

UDOT Plan Set Digital Signature Process

Due to variety of problems signing within Microstation, the ETS Group has investigated new means for creating digital signatures for plan sheets. Our hopes are to create less of a burden and increase productivity in your workflows for signing plan sheets.

With the new process we will no longer be signing the sheets from within Microstation. All signing will be done from within Adobe Acrobat. Microstation will be used to place the graphics, such as a stamp graphic. The signature field will be automatically created by Interplot. From within Interplot the plan set will be exported to a PDF file with all the applicable fields ready for signing from within Acrobat.

Below is a step by step guide on the new process for creating Digital Signatures.

Create Custom Electronic Seal in MicroStation

Step 1.

Launch MicroStation & Open XXX_Adobe_Signature_v8i.cel



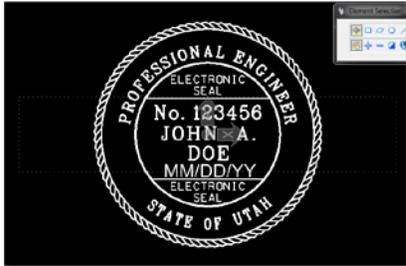
Step 2.

Select the appropriate classification and copy the text to the applicable stamp.



Step 3.

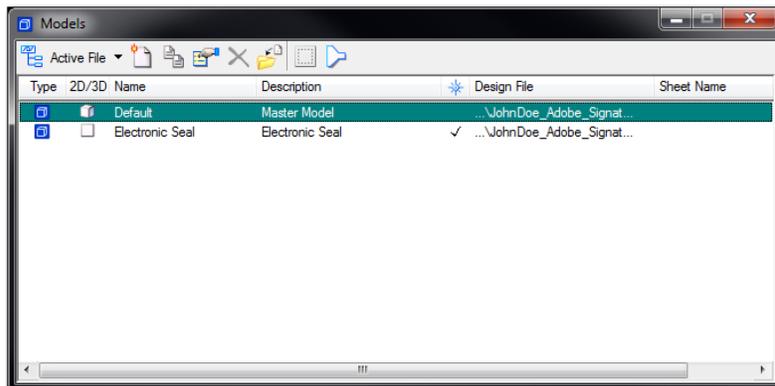
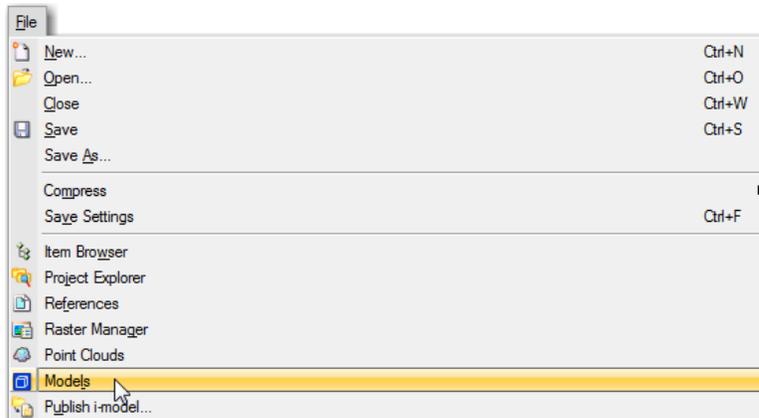
Copy the completed seal to the origin point using the snap points and **delete** the excess graphics in the file. **Move** the date text (MM/DD/YY or Last Modified) over the seal (modify as needed). The MM/DD/YY text can be modified with the edit text tool when the cell is placed in the drawing or if not modified, will be changed by Iplot with text substitution when the sheet is printed. **Move** the digital signature shape to your preferred location over the seal.



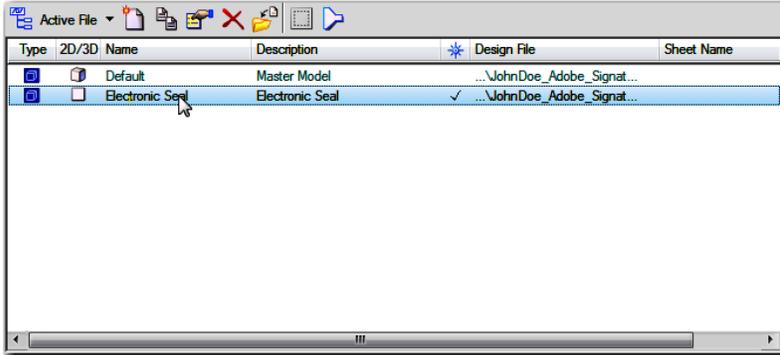
Step 4. (Required if you place a stamp on Sheet Files)

(Skip this step and move to Step 5 if you will only place a stamp on the Title or Cover Sheets and not on Sheet Files.)

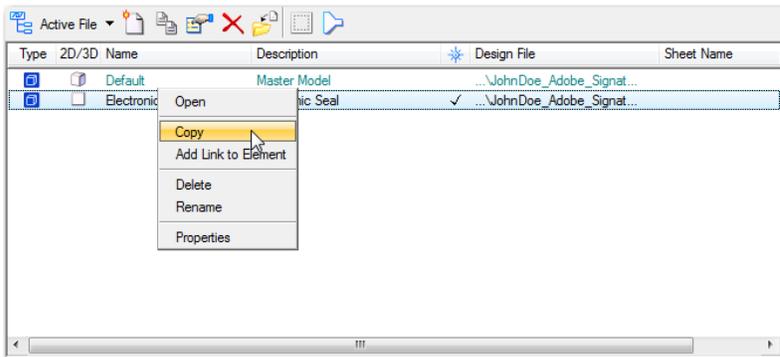
A. **Open** the Model Dialog Box



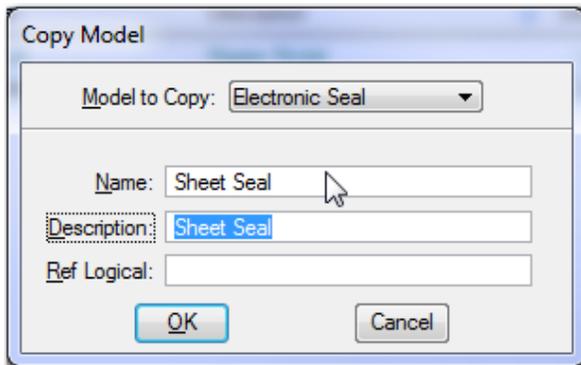
B. Select Electronic Seal



C. Right Click Electronic Seal and Select Copy



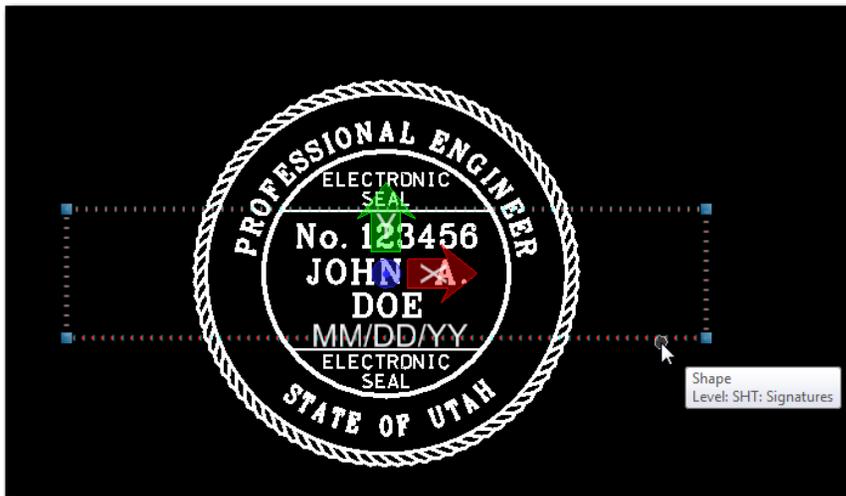
D. Change Name: and Description: to Sheet Seal Then Click OK.



Prior to completing Step 5. Verify that the Electronic Seal Model is Active.

Step 5.

Select and *Delete* the Dotted Signature Shape that covers the Seal. (Note: Only Delete the shape in the Electronic Seal Model.)



Step 6.

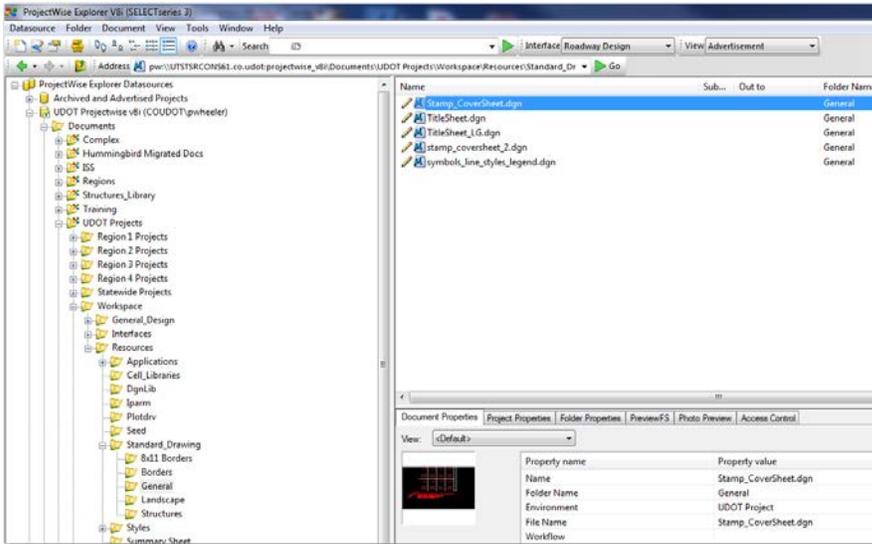
Save the file XXX_Adobe_Signature_v8i.cel to JohnDoe_Adobe_Signature_v8i.cel. We suggest you save your new Signature cell library in a secure location such as a network drive that will be backed up in case of a failure of your local drive.

Place Signature Graphics on CADD Sheets.

Cover Sheet (Skip to *Title Sheet* Section below if only one stamp is needed for the project)

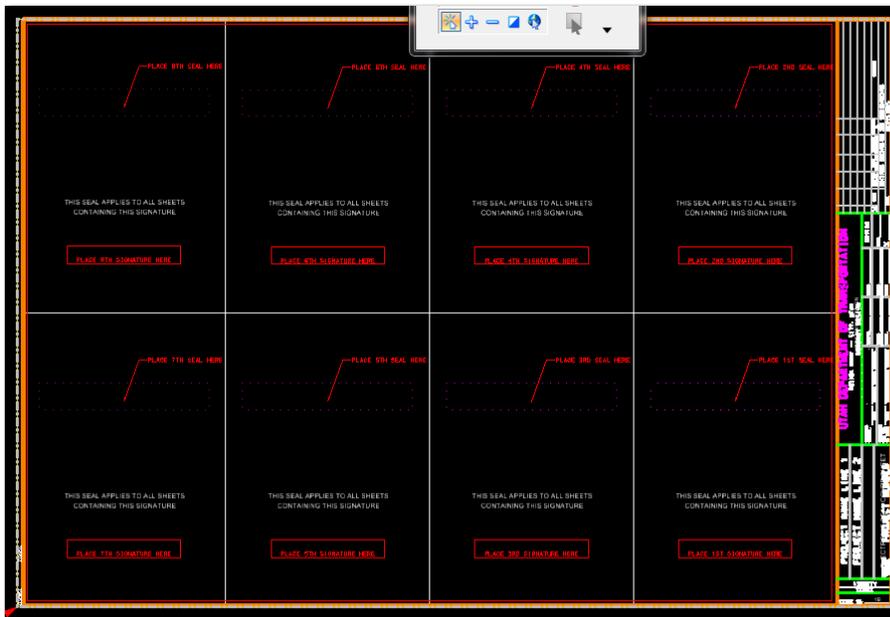
Step 1.

Copy Stamp_CoverSheet.dgn from ProjectWise Workspace\Resources\Standard_Drawing\General into your project folder.



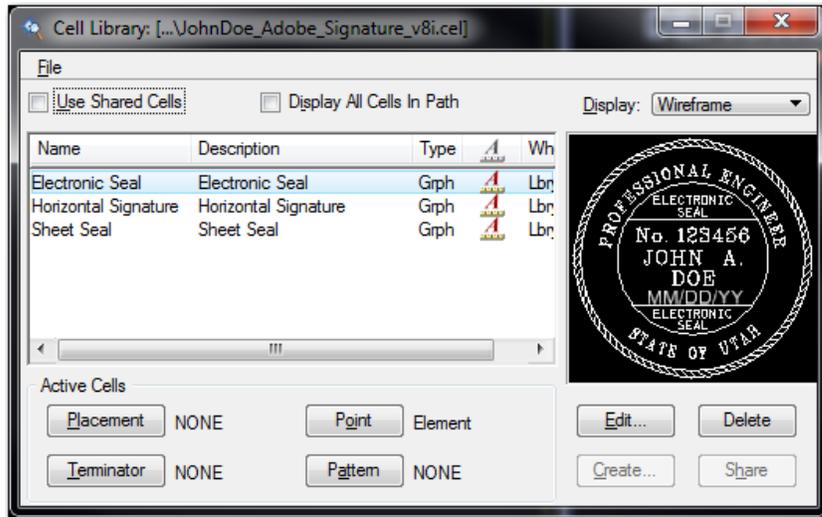
Step 2.

Open Stamp_CoverSheet.dgn and **Reference** the applicable border for your project.



Step 3.

Load your custom cell library created previously (e.g. Johndoe_Adobe_Signature_v8i.cel)



Step 4.

Place the Electronic Seal Stamp Cell from your Custom Microstation Signature Cell Library onto the Cover Sheet. **Change** the date on the stamp using the text tools from within MicroStation, if not using the automated methods on the Cover Sheet. (Use *Cover Sheet* if more than one Stamp is required. Use *Title Sheet* if only one stamp is required.)



Step 5.

Place Horizontal Signature Cell onto "Place Signature Here" box.

Step 6.

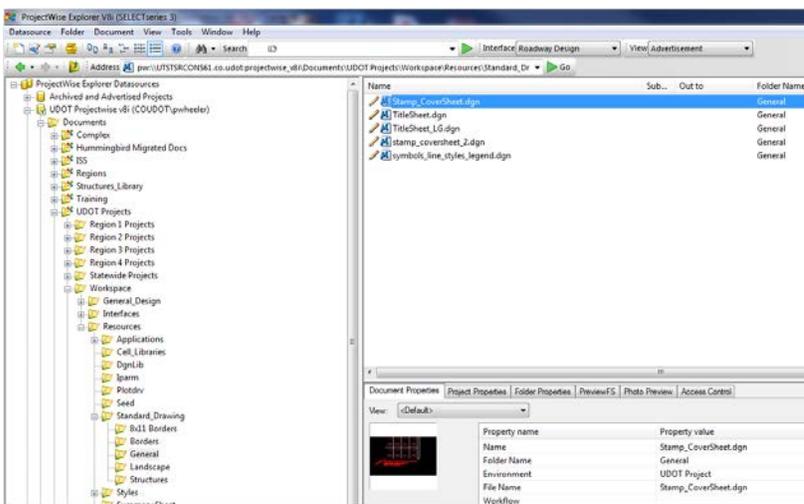
If Cover Sheet is used for Multiple Signatures make sure to **Delete** Graphics on the Title Sheet correlating to the Digital Signatures (graphics pictured below). If Title Sheet is used, no deletion is required.



Title Sheet (Move to *Cover Sheet* Section above if multiple Stamps are needed.)

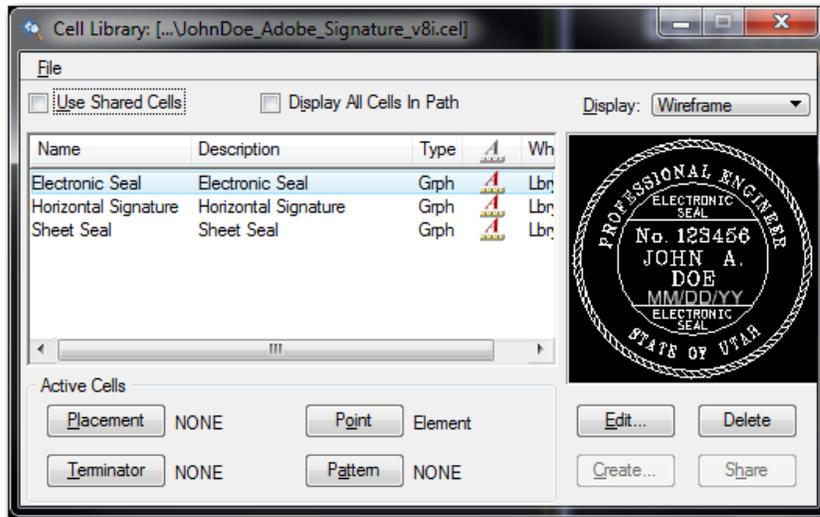
Step 1.

Copy *TitleSheet.dgn* from ProjectWise Workspace\Resources\Standard_Drawing\General into your project folder.



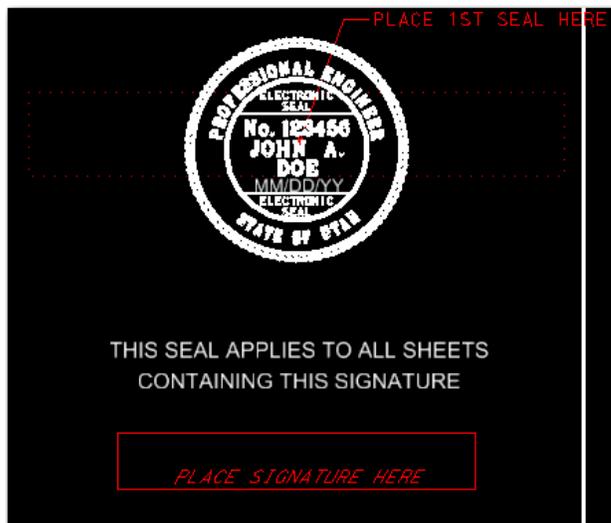
Step 2.

Open Title Sheet and **Load** your custom cell library created previously (e.g. *Johndoe_Adobe_Signature_v8i.cel*)



Step 3.

Place the Electronic Seal Stamp Cell from your Custom MicroStation Signature Cell Library onto the *Title Sheet*. **Change** the date on the stamp using the text tools from within MicroStation if not using the automated methods on the Title Sheet. (Use *Title Sheet* if only one stamp is required. Use *Cover Sheet* if more than one stamp is required.)



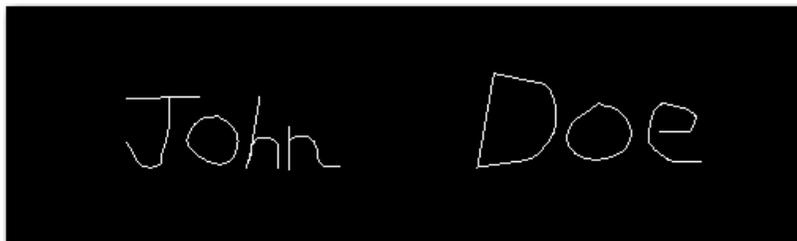
Step 4.

Place Horizontal Signature Cell onto "Place Signature Here Box".



Step 5.

Delete the excess graphics around the Horizontal Signature.



Sheet Files

Step 1. (You can skip this step if you do not place seals on Sheet Files.)

Open *Sheet File* and **Load** your custom cell library created previously (e.g. *Johndoe_Adobe_Signature_v8i.cel*)

Step 2.

Place the Sheet Seal Stamp Cell from your Custom MicroStation Signature Cell Library onto the sheet. **Change** the date on the stamp using the text tools from within MicroStation if not using the automated methods on the Sheet File.

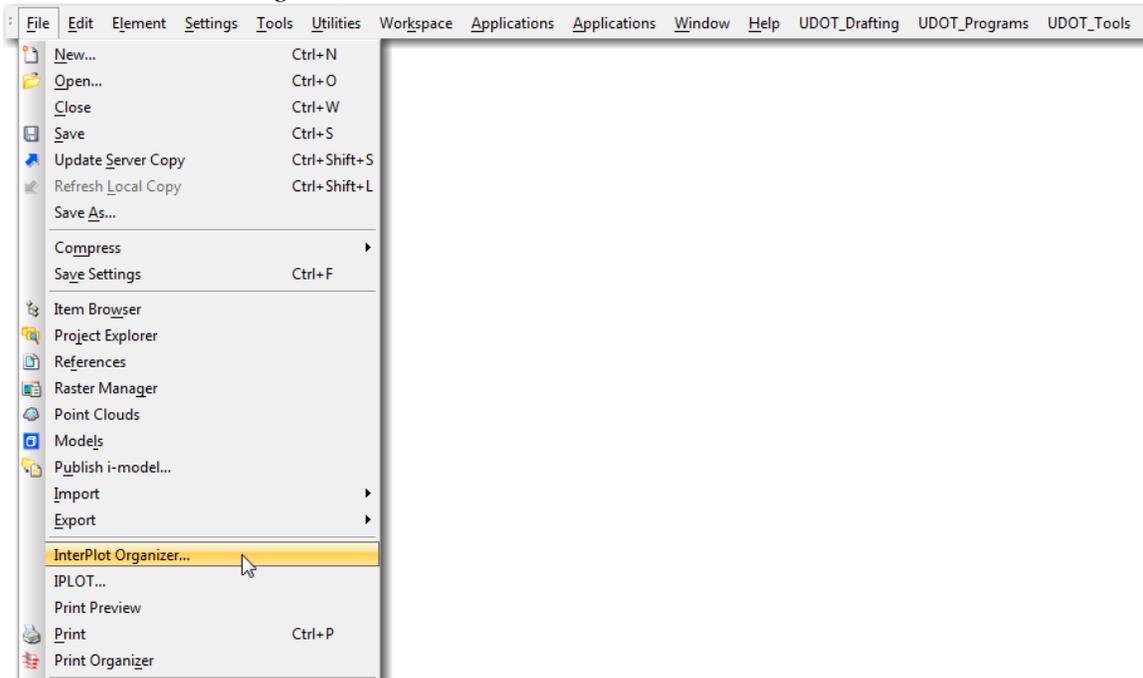


Create PDF Plan Set with InterPlot Organizer.

Note: After placing the stamp, date, and Horizontal Signature on the Cover or Title Sheets there is no need to Digitally sign within MicroStation with this new method. Simply Launch InterPlot Organizer and load the sheets needed for your plan set.

If you are not using InterPlot Organizer, the signature fields will need to be manually created in Adobe Acrobat.

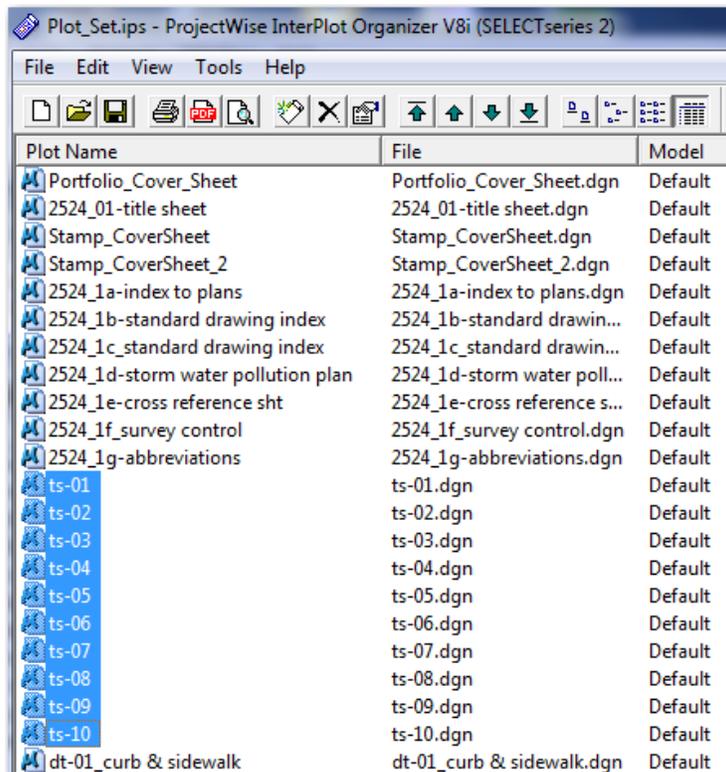
Step 1. **Launch *InterPlot Organizer***



Step 2.

From within InterPlot Organizer after the applicable sheets are loaded **Click** *Export to PDF*. **Organize** the sheets for export into their respective disciplines in order to properly assemble them later into a PDF Portfolio Package. (e.g. Title Sheet, Cover Sheets, Sheet 1's, Typicals, etc.) When naming the sheets attach a prefix of 01,02,03,etc. to the separate disciplines in the order that they need to be printed.

Note: Make sure to include the *Portfolio_Cover_Sheet.dgn* in your plan set (this pdf does not require the numeric prefix).

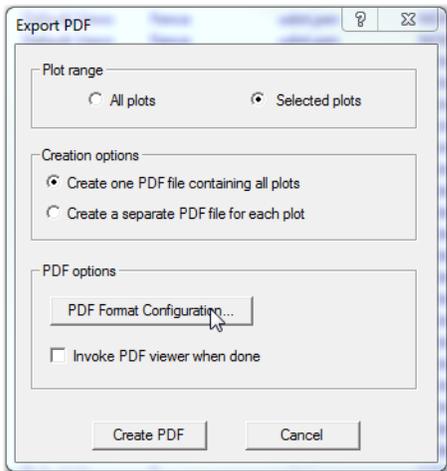


The screenshot shows the ProjectWise InterPlot Organizer V8i (SELECTseries 2) window. The window title is "Plot_Set.ips - ProjectWise InterPlot Organizer V8i (SELECTseries 2)". The menu bar includes File, Edit, View, Tools, and Help. The toolbar contains various icons for file operations and navigation. The main area displays a table with three columns: Plot Name, File, and Model. The table lists various plot sheets, including a Portfolio_Cover_Sheet, several 2524_1 sheets (title sheet, cover sheets, index to plans, standard drawing index, storm water pollution plan, cross reference sheet, survey control, abbreviations), and a series of ts-01 through ts-10 sheets, along with a dt-01_curb & sidewalk sheet. All sheets are listed with a "Default" model.

Plot Name	File	Model
Portfolio_Cover_Sheet	Portfolio_Cover_Sheet.dgn	Default
2524_01-title sheet	2524_01-title sheet.dgn	Default
Stamp_CoverSheet	Stamp_CoverSheet.dgn	Default
Stamp_CoverSheet_2	Stamp_CoverSheet_2.dgn	Default
2524_1a-index to plans	2524_1a-index to plans.dgn	Default
2524_1b-standard drawing index	2524_1b-standard drawin...	Default
2524_1c_standard drawing index	2524_1c_standard drawin...	Default
2524_1d-storm water pollution plan	2524_1d-storm water poll...	Default
2524_1e-cross reference sht	2524_1e-cross reference s...	Default
2524_1f_survey control	2524_1f_survey control.dgn	Default
2524_1g-abbreviations	2524_1g-abbreviations.dgn	Default
ts-01	ts-01.dgn	Default
ts-02	ts-02.dgn	Default
ts-03	ts-03.dgn	Default
ts-04	ts-04.dgn	Default
ts-05	ts-05.dgn	Default
ts-06	ts-06.dgn	Default
ts-07	ts-07.dgn	Default
ts-08	ts-08.dgn	Default
ts-09	ts-09.dgn	Default
ts-10	ts-10.dgn	Default
dt-01_curb & sidewalk	dt-01_curb & sidewalk.dgn	Default

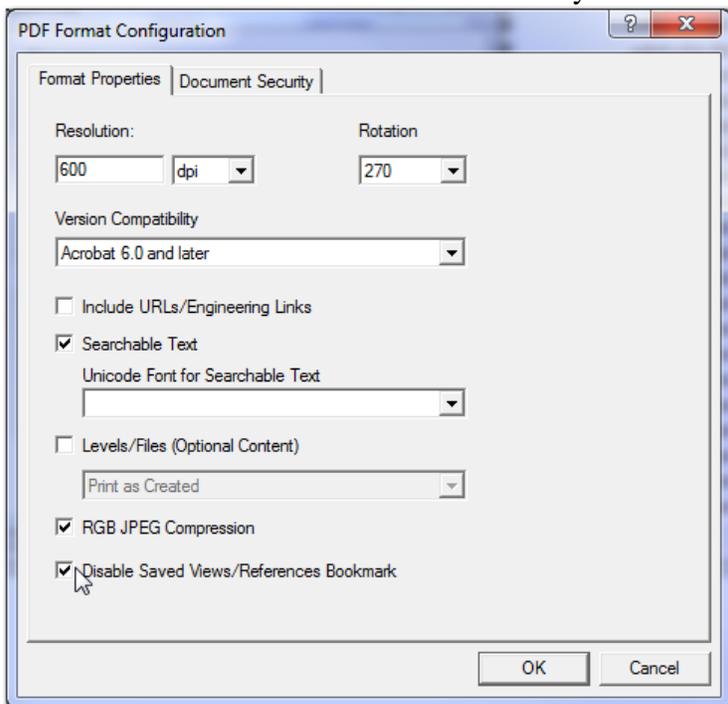
Step 3.

In the Export PDF dialog box **Click** PDF Format Configuration.



Step 4.

Check the box titled *Disable Saved Views/References Bookmark*. By checking this box it will make the PDF Files load more efficiently.



Signing Within Adobe Acrobat.

Step 1.

The PDF will be created with all the signature fields needed to be signed in Acrobat if InterPlot is used with the new UDOT.pen file.

UTAH
DEPARTMENT OF TRANSPORTATION

PLANS OF PROPOSED STATE ROAD
PROJECT FUNDING SOURCE
PROJECT NUMBER PIN: NNNNN
PROJECT NAME
TYPE OF WORK
COUNTY COUNTY
LENGTH X.XXX MILES

UTAH PROFESSIONAL ENGINEER
No. 12345
JOHN A. DOE
STATE OF UTAH

THIS SEAL APPLIES TO ALL SHEETS
CONTAINING THIS SIGNATURE

John Doe

UTAH DEPARTMENT OF TRANSPORTATION
APPROVED FOR USE BY LEGISLATURE

UTAH DEPARTMENT OF TRANSPORTATION
APPROVED FOR USE BY LEGISLATURE

UTAH DEPARTMENT OF TRANSPORTATION
APPROVED FOR USE BY LEGISLATURE

Step 2.

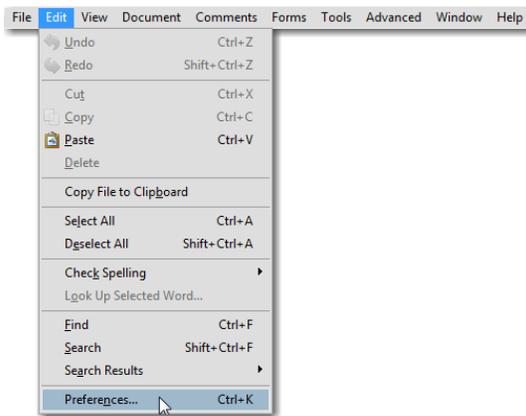
Prior to Signing the Document you will need to set up a digital signature inside of Adobe Acrobat.

To do this, first either scan a copy or use a tablet to create a graphical image of your signature. (Note: A transparent background is recommended.)

You will need to create both a horizontal signature and a vertical signature to use within Adobe Acrobat.

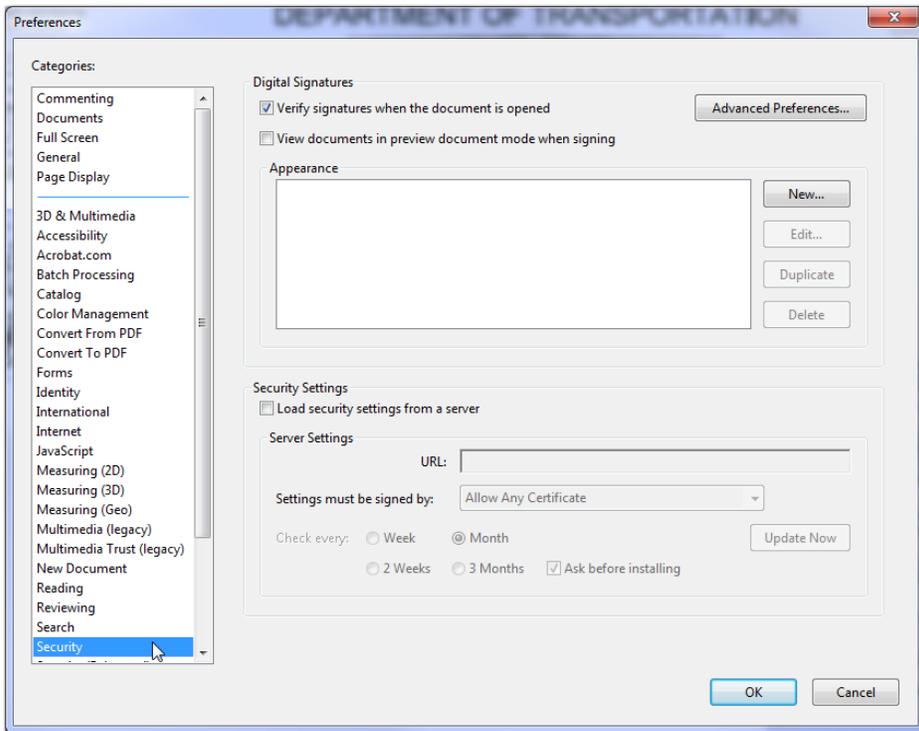
Step 3.

Once the signature is created **Click** on *EDIT>Preferences* within Acrobat.

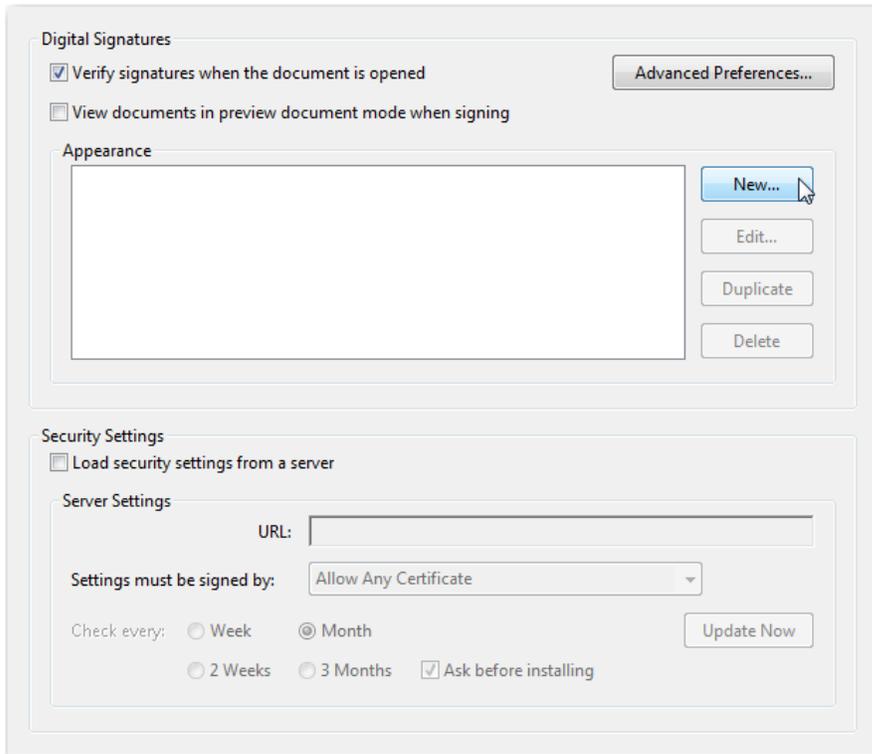


Step 4.

On the Categories Section **Click** on *Security*.

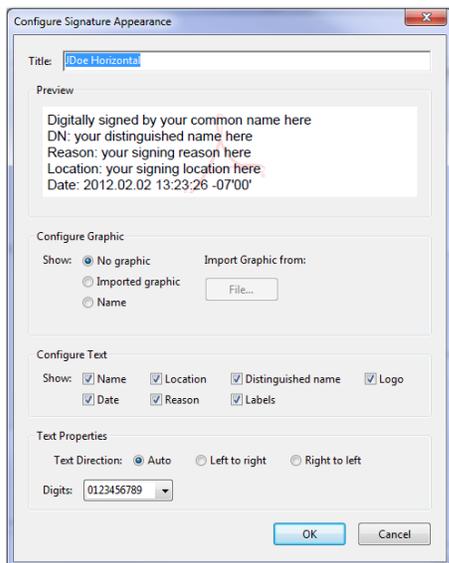


Step 5.
Click on *New* under the Digital Signatures section.



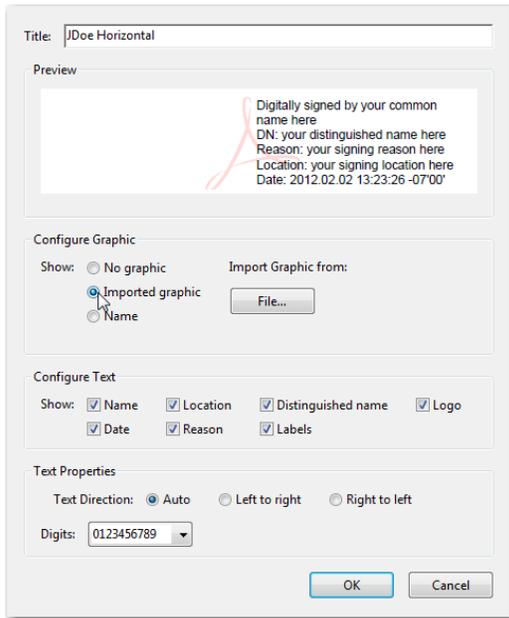
Step 6.

You will need to create a Signature for both a **Horizontal** and a **Vertical Orientation**. On the Title section **Fill** in the name applicable to your signature (i.e. John Doe Horizontal, Jane Doe Vertical, etc.)



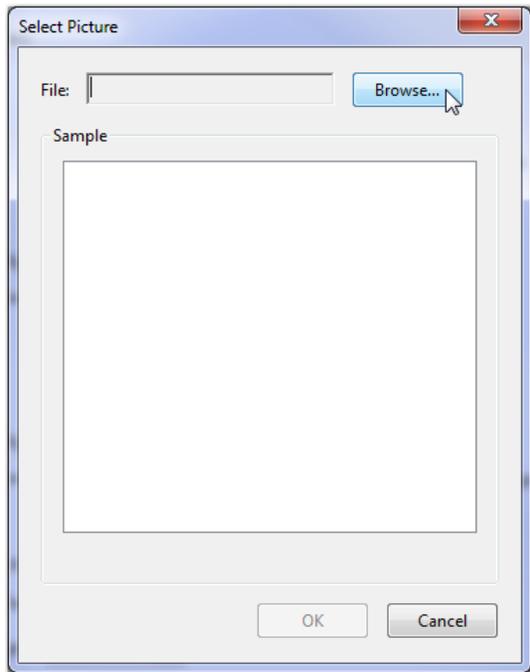
Step 7.

After entering a title select *Imported Graphic*, Then **Select File**.



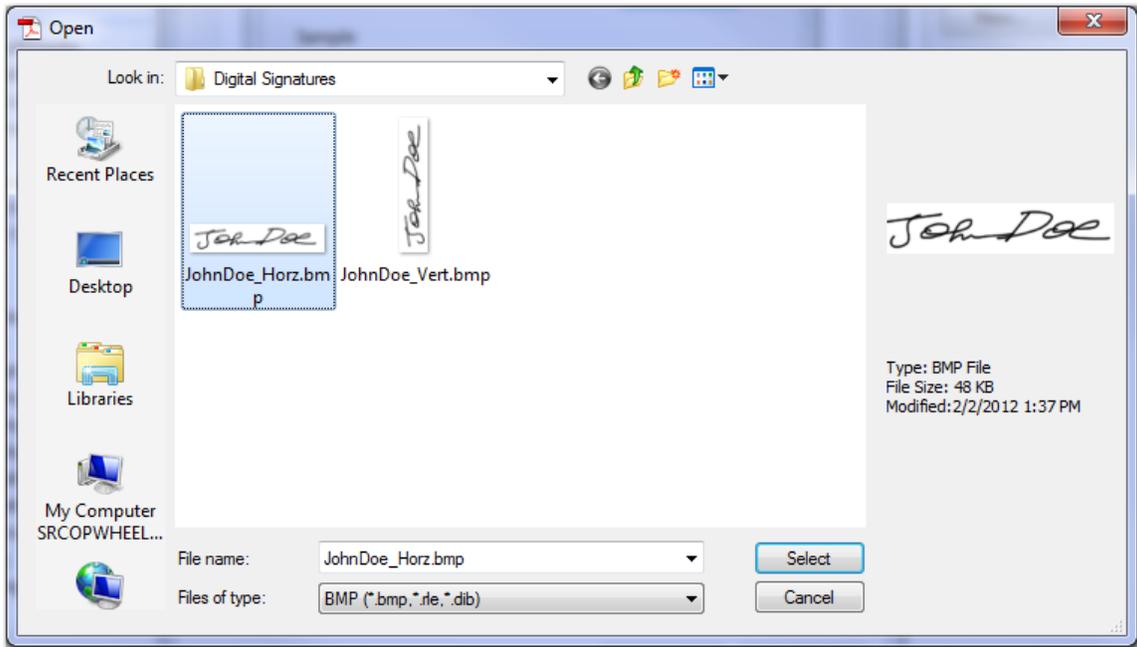
Step 8.

The Select Picture Dialog box will open, **Select *Browse***.



Step 9.

Browse to the location of your signature graphic and then **Select *the image*** and double click or choose **Select**.

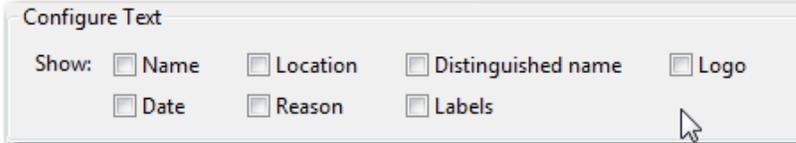
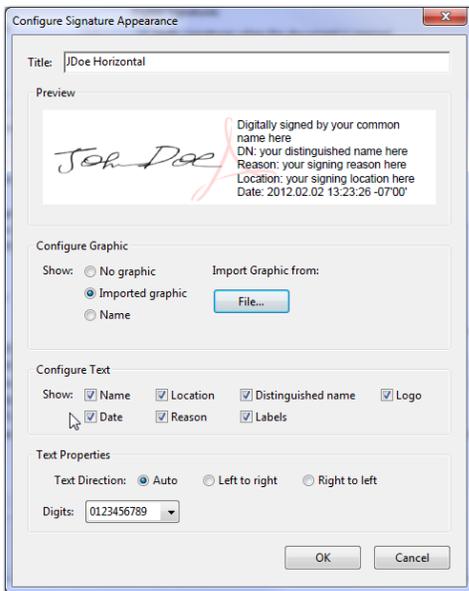


This will bring your signature into the *Select Picture Dialog Box*. Verify it is the correct signature then **Select OK**.



Step 10.

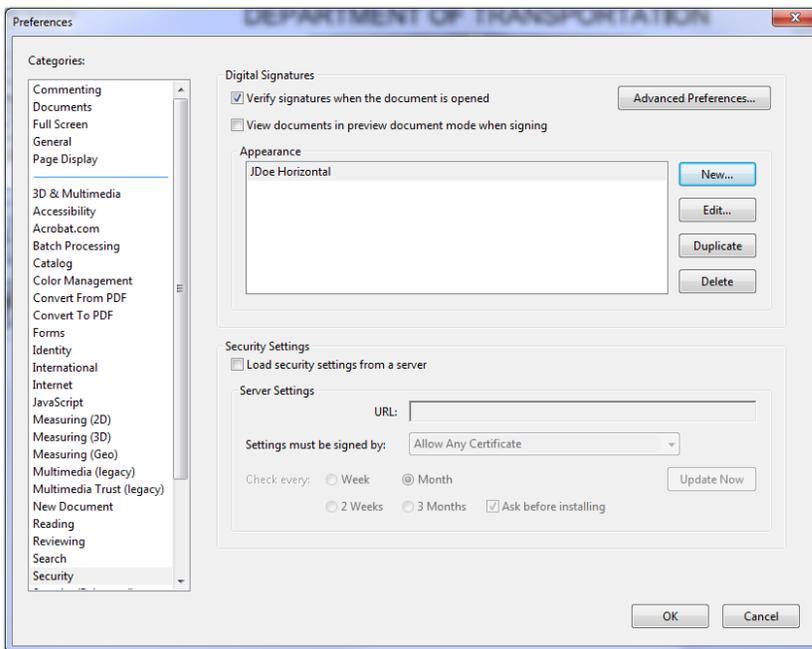
In the "*Configure Text*" Section **Uncheck** all of the Boxes



Step 11.

Click **OK**.

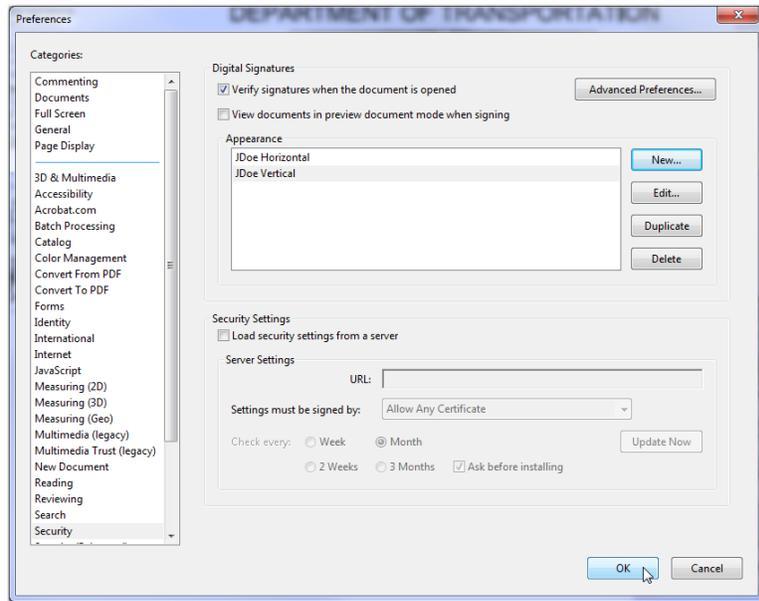
You should now see the new signature in the "Appearance" box.



Step 12.

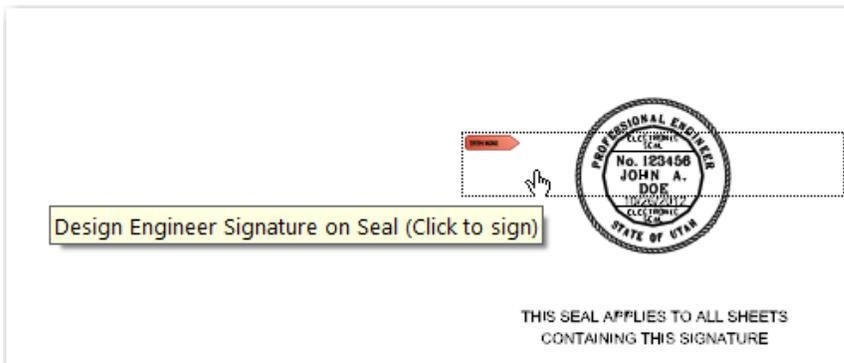
Repeat Steps 5-11 if another signature appearance is needed. (i.e. Vertical Orientation Signature) When Done **Click OK**.

Note: The Vertical Signature will need to be oriented as shown below to function properly when signing vertically.



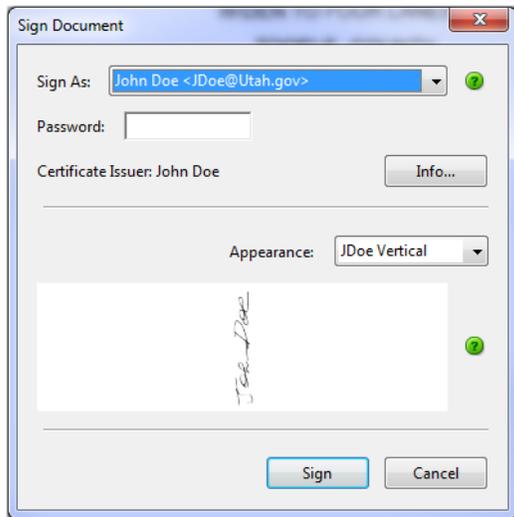
Step 13.

You are now ready to sign the sheets. Plug in your eToken into the USB drive, if applicable, then **Click** on the designated area for the signatures.



Step 14.

After clicking in the appropriate Signature area the Sign Document Dialog box will open.



Step 15.

From the *Sign As: Pull-Down*, **Select** the Correct certificate.(Typically pulled from the eToken.)

In the Password Box **Enter your Password** (If Prompted - May not show if using eToken).

In the *Appearance* Pull-Down, **Select** the Appearance appropriate for the orientation of the signature.



When Done **Click Sign.**

This will initiate the Save document dialog. **Save** the Document as the same name to overwrite the existing document. (At this time if using an eToken you will be prompted for your token password.)

This will place the signature in the Pre-Defined Signature Fields and Secure the Document.



Step 16.

To apply additional signatures simply **Click** in each of the Signature fields and repeat Steps 14-15.

VERIFIED FOR SUBMISSION FOR ADVERTISEMENT

DESIGN ENGINEER

UTAH DEPARTMENT OF TRANSPORTATION
APPROVED FOR USE BY UDOT

REGION XXXX PRECONSTRUCTION ENGINEER

 THIS SEAL APPLIES TO ALL SHEETS CONTAINING THIS SIGNATURE	 THIS SEAL APPLIES TO ALL SHEETS CONTAINING THIS SIGNATURE	 THIS SEAL APPLIES TO ALL SHEETS CONTAINING THIS SIGNATURE	 THIS SEAL APPLIES TO ALL SHEETS CONTAINING THIS SIGNATURE
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UTAH DEPARTMENT OF TRANSPORTATION
PROJECT NO. 123456
SHEET NO. 123456
DATE: 12/31/2017
SCALE: 1"=100'
DESIGNED BY: [Signature]
CHECKED BY: [Signature]
IN CHARGE: [Signature]
APPROVED BY: [Signature]

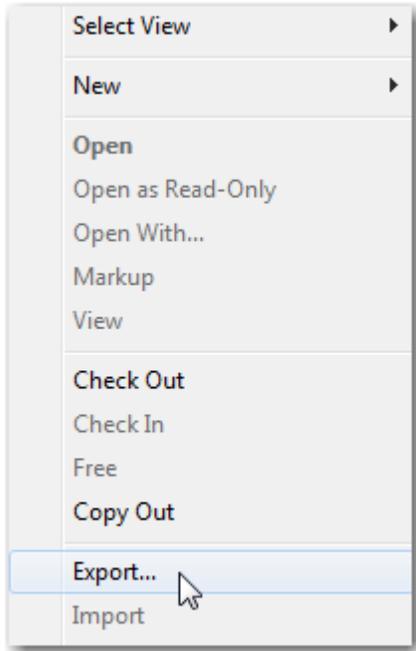
Once all the sheets from the respective disciplines have been signed you will need to **Compile** all the PDF files into a PDF Portfolio.

Export PDF Files from ProjectWise

Since Adobe Acrobat is not integrated with ProjectWise, it will be necessary to export all the associated PDF files from ProjectWise to another area before compiling them into a single portfolio.

Step 1.

In ProjectWise **Select** all the PDF files needed to create the plan set, **Right Click** and select *Export*



Step 2.

Click *Next* on the Document Export Wizard.



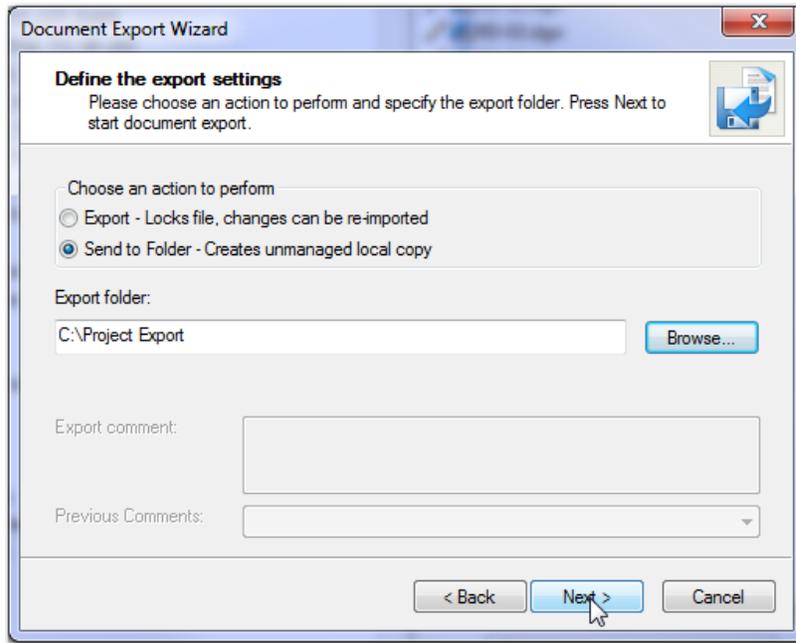
Step 3.

Confirm the following Settings in the Document Export Wizard

Select *Send to Folder* in the Choose an action to perform section.

Click *Browse* in the Export Folder Section and select an appropriate area to save the files.

Click *Next* When Finished.

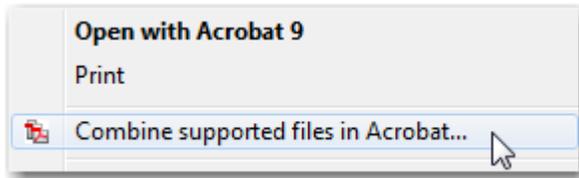


This will save all the selected files from your project within ProjectWise to the area specified in the Export Folder path to use to create your Portfolio from within Adobe Acrobat.

Compile Separate PDF Files into One Portfolio

Step 1.

Select PDF Files from Windows Explorer **Right Click** Selected Files --->Create PDF Portfolio

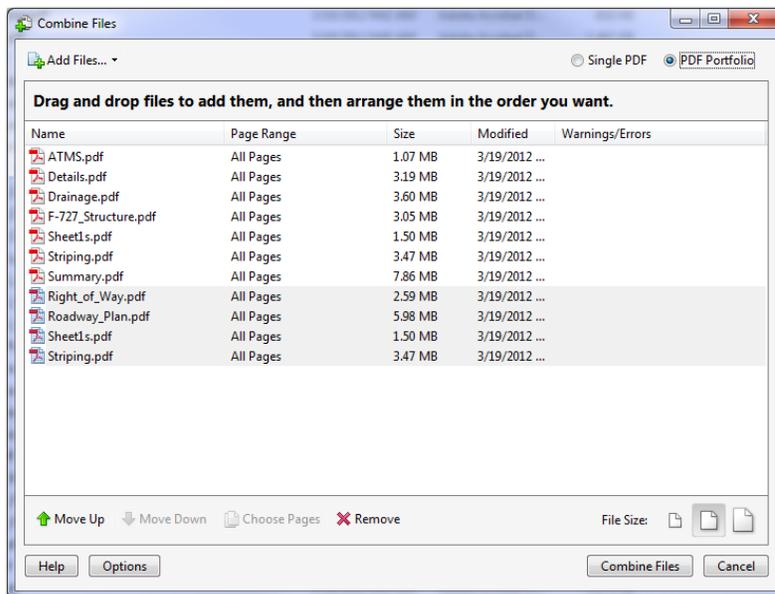


Step 2.

This will launch the *Combine Files Dialog*.

Add all the applicable PDF files that have been signed that need to be combined into the PDF Portfolio. **Arrange Files** into the proper order using the *Move Up or Move Down* Commands. If additional files are needed **Click** on *Add Files*. Make sure PDF Portfolio is **Selected** on the top right of the window to create a portfolio instead of a single PDF File.

Note: The files will need a prefix of 01,02.03, etc. for the order in which they will be printed. Adobe Acrobat will print alphabetically regardless of the order they are arranged in the portfolio.



Step 3.

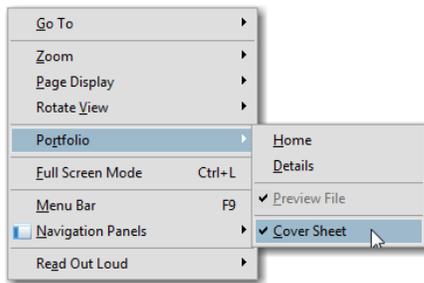
After the files have been imported and arranged **Click** Combine Files. **Save** the Portfolio and change the layout to *List with File Preview*.



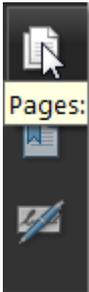
If you are using a version of Adobe Acrobat other than Version 9 you will not see "*List with File Preview*" as an option. Select the best layout for your plan set until a time when a standard template can be created by UDOT.

Step 4.

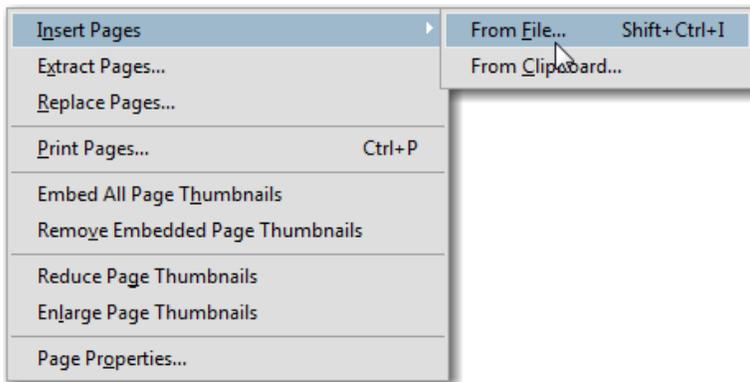
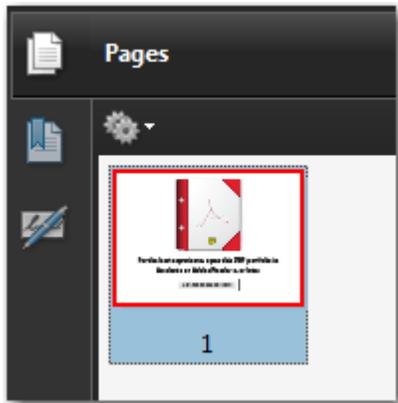
Click on View -->Portfolio-->Cover Sheet



Step 5.
Click on Pages.



Step 5.
Right Click on the Acrobat Icon, *Select Insert Pages-->From File*



Step 6.

Select the *Portfolio_Cover_Sheet.pdf*

Step 7.

Delete the Adobe page leaving only the Porfolio_Cover_sheet in the cover sheet pages.

Step 8.

When all files have been imported and arranged into the portfolio, it is ready to have the Preconstruction Engineer sign and certify the cover to lock the entire portfolio.

Step 9.

Right Click on *Signature Field*. **Click** on *Certify with Visible Signature*.



Step 10.

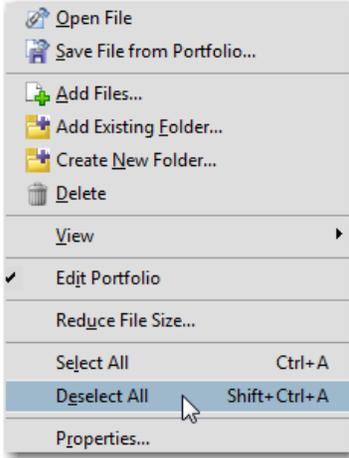
Sign the document as outlined in the previous steps.

Note: You may need to use the Vertical appearance instead of the horizontal appearance since the cover sheet is rotated. It will be necessary to create additional PDF Portfolios for Advertisement & Public Award Sets before certifying in order to remove PDF's and change securities.

Printing the Plan Set Portfolio

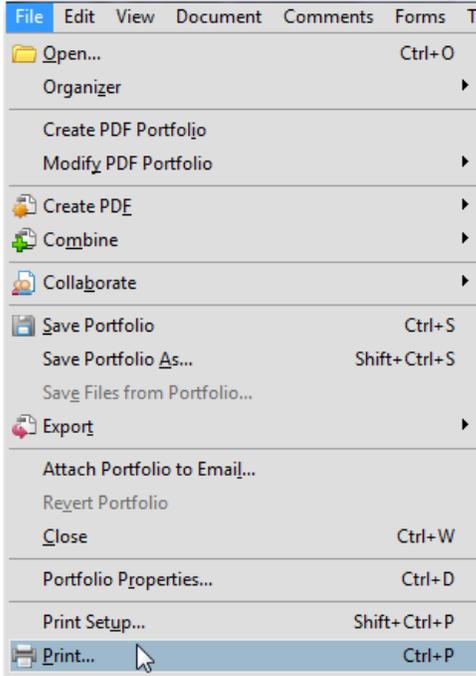
Step 1.

After the plan set portfolio has been completed, signed, and locked it is ready to be printed through Adobe Acrobat. Before printing ensure that all files are deselected in the portfolio list. To accomplish this **Right Click** on the portfolio list, then **Choose Deselect All**.



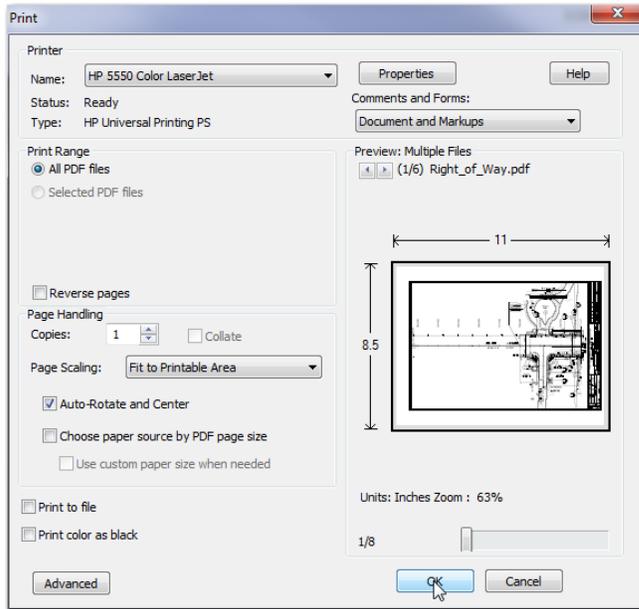
Step 2.

Click **File** Then **Select Print** to display the Print Dialog Box.

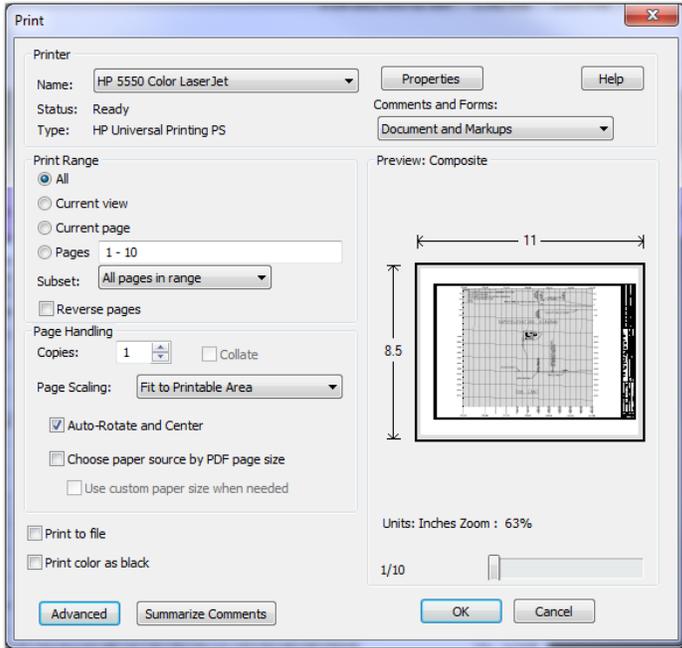


Step 3.

Ensure that *All PDF Files* is selected then **Click OK** to print out the complete portfolio set.



Note: If you see the following dialog box without the *All PDF Files* option, then one of the files are selected. **Close** the printing dialog, **Right Click** in the portfolio list and Choose **Deselect All**. Once all files are deselected *All PDF files* will show under Print Range section of the Print dialog box.



Addendums

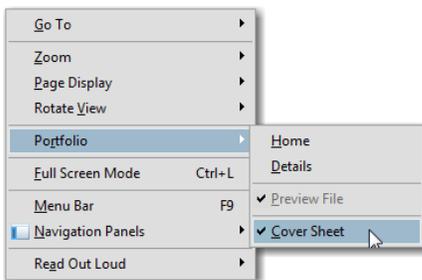
In order to add addendums, the PDF Portfolio will need to have the Preconstruction Engineer's Signature cleared. All signatures within the associated section will need to be cleared in order to add an addendum. Once the addendum is added all sheets within the section will need to be resigned. The other signatures in the other PDF files will remain valid unless changed.

Step 1.

Open the PDF Portfolio.

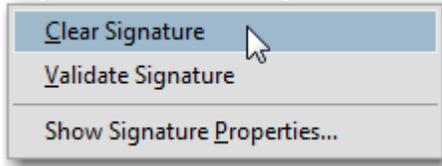
Step 2.

Click on *View -->Portfolio-->Cover Sheet*.



Step 3.

Right Click on the *Signature* and **Click** on *Clear Signature*.

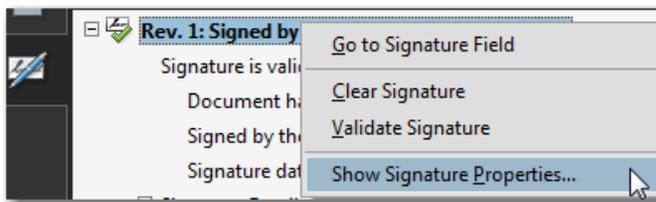


Note: When the signature is cleared it will unlock the other PDF files within the portfolio to allow for an addendum to be added.

Step 4.

Clear all signatures within the associated PDF to which the addendum will be added.

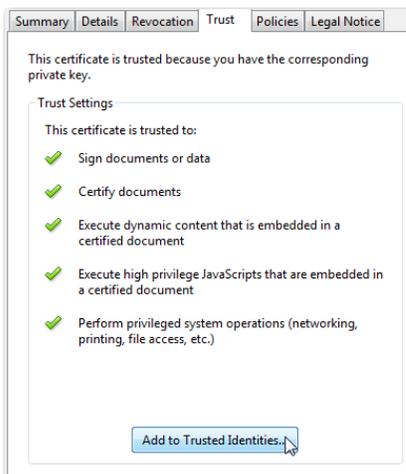
Note: If Acrobat will not Clear the signature, it may be necessary to validate your digital signature on your computer. This can be accomplished by returning to the portfolio, Expand the signature by clicking on the +, **Right Click** on *Signature Field*, **Choose Show Signature Properties** to access the Signature Properties dialog box.



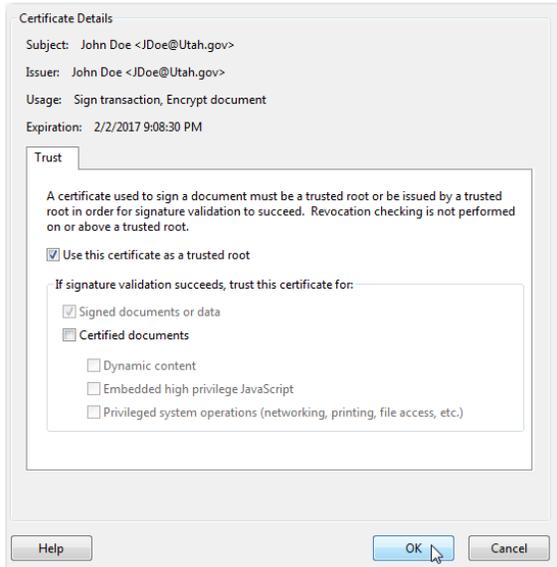
Select Signer tab, Select Show Certificate



Select Trust Tab, then Choose Add to Trusted Identities.



Ensure *Use this certificate as a trusted root* is Selected and **Click OK**.



This will add your signature as a trusted identity and allow you to clear your signature.

Step 5.

Add Addendum by removing the original PDF file and inserting the new set of sheets to the associated PDF file and resign all sheets in that set.

Note: You will only need to resign the sheets of the section that is changed not the entire portfolio.

Step 6.

When the addendum is added and all associated sheets have been signed the portfolio will be ready to be signed and certified by the Preconstruction Engineer which will prevent the document from being changed. Follow the previous steps above to resign and certify.

Note: It may be necessary to assemble the entire portfolio again into a new portfolio after an addendum is added in order for the portfolio to print in the correct order.