Table of Contents

STANDARDS FOR USE WITH MicroStation/GEOPAK V8i

Chapter 13: PDF Creation & Plan Delivery Procedures

About Plan Delivery Procedures

When a project is ready for advertisement and construction, all the sheets in the plans need to be converted to PDF files. The Acquisitions Team in Program Administration will use these files for their inclusion in the Electronic Bid Solicitation. The Workflows in this chapter will describe the methods that can be used to produce the PDF files.

Final PDF files that are delivered to Acquisitions must be named to match the individual sheet numbers within the plan set. For Example, name the PDF file created for the second Plan & Profile sheet "C2" as C2.pdf or C002.pdf. File names that do not clearly represent a plan sheet will not be accepted.

Sealing and Signing Policy

Architect-Engineer (A/E) consulting firms shall seal and sign engineering work, as provided under the contract and as described hereon. It is our expectation that a licensed professional registered in the state in which the project is located seals documents.

Refer to CFLHD's "Sealing and Signing of Architect-Engineer Documents" for requirements and procedures, which can be found with the following link:

http://www.cflhd.gov/resources/pm/documents/policies/sealing-signing-policy.pdf

Creating PDF files in MicroStation

There are two previous and one new method to create PDF files within MicroStation. The basic method is through MicroStation Print. The other method is through MicroStation Batch Print. Print Organizer is now included in MicroStation V8i, and will replace the Batch Print method. The basic method is typically used with single sheet or small print jobs. Batch Print and Print Organizer methods enable the creation of multiple PDF and are used for larger print jobs and cross sections.

MicroStation Print

MicroStation Print is the most fundamental and basic way to create a print. Workflow 1 describes this process.

Workflow 1: Creating PDF Files Using MicroStation Print

To access this workflow, follow this link:

http://www.cflhd.gov/resources/CADD/documents/Workflow_11.1_PDFs_CreatingPDF FilesUsingMicroStationPrint_x30.pdf

MicroStation Batch Print

Creating individual PDF files for cross sections using the MicroStation print method would be very time consuming. Using the Batch Print method makes this process much faster.

The following rules will help to make the batch plot PDF process more efficient:

- Rectangular MicroStation shape elements ("plotting shapes") must placed around each sheet outlining the areas within the dgn file to be plotted.
- Plotting shapes within each design file must be drawn into the file in exactly the order the PDF files are to be created. Following the CFL CADD Standards manual Cross Section Sheet Layout workflow will ensure the proper order.
- Duplicate or extra plotting shapes will generate extra PDF files and is not recommended.
- It is easiest to generate cross section PDF files from only one MicroStation file. Specific procedures must be followed to print from more than one file and to follow the proper PDF file naming system.

Workflow 2: Creating PDF Files Using Batch Print

To access this workflow, follow this link:

http://www.cflhd.gov/resources/CADD/documents/Workflow_11.2_PDFs_CreatingPDF FilesUsingBatchPlot%20_x30.pdf
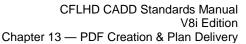
MicroStation Print Organizer

Print Organizer is a new utility in V8i that is used for creating, managing, and publishing project plan sheets. This new utility replaces the Batch Print utility used in MicroStation V8. Batch Printing will no longer be supported in future versions of MicroStation.

Refer to Chapter 12 – Printing on CFLHD's current use and procedures of Print Organizer.

Workflow 3: Creating PDF Files Using Excel Spreadsheets

To access this workflow, follow this link:

http://www.cflhd.gov/resources/CADD/documents/Workflow_11.3_PDFs_CreatingPDF FilesUsingExcelSpreadsheets_x30.pdf

CADD Documentation

In the case when electronic CADD files are delivered to CFLHD, or when a developing project moves from one designer to the next, it is very important to provide proper CADD file documentation. It is ideal to maintain a "working" file to track important files. The files to track should enable another to understand which files are used to create all the design plan sheets. Additionally, it is important to track and describe the necessary files and locations to continue and edit the project's design.

File Tracking

The CFLHD Design File Tracking spreadsheet can be downloaded from the CFLHD.gov website. It is located on the Design Resources tab in the Design Forms section. To get the file, follow the provided link

http://www.cflhd.gov/resources/design/forms/

CADD Deliverables

It is imperative to follow the key components of this CADD manual when CADD files are delivered. Maintaining the proper directory structure and file organization for a project, as described in Chapter 2, as well as file naming conventions must be followed. For deliverables other than electronic CADD files, refer to contractual or Cross Functional Team agreements if deliverables are not listed in a contract.