



Indian River County Building Division Guide to Creating Electronic Construction Documents for Permit Submission

Introduction

Included here is information on creating documents for construction permits by electronic method including signing and sealing. Submitted documents for Indian River County Building Division, third-party verified digital signatures must be used by Architects, Engineers, and Design Professionals.

Creating Construction Documents for Permitting

Documents fall into one of three categories:

1. **Secure Signature Required** - Drawings, calculations, and specifications documents, in electronic format, prepared by Florida licensed architects and/or engineers are required to be signed and sealed with an encrypted electronic signature. The encrypted signature must be verified by a third-party.
2. **Notarized Signature Required** – Application forms, and any other document required to be notarized must be received as a scanned copy of the paper document that has been signed and notarized. The applicant should keep the original paper documents on file.
3. **No Signature Required** – Cut sheets, product approval documents, pictures and other supporting information, (*IRC Product Approval Affidavits must be signed*)

All documents must be submitted in PDF format scanned at 400 DPI minimum.

NOTE:

Take great care not to alter any document signed with an encrypted signature, because any alteration will invalidate the document signature.

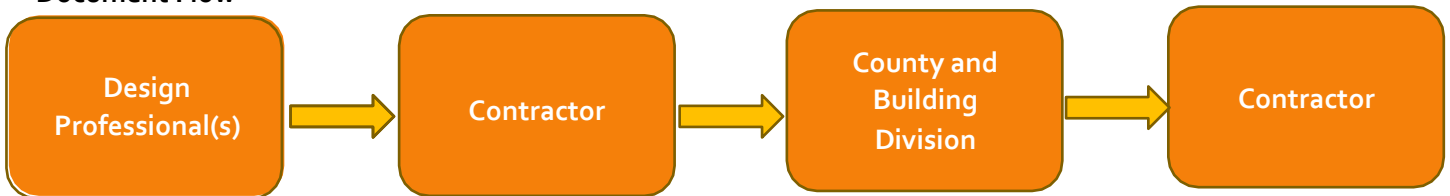
The Applicant Should Assemble the Following Documents:

1. Permit application-
 - a. A paper application can be downloaded from the building division's website, completed, signatures notarized, and scanned at minimum 400 DPI into an electronic file as a PDF file type.
 - b. An Online fillable application may be used; however it must be notarized.

https://www.irco.gov/communitydevelopment/Applications/Building_Division.htm
2. Drawing Documents – All of the drawings/documents required to describe the proposed work must be one multiple-page PDF file per discipline or per design professional electronically signed and sealed for submittal with the permit application. Make sure that drawings prepared by an architect or engineer are properly signed with a third- party verifiable digital signature. Any alteration of the electronic document made after the document was electronically signed could invalidate the signature.
3. Supporting Documents - Supporting documents include specifications, calculations, photographs, forms, Florida product approvals, and other documents must be converted to an electronic PDF format file with file names that clearly and concisely describe what the document is. Any alteration of the electronic document made after the document was electronically signed could invalidate the signature.

When a document is in paper format, it must be scanned and saved as a multiple-page PDF file. Small size documents can be scanned with a desktop scanner. Larger documents may need to be scanned by a third-party service available from companies that offer blueprint services. If a paper document is signed and sealed, a scanned version of the that document **WILL NOT** be accepted. The document must have a third-party verifiable digital signature once it is in electronic format.

Document Flow



Technology Requirements

Applicants will need basic hardware, software, and internet service to create and assemble documents for permitting.

Hardware

1. Computer
2. Internet connection
3. Scanner (*set to scan at a minimum 400 DPI*)

Software

1. PDF Management software (Convert drawings to PDF format, add bookmarks, and digitally sign documents)
2. E-mail

Internet

1. Internet service
2. E-mail
3. Third-party signature verification provider: This process is a premium service purchased by the user. When the document is uploaded into our Online portal, our software will access the third-party verification database via the Internet and authenticate the signature. If the document has been modified since it was electronically signed, the verification process will invalidate the signature file. An error message will be provided to help resolve the issue. The document would need to be replaced with new document that has not been altered.

Formatting Documents

Electronic construction documents can be created by any software as long as the documents produced can be saved in a multiple-page PDF file that will be opened by the Building Division.

When drawings and other documents are required to be signed and sealed by a single design professional, it is important to keep those documents together as one multiple-page PDF document.

Many commercial projects are designed by multiple design professionals. In this case, each individual design document set would need to be compiled into one multi-page PDF file per discipline or design professional. Our software must be able to validate each design professional's signature.

AutoCAD to PDF

All drawings must be submitted as PDF files. Print/plot from AutoCAD to PDF. The drawing needs to be "printed/plotted" to PDF using "AutoCAD", "Adobe PDF" printer /plotter or "MicrosoftPrint to PDF" printer/plotter." The option to export as PDF cannot be used. Exporting creates unwanted annotations/comments in the PDF file. SHX text elements in the PDF file are not compatible with our plan review software.

File Names

File names should be concise and clearly describe what the document is (i.e. Architectural_Plans). Please:

- Limit file name size to less than 30 characters (including spaces).
- Do not use quotation marks in the file name.

Bookmarks

Sample list of disciplines for separating individual sets:

1. Civil/Site
2. Architectural
3. Structural
4. Plumbing
5. Mechanical
6. Electrical
7. Structural Calculations
8. Energy Calculations
9. Product Approvals
10. Specification Cut-sheets

Seals and Signatures

Seals and signatures are used by State of Florida licensed architects and engineers to identify authentic documents. An electronic or digital signature serves the same purpose as wet seals and embossed seals. An electronic or digital signature is an approved method of authenticating a document as long as it complies with applicable rules/laws.

Currently, architects and engineers must comply with the respective licensing board's rule and with Florida Statute (FS) 668 when using an electronic signature. The statute requires that an electronic signature be unique to the signee, be under the control of the signee, be created using an "asymmetric cryptosystem", and be recognizable through the use of a process called "Key pair" technology.

As mentioned earlier, when the requirements of FS 668 are met, both the signee and the recipient can be assured of the authenticity and integrity of the electronic signature. An electronic signature is verified by a third-party and cannot be copied or used by anyone except the signee.

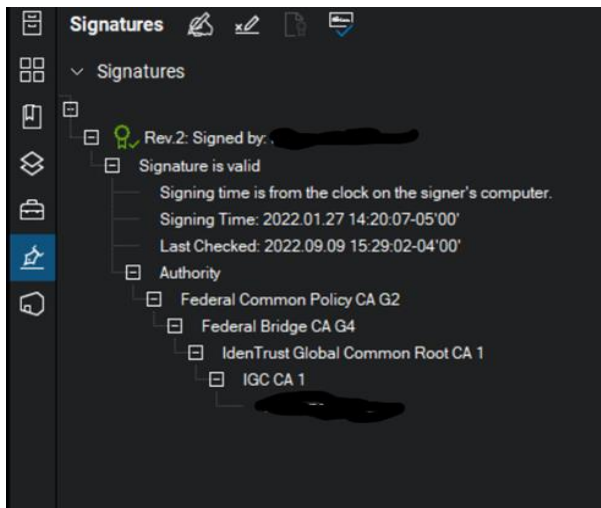
An important feature of an electronic signature is that it can be verified as authentic when it is attached to an electronic file in a PDF format. An electronic signature on a printed copy of an electronic document cannot be verified as authentic and is not valid as a permit submittal. A scanned copy of an embossed or wet (paper) seal is also not accepted for online submittals as the authenticity of these cannot be verified either. Electronic documents bearing an electronic signature may be printed for use in the field only after the jurisdiction has electronically stamped and secured the document.

Third-Party Verified Signatures

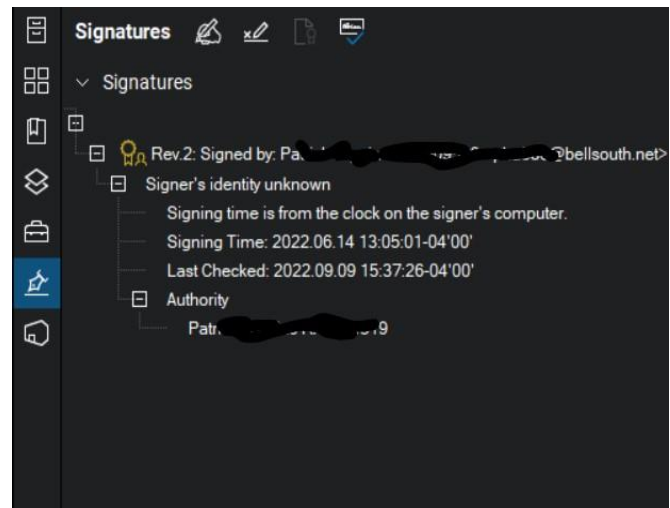
For the purpose of obtaining a construction permit with electronic or digital documents, Indian River County requires third-party verified digital signatures to be used by architects and engineers. A digital signature is not a substitute for a notarized signature when required by statute or rule, such as the contractor's or owner's signature on a permit application or notice of commencement.

Indian River County Building Division no longer accepts self-signed Digital Signatures. Only third-party verified signatures are accepted:

Correct – 3rd party verified



Wrong – Self Signed

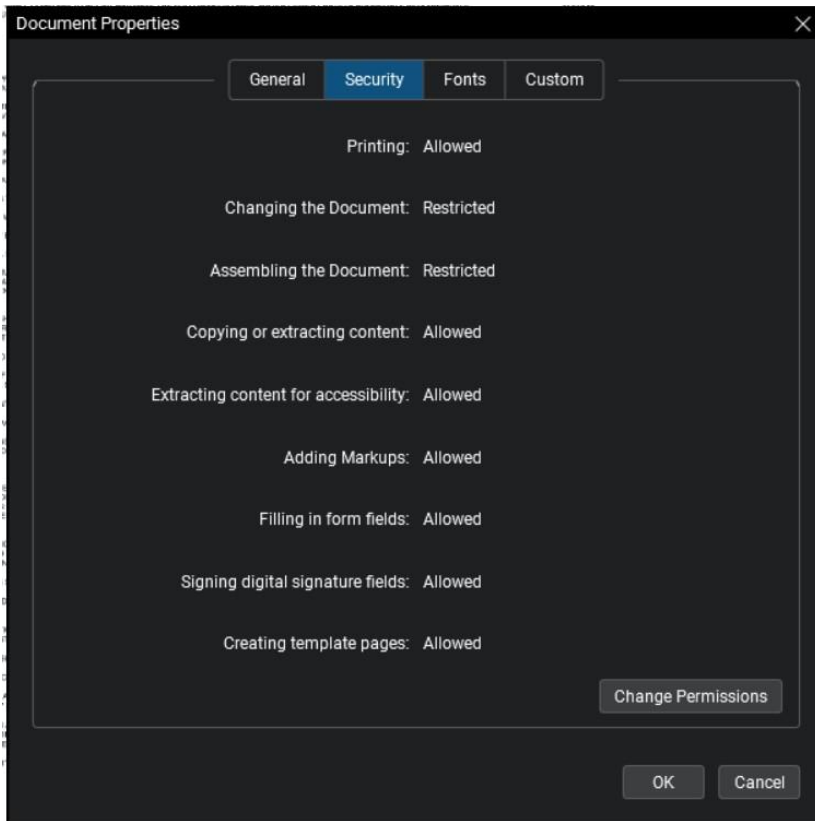


Indian River County Building Division does not endorse any of the companies listed in this link. This is just a helpful tool in your process of obtaining third-party verified signatures:

<http://www.fdot.gov/it/ApprovedDigitalCertificateAuthorities.shtm>

Document Security Settings

Electronic documents created by a design professional will pass through the contractor, and perhaps the owner, before being delivered to the building division. The documents will need to be saved, marked by the building division and possibly printed by the contractor. When a PDF file is created there is an opportunity to set the rights others will have when handling it. It is acceptable to lock the pages that include a digital signature so that the information cannot be altered (a digital signature does not lock the document); however, it will be necessary for the building division to establish the security settings policy it needs to be able to verify that the document is authentic, mark the drawings as the official documents, and return the job copy to the contractor for use on the job. During the sealing process, you must choose the options that allows for annotation and/or the adding of comments and stamps to the document. By doing this, it allows our plans examiners to open, review, make comments and add approval stamps to the sealed document.



Paper vs. Electronic

If a permit is first submitted in paper format with paper drawings, it will remain paper throughout its processing. If a permit is first submitted as an electronic format, it will remain electronic throughout its processing.

Please note that paper documents will not be accepted for electronic permit applications, and electronic documents may not be accepted permit applied for by paper format.

Response to Comments – Resubmitted Documents

When submitting a response to comments, you will be required to type a letter of response addressing each of the reviewer's comment(s). If any drawings were revised to address comments, you will need to compile the complete set with corrections clouded for easy identification. Resubmitted documents must be signed and sealed the same as original submittal and verified by third-party.

Plan Revision

Any changes to the job **after** the permit has been issued is considered a Plan Revision. When your permit is in Issued status, you can submit revised documentation, including a narrative indicating each revision to the documents via paper or electronic along with the required revision cover sheet located at;

https://www.ircgov.com/communitydevelopment/Applications/Building_Division.htm

Terminology & Legislation

Electronic signatures used by Architects and Engineers shall comply with the "Electronic Signature Act of 1996 (ss.668)." The legislature's intent in creating this legislation is to:

- 1) Facilitate economic development and efficient delivery of government services by means of reliable electronic messages.
- 2) Enhance public confidence in the use of electronic signatures.
- 3) Minimize the incidence of forged electronic signatures and fraud in electronic commerce.
- 4) Foster the development of electronic commerce through the use of electronic signatures to lend authenticity and integrity to writings in any electronic medium.
- 5) Assure that proper management oversight and accountability are maintained for agency-conducted electronic commerce.

Terms defined in the act:

- 1) "Certificate" means a computer-based record which:
 - a) Identifies the certification authority
 - b) Identifies the subscriber
 - c) Contains the subscriber's public key
 - d) Is digitally signed by the certification authority
- 2) "Certification authority" means a person who issues a certificate.
- 3) "Digital signature" means a type of electronic signature that transforms a message using an asymmetric cryptosystem such that a person having the initial message and the signer's public key can accurately determine:
 - a) Whether the transformation was created using the private key that corresponds to the signer's public key.
 - b) Whether the initial message has been altered since the transformation was made.

A "key pair" is a private key and its corresponding public key in an asymmetric cryptosystem, under which the public key verifies a digital signature the private key creates. An "asymmetric cryptosystem" is an algorithm or series of algorithms which provide a secure key pair.

- 4) "Electronic signature" means any letters, characters, or symbols, manifested by electronic or similar means, executed or adopted by a party with an intent to authenticate a writing. A writing is electronically signed if an electronic signature is logically associated with such writing.

Unless otherwise provided by law, an electronic signature, may be used to sign a writing, and shall have the same force and effect as a written signature.

The head of each agency shall be responsible for adopting and implementing control processes and procedures to ensure adequate integrity, security, confidentiality, and audit ability of business transactions conducted using electronic commerce, as per Architect's rule 61G1-16.005 and Engineer's rule 61G15-23.005.

References

This document has been created as a guideline based on:

- The Am. Inst. Of Architects, *AIA Florida, A Chapter of the American Institute of Architects*, [aiafla.org;_http://www.aiafla.org/upload_documents/Design_Professionals_Guide_to_Creating_and_Processing_Electronic_Documents_v1.pdf](http://www.aiafla.org/upload_documents/Design_Professionals_Guide_to_Creating_and_Processing_Electronic_Documents_v1.pdf);
http://www.aiafla.org/upload_documents/BuildingDepartmentGuidetoCreatingandProcessingElectronicDocuments.pdf; (Last visited March 23, 2017).
- The Fla. Eng'g Soc'y, *Engineering. It's Practically Amazing!*

And:

1. <https://www.flrules.org/gateway/ruleNo.asp?id=61G1-16.005>
2. <https://www.flrules.org/gateway/ruleNo.asp?id=61G15-23.005>