

# TxDOT

## San Antonio District

### File Management System

The File Management System (FMS) is a specified arrangement of folders, files and data. The purpose of the FMS is to create uniformity in project development and documentation within the San Antonio District. The FMS consists of Primary Files, Secondary Files, File Structure, and a File Manager. A File Structure provides a detailed level assignment that promotes a consistent format for Primary and Secondary Files. A File Manager is assigned to maintain Primary Files and ensure FMS compliance.

Every electronic file associated with a project should be stored under the appropriate folder by Control-Section-Job (CSJ). The CSJ Folder will be located in the projects folder and will contain Word documents, Microstation files, Excel Spreadsheets, Caice files, change orders, etc. The drive letter K will be mapped to the projects folder to provide a single reference drive and path name for all files. (Example: K:\ 029112.001). There will be 25 folders located within the CSJ folder and several of these folders will contain additional subfolders. There is no restriction to the number of subfolders within any of the 25 folders. The 25 folders and subfolders established within the CSJ folder should be maintained and not deleted, regardless of folder content.

See Table 4 for a File Management folder tree.

#### PRIMARY FILES

There should be ten types of **Primary** files for each project. The **Map** file contains all the existing topography, the **Roadway** file is the surface improvements to a road, the **Horizontal Alignment** and **Vertical Alignment** files are the horizontal & vertical control, and the **Drainage** file is the subsurface improvements. The **Border** file is the Plan Set sheet information such as sheet border with Title Block. The **Shade** file contains patterns and/or shading used to differentiate various aspects of the project such as asphalt widening and planing. The **Utility** file contains existing and proposed traffic system facilities and utilities. The **TCP-SW3P** file contains all traffic and pollution control items. The **QBOX** file contains linked plan sheet quantity boxes that are created and maintained in Microsoft EXCEL. The use of linked data allows for information to be carried throughout the project and helps minimize transposition errors. Primary Files are saved in the **ReferenceFiles** folder. (Refer to Table 4) These files are attached as references to the Secondary Files. All reference files attached will be mapped to the K: drive and full path saved. This drive will be a short cut to the projects folder. The naming of a Primary file should follow the abbreviations in Table 1 (also on Attachment A). A prefix will be used to delineate the location of applicable primary file for multiple roadways.

<b>MAP</b> = Map	<b>UTIL</b> = Exist. & Prop. Utilities
<b>HALN</b> = Horizontal Alignment	<b>TCP-SW3P</b> = Traffic & Pollution Control
<b>RDWY</b> = Roadway	<b>BORD</b> = Sheet Border
<b>DRN</b> = Drainage	<b>QBOX</b> = Quantity Box
<b>VALN</b> = Vertical Alignment	<b>SHAD</b> = Pattern/Shade

**Table 1**

The intent is for primary files to be accessed only by the File Manager. The recommended method is to keep the primary file locked to minimize erroneous modifications. Designers other than the File Manager will work in a blank file of the same global origin, seed file, and working units as the primary file of their project assignment. The Designer will keep the primary file name but add their initials to it. For example, a Designer developing pavement markings for a project on FM XX, will create a file in the ReferenceFiles folder named FMXXRDWYINI.dgn, where *INI* is the Designer's initials. The Designer will reference in the necessary primary files to complete the assignment. This file will contain information only on the specific levels and locations pertinent to the assignment. The File Manager will review and incorporate this information into the primary file. The File Manager will move the initialed file to the folder "Oldfiles" and rename the file with the date for reference if needed. This method allows for multiple designers to work simultaneously on various aspects of project development while maintaining the integrity of the primary file.

## SECONDARY FILES

Secondary Files are the plan sheets that compose a set of PS&E. They may or may not require the use of Primary files as references. This will depend on the type of file you are developing. Table 2 shows some of the types of Secondary files and their file name abbreviations (also on Attachment A): Additional secondary files may be required and the naming convention should adhere to the following format:

{Location}{File Type Abbreviation-2 or 3 letters}{sheet # beginning with 01}.

Where {Location} is the roadway or project specific area. For single roadways this may be omitted. The {File Type Abbreviation-2 or 3 letters} is an abbreviated text of the sheet type. Regardless of the number of sheets, the sheet number will always begin with 01. For example, FM1535PLN01.dgn would be the first plan sheet on FM 1535.

<b>GENERAL</b>	<b>DRAINAGE DETAILS</b>
TSH = Title Sheet	*HYD = Hydraulic Computation
IND = Sheet Index	DA = Drainage Area Maps
PRJ = Project Layout	STR = Culvert Layout
TYP = Typical Section	SD = Storm Drain Layout
*SUM = Project Summary	<b>UTILITIES</b>
<b>TRAFFIC CONTROL PLAN</b>	UTL – Utility Layout
TCP = Traffic Control Layout	<b>BRIDGES</b>
BAR = Barricades/Warning	BRG = Bridge Layout
<b>ROADWAY DETAILS</b>	<b>TRAFFIC ITEMS</b>
HC=Horiz. Control Data	SIG = Signal Layout
VC = Vertical Control Data	LUM = Illumination Layout
PP = Plan & Profile	SGN = Signing Layout
PLN = Plan View	PM = Pavement Markings
PRF = Profile View	TMS =Traffic Management
DET = Plan Detail	SWP = SW3P Layout
RMV = Removal Layout	<b>ENVIRONMENTAL</b>
<b>WALL DETAILS</b>	SWP = SW3P Layout
RW = Retaining Wall Layout	<b>MISCELLANEOUS ITEMS</b>
	LS = Landscape Layout

Table 2 - \* indicates a linked file

TxDOT's Internet Site ([http://www.dot.state.tx.us/business/manuals\\_publications.htm](http://www.dot.state.tx.us/business/manuals_publications.htm)) has a description of Plan Set Development and the different sections of a Plan Set in the PS & E Preparation Manual-Chapter 2 – Plan Set Development. Reference this manual to decide what type of file the Designer will create. The Secondary Files can be found in the folders listed in Table 4. Refer to this list for the correct folder for components of PS&E.

San Antonio District Internet Site, (<http://www.dot.state.tx.us/sat/specinfo/index.htm>) contains detailed information about the File Management System, folder tree and data files.

## FILE STRUCTURE

A File Structure is documentation of assigned Level & Names (**LV**), Colors (**CO**), Line Styles (**LS**), and Line Weights (**WT**) for specific elements in each file. This documentation is stored in the **File Structure** folder (Table 4) in the Microsoft Excel file titled filestructure.xls. This is the preferred file structure and any deviation from this structure should be documented and detailed with justification for the modification.

### Primary Files

The preferred file structure for each Primary File is shown in Attachments B thru K.

### Secondary Files

The file structure of the Secondary files should conform to Plan-Detail-Sheet.xls (Attachment L) and Xsec.xls (Attachment M).

### Working with File Structure

Table 3 is a short listing of WT and LS that can be found, along with other drafting guidelines such as Annotations, Standards, and Plotting at the TxDOT Internet site ([http://www.dot.state.tx.us/business/manuals\\_publications.htm](http://www.dot.state.tx.us/business/manuals_publications.htm)) in the P.S. & E Preparation Manual-Chapter 2 – Plan Set Development.

<b>Item</b>	<b>Line Weight (WT)</b>	<b>Line Style (LS)</b>
Existing Topography	0	0 (solid) or 2 (short dash)
Proposed Features	1 or 2	0 (solid)
Centerlines & Control Lines	0 or 1	4 (dash-dot)
R.O.W. Lines (Existing)	0 or 1	6 (dash-dot-dot)
R.O.W. Lines (New)	2 or 4	6 (dash-dot-dot)
Hidden Lines	0 or 1	2 (short dash)
Leader, Dimension, & Extension Lines	0	0 (solid)

**Table 3**

The intent is for uniform file structure. Deviations from the typical format should be documented by **Bolding** the LV, CO, LS, and WT. Levels not used will become blank.

## DATA FILES

Maintain the District and office data files in the K:\data folder. At a minimum, include cell libraries (\*.CEL), font and line style libraries (\*.RSC). Include a sample configuration file (fms.ucf) that points to this location. Data files that are unique to a particular project should include the CSJ in the name (CSJ.CEL).

## **FILE MANAGER**

The File Manager is the Designer assigned to a specific project who maintains the integrity of the file system for that project. The File Manager reviews and incorporates all work into the Primary Files, maintains backups, and coordinates multi-user project development if required and archives the project in accordance with the SATarchive.doc procedures.

## **FMS documentation**

The San Antonio District Design Office will maintain the current version of this document and the archiving procedures (SATarchive.doc). Requests for current copies should be directed to the District Design Engineer. This document, SATarchive.doc, standard data files, and sample FMS project folders may also be accessed by going to the TxDOT web site at <http://www.dot.state.tx.us/sat/specinfo/index.htm>.

# File Management System **F**olders

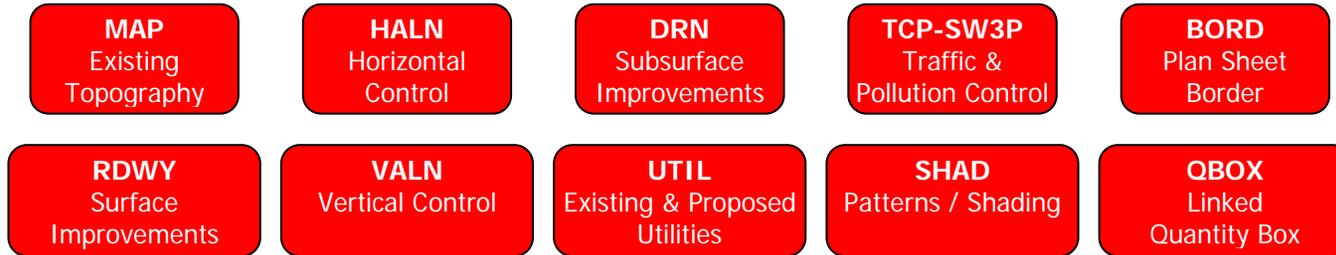
<b>FOLDER</b>	<b>DESCRIPTION</b>
Batchplot	Batchplot Files
BRIDGE	Bridge Design
ChangeOrders	Change Orders
Correspondence	Project related letters, memos, etc.
Correspondence/PDP	Project Development Process (utility companies) Utility Company location files (S.U.E.Files)
Correspondence/ENV	Environmental Documents
DRAINAGE	Culvert Layouts, Storm Sewer Layouts, Hydraulic Data, etc.
ENVIRONMENTAL	Storm Water Pollution Prevention Plans
Estimate	Estimates
Estimate/Preliminary	Preliminary Estimates
File Structure	Level Assignment Excel files
GENERAL	Title Sheet, Project Layout & Typical Sections
GeoPak	GeoPak Files
MISC	Landscape and Irrigation layouts
OldFiles	Files determined to not be needed are moved here rather than deleting. Do not delete ANY files without supervisor's approval.
P3	Contract, Time Determination & Schedules
P3/Construction	Construction Schedules
P3/Design	Design Schedules
PavementDesign	Pavement Design
PS&E	Necessary paperwork for PS&E Submission
ReferenceFiles	Primary Files ONLY
ROADWAY	Plan Sheets & Miscellaneous roadway details
ROADWAY/Driveways	Pictures of Driveways; Driveway slopes, Property penetrations
Standards	District Standards included in the completed project package.
Standards/Bridge	Bridge Standards
Standards/Drainage	Drainage Standards
Standards/Illumination	Illumination Standards
Standards/Illumination/Electrical	Electrical Standards
Standards/Retaining Walls	Retaining Wall Standards
Standards/Roadway	Roadway Standards
Standards/Signing	Signing Standards
Standards/Pavement Markers	Pavement Marking Standards
Standards/SW3P	SW3P Standards
Standards/TCP	TCP Standards
Standards/Traffic Signals	Traffic Standards
Standards/TMS	TMS Standards
Summaries	Grading Summaries, Sign Summaries, etc.
Summaries/Excel	Excel Summaries for the purpose of calculations & linking
Survey	Survey Data, .arc files
TCP	Traffic Control Plan files (create subfolders for each phase) & Project Layouts with Traffic Control and Warning Devices
TCP/PhaseI,PhaseII,etc.	Phase Layouts of TCP
TRAFFIC	Illumination, Sign, Pavement Marking, Signal, and TMS layouts
UTILITY	Utility .dgn files
WALLS	Retaining Wall layouts
Xsec	Cross Sections

**Table 4**

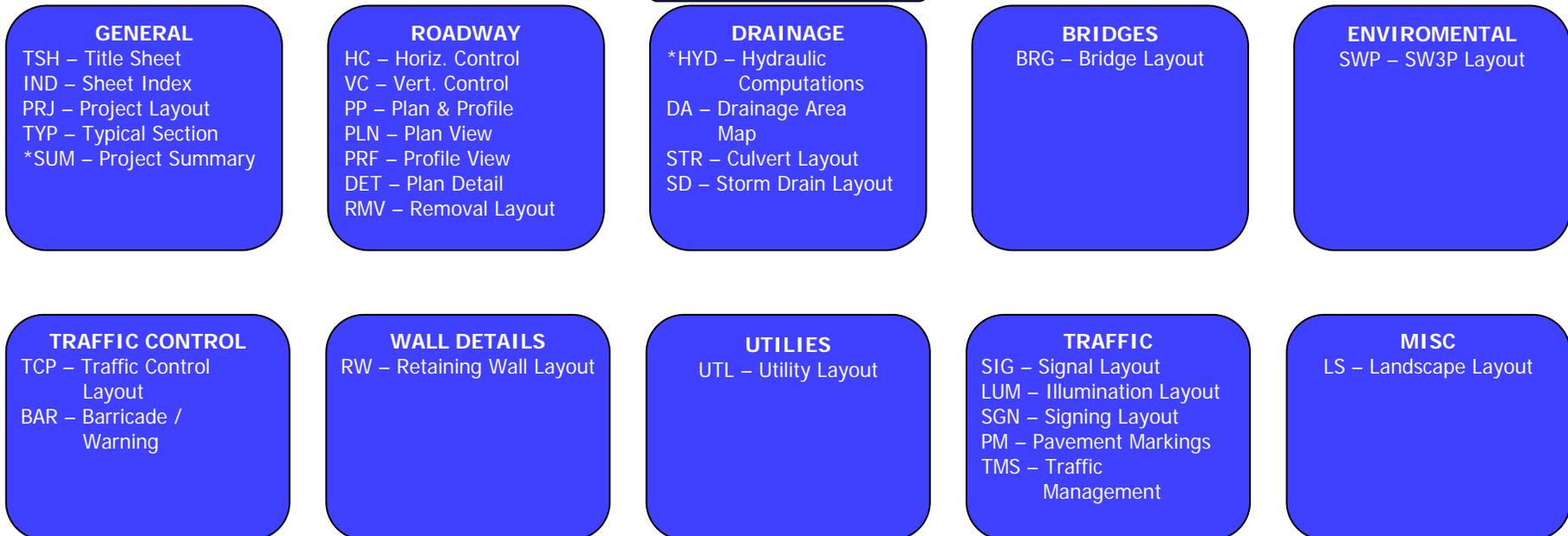
# FILE MANAGEMENT SYSTEM

K:\CSJ

## PRIMARY FILES - REFERENCE



## SECONDARY FILES



NOTE: Modifications to the Primary Files should only occur from the designated project file manager. Deviations from the file naming convention, level & name assignments, text and line size, weight, and style must be documented. See table 2 for additional Secondary file names.

## LEVEL ASSIGNMENTS FOR PROJECT NAME MAP.dgn FILE

LEVEL	DESCRIPTION	LEVEL	DESCRIPTION
1	CONTROL	32	
2	PAVED ROAD, CURB	33	
3	DIRT ROADS	34	
4	GUARDRAILS	35	DTM-PROCESSED INTERMEDIATE CONTOURS
5	GUARDFENCES	36	SKIPPED POINTS
6	CONCRETE BARRIER	37	WITHHELD POINTS
7	O.H. SIGNS , GENERAL, GUARDPOSTS	38	MASS POINTS (SPOTS)
8	RIPRAP	39	UNCOLLECTED POINTS
9	CULVERTS , INLETS	40	BREAKLINES (ONLY)
10	RAILROADS, RR CONTROL	41	OBSCURED AREAS (ONLY)(VOIDS)
11	BUILDINGS	42	
12	CONSTRUCTION, RUINS, FRAMEWORK	43	SIDEWALK/BREAKLINE (lc=2)
13	SIDEWALKS	44	
14	SLABS	45	WATER (OBSCURED)
15	PORCHS	46	
16	STEPS, STAIRS, CATTLEGUARDS	47	
17	FENCES, POSTS	48	RETAINING WALL/BREAKLINE(RETWALL)
18	RETAINING WALLS, WALLS	49	
19	STORMCELLAR OUTLINE	50	
20	POLES, MANHOLES, FH	51	
21	SIGNS	52	
22	UNDERGROUND PIPELINE	53	GENERAL/BREAKLINE
23	GENERAL, SWIMMING POOL, TANKS, WINDMILLS, PIPE	54	
24	PIT, FILL AREA, MARSH	55	
25	WATER	56	
26	EARTHEN DAM	57	
27	CONCRETE DAM	58	
28	CONCRETE DRAIN	59	
29	WOODS, TREES, ORCHARDS	60	
30	TREE FARMS	61	
31	DTM-PROCESSED INDEX CONTOURS	62	PAINT STRIPES
		63	

### ATTACHMENT B

LEVEL ASSIGNMENTS FOR PROJECT NAME RDWY.dgn FILE

LEVEL	DESCRIPTION	LEVEL	DESCRIPTION
1	Edge of Pavement-Left (OPTIONAL)	32	
2	Edge of Pavement-Right (OPTIONAL)	33	RETAINING WALLS-Right (OPTIONAL)
3	<b>EDGE OF PAVEMENT</b>	34	
4	Curb-Left (OPTIONAL)	35	<b>RETAINING WALLS</b>
5	Curb-Right (OPTIONAL)	36	BRIDGE PLAN VIEW-Left (OPTIONAL)
6	<b>CURB</b>	37	
7	SideWalk-Left (OPTIONAL)	38	BRIDGE PLAN VIEW-Right (OPTIONAL)
8	Sidewalk-Right (OPTIONAL)	39	
9	<b>SIDEWALK</b>	40	<b>BRIDGE PLAN VIEW</b>
10		41	
11	Driveways-Left (OPTIONAL)	42	
12		43	
13	Driveways-Right (OPTIONAL)	44	
14		45	
15	<b>DRIVEWAYS</b>	46	
16	SSCB;SSTR-Left (OPTIONAL)	47	
17		48	
18	SSCB;SSTR-Right (OPTIONAL)	49	
19		50	
20	<b>SSCB;SSTR</b>	51	
21	GUARDRAIL-Left (OPTIONAL)	52	
22		53	
23	GUARDRAIL-Right (OPTIONAL)	54	
24		55	
25	<b>GUARDRAIL</b>	56	
26	RIPRAP/CONCRETE-Left (OPTIONAL)	57	
27		58	
28	RIPRAP/CONCRETE-Right (OPTIONAL)	59	
29		60	<b>PAVEMENT MARKINGS</b>
30	<b>RIPRAP/CONCRETE</b>	61	<b>SIGNS</b>
31	RETAINING WALLS-Left (OPTIONAL)	62	<b>LANDSCAPE</b>
		63	<b>STREET NAMES</b>

**ATTACHMENT C**

## LEVEL ASSIGNMENTS FOR PROJECT NAME HALN.dgn FILE

LEVEL	DESCRIPTION	LEVEL	DESCRIPTION
1		32	Sta marks, PC & PT data, Pl 's (1:50)
2		33	Sta marks, PC & PT data, Pl 's (1:100)
3		34	Curve data (1:100) (FOR USER INFO ONLY)
4		35	Sta marks, PC & PT data, Pl 's (1:1000)
5		36	<b>ALIGNMENT "E"</b>
6		37	Sta marks, PC & PT data, Pl 's (1:20)
7	Sta marks, PC & PT data, Pl 's (1:20)	38	Sta marks, PC & PT data, Pl 's (1:50)
8	Sta marks, PC & PT data, Pl 's (1:50)	39	Sta marks, PC & PT data, Pl 's (1:100)
9	Sta marks, PC & PT data, Pl 's (1:100)	40	Curve data (1:100) (FOR USER INFO ONLY)
10	Curve data (1:100) (FOR USER INFO ONLY)	41	Sta marks, PC & PT data, Pl 's (1:1000)
11	Sta marks, PC & PT data, Pl 's (1:1000)	42	<b>ALIGNMENT "F"</b>
12	<b>ALIGNMENT "A"</b>	43	Sta marks, PC & PT data, Pl 's (1:20)
13	Sta marks, PC & PT data, Pl 's (1:20)	44	Sta marks, PC & PT data, Pl 's (1:50)
14	Sta marks, PC & PT data, Pl 's (1:50)	45	Sta marks, PC & PT data, Pl 's (1:100)
15	Sta marks, PC & PT data, Pl 's (1:100)	46	Curve data (1:100) (FOR USER INFO ONLY)
16	Curve data (1:100) (FOR USER INFO ONLY)	47	Sta marks, PC & PT data, Pl 's (1:1000)
17	Sta marks, PC & PT data, Pl 's (1:1000)	48	<b>ALIGNMENT "G"</b>
18	<b>ALIGNMENT "B"</b>	49	Sta marks, PC & PT data, Pl 's (1:20)
19	Sta marks, PC & PT data, Pl 's (1:20)	50	Sta marks, PC & PT data, Pl 's (1:50)
20	Sta marks, PC & PT data, Pl 's (1:50)	51	Sta marks, PC & PT data, Pl 's (1:100)
21	Sta marks, PC & PT data, Pl 's (1:100)	52	Curve data (1:100) (FOR USER INFO ONLY)
22	Curve data (1:100) (FOR USER INFO ONLY)	53	Sta marks, PC & PT data, Pl 's (1:1000)
23	Sta marks, PC & PT data, Pl 's (1:1000)	54	<b>ALIGNMENT "H"</b>
24	<b>ALIGNMENT "C"</b>	55	EASEMENTS (TEMP)
25	Sta marks, PC & PT data, Pl 's (1:20)	56	EASEMENTS (CONSTR.)
26	Sta marks, PC & PT data, Pl 's (1:50)	57	EASEMENTS (DRAINAGE)
27	Sta marks, PC & PT data, Pl 's (1:100)	58	PROP. ROW (TEXT)
28	Curve data (1:100) (FOR USER INFO ONLY)	59	PROP. R.O.W. (LINES)
29	Sta marks, PC & PT data, Pl 's (1:1000)	60	PROP. R.O.W. (POINTS)
30	<b>ALIGNMENT "D"</b>	61	EXIST. R.O.W. (TEXT)
31	Sta marks, PC & PT data, Pl 's (1:20)	62	EXIST. R.O.W. (LINES)
		63	EXIST. R.O.W. (POINTS)

### ATTACHMENT D

**LEVEL ASSIGNMENTS FOR PROJECT NAME VALN.dgn FILE**

LEVEL	DESCRIPTION	LEVEL	DESCRIPTION
1		32	PROFILE (E) - EXISTING GRADE & ELEV. TXT
2		33	PROFILE (E) - RIGHT ROW GRADE & ELEV. TXT
3		34	PROFILE (E) - LEFT ROW GRADE & ELEV. TXT
4		35	PROFILE (E) - PROPOSED VERT. CURVE DATA
5		36	PROFILE (E) - DRAINAGE STRUCTURES & TXT
6		37	PROFILE (F) - PROPOSED GRADE & ELEV. TXT
7	PROFILE (A) - PROPOSED GRADE & ELEV. TXT	38	PROFILE (F) - EXISTING GRADE & ELEV. TXT
8	PROFILE (A) - EXISTING GRADE & ELEV. TXT	39	PROFILE (F) - RIGHT ROW GRADE & ELEV. TXT
9	PROFILE (A) - RIGHT ROW GRADE & ELEV. TXT	40	PROFILE (F) - LEFT ROW GRADE & ELEV. TXT
10	PROFILE (A) - LEFT ROW GRADE & ELEV. TXT	41	PROFILE (F) - PROPOSED VERT. CURVE DATA
11	PROFILE (A) - PROPOSED VERT. CURVE DATA	42	PROFILE (F) - DRAINAGE STRUCTURES & TXT
12	PROFILE (A) - DRAINAGE STRUCTURES & TXT	43	PROFILE (G) - PROPOSED GRADE & ELEV. TXT
13	PROFILE (B) - PROPOSED GRADE & ELEV. TXT	44	PROFILE (G) - EXISTING GRADE & ELEV. TXT
14	PROFILE (B) - EXISTING GRADE & ELEV. TXT	45	PROFILE (G) - RIGHT ROW GRADE & ELEV. TXT
15	PROFILE (B) - RIGHT ROW GRADE & ELEV. TXT	46	PROFILE (G) - LEFT ROW GRADE & ELEV. TXT
16	PROFILE (B) - LEFT ROW GRADE & ELEV. TXT	47	PROFILE (G) - PROPOSED VERT. CURVE DATA
17	PROFILE (B) - PROPOSED VERT. CURVE DATA	48	PROFILE (G) - DRAINAGE STRUCTURES & TXT
18	PROFILE (B) - DRAINAGE STRUCTURES & TXT	49	PROFILE (H) - PROPOSED GRADE & ELEV. TXT
19	PROFILE (C) - PROPOSED GRADE & ELEV. TXT	50	PROFILE (H) - EXISTING GRADE & ELEV. TXT
20	PROFILE (C) - EXISTING GRADE & ELEV. TXT	51	PROFILE (H) - RIGHT ROW GRADE & ELEV. TXT
21	PROFILE (C) - RIGHT ROW GRADE & ELEV. TXT	52	PROFILE (H) - LEFT ROW GRADE & ELEV. TXT
22	PROFILE (C) - LEFT ROW GRADE & ELEV. TXT	53	PROFILE (H) - PROPOSED VERT. CURVE DATA
23	PROFILE (C) - PROPOSED VERT. CURVE DATA	54	PROFILE (H) - DRAINAGE STRUCTURES & TXT
24	PROFILE (C) - DRAINAGE STRUCTURES & TXT	55	
25	PROFILE (D) - PROPOSED GRADE & ELEV. TXT	56	
26	PROFILE (D) - EXISTING GRADE & ELEV. TXT	57	
27	PROFILE (D) - RIGHT ROW GRADE & ELEV. TXT	58	
28	PROFILE (D) - LEFT ROW GRADE & ELEV. TXT	59	
29	PROFILE (D) - PROPOSED VERT. CURVE DATA	60	
30	PROFILE (D) - DRAINAGE STRUCTURES & TXT	61	
31	PROFILE (E) - PROPOSED GRADE & ELEV. TXT	62	
		63	GRID LINES

**ATTACHMENT E**

**LEVEL ASSIGNMENTS FOR PROJECT NAME DRN.dgn FILE**

LEVEL	DESCRIPTION	LEVEL	DESCRIPTION
1	DRAINAGE AREA	32	
2		33	
3	AREA (LEFT STORM DRAIN)	34	
4	AREA (RIGHT STORM DRAIN)	35	
5	STORM DRAIN STR. (LEFT)	36	
6		37	
7	STORM DRAIN STR. (RIGHT)	38	
8		39	
9		40	
10	STORM DRAIN INLETS (LEFT)	41	
11		42	
12	STORM DRAIN INLETS (RT.)	43	
13		44	
14		45	
15	CULVERT SMALL (LEFT)	46	
16		47	
17	CULVERT SMALL (RIGHT)	48	
18		49	
19		50	
20	CULVERT LARGE (LEFT)	51	
21		52	
22	CULVERT LARGE (RIGHT)	53	
23		54	
24		55	
25		56	
26		57	
27		58	
28		59	
29		60	
30		61	
31		62	
		63	

**ATTACHMENT F**

**LEVEL ASSIGNMENTS FOR PROJECT NAME UTIL.dgn FILE**

LEVEL	DESCRIPTION	LEVEL	DESCRIPTION
1		32	TELEPHONE (PROP)(1:100) - ORANGE
2	GAS (EXIST)(1:20) - YELLOW	33	
3	GAS (EXIST)(1:50) - YELLOW	34	WATER (EXIST)((1:20) - CYAN
4	GAS (EXIST)(1:100) - YELLOW	35	WATER (EXIST)((1:50) - CYAN
5		36	WATER (EXIST)((1:100) - CYAN
6	GAS (PROP)(1:20) - YELLOW	37	
7	GAS (PROP)(1:50) - YELLOW	38	WATER (PROP)(1:20) - CYAN
8	GAS (PROP)(1:100) - YELLOW	39	WATER (PROP)(1:50) - CYAN
9		40	WATER (PROP)(1:100) - CYAN
10	ELECTRIC (EXIST)(1:20) - RED	41	
11	ELECTRIC (EXIST)(1:50) - RED	42	WASTEWATER (EXIST)(1:20) - GREEN
12	ELECTRIC (EXIST)(1:100) - RED	43	WASTEWATER (EXIST)(1:50) - GREEN
13		44	WASTEWATER (EXIST)(1:100) - GREEN
14	ELECTRIC (PROP)(1:20) - RED	45	
15	ELECTRIC (PROP)(1:50) - RED	46	WASTEWATER (PROP)(1:20) - GREEN
16	ELECTRIC (PROP)(1:100) - RED	47	WASTEWATER (PROP)(1:50) - GREEN
17		48	WASTEWATER (PROP)(1:100) - GREEN
18	CABLE (EXIST)(1:20) - ORANGE	49	
19	CABLE (EXIST)(1:50) - ORANGE	50	ILLUM./TMS (EXIST)(1:20) - GREEN
20	CABLE (EXIST)(1:100) - ORANGE	51	ILLUM./TMS (EXIST)(1:50) - GREEN
21		52	ILLUM./TMS (EXIST)(1:100) - GREEN
22	CABLE (PROP)(1:20) - ORANGE	53	
23	CABLE (PROP)(1:50) - ORANGE	54	ILLUM./TMS (PROP)(1:20) - DARK GREEN
24	CABLE (PROP)(1:100) - ORANGE	55	ILLUM./TMS (PROP)(1:50) - DARK GREEN
25		56	ILLUM./TMS (PROP)(1:100) - DARK GREEN
26	TELEPHONE (EXIST)(1:20) - ORANGE	57	
27	TELEPHONE (EXIST)(1:50) - ORANGE	58	TRAF SIGNAL (EXIST)(1:20) - WHITE
28	TELEPHONE (EXIST)(1:100) - ORANGE	59	TRAF SIGNAL (EXIST)(1:50) - WHITE
29		60	
30	TELEPHONE (PROP)(1:20) - ORANGE	61	TRAF SIGNAL (PROP)(1:20) - PURPLE
31	TELEPHONE (PROP)(1:50) - ORANGE	62	TRAF SIGNAL (PROP)(1:50) - PURPLE
		63	

**ATTACHMENT G**

LEVEL ASSIGNMENTS FOR PROJECT NAME TCP-SW3P.dgn FILE

LEVEL	DESCRIPTION	LEVEL	DESCRIPTION
1	TCP SHADE--PHASE 1	31	SW3P ITEM S--PHASE 3A
2	TCP ITEM S--PHASE 1	32	
3	SW3P ITEM S--PHASE 1	33	TCP SHADE--PHASE 4
4		34	TCP ITEM S--PHASE 4
5	TCP SHADE--PHASE 1A	35	SW3P ITEM S--PHASE 4
6	TCP ITEM S--PHASE 1A	36	
7	SW3P ITEM S--PHASE 1A	37	
8		38	
9	TCP SHADE--PHASE 1B	39	
10	TCP ITEM S--PHASE 1B	40	
11	SW3P ITEM S--PHASE 1B	41	
12		42	
13	TCP SHADE--PHASE 2	43	
14	TCP ITEM S--PHASE 2	44	
15	SW3P ITEM S--PHASE 2	45	
16		46	
17	TCP SHADE--PHASE 2A	47	
18	TCP ITEM S--PHASE 2A	48	
19	SW3P ITEM S--PHASE 2A	49	
20		50	
21	TCP SHADE--PHASE 2B	51	
22	TCP ITEM S--PHASE 2B	52	
23	SW3P ITEM S--PHASE 2B	53	
24		54	
25	TCP SHADE--PHASE 3	55	
26	TCP ITEM S--PHASE 3	56	
27	SW3P ITEM S--PHASE 3	57	
28		58	
29	TCP SHADE--PHASE 3A	59	
30	TCP ITEM S--PHASE 3A	60	
		61	
		62	
		63	

**ATTACHMENT H**

LEVEL ASSIGNMENTS FOR **PROJECT NAME** SHAD.dgn FILE

LEVEL	DESCRIPTION	LEVEL	DESCRIPTION
1		32	
2		33	
3		34	
4		35	
5		36	
6		37	
7		38	
8		39	
9		40	
10		41	
11		42	
12		43	
13		44	
14		45	
15		46	
16		47	
17		48	
18		49	
19		50	
20		51	
21		52	
22		53	
23		54	
24		55	
25		56	
26		57	
27		58	
28		59	
29		60	
30		61	
31		62	
		63	

**ATTACHMENT I**

LEVEL ASSIGNMENTS FOR **PROJECT NAME** BORD.dgn FILE

LEVEL	DESCRIPTION	LEVEL	DESCRIPTION
1	Plan sheet cell/Title Block	32	
2	Interim seal	33	
3	Engineer's seal	34	
4		35	
5		36	
6		37	
7		38	
8		39	
9		40	
10		41	
11		42	
12		43	
13		44	
14		45	
15		46	
16		47	
17		48	
18		49	
19		50	
20		51	
21		52	
22		53	
23		54	
24		55	
25		56	
26		57	
27		58	
28		59	
29		60	
30		61	
31		62	
		63	

**ATTACHMENT J**

**LEVEL ASSIGNMENTS FOR PROJECT NAME QBOX.dgn FILE**

LEVEL	DESCRIPTION	LEVEL	DESCRIPTION
1		32	
2	Corresponding sheet number	33	
3	Linked item description & quantity	34	
4		35	
5		36	
6		37	
7		38	
8		39	
9		40	
10		41	
11		42	
12		43	
13		44	
14		45	
15		46	
16		47	
17		48	
18		49	
19		50	
20		51	
21		52	
22		53	
23		54	
24		55	
25		56	
26		57	
27		58	
28		59	
29		60	
30		61	
31		62	
		63	

**ATTACHMENT K**

LEVEL ASSIGNMENTS FOR **PROJECT NAME** PLAN-DETAIL-SHEET.dgn FILE

LEVEL	DESCRIPTION	LEVEL	DESCRIPTION
1		32	
2		33	
3		34	
4		35	
5		36	
6	Match Line/Station	37	
7		38	
8		39	
9		40	
10	Quantity call outs, leaders & arrows	41	
11	Line work	42	
12	Text, leaders & arrows	43	
13		44	
14		45	
15		46	
16		47	
17		48	
18		49	
19		50	
20		51	
21		52	
22		53	
23		54	
24		55	
25		56	
26		57	
27		58	
28		59	
29		60	
30		61	
31		62	Shapes for calculations
		63	

**ATTACHMENT L**

**LEVEL ASSIGNMENTS FOR PROJECT NAME XSEC.dgn FILE**

LEVEL	DESCRIPTION	LEVEL	DESCRIPTION
1	finish grade	32	undercut
2	finish grade	33	undercut
3	finish grade	34	undercut
4	finish grade	35	undercut
5	Prop.Finish Grade-co=1,st=0,wt=1	36	undercut
6	finish grade	37	undercut
7	finish grade	38	undercut
8	finish grade	39	undercut
9	finish grade	40	RDWY/Offset dim.-co=0,st=0,wt=1
10	finish grade	41	Exist.elev.-co=0,st=0,wt=1
11	finish grade	42	Prop.elev.-co=3,st=0,wt=1
12	finish grade	43	Gutterelev.-co=0,st=0,wt=1
13	finish grade	44	Break grade .elev.-co=0,st=0,wt=1
14	finish grade	45	Center ditch. elev.-co=0,st=0,wt=1
15	finish grade	46	Lt. median elev.-co=0,st=0,wt=1
16	finish grade	47	Rt. median elev.-co=0,st=0,wt=1
17	finish grade	48	Lt. sidewalk elev.-co=0,st=0,wt=1
18	finish grade	49	Rt. sidewalk elev.-co=0,st=0,wt=1
19	finish grade	50	voids
20	undercut	51	Exist. str. -co=0,st=2,wt=1
21	Prop.undercut(dirt)-co=1,wt=1	52	Label ex. str. -co=0,st=0,wt=1
22	Prop.undercut(base)-co=1,wt=1	53	Prop. str. -co=3,st=0,wt=1
23	undercut	54	Label pr. str. -co=3,st=0,wt=1
24	undercut	55	Existing Ground-co=2,st=3,wt=1
25	Prop.undercut(tpsl)-co=4,wt=1	56	voids
26	Prop.undercut(ACP)-co=1,wt=1	57	Exist. utilities -co=*,st=2,wt=1
27	undercut	58	Label ex. utilities -co=*,st=0,wt=1
28	Concrete Riprap-co=3,wt=1	59	Prop. utilities -co=*,st=0,wt=1
29	undercut	60	Label pr.utilities-co=*,st=3,wt=1
30	CUT AND FILL SHAPES	61	Center coordinate-co=2,st=3,wt=1
31	CUT AND FILL TEXT	62	Lt.& Rt. coord.-co=2,st=3,wt=1
		63	Alignm.name,Sta.-co=2,st=3,wt=1
*	Utility(gas) -co=1	*	Utility(RSW) -co=5
*	utility(utel) -co=4	*	Utility(SW) -co=3
*	Utility(water) -co=2	*	Utility(cable) -co=6

**ATTACHMENT M**