

DocuSign email - NDDOT User Guide

Revised 7-8-25

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Overview of Tool Sets-Applications

DocuSign provides different tool sets for signing documents. DocuSign Client (Signature Appliance), DocuSign Cloud, and DocuSign email are different.

- The DocuSign Client application will be abandoned on July 31, 2023. The Client version uses software loaded on people's computer. It was not web based. The NDDOT used this application to sign plan sets in the past. DocuSign will not be supporting this application in the future.
- DocuSign Cloud is a web-based tool used to sign documents. One of the key features of this tool that sets itself apart from other digital signature tools is features that allow for a signing workflow. DocuSign Cloud allows for signing, then additional comments or decisions and then additional signing. Most other digital signature tools lock down the document after the first signature, no additional comments or decisions are allowed. DocuSign Cloud signing workflows are the reason the NDDOT used it for environmental documents and decision documents.
- DocuSign email is like DocuSign Cloud. It has all the features of Cloud and more. The additional feature that is important to ND professional engineers and land surveyors (PE and LS) is individual digital signatures. ND PE and LS need a digital signature that can be clearly associated with a specific page of document. ND PE and LS can approve specific pages of a document without reviewing and approving other pages of the same document. DocuSign email is the new tool that the NDDOT will be using to sign plan sets.

Adobe Acrobat Pro is needed to create pdf "portfolios".

DocuSign Graphics – Signature and Seal

Signers may need one or two graphics before using DocuSign email. They may need a graphic for their signature and another graphic that combines their seal and signature. A combined graphic for a user's seal and signature is needed to simplify signing.

The following video demonstrates this creation.

<https://www.youtube.com/watch?v=mT0yUHzg3c>

Signature Graphics Creation

One of the easiest ways to get a signature graphic is to physically sign a piece of paper and take a picture of your signature. The following are some recommendations for getting a good image.

- Use a bold pen to get bolder graphics.
- Use basic photo editor such as the default Windows "Photo" application to crop and adjust signature darkness.
- Use windows paint to turn graphics to a monochrome bmp file. This conversion will help with transparency settings when merging seals and signatures.

Stamp Creation

NDDOT staff should use MicroStation to create a PE or LS stamp graphic. Contact Jon Collado if you need help with creating a stamp.

Your stamp should look like your physical stamp. The Seals obtained before July 2005 look different than the current seals. The earlier seals are smaller (approximately 1.5 inch outer circle). The later (current) seals are larger (1.75 inch outer circle).

The following MicroStation drawing can be used as a template for creating a stamp graphic.

S:\STANDARD\CE*\Organization\Data\dgn\NDPELS_Seals.dgn

If you are creating seal with the old format, your named will be curved with the inner circle. The curved text is linked to the tag fields to help simplify creation.

The following MicroStation plot configuration file can be used to print a jpg image.

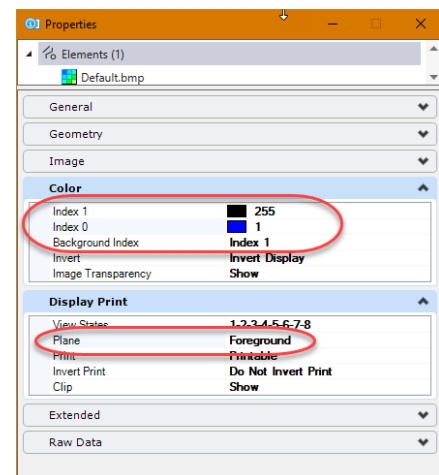
S:\STANDARD\CE*\Organization\Pltcfg\Manually_Pick_Printer\NDDOT-jpeg-signature.pltcfg

Merged Seal and Signature

Use a monochrome bmp file of your signature and MicroStation Raster Manager to merge your seal and signature graphics.

Within raster manager set the signature to graphic with the following settings.

- Color > Index 1 = 255
- Color > Index 0 = 1
- Background Index = Index 1
- Display Print > Plaine > Foreground



Access to DocuSign email Signing

People initiating the signing of a document require a DocuSign email account. However, all signers don't require an account. Anyone with email can participate. It is also possible to include people outside of the NDDOT in the signing of a document.

NDDOT staff that signs plans sets and don't currently have a DocuSign email account should use the NDDOT service portal (Generic Service Request) to request an account.

DocuSign Envelopes

DocuSign email packages documents for signing within an “Envelope”. The following are some details and limitations on DocuSign email “Envelopes”.

- Envelopes cost approximately \$1.73 each.
- 50 (49 user) digital signatures per envelope. This includes digital signatures as stamps.
- Envelopes can contain multiple separate pdf files.
- The maximum size of an individual pdf within an envelope is 100 MB.
- The maximum size of all pdf files within an envelope is 200 MB.
- The maximum number of pdf pages within an envelope is 300 pages.
- **The practical limit for digital signatures is approximately 20 pages (digital signatures).**
DocuSign email uses an oversigning process that increases the file size after signing by a relatively large factor. This factor is based on the number of signatures. This limitation is also based on the original pdf file size. Around 20 pages (digital signatures) per envelope users will start to experience complications. Around 40 pages (digital signatures) per envelope users will not be able to complete workflows.

Methods of Signing for DocuSign email (Free Form vs Templated)

The initial person setting up a document for DocuSign email has the option to assign specific fields for stamps, signatures, initials, and dates. They can do this one field at a time, or they can use a template to create many fields at one time. Whether the fields are assigned one at a time or a template is used, both are considered a templated document. With the templated method, signers cannot change where or how they sign the document.

The Free Form method of signing can be used when there is only one person signing documents in an envelope. The initiating person does not specify any fields. Only the person needed to sign is specified. The signer places their own fields for stamping, signing and dates. **The Free Form method is typically easier than the templated method to size and position stamps because the signer can adjust the location of the stamp after it is sized.**

Note if the free form method is attempted with multiple signers, only the first signer will have access to the stamp and date fields. Proceeding signers only have access to signature and initial fields. Therefore, if multiple signers need to sign a section of plans the templated method should be used.

The NDDOT uses a stamp field with a merged graphic of a seal and signature. This is a single field and uses only one digital signature. If separate fields were used for stamps and signatures, two digital signatures would be used, one for each field. A merged stamp field also simplifies placement. Two fields need to be placed for each PE or LS instead of 3. The date is the second field that needs to be placed. The date field doesn't use a separate digital signature.

Note, the maximum number of stamped sheets and maximum number of digital signatures in an envelope are not the same. The maximum number of digital signatures is 50. A DocuSign email workflow requires a digital signature for DocuSign over signing. If there is only one person involved in signing, this allows for 49 stamp fields (49+1=50).

If the maximum number of digital signatures is exceeded, you may get the following errors.

502 Bad Gateway

The server returned an invalid or incomplete response.

Server Error

502 - Web server received an invalid response while acting as a gateway or proxy server.

There is a problem with the page you are looking for, and it cannot be displayed. When the Web server (while acting as a gateway or proxy) contacted the upstream content server, it received an invalid response from the content server.

Document Preparation

Revised 6-20-25

DocuSign email is typically used with pdf files. Other formats such as Microsoft Word work with DocuSign email, but only pdf files are discussed in this document.

Plan Sets should be prepared as pdf files. All sheets from one section should be organized and grouped into a single pdf file. Extremely large sections may need to be split into separate pdf files in order to work with the 49-50 digital signature limitation.

Each section of the plans should be created and signed as a separate pdf file. The individual section needs to be created before signing. The sheets cannot be signed and then merged together as a simple pdf file. Each section of the plans should be named by section number and section description (see the table on the next page). Note the prefix part of the name is important for alpha-numeric sorting.

Over signing existing documents with digital signatures is not fully supported. The graphics from the previous digital signatures may be maintained but previous digital signatures will be invalidated. Only digital signature from the last DocuSign email workflow will be maintained.

Initiators should plan out the DocuSign email workflow.

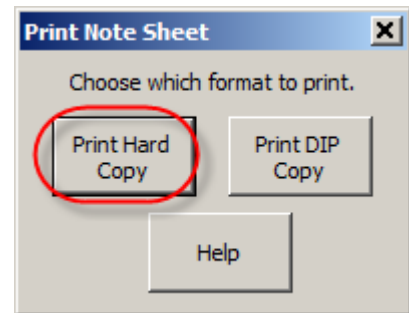
- Document adjustments may be required to address envelope size limitations.
- Putting multiple sections or all sections of a plan set into one envelope may save money.
- Templated and Free Form signing methods cannot be mixed within the same envelope. If multiple signing methods are desired, use separate envelopes.
- Consider all signers involved with the specific envelope.
 - The more signers involved, the higher potential delays. One signer can delay envelope processing for all involved.
 - The more signers involved, the higher potential for mistakes. Example, if one signer misses a key signature the entire envelope may need to be reprocessed.
 - Using separate envelopes for different signing groups may simplify administration. Example, a small signing group or a single signer may be the only signer for sections 30, 40, 60, and 100. This could be a good grouping for a single envelope.

Portfolio Section – File Names

001TS_ Title Sheet.pdf
001XA1C_ Addendum 1 Cover Letter
001XA1S_ Addendum 1 Summary and Approval
001XA2C_ Addendum 2 Cover Letter
001XA2S_ Addendum 2 Summary and Approval
001XC1S_ Change Order 1 Summary and Approval
001XC2S_ Change Order 2 Summary and Approval
001XP003 [PE Signed Special Provision -use SP number without spec book year, example ...003 = SP 003(14)]
001XP004 [PE Signed Special Provision -use SP number without spec book year, example ...004 = SP 004(14)]
002TB_ Table of Contents.pdf
004SW_ Scope of Work.pdf
006NT_ Notes.pdf
008QS_ Quantities.pdf
010BE_ Basis of Estimate.pdf
011DT_ Data Tables.pdf
020GD_ General Details.pdf
030TP_ Typical Sections.pdf
040RM_ Removals.pdf
050IM_ Inlet Manhole Summary.pdf
051AP_ Allowable Pipe List.pdf
055DL_ Drainage Layouts .pdf
060PP_ Plan and Profiles.pdf
070CT_ Contours.pdf
075WL_ Wetlands.pdf
076TE_ Temporary Erosion Control.pdf
077PE_ Permanent Erosion Control.pdf
080LO_ Layouts.pdf
081CD_ Coordinate and Curve Data.pdf
082SD_ Survey Data.pdf
085LS_ Landscaping.pdf
090PL_ Paving Layouts.pdf
100WZ_ Work Zone Traffic Control.pdf
110SN_ Signing.pdf
120MK_ Marking.pdf
130GR_ Guardrail.pdf
140LT_ Lighting.pdf
150SL_ Signals.pdf
160IT_ ITS.pdf
170BR_ Bridges.pdf
175SB_ Soil Boring.pdf
180PT_ Pit Plats and Borrow Areas.pdf
190HR_ Haul Road Restrictions.pdf
200XS_ Cross Sections.pdf

MicroStation sheets should be created with the PE print drivers and pen tables to create pdf sheets that have empty PE and LS boxes.

NDDOT Standard Word and Excel files that use the print macro should use the “Print hard Copy” option. Then select the Adobe PDF printer to create pdf sheets that have empty PE and LS boxes.



[DocuSign Log in](#)

Initiators of DocuSign email workflows can use the following web address to log in.

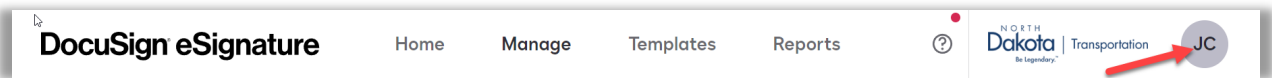
<https://account.docusign.com>

Subsequent signers in DocuSign workflows will get a email with a direct link to the document to be signed.

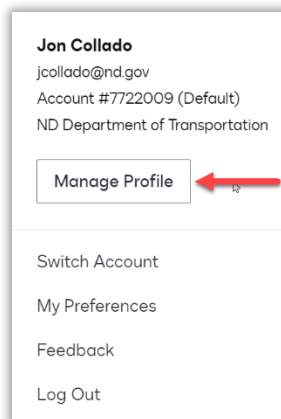
Setting a Default Stamp

A stamp can be downloaded and used during a signing workflow. However, creating or editing a stamp outside of signing workflow has an important advantage. Currently the size of the default stamp cannot be adjusted for multiple placements in different envelopes during a signing workflow. If you want to set the size of your stamp once for multiple envelopes, this must be done within your profile.

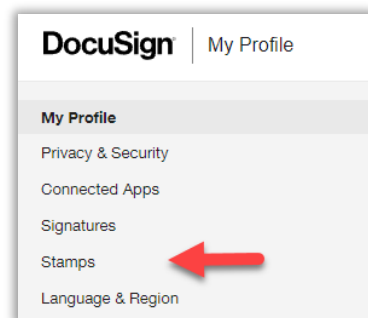
1. Log in to DocuSign eSignature.
2. Click on the icon in the upper right corner with your initials.



3. Click on "Manage Profile".



4. On the left panel click on Stamps.
5. Click on the Add Stamp button.
6. Browse to a graphic that contains your merged seal and signature.
7. Crop our graphic as desired. Then select the "next" button.

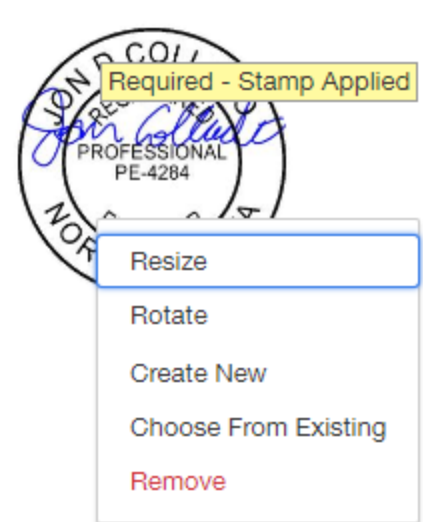


8. Adjust your stamp height accordingly. Newer stamps are 44 mm (1.75 inches). Older stamps are 39 mm (1.5 inches).
9. Set the stamp as a default stamp. Most users will only have one stamp.
10. Click the Create button to save your stamp in DocuSign eSignature (email).

People that Have Not Stored a “Default” Stamp Must Resize Their Stamp
(Section Added 9-12-23)

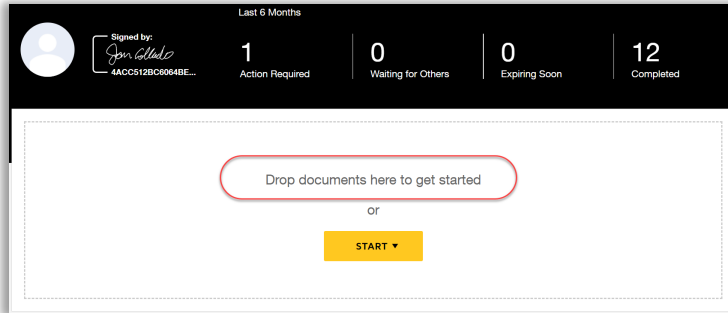
Resizing Stamps is a step that needs to be done if a default stamp size has not been set. This step is extremely easy to overlook. **Consultants need to take note of this step!**

Once a stamp has been uploaded and placed. Click on the placed stamp and a menu will popup with the “Resize” option. Adjust your stamp height accordingly. Newer stamps are 44 mm (1.75 inches). Older stamps are 39 mm (1.5 inches).



Starting a DocuSign email Workflow using the Free Form method.

1. Log into DocuSign e Signature (<https://account.docusign.com>)
2. Drag documents to be signed into web application as prompted.

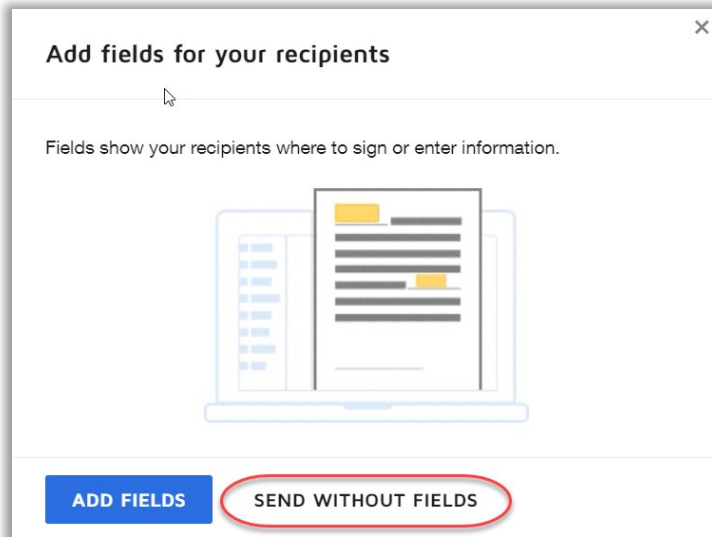


3. Scroll down to the “Add recipients” location and add the people that need to sign the section of plans within your envelope. You can set up an envelope for just your signatures if you are the only one signing that section of plans.
4. Set signature types to “DS email”. This setting will use a digital signature for each stamp.

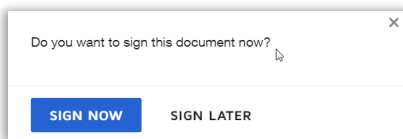
The image is a screenshot of the "Add recipients" form in the DocuSign web application. The form has a title "Add recipients" at the top left. Below the title, there's a checkbox labeled "Set signing order" with a "View" link next to it. The main part of the form is a table-like structure with two rows. The first row has a "Name" field with the value "Jon Collado", a "NEEDS TO SIGN" status, a "CUSTOMIZE" dropdown, and a trash icon. The second row has an "Email" field with the value "jcollado@nd.gov". Below the email field, there's a section titled "Select signature type" with a dropdown menu showing "DS Email" selected. At the bottom of the form, there's a button labeled "ADD RECIPIENT" with a plus icon and a dropdown arrow.

5. The Add message part of the DocuSign web application is optional.

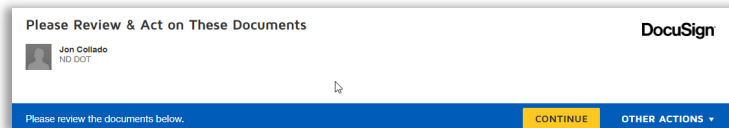
6. If you click the “next” button you will be prompted to format signatures fields before signing. When using the free from method, do not assign and format any fields. Send the document for signature without any assigned fields.



7. If you need to sign pages within the envelop, you will be asked if you want to sign now.



8. If you select “Sign Now”. You will be prompted to add and fill fields as needed. Select the “Continue” button.



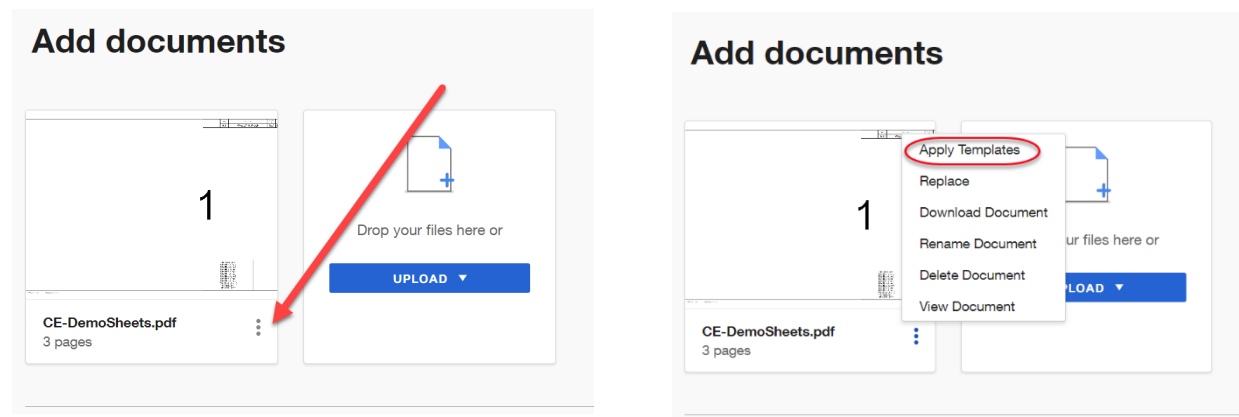
9. Add fields as needed. Most plan set pages only use the stamp and Date Signed Field. If you preset your stamp size, you will not need to resize it. It should default to the size set in profile settings.

Templated Workflow

There are 2 types of Templated documents, “Applied” (preset) and “Individual”. An individually templated document has each field manually placed and assigned. An applied templated documents copies the fields from one document to another.

Applied Template

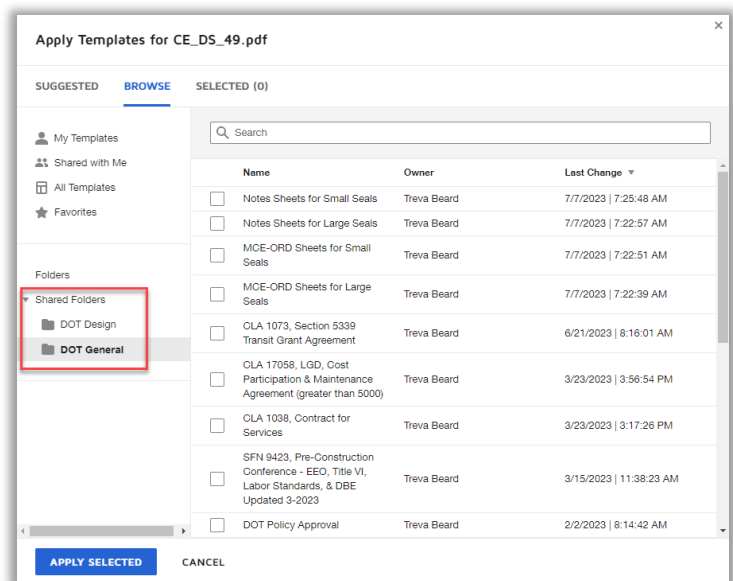
After the document is added, templates can be applied to the document by clicking on the more options ellipses.



Click on “Shared Folders > Dot General”.

The following templates are for Plan Sets

- MCE-ORD Sheets for Large Seals
- MCE-ORD Sheets for Small Seals
- Note Sheets for Large Seals
- Note Sheets for Small Seals

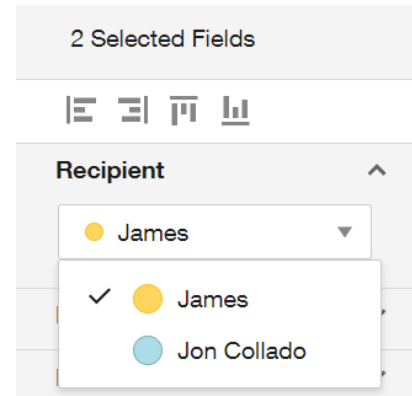


Don't Delete the "PE Signer" Recipient. Modify the email address and name fields. If the first Recipient is deleted, the templated fields for that recipient will also be deleted.

Add Additional recipients if needed.

Click the "Next" button to review and adjust field settings.

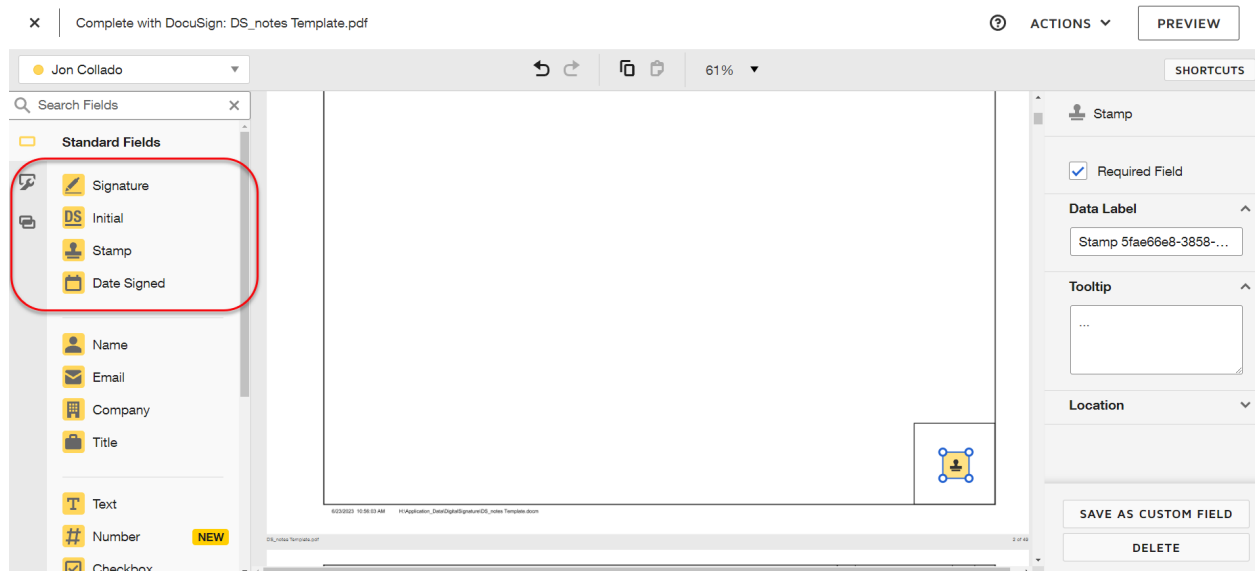
Using an applied templates still require some manual adjustments. If there are multiple signers, the recipient may need to be adjusted for some fields. Locations for some fields may also need to be adjusted.



Individual Template

With an Individually Templated document you start from scratch and must place and assign each field. Note recipients need to be added to the workflow before they can be assigned. You may need to the "Back" and "Next" buttons if you forget a recipient before adding fields.

Individual fields such as Signature, Initial, Stamp and Date can be placed using the tools on the left panel.



Pixel and Stamp Math

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DocuSign appears to be using 72 pixels per inch setting. This measurement may help with template creation. Pixel locations are not displayed in the free form placement method.

The origins for Stamp, signatures and dates appear to be all different. Stamps use a Center-Left origin.

- Signatures use a Center-Left origin.
- Dates use a Bottom-Left origin.

The following are relative pixel offsets from stamp to date fields

- 1.75 inch stamp
 - offset date field 6 pixels left
 - offset date field 42 pixels down
- 1.5 inch stamps
 - offset date field 6 pixels left
 - offset date field 24 pixels down

Note there is a small bug with signing locations verses final pdf locations. The final pdf field locations are approximately 2 pixels right and 2 pixels down from the signing locations. Also note the graphic for the seal increased slightly after downloading. **The values in table on the next page accounts for this misalignment and final pdf should look better then then it appears in DocuSign.** The following is an example of the templated alignment problem.

At DocuSign Signing

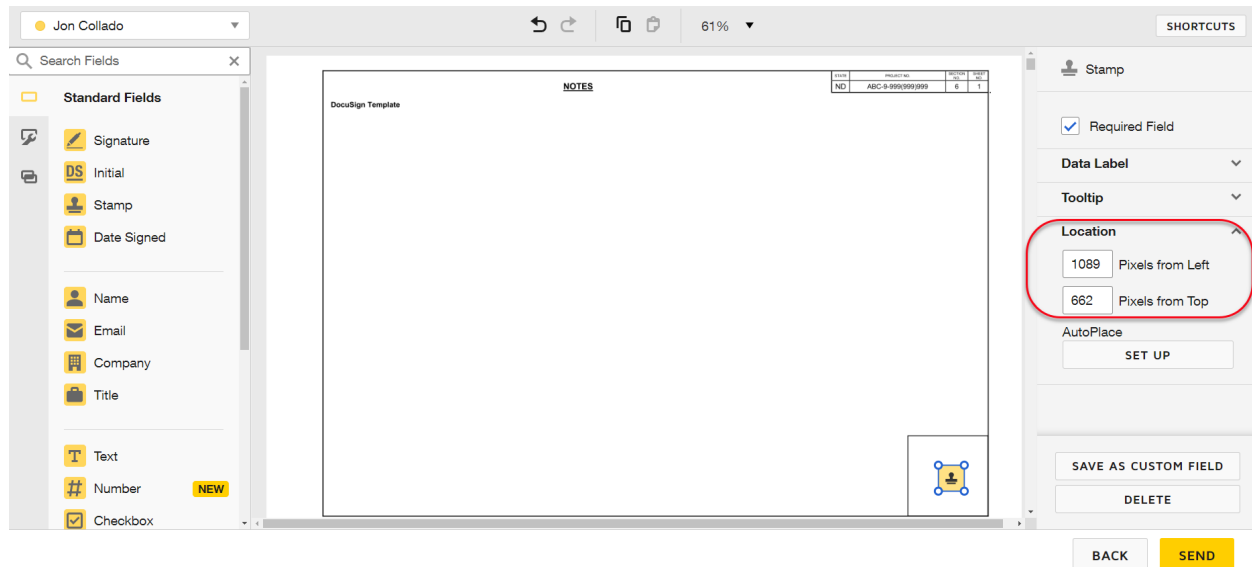


After PDF Download



This misalignment does not appear to occur with the freeform method of signing.

The following typical locations are based on MicroStation CE Sheets. Other sheets such as V8i sheets or sheets cell that are not printed to scale will use different origins.



Sheet	Field	Pixels from Left	Pixels from Top
MCE-ORD	Stamp	1087	671
MCE-ORD	Date for Large Stamp	1081	713
MCE-ORD	Date for Small Stamp	1081	695
Note	Stamp	1087	660
Note	Date for Large Stamp	1081	702
Note	Date for Small Stamp	1081	684
MCE-170BR-Layouts	Stamp	869	668
MCE-170BR-Layouts	Date for Large Stamp	863	710
MCE-170BR-Layouts	Date for Small Stamp	863	692
MCE-170BR-Layouts	Bridge Engineer Signature	960	690
MCE-170BR-Layouts	Bridge Engineer Name	1074	696
MCE-170BR-Layouts	Bridge Engineer Date	1074	708

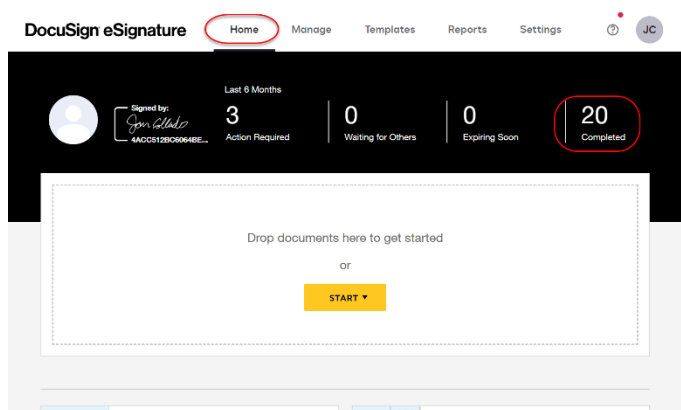
Important Tips

- **When assigning stamp fields, do not size the field.** If the assigned stamp field is sized, the users default stamp size will be overwritten, and the signer will need to resize the stamp anyway.
- **Copy and paste commands remember pixel locations.** Example, Setup the stamp and date fields on one page, then copy both fields (Ctrl+C). Move to a different page and paste the fields (Ctrl+V). The relative field locations will be used on that page.

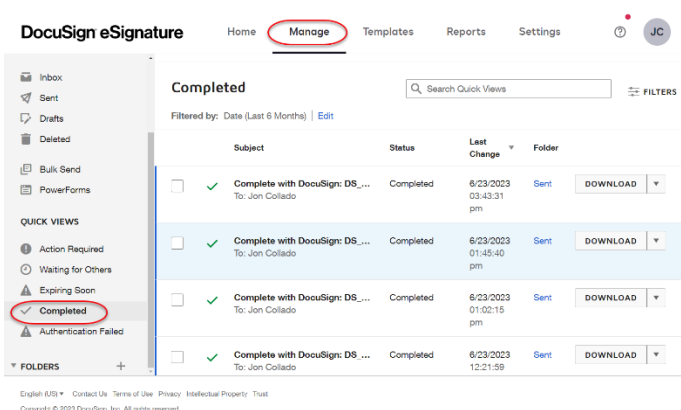
Download Completed PDF

Completed – Signed pdf files are sent to signers through email. They can also be downloaded through the DocuSign eSignature web page.

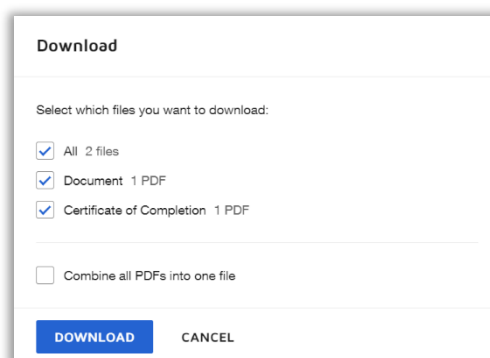
Once logged on to the DocuSign eSignature web page, go to the “Home” tab and click on the “Completed” link.



A similar navigation would be to go to the “Manage” tab and pick the Quick Views “Completed”.



Don't “Combine all PDFs into one file” when downloading. Unlike DocuSign Cloud documents, the certification pages should not be included in the DS version of pdf files when DocuSign Email is used.



Validation

DocuSign certificates should be installed on all NDDOT users' computers. DocuSign Certificates need to be installed on computers in order to validate signatures. If you are not able to validate DocuSign Digital Signatures because the DocuSign Certificate is not installed, use the NDIT service portal (Generic Service Request) to request the DocuSign Certificate installation.

Plans for Final Office Review vs Final Plan Submittal

The creation of plan sets typically requires multiple DocuSign email workflows (envelopes). Some sections of plans are signed before the “Final Office Review” and some are signed during the review. The following table shows “Plans for Final Office Review” and “Final Plan Submittal” as 2 different milestones with different deliverable packages.

	Plans for Final Office Review	Final Plan Submittal
Schedule	7 days prior to Office Review date	ASP after the Office Review Date
Signatures	Most Signatures are complete. Only Exceptions NDDOT Signatures on Title Sheet Bridge Engineer Signatures	All signatures and seals are complete
Digital Signature Version of Plans	Not delivered at this time, but required to produce Electronic Distribution version of plans	Segregated Sections Combined as Adobe Portfolio Includes Standard Drawings and Cross Sections
Electronic Distribution Version of Plans (Volume 1)	Combined entire plan set except Cross Sections Flattened Seals and Signatures (Security Stripped) Includes unsigned Title Sheet and Bridge Sheets	Combined entire plan set except Cross Sections Flattened Seals and Signatures (Security Stripped)
Cross Sections (Volume 2)	As needed	As needed
Title Sheet as Independent PDF	No Signatures This pdf will be processed at the Office Review	NA
Bridge Sheets as independent PDF	As Needed No Signatures This pdf will be process At or shortly after the Office Review	NA
Delivery Point	<i>Division or District Engineer, or OPD Director</i>	O:\81 Special Projects\DIP PLANS

State System Projects done by Consultants

Title sheets and bridge sheets on consultant projects need to be set up for signing by the NDDOT technical representative. Any section of the plans that includes both NDDOT and Consultant Digital Signatures will follow this workflow.

NDDOT plan signing is coordinated with the Final Office Plan Review. See Design Manual 1-07.04 final Office Plan Review. Digital signatures require 2 separate submittals in the final plan workflow; Plans for Final Office Review and Final Plan Submittal. The plans for Final Office Review are submitted 7 days prior to the Final Office Review date. On consultant projects, this version of plans contains no NDDOT signatures. However, consultants include seals and signatures on sections of plans that don't require NDDOT signatures.

Consultants can use their preferred digital signature application for sections of plans that don't require NDDOT signatures. NDDOT will use DocuSign email for consultant sections of the plans that require joint signatures.

The Final Plan Submittal contains both NDDOT and consultant seals and signatures. The Final Plan Submittal should not require additional processing for archiving (FileNet) and posting on the NDDOT website.

Submitting Plans for Final Office Review

1. Combine the plans into a single pdf. The only exception to this combination is the cross sections. The cross sections should be a separate pdf. The plans should be submitted in an Electronic Distribution format (digital signature security removed). Everything should be sealed and signed except the title sheet and bridge sheets. The electronic distribution version needs to be created from a digital signature version, but the DS version does not need to be submitted at this time.
2. Submit a second version of the title sheet as a separate pdf and the bridge sheets as a separate pdf for signing purposes.
3. At this time, the section of plans with only consultant signatures will be used for NDDOT reviewing purposes only. These sections of plans are not considered the final submittal. These sections of plans will need to be submitted a second time, as part of the final plan submittal.

After Submitting Plans for Final Office Review but before the Review

4. Consultants notify the NDDOT technical representative with the email addresses of the specific consultants signing a specific joint signature section of the plans. Specify needed emails for each section separately. Example, James may sign the title sheet but he may not sign in section 170.
5. The NDDOT Technical Representative will set up DocuSign email workflows for these sections. Both the NDDOT Technical Representative and the Consultant should coordinate the DocuSign email workflow so that the consultant can seal and sign their portion of the plans at or immediately after the Final Plan Review.
6. Start DocuSign email workflows for the title sheet and Bridge sheets (section 170). Include a message when sending documents. "These documents will be discussed at the Final Office Review. NDDOT staff may choose to wait to sign at the Final Office Review".
7. Once these workflows are started, Consultants will be prompted to sign and seal the documents.

At the Final Office Review

8. After the Consultant completes their part of the signing process the documents will continue to be distributed and signed by NDDOT staff as part of the same DocuSign email workflow. Once the DocuSign email workflow has been completed, DocuSign will notify all signers, including the consultant, that the document has been signed by all signers and a link to download the completed document will be provided by email.
9. The consultant will download the signed sections of the plans and assemble the final adobe portfolio with Digital signatures and the Electronic Distribution version of plans.

Final Plan Deliverables

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Two different versions of the final plans must be created for final plan deliverables: a digital signature (DS) version and an electronic distribution (ED) version. The digital signature version is created as an adobe portfolio. The electronic distribution version is a simple pdf where the digital signatures have been converted to simple graphical signatures.

The digital signature version of plans should use the suffix “_DS” in the file naming convention. The electronic distribution version of plans should use the suffix “_ED” in the file naming convention.

The Lead Designer or assigned technical representative (consultant projects) should deliver both the DS and ED version of the plans to Programming (O:\81 Special Projects\DIP PLANS). After the project is bid, Programming will notify the Record Center that the DS version of plans is ready to be stored in FileNet. The Record Center will store the DS original version of plans in FileNet.

“Digital Signature” Version of Plans

Digital signatures (security) must persist in the DS version. The Adobe Portfolio format allows files to be joined without removing the digital signature security.

Creating Adobe PDF Portfolio

Within Adobe Pro, select “File > Create > PDF Portfolio”. Use the Add Files button to add the individual sections of the plans. Remember to save your changes.

Reminders

- Include the cross sections as a separate section within the portfolio.
- Include the standard drawings as a separate section within the portfolio. The standard drawings in the final portfolio should be the only PE stamped sheets that don’t include the digital signature security.

“Electronic Distribution” Version of Plans

The “electronic distribution” version of plans does not include digital signatures, does not include electronic distribution statements, and does not use an adobe portfolio.

A flattened pdf file of the plans will be created showing the seal, signature, and date. A flattened pdf is where the portfolio has been merged into a simple pdf and the digital signature security has been removed. The flattened file will combine **most** sections of the plans. **Cross sections are typically a separate volume. Standard Drawings are optionally a separate volume.**

Use separate volumes (files), if needed, in order to keep file sizes under 300 MB. Files larger than this may be too difficult to download.

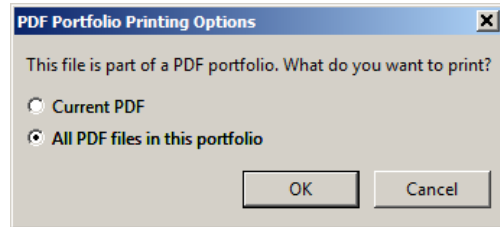
No paper deliverable is sent to the NDDOT Programming division.

Removing Digital Signatures for Electronic Distribution of Plans

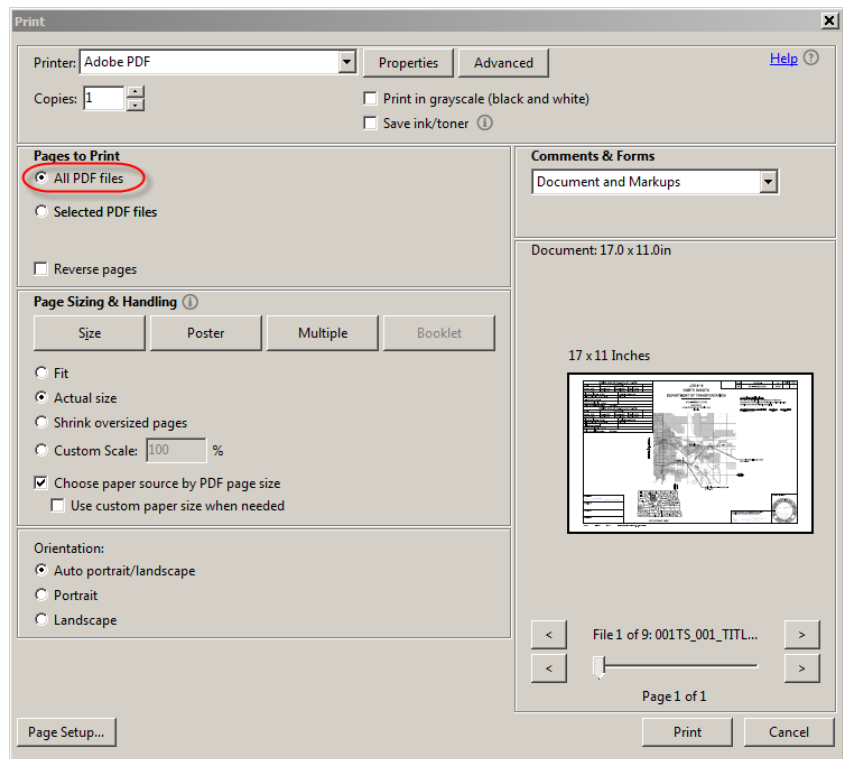
This is done by printing the portfolio into pdf files and then combining files. The following are some tips and warnings about the portfolio flattening workflow.

- The pdf files must be printed to another pdf file. Use the “Adobe PDF” printer. If this step is skipped the digital signature graphics including PE-LS seals will be stripped off the sheets. We want the PE and LS graphics to remain on the sheets.
- You will be prompted for what parts of the portfolio you want to print. But you will also have to reselect this option during the printing process. If you don’t use both settings you will not get all the sections in the portfolio.

- First Setting

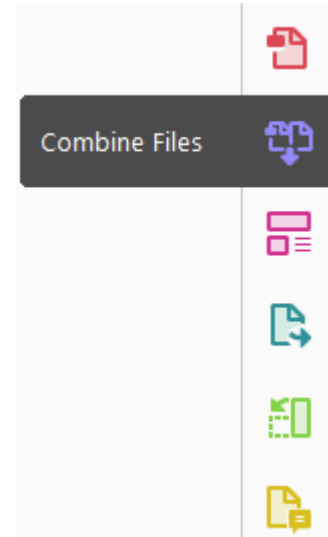


- Second Setting

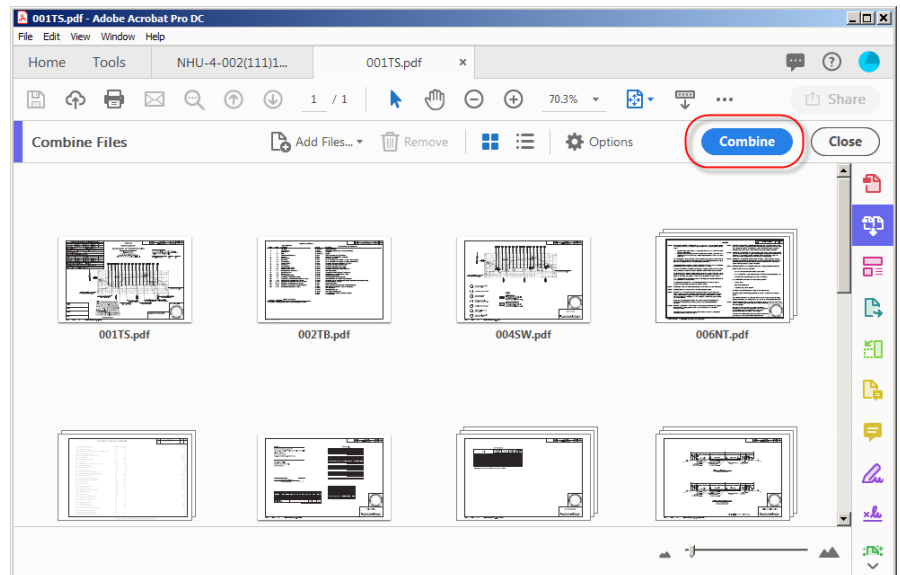


- Use the “Choose paper source by PDF page size” and “Auto portrait/Landscape” options as shown in dialog box above. If these options are not used the sheets will be undesirably rotated.
- A separate folder to store the printed – recreated pdf files is recommended. Each section will be a printed to another pdf. You will be prompted for a file name for each of the printed pdf files. If you use the default standard names the files should auto sort in the merge process.

- After the portfolio has been printed to separate pdf files use the “Combine Files” tool to merge multiple pdf files into one.



- If individual sections are not named correctly, they will not automatically sort correctly. If non standard names are used, the sections will need to be manually rearranged before the combine button is selected. You should be able to drag and drop the files in the correct location.



Related Plan Documents

Special Provisions, Addendums, and Change Orders are related plan documents. Each of these have 2 different versions, Sealed and Unsealed.

- Special Provision Sealed – Both RCN 300101 and 800395
- Special Provision Unsealed – RCN 300101
- Addendum Sealed – Both RCN 300101 and 800395
- Addendum Unsealed – RCN 300101
- Change Order Sealed – RCN 800395
- Change Order Unsealed – RCN 300101

The professional engineer sealed documents have a longer records retention. PE sealed addendums and change orders are typically plan sheets. The PE sealed version of Special Provisions and Addendums are stored twice in File Net. This guide is focusing on the PE “sealed” versions.

- RCN 300101 – Agreements, 6 Year Retention
- RCN 800395 – State Plans, 75 Year Retention

Special Provisions and Addendums with digital signatures are not stored in FileNet as independent documents. They are stored with the Contract Proposal (RCN 300101) and the Contract Plans (RCN 800395).

There are few exceptions to the term “sealed” as it applies to addendums and change orders. Some plan sheets are seldom sealed such as cross sections, quantity summaries and the table of contents. However all addendums and change orders that include plan sheets are to be processed and stored as “sealed” sheets. Example, a change order that deletes a sheet and only changes the table of contents for the plans would still be processed as a “sealed” document.

PE Sealed Special Provisions

PE sealed special provisions will be stored with the plans. These special provisions should be placed after the title sheet. Special provisions that do not require a PE seal should not be included in the plans.

PE sealed special provisions need to be stored in only the DS version of plans. Use PDF portfolios to maintain digital signatures within the DS version of plans.

The Engineer of Record for the special provision is responsible for making sure that the PE sealed special provision is stored with the plans. If the PE sealed special provision is not stored with the plans it will be deleted when the proposal is deleted (6 year retention). PE special provisions should have the same retention as the plans. The Engineer of Record should work with the lead designer to make sure the PE sealed special provision is stored with a Digital Signature in the DS version of Plans. The DS version maintains the “original”.

Addendums (Before Bid Opening)

The following steps outline how an addendum is processed regarding digital signatures. The term designer and lead designer are used synonymously in these steps because some of these steps can be delegated. However the Lead Designer is responsible for reviewing addendums and ensuring that addendums were correctly incorporated into the final plans and that the integrity of the digital signature plans is maintained.

For consultant projects on the state system, the consultant designer will process files discussed in these steps. The Technical Representative should only assist with file transfers to the Programming division.

1. The designer creates the addended sheets.
2. The designer groups addended sheets into separate pdf files if needed. If the addendum spans multiple sections, group the sheets from each section as separate pdf files before digitally signing them. Addended sheets will eventually be moved independently to the end of each section in the original plans.
3. The designer creates an ED version of the DS sheets. The ED version groups addended sheets as a single pdf for that addendum number. This file should have a "ED_AD#" suffix. The "#" character in the suffix should be replaced by the actual addendum number. The ED version contains only the **addendum cover letter (see step 7), "addendum summary and approval",** and revised plan sheets.
4. The designer renames the original plan from a "DS" suffix to a "DS_AD#" suffix. The "#" character in the suffix should be replaced by the actual addendum number. If previous addendums were processed only the addendum number will need to be revised.
5. The designer incorporates the digitally signed addended sheets to the original digitally signed plan set. A portfolio is used to group files while maintaining the integrity (security) of the digital signatures. If an addendum replaces an entire section, then that section can simply be replaced. If the addendum replaces part of a section, then place the addended sheets at the end of the applicable section. **Historically, partial replacements of sheets within a section were marked with a large red X over the entire replaced sheet. Adobe commenting tools no longer allow commenting over DocuSign digital signatures. Reviewers must review summaries of addendums and change orders to identify superseded sheets.**
6. **The Designer incorporates the Addendum Summary and Approval form in the DS_AD# document. Place summary and approval form after the title sheet in the DS_AD# version.**
7. The lead Designer delivers both the ED_AD# and the DS_AD# versions to programming (O:\81 Special Projects\DIP PLANS).
8. Programming Division places the addendum cover letter that is created by Construction division in both the ED_AD# and DS_AD# versions. The cover letter should be placed before the Plan Addendum Summary and Approval sheets.
9. Programming Division will process the ED_AD# addendum version as **a separate pdf and post it on the internet.**
10. The DS_AD# plans are held in the "O:\81 Special Projects\DIP PLANS" directory until the project is awarded. The original plans are held before being transferred to FileNet in order to simplify the incorporation of other potential addendums.

11. The Records Center will place the final plans (digital signature version) in FileNet after the project is awarded. The record center will review the "O:\81 Special Projects\DIP PLANS" folder. There should be only one DS related file left in this directory at the time of award. The designer is responsible for correctly combining the original DS plan set with all DS addendum sheets. The Record Center will delete **the entire bid opening date folder** from the dip plans directory after **all the DS plan sets have** been incorporated into FileNet.

See the Design Manual, section 1-09.01, "Plan Revisions Prior to Bid Opening" for additional guidance.
<http://www.dot.nd.gov/manuals/design/designmanual/Chapter%201.pdf#page=118>

Contract Plan Sets (After Bid Opening)

Design Division (Jesse Carlsen) will make the contract set of plans after the project has been awarded to the contractor. Change orders are not included in the contract plans. The contents of contract plans should represent the plans at the time the contractor was awarded the project.

Note the contract plan set is not the same as the original plans. Digitally signed plan revisions for change order should be included in the original plans.

Plan Revisions for Change Orders

Change orders are processed like addendums where the digital signed sheets are incorporated into the original portfolio and an electronic distribution (ED) version is processed as discussed in the design manual.

If the change order spans multiple sections, group the sheets from each section as separate pdf files before digitally signing them. Change Order sheets will eventually be moved independently to the end of each section in the original plans.

The ED file should have a "ED_CO#" suffix. The "#" character in the suffix should be replaced by the actual change order number. **The ED version of the change order should only include the Change Order Summary and Approval, and the revised or added sheets.**

Change orders are typically included in the As-built plans, but As-built plans don't typically maintain digital signatures. Therefore Change Orders also need to be stored with the original plans which are stored in FileNet. **The lead designer must check out the original plans from FileNet, add the change order sheets, and load the original plan set back into FileNet. The name of the FileNet document should not be changed.** If agreed upon, the lead engineer may delegate the FileNet posting to the engineer signing the changed sheets. On consultant projects, the technical representative will assist in file transfers to and from FileNet.

There is a section in this user guide, "FileNet and Plan Sets". This section discusses the FileNet index value for "Engineering Document Type". The plan set stored with the "Engineering Document Type" of "Original File" is the set that needs to be appended with change order. Information in the "FileNet and Plan Sets" section will be needed to file change orders.

On change order projects, the change order sheets should be incorporated at the end of each applicable section. A portfolio is used to group files while maintaining the integrity (security) of the digital signatures. Unlike addendums, if a change order replaces an entire section, the old section must be maintained.

There are 2 naming conventions for Change Orders. CADD Naming Conventions for pdf files are documented in section 2.14, Final Plan Delivery, of the NDDOT CADD Standards Manual. FileNet naming conventions are documented in this user guide, “FileNet and Plan Sets”. The digital signature version of the plans is currently stored with 2 different names. The name on the R drive and the name in FileNet will be different.

There are 3 different types of Change Orders.

- Type 1 - Construction phase revisions that do not need to be sealed.
- Type 2 - Construction phase revisions that need to be sealed but are within inherent variability.
- Type 3 - Construction phase revisions that need to be sealed because they result in a functional design change.

See the Design Manual, section 1-09.02, “Construction Phase Revisions after Bid Opening (Change Orders)” for additional guidance.

<http://www.dot.nd.gov/manuals/design/designmanual/Chapter%201.pdf#page=119>

Change Orders with PE seals (Type 2 and 3) need to be stored in FileNet with the records control number (RCN) 800395. Change orders without PE seals (Type 1) are store in FileNet with RCN 300101. If the PE sealed change order is not saved under RCN 800395, the original document will not be retained for the correct period of time.

Construction (District) staff is responsible for storing types 1 and 2 change orders in FileNet. The lead signing engineer (engineer making the functional design change) is responsible for storing type 3 change orders in FileNet.

As-built (Record Drawings) plans using Digital Signatures

As-built plans are typically generated from the Contract Plan Set. The As-built plan set doesn’t include digital signatures.

The as-built plans should be named according to CADD Standards (project number and the word “Asbuilt”). See CADD Manual, 2.9 Final Plan Delivery – PDF Plan Sets for additional information on plans with multiple project numbers.

See Decision Document on NDDOT As-Built Plan Process that was approved on 8/16/18 for additional guidance on As-Built work flows.

FileNet and Plan Sets

Within FileNet, plans for a project will be stored in a few different ways. The FileNet index values for “Engineering Document Type” is a good way to categorize the different ways and formats that plans are stored.

Engineering Document Type

- As-built Plans
- Contract Plans
- Original Files
- Plan

As-built Plans don’t use digital signatures. As-built Plans include addendums and change orders. Construction staff is responsible for creating As-built Plans and storing them in FileNet.

“Contract Plans” are the electronic distribution format of the plans (doesn’t include digital signatures) at the time the project was awarded. This version will include addendums, but it will not include any change orders.

The index use of “Original Files” is a little ambiguous. In the context of plans, this index does not refer to the first edition of the plans. It refers to the digital signature version of plans. The plans stored in “Original Files” includes addendums and change orders.

The index use of “Plan” is also a little ambiguous. You may not be able to find a complete set of state system highway plans if current workflows are implemented correctly. Complete sets of state system highway plans are not stored in this location if digital signatures are used. Older projects that did not use digital signatures might be stored under this index.

The index use of “Plan” is often used by specific divisions to store part of the plans as it pertains to their division. This index is used as part of the divisions (previously local) bookshelf. Examples, Bridge may have parts of the plans as it pertains to a specific structure number, Programing may have parts of the plans stored under this index as it pertains to traffic operations.

Digital Signature versions of plan files are renamed to work with “Records Crawler” tools. Names are generally based on

- PCN
- Bridge ID [Highway (4 digits), Mile Point (3 digits.3 digits)]
- Consultant or Originating Division
- Filing Date Code

Example: 22648_0094-161.100_NDDOT Design Division_12142023.pdf

The FileNet name does not indicate use of addendums or change orders. The file must be opened and reviewed to determine if it has been edited. When change orders are added to the “Original Files” file version, the name should not be changed.

DocuSign Vendor Documentation

DocuSign eSignature Signing Process

[https://support.docusign.com/s/document-item?language=en_US&bundleId=yca1573855023892&topicId=lou1573854977109.html& LANG=enus](https://support.docusign.com/s/document-item?language=en_US&bundleId=yca1573855023892&topicId=lou1573854977109.html&LANG=enus)