



Ohio Department of Transportation

Creating MicroStation Files as PDFs using ProjectWise InterPlot Organizer - User Guide

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Introduction

A **PDF (Portable Document Format)** is a universal file format that preserves all of the fonts, formatting, colors, and graphics of any source document, regardless of the application and platform used to create it. PDF files are compact and can be shared, viewed, navigated, and printed exactly as intended by anyone with the free Adobe Acrobat reader. Because of its features, PDF is the standard for electronic document distribution on the internet.

The following procedure is provided to assist designers in creating MicroStation design files as PDFs using **ProjectWise InterPlot Organizer**. *This process allows the user to create single or batch plot PDF images.*

What is ProjectWise InterPlot Organizer?

ProjectWise InterPlot Organizer is a Plotting solution that can be purchased from Bentley as an addition to MicroStation. **InterPlot Organizer is an interface that is activated outside the MicroStation environment** that provides a simple way to specify the plot area, size, scale, origin, rotation, and the printer for generating a plot or image file, (PDF or TIFF), from a single or multiple design (.dgn) file(s). You can add, delete, reorder, view and modify the properties of individual or multiple design files. You do not need to have MicroStation activated, Organizer allows you to operate outside the CAD environment.

Using Organizer, you can print or create images without saving or reusing the plot sets. You can also create a plot set and save it, to be plotted again. For example at various milestone dates for a project.

InterPlot Organizer requires the use of Settings Files to create PDFs. A **Settings file** can automatically select a Printer queue and set the desired Size, Scale, Rotation angle and pen table for your PDF file.

Notes: Please read the following Notes before advancing.

- ✓ *If you want to create a PDF image larger than 22"x34" see the User Guide on "Creating MicroStation Files as PDFs using IPLOT".*
- ✓ *The Settings Files make use of the Sheet cut line in the standard sheet borders created on level SH_Cut_Line as a shape to set the desired scale and size of your print. If no border is found IPLOT uses the "View" as the Plot Area.*
- ✓ *If you have any questions, suggestions, or problems regarding this User Guide, please go to the following web page:
<http://www.dot.state.oh.us/Divisions/Engineering/CaddMapping/CADD/Pages/suggestions.aspx>*

Settings Files for District Users

If you do not have any Settings Files established, please contact your IT staff or CADD Administrator for assistance. It will be necessary for District IT staff to establish the settings files prior to creating PDFs.

Settings Files for Central Office Users

The following PDF Settings Files have been established for all Central Office users:

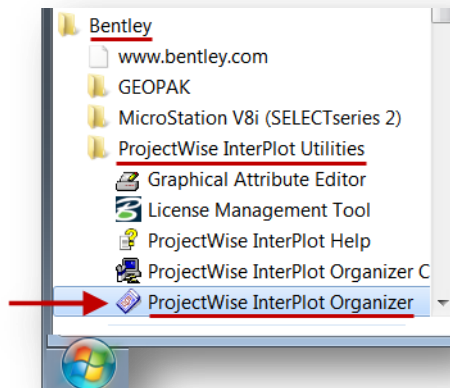
- **PDF11L_b.set** - for 8-1/2"x11" size PDF(s)
- **PDF17_b.set** - for 11"x17" size PDF(s)
- **PDF34_b.set** - for 22"x34" size PDF(s)

Note: The Settings Files are located in the `i:\V8igstd\iplot` directory for Central Office users.

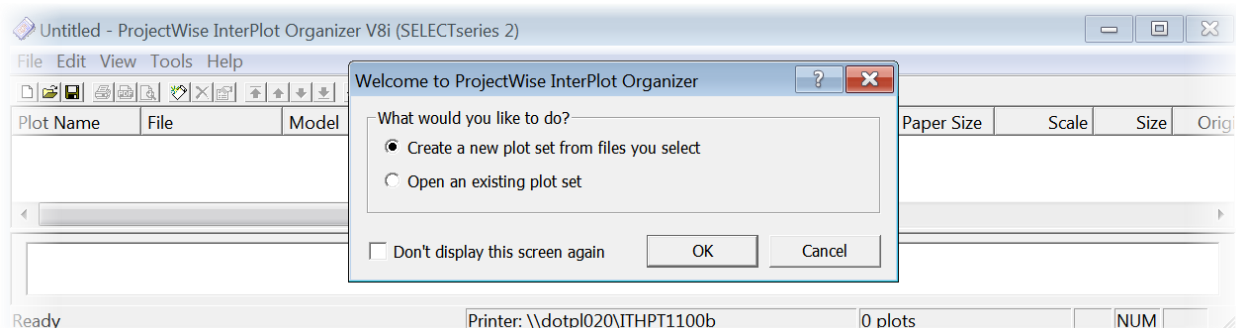
Creating MicroStation Files as PDFs using ProjectWise InterPlot Organizer

The following procedure is provided to assist designers in creating PDFs for 8-1/2"x11" (Letter size), 11"x17" (Quarter size) or 22"x34" (Full size) from MicroStation design files using the standard sheet border level with ProjectWise InterPlot Organizer. ***This process allows the user to create PDF images from multiple design files without having to activate MicroStation.***

1. From the Windows **Start** menu, select **All Programs > Bentley > ProjectWise InterPlot Utilities > ProjectWise InterPlot Organizer**.



The **Welcome to ProjectWise InterPlot Organizer** dialog box opens, as shown below, and the user is asked, "What would you like to do?"

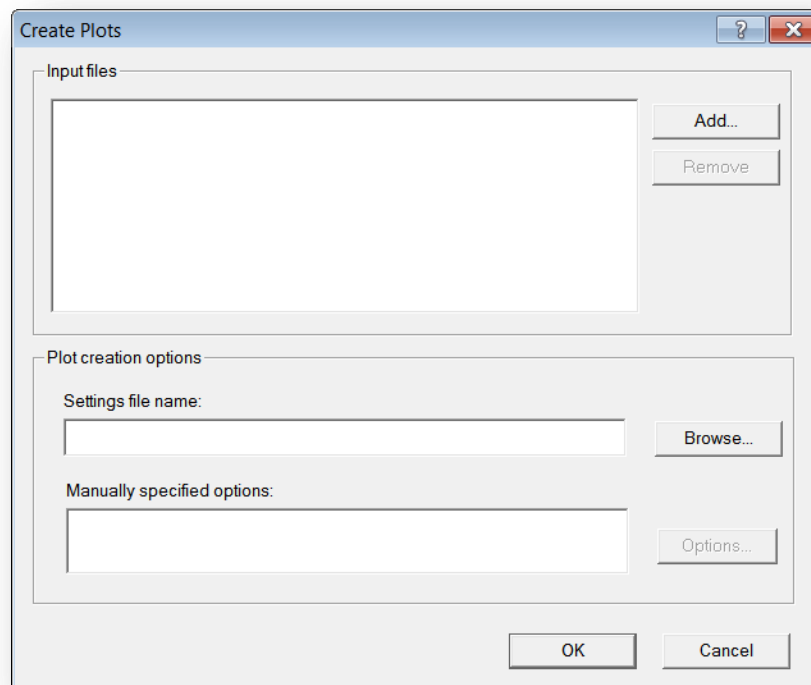


- Click the **OK** button to “Create a new plot set from files you select”.

Notes:

- ✓ When you first open Organizer, the Welcome to ProjectWise InterPlot Organizer dialog box displays with “Create a new plot set from files you select” toggled on as the default. To “Open an existing plot set”, see section on “Plot existing ProjectWise InterPlot Organizer (IPS) Files containing Revised DGN Drawings” in this User Guide.
- ✓ If you selected **Cancel** in the **Welcome to ProjectWise InterPlot Organizer** dialog box, in the **Untitled – ProjectWise InterPlot Organizer** dialog box you can select **File > Create Plots** to “Create a new plot set from files you select”.

The **Create Plots** dialog box opens as shown below:

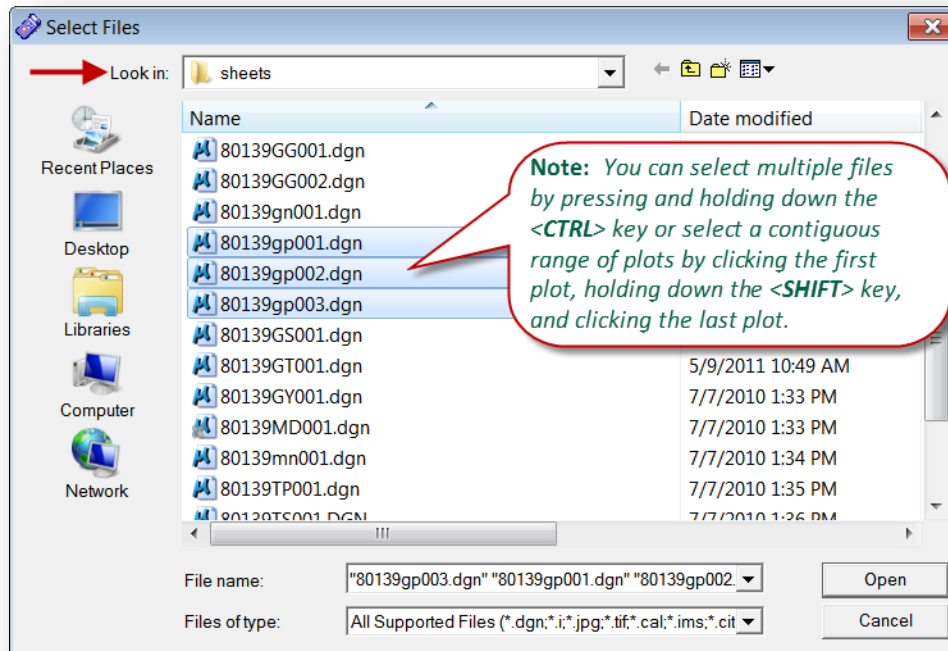


- Click the **Add** button to add files into the **Create Plots** dialog box.

Creating MicroStation Files as PDFs using ProjectWise InterPlot Organizer

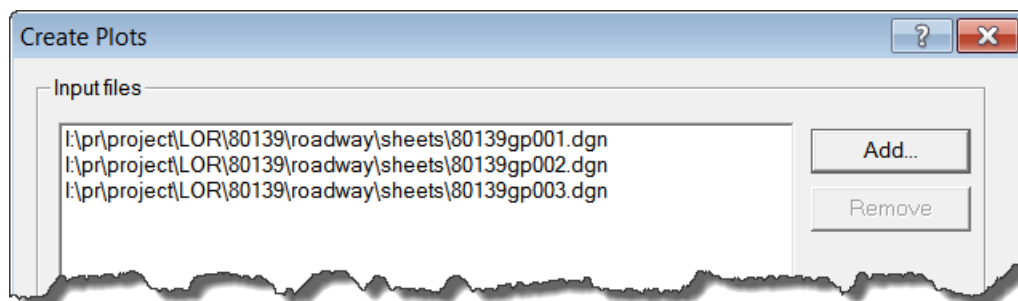
The **Select Files** dialog box now opens as shown below.

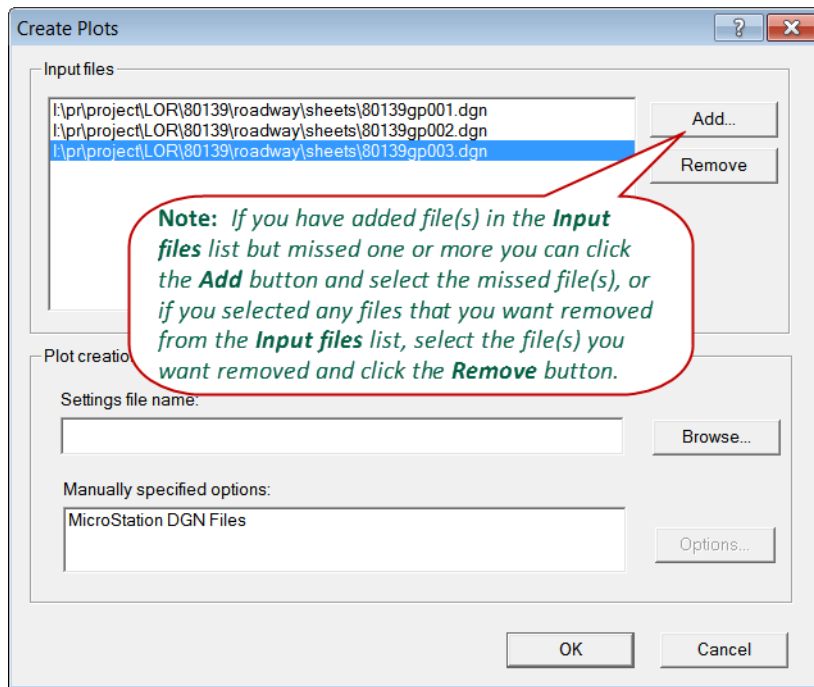
4. In the **Look in:** pull down field, browse to the directory and folder to locate the file(s) to be saved as PDF images in the **Select Files** dialog box.



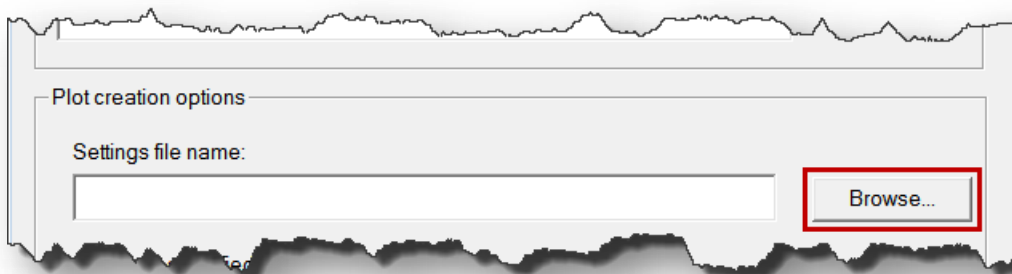
5. Click the **Open** button after selecting the desired Design file(s).

The selected file(s) are now displayed in the **Input files** list in the **Create Plots** dialog box as shown below:





6. Click the **Browse** button to locate a **Settings File** after you have selected the file(s) in the **Create Plots** dialog box.



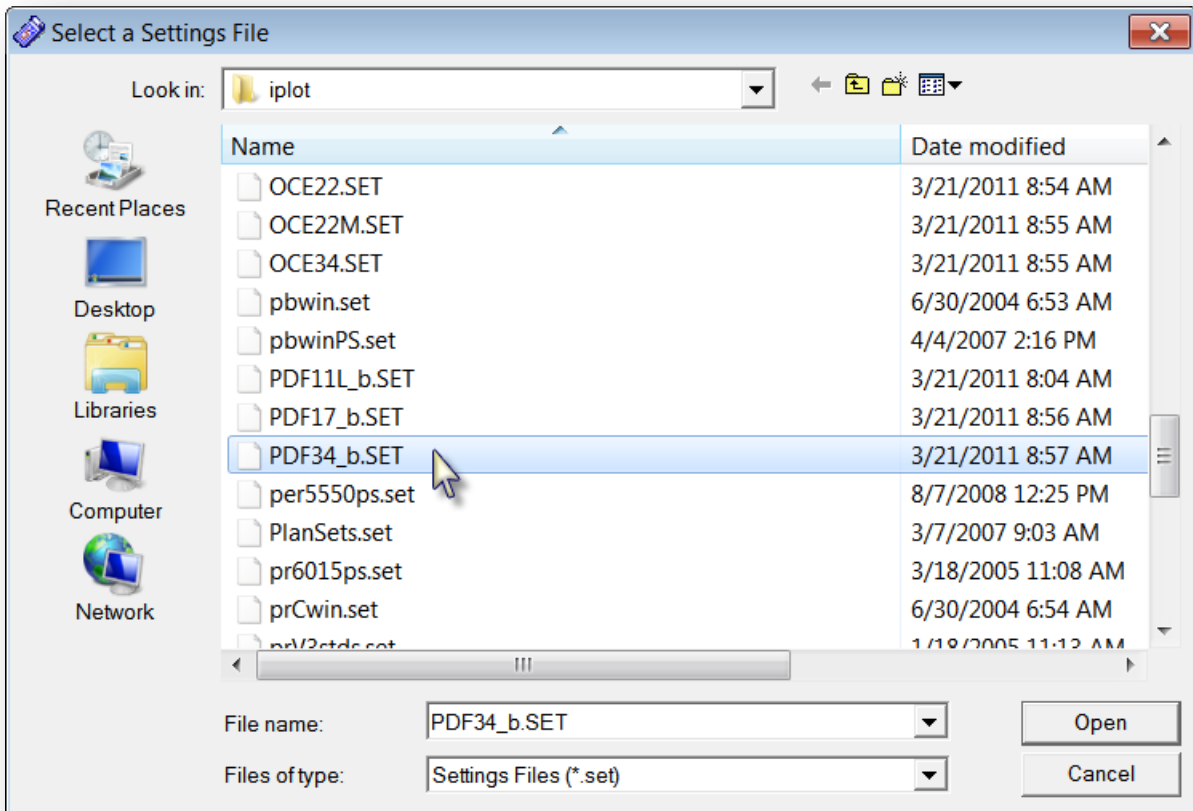
Creating MicroStation Files as PDFs using ProjectWise InterPlot Organizer

The **Select a Settings File** dialog box displays as shown below.

7. Select a **Settings File** in the **Select Settings File** dialog box.
 - **Central Office** – select one of the following:
 - **PDF11L_b.set** - for 8-1/2"x11" PDF(s)
 - **PDF17_b.set** - for 11"x17" PDF(s)
 - **PDF34_b.set** - for 22"x34" PDF(s)
 - **District Office** – select the PDF Settings File needed in your District.

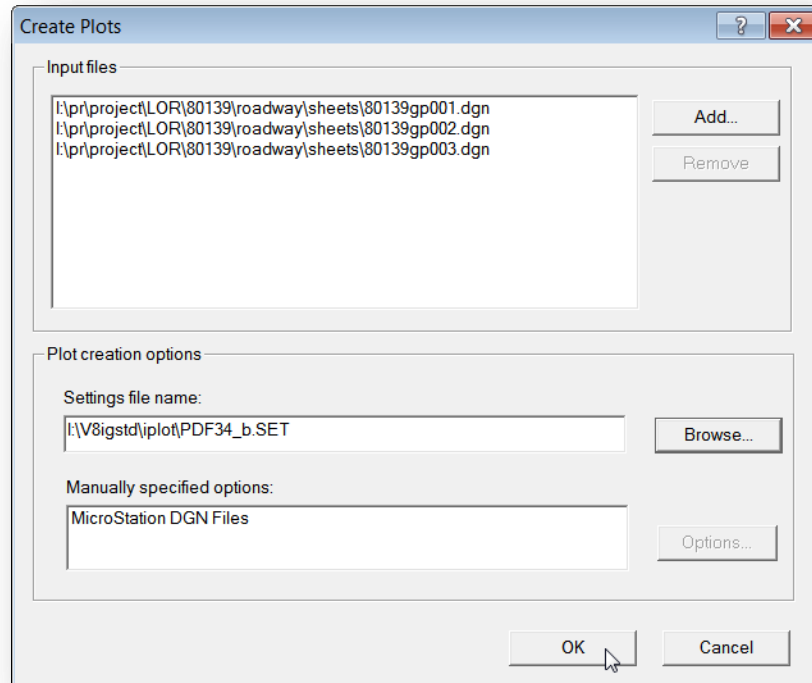
Notes:

- ✓ The settings file automatically selects a **Printer** driver which sets the desired **Size, Scale, Rotation angle** and **pen table** for your PDF file.
- ✓ When saving MicroStation Files as PDF's the settings files look for a Shape placed on Level **SH_Cut_Line**. The ODOT Standard sheet cut line border was created as a shape on Level **SH_Cut_Line**. The settings file looks for ODOT standard sheet borders in all models named ***sheet***. If no border is found Organizer uses the "View" as the Plot Area.



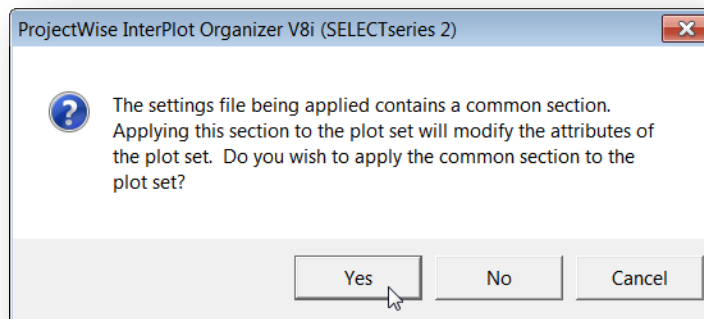
8. Click the **Open** button after selecting the desired Settings File.

This brings you back to the **Create Plots** dialog box again as shown below:



9. Click the **OK** button.

The following message dialog box displays asking, “The settings file being applied contains a common section. Applying this section to the plot set will modify the attributes of the plot set. Do you wish to apply the common section to the plot set?”.



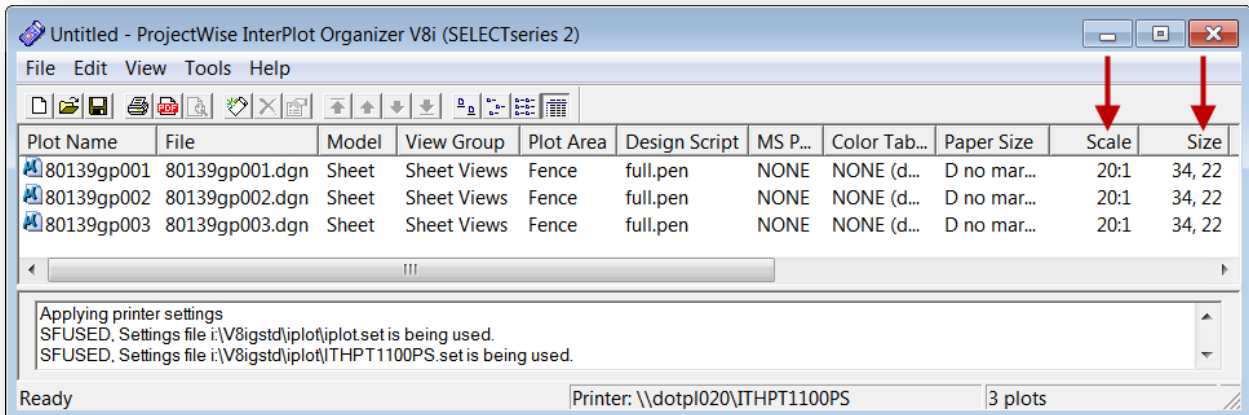
10. Select **Yes**.

Creating MicroStation Files as PDFs using ProjectWise InterPlot Organizer

The file(s) from the **Input file** list are now displayed in the **Untitled - ProjectWise InterPlot Organizer** dialog box, as shown below.

Note: It may take several minutes to load the *dgn* files into the dialog box depending on how many files you have selected.

11. Check the **Size** and **Scale** of your design file(s) to make sure it looks correct before creating the PDF.

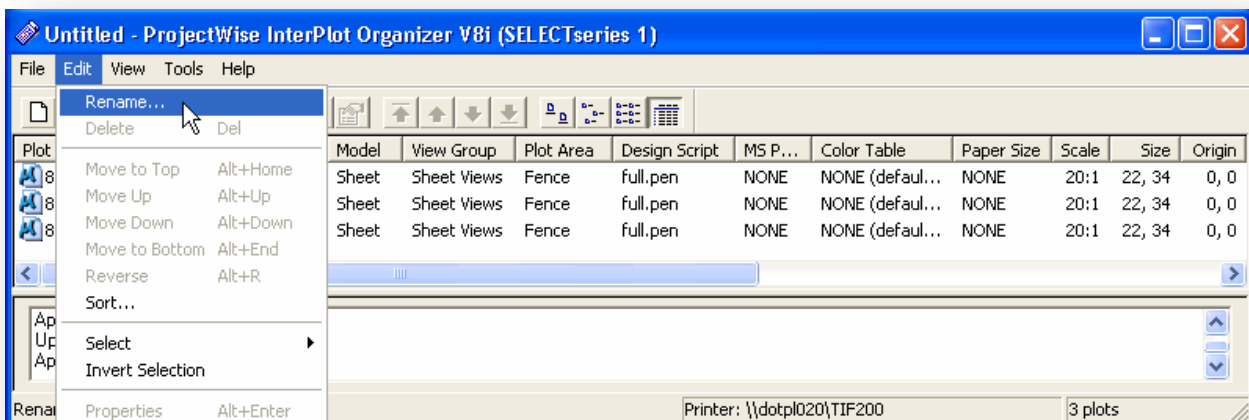


Note: If the desired **Size** and **Scale** did not display correctly for your PDF file, check your design file to make sure the size of your sheet is correct and the sheet cut line is on the correct level, *SH_Cut_Line*, and that it is a shape, not a complex shape or line string.

Rename DGN files in ProjectWise InterPlot Organizer for ODOT's PDF Submissions

The following procedure is provided to assist designers in renaming their DGN files in ProjectWise InterPlot Organizer according to the recommended ODOT file naming convention for PDF submissions.

1. Select **Edit > Rename** in the **Untitled - ProjectWise InterPlot Organizer** dialog box like shown below:



The **Rename Plots** dialog box displays like below:



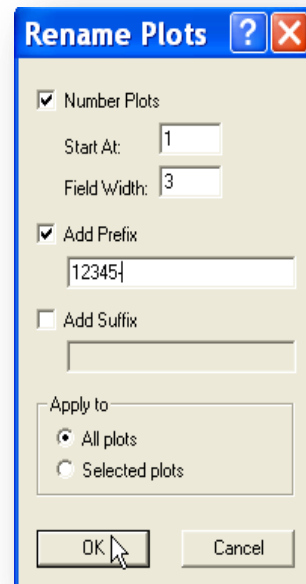
2. In the **Rename Plots** dialog box set the following parameters:

- a. **Number Plots: Toggle on**
- b. **Start At = 1**
- c. **Field Width = 3**
 - Field Width = 3 for plan sets up to 100 sheets
 - Field Width = 4 for plan sets exceeding 100 sheets
- d. **Add Prefix: Toggle on**
Type in = #####-

Note: ##### is the project **PID** number and be sure to add a **“hyphen”** to the end of the PID value. This is required to separate the PID value from the sheet value.

- e. **Apply to: All Plots Toggle on**

3. Click **OK** to accept the settings.



Creating MicroStation Files as PDFs using ProjectWise InterPlot Organizer

Note: File names shall conform to the following naming convention for PDF Submissions:

PID - ###.pdf

Where "###" references corresponding sheet number.

When projects exceed 999 pages, add an additional "#" to account for the fourth digit.

If existing pdf images need to be renamed, the following File Naming Utility is available:

Server location: \\ctrfs100\cen\$

Program Name: FileRenamer.exe

Geotechnical Exploration Sheets:

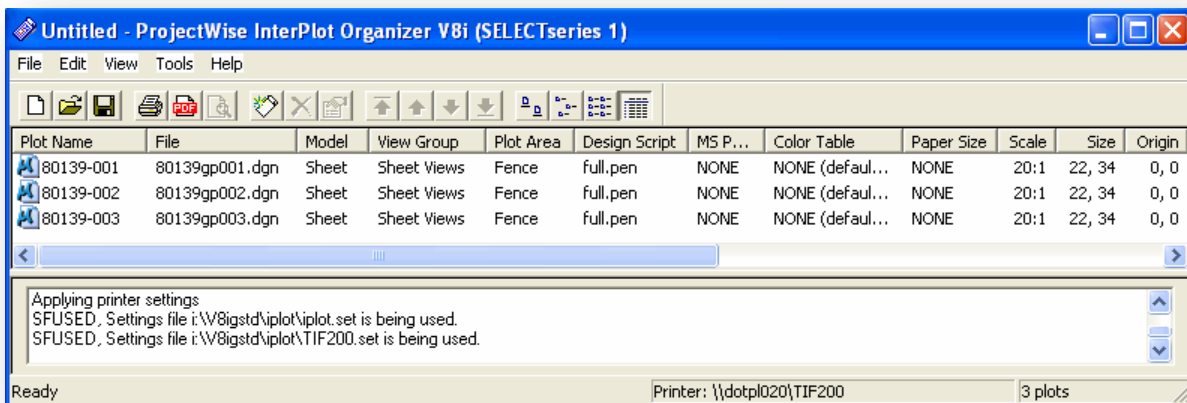
Geotechnical Exploration Sheets are considered a separate component of the plans. These drawings are attached to the back of the plans following the last plan sheet as indicated on the Title Sheet. The Geotechnical Exploration Sheets are not included with the overall sheet count in the plans.

The following PDF naming convention applies (See Figure 304-1 of the ODOT CADD Engineering Standards Manual for a listing of Geotechnical Exploration Plan Sheets):

PID-geo##.pdf

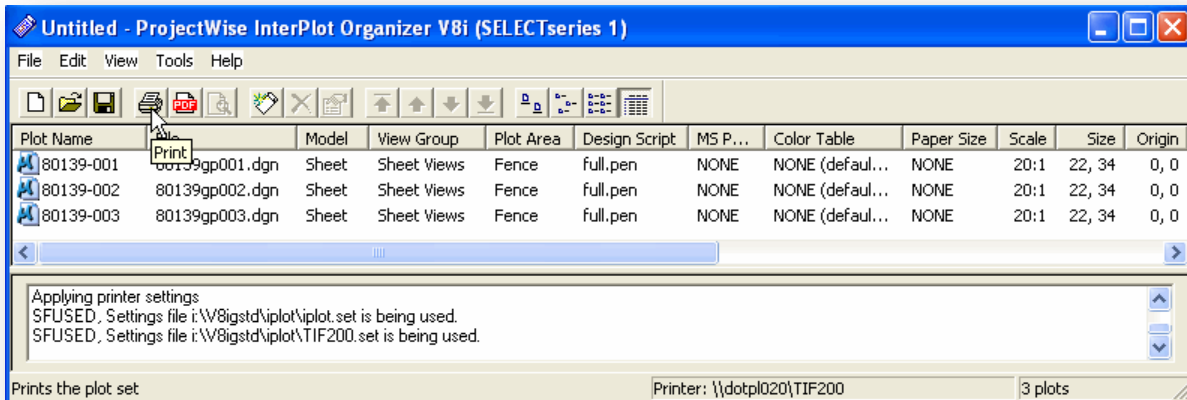
Where "##" references corresponding Geotechnical Exploration sheet page number.

After selecting OK, this brings you back to the **Untitled – ProjectWise InterPlot Organizer** dialog box displaying the Renamed images which are now ready for printing as shown below:



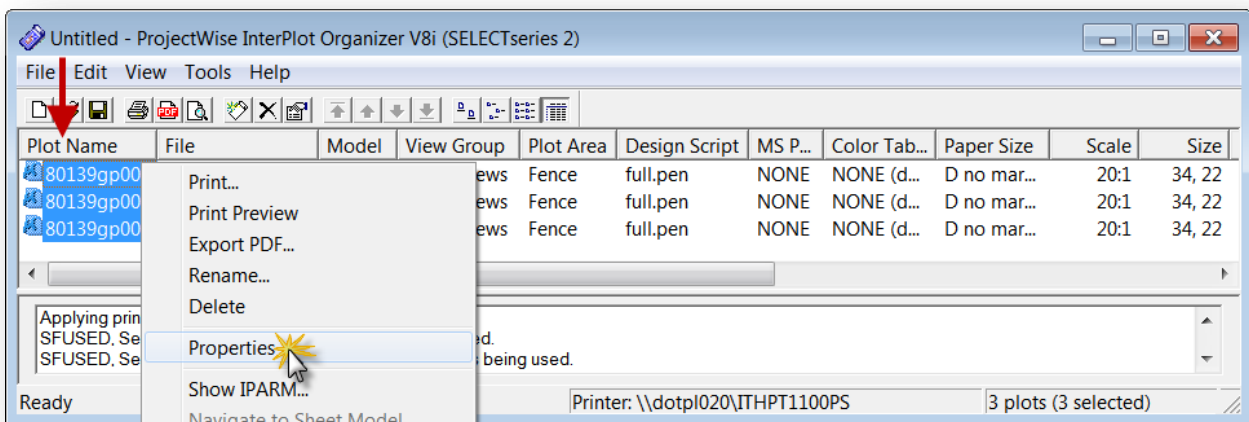
Creating MicroStation Files as PDFs using ProjectWise InterPlot Organizer

4. Select the **Print** icon or select **File > Print** in the **Untitled – ProjectWise InterPlot Organizer** dialog box.



12. *Optional*, to create a **Color** PDF image do the following:

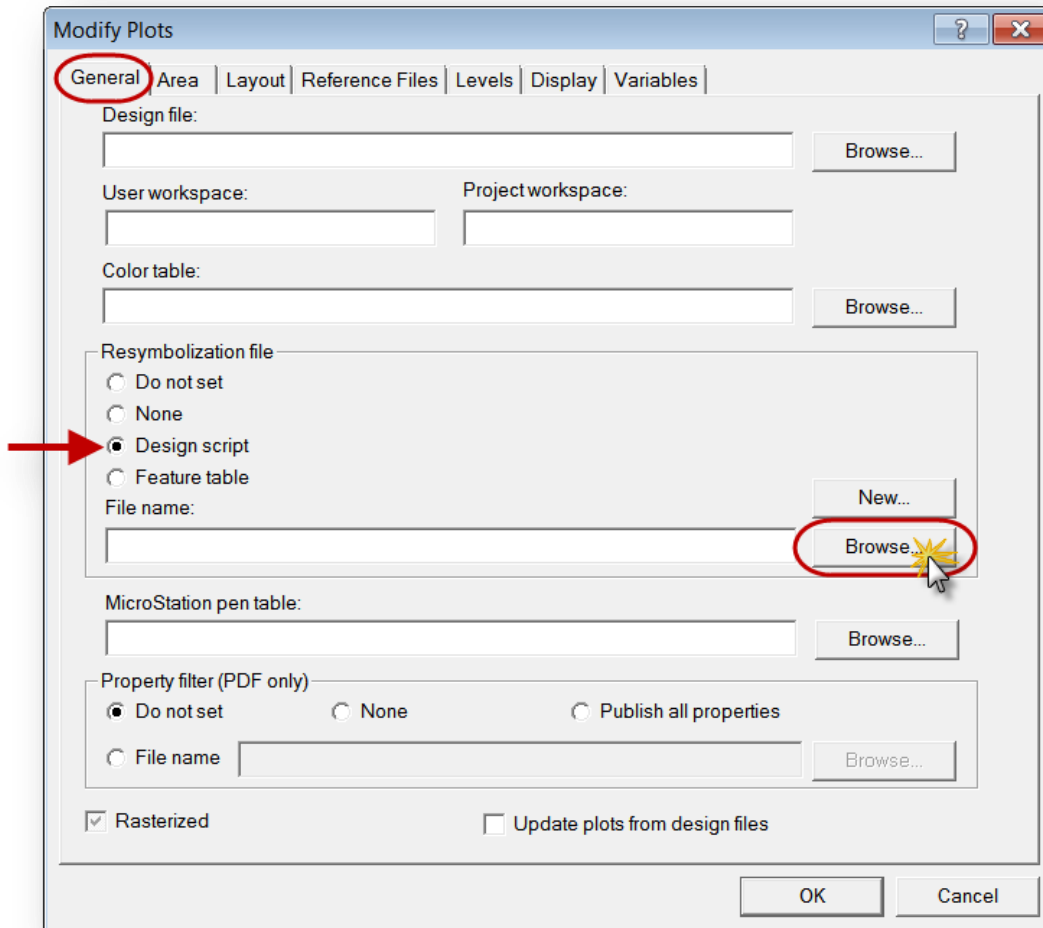
- a. Select the files in the **Plot Name** column.
- b. **Right-Click** and select **Properties**, as shown below, or select **Edit > Properties** from the pull down menu in the **ProjectWise InterPlot Organizer** dialog box:



Creating MicroStation Files as PDFs using ProjectWise InterPlot Organizer

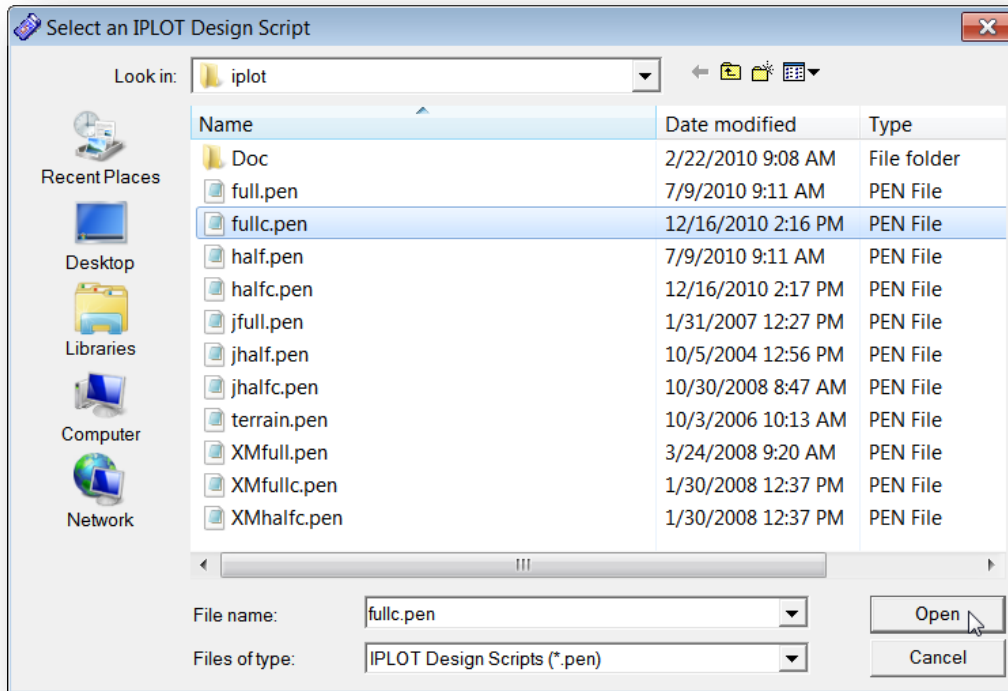
The **Modify Plots** dialog box opens as shown below.

- c. Select the **General** tab.
- d. **Toggle on Design script** under **Resymbolization file**.
- e. Click the **Browse** button by the **File name** field as shown below:



The **Select an IPLOT Design Script** dialog box opens like below.

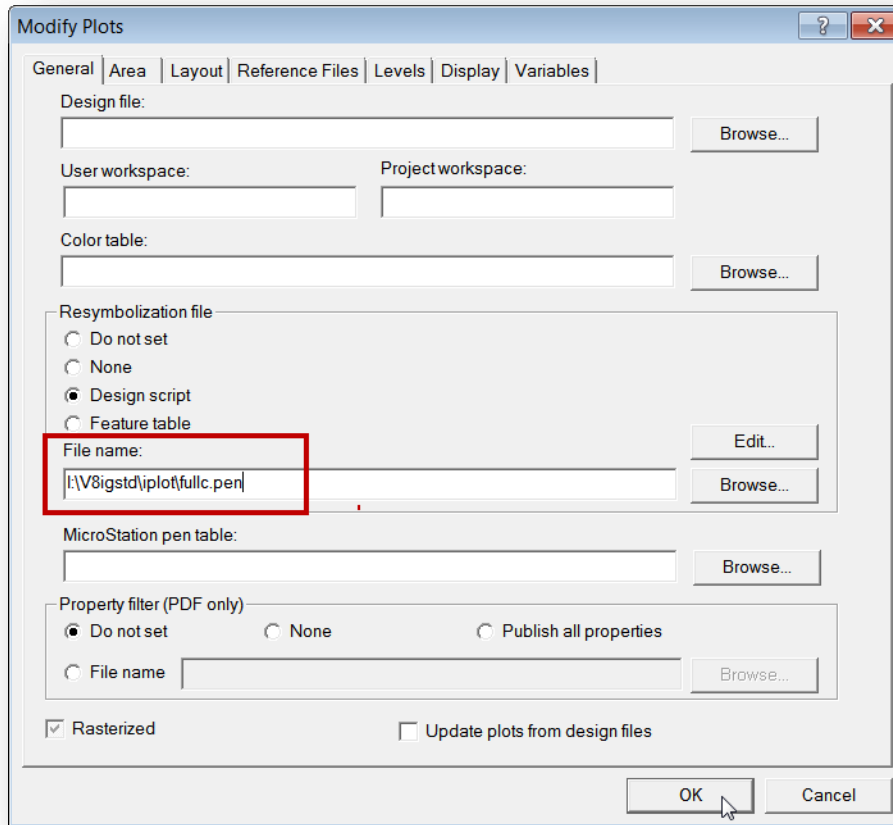
- f. Select a **Color Pen Table** in the Select an IPLOT Design Script dialog box.
- **Central Office** – select one of the following:
 - **halfc.pen** – for 11"x17" Color PDFs.
 - **fullc.pen** – for 22"x34" Color PDFs.
 - **District Office** – select the appropriate Pen table.



- g. Click **Open** in the **Select an IPLOT Design Script** dialog box.

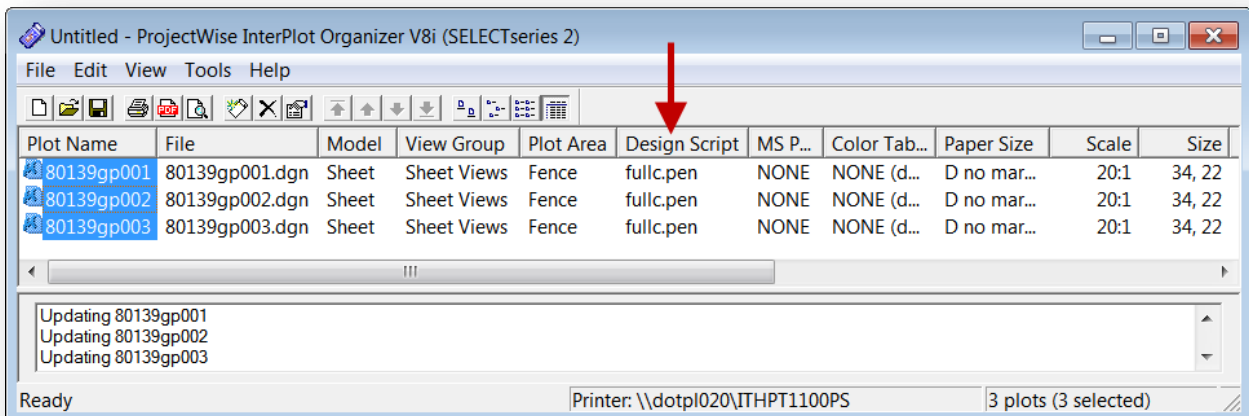
Creating MicroStation Files as PDFs using ProjectWise InterPlot Organizer

The **Modify Plots** dialog box now displays with the color table in the File name field as shown below:

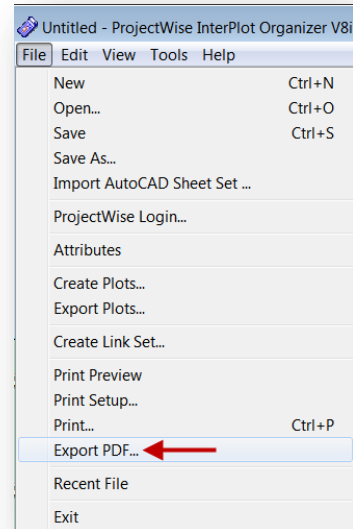


h. Click **OK** in the **Modify Plots** dialog box.

The **Untitled - ProjectWise Interplot Organizer** dialog box now displays with the **Color Pen** table chosen as shown below:



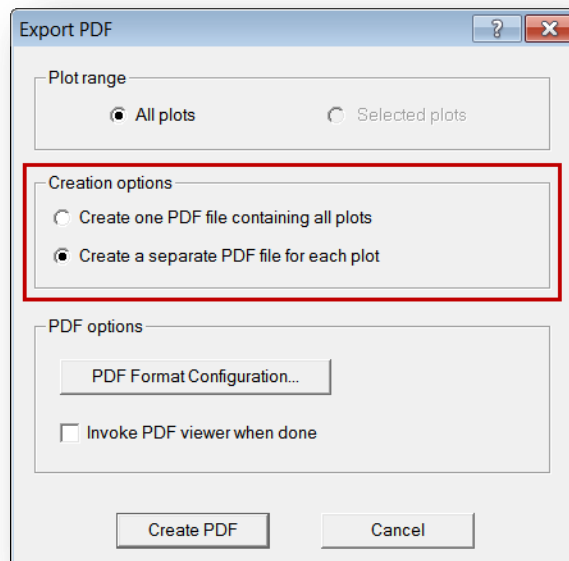
13. Select **File > Export PDF** in the **Untitled – ProjectWise Interplot Organizer** dialog box as shown at right:



The **Export PDF** dialog box displays as shown below.

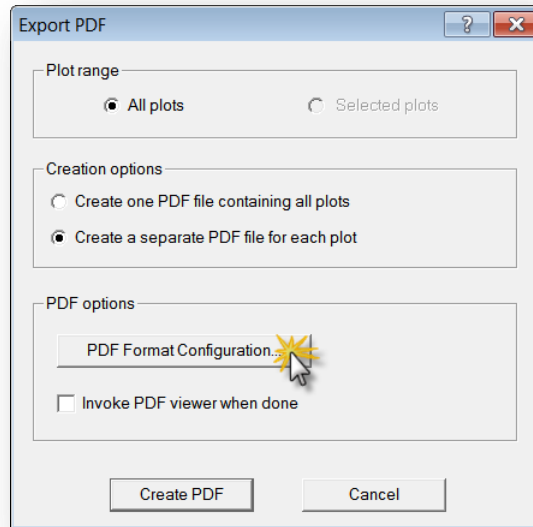
14. **Toggle On** one of the following options under the “*Creation options*” section in the **Export PDF** dialog box:

- **Create one PDF file containing all plots** – this creates a multiple page PDF file containing all the files selected.
- **Create a separate PDF file for each plot** – this creates each file as a separate PDF file.

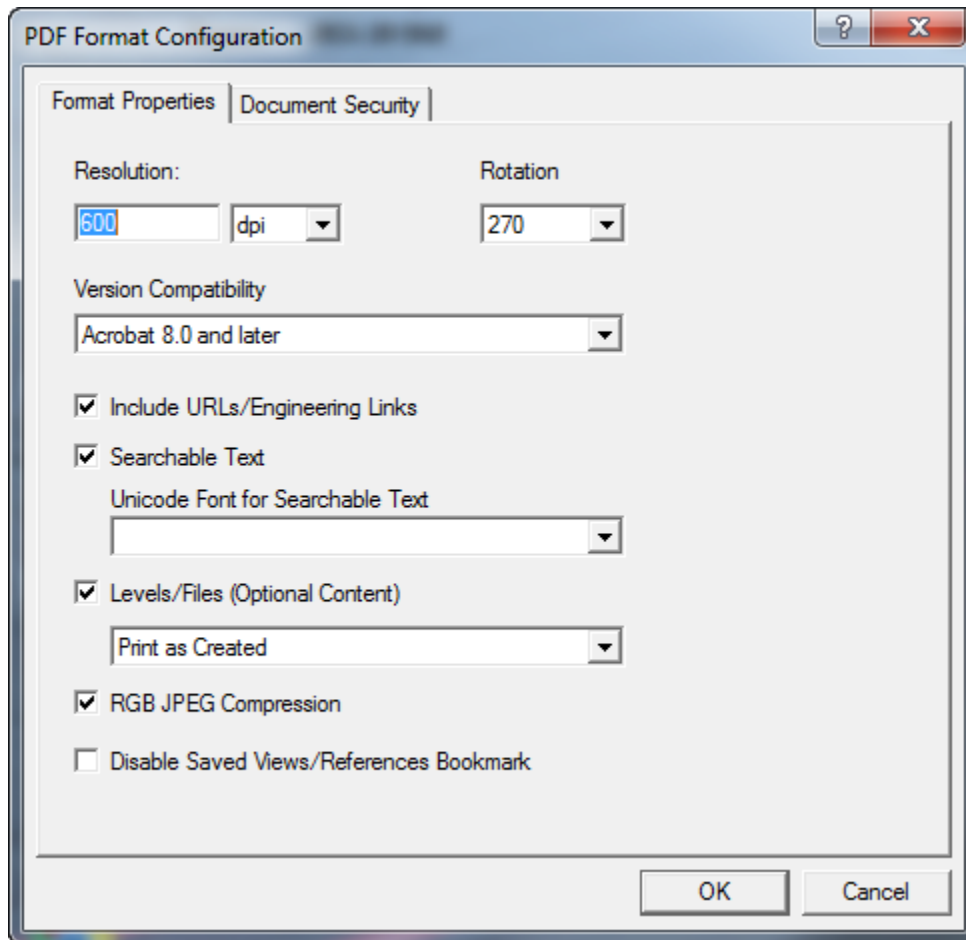


Creating MicroStation Files as PDFs using ProjectWise InterPlot Organizer

15. Click the **PDF Format Configuration** button as shown below:



A **PDF Format Configuration** dialog box now displays as shown below:

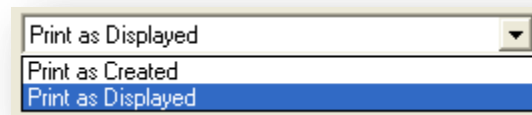


16. In the **PDF Format Configuration** dialog box make sure the following parameters are set:

- Resolution: 600 dpi**
- Rotation: 270**
- Version Compatibility: Acrobat 8.0 and later**
- Include URLs/Engineering Links – Toggle on**
- Searchable Text – Toggle on**
- Levels/Files (Optional Content) – Toggle on**
- Select: Print as Displayed**
- RGB JPEG Compression – Toggle on**
- Disable Saved Views/References Bookmark – Toggle off**

Notes:

- ✓ **Include URLs/Engineering Links** – if toggled on, specifies whether you want URLs/Engineering links included in the PDF document. URLs/Engineering links that are associated with an element's geometry are accessible when viewing the PDF document.
- ✓ **Searchable Text** – if toggled on, allows the text in the PDF to be searchable.
- ✓ **Levels/Files (Optional Content)** – if toggled on, the PDF is created with the Layers Tab. This tab allows access to the level scheme from the DGN file. The DGN file's levels and references can be turned on/off in the PDF.
- ✓ **Print as Created** – The PDF will print with all levels on, regardless of whether levels are turned off using the Layers Tab.
- ✓ **Print as Displayed** – When levels are turned off using the Layers Tab, the PDF will print as it appears on the screen.



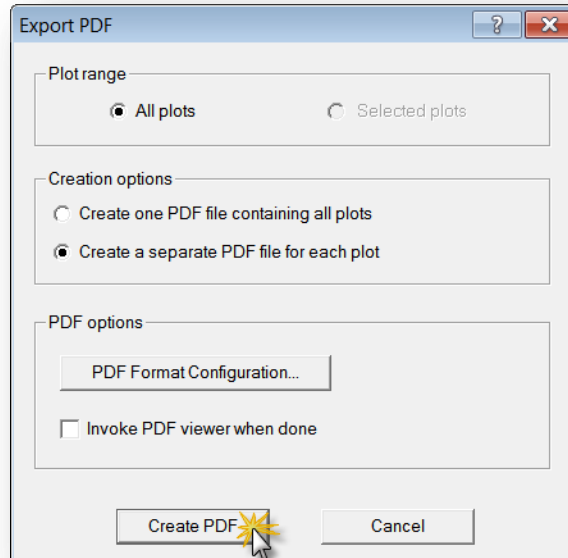
- ✓ **RGB JPEG Compression** – if toggled on, this setting control indicates that you want to enable JPEG compression for RGB (Red/Green/Blue) raster's in the PDF document. Enabling JPEG compression reduces the raster data size in the PDF file; hence, reducing the PDF file size.
- ✓ **Disable Saved Views/References Bookmark** – if toggled on, this setting control disables the automatic generation of Saved View and Reference bookmarks in the PDF file.

Creating MicroStation Files as PDFs using ProjectWise InterPlot Organizer

17. Click the **OK** button after the **PDF Format Configuration** is set in the PDF Format Configuration dialog box.

*The **PDF Format Configuration** dialog box now closes.*

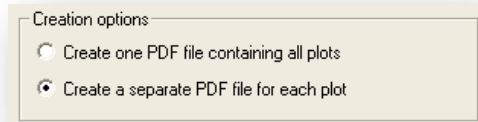
18. Click the **Create PDF** button as shown below:



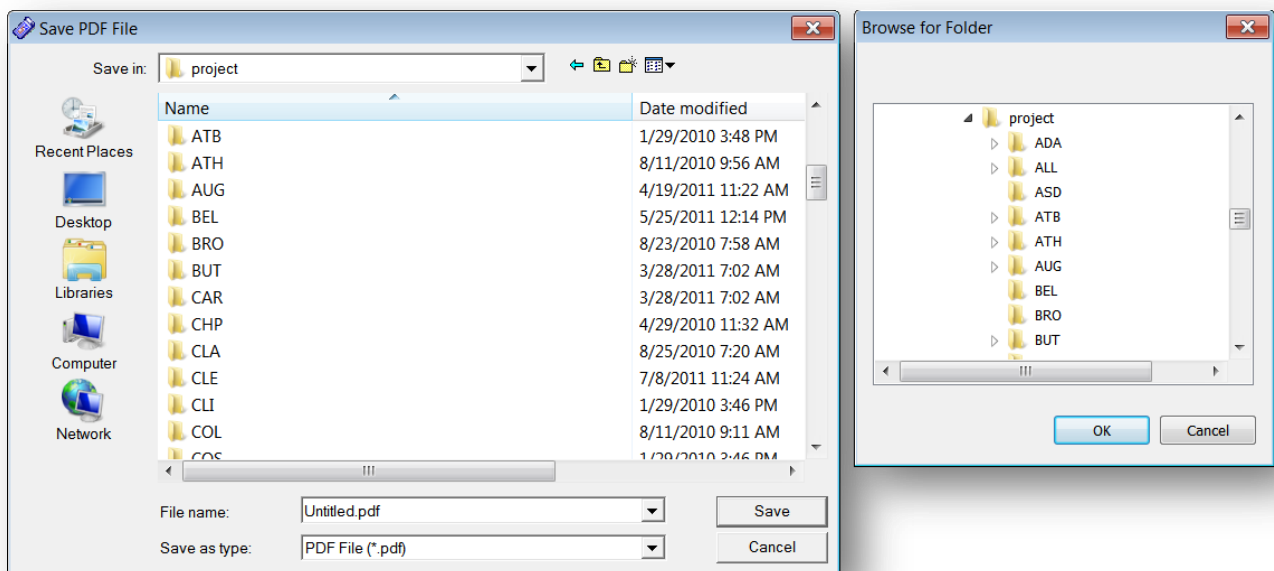
The **Save PDF File** dialog box displays as shown below.

Note: If you picked the Creation Option “**Create one PDF file containing all plots**” the **Save PDF File** dialog box opens, shown below to the left.

If you picked the Creation Option “**Create a separate PDF file for each plot**” the **Browse for Folder** dialog box displays like shown below to the right.



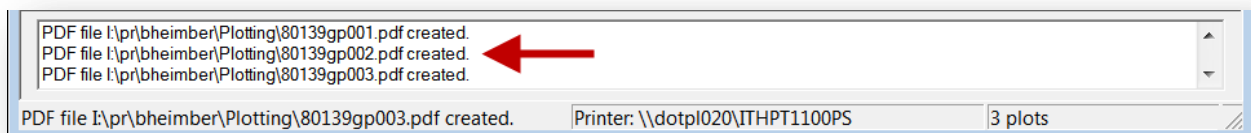
19. Browse to the **directory** and **folder** in which you want to save the PDFs in the **Save PDF File** or **Browse for Folder** dialog box.



Note: In the **Save PDF File** dialog box browse to the **directory** and **folder** in the **Save in** pull-down field.

20. Click **Save** or **OK** depending on which dialog box is open after you have located the directory and folder in which the PDFs will be created in.

It may take several minutes to create the PDF files. When the PDF files are created, the **Status** area in the **Untitled - ProjectWise InterPlot Organizer** dialog box will update saying “PDF created” as shown below:



Creating MicroStation Files as PDFs using ProjectWise InterPlot Organizer

21. In the **Untitled – ProjectWise InterPlot Organizer** dialog box select one of the following options:

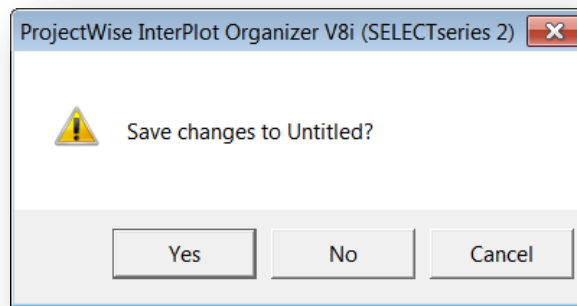
- a. Select **File > Exit** to close out of the ProjectWise Interplot Organizer dialog box when finished.

Or

- b. Select **File > Save** to save a plot set (*.ips).

Notes:

- ✓ If **Option “a”** was selected, the following dialog box will display if you did not **Save** a plot set asking you to “Save changes to Untitled?” like below:



Select **No** - if you do not want to save a plot set (*.ips) and want to exit out of ProjectWise InterPlot Organizer or Select **Yes** - if you want to save a plot set, see the next section “**Saving the IPS file for future use**”.

- ✓ If **Option “b”** was selected, see Section “**Saving the IPS file for future use**” in this user guide if you want to save a plot set (*.ips).

Saving the IPS file for future use

The following procedure is provided to assist designers in saving a plot set of their newly created PDF files from ProjectWise InterPlot Organizer.

1. Return to the **ProjectWise InterPlot Organizer** dialog box.
2. Select **File > Save** to save a plot set (*.ips) in the **Untitled – ProjectWise Interplot Organizer** dialog box.

*The **Save As** dialog box opens.*

3. In the **Save As** dialog box do the following:
 - a. In the **Save in** field browse to the directory and folder in which you want the plot set saved.
 - b. In the **File name** field key-in a name for the plot set.
 - c. Click the **Save** button.

*The **IPS** plot set is now saved for future use.*

Note: *IPS files are local files that cannot be archived. The network paths are hard-coded and cannot be changed.*

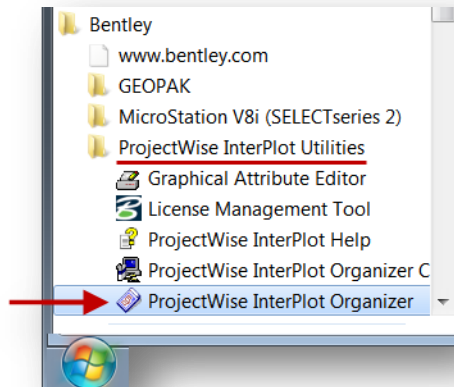
Plot existing ProjectWise InterPlot Organizer (IPS) Files containing Revised DGN files

If an existing **IPS** file contains a DGN file that has been modified, it will be necessary to update the IPS file in order for the revised PDF to print properly. This section details the process updating the revised IPS file, and creating the revised PDF.

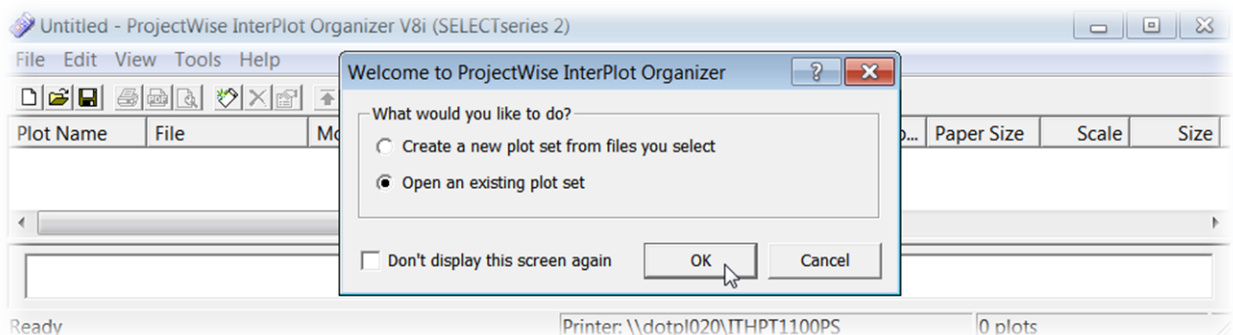
Important Note: *Please read the following Note before advancing.*

*Updating the IPS file works only if you have one (1) sheet per model. If you have a design file that has multiple sheets in one model in the IPS file InterPlot Organizer creates the same PDF multiple times from the first sheet that was placed in the model, it does not create a PDF of the other sheets placed in the model. To correct this delete the designs file(s) containing all the plots out of the “Plot Name” column and reselect the design file. In the InterPlot Organizer dialog box select **File > Create Plots** and then add the design file like you would normally for creating the PDF for the first time.*

1. Open **ProjectWise InterPlot Organizer**.

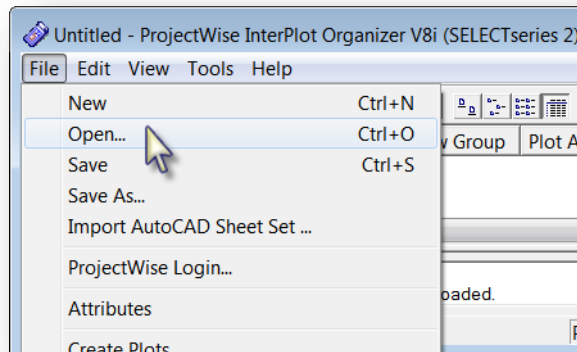


The **Welcome to ProjectWise InterPlot Organizer** dialog box opens and the user is asked; “What would you like to do?” like shown below:



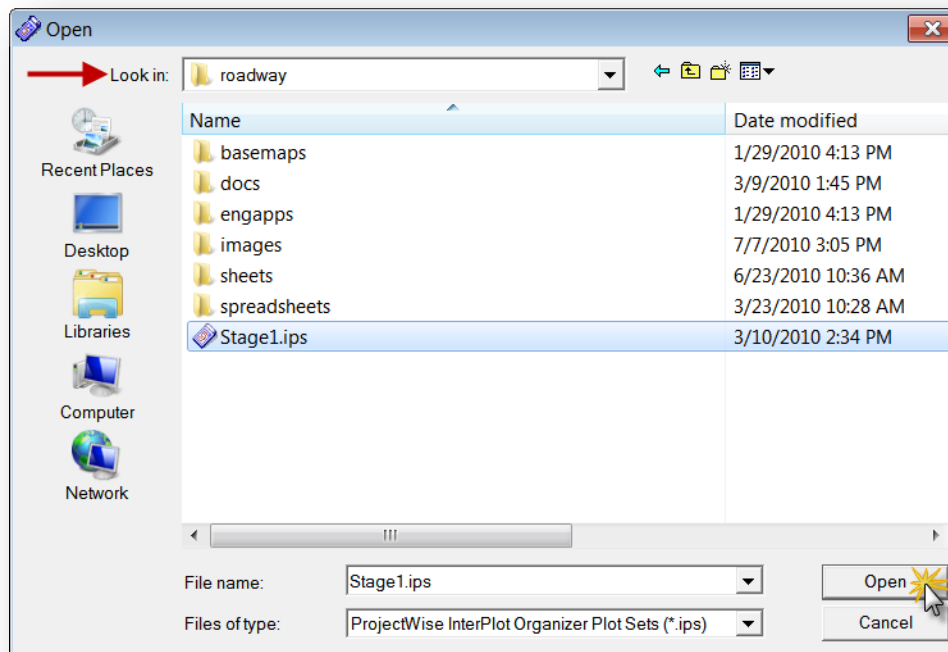
2. Toggle **on** “Open an existing plot set”.
3. Click the **OK** button.

Note: If you selected **Cancel** in the **Welcome to ProjectWise InterPlot Organizer** dialog box, in the **Untitled – ProjectWise Interplot Organizer** dialog box select **File > Open** to “Open an existing plot set” like shown below:



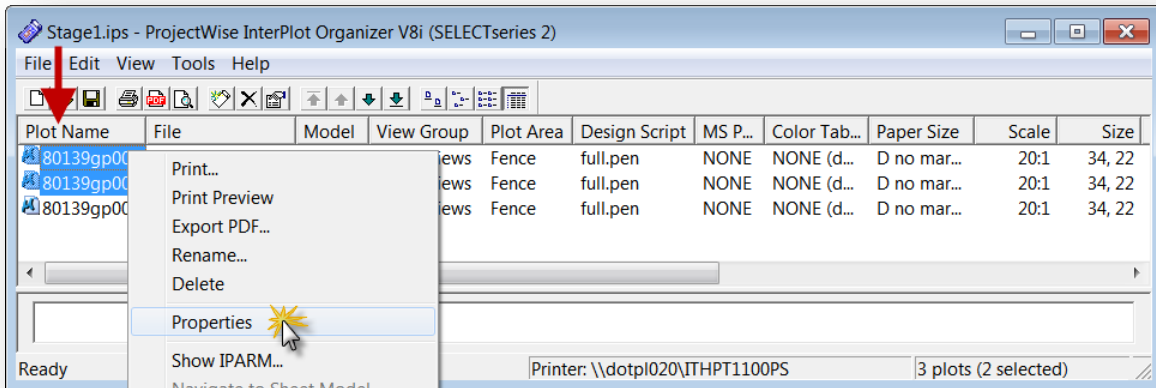
The **Open** dialog box opens like shown below.

4. In the **Look in** pull-down field of the **Open** dialog box, browse to locate the directory and folder in which the saved **IPS** file is located.
5. Select the saved **IPS** file, and click the **Open** button to load the file.



Creating MicroStation Files as PDFs using ProjectWise InterPlot Organizer

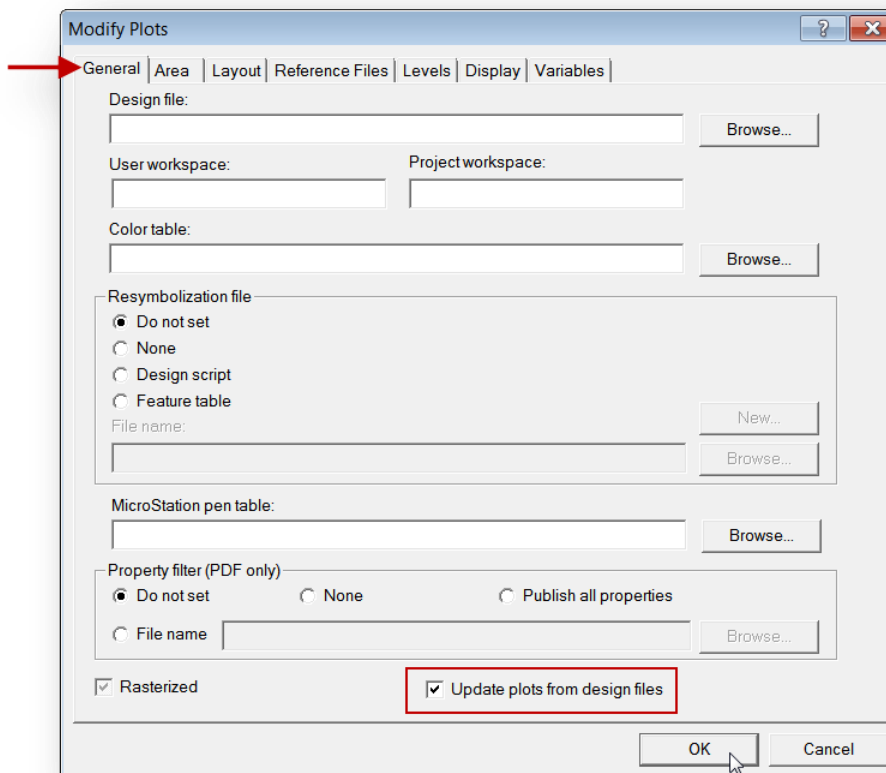
- After the IPS file has been loaded, in the **Plot Name** column select the drawing(s) that were updated or revised.



- After selecting the file(s) to update **Right-click** and select **Properties** or select **Edit > Properties** in the **ProjectWise InterPlot Organizer** dialog box like shown above.

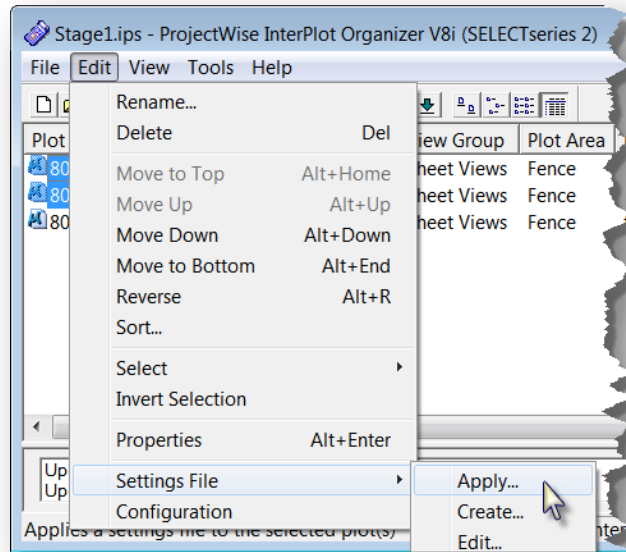
The **Modify Plots** dialog box displays like below.

- Select the **General** tab and **toggle on "Update plots from design files"** as shown below:



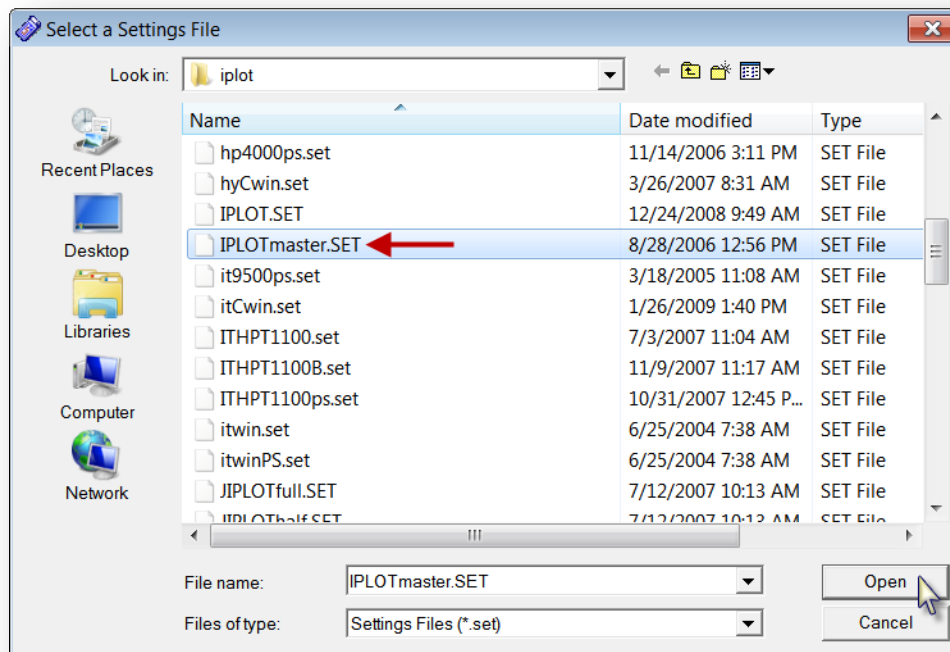
- Click the **OK** button in the **Modify Plots** dialog box to complete the update process.

10. Select **Edit > Settings File > Apply** from the **ProjectWise InterPlot Organizer** dialog box.



The **Select a Settings File** dialog box opens like shown below.

11. Select **IPLOTmaster.set** file like shown below:



12. Click **Open**.

13. When ready you can now print your files.

Notes:

- ✓ *The **IPLOTmaster.set** Settings file is necessary when you do an “Update plots from design files”. InterPlot Organizer reads everything that is displayed in your design file like Data Fields, Text Nodes etc. so it is necessary to re-apply a settings file so that the data fields, text nodes, active points do not plot out.*

- ✓ *IPS files are local files that cannot be archived. The network paths are hard-coded and cannot be changed.*