

Workflow MA 1 - Directory Structure

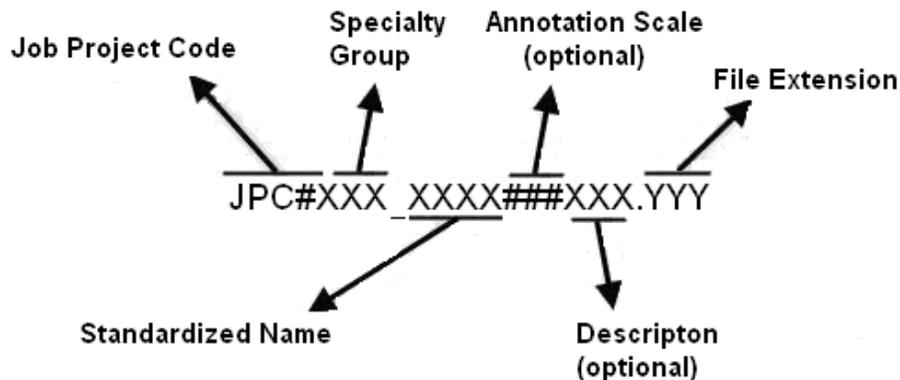
PROJECT DESIGN FILES

The CDOT workflow of projects requires that graphic and design data be created into multiple design files during the course of project development. These design files need standard, informative, and unique file names.

File Naming Conventions

The CDOT naming standard uses a formula that restricts the character placement, ensures unique file names, and identifies the information contained in the file. All CDOT projects must follow these file naming conventions. Standardizing file names is necessary for effective management of the large numbers of files needed to produce a set of design plans.

CDOT files are named in a standard format that identifies the file's project, the data contained within it, and the product used for its creation. The naming convention is illustrated as follows:



- ◆ **Job Project Code (JPC)** is the CDOT project code, formerly known as the project subaccount number.
- ◆ **Specialty Group** is the standardized abbreviation for the specialty group that the owner of the file is with.
- ◆ **Standardized Name** denotes the type of data that is contained in the file.
- ◆ **Annotation Scale** including the annotation scale in the file name is optional. However, it should be included in file names for projects that use multiple annotation scales.
- ◆ **Description** A brief description can be used to further identify a model file. For sheet files, this field is used as a counter to differentiate between multiple files of a specific type.
- ◆ **File Extensions** define the product used for its creation. Examples would be dgn for MicroStation, DTM for an InRoads surface, etc.

An example of a MicroStation design file would look like the following.

12345DES_Model100US285.dgn

12345 indicating the CDOT Project Number, **DES** indicates it is Roadway Design's model file and **100** indicating it uses a 1"=100' annotation scale, **US285** is a description identifying the highway this model depicts. **DGN** is the default extension for MicroStation design files.

Note: A seventh segment is used on Working Files. This segment should be the initials of the designer or engineer who is working on the file. For example, **CU12345DES_Model100.dgn** where **CU**, are the initials of the designer or engineer (in this example, CU stands for “CDOT User”).

DIRECTORY STRUCTURE

Project files follow a standardized scheme. This section describes the location of project files and the standard directory structure for each group within CDOT.

Project Directory

At the beginning of each project, the Project Manager will create a project directory structure using the **CreatePrjDir.exe**. This executable will create a directory that is the single storage location for all information pertaining to a given project. The Project Manager is required to assign access permissions to every person on the design team and is also responsible for maintaining the access list to keep it current.

Top Level Directory

Each project includes a unique top-level directory and a set of standardized sub-directories. The job project code (JPC) indicates the top-level directory name.

Group Sub-Directories

Below the top-level directory, you will find sub-directories for each group. Each group at CDOT which works on the project is required to store its data in the appropriate sub-directory for that group.

Group Sub-Directory Structure

The following tables show the project directories for each group and the file types that go into these directories.

Bridge Project Folder (\Bridge)

Sub-directories	Description
\Calculations	<ul style="list-style-type: none"> \Construction_Engineering \Computer_Files \Hand_Calcs \Submittals \FIR_Design
	<ul style="list-style-type: none"> \Computer_Files \Hand_Calcs \FOR_Design
	<ul style="list-style-type: none"> \Computer_Files \Hand_Calcs
\Correspondence	

	\Email
	\Memos
\Drawings	Sheet Files - Plan set sheets and detail sheets
	\Reference_Files
	All final Model files to be referenced to the sheets
	JPC#BRDG_Model.dgn
	JPC#BRDG_Prof.dgn
\Tabs	
\Geometry	Bridge Geometry Files and output
	#####.dat Structure Number and File Extension
	#####.cmd
	#####.dxf
	#####.lis
	#####.pcf
	#####.scr
	#####.dgn
\InRoads	All InRoads data: dtm, alg, tml, rwl, rwk and reports.
\Photos	Electronic photo files or scanned photos concerning the project and surroundings
\Reports	
\Schedules	
\Working	Design iterations and miscellaneous drafting without impacting final Model Files found in the Reference_Files subdirectory. The designers' initials should pre-fix all files in this directory so multiple designers can work in this directory. No working files should be used as Reference Models. When a working design is complete, copy it into the Reference_Files Folder and rename it to the standard naming convention. This directory will be deleted at project close-out.

Construction Project Folder (\Construction)

Sub-directories	Description
\Construction	
\Calculations	
\Change_Orders	
\Claims	
\Correspondence	

\Diaries	
\Drawings	Sheet Files - Plan set sheets and detail sheets
\Cross_Sections	All cross section Models and Cross Section *.job files
\Reference_Files	All final Model files to be referenced to the sheets
\Tabs	
\EEO	
\Estimates	
\Final_Documentation	
\Photos	Electronic photo files or scanned photos concerning the project and surroundings
\Public_Relations	
\Speed_Memos	
\Working	Design iterations and miscellaneous drafting without impacting final Model Files found in the Reference_Files subdirectory. The designers' initials should pre-fix all files in this directory so multiple designers can work in this directory. No working files should be used as Reference Models. When a working design is complete, copy it into the Reference_Files Folder and rename it to the standard naming convention. This directory will be deleted at project close-out.

Consultants Project Folder (\Consultants)

The Consultant Project Folder does not contain any folders or files. This will be the location of the CDOT approved directory structure delivered from the consultant. The project manager is responsible for ensuring the folder and file structure conforms to the CDOT standard directory structure.

Roadway Design Project Folder (\Design)

Sub-directories	Description
\Calculations	
\Correspondence	
\Drawings	Sheet Files – Plan set sheets and detail sheets JPC#DES_EarthworkQuant###.dgn JPC#DES_GenlNote.dgn JPC#DES_Plan###.dgn JPC#DES_PnP###.dgn JPC#DES_Prof###.dgn JPC#DES_SAQ###.dgn JPC#DES_StdPlanList.dgn JPC#DES_SWMP.dgn

	JPC#DES_TabConc##.dgn
	JPC#DES_TabMisc##.dgn
	JPC#DES_TabRem##.dgn
	JPC#DES_TitleSht.dgn
	JPC#DES_TyplSect##.dgn
	JPC#SURV_Tab##.dgn
	JPC#SURV_WUTab.dgn
	M&S Standard Plans List Index.dgn
\Cross_Sections	All cross section Models and Cross Section *.job files
\Reference_Files	All final Model files to be referenced to the sheets
	JPC#DES_Interchange.dgnJPC#DES_Intersec.dgn
	JPC#DES_Model.dgn
	JPC#DES_Phasing.dgn
	JPC#DES_Prof.dgn
\Tabs	All tabulation support data: xls, doc, and pdf files
	JPC#DES_GenNote.doc
	JPC#DES_SWMP.doc
	JPC#DES_TabEarthwork.xls
	JPC#DES_TabMisc.xls
	JPC#DES_TitleSht.xls
\InRoads	All InRoads data: dtm, alg, tml, rwl, rwk and reports
\Photos	Electronic photo files or scanned photos concerning the project and surroundings
\Reports	
\Working	Design iterations and miscellaneous drafting without impacting final Model Files found in the Reference_Files subdirectory. The designers' initials should pre-fix all files in this directory so multiple designers can work in this directory. No working files should be used as Reference Models. When a working design is complete, copy it into the Reference_Files Folder and rename it to the standard naming convention. This directory will be deleted at project close-out.

Hydraulics Project Folder (\Hydraulics)

Sub-directories	Description
\Calculations	
	\Cost_Estimates
	\Hydrology_Ponds

	\Spread_Width_Inlets
	\Storm_Sewer_Culverts_Channels
\Correspondence	
	\Email
	\Meeting_Minutes
	\Memos
\Drawings	Sheet Files – Plan set sheets and detail sheets
	JPC#HYDR_StrQuant##.dgn
	\Reference_Files All final Model files to be referenced to the sheets
	JPC#HYDR_Model.dgn
	JPC#HYDR_Prof.dgn
\Tabs	
	JPC#HYDR_TabStrmsewer.xls
\InRoads	All InRoads data: dtm, alg, tml, rwl, rwk and reports
\Manufacturers_Data	
\Photos	Electronic photo files or scanned photos concerning the project and surroundings
\Program_Data	
	\HEC-2
	\HEC-RAS
\Report	
	\Field_Notes
	\Final
	\Preliminary
	\Technical_Memorandum
\Working	Design iterations and miscellaneous drafting without impacting final Model Files found in the Reference_Files subdirectory. The designers' initials should pre-fix all files in this directory so multiple designers can work in this directory. No working files should be used as Reference Models. When a working design is complete, copy it into the Reference_Files Folder and rename it to the standard naming convention. This directory will be deleted at project close-out.

Landscape Project Folder (\Landscape_Environmental)

Sub-directories	Description
\Calculations	
\Correspondence	

\Drawings	Sheet Files – Plan set sheets and detail sheets
\Reference_Files	All final Model files to be referenced to the sheets JPC#LAND_ENVI_Model.dgn
\Tabs	\Form_128
\InRoads	All InRoads data: dtm, alg, tml, rwl, rwk and reports
\Natural_Resouces	\4(f)_6(f) \Air_Noise_Farmland \Cultural \Hazmat \T&E \Wetlands_Delineation_Findings
\Permits	
\Photos	Electronic photo files or scanned photos concerning the project and surroundings
\Public Involvement	
\Reports	
\NEPA	
\Technical	
\Social_Resources	
\Working	Design iterations and miscellaneous drafting without impacting final Model Files found in the Reference_Files subdirectory. The designers' initials should pre-fix all files in this directory so multiple designers can work in this directory. No working files should be used as Reference Models. When a working design is complete, copy it into the Reference_Files Folder and rename it to the standard naming convention. This directory will be deleted at project close-out.

Materials Project Folder (\Materials_Geotechnical)

Sub-directories	Description
\Calculations	
\Correspondence	
\Drawings	Sheet Files - Plan set sheets and detail sheets
\Reference_Files	All final Model files to be referenced to the sheets
\Tabs	
\InRoads	All InRoads data: dtm, alg, tml, rwl, rwk and reports

\Photos	Electronic photo files or scanned photos concerning the project and surroundings
\As-Built	
\Construction	
\Existing_Condition	
\Reports	
\Working	Design iterations and miscellaneous drafting without impacting final Model Files found in the Reference_Files subdirectory. The designers' initials should pre-fix all files in this directory so multiple designers can work in this directory. No working files should be used as Reference Models. When a working design is complete, copy it into the Reference_Files Folder and rename it to the standard naming convention. This directory will be deleted at project close-out.

Miscellaneous Project Folder (\Miscellaneous)

Typical Section Program Data input files, JPC#.csv (used for converting nonstandard levels to CDOT standards.), and other project specific files that do not have a designated folder.

Planning Project Folder (\Planning)

Sub-directories	Description
\Correspondence	
\RTP_TIP_STIP	
\Working	Design iterations and miscellaneous drafting without impacting final Model Files found in the Reference_Files subdirectory. The designers' initials should pre-fix all files in this directory so multiple designers can work in this directory. No working files should be used as Reference Models. When a working design is complete, copy it into the Reference_Files Folder and rename it to the standard naming convention. This directory will be deleted at project close-out.

Plot Sets Project Folder (\Plot_Sets)

The files located in this folder are project specific General Plan Set Sheets. The files located in the subfolders will be files reflecting plan set sheets captured at time of submittal. Final Plan Sets should be in Adobe Acrobat PDF file format for the Reproduction Department. The Reproduction Department will access the PDF from this location for submittals.

Sub-directories	Description
\Plot_Sets	
\AD	Advertisement
	\Revisions
\FIR	Field Inspections
\FOR	Final Office Revisions

\ROWPR

Project Specific Configuration (\Project_Configuration)

This folder contains copies of the CDOT Workspace InRoads Preference files only when a project is archived and will be brought back at a later date. Software changes and Configuration upgrades affect InRoads preference files. It is important to have copies of the preference files used when the project was created. The files will be useful for reviewing how InRoads Features, Styles and Survey Data displayed for the duration of a specific configuration release. However, software and configuration upgrades may not work seamlessly with these preference files because levels and features are renamed and linestyles are redefined.

The following files should be saved in this folder:

- C:\Program Files\Workspace-CDOT\Standards-Global\InRoads\Preferences\CDOT-Preferences.ini
- C:\Program Files\Workspace-CDOT\Standards-Global\InRoads\Preferences\CDOT-Styles.ini
- C:\Program Files\Workspace-CDOT\Standards-Global\InRoads\Preferences\CDOT-Survey_Features.fwf
- C:\Program Files\Workspace-CDOT\Standards-Global\InRoads\Preferences\CDOT-Survey_Preferences.fxp
- C:\Program Files\Workspace-CDOT\Standards-Global\InRoads\Notes\CDOT-Notes.dft.

All other InRoads data files should be stored in the appropriate Project InRoads folders.

Project Manager Project Folder (\Project_Manager)

Sub-directories	Description
\Budget	
\Clearances	
\Contract_&_Task_Order	
\Correspondence	
\Bridge	
\Construction	
\Design	
\EEO	
\Environmental_Landscape	
\Governmental_Agencies	
\Hydraulics	
\Letters	
\Materials_Geotechnical	
\Public_Relations	

- \ROW
- \Senior_Management
- \Traffic
- \Utilities
- \Meeting_Minutes
- \Schedules

Redline Project Directory (\Redline)

Right Of Way and Survey Project Folder (\ROW_Survey)

Sub-directories	Description
\Correspondence	
\Acquisition	
\Appraisal	
\Permission_To_Enter	
\Property_Management	
\ROW	
\Survey	
\Drawings	Sheet Files - Plan set sheets and detail sheets
	JPC#ROW_Cnty-24x18_###.dgn
	JPC#ROW_Cnty-24x36_###.dgn
	JPC#ROW_Mon###.dgn
	JPC#ROW_Ownership###.dgn
	JPC#ROW_Plan###.dgn
	JPC#ROW_TabProp01.dgn
	JPC#ROW_TabProp02.dgn
	JPC#ROW_TabProp03.dgn
	JPC#ROW_TabProp04.dgn
	JPC#ROW_TabProp###.dgn
	JPC#ROW_TitleSht.dgn
	JPC#ROW_MonRcrd###.dgn
	JPC#SURV_PlanLSCD###.dgn
	JPC#SURV_PlanPCD###.dgn
	JPC#SURV_TitleLSCD.dgn
	JPC#SURV_TitlePCD.dgn

\Reference_Files	All final Model files to be referenced to the sheets JPC#ROW_Model.dgn JPC#SURV_Model.dgn JPC#SURV_Topo##Scale##.dgn JPC#SURV_TopoCodes##Scale##.dgn JPC#SURV_TopoContour##Scale##.dgn JPC#SURV_TopoElevations##Scale##.dgn JPC#SURV_TopoNames##Scale##.dgn JPC#SURV_TopoNotes##Scale##.dgn JPC#SURV_TopoSymbols##Scale##.dgn \Tabs JPC#ROW_TabMon.xls JPC#ROW_TabProp.xls
\InRoads	All InRoads data: dtm, alg, tml, rwl, rwk and reports
\DTM	DTM files
\Field_Books	Field Books
\Geometry	Geometry Files
\Legals	
\Reports	ROW Report Files
\Research	
\Government	
\Miscellaneous	
\Plans	
\Title	
\Survey	
\Level	
\Monument_Information	
\Photogrammetry	
\Photos	Electronic photo files or scanned photos concerning the project and surroundings
\Raw_Data	
\TGO	Trimble Geomatics files in a zipped format.

\Working Design iterations and miscellaneous drafting without impacting final Model Files found in the Reference_Files subdirectory. The designers' initials should pre-fix all files in this directory so multiple designers can work in this directory. No working files should be used as Reference Models. When a working design is complete, copy it into the Reference_Files Folder and rename it to the standard naming convention. This directory will be deleted at project close-out.

Specifications Project Folder (\Specifications)

Project Specifications (DOC and PDF formats only). Post the Project Specifications for the Reproduction Department in one Adobe Acrobat PDF file. The Reproduction Department will access the PDF file from this location.

Traffic Project Folder (\Traffic_ITS)

Sub-directories	Description
\Calculations	
\Traffic_Modeling	
\Correspondence	
\Access	
\Email	
\Drawings	Sheet Files – Plan set sheets and detail sheets JPC#TRAF_Schedule##.dgn JPC#TRAF_TabPvmtMrk##.dgn JPC#TRAF_TabSigns##.dgn
\Reference_Files	All final Model files to be referenced to the sheets JPC#TRAF_Light.dgn JPC#TRAF_Model.dgn JPC#TRAF_Signal.dgn
\Tabs	All tabulation support data: xls, doc, and pdf files JPC#TRAF_Tabs.xls
\InRoads	All InRoads data: dtm, alg, tml, rwl, rwk and reports
\Photos	Electronic photo files or scanned photos concerning the project and surroundings
\Reports	
\Signs	SignCAD drawing files & other Misc. sign files

\Working	Design iterations and miscellaneous drafting without impacting final Model Files found in the Reference_Files subdirectory. The designers' initials should pre-fix all files in this directory so multiple designers can work in this directory. No working files should be used as Reference Models. When a working design is complete, copy it into the Reference_Files Folder and rename it to the standard naming convention. This directory will be deleted at project close-out.
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Utilities Project Folder (\Utilities)

Sub-directories	Description
\Calculations	
\Correspondence	
\Drawings	Sheet Files – Plan set sheets and detail sheets
\Reference_Files	All final Model files to be referenced to the sheets JPC#UTIL_Model.dgn
\Tabs	
\InRoads	All InRoads data: dtm, tml, rwl, rwk and reports
\Photos	Electronic photo files or scanned photos concerning the project and surroundings
\Reports	
\Working	Design iterations and miscellaneous drafting without impacting final Model Files found in the Reference_Files subdirectory. The designers' initials should pre-fix all files in this directory so multiple designers can work in this directory. No working files should be used as Reference Models. When a working design is complete, copy it into the Reference_Files Folder and rename it to the standard naming convention. This directory will be deleted at project close-out.

