

- D3.01 General
- D3.02 Work Area Organization and Naming Convention
- D3.03 PS&E Work Area Folder Structure
- D3.04 HQ Right of Way Work Area Folder Structure

D3.01 General

The Project/Work Area folder structure discussed in this chapter is intended to be the WSDOT standard structure for Computer Aided Engineering (CAE) data storage to consolidate all electronic project engineering data files into one structure.

WSDOT uses Bentley ProjectWise to manage Project/Work Area engineering files. The ProjectWise term “Work Area” will be used in this section to represent each individual project structure.

Work area structures are intended to contain all engineering data and drawing files (DGN format) along with directly supporting files in various formats. It is highly recommended but not strictly required to store additional project documents in this structure as well. Alternatively, non-EEDS related files may be stored in other repositories that also accommodate all project staff and stakeholders with appropriate access and document control such as SharePoint.

The Work Area is organized into discipline group subfolders with specific controlled access for the owner discipline and other applicable groups.

Work areas are generated by CAE ProjectWise Support and designated production staff. To request a work area, contact [WSDOT HQ CAE Help Desk](#).

When folders are created in appropriate structures, the following are not acceptable:

- Use of special characters in folder or file names. This includes any of the following:

~!@#\$%^&* (){}|\;:'<>,/+=

- Redundant use of project information in folder names and file names.

For example, note the “**XL1234_**” below:

00.0_ExamplePSEWorkArea1/Design/_CADD/XL1234_Sheets/XL1234_AL/XL1234_PS_AL_001.dgn

The file name (*XL1234_PS_AL_001.dgn*) is correct as defined in [Deliverables 4 File Naming Conventions](#).

However, the redundant project ID in the folders provides no additional value. It increases the file path which may impact Microsoft applications in their ability to read and open a file.

The design work order (**XL1234**) is included in the Work Area properties and can be used to search all related documents in ProjectWise.

D3.02 Work Area Organization and Naming Convention

Work Areas are contained in and organized by State Route (SR) number folders. In the **WSDOT** datasource, there are SR number lists found in:

_HQ\Right of Way\State Routes – all Right of Way plans and projects are stored and maintained here (see [D3.04](#) for more information).

_HQ\Fish Passage\[Region]proj – Fish Passage projects are centrally stored and maintained here.

[Region]\Projects – General projects are stored in region structures.

Under the applicable SR folder, the work area naming convention is:

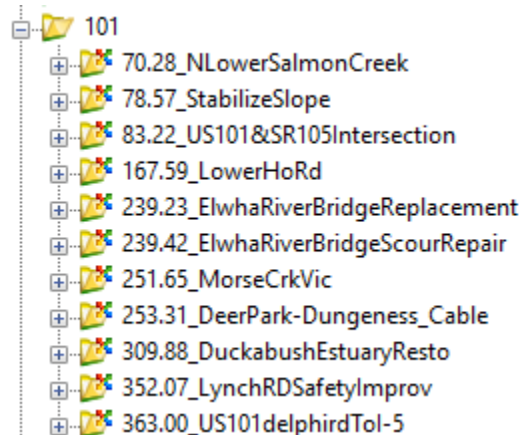
Work Area folder Name	= MP_WorkAreaName
Work Area Description	= [Region] – Narrative Title

Where:

MP	= Begin Mile Post of the work effort
WorkAreaName	= Abbreviated and CamelCase to keep the folder path as short as possible for compatibility with Microsoft applications that are sensitive to long path/file names but still readily recognized in the list of work areas.
Narrative Title	= Program Management project title

These work areas then sort automatically by location along the State Route:

Figure D3.1 Work Area Organization Based on State Route and Begin Milepost



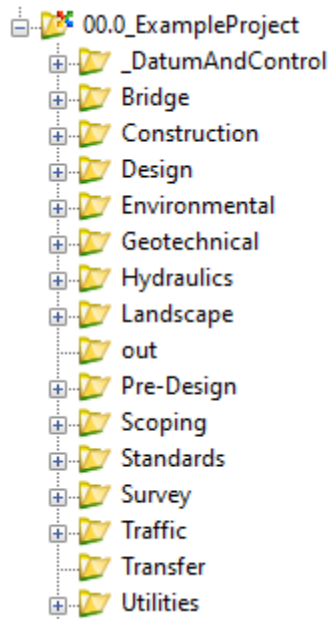
It is important **not** to revise the name of the work area root folder after creating the Work Area. Otherwise, ProjectWise links become ineffective. If renaming or modifying a work area folder is necessary, contact [WSDOT HQ CAE Help Desk](#) for guidance.

D3.03 PS&E Work Area Folder Structure

Work Area templates are provided by WSDOT CAE Support and shall be used to ensure uniformity and access control conformance.

For PS&E efforts, a set of folders and subfolders are provided for every work area. A subfolder is associated with each discipline (Bridge, Construction, Design, etc.). Access control in ProjectWise allows work groups to have specific read/read-write permissions to their portion or discipline folder of the work area structure.

Figure D3.2 Project Work Area Folders

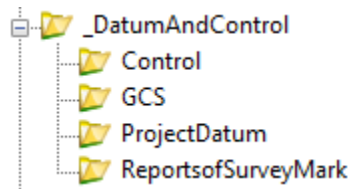


Only authorized ProjectWise Coordinators or CAE ProjectWise Administrators will create work areas and discipline group folders (see [Deliverables 4](#) for applicable file naming conventions).

D3.03(1) **_DatumAndControl**

The *_DatumAndControl* folder structure is the primary location for project coordinate system documentation. The root subfolders of *_DatumAndControl* shall not be modified (see [Deliverables 5](#) for applicable file content).

Figure D3.3 **_DatumAndControl Folder Structure**



Control

Contains documentation/notes regarding all survey control points used in the project's scoping, location, design, and construction. Data files may be in general ASCII, WSDOT ASCII Survey format, or LandXML format. Other report formats could be used to supplement data and provide additional information.

GCS

Contains Geographic Coordinate System (GCS) files. If the project is using Project Datum (PD), this folder would contain a DGN file with a PD GCS defined in it, which is used to import GCS into other DGN files, making the file geographically aware. A *PD_GCS.PRJ* file, which is used to import DGN files into other applications that use PRJ to define GCS.

Project Datum

Contains the documented Project Datum (PD) Combined Factor (CF) calculations. This folder also contains the PD Calculation Report, which could be a scanned manually calculated worksheet, spreadsheet, or Project Datum XML report.

ReportsofSurveyMark

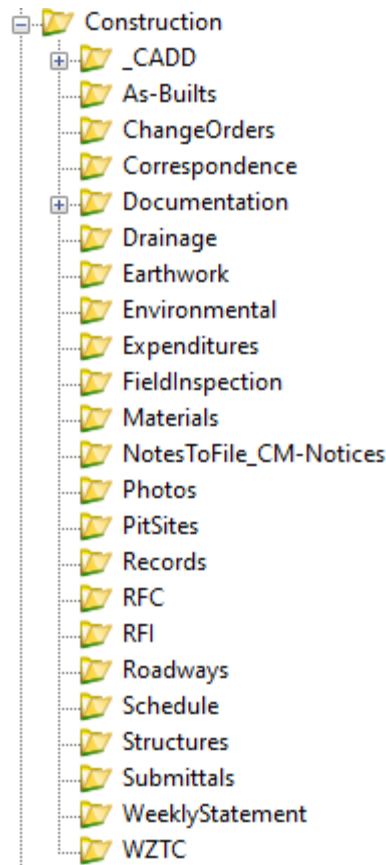
Contains the source reports for all primary control used on the project.

D3.03(2) Construction

Contains the primary construction team’s work structure. The access control for this folder structure is set to provide appropriate read/write access to this team while providing read only to other work groups applicable to the project effort.

Do not modify any preset root folders in this structure.

Figure D3.4 Construction Folder Structure



D3.03(3) Design

Contains the primary design team's work structure. The access control for this folder structure is set to provide appropriate read/write access to this team while providing read only to other work groups applicable to the project effort.

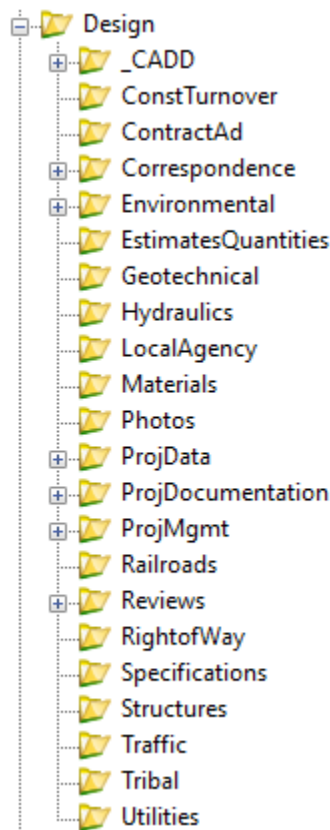
The structure intent is to provide a clear, consistent, and recognizable groupings of design team deliverable files for all projects. Each root subfolder represents design team efforts for specific disciplines. Other work groups have their own primary work structure and should not attempt to store or manipulate files in this location.

Engineering drawing/modeling between disciplines such as Design and Environmental should use references to view each other's DGN files.

This structure accommodates the standardized complete project structure for Design teams. If WSDOT determines that other sources are to be used for project documentation (such as WSDOT SharePoint) outside the engineering drawings and directly supporting files, provide hyperlinks to that source within each applicable root subfolder. Do not remove or modify any root subfolders in the Design structure.

This directory consists of the following required subfolders.

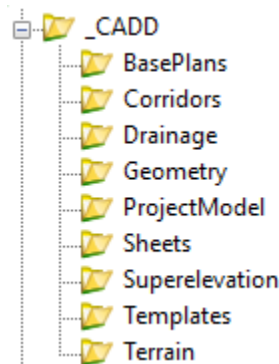
Figure D3.5 Design Folder Structure with Folder Descriptions



_CADD

Contains all engineering drawing files. These files are broken out by file content type folders. This aids in search of appropriate data by other disciplines.

Figure D3.6 **_CADD Folder Structure**



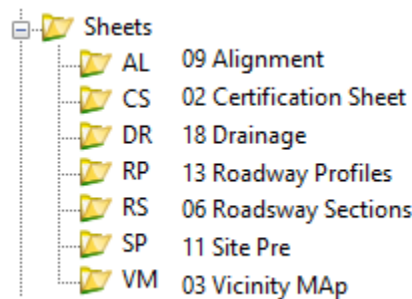
Contains different folder types – such as *Geometry*, may include additional subfolders to assist in organizing multiple instances (like alignments) of the same content. However, keep the depth (nested folders) to a minimum. If more than one additional level of subfolder is needed, the organization of data should be scrutinized and optimized. Fewer folder levels are ideal.

Do not modify any preset root folders in this structure.

_CADD\Sheets

With the single sheet per file approach, the list of sheet and container DGN files see [D6.02](#) and [Figure D6-1](#) for basic data type DGN reference model, [D6.03\(8\)](#) for consistency, and [D7.03](#) for Container and Sheet File definitions. Naming conventions help keep these files organized. However, more complex projects may opt for a folder structure to contain all sheets and applicable container file per plan type. An example set of plan type folders under \Sheets uses the Plan Reference Codes as folder names. This is ordered by Description to show the sequence per [Plans Preparation Manual](#).

Figure D3.7 **Example Sheet Folders Organization By Plan Type**



ConstTurnover

Contains the construction package documentation to be provided to Construction for administering the contract.

ContractAd

Contains the final contract plan set in PDF format submitted for Ad and Award (see [Deliverables 7](#) for requirements).

Correspondence

Contains messages and other documented correspondence not contained in specific folders.

Environmental and Other Discipline Folders

These folders such as *Environmental*, *Geotechnical*, *Hydraulics*, *Railroads*, *Traffic*, and *Utilities* are for development of DESIGN TEAM information and drawings related to collaboration efforts with these discipline work groups.

The discipline work group shall work in their own project group folder.

EstimatesQuantities

Contains documents used to develop and maintain the project estimated quantities for the design team.

LocalAgency

Contains documents related to local agency efforts.

Materials

Contains documents related to project materials.

Photos

Contains images collected by design team for the project.

ProjData, ProjDocumentation, and ProjMgmt

Contains documents that relate to design support efforts and project management.

Reviews

Contains plan review deliverables and feedback/responses.

RightofWay

Contains the design team efforts for Right of Way (R/W) plan revisions and adjacent property impacts by the project design.

Applicable Right of Way plans and/or base files shall be referenced from the ProjectWise [Right of Way](#) (*WSDOT/Documents/_HQ/Right of Way*) structure into design DGN files in this folder. Right of Way Plans can be found by State Route and beginning milepost in [_State Routes](#) (*WSDOT/Documents/_HQ/Right of Way/_State Routes*). Other R/W plan files including non-corridor-oriented efforts can be found in the Right of Way structure by content type such as *Access Hearing plans*, *Land Plats*, and *Sundry Site plans*, etc.

Specifications

Contains documentation, and other supporting files related to project specifications.

Structures

Contains documentation, and other supporting files related to bridge site data.

Tribal

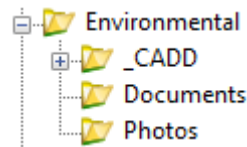
Contains reports, documentation, communications, and other supporting files related to project Tribal efforts.

D3.03(4) Support Discipline Folders

Each design support discipline, such as Environmental, Geotechnical, Hydraulics, Landscape, and Traffic, have their own workspace folder. The ProjectWise access control for each of these folders is set to read/write for the owner work group and read-only for other applicable groups to the project effort.

The Environmental structure is show below as an example.

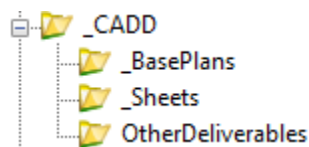
Figure D3.8 Discipline Folder Structure



_CADD

All discipline folders contain a _CADD folder for housing engineering drawings and directly supporting files. Engineering drawing/modeling between disciplines such as Environmental and Design should use CADD references to each other's DGN files.

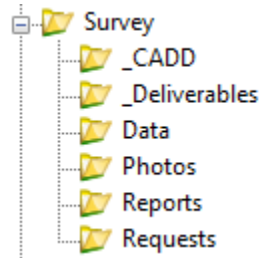
Figure D3.9 Example Discipline _CADD Folders



D3.03(5) Survey

All survey files collected for scoping, location and design will be stored in the following Survey structure.

Figure D3.10 Survey Folder Structure



_CADD

Contains the DGN files for import, review, adjustments, and deliverable development of field survey data. DGN file will be created for each disparate source i.e. Bridge, LiDAR, other survey from different source (intended to keep data segregated).

_Deliverables

Contains the complete-to-date survey dataset(s) formatted for use for design purposes including a terrain or complex terrain model. This folder may include an additional DGN containing the existing Right of Way centerline geometry the current limits and cadastral data.

Data

Contains survey data files from field data collectors or other exports from survey applications used to edit and manage survey point data.

Photos

Contains images collected by survey for the project.

Reports

Contains reports produced in the process of collection, review and evaluation, import, transformation, control management, and delivery of field collected data.

Requests

Contain survey requests, transmittals, and correspondences.

D3.03(6) Transfer

Contains files for temporary storage and review. Folder provides general read-write access.

D3.03(7) Out and Standards folders

The Out folder is a repository for application generated output files when not prompted for a location, typically PDFs.

The Standards folder contains work area specific resource files such as consultant firm logos (cells) for plan sheet title block or specialized plot configurations. These resource files are only accessible and incorporated in the work area.

D3.04 HQ Right of Way Work Area Folder Structure

Right of Way (R/W) work areas are maintained in WSDOT ProjectWise datasource. All R/W related working and deliverable files are found in *WSDOT/Documents/_HQ/Right of Way* and are organized in different methods based on plan type.

Corridor-based Right of Way plans are stored in the */_State Routes* folder and organized by State Route (SR) number, then beginning milepost.

Under the applicable SR folder, the work area naming convention is:

Work Area folder Name	= MP_Office File No._WorkAreaName
Work Area Description	= [Region] – R/W Project Title

Where:

MP	= Begin Mile Post of the work effort
Office File No.	= R/W Office File No. as indicated in the ECMs (Enterprise Content ManagementSystem).
WorkAreaName	= Abbreviated and CamelCase to keep the folder path as short as possible for compatibility with Microsoft applications that are sensitive to long path/file names but still readily recognized in the list of work areas.
R/W Project Title	= R/W project title exactly as written on the first sheet

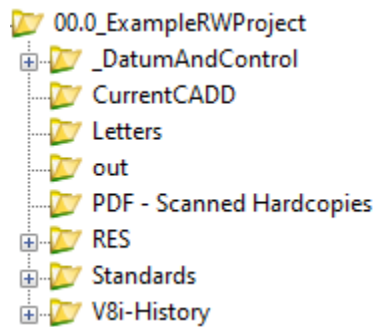
Non-corridor based Right of Way plans – those located outside State Route corridors are organized by County, Airport, Region, and other methods. R/W documents and drawings of this type include:

- Access Hearing Plans
- Land Plats
- Limited Access
- Exhibits/Parcel Acquisition Plans
- Records of Survey
- Sundry Site Plans

For typical Right of Way efforts, each work area has a consistent structure based on a preset template.

All Right of Way Plans work area structures have the same major components regardless of their orientation to corridors. There will be some variations in different types of plan work areas, but the below overview is a constant for all types.

Figure D3.11 Right of Way Plans Folder Structure



D3.04(1) ***_DatumAndControl***

Refer to *D3.04(1) _DatumAndControl* in this manual.

D3.04(2) ***CurrentCADD***

Contains the current working files for approved R/W plans. These files are maintained by the *HQ Right of Way Plans Office* and are read only to all other staff.

For R/W CAD file naming conventions (see [Deliverables 4](#)).

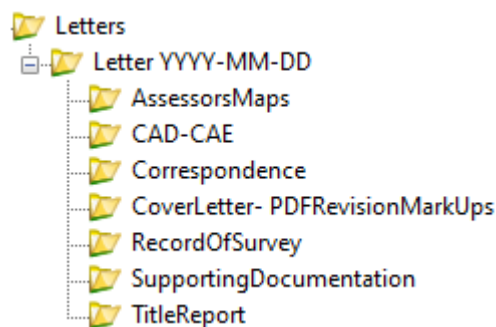
This is the location to find the most current CAD representation of the Right of Way plan applicable to your project.

Reference the applicable files from this location to a DGN file in your work area folder.

D3.04(3) ***Letters***

Contains the submittal documentation from Region R/W Plans to HQ for each revision or new plan to be completed. Each Letter folder is based on the *Letter YYYY-MM-DD* template and completed efforts includes the date of submittal in the folder name in the YYYY-MM-DD format. The template can be found in the *_HQ\Right of Way\Templates* structure.

Figure D3.10 Standard R/W Letter submittal structure



This also works as a collaboration folder between Region R/W and HQ R/W staff.

AssessorsMaps

This folder contains assessor's maps and associated specific supporting documentation.

CAD-CAE

All associated CADD files shall be stored in the CAD-CAE subfolder. Project CAD files should reference current appropriate Right of Way CAD base.

Project revision CAD files should only have revision information.

If the current CAD base and sheet files are not available, or they are inaccurate, or difficult to read, new base and/or sheets may be generated. Coordinate with the HQ Right of Way Plans office for guidance.

All deliverable DGN files shall comply to WSDOT standards as defined in [Deliverables 4 File Naming Conventions](#), [Deliverables 7 Drafting and Plans Preparation](#), and [Symbology 4](#).

Correspondence

This folder contains associated correspondence via email messages, letters, memos, etc. that do not fall under other submittal folder topics.

CoverLetter-PDFRevisionMarkups

The transmittal cover letter content and marked up PDF plan sheets are stored in this folder. No other documents are accepted in this folder.

RecordOfSurvey

All associated Records of Survey are stored in this folder.

SupportingDocumentation

Any supporting documentation that does not specifically apply to other submittal folder topics are stored in this folder.

TitleReport

Title Reports for all new parcels as defined in [Plans Preparation Manual](#) will be stored in this folder. Supplemental Title Reports are acceptable if the original transaction has been recently completed. A new parcel number will be needed for these parcels.

D3.04(4) PDF – Scanned Hardcopies

Contains the scanned PDFs of full-size hardcopy sheets. These represent the last condition of the R/W plan prior to being scanned and moved to electronic format.

D3.04(5) RES

Contains reserved for Real Estate Services efforts.

D3.04(6) Out and Standards folders

The Out folder is a repository for application generated output files when not prompted for a location, typically PDFs.

The Standards folder contains work area specific resource files such as consultant firm logos (cells) for plan sheet title block or specialized plot configurations. These resource files are only accessible and incorporated in the work area.

D3.04(7) V8i-History

Contains the previous software platform files that are used to create current platform working DGN files.