

CADD Manual Revisions

The following is an itemized LIST of applicable revisions and additions. Some minor corrections have been omitted.

Revised January 2, 2017

Chapter 11: Structure and Bridge

Updated: The current CADD Manual to point to Part 2, Chapter 1 of the VDOT's *Manual of the Structure and Bridge Division*.

Appendix E: Falcon Document Manager

Updated: Information on the Archival stages of Hydraulic files in the Falcon Document Manager.

Section E.2.2.1

- **Schedule for archiving files.**

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The following is an itemized LIST of applicable revisions and additions. Some minor corrections have been omitted.

Revised October 23, 2016

Chapter 2: Survey

Updated: Text Standards and Logical File Names

Section 2.2.8

- **Text Standards Tables and styles information revised.**

Section 2.3

- **Sentence added reiterating that all project design files must use same seed file.**
- **Symbol added to denote Logical File as a reference (<>).**

Section 2.3.1

- **<survey> added to Survey Design Planimetric Master File (sUPC#)**

Section 2.3.1.2

- **(Legacy) added Horizontal Control Plan Sheet**

Section 2.3.2

- **<survey_utility> added to Survey Design Utility Master File (suUPC#)**

Section 2.3.3

- **<po> added to Survey Property Owner File (spoUPC#)**

Section 2.3.4

- **<survey_bndy> added to Survey Design Boundary File (sbdUPC#)**

Section 2.3.5

- **<N/A> added to Survey Master Survey File (smUPC#)**

Section 2.3.6

- **<parcel_parcel> added to Survey Lot/map check Files (sp###UPC#)**

Section 2.3.7

- **<survey> added to Survey Bridge Situation file (s(UPC#)b(bridge#))**

Section 2.3.5

- **<survey> added to Contents of a Wetland File (swlUPC#)**

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Chapter 3: Plan Design

Updated: Sheet numbering conventions, Seed Files and Plotting information.

Section 3.1.2

- **Table 3-2 Sheet Numbering Conventions revised to include RW and Utility Plan Sheets**
- **Table 3-3 New Seed Files revised to include RWDATA seed file**

Section 3.11.2.1

- **Logical Names and Plotting revised to include new Survey information about plotting and logical names**
- **Pen Table Settings revised for Survey**

Chapter 5: Right Of Way/Easements and Utilities

Updated: Clarification of Text Sizes and revised information on Right of Way Data and Utility Sheets

Section 5.12

- **Revised C Size text in Imperial Text Table.**
- **Revised Text Sizes and Styles notes**

Section 5.15

- **Right of Way Data Sheet section divided into Legacy Projects prior to July 2016 and Projects after July 2016**
- **Notes added pertaining to Right of Way data file, Permissions and Editing of Right of Way Data sheet**

Section 5.16

- **Created new section on Right of Way Parcel Checks**

Section 5.17

- **Created new section on Utility Sheets (UT) for Utility Field Inspection (UFI)**

Section 5.18

- **Plotting**
- **Utility sheets (UT) will be plotted using the Id_v95_utilities-Color.tbl configuration.**

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Revised April 08, 2016

Chapter 1: Introduction & Overview

Updated: Plan File Room folder structure for Formal Right of Way Revisions

Section 1.4.3

- **Added Clarification of Formal Right of Way Plans revisions.**
- **Added new symbol for Right of Way revisions sheet**
- **Plats are only used in certain situations.**
- **Link added for Survey Manual for further clarification**
- **New screen capture showing Void Folder**

Section 1.5.7

- **Clarification of sheet numbering for Formal R/W revisions**
- **Section number change from 1.5.6 to 1.5.7**

Chapter 5: Right Of Way/Easements and Utilities

Updated: Updated clarification for Right of Way Plans and revisions

Section 5.1

- **Introduction to Right of Way Plan Sheets reduced and divided into sections shown below**

Section 5.2

- **Added section on Preparing Plans for Public Hearing**

Section 5.3

- **Added section on Plan Preparation after Utility Field Inspection**

Section 5.4

- **Added section on Managing Permissions folders in Falcon**

Section 5.5

- **Revised section on Right of Way Submission**
- **Added clarification on where Plans will reside before and after NTP**
- **Added clarification on Helpdesk Request for processing**

Section 5.6

- **Revamped section on Right of Way Revisions**
- **Added clarification for File Naming Convention**
- **New symbol designation for Revision Data Sheet**
- **Reiterated that MicroStation file names do not change**
- **Added clarification on Helpdesk request**

Section 5.10

- **Section number for Level Structure changed from 5.5 to 5.10 because of added sections above**

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Revised June 16, 2015

Chapter 1: Introduction & Overview

Updated: Plan File Room folder structure regarding revisions

Section 1.4.1

- **Added Clarification of Road Plans revisions.**
- **Added new screen capture for Bridge revisions to No Plans**
- **New process for naming and storing of Right of Way revisions**
- **New screen capture for Right of Way revision Void Folder**
- **Plats are no longer used.**

Section 1.5.1

- **New figure showing naming convention for R/W revisions**

Section 1.5.6

- **Clarification of sheet number for field changes and R/W revisions**

Chapter 2: Survey

Updated: Added clarification to various existing items.

Section 2.2,2

- **Added “District” in front of Survey Manager with regards to making changes to Survey files.**

Section 2.2,3

- **Added table of File locations in the Survey Directory**

Section 2.2.8

- **Added table of Several Text Styles that have been preset for Survey**

Section 2.3,5

- **The survey files “(s and/or su)” designated for creation of new projects.**

Section 2.3,9

- **Added information to Contents of a DTM MicroStation File (sdtUPC#)**
- **Deleted text on points and breaklines not accepted by GEOPAK**
- **Deleted information in Contents of a GEOPAK Project pertaining to CAICE and .dat file**

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Chapter 3: Plan Design

Updated: Sections of Roadway Design for Total CADD clarified.

Section 3.9.4.6

- **Right of Way and Easements file names shown differently**

Section 3.9.9

- **Revisions after R/W or Final Submittal totally revamped with new instructions and screen captures and example, all previous information deleted.**

Chapter 5: Right of Way / Easements and Utilities

Updated: Two new Sections added regarding R/W Submission and Revisions

Section 5.2

- **Handling of Right of Way plans after signing of Title sheet.**

Section 5.3

- **Revisions after R/W or Final Submittal totally revamped with new instructions and screen captures and example of naming convention.**

Chapter 7: Consultants

Updated: New information added regarding R/W Submission and Revisions

Section 7.5.1

- **Plats are no longer used**
- **File naming convention for R/W revisions**

Appendix E: Falcon Document Manager

Updated: New field added to pick list for "Generate PDF"

Section E.2.1.5

- **New Screen capture to show "Right of Way Revision" added to pick list.**

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Revised July 22, 2014

Chapter 3: Plan Design

Updated: MicroStation Seed Files and removed all references to Metric working units

Section 3.1.3.1

- **Added new seed files for Design to change to USsurveyft**
- **Added new seed files for Survey to change to USsurveyft**

Section 3.10.1.4

- **Removed Metric Working Units from CADD Drawing Standards**
- **All references to metric in levels, weights and text sizes deleted**
- **Color, line weights and text sizes revised**
- **Added color and weight symbology to cells and patterning**

Appendix F: Sealing and Signing of Plans

Updated: The requirements for the appearance of the Seals and Digital Signatures used by Consultants with VDOT projects

Section F.5.4

- **The appearance for the signature should be created to only show Name, Date, and Reason.**
- **Added link that takes you to step by step instructions on how to set-up appearance**

Revised May 23, 2014

Chapter 2: Survey

Updated: The procedures used by VDOT survey to provide **NEW** survey projects beginning in 2014 including updated seed files (working units set to U.S. survey feet), level structure, updated line styles, updated project coordinate system, annotative cells & text for use

Section 2.2,1

- **Added five new files to survey master files**

Section 2.2,2

- **Added new Master Design File (m) to Survey Directory**

Section 2.2.6.1

- **New named levels have been provided**

Section 2.2,9

- **Added new cell libraries**

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Section 2.3.10.2

- The 2014 line styles have been assigned an individual level, color and weight.

Section 2.3

- Survey Design Planimetric Master File
- Survey Design Utility Master File
- Survey Master Survey File
- Survey Lot/Map check File
- Survey Bridge Situation File
- 2014 VDOT Symbology Standards

Appendix B: Survey Standards

Updated: All drafting symbology

Section B.4

- New Survey level names, description and symbology
- New Survey Custom Line Styles

Section B.5

- New Survey Cell Library
- New Photogrammetric Cell Library

Revised February 14, 2014

Appendix E: Falcon Document Manager

Updated “**Attaching Reference Files**” instructions in to include more information on “**Live Nesting**”

Section E.1.5

- Add explanation of “No Nesting” and “Live Nesting”
- Shows preferences for Live Nesting
- Added note about Logical Names

Revised January 15, 2014

Chapter 3: Plan Design

New guidelines for the creation of **Location Maps** and that maps located in Falcon are not up-to-date.

Section 3.3.2

- How to access Maps that are now located in **InsideVDOT**

Section 3.3.2.1

- How to reference **County Map** to design file

Section 3.3.3

- How to edit new maps

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Revised December 04, 2013

Appendix E: Falcon Document Manager

Clarification was needed and information had to match recent changes to Reference Guides.

Section E.2.1.3

- **Additional guidance given for Project Submittals at Milestones for Tier 1 and Tier 2 Projects**

Section E.2.1.7

- **Clarification on numbering sheets with “leading” zeros in L&D and Bridge**

Section E2.2

- **Emphasis (highlights) put on certain aspects of Archiving plans**

Revised November 04, 2013

Chapter 3: Plan Design

Changes made to plan assembly.

Section 3.1.2

- **CADD Level Structure Sheet removed from table of Sheet Numbering Conventions and note added to bottom of page stating that it is no longer required in Plan Assembly**

Revised October 29, 2013

Chapter 9: Hydraulic Design

Clarification was needed on some of the Visual Basic Applications and new Instructions for Ditch/Design and Analysis was added. The revisions are as follows:

Section 9.5.1

- **Preferences removed from individual titles 9.5.1.2 – 9.5.1.6**
- **Link Options moved under 9.5.1 from 9.5.2**

Section 9.5.2

- **Removed Project Preferences: Link Options - Link Design Options**

Section 9.5.3

- **Inserted new Section on VDOT Inlet Configurations in GEOPAK Drainage**
- **Added Screen captures on Curb Inlet Throat Widths and Node Library Items**
- **Sub-section added on On-Grade Inlets (With and Without Gutter)**
- **Sub-section added on Sag Inlets (With and Without Gutter)**

Section 9.5.4

- **Inserted new Section on Special Use Inlets**
- **Added Screen captures on Node Library Items**
- **Sub-section added on On-Grade Inlet Application**

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- **Sub-section added on Sag Inlet Application**

Section 9.5.5

- **Was 9.5.3**

Section 9.5.6

- **Was 9.5.4**

Section 9.6

- **New Main Section entitled Ditch Design/Analysis in GEOPAK Drainage**
- **Added link to a new Appendix H Drainage Ditch Design – Lab**
- **Added section on Individual Networks**
- **Added section on Combined Networks**
- **Added section on Ditch Design Procedures**
- **Added section on Leapfrogging through a Combined Networks**
- **Added example screen captures**
- **New Section on Using Equivalent Drainage Areas with Individual Networks**
- **New Section on Drainage Labeler Instructions**
- **New Section on Potential Problems, Errors and Lock-ups**

Appendix H: Drainage Ditch Design - Lab

This Appendix was created as an adjunct to Chapter 9 revisions on Ditch Design. This exercise is to enhance new information in section 9.6. It is an excerpt from the 2011 Geopak Drainage VDOT Training Manual.

Section 9.5.1

- **Link/Ditch Configuration**
- **Lab 19 – Ditch Design**

Appendix I: Abbreviations and Acronyms

Appendix H became Appendix I. because of the nature of the content; it should be last in the Manual.

- **Added two new abbreviations VBA and GDF**

Revised September 17, 2013

Appendix F: Sealing and Signing of Plans

Based on questions from the Consultants comments about where to find information on Digital Certificates, we have revised the following segments:

Section F.1

- **Expanded definition Digital Signature Certificates**
- **Added new links to information about ACES Business Representative Digital Certificates**
- **Removed reference to Exempt by Virginia Code**
- **Added information on how seal is created**

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Section F.3

- **Removed any references to TIF files**
- **Clarified information for VDOT Staff about locating and checking out files**

Section F.5

- **Removed any references to TIF files and changed will to must**
- **Changed submitted to Plan Coordination Section to VDOT**
- **Removed section F.5.5 Exempt Stamp**

Section F.7

- **Added additional links for clarification of File Formats Requirements**

Section F.8

- **Removed reference and link to CD-209-3**

Revised March 29, 2013

Chapter 5: Right of Way / Easements and Utilities

Based on feedback from the L&D Technical Session on March 14th 2013, several sections have been revised to incorporate the comments:

Section 5.4

- **Added symbology for Limited Access**
- **Added symbology for Joint Use VDOT Utility Easements**
- **Revised water easement color to be purple**
- **Updated the example on page 5-5 to reflect the new symbology**

Section 5.5

- **Added new level for Limited Access lines, text, and plus & offsets**
- **Added new level for Joint Use VDOT Utility Easements lines, text, and plus & offsets**
- **Updated Demolition Numbers and Parcel Number information**
- **Design and Computation Manager was updated for new levels and symbology**

Section 5.6

- **Updated the example for Permanent Easement Plus and Offset**
- **Updated the example for Joint Use VDOT Utility Easement**
- **Added link to Survey Manual for additional information on what type of brackets to use**
- **Added information about notes to be placed on Right of Way plan sheets**
- **Plan View Labeler was updated for new levels, plus & offsets, and label names**

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Revised January 03, 2013

Chapter 5: Right of Way / Easements and Utilities

The entire chapter was revised to incorporate instructions on how to create the new Right of Way plan sheets.

- **Added an introduction and brief description of the new method for creating Right of Way plan sheets.**
- **Updated Directory Structure and File Name information**
- **Updated Seed Files information**
- **Updated Color and Symbology information**
- **Added New Levels names and assigned symbology by level. New level filters have been added.**
- **Updated Labeling / Pluses & Offset information**
- **Updated Text Size information**
- **Updated Demolition Numbers and Parcel Number information**
- **Updated information on Survey Property Owners File**
- **Updated procedures on how to create Right of Way Data Sheet**
- **Added section on Plotting/Printing**

Revised August 13, 2012

Chapter 1:

- **Falcon System Access now thru SARA**
- **Handling of project revisions, saved not overwritten**
- **Explanation and diagram of Plan File room naming structure**
- **Falcon Archiving Stages flow chart**
- **Archiving Plans for Design Build Projects in Falcon**
- **Archiving Plans for Design Build Projects flow chart**
- **Plotting software changed from eQuorum to MicroStation**

Chapter 3:

- **Diagram of File naming conventions**
- **All new screen captures to reflect changes from MicroStation V8 to V8i**
- **Cross Section Labeling**
- **Macros**
- **Instructions for Handling of project revisions**
- **Referencing PDF Insertable Sheets**
- **Plotting with MicroStation V8i**
- **Sheet Plotting scales**
- **Logical Names and plotting**
- **Print Organizer**
- **Plotting from Falcon Web**

Chapter 4:

- **Traffic Engineering Named Levels**

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- **Traffic Engineering Cell Libraries**

Chapter 5:

- **Location/path to Right of Way Color Table**
- **Location of Right of Way Data Sheet**

Chapter 7:

- **Naming of PDF files**
- **Consultant Access to Projects thru Falcon**
- **Consultant Request Access to FTP**
- **Accessing FTP Server**

Chapter 8:

- **Creating Cross Section Plot File**
- **Generating and Submitting PDF Files**
- **Links to Tier 1 and Tier 2 Information**
- **VDOT Software License Request Process**

Chapter 9:

- **Hydraulics GEOPAK Drainage File (GDF)**
- **Hydraulics GEOPAK Drainage VBA's**
- **Storm Sewer Profiles**
- **Bentley Instructions for GEOPAK Drainage VBA's**
- **Supplemental Instructions on Project Preferences**

Chapter 11:

- **Information removed from CADD Manual and replaced with link to Structure and Bridge Manual**

Appendix A:

- **New path to Cell Libraries**
- **New cells added to Sheet Cell Library (Tier 1, Tier 2, etc.)**

Appendix D:

- **Updated dialog boxes for V8i for Stippling and Cross-Hatching**
- **New instructions for using Place Note Command**
- **New instructions for Dimension Styles Appendix E:**
- **Expanded instructions on Attaching Reference Files**
- **Table of Referencing for Plotted Files**
- **Falcon Database Information added and updated**
- **Viewing Tiffs and PDF's**

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Appendix G:

- **Completely rewritten and replaces old Appendix**
- **New guidelines for Public Involvement Displays**
- **New Sheet Templates**
- **Setting up Public Hearing Plot**
- **Plotting Public Hearing Displays**

All subsequent Revisions will be dated and the most recent will take precedence over latter..