1900 Hotel Plaza Blvd., Lake Buena Vista, FL 32830 ⌖ (407) 828-2034 ⌖ (407) 828-4466/IVR ⌖ (407) 828-2416/Fax ⌖ RCIDPermits@rcid.org ⌖ www.rcid.org

DIGITAL SEAL AND SIGNATURE REGULATIONS

Effective January 1, 2019, The Reedy Creek Improvement District (The District) will only accept digitally signed and sealed plans from third party certificate authorities. The following has been created to assist in understanding the requirements for creating a digital signature to meet State Statute requirements by using a third party certificate authority. The District is applying the following regulations across the board for all design professionals for efficiency and the legality of validating all design professionals' identities.

2018 Florida Statutes

Title XXXII REGULATION OF PROFESSIONS AND OCCUPATIONS
Chapter 471 ENGINEERING

SECTION 025 Seals.
471.025 Seals.—

(1) The board shall prescribe, by rule, one or more forms of seal to be used by licensees. Each licensee shall obtain at least one seal in the form approved by rule of the board and may, in addition, register his or her seal electronically in accordance with *ss. 668.001-668.006*. All final drawings, specifications, plans, reports, or documents prepared or issued by the licensee and being filed for public record and all final documents provided to the owner or the owner's representative shall be signed by the licensee, dated, and sealed with said seal. Such signature, date, and seal shall be evidence of the authenticity of that to which they are affixed. Drawings, specifications, plans, reports, final documents, or documents prepared or issued by a licensee may be transmitted electronically and may be signed by the licensee, dated, and sealed electronically with said seal in accordance with *ss. 668.001-668.006*.

668.003 Definitions. — As used in this 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.

668.004 Force and effect of electronic signature. — 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.

Reference: http://www.flsenate.gov/Laws/Statutes/2018/471.025
Reference (2): http://www.flsenate.gov/Laws/Statutes/2014/Chapter668/PART_I/

1900 Hotel Plaza Blvd., Lake Buena Vista, FL 32830 ⌖ (407) 828-2034 ⌖ (407) 828-4466/IVR ⌖ (407) 828-2416/Fax ⌖ RCIDPermits@rcid.org ⌖ www.rcid.org

Florida Administrative Code 61G15-23.003

61G15-23.003 Procedures for Signing and Sealing Electronically Transmitted Plans, Specifications, Reports or Other Documents.

(1) Engineering plans, specifications, reports or other documents which must be signed, dated and sealed in accordance with the provisions of *Section 471.025, F.S.*, and *Rule 61G15-23.001, F.A.C.* may be signed digitally as provided herein by the professional engineer in responsible charge. As used herein, the terms "certification authority," and "digital signature" shall have the meanings ascribed to them in *Sections 668.003(2), (3) and (4), F.S.*

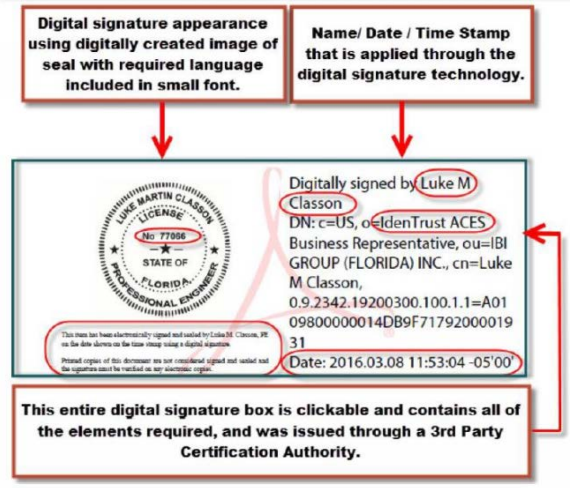
(2) A professional engineer utilizing a digital signature to electronically sign and seal engineering plans, specifications, reports or other documents shall have their identity authenticated by a certification authority and shall assure that the digital signature is:
  (a) Unique to the person using it;
  (b) Capable of verification;
  (c) Under the sole control of the person using it; and,
  (d) Linked to a document in such a manner that the digital signature and correspondingly the document is invalidated if any data in the document is changed.

(3) The affixing of a digital signature to engineering plans, specifications, reports or other documents as provided herein shall constitute the signing and sealing of such items.
  (a) A digitally created seal as set forth in *Rule 61G15-23.002, F.A.C.* may be placed where it would appear if the item were being physically signed, dated and sealed.
  (b) The date that the digital signature was placed into the document must appear on the document in accordance with subsection *61G15-23.001(5), F.A.C.* and where it would appear if the item were being physically signed, dated and sealed.
  (c) The engineering plans, specifications, reports or other documents being digitally signed and sealed shall include text to indicate the following and place it where an original signature would appear if the item were being physically signed, dated and sealed:
    1. The same information required by subsection *61G15-23.002(2), F.A.C.* if a digitally created seal is not use;
    2. The item has been electronically signed and sealed using a Digital Signature; and,
    3. Printed copies of the document are not considered signed and sealed and all signatures must be verified on any electronic copies.
  (d) Formatting of seals and text similar to that depicted below may be used.
    1. When a digitally created seal is used:
    2. When a digitally created seal is not used:
  (e) When engineering plans, specifications, reports or other documents contain multiple sheets or pages, the licensee may apply a single digital signature per electronically transmitted item as set out in *Rule 61G15-23.001, F.A.C.* A digital signature applied to an item in electronic form shall have the same force and effect as signing all of the individual sheets or pages contained within that item unless otherwise limited as specified in subsection *61G15-30.003(3), F.A.C.*
  (f) In the case where multiple licensees sign and seal a single item, each licensee shall apply their digital signature and include qualifying language with those items required in paragraph (e) of this rule thoroughly describing what portions the licensee is taking responsibility for.

Reference: https://www.flrules.org/gateway/RuleNo.asp?title=SEALS&ID=61G15-23.003
Secure Hash Standard: https://www.flrules.org/gateway/reference.asp?No=Ref-00790

THE DIGITAL SEAL AND SIGNATURE

An engineer's digital signature must be in compliance with the latest State Statue requirements *471.025* and *Florida Administrative Code 61G15-23.003*. Plans submitted by all design professionals will not be accepted by The District if they are not digitally signed and sealed in accordance with the State Statute utilizing a third party certificate authority.



A Digital Signature
The online equivalent of a notarized signature. The Certificate Authority (CA) serves as the notary in terms of verifying an identity, while a trusted timestamp verifies the date and time the signature was applied. A digital signature is made up of several components:

1) **Adobe Acrobat Pro or Pro DC** – Most digital signatures are built using the Adobe platform. Step one creates the digital certificate. Step two involves scanning a professional's seal and saving the jpeg file on the computer hard drive. Acrobat then imports it into the digital signature. Step three will add the Certificate Authority (CA) file, token key or serial number to the digital signature as verification of the design professional's identity.

2) **Digital Certificate** – A way of proving an identity in online transactions and is unique to each person when signing a document. The typical digital certificate includes the full name, email address and professional qualifications for signing.

3) **Certificate Authority (CA)** – A third party verification entity that certifies an identity. Software is used, or a token key on a smart card or USB drive is provided, that will attach to the digital certificate in Adobe Acrobat. Some companies require background checks or others ways to verify identity.

4) **Secure Hash** – When the design professional clicks "sign" in Adobe Acrobat, a unique digital fingerprint (called a hash) of the document is created using a mathematical algorithm. This hash is specific to this particular document; even the slightest change would result in a different hash. The hash is encrypted using the private key from the digital certificate. The encrypted hash and public key are combined into a digital signature, which is applied to the document.

5) **Professional's Seal** – Scan the wet stamp of the professional's seal into a 2" square jpeg file on the computer hard drive. It can then be integrated with the digital certificate using the Adobe software.

1900 Hotel Plaza Blvd., Lake Buena Vista, FL 32830 ⌖ (407) 828-2034 ⌖ (407) 828-4466/IVR ⌖ (407) 828-2416/Fax ⌖ RCIDPermits@rcid.org ⌖ www.rcid.org

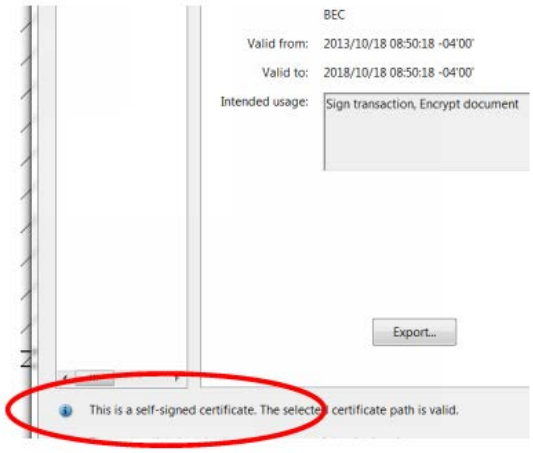
How does it work?

When a digital signature is applied on a drawing, a cryptographic operation binds the digital certificate and the data being signed such as a PDF or other drawing file into one unique descriptor. Any change to the drawing will remove that unique descriptor and will be indicated when opened in Adobe. A Signature Invalid warning will display, "This Document has been modified."

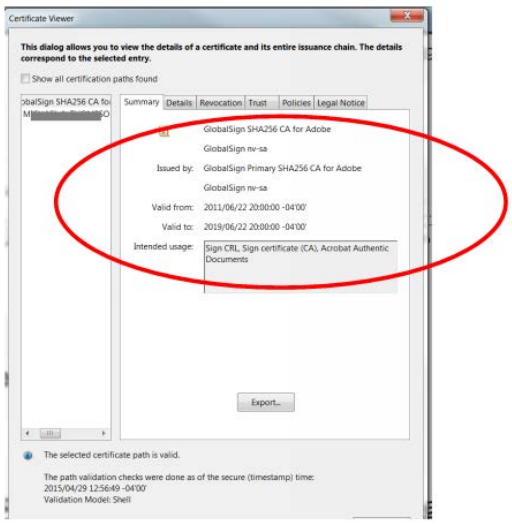
Authentication – Since a third-party validated certificate was used to apply the signature, recipients can easily verify the validity of the drawing. A right click on the digital signature displays a popup screen to validate the signature, showing the Summary, Certificate Authority, Revocation, Trust, Date/Time, Signature Properties and Policies. When the drawing is opened in Adobe, it will ask the recipient to validate the signature.

Data Integrity – When the signature is verified, it checks that the data in the document matches what was in the hash when the signature was applied. Even the slightest change to the original document results in a fail.

Engineers can no longer self-sign their own Digital Signature. The new requirement involves having an identity, digital seal, and signature validated by a third party Certificate Authority. Some design professionals have successfully used IdenTrust, Cosign, and GlobalSign, as an example. (Note: These authorities are not being promoted by The District, nor are they the exclusive authority accepted.) For example, these companies validate an identity, then have the design professional download software or provide a USB drive with a token key or serial number to add to the signature.



Wrong – Self Signed



Correct – Certificate Authority Attached