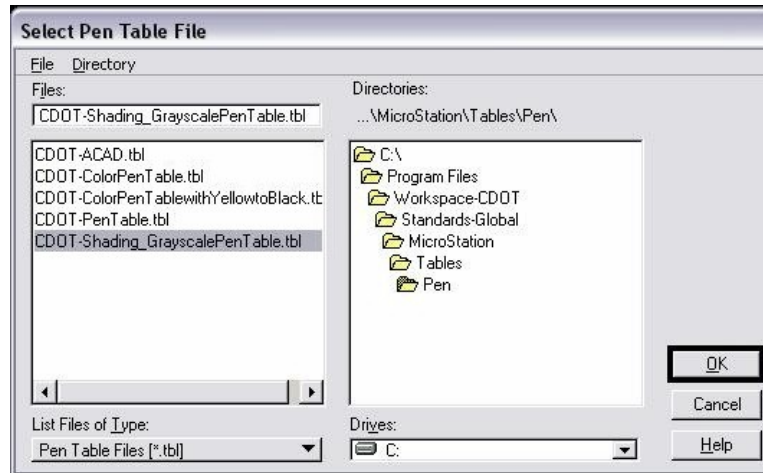


Selecting the Pen Table

14. Select **Pen Table > Attach** from the menu.



15. From the **Select Pen Table File** dialog, select the **CDOT-Shading_GrayscalePenTable.tbl** then select **OK**.



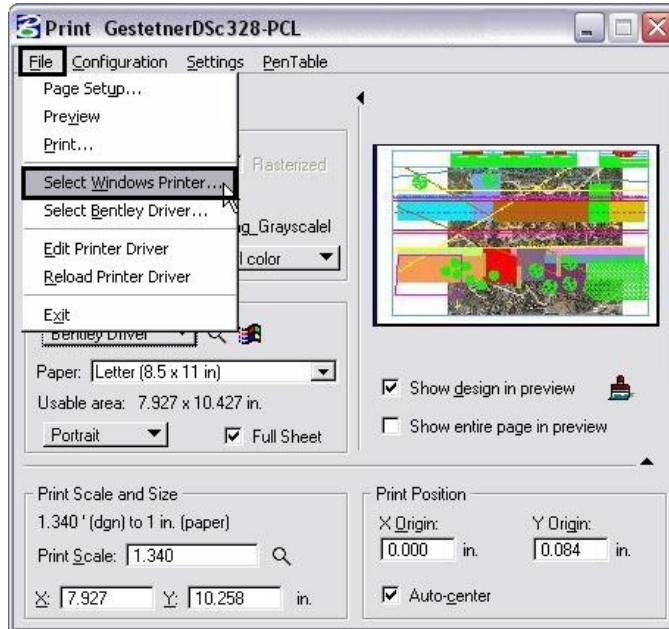
16. Select **File > Save Settings** from the MicroStation menu bar before exiting the file.
17. The remainder of the printing process has not changed. For additional information refer to, “CDOT MicroStation Printing” workflow.

Note: The shaded printer driver does not currently work with the Batch Printing. Files meant to be shaded will have to be printed individually.

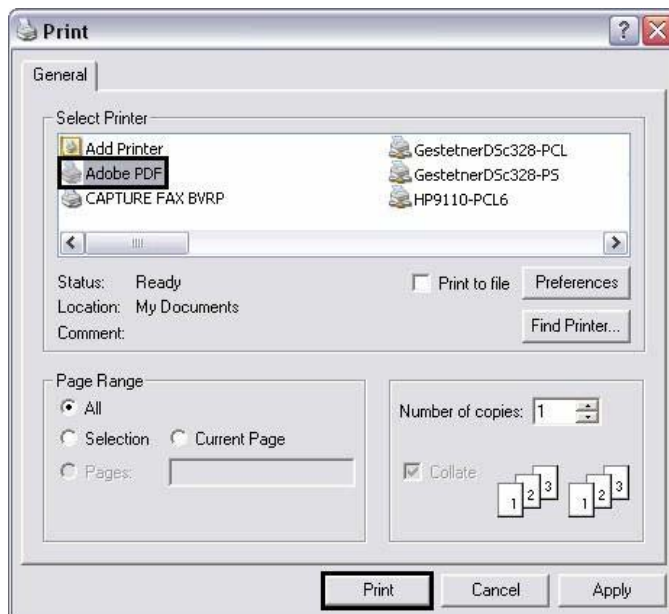
Creating A PDF File

To create a PDF file of the shaded print follow the steps above, then complete the steps below.

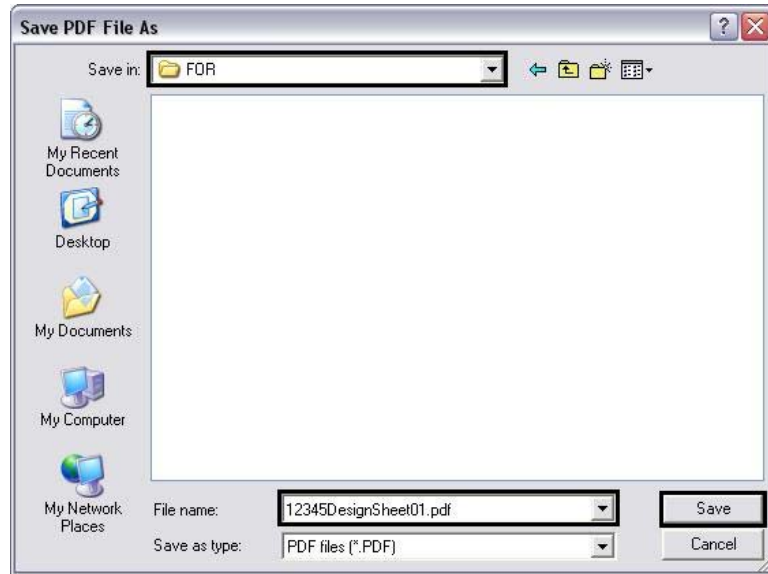
18. Select **File > Select Windows Printer.**



19. From the **Print** window, select the **Adobe PDF** printer. Select the **Print** icon to accept the change and dismiss the window.



20. Select the **Print** icon in the parent **Print** window. The Save PDF File in window will be displayed.
21. Set the desired directory path for the file in the **Save In** field.



22. Key in the desired **File Name** and select the **Save** icon.
23. The PDF file will open in Adobe Acrobat.