

CADD Production Criteria Handbook (CPCH)

FDOT2008 XM Revision

Record of Changes

Chapter	Section	Description
<p>NOTE: CPCH chapter headers updated to reflect new Effective date and Release description. All hyperlinks updated to current locations. Updated all images and FDOT2004 references to FDOT2008 versioning. All references to the "SiteMenu" have been changed to reflect "FDOT Menu".</p>		
1	<i>Chapter 1</i>	Introduction
	1.3	3rd paragraph - Updated to current FDOT2008 versioning information.
	1.5	Added contact information for submitting revisions and update comments and updated form.
2	<i>Chapter 2</i>	FDOT CADD Software
	2.2	Added information regarding the use of the Enterprise application known as the Software Distribution Notification Application (SDNA)
	2.4	Added "Additional products used may also be found in the CADD Customer Support Guide mentioned in section 2.3 previously."
	2.5	Updated current FDOT2008 version information and replaced listing of versions with reference.
	2.6	Added qualifying verbiage.
3	<i>Chapter 3</i>	MicroStation Resource & Support Files
	3.1	Changed Cell Libraries. Updated to current FDOT2008 versioning, FDOT Menu verbiage and listing of cell libraries.
	3.2	Changed to FONTS and updated to current FDOT2008 versioning.
	3.2.1	Changed to Zdotfont.rsc
	3.3	Changed to Text Size and Spacing
	3.3.1	Changed to Standard Text Sizes
	3.3.2	Removed
	3.4	Changed to new section named DATA and added new verbiage.
	3.5	Updated current FDOT2008 versioning information.
	3.6	Changed to Seed Files
	3.6.1	Assigned new subsection to English 2D Seed File
	3.6.2	Assigned new subsection to English 3D Seed File
	3.7	Changed to new section named Symbology and added new verbiage.
	3.7.1	Added new subsection named DGNLibs with new verbiage and table.
	3.7.2	Assigned new subsection for Color Tables under Symbology and updated color table.
	3.7.3	Assigned new subsection for Line Styles under Symbology.
	3.7.3.1	Assigned new sub-subsection for Standard English Line Style Measurements for Plotting and updated style measurements.
	3.7.3.2	Assigned new sub-subsection for FDOT Custom Line Style Resource Files.
	3.7.3.3	Assigned new sub-subsection for Custom Line Style Graphics.
	3.7.4	Assigned new subsection for Line Weight under Symbology
	3.8	Changed to new section named Database and added new verbiage defining the GEOPAK Design & Computation Manager.
	3.9	Added new section named Control Files with new verbiage.
	3.10	Added new section named Rule Files with verbiage consolidated from the Discipline chapters. This section to include subsections to define FDOT Standard File Naming Convention, FDOT Standard File Names, Descriptions and Rule files, and rule file tables reflecting associated FDOT Standard Level names and attributes.
	3.10.1	Added new subsection named FDOT Standard Graphic File Naming Convention with new verbiage.

	3.10.2	Added new subsection named FDOT Standard File Names, Descriptions and Rule Files with new table reflecting Critical Files, Discipline, Filename, File Description and associated Rule File.
	3.10.3	Added new subsection named FDOT Standard Rule File Names & Descriptions reflected in a table.
	3.10.4	Added new subsection named FDOT Standard Levels by Rule File with a new sub-subsections containing on table per Rule File with associated Levels.
	3.10.4.1 thru 3.10.4.35	Added new sub-subsections named for each FDOT Rule File. Symbology Tables were moved from the each discipline chapters and restructured in one listing of Tables per Rule File with associated Levels, reflecting Critical Level, Rule File Name, New Level Number, Level Name, Level Description, ByLevel Color, ByLevel Style, ByLevel Weight and in some also included are Point/Line and Feature codes.
4	Chapter 4	Project Directory Structure
	4.1	Updated with current FDOT2008 versioning information.
	4.1.2	Removed the last sentence: " Some functionality was added to the PEDDS utility to assist with this task."
	4.1.3	Added clarifying verbiage regarding copying.
	4.1.4	Added clarifying verbiage regarding usage of full or relative path. Updated the change from using Sitemenu to FDOT Menu and the change of the FDOT Menu option Utils to Actions.
	4.2.1	Updated the Standard File Name Extensions table.
	4.2.2	Added verbiage: (a padded integer, i.e. "00", "01", "02" ... "99") to ## =
	4.2.3	Updated the current FDOT2008 versioning information. Added Sheet Numbers information in the first two paragraphs. Added the section on: "The following shows how Sheet Navigator and EDI will interpret sheet numbers to attempt to discern what plans component the sheet belongs to:" with table of Prefixes and Components. Under Output File Naming Convention, added "NOTE: on old projects - now obsolete, but included here for reference." and moved "NOTE: EDI Maintenance Release 3 and Subsequent version....." to be placed at the end of section on Source Design File Name. Under Plans Component Code, changed 0010 - Right of Way Maps and 0011 to 0099 - Unknown. Under Current Postscript File Naming Format, added "NOTE: Used for contemporary projects." and removed: "NOTE: Used for contemporary projects." Added "All new projects subsequent to November 2006 should use the new output format." to the final paragraph.
5	Chapter 5	Project Indexing & Journaling
	5.1	Index.XML verbiage change: "This file is only required for those projects prepared with the FDOT2004 software and beyond, as it can only be produced with the Electronic Delivery Indexer Version 2. This file is placed in the root directory of the project." ProjectIndex.XML verbiage change: "From this index, an HTML report can be produced (Sheetndx.htm) by the Project Browser EDI application ..." Removed all reference to Project Browser. Added to forth paragraph: "Since the files mentioned above are text based, a user could conceivably produce these by other means, albeit with difficulty." Removed EDI versioning.
	5.1.1	Removed Indexing Postscript Images section
	5.2	Removed EDI versioning.
6	Chapter 6	Plotting & Postscript Image Files
	6.1	Added clarifying verbiage and removed: "Refer to the Electronic Delivery software's documentation for details regarding the configuration and use of these utilities." from the first paragraph. Removed last reference: "Refer to the CPCH Chapter 3, Section 3.5, Plot Driver Descriptions, for additional information."
	6.2	Updated the Plot Border table.
	6.3	Removed verbiage in reference to the Department's "...migration from paper plans..." in the first paragraph. Added some clarifying verbiage in subsequent paragraphs.

	6.5	Removed verbiage: "Refer to the CPCH Chapter 3, Section 3.5, Plot Driver Descriptions, for additional information."
	6.5.1	Added to first paragraph first sentence: " ... supplied by FDOT." Removed last half last sentence second paragraph: "...basis and shall meet the requirement specified under the Quality and Reproduction."
7	Chapter 7	CADD Quality Assurance / Quality Control
	7.1	Qualified acronyms for plain language directive. Added qualifying verbiage for "minimum" threshold of compliancy and "later project phases".
	7.2	Qualified acronyms for plain language directive. Added qualifying verbiage for "the rules of the Florida Boards of Professional Regulation and implemented in the Professional's Electronic Data Delivery System (PEDDS) software".
	7.4.1	Updated CADD design/delivery components listing.
	7.4.2	Added the verbiage: "...of both the districts and ECSO."
	7.5	Added qualifying verbiage for more concise descriptions of the FDOT QC software.
	7.5.1	Added qualifying verbiage in first paragraph. Updated "item checked by FileChecker". Removed: "A Video tutorial for the operation of the FileChecker utility is available on the Florida Department of Transportation, Engineering / CADD Office website here." Enhanced "IMPORTANT NOTE" with stronger verbiage. FileChecker Reports:
		Added: "FileChecker also has a powerful search tool that can search for text strings, including multiple occurrences, within files." "NOTE: The report screens have additional controls to sort data in columns (by clicking in the column header) and some have pull-down lists to access additional data."
		Removed: "A Video tutorial for the operation of the FileChecker utility is available on the Florida Department of Transportation, Engineering / CADD Office website here." "FileChecker also has a powerful search tool that can search for text strings, including multiple occurrences, within files."
	7.5.2	Removed all verbiage reflecting "How to" instructions. This will be included in a new FDOT QC Software training document found on the ECSO training website. Added qualifying verbiage for more concise descriptions of the FDOT QC software.
		Added: NOTE: For detailed listing of the current FDOT Standard Files and corresponding FDOT Standard Rule File information, see Chapter 3.10 of this document. NOTE: For a more in-depth instructional document on the FDOT QC Software, go to the ECSO Website: http://www.dot.state.fl.us/ecso/main/fdotcaddtraining.shtm
		Removed: "QC Toolboxes, QC-Std and Cleanup and QC Utilities sections
	(7.5.2.1 thru 7.5.2.5)	Removed all verbiage reflecting "How to" instructions. This will be included in a new FDOT QC Software training document found on the ECSO training website. Added qualifying verbiage for more concise descriptions of the FDOT QC software.
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8	Chapter 8	Electronic Delivery Procedure
	8.2	Removed Project Browser

8.4.3	<p>Removed "Using Multi line to Validate ASCII Text Files" step by step instructions. Added: "Note: For a step by step demonstration of importing an ASCII text file in Multi-Line Earthwork, go to the ECSO Training website: http://www.dot.state.fl.us/ecso/main/fdotcaddtraining.shtm"</p>
8.6	<p>#11 Added: " Project Delta will no longer output a DeltaNDX.htm file, it will append the revision number selected to the end of the file in the format of DeltaNDX#.htm."</p>
	<p>#12 Replaced with: " 12. Update the Sheet Index Report (SheetNDX#.htm) and project composite PDF (Project#.PDF) using EDI. Note: These actions in Step 12 are necessary for defining the state of the project as will be reflected in the Revised Project CD deliverable. The new SheetNDX#.HTM file and Project#.PDF file will make reference to all sheets currently active in the project following the revision. However, as required in Step Number 10, the updated project sheets are assembled into a composite revision PDF as needed for the Plans and Specs Revision CD deliverable used in the letting process."</p>
	<p>#13, 14 & 15 Added: "13. Create the composite Project#.pdf with EDI. This file contains all sheets currently part of the project. Select the appropriate index as defined by DeltaNDX#.htm for each revision. 14. Create the Sheetndx#.htm, which is the index for all sheets in the project. Select the appropriate index as defined by DeltaNDX#.htm for each revision 15. Additionally create the composite Revision#.pdf by selecting the appropriate DeltaNDX#.htm, from the project root folder. EDI will automatically prompt for and then reads the data from DeltaNDX#.htm to create Revision#.pdf. Only revised sheets are included in the revision PDF, as found in the DeltaNDX#.htm index. Note: This action is necessary to produce a PDF file of the revised sheets to be included in the Plans and Specs Revision CD deliverable. An example of a Revision1.PDF is shown below:</p>
	<p>#17 Added Note: "Note: In SetMaker, if the Source Directory folder contains more than one deltandx.htm file, the user will be given the option to select which deltandx file will be the active one. See image below."</p>
8.7	<p>#8 Added: "8. Press the [Create] button. StrungProject will ask for some identification information to create a Project Identification file (ProjectID.xml) in the _meta_info folder of the root strung project structure. This Project ID file is copied from the Lead project, and modified slightly by Strung Project so that PEDDS will recognize the strung project as a unique project (a new PEDDS Project key is created). Likewise, a "seed" Manifest file (Manifest.xml) is also created in the _meta_info folder; however it does not contain any file listing data (URLs or Hash codes)."</p>
	<p>#9 Replaced: "9. On the User Info dialog, Press the [Cancel] button to return to the main StrungProject Screen, (OR) press the [Continue] button and . StrungProject will begin creating and completing the appropriate strung project directory structure, and then start copying e. Each of the component 'Lead' and 'Goes-with' sub-projects will be copied into the strung project structure. As copying takes place, Strung project displays a progress bar, and descriptive text about what is being processed. Note: As described previously StrungProject will also create the ProjectID.xml and Manifest.xml files at this point."</p>

		<p>#9 Replaced: (conti) "Note: The strung project directory structure is not secured by StrungProject – use PEDDS to do all securing.</p> <p>Once StrungProject has created the directory structure and all appropriate files the strung project's Manifest data is complete, StrungProject will append any "Project.PDF" files found in the Lead and Goes-with project(s) and place the appended composite (also called Project.PDF) in the root directory of the strung project.</p> <p>GhostScript runs , with no user interface, once for each Project.PDF found in the component projects(s), and builds the composite Project.PDF in the root directory of the strung project. StrungProject displays a progress bar and descriptive text as all the PDFs are being un-distilled to PostScript, concatenated, and re-distilled back to PDF, which is a very computer intensive operation, so be patient please."</p>
9	<i>Chapter 9</i>	Right of Way Mapping CADD Standards
	9.1.7	Added to the Cell Table: Property Line Hook element, C=PLHOOK Type
	9.1.8	Standard Symbology Table updated to reflect changes resulting from the QC Review Committees.
	9.2	Removed Geopak from the title
	9.2.3	R/W Hot Boxes: Removed: "The browser must have been previously opened before the HotBox icon will open the browser." "The HotBoxes can be positioned anywhere in the design file by moving your cursor to the center of the HotBox (so it displays as a pointer) and dragging to the desired location. The user must then right click anywhere on the SiteMenu bar and save these settings through SiteMenu > Save Settings." Added new Hot Boxes: Run Plot Scale; Run Quikchek
	9.2.5	<ul style="list-style-type: none"> • Create Cover Sheet > With Map(DGN): Removed: Section for "Units: Metric/English"; "Place Clipped Area in Master File > This option places the clipped area of the County Map File into the same design file the Cover Sheet is to be drawn into."; "Place Clipped Area in Reference File > This option places the clipped area of the County Map File into a reference design file. When this option is active the dialog will include an input line for location of the reference file and its name:" Section for "Clip Key Map > " removed "or in the master file depending on the user's section"
	9.2.6	Scale All Custom Line Styles - Verbiage changed from "The desired custom line style scale is entered in the text window." to "Select the desired custom line style scale and then click the Scale Lines button...."
	9.2.8	Added new Cell section for "North Arrow - This command automates the process of placing a north arrow. The English cell library row.cel must be attached to the current design file. The program will prompt the user if it cannot find the required cell library."
	9.2.9	Place Delineators - Added with image: "Select Your Plot Scale – Sets the required scale for R/W Mapping standards for placement of the delineator arrows. Multiple scales are place in the pull down." Added to "Leader Above Line" and "Leader Below Line" – "depending on the direction the line was original drawn in."
	9.2.11	<i>Added in 5th paragraph: "GEOPAK Legal Description Editor must be running for this ap</i>
	9.2.12	Removed "Drafting Tools" section
	9.2.13	Removed "Spot Check, Spot Fix, View DGN Difference, Manage Reference Files, QA_Input and Gridscan" from the R/W Menu and QC Toolbox. These GDM QC applications have been retired.
	9.3	Plans Preparations Toolbox has been updated.
	9.4	Removed "Geopak" from the "Plan Sheet Layout" description.
	9.4.1	Replaced "Geopak" with "Civil Extension" and added new menu option for accessing "Plan/Profile Sheet Computation".
	9.5	Removed "Geopak" from the "Design and Computation Manager" title.

	9.5.1	Removed "Geopak" from the "Selection of R/W Database (English)" title. Added: "The file can be accessed through the MicroStation main menu by selecting: Applications>MicroStation Civil Extensions> Design & Computation Manager Or...." Removed: "The file can be accessed..."
	9.7	Removed: "o FDOT2004 – uses the V8 file format and FDOT2004 CADD standards. This option requires existing files to be converted for both file format and CADD Standards. All new supporting files and programs are accessible." Updated all the prior versioning images.
	9.8	Removed: "There are three basic options available to consider prior to converting active design files: 1. No Conversion – When a projects/design files are near completion such as 90% or greater and require negligible use of Geopak, the FDOT2002_V7 workspace should be used. 2. Convert File Format Only – Those projects/design files that are between 60% and 90% and require additional work using design software the FDOT2002_V8 workspace with existing support files should be used. 3. Convert File Format and Migrate to new FDOT2004 Standards – All projects/files that are 60% or less that require extensive use of Geopak should be converted to MicroStation V8 file format and continue development with the FDOT2004 workspace. Additional considerations:"
10	Chapter 10	Environmental Management Standards
	10.2	Changed Standard File Name from UTCPEM.dgn to PLPREM.dgn
	10.5	Moved Level-Symbology table to CPCH Ch 03.10 where these tables are set up by Rule File. Added verbiage to clarify Symbology Standards and Level naming convention rules.
11	Chapter 11	Survey Standards
	11.2	Added new non-critical Standard File Name: TREERD.dgn with File Type - Existing Topography; Model Name - Default File Description - Tree Survey Sheet; Rule File - topord.rul; Seed File - \$(MX_SEEDIR)fdotseed2d.dgn.
	11.3	Removed from 2nd paragraph: " The "V8" refers to the new standards for level names implemented for MicroStation V8."
	11.5	Moved Level-Symbology table to CPCH Ch 03.10 where these tables are set up by Rule File. Added verbiage to clarify Symbology Standards and Level naming convention rules.
12	Chapter 12	Drainage Standards
	12.4	Removed the verbiage "Hydrology".
	12.6.1	Moved Level-Symbology table to CPCH Ch 03.10 where these tables are set up by Rule File. Added verbiage to clarify Symbology Standards and Level naming convention rules.
	12.7	Replaced verbiage for Drainage Map: (not usually in a plan set, but kept on the server- The Drainage Map may be considered as optional to be included in the Final Plans submittal at the discretion of the individual Districts)
13	Chapter 13	Roadway Standards
	13.2	Changed Standard File Names from: PLAN_MOTIF.dgn to MTPLRD.dgn; PROFILE_MOTIF.dgn to MTPRRD.dgn.
		Added new Standard File Names: AMGMRD.dgn, File type - Cross Sections, Model Name - Default, File Description - Automated Machine Guidance Model (3D), Seed file \$(MX_SEEDIR)fdotseed3d.dgn

		Added new Standard File Names: GKLNRD.dgn, File type - Cross Sections, Model Name - Default, File Description - Geopak Lines for Existing Features, Seed file - \$(MX_SEEDIR)fdotseed2d.dgn
		Removed Standard File Name: URCPRD.dgn - This was replaced with PLPRRD.dgn which already exists.
		Added to Note: "Refer to Chapter 19 for the Utility symbology standards."
	13.7	Moved Level-Symbology table to CPCH Ch 03.10 where these tables are set up by Rule File. Added verbiage to clarify Symbology Standards and Level naming convention rules.
14	Chapter 14	Signing & Pavement Marking Standards
	14.5	Moved Level-Symbology table to CPCH Ch 03.10 where these tables are set up by Rule File. Added verbiage to clarify Symbology Standards and Level naming convention rules.
15	Chapter 15	Signals Standards
	15.5	Moved Level-Symbology table to CPCH Ch 03.10 where these tables are set up by Rule File. Added verbiage to clarify Symbology Standards and Level naming convention rules.
16	Chapter 16	Highway Lighting Standards
	16.5	Moved Level-Symbology table to CPCH Ch 03.10 where these tables are set up by Rule File. Added verbiage to clarify Symbology Standards and Level naming convention rules.
17	Chapter 17	Landscape Standards
	17.5	Moved Level-Symbology table to CPCH Ch 03.10 where these tables are set up by Rule File. Added verbiage to clarify Symbology Standards and Level naming convention rules.
18	Chapter 18	Structures Standards
	18.2	5th paragraph added verbiage regarding Geotech files: "...are listed to show the order of placement within the Structures plans component only. All Geotech files should be located in the Geotech discipline folder and..."
		Added new filename: B#SlopeProtectionConcrete.dgn and renumbered Sheet Order within the Structures Plans Naming Convention and Numbering Convention table.
	18.6	Removed Common and Survey Library entries from the symbology table.
	18.6.1	1st paragraph replaced verbiage: "sheets that reside in other component areas of the plan set shall use the corresponding component area's border cell" with "Sheets requiring Structures design that reside within other discipline components of the plan set (Roadway, Lighting, etc.) shall use the Border Roadway w/Initials cell "Sheet-Rdwy"."
		"Scales" tables Height and Width updated.
		"Text Sizes and Weights" table updated
	18.9	2nd paragraph removed verbiage: "The Quality Control Process does not analyze reference files."
		3rd paragraph removed: "Structures design files for projects let before July 1, 2003 containing non-Structures elements are exempt from the Quality Control process and should be noted as an exception in the Quality Control Report."
19	Chapter 19	Utilities Standards
	19.3	1st paragraph removed the verbiage: "The first and preferred option is the exchange of graphic files (DGN or DWG) and the second is the creation of ASCII input files. The procedures for both are defined below."
	19.5.3	Renamed file names: PLAN MOTIF to MTPLUW; PROFILE MOTIF to MTPRUW;

		Added file name: UTVHUW for UWHC Summary of Survey Verified Utilities (3D).
	19.8	Moved Level-Symbology table to CPCH Ch 03.10 where these tables are set up by Rule File. Added verbiage to clarify Symbology Standards and Level naming convention rules.
	19.9.3 - 19.9.5	(AUTOCAD Environment; Utility File Locations; and Syntax) Removed all verbiage in reference to AutoCAD. New configuration information is under development for FDOT to implement acceptance of AutoCAD format in design files set for 2010.
	19.10.6, 19.11	HotLists and Hot Boxes are removed.
	19.16.2 - 19.16.3	(Basic Translation Issues and DWG Import/Export Settings for Standardization of Files) Removed all verbiage in reference to AutoCAD. New configuration information is under development for FDOT to implement acceptance of AutoCAD format in design files set for 2010.
20	<i>Chapter 20</i>	Geotechnical Standards
	20.6	Moved Level-Symbology table to CPCH Ch 03.10 where these tables are set up by Rule File. Added verbiage to clarify Symbology Standards and Level naming convention rules.
21	<i>Chapter 21</i>	Construction Standards
	21.5	Moved Level-Symbology table to CPCH Ch 03.10 where these tables are set up by Rule File. Added verbiage to clarify Symbology Standards and Level naming convention rules.
	21.7	"Steps for Construction's use of Electronic Data" updated to current versioning.
22	<i>Chapter 22</i>	Intelligent Transportations Systems (ITS) Standards
	22.2	Renamed file names: PLAN_MOTIF to MTPLIT; PROFILE_MOTIF to MTPRIT
	22.6	Moved Level-Symbology table to CPCH Ch 03.10 where these tables are set up by Rule File. Added verbiage to clarify Symbology Standards and Level naming convention rules.
23	<i>Chapter 23</i>	Architectural Standards
		Formatting and plain language corrections made only.
24	<i>Chapter 24</i>	Specification Standards
		Formatting and plain language corrections made only.
25	<i>Chapter 25</i>	Appendix
		Grammatical errors corrected only.