

# 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 may need changing are the **Slot Numbers** and **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. **Update Sequence** determines the order in which files are refreshed on the screen and printed on paper.

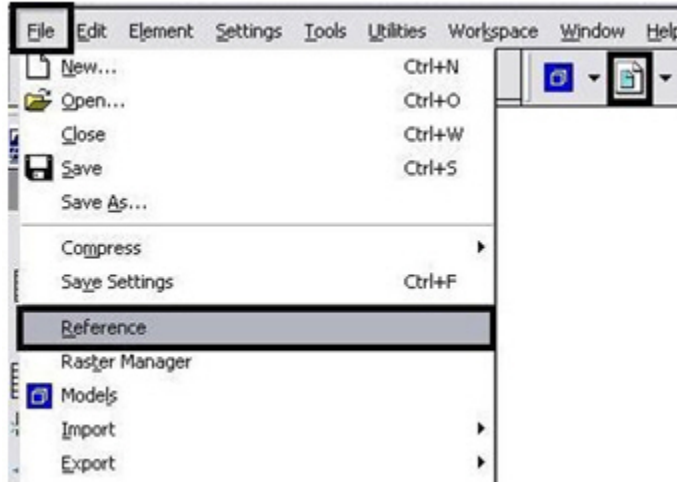
### Reference File Slot Number Categories:

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

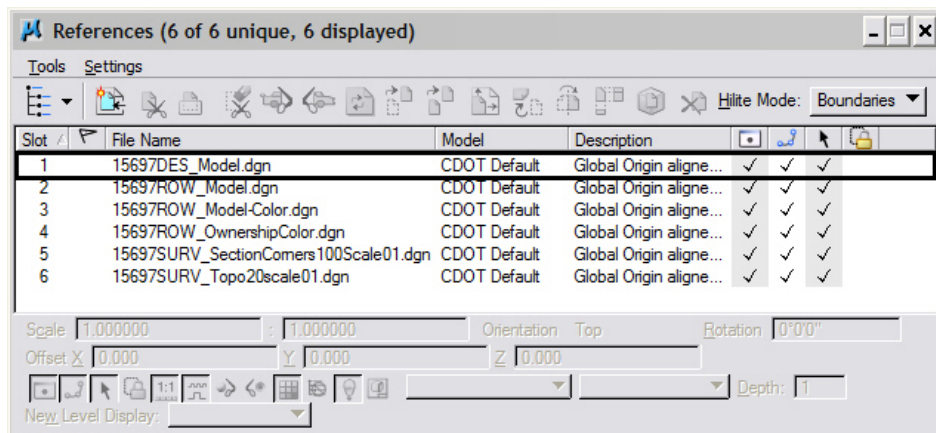
**Note:** All data placed in the Sheet File will be printed black. Items to be printed in color should be contained in their own file. Create a new file using the standard CDOT seed file and reference design elements to create color areas. If printing to a black and white printer all colors will be printed 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** dialog by selecting **File > Reference** or **<D>** the Reference icon on the Primary toolbar.

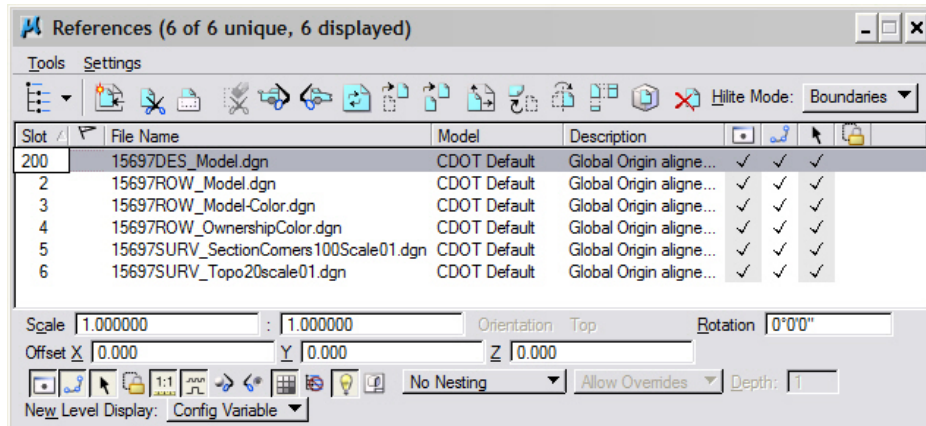


2. **Highlight** the desired reference file that you want to apply shaded color, grayscale or a combination of both to for printing purposes.

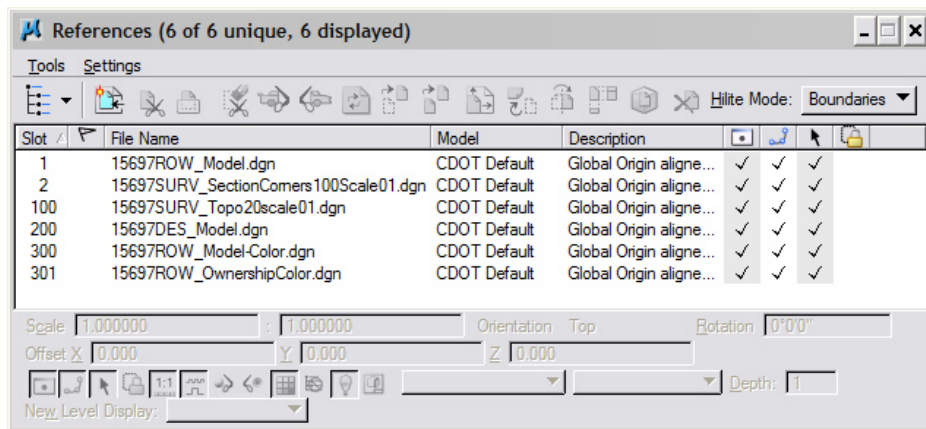


3. Once a reference file is highlighted, **<D>** in the **Slot Number** field.
4. **Key-in** the desired number and press the **Enter** key. Refer to the Reference File Slot Number Categories on Page 1. In this example, **200** is entered, which will result in reference file information be plotted Dark Gray, indicating Other Discipline. The reference files will be re-ordered in the window based on their slot numbers after you have updated the Slot Numbers for all reference files.

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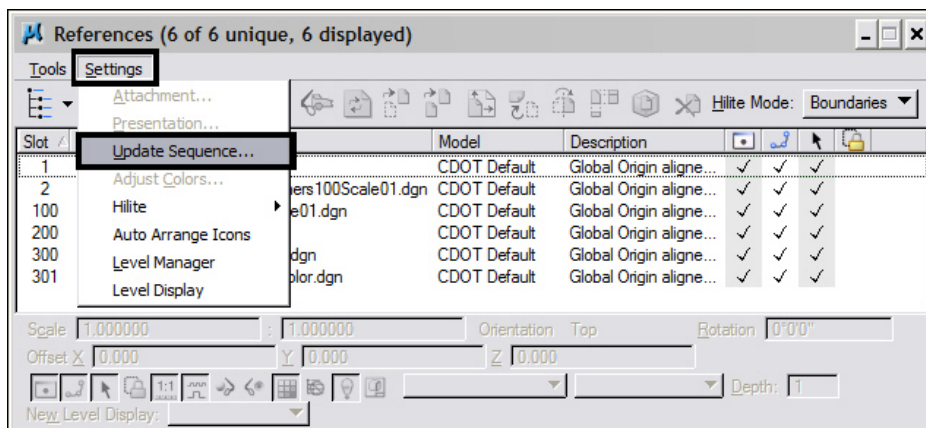
5. Repeat this process for each reference file attached. The illustration below shows a group of files with updated slot numbers.



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

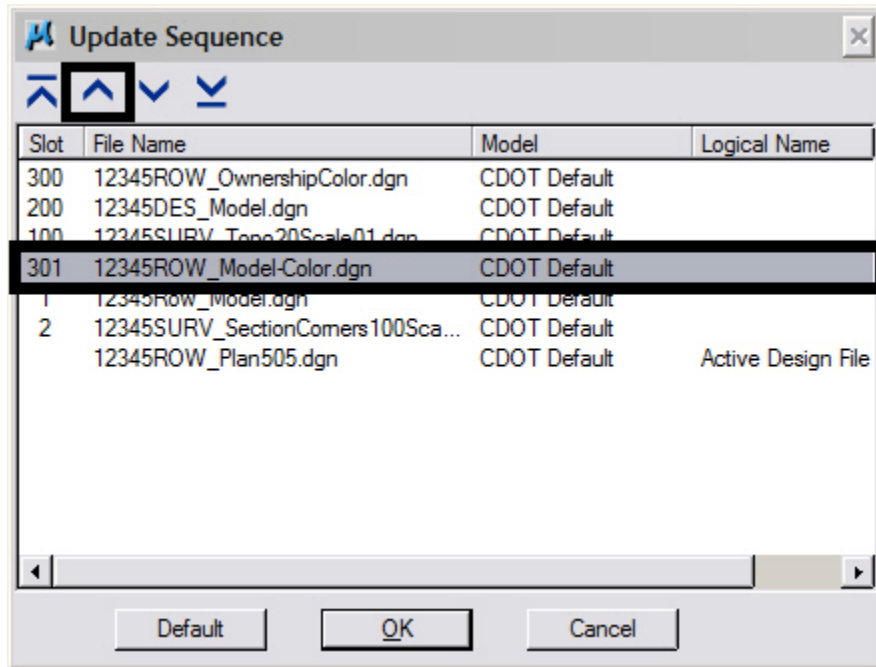
### Re-Ordering Sequence

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



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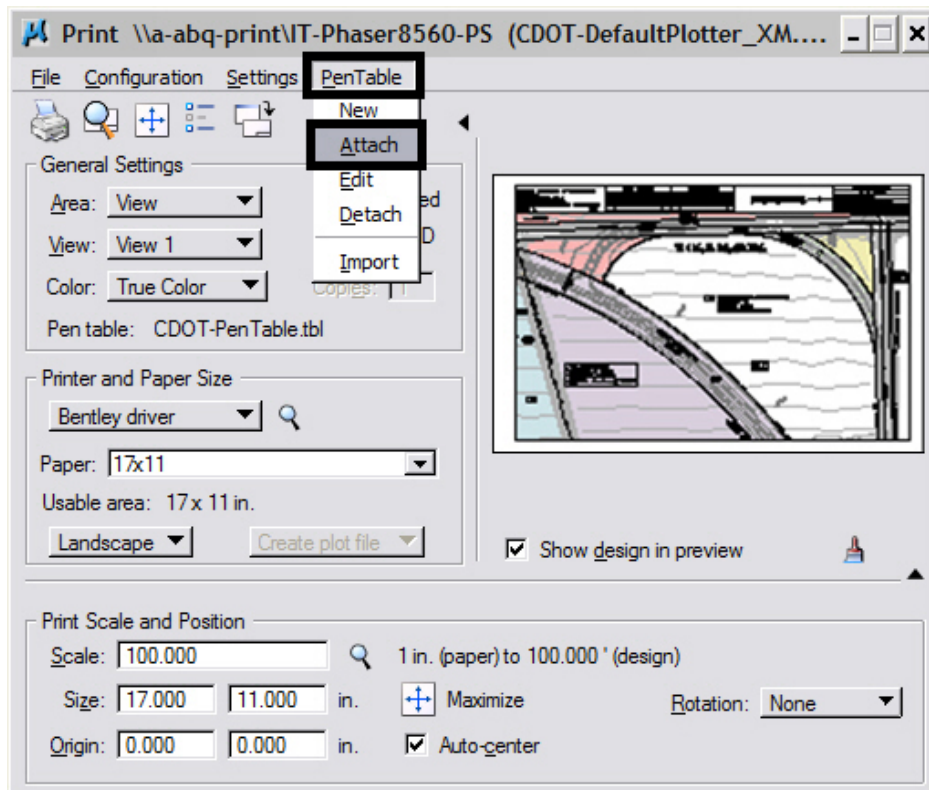
2. If a reference file in the list contains shaded areas, move it directly below **Raster References**. If there are no raster references, move it to the top.
3. Move the **Active Design File** to the bottom of the list. When updating the sequence of reference files, highlight the desired file then <D> the **Move Up** or **Move Down** icon until it is in its desired location. The **Move Up** icon is outlined below.



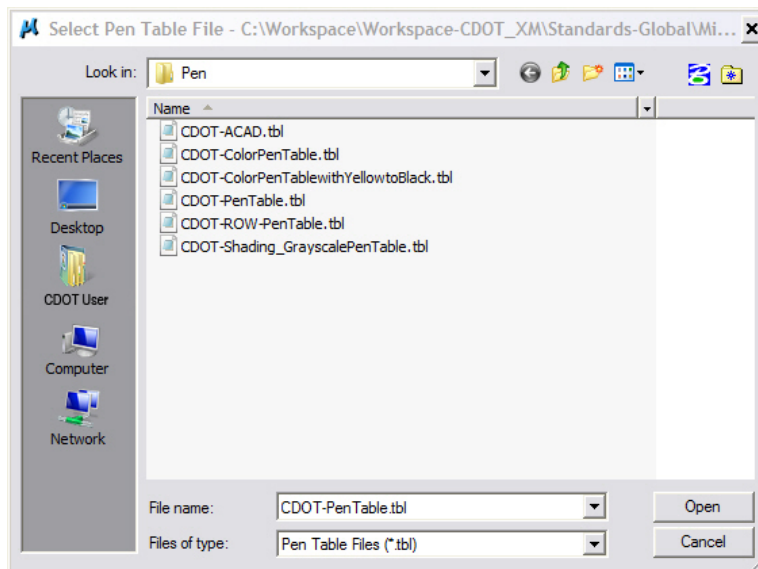
4. Any file containing Area Patterns should be moved under the files containing shaded areas. Highlight the desired file then <D> the **Move Up** icon until it is in its desired location. <D> **OK** to proceed with plotting.  
**Note:** If area patterns are to be printed in color they should reside in the file containing shaded areas to be printed in color, or in their own file.
3. Select **File > Save Settings** from the MicroStation main menu after reordering slot numbers so these changes will remain each time this file is plotted.

## Selecting the Pen Table

1. Select PenTable > Attach from the Print dialog pull-down menu.



2. From the Select Pen Table File dialog, select the *CDOT-Shading\_GrayscalePenTable.tbl* then <D> OK.



3. Select File > Save Settings from the MicroStation main menu before exiting the file.

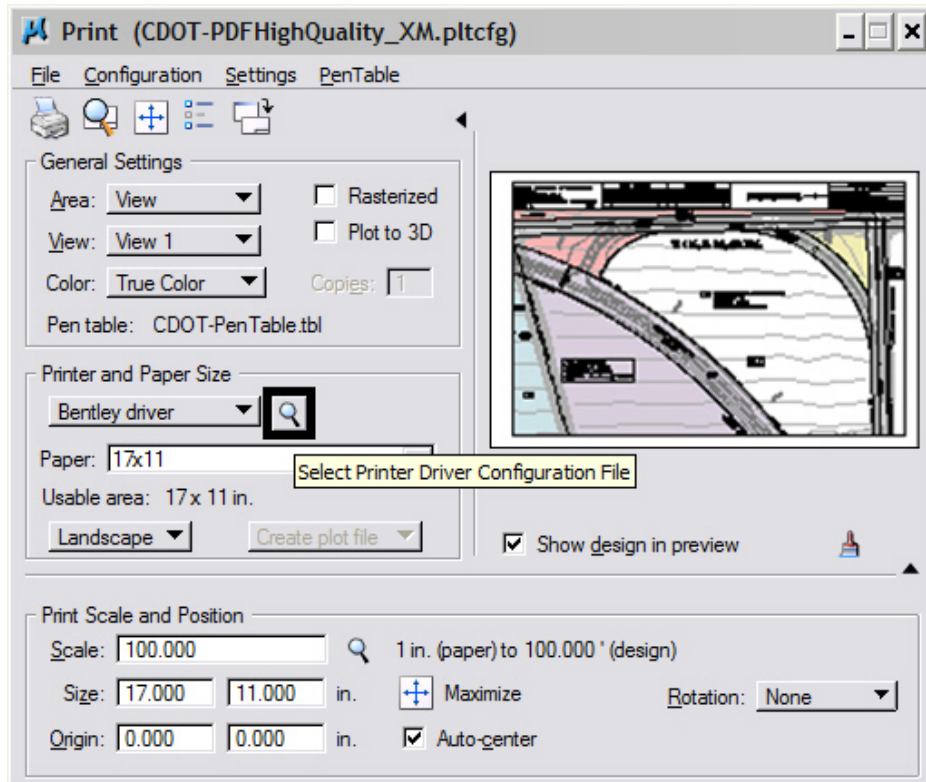
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4. The remainder of the printing process does not change. For additional information refer to the workflow document [CDOT MicroStation Printing](#).

### Creating A PDF File

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

1. <D> the Select Print Driver icon from the Print dialog.



2. From the **Select Printer Driver File** dialog, select the correct Printer Driver file. <D> OK to accept the change and dismiss the window.
3. <D> the **Print** icon in the **Print** dialog box. The **Save Print As** dialog box will be displayed.
4. Set the desired directory path for the file in the **Directories** area
5. Key in the desired name for your file in the **Files** field and <D> **Save**.  
**Note:** A default name (the DGN file name with the pdf extension) is supplied by the computer
6. <D> **OK** to accept the changes and create the PDF file.

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