

Signing & Sealing Electronically Produced Plan Sets



an Implementation at Florida
Department of Transportation



Sign & Seal Electronic Files?

- Florida Board of Professional Engineers rules require the use of an impression type metal seal, then...

1998:

- **FBPE approves use of numeric codes to represent electronic files!**
- **Expands rule for signing and sealing electronic files.**



PEDDS

Professionals Electronic Data Delivery System

- Prototype developed 1998
- First project let in 2001
- Production 2003
- Other disciplines added



Electronic Signature

**Florida Statutes – Chapter 668
ELECTRONIC COMMERCE
PART II – UNIFORM ELECTRONIC
TRANSMISSION ACT 668.50(2) DEFINITIONS**

(h) “Electronic signature” means an electronic sound, symbol, or process attached to or logically associated with a record and executed or adopted by a person with the intent to sign the record.

PEDDS

Professionals Electronic Data Delivery System

- 
- One-way cryptographic algorithm SHA1
 - <http://www.itl.nist.gov/fipspubs/fip180-1.htm>
 - Extremely large number!

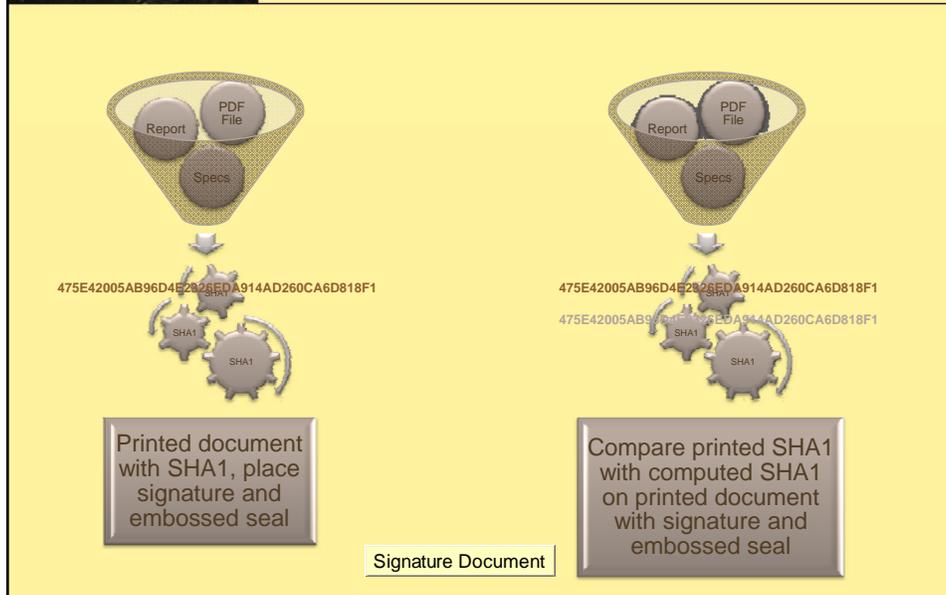


Florida Administrative Code

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

(1) Engineering work which must be sealed under the provisions of Chapter 471, F.S., stored or transmitted in an electronic format, shall be signed, dated and sealed by the professional engineer in responsible charge.

Signing, Sealing and Authentication



Create PEDDS Project

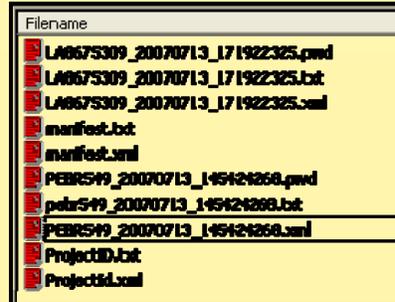
- Identify project root folder
- Provide project Identification information
- Identify managers & signers





Create PEDDS Project

- Project _meta_info folder
- Manifest.xml file
- ProjectID.xml file
- Signatory files



Wikipedia

http://en.wikipedia.org/wiki/Electronic_signature

CIC

<http://www.cic.com>

Google Groups – [secure.professional.plans](http://groups.google.com/group/secure-plans)

<http://groups.google.com/group/secure-plans?hl=en>



Digital Signature

Secures & Authenticates
Documents



Florida Administrative Code

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(3)An electronic signature is a digital authentication process attached to or logically associated with an electronic document and shall carry the same weight, authority, and effect as an original signature. The electronic signature, which can be generated by using either public key infrastructure or signature dynamics technology...

- ❖ Digital Signature
 - ❖ Public Key Infrastructure (asym. keys)
 - ❖ Certificate Authority
 - ❖ Digital Certificate
- ❖ Electronic Signature
 - ❖ Signature File
 - ❖ Signature Report
 - ❖ Embossed Seal & Handwritten Signature



Digital vs. Electronic

Which is appropriate?

PRO	CON
<ul style="list-style-type: none"> ❖ Project based ❖ Easy to create ❖ No cost ❖ No C.A. involved ❖ Perpetual ❖ Individual accountable ❖ Data type agnostic 	<ul style="list-style-type: none"> ❖ Paper trail ❖ No seal on Plans



Electronic Signature

Signature file based

Open Project Folder
Open Pedds

PRO	CON
<ul style="list-style-type: none"> ❖ No paper ❖ “Seal” on plans 	<ul style="list-style-type: none"> ❖ Not perpetual ❖ Third Party Involvement ❖ Certificate security issues ❖ Sheet or file based ❖ Cost (expensive) ❖ Data type dependant



Digital Signature

Certificate based

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