

## CDOT Project/Materials Electronic Documentation - 24

CDOT is transitioning toward accepting all submittals, forms, project records, and supporting documents in electronic format. This Manual reflects technology as of 7/01/2020. Users should work in partnership with CDOT staff to continue to advance this effort in between Manual updates. Please refer to the Owner Acceptance Requirements for Electronic Records and Electronic Signature Guidelines below.

Also refer to: CDOT Standards and Specifications Section 105.08, Document Management and Professional Engineer and Professional Land Surveyor Electronic Seals.



### Owner Acceptance Requirements for Electronic Records and Electronic Signatures Requirements

	Electronic Record (Preferred)		Paper Record	
	Electronic Signature		Original with Wet Signature	
	Type I Signature	Type II Signature		
Definition	Law or regulation that dictates requirements Governed by the Bylaws and Rules of the Colorado State Board of Licensure for Architects, Professional Engineers, and Professional Land Surveyors or the Department of Personnel & Administration, Office of the State Controller Includes an attached digital authentication process that uses public key infrastructure or signature dynamics technology (encryption) Unique to the person, capable of verification, under the individual's sole control, and linked so changes invalidate the electronic signature	Virtual fingerprint that is unique to a person or entity and used to identify the signer  <i>Certifications and Buy America Signatures shall include the signer's name, date, and time the document was signed in addition to locking the document after signing</i>	Scanned copy of an Original record or a copy of a record in PDF or another format	Document with a signature by a person who physically marks a document using a pen  <b>Copy</b> Reproduction of the original paper record Scanned copy of an original paper record Printed copy of an electronic record (invalidates the electronic signature)
Record Type	Required on these electronic records: <ul style="list-style-type: none"> <li>Professional Engineer Seal</li> <li>Professional Land Surveyor Seal</li> <li>Change Orders</li> <li>Notary</li> <li>Agreements and Contracts with CDOT (including MOUs and MOAs)</li> </ul>	Any electronic record not requiring a Type I signature may use Type II signature	A paper record may be scanned and becomes a copy A scanned record that requires a Type I signature or an original wet signature becomes an electronic copy	Original Paper Records that include a P.E. Seal, P.L.S. Seal, Change Orders, and notarized signatures require an original wet signature. A copy or scanned copy of these records is not an acceptable Original Record
Software	A particular software is not specified for Type I signatures Examples of software that meets the requirements - DocuSign and AdobeSign Examples of software that <b>DOES NOT</b> meet requirements - Adobe DC Pro and Blue Beam	CDOT approved electronic signature software.  Examples of software include Adobe DC Pro, Blue Beam, DocuSign, and Adobe Sign.	Electronic records with a Type I signature will contain only Type I electronic signatures. Do not mix Type I signatures with Type II signatures or wet signatures.	

*Revised December 2022*

## 1. Description of Bentley Software Tools and Adobe Sign

### **Adobe Sign**

Adobe Sign is the electronic signature and professional seal software selected by CDOT and required for use on Project Records including CDOT Form 90 Change Modification Orders (CMO), which facilitates automated workflows including the ability to route Project Records for acknowledgments, electronically sealing, and/or signing. DocuSign is the electronic signature program selected for use on a document requiring a CDOT Controller or State Controller signature (contracts)

### **Deliverables Management**

CDOT uses a series of tools in the Bentley suite for design, construction, and engineering documents. One of them is ProjectWise Deliverables Management. This is a cloud-based service that streamlines how a project team works with transmittals, submittals, and Requests for Information (RFI). It provides improved visibility into these processes and retains confidentiality when legally required.

ProjectWise Deliverables Management is utilized to ensure that documents are submitted, completed, and processed on schedule. Functions include ensuring delivery to correct parties, enabling faster reviews and responses, automating an audit trail thereby increasing accountability with detailed recordkeeping, connecting the entire supply chain through a secure cloud platform, and leveraging project dashboards to monitor workflows and evaluate project performance. ProjectWise Deliverables Management is capable of handling reference files used in design.

### **Bentley Client Connect**

The Cloud-based software tool hosted in the Bentley / Microsoft Azure Cloud is used for document collaboration. Project Share connects to and synchronizes with ProjectWise Explorer, such that files placed in a Project Share folder, which is synchronized with ProjectWise Explorer, are automatically copied to the same folder in ProjectWise Explorer. Note that Project Share is not used for DGN reference files in design.

### **ProjectWise Explorer**

Bentley Client Connect (PW Connection) Explorer is the Electronic Document Management System (EDMS) for all active project electronic project records outlined in the CDOT Record File Plans.

**2. Definitions (Please also use the Definitions in the PDs if they are necessary for your Manual. The PDs are available in Word format in the Workshop Documents folder)**

**Adobe Acrobat DC.** The software selected by CDOT and required for users to create and/or modify a PDF (portable document format) Project Record, to retain a record in an ISO Compliant format. By using Adobe Acrobat DC tools, the software “Smart Scans” Project Records to meet state and federal legal requirements before archiving in ProjectWise Explorer used for Type 2 signatures.

**Adobe Sign.** The Type 1 electronic signature and professional seal software selected by CDOT and required for use on Project Records that require a Professional Engineer, Professional Architect, or Land Surveyor Seal such as Final Material Certification and Explanation of Exceptions (CDOT Forms 473 & 474). Also used for the Form 90 for Change Orders, which facilitates automated workflows including the ability to route Project Records for acknowledgments, electronically sealing, and/or signing.

**Local Agency Records**

On Local Agency projects with CDOT oversight, Local Agencies follow their record retention schedules that adhere to the Inter-Governmental Agreement with CDOT. However, specific documents in the CDOT Record File Plans are required to be retained by CDOT and must be provided to the CDOT Local Agency Coordinator by the local agency or its representative. Refer to CDOT records management for Local Agency record requirements.

**[Local Agency E-Signature Guidelines](#)**

**5. Procedural Directive (PD) 508.1 “Requirements for the Use of the Professional Engineer’s Seal”**

**General Description**

PD 508.1 defines the procedures for the use of the Professional Engineer seal by CDOT employees, consultants, contractors, and local agencies who perform engineering work for CDOT.

All CDOT, local agencies, and consulting Engineers must utilize electronic sealing (rather than mechanical sealing on paper). CDOT has designated CDOT employees will use Adobe Sign for electronic Seals.

6. Updated Procedural Directive 21.1 "Requirements for Capital Engineering Program Records"



RELEASE MEMORANDUM

TO: All CDOT Employees

FROM: Shoshana M. Lew, Executive Director  
 Herman Stockinger, Deputy Executive Director & OPR Director  
 Sari Weichbrodt, Rules, Policies, and Procedures Advisor

RE: Updated Procedural Directive 21.1 "Requirements for Capital Engineering Program Records"

DATE: December 20, 2021

1. Name of Updated Procedural Directive:

Procedural Directive 21.1 "Requirements for Capital Engineering Program Records"

2. Executive Summary:

Procedural Directive 21.1 was last updated on June 20, 2019, and specifies the process for managing active Capital Engineering Program Records and storing the records for the length of their legal retention requirements. As part of a concerted effort to coordinate the use of existing engineering document management systems, the Document Management Quick Action Team was established to help address immediate needs of document management solutions and provide guidance that promotes, shares, and organizes these solutions to better serve users and foster a coordinated use.

In evaluating and analyzing the use of document management solutions utilized in engineering, the Document Management Quick Action Team recommended the continued use of ProjectWise for active engineering projects and then storing and archiving closed projects into OnBase within ninety (90) days after Form 950 has been issued. OnBase allows archived engineering records to be easily displayed on CDOT's GIS Map and shared with maintenance and other working groups within CDOT. Based on the Document Management Quick Action Team's recommendation, Procedural Directive 21.1 was updated and has been renamed "Requirements for Capital Engineering Program Records." The updated Procedural Directive establishes one term to consistently refer to engineering records rather than the three different terms used in the prior Procedural Directive and removes outdated requirements and definitions. Overall, the updated Procedural Directive simplifies the process for managing and storing Capital Engineering Program Records.

Key changes include:

- Establishes a streamlined process utilizing existing document management applications for management of active Capital Engineering Program Records and storing the records for the length of their legal retention requirements.
- Allows for better sharing of archived Capital Engineering Program Records with maintenance and other working units within CDOT.



- Establishes an automatic process to transfer Capital Engineering Program Records from ProjectWise to OnBase.
  - Other minor changes were made to the Procedural Directive.
3. Offices to Contact with Questions:
- The Office of Policy and Government Relations at 303.757.9441 or [sari.weichbrodt@state.co.us](mailto:sari.weichbrodt@state.co.us).  
The Records Management Program at 303.512.4905 or [tammi.haddad@state.co.us](mailto:tammi.haddad@state.co.us).
4. Effective Date of Updated Procedural Directive: December 20, 2021



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