State of Florida
Department of Transportation

CADD PRODUCTION CRITERIA HANDBOOK

(Companion Document to the FDOT2010 CADD Software and Standards)

CPCH

Engineering / CADD Systems Office

Effective: March 18, 2011

MR1 *Update* ***– No CPCH Update***
MR2 *Update* ***– February 23, 2012***
MR3 *Update* ***– No CPCH Update***
MR4 *Update* ***– May 8, 2013***

Table of Contents

CHAPTER 1 - INTRODUCTION 1-1

1.1 PURPOSE 1-1
1.2 SCOPE 1-1
1.3 GENERAL 1-1
1.4 DISTRIBUTION 1-2
1.5 PROCEDURE FOR REVISIONS AND UPDATES 1-2
1.6 GLOSSARY OF TERMS 1-4
1.7 ABBREVIATIONS 1-12
1.8 REFERENCED DOCUMENTS 1-13

CHAPTER 2 - FDOT CADD SOFTWARE 2-1

2.1 GENERAL 2-1
2.2 DISTRIBUTION 2-1
2.3 SUPPORT 2-1
2.4 SUPPORTED PRODUCTS 2-2
2.5 MINIMUM SYSTEM REQUIREMENTS 2-2
2.6 TRANSLATION OF FILES 2-2

CHAPTER 3 - RESOURCE AND SUPPORT FILES 3-1

3.1 GENERAL 3-1
3.2 DATABASE 3-1
3.3 CONTROL FILES 3-2
3.4 AUTOCAD CIVIL3D STANDARDS 3-2
3.5 MICROSTATION SEED FILES 3-3
3.6 LEVELS AND SYMBOLOGY 3-3
3.6.1 Levels and Layers 3-4
3.6.2 Color 3-5
3.6.3 Line Weight 3-6
3.6.4 Line Styles 3-7
3.6.4.1 Standard English Line Style Measurements for Printing 3-7
3.6.4.2 FDOT Custom Line Style Resource Files 3-8
3.6.4.3 Custom Line Style Graphics 3-8
3.7 PRINTER DRIVER CONFIGURATION FILES 3-20
3.8 CELL / BLOCK LIBRARIES 3-21
3.9 TEXT 3-22
3.9.1 FDOT True Type Fonts (TTF) 3-22
3.9.2 Legacy MicroStation Fonts 3-23
3.9.3 Size and Spacing 3-25

CHAPTER 4 - CADD STANDARD RULES 4-1

4.1 STANDARD RULES 4-1
4.2 STANDARD RULE TABLES 4-2
4.2.1 Alignment Design - ALGNRD 4-2
4.2.2 AutoTURN - AUTOSP 4-5
4.2.3 Clip Border - CLIPRD 4-7
4.2.4 Drainage Detail - DRDTRD 4-10
4.2.5 Existing Drainage - DREXRD 4-16
4.2.6 Drainage Mapping - DRMPRD 4-18
4.2.7 Drainage Proposed - DRPRRD 4-24
4.2.8 Drainage Cross Section - DRXSRD 4-30
4.2.9 Landscaping Design - DSGNLD 4-38
4.2.10 Lighting Design - DSGNLT 4-41
4.2.11 RoadwayDesign - DSGNRD 4-44
4.2.12 Signalization Design - DSGNSG 4-50
4.2.13 Signing and Pavement Marking Design - DSGNSP 4-57

4.2.14 Digital Terrain Model - DTMRD 4-63
4.2.15 Geotechnical - GEOTECH 4-65
4.2.16 GuidSIGN - GSWKSP....4-68
4.2.17 Irrigation - IRRGLD 4-71
4.2.18 Intelligent Transportation System - ITSSP 4-73
4.2.19 Key Sheets - KEYSHT 4-82
4.2.20 Mast Arm Details - MRARSP 4-86
4.2.21 All Levels and Symbology Accepted - OPEN....4-91
4.2.22 Pond Cross Section - PDXSRD 4-91
4.2.23 Roadway Plan Sheet - PLANRD 4-99
4.2.24 Roadway Plan/Profile Sheet - PLPRRD 4-103
4.2.25 Quantity Computation - QTDSRD 4-116
4.2.26 Roadway Cross Section - RDXSRD....4-122
4.2.27 Signing and Pavement Cross Section - RDXSSP 4-131
4.2.28 Right of Way Detail for Roadway – RWDTRD 4-142
4.2.29 Right of Way – RWENG10 4-145
4.2.30 Traffic Control - TCDSRD 4-152
4.2.31 Existing Topography for Roadway - TOPORD....4-161
4.2.32 Existing Topography for Right of Way – TOPORW....4-166
4.2.33 Typical Section Data – TYPDRD....4-169
4.2.34 Typical Section Sheets - TYPSRD 4-180
4.2.35 Utilities Adjustment - UTADRD 4-191
4.2.36 Utilities Existing - UTEXRD....4-199
4.2.37 Utilities Proposed - UTPRRD....4-203

CHAPTER 5 - PROJECT STRUCTURE 5-1

5.1 INTRODUCTION 5-1
5.2 STANDARD PROJECT DIRECTORY 5-1
5.2.1 Classical Electronic Delivery –vs- Digital Delivery Projects 5-1
5.2.2 Create Project....5-2
5.2.3 Discipline Sub-directories....5-2
5.2.3.1 Sub-Directories Under the Discipline Directories 5-2
5.2.4 Custom Sub-directories....5-2
5.2.5 Engineering Data Sub-directories 5-3
5.2.6 Standard Project Directory Format 5- 3
5.3 STANDARD FILE NAMES.... 5-6
5.3.1 Standard Design File Naming Convention 5-6
5.3.2 Print Image File Naming Convention 5-6
5.3.2.1 Sheet Numbers....5-7
5.3.2.2 Print Image File Naming Format 5-8
5.3.3 Standard File Name Extensions 5-9
5.3.4 Duplicate Files 5-11
5.4 REFERENCE FILES 5-11
5.5 FILE SHARING AND MERGING.... 5-12
5.6 PROJECT INDEXING & JOURNALING 5-13
5.6.1 Index Guidelines and Format....5-13
5.6.2 Journal Guidelines and Format 5-14

CHAPTER 6 - PRINTING & PRINT IMAGE FILES 6-1

6.1 PRINTS 6-1
6.2 PRINT BORDERS.... 6-1
6.3 IMAGE FILES.... 6-1
6.4 FOREIGN PLAN SHEETS 6-2
6.5 FDOT PRINT DRIVERS.... 6-3
6.5.1 MicroStation Half-Toning 6-3
6.5.2 Quality and Reproduction 6-3

CHAPTER 7 - CADD QUALITY ASSURANCE / QUALITY CONTROL 7-1

7.1 GENERAL 7-1
7.2 THE PROFESSIONAL OF RECORD 7-1
7.3 ELECTRONIC DELIVERY PROCESS MANAGEMENT 7-3
7.4 QUALITY ASSURANCE (QA) – CENTRAL OFFICE ROLE 7-3
7.4.1 QA Reports 7-3
7.5 QUALITY CONTROL (QC) – DATA PRODUCERS' ROLE 7-3

CHAPTER 8 - ELECTRONIC DELIVERY PROCEDURE 8-1

8.1 GENERAL 8-1
8.2 PROJECT DATA SET CONTRASTED TO THE BID SET 8-3
8.3 PROJECT DIRECTORY / BID SET EXAMPLES 8-5
8.4 FILENAME CONVENTIONS FOR ELECTRONIC DELIVERY 8-6
8.4.1 CLASSICAL ELECTRONIC DELIVERY PROJECTS 8-5
8.4.2 DIGITAL DELIVERY PROJECTS 8-5
8.5 PRE-PRODUCTION 8-6
8.6 PRODUCTION 8-8
8.6.1 Classical Electronic Delivery Projects 8-7
8.6.2 Digital Delivery Projects 8-8
8.6.3 Engineering Data 8-9
8.6.4 Data for Machine Control in Construction 8-13
8.6.5 Maximum Corridor Frequency Interval Spacing 8-15
8.6.6 Merging External Project Files 8-15
8.6.7 Reviewing The Project 8-16
8.6.8 Sign and Seal Project Files 8-17
8.6.8.1 Classical Electronic Delivery with PEDDS 8-17
8.6.8.2 Digital Delivery with Digital Signature 8-17
8.6.9 Securing the Project for Delivery 8-18
8.6.10 Authentication of a Delivery 8-18
8.6.11 Media Requirements for Delivery 8-18
8.6.12 Compliance Certification 8-18
8.7 POST-PRODUCTION 8-20
8.8 REVISIONS 8-20
8.8.1 Classical Electronic Delivery 8-20
8.8.2 Digital Delivery 8-21
8.9 STRUNG PROJECTS 8-22
8.10 RE-LET PROJECTS AND ROLL BACK REVISIONS 8-22
8.11 DESIGN BUILD PROJECTS 8-22

CHAPTER 9 - RIGHT OF WAY MAPPING STANDARDS 9-1

9.1 GENERAL 9-1
9.2 STANDARD FILE NAMES 9-1
9.3 SEED FILES SETTINGS 9-3
9.4 TEXT 9-4
9.4.1 True Type Font 9-4
9.4.2 Text Size 9-5
9.5 MICROSTATION LINE STYLES 9-5
9.6 CELL LIBRARY 9-8
9.7 LEVEL AND SYMBOLOGY STANDARDS 9-10
9.8 R/W CADD WORKSPACE 9-10
9.9 GEOPAK FEATURE PREFERENCE 9-11

CHAPTER 10 - ENVIRONMENTAL MANAGEMENT STANDARDS 10-1

10.1 GENERAL 10-1
10.2 STANDARD FILE NAMES 10-1

CHAPTER 11 - SURVEY STANDARDS 11-1

11.1 GENERAL 11-1
11.2 STANDARD FILE NAMES 11-1
11.3 DATA FILES CREATED BY SURVEY 11-2
11.4 RESOURCE FILES 11-2
11.4.1 CAiCE Feature table 11-2
11.4.2 CAiCE Cell Library 11-2
11.4.3 CAiCE Translation Table 11-2
11.4.4 Additional CAiCE Tables and Cell Libraries 11-3
11.4.5 CAiCE Special Characters 11-3
11.5 GEOPAK SURVEY & DATA ACQUISITION 11-4
11.6 SURVEYING DATA 11-4
11.7 LEVEL AND SYMBOLOGY STANDARDS 11-4
11.8 COUNTY MAPPING 11-5

CHAPTER 12 - DRAINAGE STANDARDS 12-1

12.1 GENERAL 12-1
12.2 STANDARD FILE NAMES 12-1
12.2.1 File Sharing and Merging 12-2
12.3 RESOURCE FILES 12-2
12.4 ENGINEERING DATA 12-3
12.5 PACKAGING 12-3

CHAPTER 13 - ROADWAY STANDARDS 13-1

13.1 GENERAL 13-1
13.2 STANDARD FILE NAMES 13-1

CHAPTER 14 - SIGNING & PAVEMENT MARKING STANDARDS 14-1

14.1 GENERAL 14-1
14.2 STANDARD FILE NAMES 14-1
14.3 SIGN DESIGN 14-2
14.4 GUIDSIGN 14-2
14.5 AUTOTURN 14-3

CHAPTER 15 - SIGNALS STANDARDS 15-1

15.1 GENERAL 15-1
15.2 STANDARD FILE NAMES 15-1

CHAPTER 16 - HIGHWAY LIGHTING STANDARDS 16-1

16.1 GENERAL 16-1
16.2 STANDARD FILE NAMES 16-1
16.3 AGI32 LIGHTING SOFTWARE 16-2

CHAPTER 17 - LANDSCAPE STANDARDS 17-1

17.1 GENERAL 17-1
17.2 STANDARD FILE NAMES 17-1

CHAPTER 18 - STRUCTURES STANDARDS 18-1

18.1 GENERAL 18-1
18.2 STANDARD FILE NAMES 18-2
18.3 RESOURCE FILES 18-12
18.4 ENGINEERING DATA 18-12
18.5 LEVEL AND SYMBOLOGY STANDARDS 18-14
18.5.1 Borders and Scales 18-19
18.5.1.1 Borders 18-19
18.5.1.2 Scales 18-20
18.5.2 Text Sizes and Weights 18-21
18.5.3 Colors 18-22
18.5.4 Special Symbols 18-22
18.5.5 Dimension Settings 18-22
18.6 REFERENCE FILES 18-22

CHAPTER 19 - UTILITIES STANDARDS 19-1

19.1 INTRODUCTION OF UTILITY COORDINATION OF CADD FILES 19-1
19.2 UTILITY FILE COORDINATION OPTIONS 19-1
19.2.1 Sharing of Graphic Files 19-1
19.2.2 ASCII Input File 19-1
19.2.3 Geographic Information System (GIS) File 19-1
19.3 UTILITY COORDINATION WORKFLOW 19-2
19.3.1 Phase I Utility Coordination Workflow 19-2
19.3.2 Phase II Utility Coordination Workflow 19-2
19.3.3 Phase III Utility Coordination Workflow 19-3
19.3.4 Phase IV Utility Coordination Workflow 19-3
19.4 EXCHANGE OF GRAPHICS FILES 19-4
19.4.1 Standard File Names 19-4
19.5 UTILITY PLANS 19-5
19.6 ASCII FILE NAME CONVENTIONS 19-5
19.6.1 ASCII Header Convention 19-5
19.6.2 Format of Station and Offset ASCII File 19-6
19.6.3 Format of Northing and Easting ASCII File 19-7
19.6.4 ASCII Input File Examples 19-8
19.7 UTILITY SCANNED IMAGES 19-11

CHAPTER 20 - GEOTECHNICAL STANDARDS 20-1

20.1 GENERAL 20-1
20.2 STANDARD FILE NAMES 20-1
20.3 ENGINEERING DATA 20-2
20.4 SOIL SURVEY 20-3
20.5 SOIL BORING DATA 20-3

CHAPTER 21 - CONSTRUCTION STANDARDS 21-1

21.1 GENERAL 21-1
21.2 STANDARD FILE NAMES 21-1

CHAPTER 22 - INTELLIGENT TRANSPORTATION SYSTEMS (ITS) STANDARDS 22-1

22.1 GENERAL 22-1
22.2 STANDARD FILE NAMES 22-1

CHAPTER 23 - ARCHITECTURAL STANDARDS 23-1

23.1 GENERAL 23-1
23.2 ADOPTED CADD FILE FORMAT 23-1
23.3 ADOPTED CADD STANDARDS 23-2
23.4 ARCHITECTURAL PROJECTS 23-2
23.5 DELINEATION BETWEEN ARCHITECTUAL & ENGINEERING PLANS 23-3
23.6 STANDARD FILE NAMES 23-4
23.6.1 Standard Model File Names 23-4
23.6.2 Standard Sheet File Names 23-5
23.6.3 Detail File Name Format 23-6
23.6.4 Schedule File Name Format 23-6
23.7 ENGINEERING DATA 23-6
23.8 LEVEL AND SYMBOLOGY STANDARDS 23-6
23.8.1 Architectural Scale Chart 23-7
23.8.2 Text Type, Size and Line Weight 23-7
23.9 LAYERING STANDARDS 23-9
23.10 FILE STRUCTURE 23-10
23.11 ELECTRONIC SIGNING AND SEALING 23-10
23.12 ELECTRONIC SUBMITTAL 23-10

CHAPTER 24 - SPECIFICATIONS STANDARDS 24-1

24.1 GENERAL 24-1
24.2 STANDARD FILE NAMING CONVENTION 24-1
24.2.1 CLASSICAL ELECTRONIC DELIVERY 24-1
24.2.2 DIGITAL DELIVERY 24-1
24.3 RESOURCE FILES 24-2
24.4 TECHNICAL SPECIAL PROVISIONS – SIGNING AND SEALING 24-2
24.5 ELECTRONIC FILE STRUCTURE 24-2
24.5.1 CLASSICAL ELECTRONIC DELIVERY 24-3
24.5.2 DIGITAL DELIVERY 24-4
24.6 ADDITIONAL INSTRUCTIONS FOR SPECS-PACKAGE SUBMITTAL 24-5
24.6.1 CLASSICAL ELECTRONIC DELIVERY 24-5
24.6.2 DIGITAL DELIVERY 24-5

Table of Contents

CHAPTER 1 - INTRODUCTION 1-1

1.1 PURPOSE 1-1

1.2 SCOPE 1-1

1.3 GENERAL 1-1

1.4 DISTRIBUTION 1-2

1.5 PROCEDURE FOR REVISIONS AND UPDATES 1-2

1.6 GLOSSARY OF TERMS 1-4

1.7 ABBREVIATIONS 1-12

1.8 REFERENCED DOCUMENTS 1-13

THIS PAGE WAS LEFT BLANK INTENTIONALLY.

Chapter 1 - INTRODUCTION

CADD Production Criteria Handbook

1.1 PURPOSE

The electronic files created during the process of developing a Computer Aided Design and Drafting (CADD) project for Florida Department of Transportation (FDOT) are shared and referenced by many different individuals and disciplines, and therefore must satisfy diverse needs. Electronic files must be in formats that most parties can utilize and share. Therefore, processes, standards and requirements have been established for many disciplines involved in the CADD development workflow. This ***CADD Production Criteria Handbook (CPCH)*** is a companion to the ***FDOT CADD Manual (Topic Number 625-050-001)*** that outlines minimum standards necessary to ensure a usable, consistent and predicable CADD data set for the project and provides the information necessary to accomplish this task(s).

1.2 SCOPE

This CPCH provides supplemental requirements to the ***FDOT CADD Manual***. The material presented herein is monitored as a critical requirement to meet FDOT CADD Quality Assurance objectives.

1.3 GENERAL

Chapter 334 of the Florida Statues, known as the ***Florida Transportation Code*** (Code), establishes the responsibilities of the State, Counties, and Municipalities for planning and developing transportation systems which serve the people of Florida. The Code's purpose is to protect the safety and general welfare of the people of Florida and preserve and improve Florida's transportation facilities. Code Section 334.044(2) sets forth the powers and duties of the Department of Transportation to develop and adopt uniform minimum standards and criteria for the design, construction, maintenance, and operation of public roads.

The guidelines in this CPCH and the CADD Manual represent the minimum requirements that must be met for FDOT CADD projects. While the guidelines contained herein provide a basis for uniform CADD practices for FDOT projects, situations will exist where these standards may not apply. If variances from the ***CADD Manual*** or CPCH are required for a project, they must be approved in writing by the FDOT Project Manager and documented in the Project Journal as defined in Chapter 5.

The effective version of this document is the latest version released and published on the FDOT Engineering / CADD Systems Office (ECSO) website listed in section 1.4 following.

1.4 DISTRIBUTION

The FDOT CPCH is available in electronic format on the ECSO Internet Website:

http://www.dot.state.fl.us/ecso/downloads/publications/CriteriaHandBook/

The ***FDOT CADD Manual*** is available on the ECSO Internet Website:

http://www.dot.state.fl.us/ecso/downloads/publications/Manual/default.shtm

1.5 PROCEDURE FOR REVISIONS AND UPDATES

Users of the CPCH are encouraged to send comments and suggestions for changes or improvements for any CADD processes or documentation. Major changes are reviewed and approved by the Technical Advisory Committees (TACs) of the appropriate discipline and the State CADD Coordinator. As such, revisions are implemented into this document and published on the ECSO website at the internet address listed in Section 1.4.

Users may utilize the form provided below and submit change requests via:

- By Email: ECSO Support: ecso.support@dot.state.fl.us

  Statewide CADD Coordinator, Bruce Dana, PE: bruce.dana@dot.state.fl.us

  Support Coordinator, Jimmie Prow: jimmie.prow@dot.state.fl.us

  Development Coordinator, Ray L'Amoreaux: ray.lamoreaux@dot.state.fl.us

- In Person: FDOT Engineering / CADD Systems Office
  Koger Executive Center - Atkins Building, Suite 300
  1320 Executive Center Drive
  Tallahassee, FL 32301

- By FAX: (850) 245-1601

- By Mail: FDOT Engineering / CADD Systems Office
  605 Suwannee Street, MS 69
  Tallahassee, FL 32399-0450

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION

CADD PRODUCTION CRITERIA HANDBOOK (CPCH)

SUGGESTION AND COMMENTS

Date: _____

Name: _____

Company or FDOT District: _____

Address: _____

_____

E-Mail: _____

Telephone: _____

FAX: _____ No. of Pages Including this page: _____

☐ (Comments or Suggestions are attached as marked-up copies of CPCH pages or other resources).

Comments: _____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

1.6 GLOSSARY OF TERMS

In the application of the criteria in this handbook, the following definitions are assigned for consistency of understanding and interpretation.

Authentication For Electronic Signature (as with Professional's Electronic Data Delivery System (PEDDS)) it's the process of comparing the message digests (SHA-1 Hash Codes generated by the PEDDS application) of the PEDDS Manifest file (Manifest.XML) and PEDDS Signature files to those appearing on the signed Manifest Document (paper) or Signatory Documents (paper).

For Digital Signature, Authentication is also the process where Digital Signatures are compared with identity data held by the issuer of a Digital Certificate to validate the identify of a Signatory; and that a document that has been signed with a Digital Signature has not been modified. For Digital Signature this is an automated process which usually provides feedback to the user of the document software (such as with Adobe Reader or Acrobat) that the file being examined is both signed and the signatures are valid.

Authorization For Electronic Signature (as with Professional's Electronic Data Delivery System (PEDDS)) it's the process of comparing the message digests (SHA-1 Hash Codes generated by the PEDDS application) of the PEDDS Manifest file (Manifest.XML) and PEDDS Signature files to those appearing on the signed Manifest Document (paper) or Signatory Documents (paper).

For Digital Signature, Authentication is also the process where Digital Signatures are compared with identity data held by the issuer of a Digital Certificate to validate the identify of a Signatory; and that a document that has been signed with a Digital Signature has not been modified. For Digital Signature this is an automated process which usually provides feedback to the user of the document software (such as with Adobe Reader or Acrobat) that the file being examined is both signed, and the signatures are valid

Bid Set A file set consisting of a data sub-set derived from the project data set (Project CD) containing only those files needed for advertisement and letting. Note that the files needed for this set remain in their source folders in the project data set. All empty discipline folders are deleted for the Bid Set. The SetMaker application can be used to create the Bid Set from the project data set for Classical Electronic Delivery projects. For Digital Delivery projects, the data delivered is compiled manually.

By-Level A term for Level Symbology.

CADD Computer Aided Design and Drafting.

Cell A complex element composed of a group of other complex elements that is stored in a cell library for repeated replacement.

Cell Library A file that is used to store cells. To access cell in a cell library, the library must be attached.

Centerline The axis along the middle of a road or other facility from which features can be conveniently measured.

Certificate Authority The 3rd party entity that issues the Digital Certificate to the professional signatory and who has validated the identity of the signatory.

CES Cost Estimating System. FDOT's program for estimating construction cost for projects.

Change Report For Classical Electronic Delivery projects where an Index is produced, this is an HTML report created by the Project 'Delta' application containing information about sheet-specific differences between a secured project data set and a revised project data set. It is a comparison between the indexes (ProjectIndex.XML) of an earlier delivery of a project and a contemporary delivery of a project. Also see Revision Report. For Digital Delivery projects, this report is not produced.

Classical Electronic Delivery The original method of Electronic Delivery specified prior to the 2013 release of the CPCH. This delivery methodology involved printing each plan sheet as a separate file, creating an index of those sheets, signing and sealing each sheet separately (typically with PEDDS), and producing several files associated with that index.

Compliance Certification Worksheet A document that contains the data producers' assurances that items required by the Florida Department of Transportation (FDOT) Computer Aided Drafting and Design (CADD) Manual and this Handbook are included in the delivered project data and that certain Quality Control functions were performed.

Composite PDF A document containing all plan sheet images in index order. This document must be in Adobe Portable Document Format (PDF) format and reside in the project's root directory.

For Classical Electronic Delivery projects, it is named 'Project.pdf' - for an original delivery. For Digital Delivery projects, it is named *fpid*-PLANS[-].PDF (where *fpid* is the projects' Financial Project Identification Number and *[-]* is any additional naming specific to the project).

For Classical Electronic Delivery projects, the Composite PDF is not usually signed, or signed and sealed. For Digital Delivery projects, the Composite PDF of the plans are signed and sealed with a certificate based Digital Signatures.

For Classical Electronic Delivery projects during revisions, a second PDF is produced for the contractor called Revision#.pdf, a subset of Project#.pdf containing those sheets revised for that revision number. For Digital Delivery projects, this file is named *fpid*-PLANS-REV##[-].pdf.

Component A categorization of design plans as defined in Chapters 2 & 3 of the FDOT Plans Preparation Manual, Vol. 2. The list of plans components for Electronic Delivery is comprised of the following:

1. Roadway Plans
2. Signing and Pavement Marking Plans
3. Signalization Plans
4. Intelligent Transportation System (ITS) Plans
5. Lighting Plans
6. Landscape Plans
7. Architectural Plans
8. Structures Plans
9. Utility Work by Highway Contractor Agreement Plans

The plans components do not directly correspond to the project directory structure. For example, Drainage files have a \drainage folder at the root level of the project, but may be included as part of the Roadway Plans component.

Delivery A set of electronic files secured by PEDDS, plus additional project metadata.

Delivery Key The message digest (SHA-1 hash code) used to reference the delivery. The delivery key is the hash code of the Manifest file produced by the PEDDS software.

Design File MicroStation or AutoCAD document file. The open (active) design file can be manipulated. Design files can be attached to the open design file as reference files for viewing and construction purposes.

Digital Certificate In cryptography, a digital certificate uses a digital signature to bind together a public key with an identity — information such as the name of a person or an organization, their address, and so forth. The certificate can be used to verify that a public key belongs to an individual. The signatures on a certificate are attestations by the certificate signer that the identity information and the public key belong together. The type of Digital Certificates used for FDOT design work must meet the Federal Governments' Access Certificates for Electronic Services (ACES) program.

Digital Delivery A contemporary method of Electronic Delivery that relies further upon the Composite PDF being produced and delivered by more direct means, no production of an index (nor the associated files or reports), and Digital Signature as the principal means to secure the Composite PDF and Specifications files.

Digital Signature Cryptographic data applied to an electronic file which is unique to the signatory, and is very difficult to forge. In addition, the digital signature assures that any changes made to the data or electronic file that has been signed cannot go undetected. A Digital Signature is much the same as a conventional handwritten signature that identifies a person signing the document. While traditional signatures are on paper, every digital signature stores information that will identify the person signing. There can also be information about changes made to a digitally signed document since the first signature was applied.

Document Image File An electronic file from which a hard copy of a project document could be produced. For Classical Electronic Delivery these would represent the individual plot files of each sheet of the plans set which would also be Signed and Sealed with PEDDS. For Digital Delivery these files are not required, and only the Composite PDF of the whole plans set, or any necessary subdivision of that Composite is required. In Digital Delivery the Composite is Digitally Signed with a Digital Signature.

DXF A drawing interchange file format supported by most CAD packages. MicroStation design files can be saved in DXF format, and DXF files can be imported into MicroStation design files.

Electronic Delivery Indexer (EDI) An application used to build an index for a set of plans for Classical Electronic Delivery projects. EDI also helps develop the project Journals, and helps produce printed document image files of the plans sheets.

Electronic Journal Electronic file(s) that document development, correspondence, decisions made, methodology used, exceptions to standards, and other descriptive information about the project. The Electronic Journal includes details that will give future users insight about the project data.

Electronic Signature The process of associating a wet-ink signed document with an electronic file, and involves the production of a Signature Document securing the electronic file and any data referenced by either the Signature Document or the file. By signing the Signature Document, the Signatory is electronically signing all files listed in the signature file.

Engineering Data Those electronic files that represent the critical geometric and quantitative controls or other engineering calculations supporting the graphical representation of a project.

Extension Characters optionally separated from the main part of a filename by a period (".") character. Traditionally, these have been used to designate the type of file. For example, .dgn, .cel, .ucm are commonly used to represent a design file, a cell library, and a user command, respectively.

File Checker An application to assist with the verification of QC compliance to Electronic Delivery standards, such as directory structure, file naming, etcetera.

Font Library A file in which text characters styles, symbols, or patterns are stored.

Global Origin Location of the origin of the Cartesian coordinate system in the design plane coordinates (UORs). When design plane positions are specified or reported in working units, they are relative to the global origin.

Graphics Design File An electronic file that conforms to MicroStation (DGN) or AutoCAD (DWG) graphics formats.

Hash code See *Message Digest*.

Index An XML file (ProjectIndex.XML) created by EDI or Sheet Set Organizer (SSO) that contains metadata concerning all print image files that have been identified as sheets and the design file from where they were produced. This file resides at the root folder of the project. Note that Digital Delivery projects do not require an Index.

Journal See Electronic Journal.

Letting The process of advertising, selection, and award of a contract for the construction of a project.

Letting CD The compact disk prepared for the letting process consisting of plans, specifications, and a front-end "kiosk" application that offers easy access to bidding documents.

Level Data in the design file is segregated into drawing levels. Levels are similar to transparent overlays that can be put together to form a complete drawing. A level can be turned on and off independently in different views.

Level Symbology View setting that, when turned on, causes all elements on a particular level to be displayed with the same element symbology.

Line Style Part of the symbology of an element: for example, whether a line is solid, continuous dashes, dots and dashes, and so on. In plotting, a line style is an index in the range 0 to 7 that designates a particular sequence of pen up/down pairs to be used when drawing or plotting a graphic element. Each element has its own line style.

Line Weight An index in the range 0 to 31 that designates the weight or thickness of the lines used to draw or plot a graphic element. Each element has its own line weight.

Manifest Document A wet-ink signed (not sealed) paper document, output by PEDDS, used to secure a PEDDS Manifest file (Manifest.XML) and references the Signature files in a project.

Manifest File The XML file (Manifest.XML), used by PEDDS to define and secure the entire contents of the project folder for Electronic Delivery. This file resides in the project's _meta_info sub-folder. The Manifest file lists the projects' files by their relative URL and SHA-1 hash-codes.

Message Digest Often referred to as a hash code, is an alphanumeric string of hexadecimal characters (0–9, A–F) that is generated by a one-way cryptographic hashing algorithm (SHA-1) and is used by PEDDS to uniquely identify a file based solely upon the file's contents.

Master Units The largest units in common use in a design.

PDF Portfolio A PDF portfolio is a container that can hold a variety of files assembled that can be in different formats and created from different applications. PDF portfolios support PDF, JPG, TIFF, GIFF, BMP, PNG, and Text files. These are created by Acrobat editing software like Acrobat®, Bluebeam Revu® and other similar software. Portfolios may be used to include related documents such as Technical Special Provisions along with Specifications in the Specs package (*fpid*-SPECS[-].pdf) for Digital Deliveries.

PEDDS The Professionals' Electronic Data Delivery System (PEDDS) is an application used to secure a project or sub-sets of files signed/sealed by a signatory.

PEDDS Information The electronic files and paper documents created by PEDDS to secure the delivery and sign / seal selected files within that delivery.

Plans Change ***(****Plans Preparation Manual Chapter 20 definition)* Modification to a set of plans, after the Estimates department has changed the Control Group, but before the plans are sent to the FDOT Central Office.

Project Projects are identified by the Department through the Financial Project Identification Number and related project identification information. Multiple deliveries can occur for a single project, each representing the status of the project at the time of delivery.

Project CD Media (CD, DVD, etc.) containing all data associated with a project.

Project Component The data structure and organization of electronic files on storage media, also referred to a project sub-directory or sub-folder.

Project Component Directory The data structure and organization of electronic files on storage media, also referred to a project sub-directory or sub-folder.

Project Delta An application used to reveal file changes after revisions and corrections. ProjectDelta reports any differences between the indexes of two different deliveries of the same project. ProjectDelta creates the Revision Report (Deltandx#.htm) and Change Report, where # is the revision number. ProjectDelta is not used on Digital Delivery projects.

Project Directory The parent directory structure of a project containing all project component directories and ancillary data.

Project Index File A file that lists and describes critical files contained in a Classical Electronic Delivery. See Index.

Project Key An alphanumeric character string (a Global Unique Identifier or GUID), generated at the time of project creation that uniquely identifies a project. This number is unique across all project deliveries of the same project. This number is printed on the Manifest report.

Project Root Directory The file system directory that contains all of the projects' files and folders. The project root directory should not contain files that do not pertain to the project, nor should files that are part of the project reside outside of the project root directory, or one of its sub-folders.

qSheet A printing application used to print all or part of an indexed project sheet set. qSheet uses the Project Index (ProjectIndex.XML) and Revision Reports (Deltandx#.htm) as input. (See Section on Revisions in regards to file naming convention.)

Quality Control Reports Reports that must be included with the final project delivery, the Compliance Certification Worksheet and all reports listed therein. These reports are produced by software within the FDOT CADD Software suite.

Reference File A design file that is attached to and viewed simultaneously with the active design file. Reference files can be used for constructions in the active design file, but cannot be modified. Elements can be copied from a reference file to a design file.

Resolution The number of addressable points across a given area. For example, plotter resolution is measured in lines per inch, while screen resolution is usually given with two numbers indicating the number of pixels across the width and height of the largest image that can be displayed.

Revision Section 20.4 of the Plans Preparation Manual defines a design revision as a modification to the PS&E Package/Bid Set after it has been accepted by Central Office Project Review.

Revision Report An HTML report created by the 'ProjectDelta' application containing information about sheet-specific file differences between a secured, delivered file set (Project CD) and a new, corrected file set. This report is named 'Deltandx#.htm', where # is the revision number, and is placed in the root folder of the project. This report is a comparison between the indexes (ProjectIndex.XML) of an earlier delivery of a project, and a contemporary delivery of a project. Also see Change Report.

Revision Reports are not produced on Digital Delivery projects.

Revision Set The set of files that denote changes from one delivery to the next, as well as the Revision Report (Deltandx#.htm) that helps define them. For a Digital Delivery project, many of the Classical Electronic Delivery reports and processes are not produced. For these, the Revision Set includes the changes from one revision to the next, absent the Revision Report (Deltandx#.htm).

Root Certificate Cryptographic information installed on a computer that identifies the Certificate Authority and allows the identity of the signatory to be validated against the identity records held by the Certificate Authority. This process usually requires a connection to the Internet.

Securing Files The act of updating the project's Manifest.XML file with the contemporary listing of project files and SHA-1 hash codes that in turn will allow PEDDS to validate secured files. This process produces the Manifest Document. In Digital Signature, files are Secured when they are Digitally signed.

Seed File A template used to create a new design file or cell library. The new file has its settings identical to those of the seed file.

Seed Project A seed project is a template folder structure that contains all folders listed in Chapter 5 of this handbook, as well as other project configuration files. The "seed" is the beginning structure of a project which gets populated with data as the project development occurs.

Set maker An application to extract a project subset from a secure project delivery. This application is not used in Digital Delivery projects, as it relies upon both an index and the source project data set to be Secured by PEDDS.

SHA-1 Hash Standard United States Secure Hash Algorithm 1 (SHA-1) is a secure hash standard which produces a unique code representing a data file. The SHA-1 is called "secure" because it is computationally infeasible to find two files of different content which produce the same hash.

Sheet Classical Electronic Delivery applications recognize a sheet as a discreet image file representing a page in the plans that is listed in the project index. A sheet must belong to a plans component and also be found in a defined discipline sub-folder of the project.

For Digital Delivery projects, a sheet is simply a page in a multipage PDF (*fpid*-PLANS[-].PDF for an original delivery or *fpid*-PLANS-*REV##[-]*.PDF for revisions).

Sheet Index See Index

Sheet Index Report For Classical Electronic Delivery, an HTML report which is derived from the Index (ProjectIndex.XML). The original delivery file name is Sheetndx.htm. The report file is named Sheetndx#.HTM, where # is the revision number, and resides in the project's root folder. This report is not produced for Digital Delivery projects.

Sheet Navigator An application which runs inside MicroStation, allowing users to browse and open MicroStation files containing sheets for verification or editing. Its purpose is to 'tag' sheets with data that supports later Electronic Delivery for both Indexing and Printing. It is a foundation utility for subsequent Classical Electronic Delivery processes and should be run against every MicroStation design file.

Sheet Set Organizer The 'Sheet Set Organizer' is an application which runs in conjunction with AutoCAD Sheet Set Manager. Its purpose is to update fields in the Sheet Set Manager database(s) with data that supports later Electronic Delivery Indexing and Plotting. It is a foundation utility for subsequent Electronic Delivery processes using AutoCAD Civil 3D and is run against every Sheet Set Manager database (*.DST) in the project, ensuring sheet data can be extracted properly.

Signatory The person or professional who secures files in a delivery using a signature file and document. If the signatory is a professional, signatures will be governed by rules defined by the Florida Boards of Professional Regulation. A professional may have multiple signatories in a project as needed by the revision process. See 'Revision Set' for more details.

Signatory File Defines / lists files that a Signatory signs, or signs-and-seals. All signatory files are created by PEDDS and stored in the project's _meta_info sub-folder. The signatory file lists each file selected by the Signatory to sign/sign and seal by that file's relative URL to the project's root folder, and the SHA-1 hash code.

A professional Signatory may have multiple signatory files for their work within a project.

The Signature Document secures the legal record must be at hand with the data; otherwise, the data representing the legal record can never be truly authenticated.

Digital Signature does not use a Signature Document.

Signature Document A wet-ink signed or signed-and-sealed paper document used to secure a signatory file. By signing the Signature Document, the Signatory is electronically signing all files listed in the signature file.

A professional Signatory may have multiple signatory files for their work within a project.

The Signature Document secures the legal record must be at hand with the data; otherwise, the data representing the legal record can never be truly authenticated.

Digital Signature does not use a Signature Document.

Signatory File Defines / lists files a Signatory signs, or signs-and-seals. All signatory files are created by PEDDS and reside in the project's _meta_info sub-folder. The signatory file lists each file selected by relative URL in the project, the SHA-1 hash code, and any qualifiers the Signatory indicated for his/her signature.

Signing Acts of securing a file or set of files under a signature file (for Electronic Signature) without the benefit of signing-and-sealing under Florida Boards of Professional Regulation rules. This implies that the Signatory is signing with a signature type intended to sign only, and not as a Professional of Record. Note that Digital Signature makes no distinction between Signing, or Signing and Sealing, and the context of the activity and any exculpatory language included at the time of signing will establish the intent of the Signatory.

Signing and Sealing The act of securing a set of files based on the rules defined by the Florida Boards of Professional Regulation governing signing-and-sealing of electronic files. For Electronic Signature, these rules provide for:

- a signature file that defines the type of professional that is signing and sealing (i.e., engineer, surveyor, geologist, landscape architect, etc.)
- the professional's name, license number, and scope of work for the signature
- the list of files selected — each file listed is defined by its relative URL to the project, the SHA-1 hash-code for each file, and any qualifiers the Signatory has indicated regarding the scope of responsibility, usability, or reliability for any of the files selected

Signing and Sealing a file adds file information to the Signatory's signatory file, and generates the signatory report. Signing and sealing is not complete until the professional wet-ink signs, dates, and seals the signatory report.

In contrast, Digital Signature instead relies upon Public Key Infrastructure to embed secure data into a file the Signatory is Signing, or Signing and Sealing.

Strung Project Two or more projects let in the same contract. For Classical Electronic Delivery, Bid Set CD subsets for those projects may be assembled into a directory structure representing the Strung Project. An application called 'StrungProject' is provided to help perform this function. Note that Project CD datasets (contrast with Bid Sets CD subsets) are never merged for stringing – only Bid Set subsets extracted from Project CD datasets.

Digital Delivery simplifies the delivery – each Subset is delivered separately. The StrungProject application is not used, and data between Lead and Goes-with projects are never intermingled.

Sub Consultant A consultant, separate from the primary consultant, who performs work for a project under the hire of a prime consultant.

Sub Delivery A delivery of files made by a sub consultant to a consultant, prime consultant or project manager.

Sub-project A project that is combined and let with other projects as part of a strung project. These are also referred as 'Lead' and 'Goes-with' projects. The 'Lead' sub-project is the first project in the strung project and all others are 'Goes-with' projects.

For Classical Electronic Delivery, sub-projects may be combined with the StrungProject application, binding them under a single Strung project directory structure.

Digital Delivery simplifies the delivery – Each Subset is delivered separately. The StrungProject application is not used, and data subsets of Lead and Goes-with projects are never combined.

Subset For Classical Electronic Delivery projects, a set of files that is entirely derived from a secure Project CD. 'SetMaker' is an application used to create subsets from secured Project CD data sets. Sub-Projects are Subsets of Lead and Goes-with projects.

For Digital Delivery, Subsets must be created manually, as the Digital process has no index (or perhaps PEDDS data) to work with.

Supporting CADD Files Any files, including CADD platform specific resource files (such as fonts, line styles, pen tables, cell/block libraries, etc.) that are required to reproduce the sheet or document image files.

Surface A geometric construction that can partition space but cannot enclose a volume.

Symbol A character placed from a MicroStation symbol font.

Symbology See element symbology or level symbology.

Text Attributes The color, weight, font, height and width of text.

Text Element MicroStation places text in design files as a distinct type of element.

Units of Resolution (UORs) The distance between adjacent points in MicroStation's design plan. There are a very large number of fixed discrete positions or UORs along each coordinate axis that are defined as real world coordinates by master units and sub-units (collectively, working units). This process is similar to setting up a piece of graph paper to represent data of a particular range.

Validation The comparison of SHA-1 hash codes recorded in the project's Manifest file against those hash codes calculated from the contemporary delivery. Validation tests to determine if the project file set was altered since the project was secured.

Validation is also done in Digital Signature; however the validating application will compare hashes embedded cryptically within the file against ones calculated "on the fly" to see if a document has changed. For Digital Signature the Validation also extends to the hosting application verifying the identity of Signatory by using the Root Certificate to make contact with the Certificate Authority over the internet and checking identity records to ascertain the authenticity of the Signatory.

Working Area Size, in working units square, of design plane.

Working Resolution Number of positional units, or units of resolution, per sub-unit.

Working Units The real-world units that the design plane is configured to.

1.7 ABBREVIATIONS

The abbreviations are listed in the FDOT Design Standards STANDARD ABBREVIATIONS Index No.001 for contract plans production. This list is not inclusive. Other Department accepted abbreviations may be used when deemed more appropriate. Where special abbreviations are used a descriptive tabulation may be necessary in the plans.

http://www.dot.state.fl.us/rddesign/DesignStandards/Standards.shtm

1.8 REFERENCED DOCUMENTS

Plans Preparation Manual (Topic No. 625-000-007 Vol1 English) (Topic No. 625-000-008 Vol2)

This manual provides engineering criteria and guidelines to be used in the development of roadway designs and plans preparation for roads on the State Highway System.

Facilities Design Manual (Topic No. 625-020-016)

This document describes the Florida Department of Transportation (Department) guidelines and requirements for providing professional Architectural/Engineering (A/E) consulting services for building facility projects for the Department.

FDOT CADD Manual (Topic No. 625-050-001)

This manual provides guidance to engineers and technicians in **C**omputer **A**ided **D**rafting and **D**esign (CADD) techniques for the development of Contract CADD plans.

Design Standards (Topic No. 625-010-003)

These indexes provide standard drawings to support the various engineering obligations for designing, specifying, estimating, constructing, inspecting, testing, accepting, operating, maintaining and monitoring the roads on the State Highway System.

Structures Manual (Topic No. 625-020-018)

This document provides the structures personnel with guidelines for the development of uniform structural design and plans preparation.

Drainage Manual (Topic No. 625-040-002)

The Drainage Manual sets forth drainage design standards for the Florida Department of Transportation.

Utility Accommodation Manual (Topic No. 710-020-001)

This guide is to regulate the location, manner, installation and adjustment of utility facilities along, across or on any road under the jurisdiction of the Department of Transportation.

THIS PAGE WAS LEFT BLANK INTENTIONALLY.

Table of Contents

CHAPTER 2 - FDOT CADD SOFTWARE 2-1

2.1 GENERAL 2-1
2.2 DISTRIBUTION 2-1
2.3 SUPPORT 2-1
2.4 SUPPORTED PRODUCTS 2-2
2.5 MINIMUM SYSTEM REQUIREMENTS 2-2
2.6 TRANSLATION OF FILES 2-2

THIS PAGE WAS LEFT BLANK INTENTIONALLY.

Chapter 2 - FDOT CADD SOFTWARE

CADD Production Criteria Handbook

2.1 GENERAL

The Florida Department of Transportation (FDOT) Computer Aided Design and Drafting (CADD) Software is upgraded periodically and as needed to issue enhancements and fixes. Updates occur for major releases (generally released when major upgrades to platform CADD software by our vendors becomes available), or when major upgrades to FDOT design standards are implemented. Interim Maintenance Releases and Hot fixes (released as required as cumulative service packs) are available for download from the Engineering / CADD Systems Office (ECSO) internet website. Notification of new releases and updates are posted on the ECSO website, via the FDOT Contact e-mailer, during training sessions, and notified through other venues as appropriate. FDOT uses MicroStation and GEOPAK (or Power GEOPAK) as its standard graphics and roadway design platform. FDOT will support Autodesk's AutoCAD Civil 3D as an alternate platform. Regardless whether Bentley's or Autodesk's design software is used, an effort had been made in this Handbook to maintain similar standards and deliverables so the resulting CADD and Electronic Delivery is consistent, predictable, and repeatable (CPR).

2.2 DISTRIBUTION

Notification and statewide distribution of FDOT CADD Software releases and upgrades for installation on FDOT hardware is made by ECSO to the designated CADD IT contacts in the districts using the Enterprise Application known as the Software Distribution Notification Application (SDNA). The District Technology Services and Support Manager (TSSM) and the FDOT CADD Managers are copied during these notices. They are responsible for management of the software, distribution of licenses, and installation and maintenance on district servers and workstations. In most cases, users are expected to operate the most contemporary version of the FDOT CADD Software release on FDOT projects, unless otherwise exempted by either the project's Scope of Services or a written exemption by the FDOT Project Manager.

Consultants can acquire the FDOT CADD Software, fixes and upgrades from the Engineering/CADD Systems Office (ECSO) internet website:

http://www.dot.state.fl.us/ecso/

2.3 SUPPORT

FDOT supports most CADD software used for in-house production as specified herein. Consultant support is generally limited to the FDOT developed software modules, interfaces, and configurations. The FDOT CADD Manual establishes the hierarchy of CADD related support roles and responsibilities including the **Peer** level, and the **District CADD Manager** support function, to the **Technical Advisory Committees (TACs),** and ultimately to the **statewide level - ECSO**.

The FDOT CADD ***Customer Support Guide*** outlines this escalating hierarchical support structure and provides detailed information for the user to access support and assistance. The ***Customer Support Guide*** can be downloaded from the ECSO Publication website:

http://www.dot.state.fl.us/ecso/downloads/publications/CADDSupportGuide/CADDSupport.shtm

2.4 SUPPORTED PRODUCTS

The ECSO supports a core group of CADD software products. A list of the current versions of these products, with some accompanying technical documentation, is available from:

http://www.dot.state.fl.us/ecso/main/Version/CurrentVersions.shtm

Most of the core FDOT CADD software products are commercial programs that FDOT has purchased a license to use. Note that FDOT makes no warranty, expressed or implied, as to the documentation, functionality or performance of these or other FDOT developed programs described herein.

The FDOT CADD ***Customer Support Guide*** outlines these products, along with additional products used by FDOT, and provides support information for each. As stated previously, the ***Customer Support Guide*** can be downloaded from the ECSO Publication website:

http://www.dot.state.fl.us/ecso/downloads/publications/CADDSupportGuide/CADDSupport.shtm

2.5 MINIMUM SYSTEM REQUIREMENTS

The current FDOT CADD Software was developed and tested for FDOT standard workstation configurations. This standard configuration is published in the ***Adopted Information Technology Resource Standards*** and is available from the FDOT's Office of Information Systems (OIS) intranet website.

The FDOT CADD Software is tested on Microsoft's Windows 7 (32- and 64-bit) with Internet Explorer version 8 (or higher) and the versions of the Core CADD products linked in section 2.4 above.

Other software configurations may support the current FDOT CADD Software; however no substantial testing has been performed on any other configuration. Use and support of FDOT CADD Software on other configurations are the sole responsibility of the user.

2.6 TRANSLATION OF FILES

FDOT requires MicroStation .DGN format (V8 and higher) or AutoCAD 2012 (for authorized Civil 3D projects) for the delivery of all graphics design files, except as specifically defined in subsequent CPCH chapters for specific disciplines. In addition, MicroStation (or AutoCAD) will be used for the production of the Sheet Image files used to represent the plans sheets produced as required by Chapter 3 of the ***CADD Manual and outlined in Chapter 6 of this document.*** It is the intention of FDOT to plot each plan sheet to the appropriate output using the native CADD system's plotting engine, so that output may be reproducible as necessary.

The data producer is solely responsible for any translation required to convert any non-MicroStation graphics file formats to the MicroStation design file format (.DGN) for delivery to FDOT. Likewise if an AutoCAD .DWG is required for delivery, the data producer is responsible to deliver the required format. The correctness of translation of the graphics design files and adherence to the standards and specifications contained herein, including the validity of the geometric elements, is the sole responsibility of the person performing the translation.

All translated / converted design files shall also conform to the file naming conventions and other standards rules for symbology and attribution adopted by FDOT as specified herein, or mandated by the ***CADD Manual***.

Table of Contents

CHAPTER 3 - RESOURCE AND SUPPORT FILES.....3-1

3.1 GENERAL.....3-1
3.2 DATABASE.....3-1
3.3 CONTROL FILES.....3-2
3.4 AUTOCAD CIVIL3D STANDARDS.....3-2
3.5 MICROSTATION SEED FILES.....3-3
3.6 LEVELS AND SYMBOLOGY.....3-3
3.6.1 Levels and Layers.....3-4
3.6.2 Color.....3-5
3.6.3 Line Weight.....3-6
3.6.4 Line Styles.....3-7
3.6.4.1 Standard English Line Style Measurements for Printing.....3-7
3.6.4.2 FDOT Custom Line Style Resource Files.....3-8
3.6.4.3 Custom Line Style Graphics.....3-8
3.7 PRINTER DRIVER CONFIGURATION FILES.....3-20
3.8 CELL / BLOCK LIBRARIES.....3-21
3.9 TEXT.....3-22
3.9.1 FDOT True Type Fonts (TTF).....3-22
3.9.2 Legacy MicroStation Fonts.....3-23
3.9.3 Size and Spacing.....3-25

THIS PAGE LEFT BLANK INTENTIONALLY.

Chapter 3 - RESOURCE AND SUPPORT FILES

CADD Production Criteria Handbook

3.1 GENERAL

Florida Department of Transportation (FDOT) has developed Computer Aided Design and Drafting (CADD) Standards for the production of Florida transportation systems plans to be delivered with the aid of the FDOT CADD Software suites. Utilization of the FDOT CADD Software suites is strongly encouraged. FDOT CADD Standards are conveyed through customization within the FDOT approved design software and automated tools contained in the FDOT CADD Software suites. This chapter documents and defines the FDOT Resource and Support Files that are included in the FDOT CADD Software suites.

3.2 DATABASE

The Engineering / CADD Systems Office (ECSO) has created a GEOPAK Design and Computation Manager (D&C Manager) database (*FDOT2010.ddb*) file in the FDOT2010 folder located at *\FDOT2010\geopak\databases*. This database has been set up specifically to create drawing elements with the correct level symbology and in many cases attach pay item data according to FDOT CADD Standards. Likewise, for Civil3D projects *\FDOT2012.C3D\Support\QC\MasterStandards.xlsx* and *\FDOT2012.C3D\Data\PayItemData\AECMerge.xml* serve the same function.

These resources may need to be modified for project specific items or to comply with District standards. If the *FDOT2010.ddb* database is customized, the user would save the customized database into the project directory in the *\symb* project sub-folder. Saving the database to the project directory is important to ensure the modified database will be delivered with the project. Likewise a modified copy of *AECCMerge.XML* needs to be saved to the local project folder.

When modifying project specific resources, use the following naming convention:

[Project Financial Project Identification Number][Discipline Designation].ddb

Where discipline designation would be one of the following:

dr	(drainage)
its	(intelligent transportation system)
lnd	(landscape)
lt	(lighting)
rdwy	(roadway)
sg	(signalization)
sp	(signing and pavement markings)
util	(utilities)

Example: A modified standard DDB, ***19728125201sg.ddb*** would be stored in ***.\19728125201\symb*** subfolder of the aforementioned project.

3.3 CONTROL FILES

FDOT delivers the Create/Edit program to create the standard files in the expected locations within the project directory structure. The standard FDOT Design file is derived from a "seed" file as part of the FDOT software suite. An example would be an existing topography file produced by the Survey discipline – *TOPORD01.DGN* created in the *.\survey* sub-folder of the project. Control Files are implemented to control the parameters needed by the Create/Edit program for the creation of these standard design files in adherence with the naming conventions set forth in Chapter 5 of this document. When creating new standard design files, the correct control file must be selected.

Standard FDOT Control Files:

- GEOTECH.CTL Standard FDOT Geotechnical File Names
- ROADWAY.CTL Standard FDOT Roadway File Names
- RW.CTL Standard FDOT Right of Way File Names
- STRUCTURES.CTL Standard FDOT Structures File Names
- MECHELEC.CTL Standard FDOT Mechanical and Electrical File Names
- ARCHITECTURE.CTL Standard FDOT Architectural File Names

3.4 AUTOCAD CIVIL3D STANDARDS

FDOT made a commitment to implement and support AutoCAD Civil 3D on future projects. The intention is for the standard resources definitions for CAD drawings to be consistent between the MicroStation and AutoCAD platforms. To that end, when discussions arise regarding standards of a file name, level name, line style, cell name, line weight or color, the equivalent should be inferred for the AutoCAD standard.

MicroStation	AutoCAD equivalent
File name	File name
Level name	Layer name
Cell Library	Block Library
Cell name	Block name
Line Style	Line Type
Line Weight	Line Thickness
Color	Color
Seed file	Template file (Note: template files are handled differently for FDOT).
And so on…	

3.5 MICROSTATION SEED FILES

MicroStation uses “seed” files to create all graphics design files (Likewise, AutoCAD uses Template files). Seed files are empty drawing files that serve as a “template” for design content to be created and drawing objects added to.

The FDOT seed files define the working units for the graphics file, global origin of the file’s coordinate system, view attributes, default color table, text settings, coordinate readout and several other important parameters. FDOT supplies English unit seed files for both 2D and 3D CADD work.

Working units and global origin are two of the most important settings in the seed file. Working units are expressed as master units and sub-units. FDOT has defined all seed files for MicroStation, based on master unit of “Survey Feet” with a sub unit of “Survey Inches.” The global origin is located at the center of the design plane for all seed files.

The resolution is defined per the master unit and determines the size (working area) of the design plane, which will encompass an area large enough for any State Plane coordinate zone in Florida.

- English (Imperial) 2D Seed File (FDOTSEED2D.DGN)

The following settings apply to all 2D seed files. Working Units:

  - Master Units = Survey Feet
  - Sub-Units = Survey Inches
  - Resolution = 304800 UOR per Survey Foot
  - Global Origin: Center of Design plane

- English (Imperial) 3D Seed File (FDOTSEED3D.DGN)

The following settings also apply to 3D seed files. Working Units:

  - Master Units = Survey Feet
  - Sub-Units = Survey Inches
  - Resolution = 304800 UOR per Survey Foot
  - Global Origin: Center of Design plane

3.6 LEVELS AND SYMBOLOGY

FDOT defines CADD level / symbology standards and deploys the standard using Design Libraries (DGNLIB files), Color Tables, Line Style Resource files, Line Weights and Toolboxes. FDOT has created standard FDOT Design Libraries to propagate FDOT Standards for: cells, levels, level filters, line styles, multi-line styles, text styles, dimension styles, element templates, menu customizations, customized tools, tool boxes, and tasks. Each FDOT Design Library contains data that is shared throughout files and among users.

Each FDOT Standard defined in a Design Library is identified by a unique name. When used, it is copied into the active design file and is given the same name. This allows for comparison of the local resource to the FDOT Design Library resource for compliancy to FDOT CADD Standards.

The following is a listing of all standard FDOT Design Libraries:

Design Library Name (DGNLIB)	DESCRIPTION
countymappinglevels.dgnlib	FDOT Standard County Mapping Levels
fdot_common_levels.dgnlib	FDOT Standard Common Levels
FDOT_PrintStyles.dgnlib	FDOT Standard Print Styles
FDOT_Styles.dgnlib	FDOT Standard Styles
fdot_v8_levels.dgnlib	FDOT Standard Roadway Levels
FDOTtoolboxes.dgnlib	FDOT Standard Toolboxes
GeoTech.dgnlib	FDOT Standard Geotechnical Levels
photogrammetry.dgnlib	FDOT Standard Photogrammetric Levels
rwlevels.dgnlib	FDOT Standard Right of Way Levels
strlevels.dgnlib	FDOT Standard Structure Levels
survey_levels.dgnlib	FDOT Standard Survey Levels
v7_levels.dgnlib	FDOT Standard V7 Levels

For Civil 3D projects, FDOT supplies templates found in the *\FDOT2012.C3D\Data\Templates* folder of your installation which define Layers and symbology. In addition, the *MasterStandards.xlsx* file located in the *\FDOT2012.C3D\Support\QC* folder is used to help control some of the same file/symbology standards when using FDOT developed productivity tools for AutoCAD Civil 3D, such as the FDOT Entity Manager.

3.6.1 LEVELS AND LAYERS

The standard FDOT Design Libraries define the MicroStation Levels (and by convention the AutoCAD Layers) for each Discipline. Designers shall use the standard FDOT Levels / Layers in the production of FDOT CADD design files.

The following are FDOT's basic level / layer naming conventions to assist CADD users in utilization:

- Level / Layer Names have 18 maximum characters.
- The format of the Level / Layer Name is: ***object_sv***

  Where: (***object*** = element type)_ (***s*** = state)(***v*** = view)

State Designations	View Designations
p (proposed)	**p** (plan)
d (drafting element)	**r** (profile)
e (existing)	**x** (cross section)

Note *Level / layer Names with no "_sv" portion in the name are assumed to be: _pp (proposed plan). Example: With this information one can determine the following about the Level names below:*

gas	*- Proposed Plan view elements for "gas" related items*
gas_ep	*- Existing Plan view elements for "gas" related items*
gas_px	*- Proposed cross section view elements for "gas" related items*

3.6.2 COLOR

The standard FDOT Color Table (*FDOTColor.tbl*) for MicroStation was created to allow users to visually identify elements in shared files and for consistency in color plotting. The FDOT Color Table is a modified version of the default MicroStation color table (*color.tbl*) which defines 256 colors. The most important aspect for the standardization of colors is the color number that is applied to MicroStation (or AutoCAD) elements.

FDOT Color Table customizes various colors, 0 through 166, as defined in the table below. The FDOT Color Table is named "FDOTColor.tbl" as preset by the FDOT workspace variable MS_DEFCTBL and attached in the FDOT seed files. Some FDOT disciplines use the MicroStation default color table, or their own customized color table in place of the standard FDOT Color Table. These are defined in the discipline specific chapters later in this Handbook.

FDOT Color Table is shown below:

Note *These apply to AutoCAD colors as well.*

MicroStation Color	Acad Color non-Structures (fdotcolor.tbl)	Acad Color Structures (color.tbl)
0	7 (255,255,255)	7 (255,255,255)
1	5 (255,0,255)	5 (255,0,255)
2	3 (255,0,0)	3 (255,0,0)
3	1 (0,0,0)	1 (0,0,0)
4	2 (0,255,0)	2 (0,255,0)
5	6 (255,165,0)	6 (255,165,0)
6	255,165,0	255,127,0
7	4 (255,255,0)	4 (255,255,0)
8	148,0,211	64,64,64
9	140,88,44	192,192,192
10	200,176,125	254,0,96
11	192,192,192	160,224,0
12	255,192,203	0,254,160
13	0,100,0	128,0,160
14	176,176,176	176,176,176
15	0,240,240	0,240,240
16	240,240,240	240,240,240
17	0,0,240	0,0,240
18	0,240,0	0,240,0
19	240,0,0	240,0,0
20	225,225,225	240,240,225
21	240,0,240	240,0,240
22	240,122,0	240,122,0
23	0,240,240	0,240,240
24	240,240,240	240,240,240
25	0,0,240	0,0,240
26	0,240,0	0,240,0

MicroStation Color	Acad Color non-Structures (fdotcolor.tbl)	Acad Color Structures (color.tbl)
27	240,0,0	240,0,0
28	240,240,0	240,240,0
29	240,0,240	240,0,240
30	240,122,0	240,122,0
31	0,255,255	0,255,255
32	225,225,225	225,225,225
33	0,0,225	0,0,225
34	225,225,0	225,225,0
35	225,0,0	225,0,0
36	225,225,0	225,225,0
37	225,0,225	225,0,225
38	225,117,0	225,117,0
39	0,225,225	0,225,225
46	225,117,0	225,117,0
55	0,210,210	0,210,210
68	195,195,0	195,195,0
71	0,195,195	0,195,195
84	180,180,0	180,180,0
86	180,102,0	180,102,0
99	165,0,0	165,0,0
100	165,165,0	165,165,0
142	135,87,0	135,87,0
150	120,82,0	120,82,0
152	120,120,120	120,120,120
154	0,120,0	0,120,0
157	120,0,120	120,0,120
255	250 (0,0,0)	250 (0,0,0)

Note *Color 255 is used as the background color (usually black).*

3.6.3 LINE WEIGHT

Line weight for MicroStation is defined by a numerical index within the range of 0 to 31 that designates the stroke width (or thickness) of the line used to draw and print a graphic element. Each element has its own line weight. The standard line thickness (width) of a printed graphic element is in inches on the paper. Some printers may require an adjustment of these weights.

Note *For Right of Way Mapping Line Weight requirements see Chapter 9.*

Printed Outputs from the design file plots must be of a quality legible on 2nd generation copies. Line Weights / Thicknesses in the table below are represented in inches, and are default settings (also set in the FDOT delivered print drivers). These may need to be adjusted depending on your hardware to produce the required quality of printed documents.

FDOT Line Weights:

MicroStation/Autocad Lineweight Mapping			
MS Weight	*MS Plot(inches)*	*Autocad inches*	*Autocad mm*
0	0.003	0.004	0.09
1	0.006	0.006	0.15
2	0.009	0.008	0.20
3	0.012	0.012	0.30
4	0.015	0.014	0.35
5	0.018	0.016	0.40
6	0.021	0.021	0.53
7	0.024	0.024	0.60
8	0.027	0.028	0.70
9	0.030	0.031	0.80
10	0.033	0.035	0.90
11	0.036	0.035	0.90
12	0.039	0.039	1.00
13	0.042	0.042	1.06
14	0.045	0.047	1.20
15	0.048	0.047	1.20
16	0.051	0.055	1.40
17	0.054	0.055	1.40
18	0.057	0.055	1.40
19	0.106	0.083	2.11
20	0.105	0.083	2.11
21	0.110	0.083	2.11
22	0.115	0.083	2.11
23	0.120	0.083	2.11
24	0.125	0.083	2.11
25	0.130	0.083	2.11
26	0.135	0.083	2.11
27	0.140	0.083	2.11
28	0.145	0.083	2.11
29	0.150	0.083	2.11
30	0.155	0.083	2.11

Available Autocad Line Weights	
inches	*mm*
0	0.000
0.002	0.050
0.004	0.090
0.005	0.130
0.006	0.150
0.007	0.180
0.008	0.200
0.01	0.250
0.012	0.300
0.014	0.350
0.016	0.400
0.02	0.500
0.21	0.530
0.024	0.600
0.028	0.700
0.031	0.800
0.035	0.900
0.039	1.000
0.042	1.060
0.047	1.200
0.055	1.400
0.062	1.580
0.079	2.000
0.083	2.110

3.6.4 LINE STYLES

FDOT Line style is part of the symbology of graphic elements. It defines a line's appearance as being solid, continuous dashes, dots and dashes, with embedded characters or symbols, and so on. Each element has its own line style. An element can be set to a standard MicroStation line style (numbered 0 - 7) or to a custom line style as defined in a custom line style resource file, or custom line style definition embedded in the design file. AutoCAD Line types have been created to match the name and appearance of FDOT MicroStation Line styles, including the MicroStation custom line styles.

Custom line styles are more complex and contain patterns of line segments and/or symbols. Some examples of custom line styles are a tree line, fence line, guardrail, etc.

If non-standard custom line styles are required, the resource file defining them must be delivered in the project directory structure, or the custom line style definitions must be embedded in the design file. The user must not create conflicting custom line styles with the same name as an FDOT Standard Line Style.

User created resource files must be unique in name and copied to the *\symb* sub-directory of the FDOT project directory structure.

For named styles, the MicroStation stylename and Acad linestype should match DGN linetypes stored in the *FDOT.lin* file located in the *FDOTXX\Support\linetype* folder.

MicroStation Style	Acad Linetype
0	Continuous
1	DGN1
2	DGN2
3	DGN3
4	DGN4
5	DGN5
6	DGN6
7	DGN7

3.6.4.1 Standard English Line Style Measurements for Printing

style(0) = continuous

style(1) = (0.02, 0.04), for ACAD - DGN1

style(2) = (0.08, 0.04), for ACAD - DGN2

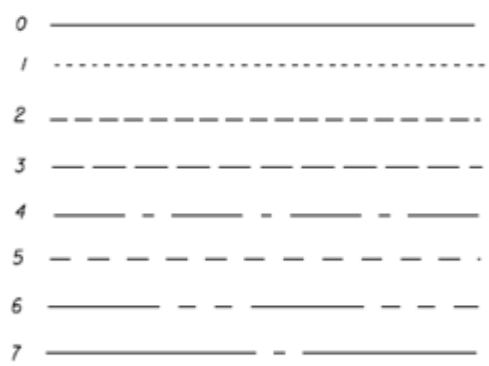
style(3) = (0.15, 0.05), for ACAD - DGN3

style(4) = (0.200, 0.053, 0.03, 0.053). DGN4

style(5) = (0.056, 0.056), for ACAD - DGN5

style(6) = (0.32, 0.056, 0.048, 0.056, 0.048,0.056)

style(7) = (0.59, 0.053, 0.03, 0.053) **,** DGN7

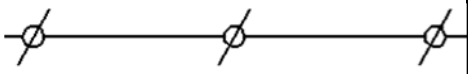
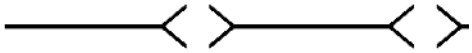
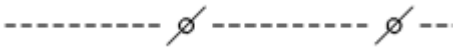
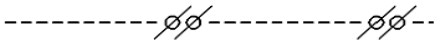
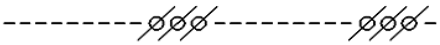
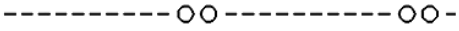
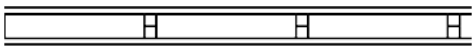


3.6.4.2 FDOT Custom Line Style Resource Files

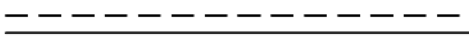
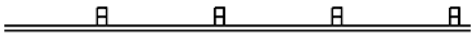
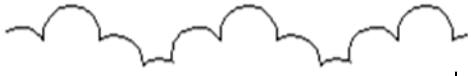
FDOT provides custom line styles for linear repeating patterns. Standard FDOT custom line styles will be carried forward into future FDOT CADD Software releases. Users shall not modify the standard FDOT Custom Line Style resource files.

3.6.4.3 Custom Line Style Graphics

Discipline	Name	Description	Sample Image
Maintenance of Traffic	attenuator	Attenuation Systems	
Maintenance of Traffic	barricade1	Barricade Symbol Type 1 or 2 at 15' spacing	
Maintenance of Traffic	barricade2	Barricade Symbol Type 1 or 2 at 30' Spacing	
Maintenance of Traffic	barricade3	Barricade Symbol Type 1 or 2 at 50' Spacing	
Maintenance of Traffic	barricade4	Barricade Symbol Type 1 or 2 at 100' Spacing	
Maintenance of Traffic	cone1	Cones at 25' Spacing	
Maintenance of Traffic	cone2	Cones at 50' Spacing	
Maintenance of Traffic	drum1	Drums at 15' Spacing	
Maintenance of Traffic	drum2	Drums at 30' Spacing	
Maintenance of Traffic	drum3	Drums at 50' Spacing	
Maintenance of Traffic	drum4	Drums at 100' Spacing	
Maintenance of Traffic	sign1	Traffic Control Sign Symbol at 500' Spacing	
Maintenance of Traffic	sign2	Traffic Control Sign Symbol 400' Spacing	
Maintenance of Traffic	sign3	Traffic Control Sign Symbol 200' Spacing	
Roadway	barrier1	Turbidity Barrier 1 (floating)	

Discipline	Name	Description	Sample Image
Roadway	barrier2	Staked Turbidity Barrier	
Roadway	Cable-Barrier	Cable Barrier	
Roadway	conduit1	Conduit for Utilities and Encasements	
Roadway	conduit2	Conduit & Encasements	
Roadway	directbore	Directional Bore	
Roadway	easement	Easement Lines	
Roadway	exlite_cond1	Conduit Underground (Existing)	
Roadway	exlite_cond2	Conduit Under pavement (Existing)	
Roadway	exlite_cond3	Conduit Jacked (Existing)	
Roadway	exlite_cond4	Conduit Surface Mounted (Existing)	
Roadway	exlite_cond5	Conduit In Box Girder (Existing)	
Roadway	grdbl	Guardrail Double Face	
Roadway	hay_bales	Sediment Barriers – Synthetic Bales	
Roadway	silt_fence	Sediment Barriers – Silt Fence	
Roadway	intcon1	Cable Interconnect	
Roadway	intcon2	Interconnect Cable (Existing)	
Roadway	lite_cond1	Street Lighting Conductors, Conduit Underground	

Discipline	Name	Description	Sample Image
Roadway	lite_cond2	Conduit Under pavement	
Roadway	lite_cond3	Conduit Jacked Under pavement	
Roadway	lite_cond4	Conduit Surface Mounted	
Roadway	lite_cond5	Conduit In Box Girder	
Roadway	PS_PAT2'	Shoulder Paved 2ft	
Roadway	PS_PAT4'	Shoulder Paved 4ft	
Roadway	PS_PAT5'	Shoulder Paved 5ft	
Roadway	PS_PAT6'	Shoulder Paved 6ft	
Roadway	PS_PAT8'	Shoulder Paved 8ft	
Roadway	PS_PAT10'	Shoulder Paved 10ft	
Roadway	PS_PAT12'	Shoulder Paved 12ft	
Roadway	PS_PAT15'	Shoulder Paved 15ft	
Roadway	RockBag	Rock Bag	
Roadway	rpm_skip1	Reflective Pavement Markers Skip Striping Temporary	
Roadway	rpm_solid	Reflective Pavement Markers Solid Striping	
Roadway	rpm10	Reflective Pavement Markers 10' spacing	
Roadway	rpm20	Reflective Pavement Markers 20' spacing	

Discipline	Name	Description	Sample Image
Roadway	rpm30	Reflective Pavement Markers 30' spacing	
Roadway	rpm40	Reflective Pavement Markers 40' spacing	
Roadway	rr1	Railroad	
Roadway	rr2	Railroad	
Roadway	rumble_cont	Rumble Strip Continuous	
Roadway	rumble_skip	Rumble Strip Skip	
Roadway	signal_cable	Signal Cable	
Roadway; Survey & Mapping	grail1	Guardrail Left	
Roadway; Survey & Mapping	grail2	Guardrail Right	
Roadway; Survey & Mapping	laflt	Fence Limited Access Left	
Roadway; Survey & Mapping	lafrt	Fence Limited Access Right	
Roadway; Survey & Mapping	LaneLine_exist	Lane Lines - Existing	
Roadway; Survey & Mapping	wetland	Edge of Mangrove, Wetlands (Marsh or Swamp)	
Roadway; Survey & Mapping	Wetland_ep	Edge of Mangrove, Wetlands (Marsh or Swamp) (Existing)	
Roadway; Survey & Mapping	woodline	Wood Line, Groves & Orchards Boundary, Scattered Trees	
Signing & Pavement Markings	10/10/20 Alt. Skip	Pavement Markings	
Signing & Pavement Markings	crosswalk1	Emphasis Crosswalk 6ft High	

Discipline	Name	Description	Sample Image
Signing & Pavement Markings	crosswalk2	Emphasis Crosswalk 10ft High	
Signing & Pavement Markings	dbl_line	Pavement Marking Traffic Stripe 6" Double Yellow	
Signing & Pavement Markings	Delineators40	40' Spacing	
Signing & Pavement Markings	Delineators300	300' Spacing	
Signing & Pavement Markings	skip 10/30 contrast	Pavement Marking Traffic Stripe Skip 10/30 (Contrast)	
Signing & Pavement Markings	skip/solid	Pavement Markings	
Signing & Pavement Markings	skip 10/10/20contrast	Pavement Markings	
Signing & Pavement Markings	skip10_30	Pavement Marking Traffic Stripe Skip 10/30	
Signing & Pavement Markings	skip 10_30ext	Pavement Marking Traffic Stripe Skip 10/30 (Existing)	
Signing & Pavement Markings	skip 2_4	Pavement Marking Traffic Stripe Skip 2/4	
Signing & Pavement Markings	skip 2_4ext	Pavement Markings Skip 2_4 (Existing)	
Signing & Pavement Markings	skip 3_12 (6")	Pavement Markings Paint Skip 3_12 6"	
Signing & Pavement Markings	skip 3_12ext (6")	Pavement Markings Paint Skip 3_12 6" (Existing)	
Signing & Pavement Markings	skip 3_9 (6")	Pavement Markings Paint Skip 3_9 6"	
Signing & Pavement Markings	skip 3_9ext (6")	Pavement Markings Paint Skip 3_9 6" (Existing)	
Signing & Pavement Markings	skip 6_10	Pavement Markings	

Discipline	Name	Description	Sample Image
Signing & Pavement Markings	skip 6_10ext	Pavement Markings Paint Skip 6_10 8" (Existing)	
Signing & Pavement Markings	stripe06	Pavement Marking Traffic Stripe 6in	
Signing & Pavement Markings	stripe06ext	Pavement Marking Traffic Stripe 6in (Existing)	
Signing & Pavement Markings	stripe08	Pavement Marking Traffic Stripe 8in	
Signing & Pavement Markings	stripe08ext	Pavement Marking Traffic Stripe 8in (Existing)	
Signing & Pavement Markings	stripe12	Pavement Marking Traffic Stripe 12in	
Signing & Pavement Markings	stripe12ext	Pavement Marking Traffic Stripe 12in (Existing)	
Signing & Pavement Markings	stripe16	Pavement Marking Traffic Stripe 16in	
Signing & Pavement Markings	stripe16ext	Pavement Marking Traffic Stripe 16in (Existing)	
Signing & Pavement Markings	stripe18	Pavement Marking Traffic Stripe 18in	
Signing & Pavement Markings	stripe18ext	Pavement Marking Traffic Stripe 18in (Existing)	
Signing & Pavement Markings	stripe24	Pavement Marking Traffic Stripe 24in	
Signing & Pavement Markings	stripe24ext	Pavement Marking Traffic Stripe 24in (Existing)	
Signing & Pavement Markings	Vibratory	Audible and Vibratory Pavement Marking 6in	
Signing & Pavement Markings	yield	Yield Pavement Markings 3' Spacing	
Signing & Pavement Markings	yield1	Yield Pavement Markings 2' Spacing	
Survey & Mapping	Angle	Annotation Angles	

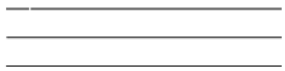
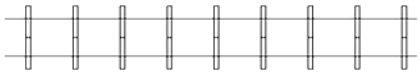
Discipline	Name	Description	Sample Image
Survey & Mapping	ARROW2	Annotation: RW Width	
Survey & Mapping	ArrowPoint	Annotation: Station Offset	
Survey & Mapping	ArrowTie	Annotation: Station Tie	
Survey & Mapping	CLIMIT	City Limit Line	
Survey & Mapping	Climit2	City Limit	
Survey & Mapping	COLINE	County Line	
Survey & Mapping	EECL	Existing Easement Centerline	
Survey & Mapping	EXLA	Limited Access Right of Way (Existing)	
Survey & Mapping	fence1	Fence	
Survey & Mapping	GRTL	Government: Grant Line	
Survey & Mapping	LA	Limited Access Right of Way	
Survey & Mapping	LEADERLT	Annotation: Begin End Leader Left	
Survey & Mapping	LEADERRT	Annotation: Begin End Leader Right	
Survey & Mapping	LICENSE	Easement: License (Agreement)	
Survey & Mapping	LOC	Construction Limits	
Survey & Mapping	NONVH	Non-Vehicular Access	
Survey & Mapping	NSPF	Government: National or State Forest Park Line	

Discipline	Name	Description	Sample Image
Survey & Mapping	NSPF2	Government: National or State Forest Park Line (Hash Only)	
Survey & Mapping	PESMT	Easement Lines Perpetual	
Survey & Mapping	PL	Property Line	
Survey & Mapping	QSEC	Quarter Section Line	
Survey & Mapping	RR	Railroad	
Survey & Mapping	RW	Right of Way Lines - Existing	
Survey & Mapping	SECLIN	Section Lines	
Survey & Mapping	STL	Government: State Line	
Survey & Mapping	SUBDIV	Annotation: Subdivision Boundary Arrows <---->	
Survey & Mapping	SUBDIV2	Annotation: Subdivision Boundary Arrows Double <<---->>	
Survey & Mapping	SUBDIV2LT	Annotation: Subdivision Boundary Arrows Two Left <<---->	
Survey & Mapping	SUBDIV2LTOnly	Annotation: Subdivision Boundary Arrows Two Left Only <<----	
Survey & Mapping	SUBDIV2RT	Annotation: Subdivision Boundary Arrows Two Right <---->>	
Survey & Mapping	SUBDIV2RTOnly	Annotation: Subdivision Boundary Arrows Two Right Only ---->>	
Survey & Mapping	SUBDIVLT	Annotation: Subdivision Boundary Arrows Single Left <----	
Survey & Mapping	SUBDIVRT	Annotation: Subdivision Boundary Arrows Single Right ---->	
Survey & Mapping	TEMPE	Easements Temporary (Existing)	

Discipline	Name	Description	Sample Image
Survey & Mapping	TIITF	Safe Upland – Murphy Reservation	
Survey & Mapping	TWPRGE	Township / Range Lines	
Survey & Mapping	WaterMapBoundary	Major Water Mapping Boundary	
Utilities– existing; Survey & Mapping	e-be	Existing Conductors (Transmission), Buried Power	BE - - - - - - - - - - - - - BE
Utilities - Existing; Survey & Mapping	e-bfo	Existing Fiber Optics Cable (Underground)	BFO - - - - - - - - - - - - - BFO
Utilities - Existing; Survey & Mapping	e-bt	Existing Telephone (Buried), Duct, Toll	BT - - - - - - - - - - - - - BT
Utilities - Existing; Survey & Mapping	e-btv	Existing Cable TV Line (Buried)	BTV - - - - - - - - - - - - - BTV
Utilities - Existing; Survey & Mapping	e-cas	Existing Conduit & Pipe Encasements	CAS - - - - - - - - - - - - - CAS
Utilities - Existing; Survey & Mapping	e-dt	Existing Telephone Buried Duct	DT - - - - - - - - - - - - - DT
Utilities - Existing; Survey & Mapping	e-g	Existing Gas Line	G - - - - - - - - - - - - - G
Utilities - Existing; Survey & Mapping	e-npw	Existing Non-potable Water Line	NPW - - - - - - - - - - - - - NPW
Utilities - Existing; Survey & Mapping	e-oe	Existing Power Lines (Aerial), High Voltage Transmission Lines	OE - - - - - - - - - - - - - OE
Utilities - Existing; Survey & Mapping	e-ofo	Existing Fiber Optics Cable (Overhead)	OFO - - - - - - - - - - - - - OFO
Utilities - Existing; Survey & Mapping	e-ot	Existing Telephone Line (aerial)	OT - - - - - - - - - - - - - OT
Utilities - Existing; Survey & Mapping	e-otv	Existing Cable TV Line (Aerial)	OTV - - - - - - - - - - - - - OTV
Utilities - Existing; Survey & Mapping	e-pet	Existing Oil Line	PET - - - - - - - - - - - - - PET
Utilities - Existing; Survey & Mapping	e-rd	Existing Roof Drain	RD - - - - - - - - - - - - - RD

Discipline	Name	Description	Sample Image
Utilities - Existing; Survey & Mapping	e-s	Existing Force Main, Sanitary Sewer	S - - - - - - - - - - - - - S
Utilities - Existing; Survey & Mapping	e-stm	Existing Steam Pipe	STM - - - - - - - - - - - - - STM
Utilities - Existing; Survey & Mapping	e-w	Existing Water Line	W - - - - - - - - - - - - - W
Utilities -Proposed	be	Proposed Electrical Transmission Conductors Power (Buried)	BE BE BE BE BE
Utilities -Proposed	bfo	Proposed Fiber Optics Cable (Buried)	BFO BFO BFO BFO
Utilities -Proposed	bt	Proposed Telephone (Buried)	BT BT BT BT BT
Utilities -Proposed	btv	Proposed Cable TV Line (Buried)	BTV BTV BTV BTV
Utilities -Proposed	cas	Proposed Casing	CAS CAS CAS CAS
Utilities -Proposed	dt	Telephone Buried Duct	DT DT DT DT DT
Utilities -Proposed	g	Proposed Gas	G G G G G G G G G G G
Utilities -Proposed	npw	Proposed Water Line Non Potable, Sanitary Sewer Effluent NPW	NPW NPW NPW NPW
Utilities -Proposed	oe	Proposed Transmission Conductors High voltage Line (Overhead)	OE OE OE OE OE
Utilities -Proposed	ofo	Fiber Optics Cable (Aerial)	OFO OFO OFO OFO
Utilities -Proposed	ot	Cable TV Line (Aerial)	OT OT OT OT OT
Utilities -Proposed	otv	Proposed Overhead Television	OTV OTV OTV OTV
Utilities -Proposed	pet	Proposed Oil Pipeline, Petroleum	PET PET PET PET
Utilities -Proposed	rd	Proposed Roof Drain	RD RD RD RD RD

Discipline	Name	Description	Sample Image
Utilities -Proposed	s	Proposed Sanitary Sewer, Force Main	S S S S S S S S S S S
Utilities -Proposed	stm	Proposed Steam Pipes	STM STM STM STM
Utilities -Proposed	w	Proposed Water	W W W W W W W W W W W
	(Border)	Default MicroStation	
	(Center)	Default MicroStation	
	(Dashdot)	Default MicroStation	
	(Dashed)	Default MicroStation	
	(Divide)	Default MicroStation	
	(Dot)	Default MicroStation	
	(Hidden)	Default MicroStation	
	(Phantom)	Default MicroStation	
	{-E-}	Default MicroStation - Electric Line	E E
	{Arrow}	Default MicroStation	
	{Batten}	Default MicroStation – Batt Insulation	
	{Cable/Tele}	Default MicroStation – Cable/Telephone	C T C T C
	{Chain Double-Dash}	Default MicroStation	
	{Curtain}	Glare Screen & Blinds Curtain Wall	
	{Dashed Triple-Dot}	Default MicroStation	
	{Diamond}	Default MicroStation	
	{Gas Line}	Default MicroStation	
	{Ground Line}	Ground Lines (Existing)	

Discipline	Name	Description	Sample Image
	{Half Dash}	Default MicroStation	
	{Leader Line}	Default MicroStation	
	{Offset Lines}	Default MicroStation	
	{Origin Line}	Default MicroStation	
	{Rail Road}	Default MicroStation	
	{Tapered Dash}	Default MicroStation	
	{Tree Line}	Default MicroStation	
	{Wide Dash}	Default MicroStation	

Note *Some of the custom line types have not been developed in the FDOT AutoCAD Civil 3D resources (FDOT.lin)* file. *The reason for this is the appearance of those lines can be created with the FDOT Pavement Marking tool and the FDOT Place Block Group tool for AutoCAD Civil 3D.*

3.7 PRINTER DRIVER CONFIGURATION FILES

The FDOT CADD Software supplies MicroStation print configuration files to generate prints to scale using the sheet cells (also provided with the FDOT CADD Software) on specific printers. All print configuration files have raster printing enabled. These print configuration files are examples due to various site-specific configurations and the types of printers encountered.

The table below lists the print configuration file names and the type of printer on which it was developed and tested. Each printer has its own footprint, or area on the paper on which it can print. For this reason, if a printer is not listed below and is used to generate prints, the print configuration file may require modification by the user.

PRINT CONFIGURATION FILE	PRINTER	DESCRIPTION
36x24.pro	N/A	Controls postscript image/print output
Color.plt		Color 11x17 (Raster Capable) Uses FDOT.TBL pen table and PSCRIPT.PRO prolog file.
Color_FDOTPDF.pltcfg	N/A	Creates a color PDF file. (Raster Capable) Uses FDOT.TBL pen table.
Color_Keysheet.pltcfg	ANY	To be used when printing key sheets containing maps with filled shapes.
FDOT.tbl	N/A	Pen table that also enters username, date time, and sheet border path.
FDOT_GrayExisting.tbl	N\A	Pen table that enters username, date time, sheet border path, and applies gray scale to files named like: TOPO*, UTEX*, and DREX*
FDOTbatchplt.spc	N/A	Batch print specification file customized for FDOT print configuration files. (Only used with old Batch Print dialog). This print configuration file is being replaced with Print Styles in MicroStation V8i)
FDOTPDF.plt	N/A	Creates a .PDF file. (Raster Capable) Uses FDOT.TBL pen table.
FDOTprinter.plt	Windows Printer	Copy of Bentley's PRINTER.PLT with weights and styles set to FDOT standards. Uses FDOT.TBL pen table.
HP1055.plt	HP 1055 CM	Monochrome 36x24 (Raster Capable) Uses 36x24.PRO prolog file.
HP1055C.plt	HP 1055 CM	Color 36x24 (Raster Capable) Uses 36x24.PRO prolog file.
HP5000.plt	HP 5000 GN	Monochrome 11x17 (Raster Capable) Uses FDOT.TBL pen table and HPTTABL1.PRO prolog file.
HP5000Legal.plt	HP 5000 GN	Monochrome 8.5x14 (Raster Capable) Uses FDOT.TBL pen table and HPTLEGAL.PRO prolog file.
HP5000Letter.plt	HP 5000 GN	Monochrome 8.5x11 (Raster Capable) Uses FDOT.TBL pen table and HPTLETTER.PRO prolog file.
hpglrtl.pltcfg	Large Format	Intended for use when printing large format monochrome sheets. (Raster Capable)
hpglrtl_c.pltcfg	Large Format	Intended for use when printing large format color sheets. (Raster Capable)
PostScript.plt	N/A	Creates postscript image file. (Raster Capable) Uses FDOT.TBL pen table and HPTTABL1.PRO prolog file.
Postscript36x24.plt	N/A	Creates postscript image file. (Raster Capable) Uses FDOT.TBL pen table and 36x24.PRO prolog file.
pscript.pro	N/A	Controls postscript image/print output
XeroxN40.plt	XEROX Docuprint N4025	Monochrome 11x17 (Raster Capable) Uses FDOT.TBL pen table and HPTTABL1.PRO prolog file.

3.8 CELL / BLOCK LIBRARIES

Cells and Blocks are frequently used as repeated components of drawings, complex symbols, notations, details, or parts that can be inserted into one or many drawings. Cells are defined and stored in design files called a Cell Libraries (Blocks in drawing files are called "Block Libraries"). Cell Libraries are DGN files, but with a *.cel* extension (Block libraries have a *.DWG* extension). Cells have been grouped by disciplinary usage into the standard FDOT Cell/Block Libraries delivered with the FDOT CADD software.

The Standard FDOT Cell/Block Libraries are listed in the following table:

MicroStation CELL LIBRARY	AutoCAD BLOCK LIBRARY	DESCRIPTION
alphabet.cel	*(Not Applicable)*	Alphabet & Numbers
arrows.cel	arrows.dwg	Distance & GuidSIGN Arrows
DrainXS.cel	DrainXS.dwg	Drainage Structure Cross Sections
drplan.cel	drplan.dwg	Drainage Proposed
drplan_ex.cel	drplan_ex.dwg	Drainage Existing
ftpsigns.cel	ftpsigns.dwg	Florida Traffic Plans Signs
geotech.cel	geotech.dwg	Geotechnical
its.cel	its.dwg	Intelligent Transportation Systems Signs
Landscape.cel	Landscape.dwg	Landscape
Lighting.cel	Lighting.dwg	Lighting
Mutcd.cel	mutcd.dwg	Manual on Uniform Traffic Control Devices
PavementMarkings.cel	pavementMarkings.dwg	Pavement Markings
Photogrammetry.cel	Photo.dwg	Photogrammetry
Roadway.cel	Roadway.dwg	Roadway
row.cel	ROW.dwg	Right of Way
Seals.cel	Seals.dwg	Professional Seals for Digital Signatories
Signalization.cel	Signalization.dwg	Signalization
SignalPoles.cel	SignalPoles.dwg	Signal Poles
survey.cel	survey.dwg	Survey Symbols for Right of Way
syeng.cel	syeng.dwg	Survey Symbols for Roadway
TollPlaza.cel	TollPlaza.dwg	Toll Plaza Signs
tplabels.cel	tplabels.dwg	Traffic Plans Labels
TrafficControl.cel	TrafficControl.dwg	Traffic Control
ttf_v8semi-standards.cel	Semi-Standards.dwg	Structures Semi-standards
ttf_v8structures.cel	Structures.dwg	Structures
TypicalSection.cel	TypicalSection. dwg	Typical Sections
utilities.cel	utilities.dwg	Utilities
v8structurespatterns.cel	*(Not Applicable)*	Patterns for Structures
XMSuperSection.cel	*(Not Applicable)*	Structures for Super sections
xsections.cel	*(Not Applicable)*	Cross Sections

3.9 TEXT

FDOT delivers a set of True Type Font (TTF) files to ensure text uniformity between applications supporting TTF fonts and legibility of FDOT CADD drawings. The FDOT CADD Software delivers a set of proportional and uniformed spaced True Type Font files using vertical and slanted characters, the detail of which is reflected in the table below. These font files have additional characters added in the gaps of the Unicode definition so engineering symbols like: ℄, ⊕, ⌖, ⌖, ▼, ⅓, ⅔, etcetera, and fraction combinations are supported in the fonts directly. The MicroStation based *zdotfont.rsc* and *structuresfont.rsc* resource files are also delivered with the FDOT CADD software to maintain legibility of legacy files predating the use of True Type fonts.

MicroStation can utilize fonts contained within MicroStation RSC, AutoCAD SHX, and True Type Font files. MicroStation will read multiple font resource files according to the paths set by the MS_FONTPATH configuration variable in the selected workspace, and True Types Fonts registered with the Windows operating system. Within a MicroStation design file, font resources are compiled into a list of fonts from all the resource files that are found. The *MstnFontConfig.xml* file located by the MS_FONTCONFIGFILE variable determines if duplicate font names are displayed in font selection and lists how to resolve duplicate font names.

3.9.1 FDOT TRUE TYPE FONTS (TTF)

A single TTF file may contain thousands of characters. The FDOT TTF files contain special characters used by designers that are not normally found in standard publishing fonts (*see the Unicode mapping standard here: http://www.unicode.org/charts/*). If the FDOT TTF files are registered with the Windows operating system, the fonts may be used in any standard Windows program like Word, Excel, or other applications supporting TTF.

Font	Description
FDOT	Standard slanted proportional spaced font used for most annotations
FDOT Bold	Bold version of the FDOT font
FDOT Heavy	Heavier Bold version of the FDOT font
FDOT Imprint	Chiseled font used mainly within the FDOT sheet border
FDOT Imprint Bold	Bold version of FDOTImprint font
FDOT Mono	Standard mono-spaced font used mainly in tables to keep characters aligned vertically
FDOT Mono Bold	Bold version of FDOTMono font
FDOT Mono Heavy	Heavier Bold version of FDOTMono font
FDOT Vert	Non-slanted proportional spaced version of FDOT font used mainly by Right Of Way discipline
FDOT Vert Bold	Bold version of FDOTVert font used mainly by ROW
FDOT Vert Heavy	Heavier Bold version of FDOTVert font used mainly by ROW
FDOT Vert Mono	Mono-spaced version for FDOTVert font used mainly in tables used mainly by ROW
FDOT Vert Mono Bold	Bold version of FDOTVertMono font used mainly by ROW
FDOT Vert Mono Heavy	Heavier Bold version of FDOTVertMono font used mainly by ROW

3.9.2 LEGACY MICROSTATION FONTS

The fonts within *zdotfont.rsc* are no longer in use, but must be maintained for backward compatibility purposes.

FDOT Font resource file - Zdotfont.rsc:

Font	Description
0	(Fast font) Simple font - Upper and Lower Case, Fractions
2	Wide font - Upper Case (used by survey & mapping)
3	Narrow font - Upper and Lower Case (used by survey & mapping)
4	Italics font - Upper and Lower Case (used by survey & mapping)
5	Script font - Upper and Lower Case (used by survey & mapping)
6	Simple Block font - Upper Case (used by survey & mapping)
7	Filled font - Upper Case (used by survey & mapping)
8	Filled font - Lower Case (no numbers - used by survey & mapping)
9	Filled font - Upper and Lower Case (used by survey & mapping)
10	Simple font - Upper and Lower Case, Fractions (used by survey & mapping)
11	Slanted font - Upper and Lower Case (used by survey & mapping)
12	Filled font - Upper Case (no numbers - used by survey & mapping)
13	Outline Block font - Upper Case (used by survey & mapping)
14	Script font - Upper and Lower Case (used by survey & mapping)
15	Old English style font - Upper and Lower Case (used by survey & mapping)
16	Upper Case and Engineering Symbols
17	Arrow and Miscellaneous Symbols
23	Slanted Simple font - Upper and Lower Case, Fractions
25	Standard font - Upper and Lower Case, Fractions (English projects prior to 2000 - No longer used)
26	Greek Symbols
41	Hand lettering font - Upper Case
42	Block outline font - Upper Case for Architecture plans
48	Slanted font (proportional spacing) Upper and Lower Case, fractions (the new English font for Design and Traffic Plans for labels)
49	Slanted font (proportional spacing) Upper and Lower Case, fractions (the new English font for Design and Traffic Plans for notes)
58	Vertical font (proportional spacing) Upper and Lower Case, fractions (used by R/W Engineering and Mapping for labels in English projects)
59	Slanted font (proportional spacing) Upper and Lower Case, fractions (used by R/W Engineering and Mapping for labels in Metric projects)
67	Provided for backward compatibility, no longer used.
68	Slanted font (proportional spacing) Upper and Lower Case, fractions (used by Structures for labels)

Font	Description
69	Slanted font (proportional spacing) Upper and Lower Case, fractions (used by Structures for notes)
70	Standard font - Upper and Lower Case, fractions (used in the Roadway and Traffic Design Standards)
71	Slanted font - Upper and Lower Case, fractions
72	Simple font - Upper and Lower Case, fractions
77	Filled font - Upper and Lower Case used for the titles in Sheet borders
78	Slanted font (proportional spacing) Upper and Lower Case (the Metric font for Design and Traffic Plans for labels)
79	Slanted font (proportional spacing) Upper and Lower Case (the Metric font for Design and Traffic Plans for notes)
80	True Type font Arial
81	True Type font Arial Italics
82	True Type font Courier
83	True Type font Courier Italics
84	True Type font Engravers Gothic
85	True Type font Photina
86	True Type font CG Times
87	True Type font Swis721
88	True Type font Times New Roman
89	True Type font Times New Roman Italics
90	True Type font Times New Roman Bold Italics
91	True Type font Garait
92	True Type font Garamond
93	True Type font Garamond Bold
94	True Type Greek Alphabet and Symbol
95	True Type Wingding
96	True Type WPMathA
97	True Type WPMathB
98	Character symbol text from cross section files
99	Block filled fonts - Upper and Lower Case for signs
100	Symbol arrows
101	Symbol fonts for cross section files
102	Topography symbol fonts (used by Surveying and Mapping)
126	Topography symbol fonts (used by Surveying and Mapping)

3.9.3 SIZE AND SPACING

FDOT has slected standard text sizes to ensure uniformity and legibility on FDOT Cadd drawings. The appropriate text size is dependent on the plot scale selected. Since the most important issue with text is legibility, font, weight and text size may vary as necessary. Text line spacing should be, on average, three-fourths of the text height.

FDOT CADD Software provides several Text Levels and Text Styles for designers to choose as guides or starting points to create text to fit their needs. Text Levels can be indentified by the naming convention beginning with "Text".

The following table should be used as a guideline for standard text size definitions for plans at given plot scales.

English Text for B-Size Plans (11" x 17" paper)

English (Scale)	1"=1'	1"=20'	1"=40'	1"=50'	1"=100'	1"=200'	1"=400'	1"=500'
Minimum	0.06	1.2	2.4	3	6	12	24	30
Desired	0.07	1.4	2.8	3.5	7	14	28	35
Maximum	0.1	2.0	4	5	10	20	40	50

Note *For Right of Way Mapping Standard Text Sizes, See Chapter 9.*

THIS PAGE LEFT BLANK INTENTIONALLY.

Table of Contents

CHAPTER 4 - CADD STANDARD RULES 4-1

4.1 STANDARD RULES 4-1
4.2 STANDARD RULE TABLES 4-2
4.2.1 Alignment Design - ALGNRD 4-2
4.2.2 AutoTURN - AUTOSP 4-5
4.2.3 Clip Border - CLIPRD 4-7
4.2.4 Drainage Detail - DRDTRD 4-10
4.2.5 Existing Drainage - DREXRD 4-16
4.2.6 Drainage Map - DRMPRD 4-18
4.2.7 Drainage Proposed - DRPRRD 4-24
4.2.8 Drainage Cross Section - DRXSRD 4-30
4.2.9 Landscaping Design - DSGNLD 4-38
4.2.10 Lighting Design - DSGNLT 4-41
4.2.11 RoadwayDesign - DSGNRD 4-44
4.2.12 Signalization Design - DSGNSG 4-50
4.2.13 Signing and Pavement Marking Design - DSGNSP 4-57
4.2.14 Digital Terrain Model - DTMRD 4-63
4.2.15 Geotechnical - GEOTECH 4-65
4.2.16 GuidSIGN - GSWKSP 4-68
4.2.17 Irrigation - IRRGLD 4-71
4.2.18 Intelligent Transportation System - ITSSP 4-73
4.2.19 Key Sheets - KEYSHT 4-82
4.2.20 Mast Arm Details - MRARSP 4-86
4.2.21 All Levels and Symbology Accepted - OPEN 4-91
4.2.22 Pond Cross Section - PDXSRD 4-91
4.2.23 Roadway Plan Sheet - PLANRD 4-99
4.2.24 Roadway Plan/Profile Sheet - PLPRRD 4-103
4.2.25 Quantity Computation - QTDSRD 4-116
4.2.26 Roadway Cross Section - RDXSRD 4-122
4.2.27 Signing and Pavement Cross Section - RDXSSP 4-131
4.2.28 Right of Way Detail for Roadway – RWDTRD 4-142
4.2.29 Right of Way – RWENG10 4-145
4.2.30 Traffic Control - TCDSRD 4-152
4.2.31 Existing Topography for Roadway - TOPORD 4-161
4.2.32 Existing Topography for Right of Way – TOPORW 4-166
4.2.33 Typical Section Data – TYPDRD 4-169
4.2.34 Typical Section Sheets - TYPSRD 4-180
4.2.35 Utilities Adjustment - UTADRD 4-191
4.2.36 Utilities Existing - UTEXRD 4-199
4.2.37 Utilities Proposed - UTPRRD 4-203

THIS PAGE LEFT BLANK INTENTIONALLY.

Chapter 4 - CADD STANDARD RULES

CADD Production Criteria Handbook

4.1 STANDARD RULES

Symbology Standards for Florida Department of Transportation (FDOT) Projects prescribe standard Level/Layer Names with specific ByLevel Color, Style and Weight symbologies for graphics elements. These levels are grouped into specific "Rules" which are associated to each standard FDOT graphics filename as it relates to a given discipline or purpose. This facilitates Quality Control (QC) checks for compliancy of design file Computer Aided Design and Drafting (CADD) elements to the specification found in the QC "Rule." Therefore, File-Level-Symbology standards are defined by "Rule".

Note *The individual Discipline chapters (Chapters 9-24) provide complete Standard File Name listings with associated Standard Rule applicable to each respective Discipline.*

FDOT Standard Rules & Descriptions:

Rule Name	Rule Description
algnrd	Alignment Design
autosp	AutoTURN
cliprd	Clip Border
drdtrd	Drainage Detail
drexrd	Drainage Existing
drmprd	Drainage Mapping
drprrd	Drainage Proposed
drxsrd	Drainage Cross Section
dsgnld	Landscaping Design
dsgnlt	Lighting Design
dsgnrd	Roadway Design
dsgnsg	Signalization Design
dsgnsp	Signing & Pavement Marking Design
dtmrd	Digital Terrain Model
geotech	Geotechnical
gswksp	GuidSIGN
irrgld	Irrigation
itssp	Intelligent Transportation System
keysht	Key Sheets

Rule Name	Rule Description
msarsp	Mast Arm Details
open	All Levels and Symbology Accepted
pdxsrd	Pond Cross Section
planrd	Roadway Plan Sheet
plprrd	Roadway Plan/Profile Sheet
qtdsrd	Quantity Computation
rdxsrd	Roadway Cross Section
rdxssp	Signing & Pavement Cross Section
rwdtrd	Right of Way Detail for Roadway
rweng10	Right of Way
spst10	Structural
tcdsrd	Traffic Control
topord	Existing Topography for Roadway
toporw	Existing Topography for Right of Way
typdrd	Typical Section Data
typsrd	Typical Section Sheets
utadrd	Utilities Adjustment
utexrd	Utilities Existing
utprrd	Utilities Proposed

4.2 STANDARD RULE TABLES

FDOT establishes CADD Standard symbology levels and groups them into Standard Rules used to check compliancy of all FDOT project design files. In the tables to follow, each Standard Rule is documented and the Standard Symbology Levels found within each one are defined. These standards are derived from a master standards file called *MasterStandards.xlsx that is* delivered with the FDOT CADD Software.

Note *For Structures' Rule (spst10) table, see CPCH Chapter 18.*

Each standard level is classified as Critical or Non-Critical. Critical Levels are those levels that downstream applications rely upon or other disciplines utilize. In the tables to follow, the Critical Level column allows for:

- ***X*** - Denotes Critical Levels where all graphical element symbology (color, line style, & line weight), in addition to the level name, will be checked for By-Level settings when the Quality Control (QC) process is run.
- ***<empty>*** - Denotes Non-Critical Levels where ONLY level name is checked for By-Level setting when the Quality Control (QC) process is run.
- ***3 digit string*** – Denotes whether *to check* (1) and/or *not to check* (0) symbology (Color, Linestyle, Weight)

  (*Color* – 1st digit, *Linestyle* – 2nd digit, *Weight* – 3rd digit)

  Example: 100 – denotes check only color (common for structures files)

  010 – denotes check only linestyle

  101 – denotes check only color & weight

4.2.1 ALIGNMENT DESIGN - ALGNRD

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	ByLevel Weight
	algnrd	ActivePointCell_dp	Active Point Cell	4	0	10
	algnrd	AdhocPoint_dp	Adhoc Points Placed by SheetInfo	0	4	0
	algnrd	BaselineSurvey	Baseline Survey	0	0	2
	algnrd	CLConst_dp	Center Line of Construction	0	0	2
	algnrd	ClipBorder_dp	CLIP Border	3	0	0
	algnrd	ClipDrawingBound_dp	CLIP Drawing Boundary	3	3	0
	algnrd	COGO_dp	COGO Information	3	0	1
	algnrd	CurveData_dp	Curve & Coordinate Data Elements incl PC, PT, PI symbols	4	0	2
	algnrd	CurveDataLabel_dp	Curve Data Labels PC,PI, PT	0	0	2
	algnrd	DimLines_dp	Dimension Lines, Corresponding Terminators, Equation Lines	0	0	1

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	ByLevel Weight
X	algnrd	EaseLicLine	Easement License Agreement Line	5	6	0
	algnrd	GridMaj_dp	Grid Lines Major in Profile and Cross Section	3	0	1
	algnrd	GridMin_dp	Grid Lines Minor in Profile and Cross Section	0	0	0
	algnrd	GridMinSub_dp	Grid Lines Minor Sub in Cross Section Sheets	20	0	0
	algnrd	LeaderLine_dp	Leader Line and terminator with Text	0	0	1
	algnrd	Logo_dp	Consultant Engineer of Record Logo	0	0	1
	algnrd	MatchLines_dp	Match Lines with Text, Arrows for Station Notations	1	0	2
	algnrd	ImageAttachment_dp	Image Attachmentst	0	0	0
	algnrd	Miscellaneous0	Undefined proposed item - co blue wt 0	1	0	0
	algnrd	Miscellaneous1	Undefined proposed item - co blue wt 1	1	0	1
	algnrd	Miscellaneous2	Undefined proposed item - co blue wt 2	1	0	2
	algnrd	Miscellaneous3	Undefined proposed item - co green wt 0	2	0	0
	algnrd	Miscellaneous4	Undefined proposed item - co green wt 1	2	0	1
	algnrd	Miscellaneous5	Undefined proposed item - co green wt 2	2	0	2
	algnrd	Miscellaneous6	Undefined proposed item - co red wt 0	3	0	0
	algnrd	Miscellaneous7	Undefined proposed item - co red wt 1	3	0	1
	algnrd	Miscellaneous8	Undefined proposed item - co red wt 2	3	0	2
	algnrd	Miscellaneous9	Undefined proposed item - co red wt 3	3	0	3
	algnrd	NonPlottingEle_dp	Non plotting items such as construction elements and type 66 elements	4	0	0
	algnrd	NorthArw_dp	North Arrows	0	0	2
	algnrd	PayItem_dp	Pay Item Number Label Elements	4	0	2
X	algnrd	PlotBorder_dp	Plot Border	3	0	0
	algnrd	PointLocator_ep	Point Locator Symbol	4	0	0
	algnrd	ReferencePt_dp	Survey and Construction Reference Point Details and Elements	4	0	2
	algnrd	RoadwayMisc	Roadway Miscellaneous Items	4	0	2
	algnrd	Scale_dp	Bar Scale, Scale Label Elements	0	0	2
	algnrd	Scratch1_dp	A scratch level for temporary or informational items	4	0	0
	algnrd	Scratch2_dp	A scratch level for temporary or informational items	5	0	0
	algnrd	ScratchEle_dp	Level for Draft Elements, Temporary Elements, Etc. Do Not Plot	3	0	0
	algnrd	ScratchEle2_dp	Level for Draft Elements, Temporary Elements, Etc. Do Not Plot	4	0	0
	algnrd	SheetBorder_dp	Sheet Border	1	0	4
	algnrd	SheetLines_dp	Sheet Lines	1	0	2
	algnrd	SheetLinesMisc1_dp	Sheet Lines	1	0	0
	algnrd	SheetLinesMisc2_dp	Sheet Lines	2	0	2

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	ByLevel Weight
	algnrd	SheetLinesMisc3_dp	Sheet Lines	3	0	2
	algnrd	SheetLinesMisc4_dp	Sheet Lines	4	0	2
	algnrd	SpecialDetails	Special Details	6	0	1
	algnrd	StationTicL_dp	Station Tic Marks (Large) and Text	0	0	2
	algnrd	StationTicS_dp	Station Tic Marks (Small) and Text	0	0	2
	algnrd	SumBoxBorder_dp	Summary Boxes Borders	4	0	3
	algnrd	SumBoxLines_dp	Summary Boxes Lines and Miscellaneous Items	4	0	1
	algnrd	SumBoxLinesMin_dp	Summary Boxes Lines Minor Line and Miscellaneous Items	4	0	0
	algnrd	TextBLStation	Text - B/L Station and Tics	0	0	2
	algnrd	TextConstEle	Text - Construction Element	0	0	1
	algnrd	TextCurveData	Text - Curve Data Note	0	0	2
	algnrd	TextDetails	Text - Detail Notes	4	0	2
	algnrd	TextElevLabel	Elevation Labels	4	0	0
	algnrd	TextLabel	Text - Label	0	0	2
	algnrd	TextLandscape	Text - Landscape Labels	0	0	1
	algnrd	TextMajor	Text - Major	0	0	5
	algnrd	TextMinor	Text - Minor	0	0	0
	algnrd	TextMisc	Text - Miscellaneous	0	0	1
	algnrd	TextNotes	Text - Notes	4	0	1
	algnrd	TextProfLabel	Text - Profile, Horizontal and Vertical Axis Labels	0	0	2
	algnrd	TextProjLabel	Text - Begin and End Project label with leader lines	1	0	2
	algnrd	TextPtLabel	Point Labels	4	0	0
	algnrd	TextShtNo	Text - Sheet Number	0	0	2
	algnrd	TextSurveyLabel	Survey Text Labels	0	0	0
	algnrd	TextTables	Text - Keysheet Indexes and Table Data	4	0	2
	algnrd	TextTitle	Text - Title	0	0	3
	algnrd	TextXSElev	Text - Cross Section Elevations	2	0	1
	algnrd	XSCell	GEOPAK Cross Section Cell and Profile Cell	8	0	1
	algnrd	Viewport	Viewport (For AutoCAD Use)	3	0	0
	algnrd	Xreference_dp	Reference Files (For AutoCAD Use)	0	0	1
	algnrd	Xreference01_dp	Reference Files (For AutoCAD Use)	0	0	1
	algnrd	Xreference02_dp	Reference Files (For AutoCAD Use)	0	0	1
	algnrd	Xreference03_dp	Reference Files (For AutoCAD Use)	0	0	1
	algnrd	Xreference04_dp	Reference Files (For AutoCAD Use)	0	0	1

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	ByLevel Weight
	algnrd	Xreference05_dp	Reference Files (For AutoCAD Use)	0	0	1
	algnrd	Xreference06_dp	Reference Files (For AutoCAD Use)	0	0	1
	algnrd	Xreference07_dp	Reference Files (For AutoCAD Use)	0	0	1
	algnrd	Xreference08_dp	Reference Files (For AutoCAD Use)	0	0	1
	algnrd	Xreference09_dp	Reference Files (For AutoCAD Use)	0	0	1
	algnrd	Xreference10_dp	Reference Files (For AutoCAD Use)	0	0	1

4.2.2 AUTOTURN - AUTOSP

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
	autosp	ActivePointCell_dp	Active Point Cell	4	0	10
	autosp	AdhocPoint_dp	Adhoc Points Placed by SheetInfo	0	4	0
	autosp	ATDims	AutoTurn Profile Dimensions, Tire Envelope	1	0	1
	autosp	ATText	AutoTurn Profile and TT Dimensions, Annotation, TT Overhang	0	0	1
	autosp	ATVHP	AutoTurn Temporary Profile for Building Custom Type	1	0	1
	autosp	COGO_dp	COGO Information	3	0	1
	autosp	DimLines_dp	Dimension Lines, Corresponding Terminators, Equation Lines	0	0	1
X	autosp	EaseLicLine	Easement License Agreement Line	5	6	0
	autosp	GridMaj_dp	Grid Lines Major in Profile and Cross Section	3	0	1
	autosp	GridMin_dp	Grid Lines Minor in Profile and Cross Section	0	0	0
	autosp	GridMinSub_dp	Grid Lines Minor Sub in Cross Section Sheets	20	0	0
	autosp	ImageAttachment_dp	Image Attachmentst	0	0	0
	autosp	LeaderLine_dp	Leader Line and terminator with Text	0	0	1
	autosp	Logo_dp	Consultant Engineer of Record Logo	0	0	1
	autosp	MatchLines_dp	Match Lines with Text, Arrows for Station Notations	1	0	2
	autosp	Miscellaneous0	Undefined proposed item - co blue wt 0	1	0	0
	autosp	Miscellaneous1	Undefined proposed item - co blue wt 1	1	0	1
	autosp	Miscellaneous2	Undefined proposed item - co blue wt 2	1	0	2
	autosp	Miscellaneous3	Undefined proposed item - co green wt 0	2	0	0
	autosp	Miscellaneous4	Undefined proposed item - co green wt 1	2	0	1
	autosp	Miscellaneous5	Undefined proposed item - co green wt 2	2	0	2
	autosp	Miscellaneous6	Undefined proposed item - co red wt 0	3	0	0
	autosp	Miscellaneous7	Undefined proposed item - co red wt 1	3	0	1

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
	autosp	Miscellaneous8	Undefined proposed item - co red wt 2	3	0	2
	autosp	Miscellaneous9	Undefined proposed item - co red wt 3	3	0	3
	autosp	NonPlottingEle_dp	Non plotting items such as construction elements and type 66 elements	4	0	0
	autosp	PayItem_dp	Pay Item Number Label Elements	4	0	2
X	autosp	PlotBorder_dp	Plot Border	3	0	0
	autosp	PointLocator_ep	Point Locator Symbol	4	0	0
	autosp	ReferencePt_dp	Survey and Construction Reference Point Details and Elements	4	0	2
	autosp	RoadwayMisc	Roadway Miscellaneous Items	4	0	2
	autosp	Scratch1_dp	A scratch level for temporary or informational items	4	0	0
	autosp	Scratch2_dp	A scratch level for temporary or informational items	5	0	0
	autosp	ScratchEle_dp	Level for Draft Elements, Temporary Elements, Etc. Do Not Plot	3	0	0
	autosp	ScratchEle2_dp	Level for Draft Elements, Temporary Elements, Etc. Do Not Plot	4	0	0
	autosp	SheetBorder_dp	Sheet Border	1	0	4
	autosp	SheetLines_dp	Sheet Lines	1	0	2
	autosp	SheetLinesMisc1_dp	Sheet Lines	1	0	0
	autosp	SheetLinesMisc2_dp	Sheet Lines	2	0	2
	autosp	SheetLinesMisc3_dp	Sheet Lines	3	0	2
	autosp	SheetLinesMisc4_dp	Sheet Lines	4	0	2
	autosp	SpecialDetails	Special Details	6	0	1
	autosp	SumBoxBorder_dp	Summary Boxes Borders	4	0	3
	autosp	SumBoxLines_dp	Summary Boxes Lines and Miscellaneous Items	4	0	1
	autosp	SumBoxLinesMin_dp	Summary Boxes Lines Minor Line and Miscellaneous Items	4	0	0
	autosp	TextBLStation	Text - B/L Station and Tics	0	0	2
	autosp	TextConstEle	Text - Construction Element	0	0	1
	autosp	TextCurveData	Text - Curve Data Note	0	0	2
	autosp	TextDetails	Text - Detail Notes	4	0	2
	autosp	TextElevLabel	Elevation Labels	4	0	0
	autosp	TextLabel	Text - Label	0	0	2
	autosp	TextLandscape	Text - Landscape Labels	0	0	1
	autosp	TextMinor	Text - Minor	0	0	0
	autosp	TextMisc	Text - Miscellaneous	0	0	1
	autosp	TextNotes	Text - Notes	4	0	1
	autosp	TextProfLabel	Text - Profile, Horizontal and Vertical Axis Labels	0	0	2
	autosp	TextProjLabel	Text - Begin and End Project label with leader lines	1	0	2
	autosp	TextPtLabel	Point Labels	4	0	0

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
	autosp	TextShtNo	Text - Sheet Number	0	0	2
	autosp	TextSurveyLabel	Survey Text Labels	0	0	0
	autosp	TextTables	Text - Keysheet Indexes and Table Data	4	0	2
	autosp	TextTitle	Text - Title	0	0	3
	autosp	TextXSElev	Text - Cross Section Elevations	2	0	1
	autosp	TurningEle_dp	Miscellaneous Turning Radius Elements	4	0	1
	autosp	TurningRadius_dp	Turning Radius Line	3	3	1
	autosp	Vehicle	Vehicle for Calculating Turning Radius	7	0	2
	autosp	XSCell	GEOPAK Cross Section Cell and Profile Cell	8	0	1
	autosp	XSPt_ep	Cross Section Point, Station	2	1	0
	autosp	Viewport	Viewport (For AutoCAD Use)	3	0	0
	autosp	Xreference_dp	Reference Files (For AutoCAD Use)	0	0	1
	autosp	Xreference01_dp	Reference Files (For AutoCAD Use)	0	0	1
	autosp	Xreference02_dp	Reference Files (For AutoCAD Use)	0	0	1
	autosp	Xreference03_dp	Reference Files (For AutoCAD Use)	0	0	1
	autosp	Xreference04_dp	Reference Files (For AutoCAD Use)	0	0	1
	autosp	Xreference05_dp	Reference Files (For AutoCAD Use)	0	0	1
	autosp	Xreference06_dp	Reference Files (For AutoCAD Use)	0	0	1
	autosp	Xreference07_dp	Reference Files (For AutoCAD Use)	0	0	1
	autosp	Xreference08_dp	Reference Files (For AutoCAD Use)	0	0	1
	autosp	Xreference09_dp	Reference Files (For AutoCAD Use)	0	0	1
	autosp	Xreference10_dp	Reference Files (For AutoCAD Use)	0	0	1

4.2.3 CLIP BORDER - CLIPRD

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
	cliprd	ActivePointCell_dp	Active Point Cell	4	0	10
	cliprd	AdhocPoint_dp	Adhoc Points Placed by SheetInfo	0	4	0
	cliprd	ClipBorder_dp	CLIP Border	3	0	0
	cliprd	ClipDrawingBound_dp	CLIP Drawing Boundary	3	3	0
	cliprd	Cloud_dp	Construction Cloud	7	0	2
	cliprd	COGO_dp	COGO Information	3	0	1
	cliprd	ConstArea_dp	Construction Area Crosshatch	0	0	1

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
	cliprd	ConstLimits	Construction Limits	3	LOC	2
	cliprd	ConstLines	Construction Lines and References	1	0	0
	cliprd	DimLines_dp	Dimension Lines, Corresponding Terminators, Equation Lines	0	0	1
X	cliprd	EaseLicLine	Easement License Agreement Line	5	6	0
	cliprd	GridMaj_dp	Grid Lines Major in Profile and Cross Section	3	0	1
	cliprd	GridMin_dp	Grid Lines Minor in Profile and Cross Section	0	0	0
	cliprd	GridMinSub_dp	Grid Lines Minor Sub in Cross Section Sheets	20	0	0
	cliprd	ImageAttachment_dp	Image Attachmentst	0	0	0
	cliprd	LeaderLine_dp	Leader Line and terminator with Text	0	0	1
	cliprd	Logo_dp	Consultant Engineer of Record Logo	0	0	1
	cliprd	MatchLines_dp	Match Lines with Text, Arrows for Station Notations	1	0	2
	cliprd	Miscellaneous0	Undefined proposed item - co blue wt 0	1	0	0
	cliprd	Miscellaneous1	Undefined proposed item - co blue wt 1	1	0	1
	cliprd	Miscellaneous2	Undefined proposed item - co blue wt 2	1	0	2
	cliprd	Miscellaneous3	Undefined proposed item - co green wt 0	2	0	0
	cliprd	Miscellaneous4	Undefined proposed item - co green wt 1	2	0	1
	cliprd	Miscellaneous5	Undefined proposed item - co green wt 2	2	0	2
	cliprd	Miscellaneous6	Undefined proposed item - co red wt 0	3	0	0
	cliprd	Miscellaneous7	Undefined proposed item - co red wt 1	3	0	1
	cliprd	Miscellaneous8	Undefined proposed item - co red wt 2	3	0	2
	cliprd	Miscellaneous9	Undefined proposed item - co red wt 3	3	0	3
	cliprd	NonPlottingEle_dp	Non plotting items such as construction elements and type 66 elements	4	0	0
	cliprd	NorthArw_dp	North Arrows	0	0	2
	cliprd	PayItem_dp	Pay Item Number Label Elements	4	0	2
X	cliprd	PlotBorder_dp	Plot Border	3	0	0
	cliprd	PointLocator_ep	Point Locator Symbol	4	0	0
	cliprd	ReferencePt_dp	Survey and Construction Reference Point Details and Elements	4	0	2
	cliprd	RoadwayMisc	Roadway Miscellaneous Items	4	0	2
	cliprd	Scale_dp	Bar Scale, Scale Label Elements	0	0	2
	cliprd	Scratch1_dp	A scratch level for temporary or informational items	4	0	0
	cliprd	Scratch2_dp	A scratch level for temporary or informational items	5	0	0
	cliprd	ScratchEle_dp	Level for Draft Elements, Temporary Elements, Etc. Do Not Plot	3	0	0
	cliprd	ScratchEle2_dp	Level for Draft Elements, Temporary Elements, Etc. Do Not Plot	4	0	0
	cliprd	SheetBorder_dp	Sheet Border	1	0	4
	cliprd	SheetLines_dp	Sheet Lines	1	0	2

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
	cliprd	SheetLinesMisc1_dp	Sheet Lines	1	0	0
	cliprd	SheetLinesMisc2_dp	Sheet Lines	2	0	2
	cliprd	SheetLinesMisc3_dp	Sheet Lines	3	0	2
	cliprd	SheetLinesMisc4_dp	Sheet Lines	4	0	2
	cliprd	SpecialDetails	Special Details	6	0	1
	cliprd	SumBoxBorder_dp	Summary Boxes Borders	4	0	3
	cliprd	SumBoxLines_dp	Summary Boxes Lines and Miscellaneous Items	4	0	1
	cliprd	SumBoxLinesMin_dp	Summary Boxes Lines Minor Line and Miscellaneous Items	4	0	0
	cliprd	TextBLStation	Text - B/L Station and Tics	0	0	2
	cliprd	TextConstEle	Text - Construction Element	0	0	1
	cliprd	TextCurveData	Text - Curve Data Note	0	0	2
	cliprd	TextDetails	Text - Detail Notes	4	0	2
	cliprd	TextElevLabel	Elevation Labels	4	0	0
	cliprd	TextLabel	Text - Label	0	0	2
	cliprd	TextLandscape	Text - Landscape Labels	0	0	1
	cliprd	TextMajor	Text - Major	0	0	5
	cliprd	TextMinor	Text - Minor	0	0	0
	cliprd	TextMisc	Text - Miscellaneous	0	0	1
	cliprd	TextNotes	Text - Notes	4	0	1
	cliprd	TextProfLabel	Text - Profile, Horizontal and Vertical Axis Labels	0	0	2
	cliprd	TextProjLabel	Text - Begin and End Project label with leader lines	1	0	2
	cliprd	TextPtLabel	Point Labels	4	0	0
	cliprd	TextShtNo	Text - Sheet Number	0	0	2
	cliprd	TextSurveyLabel	Survey Text Labels	0	0	0
	cliprd	TextTables	Text - Keysheet Indexes and Table Data	4	0	2
	cliprd	TextTitle	Text - Title	0	0	3
	cliprd	TextXSElev	Text - Cross Section Elevations	2	0	1
	cliprd	XSCell	GEOPAK Cross Section Cell and Profile Cell	8	0	1
	cliprd	Viewport	Viewport (For AutoCAD Use)	3	0	0
	cliprd	Xreference_dp	Reference Files (For AutoCAD Use)	0	0	1
	cliprd	Xreference01_dp	Reference Files (For AutoCAD Use)	0	0	1
	cliprd	Xreference02_dp	Reference Files (For AutoCAD Use)	0	0	1
	cliprd	Xreference03_dp	Reference Files (For AutoCAD Use)	0	0	1
	cliprd	Xreference04_dp	Reference Files (For AutoCAD Use)	0	0	1
	cliprd	Xreference05_dp	Reference Files (For AutoCAD Use)	0	0	1

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
	cliprd	Xreference06_dp	Reference Files (For AutoCAD Use)	0	0	1
	cliprd	Xreference07_dp	Reference Files (For AutoCAD Use)	0	0	1
	cliprd	Xreference08_dp	Reference Files (For AutoCAD Use)	0	0	1
	cliprd	Xreference09_dp	Reference Files (For AutoCAD Use)	0	0	1
	cliprd	Xreference10_dp	Reference Files (For AutoCAD Use)	0	0	1

4.2.4 DRAINAGE DETAIL - DRDTRD

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
	drdtrd	ActivePointCell_dp	Active Point Cell	4	0	10
	drdtrd	AdhocPoint_dp	Adhoc Points Placed by SheetInfo	0	4	0
X	drdtrd	ArtificialCovering	Artificial Coverings	10	0	2
X	drdtrd	Berm	Berm (Top, Front, or Back)	10	0	2
X	drdtrd	BoxCulvert	Box Culvert	10	0	2
X	drdtrd	Canal	Canal	7	0	1
X	drdtrd	CatchBasin	Catch Basin	10	0	2
	drdtrd	Cloud_dp	Construction Cloud	7	0	2
	drdtrd	COGO_dp	COGO Information	3	0	1
	drdtrd	ConstArea_dp	Construction Area Crosshatch	0	0	1
	drdtrd	ConstLimits	Construction Limits	3	LOC	2
	drdtrd	ConstLines	Construction Lines and References	1	0	0
	drdtrd	ContourIndex_dp	Contour Index and special contour info	3	0	2
	drdtrd	ContourIndex_ep	Contour Index (Existing)	3	0	2
	drdtrd	ContoursMajor_dp	Contour Lines Major	3	0	2
	drdtrd	ContoursMajor_ep	Contour Lines Major (Existing)	3	1	1
	drdtrd	ContoursMinor_dp	Contour Lines Minor	4	0	1
	drdtrd	ContoursMinor_ep	Contour Lines Minor (Existing)	4	1	0
X	drdtrd	DesiltingPipes	Desilting Pipes	10	0	2
	drdtrd	DimLines_dp	Dimension Lines, Corresponding Terminators, Equation Lines	0	0	1
X	drdtrd	Ditch	Ditch Top	7	6	1
X	drdtrd	DitchBot	Ditch Bottom	10	0	2
	drdtrd	DitchProfLt_er	Ditch Profile Left (Existing)	8	3	1
	drdtrd	DitchProfLt_pr	Ditch Profile Left	8	0	1

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
	drdtrd	DitchProfMdn_er	Ditch Profile Median (Existing)	10	3	1
	drdtrd	DitchProfMdn_pr	Ditch Profile Median	10	0	1
	drdtrd	DitchProfRt_er	Ditch Profile Right (Existing)	9	3	1
	drdtrd	DitchProfRt_pr	Ditch Profile Right	9	0	1
	drdtrd	DrainDivideArw	Drainage Divide Arrow	0	0	1
	drdtrd	DrainDivides00	Drainage Divides	10	2	4
	drdtrd	DrainDivides00_ep	Drainage Divides (Existing)	9	2	4
	drdtrd	DrainDivides01	Drainage Divides	10	2	4
	drdtrd	DrainDivides01_ep	Drainage Divides (Existing)	9	2	4
	drdtrd	DrainDivides02	Drainage Divides	10	2	4
	drdtrd	DrainDivides02_ep	Drainage Divides (Existing)	9	2	4
	drdtrd	DrainDivides03	Drainage Divides	10	2	4
	drdtrd	DrainDivides03_ep	Drainage Divides (Existing)	9	2	4
	drdtrd	DrainDivides04	Drainage Divides	10	2	4
	drdtrd	DrainDivides04_ep	Drainage Divides (Existing)	9	2	4
	drdtrd	DrainDivides05	Drainage Divides	10	2	4
	drdtrd	DrainDivides05_ep	Drainage Divides (Existing)	9	2	4
	drdtrd	DrainDivides06	Drainage Divides	10	2	4
	drdtrd	DrainDivides06_ep	Drainage Divides (Existing)	9	2	4
	drdtrd	DrainDivides07	Drainage Divides	10	2	4
	drdtrd	DrainDivides07_ep	Drainage Divides (Existing)	9	2	4
	drdtrd	DrainDivides08	Drainage Divides	10	2	4
	drdtrd	DrainDivides08_ep	Drainage Divides (Existing)	9	2	4
	drdtrd	DrainDivides09	Drainage Divides	10	2	4
	drdtrd	DrainDivides09_ep	Drainage Divides (Existing)	9	2	4
	drdtrd	DrainMisc	Miscellaneous Drainage Items	10	0	2
X	drdtrd	DrainStruct_pr	Drainage Structures (All Types)	10	0	2
X	drdtrd	EaseLicLine	Easement License Agreement Line	5	6	0
X	drdtrd	EasePerpLine	Easement Lines Perpetual	4	PESMT	1
X	drdtrd	EaseTempLine	Easement Lines Temporary	6	TEMPE	0
X	drdtrd	EdgeDrain	Edge Drain, Material and Outlet Pipe	10	0	2
X	drdtrd	Endwall	Endwall (All Types)	10	0	2
	drdtrd	Fence_ex	Fence Lines on Cross Sections (Existing)	6	3	1
X	drdtrd	FES	Flared End Sections	10	0	2
X	drdtrd	FlapGate	Flap Gates	10	0	2

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
	drdtrd	FlowArrow_dp	Flow Arrow	10	0	2
X	drdtrd	FlowLine	Flow Line	10	0	2
	drdtrd	FlowLine_pr	Flow Line (Roadway Profile View)	0	0	2
X	drdtrd	FrenchDrain	French Drain	10	0	2
X	drdtrd	GovSectionLine_ep	Section Lines	10	SECLIN	2
X	drdtrd	GovTwpRgeLine_ep	Township / Range Lines	10	TWPRGE	2
	drdtrd	GPKDrBack_dp	Back Point on Drainage Cells	2	2	2
	drdtrd	GPKDrBottom_dp	Bottom Point on Drainage Cells	3	3	2
	drdtrd	GPKDrCellIns_dp	Cell Insertion Point on Drainage Cells	4	4	2
	drdtrd	GPKDrCentroid_dp	Point on Centroid for Drainage	7	7	2
	drdtrd	GPKDrElv	Location point for drainage cells	5	5	2
	drdtrd	GPKDrFront_dp	Front Point on Drainage Cells	1	1	2
	drdtrd	GPKDrPipe_dp	Point on Drainage Pipe	6	6	2
	drdtrd	GPKDrPipeCir_dp	Point on Pipe Circular	6	6	0
	drdtrd	GradeLine_er	Grade Line Profile (Existing)	2	2	1
	drdtrd	GradeLine_pr	Grade Line Profile	5	0	2
	drdtrd	GradeLineCtr_dp	Grade Line Profile Center (shown in plan view)	5	0	0
	drdtrd	GradeLineCtr_pr	Grade Line Profile Center	5	0	2
	drdtrd	GradeLineLt_dp	Grade Line Profile Left (shown in plan view)	1	0	0
	drdtrd	GradeLineLt_er	Grade Line Profile Left (Existing)	1	2	1
	drdtrd	GradeLineLt_pr	Grade Line Profile Left	1	0	2
	drdtrd	GradeLineRt_dp	Grade Line Profile Right (shown in plan view)	4	0	0
	drdtrd	GradeLineRt_er	Grade Line Profile Right (Existing)	4	2	1
	drdtrd	GradeLineRt_pr	Grade Line Profile Right	4	0	2
	drdtrd	GradeSecPat	Grade Section Patterns	0	0	0
	drdtrd	GridMaj_dp	Grid Lines Major in Profile and Cross Section	3	0	1
	drdtrd	GridMin_dp	Grid Lines Minor in Profile and Cross Section	0	0	0
	drdtrd	GridMinSub_dp	Grid Lines Minor Sub in Cross Section Sheets	20	0	0
	drdtrd	ImageAttachment_dp	Image Attachmentst	0	0	0
X	drdtrd	InletBottomJ	Inlet Bottom Type J	10	0	1
X	drdtrd	InletBottomP	Inlet Bottom Type P	10	0	1
X	drdtrd	InletClosedFlume	Closed Flume Inlet	10	0	2
X	drdtrd	InletCurb	Curb Inlet (All Types)	10	0	2
X	drdtrd	InletDBI	Ditch Bottom Inlet (All Types)	10	0	2
X	drdtrd	InletProt	Rock Bags and Sand Bagging	10	Rockbag	2

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
X	drdtrd	InletGutter	Gutter Inlet (All Types)	10	0	2
X	drdtrd	InletMedian	Median Barrier Inlet	10	0	2
X	drdtrd	LARWLine	Limited Access Right of Way	4	LA	2
X	drdtrd	LARWLine_ep	Limited Access Right of Way (Existing)	4	EXLA	1
	drdtrd	LeaderLine_dp	Leader Line and terminator with Text	0	0	1
	drdtrd	Logo_dp	Consultant Engineer of Record Logo	0	0	1
X	drdtrd	Manhole	Manhole (Drainage and Unknown)	10	0	2
X	drdtrd	MES	Mitered End Section	10	0	2
	drdtrd	Miscellaneous0	Undefined proposed item - co blue wt 0	1	0	0
	drdtrd	Miscellaneous1	Undefined proposed item - co blue wt 1	1	0	1
	drdtrd	Miscellaneous2	Undefined proposed item - co blue wt 2	1	0	2
	drdtrd	Miscellaneous3	Undefined proposed item - co green wt 0	2	0	0
	drdtrd	Miscellaneous4	Undefined proposed item - co green wt 1	2	0	1
	drdtrd	Miscellaneous5	Undefined proposed item - co green wt 2	2	0	2
	drdtrd	Miscellaneous6	Undefined proposed item - co red wt 0	3	0	0
	drdtrd	Miscellaneous7	Undefined proposed item - co red wt 1	3	0	1
	drdtrd	Miscellaneous8	Undefined proposed item - co red wt 2	3	0	2
	drdtrd	Miscellaneous9	Undefined proposed item - co red wt 3	3	0	3
	drdtrd	NonPlottingEle_dp	Non plotting items such as construction elements and type 66 elements	4	0	0
	drdtrd	Patternlines_ep	Cross Section Chain	2	1	0
	drdtrd	PatternLines1_dp	Pattern Lines for Cross Sections	3	0	2
	drdtrd	PatternLines2_dp	Pattern Lines for XSections alternate for side streets, critical Cross Sections or drainage structures	4	0	2
	drdtrd	PatternLines3_dp	Pattern Lines for XSections alternate for side streets, critical Cross Sections or drainage structures	5	0	2
	drdtrd	PayItem_dp	Pay Item Number Label Elements	4	0	2
	drdtrd	Permit1	Permit 1 Wetlands, Mitigation Sites, Planting Areas	1	0	1
	drdtrd	Permit2	Permit 2 Wetlands, Mitigation Sites, Planting Areas	2	0	1
	drdtrd	Permit3	Permit 3 Wetlands, Mitigation Sites, Planting Areas	4	0	1
	drdtrd	PipeCulvert_ep	Pipe Culvert	10	3	1
X	drdtrd	PipeCulvert_pr	Pipe Culvert in Profile	3	0	2
X	drdtrd	PipeCulvert_px	Pipe Culvert for Cross Section View	10	0	2
X	drdtrd	PipeCulvertCD	Pipe Culvert Cross Drain	10	0	2
X	drdtrd	PipeCulvertGD	Pipe Culvert Gutter Drain	11	0	2
X	drdtrd	PipeCulvertSD	Pipe Culvert Side Drain	12	0	2

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
X	drdtrd	PipeCulvertSS	Pipe Culvert Storm Sewer	9	0	2
X	drdtrd	PlotBorder_dp	Plot Border	3	0	0
	drdtrd	PointLocator_ep	Point Locator Symbol	4	0	0
X	drdtrd	Pond_px	Pond Lines on Cross Sections	2	0	2
X	drdtrd	PondSideSlope	Pond Side Slope	0	0	2
X	drdtrd	PropertyLine_ep	Property Lines	3	0	0
	drdtrd	ReferencePt_dp	Survey and Construction Reference Point Details and Elements	4	0	2
X	drdtrd	RetentionArea	Retention Area	2	0	2
X	drdtrd	RipRap	Rip Rap, Rubble	4	0	2
X	drdtrd	RockGravelStone	Rock, Gravel, Stone, Boulders, Etc.	1	0	2
X	drdtrd	RWLine	Right of Way Lines	4	RW	2
X	drdtrd	RWLine_ep	Right of Way Lines (Existing)	3	RW	1
	drdtrd	Scratch1_dp	A scratch level for temporary or informational items	4	0	0
	drdtrd	Scratch2_dp	A scratch level for temporary or informational items	5	0	0
	drdtrd	ScratchEle_dp	Level for Draft Elements, Temporary Elements, Etc. Do Not Plot	3	0	0
	drdtrd	ScratchEle2_dp	Level for Draft Elements, Temporary Elements, Etc. Do Not Plot	4	0	0
X	drdtrd	SedimentBarrier	Synthetic Bales and Staked Silt Fences	10	*hay_bales	2
X	drdtrd	SedimentBarrier	Synthetic Bales and Staked Silt Fences	10	*silt_fence	2
X	drdtrd	SedimentBasin	Sediment Basin Index 101	10	0	2
X	drdtrd	SedimentBasin_ep	Sediment Basin Index 101 (Existing)	10	3	1
	drdtrd	SheetBorder_dp	Sheet Border	1	0	4
	drdtrd	SheetLines_dp	Sheet Lines	1	0	2
	drdtrd	SheetLinesMisc1_dp	Sheet Lines	1	0	0
	drdtrd	SheetLinesMisc2_dp	Sheet Lines	2	0	2
	drdtrd	SheetLinesMisc3_dp	Sheet Lines	3	0	2
	drdtrd	SheetLinesMisc4_dp	Sheet Lines	4	0	2
X	drdtrd	SlideGate	Slide Gate	10	0	2
X	drdtrd	Slopes	Slopes (Top, Bottom)	9	3	0
X	drdtrd	SlopeStakes1	Slope Stakes 1	4	1	3
X	drdtrd	SlopeStakes2	Slope Stakes 2	1	1	3
X	drdtrd	SlottedDrainPipe	Slotted Drain Pipe	10	0	1
X	drdtrd	SlottedStormSewer	Storm Sewer Slotted or Perforated	10	0	2
	drdtrd	SpecialDetails	Special Details	6	0	1
	drdtrd	SpecialDetails_px	Special Details_XS	6	0	1
X	drdtrd	Spillway	Spillway/ Flume/ Slope Drain	10	0	2

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
X	drdtrd	StormSewer	Storm Sewer (All Types), Drain Pipes and Spouts	10	0	2
	drdtrd	SumBoxBorder_dp	Summary Boxes Borders	4	0	3
	drdtrd	SumBoxLines_dp	Summary Boxes Lines and Miscellaneous Items	4	0	1
	drdtrd	SumBoxLinesMin_dp	Summary Boxes Lines Minor Line and Miscellaneous Items	4	0	0
X	drdtrd	TerrainLine_ex	Existing Ground Line for Multiline	5	0	1
	drdtrd	TextAlert	Text - An Alert Label to Highlight a Problem	3	0	2
	drdtrd	TextBLStation	Text - B/L Station and Tics	0	0	2
	drdtrd	TextConstEle	Text - Construction Element	0	0	1
	drdtrd	TextCurveData	Text - Curve Data Note	0	0	2
	drdtrd	TextDetails	Text - Detail Notes	4	0	2
	drdtrd	TextElevLabel	Elevation Labels	4	0	0
	drdtrd	TextLabel	Text - Label	0	0	2
	drdtrd	TextLandscape	Text - Landscape Labels	0	0	1
	drdtrd	TextMajor	Text - Major	0	0	5
	drdtrd	TextMinor	Text - Minor	0	0	0
	drdtrd	TextMisc	Text - Miscellaneous	0	0	1
	drdtrd	TextNotes	Text - Notes	4	0	1
	drdtrd	TextProfLabel	Text - Profile, Horizontal and Vertical Axis Labels	0	0	2
	drdtrd	TextProjLabel	Text - Begin and End Project label with leader lines	1	0	2
	drdtrd	TextPtLabel	Point Labels	4	0	0
	drdtrd	TextShtNo	Text - Sheet Number	0	0	2
	drdtrd	TextSurveyLabel	Survey Text Labels	0	0	0
	drdtrd	TextTables	Text - Keysheet Indexes and Table Data	4	0	2
	drdtrd	TextTitle	Text - Title	0	0	3
	drdtrd	TextXSElev	Text - Cross Section Elevations	2	0	1
X	drdtrd	Trench	Storm Sewer Trench	10	0	2
X	drdtrd	TurbidityBarrier1	Turbidity Barrier 1 (floating)	10	barrier1	2
X	drdtrd	TurbidityBarrier2	Turbidity Barrier 2 (staked)	10	barrier2	2
	drdtrd	TurbidityBarrier2_ep	Turbidity Barrier (Staked) (Existing)	10	1	2
	drdtrd	TurbidityBarrier1_ep	Turbidity Barrier (Floating) (Existing)	10	1	2
X	drdtrd	UnderDrain	Underdrains (All Types)	10	0	2
X	drdtrd	UnderDrainOP	Underdrain Outlet Pipes	10	0	2
	drdtrd	Wetland	Wetland Boundary	2	wetland	1
	drdtrd	XSCell	GEOPAK Cross Section Cell and Profile Cell	8	0	1
X	drdtrd	XSExtendGrdLine_ex	Extend Ground Lines for Cross Sections (Existing)	21	2	1

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
X	drdtrd	XSGrdLine_ex	Ground Lines for Cross Sections (Existing)	2	2	1
X	drdtrd	XSGrdLine_px	Roadway Ground Lines on Cross Sections	1	0	2
	drdtrd	XSPt_ep	Cross Section Point, Station	2	1	0
X	drdtrd	YardDrain	Yard Drain	10	3	1
	drdtrd	Viewport	Viewport (For AutoCAD Use)	3	0	0
	drdtrd	Xreference_dp	Reference Files (For AutoCAD Use)	0	0	1
	drdtrd	Xreference01_dp	Reference Files (For AutoCAD Use)	0	0	1
	drdtrd	Xreference02_dp	Reference Files (For AutoCAD Use)	0	0	1
	drdtrd	Xreference03_dp	Reference Files (For AutoCAD Use)	0	0	1
	drdtrd	Xreference04_dp	Reference Files (For AutoCAD Use)	0	0	1
	drdtrd	Xreference05_dp	Reference Files (For AutoCAD Use)	0	0	1
	drdtrd	Xreference06_dp	Reference Files (For AutoCAD Use)	0	0	1
	drdtrd	Xreference07_dp	Reference Files (For AutoCAD Use)	0	0	1
	drdtrd	Xreference08_dp	Reference Files (For AutoCAD Use)	0	0	1
	drdtrd	Xreference09_dp	Reference Files (For AutoCAD Use)	0	0	1
	drdtrd	Xreference10_dp	Reference Files (For AutoCAD Use)	0	0	1

4.2.5 EXISTING DRAINAGE - DREXRD

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight	Point / Line	Feature
	drexrd	Basins_ep	Sediment Basin, Retention Pond	10	3	1	L	BAS
	drexrd	BoxCulvert_ep	Box Culvert	10	3	1	L	BXC
	drexrd	CrossDrain_ep	Underdrains and Cross drains	10	3	1	L	UD
	drexrd	Ditch_ep	Ditch (Top, Bottom and Flow Lines)	7	6	0	L	DTCH
	drexrd	DitchPavt_ep	Ditch Pavement	0	1	0	L	DTCHP
	drexrd	DrainMisc_ep	Catch Basins	10	3	1	L	CB
	drexrd	DrainMisc_ep	Drainage Pipes and Spouts	10	3	1	L	DRNP
	drexrd	DrainMisc_ep	Drainage Junction Box	10	3	1	L	JB
	drexrd	DrainMisc_ep	Special Drainage Feature (Describe)	10	3	1	L	SPD
	drexrd	DrainMisc_ep	Spillways, Flumes or Scuppers	10	3	1	L	SPL
	drexrd	DrainMisc_ep	Yard Drain	10	3	1	L	YD
	drexrd	EndTreat_ep	Flared End Section	10	3	1	L	FES
	drexrd	EndTreat_ep	Mitered End Section	10	3	1	L	MES

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight	Point / Line	Feature
	drexrd	EndTreat_ep	Straight Endwall	10	3	1	L	SEW
	drexrd	EndTreat_ep	Special Endwall	10	3	1	L	SPEW
	drexrd	EndTreat_ep	U-Type Endwall	10	3	1	L	UEW
	drexrd	EndTreat_ep	Winged End wall	10	3	1	L	WEW
	drexrd	ImageAttachment_dp	Image Attachmentst	0	0	0		
	drexrd	InletBottom_ep	Drainage Structure Bottoms	10	3	1	L	DRNB
	drexrd	InletCurb_ep	Curb Inlets	10	3	1	L	CINL
	drexrd	InletCurb_ep	Median Inlets	10	3	1	L	MEDI
	drexrd	InletDBI_ep	Ditch Bottom Inlet	10	3	1	L	DTCHI
	drexrd	InletGutter_ep	Gutter Inlets (All Types)	10	3	1	L	GI
	drexrd	LeaderLine_dp	Leader Line and terminator with Text	0	0	1		
	drexrd	ManholeCovUnk_ep	Manhole Cover (Unknown)	0	1	1	P	MH
	drexrd	ManholeSW_ep	Manhole (Storm Water)	10	1	0	P	MHD
	drexrd	PipeCulvert_ep	Pipe Culvert	10	3	1	L	PCULV
	drexrd	PointLocator_ep	Point Locator Symbol	4	0	0		
	drexrd	StormSewer_ep	Storm Sewer (all sizes), Drain Pipes and Spouts	10	3	1	L	STS
	drexrd	TextElevLabel	Elevation Labels	4	0	0		
	drexrd	TextMisc	Text - Miscellaneous	0	0	1		
	drexrd	TextNotes	Text - Notes	4	0	1		
	drexrd	TextPtLabel	Point Labels	4	0	0		
	drexrd	TextSurveyLabel	Survey Text Labels	0	0	0		
	drexrd	UnderDrain_ep	Under Drain Box	10	3	0	P	UDBX
	drexrd	Viewport	Viewport (For AutoCAD Use)	3	0	0		
	drexrd	Xreference_dp	Reference Files (For AutoCAD Use)	0	0	1		
	drexrd	Xreference01_dp	Reference Files (For AutoCAD Use)	0	0	1		
	drexrd	Xreference02_dp	Reference Files (For AutoCAD Use)	0	0	1		
	drexrd	Xreference03_dp	Reference Files (For AutoCAD Use)	0	0	1		
	drexrd	Xreference04_dp	Reference Files (For AutoCAD Use)	0	0	1		
	drexrd	Xreference05_dp	Reference Files (For AutoCAD Use)	0	0	1		
	drexrd	Xreference06_dp	Reference Files (For AutoCAD Use)	0	0	1		
	drexrd	Xreference07_dp	Reference Files (For AutoCAD Use)	0	0	1		
	drexrd	Xreference08_dp	Reference Files (For AutoCAD Use)	0	0	1		
	drexrd	Xreference09_dp	Reference Files (For AutoCAD Use)	0	0	1		
	drexrd	Xreference10_dp	Reference Files (For AutoCAD Use)	0	0	1		

4.2.6 DRAINAGE MAP - DRMPRD

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
	drmprd	ActivePointCell_dp	Active Point Cell	4	0	10
	drmprd	AdhocPoint_dp	Adhoc Points Placed by SheetInfo	0	4	0
	drmprd	BaselineSurvey	Baseline Survey	0	0	2
X	drmprd	Berm	Berm (Top, Front, or Back)	10	0	2
X	drmprd	BoxCulvert	Box Culvert	10	0	2
X	drmprd	Canal	Canal	7	0	1
X	drmprd	CatchBasin	Catch Basin	10	0	2
	drmprd	CLConst_dp	Center Line of Construction	0	0	2
	drmprd	Cloud_dp	Construction Cloud	7	0	2
	drmprd	COGO_dp	COGO Information	3	0	1
	drmprd	ConstArea_dp	Construction Area Crosshatch	0	0	1
	drmprd	ConstLimits	Construction Limits	3	LOC	2
	drmprd	ConstLines	Construction Lines and References	1	0	0
	drmprd	ContourIndex_dp	Contour Index and special contour info	3	0	2
	drmprd	ContourIndex_ep	Contour Index (Existing)	3	0	2
	drmprd	ContoursMajor_dp	Contour Lines Major	3	0	2
	drmprd	ContoursMajor_ep	Contour Lines Major (Existing)	3	1	1
	drmprd	ContoursMinor_dp	Contour Lines Minor	4	0	1
	drmprd	ContoursMinor_ep	Contour Lines Minor (Existing)	4	1	0
	drmprd	CurveData_dp	Curve & Coordinate Data Elements incl. PC, PT, PI symbols	4	0	2
	drmprd	CurveDataLabel_dp	Curve Data Labels PC,PI, PT	0	0	2
X	drmprd	DesiltingPipes	Desilting Pipes	10	0	2
	drmprd	DimLines_dp	Dimension Lines, Corresponding Terminators, Equation Lines	0	0	1
X	drmprd	Ditch	Ditch Top	7	6	1
X	drmprd	DitchBot	Ditch Bottom	10	0	2
	drmprd	DitchProfLt_er	Ditch Profile Left (Existing)	8	3	1
	drmprd	DitchProfLt_pr	Ditch Profile Left	8	0	1
	drmprd	DitchProfMdn_er	Ditch Profile Median (Existing)	10	3	1
	drmprd	DitchProfMdn_pr	Ditch Profile Median	10	0	1
	drmprd	DitchProfRt_er	Ditch Profile Right (Existing)	9	3	1
	drmprd	DitchProfRt_pr	Ditch Profile Right	9	0	1
	drmprd	DrainAlert_px	Alert Symbology for Structural Elements on Cross Sections	3	0	2
	drmprd	DrainDivideArw	Drainage Divide Arrow	0	0	1
	drmprd	DrainDivides00	Drainage Divides	10	2	4

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
	drmprd	DrainDivides00_ep	Drainage Divides (Existing)	9	2	4
	drmprd	DrainDivides01	Drainage Divides	10	2	4
	drmprd	DrainDivides01_ep	Drainage Divides (Existing)	9	2	4
	drmprd	DrainDivides02	Drainage Divides	10	2	4
	drmprd	DrainDivides02_ep	Drainage Divides (Existing)	9	2	4
	drmprd	DrainDivides03	Drainage Divides	10	2	4
	drmprd	DrainDivides03_ep	Drainage Divides (Existing)	9	2	4
	drmprd	DrainDivides04	Drainage Divides	10	2	4
	drmprd	DrainDivides04_ep	Drainage Divides (Existing)	9	2	4
	drmprd	DrainDivides05	Drainage Divides	10	2	4
	drmprd	DrainDivides05_ep	Drainage Divides (Existing)	9	2	4
	drmprd	DrainDivides06	Drainage Divides	10	2	4
	drmprd	DrainDivides06_ep	Drainage Divides (Existing)	9	2	4
	drmprd	DrainDivides07	Drainage Divides	10	2	4
	drmprd	DrainDivides07_ep	Drainage Divides (Existing)	9	2	4
	drmprd	DrainDivides08	Drainage Divides	10	2	4
	drmprd	DrainDivides08_ep	Drainage Divides (Existing)	9	2	4
	drmprd	DrainDivides09	Drainage Divides	10	2	4
	drmprd	DrainDivides09_ep	Drainage Divides (Existing)	9	2	4
	drmprd	DrainMisc	Miscellaneous Drainage Items	10	0	2
X	drmprd	DrainStruct_pr	Drainage Structures (All Types)	10	0	2
X	drmprd	EaseLicLine	Easement License Agreement Line	5	6	0
X	drmprd	EasePerpLine	Easement Lines Perpetual	4	PESMT	1
X	drmprd	EaseTempLine	Easement Lines Temporary	6	TEMPE	0
X	drmprd	EdgeDrain	Edge Drain, Material and Outlet Pipe	10	0	2
X	drmprd	Endwall	Endwall (All Types)	10	0	2
	drmprd	Fence_ex	Fence Lines on Cross Sections (Existing)	6	3	1
X	drmprd	FES	Flared End Sections	10	0	2
X	drmprd	FlapGate	Flap Gates	10	0	2
	drmprd	FlowArrow_dp	Flow Arrow	10	0	2
X	drmprd	FlowLine	Flow Line	10	0	2
	drmprd	FlowLine_pr	Flow Line (Roadway Profile View)	0	0	2
X	drmprd	FlowPaths	Time of Concentration Flow Paths	10	1	1
X	drmprd	FrenchDrain	French Drain	10	0	2
X	drmprd	Gabions	Gabion Baskets or Mats	10	0	2

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
X	drmprd	Gabions_ep	Gabion Baskets or Mats (Existing)	10	1	2
X	drmprd	GovTwpRgeLine_ep	Township / Range Lines	10	TWPRGE	2
	drmprd	GPKDrBack_dp	Back Point on Drainage Cells	2	2	2
	drmprd	GPKDrBottom_dp	Bottom Point on Drainage Cells	3	3	2
	drmprd	GPKDrCellIns_dp	Cell Insertion Point on Drainage Cells	4	4	2
	drmprd	GPKDrCentroid_dp	Point on Centroid for Drainage	7	7	2
	drmprd	GPKDrElv	Location point for drainage cells	5	5	2
	drmprd	GPKDrFront_dp	Front Point on Drainage Cells	1	1	2
	drmprd	GPKDrPipe_dp	Point on Drainage Pipe	6	6	2
	drmprd	GPKDrPipeCir_dp	Point on Pipe Circular	6	6	0
	drmprd	GradeLine_er	Grade Line Profile (Existing)	2	2	1
	drmprd	GradeLine_pr	Grade Line Profile	5	0	2
	drmprd	GradeLineCtr_dp	Grade Line Profile Center (shown in plan view)	5	0	0
	drmprd	GradeLineCtr_pr	Grade Line Profile Center	5	0	2
	drmprd	GradeLineLt_dp	Grade Line Profile Left (shown in plan view)	1	0	0
	drmprd	GradeLineLt_er	Grade Line Profile Left (Existing)	1	2	1
	drmprd	GradeLineLt_pr	Grade Line Profile Left	1	0	2
	drmprd	GradeLineRt_dp	Grade Line Profile Right (shown in plan view)	4	0	0
	drmprd	GradeLineRt_er	Grade Line Profile Right (Existing)	4	2	1
	drmprd	GradeLineRt_pr	Grade Line Profile Right	4	0	2
	drmprd	GradeSecPat	Grade Section Patterns	0	0	0
	drmprd	GridMaj_dp	Grid Lines Major in Profile and Cross Section	3	0	1
	drmprd	GridMin_dp	Grid Lines Minor in Profile and Cross Section	0	0	0
	drmprd	GridMinSub_dp	Grid Lines Minor Sub in Cross Section Sheets	20	0	0
	drmprd	ImageAttachment_dp	Image Attachmentst	0	0	0
X	drmprd	InletBottomJ	Inlet Bottom Type J	10	0	1
X	drmprd	InletBottomP	Inlet Bottom Type P	10	0	1
X	drmprd	InletClosedFlume	Closed Flume Inlet	10	0	2
X	drmprd	InletCurb	Curb Inlet (All Types)	10	0	2
X	drmprd	InletDBI	Ditch Bottom Inlet (All Types)	10	0	2
X	drmprd	InletGutter	Gutter Inlet (All Types)	10	0	2
X	drmprd	InletMedian	Median Barrier Inlet	10	0	2
X	drmprd	InletProt	Rock Bags and Sand Bagging	10	Rockbag	2
	drmprd	KeyShtMisc	Key sheet Miscellaneous Items	0	0	2
X	drmprd	LARWLine	Limited Access Right of Way	4	LA	2

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
X	drmprd	LARWLine_ep	Limited Access Right of Way (Existing)	4	EXLA	1
	drmprd	LeaderLine_dp	Leader Line and terminator with Text	0	0	1
	drmprd	Logo_dp	Consultant Engineer of Record Logo	0	0	1
X	drmprd	Manhole	Manhole (Drainage and Unknown)	10	0	2
	drmprd	MatchLines_dp	Match Lines with Text, Arrows for Station Notations	1	0	2
X	drmprd	MES	Mitered End Section	10	0	2
	drmprd	Miscellaneous0	Undefined proposed item - co blue wt 0	1	0	0
	drmprd	Miscellaneous1	Undefined proposed item - co blue wt 1	1	0	1
	drmprd	Miscellaneous2	Undefined proposed item - co blue wt 2	1	0	2
	drmprd	Miscellaneous3	Undefined proposed item - co green wt 0	2	0	0
	drmprd	Miscellaneous4	Undefined proposed item - co green wt 1	2	0	1
	drmprd	Miscellaneous5	Undefined proposed item - co green wt 2	2	0	2
	drmprd	Miscellaneous6	Undefined proposed item - co red wt 0	3	0	0
	drmprd	Miscellaneous7	Undefined proposed item - co red wt 1	3	0	1
	drmprd	Miscellaneous8	Undefined proposed item - co red wt 2	3	0	2
	drmprd	Miscellaneous9	Undefined proposed item - co red wt 3	3	0	3
	drmprd	NonPlottingEle_dp	Non plotting items (construction elements and type 66 elements)	4	0	0
	drmprd	NorthArw_dp	North Arrows	0	0	2
	drmprd	PayItem_dp	Pay Item Number Label Elements	4	0	2
	drmprd	Permit1	Permit 1 Wetlands, Mitigation Sites, Planting Areas	1	0	1
	drmprd	Permit2	Permit 2 Wetlands, Mitigation Sites, Planting Areas	2	0	1
	drmprd	Permit3	Permit 3 Wetlands, Mitigation Sites, Planting Areas	4	0	1
	drmprd	PipeCulvert_ep	Pipe Culvert	10	3	1
X	drmprd	PipeCulvert_pr	Pipe Culvert in Profile	3	0	2
X	drmprd	PipeCulvert_px	Pipe Culvert for Cross Section View	10	0	2
X	drmprd	PipeCulvertCD	Pipe Culvert Cross Drain	10	0	2
X	drmprd	PipeCulvertGD	Pipe Culvert Gutter Drain	11	0	2
X	drmprd	PipeCulvertSD	Pipe Culvert Side Drain	12	0	2
X	drmprd	PipeCulvertSS	Pipe Culvert Storm Sewer	9	0	2
X	drmprd	PlotBorder_dp	Plot Border	3	0	0
	drmprd	PointLocator_ep	Point Locator Symbol	4	0	0
X	drmprd	Pond_px	Pond Lines on Cross Sections	2	0	2
X	drmprd	PondSideSlope	Pond Side Slope	0	0	2
X	drmprd	PropertyLine_ep	Property Lines	3	0	0
	drmprd	ReferencePt_dp	Survey and Construction Reference Point Details and Elements	4	0	2
X	drmprd	RetentionArea	Retention Area	2	0	2

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
X	drmprd	RipRap	Rip Rap, Rubble	4	0	2
X	drmprd	RockGravelStone	Rock, Gravel, Stone, Boulders, Etc.	1	0	2
X	drmprd	RWLine	Right of Way Lines	4	RW	2
X	drmprd	RWLine_ep	Right of Way Lines (Existing)	3	RW	1
	drmprd	Scale_dp	Bar Scale, Scale Label Elements	0	0	2
	drmprd	Scratch1_dp	A scratch level for temporary or informational items	4	0	0
	drmprd	Scratch2_dp	A scratch level for temporary or informational items	5	0	0
	drmprd	ScratchEle_dp	Level for Draft Elements, Temporary Elements, Etc. Do Not Plot	3	0	0
	drmprd	ScratchEle2_dp	Level for Draft Elements, Temporary Elements, Etc. Do Not Plot	4	0	0
101	drmprd	SedimentBarrier	Synthetic Bales and Staked Silt Fences	10	*hay_bales	2
101	drmprd	SedimentBarrier	Synthetic Bales and Staked Silt Fences	10	*silt_fence	2
X	drmprd	SedimentBasin	Sediment Basin Index 101	10	0	2
X	drmprd	SedimentBasin_ep	Sediment Basin Index 101 (Existing)	10	3	1
	drmprd	SheetBorder_dp	Sheet Border	1	0	4
	drmprd	SheetLines_dp	Sheet Lines	1	0	2
	drmprd	SheetLinesMisc1_dp	Sheet Lines	1	0	0
	drmprd	SheetLinesMisc2_dp	Sheet Lines	2	0	2
	drmprd	SheetLinesMisc3_dp	Sheet Lines	3	0	2
	drmprd	SheetLinesMisc4_dp	Sheet Lines	4	0	2
X	drmprd	SlideGate	Slide Gate	10	0	2
X	drmprd	Slopes	Slopes (Top, Bottom)	9	3	0
X	drmprd	SlopeStakes1	Slope Stakes 1	4	1	3
X	drmprd	SlopeStakes2	Slope Stakes 2	1	1	3
X	drmprd	SlottedDrainPipe	Slotted Drain Pipe	10	0	1
X	drmprd	SlottedStormSewer	Storm Sewer Slotted or Perforated	10	0	2
	drmprd	SpecialDetails	Special Details	6	0	1
	drmprd	SpecialDetails_px	Special Details_XS	6	0	1
X	drmprd	Spillway	Spillway/ Flume/ Slope Drain	10	0	2
	drmprd	StationTicL_dp	Station Tic Marks (Large) and Text	0	0	2
	drmprd	StationTicS_dp	Station Tic Marks (Small) and Text	0	0	2
X	drmprd	StormSewer	Storm Sewer (All Types), Drain Pipes and Spouts	10	0	2
	drmprd	SumBoxBorder_dp	Summary Boxes Borders	4	0	3
	drmprd	SumBoxLines_dp	Summary Boxes Lines and Miscellaneous Items	4	0	1
	drmprd	SumBoxLinesMin_dp	Summary Boxes Lines Minor Line and Miscellaneous Items	4	0	0
X	drmprd	TerrainLine_ex	Existing Ground Line for Multiline	5	0	1

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
	drmprd	TextAlert	Text - An Alert Label to Highlight a Problem	3	0	2
	drmprd	TextBLStation	Text - B/L Station and Tics	0	0	2
	drmprd	TextConstEle	Text - Construction Element	0	0	1
	drmprd	TextCurveData	Text - Curve Data Note	0	0	2
	drmprd	TextDetails	Text - Detail Notes	4	0	2
	drmprd	TextElevLabel	Elevation Labels	4	0	0
	drmprd	TextLabel	Text - Label	0	0	2
	drmprd	TextLandscape	Text - Landscape Labels	0	0	1
	drmprd	TextMajor	Text - Major	0	0	5
	drmprd	TextMinor	Text - Minor	0	0	0
	drmprd	TextMisc	Text - Miscellaneous	0	0	1
	drmprd	TextNotes	Text - Notes	4	0	1
	drmprd	TextProfLabel	Text - Profile, Horizontal and Vertical Axis Labels	0	0	2
	drmprd	TextProjLabel	Text - Begin and End Project label with leader lines	1	0	2
	drmprd	TextPtLabel	Point Labels	4	0	0
	drmprd	TextShtNo	Text - Sheet Number	0	0	2
	drmprd	TextSurveyLabel	Survey Text Labels	0	0	0
	drmprd	TextTables	Text - Keysheet Indexes and Table Data	4	0	2
	drmprd	TextTitle	Text - Title	0	0	3
	drmprd	TextXSElev	Text - Cross Section Elevations	2	0	1
X	drmprd	Trench	Storm Sewer Trench	10	0	2
X	drmprd	TurbidityBarrier1	Turbidity Barrier 1 (floating)	10	barrier1	2
X	drmprd	TurbidityBarrier2	Turbidity Barrier 2 (staked)	10	barrier2	2
	drmprd	TurbidityBarrier2_ep	Turbidity Barrier (Staked) (Existing)	10	1	2
	drmprd	TurbidityBarrier1_ep	Turbidity Barrier (Floating) (Existing)	10	1	2
X	drmprd	UnderDrain	Underdrains (All Types)	10	0	2
X	drmprd	UnderDrainOP	Underdrain Outlet Pipes	10	0	2
	drmprd	Wetland	Wetland Boundary	2	wetland	1
	drmprd	XSCell	GEOPAK Cross Section Cell and Profile Cell	8	0	1
X	drmprd	XSExtendGrdLine_ex	Extend Ground Lines for Cross Sections (Existing)	21	2	1
X	drmprd	XSGrdLine_ex	Ground Lines for Cross Sections (Existing)	2	2	1
X	drmprd	XSGrdLine_px	Roadway Ground Lines on Cross Sections	1	0	2
X	drmprd	YardDrain	Yard Drain	10	3	1
	drmprd	Viewport	Viewport (For AutoCAD Use)	3	0	0
	drmprd	Xreference_dp	Reference Files (For AutoCAD Use)	0	0	1

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
	drmprd	Xreference01_dp	Reference Files (For AutoCAD Use)	0	0	1
	drmprd	Xreference02_dp	Reference Files (For AutoCAD Use)	0	0	1
	drmprd	Xreference03_dp	Reference Files (For AutoCAD Use)	0	0	1
	drmprd	Xreference04_dp	Reference Files (For AutoCAD Use)	0	0	1
	drmprd	Xreference05_dp	Reference Files (For AutoCAD Use)	0	0	1
	drmprd	Xreference06_dp	Reference Files (For AutoCAD Use)	0	0	1
	drmprd	Xreference07_dp	Reference Files (For AutoCAD Use)	0	0	1
	drmprd	Xreference08_dp	Reference Files (For AutoCAD Use)	0	0	1
	drmprd	Xreference09_dp	Reference Files (For AutoCAD Use)	0	0	1
	drmprd	Xreference10_dp	Reference Files (For AutoCAD Use)	0	0	1

4.2.7 DRAINAGE PROPOSED - DRPRRD

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
	drprrd	ActivePointCell_dp	Active Point Cell	4	0	10
	drprrd	AdhocPoint_dp	Adhoc Points Placed by SheetInfo	0	4	0
X	drprrd	ArtificialCovering	Artificial Coverings	10	0	2
X	drprrd	Berm	Berm (Top, Front, or Back)	10	0	2
	drprrd	BoundaryLineImp	Boundary Lines - Impervious	11	0	2
	drprrd	BoundaryLineP	Boundary Lines - Pervious	9	0	2
X	drprrd	BoxCulvert	Box Culvert	10	0	2
X	drprrd	BuildingRes1	Boundaries of Single Family Residential Buildings	1	0	2
X	drprrd	BuildingRes2	Boundaries of Multi-Family Residential Buildings	1	0	2
X	drprrd	Canal	Canal	7	0	1
X	drprrd	CatchBasin	Catch Basin	10	0	2
	drprrd	CLConst_dp	Center Line of Construction	0	0	2
	drprrd	ClipBorder_dp	CLIP Border	3	0	0
	drprrd	ClipDrawingBound_dp	CLIP Drawing Boundary	3	3	0
	drprrd	COGO_dp	COGO Information	3	0	1
	drprrd	ContourIndex_dp	Contour Index and special contour info	3	0	2
	drprrd	ContourIndex_ep	Contour Index (Existing)	3	0	2
	drprrd	ContoursMajor_dp	Contour Lines Major	3	0	2
	drprrd	ContoursMajor_ep	Contour Lines Major (Existing)	3	1	1

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
	drprrd	ContoursMinor_dp	Contour Lines Minor	4	0	1
	drprrd	ContoursMinor_ep	Contour Lines Minor (Existing)	4	1	0
X	drprrd	DesiltingPipes	Desilting Pipes	10	0	2
	drprrd	DimLines_dp	Dimension Lines, Corresponding Terminators, Equation Lines	0	0	1
X	drprrd	Ditch	Ditch Top	7	6	1
X	drprrd	DitchBot	Ditch Bottom	10	0	2
	drprrd	DitchProfLt_er	Ditch Profile Left (Existing)	8	3	1
	drprrd	DitchProfLt_pr	Ditch Profile Left	8	0	1
	drprrd	DitchProfMdn_er	Ditch Profile Median (Existing)	10	3	1
	drprrd	DitchProfMdn_pr	Ditch Profile Median	10	0	1
	drprrd	DitchProfRt_er	Ditch Profile Right (Existing)	9	3	1
	drprrd	DitchProfRt_pr	Ditch Profile Right	9	0	1
	drprrd	DrainAlert_px	Alert Symbology for Structural Elements on Cross Sections	3	0	2
	drprrd	DrainDivideArw	Drainage Divide Arrow	0	0	1
	drprrd	DrainDivides00	Drainage Divides	10	2	4
	drprrd	DrainDivides00_ep	Drainage Divides (Existing)	9	2	4
	drprrd	DrainDivides01	Drainage Divides	10	2	4
	drprrd	DrainDivides01_ep	Drainage Divides (Existing)	9	2	4
	drprrd	DrainDivides02	Drainage Divides	10	2	4
	drprrd	DrainDivides02_ep	Drainage Divides (Existing)	9	2	4
	drprrd	DrainDivides03	Drainage Divides	10	2	4
	drprrd	DrainDivides03_ep	Drainage Divides (Existing)	9	2	4
	drprrd	DrainDivides04	Drainage Divides	10	2	4
	drprrd	DrainDivides04_ep	Drainage Divides (Existing)	9	2	4
	drprrd	DrainDivides05	Drainage Divides	10	2	4
	drprrd	DrainDivides05_ep	Drainage Divides (Existing)	9	2	4
	drprrd	DrainDivides06	Drainage Divides	10	2	4
	drprrd	DrainDivides06_ep	Drainage Divides (Existing)	9	2	4
	drprrd	DrainDivides07	Drainage Divides	10	2	4
	drprrd	DrainDivides07_ep	Drainage Divides (Existing)	9	2	4
	drprrd	DrainDivides08	Drainage Divides	10	2	4
	drprrd	DrainDivides08_ep	Drainage Divides (Existing)	9	2	4
	drprrd	DrainDivides09	Drainage Divides	10	2	4
	drprrd	DrainDivides09_ep	Drainage Divides (Existing)	9	2	4
	drprrd	DrainMisc	Miscellaneous Drainage Items	10	0	2

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
X	drprrd	DrainStruct_pr	Drainage Structures (All Types)	10	0	2
X	drprrd	EaseLicLine	Easement License Agreement Line	5	6	0
X	drprrd	EasePerpLine	Easement Lines Perpetual	4	PESMT	1
X	drprrd	EaseTempLine	Easement Lines Temporary	6	TEMPE	0
X	drprrd	EdgeDrain	Edge Drain, Material and Outlet Pipe	10	0	2
X	drprrd	Endwall	Endwall (All Types)	10	0	2
X	drprrd	Fence	Fence, Sand Fence	6	Fence1	1
X	drprrd	FES	Flared End Sections	10	0	2
X	drprrd	FlapGate	Flap Gates	10	0	2
	drprrd	FlowArrow_dp	Flow Arrow	10	0	2
X	drprrd	FlowLine	Flow Line	10	0	2
	drprrd	FlowLine_pr	Flow Line (Roadway Profile View)	0	0	2
X	drprrd	FlowPaths	Time of Concentration Flow Paths	10	1	1
X	drprrd	FrenchDrain	French Drain	10	0	2
X	drprrd	Gabions	Gabion Baskets or Mats	10	0	2
X	drprrd	Gabions_ep	Gabion Baskets or Mats (Existing)	10	1	2
X	drprrd	GovTwpRgeLine_ep	Township / Range Lines	10	TWPRGE	2
	drprrd	GPKDrBack_dp	Back Point on Drainage Cells	2	2	2
	drprrd	GPKDrBottom_dp	Bottom Point on Drainage Cells	3	3	2
	drprrd	GPKDrCellIns_dp	Cell Insertion Point on Drainage Cells	4	4	2
	drprrd	GPKDrCentroid_dp	Point on Centroid for Drainage	7	7	2
	drprrd	GPKDrElv	Location point for drainage cells	5	5	2
	drprrd	GPKDrFront_dp	Front Point on Drainage Cells	1	1	2
	drprrd	GPKDrPipe_dp	Point on Drainage Pipe	6	6	2
	drprrd	GPKDrPipeCir_dp	Point on Pipe Circular	6	6	0
	drprrd	GradeLine_er	Grade Line Profile (Existing)	2	2	1
	drprrd	GradeLine_pr	Grade Line Profile	5	0	2
	drprrd	GradeLineCtr_dp	Grade Line Profile Center (shown in plan view)	5	0	0
	drprrd	GradeLineCtr_pr	Grade Line Profile Center	5	0	2
	drprrd	GradeLineLt_dp	Grade Line Profile Left (shown in plan view)	1	0	0
	drprrd	GradeLineLt_er	Grade Line Profile Left (Existing)	1	2	1
	drprrd	GradeLineLt_pr	Grade Line Profile Left	1	0	2
	drprrd	GradeLineRt_dp	Grade Line Profile Right (shown in plan view)	4	0	0
	drprrd	GradeLineRt_er	Grade Line Profile Right (Existing)	4	2	1
	drprrd	GradeLineRt_pr	Grade Line Profile Right	4	0	2

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
	drprrd	GradeSecPat	Grade Section Patterns	0	0	0
	drprrd	ImageAttachment_dp	Image Attachmentst	0	0	0
X	drprrd	InletBottomJ	Inlet Bottom Type J	10	0	1
X	drprrd	InletBottomP	Inlet Bottom Type P	10	0	1
X	drprrd	InletClosedFlume	Closed Flume Inlet	10	0	2
X	drprrd	InletCurb	Curb Inlet (All Types)	10	0	2
X	drprrd	InletDBI	Ditch Bottom Inlet (All Types)	10	0	2
X	drprrd	InletGutter	Gutter Inlet (All Types)	10	0	2
X	drprrd	InletMedian	Median Barrier Inlet	10	0	2
X	drprrd	InletProt	Rock Bags and Sand Bagging	10	Rockbag	2
X	drprrd	LARWLine	Limited Access Right of Way	4	LA	2
X	drprrd	LARWLine_ep	Limited Access Right of Way (Existing)	4	EXLA	1
	drprrd	LeaderLine_dp	Leader Line and terminator with Text	0	0	1
X	drprrd	Manhole	Manhole (Drainage and Unknown)	10	0	2
X	drprrd	MES	Mitered End Section	10	0	2
	drprrd	Miscellaneous0	Undefined proposed item - co blue wt 0	1	0	0
	drprrd	Miscellaneous1	Undefined proposed item - co blue wt 1	1	0	1
	drprrd	Miscellaneous2	Undefined proposed item - co blue wt 2	1	0	2
	drprrd	Miscellaneous3	Undefined proposed item - co green wt 0	2	0	0
	drprrd	Miscellaneous4	Undefined proposed item - co green wt 1	2	0	1
	drprrd	Miscellaneous5	Undefined proposed item - co green wt 2	2	0	2
	drprrd	Miscellaneous6	Undefined proposed item - co red wt 0	3	0	0
	drprrd	Miscellaneous7	Undefined proposed item - co red wt 1	3	0	1
	drprrd	Miscellaneous8	Undefined proposed item - co red wt 2	3	0	2
	drprrd	Miscellaneous9	Undefined proposed item - co red wt 3	3	0	3
	drprrd	NonPlottingEle_dp	Non plotting items (construction elements and type 66 elements)	4	0	0
	drprrd	NorthArw_dp	North Arrows	0	0	2
	drprrd	PayItem_dp	Pay Item Number Label Elements	4	0	2
	drprrd	Permit1	Permit 1 Wetlands, Mitigation Sites, Planting Areas	1	0	1
	drprrd	Permit2	Permit 2 Wetlands, Mitigation Sites, Planting Areas	2	0	1
	drprrd	Permit3	Permit 3 Wetlands, Mitigation Sites, Planting Areas	4	0	1
	drprrd	PipeCulvert_ep	Pipe Culvert	10	3	1
	drprrd	PipeCulvert_ep	Pipe Culvert	10	3	1
X	drprrd	PipeCulvert_pr	Pipe Culvert in Profile	3	0	2
X	drprrd	PipeCulvert_px	Pipe Culvert for Cross Section View	10	0	2

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
X	drprrd	PipeCulvertCD	Pipe Culvert Cross Drain	10	0	2
X	drprrd	PipeCulvertGD	Pipe Culvert Gutter Drain	11	0	2
X	drprrd	PipeCulvertSD	Pipe Culvert Side Drain	12	0	2
X	drprrd	PipeCulvertSS	Pipe Culvert Storm Sewer	9	0	2
	drprrd	PointLocator_ep	Point Locator Symbol	4	0	0
X	drprrd	PondSideSlope	Pond Side Slope	0	0	2
X	drprrd	PropertyLine_ep	Property Lines	3	0	0
	drprrd	ReferencePt_dp	Survey and Construction Reference Point Details and Elements	4	0	2
X	drprrd	RetentionArea	Retention Area	2	0	2
X	drprrd	RipRap	Rip Rap, Rubble	4	0	2
X	drprrd	RockGravelStone	Rock, Gravel, Stone, Boulders, Etc.	1	0	2
X	drprrd	RWLine	Right of Way Lines	4	RW	2
X	drprrd	RWLine_ep	Right of Way Lines (Existing)	3	RW	1
	drprrd	Scale_dp	Bar Scale, Scale Label Elements	0	0	2
	drprrd	Scratch1_dp	A scratch level for temporary or informational items	4	0	0
	drprrd	Scratch2_dp	A scratch level for temporary or informational items	5	0	0
	drprrd	ScratchEle_dp	Level for Draft Elements, Temporary Elements, Etc. Do Not Plot	3	0	0
	drprrd	ScratchEle2_dp	Level for Draft Elements, Temporary Elements, Etc. Do Not Plot	4	0	0
101	drprrd	SedimentBarrier	Synthetic Bales and Staked Silt Fences	10	*hay_bales	2
101	drprrd	SedimentBarrier	Synthetic Bales and Staked Silt Fences	10	*silt_fence	2
X	drprrd	SedimentBasin	Sediment Basin Index 101	10	0	2
X	drprrd	SedimentBasin_ep	Sediment Basin Index 101 (Existing)	10	3	1
X	drprrd	SlideGate	Slide Gate	10	0	2
X	drprrd	Slopes	Slopes (Top, Bottom)	9	3	0
	drprrd	Slopes_ep	Natural Slopes, Levees, Dikes, Dams, Embankment (Top or Bottom)	9	3	0
X	drprrd	SlopeStakes1	Slope Stakes 1	4	1	3
X	drprrd	SlopeStakes2	Slope Stakes 2	1	1	3
X	drprrd	SlottedDrainPipe	Slotted Drain Pipe	10	0	1
X	drprrd	SlottedStormSewer	Storm Sewer Slotted or Perforated	10	0	2
X	drprrd	Spillway	Spillway/ Flume/ Slope Drain	10	0	2
	drprrd	StationTicL_dp	Station Tic Marks (Large) and Text	0	0	2
	drprrd	StationTicS_dp	Station Tic Marks (Small) and Text	0	0	2
X	drprrd	StormSewer	Storm Sewer (All Types), Drain Pipes and Spouts	10	0	2
	drprrd	TextAlert	Text - An Alert Label to Highlight a Problem	3	0	2
	drprrd	TextBLStation	Text - B/L Station and Tics	0	0	2
	drprrd	TextConstEle	Text - Construction Element	0	0	1

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
	drprrd	TextCurveData	Text - Curve Data Note	0	0	2
	drprrd	TextDetails	Text - Detail Notes	4	0	2
	drprrd	TextElevLabel	Elevation Labels	4	0	0
	drprrd	TextLabel	Text - Label	0	0	2
	drprrd	TextLandscape	Text - Landscape Labels	0	0	1
	drprrd	TextMajor	Text - Major	0	0	5
	drprrd	TextMinor	Text - Minor	0	0	0
	drprrd	TextMisc	Text - Miscellaneous	0	0	1
	drprrd	TextNotes	Text - Notes	4	0	1
	drprrd	TextProfLabel	Text - Profile, Horizontal and Vertical Axis Labels	0	0	2
	drprrd	TextProjLabel	Text - Begin and End Project label with leader lines	1	0	2
	drprrd	TextPtLabel	Point Labels	4	0	0
	drprrd	TextShtNo	Text - Sheet Number	0	0	2
	drprrd	TextSurveyLabel	Survey Text Labels	0	0	0
	drprrd	TextTables	Text - Keysheet Indexes and Table Data	4	0	2
	drprrd	TextTitle	Text - Title	0	0	3
	drprrd	TextXSElev	Text - Cross Section Elevations	2	0	1
X	drprrd	Trench	Storm Sewer Trench	10	0	2
X	drprrd	TurbidityBarrier1	Turbidity Barrier 1 (floating)	10	barrier1	2
X	drprrd	TurbidityBarrier2	Turbidity Barrier 2 (staked)	10	barrier2	2
	drprrd	TurbidityBarrier2_ep	Turbidity Barrier (Staked) (Existing)	10	1	2
	drprrd	TurbidityBarrier1_ep	Turbidity Barrier (Floating) (Existing)	10	1	2
X	drprrd	UnderDrain	Underdrains (All Types)	10	0	2
X	drprrd	UnderDrainOP	Underdrain Outlet Pipes	10	0	2
	drprrd	Wetland	Wetland Boundary	2	wetland	1
	drprrd	XSCell	GEOPAK Cross Section Cell and Profile Cell	8	0	1
X	drprrd	YardDrain	Yard Drain	10	3	1
	drprrd	Viewport	Viewport (For AutoCAD Use)	3	0	0
	drprrd	Xreference_dp	Reference Files (For AutoCAD Use)	0	0	1
	drprrd	Xreference01_dp	Reference Files (For AutoCAD Use)	0	0	1
	drprrd	Xreference02_dp	Reference Files (For AutoCAD Use)	0	0	1
	drprrd	Xreference03_dp	Reference Files (For AutoCAD Use)	0	0	1
	drprrd	Xreference04_dp	Reference Files (For AutoCAD Use)	0	0	1
	drprrd	Xreference05_dp	Reference Files (For AutoCAD Use)	0	0	1
	drprrd	Xreference06_dp	Reference Files (For AutoCAD Use)	0	0	1
	drprrd	Xreference07_dp	Reference Files (For AutoCAD Use)	0	0	1
	drprrd	Xreference08_dp	Reference Files (For AutoCAD Use)	0	0	1

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
	drprrd	Xreference09_dp	Reference Files (For AutoCAD Use)	0	0	1
	drprrd	Xreference10_dp	Reference Files (For AutoCAD Use)	0	0	1

4.2.8 DRAINAGE CROSS SECTION - DRXSRD

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
	drxsrd	ActivePointCell_dp	Active Point Cell	4	0	10
	drxsrd	AdhocPoint_dp	Adhoc Points Placed by SheetInfo	0	4	0
X	drxsrd	AsphaltConc	Asphaltic Concrete Quantity Shapes	6	0	3
X	drxsrd	AsphaltMilling_px	Asphalt Milling Lines on Cross Sections	7	0	2
X	drxsrd	AsphaltMisc_px	Miscellaneous Pavement on Cross Sections	1	0	2
X	drxsrd	BarrierWall_ex	Barrier Wall for Cross Section (Existing)	6	3	1
X	drxsrd	BarrierWall_px	Barrier Wall for Cross Section	6	0	2
X	drxsrd	Base_ex	Base Material for Cross Sections (All Types) (Existing)	3	3	1
X	drxsrd	Base_px	Base Material for Cross Sections (All Types)	3	0	2
	drxsrd	BaselineSurvey	Baseline Survey	0	0	2
X	drxsrd	Berm_px	Berm (Top, Front, or Back) for Cross Sections	10	0	2
X	drxsrd	CandG_ex	Curb and Gutter for Cross Sections (All Types) (Existing)	4	2	1
X	drxsrd	CandG_px	Curb and Gutter for Cross Sections (All Types)	4	0	2
X	drxsrd	CandGBase_px	Curb and Gutter Base on Cross Sections	3	0	1
X	drxsrd	CATVBur_ex	Cable TV and Miscellaneous on Cross Sections (Existing)	6	2	1
X	drxsrd	CATVBur_px	Cable TV and Miscellaneous on Cross Sections	6	0	1
	drxsrd	CLConst_dp	Center Line of Construction	0	0	2
	drxsrd	Cloud_dp	Construction Cloud	7	0	2
	drxsrd	COGO_dp	COGO Information	3	0	1
X	drxsrd	Concrete_px	Concrete Boundary Lines on Cross Sections	0	0	2
X	drxsrd	Conduit_ex	Conduit and Encasements on Cross Sections (Existing)	3	2	1
X	drxsrd	Conduit_px	Conduit and Encasements on Cross Sections	3	0	1
	drxsrd	ConstArea_dp	Construction Area Crosshatch	0	0	1
	drxsrd	ConstLimits	Construction Limits	3	LOC	2
	drxsrd	ConstLines	Construction Lines and References	1	0	0
	drxsrd	CurveData_dp	Curve & Coordinate Data Elements incl. PC, PT, PI symbols	4	0	2
	drxsrd	CurveDataLabel_dp	Curve Data Labels PC,PI, PT	0	0	2

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
	drxsrd	DimLines_dp	Dimension Lines, Corresponding Terminators, Equation Lines	0	0	1
X	drxsrd	Ditch_px	Ditch Top for Cross Sections	7	0	2
X	drxsrd	DitchBot_px	Ditch Bottom for Cross Sections	10	0	2
X	drxsrd	DitchPavt_px	Ditch Pavement for Cross Sections	3	0	3
	drxsrd	DrainAlert_px	Alert Symbology for Structural Elements on Cross Sections	3	0	2
	drxsrd	DrainMisc_ex	All types of miscellaneous drainage elements (Existing)	10	3	1
X	drxsrd	DrainStruct_ex	All Drainage Structures for Cross Sections (Existing)	10	3	1
X	drxsrd	DrainStruct_px	Misc Drainage Structures and Elements for XSections	10	0	2
X	drxsrd	Driveway_ex	Driveway Lines on Cross Sections - Existing	7	1	2
X	drxsrd	Driveway_px	Driveway Lines on Cross Sections	7	0	2
X	drxsrd	DrivewayBase_px	Proposed Driveway Subgrade	3	0	2
	drxsrd	Earthwork1_px	Earthwork (color 0)	0	0	1
	drxsrd	Earthwork2_px	Earthwork (color 1)	1	0	1
	drxsrd	Earthwork3_px	Earthwork (color 2)	2	0	1
	drxsrd	Earthwork4_px	Earthwork (color 3)	3	0	1
	drxsrd	Earthwork5_px	Earthwork (color 4)	4	0	1
X	drxsrd	EaseLicLine	Easement License Agreement Line	5	6	0
X	drxsrd	EasePerpLine_px	Easement Lines Perpetual on Cross Sections	4	PESMT	1
X	drxsrd	EaseTempLine_px	Easement Lines Temporary on Cross Sections	6	TEMPE	0
X	drxsrd	Endwall_px	Endwall for Cross Sections	10	0	2
	drxsrd	ExcavationLimits_dp	Excavation Limits on Cross Sections	0	0	1
X	drxsrd	Fence_px	Fence Lines on Cross Sections	6	Fence1	2
	drxsrd	Fence_ex	Fence Lines on Cross Sections (Existing)	6	3	1
X	drxsrd	FES_px	Flared End Sections for Cross Sections	10	0	2
	drxsrd	FlowArrow_dp	Flow Arrow	10	0	2
X	drxsrd	FOCBur_ex	Fiber Optics Cable (Buried) for XSections (Existing)	6	2	1
X	drxsrd	FOCBur_px	Fiber Optics Cable (Buried) for XSections	6	0	1
X	drxsrd	Gas_ex	Gas Pipe and Fittings, Misc for Xsections (Existing)	4	2	1
X	drxsrd	Gas_px	Gas Pipe and Fittings, Misc for Xsections	4	0	1
	drxsrd	GeotechFillPatt1	Geotechnical Fill Pattern - (earth, wood, muck, concrete, rock, riprap) as defined in project	3	0	0
	drxsrd	GeotechFillPatt1_px	Geotechnical Fill Pattern - (earth, wood, muck, concrete, rock, riprap) as defined in project	3	0	0
	drxsrd	GeotechFillPatt2	Geotechnical Fill Pattern - clay, sand	0	1	0
	drxsrd	GeotechFillPatt2_px	Geotechnical Fill Pattern - clay, sand	0	1	0
	drxsrd	GeotechFillPatt3	Geotechnical Fill Pattern - shell	3	1	0
	drxsrd	GeotechFillPatt3_px	Geotechnical Fill Pattern - shell	3	1	0

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
	drxsrd	GeotechFillPatt4	Geotechnical Fill Pattern - sand	4	0	0
	drxsrd	GeotechFillPatt4_px	Geotechnical Fill Pattern - sand	4	0	0
	drxsrd	GeotechFillPatt5	Geotechnical Fill Pattern - coquina	1	0	1
	drxsrd	GeotechFillPatt5_px	Geotechnical Fill Pattern - coquina	1	0	1
	drxsrd	GeotechFillPatt6	Geotechnical Fill Pattern - limestone	2	0	0
	drxsrd	GeotechFillPatt6_px	Geotechnical Fill Pattern - limestone	2	0	0
	drxsrd	GeotechFillPatt7	Geotechnical Fill Pattern - gravel	6	0	0
	drxsrd	GeotechFillPatt7_px	Geotechnical Fill Pattern - gravel	6	0	0
	drxsrd	GeotechFillPatt8	Geotechnical Fill Pattern - silt	0	0	1
	drxsrd	GeotechFillPatt8_px	Geotechnical Fill Pattern - silt	0	0	1
	drxsrd	GeotechMisc	Miscellaneous Geotechnical Elements	0	0	1
	drxsrd	GPKDrBack_dp	Back Point on Drainage Cells	2	2	2
	drxsrd	GPKDrBottom_dp	Bottom Point on Drainage Cells	3	3	2
	drxsrd	GPKDrCellIns_dp	Cell Insertion Point on Drainage Cells	4	4	2
	drxsrd	GPKDrCentroid_dp	Point on Centroid for Drainage	7	7	2
	drxsrd	GPKDrElv	Location point for drainage cells	5	5	2
	drxsrd	GPKDrFront_dp	Front Point on Drainage Cells	1	1	2
	drxsrd	GPKDrPipe_dp	Point on Drainage Pipe	6	6	2
	drxsrd	GPKDrPipeCir_dp	Point on Pipe Circular	6	6	0
X	drxsrd	GravityWall_px	Gravity Wall for Cross Sections	11	0	2
X	drxsrd	GravWallBase_px	Proposed Gravity Wall Subgrade	3	0	2
	drxsrd	GridMaj_dp	Grid Lines Major in Profile and Cross Section	3	0	1
	drxsrd	GridMin_dp	Grid Lines Minor in Profile and Cross Section	0	0	0
	drxsrd	GridMinG_dp	Grid Lines Minor Sub 2 in Cross Section Sheets	20	0	0
	drxsrd	GridMinSub_dp	Grid Lines Minor Sub in Cross Section Sheets	20	0	0
X	drxsrd	Guardrail_ex	Guardrail Lines on Cross Sections - Existing	0	1	2
X	drxsrd	Guardrail_px	Guardrail	0	0	1
X	drxsrd	Handrail_px	Handrail Lines on Cross Sections	9	0	1
	drxsrd	ImageAttachment_dp	Image Attachmentst	0	0	0
X	drxsrd	Inlet_px	Inlets on Cross Sections	10	0	2
X	drxsrd	InletBottom_px	Inlet Bottom on Cross Sections (All Types)	10	0	2
	drxsrd	KeyShtMisc	Key sheet Miscellaneous Items	0	0	2
X	drxsrd	LARWLine_ex	Limited Access Right of Way on Cross Sections (Existing)	4	EXLA	1
X	drxsrd	LARWLine_px	Limited Access ROW Lines on Cross Sections	4	LA	2
X	drxsrd	LateralLimits_px	Lateral Limits for Cross Sections	6	0	2

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
	drxsrd	LeaderLine_dp	Leader Line and terminator with Text	0	0	1
	drxsrd	Logo_dp	Consultant Engineer of Record Logo	0	0	1
X	drxsrd	Manhole_px	Manhole on Cross Sections	10	0	2
X	drxsrd	MedianWallBase_px	Proposed Median Wall Subgrade	3	0	2
X	drxsrd	MES_px	Mitered End Section on Cross Sections	10	0	2
	drxsrd	Miscellaneous0	Undefined proposed item - co blue wt 0	1	0	0
	drxsrd	Miscellaneous1	Undefined proposed item - co blue wt 1	1	0	1
	drxsrd	Miscellaneous2	Undefined proposed item - co blue wt 2	1	0	2
	drxsrd	Miscellaneous3	Undefined proposed item - co green wt 0	2	0	0
	drxsrd	Miscellaneous4	Undefined proposed item - co green wt 1	2	0	1
	drxsrd	Miscellaneous5	Undefined proposed item - co green wt 2	2	0	2
	drxsrd	Miscellaneous6	Undefined proposed item - co red wt 0	3	0	0
	drxsrd	Miscellaneous7	Undefined proposed item - co red wt 1	3	0	1
	drxsrd	Miscellaneous8	Undefined proposed item - co red wt 2	3	0	2
	drxsrd	Miscellaneous9	Undefined proposed item - co red wt 3	3	0	3
	drxsrd	NonPlottingEle_dp	Non plotting items such as construction elements and type 66 elements	4	0	0
X	drxsrd	Overbuild_px	Overbuild Areas on Cross Sections	4	0	2
X	drxsrd	Overbuild1_px	Proposed Overbuild Binder Symbology (No Longer Used)	7	0	2
X	drxsrd	Overbuild2_px	Proposed Overbuild Base Symbology (No Longer Used)	7	0	2
X	drxsrd	Overlay_px	Proposed Overlay Layer for Cross Sections	1	0	2
X	drxsrd	Overlay1_px	Proposed Overlay Layer for Cross Sections	14	0	2
X	drxsrd	Overlay2_px	Proposed Overlay Layer for Cross Sections	7	0	2
	drxsrd	Patternlines_ep	Cross Section Chain	2	1	0
	drxsrd	PatternLines1_dp	Pattern Lines for Cross Sections	3	0	2
	drxsrd	PatternLines2_dp	Pattern Lines for XSections alternate for side streets, critical Cross Sections or drainage structures	4	0	2
	drxsrd	PatternLines3_dp	Pattern Lines for XSections alternate for side streets, critical Cross Sections or drainage structures	5	0	2
X	drxsrd	PavedMedianBase_px	Proposed Paved Median Subgrade	3	0	2
	drxsrd	PavtAsph_ep	Asphalt Pavement Edge	0	3	1
	drxsrd	PayItem_dp	Pay Item Number Label Elements	4	0	2
	drxsrd	PipeCulvert_ep	Pipe Culvert	10	3	1
X	drxsrd	PipeCulvert_pr	Pipe Culvert in Profile	3	0	2
X	drxsrd	PipeCulvert_px	Pipe Culvert for Cross Section View	10	0	2
X	drxsrd	PlotBorder_dp	Plot Border	3	0	0
	drxsrd	PointLocator_ep	Point Locator Symbol	4	0	0
X	drxsrd	Pond_px	Pond Lines on Cross Sections	2	0	2

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
X	drxsrd	Power_ex	Power on Cross Sections (Existing)	3	2	1
X	drxsrd	Power_px	Power on Cross Sections	3	0	1
X	drxsrd	PropertyLine_ep	Property Lines	3	0	0
	drxsrd	ReferencePt_dp	Survey and Construction Reference Point Details and Elements	4	0	2
	drxsrd	RegionBdry_dp	Boundary Line for Regions in Corridor Design (Autodesk)	0	0	0
X	drxsrd	RetainWall_px	Retaining Walls on Cross Sections	6	0	1
X	drxsrd	RipRap_px	Rip Rap, Rubble on Cross Sections	4	1	2
X	drxsrd	RumbleStrip1	Rumble Strips Continuous Array	0	rumble_cont	2
X	drxsrd	RumbleStrip2	Rumble Strips Skip Array	0	rumble_skip	2
X	drxsrd	RWLine	Right of Way Lines	4	RW	2
X	drxsrd	RWLine_ep	Right of Way Lines (Existing)	3	RW	1
X	drxsrd	RWLine_ex	ROW Lines on Cross Sections (Existing)	3	RW	1
X	drxsrd	RWLine_px	ROW Lines on Cross Sections	4	RW	2
X	drxsrd	SanitaryFM_ex	Force Main Lines on Cross Sections (Existing)	2	2	1
X	drxsrd	SanitaryFM_px	Force Main Lines on Cross Sections	2	0	1
X	drxsrd	SanitarySewer_ex	Sanitary Sewer Lines on Cross Sections (Existing)	10	2	0
X	drxsrd	SanitarySewer_px	Sanitary Sewer Lines on Cross Sections	2	0	1
X	drxsrd	SanitarySewerEff_px	Sanitary Effluent for Cross Sections	9	0	0
	drxsrd	Scratch1_dp	A scratch level for temporary or informational items	4	0	0
	drxsrd	Scratch2_dp	A scratch level for temporary or informational items	5	0	0
	drxsrd	ScratchEle_dp	Level for Draft Elements, Temporary Elements, Etc. Do Not Plot	3	0	0
	drxsrd	ScratchEle2_dp	Level for Draft Elements, Temporary Elements, Etc. Do Not Plot	4	0	0
	drxsrd	SheetBorder_dp	Sheet Border	1	0	4
	drxsrd	SheetLines_dp	Sheet Lines	1	0	2
	drxsrd	SheetLinesMisc1_dp	Sheet Lines	1	0	0
	drxsrd	SheetLinesMisc2_dp	Sheet Lines	2	0	2
	drxsrd	SheetLinesMisc3_dp	Sheet Lines	3	0	2
	drxsrd	SheetLinesMisc4_dp	Sheet Lines	4	0	2
X	drxsrd	ShldrBase_px	Bottom of Proposed Paved Shoulder Base	3	0	2
X	drxsrd	ShldrBaseTop_px	Top of Proposed Paved Shoulder Base	3	0	2
X	drxsrd	ShldrPaved_px	Paved Shoulder Lines on Cross Sections	1	0	2
X	drxsrd	ShldrUnpaved_px	Grass Shoulder Lines on Cross Sections	2	0	2
X	drxsrd	ShldrWallBase_px	Proposed Shoulder Wall Subgrade	3	0	2
X	drxsrd	Sidewalk_ex	Sidewalk Elements in Cross Sections (Existing)	0	2	1
X	drxsrd	Sidewalk_px	Sidewalk Elements in Cross Sections	0	0	2

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
	drxsrd	SidewalkBack_er	Back of Sidewalk Line Profile (Existing)	2	2	1
	drxsrd	SidewalkBack_pr	Back of Sidewalk Line Profile	5	0	2
X	drxsrd	SidewalkBase_px	Proposed Sidewalk Subgrade	3	0	2
X	drxsrd	Slopes_px	Slope Lines on Cross Sections	9	0	2
X	drxsrd	SoilBoxes_px	Soil Boxes and Borings for Cross Sections	4	0	1
	drxsrd	SpecialDetails_px	Special Details_XS	6	0	1
X	drxsrd	Stabilization_px	Stabilization for Cross Sections	5	2	2
	drxsrd	StationTicL_dp	Station Tic Marks (Large) and Text	0	0	2
	drxsrd	StationTicS_dp	Station Tic Marks (Small) and Text	0	0	2
X	drxsrd	StreetLights_px	Street Lights for Cross Sections	3	0	1
	drxsrd	Structure_px	Signal and Sign Structures on Cross Sections	0	0	2
X	drxsrd	SubDsgn_px	Sub Design for Cross Sections including sub base	4	0	1
X	drxsrd	Subsoil_px	Subsoil Or Undercut for Cross Sections	4	0	2
X	drxsrd	SubsoilFinal_px	Subsoil Final for Multiline	18	0	1
X	drxsrd	SubsoilProp_px	Subsoil Proposed for Multiline	8	0	1
	drxsrd	SumBoxBorder_dp	Summary Boxes Borders	4	0	3
	drxsrd	SumBoxLines_dp	Summary Boxes Lines and Miscellaneous Items	4	0	1
	drxsrd	SumBoxLinesMin_dp	Summary Boxes Lines Minor Line and Miscellaneous Items	4	0	0
X	drxsrd	TeleBur_ex	Telephone for Cross Sections (Buried - Miscellaneous - Existing)	6	2	1
X	drxsrd	TeleBur_px	Telephone for Cross Sections (Buried) (Miscellaneous)	6	0	1
X	drxsrd	TemplateBottom_px	Bottom of Template for Multiline	6	0	1
X	drxsrd	TemplateFinal_px	Final Template for Multiline	2	0	1
X	drxsrd	TemplateTop_px	Top of Template for Multiline	7	0	1
X	drxsrd	TerrainLine_ex	Existing Ground Line for Multiline	5	0	1
	drxsrd	TextAlert	Text - An Alert Label to Highlight a Problem	3	0	2
	drxsrd	TextBLStation	Text - B/L Station and Tics	0	0	2
	drxsrd	TextConstEle	Text - Construction Element	0	0	1
	drxsrd	TextCurveData	Text - Curve Data Note	0	0	2
	drxsrd	TextDetails	Text - Detail Notes	4	0	2
	drxsrd	TextElevLabel	Elevation Labels	4	0	0
	drxsrd	TextGeotech	Text for soil borings and labels	0	0	2
	drxsrd	TextLabel	Text - Label	0	0	2
	drxsrd	TextLandscape	Text - Landscape Labels	0	0	1
	drxsrd	TextMajor	Text - Major	0	0	5
	drxsrd	TextMinor	Text - Minor	0	0	0

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
	drxsrd	TextMisc	Text - Miscellaneous	0	0	1
	drxsrd	TextNotes	Text - Notes	4	0	1
	drxsrd	TextProfLabel	Text - Profile, Horizontal and Vertical Axis Labels	0	0	2
	drxsrd	TextPtLabel	Point Labels	4	0	0
	drxsrd	TextShtNo	Text - Sheet Number	0	0	2
	drxsrd	TextSurveyLabel	Survey Text Labels	0	0	0
	drxsrd	TextTables	Text - Keysheet Indexes and Table Data	4	0	2
	drxsrd	TextTitle	Text - Title	0	0	3
	drxsrd	TextXSBL_dp	Cross Section Baseline Labels	0	0	2
	drxsrd	TextXSDrain_ex	Existing Drainage Labels	10	0	2
	drxsrd	TextXSDrain_px	Proposed Drainage Labels	10	0	2
	drxsrd	TextXSElev	Text - Cross Section Elevations	2	0	1
	drxsrd	TextXSElev_ex	Existing cross section elevations	2	0	1
	drxsrd	TextXSElev_px	Proposed cross section elevations	0	0	1
	drxsrd	TextXSGPKPts_dp	Points Labeled on Cross Sections	4	0	0
	drxsrd	TextXSNotes_dp	Cross Section Notes	0	0	2
	drxsrd	TextXSSlope_dp	Cross Section Slope Labels (rise:run format)	0	0	2
	drxsrd	TextXSSlopePvt_dp	Cross Section Pavement Slope Labels	0	0	2
X	drxsrd	TrafSeparator_ex	Traffic Separator (All Types) on Cross Sections (Existing)	6	2	1
X	drxsrd	TrafSeparator_px	Traffic Separator (All Types) on Cross Sections	6	0	2
X	drxsrd	TrafSeparatorBase_px	Proposed Traffic Separator Subgrade	3	0	2
	drxsrd	TypicalMisc	Typical Miscellaneous Items	0	0	2
	drxsrd	Utility_er	Existing Utilities in Profile View	3	2	1
	drxsrd	Utility_pr	Proposed Utilities in Profile View	3	0	2
	drxsrd	UtilsMisc_ex	Miscellaneous Utility Items on Cross Sections (Existing)	8	2	1
	drxsrd	UtilsMisc_px	Miscellaneous Utility Items on Cross Sections	8	0	1
	drxsrd	Vehicle	Vehicle for Calculating Turning Radius	7	0	2
	drxsrd	Viewport	Viewport (For AutoCAD Use)	3	0	0
	drxsrd	VoidArea_dx	Void Area_XS	1	0	0
X	drxsrd	Water_ex	Water for Cross Sections (Existing)	1	2	1
X	drxsrd	Water_px	Water for Cross Sections	1	0	1
X	drxsrd	WaterNP_px	Raw Water Pipes for Cross Sections	1	0	1
	drxsrd	Wetland_ex	Wetland Boundary for Cross Sections (Existing)	2	wetland	1
	drxsrd	WetlandEdge_ep	Edge of Mangrove, Wetlands (Marsh or Swamp)	2	wetland_ep	0
	drxsrd	Xreference_dp	Reference Files (For AutoCAD Use)	0	0	1

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
	drxsrd	Xreference01_dp	Reference Files (For AutoCAD Use)	0	0	1
	drxsrd	Xreference02_dp	Reference Files (For AutoCAD Use)	0	0	1
	drxsrd	Xreference03_dp	Reference Files (For AutoCAD Use)	0	0	1
	drxsrd	Xreference04_dp	Reference Files (For AutoCAD Use)	0	0	1
	drxsrd	Xreference05_dp	Reference Files (For AutoCAD Use)	0	0	1
	drxsrd	Xreference06_dp	Reference Files (For AutoCAD Use)	0	0	1
	drxsrd	Xreference07_dp	Reference Files (For AutoCAD Use)	0	0	1
	drxsrd	Xreference08_dp	Reference Files (For AutoCAD Use)	0	0	1
	drxsrd	Xreference09_dp	Reference Files (For AutoCAD Use)	0	0	1
	drxsrd	Xreference10_dp	Reference Files (For AutoCAD Use)	0	0	1
X	drxsrd	XSBaseTop_px	Top of Proposed Base	3	0	2
	drxsrd	XSCell	GEOPAK Cross Section Cell and Profile Cell	8	0	1
X	drxsrd	XSExtendGrdLine_ex	Extend Ground Lines for Cross Sections (Existing)	21	2	1
X	drxsrd	XSGrdLine_ex	Ground Lines for Cross Sections (Existing)	2	2	1
X	drxsrd	XSGrdLine_px	Roadway Ground Lines on Cross Sections	1	0	2
	drxsrd	XSMisc_ex	Roadway Miscellaneous Items on Cross Sections (Existing)	4	3	1
	drxsrd	XSMisc_px	Cross Section Miscellaneous Items	0	0	2
	drxsrd	XSPt_ep	Cross Section Point, Station	2	1	0
	drxsrd	XSShapeDep01_dp	Cross Section Shape Dependent	11	0	2
	drxsrd	XSShapeDep02_dp	Cross Section Shape Dependent	12	0	2
	drxsrd	XSShapeDep03_dp	Cross Section Shape Dependent	13	0	2
	drxsrd	XSShapeDep04_dp	Cross Section Shape Dependent	14	0	2
	drxsrd	XSShapeDep05_dp	Cross Section Shape Dependent	15	0	2
	drxsrd	XSShapeDep06_dp	Cross Section Shape Dependent	16	0	2
	drxsrd	XSShapeDep07_dp	Cross Section Shape Dependent	17	0	2
	drxsrd	XSShapeDep08_dp	Cross Section Shape Dependent	18	0	2
	drxsrd	XSShapeDep09_dp	Cross Section Shape Dependent	19	0	2
	drxsrd	XSShapeDep10_dp	Cross Section Shape Dependent	20	0	2
	drxsrd	XSShapeIndep01_dp	Cross Section Shape Independent	1	0	2
	drxsrd	XSShapeIndep02_dp	Cross Section Shape Independent	2	0	2
	drxsrd	XSShapeIndep03_dp	Cross Section Shape Independent	3	0	2
	drxsrd	XSShapeIndep04_dp	Cross Section Shape Independent	4	0	2
	drxsrd	XSShapeIndep05_dp	Cross Section Shape Independent	5	0	2
	drxsrd	XSShapeIndep06_dp	Cross Section Shape Independent	6	0	2
	drxsrd	XSShapeIndep07_dp	Cross Section Shape Independent	7	0	2

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
	drxsrd	XSShapeIndep08_dp	Cross Section Shape Independent	8	0	2
	drxsrd	XSShapeIndep09_dp	Cross Section Shape Independent	9	0	2
	drxsrd	XSShapeIndep10_dp	Cross Section Shape Independent	10	0	2
X	drxsrd	XSTypical_px	Roadway Pavement Typical on Cross Sections	1	0	2

4.2.9 LANDSCAPING DESIGN - DSGNLD

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
	dsgnld	ActivePointCell_dp	Active Point Cell	4	0	10
	dsgnld	AdhocPoint_dp	Adhoc Points Placed by SheetInfo	0	4	0
	dsgnld	BillboardDim	Billboard Dimension	0	0	2
	dsgnld	BillboardHt	Billboard Height	0	0	2
	dsgnld	BillboardLoc	Billboard Location	0	0	2
	dsgnld	BillboardVeg	Billboard Vegetation Area	6	1	1
	dsgnld	BillboardZone	Billboard View Zone	3	3	4
	dsgnld	ClearSight_dp	Clear Sight Lines and Limits	3	4	2
	dsgnld	ClearZone_dp	Clear Zone Elements	3	1	1
	dsgnld	COGO_dp	COGO Information	3	0	1
	dsgnld	DimLines_dp	Dimension Lines, Corresponding Terminators, Equation Lines	0	0	1
X	dsgnld	DitchBankArea	Ditch Bank Areas for Landscape	1	0	1
X	dsgnld	EaseLicLine	Easement License Agreement Line	5	6	0
X	dsgnld	Fertilizer	Fertilizer	11	0	1
X	dsgnld	Flower	Flower Edge / Flower Symbol	2	0	1
	dsgnld	GroundCover	Groundcover Edge Symbol	2	0	1
	dsgnld	GroundCoverHatch	Groundcover Hatch Pattern	2	0	0
X	dsgnld	HandWaterArea	Hand Watering Area	1	0	0
X	dsgnld	HerbicideArea	Area to Receive Herbicide	5	0	1
	dsgnld	ImageAttachment_dp	Image Attachmentst	0	0	0
	dsgnld	LandscapeAccs	Landscape Accessories (Barbeque Grill, Bike Rack etc.)	1	0	1
	dsgnld	LandscapeBlder	Landscape Boulders and Cobble	4	0	2
	dsgnld	LandscapeBlock	Landscape Concrete Blocks, Patterns and Walls	3	0	1
	dsgnld	LandscapeFills	Fills and Rock Sections	4	0	1
	dsgnld	LandscapeMisc	Landscaping Miscellaneous Items	3	0	2

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
	dsgnld	LeaderLine_dp	Leader Line and terminator with Text	0	0	1
X	dsgnld	Luminaire	Luminaires (Decorative - All Types)	2	0	1
X	dsgnld	MaintArea	Maintenance Areas for Landscape	10	0	2
	dsgnld	Miscellaneous0	Undefined proposed item - co blue wt 0	1	0	0
	dsgnld	Miscellaneous1	Undefined proposed item - co blue wt 1	1	0	1
	dsgnld	Miscellaneous2	Undefined proposed item - co blue wt 2	1	0	2
	dsgnld	Miscellaneous3	Undefined proposed item - co green wt 0	2	0	0
	dsgnld	Miscellaneous4	Undefined proposed item - co green wt 1	2	0	1
	dsgnld	Miscellaneous5	Undefined proposed item - co green wt 2	2	0	2
	dsgnld	Miscellaneous6	Undefined proposed item - co red wt 0	3	0	0
	dsgnld	Miscellaneous7	Undefined proposed item - co red wt 1	3	0	1
	dsgnld	Miscellaneous8	Undefined proposed item - co red wt 2	3	0	2
	dsgnld	Miscellaneous9	Undefined proposed item - co red wt 3	3	0	3
X	dsgnld	MowingAreaLarge	Mowing and Maintenance Areas for Large Machine	2	0	2
X	dsgnld	MowingAreaSmall	Mowing and Maintenance Areas	68	0	1
X	dsgnld	Mulch	Mulch Area	10	0	1
X	dsgnld	NaturalArea	Natural Landscape Areas	30	0	1
X	dsgnld	NoMaint	Maintained by Others	7	0	1
	dsgnld	NonPlottingEle_dp	Non plotting items such as construction elements and type 66 elements	4	0	0
	dsgnld	Pavers	Pavers - Brick and Block	5	0	1
	dsgnld	PayItem_dp	Pay Item Number Label Elements	4	0	2
	dsgnld	PointLocator_ep	Point Locator Symbol	4	0	0
X	dsgnld	PlantingArea	Plant Areas, Patterns and Boundary Elements	13	0	0
	dsgnld	ReferencePt_dp	Survey and Construction Reference Point Details and Elements	4	0	2
X	dsgnld	RockGravelStone	Rock, Gravel, Stone, Boulders, Etc.	1	0	2
	dsgnld	Scratch1_dp	A scratch level for temporary or informational items	4	0	0
	dsgnld	Scratch2_dp	A scratch level for temporary or informational items	5	0	0
	dsgnld	ScratchEle_dp	Level for Draft Elements, Temporary Elements, Etc. These Elements Do Not Plot	3	0	0
	dsgnld	ScratchEle2_dp	Level for Draft Elements, Temporary Elements, Etc. Do Not Plot	4	0	0
X	dsgnld	Shrub	Shrubs	2	0	1
X	dsgnld	SlopeArea	Slope Areas for Landscape	3	0	1
X	dsgnld	StakingArea	Staking Area	14	0	1
	dsgnld	StreetFurniture	Benches, Trash Receptacles, Bus Stop Covers, etc.	4	0	1
X	dsgnld	StreetLights	Street Lights	2	0	1
	dsgnld	TextAlert	Text - An Alert Label to Highlight a Problem	3	0	2

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
	dsgnld	TextBLStation	Text - B/L Station and Tics	0	0	2
	dsgnld	TextConstEle	Text - Construction Element	0	0	1
	dsgnld	TextCurveData	Text - Curve Data Note	0	0	2
	dsgnld	TextDetails	Text - Detail Notes	4	0	2
	dsgnld	TextElevLabel	Elevation Labels	4	0	0
	dsgnld	TextLabel	Text - Label	0	0	2
	dsgnld	TextLandscape	Text - Landscape Labels	0	0	1
	dsgnld	TextMajor	Text - Major	0	0	5
	dsgnld	TextMinor	Text - Minor	0	0	0
	dsgnld	TextMisc	Text - Miscellaneous	0	0	1
	dsgnld	TextNotes	Text - Notes	4	0	1
	dsgnld	TextProfLabel	Text - Profile, Horizontal and Vertical Axis Labels	0	0	2
	dsgnld	TextProjLabel	Text - Begin and End Project label with leader lines	1	0	2
	dsgnld	TextPtLabel	Point Labels	4	0	0
	dsgnld	TextShtNo	Text - Sheet Number	0	0	2
	dsgnld	TextSurveyLabel	Survey Text Labels	0	0	0
	dsgnld	TextTables	Text - Keysheet Indexes and Table Data	4	0	2
	dsgnld	TextTitle	Text - Title	0	0	3
	dsgnld	TextXSElev	Text - Cross Section Elevations	2	0	1
X	dsgnld	Tree	Trees, Tree Line Pattern	2	0	1
X	dsgnld	TreeGrate	Tree Grate	5	0	1
X	dsgnld	TreeMaintArea	Area Designation for Tree Sheering and Pruning	6	0	1
X	dsgnld	TreeProtection	Tree Protection Symbol	5	0	2
X	dsgnld	WeedArea	Weeding Area	11	0	0
	dsgnld	XSCell	GEOPAK Cross Section Cell and Profile Cell	8	0	1
	dsgnld	Viewport	Viewport (For AutoCAD Use)	3	0	0
	dsgnld	Xreference_dp	Reference Files (For AutoCAD Use)	0	0	1
	dsgnld	Xreference01_dp	Reference Files (For AutoCAD Use)	0	0	1
	dsgnld	Xreference02_dp	Reference Files (For AutoCAD Use)	0	0	1
	dsgnld	Xreference03_dp	Reference Files (For AutoCAD Use)	0	0	1
	dsgnld	Xreference04_dp	Reference Files (For AutoCAD Use)	0	0	1
	dsgnld	Xreference05_dp	Reference Files (For AutoCAD Use)	0	0	1
	dsgnld	Xreference06_dp	Reference Files (For AutoCAD Use)	0	0	1
	dsgnld	Xreference07_dp	Reference Files (For AutoCAD Use)	0	0	1
	dsgnld	Xreference08_dp	Reference Files (For AutoCAD Use)	0	0	1

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
	dsgnld	Xreference09_dp	Reference Files (For AutoCAD Use)	0	0	1
	dsgnld	Xreference10_dp	Reference Files (For AutoCAD Use)	0	0	1

4.2.10 LIGHTING DESIGN - DSGNLT

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
	dsgnlt	ActivePointCell_dp	Active Point Cell	4	0	10
	dsgnlt	AdhocPoint_dp	Adhoc Points Placed by SheetInfo	0	4	0
	dsgnlt	Cloud_dp	Construction Cloud	7	0	2
	dsgnlt	COGO_dp	COGO Information	3	0	1
X	dsgnlt	ConduitAG	Conduit – Above Ground	4	lite_cond4	1
X	dsgnlt	ConduitBG	Conduit In Box Girder	5	lite_cond5	1
X	dsgnlt	ConduitBG_ep	Conduit In Box Girder (Existing)	5	exlite_cond5	0
X	dsgnlt	ConduitBM	Conduit – Bridge Mount	5	lite_cond5	1
X	dsgnlt	ConduitC	Conduit Lead-in Cable	3	0	0
X	dsgnlt	ConduitDB	Conduit – Directional Bore	2	lite_cond2	1
X	dsgnlt	ConduitJ	Conduit Jacked Underpavement	1	lite_cond3	1
X	dsgnlt	ConduitJ_ep	Conduit Jacked (Existing)	1	exlite_cond3	0
X	dsgnlt	ConduitJB	Conduit – Jack & Bore Under Rail	3	lite_cond3	1
X	dsgnlt	ConduitOT	Conduit – Open Trench	1	lite_cond1	1
X	dsgnlt	ConduitSM	Conduit Surface Mounted	4	lite_cond4	1
X	dsgnlt	ConduitSM_ep	Conduit Surface Mounted (Existing)	4	exlite_cond4	0
X	dsgnlt	ConduitUG	Conduit Underground	3	lite_cond1	1
X	dsgnlt	ConduitUG_ep	Conduit Underground (Existing)	3	exlite_cond1	0
X	dsgnlt	ConduitUP	Conduit Underpavement	2	lite_cond2	1
X	dsgnlt	ConduitUP_ep	Conduit Underpavement (Existing)	2	exlite_cond2	0
	dsgnlt	ConstArea_dp	Construction Area Crosshatch	0	0	1
	dsgnlt	ConstLimits	Construction Limits	3	LOC	2
	dsgnlt	ConstLines	Construction Lines and References	1	0	0
	dsgnlt	DimLines_dp	Dimension Lines, Corresponding Terminators, Equation Lines	0	0	1
X	dsgnlt	EaseLicLine	Easement License Agreement Line	5	6	0
	dsgnlt	GridMaj_dp	Grid Lines Major in Profile and Cross Section	3	0	1
	dsgnlt	GridMin_dp	Grid Lines Minor in Profile and Cross Section	0	0	0

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
	dsgnlt	GridMinSub_dp	Grid Lines Minor Sub in Cross Section Sheets	20	0	0
	dsgnlt	ImageAttachment_dp	Image Attachmentst	0	0	0
X	dsgnlt	InterconCable	Cable Interconnect	1	intcon1	1
X	dsgnlt	InterconCable_ep	Interconnect Cable (Existing)	1	intcon2	0
X	dsgnlt	JunctBoxA	Junction Boxes (Aerial)	3	0	1
X	dsgnlt	JunctBoxA_ep	Junction Boxes (Aerial) (Existing)	3	1	0
	dsgnlt	LeaderLine_dp	Leader Line and terminator with Text	0	0	1
	dsgnlt	LightingMisc	Lighting Miscellaneous Items	4	0	2
X	dsgnlt	LightingSP	Lighting Service Points	0	0	1
X	dsgnlt	LoadCenter	Load Center	2	0	1
X	dsgnlt	LoadCenter_ep	Load Center (Existing)	2	5	0
	dsgnlt	Logo_dp	Consultant Engineer of Record Logo	0	0	1
X	dsgnlt	Luminaire	Luminaires (Decorative - All Types)	2	0	1
	dsgnlt	Miscellaneous0	Undefined proposed item - co blue wt 0	1	0	0
	dsgnlt	Miscellaneous1	Undefined proposed item - co blue wt 1	1	0	1
	dsgnlt	Miscellaneous2	Undefined proposed item - co blue wt 2	1	0	2
	dsgnlt	Miscellaneous3	Undefined proposed item - co green wt 0	2	0	0
	dsgnlt	Miscellaneous4	Undefined proposed item - co green wt 1	2	0	1
	dsgnlt	Miscellaneous5	Undefined proposed item - co green wt 2	2	0	2
	dsgnlt	Miscellaneous6	Undefined proposed item - co red wt 0	3	0	0
	dsgnlt	Miscellaneous7	Undefined proposed item - co red wt 1	3	0	1
	dsgnlt	Miscellaneous8	Undefined proposed item - co red wt 2	3	0	2
	dsgnlt	Miscellaneous9	Undefined proposed item - co red wt 3	3	0	3
	dsgnlt	NonPlottingEle_dp	Non plotting items such as construction elements and type 66 elements	4	0	0
	dsgnlt	PayItem_dp	Pay Item Number Label Elements	4	0	2
X	dsgnlt	PlotBorder_dp	Plot Border	3	0	0
	dsgnlt	PointLocator_ep	Point Locator Symbol	4	0	0
X	dsgnlt	PoleConc	Concrete Strain Pole	0	0	2
X	dsgnlt	PoleConc_ep	Concrete Strain Pole (Existing)	0	2	1
X	dsgnlt	PoleFound	Pole Foundation	0	0	2
X	dsgnlt	PoleLight	Light Pole	2	0	1
X	dsgnlt	PoleLight_ep	Light Pole (Existing)	2	2	1
X	dsgnlt	PoleLightHM	High Mast Light Pole	3	0	1
X	dsgnlt	PoleLightHM_ep	High Mast Light Pole (Existing)	2	2	1
	dsgnlt	PoleLightID	Light Pole Location / ID	4	0	1

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
X	dsgnlt	PolePower	Power Pole w/ Transformer	3	0	2
X	dsgnlt	PoleShared	Power Pole Electric (Above Ground) Shared w/ Transformer	3	0	2
X	dsgnlt	PoleSteelStrain	Steel Strain Pole	0	0	2
X	dsgnlt	PoleSteelStrain_ep	Steel Strain Pole (Existing)	0	2	1
X	dsgnlt	PoleTel	Telephone Pole	6	0	2
X	dsgnlt	PoleUtil	Utility Pole	0	0	2
X	dsgnlt	PoleWoodStrain	Wood Strain Pole	0	0	2
X	dsgnlt	PoleWoodStrain_ep	Wood Strain Pole (Existing)	0	2	1
X	dsgnlt	PullBox	Pull Boxes (All Types)	3	0	1
	dsgnlt	ReferencePt_dp	Survey and Construction Reference Point Details and Elements	4	0	2
X	dsgnlt	SawCuts	Saw Cuts	3	conduit1	0
	dsgnlt	Scratch1_dp	A scratch level for temporary or informational items	4	0	0
	dsgnlt	Scratch2_dp	A scratch level for temporary or informational items	5	0	0
	dsgnlt	ScratchEle_dp	Level for Draft Elements, Temporary Elements, Etc. Do Not Plot	3	0	0
	dsgnlt	ScratchEle2_dp	Level for Draft Elements, Temporary Elements, Etc. Do Not Plot	4	0	0
	dsgnlt	SheetBorder_dp	Sheet Border	1	0	4
	dsgnlt	SheetLines_dp	Sheet Lines	1	0	2
	dsgnlt	SheetLinesMisc1_dp	Sheet Lines	1	0	0
	dsgnlt	SheetLinesMisc2_dp	Sheet Lines	2	0	2
	dsgnlt	SheetLinesMisc3_dp	Sheet Lines	3	0	2
	dsgnlt	SheetLinesMisc4_dp	Sheet Lines	4	0	2
	dsgnlt	SumBoxBorder_dp	Summary Boxes Borders	4	0	3
	dsgnlt	SumBoxLines_dp	Summary Boxes Lines and Miscellaneous Items	4	0	1
	dsgnlt	SumBoxLinesMin_dp	Summary Boxes Lines Minor Line and Miscellaneous Items	4	0	0
	dsgnlt	TextAlert	Text - An Alert Label to Highlight a Problem	3	0	2
	dsgnlt	TextBLStation	Text - B/L Station and Tics	0	0	2
	dsgnlt	TextConstEle	Text - Construction Element	0	0	1
	dsgnlt	TextCurveData	Text - Curve Data Note	0	0	2
	dsgnlt	TextDetails	Text - Detail Notes	4	0	2
	dsgnlt	TextElevLabel	Elevation Labels	4	0	0
	dsgnlt	TextLabel	Text - Label	0	0	2
	dsgnlt	TextLandscape	Text - Landscape Labels	0	0	1
	dsgnlt	TextMajor	Text - Major	0	0	5
	dsgnlt	TextMinor	Text - Minor	0	0	0
	dsgnlt	TextMisc	Text - Miscellaneous	0	0	1

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
	dsgnlt	TextNotes	Text - Notes	4	0	1
	dsgnlt	TextProfLabel	Text - Profile, Horizontal and Vertical Axis Labels	0	0	2
	dsgnlt	TextProjLabel	Text - Begin and End Project label with leader lines	1	0	2
	dsgnlt	TextPtLabel	Point Labels	4	0	0
	dsgnlt	TextShtNo	Text - Sheet Number	0	0	2
	dsgnlt	TextSurveyLabel	Survey Text Labels	0	0	0
	dsgnlt	TextTables	Text - Keysheet Indexes and Table Data	4	0	2
	dsgnlt	TextTitle	Text - Title	0	0	3
	dsgnlt	TextXSElev	Text - Cross Section Elevations	2	0	1
	dsgnlt	XSCell	GEOPAK Cross Section Cell and Profile Cell	8	0	1
	dsgnlt	Viewport	Viewport (For AutoCAD Use)	3	0	0
	dsgnlt	Xreference_dp	Reference Files (For AutoCAD Use)	0	0	1
	dsgnlt	Xreference01_dp	Reference Files (For AutoCAD Use)	0	0	1
	dsgnlt	Xreference02_dp	Reference Files (For AutoCAD Use)	0	0	1
	dsgnlt	Xreference03_dp	Reference Files (For AutoCAD Use)	0	0	1
	dsgnlt	Xreference04_dp	Reference Files (For AutoCAD Use)	0	0	1
	dsgnlt	Xreference05_dp	Reference Files (For AutoCAD Use)	0	0	1
	dsgnlt	Xreference06_dp	Reference Files (For AutoCAD Use)	0	0	1
	dsgnlt	Xreference07_dp	Reference Files (For AutoCAD Use)	0	0	1
	dsgnlt	Xreference08_dp	Reference Files (For AutoCAD Use)	0	0	1
	dsgnlt	Xreference09_dp	Reference Files (For AutoCAD Use)	0	0	1
	dsgnlt	Xreference10_dp	Reference Files (For AutoCAD Use)	0	0	1

4.2.11 ROADWAYDESIGN - DSGNRD

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
	dsgnrd	ActivePointCell_dp	Active Point Cell	4	0	10
	dsgnrd	AdhocPoint_dp	Adhoc Points Placed by SheetInfo	0	4	0
	dsgnrd	ArchSite_ep	Archeological Site	2	0	1
X	dsgnrd	ArtificialCovering	Artificial Coverings	10	0	2
X	dsgnrd	AsphaltConc	Asphaltic Concrete Quantity Shapes	6	0	3
X	dsgnrd	AsphaltMilling	Asphalt Milling Quantity Shapes	7	0	2
	dsgnrd	AsphaltMisc	Asphalt Miscellaneous Material	1	0	1

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
	dsgnrd	ATDims	AutoTurn Profile Dimensions, Tire Envelope	1	0	1
X	dsgnrd	Attenuator	Attenuation Systems	6	attenuator	1
X	dsgnrd	AttenuatorTM	Attenuator Truck Mount	6	0	2
	dsgnrd	ATText	AutoTurn Profile and TT Dimensions, Annotation, TT Overhang	0	0	1
	dsgnrd	ATVHP	AutoTurn Temporary Profile for Building Custom Type	1	0	1
X	dsgnrd	BarrierWall	Barrier Wall All Types	6	0	2
X	dsgnrd	Base	Base Material (All Types)	3	0	2
	dsgnrd	BaselineSurvey	Baseline Survey	0	0	2
X	dsgnrd	Berm	Berm (Top, Front, or Back)	10	0	2
X	dsgnrd	BikeLaneColorPavt	Green Bike Lane Pavement	2	0	2
X	dsgnrd	Bollard	Concrete filled pipe bollards	11	0	2
X	dsgnrd	Bridge	Bridge	0	0	2
X	dsgnrd	BridgeAppSlab	Bridge Approaches and Slabs	0	0	2
X	dsgnrd	BridgePiers	Bridge Piers	0	0	2
X	dsgnrd	Building	Buildings	1	0	2
X	dsgnrd	CableBarrier	Cable Barrier	0	cable_barrier	2
X	dsgnrd	Canal	Canal	7	0	1
	dsgnrd	CLConst_dp	Center Line of Construction	0	0	2
X	dsgnrd	ClearingGrubbing	Clearing and Grubbing Limits and Quantity Items	4	0	1
	dsgnrd	ClearZone_dp	Clear Zone Elements	3	1	1
	dsgnrd	ClipBorder_dp	CLIP Border	3	0	0
	dsgnrd	ClipDrawingBound_dp	CLIP Drawing Boundary	3	3	0
	dsgnrd	Cloud_dp	Construction Cloud	7	0	2
	dsgnrd	COGO_dp	COGO Information	3	0	1
X	dsgnrd	ConcPavt	Concrete Pavement Edges	10	0	2
X	dsgnrd	ConcPvtSC	Concrete Surface Coloring	9	0	1
X	dsgnrd	Concrete	Concrete Areas (All Types plus miscellaneous)	0	0	2
X	dsgnrd	ConcSlabs	Concrete Slabs	0	0	2
	dsgnrd	ConstArea_dp	Construction Area Crosshatch	0	0	1
	dsgnrd	ConstLimits	Construction Limits	3	LOC	2
	dsgnrd	ConstLines	Construction Lines and References	1	0	0
	dsgnrd	ControlZone_dp	Control Zone	3	1	2
	dsgnrd	Core	Core test hole	9	1	1
X	dsgnrd	CurbBack	Back of Curb	4	0	1
X	dsgnrd	CurbFace	Curb and Gutter (Face)	4	0	1

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
X	dsgnrd	CurbRamp	Curb Cut Ramp	8	0	1
	dsgnrd	CurveData_dp	Curve & Coordinate Data Elements incl PC, PT, PI symbols	4	0	2
	dsgnrd	CurveDataLabel_dp	Curve Data Labels PC,PI, PT	0	0	2
	dsgnrd	DimLines_dp	Dimension Lines, Corresponding Terminators, Equation Lines	0	0	1
X	dsgnrd	Ditch	Ditch Top	7	6	1
X	dsgnrd	DitchBot	Ditch Bottom	10	0	2
X	dsgnrd	DitchPavt	Ditch Pavement Including Quantity Shapes	3	0	1
	dsgnrd	Driveway	Driveway (Drive, Lane, Turnouts)	7	0	2
X	dsgnrd	EaseLicLine	Easement License Agreement Line	5	6	0
X	dsgnrd	EasePerpLine	Easement Lines Perpetual	4	PESMT	1
X	dsgnrd	EaseTempLine	Easement Lines Temporary	6	TEMPE	0
X	dsgnrd	EaseTempLine_ep	Easement Lines Temporary (Existing)	6	TEMPE	1
	dsgnrd	EnvImpact_ep	Locations for Portential Environmental Concerns	3	0	1
X	dsgnrd	EOP	Edge of Pavement	0	0	2
X	dsgnrd	Fence	Fence, Sand Fence	6	Fence1	1
X	dsgnrd	FenceLt	Fence Limited Access Left	6	laflt	1
X	dsgnrd	FenceRt	Fence Limited Access Right	6	lafrt	1
	dsgnrd	FlowArrow_dp	Flow Arrow	10	0	2
X	dsgnrd	FlowPaths	Time of Concentration Flow Paths	10	1	1
X	dsgnrd	Gabions	Gabion Baskets or Mats	10	0	2
X	dsgnrd	Gabions_ep	Gabion Baskets or Mats (Existing)	10	1	2
X	dsgnrd	GovTwpRgeLine_ep	Township / Range Lines	10	TWPRGE	2
	dsgnrd	GradeLineCtr_dp	Grade Line Profile Center (shown in plan view)	5	0	0
	dsgnrd	GradeLineLt_dp	Grade Line Profile Left (shown in plan view)	1	0	0
	dsgnrd	GradeLineRt_dp	Grade Line Profile Right (shown in plan view)	4	0	0
	dsgnrd	GradeSecPat	Grade Section Patterns	0	0	0
X	dsgnrd	Grass	Grass, Seeding and Mulching Areas	2	1	2
X	dsgnrd	GravityWall	Gravity Wall	11	0	1
X	dsgnrd	Guardrail	Guardrail	0	0	2
X	dsgnrd	GuardrailDbl	Guardrail Double Face	0	grdbl	1
X	dsgnrd	GuardrailEndAch	Guardrail End Anchorage	0	0	1
X	dsgnrd	GuardrailLt	Guardrail Left	0	grail1	1
X	dsgnrd	GuardrailRt	Guardrail Right	0	grail2	1
X	dsgnrd	Handrail	Handrails	9	0	1
	dsgnrd	HardscapeDetails	Paving Details, Fence Railing, Stamped Asphalt	4	0	2

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
	dsgnrd	ImageAttachment_dp	Image Attachmentst	0	0	0
X	dsgnrd	InletProt	Rock Bags and Sand Bagging	10	Rockbag	2
	dsgnrd	LaneLine	Lane Lines (Defines Changes in Pavement Cross Slope – Non-Plotting)	4	3	2
X	dsgnrd	LARWLine	Limited Access Right of Way	4	LA	2
X	dsgnrd	LARWLine_ep	Limited Access Right of Way (Existing)	4	EXLA	1
	dsgnrd	LeaderLine_dp	Leader Line and terminator with Text	0	0	1
X	dsgnrd	Mailbox	Mailboxes	8	0	1
	dsgnrd	MatchLineMask_dp	Mask Area for Match Line Overlap Areas (Autodesk)	0	0	0
	dsgnrd	MatchLines_dp	Match Lines with Text, Arrows for Station Notations	1	0	2
	dsgnrd	MillingLimits	Milling and Resurfacing Limits	1	0	2
	dsgnrd	Miscellaneous0	Undefined proposed item - co blue wt 0	1	0	0
	dsgnrd	Miscellaneous1	Undefined proposed item - co blue wt 1	1	0	1
	dsgnrd	Miscellaneous2	Undefined proposed item - co blue wt 2	1	0	2
	dsgnrd	Miscellaneous3	Undefined proposed item - co green wt 0	2	0	0
	dsgnrd	Miscellaneous4	Undefined proposed item - co green wt 1	2	0	1
	dsgnrd	Miscellaneous5	Undefined proposed item - co green wt 2	2	0	2
	dsgnrd	Miscellaneous6	Undefined proposed item - co red wt 0	3	0	0
	dsgnrd	Miscellaneous7	Undefined proposed item - co red wt 1	3	0	1
	dsgnrd	Miscellaneous8	Undefined proposed item - co red wt 2	3	0	2
	dsgnrd	Miscellaneous9	Undefined proposed item - co red wt 3	3	0	3
	dsgnrd	NonPlottingEle_dp	Non plotting items such as construction elements and type 66 elements	4	0	0
	dsgnrd	NorthArw_dp	North Arrows	0	0	2
	dsgnrd	Patternlines_ep	Cross Section Chain	2	1	0
	dsgnrd	PatternLines1_dp	Pattern Lines for Cross Sections	3	0	2
	dsgnrd	PatternLines2_dp	Pattern Lines for XSections alternate for side streets, critical xsections or drainage structures	4	0	2
	dsgnrd	PatternLines3_dp	Pattern Lines for XSections alternate for side streets, critical xsections or drainage structures	5	0	2
	dsgnrd	Pavers	Pavers - Brick and Block	5	0	1
	dsgnrd	PavtAsph_ep	Asphalt Pavement Edge	0	3	1
	dsgnrd	PavtCrown	Pavement Crown	16	0	2
	dsgnrd	PavtXover_ep	Crossovers and Detours (Temporary)	0	3	0
	dsgnrd	PayItem_dp	Pay Item Number Label Elements	4	0	2
	dsgnrd	Permit1	Permit 1 Wetlands, Mitigation Sites, Planting Areas	1	0	1
	dsgnrd	Permit2	Permit 2 Wetlands, Mitigation Sites, Planting Areas	2	0	1
	dsgnrd	Permit3	Permit 3 Wetlands, Mitigation Sites, Planting Areas	4	0	1

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
X	dsgnrd	Piling	Piling Piers or Column	8	0	2
	dsgnrd	PointLocator_ep	Point Locator Symbol	4	0	0
X	dsgnrd	PondSideSlope	Pond Side Slope	0	0	2
X	dsgnrd	PropertyLine_ep	Property Lines	3	0	0
	dsgnrd	RailroadDetails	Railroad Crossing Details	3	0	2
	dsgnrd	RailroadXing	Railroad Crossing Elements	11	0	0
	dsgnrd	ReferencePt_dp	Survey and Construction Reference Point Details and Elements	4	0	2
	dsgnrd	RegionBdry_dp	Boundary Line for Regions in Corridor Design (Autodesk)	0	0	0
X	dsgnrd	RetainWall	Retaining Wall System	6	0	1
X	dsgnrd	RetainWall_pr	Retaining Wall Profile	9	0	2
X	dsgnrd	RetentionArea	Retention Area	2	0	2
X	dsgnrd	RipRap	Rip Rap, Rubble	4	0	2
	dsgnrd	RoadwayMisc	Roadway Miscellaneous Items	4	0	2
X	dsgnrd	RumbleStrip1	Rumble Strips Continuous Array	0	rumble_cont	2
X	dsgnrd	RumbleStrip2	Rumble Strips Skip Array	0	rumble_skip	2
X	dsgnrd	RWLine	Right of Way Lines	4	RW	2
X	dsgnrd	RWLine_ep	Right of Way Lines (Existing)	3	RW	1
X	dsgnrd	SawCuts	Saw Cuts	3	conduit1	0
	dsgnrd	Scale_dp	Bar Scale, Scale Label Elements	0	0	2
	dsgnrd	Scratch1_dp	A scratch level for temporary or informational items	4	0	0
	dsgnrd	Scratch2_dp	A scratch level for temporary or informational items	5	0	0
	dsgnrd	ScratchEle_dp	Level for Draft Elements, Temporary Elements, Etc. Do Not Plot	3	0	0
	dsgnrd	ScratchEle2_dp	Level for Draft Elements, Temporary Elements, Etc. Do Not Plot	4	0	0
101	dsgnrd	SedimentBarrier	Synthetic Bales and Staked Silt Fences	10	*hay_bales	2
101	dsgnrd	SedimentBarrier	Synthetic Bales and Staked Silt Fences	10	*silt_fence	2
X	dsgnrd	SedimentBasin	Sediment Basin Index 101	10	0	2
X	dsgnrd	SedimentBasin_ep	Sediment Basin Index 101 (Existing)	10	3	1
	dsgnrd	ShldrHatch	Paved Shoulder Hatch Pattern	1	0	1
X	dsgnrd	ShldrPaved	Paved Shoulder Line	1	0	1
X	dsgnrd	ShldrUnpaved	Unpaved Shoulder Line	0	0	0
X	dsgnrd	SidewalkBack	Sidewalk Back	2	0	1
X	dsgnrd	SidewalkConc	Sidewalk Concrete Shape	0	0	2
X	dsgnrd	SidewalkFront	Sidewalk Front	1	0	1
X	dsgnrd	Slopes	Slopes (Top, Bottom)	9	3	0
X	dsgnrd	SlopeStakes1	Slope Stakes 1	4	1	3

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
X	dsgnrd	SlopeStakes2	Slope Stakes 2	1	1	3
X	dsgnrd	Sod	Performance Sod	2	0	2
X	dsgnrd	SoilBoring	Soil Boring Elements	5	0	1
	dsgnrd	SoilBoringLoc_dp	Soil Boring Location Symbol	4	0	2
	dsgnrd	SoilBoxes_dp	Soil Boxes	4	0	1
	dsgnrd	SpecialDetails	Special Details	6	0	1
X	dsgnrd	Stabilization	Stabilization Material Lines and Shapes	9	0	2
	dsgnrd	StationTicL_dp	Station Tic Marks (Large) and Text	0	0	2
	dsgnrd	StationTicS_dp	Station Tic Marks (Small) and Text	0	0	2
X	dsgnrd	StructuralCourse	Asphaltic Concrete Structural Course	6	0	2
	dsgnrd	Structure	Structures	0	0	2
	dsgnrd	SumBoxBorder_dp	Summary Boxes Borders	4	0	3
	dsgnrd	SumBoxLines_dp	Summary Boxes Lines and Miscellaneous Items	4	0	1
	dsgnrd	SumBoxLinesMin_dp	Summary Boxes Lines Minor Line and Miscellaneous Items	4	0	0
	dsgnrd	TextAlert	Text - An Alert Label to Highlight a Problem	3	0	2
	dsgnrd	TextBLStation	Text - B/L Station and Tics	0	0	2
	dsgnrd	TextConstEle	Text - Construction Element	0	0	1
	dsgnrd	TextCurveData	Text - Curve Data Note	0	0	2
	dsgnrd	TextDetails	Text - Detail Notes	4	0	2
	dsgnrd	TextElevLabel	Elevation Labels	4	0	0
	dsgnrd	TextLabel	Text - Label	0	0	2
	dsgnrd	TextLandscape	Text - Landscape Labels	0	0	1
	dsgnrd	TextMajor	Text - Major	0	0	5
	dsgnrd	TextMinor	Text - Minor	0	0	0
	dsgnrd	TextMisc	Text - Miscellaneous	0	0	1
	dsgnrd	TextNotes	Text - Notes	4	0	1
	dsgnrd	TextProfLabel	Text - Profile, Horizontal and Vertical Axis Labels	0	0	2
	dsgnrd	TextProjLabel	Text - Begin and End Project label with leader lines	1	0	2
	dsgnrd	TextPtLabel	Point Labels	4	0	0
	dsgnrd	TextShtNo	Text - Sheet Number	0	0	2
	dsgnrd	TextSurveyLabel	Survey Text Labels	0	0	0
	dsgnrd	TextTables	Text - Keysheet Indexes and Table Data	4	0	2
	dsgnrd	TextTitle	Text - Title	0	0	3
	dsgnrd	TextXSElev	Text - Cross Section Elevations	2	0	1
X	dsgnrd	TrafSeparator	Traffic Separator (All Types)	6	0	1

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
X	dsgnrd	TurbidityBarrier1	Turbidity Barrier 1 (floating)	10	barrier1	2
X	dsgnrd	TurbidityBarrier2	Turbidity Barrier 2 (staked)	10	barrier2	2
	dsgnrd	TurbidityBarrier2_ep	Turbidity Barrier (Staked) (Existing)	10	1	2
	dsgnrd	TurbidityBarrier1_ep	Turbidity Barrier (Floating) (Existing)	10	1	2
X	dsgnrd	Turf	Performance Truf	100	0	2
	dsgnrd	TurningEle_dp	Miscellaneous Turning Radius Elements	4	0	1
	dsgnrd	TurningRadius_dp	Turning Radius Line	3	3	1
	dsgnrd	Wetland	Wetland Boundary	2	wetland	1
	dsgnrd	Widening	Widening Patterns and Miscellaneous Elements	1	0	1
	dsgnrd	XSCell	GEOPAK Cross Section Cell and Profile Cell	8	0	1
	dsgnrd	XSPt_ep	Cross Section Point, Station	2	1	0
	dsgnrd	Viewport	Viewport (For AutoCAD Use)	3	0	0
	dsgnrd	Xreference_dp	Reference Files (For AutoCAD Use)	0	0	1
	dsgnrd	Xreference01_dp	Reference Files (For AutoCAD Use)	0	0	1
	dsgnrd	Xreference02_dp	Reference Files (For AutoCAD Use)	0	0	1
	dsgnrd	Xreference03_dp	Reference Files (For AutoCAD Use)	0	0	1
	dsgnrd	Xreference04_dp	Reference Files (For AutoCAD Use)	0	0	1
	dsgnrd	Xreference05_dp	Reference Files (For AutoCAD Use)	0	0	1
	dsgnrd	Xreference06_dp	Reference Files (For AutoCAD Use)	0	0	1
	dsgnrd	Xreference07_dp	Reference Files (For AutoCAD Use)	0	0	1
	dsgnrd	Xreference08_dp	Reference Files (For AutoCAD Use)	0	0	1
	dsgnrd	Xreference09_dp	Reference Files (For AutoCAD Use)	0	0	1
	dsgnrd	Xreference10_dp	Reference Files (For AutoCAD Use)	0	0	1

4.2.12 SIGNALIZATION DESIGN - DSGNSG

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
	dsgnsg	ActivePointCell_dp	Active Point Cell	4	0	10
	dsgnsg	AdhocPoint_dp	Adhoc Points Placed by SheetInfo	0	4	0
	dsgnsg	BaselineSurvey	Baseline Survey	0	0	2
	dsgnsg	CLConst_dp	Center Line of Construction	0	0	2
	dsgnsg	Cloud_dp	Construction Cloud	7	0	2
	dsgnsg	COGO_dp	COGO Information	3	0	1

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
X	dsgnsg	Conduit	Conduit for Utilities and Encasements	3	conduit1	1
X	dsgnsg	ConduitAG	Conduit – Above Ground	4	lite_cond4	1
X	dsgnsg	ConduitBG	Conduit In Box Girder	5	lite_cond5	1
X	dsgnsg	ConduitBG_ep	Conduit In Box Girder (Existing)	5	exlite_cond5	0
X	dsgnsg	ConduitBM	Conduit – Bridge Mount	5	lite_cond5	1
X	dsgnsg	ConduitC	Conduit Lead-in Cable	3	0	0
X	dsgnsg	ConduitDB	Conduit – Directional Bore	2	lite_cond2	1
X	dsgnsg	ConduitJ	Conduit Jacked Underpavement	1	lite_cond3	1
X	dsgnsg	ConduitJ_ep	Conduit Jacked (Existing)	1	exlite_cond3	0
X	dsgnsg	ConduitJB	Conduit – Jack & Bore Under Rail	3	lite_cond3	1
X	dsgnsg	ConduitOT	Conduit – Open Trench	1	lite_cond1	1
X	dsgnsg	ConduitSM	Conduit Surface Mounted	4	lite_cond4	1
X	dsgnsg	ConduitSM_ep	Conduit Surface Mounted (Existing)	4	exlite_cond4	0
X	dsgnsg	ConduitUG	Conduit Underground	3	lite_cond1	1
X	dsgnsg	ConduitUG_ep	Conduit Underground (Existing)	3	exlite_cond1	0
X	dsgnsg	ConduitUP	Conduit Underpavement	2	lite_cond2	1
X	dsgnsg	ConduitUP_ep	Conduit Underpavement (Existing)	2	exlite_cond2	0
	dsgnsg	ConstArea_dp	Construction Area Crosshatch	0	0	1
	dsgnsg	ConstLimits	Construction Limits	3	LOC	2
	dsgnsg	ConstLines	Construction Lines and References	1	0	0
X	dsgnsg	Controller	Controller and Accessories	0	0	2
X	dsgnsg	Controller_ep	Controller and Accessories (Existing)	0	2	1
X	dsgnsg	ControllerAcess	Controller Accessories	0	0	1
X	dsgnsg	ControllerB	Controller - Base Mounted	0	0	2
X	dsgnsg	ControllerB_ep	Controller - Base Mounted (Existing)	0	2	1
X	dsgnsg	ControllerP	Controller Pole Mount	0	0	2
X	dsgnsg	ControllerP_ep	Controller Pole Mount (Existing)	0	2	1
	dsgnsg	CurveData_dp	Curve & Coordinate Data Elements incl PC, PT, PI symbols	4	0	2
	dsgnsg	CurveDataLabel_dp	Curve Data Labels PC,PI, PT	0	0	2
X	dsgnsg	Delineator	Delineators (All Types)	4	0	1
X	dsgnsg	Detector	Detector Cabinet, Button and Misc Assemblies	3	0	2
X	dsgnsg	DetectorVeh	Detector Vehicle Assemblies (All Types)	3	0	1
	dsgnsg	DimLines_dp	Dimension Lines, Corresponding Terminators, Equation Lines	0	0	1
X	dsgnsg	EaseLicLine	Easement License Agreement Line	5	6	0
X	dsgnsg	ElectPS	Electrical Power Service Miscellaneous	3	0	1

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
X	dsgnsg	ElectPSB	Electrical (Buried)	3	be	2
X	dsgnsg	ElectPSO	Electrical Outlet	3	0	1
X	dsgnsg	ElectServWire	Electrical Service Wire	3	0	2
X	dsgnsg	FOCBur	Fiber Optics Cable (Buried)	6	bfo	1
X	dsgnsg	Generator	Emergency Generator	0	0	2
	dsgnsg	GridMaj_dp	Grid Lines Major in Profile and Cross Section	3	0	1
	dsgnsg	GridMin_dp	Grid Lines Minor in Profile and Cross Section	0	0	0
	dsgnsg	GridMinSub_dp	Grid Lines Minor Sub in Cross Section Sheets	20	0	0
	dsgnsg	GSBWFill	GuidSign Black and White Fill Level for GuidSign Cells	0	0	1
	dsgnsg	GSColorFill	GuidSign Color Fill Level for GuidSign Cells	2	0	1
	dsgnsg	GSDims	GuidSign Dimensions	0	0	1
	dsgnsg	GSOutline	GuidSign Outline Level for GuidSign Cells	0	0	2
	dsgnsg	GSSign	GuidSign Panel and Tag	7	0	0
X	dsgnsg	GuyWire	Guy Wire	3	0	0
	dsgnsg	ImageAttachment_dp	Image Attachmentst	0	0	0
X	dsgnsg	Insulator	Insulator, Fiberglass	3	0	4
X	dsgnsg	InterconCable	Cable Interconnect	1	intcon1	1
X	dsgnsg	InterconCable_ep	Interconnect Cable (Existing)	1	intcon2	0
X	dsgnsg	JunctBox	Junction Boxes, Service Cabinet (Elec/Tel)	3	0	1
	dsgnsg	JunctBox_ep	Junct. Box / Service Cabinet (Elec/Tel)	3	1	1
X	dsgnsg	JunctBoxA	Junction Boxes (Aerial)	3	0	1
X	dsgnsg	JunctBoxA_ep	Junction Boxes (Aerial) (Existing)	3	1	0
	dsgnsg	LeaderLine_dp	Leader Line and terminator with Text	0	0	1
X	dsgnsg	LoadCenter	Load Center	2	0	1
X	dsgnsg	LoadCenter_ep	Load Center (Existing)	2	5	0
	dsgnsg	Logo_dp	Consultant Engineer of Record Logo	0	0	1
X	dsgnsg	LoopLI	Loop Lead-In	3	0	1
X	dsgnsg	LoopLI_ep	Loop Lead-In (Existing)	3	2	0
X	dsgnsg	Loops	Loop Assembly (All Types)	2	0	2
X	dsgnsg	Loops_ep	Loop Assembly (All Types) (Existing)	2	2	2
	dsgnsg	MatchLines_dp	Match Lines with Text, Arrows for Station Notations	1	0	2
X	dsgnsg	MessengerWire	Messenger Wire	3	0	1
	dsgnsg	Miscellaneous0	Undefined proposed item - co blue wt 0	1	0	0
	dsgnsg	Miscellaneous1	Undefined proposed item - co blue wt 1	1	0	1
	dsgnsg	Miscellaneous2	Undefined proposed item - co blue wt 2	1	0	2

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
	dsgnsg	Miscellaneous3	Undefined proposed item - co green wt 0	2	0	0
	dsgnsg	Miscellaneous4	Undefined proposed item - co green wt 1	2	0	1
	dsgnsg	Miscellaneous5	Undefined proposed item - co green wt 2	2	0	2
	dsgnsg	Miscellaneous6	Undefined proposed item - co red wt 0	3	0	0
	dsgnsg	Miscellaneous7	Undefined proposed item - co red wt 1	3	0	1
	dsgnsg	Miscellaneous8	Undefined proposed item - co red wt 2	3	0	2
	dsgnsg	Miscellaneous9	Undefined proposed item - co red wt 3	3	0	3
	dsgnsg	NonPlottingEle_dp	Non plotting items such as construction elements and type 66 elements	4	0	0
	dsgnsg	NorthArw_dp	North Arrows	0	0	2
X	dsgnsg	ObjectMarker	Object and Reflective Markers	3	0	1
X	dsgnsg	OverheadSign	Overhead Sign Panels	0	0	2
X	dsgnsg	OverheadSign_ep	Overhead Sign Panels (Existing)	0	3	1
X	dsgnsg	OverheadStr	Mast Arm, Truss Assemblies, Signal Arms and Supports	0	0	2
X	dsgnsg	OverheadStr_ep	Mast Arm, Truss Assemblies, Signal Arms and Supports (Existing)	0	3	1
X	dsgnsg	PavtMessage	Pavement Message (All types)	0	0	1
X	dsgnsg	PavtMessage_ep	Pavement Message (Existing - All types)	0	2	0
	dsgnsg	PayItem_dp	Pay Item Number Label Elements	4	0	2
X	dsgnsg	PedDetector	Pedestrian Detector	0	0	2
X	dsgnsg	Pedestal	Pedestal	1	0	1
X	dsgnsg	Pedestal_ep	Pedestal (Existing)	1	2	1
X	dsgnsg	PedHead	Pedestrian Head (All Types)	1	0	1
X	dsgnsg	PedHead_ep	Pedestrian Head (All Types) (Existing)	0	2	1
X	dsgnsg	PlotBorder_dp	Plot Border	3	0	0
X	dsgnsg	PMCeramic	Pavement Markers Ceramic	0	0	1
	dsgnsg	PMMisc	Pavement Marking Miscellaneous Items	0	0	2
X	dsgnsg	PMStripe12B	Pavement Marking Traffic Stripe 12in Black	3	stripe12	4
X	dsgnsg	PMStripe12W	Pavement Marking Traffic Stripe 12in White	0	stripe12	4
X	dsgnsg	PMStripe12W(3-9)	Pavement Marking 3/9 Skip Traffic Stripe 12in White	0	stripe12	4
X	dsgnsg	PMStripe12Y	Pavement Marking Traffic Stripe 12in Yellow	4	stripe12	4
X	dsgnsg	PMStripe16B	Pavement Marking Traffic Stripe 16in Black	3	stripe16	5
X	dsgnsg	PMStripe16W	Pavement Marking Traffic Stripe 16in White	0	stripe16	5
X	dsgnsg	PMStripe16Y	Pavement Marking Traffic Stripe 16in Yellow	4	stripe16	5
X	dsgnsg	PMStripe18B	Pavement Marking Traffic Stripe 18in Black	3	stripe18	6
X	dsgnsg	PMStripe18W	Pavement Marking Traffic Stripe 18in White	0	stripe18	6
X	dsgnsg	PMStripe18Y	Pavement Marking Traffic Stripe 18in Yellow	4	stripe18	6

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
X	dsgnsg	PMStripe24W	Pavement Marking Traffic Stripe 24in White	0	stripe24	7
X	dsgnsg	PMStripe24Y	Pavement Marking Traffic Stripe 24in Yellow	4	stripe24	7
X	dsgnsg	PMStripe6B	Pavement Marking Traffic Stripe 6in Black	3	stripe06	2
X	dsgnsg	PMStripe6B(10-30)	Pavement Marking 10/30 Skip Traffic Stripe 6in Black	3	stripe06	2
X	dsgnsg	PMStripe6Bl	Pavement Marking Traffic Stripe 6in Blue	1	stripe06	2
X	dsgnsg	PMStripe6DY	Pavement Marking Traffic Stripe 6in Double Yellow	4	dbl_line	2
X	dsgnsg	PMStripe6W	Pavement Marking Traffic Stripe 6in White	0	stripe06	2
X	dsgnsg	PMStripe6W(10-30)	Pavement Marking 10/30 Skip Traffic Stripe 6in White	0	stripe06	2
X	dsgnsg	PMStripe6W(2-4)	Pavement Marking 2/4 Skip Traffic Stripe 6in White	0	stripe06	2
X	dsgnsg	PMStripe6W(3-9)	Pavement Marking 3/9 Skip Traffic Stripe 6in White	0	stripe06	2
X	dsgnsg	PMStripe6W(6-10)	Pavement Marking 6/10 Skip Traffic Stripe 6in White	0	stripe06	2
X	dsgnsg	PMStripe6Y	Pavement Marking Traffic Stripe 6in Yellow	4	stripe06	2
X	dsgnsg	PMStripe6Y(10-30)	Pavement Marking 10/30 Skip Traffic Stripe 6in Yellow	4	stripe06	2
X	dsgnsg	PMStripe6Y(2-4)	Pavement Marking 2/4 Skip Traffic Stripe 6in Yellow	4	stripe06	2
X	dsgnsg	PMStripe6Y(6-10)	Pavement Marking 6/10 Skip Traffic Stripe 6in Yellow	4	stripe06	2
X	dsgnsg	PMStripe8B	Pavement Marking Traffic Stripe 8in Black	3	stripe06	3
X	dsgnsg	PMStripe8W	Pavement Marking Traffic Stripe 8in White	0	stripe08	3
X	dsgnsg	PMStripe8W(3-9)	Pavement Marking 3/9 Skip Traffic Stripe 8in White	0	stripe08	2
X	dsgnsg	PMStripe8Y	Pavement Marking Traffic Stripe 8in Yellow	4	stripe08	3
X	dsgnsg	PMStripeVibeW	Pavement Marking Auditory and Vibratory 6in White	0	Vibratory	2
X	dsgnsg	PMStripeVibeY	Pavement Marking Auditory and Vibratory 6in Yellow	4	Vibratory	2
	dsgnsg	PointLocator_ep	Point Locator Symbol	4	0	0
X	dsgnsg	PoleConc	Concrete Strain Pole	0	0	2
X	dsgnsg	PoleConc_ep	Concrete Strain Pole (Existing)	0	2	1
X	dsgnsg	PoleFound	Pole Foundation	0	0	2
X	dsgnsg	PoleLight	Light Pole	2	0	1
X	dsgnsg	PoleLight_ep	Light Pole (Existing)	2	2	1
X	dsgnsg	PoleLightHM	High Mast Light Pole	3	0	1
X	dsgnsg	PoleLightHM_ep	High Mast Light Pole (Existing)	2	2	1
	dsgnsg	PoleLightID	Light Pole Location / ID	4	0	1
X	dsgnsg	PolePower	Power Pole w/ Transformer	3	0	2
X	dsgnsg	PoleShared	Power Pole Electric (Above Ground) Shared w/ Transformer	3	0	2
X	dsgnsg	PoleSteelStrain	Steel Strain Pole	0	0	2
X	dsgnsg	PoleSteelStrain_ep	Steel Strain Pole (Existing)	0	2	1
X	dsgnsg	PoleTel	Telephone Pole	6	0	2

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
X	dsgnsg	PoleUtil	Utility Pole	0	0	2
X	dsgnsg	PoleWoodStrain	Wood Strain Pole	0	0	2
X	dsgnsg	PoleWoodStrain_ep	Wood Strain Pole (Existing)	0	2	1
X	dsgnsg	PullBox	Pull Boxes (All Types)	3	0	1
	dsgnsg	PullBox_ep	Wiring Pull Box	3	1	1
	dsgnsg	ReferencePt_dp	Survey and Construction Reference Point Details and Elements	4	0	2
X	dsgnsg	SawCuts	Saw Cuts	3	conduit1	0
	dsgnsg	Scale_dp	Bar Scale, Scale Label Elements	0	0	2
	dsgnsg	Scratch1_dp	A scratch level for temporary or informational items	4	0	0
	dsgnsg	Scratch2_dp	A scratch level for temporary or informational items	5	0	0
	dsgnsg	ScratchEle_dp	Level for Draft Elements, Temporary Elements, Etc. Do Not Plot	3	0	0
	dsgnsg	ScratchEle2_dp	Level for Draft Elements, Temporary Elements, Etc. Do Not Plot	4	0	0
	dsgnsg	SheetBorder_dp	Sheet Border	1	0	4
	dsgnsg	SheetLines_dp	Sheet Lines	1	0	2
	dsgnsg	SheetLinesMisc1_dp	Sheet Lines	1	0	0
	dsgnsg	SheetLinesMisc2_dp	Sheet Lines	2	0	2
	dsgnsg	SheetLinesMisc3_dp	Sheet Lines	3	0	2
	dsgnsg	SheetLinesMisc4_dp	Sheet Lines	4	0	2
X	dsgnsg	SignalCable	Signal Cable	3	signal_cable	1
X	dsgnsg	SignalCableAccs	Signal Cable Accessories	0	0	2
X	dsgnsg	SignalDetail	Signal Details	0	0	1
	dsgnsg	SignalHead	Signal Head Section Details	2	0	1
X	dsgnsg	SignalHead_ep	Signal Head Section Details (Existing)	2	2	0
	dsgnsg	SignalMisc	Signal Miscellaneous Equipment	3	0	1
X	dsgnsg	SignalSOP	S.O.P. Box and Movements	0	0	2
X	dsgnsg	SignalSym	Signal Head Symbols	0	0	1
X	dsgnsg	SignalSym_ep	Signal Head Symbols (Existing)	3	2	0
X	dsgnsg	SignCantilever	Sign Symbol Cantilever	0	0	1
X	dsgnsg	SignCantilever_ep	Sign Symbol Cantilever (Existing)	0	2	0
	dsgnsg	SignDetail	Sign Details	0	0	2
X	dsgnsg	SignDMS	Dynamic Message Sign	0	0	1
	dsgnsg	SignLettersAZ	Alphabet Cell Library Letter A-Z Numbers 0-9	0	0	0
	dsgnsg	SignMisc	Miscellaneous Sign Symbols	1	0	2
	dsgnsg	SignMisc_ep	Miscellaneous Sign Symbols (Existing)	1	1	1
X	dsgnsg	SignPanel	Sign Panels - Regulatory	0	0	2

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
X	dsgnsg	SignPanel_ep	Sign Panel Elements (Existing)	0	2	1
X	dsgnsg	SignPanelBorder	Sign Panel Border on Sign Details	0	0	1
X	dsgnsg	SignPanelC	Sign Panels - Civil	1	0	2
X	dsgnsg	SignPanelDetRed	Sign Panel Details in Red	3	0	2
X	dsgnsg	SignPanelG	Sign Panels - Guide	2	0	2
X	dsgnsg	SignPanelI	Sign Panels - Special Interest	9	0	2
X	dsgnsg	SignPanelT	Sign Panels - Construction	6	0	2
X	dsgnsg	SignPanelW	Sign Panels - Warning	4	0	2
X	dsgnsg	SignSpanwire	Span Wire Signing Assembly	2	0	1
X	dsgnsg	SignSpanwire_ep	Span Wire Signing Assembly (Existing)	2	2	1
X	dsgnsg	SignSpecial	Special Signs / Guide Signs	2	0	2
X	dsgnsg	SignSupport	Ground Mounted Sign Support Symbol (All Types)	1	0	1
X	dsgnsg	SignSymbol_px	Sign Structure and Foundation on Cross Sections	4	0	2
X	dsgnsg	SignTruss	Sign Symbol Truss	3	0	1
X	dsgnsg	SignTruss_ep	Sign Symbol Truss (Existing)	3	2	1
	dsgnsg	SpecialDetails	Special Details	6	0	1
	dsgnsg	StationTicL_dp	Station Tic Marks (Large) and Text	0	0	2
	dsgnsg	StationTicS_dp	Station Tic Marks (Small) and Text	0	0	2
	dsgnsg	SumBoxBorder_dp	Summary Boxes Borders	4	0	3
	dsgnsg	SumBoxLines_dp	Summary Boxes Lines and Miscellaneous Items	4	0	1
	dsgnsg	SumBoxLinesMin_dp	Summary Boxes Lines Minor Line and Miscellaneous Items	4	0	0
	dsgnsg	TextBLStation	Text - B/L Station and Tics	0	0	2
	dsgnsg	TextConstEle	Text - Construction Element	0	0	1
	dsgnsg	TextCurveData	Text - Curve Data Note	0	0	2
	dsgnsg	TextDetails	Text - Detail Notes	4	0	2
	dsgnsg	TextElevLabel	Elevation Labels	4	0	0
	dsgnsg	TextLabel	Text - Label	0	0	2
	dsgnsg	TextLandscape	Text - Landscape Labels	0	0	1
	dsgnsg	TextMajor	Text - Major	0	0	5
	dsgnsg	TextMinor	Text - Minor	0	0	0
	dsgnsg	TextMisc	Text - Miscellaneous	0	0	1
	dsgnsg	TextNotes	Text - Notes	4	0	1
	dsgnsg	TextProfLabel	Text - Profile, Horizontal and Vertical Axis Labels	0	0	2
	dsgnsg	TextProjLabel	Text - Begin and End Project label with leader lines	1	0	2
	dsgnsg	TextPtLabel	Point Labels	4	0	0

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
	dsgnsg	TextShtNo	Text - Sheet Number	0	0	2
	dsgnsg	TextSurveyLabel	Survey Text Labels	0	0	0
	dsgnsg	TextTables	Text - Keysheet Indexes and Table Data	4	0	2
	dsgnsg	TextTitle	Text - Title	0	0	3
	dsgnsg	TextXSElev	Text - Cross Section Elevations	2	0	1
	dsgnsg	XSCell	GEOPAK Cross Section Cell and Profile Cell	8	0	1
	dsgnsg	Viewport	Viewport (For AutoCAD Use)	3	0	0
	dsgnsg	Xreference_dp	Reference Files (For AutoCAD Use)	0	0	1
	dsgnsg	Xreference01_dp	Reference Files (For AutoCAD Use)	0	0	1
	dsgnsg	Xreference02_dp	Reference Files (For AutoCAD Use)	0	0	1
	dsgnsg	Xreference03_dp	Reference Files (For AutoCAD Use)	0	0	1
	dsgnsg	Xreference04_dp	Reference Files (For AutoCAD Use)	0	0	1
	dsgnsg	Xreference05_dp	Reference Files (For AutoCAD Use)	0	0	1
	dsgnsg	Xreference06_dp	Reference Files (For AutoCAD Use)	0	0	1
	dsgnsg	Xreference07_dp	Reference Files (For AutoCAD Use)	0	0	1
	dsgnsg	Xreference08_dp	Reference Files (For AutoCAD Use)	0	0	1
	dsgnsg	Xreference09_dp	Reference Files (For AutoCAD Use)	0	0	1
	dsgnsg	Xreference10_dp	Reference Files (For AutoCAD Use)	0	0	1

4.2.13 SIGNING AND PAVEMENT MARKING DESIGN - DSGNSP

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
	dsgnsp	ActivePointCell_dp	Active Point Cell	4	0	10
	dsgnsp	AdhocPoint_dp	Adhoc Points Placed by SheetInfo	0	4	0
	dsgnsp	BaselineSurvey	Baseline Survey	0	0	2
X	dsgnsp	BikeLaneColorPavt	Green Bike Lane Pavement	2	0	2
	dsgnsp	CLConst_dp	Center Line of Construction	0	0	2
	dsgnsp	Cloud_dp	Construction Cloud	7	0	2
	dsgnsp	COGO_dp	COGO Information	3	0	1
X	dsgnsp	ConduitAG	Conduit – Above Ground	4	lite_cond4	1
X	dsgnsp	ConduitBG	Conduit In Box Girder	5	lite_cond5	1
X	dsgnsp	ConduitBG_ep	Conduit In Box Girder (Existing)	5	exlite_cond5	0
X	dsgnsp	ConduitBM	Conduit – Bridge Mount	5	lite_cond5	1

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
X	dsgnsp	ConduitC	Conduit Lead-in Cable	3	0	0
X	dsgnsp	ConduitDB	Conduit – Directional Bore	2	lite_cond2	1
X	dsgnsp	ConduitJ	Conduit Jacked Underpavement	1	lite_cond3	1
X	dsgnsp	ConduitJ_ep	Conduit Jacked (Existing)	1	exlite_cond3	0
X	dsgnsp	ConduitJB	Conduit – Jack & Bore Under Rail	3	lite_cond3	1
X	dsgnsp	ConduitOT	Conduit – Open Trench	1	lite_cond1	1
X	dsgnsp	ConduitSM	Conduit Surface Mounted	4	lite_cond4	1
X	dsgnsp	ConduitSM_ep	Conduit Surface Mounted (Existing)	4	exlite_cond4	0
X	dsgnsp	ConduitUG	Conduit Underground	3	lite_cond1	1
X	dsgnsp	ConduitUG_ep	Conduit Underground (Existing)	3	exlite_cond1	0
X	dsgnsp	ConduitUP	Conduit Underpavement	2	lite_cond2	1
X	dsgnsp	ConduitUP_ep	Conduit Underpavement (Existing)	2	exlite_cond2	0
	dsgnsp	ConstArea_dp	Construction Area Crosshatch	0	0	1
	dsgnsp	ConstLimits	Construction Limits	3	LOC	2
	dsgnsp	ConstLines	Construction Lines and References	1	0	0
X	dsgnsp	CrossWalk1	Emphasis Crosswalk 6ft High	0	crosswalk1	4
X	dsgnsp	CrossWalk2	Emphasis Crosswalk 10ft High	0	crosswalk2	4
	dsgnsp	CurveData_dp	Curve & Coordinate Data Elements incl PC, PT, PI symbols	4	0	2
	dsgnsp	CurveDataLabel_dp	Curve Data Labels PC,PI, PT	0	0	2
X	dsgnsp	Delineator	Delineators (All Types)	4	0	1
	dsgnsp	DimLines_dp	Dimension Lines, Corresponding Terminators, Equation Lines	0	0	1
X	dsgnsp	DirArrowsPavt	Pavement Marking Directional Arrows	0	0	1
X	dsgnsp	EaseLicLine	Easement License Agreement Line	5	6	0
	dsgnsp	GridMaj_dp	Grid Lines Major in Profile and Cross Section	3	0	1
	dsgnsp	GridMin_dp	Grid Lines Minor in Profile and Cross Section	0	0	0
	dsgnsp	GridMinSub_dp	Grid Lines Minor Sub in Cross Section Sheets	20	0	0
	dsgnsp	GSBWFill	GuidSign Black and White Fill Level for GuidSign Cells	0	0	1
	dsgnsp	GSColorFill	GuidSign Color Fill Level for GuidSign Cells	2	0	1
	dsgnsp	GSDims	GuidSign Dimensions	0	0	1
	dsgnsp	GSOutline	GuidSign Outline Level for GuidSign Cells	0	0	2
	dsgnsp	GSSign	GuidSign Panel and Tag	7	0	0
	dsgnsp	ImageAttachment_dp	Image Attachmentst	0	0	0
	dsgnsp	LaneDirArrow	Lane Directional Arrow	0	0	1
	dsgnsp	LeaderLine_dp	Leader Line and terminator with Text	0	0	1
	dsgnsp	Logo_dp	Consultant Engineer of Record Logo	0	0	1

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
	dsgnsp	MatchLines_dp	Match Lines with Text, Arrows for Station Notations	1	0	2
X	dsgnsp	MetalButtons	Metal Buttons	0	0	2
	dsgnsp	Miscellaneous0	Undefined proposed item - co blue wt 0	1	0	0
	dsgnsp	Miscellaneous1	Undefined proposed item - co blue wt 1	1	0	1
	dsgnsp	Miscellaneous2	Undefined proposed item - co blue wt 2	1	0	2
	dsgnsp	Miscellaneous3	Undefined proposed item - co green wt 0	2	0	0
	dsgnsp	Miscellaneous4	Undefined proposed item - co green wt 1	2	0	1
	dsgnsp	Miscellaneous5	Undefined proposed item - co green wt 2	2	0	2
	dsgnsp	Miscellaneous6	Undefined proposed item - co red wt 0	3	0	0
	dsgnsp	Miscellaneous7	Undefined proposed item - co red wt 1	3	0	1
	dsgnsp	Miscellaneous8	Undefined proposed item - co red wt 2	3	0	2
	dsgnsp	Miscellaneous9	Undefined proposed item - co red wt 3	3	0	3
	dsgnsp	NonPlottingEle_dp	Non plotting items (construction elements and type 66 elements)	4	0	0
	dsgnsp	NorthArw_dp	North Arrows	0	0	2
X	dsgnsp	ObjectMarker	Object and Reflective Markers	3	0	1
X	dsgnsp	OverheadSign	Overhead Sign Panels	0	0	2
X	dsgnsp	OverheadSign_ep	Overhead Sign Panels (Existing)	0	3	1
X	dsgnsp	OverheadStr	Mast Arm, Truss Assemblies, Signal Arms and Supports	0	0	2
X	dsgnsp	OverheadStr_ep	Mast Arm, Truss Assemblies, Signal Arms and Supports (Existing)	0	3	1
	dsgnsp	Pavemk_ep	Pavement Markings (all)	0	2	0
X	dsgnsp	PavtMessage	Pavement Message (All types)	0	0	1
X	dsgnsp	PavtMessage_ep	Pavement Message (Existing - All types)	0	2	0
	dsgnsp	PayItem_dp	Pay Item Number Label Elements	4	0	2
X	dsgnsp	PlotBorder_dp	Plot Border	3	0	0
X	dsgnsp	PMCeramic	Pavement Markers Ceramic	0	0	1
	dsgnsp	PMMisc	Pavement Marking Miscellaneous Items	0	0	2
X	dsgnsp	PMStripe(10-10-20)	Pavement Marking 10/10/20 Skip Traffic Stripe 6in Contrast	0	skip10/10/20contrast	2
X	dsgnsp	PMStripe12B	Pavement Marking Traffic Stripe 12in Black	3	stripe12	4
X	dsgnsp	PMStripe12W	Pavement Marking Traffic Stripe 12in White	0	stripe12	4
X	dsgnsp	PMStripe12W(3-9)	Pavement Marking 3/9 Skip Traffic Stripe 12in White	0	stripe12	4
X	dsgnsp	PMStripe12Y	Pavement Marking Traffic Stripe 12in Yellow	4	stripe12	4
X	dsgnsp	PMStripe16B	Pavement Marking Traffic Stripe 16in Black	3	stripe16	5
X	dsgnsp	PMStripe16W	Pavement Marking Traffic Stripe 16in White	0	stripe16	5
X	dsgnsp	PMStripe16Y	Pavement Marking Traffic Stripe 16in Yellow	4	stripe16	5
X	dsgnsp	PMStripe18B	Pavement Marking Traffic Stripe 18in Black	3	stripe18	6

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
X	dsgnsp	PMStripe18W	Pavement Marking Traffic Stripe 18in White	0	stripe18	6
X	dsgnsp	PMStripe18Y	Pavement Marking Traffic Stripe 18in Yellow	4	stripe18	6
X	dsgnsp	PMStripe24W	Pavement Marking Traffic Stripe 24in White	0	stripe24	7
X	dsgnsp	PMStripe24Y	Pavement Marking Traffic Stripe 24in Yellow	4	stripe24	7
X	dsgnsp	PMStripe6B	Pavement Marking Traffic Stripe 6in Black	3	stripe06	2
X	dsgnsp	PMStripe6B(10-30)	Pavement Marking 10/30 Skip Traffic Stripe 6in Black	3	stripe06	2
X	dsgnsp	PMStripe6Bl	Pavement Marking Traffic Stripe 6in Blue	1	stripe06	2
X	dsgnsp	PMStripe6DY	Pavement Marking Traffic Stripe 6in Double Yellow	4	dbl_line	2
X	dsgnsp	PMStripe6W	Pavement Marking Traffic Stripe 6in White	0	stripe06	2
X	dsgnsp	PMStripe6W(10-30)	Pavement Marking 10/30 Skip Traffic Stripe 6in White	0	stripe06	2
X	dsgnsp	PMStripe6W(3-9)	Pavement Marking 3/9 Skip Traffic Stripe 6in White	0	stripe06	2
X	dsgnsp	PMStripe6W(2-4)	Pavement Marking 2/4 Skip Traffic Stripe 6in White	0	stripe06	2
X	dsgnsp	PMStripe6W(6-10)	Pavement Marking 6/10 Skip Traffic Stripe 6in White	0	stripe06	2
X	dsgnsp	PMStripe6Y	Pavement Marking Traffic Stripe 6in Yellow	4	stripe06	2
X	dsgnsp	PMStripe6Y(10-30)	Pavement Marking 10/30 Skip Traffic Stripe 6in Yellow	4	stripe06	2
X	dsgnsp	PMStripe6Y(2-4)	Pavement Marking 2/4 Skip Traffic Stripe 6in Yellow	4	stripe06	2
X	dsgnsp	PMStripe6Y(6-10)	Pavement Marking 6/10 Skip Traffic Stripe 6in Yellow	4	stripe06	2
X	dsgnsp	PMStripe8B	Pavement Marking Traffic Stripe 8in Black	3	stripe06	3
X	dsgnsp	PMStripe8W	Pavement Marking Traffic Stripe 8in White	0	stripe08	3
X	dsgnsp	PMStripe8W(3-9)	Pavement Marking 3/9 Skip Traffic Stripe 8in White	0	stripe08	2
X	dsgnsp	PMStripe8Y	Pavement Marking Traffic Stripe 8in Yellow	4	stripe08	3
X	dsgnsp	PMStripe9C(10-30)	Pavement Marking 10/30 Skip Traffic Stripe 9in Contrast	0	skip 10/30 contrast	2
X	dsgnsp	PMStripeVibeW	Pavement Marking Auditory and Vibratory 6in White	0	Vibratory	2
X	dsgnsp	PMStripeVibeY	Pavement Marking Auditory and Vibratory 6in Yellow	4	Vibratory	2
	dsgnsp	PMYieldL	Special Marking Area Yield Lines Large	0	yield1	2
	dsgnsp	PMYieldS	Special Marking Area Yield Lines Small	0	yield	2
	dsgnsp	PointLocator_ep	Point Locator Symbol	4	0	0
	dsgnsp	ReferencePt_dp	Survey and Construction Reference Point Details and Elements	4	0	2
X	dsgnsp	ReflPaintWht	Reflective Paint - Island Nose (White)	0	0	3
X	dsgnsp	ReflPaintYel	Reflective Paint - Island Nose (Yellow)	4	0	3
X	dsgnsp	RPM_ep	Reflective Pavement Markers (Existing)	2	2	1
X	dsgnsp	RPM1	Raised Pavement Markers, White	0	0	2
X	dsgnsp	RPM2	Raised Pavement Markers, White - Red	3	0	2
X	dsgnsp	RPM3	Raised Pavement Markers, Yellow	4	0	2
X	dsgnsp	RPM4	Raised Pavement Markers, Yellow - Yellow	9	0	2

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
X	dsgnsp	RPM5	Raised Pavement Markers, Yellow - Red	6	0	2
X	dsgnsp	RPM6	Raised Pavement Markers, Blue	1	0	2
X	dsgnsp	SawCuts	Saw Cuts	3	conduit1	0
	dsgnsp	Scale_dp	Bar Scale, Scale Label Elements	0	0	2
	dsgnsp	Scratch1_dp	A scratch level for temporary or informational items	4	0	0
	dsgnsp	Scratch2_dp	A scratch level for temporary or informational items	5	0	0
	dsgnsp	ScratchEle_dp	Level for Draft Elements, Temporary Elements, Etc. Do Not Plot	3	0	0
	dsgnsp	ScratchEle2_dp	Level for Draft Elements, Temporary Elements, Etc. Do Not Plot	4	0	0
	dsgnsp	SheetBorder_dp	Sheet Border	1	0	4
	dsgnsp	SheetLines_dp	Sheet Lines	1	0	2
	dsgnsp	SheetLinesMisc1_dp	Sheet Lines	1	0	0
	dsgnsp	SheetLinesMisc2_dp	Sheet Lines	2	0	2
	dsgnsp	SheetLinesMisc3_dp	Sheet Lines	3	0	2
	dsgnsp	SheetLinesMisc4_dp	Sheet Lines	4	0	2
X	dsgnsp	SignCantilever	Sign Symbol Cantilever	0	0	1
X	dsgnsp	SignCantilever_ep	Sign Symbol Cantilever (Existing)	0	2	0
	dsgnsp	SignDetail	Sign Details	0	0	2
	dsgnsp	SignLettersAZ	Alphabet Cell Library Letter A-Z Numbers 0-9	0	0	0
	dsgnsp	SignMisc	Miscellaneous Sign Symbols	1	0	2
	dsgnsp	SignMisc_ep	Miscellaneous Sign Symbols (Existing)	1	1	1
X	dsgnsp	SignPanel	Sign Panels - Regulatory	0	0	2
X	dsgnsp	SignPanel_ep	Sign Panel Elements (Existing)	0	2	1
X	dsgnsp	SignPanelBorder	Sign Panel Border on Sign Details	0	0	1
X	dsgnsp	SignPanelC	Sign Panels - Civil	1	0	2
X	dsgnsp	SignPanelDetRed	Sign Panel Details in Red	3	0	2
X	dsgnsp	SignPanelG	Sign Panels - Guide	2	0	2
X	dsgnsp	SignPanelI	Sign Panels - Special Interest	9	0	2
X	dsgnsp	SignPanelT	Sign Panels - Construction	6	0	2
X	dsgnsp	SignPanelW	Sign Panels - Warning	4	0	2
	dsgnsp	SignSingle_ep	Sign (Single Support)	3	2	0
X	dsgnsp	SignSpanwire	Span Wire Signing Assembly	2	0	1
X	dsgnsp	SignSpanwire_ep	Span Wire Signing Assembly (Existing)	2	2	1
X	dsgnsp	SignSpecial	Special Signs / Guide Signs	2	0	2
X	dsgnsp	SignSupport	Ground Mounted Sign Support Symbol (All Types)	1	0	1
	dsgnsp	SignSupport_ep	Trusses and Cantilevers for Overhead Signs	0	3	1

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
X	dsgnsp	SignSymbol_px	Sign Structure and Foundation on Cross Sections	4	0	2
X	dsgnsp	SignTruss	Sign Symbol Truss	3	0	1
X	dsgnsp	SignTruss_ep	Sign Symbol Truss (Existing)	3	2	1
	dsgnsp	SpecialDetails	Special Details	6	0	1
	dsgnsp	StationTicL_dp	Station Tic Marks (Large) and Text	0	0	2
	dsgnsp	StationTicS_dp	Station Tic Marks (Small) and Text	0	0	2
	dsgnsp	SumBoxBorder_dp	Summary Boxes Borders	4	0	3
	dsgnsp	SumBoxLines_dp	Summary Boxes Lines and Miscellaneous Items	4	0	1
	dsgnsp	SumBoxLinesMin_dp	Summary Boxes Lines Minor Line and Miscellaneous Items	4	0	0
	dsgnsp	TextBLStation	Text - B/L Station and Tics	0	0	2
	dsgnsp	TextConstEle	Text - Construction Element	0	0	1
	dsgnsp	TextCurveData	Text - Curve Data Note	0	0	2
	dsgnsp	TextDetails	Text - Detail Notes	4	0	2
	dsgnsp	TextElevLabel	Elevation Labels	4	0	0
	dsgnsp	TextLabel	Text - Label	0	0	2
	dsgnsp	TextLandscape	Text - Landscape Labels	0	0	1
	dsgnsp	TextMajor	Text - Major	0	0	5
	dsgnsp	TextMinor	Text - Minor	0	0	0
	dsgnsp	TextMisc	Text - Miscellaneous	0	0	1
	dsgnsp	TextNotes	Text - Notes	4	0	1
	dsgnsp	TextProfLabel	Text - Profile, Horizontal and Vertical Axis Labels	0	0	2
	dsgnsp	TextProjLabel	Text - Begin and End Project label with leader lines	1	0	2
	dsgnsp	TextPtLabel	Point Labels	4	0	0
	dsgnsp	TextShtNo	Text - Sheet Number	0	0	2
	dsgnsp	TextSurveyLabel	Survey Text Labels	0	0	0
	dsgnsp	TextTables	Text - Keysheet Indexes and Table Data	4	0	2
	dsgnsp	TextTitle	Text - Title	0	0	3
	dsgnsp	TextXSElev	Text - Cross Section Elevations	2	0	1
	dsgnsp	XSCell	GEOPAK Cross Section Cell and Profile Cell	8	0	1
	dsgnsp	Viewport	Viewport (For AutoCAD Use)	3	0	0
	dsgnsp	Xreference_dp	Reference Files (For AutoCAD Use)	0	0	1
	dsgnsp	Xreference01_dp	Reference Files (For AutoCAD Use)	0	0	1
	dsgnsp	Xreference02_dp	Reference Files (For AutoCAD Use)	0	0	1
	dsgnsp	Xreference03_dp	Reference Files (For AutoCAD Use)	0	0	1
	dsgnsp	Xreference04_dp	Reference Files (For AutoCAD Use)	0	0	1

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
	dsgnsp	Xreference05_dp	Reference Files (For AutoCAD Use)	0	0	1
	dsgnsp	Xreference06_dp	Reference Files (For AutoCAD Use)	0	0	1
	dsgnsp	Xreference07_dp	Reference Files (For AutoCAD Use)	0	0	1
	dsgnsp	Xreference08_dp	Reference Files (For AutoCAD Use)	0	0	1
	dsgnsp	Xreference09_dp	Reference Files (For AutoCAD Use)	0	0	1
	dsgnsp	Xreference10_dp	Reference Files (For AutoCAD Use)	0	0	1

4.2.14 DIGITAL TERRAIN MODEL - DTMRD

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
	dtmrd	ActivePointCell_dp	Active Point Cell	4	0	10
	dtmrd	AdhocPoint_dp	Adhoc Points Placed by SheetInfo	0	4	0
	dtmrd	BreakLine_dp	Break Lines	0	0	1
	dtmrd	COGO_dp	COGO Information	3	0	1
	dtmrd	ContourIndex_dp	Contour Index and special contour info	3	0	2
	dtmrd	ContourIndex_ep	Contour Index (Existing)	3	0	2
	dtmrd	ContoursMajor_dp	Contour Lines Major	3	0	2
	dtmrd	ContoursMajor_ep	Contour Lines Major (Existing)	3	1	1
	dtmrd	ContoursMinor_dp	Contour Lines Minor	4	0	1
	dtmrd	ContoursMinor_ep	Contour Lines Minor (Existing)	4	1	0
	dtmrd	DimLines_dp	Dimension Lines, Corresponding Terminators, Equation Lines	0	0	1
	dtmrd	DTM	Digital Terrain Model, TIN Model Elements	1	0	2
	dtmrd	DTM_ep	Digital Terrain Model, TIN Model Elements (Existing)	2	0	1
	dtmrd	DTMTriangles	DTM Triangles	1	0	2
	dtmrd	DTMTriangles_ep	DTM Triangles (Existing)	2	0	1
X	dtmrd	EaseLicLine	Easement License Agreement Line	5	6	0
	dtmrd	GridMaj_dp	Grid Lines Major in Profile and Cross Section	3	0	1
	dtmrd	GridMin_dp	Grid Lines Minor in Profile and Cross Section	0	0	0
	dtmrd	GridMinSub_dp	Grid Lines Minor Sub in Cross Section Sheets	20	0	0
	dtmrd	ImageAttachment_dp	Image Attachmentst	0	0	0
	dtmrd	LeaderLine_dp	Leader Line and terminator with Text	0	0	1
	dtmrd	Miscellaneous0	Undefined proposed item - co blue wt 0	1	0	0
	dtmrd	Miscellaneous1	Undefined proposed item - co blue wt 1	1	0	1

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
	dtmrd	Miscellaneous2	Undefined proposed item - co blue wt 2	1	0	2
	dtmrd	Miscellaneous3	Undefined proposed item - co green wt 0	2	0	0
	dtmrd	Miscellaneous4	Undefined proposed item - co green wt 1	2	0	1
	dtmrd	Miscellaneous5	Undefined proposed item - co green wt 2	2	0	2
	dtmrd	Miscellaneous6	Undefined proposed item - co red wt 0	3	0	0
	dtmrd	Miscellaneous7	Undefined proposed item - co red wt 1	3	0	1
	dtmrd	Miscellaneous8	Undefined proposed item - co red wt 2	3	0	2
	dtmrd	Miscellaneous9	Undefined proposed item - co red wt 3	3	0	3
	dtmrd	NonPlottingEle_dp	Non plotting items such as construction elements and type 66 elements	4	0	0
	dtmrd	PayItem_dp	Pay Item Number Label Elements	4	0	2
	dtmrd	PointLocator_ep	Point Locator Symbol	4	0	0
	dtmrd	ReferencePt_dp	Survey and Construction Reference Point Details and Elements	4	0	2
	dtmrd	Scratch1_dp	A scratch level for temporary or informational items	4	0	0
	dtmrd	Scratch2_dp	A scratch level for temporary or informational items	5	0	0
	dtmrd	ScratchEle_dp	Level for Draft Elements, Temporary Elements, Etc. Do Not Plot	3	0	0
	dtmrd	ScratchEle2_dp	Level for Draft Elements, Temporary Elements, Etc. Do Not Plot	4	0	0
	dtmrd	TextBLStation	Text - B/L Station and Tics	0	0	2
	dtmrd	TextConstEle	Text - Construction Element	0	0	1
	dtmrd	TextCurveData	Text - Curve Data Note	0	0	2
	dtmrd	TextDetails	Text - Detail Notes	4	0	2
	dtmrd	TextElevLabel	Elevation Labels	4	0	0
	dtmrd	TextLabel	Text - Label	0	0	2
	dtmrd	TextLandscape	Text - Landscape Labels	0	0	1
	dtmrd	TextMajor	Text - Major	0	0	5
	dtmrd	TextMinor	Text - Minor	0	0	0
	dtmrd	TextMisc	Text - Miscellaneous	0	0	1
	dtmrd	TextNotes	Text - Notes	4	0	1
	dtmrd	TextProfLabel	Text - Profile, Horizontal and Vertical Axis Labels	0	0	2
	dtmrd	TextProjLabel	Text - Begin and End Project label with leader lines	1	0	2
	dtmrd	TextPtLabel	Point Labels	4	0	0
	dtmrd	TextShtNo	Text - Sheet Number	0	0	2
	dtmrd	TextSurveyLabel	Survey Text Labels	0	0	0
	dtmrd	TextTables	Text - Keysheet Indexes and Table Data	4	0	2
	dtmrd	TextTitle	Text - Title	0	0	3
	dtmrd	TextXSElev	Text - Cross Section Elevations	2	0	1

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
	dtmrd	VoidArea_dx	Void Area_XS	1	0	0
	dtmrd	Voids_dp	Voids	11	3	1
	dtmrd	XSCell	GEOPAK Cross Section Cell and Profile Cell	8	0	1
	dtmrd	Viewport	Viewport (For AutoCAD Use)	3	0	0
	dtmrd	Xreference_dp	Reference Files (For AutoCAD Use)	0	0	1
	dtmrd	Xreference01_dp	Reference Files (For AutoCAD Use)	0	0	1
	dtmrd	Xreference02_dp	Reference Files (For AutoCAD Use)	0	0	1
	dtmrd	Xreference03_dp	Reference Files (For AutoCAD Use)	0	0	1
	dtmrd	Xreference04_dp	Reference Files (For AutoCAD Use)	0	0	1
	dtmrd	Xreference05_dp	Reference Files (For AutoCAD Use)	0	0	1
	dtmrd	Xreference06_dp	Reference Files (For AutoCAD Use)	0	0	1
	dtmrd	Xreference07_dp	Reference Files (For AutoCAD Use)	0	0	1
	dtmrd	Xreference08_dp	Reference Files (For AutoCAD Use)	0	0	1
	dtmrd	Xreference09_dp	Reference Files (For AutoCAD Use)	0	0	1
	dtmrd	Xreference10_dp	Reference Files (For AutoCAD Use)	0	0	1

4.2.15 GEOTECHNICAL - GEOTECH

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
	geotech	ActivePointCell_dp	Active Point Cell	4	0	10
	geotech	AdhocPoint_dp	Adhoc Points Placed by SheetInfo	0	4	0
	geotech	COGO_dp	COGO Information	3	0	1
	geotech	Dimension	Dimension Lines (Structures)	0	0	0
	geotech	DimLines_dp	Dimension Lines, Corresponding Terminators, Equation Lines	0	0	1
X	geotech	EaseLicLine	Easement License Agreement Line	5	6	0
	geotech	GeotechFillPatt1	Geotechnical Fill Pattern - (earth, wood, muck, concrete, rock, riprap) as defined in project	3	0	0
	geotech	GeotechFillPatt2	Geotechnical Fill Pattern - clay, sand	0	1	0
	geotech	GeotechFillPatt3	Geotechnical Fill Pattern - shell	3	1	0
	geotech	GeotechFillPatt4	Geotechnical Fill Pattern - sand	4	0	0
	geotech	GeotechFillPatt5	Geotechnical Fill Pattern - coquina	1	0	1
	geotech	GeotechFillPatt6	Geotechnical Fill Pattern - limestone	2	0	0
	geotech	GeotechFillPatt7	Geotechnical Fill Pattern - gravel	6	0	0
	geotech	GeotechFillPatt8	Geotechnical Fill Pattern - silt	0	0	1

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
	geotech	GeotechMisc	Miscellaneous Geotechnical Elements	0	0	1
	geotech	GridMaj_dp	Grid Lines Major in Profile and Cross Section	3	0	1
	geotech	GridMin_dp	Grid Lines Minor in Profile and Cross Section	0	0	0
	geotech	GridMinG_dp	Grid Lines Minor Sub 2 in Cross Section Sheets	20	0	0
	geotech	GridMinSub_dp	Grid Lines Minor Sub in Cross Section Sheets	20	0	0
	goetech	ImageAttachment_dp	Image Attachmentst	0	0	0
	geotech	LeaderLine_dp	Leader Line and terminator with Text	0	0	1
	geotech	Logo_dp	Consultant Engineer of Record Logo	0	0	1
	geotech	Miscellaneous0	Undefined proposed item - co blue wt 0	1	0	0
	geotech	Miscellaneous1	Undefined proposed item - co blue wt 1	1	0	1
	geotech	Miscellaneous2	Undefined proposed item - co blue wt 2	1	0	2
	geotech	Miscellaneous3	Undefined proposed item - co green wt 0	2	0	0
	geotech	Miscellaneous4	Undefined proposed item - co green wt 1	2	0	1
	geotech	Miscellaneous5	Undefined proposed item - co green wt 2	2	0	2
	geotech	Miscellaneous6	Undefined proposed item - co red wt 0	3	0	0
	geotech	Miscellaneous7	Undefined proposed item - co red wt 1	3	0	1
	geotech	Miscellaneous8	Undefined proposed item - co red wt 2	3	0	2
	geotech	Miscellaneous9	Undefined proposed item - co red wt 3	3	0	3
	geotech	NonPlottingEle_dp	Non plotting items such as construction elements and type 66 elements	4	0	0
	geotech	NorthArw_dp	North Arrows	0	0	2
	geotech	Patterning	All; any Patterning	3	0	1
	geotech	Patternlines_ep	Cross Section Chain	2	1	0
	geotech	PatternLines1_dp	Pattern Lines for Cross Sections	3	0	2
	geotech	PatternLines2_dp	Pattern Lines for XSections alternate for side streets, critical xsections or drainage structures	4	0	2
	geotech	PatternLines3_dp	Pattern Lines for XSections alternate for side streets, critical xsections or drainage structures	5	0	2
	geotech	PayItem_dp	Pay Item Number Label Elements	4	0	2
X	geotech	PlotBorder_dp	Plot Border	3	0	0
	geotech	PointLocator_ep	Point Locator Symbol	4	0	0
	geotech	ReferencePt_dp	Survey and Construction Reference Point Details and Elements	4	0	2
	geotech	Scale_dp	Bar Scale, Scale Label Elements	0	0	2
	geotech	Scratch1_dp	A scratch level for temporary or informational items	4	0	0
	geotech	Scratch2_dp	A scratch level for temporary or informational items	5	0	0
	geotech	ScratchEle_dp	Level for Draft Elements, Temporary Elements, Etc. Do Not Plot	3	0	0
	geotech	ScratchEle2_dp	Level for Draft Elements, Temporary Elements, Etc. Do Not Plot	4	0	0
	geotech	SheetBorder_dp	Sheet Border	1	0	4

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
	geotech	SheetLines_dp	Sheet Lines	1	0	2
	geotech	SheetLinesMisc1_dp	Sheet Lines	1	0	0
	geotech	SheetLinesMisc2_dp	Sheet Lines	2	0	2
	geotech	SheetLinesMisc3_dp	Sheet Lines	3	0	2
	geotech	SheetLinesMisc4_dp	Sheet Lines	4	0	2
X	geotech	SoilBoring	Soil Boring Elements	5	0	1
	geotech	SoilBoringLoc_dp	Soil Boring Location Symbol	4	0	2
	geotech	SoilBoxes_dp	Soil Boxes	4	0	1
X	geotech	SoilBoxes_px	Soil Boxes and Borings for Cross Sections	4	0	1
	geotech	SumBoxBorder_dp	Summary Boxes Borders	4	0	3
	geotech	SumBoxLines_dp	Summary Boxes Lines and Miscellaneous Items	4	0	1
	geotech	SumBoxLinesMin_dp	Summary Boxes Lines Minor Line and Miscellaneous Items	4	0	0
	geotech	TextAlert	Text - An Alert Label to Highlight a Problem	3	0	2
	geotech	TextBLStation	Text - B/L Station and Tics	0	0	2
	geotech	TextConstEle	Text - Construction Element	0	0	1
	geotech	TextCurveData	Text - Curve Data Note	0	0	2
	geotech	TextDetails	Text - Detail Notes	4	0	2
	geotech	TextElevLabel	Elevation Labels	4	0	0
	geotech	TextGeotech	Text for soil borings and labels	0	0	2
	geotech	TextLabel	Text - Label	0	0	2
	geotech	TextLandscape	Text - Landscape Labels	0	0	1
	geotech	TextMajor	Text - Major	0	0	5
	geotech	TextMinor	Text - Minor	0	0	0
	geotech	TextMisc	Text - Miscellaneous	0	0	1
	geotech	TextNotes	Text - Notes	4	0	1
	geotech	TextProfLabel	Text - Profile, Horizontal and Vertical Axis Labels	0	0	2
	geotech	TextProjLabel	Text - Begin and End Project label with leader lines	1	0	2
	geotech	TextPtLabel	Point Labels	4	0	0
	geotech	TextShtNo	Text - Sheet Number	0	0	2
	geotech	TextStructures	Structures Text	0	0	0
	geotech	TextSurveyLabel	Survey Text Labels	0	0	0
	geotech	TextTables	Text - Keysheet Indexes and Table Data	4	0	2
	geotech	TextTitle	Text - Title	0	0	3
	geotech	TextXSElev	Text - Cross Section Elevations	2	0	1
X	geotech	Water	Water Line	1	w	2

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
	geotech	XSCell	GEOPAK Cross Section Cell and Profile Cell	8	0	1
	geotech	Viewport	Viewport (For AutoCAD Use)	3	0	0
	geotech	Xreference_dp	Reference Files (For AutoCAD Use)	0	0	1
	geotech	Xreference01_dp	Reference Files (For AutoCAD Use)	0	0	1
	geotech	Xreference02_dp	Reference Files (For AutoCAD Use)	0	0	1
	geotech	Xreference03_dp	Reference Files (For AutoCAD Use)	0	0	1
	geotech	Xreference04_dp	Reference Files (For AutoCAD Use)	0	0	1
	geotech	Xreference05_dp	Reference Files (For AutoCAD Use)	0	0	1
	geotech	Xreference06_dp	Reference Files (For AutoCAD Use)	0	0	1
	geotech	Xreference07_dp	Reference Files (For AutoCAD Use)	0	0	1
	geotech	Xreference08_dp	Reference Files (For AutoCAD Use)	0	0	1
	geotech	Xreference09_dp	Reference Files (For AutoCAD Use)	0	0	1
	geotech	Xreference10_dp	Reference Files (For AutoCAD Use)	0	0	1

4.2.16 GUIDSIGN - GSWKSP

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
	gswksp	ActivePointCell_dp	Active Point Cell	4	0	10
	gswksp	AdhocPoint_dp	Adhoc Points Placed by SheetInfo	0	4	0
	gswksp	COGO_dp	COGO Information	3	0	1
	gswksp	DimLines_dp	Dimension Lines, Corresponding Terminators, Equation Lines	0	0	1
X	gswksp	EaseLicLine	Easement License Agreement Line	5	6	0
	gswksp	GridMaj_dp	Grid Lines Major in Profile and Cross Section	3	0	1
	gswksp	GridMin_dp	Grid Lines Minor in Profile and Cross Section	0	0	0
	gswksp	GridMinSub_dp	Grid Lines Minor Sub in Cross Section Sheets	20	0	0
	gswksp	GSBWFill	GuidSign Black and White Fill Level for GuidSign Cells	0	0	1
	gswksp	GSColorFill	GuidSign Color Fill Level for GuidSign Cells	2	0	1
	gswksp	GSDims	GuidSign Dimensions	0	0	1
	gswksp	GSOutline	GuidSign Outline Level for GuidSign Cells	0	0	2
	gswksp	GSSign	GuidSign Panel and Tag	7	0	0
	gswksp	ImageAttachment_dp	Image Attachmentst	0	0	0
	gswksp	KeyShtMisc	Key sheet Miscellaneous Items	0	0	2
	gswksp	LeaderLine_dp	Leader Line and terminator with Text	0	0	1
	gswksp	Logo_dp	Consultant Engineer of Record Logo	0	0	1
	gswksp	Miscellaneous0	Undefined proposed item - co blue wt 0	1	0	0

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
	gswksp	Miscellaneous1	Undefined proposed item - co blue wt 1	1	0	1
	gswksp	Miscellaneous2	Undefined proposed item - co blue wt 2	1	0	2
	gswksp	Miscellaneous3	Undefined proposed item - co green wt 0	2	0	0
	gswksp	Miscellaneous4	Undefined proposed item - co green wt 1	2	0	1
	gswksp	Miscellaneous5	Undefined proposed item - co green wt 2	2	0	2
	gswksp	Miscellaneous6	Undefined proposed item - co red wt 0	3	0	0
	gswksp	Miscellaneous7	Undefined proposed item - co red wt 1	3	0	1
	gswksp	Miscellaneous8	Undefined proposed item - co red wt 2	3	0	2
	gswksp	Miscellaneous9	Undefined proposed item - co red wt 3	3	0	3
	gswksp	NonPlottingEle_dp	Non plotting items such as construction elements and type 66 elements	4	0	0
	gswksp	NorthArw_dp	North Arrows	0	0	2
X	gswksp	ObjectMarker	Object and Reflective Markers	3	0	1
X	gswksp	OverheadSign	Overhead Sign Panels	0	0	2
X	gswksp	OverheadSign_ep	Overhead Sign Panels (Existing)	0	3	1
X	gswksp	OverheadStr	Mast Arm, Truss Assemblies, Signal Arms and Supports	0	0	2
X	gswksp	OverheadStr_ep	Mast Arm, Truss Assemblies, Signal Arms and Supports (Existing)	0	3	1
	gswksp	PayItem_dp	Pay Item Number Label Elements	4	0	2
X	gswksp	PlotBorder_dp	Plot Border	3	0	0
	gswksp	PointLocator_ep	Point Locator Symbol	4	0	0
	gswksp	ReferencePt_dp	Survey and Construction Reference Point Details and Elements	4	0	2
	gswksp	Scale_dp	Bar Scale, Scale Label Elements	0	0	2
	gswksp	Scratch1_dp	A scratch level for temporary or informational items	4	0	0
	gswksp	Scratch2_dp	A scratch level for temporary or informational items	5	0	0
	gswksp	ScratchEle_dp	Level for Draft Elements, Temporary Elements, Etc. Do Not Plot	3	0	0
	gswksp	ScratchEle2_dp	Level for Draft Elements, Temporary Elements, Etc. Do Not Plot	4	0	0
	gswksp	SheetBorder_dp	Sheet Border	1	0	4
	gswksp	SheetLines_dp	Sheet Lines	1	0	2
	gswksp	SheetLinesMisc1_dp	Sheet Lines	1	0	0
	gswksp	SheetLinesMisc2_dp	Sheet Lines	2	0	2
	gswksp	SheetLinesMisc3_dp	Sheet Lines	3	0	2
	gswksp	SheetLinesMisc4_dp	Sheet Lines	4	0	2
X	gswksp	SignCantilever	Sign Symbol Cantilever	0	0	1
X	gswksp	SignCantilever_ep	Sign Symbol Cantilever (Existing)	0	2	0
	gswksp	SignDetail	Sign Details	0	0	2
	gswksp	SignLettersAZ	Alphabet Cell Library Letter A-Z Numbers 0-9	0	0	0

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
	gswksp	SignMisc	Miscellaneous Sign Symbols	1	0	2
	gswksp	SignMisc_ep	Miscellaneous Sign Symbols (Existing)	1	1	1
X	gswksp	SignPanel	Sign Panels - Regulatory	0	0	2
X	gswksp	SignPanel_ep	Sign Panel Elements (Existing)	0	2	1
X	gswksp	SignPanelBorder	Sign Panel Border on Sign Details	0	0	1
X	gswksp	SignPanelC	Sign Panels - Civil	1	0	2
X	gswksp	SignPanelDetRed	Sign Panel Details in Red	3	0	2
X	gswksp	SignPanelG	Sign Panels - Guide	2	0	2
X	gswksp	SignPanelI	Sign Panels - Special Interest	9	0	2
X	gswksp	SignPanelT	Sign Panels - Construction	6	0	2
X	gswksp	SignPanelW	Sign Panels - Warning	4	0	2
X	gswksp	SignSpanwire	Span Wire Signing Assembly	2	0	1
X	gswksp	SignSpanwire_ep	Span Wire Signing Assembly (Existing)	2	2	1
X	gswksp	SignSpecial	Special Signs / Guide Signs	2	0	2
X	gswksp	SignSupport	Ground Mounted Sign Support Symbol (All Types)	1	0	1
X	gswksp	SignSymbol_px	Sign Structure and Foundation on Cross Sections	4	0	2
X	gswksp	SignTruss	Sign Symbol Truss	3	0	1
X	gswksp	SignTruss_ep	Sign Symbol Truss (Existing)	3	2	1
	gswksp	SumBoxBorder_dp	Summary Boxes Borders	4	0	3
	gswksp	SumBoxLines_dp	Summary Boxes Lines and Miscellaneous Items	4	0	1
	gswksp	SumBoxLinesMin_dp	Summary Boxes Lines Minor Line and Miscellaneous Items	4	0	0
	gswksp	TextBLStation	Text - B/L Station and Tics	0	0	2
	gswksp	TextConstEle	Text - Construction Element	0	0	1
	gswksp	TextCurveData	Text - Curve Data Note	0	0	2
	gswksp	TextDetails	Text - Detail Notes	4	0	2
	gswksp	TextElevLabel	Elevation Labels	4	0	0
	gswksp	TextLabel	Text - Label	0	0	2
	gswksp	TextLandscape	Text - Landscape Labels	0	0	1
	gswksp	TextMajor	Text - Major	0	0	5
	gswksp	TextMinor	Text - Minor	0	0	0
	gswksp	TextMisc	Text - Miscellaneous	0	0	1
	gswksp	TextNotes	Text - Notes	4	0	1
	gswksp	TextProfLabel	Text - Profile, Horizontal and Vertical Axis Labels	0	0	2
	gswksp	TextProjLabel	Text - Begin and End Project label with leader lines	1	0	2
	gswksp	TextPtLabel	Point Labels	4	0	0
	gswksp	TextShtNo	Text - Sheet Number	0	0	2

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
	gswksp	TextSurveyLabel	Survey Text Labels	0	0	0
	gswksp	TextTables	Text - Keysheet Indexes and Table Data	4	0	2
	gswksp	TextTitle	Text - Title	0	0	3
	gswksp	TextXSElev	Text - Cross Section Elevations	2	0	1
	gswksp	XSCell	GEOPAK Cross Section Cell and Profile Cell	8	0	1
	gswksp	Viewport	Viewport (For AutoCAD Use)	3	0	0
	gswksp	Xreference_dp	Reference Files (For AutoCAD Use)	0	0	1
	gswksp	Xreference01_dp	Reference Files (For AutoCAD Use)	0	0	1
	gswksp	Xreference02_dp	Reference Files (For AutoCAD Use)	0	0	1
	gswksp	Xreference03_dp	Reference Files (For AutoCAD Use)	0	0	1
	gswksp	Xreference04_dp	Reference Files (For AutoCAD Use)	0	0	1
	gswksp	Xreference05_dp	Reference Files (For AutoCAD Use)	0	0	1
	gswksp	Xreference06_dp	Reference Files (For AutoCAD Use)	0	0	1
	gswksp	Xreference07_dp	Reference Files (For AutoCAD Use)	0	0	1
	gswksp	Xreference08_dp	Reference Files (For AutoCAD Use)	0	0	1
	gswksp	Xreference09_dp	Reference Files (For AutoCAD Use)	0	0	1
	gswksp	Xreference10_dp	Reference Files (For AutoCAD Use)	0	0	1

4.2.17 IRRIGATION - IRRGLD

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
	irrgld	ActivePointCell_dp	Active Point Cell	4	0	10
	irrgld	AdhocPoint_dp	Adhoc Points Placed by SheetInfo	0	4	0
	irrgld	COGO_dp	COGO Information	3	0	1
	irrgld	DimLines_dp	Dimension Lines, Corresponding Terminators, Equation Lines	0	0	1
	irrgld	DripSystem	Irrigation Drip System	1	0	2
X	irrgld	EaseLicLine	Easement License Agreement Line	5	6	0
	irrgld	ImageAttachment_dp	Image Attachmentst	0	0	0
X	irrgld	IrrigationWaterLine	Irrigation Water Lines	1	0	2
X	irrgld	IrrigationHeads	Irrigation Heads (All Types)	5	0	2
X	irrgld	IrrigationLateral	Irrigation Lateral Line	7	0	1
X	irrgld	IrrigationLateralNP	Irrigation Lateral (Reclaimed)	12	0	1
X	irrgld	IrrigationMain	Irrigation Main Line	1	3	3
X	irrgld	IrrigationMainNP	Irrigation Main Line (Reclaimed)	8	3	3
	irrgld	IrrigationMisc	Irrigation Miscellaneous Items	0	0	2
X	irrgld	IrrigationMiscNP	Irrigation Equipment (Reclaimed)	8	0	1
X	irrgld	IrrigationSleeve	Irrigation Sleeve	6	5	1

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
	irrgld	IrrigationSprayPat	Irrigation Head Spray Pattern	1	1	1
	irrgld	LeaderLine_dp	Leader Line and terminator with Text	0	0	1
X	irrgld	MechanicalAccs	Mechanical Irrigation Items (valves, meters, pipe, clocks, back flow)	3	0	1
	irrgld	Miscellaneous0	Undefined proposed item - co blue wt 0	1	0	0
	irrgld	Miscellaneous1	Undefined proposed item - co blue wt 1	1	0	1
	irrgld	Miscellaneous2	Undefined proposed item - co blue wt 2	1	0	2
	irrgld	Miscellaneous3	Undefined proposed item - co green wt 0	2	0	0
	irrgld	Miscellaneous4	Undefined proposed item - co green wt 1	2	0	1
	irrgld	Miscellaneous5	Undefined proposed item - co green wt 2	2	0	2
	irrgld	Miscellaneous6	Undefined proposed item - co red wt 0	3	0	0
	irrgld	Miscellaneous7	Undefined proposed item - co red wt 1	3	0	1
	irrgld	Miscellaneous8	Undefined proposed item - co red wt 2	3	0	2
	irrgld	Miscellaneous9	Undefined proposed item - co red wt 3	3	0	3
	irrgld	NonPlottingEle_dp	Non plotting items such as construction elements and type 66 elements	4	0	0
	irrgld	PayItem_dp	Pay Item Number Label Elements	4	0	2
	irrgld	PointLocator_ep	Point Locator Symbol	4	0	0
	irrgld	ReferencePt_dp	Survey and Construction Reference Point Details and Elements	4	0	2
	irrgld	Scratch1_dp	A scratch level for temporary or informational items	4	0	0
	irrgld	Scratch2_dp	A scratch level for temporary or informational items	5	0	0
	irrgld	ScratchEle_dp	Level for Draft Elements, Temporary Elements, Etc. Do Not Plot	3	0	0
	irrgld	ScratchEle2_dp	Level for Draft Elements, Temporary Elements, Etc. Do Not Plot	4	0	0
	irrgld	TextBLStation	Text - B/L Station and Tics	0	0	2
	irrgld	TextConstEle	Text - Construction Element	0	0	1
	irrgld	TextCurveData	Text - Curve Data Note	0	0	2
	irrgld	TextDetails	Text - Detail Notes	4	0	2
	irrgld	TextElevLabel	Elevation Labels	4	0	0
	irrgld	TextLabel	Text - Label	0	0	2
	irrgld	TextLandscape	Text - Landscape Labels	0	0	1
	irrgld	TextMajor	Text - Major	0	0	5
	irrgld	TextMinor	Text - Minor	0	0	0
	irrgld	TextMisc	Text - Miscellaneous	0	0	1
	irrgld	TextNotes	Text - Notes	4	0	1
	irrgld	TextProfLabel	Text - Profile, Horizontal and Vertical Axis Labels	0	0	2
	irrgld	TextProjLabel	Text - Begin and End Project label with leader lines	1	0	2
	irrgld	TextPtLabel	Point Labels	4	0	0

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
	irrgld	TextShtNo	Text - Sheet Number	0	0	2
	irrgld	TextSurveyLabel	Survey Text Labels	0	0	0
	irrgld	TextTables	Text - Keysheet Indexes and Table Data	4	0	2
	irrgld	TextTitle	Text - Title	0	0	3
	irrgld	TextXSElev	Text - Cross Section Elevations	2	0	1
	irrgld	XSCell	GEOPAK Cross Section Cell and Profile Cell	8	0	1
	irrgld	Viewport	Viewport (For AutoCAD Use)	3	0	0
	irrgld	Xreference_dp	Reference Files (For AutoCAD Use)	0	0	1
	irrgld	Xreference01_dp	Reference Files (For AutoCAD Use)	0	0	1
	irrgld	Xreference02_dp	Reference Files (For AutoCAD Use)	0	0	1
	irrgld	Xreference03_dp	Reference Files (For AutoCAD Use)	0	0	1
	irrgld	Xreference04_dp	Reference Files (For AutoCAD Use)	0	0	1
	irrgld	Xreference05_dp	Reference Files (For AutoCAD Use)	0	0	1
	irrgld	Xreference06_dp	Reference Files (For AutoCAD Use)	0	0	1
	irrgld	Xreference07_dp	Reference Files (For AutoCAD Use)	0	0	1
	irrgld	Xreference08_dp	Reference Files (For AutoCAD Use)	0	0	1
	irrgld	Xreference09_dp	Reference Files (For AutoCAD Use)	0	0	1
	irrgld	Xreference10_dp	Reference Files (For AutoCAD Use)	0	0	1

4.2.18 INTELLIGENT TRANSPORTATION SYSTEM - ITSSP

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
	itssp	ActivePointCell_dp	Active Point Cell	4	0	10
	itssp	AdhocPoint_dp	Adhoc Points Placed by SheetInfo	0	4	0
	itssp	BaselineSurvey	Baseline Survey	0	0	2
X	itssp	CCTV	CC TV Camera and Accessories	4	0	1
X	itssp	CCTV_ep	CC TV Camera and Accessories (Existing)	4	0	0
X	itssp	CCTVAer	CC TV Cable - Aerial	6	otv	1
X	itssp	CCTVBur	CC TV Cable - Buried	5	btv	1
	itssp	CCTVMisc	CC TV Service Box and Miscellaneous	6	0	0
	itssp	CLConst_dp	Center Line of Construction	0	0	2
	itssp	Cloud_dp	Construction Cloud	7	0	2
	itssp	COGO_dp	COGO Information	3	0	1
X	itssp	ConduitAG	Conduit – Above Ground	4	lite_cond4	1

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
X	itssp	ConduitBG	Conduit In Box Girder	5	lite_cond5	1
X	itssp	ConduitBG_ep	Conduit In Box Girder (Existing)	5	exlite_cond5	0
X	itssp	ConduitBM	Conduit – Bridge Mount	5	lite_cond5	1
X	itssp	ConduitC	Conduit Lead-in Cable	3	0	0
X	itssp	ConduitDB	Conduit – Directional Bore	2	lite_cond2	1
X	itssp	ConduitJ	Conduit Jacked Underpavement	1	lite_cond3	1
X	itssp	ConduitJ_ep	Conduit Jacked (Existing)	1	exlite_cond3	0
X	itssp	ConduitJB	Conduit – Jack & Bore Under Rail	3	lite_cond3	1
X	itssp	ConduitOT	Conduit – Open Trench	1	lite_cond1	1
X	itssp	ConduitSM	Conduit Surface Mounted	4	lite_cond4	1
X	itssp	ConduitSM_ep	Conduit Surface Mounted (Existing)	4	exlite_cond4	0
X	itssp	ConduitUG	Conduit Underground	3	lite_cond1	1
X	itssp	ConduitUG_ep	Conduit Underground (Existing)	3	exlite_cond1	0
X	itssp	ConduitUP	Conduit Underpavement	2	lite_cond2	1
X	itssp	ConduitUP_ep	Conduit Underpavement (Existing)	2	exlite_cond2	0
	itssp	ConstArea_dp	Construction Area Crosshatch	0	0	1
	itssp	ConstLimits	Construction Limits	3	LOC	2
	itssp	ConstLines	Construction Lines and References	1	0	0
X	itssp	Controller	Controller and Accessories	0	0	2
X	itssp	Controller_ep	Controller and Accessories (Existing)	0	2	1
X	itssp	ControllerAcess	Controller Accessories	0	0	1
X	itssp	ControllerB	Controller - Base Mounted	0	0	2
X	itssp	ControllerB_ep	Controller - Base Mounted (Existing)	0	2	1
X	itssp	ControllerP	Controller Pole Mount	0	0	2
X	itssp	ControllerP_ep	Controller Pole Mount (Existing)	0	2	1
X	itssp	CrossWalk1	Emphasis Crosswalk 6ft High	0	crosswalk1	4
X	itssp	CrossWalk2	Emphasis Crosswalk 10ft High	0	crosswalk2	4
	itssp	CurveData_dp	Curve & Coordinate Data Elements incl PC, PT, PI symbols	4	0	2
	itssp	CurveDataLabel_dp	Curve Data Labels PC,PI, PT	0	0	2
X	itssp	Delineator	Delineators (All Types)	4	0	1
X	itssp	Detector	Detector Cabinet, Button and Misc Assemblies	3	0	2
X	itssp	Detector_ep	Detector Cabinet, Button and Misc Assemblies (Existing)	3	2	1
X	itssp	DetectorVeh	Detector Vehicle Assemblies (All Types)	3	0	1
X	itssp	DetectorVeh_ep	Detector Vehicle Assemblies (All Types) (Existing)	3	2	0
	itssp	DimLines_dp	Dimension Lines, Corresponding Terminators, Equation Lines	0	0	1

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
X	itssp	DirArrowsPavt	Pavement Marking Directional Arrows	0	0	1
X	itssp	EaseLicLine	Easement License Agreement Line	5	6	0
X	itssp	ElectPS	Electrical Power Service Miscellaneous	3	0	1
X	itssp	ElectPSB	Electrical (Buried)	3	be	2
X	itssp	ElectPSO	Electrical Outlet	3	0	1
X	itssp	ElectServWire	Electrical Service Wire	3	0	2
X	itssp	Fiber01Blue	Fiber Optic Buffer Tube, Blue	25	0	2
X	itssp	Fiber01Blue_ep	Fiber Optic Buffer Tube, Blue (Existing)	25	2	1
X	itssp	Fiber02Orange	Fiber Optic Buffer Tube, Orange	30	0	2
X	itssp	Fiber02Orange_ep	Fiber Optic Buffer Tube, Orange (Existing)	30	2	1
X	itssp	Fiber03Green	Fiber Optic Buffer Tube, Green	154	0	2
X	itssp	Fiber03Green_ep	Fiber Optic Buffer Tube, Green (Existing)	154	2	1
X	itssp	Fiber04Brown	Fiber Optic Buffer Tube, Brown	150	0	2
X	itssp	Fiber04Brown_ep	Fiber Optic Buffer Tube, Brown (Existing)	150	2	1
X	itssp	Fiber05Slate	Fiber Optic Buffer Tube, Slate	152	0	2
X	itssp	Fiber05Slate_ep	Fiber Optic Buffer Tube, Slate (Existing)	152	2	1
X	itssp	Fiber06White	Fiber Optic Buffer Tube, White	152	0	2
X	itssp	Fiber06White_ep	Fiber Optic Buffer Tube, White (Existing)	152	2	1
X	itssp	Fiber07Red	Fiber Optic Buffer Tube, Red	27	0	2
X	itssp	Fiber07Red_ep	Fiber Optic Buffer Tube, Red (Existing)	27	2	1
X	itssp	Fiber08Black	Fiber Optic Buffer Tube, Black	0	0	2
X	itssp	Fiber08Black_ep	Fiber Optic Buffer Tube, Black (Existing)	0	2	1
X	itssp	Fiber09Yellow	Fiber Optic Buffer Tube, Yellow	28	0	2
X	itssp	Fiber09Yellow_ep	Fiber Optic Buffer Tube, Yellow (Existing)	28	2	1
X	itssp	Fiber10Purple	Fiber Optic Buffer Tube, Purple	157	0	2
X	itssp	Fiber10Purple_ep	Fiber Optic Buffer Tube, Purple (Existing)	157	2	1
X	itssp	Fiber11Rose	Fiber Optic Buffer Tube, Rose	12	0	2
X	itssp	Fiber11Rose_ep	Fiber Optic Buffer Tube, Rose (Existing)	12	2	1
X	itssp	Fiber12Aqua	Fiber Optic Buffer Tube, Aqua	55	0	2
X	itssp	Fiber12Aqua_ep	Fiber Optic Buffer Tube, Aqua (Existing)	55	2	1
X	itssp	FiberSheath	Fiber Optic Sheath	0	0	2
X	itssp	FiberSpliceCap	Fiber Optic Splice Cap	0	0	2
X	itssp	FiberStripe	Fiber Optic Buffer Tube, Stripe	0	0	2
X	itssp	FOCBur	Fiber Optics Cable (Buried)	6	bfo	1
X	itssp	Generator	Emergency Generator	0	0	2

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
X	itssp	Generator_ep	Emergency Generator (Existing)	0	2	1
	itssp	GridMaj_dp	Grid Lines Major in Profile and Cross Section	3	0	1
	itssp	GridMin_dp	Grid Lines Minor in Profile and Cross Section	0	0	0
	itssp	GridMinSub_dp	Grid Lines Minor Sub in Cross Section Sheets	20	0	0
	itssp	GSBWFill	GuidSign Black and White Fill Level for GuidSign Cells	0	0	1
	itssp	GSColorFill	GuidSign Color Fill Level for GuidSign Cells	2	0	1
	itssp	GSDims	GuidSign Dimensions	0	0	1
	itssp	GSOutline	GuidSign Outline Level for GuidSign Cells	0	0	2
	itssp	GSSign	GuidSign Panel and Tag	7	0	0
X	itssp	GuyWire	Guy Wire	3	0	0
X	itssp	HAR	Highway Advisory Radio Unit	3	0	2
X	itssp	HAR_ep	Highway Advisory Radio Unit (Existing)	3	2	1
X	itssp	HubEthernet	Ethernet Hub	1	0	1
X	itssp	HubWireless	Wireless Receiver and Transmitter	3	0	1
	itssp	ImageAttachment_dp	Image Attachmentst	0	0	0
X	itssp	Insulator	Insulator, Fiberglass	3	0	4
X	itssp	InterconCable	Cable Interconnect	1	intcon1	1
X	itssp	InterconCable_ep	Interconnect Cable (Existing)	1	intcon2	0
	itssp	ITSDetail00	ITS Details	0	0	0
	itssp	ITSDetail01	ITS Details	0	0	1
	itssp	ITSDetail02	ITS Details	0	0	2
	itssp	ITSDetail10	ITS Details	1	0	0
	itssp	ITSDetail11	ITS Details	1	0	1
	itssp	ITSDetail12	ITS Details	1	0	2
	itssp	ITSDetail20	ITS Details	2	0	0
	itssp	ITSDetail21	ITS Details	2	0	1
	itssp	ITSDetail22	ITS Details	2	0	2
	itssp	ITSDetail30	ITS Details	3	0	0
	itssp	ITSDetail31	ITS Details	3	0	1
	itssp	ITSDetail32	ITS Details	3	0	2
X	itssp	ITSEquip00	ITS Equipment Racks	0	0	0
X	itssp	ITSEquip01	ITS Equipment Racks	0	0	1
X	itssp	ITSEquip02	ITS Equipment Racks	0	0	2
X	itssp	JunctBoxA	Junction Boxes (Aerial)	3	0	1
X	itssp	JunctBoxA_ep	Junction Boxes (Aerial) (Existing)	3	1	0

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
X	itssp	Kiosk	Kiosk	2	0	1
	itssp	LaneDirArrow	Lane Directional Arrow	0	0	1
	itssp	LeaderLine_dp	Leader Line and terminator with Text	0	0	1
	itssp	LightingMisc	Lighting Miscellaneous Items	4	0	2
X	itssp	LightingSP	Lighting Service Points	0	0	1
X	itssp	LoadCenter	Load Center	2	0	1
X	itssp	LoadCenter_ep	Load Center (Existing)	2	5	0
	itssp	Logo_dp	Consultant Engineer of Record Logo	0	0	1
X	itssp	LoopLI	Loop Lead-In	3	0	1
X	itssp	LoopLI_ep	Loop Lead-In (Existing)	3	2	0
X	itssp	Loops	Loop Assembly (All Types)	2	0	2
X	itssp	Loops_ep	Loop Assembly (All Types) (Existing)	2	2	2
X	itssp	Luminaire	Luminaires (Decorative - All Types)	2	0	1
X	itssp	MessengerWire	Messenger Wire	3	0	1
X	itssp	MetalButtons	Metal Buttons	0	0	2
	itssp	Miscellaneous0	Undefined proposed item - co blue wt 0	1	0	0
	itssp	Miscellaneous1	Undefined proposed item - co blue wt 1	1	0	1
	itssp	Miscellaneous2	Undefined proposed item - co blue wt 2	1	0	2
	itssp	Miscellaneous3	Undefined proposed item - co green wt 0	2	0	0
	itssp	Miscellaneous4	Undefined proposed item - co green wt 1	2	0	1
	itssp	Miscellaneous5	Undefined proposed item - co green wt 2	2	0	2
	itssp	Miscellaneous6	Undefined proposed item - co red wt 0	3	0	0
	itssp	Miscellaneous7	Undefined proposed item - co red wt 1	3	0	1
	itssp	Miscellaneous8	Undefined proposed item - co red wt 2	3	0	2
	itssp	Miscellaneous9	Undefined proposed item - co red wt 3	3	0	3
	itssp	NonPlottingEle_dp	Non plotting items such as construction elements and type 66 elements	4	0	0
	itssp	NorthArw_dp	North Arrows	0	0	2
X	itssp	ObjectMarker	Object and Reflective Markers	3	0	1
X	itssp	OverheadSign	Overhead Sign Panels	0	0	2
X	itssp	OverheadSign_ep	Overhead Sign Panels (Existing)	0	3	1
X	itssp	OverheadStr	Mast Arm, Truss Assemblies, Signal Arms and Supports	0	0	2
X	itssp	OverheadStr_ep	Mast Arm, Truss Assemblies, Signal Arms and Supports (Existing)	0	3	1
	itssp	Pavemk_ep	Pavement Markings (all)	0	2	0
X	itssp	PavtMessage	Pavement Message (All types)	0	0	1
X	itssp	PavtMessage_ep	Pavement Message (Existing - All types)	0	2	0

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
	itssp	PayItem_dp	Pay Item Number Label Elements	4	0	2
X	itssp	PedDetector	Pedestrian Detector	0	0	2
X	itssp	Pedestal	Pedestal	1	0	1
X	itssp	Pedestal_ep	Pedestal (Existing)	1	2	1
X	itssp	PedHead	Pedestrian Head (All Types)	1	0	1
X	itssp	PedHead_ep	Pedestrian Head (All Types) (Existing)	0	2	1
X	itssp	PlotBorder_dp	Plot Border	3	0	0
X	itssp	PMCeramic	Pavement Markers Ceramic	0	0	1
	itssp	PMMisc	Pavement Marking Miscellaneous Items	0	0	2
X	itssp	PMStripe12B	Pavement Marking Traffic Stripe 12in Black	3	stripe12	4
X	itssp	PMStripe12W	Pavement Marking Traffic Stripe 12in White	0	stripe12	4
X	itssp	PMStripe12W(3-9)	Pavement Marking 3/9 Skip Traffic Stripe 12in White	0	stripe12	4
X	itssp	PMStripe12Y	Pavement Marking Traffic Stripe 12in Yellow	4	stripe12	4
X	itssp	PMStripe16B	Pavement Marking Traffic Stripe 16in Black	3	stripe16	5
X	itssp	PMStripe16W	Pavement Marking Traffic Stripe 16in White	0	stripe16	5
X	itssp	PMStripe16Y	Pavement Marking Traffic Stripe 16in Yellow	4	stripe16	5
X	itssp	PMStripe18B	Pavement Marking Traffic Stripe 18in Black	3	stripe18	6
X	itssp	PMStripe18W	Pavement Marking Traffic Stripe 18in White	0	stripe18	6
X	itssp	PMStripe18Y	Pavement Marking Traffic Stripe 18in Yellow	4	stripe18	6
X	itssp	PMStripe24W	Pavement Marking Traffic Stripe 24in White	0	stripe24	7
X	itssp	PMStripe24Y	Pavement Marking Traffic Stripe 24in Yellow	4	stripe24	7
X	itssp	PMStripe6B	Pavement Marking Traffic Stripe 6in Black	3	stripe06	2
X	itssp	PMStripe6B(10-30)	Pavement Marking 10/30 Skip Traffic Stripe 6in Black	3	stripe06	2
X	itssp	PMStripe6Bl	Pavement Marking Traffic Stripe 6in Blue	1	stripe06	2
X	itssp	PMStripe6DY	Pavement Marking Traffic Stripe 6in Double Yellow	4	dbl_line	2
X	itssp	PMStripe6W	Pavement Marking Traffic Stripe 6in White	0	stripe06	2
X	itssp	PMStripe6W(10-30)	Pavement Marking 10/30 Skip Traffic Stripe 6in White	0	stripe06	2
X	itssp	PMStripe6W(2-4)	Pavement Marking 2/4 Skip Traffic Stripe 6in White	0	stripe06	2
X	itssp	PMStripe6W(3-9)	Pavement Marking 3/9 Skip Traffic Stripe 6in White	0	stripe06	2
X	itssp	PMStripe6W(6-10)	Pavement Marking 6/10 Skip Traffic Stripe 6in White	0	stripe06	2
X	itssp	PMStripe6Y	Pavement Marking Traffic Stripe 6in Yellow	4	stripe06	2
X	itssp	PMStripe6Y(10-30)	Pavement Marking 10/30 Skip Traffic Stripe 6in Yellow	4	stripe06	2
X	itssp	PMStripe6Y(2-4)	Pavement Marking 2/4 Skip Traffic Stripe 6in Yellow	4	stripe06	2
X	itssp	PMStripe6Y(6-10)	Pavement Marking 6/10 Skip Traffic Stripe 6in Yellow	4	stripe06	2
X	itssp	PMStripe8B	Pavement Marking Traffic Stripe 8in Black	3	stripe06	3

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
X	itssp	PMStripe8W	Pavement Marking Traffic Stripe 8in White	0	stripe08	3
X	itssp	PMStripe8W(3-9)	Pavement Marking 3/9 Skip Traffic Stripe 8in White	0	stripe08	2
X	itssp	PMStripe8Y	Pavement Marking Traffic Stripe 8in Yellow	4	stripe08	3
X	itssp	PMStripeVibeW	Pavement Marking Auditory and Vibratory 6in White	0	Vibratory	2
X	itssp	PMStripeVibeY	Pavement Marking Auditory and Vibratory 6in Yellow	4	Vibratory	2
	itssp	PointLocator_ep	Point Locator Symbol	4	0	0
X	itssp	PoleConc	Concrete Strain Pole	0	0	2
X	itssp	PoleConc_ep	Concrete Strain Pole (Existing)	0	2	1
X	itssp	PoleFound	Pole Foundation	0	0	2
X	itssp	PoleLight	Light Pole	2	0	1
X	itssp	PoleLight_ep	Light Pole (Existing)	2	2	1
X	itssp	PoleLightHM	High Mast Light Pole	3	0	1
X	itssp	PoleLightHM_ep	High Mast Light Pole (Existing)	2	2	1
	itssp	PoleLightID	Light Pole Location / ID	4	0	1
X	itssp	PolePower	Power Pole w/ Transformer	3	0	2
X	itssp	PoleShared	Power Pole Electric (Above Ground) Shared w/ Transformer	3	0	2
X	itssp	PoleSteelStrain	Steel Strain Pole	0	0	2
X	itssp	PoleSteelStrain_ep	Steel Strain Pole (Existing)	0	2	1
X	itssp	PoleTel	Telephone Pole	6	0	2
X	itssp	PoleUtil	Utility Pole	0	0	2
X	itssp	PoleWoodStrain	Wood Strain Pole	0	0	2
X	itssp	PoleWoodStrain_ep	Wood Strain Pole (Existing)	0	2	1
X	itssp	PullBox	Pull Boxes (All Types)	3	0	1
	itssp	ReferencePt_dp	Survey and Construction Reference Point Details and Elements	4	0	2
X	itssp	ReflPaintWht	Reflective Paint - Island Nose (White)	0	0	3
X	itssp	ReflPaintYel	Reflective Paint - Island Nose (Yellow)	4	0	3
X	itssp	RPM_ep	Reflective Pavement Markers (Existing)	2	2	1
X	itssp	RPM1	Raised Pavement Markers, White	0	0	2
X	itssp	RPM2	Raised Pavement Markers, White - Red	3	0	2
X	itssp	RPM3	Raised Pavement Markers, Yellow	4	0	2
X	itssp	RPM4	Raised Pavement Markers, Yellow - Yellow	9	0	2
X	itssp	RPM5	Raised Pavement Markers, Yellow - Red	6	0	2
X	itssp	RPM6	Raised Pavement Markers, Blue	1	0	2
X	itssp	SawCuts	Saw Cuts	3	conduit1	0
	itssp	Scale_dp	Bar Scale, Scale Label Elements	0	0	2
	itssp	Scratch1_dp	A scratch level for temporary or informational items	4	0	0

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
	itssp	Scratch2_dp	A scratch level for temporary or informational items	5	0	0
	itssp	ScratchEle_dp	Level for Draft Elements, Temporary Elements, Etc. Do Not Plot	3	0	0
	itssp	ScratchEle2_dp	Level for Draft Elements, Temporary Elements, Etc. Do Not Plot	4	0	0
	itssp	SheetBorder_dp	Sheet Border	1	0	4
	itssp	SheetLines_dp	Sheet Lines	1	0	2
	itssp	SheetLinesMisc1_dp	Sheet Lines	1	0	0
	itssp	SheetLinesMisc2_dp	Sheet Lines	2	0	2
	itssp	SheetLinesMisc3_dp	Sheet Lines	3	0	2
	itssp	SheetLinesMisc4_dp	Sheet Lines	4	0	2
X	itssp	SignalCable	Signal Cable	3	signal_cable	1
X	itssp	SignalCableAccs	Signal Cable Accessories	0	0	2
X	itssp	SignalDetail	Signal Details	0	0	1
	itssp	SignalHead	Signal Head Section Details	2	0	1
X	itssp	SignalHead_ep	Signal Head Section Details (Existing)	2	2	0
	itssp	SignalMisc	Signal Miscellaneous Equipment	3	0	1
X	itssp	SignalSOP	S.O.P. Box and Movements	0	0	2
X	itssp	SignalSym	Signal Head Symbols	0	0	1
X	itssp	SignalSym_ep	Signal Head Symbols (Existing)	3	2	0
X	itssp	SignCantilever	Sign Symbol Cantilever	0	0	1
X	itssp	SignCantilever_ep	Sign Symbol Cantilever (Existing)	0	2	0
	itssp	SignDetail	Sign Details	0	0	2
	itssp	SignLettersAZ	Alphabet Cell Library Letter A-Z Numbers 0-9	0	0	0
	itssp	SignMisc	Miscellaneous Sign Symbols	1	0	2
	itssp	SignMisc_ep	Miscellaneous Sign Symbols (Existing)	1	1	1
X	itssp	SignPanel	Sign Panels - Regulatory	0	0	2
X	itssp	SignPanel_ep	Sign Panel Elements (Existing)	0	2	1
X	itssp	SignPanelBorder	Sign Panel Border on Sign Details	0	0	1
X	itssp	SignPanelC	Sign Panels - Civil	1	0	2
X	itssp	SignPanelDetRed	Sign Panel Details in Red	3	0	2
X	itssp	SignPanelG	Sign Panels - Guide	2	0	2
X	itssp	SignPanelI	Sign Panels - Special Interest	9	0	2
X	itssp	SignPanelT	Sign Panels - Construction	6	0	2
X	itssp	SignPanelW	Sign Panels - Warning	4	0	2
X	itssp	SignSpanwire	Span Wire Signing Assembly	2	0	1
X	itssp	SignSpanwire_ep	Span Wire Signing Assembly (Existing)	2	2	1

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
X	itssp	SignSpecial	Special Signs / Guide Signs	2	0	2
X	itssp	SignSupport	Ground Mounted Sign Support Symbol (All Types)	1	0	1
X	itssp	SignSymbol_px	Sign Structure and Foundation on Cross Sections	4	0	2
X	itssp	SignTruss	Sign Symbol Truss	3	0	1
X	itssp	SignTruss_ep	Sign Symbol Truss (Existing)	3	2	1
	itssp	SpecialDetails	Special Details	6	0	1
X	itssp	SpliceBox	Fiber Optic Splice Box	3	0	1
X	itssp	SpliceBox_ep	Fiber Optic Splice Box (Existing)	3	2	0
	itssp	StationTicL_dp	Station Tic Marks (Large) and Text	0	0	2
	itssp	StationTicS_dp	Station Tic Marks (Small) and Text	0	0	2
	itssp	SumBoxBorder_dp	Summary Boxes Borders	4	0	3
	itssp	SumBoxLines_dp	Summary Boxes Lines and Miscellaneous Items	4	0	1
	itssp	SumBoxLinesMin_dp	Summary Boxes Lines Minor Line and Miscellaneous Items	4	0	0
	itssp	TextBLStation	Text - B/L Station and Tics	0	0	2
	itssp	TextConstEle	Text - Construction Element	0	0	1
	itssp	TextCurveData	Text - Curve Data Note	0	0	2
	itssp	TextDetails	Text - Detail Notes	4	0	2
	itssp	TextElevLabel	Elevation Labels	4	0	0
	itssp	TextLabel	Text - Label	0	0	2
	itssp	TextLandscape	Text - Landscape Labels	0	0	1
	itssp	TextMajor	Text - Major	0	0	5
	itssp	TextMinor	Text - Minor	0	0	0
	itssp	TextMisc	Text - Miscellaneous	0	0	1
	itssp	TextNotes	Text - Notes	4	0	1
	itssp	TextProfLabel	Text - Profile, Horizontal and Vertical Axis Labels	0	0	2
	itssp	TextProjLabel	Text - Begin and End Project label with leader lines	1	0	2
	itssp	TextPtLabel	Point Labels	4	0	0
	itssp	TextShtNo	Text - Sheet Number	0	0	2
	itssp	TextSurveyLabel	Survey Text Labels	0	0	0
	itssp	TextTables	Text - Keysheet Indexes and Table Data	4	0	2
	itssp	TextTitle	Text - Title	0	0	3
	itssp	TextXSElev	Text - Cross Section Elevations	2	0	1
X	itssp	TMC	Traffic Management Center	1	0	1
X	itssp	TollReader	Electronic Toll Reader	3	0	1
X	itssp	TollReader_ep	Electronic Toll Reader (Existing)	3	2	0

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
	itssp	XSCell	GEOPAK Cross Section Cell and Profile Cell	8	0	1
	itssp	Viewport	Viewport (For AutoCAD Use)	3	0	0
	itssp	Xreference_dp	Reference Files (For AutoCAD Use)	0	0	1
	itssp	Xreference01_dp	Reference Files (For AutoCAD Use)	0	0	1
	itssp	Xreference02_dp	Reference Files (For AutoCAD Use)	0	0	1
	itssp	Xreference03_dp	Reference Files (For AutoCAD Use)	0	0	1
	itssp	Xreference04_dp	Reference Files (For AutoCAD Use)	0	0	1
	itssp	Xreference05_dp	Reference Files (For AutoCAD Use)	0	0	1
	itssp	Xreference06_dp	Reference Files (For AutoCAD Use)	0	0	1
	itssp	Xreference07_dp	Reference Files (For AutoCAD Use)	0	0	1
	itssp	Xreference08_dp	Reference Files (For AutoCAD Use)	0	0	1
	itssp	Xreference09_dp	Reference Files (For AutoCAD Use)	0	0	1
	itssp	Xreference10_dp	Reference Files (For AutoCAD Use)	0	0	1

4.2.19 KEY SHEETS - KEYSHT

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
	keysht	ActivePointCell_dp	Active Point Cell	4	0	10
	keysht	AdhocPoint_dp	Adhoc Points Placed by SheetInfo	0	4	0
	keysht	BaselineSurvey	Baseline Survey	0	0	2
X	keysht	BoxCulvert	Box Culvert	10	0	2
	keysht	CLConst_dp	Center Line of Construction	0	0	2
	keysht	ClipBorder_dp	CLIP Border	3	0	0
	keysht	ClipDrawingBound_dp	CLIP Drawing Boundary	3	3	0
	keysht	Cloud_dp	Construction Cloud	7	0	2
	keysht	COGO_dp	COGO Information	3	0	1
	keysht	ConstArea_dp	Construction Area Crosshatch	0	0	1
	keysht	ConstLimits	Construction Limits	3	LOC	2
	keysht	ConstLines	Construction Lines and References	1	0	0
	keysht	CurveData_dp	Curve & Coordinate Data Elements incl PC, PT, PI symbols	4	0	2
	keysht	CurveDataLabel_dp	Curve Data Labels PC,PI, PT	0	0	2
	keysht	DimLines_dp	Dimension Lines, Corresponding Terminators, Equation Lines	0	0	1
X	keysht	DrainStruct_pr	Drainage Structures (All Types)	10	0	2

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
X	keysht	EaseLicLine	Easement License Agreement Line	5	6	0
X	keysht	Endwall	Endwall (All Types)	10	0	2
X	keysht	FES	Flared End Sections	10	0	2
X	keysht	Flag	Orange Flag and / or Flagman	6	0	1
	keysht	FLMap1	Florida Map items - weight of 1	1	0	1
	keysht	FLMap2	Florida Map items - weight of 2	3	0	2
	keysht	FLMap3	Florida Map items - weight of 3	2	0	3
	keysht	FLMap4	Florida Map items - color 11 (Interstate)	11	0	3
	keysht	FLMap5	Florida Map items - style 7, wt. 5 (state line)	3	7	5
	keysht	FlowArrow_dp	Flow Arrow	10	0	2
X	keysht	GovTwpRgeLine_ep	Township / Range Lines	10	TWPRGE	2
	keysht	GradeLine_er	Grade Line Profile (Existing)	2	2	1
	keysht	GradeLine_pr	Grade Line Profile	5	0	2
	keysht	GradeLineCtr_dp	Grade Line Profile Center (shown in plan view)	5	0	0
	keysht	GradeLineCtr_pr	Grade Line Profile Center	5	0	2
	keysht	GradeLineLt_dp	Grade Line Profile Left (shown in plan view)	1	0	0
	keysht	GradeLineLt_er	Grade Line Profile Left (Existing)	1	2	1
	keysht	GradeLineLt_pr	Grade Line Profile Left	1	0	2
	keysht	GradeLineRt_dp	Grade Line Profile Right (shown in plan view)	4	0	0
	keysht	GradeLineRt_er	Grade Line Profile Right (Existing)	4	2	1
	keysht	GradeLineRt_pr	Grade Line Profile Right	4	0	2
	keysht	GradeSecPat	Grade Section Patterns	0	0	0
	keysht	GridMaj_dp	Grid Lines Major in Profile and Cross Section	3	0	1
	keysht	GridMin_dp	Grid Lines Minor in Profile and Cross Section	0	0	0
	keysht	GridMinSub_dp	Grid Lines Minor Sub in Cross Section Sheets	20	0	0
	keysht	ImageAttachment_dp	Image Attachmentst	0	0	0
X	keysht	InletBottomJ	Inlet Bottom Type J	10	0	1
X	keysht	InletBottomP	Inlet Bottom Type P	10	0	1
X	keysht	InletClosedFlume	Closed Flume Inlet	10	0	2
X	keysht	InletCurb	Curb Inlet (All Types)	10	0	2
X	keysht	InletDBI	Ditch Bottom Inlet (All Types)	10	0	2
X	keysht	InletGutter	Gutter Inlet (All Types)	10	0	2
X	keysht	InletMedian	Median Barrier Inlet	10	0	2
	keysht	KeyShtMisc	Key sheet Miscellaneous Items	0	0	2
	keysht	LaneDirArrow	Lane Directional Arrow	0	0	1

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
	keysht	LeaderLine_dp	Leader Line and terminator with Text	0	0	1
	keysht	Logo_dp	Consultant Engineer of Record Logo	0	0	1
X	keysht	Manhole	Manhole (Drainage and Unknown)	10	0	2
	keysht	MapOutline_dp	Outline for key maps	0	0	5
	keysht	MatchLines_dp	Match Lines with Text, Arrows for Station Notations	1	0	2
X	keysht	MES	Mitered End Section	10	0	2
	keysht	Miscellaneous0	Undefined proposed item - co blue wt 0	1	0	0
	keysht	Miscellaneous1	Undefined proposed item - co blue wt 1	1	0	1
	keysht	Miscellaneous2	Undefined proposed item - co blue wt 2	1	0	2
	keysht	Miscellaneous3	Undefined proposed item - co green wt 0	2	0	0
	keysht	Miscellaneous4	Undefined proposed item - co green wt 1	2	0	1
	keysht	Miscellaneous5	Undefined proposed item - co green wt 2	2	0	2
	keysht	Miscellaneous6	Undefined proposed item - co red wt 0	3	0	0
	keysht	Miscellaneous7	Undefined proposed item - co red wt 1	3	0	1
	keysht	Miscellaneous8	Undefined proposed item - co red wt 2	3	0	2
	keysht	Miscellaneous9	Undefined proposed item - co red wt 3	3	0	3
	keysht	NonPlottingEle_dp	Non plotting items such as construction elements and type 66 elements	4	0	0
	keysht	NorthArw_dp	North Arrows	0	0	2
	keysht	PatternLines1_dp	Pattern Lines for Cross Sections	3	0	2
	keysht	PatternLines2_dp	Pattern Lines for XSections alternate for side streets, critical xsections or drainage structures	4	0	2
	keysht	PatternLines3_dp	Pattern Lines for XSections alternate for side streets, critical xsections or drainage structures	5	0	2
	keysht	PayItem_dp	Pay Item Number Label Elements	4	0	2
X	keysht	PlotBorder_dp	Plot Border	3	0	0
	keysht	PointLocator_ep	Point Locator Symbol	4	0	0
	keysht	RailroadDetails	Railroad Crossing Details	3	0	2
	keysht	RailroadXing	Railroad Crossing Elements	11	0	0
	keysht	ReferencePt_dp	Survey and Construction Reference Point Details and Elements	4	0	2
	keysht	RoadwayMisc	Roadway Miscellaneous Items	4	0	2
	keysht	Scale_dp	Bar Scale, Scale Label Elements	0	0	2
	keysht	Scratch1_dp	A scratch level for temporary or informational items	4	0	0
	keysht	Scratch2_dp	A scratch level for temporary or informational items	5	0	0
	keysht	ScratchEle_dp	Level for Draft Elements, Temporary Elements, Etc. Do Not Plot	3	0	0
	keysht	ScratchEle2_dp	Level for Draft Elements, Temporary Elements, Etc. Do Not Plot	4	0	0
	keysht	SheetBorder_dp	Sheet Border	1	0	4

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
	keysht	SheetLines_dp	Sheet Lines	1	0	2
	keysht	SheetLinesMisc1_dp	Sheet Lines	1	0	0
	keysht	SheetLinesMisc2_dp	Sheet Lines	2	0	2
	keysht	SheetLinesMisc3_dp	Sheet Lines	3	0	2
	keysht	SheetLinesMisc4_dp	Sheet Lines	4	0	2
	keysht	StationTicL_dp	Station Tic Marks (Large) and Text	0	0	2
	keysht	StationTicS_dp	Station Tic Marks (Small) and Text	0	0	2
	keysht	SumBoxBorder_dp	Summary Boxes Borders	4	0	3
	keysht	SumBoxLines_dp	Summary Boxes Lines and Miscellaneous Items	4	0	1
	keysht	SumBoxLinesMin_dp	Summary Boxes Lines Minor Line and Miscellaneous Items	4	0	0
	keysht	TextBLStation	Text - B/L Station and Tics	0	0	2
	keysht	TextConstEle	Text - Construction Element	0	0	1
	keysht	TextCurveData	Text - Curve Data Note	0	0	2
	keysht	TextDetails	Text - Detail Notes	4	0	2
	keysht	TextElevLabel	Elevation Labels	4	0	0
	keysht	TextLabel	Text - Label	0	0	2
	keysht	TextLandscape	Text - Landscape Labels	0	0	1
	keysht	TextMajor	Text - Major	0	0	5
	keysht	TextMinor	Text - Minor	0	0	0
	keysht	TextMisc	Text - Miscellaneous	0	0	1
	keysht	TextNotes	Text - Notes	4	0	1
	keysht	TextProfLabel	Text - Profile, Horizontal and Vertical Axis Labels	0	0	2
	keysht	TextProjLabel	Text - Begin and End Project label with leader lines	1	0	2
	keysht	TextPtLabel	Point Labels	4	0	0
	keysht	TextShtNo	Text - Sheet Number	0	0	2
	keysht	TextSurveyLabel	Survey Text Labels	0	0	0
	keysht	TextTables	Text - Keysheet Indexes and Table Data	4	0	2
	keysht	TextTitle	Text - Title	0	0	3
	keysht	TextXSElev	Text - Cross Section Elevations	2	0	1
	keysht	XSCell	GEOPAK Cross Section Cell and Profile Cell	8	0	1
	keysht	Viewport	Viewport (For AutoCAD Use)	3	0	0
	keysht	Xreference_dp	Reference Files (For AutoCAD Use)	0	0	1
	keysht	Xreference01_dp	Reference Files (For AutoCAD Use)	0	0	1
	keysht	Xreference02_dp	Reference Files (For AutoCAD Use)	0	0	1
	keysht	Xreference03_dp	Reference Files (For AutoCAD Use)	0	0	1

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
	keysht	Xreference04_dp	Reference Files (For AutoCAD Use)	0	0	1
	keysht	Xreference05_dp	Reference Files (For AutoCAD Use)	0	0	1
	keysht	Xreference06_dp	Reference Files (For AutoCAD Use)	0	0	1
	keysht	Xreference07_dp	Reference Files (For AutoCAD Use)	0	0	1
	keysht	Xreference08_dp	Reference Files (For AutoCAD Use)	0	0	1
	keysht	Xreference09_dp	Reference Files (For AutoCAD Use)	0	0	1
	keysht	Xreference10_dp	Reference Files (For AutoCAD Use)	0	0	1

4.2.20 MAST ARM DETAILS - MRARSP

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
	msarsp	ActivePointCell_dp	Active Point Cell	4	0	10
	msarsp	AdhocPoint_dp	Adhoc Points Placed by SheetInfo	0	4	0
	msarsp	COGO_dp	COGO Information	3	0	1
X	msarsp	ConduitAG	Conduit – Above Ground	4	lite_cond4	1
X	msarsp	ConduitBG	Conduit In Box Girder	5	lite_cond5	1
X	msarsp	ConduitBG_ep	Conduit In Box Girder (Existing)	5	exlite_cond5	0
X	msarsp	ConduitBM	Conduit – Bridge Mount	5	lite_cond5	1
X	msarsp	ConduitC	Conduit Lead-in Cable	3	0	0
X	msarsp	ConduitDB	Conduit – Directional Bore	2	lite_cond2	1
X	msarsp	ConduitJ	Conduit Jacked Underpavement	1	lite_cond3	1
X	msarsp	ConduitJ_ep	Conduit Jacked (Existing)	1	exlite_cond3	0
X	msarsp	ConduitJB	Conduit – Jack & Bore Under Rail	3	lite_cond3	1
X	msarsp	ConduitOT	Conduit – Open Trench	1	lite_cond1	1
X	msarsp	ConduitSM	Conduit Surface Mounted	4	lite_cond4	1
X	msarsp	ConduitSM_ep	Conduit Surface Mounted (Existing)	4	exlite_cond4	0
X	msarsp	ConduitUG	Conduit Underground	3	lite_cond1	1
X	msarsp	ConduitUG_ep	Conduit Underground (Existing)	3	exlite_cond1	0
X	msarsp	ConduitUP	Conduit Underpavement	2	lite_cond2	1
X	msarsp	ConduitUP_ep	Conduit Underpavement (Existing)	2	exlite_cond2	0
X	msarsp	Controller	Controller and Accessories	0	0	2
X	msarsp	Controller_ep	Controller and Accessories (Existing)	0	2	1

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
X	msarsp	ControllerAcess	Controller Accessories	0	0	1
X	msarsp	ControllerB	Controller - Base Mounted	0	0	2
X	msarsp	ControllerB_ep	Controller - Base Mounted (Existing)	0	2	1
X	msarsp	ControllerP	Controller Pole Mount	0	0	2
X	msarsp	ControllerP_ep	Controller Pole Mount (Existing)	0	2	1
X	msarsp	Detector	Detector Cabinet, Button and Misc Assemblies	3	0	2
X	msarsp	DetectorVeh	Detector Vehicle Assemblies (All Types)	3	0	1
	msarsp	DimLines_dp	Dimension Lines, Corresponding Terminators, Equation Lines	0	0	1
X	msarsp	EaseLicLine	Easement License Agreement Line	5	6	0
X	msarsp	ElectPS	Electrical Power Service Miscellaneous	3	0	1
X	msarsp	ElectPSB	Electrical (Buried)	3	be	2
X	msarsp	ElectPSO	Electrical Outlet	3	0	1
X	msarsp	ElectServWire	Electrical Service Wire	3	0	2
X	msarsp	FOCBur	Fiber Optics Cable (Buried)	6	bfo	1
X	msarsp	Generator	Emergency Generator	0	0	2
	msarsp	GridMaj_dp	Grid Lines Major in Profile and Cross Section	3	0	1
	msarsp	GridMin_dp	Grid Lines Minor in Profile and Cross Section	0	0	0
	msarsp	GridMinSub_dp	Grid Lines Minor Sub in Cross Section Sheets	20	0	0
X	msarsp	GuyWire	Guy Wire	3	0	0
	mrarsp	ImageAttachment_dp	Image Attachmentst	0	0	0
X	msarsp	Insulator	Insulator, Fiberglass	3	0	4
X	msarsp	InterconCable	Cable Interconnect	1	intcon1	1
X	msarsp	InterconCable_ep	Interconnect Cable (Existing)	1	intcon2	0
X	msarsp	JunctBoxA	Junction Boxes (Aerial)	3	0	1
X	msarsp	JunctBoxA_ep	Junction Boxes (Aerial) (Existing)	3	1	0
	msarsp	LeaderLine_dp	Leader Line and terminator with Text	0	0	1
X	msarsp	LoadCenter	Load Center	2	0	1
X	msarsp	LoadCenter_ep	Load Center (Existing)	2	5	0
X	msarsp	LoopLI	Loop Lead-In	3	0	1
X	msarsp	LoopLI_ep	Loop Lead-In (Existing)	3	2	0
X	msarsp	Loops	Loop Assembly (All Types)	2	0	2
X	msarsp	Loops_ep	Loop Assembly (All Types) (Existing)	2	2	2
X	msarsp	MessengerWire	Messenger Wire	3	0	1
	msarsp	Miscellaneous0	Undefined proposed item - co blue wt 0	1	0	0
	msarsp	Miscellaneous1	Undefined proposed item - co blue wt 1	1	0	1

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
	msarsp	Miscellaneous2	Undefined proposed item - co blue wt 2	1	0	2
	msarsp	Miscellaneous3	Undefined proposed item - co green wt 0	2	0	0
	msarsp	Miscellaneous4	Undefined proposed item - co green wt 1	2	0	1
	msarsp	Miscellaneous5	Undefined proposed item - co green wt 2	2	0	2
	msarsp	Miscellaneous6	Undefined proposed item - co red wt 0	3	0	0
	msarsp	Miscellaneous7	Undefined proposed item - co red wt 1	3	0	1
	msarsp	Miscellaneous8	Undefined proposed item - co red wt 2	3	0	2
	msarsp	Miscellaneous9	Undefined proposed item - co red wt 3	3	0	3
	msarsp	NonPlottingEle_dp	Non plotting items (construction elements and type 66 elements)	4	0	0
	msarsp	NorthArw_dp	North Arrows	0	0	2
X	msarsp	ObjectMarker	Object and Reflective Markers	3	0	1
X	msarsp	OverheadSign	Overhead Sign Panels	0	0	2
X	msarsp	OverheadSign_ep	Overhead Sign Panels (Existing)	0	3	1
X	msarsp	OverheadStr	Mast Arm, Truss Assemblies, Signal Arms and Supports	0	0	2
X	msarsp	OverheadStr_ep	Mast Arm, Truss Assemblies, Signal Arms and Supports (Existing)	0	3	1
	msarsp	PayItem_dp	Pay Item Number Label Elements	4	0	2
X	msarsp	PedDetector	Pedestrian Detector	0	0	2
X	msarsp	Pedestal	Pedestal	1	0	1
X	msarsp	Pedestal_ep	Pedestal (Existing)	1	2	1
X	msarsp	PedHead	Pedestrian Head (All Types)	1	0	1
X	msarsp	PedHead_ep	Pedestrian Head (All Types) (Existing)	0	2	1
X	msarsp	PlotBorder_dp	Plot Border	3	0	0
	msarsp	PointLocator_ep	Point Locator Symbol	4	0	0
X	msarsp	PoleConc	Concrete Strain Pole	0	0	2
X	msarsp	PoleConc_ep	Concrete Strain Pole (Existing)	0	2	1
X	msarsp	PoleFound	Pole Foundation	0	0	2
X	msarsp	PoleLight	Light Pole	2	0	1
X	msarsp	PoleLight_ep	Light Pole (Existing)	2	2	1
X	msarsp	PoleLightHM	High Mast Light Pole	3	0	1
X	msarsp	PoleLightHM_ep	High Mast Light Pole (Existing)	2	2	1
	msarsp	PoleLightID	Light Pole Location / ID	4	0	1
X	msarsp	PolePower	Power Pole w/ Transformer	3	0	2
X	msarsp	PoleShared	Power Pole Electric (Above Ground) Shared w/ Transformer	3	0	2
X	msarsp	PoleSteelStrain	Steel Strain Pole	0	0	2
X	msarsp	PoleSteelStrain_ep	Steel Strain Pole (Existing)	0	2	1

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
X	msarsp	PoleTel	Telephone Pole	6	0	2
X	msarsp	PoleUtil	Utility Pole	0	0	2
X	msarsp	PoleWoodStrain	Wood Strain Pole	0	0	2
X	msarsp	PoleWoodStrain_ep	Wood Strain Pole (Existing)	0	2	1
X	msarsp	PullBox	Pull Boxes (All Types)	3	0	1
	msarsp	ReferencePt_dp	Survey and Construction Reference Point Details and Elements	4	0	2
X	msarsp	SawCuts	Saw Cuts	3	conduit1	0
	msarsp	Scale_dp	Bar Scale, Scale Label Elements	0	0	2
	msarsp	Scratch1_dp	A scratch level for temporary or informational items	4	0	0
	msarsp	Scratch2_dp	A scratch level for temporary or informational items	5	0	0
	msarsp	ScratchEle_dp	Level for Draft Elements, Temporary Elements, Etc. Do Not Plot	3	0	0
	msarsp	ScratchEle2_dp	Level for Draft Elements, Temporary Elements, Etc. Do Not Plot	4	0	0
	msarsp	SheetBorder_dp	Sheet Border	1	0	4
	msarsp	SheetLines_dp	Sheet Lines	1	0	2
	msarsp	SheetLinesMisc1_dp	Sheet Lines	1	0	0
	msarsp	SheetLinesMisc2_dp	Sheet Lines	2	0	2
	msarsp	SheetLinesMisc3_dp	Sheet Lines	3	0	2
	msarsp	SheetLinesMisc4_dp	Sheet Lines	4	0	2
X	msarsp	SignalCable	Signal Cable	3	signal_cable	1
X	msarsp	SignalCableAccs	Signal Cable Accessories	0	0	2
X	msarsp	SignalDetail	Signal Details	0	0	1
	msarsp	SignalHead	Signal Head Section Details	2	0	1
X	msarsp	SignalHead_ep	Signal Head Section Details (Existing)	2	2	0
	msarsp	SignalMisc	Signal Miscellaneous Equipment	3	0	1
X	msarsp	SignalSOP	S.O.P. Box and Movements	0	0	2
X	msarsp	SignalSym	Signal Head Symbols	0	0	1
X	msarsp	SignalSym_ep	Signal Head Symbols (Existing)	3	2	0
X	msarsp	SignCantilever	Sign Symbol Cantilever	0	0	1
X	msarsp	SignCantilever_ep	Sign Symbol Cantilever (Existing)	0	2	0
	msarsp	SignDetail	Sign Details	0	0	2
	msarsp	SignLettersAZ	Alphabet Cell Library Letter A-Z Numbers 0-9	0	0	0
	msarsp	SignMisc	Miscellaneous Sign Symbols	1	0	2
	msarsp	SignMisc_ep	Miscellaneous Sign Symbols (Existing)	1	1	1
X	msarsp	SignPanel	Sign Panels - Regulatory	0	0	2
X	msarsp	SignPanel_ep	Sign Panel Elements (Existing)	0	2	1

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
X	msarsp	SignPanelBorder	Sign Panel Border on Sign Details	0	0	1
X	msarsp	SignSpanwire	Span Wire Signing Assembly	2	0	1
X	msarsp	SignSpanwire_ep	Span Wire Signing Assembly (Existing)	2	2	1
X	msarsp	SignSpecial	Special Signs / Guide Signs	2	0	2
X	msarsp	SignSupport	Ground Mounted Sign Support Symbol (All Types)	1	0	1
X	msarsp	SignSymbol_px	Sign Structure and Foundation on Cross Sections	4	0	2
X	msarsp	SignTruss	Sign Symbol Truss	3	0	1
X	msarsp	SignTruss_ep	Sign Symbol Truss (Existing)	3	2	1
	msarsp	SpecialDetails	Special Details	6	0	1
	msarsp	SumBoxBorder_dp	Summary Boxes Borders	4	0	3
	msarsp	SumBoxLines_dp	Summary Boxes Lines and Miscellaneous Items	4	0	1
	msarsp	SumBoxLinesMin_dp	Summary Boxes Lines Minor Line and Miscellaneous Items	4	0	0
	msarsp	TextBLStation	Text - B/L Station and Tics	0	0	2
	msarsp	TextConstEle	Text - Construction Element	0	0	1
	msarsp	TextCurveData	Text - Curve Data Note	0	0	2
	msarsp	TextDetails	Text - Detail Notes	4	0	2
	msarsp	TextElevLabel	Elevation Labels	4	0	0
	msarsp	TextLabel	Text - Label	0	0	2
	msarsp	TextLandscape	Text - Landscape Labels	0	0	1
	msarsp	TextMajor	Text - Major	0	0	5
	msarsp	TextMinor	Text - Minor	0	0	0
	msarsp	TextMisc	Text - Miscellaneous	0	0	1
	msarsp	TextNotes	Text - Notes	4	0	1
	msarsp	TextProfLabel	Text - Profile, Horizontal and Vertical Axis Labels	0	0	2
	msarsp	TextProjLabel	Text - Begin and End Project label with leader lines	1	0	2
	msarsp	TextPtLabel	Point Labels	4	0	0
	msarsp	TextShtNo	Text - Sheet Number	0	0	2
	msarsp	TextSurveyLabel	Survey Text Labels	0	0	0
	msarsp	TextTables	Text - Keysheet Indexes and Table Data	4	0	2
	msarsp	TextTitle	Text - Title	0	0	3
	msarsp	TextXSElev	Text - Cross Section Elevations	2	0	1
	msarsp	XSCell	GEOPAK Cross Section Cell and Profile Cell	8	0	1
	msarsp	Viewport	Viewport (For AutoCAD Use)	3	0	0
	msarsp	Xreference_dp	Reference Files (For AutoCAD Use)	0	0	1
	msarsp	Xreference01_dp	Reference Files (For AutoCAD Use)	0	0	1

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
	msarsp	Xreference02_dp	Reference Files (For AutoCAD Use)	0	0	1
	msarsp	Xreference03_dp	Reference Files (For AutoCAD Use)	0	0	1
	msarsp	Xreference04_dp	Reference Files (For AutoCAD Use)	0	0	1
	msarsp	Xreference05_dp	Reference Files (For AutoCAD Use)	0	0	1
	msarsp	Xreference06_dp	Reference Files (For AutoCAD Use)	0	0	1
	msarsp	Xreference07_dp	Reference Files (For AutoCAD Use)	0	0	1
	msarsp	Xreference08_dp	Reference Files (For AutoCAD Use)	0	0	1
	msarsp	Xreference09_dp	Reference Files (For AutoCAD Use)	0	0	1
	msarsp	Xreference10_dp	Reference Files (For AutoCAD Use)	0	0	1

4.2.21 ALL LEVELS AND SYMBOLOGY ACCEPTED - OPEN

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
	open		<< All Levels and Symbology Accepted >>			

4.2.22 POND CROSS SECTION - PDXSRD

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
	pdxsrd	ActivePointCell_dp	Active Point Cell	4	0	10
	pdxsrd	AdhocPoint_dp	Adhoc Points Placed by SheetInfo	0	4	0
X	pdxsrd	AsphaltConc	Asphaltic Concrete Quantity Shapes	6	0	3
X	pdxsrd	AsphaltMilling_px	Asphalt Milling Lines on Cross Sections	7	0	2
X	pdxsrd	AsphaltMisc_px	Miscellaneous Pavement on Cross Sections	1	0	2
X	pdxsrd	BarrierWall_ex	Barrier Wall for Cross Section (Existing)	6	3	1
X	pdxsrd	BarrierWall_px	Barrier Wall for Cross Section	6	0	2
X	pdxsrd	Base_ex	Base Material for Cross Sections (All Types) (Existing)	3	3	1
X	pdxsrd	Base_px	Base Material for Cross Sections (All Types)	3	0	2
	pdxsrd	BaselineSurvey	Baseline Survey	0	0	2
X	pdxsrd	Berm_px	Berm (Top, Front, or Back) for Cross Sections	10	0	2
X	pdxsrd	CandG_ex	Curb and Gutter for Cross Sections (All Types) (Existing)	4	2	1

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
X	pdxsrd	CandG_px	Curb and Gutter for Cross Sections (All Types)	4	0	2
X	pdxsrd	CandGBase_px	Curb and Gutter Base on Cross Sections	3	0	1
X	pdxsrd	CATVBur_ex	Cable TV and Miscellaneous on Cross Sections (Existing)	6	2	1
X	pdxsrd	CATVBur_px	Cable TV and Miscellaneous on Cross Sections	6	0	1
	pdxsrd	CLConst_dp	Center Line of Construction	0	0	2
	pdxsrd	Cloud_dp	Construction Cloud	7	0	2
	pdxsrd	COGO_dp	COGO Information	3	0	1
	pdxsrd	Concrete_px	Concrete Boundary Lines on Cross Sections	0	0	2
X	pdxsrd	Conduit_ex	Conduit and Encasements on Cross Sections (Existing)	3	2	1
X	pdxsrd	Conduit_px	Conduit and Encasements on Cross Sections	3	0	1
	pdxsrd	ConstArea_dp	Construction Area Crosshatch	0	0	1
	pdxsrd	ConstLimits	Construction Limits	3	LOC	2
	pdxsrd	ConstLines	Construction Lines and References	1	0	0
	pdxsrd	CurveData_dp	Curve & Coordinate Data Elements incl PC, PT, PI symbols	4	0	2
	pdxsrd	CurveDataLabel_dp	Curve Data Labels PC,PI, PT	0	0	2
	pdxsrd	DimLines_dp	Dimension Lines, Corresponding Terminators, Equation Lines	0	0	1
X	pdxsrd	Ditch_px	Ditch Top for Cross Sections	7	0	2
X	pdxsrd	DitchBot_px	Ditch Bottom for Cross Sections	10	0	2
X	pdxsrd	DitchPavt_px	Ditch Pavement for Cross Sections	3	0	3
	pdxsrd	DrainAlert_px	Alert Symbology for Structural Elements on Cross Sections	3	0	2
	pdxsrd	DrainMisc_ex	All types of miscellaneous drainage elements (Existing)	10	3	1
X	pdxsrd	DrainStruct_ex	All Drainage Structures for Cross Sections (Existing)	10	3	1
X	pdxsrd	DrainStruct_px	Misc Drainage Structures and Elements for XSections	10	0	2
X	pdxsrd	Driveway_ex	Driveway Lines on Cross Sections - Existing	7	1	2
X	pdxsrd	Driveway_px	Driveway Lines on Cross Sections	7	0	2
X	pdxsrd	DrivewayBase_px	Proposed Driveway Subgrade	3	0	2
	pdxsrd	Earthwork1_px	Earthwork (color 0)	0	0	1
	pdxsrd	Earthwork2_px	Earthwork (color 1)	1	0	1
	pdxsrd	Earthwork3_px	Earthwork (color 2)	2	0	1
	pdxsrd	Earthwork4_px	Earthwork (color 3)	3	0	1
	pdxsrd	Earthwork5_px	Earthwork (color 4)	4	0	1
X	pdxsrd	EaseLicLine	Easement License Agreement Line	5	6	0
X	pdxsrd	EaseLine_ep	Easement Lines (Existing)	1	PESMT	1
X	pdxsrd	EasePerpLine_px	Easement Lines Perpetual on Cross Sections	4	PESMT	1
X	pdxsrd	EaseTempLine_px	Easement Lines Temporary on Cross Sections	6	TEMPE	0

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
X	pdxsrd	Endwall_px	Endwall for Cross Sections	10	0	2
	pdxsrd	ExcavationLimits_dp	Excavation Limits on Cross Sections	0	0	1
	pdxsrd	Fence_ex	Fence Lines on Cross Sections (Existing)	6	3	1
X	pdxsrd	Fence_px	Fence Lines on Cross Sections	6	Fence1	2
X	pdxsrd	FES_px	Flared End Sections for Cross Sections	10	0	2
	pdxsrd	FlowArrow_dp	Flow Arrow	10	0	2
X	pdxsrd	FOCBur_ex	Fiber Optics Cable (Buried) for XSections (Existing)	6	2	1
X	pdxsrd	FOCBur_px	Fiber Optics Cable (Buried) for XSections	6	0	1
X	pdxsrd	Gas_ex	Gas Pipe and Fittings, Misc for Xsections (Existing)	4	2	1
X	pdxsrd	Gas_px	Gas Pipe and Fittings, Misc for Xsections	4	0	1
	pdxsrd	GeotechFillPatt1	Geotechnical Fill Pattern - (earth, wood, muck, concrete, rock, riprap) as defined in project	3	0	0
	pdxsrd	GeotechFillPatt1_px	Geotechnical Fill Pattern - (earth, wood, muck, concrete, rock, riprap) as defined in project	3	0	0
	pdxsrd	GeotechFillPatt2	Geotechnical Fill Pattern - clay, sand	0	1	0
	pdxsrd	GeotechFillPatt2_px	Geotechnical Fill Pattern - clay, sand	0	1	0
	pdxsrd	GeotechFillPatt3	Geotechnical Fill Pattern - shell	3	1	0
	pdxsrd	GeotechFillPatt3_px	Geotechnical Fill Pattern - shell	3	1	0
	pdxsrd	GeotechFillPatt4	Geotechnical Fill Pattern - sand	4	0	0
	pdxsrd	GeotechFillPatt4_px	Geotechnical Fill Pattern - sand	4	0	0
	pdxsrd	GeotechFillPatt5	Geotechnical Fill Pattern - coquina	1	0	1
	pdxsrd	GeotechFillPatt5_px	Geotechnical Fill Pattern - coquina	1	0	1
	pdxsrd	GeotechFillPatt6	Geotechnical Fill Pattern - limestone	2	0	0
	pdxsrd	GeotechFillPatt6_px	Geotechnical Fill Pattern - limestone	2	0	0
	pdxsrd	GeotechFillPatt7	Geotechnical Fill Pattern - gravel	6	0	0
	pdxsrd	GeotechFillPatt7_px	Geotechnical Fill Pattern - gravel	6	0	0
	pdxsrd	GeotechFillPatt8	Geotechnical Fill Pattern - silt	0	0	1
	pdxsrd	GeotechFillPatt8_px	Geotechnical Fill Pattern - silt	0	0	1
	pdxsrd	GeotechMisc	Miscellaneous Geotechnical Elements	0	0	1
	pdxsrd	GPKDrBack_dp	Back Point on Drainage Cells	2	2	2
	pdxsrd	GPKDrBottom_dp	Bottom Point on Drainage Cells	3	3	2
	pdxsrd	GPKDrCellIns_dp	Cell Insertion Point on Drainage Cells	4	4	2
	pdxsrd	GPKDrCentroid_dp	Point on Centroid for Drainage	7	7	2
	pdxsrd	GPKDrElv	Location point for drainage cells	5	5	2
	pdxsrd	GPKDrFront_dp	Front Point on Drainage Cells	1	1	2
	pdxsrd	GPKDrPipe_dp	Point on Drainage Pipe	6	6	2
	pdxsrd	GPKDrPipeCir_dp	Point on Pipe Circular	6	6	0

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
X	pdxsrd	GravityWall_px	Gravity Wall for Cross Sections	11	0	2
X	pdxsrd	GravWallBase_px	Proposed Gravity Wall Subgrade	3	0	2
	pdxsrd	GridMaj_dp	Grid Lines Major in Profile and Cross Section	3	0	1
	pdxsrd	GridMin_dp	Grid Lines Minor in Profile and Cross Section	0	0	0
	pdxsrd	GridMinG_dp	Grid Lines Minor Sub 2 in Cross Section Sheets	20	0	0
	pdxsrd	GridMinSub_dp	Grid Lines Minor Sub in Cross Section Sheets	20	0	0
X	pdxsrd	Guardrail_ex	Guardrail Lines on Cross Sections - Existing	0	1	2
X	pdxsrd	Guardrail_px	Guardrail	0	0	1
X	pdxsrd	Handrail_px	Handrail Lines on Cross Sections	9	0	1
	pdxsrd	ImageAttachment_dp	Image Attachmentst	0	0	0
X	pdxsrd	Inlet_px	Inlets on Cross Sections	10	0	2
X	pdxsrd	InletBottom_px	Inlet Bottom on Cross Sections (All Types)	10	0	2
	pdxsrd	KeyShtMisc	Key sheet Miscellaneous Items	0	0	2
X	pdxsrd	LARWLine_ex	Limited Access Right of Way on XSections (Existing)	4	EXLA	1
X	pdxsrd	LARWLine_px	Limited Access ROW Lines on Cross Sections	4	LA	2
X	pdxsrd	LateralLimits_px	Lateral Limits for Cross Sections	6	0	2
	pdxsrd	LeaderLine_dp	Leader Line and terminator with Text	0	0	1
	pdxsrd	Logo_dp	Consultant Engineer of Record Logo	0	0	1
X	pdxsrd	Manhole_px	Manhole on Cross Sections	10	0	2
X	pdxsrd	MES_px	Mitered End Section on Cross Sections	10	0	2
X	pdxsrd	MedianWallBase_px	Proposed Median Wall Subgrade	3	0	2
	pdxsrd	Miscellaneous0	Undefined proposed item - co blue wt 0	1	0	0
	pdxsrd	Miscellaneous1	Undefined proposed item - co blue wt 1	1	0	1
	pdxsrd	Miscellaneous2	Undefined proposed item - co blue wt 2	1	0	2
	pdxsrd	Miscellaneous3	Undefined proposed item - co green wt 0	2	0	0
	pdxsrd	Miscellaneous4	Undefined proposed item - co green wt 1	2	0	1
	pdxsrd	Miscellaneous5	Undefined proposed item - co green wt 2	2	0	2
	pdxsrd	Miscellaneous6	Undefined proposed item - co red wt 0	3	0	0
	pdxsrd	Miscellaneous7	Undefined proposed item - co red wt 1	3	0	1
	pdxsrd	Miscellaneous8	Undefined proposed item - co red wt 2	3	0	2
	pdxsrd	Miscellaneous9	Undefined proposed item - co red wt 3	3	0	3
	pdxsrd	NonPlottingEle_dp	Non plotting items such as construction elements and type 66 elements	4	0	0
X	pdxsrd	Overbuild_px	Overbuild Areas on Cross Sections	4	0	2
X	pdxsrd	Overbuild1_px	Proposed Overbuild Binder Symbology (No Longer Used)	7	0	2
X	pdxsrd	Overbuild2_px	Proposed Overbuild Base Symbology (No Longer Used)	7	0	2

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
X	pdxsrd	Overlay_px	Proposed Overlay Layer for Cross Sections	1	0	2
X	pdxsrd	Overlay1_px	Proposed Overlay Layer for Cross Sections	14	0	2
X	pdxsrd	Overlay2_px	Proposed Overlay Layer for Cross Sections	7	0	2
	pdxsrd	Patternlines_ep	Cross Section Chain	2	1	0
	pdxsrd	PatternLines1_dp	Pattern Lines for Cross Sections	3	0	2
	pdxsrd	PatternLines2_dp	Pattern Lines for XSections alternate for side streets, critical xsections or drainage structures	4	0	2
	pdxsrd	PatternLines3_dp	Pattern Lines for XSections alternate for side streets, critical xsections or drainage structures	5	0	2
X	pdxsrd	PavedMedianBase_px	Proposed Paved Median Subgrade	3	0	2
	pdxsrd	PavtAsph_ep	Asphalt Pavement Edge	0	3	1
	pdxsrd	PayItem_dp	Pay Item Number Label Elements	4	0	2
	pdxsrd	PipeCulvert_ep	Pipe Culvert	10	3	1
X	pdxsrd	PipeCulvert_pr	Pipe Culvert in Profile	3	0	2
X	pdxsrd	PipeCulvert_px	Pipe Culvert for Cross Section View	10	0	2
X	pdxsrd	PlotBorder_dp	Plot Border	3	0	0
	pdxsrd	PointLocator_ep	Point Locator Symbol	4	0	0
X	pdxsrd	Pond_px	Pond Lines on Cross Sections	2	0	2
X	pdxsrd	Power_ex	Power on Cross Sections (Existing)	3	2	1
X	pdxsrd	Power_px	Power on Cross Sections	3	0	1
X	pdxsrd	PropertyLine_ep	Property Lines	3	0	0
	pdxsrd	ReferencePt_dp	Survey and Construction Reference Point Details and Elements	4	0	2
	pdxsrd	RegionBdry_dp	Boundary Line for Regions in Corridor Design (Autodesk)	0	0	0
X	pdxsrd	RetainWall_px	Retaining Walls on Cross Sections	6	0	1
X	pdxsrd	RipRap_px	Rip Rap, Rubble on Cross Sections	4	1	2
X	pdxsrd	RumbleStrip1	Rumble Strips Continuous Array	0	rumble_cont	2
X	pdxsrd	RumbleStrip2	Rumble Strips Skip Array	0	rumble_skip	2
X	pdxsrd	RWLine	Right of Way Lines	4	RW	2
X	pdxsrd	RWLine_ep	Right of Way Lines (Existing)	3	RW	1
X	pdxsrd	RWLine_ex	ROW Lines on Cross Sections (Existing)	3	RW	1
X	pdxsrd	RWLine_px	ROW Lines on Cross Sections	4	RW	2
X	pdxsrd	SanitaryFM_ex	Force Main Lines on Cross Sections (Existing)	2	2	1
X	pdxsrd	SanitaryFM_px	Force Main Lines on Cross Sections	2	0	1
X	pdxsrd	SanitarySewer_ex	Sanitary Sewer Lines on Cross Sections (Existing)	10	2	0
X	pdxsrd	SanitarySewer_px	Sanitary Sewer Lines on Cross Sections	2	0	1
X	pdxsrd	SanitarySewerEff_px	Sanitary Effluent for Cross Sections	9	0	0
	pdxsrd	Scratch1_dp	A scratch level for temporary or informational items	4	0	0

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
	pdxsrd	Scratch2_dp	A scratch level for temporary or informational items	5	0	0
	pdxsrd	ScratchEle_dp	Level for Draft Elements, Temporary Elements, Etc. Do Not Plot	3	0	0
	pdxsrd	ScratchEle2_dp	Level for Draft Elements, Temporary Elements, Etc. Do Not Plot	4	0	0
	pdxsrd	SheetBorder_dp	Sheet Border	1	0	4
	pdxsrd	SheetLines_dp	Sheet Lines	1	0	2
	pdxsrd	SheetLinesMisc1_dp	Sheet Lines	1	0	0
	pdxsrd	SheetLinesMisc2_dp	Sheet Lines	2	0	2
	pdxsrd	SheetLinesMisc3_dp	Sheet Lines	3	0	2
	pdxsrd	SheetLinesMisc4_dp	Sheet Lines	4	0	2
X	pdxsrd	ShldrBase_px	Bottom of Proposed Paved Shoulder Base	3	0	2
X	pdxsrd	ShldrBaseTop_px	Top of Proposed Paved Shoulder Base	3	0	2
X	pdxsrd	ShldrPaved_px	Paved Shoulder Lines on Cross Sections	1	0	2
X	pdxsrd	ShldrUnpaved_px	Grass Shoulder Lines on Cross Sections	2	0	2
X	pdxsrd	ShldrWallBase_px	Proposed Shoulder Wall Subgrade	3	0	2
X	pdxsrd	Sidewalk_ex	Sidewalk Elements in Cross Sections (Existing)	0	2	1
X	pdxsrd	Sidewalk_px	Sidewalk Elements in Cross Sections	0	0	2
	pdxsrd	SidewalkBack_er	Back of Sidewalk Line Profile (Existing)	2	2	1
	pdxsrd	SidewalkBack_pr	Back of Sidewalk Line Profile	5	0	2
X	pdxsrd	SidewalkBase_px	Proposed Sidewalk Subgrade	3	0	2
X	pdxsrd	Slopes_px	Slope Lines on Cross Sections	9	0	2
X	pdxsrd	SoilBoxes_px	Soil Boxes and Borings for Cross Sections	4	0	1
	pdxsrd	SpecialDetails_px	Special Details_XS	6	0	1
X	pdxsrd	Stabilization_px	Stabilization for Cross Sections	5	2	2
	pdxsrd	StationTicL_dp	Station Tic Marks (Large) and Text	0	0	2
	pdxsrd	StationTicS_dp	Station Tic Marks (Small) and Text	0	0	2
X	pdxsrd	StreetLights_px	Street Lights for Cross Sections	3	0	1
	pdxsrd	Structure_px	Signal and Sign Structures on Cross Sections	0	0	2
X	pdxsrd	SubDsgn_px	Sub Design for Cross Sections including subbase	4	0	1
X	pdxsrd	Subsoil_px	Subsoil Or Undercut for Cross Sections	4	0	2
X	pdxsrd	SubsoilFinal_px	Subsoil Final for Multiline	18	0	1
X	pdxsrd	SubsoilProp_px	Subsoil Proposed for Multiline	8	0	1
	pdxsrd	SumBoxBorder_dp	Summary Boxes Borders	4	0	3
	pdxsrd	SumBoxLines_dp	Summary Boxes Lines and Miscellaneous Items	4	0	1
	pdxsrd	SumBoxLinesMin_dp	Summary Boxes Lines Minor Line and Miscellaneous Items	4	0	0
X	pdxsrd	TeleBur_ex	Telephone for Cross Sections (Buried - Miscellaneous - Existing)	6	2	1
X	pdxsrd	TeleBur_px	Telephone for Cross Sections (Buried) (Miscellaneous)	6	0	1

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
X	pdxsrd	TemplateBottom_px	Bottom of Template for Multiline	6	0	1
X	pdxsrd	TemplateFinal_px	Final Template for Multiline	2	0	1
X	pdxsrd	TemplateTop_px	Top of Template for Multiline	7	0	1
X	pdxsrd	TerrainLine_ex	Existing Ground Line for Multiline	5	0	1
	pdxsrd	TextAlert	Text - An Alert Label to Highlight a Problem	3	0	2
	pdxsrd	TextBLStation	Text - B/L Station and Tics	0	0	2
	pdxsrd	TextConstEle	Text - Construction Element	0	0	1
	pdxsrd	TextCurveData	Text - Curve Data Note	0	0	2
	pdxsrd	TextDetails	Text - Detail Notes	4	0	2
	pdxsrd	TextElevLabel	Elevation Labels	4	0	0
	pdxsrd	TextGeotech	Text for soil borings and labels	0	0	2
	pdxsrd	TextLabel	Text - Label	0	0	2
	pdxsrd	TextLandscape	Text - Landscape Labels	0	0	1
	pdxsrd	TextMajor	Text - Major	0	0	5
	pdxsrd	TextMinor	Text - Minor	0	0	0
	pdxsrd	TextMisc	Text - Miscellaneous	0	0	1
	pdxsrd	TextNotes	Text - Notes	4	0	1
	pdxsrd	TextProfLabel	Text - Profile, Horizontal and Vertical Axis Labels	0	0	2
	pdxsrd	TextProjLabel	Text - Begin and End Project label with leader lines	1	0	2
	pdxsrd	TextPtLabel	Point Labels	4	0	0
	pdxsrd	TextShtNo	Text - Sheet Number	0	0	2
	pdxsrd	TextSurveyLabel	Survey Text Labels	0	0	0
	pdxsrd	TextTables	Text - Keysheet Indexes and Table Data	4	0	2
	pdxsrd	TextTitle	Text - Title	0	0	3
	pdxsrd	TextXSBL_dp	Cross Section Baseline Labels	0	0	2
	pdxsrd	TextXSDrain_ex	Existing Drainage Labels	10	0	2
	pdxsrd	TextXSDrain_px	Proposed Drainage Labels	10	0	2
	pdxsrd	TextXSElev	Text - Cross Section Elevations	2	0	1
	pdxsrd	TextXSElev_ex	Existing cross section elevations	2	0	1
	pdxsrd	TextXSElev_px	Proposed cross section elevations	0	0	1
	pdxsrd	TextXSGPKPts_dp	Points Labeled on Cross Sections	4	0	0
	pdxsrd	TextXSNotes_dp	Cross Section Notes	0	0	2
	pdxsrd	TextXSSlope_dp	Cross Section Slope Labels (rise:run format)	0	0	2
	pdxsrd	TextXSSlopePvt_dp	Cross Section Pavement Slope Labels	0	0	2
X	pdxsrd	TrafSeparator_ex	Traffic Separator (All Types) on Cross Sections (Existing)	6	2	1

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
X	pdxsrd	TrafSeparator_px	Traffic Separator (All Types) on Cross Sections	6	0	2
X	pdxsrd	TrafSeparatorBase_px	Proposed Traffic Separator Subgrade	3	0	2
	pdxsrd	TypicalMisc	Typical Miscellaneous Items	0	0	2
	pdxsrd	Utility_er	Existing Utilities in Profile View	3	2	1
	pdxsrd	Utility_pr	Proposed Utilities in Profile View	3	0	2
	pdxsrd	UtilsMisc_ex	Miscellaneous Utility Items on Cross Sections (Existing)	8	2	1
	pdxsrd	UtilsMisc_px	Miscellaneous Utility Items on Cross Sections	8	0	1
	pdxsrd	Vehicle	Vehicle for Calculating Turning Radius	7	0	2
	pdxsrd	Viewport	Viewport (For AutoCAD Use)	3	0	0
	pdxsrd	VoidArea_dx	Void Area_XS	1	0	0
X	pdxsrd	Water_ex	Water for Cross Sections (Existing)	1	2	1
X	pdxsrd	Water_px	Water for Cross Sections	1	0	1
X	pdxsrd	WaterNP_px	Raw Water Pipes for Cross Sections	1	0	1
	pdxsrd	Wetland_ex	Wetland Boundary for Cross Sections (Existing)	2	wetland	1
	pdxsrd	WetlandEdge_ep	Edge of Mangrove, Wetlands (Marsh or Swamp)	2	wetland_ep	0
	pdxsrd	Xreference_dp	Reference Files (For AutoCAD Use)	0	0	1
	pdxsrd	Xreference01_dp	Reference Files (For AutoCAD Use)	0	0	1
	pdxsrd	Xreference02_dp	Reference Files (For AutoCAD Use)	0	0	1
	pdxsrd	Xreference03_dp	Reference Files (For AutoCAD Use)	0	0	1
	pdxsrd	Xreference04_dp	Reference Files (For AutoCAD Use)	0	0	1
	pdxsrd	Xreference05_dp	Reference Files (For AutoCAD Use)	0	0	1
	pdxsrd	Xreference06_dp	Reference Files (For AutoCAD Use)	0	0	1
	pdxsrd	Xreference07_dp	Reference Files (For AutoCAD Use)	0	0	1
	pdxsrd	Xreference08_dp	Reference Files (For AutoCAD Use)	0	0	1
	pdxsrd	Xreference09_dp	Reference Files (For AutoCAD Use)	0	0	1
	pdxsrd	Xreference10_dp	Reference Files (For AutoCAD Use)	0	0	1
X	pdxsrd	XSBaseTop_px	Top of Proposed Base	3	0	2
	pdxsrd	XSCell	GEOPAK Cross Section Cell and Profile Cell	8	0	1
X	pdxsrd	XSExtendGrdLine_ex	Extend Ground Lines for Cross Sections (Existing)	21	2	1
X	pdxsrd	XSGrdLine_ex	Ground Lines for Cross Sections (Existing)	2	2	1
	pdxsrd	XSGrdLine_px	Roadway Ground Lines on Cross Sections	1	0	2
	pdxsrd	XSMisc_ex	Roadway Miscellaneous Items on Cross Sections (Existing)	4	3	1
	pdxsrd	XSMisc_px	Cross Section Miscellaneous Items	0	0	2
	pdxsrd	XSPt_ep	Cross Section Point, Station	2	1	0
	pdxsrd	XSShapeDep01_dp	Cross Section Shape Dependent	11	0	2

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
	pdxsrd	XSShapeDep02_dp	Cross Section Shape Dependent	12	0	2
	pdxsrd	XSShapeDep03_dp	Cross Section Shape Dependent	13	0	2
	pdxsrd	XSShapeDep04_dp	Cross Section Shape Dependent	14	0	2
	pdxsrd	XSShapeDep05_dp	Cross Section Shape Dependent	15	0	2
	pdxsrd	XSShapeDep06_dp	Cross Section Shape Dependent	16	0	2
	pdxsrd	XSShapeDep07_dp	Cross Section Shape Dependent	17	0	2
	pdxsrd	XSShapeDep08_dp	Cross Section Shape Dependent	18	0	2
	pdxsrd	XSShapeDep09_dp	Cross Section Shape Dependent	19	0	2
	pdxsrd	XSShapeDep10_dp	Cross Section Shape Dependent	20	0	2
	pdxsrd	XSShapeIndep01_dp	Cross Section Shape Independent	1	0	2
	pdxsrd	XSShapeIndep02_dp	Cross Section Shape Independent	2	0	2
	pdxsrd	XSShapeIndep03_dp	Cross Section Shape Independent	3	0	2
	pdxsrd	XSShapeIndep04_dp	Cross Section Shape Independent	4	0	2
	pdxsrd	XSShapeIndep05_dp	Cross Section Shape Independent	5	0	2
	pdxsrd	XSShapeIndep06_dp	Cross Section Shape Independent	6	0	2
	pdxsrd	XSShapeIndep07_dp	Cross Section Shape Independent	7	0	2
	pdxsrd	XSShapeIndep08_dp	Cross Section Shape Independent	8	0	2
	pdxsrd	XSShapeIndep09_dp	Cross Section Shape Independent	9	0	2
	pdxsrd	XSShapeIndep10_dp	Cross Section Shape Independent	10	0	2
X	pdxsrd	XSTypical_px	Roadway Pavement Typical on Cross Sections	1	0	2

4.2.23 ROADWAY PLAN SHEET - PLANRD

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
	planrd	ActivePointCell_dp	Active Point Cell	4	0	10
	planrd	AdhocPoint_dp	Adhoc Points Placed by SheetInfo	0	4	0
	planrd	BaselineSurvey	Baseline Survey	0	0	2
	planrd	CLConst_dp	Center Line of Construction	0	0	2
	planrd	ClipBorder_dp	CLIP Border	3	0	0
	planrd	ClipDrawingBound_dp	CLIP Drawing Boundary	3	3	0
	planrd	Cloud_dp	Construction Cloud	7	0	2
	planrd	COGO_dp	COGO Information	3	0	1
	planrd	ConstArea_dp	Construction Area Crosshatch	0	0	1

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
	planrd	ConstLimits	Construction Limits	3	LOC	2
	planrd	ConstLines	Construction Lines and References	1	0	0
	planrd	CurveData_dp	Curve & Coordinate Data Elements incl PC, PT, PI symbols	4	0	2
	planrd	CurveDataLabel_dp	Curve Data Labels PC,PI, PT	0	0	2
	planrd	DimLines_dp	Dimension Lines, Corresponding Terminators, Equation Lines	0	0	1
X	planrd	EaseLicLine	Easement License Agreement Line	5	6	0
	planrd	FLMap1	Florida Map items - weight of 1	1	0	1
	planrd	FLMap2	Florida Map items - weight of 2	3	0	2
	planrd	FLMap3	Florida Map items - weight of 3	2	0	3
	planrd	FLMap4	Florida Map items - color 11 (Interstate)	11	0	3
	planrd	FLMap5	Florida Map items - style 7, wt. 5 (state line)	3	7	5
	planrd	GradeLine_er	Grade Line Profile (Existing)	2	2	1
	planrd	GradeLine_pr	Grade Line Profile	5	0	2
	planrd	GradeLineCtr_dp	Grade Line Profile Center (shown in plan view)	5	0	0
	planrd	GradeLineCtr_pr	Grade Line Profile Center	5	0	2
	planrd	GradeLineLt_dp	Grade Line Profile Left (shown in plan view)	1	0	0
	planrd	GradeLineLt_er	Grade Line Profile Left (Existing)	1	2	1
	planrd	GradeLineLt_pr	Grade Line Profile Left	1	0	2
	planrd	GradeLineRt_dp	Grade Line Profile Right (shown in plan view)	4	0	0
	planrd	GradeLineRt_er	Grade Line Profile Right (Existing)	4	2	1
	planrd	GradeLineRt_pr	Grade Line Profile Right	4	0	2
	planrd	GradeSecPat	Grade Section Patterns	0	0	0
	planrd	GridMaj_dp	Grid Lines Major in Profile and Cross Section	3	0	1
	planrd	GridMin_dp	Grid Lines Minor in Profile and Cross Section	0	0	0
	planrd	GridMinSub_dp	Grid Lines Minor Sub in Cross Section Sheets	20	0	0
	planrd	ImageAttachment_dp	Image Attachmentst	0	0	0
	planrd	KeyShtMisc	Key sheet Miscellaneous Items	0	0	2
	planrd	LeaderLine_dp	Leader Line and terminator with Text	0	0	1
	planrd	Logo_dp	Consultant Engineer of Record Logo	0	0	1
	planrd	MatchLineMask_dp	Mask Area for Match Line Overlap Areas (Autodesk)	0	0	0
	planrd	MatchLines_dp	Match Lines with Text, Arrows for Station Notations	1	0	2
	planrd	Miscellaneous0	Undefined proposed item - co blue wt 0	1	0	0
	planrd	Miscellaneous1	Undefined proposed item - co blue wt 1	1	0	1
	planrd	Miscellaneous2	Undefined proposed item - co blue wt 2	1	0	2
	planrd	Miscellaneous3	Undefined proposed item - co green wt 0	2	0	0

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
	planrd	Miscellaneous4	Undefined proposed item - co green wt 1	2	0	1
	planrd	Miscellaneous5	Undefined proposed item - co green wt 2	2	0	2
	planrd	Miscellaneous6	Undefined proposed item - co red wt 0	3	0	0
	planrd	Miscellaneous7	Undefined proposed item - co red wt 1	3	0	1
	planrd	Miscellaneous8	Undefined proposed item - co red wt 2	3	0	2
	planrd	Miscellaneous9	Undefined proposed item - co red wt 3	3	0	3
	planrd	NonPlottingEle_dp	Non plotting items such as construction elements and type 66 elements	4	0	0
	planrd	NorthArw_dp	North Arrows	0	0	2
	planrd	Patternlines_ep	Cross Section Chain	2	1	0
	planrd	PatternLines1_dp	Pattern Lines for Cross Sections	3	0	2
	planrd	PatternLines2_dp	Pattern Lines for XSections alternate for side streets, critical xsections or drainage structures	4	0	2
	planrd	PatternLines3_dp	Pattern Lines for XSections alternate for side streets, critical xsections or drainage structures	5	0	2
	planrd	PayItem_dp	Pay Item Number Label Elements	4	0	2
X	planrd	PlotBorder_dp	Plot Border	3	0	0
	planrd	PointLocator_ep	Point Locator Symbol	4	0	0
	planrd	ReferencePt_dp	Survey and Construction Reference Point Details and Elements	4	0	2
	planrd	RefPtAngleTie	Annotation:Leader:Survey Reference Point / Detail	0	Angle	1
	planrd	RefPtLine	Miscellaneous:Survey Reference Point Line / Detail	0	0	1
	planrd	Scale_dp	Bar Scale, Scale Label Elements	0	0	2
	planrd	Scratch1_dp	A scratch level for temporary or informational items	4	0	0
	planrd	Scratch2_dp	A scratch level for temporary or informational items	5	0	0
	planrd	ScratchEle_dp	Level for Draft Elements, Temporary Elements, Etc. Do Not Plot	3	0	0
	planrd	ScratchEle2_dp	Level for Draft Elements, Temporary Elements, Etc. Do Not Plot	4	0	0
	planrd	SheetBorder_dp	Sheet Border	1	0	4
	planrd	SheetLines_dp	Sheet Lines	1	0	2
	planrd	SheetLinesMisc1_dp	Sheet Lines	1	0	0
	planrd	SheetLinesMisc2_dp	Sheet Lines	2	0	2
	planrd	SheetLinesMisc3_dp	Sheet Lines	3	0	2
	planrd	SheetLinesMisc4_dp	Sheet Lines	4	0	2
	planrd	StationTicL_dp	Station Tic Marks (Large) and Text	0	0	2
	planrd	StationTicS_dp	Station Tic Marks (Small) and Text	0	0	2
	planrd	SumBoxBorder_dp	Summary Boxes Borders	4	0	3
	planrd	SumBoxLines_dp	Summary Boxes Lines and Miscellaneous Items	4	0	1
	planrd	SumBoxLinesMin_dp	Summary Boxes Lines Minor Line and Miscellaneous Items	4	0	0
	planrd	TextBLStation	Text - B/L Station and Tics	0	0	2

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
	planrd	TextConstEle	Text - Construction Element	0	0	1
	planrd	TextCurveData	Text - Curve Data Note	0	0	2
	planrd	TextDetails	Text - Detail Notes	4	0	2
	planrd	TextElevLabel	Elevation Labels	4	0	0
	planrd	TextLabel	Text - Label	0	0	2
	planrd	TextLandscape	Text - Landscape Labels	0	0	1
	planrd	TextMajor	Text - Major	0	0	5
	planrd	TextMinor	Text - Minor	0	0	0
	planrd	TextMisc	Text - Miscellaneous	0	0	1
	planrd	TextNotes	Text - Notes	4	0	1
	planrd	TextProfLabel	Text - Profile, Horizontal and Vertical Axis Labels	0	0	2
	planrd	TextProjLabel	Text - Begin and End Project label with leader lines	1	0	2
	planrd	TextPtLabel	Point Labels	4	0	0
	planrd	TextShtNo	Text - Sheet Number	0	0	2
	planrd	TextSurveyLabel	Survey Text Labels	0	0	0
	planrd	TextTables	Text - Keysheet Indexes and Table Data	4	0	2
	planrd	TextTitle	Text - Title	0	0	3
	planrd	TextXSElev	Text - Cross Section Elevations	2	0	1
	planrd	Wetland	Wetland Boundary	2	wetland	1
	planrd	XSCell	GEOPAK Cross Section Cell and Profile Cell	8	0	1
	planrd	Viewport	Viewport (For AutoCAD Use)	3	0	0
	planrd	Xreference_dp	Reference Files (For AutoCAD Use)	0	0	1
	planrd	Xreference01_dp	Reference Files (For AutoCAD Use)	0	0	1
	planrd	Xreference02_dp	Reference Files (For AutoCAD Use)	0	0	1
	planrd	Xreference03_dp	Reference Files (For AutoCAD Use)	0	0	1
	planrd	Xreference04_dp	Reference Files (For AutoCAD Use)	0	0	1
	planrd	Xreference05_dp	Reference Files (For AutoCAD Use)	0	0	1
	planrd	Xreference06_dp	Reference Files (For AutoCAD Use)	0	0	1
	planrd	Xreference07_dp	Reference Files (For AutoCAD Use)	0	0	1
	planrd	Xreference08_dp	Reference Files (For AutoCAD Use)	0	0	1
	planrd	Xreference09_dp	Reference Files (For AutoCAD Use)	0	0	1
	planrd	Xreference10_dp	Reference Files (For AutoCAD Use)	0	0	1

4.2.24 ROADWAY PLAN/PROFILE SHEET - PLPRRD

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
	plprrd	ActivePointCell_dp	Active Point Cell	4	0	10
	plprrd	AdhocPoint_dp	Adhoc Points Placed by SheetInfo	0	4	0
X	plprrd	Base_ex	Base Material for Cross Sections (All Types) (Existing)	3	3	1
X	plprrd	Base_px	Base Material for Cross Sections (All Types)	3	0	2
	plprrd	BaselineSurvey	Baseline Survey	0	0	2
	plprrd	Beacons_ep	Beacons and Path Illumination	0	0	1
X	plprrd	Berm_px	Berm (Top, Front, or Back) for Cross Sections	10	0	2
X	plprrd	CandG_ex	Curb and Gutter for Cross Sections (All Types) (Existing)	4	2	1
X	plprrd	CandG_px	Curb and Gutter for Cross Sections (All Types)	4	0	2
X	plprrd	CandGBase_px	Curb and Gutter Base on Cross Sections	3	0	1
X	plprrd	Capacitor	Capacitors (All Types)	3	0	1
	plprrd	CATV_ep	Cable TV Line (Aerial)	6	e-otv	0
X	plprrd	CATVAer	Cable TV Line (Aerial)	6	otv	1
X	plprrd	CATVBur	Cable TV Line (Buried)	6	btv	1
	plprrd	CATVBur_ep	Cable TV Line (Buried)	6	e-btv	1
X	plprrd	CATVBur_ex	Cable TV and Miscellaneous on Cross Sections (Existing)	6	2	1
X	plprrd	CATVBur_px	Cable TV and Miscellaneous on Cross Sections	6	0	1
X	plprrd	CATVCond	Cable TV Conduit System	6	conduit1	1
	plprrd	CATVCond_ep	Cable TV Conduit System	6	0	1
	plprrd	CATVMisc	Cable TV Service Box	6	0	1
	plprrd	CATVMisc_ep	Cable TV Service Box, Pole	6	1	1
	plprrd	CLConst_dp	Center Line of Construction	0	0	2
	plprrd	ClipBorder_dp	CLIP Border	3	0	0
	plprrd	ClipDrawingBound_dp	CLIP Drawing Boundary	3	3	0
	plprrd	Cloud_dp	Construction Cloud	7	0	2
	plprrd	COGO_dp	COGO Information	3	0	1
X	plprrd	Conduit	Conduit for Utilities and Encasements	3	conduit1	1
	plprrd	Conduit_ep	Utility Conduit & Encasements	3	e-cas	0
X	plprrd	Conduit_ex	Conduit and Encasements on Cross Sections (Existing)	3	2	1
X	plprrd	Conduit_px	Conduit and Encasements on Cross Sections	3	0	1
X	plprrd	ConduitAG	Conduit – Above Ground	4	lite_cond4	1
X	plprrd	ConduitBG	Conduit In Box Girder	5	lite_cond5	1
X	plprrd	ConduitBG_ep	Conduit In Box Girder (Existing)	5	exlite_cond5	0

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
X	plprrd	ConduitBM	Conduit – Bridge Mount	5	lite_cond5	1
X	plprrd	ConduitC	Conduit Lead-in Cable	3	0	0
X	plprrd	ConduitDB	Conduit – Directional Bore	2	lite_cond2	1
X	plprrd	ConduitJ	Conduit Jacked Underpavement	1	lite_cond3	1
X	plprrd	ConduitJ_ep	Conduit Jacked (Existing)	1	exlite_cond3	0
X	plprrd	ConduitJB	Conduit – Jack & Bore Under Rail	3	lite_cond3	1
X	plprrd	ConduitOT	Conduit – Open Trench	1	lite_cond1	1
X	plprrd	ConduitSM	Conduit Surface Mounted	4	lite_cond4	1
X	plprrd	ConduitSM_ep	Conduit Surface Mounted (Existing)	4	exlite_cond4	0
X	plprrd	ConduitUG	Conduit Underground	3	lite_cond1	1
X	plprrd	ConduitUG_ep	Conduit Underground (Existing)	3	exlite_cond1	0
X	plprrd	ConduitUP	Conduit Underpavement	2	lite_cond2	1
X	plprrd	ConduitUP_ep	Conduit Underpavement (Existing)	2	exlite_cond2	0
	plprrd	ConstArea_dp	Construction Area Crosshatch	0	0	1
	plprrd	ConstLimits	Construction Limits	3	LOC	2
	plprrd	ConstLines	Construction Lines and References	1	0	0
X	plprrd	Controller_ep	Controller and Accessories (Existing)	0	2	1
X	plprrd	ControllerB_ep	Controller - Base Mounted (Existing)	0	2	1
X	plprrd	ControllerP_ep	Controller Pole Mount (Existing)	0	2	1
	plprrd	CurveData_dp	Curve & Coordinate Data Elements incl PC, PT, PI symbols	4	0	2
	plprrd	CurveDataLabel_dp	Curve Data Labels PC,PI, PT	0	0	2
	plprrd	DimLines_dp	Dimension Lines, Corresponding Terminators, Equation Lines	0	0	1
X	plprrd	Ditch_px	Ditch Top for Cross Sections	7	0	2
X	plprrd	DitchBot_px	Ditch Bottom for Cross Sections	10	0	2
X	plprrd	DitchPavt_px	Ditch Pavement for Cross Sections	3	0	3
	plprrd	DitchProfLt_er	Ditch Profile Left (Existing)	8	3	1
	plprrd	DitchProfLt_pr	Ditch Profile Left	8	0	1
	plprrd	DitchProfMdn_er	Ditch Profile Median (Existing)	10	3	1
	plprrd	DitchProfMdn_pr	Ditch Profile Median	10	0	1
	plprrd	DitchProfRt_er	Ditch Profile Right (Existing)	9	3	1
	plprrd	DitchProfRt_pr	Ditch Profile Right	9	0	1
	plprrd	DrainAlert_px	Alert Symbology for Structural Elements on Cross Sections	3	0	2
	plprrd	DrainDivides00	Drainage Divides	10	2	4
	plprrd	DrainDivides00_ep	Drainage Divides (Existing)	9	2	4

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
	plprrd	DrainDivides01	Drainage Divides	10	2	4
	plprrd	DrainDivides01_ep	Drainage Divides (Existing)	9	2	4
	plprrd	DrainDivides02	Drainage Divides	10	2	4
	plprrd	DrainDivides02_ep	Drainage Divides (Existing)	9	2	4
	plprrd	DrainDivides03	Drainage Divides	10	2	4
	plprrd	DrainDivides03_ep	Drainage Divides (Existing)	9	2	4
	plprrd	DrainDivides04	Drainage Divides	10	2	4
	plprrd	DrainDivides04_ep	Drainage Divides (Existing)	9	2	4
	plprrd	DrainDivides05	Drainage Divides	10	2	4
	plprrd	DrainDivides05_ep	Drainage Divides (Existing)	9	2	4
	plprrd	DrainDivides06	Drainage Divides	10	2	4
	plprrd	DrainDivides06_ep	Drainage Divides (Existing)	9	2	4
	plprrd	DrainDivides07	Drainage Divides	10	2	4
	plprrd	DrainDivides07_ep	Drainage Divides (Existing)	9	2	4
	plprrd	DrainDivides08	Drainage Divides	10	2	4
	plprrd	DrainDivides08_ep	Drainage Divides (Existing)	9	2	4
	plprrd	DrainDivides09	Drainage Divides	10	2	4
	plprrd	DrainDivides09_ep	Drainage Divides (Existing)	9	2	4
	plprrd	DrainMisc	Miscellaneous Drainage Items	10	0	2
	plprrd	DrainMisc_ex	All types of miscellaneous drainage elements (Existing)	10	3	1
X	plprrd	DrainStruct_ex	All Drainage Structures for Cross Sections (Existing)	10	3	1
X	plprrd	DrainStruct_pr	Drainage Structures (All Types)	10	0	2
X	plprrd	DrainStruct_px	Misc Drainage Structures and Elements for XSections	10	0	2
X	plprrd	DrivewayBase_px	Proposed Driveway Subgrade	3	0	2
	plprrd	DummyChains_ep	Dummy Chains	0	0	1
X	plprrd	EaseLicLine	Easement License Agreement Line	5	6	0
X	plprrd	ElecMeter	Meter (Electric)	3	0	1
X	plprrd	ElectPS	Electrical Power Service Miscellaneous	3	0	1
X	plprrd	ElectPSB	Electrical (Buried)	3	be	2
X	plprrd	ElectPSO	Electrical Outlet	3	0	1
X	plprrd	ElectServWire	Electrical Service Wire	3	0	2
X	plprrd	Endwall_px	Endwall for Cross Sections	10	0	2
X	plprrd	FES_px	Flared End Sections for Cross Sections	10	0	2
X	plprrd	FireHydrant	Fire Hydrant	1	0	1

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
	plprrd	FireHydrant_ep	Fire Hydrant	1	1	1
	plprrd	FLMap1	Florida Map items - weight of 1	1	0	1
	plprrd	FLMap2	Florida Map items - weight of 2	3	0	2
	plprrd	FLMap3	Florida Map items - weight of 3	2	0	3
	plprrd	FLMap4	Florida Map items - color 11 (Interstate)	11	0	3
	plprrd	FLMap5	Florida Map items - style 7, wt. 5 (state line)	3	7	5
	plprrd	FloodLight_ep	Flood Light	3	1	1
	plprrd	FlowArrow_dp	Flow Arrow	10	0	2
	plprrd	FlowLine_pr	Flow Line (Roadway Profile View)	0	0	2
X	plprrd	FOCBur	Fiber Optics Cable (Buried)	6	bfo	1
X	plprrd	FOCBur_ex	Fiber Optics Cable (Buried) for XSections (Existing)	6	2	1
X	plprrd	FOCBur_px	Fiber Optics Cable (Buried) for XSections	6	0	1
X	plprrd	Gas	Gas Pipe and Fittings	4	g	1
	plprrd	Gas_ep	Gas Line (all sizes)	4	e-g	1
X	plprrd	Gas_ex	Gas Pipe and Fittings, Misc for Xsections (Existing)	4	2	1
X	plprrd	Gas_px	Gas Pipe and Fittings, Misc for Xsections	4	0	1
X	plprrd	GasMeter	Meter (Gas)	4	0	1
	plprrd	GasMisc	Gas Regulator and Miscellaneous Items	4	0	0
	plprrd	GasReg_ep	Gas Regulator	4	1	1
X	plprrd	Gauges	Gauges	0	0	1
	plprrd	Gauges_ep	Gauges	0	1	1
X	plprrd	Generator	Emergency Generator	0	0	2
	plprrd	GeotechFillPatt1	Geotechnical Fill Pattern - (earth, wood, muck, concrete, rock, riprap) as defined in project	3	0	0
	plprrd	GeotechFillPatt1_px	Geotechnical Fill Pattern - (earth, wood, muck, concrete, rock, riprap) as defined in project	3	0	0
	plprrd	GeotechFillPatt2	Geotechnical Fill Pattern - clay, sand	0	1	0
	plprrd	GeotechFillPatt2_px	Geotechnical Fill Pattern - clay, sand	0	1	0
	plprrd	GeotechFillPatt3	Geotechnical Fill Pattern - shell	3	1	0
	plprrd	GeotechFillPatt3_px	Geotechnical Fill Pattern - shell	3	1	0
	plprrd	GeotechFillPatt4	Geotechnical Fill Pattern - sand	4	0	0
	plprrd	GeotechFillPatt4_px	Geotechnical Fill Pattern - sand	4	0	0
	plprrd	GeotechFillPatt5	Geotechnical Fill Pattern - coquina	1	0	1
	plprrd	GeotechFillPatt5_px	Geotechnical Fill Pattern - coquina	1	0	1
	plprrd	GeotechFillPatt6	Geotechnical Fill Pattern - limestone	2	0	0
	plprrd	GeotechFillPatt6_px	Geotechnical Fill Pattern - limestone	2	0	0

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
	plprrd	GeotechFillPatt7	Geotechnical Fill Pattern - gravel	6	0	0
	plprrd	GeotechFillPatt7_px	Geotechnical Fill Pattern - gravel	6	0	0
	plprrd	GeotechFillPatt8	Geotechnical Fill Pattern - silt	0	0	1
	plprrd	GeotechFillPatt8_px	Geotechnical Fill Pattern - silt	0	0	1
	plprrd	GeotechMisc	Miscellaneous Geotechnical Elements	0	0	1
	plprrd	GPKDrBack_dp	Back Point on Drainage Cells	2	2	2
	plprrd	GPKDrBottom_dp	Bottom Point on Drainage Cells	3	3	2
	plprrd	GPKDrCellIns_dp	Cell Insertion Point on Drainage Cells	4	4	2
	plprrd	GPKDrCentroid_dp	Point on Centroid for Drainage	7	7	2
	plprrd	GPKDrFront_dp	Front Point on Drainage Cells	1	1	2
	plprrd	GPKDrPipe_dp	Point on Drainage Pipe	6	6	2
	plprrd	GPKDrPipeCir_dp	Point on Pipe Circular	6	6	0
	plprrd	GradeLine_er	Grade Line Profile (Existing)	2	2	1
	plprrd	GradeLine_pr	Grade Line Profile	5	0	2
	plprrd	GradeLineCtr_dp	Grade Line Profile Center (shown in plan view)	5	0	0
	plprrd	GradeLineCtr_pr	Grade Line Profile Center	5	0	2
	plprrd	GradeLineLt_dp	Grade Line Profile Left (shown in plan view)	1	0	0
	plprrd	GradeLineLt_er	Grade Line Profile Left (Existing)	1	2	1
	plprrd	GradeLineLt_pr	Grade Line Profile Left	1	0	2
	plprrd	GradeLineRt_dp	Grade Line Profile Right (shown in plan view)	4	0	0
	plprrd	GradeLineRt_er	Grade Line Profile Right (Existing)	4	2	1
	plprrd	GradeLineRt_pr	Grade Line Profile Right	4	0	2
	plprrd	GradeSecPat	Grade Section Patterns	0	0	0
X	plprrd	GravWallBase_px	Proposed Gravity Wall Subgrade	3	0	2
	plprrd	GridMaj_dp	Grid Lines Major in Profile and Cross Section	3	0	1
	plprrd	GridMin_dp	Grid Lines Minor in Profile and Cross Section	0	0	0
	plprrd	GridMinG_dp	Grid Lines Minor Sub 2 in Cross Section Sheets	20	0	0
	plprrd	GridMinSub_dp	Grid Lines Minor Sub in Cross Section Sheets	20	0	0
	plprrd	Guys_ep	Guy Anchor, Guy pole, Span Guys	3	1	1
X	plprrd	GuyWire	Guy Wire	3	0	0
	plprrd	ImageAttachment _dp	Image Attachmentst	0	0	0
X	plprrd	Inlet_px	Inlets on Cross Sections	10	0	2
X	plprrd	InletBottom_px	Inlet Bottom on Cross Sections (All Types)	10	0	2
X	plprrd	InterconCable_ep	Interconnect Cable (Existing)	1	intcon2	0

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
X	plprrd	JunctBox	Junction Boxes, Service Cabinet Elec / Tel	3	0	1
	plprrd	JunctBox_ep	Junct. Box / Service Cabinet (Elec/Tel)	3	1	1
X	plprrd	JunctBoxA	Junction Boxes (Aerial)	3	0	1
X	plprrd	JunctBoxA_ep	Junction Boxes (Aerial) (Existing)	3	1	0
	plprrd	KeyShtMisc	Key sheet Miscellaneous Items	0	0	2
	plprrd	LaneDirArrow	Lane Directional Arrow	0	0	1
	plprrd	LeaderLine_dp	Leader Line and terminator with Text	0	0	1
	plprrd	LiteCond_ep	Street Lighting Conductors	3	exlite_cond1	0
X	plprrd	LoadCenter	Load Center	2	0	1
X	plprrd	LoadCenter_ep	Load Center (Existing)	2	5	0
	plprrd	Logo_dp	Consultant Engineer of Record Logo	0	0	1
X	plprrd	LoopLI_ep	Loop Lead-In (Existing)	3	2	0
X	plprrd	Loops_ep	Loop Assembly (All Types) (Existing)	2	2	2
X	plprrd	Luminaire	Luminaires (Decorative - All Types)	2	0	1
	plprrd	Luminaire_ep	Street Light / Pole	3	1	1
X	plprrd	Manhole_px	Manhole on Cross Sections	10	0	2
	plprrd	ManholeCover_ep	Manhole Cover (Cable TV)	6	1	1
	plprrd	ManholeCovUnk_ep	Manhole Cover (Unknown)	0	1	1
	plprrd	ManholeCovW_ep	Manhole Cover (Water)	1	1	1
X	plprrd	ManholeElec	Manhole (Electric)	3	0	1
	plprrd	ManholeElec_ep	Manhole (Electric)	3	1	1
X	plprrd	ManholeGas	Manhole (Gas)	4	0	1
	plprrd	ManholeGas_ep	Manhole (Gas)	4	1	1
X	plprrd	ManholeSS	Manhole (Sanitary Sewer)	2	0	1
	plprrd	ManholeSS_ep	Manhole (Sanitary Sewer)	2	1	1
X	plprrd	ManholeSW	Manhole (Storm Water)	10	0	1
	plprrd	ManholeSW_ep	Manhole (Storm Water)	10	1	1
X	plprrd	ManholeTel	Manhole (Telephone)	6	0	1
	plprrd	ManholeTel_ep	Manhole (Telephone)	6	1	1
	plprrd	MatchLineMask_dp	Mask Area for Match Line Overlap Areas (Autodesk)	0	0	0
	plprrd	MatchLines_dp	Match Lines with Text, Arrows for Station Notations	1	0	2
X	plprrd	MedianWallBase_px	Proposed Median Wall Subgrade	3	0	2
X	plprrd	MES_px	Mitered End Section on Cross Sections	10	0	2
	plprrd	MeterElec_ep	Meter (Electric)	3	1	1

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
	plprrd	MeterElecUG_ep	Meter (Electric) (Underground)	3	1	1
	plprrd	MeterGas_ep	Meter (Gas)	4	1	1
	plprrd	MeterUnk	Meter (Unknown) PROPOSED UNKNOWN ELEMENT	0	0	0
	plprrd	MeterUnk_ep	Meter (Unknown)	0	1	1
	plprrd	MeterWater_ep	Meter (Water)	1	1	1
	plprrd	Miscellaneous0	Undefined proposed item - co blue wt 0	1	0	0
	plprrd	Miscellaneous1	Undefined proposed item - co blue wt 1	1	0	1
	plprrd	Miscellaneous2	Undefined proposed item - co blue wt 2	1	0	2
	plprrd	Miscellaneous3	Undefined proposed item - co green wt 0	2	0	0
	plprrd	Miscellaneous4	Undefined proposed item - co green wt 1	2	0	1
	plprrd	Miscellaneous5	Undefined proposed item - co green wt 2	2	0	2
	plprrd	Miscellaneous6	Undefined proposed item - co red wt 0	3	0	0
	plprrd	Miscellaneous7	Undefined proposed item - co red wt 1	3	0	1
	plprrd	Miscellaneous8	Undefined proposed item - co red wt 2	3	0	2
	plprrd	Miscellaneous9	Undefined proposed item - co red wt 3	3	0	3
	plprrd	NonPlottingEle_dp	Non plotting items such as construction elements and type 66 elements	4	0	0
	plprrd	NorthArw_dp	North Arrows	0	0	2
X	plprrd	Oil	Oil Pipeline, Petroleum	4	pet	2
X	plprrd	Overbuild1_px	Proposed Overbuild Binder Symbology (No Longer Used)	7	0	2
X	plprrd	Overbuild2_px	Proposed Overbuild Base Symbolog y (No Longer Used)	7	0	2
X	plprrd	OverheadSign_ep	Overhead Sign Panels (Existing)	0	3	1
X	plprrd	OverheadStr_ep	Mast Arm, Truss Assemblies, Signal Arms and Supports (Existing)	0	3	1
X	plprrd	Overlay1_px	Proposed Overlay for Cross Sections (No Longer Used)	14	0	2
X	plprrd	Overlay2_px	Proposed Overlay for Cross Secions (No Longer Used)	7	0	2
	plprrd	Patternlines_ep	Cross Section Chain	2	1	0
	plprrd	PatternLines1_dp	Pattern Lines for Cross Sections	3	0	2
	plprrd	PatternLines2_dp	Pattern Lines for XSections alternate for side streets, critical xsections or drainage structures	4	0	2
	plprrd	PatternLines3_dp	Pattern Lines for XSections alternate for side streets, critical xsections or drainage structures	5	0	2
X	plprrd	PavedMedianBase_px	Proposed Paved Median Subgrade	3	0	2
	plprrd	PayItem_dp	Pay Item Number Label Elements	4	0	2
X	plprrd	Pedestal_ep	Pedestal (Existing)	1	2	1
X	plprrd	PedHead_ep	Pedestrian Head (All Types) (Existing)	0	2	1
	plprrd	PedSignal_ep	Pedestrian Signal Unit, Signage	0	2	0
	plprrd	PipeCulvert_ep	Pipe Culvert	10	3	1

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
X	plprrd	PipeCulvert_pr	Pipe Culvert in Profile	3	0	2
X	plprrd	PipeCulvert_px	Pipe Culvert for Cross Section View	10	0	2
X	plprrd	PlotBorder_dp	Plot Border	3	0	0
	plprrd	PointLocator_ep	Point Locator Symbol	4	0	0
X	plprrd	PoleConc	Concrete Strain Pole	0	0	2
X	plprrd	PoleConc_ep	Concrete Strain Pole (Existing)	0	2	1
X	plprrd	PoleFound	Pole Foundation	0	0	2
X	plprrd	PoleLight	Light Pole	2	0	1
X	plprrd	PoleLight_ep	Light Pole (Existing)	2	2	1
X	plprrd	PoleLightHM	High Mast Light Pole	3	0	1
X	plprrd	PoleLightHM_ep	High Mast Light Pole (Existing)	2	2	1
	plprrd	PoleLightID	Light Pole Location / ID	4	0	1
X	plprrd	PolePower	Power Pole w/ Transformer	3	0	2
	plprrd	PolePower_ep	Power Pole with or without Transformer, shared pole	3	1	1
X	plprrd	PoleShared	Power Pole Electric (Above Ground) Shared w/ Transformer	3	0	2
X	plprrd	PoleSteelStrain	Steel Strain Pole	0	0	2
X	plprrd	PoleSteelStrain_ep	Steel Strain Pole (Existing)	0	2	1
X	plprrd	PoleTel	Telephone Pole	6	0	2
	plprrd	PoleTel_ep	Telephone Pole	6	1	1
X	plprrd	PoleUtil	Utility Pole	0	0	2
X	plprrd	PoleWoodStrain	Wood Strain Pole	0	0	2
X	plprrd	PoleWoodStrain_ep	Wood Strain Pole (Existing)	0	2	1
	plprrd	Power_ep	Existing Overhead Electric Power Conductors (Distribution & Transmission)	3	e-oe	0
X	plprrd	Power_ex	Power on Cross Sections (Existing)	3	2	1
X	plprrd	Power_px	Power on Cross Sections	3	0	1
	plprrd	PowerBur_ep	Existing Buried Electric Power Conductors (Distribution & Transmission)	3	e-be	1
	plprrd	PowerBurCond_ep	Secondary Conductor Buried	3	e-be	0
	plprrd	PowerCapcUG_ep	Capacitors (Underground)	3	1	1
	plprrd	PowerCond_ep	Conductors (primary distribution)	3	e-oe	1
	plprrd	PowerElecOut_ep	Electrical Outlet	3	1	1
	plprrd	PowerMisc	Fuses, Reclosures, Regulator, Sectionalizers	3	0	0
	plprrd	PowerMisc_ep	Capacitors (Above Ground), Switchgear, Transformer, Electrical Service Box	3	1	1
X	plprrd	PropertyLine_ep	Property Lines	3	0	0
X	plprrd	PullBox	Pull Boxes (All Types)	3	0	1

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
	plprrd	PullBox_ep	Wiring Pull Box	3	1	1
X	plprrd	PumpNonPet	Pump (Non Petroleum)	1	0	0
	plprrd	PumpNonPet_ep	Pump (Non Petroleum)	1	1	1
	plprrd	ReferencePt_dp	Survey and Construction Reference Point Details and Elements	4	0	2
X	plprrd	RetainWall_pr	Retaining Wall Profile	9	0	2
X	plprrd	RipRap_px	Rip Rap, Rubble on Cross Sections	4	1	2
	plprrd	RoadwayMisc	Roadway Miscellaneous Items	4	0	2
X	plprrd	RWLine	Right of Way Lines	4	RW	2
X	plprrd	RWLine_ep	Right of Way Lines (Existing)	3	RW	1
	plprrd	Sanitary_ep	Sanitary Sewer (all sizes)	2	e-s	1
	plprrd	SanitaryDumpSta_ep	Dump Station (SS)	2	2	1
X	plprrd	SanitaryFM	Force Main	2	s	1
	plprrd	SanitaryFM_ep	Force Main (all sizes)	2	e-s	1
X	plprrd	SanitaryFM_ex	Force Main Lines on Cross Sections (Existing)	2	2	1
X	plprrd	SanitaryFM_px	Force Main Lines on Cross Sections	2	0	1
	plprrd	SanitaryMisc_ep	Cleanout, Sanitary Effluent (Open channel)	2	1	1
X	plprrd	SanitarySewer	Sanitary Sewer	2	s	1
X	plprrd	SanitarySewer_ex	Sanitary Sewer Lines on Cross Sections (Existing)	10	2	0
X	plprrd	SanitarySewer_px	Sanitary Sewer Lines on Cross Sections	2	0	1
X	plprrd	SanitarySewerDSta	Sewer Dump Station	2	0	0
X	plprrd	SanitarySewerEff	Sanitary Sewer Effluent NPW	5	npw	0
X	plprrd	SanitarySewerEff_px	Sanitary Effluent for Cross Sections	9	0	0
	plprrd	SanitarySewerMisc	Sewer Miscellaneous Items	2	0	0
	plprrd	SateDish_ep	Sattelite Dish Antenna	6	4	1
	plprrd	Scale_dp	Bar Scale, Scale Label Elements	0	0	2
	plprrd	Scratch1_dp	A scratch level for temporary or informational items	4	0	0
	plprrd	Scratch2_dp	A scratch level for temporary or informational items	5	0	0
	plprrd	ScratchEle_dp	Level for Draft Elements, Temporary Elements, Etc. Do Not Plot	3	0	0
	plprrd	ScratchEle2_dp	Level for Draft Elements, Temporary Elements, Etc. Do Not Plot	4	0	0
	plprrd	SheetBorder_dp	Sheet Border	1	0	4
	plprrd	SheetLines_dp	Sheet Lines	1	0	2
	plprrd	SheetLinesMisc1_dp	Sheet Lines	1	0	0
	plprrd	SheetLinesMisc2_dp	Sheet Lines	2	0	2
	plprrd	SheetLinesMisc3_dp	Sheet Lines	3	0	2

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
	plprrd	SheetLinesMisc4_dp	Sheet Lines	4	0	2
X	plprrd	ShldrBase_px	Bottom of Proposed Paved Shoulder Base	3	0	2
X	plprrd	ShldrBaseTop_px	Top of Proposed Paved Shoulder Base	3	0	2
X	plprrd	ShldrWallBase_px	Proposed Shoulder Wall Subgrade	3	0	2
	plprrd	SidewalkBack_er	Back of Sidewalk Line Profile (Existing)	2	2	1
	plprrd	SidewalkBack_pr	Back of Sidewalk Line Profile	5	0	2
X	plprrd	SidewalkBase_px	Proposed Sidewalk Subgrade	3	0	2
	plprrd	Signal_ep	Signal Head, Signal on Pedestal	3	1	1
X	plprrd	SignalHead_ep	Signal Head Section Details (Existing)	2	2	0
	plprrd	SignalLoop_ep	Traffic Detector Loops	7	1	2
	plprrd	SignalMisc_ep	Miscellaneous Signal Equipment Existing including control unit	3	2	0
	plprrd	SignalSupport_ep	Signal Supports including Mast Arm	3	2	0
X	plprrd	SignalSym_ep	Signal Head Symbols (Existing)	3	2	0
X	plprrd	SignCantilever_ep	Sign Symbol Cantilever (Existing)	0	2	0
	plprrd	SignMulti_ep	Multi-column Sign (All Signs)	0	3	1
X	plprrd	SignPanel_ep	Sign Panel Elements (Existing)	0	2	1
	plprrd	SignSingle_ep	Sign (Single Support)	3	2	0
X	plprrd	SignSpanwire	Span Wire Signing Assembly	2	0	1
X	plprrd	SignSpanwire_ep	Span Wire Signing Assembly (Existing)	2	2	1
	plprrd	SignSupport_ep	Trusses and Cantilevers for Overhead Signs	0	3	1
X	plprrd	SignTruss_ep	Sign Symbol Truss (Existing)	3	2	1
X	plprrd	Slopes_px	Slope Lines on Cross Sections	9	0	2
X	plprrd	SoilBoxes_px	Soil Boxes and Borings for Cross Sections	4	0	1
	plprrd	SpanWire_ep	Signal / Span Wire Pole	3	2	0
	plprrd	SpecialDetails_px	Special Details_XS	6	0	1
	plprrd	Sprinkler_ep	Sprinkler Head	1	1	1
X	plprrd	Stabilization_px	Stabilization for Cross Sections	5	2	2
	plprrd	StationTicL_dp	Station Tic Marks (Large) and Text	0	0	2
	plprrd	StationTicS_dp	Station Tic Marks (Small) and Text	0	0	2
X	plprrd	SteamPipe	Steam Pipes	1	stm	1
X	plprrd	StreetLights	Street Lights	2	0	1
X	plprrd	StreetLights_px	Street Lights for Cross Sections	3	0	1
X	plprrd	SubDsgn_px	Sub Design for Cross Sections including subbase	4	0	1
X	plprrd	Subsoil_px	Subsoil Or Undercut for Cross Sections	4	0	2

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
	plprrd	SumBoxBorder_dp	Summary Boxes Borders	4	0	3
	plprrd	SumBoxLines_dp	Summary Boxes Lines and Miscellaneous Items	4	0	1
	plprrd	SumBoxLinesMin_dp	Summary Boxes Lines Minor Line and Miscellaneous Items	4	0	0
X	plprrd	Switchgear	Switchgear and Appurtenances	3	0	0
	plprrd	Tele_ep	Telephone Line (aerial)	6	e-ot	0
X	plprrd	TeleAer	Telephone Line (Aerial)	6	ot	1
X	plprrd	TeleBur	Telephone (Buried)	6	bt	1
	plprrd	TeleBur_ep	Telephone (all sizes Buried), Duct, Toll	6	e-bt	1
X	plprrd	TeleBur_ex	Telephone for Cross Sections (Buried - Miscellaneous - Existing)	6	2	1
X	plprrd	TeleBur_px	Telephone for Cross Sections (Buried) (Miscellaneous)	6	0	1
	plprrd	TeleMisc	Telephone Service Box, Booth or Pedestal	6	0	0
	plprrd	TeleMisc_ep	Telephone Service Box, Booth or Pedestal	6	1	1
	plprrd	TextAlert	Text - An Alert Label to Highlight a Problem	3	0	2
	plprrd	TextBLStation	Text - B/L Station and Tics	0	0	2
	plprrd	TextConstEle	Text - Construction Element	0	0	1
	plprrd	TextCurveData	Text - Curve Data Note	0	0	2
	plprrd	TextDetails	Text - Detail Notes	4	0	2
	plprrd	TextElevLabel	Elevation Labels	4	0	0
	plprrd	TextGeotech	Text for soil borings and labels	0	0	2
	plprrd	TextLabel	Text - Label	0	0	2
	plprrd	TextLandscape	Text - Landscape Labels	0	0	1
	plprrd	TextMajor	Text - Major	0	0	5
	plprrd	TextMinor	Text - Minor	0	0	0
	plprrd	TextMisc	Text - Miscellaneous	0	0	1
	plprrd	TextNotes	Text - Notes	4	0	1
	plprrd	TextProfLabel	Text - Profile, Horizontal and Vertical Axis Labels	0	0	2
	plprrd	TextProjLabel	Text - Begin and End Project label with leader lines	1	0	2
	plprrd	TextPtLabel	Point Labels	4	0	0
	plprrd	TextShtNo	Text - Sheet Number	0	0	2
	plprrd	TextSurveyLabel	Survey Text Labels	0	0	0
	plprrd	TextTables	Text - Keysheet Indexes and Table Data	4	0	2
	plprrd	TextTitle	Text - Title	0	0	3
	plprrd	TextXSElev	Text - Cross Section Elevations	2	0	1
	plprrd	TopoMisc_ep	Miscellaneous Topography	0	3	1
	plprrd	Tower_ep	High Mast Light Poles or Towers, Transmission Tower, Antenna	3	1	1

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
X	plprrd	TrafSeparatorBase_px	Proposed Traffic Separator Subgrade	3	0	2
X	plprrd	TransformerAer	Transformer Unit (Above Ground)	3	0	0
X	plprrd	TransformerBur	Transformer (Underground)	3	0	1
X	plprrd	TransmissionAer	Proposed Overhead Electric Power Conductors (Distribution & Transmission)	3	oe	0
X	plprrd	TransmissionBur	Proposed Buried Electric Power Conductors (Distribution & Transmission)	3	be	1
X	plprrd	TransmissionT	Transmission Tower Single	3	0	0
	plprrd	Utility_er	Existing Utilities in Profile View	3	2	1
	plprrd	Utility_pr	Proposed Utilities in Profile View	3	0	2
	plprrd	UtilMisc_ep	Miscellaneous Utilities	0	0	0
	plprrd	UtilsMisc	Miscellaneous Utility Items	8	0	1
	plprrd	UtilsMisc_ex	Miscellaneous Utility Items on Cross Sections (Existing)	8	2	1
	plprrd	UtilsMisc_px	Miscellaneous Utility Items on Cross Sections	8	0	1
X	plprrd	Valve	Valve, Valve Box (Unknown) PROPOSED UNKNOW VALVE	0	0	1
	plprrd	Valve_ep	Valve, Valve Box	0	1	1
X	plprrd	ValveCover	Valve Cover (Unknown) PROPOSED UNKNOW VALVE	0	0	1
	plprrd	ValveCover_ep	Valve Cover	0	1	1
X	plprrd	ValveCvrEff	Valve Cover (Effluent)	5	0	1
	plprrd	ValveCvrEff_ep	Valve Cover (Effluent)	5	1	1
X	plprrd	ValveCvrGas	Valve Cover (Gas)	4	0	1
	plprrd	ValveCvrGas_ep	Valve Cover (Gas)	4	1	1
X	plprrd	ValveCvrSewer	Valve Cover (Sewer)	2	0	1
	plprrd	ValveCvrSewer_ep	Valve Cover (Sewer)	2	1	1
X	plprrd	ValveCvrWater	Valve Cover (Water)	1	0	1
	plprrd	ValveCvrWater_ep	Valve Cover (Water)	1	1	1
	plprrd	ValveCvrWaterNP_ep	Valve Cover (Non-potable Water)	5	1	1
X	plprrd	ValveGas	Valve, Valve Box (Gas)	4	0	1
	plprrd	ValveGas_ep	Valve (Gas), Valve Box	4	1	1
X	plprrd	ValveSewer	Valve, Valve Box (Sewer)	2	0	1
	plprrd	ValveSewer_ep	Valve (Sewer), Valve Box	2	1	1
X	plprrd	ValveWater	Valve, Valve Box (Water)	1	0	1
	plprrd	ValveWater_ep	Valve (Water), Valve Box	1	1	1
X	plprrd	ValveWaterNP	Water Line Non Potable	5	0	1
	plprrd	ValveWaterNP_ep	Valve (Non-potable Water), Valve Box	8	1	1
	plprrd	Vault_ep	Vaults Above Grade and Below Grade	3	1	0

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
	plprrd	Vaults	Vaults Above Grade and Below Grade	3	0	0
X	plprrd	VaultsRW	Vaults (Raw Water)	1	0	0
	plprrd	Vent	Vent (Unknown) PROPOSED UNKNOW VENT	0	0	0
	plprrd	Vent_ep	Vent	0	1	1
X	plprrd	VentGas	Vent (Gas)	4	0	0
	plprrd	VentGas_ep	Vent (Gas)	4	1	1
X	plprrd	VentSewer	Vent (Sewer)	2	0	0
	plprrd	VentSewer_ep	Vent (Sewer)	2	1	1
	plprrd	Viewport	Viewport (For AutoCAD Use)	3	0	0
	plprrd	VoidArea_dx	Void Area_XS	1	0	0
X	plprrd	Water	Water Line	1	w	2
	plprrd	Water_ep	Water Line (all sizes)	1	e-w	1
X	plprrd	Water_ex	Water for Cross Sections (Existing)	1	2	1
X	plprrd	Water_px	Water for Cross Sections	1	0	1
X	plprrd	WaterFct	Standpipe and Water Faucet	1	0	0
X	plprrd	WaterFilter	Water Filter	5	0	2
X	plprrd	WaterMeter	Water Meter	1	0	2
	plprrd	WaterMisc_ep	Faucet, Standpipe	1	1	1
X	plprrd	WaterNP	Water Line Non Potable	5	npw	2
X	plprrd	WaterNP_px	Raw Water Pipes for Cross Sections	1	0	1
X	plprrd	Well	Well	1	1	1
X	plprrd	WellMon	Well Monitoring	1	0	1
	plprrd	Wells_ep	Wells, Monitoring Well, Taps	1	1	1
	plprrd	Xreference_dp	Reference Files (For AutoCAD Use)	0	0	1
	plprrd	Xreference01_dp	Reference Files (For AutoCAD Use)	0	0	1
	plprrd	Xreference02_dp	Reference Files (For AutoCAD Use)	0	0	1
	plprrd	Xreference03_dp	Reference Files (For AutoCAD Use)	0	0	1
	plprrd	Xreference04_dp	Reference Files (For AutoCAD Use)	0	0	1
	plprrd	Xreference05_dp	Reference Files (For AutoCAD Use)	0	0	1
	plprrd	Xreference06_dp	Reference Files (For AutoCAD Use)	0	0	1
	plprrd	Xreference07_dp	Reference Files (For AutoCAD Use)	0	0	1
	plprrd	Xreference08_dp	Reference Files (For AutoCAD Use)	0	0	1
	plprrd	Xreference09_dp	Reference Files (For AutoCAD Use)	0	0	1
	plprrd	Xreference10_dp	Reference Files (For AutoCAD Use)	0	0	1
X	plprrd	XSBaseTop_px	Top of Proposed Base	3	0	2

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
	plprrd	XSCell	GEOPAK Cross Section Cell and Profile Cell	8	0	1
X	plprrd	XSExtendGrdLine_ex	Extend Ground Lines for Cross Sections (Existing)	21	2	1
X	plprrd	XSGrdLine_ex	Ground Lines for Cross Sections (Existing)	2	2	1
X	plprrd	XSGrdLine_px	Roadway Ground Lines on Cross Sections	1	0	2
	plprrd	XSPt_ep	Cross Section Point, Station	2	1	0

4.2.25 QUANTITY COMPUTATION - QTDSRD

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
	qtdsrd	ActivePointCell_dp	Active Point Cell	4	0	10
	qtdsrd	AdhocPoint_dp	Adhoc Points Placed by SheetInfo	0	4	0
X	qtdsrd	AdvWarnPanel	Advance Warning Arrow Panels	4	0	2
X	qtdsrd	Aggregate	Aggregate	8	0	1
X	qtdsrd	ArtificialCovering	Artificial Coverings	10	0	2
X	qtdsrd	AsphaltConc	Asphaltic Concrete Quantity Shapes	6	0	3
X	qtdsrd	AsphaltMilling	Asphalt Milling Quantity Shapes	7	0	2
	qtdsrd	AsphaltMisc	Asphalt Miscellaneous Material	1	0	1
X	qtdsrd	Attenuator	Attenuation Systems	6	attenuator	1
X	qtdsrd	AttenuatorTM	Attenuator Truck Mount	6	0	2
X	qtdsrd	Barricade	Barricade	0	0	1
X	qtdsrd	Barricade1	Barricade Symbol Type 1 or 2 at 15' spacing	0	barricade1	1
X	qtdsrd	Barricade2	Barricade Symbol Type 1 or 2 at 30' spacing	0	barricade2	1
X	qtdsrd	Barricade3	Barricade Symbol Type 1 or 2 at 50' spacing	0	barricade3	1
X	qtdsrd	Barricade4	Barricade Symbol Type 1 or 2 at 100' spacing	0	barricade4	1
X	qtdsrd	BarrierWall	Barrier Wall All Types	6	0	2
X	qtdsrd	Base	Base Material (All Types)	3	0	2
X	qtdsrd	CandG_ex	Curb and Gutter for Cross Sections (All Types) (Existing)	4	2	1
X	qtdsrd	CandG_px	Curb and Gutter for Cross Sections (All Types)	4	0	2
X	qtdsrd	CandGBase_px	Curb and Gutter Base on Cross Sections	3	0	1
	qtdsrd	CLConst_dp	Center Line of Construction	0	0	2
X	qtdsrd	ClearingGrubbing	Clearing and Grubbing Limits and Quantity Items	4	0	1
	qtdsrd	ClipBorder_dp	CLIP Border	3	0	0

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
	qtdsrd	ClipDrawingBound_dp	CLIP Drawing Boundary	3	3	0
	qtdsrd	Cloud_dp	Construction Cloud	7	0	2
X	qtdsrd	CmpFlashbrdRiser	Cmp Flashboard Riser	10	0	2
	qtdsrd	COGO_dp	COGO Information	3	0	1
X	qtdsrd	ConcPavt	Concrete Pavement Edges	10	0	2
X	qtdsrd	ConcPvtSC	Concrete Surface Coloring	9	0	1
X	qtdsrd	Concrete	Concrete Areas (All Types plus miscellaneous)	0	0	2
X	qtdsrd	ConcSlabs	Concrete Slabs	0	0	2
X	qtdsrd	Cone	Cone and Tubular Marker	6	0	2
	qtdsrd	ConstArea_dp	Construction Area Crosshatch	0	0	1
	qtdsrd	ConstLimits	Construction Limits	3	LOC	2
	qtdsrd	ConstLines	Construction Lines and References	1	0	0
X	qtdsrd	CurbBack	Back of Curb	4	0	1
X	qtdsrd	CurbFace	Curb and Gutter (Face)	4	0	1
X	qtdsrd	CurbRamp	Curb Cut Ramp	8	0	1
	qtdsrd	CurveData_dp	Curve & Coordinate Data Elements incl PC, PT, PI symbols	4	0	2
	qtdsrd	CurveDataLabel_dp	Curve Data Labels PC,PI, PT	0	0	2
	qtdsrd	DimLines_dp	Dimension Lines, Corresponding Terminators, Equation Lines	0	0	1
X	qtdsrd	DitchPavt	Ditch Pavement Including Quantity Shapes	3	0	1
	qtdsrd	Driveway	Driveway (Drive, Lane, Turnouts)	7	0	2
X	qtdsrd	EaseLicLine	Easement License Agreement Line	5	6	0
X	qtdsrd	EOP	Edge of Pavement	0	0	2
X	qtdsrd	FlashingLight	Flashing Lights (All Types)	0	0	1
X	qtdsrd	FlowPaths	Time of Concentration Flow Paths	10	1	1
X	qtdsrd	FrictionCourse	Asphalt Concrete Friction Course	4	0	2
X	qtdsrd	Gabions	Gabion Baskets or Mats	10	0	2
X	qtdsrd	Gabions_ep	Gabion Baskets or Mats (Existing)	10	1	2
X	qtdsrd	Grass	Grass, Seeding and Mulching Areas	2	1	2
X	qtdsrd	GravityWall	Gravity Wall	11	0	1
X	qtdsrd	Guardrail	Guardrail	0	0	2
X	qtdsrd	Guardrail_px	Guardrail	0	0	1
X	qtdsrd	GuardrailDbl	Guardrail Double Face	0	grdbl	1
X	qtdsrd	GuardrailEndAch	Guardrail End Anchorage	0	0	1
X	qtdsrd	GuardrailLt	Guardrail Left	0	grail1	1
X	qtdsrd	GuardrailRt	Guardrail Right	0	grail2	1

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
X	qtdsrd	Handrail	Handrails	9	0	1
	qtdsrd	ImageAttachment_dp	Image Attachmentst	0	0	0
X	qtdsrd	InletProt	Rock Bags and Sand Bagging	10	Rockbag	2
	qtdsrd	LeaderLine_dp	Leader Line and terminator with Text	0	0	1
X	qtdsrd	Mailbox	Mailboxes	8	0	1
	qtdsrd	MatchLines_dp	Match Lines with Text, Arrows for Station Notations	1	0	2
	qtdsrd	Miscellaneous0	Undefined proposed item - co blue wt 0	1	0	0
	qtdsrd	Miscellaneous1	Undefined proposed item - co blue wt 1	1	0	1
	qtdsrd	Miscellaneous2	Undefined proposed item - co blue wt 2	1	0	2
	qtdsrd	Miscellaneous3	Undefined proposed item - co green wt 0	2	0	0
	qtdsrd	Miscellaneous4	Undefined proposed item - co green wt 1	2	0	1
	qtdsrd	Miscellaneous5	Undefined proposed item - co green wt 2	2	0	2
	qtdsrd	Miscellaneous6	Undefined proposed item - co red wt 0	3	0	0
	qtdsrd	Miscellaneous7	Undefined proposed item - co red wt 1	3	0	1
	qtdsrd	Miscellaneous8	Undefined proposed item - co red wt 2	3	0	2
	qtdsrd	Miscellaneous9	Undefined proposed item - co red wt 3	3	0	3
X	qtdsrd	MowingAreaLarge	Mowing and Maintenance Areas for Large Machine	2	0	2
X	qtdsrd	MowingAreaSmall	Mowing and Maintenance Areas	68	0	1
X	qtdsrd	Mulch	Mulch Area	10	0	1
	qtdsrd	NonPlottingEle_dp	Non plotting items such as construction elements and type 66 elements	4	0	0
X	qtdsrd	ObjectMarker	Object and Reflective Markers	3	0	1
X	qtdsrd	OverheadSign	Overhead Sign Panels	0	0	2
X	qtdsrd	OverheadSign_ep	Overhead Sign Panels (Existing)	0	3	1
X	qtdsrd	OverheadStr	Mast Arm, Truss Assemblies, Signal Arms and Supports	0	0	2
X	qtdsrd	OverheadStr_ep	Mast Arm, Truss Assemblies, Signal Arms and Supports (Existing)	0	3	1
	qtdsrd	Patternlines_ep	Cross Section Chain	2	1	0
	qtdsrd	Pavers	Pavers - Brick and Block	5	0	1
	qtdsrd	PavtAsph_ep	Asphalt Pavement Edge	0	3	1
	qtdsrd	PavtConc_ep	Concrete Pavement (Edges)	0	3	1
X	qtdsrd	PavtMessage	Pavement Message (All types)	0	0	1
X	qtdsrd	PavtMessage_ep	Pavement Message (Existing - All types)	0	2	0
	qtdsrd	PavtMiscMat	Misc Pavement Quantity Items (Bituminous Material, Cover Material, Mesh, etc.)	11	0	1
	qtdsrd	PavtXover_ep	Crossovers and Detours (Temporary)	0	3	0
	qtdsrd	PayItem_dp	Pay Item Number Label Elements	4	0	2
	qtdsrd	Permit1	Permit 1 Wetlands, Mitigation Sites, Planting Areas	1	0	1

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
	qtdsrd	Permit2	Permit 2 Wetlands, Mitigation Sites, Planting Areas	2	0	1
	qtdsrd	Permit3	Permit 3 Wetlands, Mitigation Sites, Planting Areas	4	0	1
X	qtdsrd	PMCeramic	Pavement Markers Ceramic	0	0	1
	qtdsrd	PMMisc	Pavement Marking Miscellaneous Items	0	0	2
X	qtdsrd	PMStripe12B	Pavement Marking Traffic Stripe 12in Black	3	stripe12	4
X	qtdsrd	PMStripe12W	Pavement Marking Traffic Stripe 12in White	0	stripe12	4
X	qtdsrd	PMStripe12W(3-9)	Pavement Marking 3/9 Skip Traffic Stripe 12in White	0	stripe12	4
X	qtdsrd	PMStripe12Y	Pavement Marking Traffic Stripe 12in Yellow	4	stripe12	4
X	qtdsrd	PMStripe16B	Pavement Marking Traffic Stripe 16in Black	3	stripe16	5
X	qtdsrd	PMStripe16W	Pavement Marking Traffic Stripe 16in White	0	stripe16	5
X	qtdsrd	PMStripe16Y	Pavement Marking Traffic Stripe 16in Yellow	4	stripe16	5
X	qtdsrd	PMStripe18B	Pavement Marking Traffic Stripe 18in Black	3	stripe18	6
X	qtdsrd	PMStripe18W	Pavement Marking Traffic Stripe 18in White	0	stripe18	6
X	qtdsrd	PMStripe18Y	Pavement Marking Traffic Stripe 18in Yellow	4	stripe18	6
X	qtdsrd	PMStripe24W	Pavement Marking Traffic Stripe 24in White	0	stripe24	7
X	qtdsrd	PMStripe24Y	Pavement Marking Traffic Stripe 24in Yellow	4	stripe24	7
X	qtdsrd	PMStripe6B	Pavement Marking Traffic Stripe 6in Black	3	stripe06	2
X	qtdsrd	PMStripe6B(10-30)	Pavement Marking 10/30 Skip Traffic Stripe 6in Black	3	stripe06	2
X	qtdsrd	PMStripe6Bl	Pavement Marking Traffic Stripe 6in Blue	1	stripe06	2
X	qtdsrd	PMStripe6DY	Pavement Marking Traffic Stripe 6in Double Yellow	4	dbl_line	2
X	qtdsrd	PMStripe6W	Pavement Marking Traffic Stripe 6in White	0	stripe06	2
X	qtdsrd	PMStripe6W(10-30)	Pavement Marking 10/30 Skip Traffic Stripe 6in White	0	stripe06	2
X	qtdsrd	PMStripe6W(2-4)	Pavement Marking 2/4 Skip Traffic Stripe 6in White	0	stripe06	2
X	qtdsrd	PMStripe6W(3-9)	Pavement Marking 3/9 Skip Traffic Stripe 6in White	0	stripe06	2
X	qtdsrd	PMStripe6W(6-10)	Pavement Marking 6/10 Skip Traffic Stripe 6in White	0	stripe06	2
X	qtdsrd	PMStripe6Y	Pavement Marking Traffic Stripe 6in Yellow	4	stripe06	2
X	qtdsrd	PMStripe6Y(10-30)	Pavement Marking 10/30 Skip Traffic Stripe 6in Yellow	4	stripe06	2
X	qtdsrd	PMStripe6Y(2-4)	Pavement Marking 2/4 Skip Traffic Stripe 6in Yellow	4	stripe06	2
X	qtdsrd	PMStripe6Y(6-10)	Pavement Marking 6/10 Skip Traffic Stripe 6in Yellow	4	stripe06	2
X	qtdsrd	PMStripe8B	Pavement Marking Traffic Stripe 8in Black	3	stripe06	3
X	qtdsrd	PMStripe8W	Pavement Marking Traffic Stripe 8in White	0	stripe08	3
X	qtdsrd	PMStripe8W(3-9)	Pavement Marking 3/9 Skip Traffic Stripe 8in White	0	stripe08	2
X	qtdsrd	PMStripe8Y	Pavement Marking Traffic Stripe 8in Yellow	4	stripe08	3
X	qtdsrd	PMStripeVibeW	Pavement Marking Auditory and Vibratory 6in White	0	Vibratory	2
X	qtdsrd	PMStripeVibeY	Pavement Marking Auditory and Vibratory 6in Yellow	4	Vibratory	2

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
	qtdsrd	PointLocator_ep	Point Locator Symbol	4	0	0
X	qtdsrd	PondSideSlope	Pond Side Slope	0	0	2
	qtdsrd	ReferencePt_dp	Survey and Construction Reference Point Details and Elements	4	0	2
X	qtdsrd	ReflPaintWht	Reflective Paint - Island Nose (White)	0	0	3
X	qtdsrd	ReflPaintYel	Reflective Paint - Island Nose (Yellow)	4	0	3
X	qtdsrd	RetentionArea	Retention Area	2	0	2
	qtdsrd	RoadwayMisc	Roadway Miscellaneous Items	4	0	2
X	qtdsrd	RockGravelStone	Rock, Gravel, Stone, Boulders, Etc.	1	0	2
X	qtdsrd	RPM_ep	Reflective Pavement Markers (Existing)	2	2	1
X	qtdsrd	RPM1	Raised Pavement Markers, White	0	0	2
X	qtdsrd	RPM2	Raised Pavement Markers, White - Red	3	0	2
X	qtdsrd	RPM3	Raised Pavement Markers, Yellow	4	0	2
X	qtdsrd	RPM4	Raised Pavement Markers, Yellow - Yellow	9	0	2
X	qtdsrd	RPM5	Raised Pavement Markers, Yellow - Red	6	0	2
X	qtdsrd	RPM6	Raised Pavement Markers, Blue	1	0	2
X	qtdsrd	RumbleStrip1	Rumble Strips Continuous Array	0	rumble_cont	2
X	qtdsrd	RumbleStrip2	Rumble Strips Skip Array	0	rumble_skip	2
	qtdsrd	Scratch1_dp	A scratch level for temporary or informational items	4	0	0
	qtdsrd	Scratch2_dp	A scratch level for temporary or informational items	5	0	0
	qtdsrd	ScratchEle_dp	Level for Draft Elements, Temporary Elements, Etc. Do Not Plot	3	0	0
	qtdsrd	ScratchEle2_dp	Level for Draft Elements, Temporary Elements, Etc. Do Not Plot	4	0	0
101	qtdsrd	SedimentBarrier	Synthetic Bales and Staked Silt Fences	10	*hay_bales	2
101	qtdsrd	SedimentBarrier	Synthetic Bales and Staked Silt Fences	10	*silt_fence	2
X	qtdsrd	SedimentBasin	Sediment Basin Index 101	10	0	2
X	qtdsrd	SedimentBasin_ep	Sediment Basin Index 101 (Existing)	10	3	1
	qtdsrd	ShldrHatch	Paved Shoulder Hatch Pattern	1	0	1
X	qtdsrd	ShldrPaved	Paved Shoulder Line	1	0	1
X	qtdsrd	ShldrUnpaved	Unpaved Shoulder Line	0	0	0
X	qtdsrd	SidewalkBack	Sidewalk Back	2	0	1
X	qtdsrd	SidewalkConc	Sidewalk Concrete Shape	0	0	2
X	qtdsrd	SidewalkFront	Sidewalk Front	1	0	1
X	qtdsrd	SignCantilever	Sign Symbol Cantilever	0	0	1
X	qtdsrd	SignCantilever_ep	Sign Symbol Cantilever (Existing)	0	2	0
	qtdsrd	SignDetail	Sign Details	0	0	2
	qtdsrd	SignLettersAZ	Alphabet Cell Library Letter A-Z Numbers 0-9	0	0	0

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
	qtdsrd	SignMisc	Miscellaneous Sign Symbols	1	0	2
	qtdsrd	SignMisc_ep	Miscellaneous Sign Symbols (Existing)	1	1	1
X	qtdsrd	SignPanel	Sign Panels - Regulatory	0	0	2
X	qtdsrd	SignPanel_ep	Sign Panel Elements (Existing)	0	2	1
X	qtdsrd	SignPanelBorder	Sign Panel Border on Sign Details	0	0	1
X	qtdsrd	SignSpanwire	Span Wire Signing Assembly	2	0	1
X	qtdsrd	SignSpanwire_ep	Span Wire Signing Assembly (Existing)	2	2	1
X	qtdsrd	SignSpecial	Special Signs / Guide Signs	2	0	2
X	qtdsrd	SignSupport	Ground Mounted Sign Support Symbol (All Types)	1	0	1
	qtdsrd	SignSupport_ep	Trusses and Cantilevers for Overhead Signs	0	3	1
X	qtdsrd	SignSymbol_px	Sign Structure and Foundation on Cross Sections	4	0	2
X	qtdsrd	SignTruss	Sign Symbol Truss	3	0	1
X	qtdsrd	SignTruss_ep	Sign Symbol Truss (Existing)	3	2	1
X	qtdsrd	Sod	Performance Sod	2	0	2
X	qtdsrd	Stabilization	Stabilization Material Lines and Shapes	9	0	2
	qtdsrd	StationTicL_dp	Station Tic Marks (Large) and Text	0	0	2
	qtdsrd	StationTicS_dp	Station Tic Marks (Small) and Text	0	0	2
	qtdsrd	SuperPave	Asphaltic Concrete Super Pavement	6	0	2
X	qtdsrd	TCZSign	Traffic Control Sign Symbol	6	0	2
X	qtdsrd	TCZSign1	Traffic Control Sign Symbol at 200' Spacing	6	sign3	2
X	qtdsrd	TCZSign2	Traffic Control Sign Symbol at 400' Spacing	6	sign2	2
X	qtdsrd	TCZSign3	Traffic Control Sign Symbol at 500' Spacing	6	sign1	2
	qtdsrd	TextAlert	Text - An Alert Label to Highlight a Problem	3	0	2
	qtdsrd	TextBLStation	Text - B/L Station and Tics	0	0	2
	qtdsrd	TextConstEle	Text - Construction Element	0	0	1
	qtdsrd	TextCurveData	Text - Curve Data Note	0	0	2
	qtdsrd	TextDetails	Text - Detail Notes	4	0	2
	qtdsrd	TextElevLabel	Elevation Labels	4	0	0
	qtdsrd	TextLabel	Text - Label	0	0	2
	qtdsrd	TextLandscape	Text - Landscape Labels	0	0	1
	qtdsrd	TextMajor	Text - Major	0	0	5
	qtdsrd	TextMinor	Text - Minor	0	0	0
	qtdsrd	TextMisc	Text - Miscellaneous	0	0	1
	qtdsrd	TextNotes	Text - Notes	4	0	1
	qtdsrd	TextProfLabel	Text - Profile, Horizontal and Vertical Axis Labels	0	0	2
	qtdsrd	TextProjLabel	Text - Begin and End Project label with leader lines	1	0	2
	qtdsrd	TextPtLabel	Point Labels	4	0	0
	qtdsrd	TextShtNo	Text - Sheet Number	0	0	2

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
	qtdsrd	TextSurveyLabel	Survey Text Labels	0	0	0
	qtdsrd	TextTables	Text - Keysheet Indexes and Table Data	4	0	2
	qtdsrd	TextTitle	Text - Title	0	0	3
	qtdsrd	TextXSElev	Text - Cross Section Elevations	2	0	1
X	qtdsrd	TrafSeparator	Traffic Separator (All Types)	6	0	1
X	qtdsrd	TurbidityBarrier1	Turbidity Barrier 1 (floating)	10	barrier1	2
X	qtdsrd	TurbidityBarrier2	Turbidity Barrier 2 (staked)	10	barrier2	2
	qtdsrd	TurbidityBarrier2_ep	Turbidity Barrier (Staked) (Existing)	10	1	2
	qtdsrd	TurbidityBarrier1_ep	Turbidity Barrier (Floating) (Existing)	10	1	2
X	qtdsrd	Turf	Performance Truf	100	0	2
	qtdsrd	Viewport	Viewport (For AutoCAD Use)	3	0	0
	qtdsrd	Wetland	Wetland Boundary	2	wetland	1
	qtdsrd	Widening	Widening Patterns and Miscellaneous Elements	1	0	1
	qtdsrd	Xreference_dp	Reference Files (For AutoCAD Use)	0	0	1
	qtdsrd	Xreference01_dp	Reference Files (For AutoCAD Use)	0	0	1
	qtdsrd	Xreference02_dp	Reference Files (For AutoCAD Use)	0	0	1
	qtdsrd	Xreference03_dp	Reference Files (For AutoCAD Use)	0	0	1
	qtdsrd	Xreference04_dp	Reference Files (For AutoCAD Use)	0	0	1
	qtdsrd	Xreference05_dp	Reference Files (For AutoCAD Use)	0	0	1
	qtdsrd	Xreference06_dp	Reference Files (For AutoCAD Use)	0	0	1
	qtdsrd	Xreference07_dp	Reference Files (For AutoCAD Use)	0	0	1
	qtdsrd	Xreference08_dp	Reference Files (For AutoCAD Use)	0	0	1
	qtdsrd	Xreference09_dp	Reference Files (For AutoCAD Use)	0	0	1
	qtdsrd	Xreference10_dp	Reference Files (For AutoCAD Use)	0	0	1
	qtdsrd	XSCell	GEOPAK Cross Section Cell and Profile Cell	8	0	1
	qtdsrd	XSPt_ep	Cross Section Point, Station	2	1	0

4.2.26 ROADWAY CROSS SECTION - RDXSRD

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
	rdxsrd	ActivePointCell_dp	Active Point Cell	4	0	10
	rdxsrd	AdhocPoint_dp	Adhoc Points Placed by SheetInfo	0	4	0
X	rdxsrd	AsphaltConc	Asphaltic Concrete Quantity Shapes	6	0	3
X	rdxsrd	AsphaltMilling_px	Asphalt Milling Lines on Cross Sections	7	0	2

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
X	rdxsrd	AsphaltMisc_px	Miscellaneous Pavement on Cross Sections	1	0	2
X	rdxsrd	BarrierWall_ex	Barrier Wall for Cross Section (Existing)	6	3	1
X	rdxsrd	BarrierWall_px	Barrier Wall for Cross Section	6	0	2
X	rdxsrd	Base_ex	Base Material for Cross Sections (All Types) (Existing)	3	3	1
X	rdxsrd	Base_px	Base Material for Cross Sections (All Types)	3	0	2
	rdxsrd	BaselineSurvey	Baseline Survey	0	0	2
X	rdxsrd	Berm_px	Berm (Top, Front, or Back) for Cross Sections	10	0	2
X	rdxsrd	CableBarrier_px	Cable Barrier for Cross Sections	0	0	2
X	rdxsrd	CandG_ex	Curb and Gutter for Cross Sections (All Types) (Existing)	4	2	1
X	rdxsrd	CandG_px	Curb and Gutter for Cross Sections (All Types)	4	0	2
X	rdxsrd	CandGBase_px	Curb and Gutter Base on Cross Sections	3	0	1
X	rdxsrd	CATVBur_ex	Cable TV and Miscellaneous on Cross Sections (Existing)	6	2	1
X	rdxsrd	CATVBur_px	Cable TV and Miscellaneous on Cross Sections	6	0	1
	rdxsrd	CLConst_dp	Center Line of Construction	0	0	2
	rdxsrd	Cloud_dp	Construction Cloud	7	0	2
	rdxsrd	COGO_dp	COGO Information	3	0	1
X	rdxsrd	Concrete_px	Concrete Boundary Lines on Cross Sections	0	0	2
X	rdxsrd	Conduit_ex	Conduit and Encasements on Cross Sections (Existing)	3	2	1
X	rdxsrd	Conduit_px	Conduit and Encasements on Cross Sections	3	0	1
	rdxsrd	ConstArea_dp	Construction Area Crosshatch	0	0	1
	rdxsrd	ConstLimits	Construction Limits	3	LOC	2
	rdxsrd	ConstLines	Construction Lines and References	1	0	0
	rdxsrd	CurveData_dp	Curve & Coordinate Data Elements incl PC, PT, PI symbols	4	0	2
	rdxsrd	CurveDataLabel_dp	Curve Data Labels PC,PI, PT	0	0	2
	rdxsrd	DimLines_dp	Dimension Lines, Corresponding Terminators, Equation Lines	0	0	1
X	rdxsrd	Ditch_px	Ditch Top for Cross Sections	7	0	2
X	rdxsrd	DitchBot_px	Ditch Bottom for Cross Sections	10	0	2
X	rdxsrd	DitchPavt_px	Ditch Pavement for Cross Sections	3	0	3
	rdxsrd	DrainAlert_px	Alert Symbology for Structural Elements on Cross Sections	3	0	2
	rdxsrd	DrainMisc_ex	All types of miscellaneous drainage elements (Existing)	10	3	1
X	rdxsrd	DrainStruct_ex	All Drainage Structures for Cross Sections (Existing)	10	3	1
X	rdxsrd	DrainStruct_px	Misc Drainage Structures and Elements for XSections	10	0	2
X	rdxsrd	Driveway_ex	Driveway Lines on Cross Sections - Existing	7	1	2
X	rdxsrd	Driveway_px	Driveway Lines on Cross Sections	7	0	2

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
X	rdxsrd	DrivewayBase_px	Proposed Driveway Subgrade	3	0	2
	rdxsrd	Earthwork1_px	Earthwork (color 0)	0	0	1
	rdxsrd	Earthwork2_px	Earthwork (color 1)	1	0	1
	rdxsrd	Earthwork3_px	Earthwork (color 2)	2	0	1
	rdxsrd	Earthwork4_px	Earthwork (color 3)	3	0	1
	rdxsrd	Earthwork5_px	Earthwork (color 4)	4	0	1
X	rdxsrd	EaseLicLine	Easement License Agreement Line	5	6	0
X	rdxsrd	EaseLine_ep	Easement Lines (Existing)	1	PESMT	1
X	rdxsrd	EasePerpLine_px	Easement Lines Perpetual on Cross Sections	4	PESMT	1
X	rdxsrd	EaseTempLine_px	Easement Lines Temporary on Cross Sections	6	TEMPE	0
X	rdxsrd	Endwall_px	Endwall for Cross Sections	10	0	2
	rdxsrd	ExcavationLimits_dp	Excavation Limits on Cross Sections	0	0	1
	rdxsrd	Fence_ex	Fence Lines on Cross Sections (Existing)	6	3	1
X	rdxsrd	Fence_px	Fence Lines on Cross Sections	6	Fence1	2
X	rdxsrd	FES_px	Flared End Sections for Cross Sections	10	0	2
	rdxsrd	FlowArrow_dp	Flow Arrow	10	0	2
X	rdxsrd	FOCBur_ex	Fiber Optics Cable (Buried) for XSections (Existing)	6	2	1
X	rdxsrd	FOCBur_px	Fiber Optics Cable (Buried) for XSections	6	0	1
X	rdxsrd	Gas_ex	Gas Pipe and Fittings, Misc for Xsections (Existing)	4	2	1
X	rdxsrd	Gas_px	Gas Pipe and Fittings, Misc for Xsections	4	0	1
	rdxsrd	GeotechFillPatt1	Geotechnical Fill Pattern - (earth, wood, muck, concrete, rock, riprap) as defined in project	3	0	0
	rdxsrd	GeotechFillPatt1_px	Geotechnical Fill Pattern - (earth, wood, muck, concrete, rock, riprap) as defined in project	3	0	0
	rdxsrd	GeotechFillPatt2	Geotechnical Fill Pattern - clay, sand	0	1	0
	rdxsrd	GeotechFillPatt2_px	Geotechnical Fill Pattern - clay, sand	0	1	0
	rdxsrd	GeotechFillPatt3	Geotechnical Fill Pattern - shell	3	1	0
	rdxsrd	GeotechFillPatt3_px	Geotechnical Fill Pattern - shell	3	1	0
	rdxsrd	GeotechFillPatt4	Geotechnical Fill Pattern - sand	4	0	0
	rdxsrd	GeotechFillPatt4_px	Geotechnical Fill Pattern - sand	4	0	0
	rdxsrd	GeotechFillPatt5	Geotechnical Fill Pattern - coquina	1	0	1
	rdxsrd	GeotechFillPatt5_px	Geotechnical Fill Pattern - coquina	1	0	1
	rdxsrd	GeotechFillPatt6	Geotechnical Fill Pattern - limestone	2	0	0
	rdxsrd	GeotechFillPatt6_px	Geotechnical Fill Pattern - limestone	2	0	0
	rdxsrd	GeotechFillPatt7	Geotechnical Fill Pattern - gravel	6	0	0
	rdxsrd	GeotechFillPatt7_px	Geotechnical Fill Pattern - gravel	6	0	0

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
	rdxsrd	GeotechFillPatt8	Geotechnical Fill Pattern - silt	0	0	1
	rdxsrd	GeotechFillPatt8_px	Geotechnical Fill Pattern - silt	0	0	1
	rdxsrd	GeotechMisc	Miscellaneous Geotechnical Elements	0	0	1
	rdxsrd	GPKDrBack_dp	Back Point on Drainage Cells	2	2	2
	rdxsrd	GPKDrBottom_dp	Bottom Point on Drainage Cells	3	3	2
	rdxsrd	GPKDrCellIns_dp	Cell Insertion Point on Drainage Cells	4	4	2
	rdxsrd	GPKDrCentroid_dp	Point on Centroid for Drainage	7	7	2
	rdxsrd	GPKDrElv	Location point for drainage cells	5	5	2
	rdxsrd	GPKDrFront_dp	Front Point on Drainage Cells	1	1	2
	rdxsrd	GPKDrPipe_dp	Point on Drainage Pipe	6	6	2
	rdxsrd	GPKDrPipeCir_dp	Point on Pipe Circular	6	6	0
X	rdxsrd	GravityWall_px	Gravity Wall for Cross Sections	11	0	2
X	rdxsrd	GravWallBase_px	Proposed Gravity Wall Subgrade	3	0	2
	rdxsrd	GridMaj_dp	Grid Lines Major in Profile and Cross Section	3	0	1
	rdxsrd	GridMin_dp	Grid Lines Minor in Profile and Cross Section	0	0	0
	rdxsrd	GridMinG_dp	Grid Lines Minor Sub 2 in Cross Section Sheets	20	0	0
	rdxsrd	GridMinSub_dp	Grid Lines Minor Sub in Cross Section Sheets	20	0	0
X	rdxsrd	Guardrail_ex	Guardrail Lines on Cross Sections - Existing	0	1	2
X	rdxsrd	Guardrail_px	Guardrail	0	0	1
X	rdxsrd	Handrail_px	Handrail Lines on Cross Sections	9	0	1
	rdxsrd	ImageAttachment_dp	Image Attachmentst	0	0	0
X	rdxsrd	Inlet_px	Inlets on Cross Sections	10	0	2
X	rdxsrd	InletBottom_px	Inlet Bottom on Cross Sections (All Types)	10	0	2
	rdxsrd	KeyShtMisc	Key sheet Miscellaneous Items	0	0	2
X	rdxsrd	LARWLine_ex	Limited Access Right of Way on XSections (Existing)	4	EXLA	1
X	rdxsrd	LARWLine_px	Limited Access ROW Lines on Cross Sections	4	LA	2
X	rdxsrd	LateralLimits_px	Lateral Limits for Cross Sections	6	0	2
	rdxsrd	LeaderLine_dp	Leader Line and terminator with Text	0	0	1
	rdxsrd	Logo_dp	Consultant Engineer of Record Logo	0	0	1
X	rdxsrd	Manhole_px	Manhole on Cross Sections	10	0	2
	rdxsrd	MatchLineMask_dp	Mask Area for Match Line Overlap Areas (Autodesk)	0	0	0
X	rdxsrd	MedianWallBase_px	Proposed Median Wall Subgrade	3	0	2
X	rdxsrd	MES_px	Mitered End Section on Cross Sections	10	0	2
	rdxsrd	Miscellaneous0	Undefined proposed item - co blue wt 0	1	0	0

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
	rdxsrd	Miscellaneous1	Undefined proposed item - co blue wt 1	1	0	1
	rdxsrd	Miscellaneous2	Undefined proposed item - co blue wt 2	1	0	2
	rdxsrd	Miscellaneous3	Undefined proposed item - co green wt 0	2	0	0
	rdxsrd	Miscellaneous4	Undefined proposed item - co green wt 1	2	0	1
	rdxsrd	Miscellaneous5	Undefined proposed item - co green wt 2	2	0	2
	rdxsrd	Miscellaneous6	Undefined proposed item - co red wt 0	3	0	0
	rdxsrd	Miscellaneous7	Undefined proposed item - co red wt 1	3	0	1
	rdxsrd	Miscellaneous8	Undefined proposed item - co red wt 2	3	0	2
	rdxsrd	Miscellaneous9	Undefined proposed item - co red wt 3	3	0	3
	rdxsrd	NonPlottingEle_dp	Non plotting items such as construction elements and type 66 elements	4	0	0
X	rdxsrd	Overbuild_px	Overbuild Areas on Cross Sections	4	0	2
X	rdxsrd	Overbuild1_px	Proposed Overbuild Binder Symbology (No Longer Used)	7	0	2
X	rdxsrd	Overbuild2_px	Proposed Overbuild Base Symbology (No Longer Used)	7	0	2
X	rdxsrd	Overlay_px	Proposed Overlay Layer for Cross Sections	1	0	2
X	rdxsrd	Overlay1_px	Proposed Overlay Layer for Cross Sections	14	0	2
X	rdxsrd	Overlay2_px	Proposed Overlay Layer for Cross Sections	7	0	2
	rdxsrd	Patternlines_ep	Cross Section Chain	2	1	0
	rdxsrd	PatternLines1_dp	Pattern Lines for Cross Sections	3	0	2
	rdxsrd	PatternLines2_dp	Pattern Lines for XSections alternate for side streets, critical xsections or drainage structures	4	0	2
	rdxsrd	PatternLines3_dp	Pattern Lines for XSections alternate for side streets, critical xsections or drainage structures	5	0	2
X	rdxsrd	PavedMedianBase_px	Proposed Paved Median Subgrade	3	0	2
	rdxsrd	PavtAsph_ep	Asphalt Pavement Edge	0	3	1
	rdxsrd	PayItem_dp	Pay Item Number Label Elements	4	0	2
	rdxstrd	PipeCulvert_ep	Pipe Culvert	10	3	1
X	rdxsrd	PipeCulvert_pr	Pipe Culvert in Profile	3	0	2
X	rdxsrd	PipeCulvert_px	Pipe Culvert for Cross Section View	10	0	2
X	rdxsrd	PlotBorder_dp	Plot Border	3	0	0
	rdxsrd	PointLocator_ep	Point Locator Symbol	4	0	0
X	rdxsrd	Pond_px	Pond Lines on Cross Sections	2	0	2
X	rdxsrd	Power_ex	Power on Cross Sections (Existing)	3	2	1
X	rdxsrd	Power_px	Power on Cross Sections	3	0	1
X	rdxsrd	PropertyLine_ep	Property Lines	3	0	0
	rdxsrd	ReferencePt_dp	Survey and Construction Reference Point Details and Elements	4	0	2
	rdxsrd	RegionBdry_dp	Boundary Line for Regions in Corridor Design (Autodesk)	0	0	0

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
X	rdxsrd	RetainWall_px	Retaining Walls on Cross Sections	6	0	1
X	rdxsrd	RipRap_px	Rip Rap, Rubble on Cross Sections	4	1	2
X	rdxsrd	RumbleStrip1	Rumble Strips Continuous Array	0	rumble_cont	2
X	rdxsrd	RumbleStrip2	Rumble Strips Skip Array	0	rumble_skip	2
X	rdxsrd	RWLine	Right of Way Lines	4	RW	2
X	rdxsrd	RWLine_ep	Right of Way Lines (Existing)	3	RW	1
X	rdxsrd	RWLine_ex	ROW Lines on Cross Sections (Existing)	3	RW	1
X	rdxsrd	RWLine_px	ROW Lines on Cross Sections	4	RW	2
X	rdxsrd	SanitaryFM_ex	Force Main Lines on Cross Sections (Existing)	2	2	1
X	rdxsrd	SanitaryFM_px	Force Main Lines on Cross Sections	2	0	1
X	rdxsrd	SanitarySewer_ex	Sanitary Sewer Lines on Cross Sections (Existing)	10	2	0
X	rdxsrd	SanitarySewer_px	Sanitary Sewer Lines on Cross Sections	2	0	1
X	rdxsrd	SanitarySewerEff_px	Sanitary Effluent for Cross Sections	9	0	0
	rdxsrd	Scratch1_dp	A scratch level for temporary or informational items	4	0	0
	rdxsrd	Scratch2_dp	A scratch level for temporary or informational items	5	0	0
	rdxsrd	ScratchEle_dp	Level for Draft Elements, Temporary Elements, Etc. Do Not Plot	3	0	0
	rdxsrd	ScratchEle2_dp	Level for Draft Elements, Temporary Elements, Etc. Do Not Plot	4	0	0
	rdxsrd	SheetBorder_dp	Sheet Border	1	0	4
	rdxsrd	SheetLines_dp	Sheet Lines	1	0	2
	rdxsrd	SheetLinesMisc1_dp	Sheet Lines	1	0	0
	rdxsrd	SheetLinesMisc2_dp	Sheet Lines	2	0	2
	rdxsrd	SheetLinesMisc3_dp	Sheet Lines	3	0	2
	rdxsrd	SheetLinesMisc4_dp	Sheet Lines	4	0	2
X	rdxsrd	ShldrBase_px	Bottom of Proposed Paved Shoulder Base	3	0	2
X	rdxsrd	ShldrBaseTop_px	Top of Proposed Paved Shoulder Base	3	0	2
X	rdxsrd	ShldrPaved_px	Paved Shoulder Lines on Cross Sections	1	0	2
X	rdxsrd	ShldrUnpaved_px	Grass Shoulder Lines on Cross Sections	2	0	2
X	rdxsrd	ShldrWallBase_px	Proposed Shoulder Wall Subgrade	3	0	2
X	rdxsrd	Sidewalk_ex	Sidewalk Elements in Cross Sections (Existing)	0	2	1
X	rdxsrd	Sidewalk_px	Sidewalk Elements in Cross Sections	0	0	2
	rdxsrd	SidewalkBack_er	Back of Sidewalk Line Profile (Existing)	2	2	1
	rdxsrd	SidewalkBack_pr	Back of Sidewalk Line Profile	5	0	2
X	rdxsrd	SidewalkBase_px	Proposed Sidewalk Subgrade	3	0	2
X	rdxsrd	Slopes_px	Slope Lines on Cross Sections	9	0	2

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
X	rdxsrd	SoilBoxes_px	Soil Boxes and Borings for Cross Sections	4	0	1
	rdxsrd	SpecialDetails_px	Special Details_XS	6	0	1
X	rdxsrd	Stabilization_px	Stabilization for Cross Sections	5	2	2
	rdxsrd	StationTicL_dp	Station Tic Marks (Large) and Text	0	0	2
	rdxsrd	StationTicS_dp	Station Tic Marks (Small) and Text	0	0	2
X	rdxsrd	StreetLights_px	Street Lights for Cross Sections	3	0	1
	rdxsrd	Structure_px	Signal and Sign Structures on Cross Sections	0	0	2
X	rdxsrd	SubDsgn_px	Sub Design for Cross Sections including subbase	4	0	1
X	rdxsrd	Subsoil_px	Subsoil Or Undercut for Cross Sections	4	0	2
X	rdxsrd	SubsoilFinal_px	Subsoil Final for Multiline	18	0	1
X	rdxsrd	SubsoilProp_px	Subsoil Proposed for Multiline	8	0	1
	rdxsrd	SumBoxBorder_dp	Summary Boxes Borders	4	0	3
	rdxsrd	SumBoxLines_dp	Summary Boxes Lines and Miscellaneous Items	4	0	1
	rdxsrd	SumBoxLinesMin_dp	Summary Boxes Lines Minor Line and Miscellaneous Items	4	0	0
X	rdxsrd	TeleBur_ex	Telephone for Cross Sections (Buried - Miscellaneous - Existing)	6	2	1
X	rdxsrd	TeleBur_px	Telephone for Cross Sections (Buried) (Miscellaneous)	6	0	1
X	rdxsrd	TemplateBottom_px	Bottom of Template for Multiline	6	0	1
X	rdxsrd	TemplateFinal_px	Final Template for Multiline	2	0	1
X	rdxsrd	TemplateTop_px	Top of Template for Multiline	7	0	1
X	rdxsrd	TerrainLine_ex	Existing Ground Line for Multiline	5	0	1
	rdxsrd	TextAlert	Text - An Alert Label to Highlight a Problem	3	0	2
	rdxsrd	TextBLStation	Text - B/L Station and Tics	0	0	2
	rdxsrd	TextConstEle	Text - Construction Element	0	0	1
	rdxsrd	TextCurveData	Text - Curve Data Note	0	0	2
	rdxsrd	TextDetails	Text - Detail Notes	4	0	2
	rdxsrd	TextElevLabel	Elevation Labels	4	0	0
	rdxsrd	TextGeotech	Text for soil borings and labels	0	0	2
	rdxsrd	TextLabel	Text - Label	0	0	2
	rdxsrd	TextLandscape	Text - Landscape Labels	0	0	1
	rdxsrd	TextMajor	Text - Major	0	0	5
	rdxsrd	TextMinor	Text - Minor	0	0	0
	rdxsrd	TextMisc	Text - Miscellaneous	0	0	1
	rdxsrd	TextNotes	Text - Notes	4	0	1
	rdxsrd	TextProfLabel	Text - Profile, Horizontal and Vertical Axis Labels	0	0	2

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
	rdxsrd	TextProjLabel	Text - Begin and End Project label with leader lines	1	0	2
	rdxsrd	TextPtLabel	Point Labels	4	0	0
	rdxsrd	TextShtNo	Text - Sheet Number	0	0	2
	rdxsrd	TextSurveyLabel	Survey Text Labels	0	0	0
	rdxsrd	TextTables	Text - Keysheet Indexes and Table Data	4	0	2
	rdxsrd	TextTitle	Text - Title	0	0	3
	rdxsrd	TextXSBL_dp	Cross Section Baseline Labels	0	0	2
	rdxsrd	TextXSDrain_ex	Existing Drainage Labels	10	0	2
	rdxsrd	TextXSDrain_px	Proposed Drainage Labels	10	0	2
	rdxsrd	TextXSElev	Text - Cross Section Elevations	2	0	1
	rdxsrd	TextXSElev_ex	Existing cross section elevations	2	0	1
	rdxsrd	TextXSElev_px	Proposed cross section elevations	0	0	1
	rdxsrd	TextXSGPKPts_dp	Points Labeled on Cross Sections	4	0	0
	rdxsrd	TextXSNotes_dp	Cross Section Notes	0	0	2
	rdxsrd	TextXSSlope_dp	Cross Section Slope Labels (rise:run format)	0	0	2
	rdxsrd	TextXSSlopePvt_dp	Cross Section Pavement Slope Labels	0	0	2
X	rdxsrd	TrafSeparator_ex	Traffic Separator (All Types) on Cross Sections (Existing)	6	2	1
X	rdxsrd	TrafSeparator_px	Traffic Separator (All Types) on Cross Sections	6	0	2
X	rdxsrd	TrafSeparatorBase_px	Proposed Traffic Separator Subgrade	3	0	2
	rdxsrd	TypicalMisc	Typical Miscellaneous Items	0	0	2
	rdxsrd	Utility_er	Existing Utilities in Profile View	3	2	1
	rdxsrd	Utility_pr	Proposed Utilities in Profile View	3	0	2
	rdxsrd	UtilsMisc_ex	Miscellaneous Utility Items on Cross Sections (Existing)	8	2	1
	rdxsrd	UtilsMisc_px	Miscellaneous Utility Items on Cross Sections	8	0	1
	rdxsrd	Vehicle	Vehicle for Calculating Turning Radius	7	0	2
	rdxsrd	Viewport	Viewport (For AutoCAD Use)	3	0	0
	rdxsrd	VoidArea_dx	Void Area_XS	1	0	0
X	rdxsrd	Water_ex	Water for Cross Sections (Existing)	1	2	1
X	rdxsrd	Water_px	Water for Cross Sections	1	0	1
X	rdxsrd	WaterNP_px	Raw Water Pipes for Cross Sections	1	0	1
	rdxsrd	Wetland_ex	Wetland Boundary for Cross Sections (Existing)	2	wetland	1
	rdxsrd	WetlandEdge_ep	Edge of Mangrove, Wetlands (Marsh or Swamp)	2	wetland_ep	0
	rdxsrd	Xreference_dp	Reference Files (For AutoCAD Use)	0	0	1
	rdxsrd	Xreference01_dp	Reference Files (For AutoCAD Use)	0	0	1

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
	rdxsrd	Xreference02_dp	Reference Files (For AutoCAD Use)	0	0	1
	rdxsrd	Xreference03_dp	Reference Files (For AutoCAD Use)	0	0	1
	rdxsrd	Xreference04_dp	Reference Files (For AutoCAD Use)	0	0	1
	rdxsrd	Xreference05_dp	Reference Files (For AutoCAD Use)	0	0	1
	rdxsrd	Xreference06_dp	Reference Files (For AutoCAD Use)	0	0	1
	rdxsrd	Xreference07_dp	Reference Files (For AutoCAD Use)	0	0	1
	rdxsrd	Xreference08_dp	Reference Files (For AutoCAD Use)	0	0	1
	rdxsrd	Xreference09_dp	Reference Files (For AutoCAD Use)	0	0	1
	rdxsrd	Xreference10_dp	Reference Files (For AutoCAD Use)	0	0	1
X	rdxsrd	XSBaseTop_px	Top of Proposed Base	3	0	2
	rdxsrd	XSCell	GEOPAK Cross Section Cell and Profile Cell	8	0	1
X	rdxsrd	XSExtendGrdLine_ex	Extend Ground Lines for Cross Sections (Existing)	21	2	1
X	rdxsrd	XSGrdLine_ex	Ground Lines for Cross Sections (Existing)	2	2	1
X	rdxsrd	XSGrdLine_px	Roadway Ground Lines on Cross Sections	1	0	2
	rdxsrd	XSMisc_ex	Roadway Miscellaneous Items on Cross Sections (Existing)	4	3	1
	rdxsrd	XSMisc_px	Cross Section Miscellaneous Items	0	0	2
	rdxsrd	XSPt_ep	Cross Section Point, Station	2	1	0
	rdxsrd	XSShapeDep01_dp	Cross Section Shape Dependent	11	0	2
	rdxsrd	XSShapeDep02_dp	Cross Section Shape Dependent	12	0	2
	rdxsrd	XSShapeDep03_dp	Cross Section Shape Dependent	13	0	2
	rdxsrd	XSShapeDep04_dp	Cross Section Shape Dependent	14	0	2
	rdxsrd	XSShapeDep05_dp	Cross Section Shape Dependent	15	0	2
	rdxsrd	XSShapeDep06_dp	Cross Section Shape Dependent	16	0	2
	rdxsrd	XSShapeDep07_dp	Cross Section Shape Dependent	17	0	2
	rdxsrd	XSShapeDep08_dp	Cross Section Shape Dependent	18	0	2
	rdxsrd	XSShapeDep09_dp	Cross Section Shape Dependent	19	0	2
	rdxsrd	XSShapeDep10_dp	Cross Section Shape Dependent	20	0	2
	rdxsrd	XSShapeIndep01_dp	Cross Section Shape Independent	1	0	2
	rdxsrd	XSShapeIndep02_dp	Cross Section Shape Independent	2	0	2
	rdxsrd	XSShapeIndep03_dp	Cross Section Shape Independent	3	0	2
	rdxsrd	XSShapeIndep04_dp	Cross Section Shape Independent	4	0	2
	rdxsrd	XSShapeIndep05_dp	Cross Section Shape Independent	5	0	2
	rdxsrd	XSShapeIndep06_dp	Cross Section Shape Independent	6	0	2
	rdxsrd	XSShapeIndep07_dp	Cross Section Shape Independent	7	0	2

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
	rdxsrd	XSShapeIndep08_dp	Cross Section Shape Independent	8	0	2
	rdxsrd	XSShapeIndep09_dp	Cross Section Shape Independent	9	0	2
	rdxsrd	XSShapeIndep10_dp	Cross Section Shape Independent	10	0	2
X	rdxsrd	XSTypical_px	Roadway Pavement Typical on Cross Sections	1	0	2

4.2.27 SIGNING AND PAVEMENT CROSS SECTION - RDXSSP

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
	rdxssp	ActivePointCell_dp	Active Point Cell	4	0	10
	rdxssp	AdhocPoint_dp	Adhoc Points Placed by SheetInfo	0	4	0
X	rdxssp	AsphaltConc	Asphaltic Concrete Quantity Shapes	6	0	3
X	rdxssp	AsphaltMilling_px	Asphalt Milling Lines on Cross Sections	7	0	2
X	rdxssp	AsphaltMisc_px	Miscellaneous Pavement on Cross Sections	1	0	2
X	rdxssp	BarrierWall_ex	Barrier Wall for Cross Section (Existing)	6	3	1
X	rdxssp	BarrierWall_px	Barrier Wall for Cross Section	6	0	2
X	rdxssp	Base_ex	Base Material for Cross Sections (All Types) (Existing)	3	3	1
X	rdxssp	Base_px	Base Material for Cross Sections (All Types)	3	0	2
	rdxssp	BaselineSurvey	Baseline Survey	0	0	2
X	rdxssp	Berm_px	Berm (Top, Front, or Back) for Cross Sections	10	0	2
X	rdxssp	CandG_ex	Curb and Gutter for Cross Sections (All Types) (Existing)	4	2	1
X	rdxssp	CandG_px	Curb and Gutter for Cross Sections (All Types)	4	0	2
X	rdxssp	CandGBase_px	Curb and Gutter Base on Cross Sections	3	0	1
X	rdxssp	CATVBur_ex	Cable TV and Miscellaneous on Cross Sections (Existing)	6	2	1
X	rdxssp	CATVBur_px	Cable TV and Miscellaneous on Cross Sections	6	0	1
	rdxssp	CLConst_dp	Center Line of Construction	0	0	2
	rdxssp	Cloud_dp	Construction Cloud	7	0	2
	rdxssp	COGO_dp	COGO Information	3	0	1
X	rdxssp	Concrete_px	Concrete Boundary Lines on Cross Sections	0	0	2
X	rdxssp	Conduit_ex	Conduit and Encasements on Cross Sections (Existing)	3	2	1
X	rdxssp	Conduit_px	Conduit and Encasements on Cross Sections	3	0	1
X	rdxssp	ConduitAG	Conduit – Above Ground	4	lite_cond4	1
X	rdxssp	ConduitBG	Conduit In Box Girder	5	lite_cond5	1
X	rdxssp	ConduitBG_ep	Conduit In Box Girder (Existing)	5	exlite_cond5	0
X	rdxssp	ConduitBM	Conduit – Bridge Mount	5	lite_cond5	1

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
X	rdxssp	ConduitC	Conduit Lead-in Cable	3	0	0
X	rdxssp	ConduitDB	Conduit – Directional Bore	2	lite_cond2	1
X	rdxssp	ConduitJ	Conduit Jacked Underpavement	1	lite_cond3	1
X	rdxssp	ConduitJ_ep	Conduit Jacked (Existing)	1	exlite_cond3	0
X	rdxssp	ConduitJB	Conduit – Jack & Bore Under Rail	3	lite_cond3	1
X	rdxssp	ConduitOT	Conduit – Open Trench	1	lite_cond1	1
X	rdxssp	ConduitSM	Conduit Surface Mounted	4	lite_cond4	1
X	rdxssp	ConduitSM_ep	Conduit Surface Mounted (Existing)	4	exlite_cond4	0
X	rdxssp	ConduitUG	Conduit Underground	3	lite_cond1	1
X	rdxssp	ConduitUG_ep	Conduit Underground (Existing)	3	exlite_cond1	0
X	rdxssp	ConduitUP	Conduit Underpavement	2	lite_cond2	1
X	rdxssp	ConduitUP_ep	Conduit Underpavement (Existing)	2	exlite_cond2	0
	rdxssp	ConstArea_dp	Construction Area Crosshatch	0	0	1
	rdxssp	ConstLimits	Construction Limits	3	LOC	2
	rdxssp	ConstLines	Construction Lines and References	1	0	0
X	rdxssp	CrossWalk1	Emphasis Crosswalk 6ft High	0	crosswalk1	4
X	rdxssp	CrossWalk2	Emphasis Crosswalk 10ft High	0	crosswalk2	4
	rdxssp	CurveData_dp	Curve & Coordinate Data Elements incl PC, PT, PI symbols	4	0	2
	rdxssp	CurveDataLabel_dp	Curve Data Labels PC,PI, PT	0	0	2
X	rdxssp	Delineator	Delineators (All Types)	4	0	1
	rdxssp	DimLines_dp	Dimension Lines, Corresponding Terminators, Equation Lines	0	0	1
X	rdxssp	DirArrowsPavt	Pavement Marking Directional Arrows	0	0	1
X	rdxssp	Ditch_px	Ditch Top for Cross Sections	7	0	2
X	rdxssp	DitchBot_px	Ditch Bottom for Cross Sections	10	0	2
X	rdxssp	DitchPavt_px	Ditch Pavement for Cross Sections	3	0	3
	rdxssp	DrainAlert_px	Alert Symbology for Structural Elements on Cross Sections	3	0	2
	rdxssp	DrainMisc_ex	All types of miscellaneous drainage elements (Existing)	10	3	1
X	rdxssp	DrainStruct_ex	All Drainage Structures for Cross Sections (Existing)	10	3	1
X	rdxssp	DrainStruct_px	Misc Drainage Structures and Elements for XSections	10	0	2
X	rdxssp	Driveway_ex	Driveway Lines on Cross Sections - Existing	7	1	2
X	rdxssp	Driveway_px	Driveway Lines on Cross Sections	7	0	2
X	rdxssp	DrivewayBase_px	Proposed Driveway Subgrade	3	0	2
	rdxssp	Earthwork1_px	Earthwork (color 0)	0	0	1
	rdxssp	Earthwork2_px	Earthwork (color 1)	1	0	1
	rdxssp	Earthwork3_px	Earthwork (color 2)	2	0	1

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
	rdxssp	Earthwork4_px	Earthwork (color 3)	3	0	1
	rdxssp	Earthwork5_px	Earthwork (color 4)	4	0	1
X	rdxssp	EaseLicLine	Easement License Agreement Line	5	6	0
X	rdxssp	EaseLine_ep	Easement Lines (Existing)	1	PESMT	1
X	rdxssp	EasePerpLine_px	Easement Lines Perpetual on Cross Sections	4	PESMT	1
X	rdxssp	EaseTempLine_px	Easement Lines Temporary on Cross Sections	6	TEMPE	0
X	rdxssp	Endwall_px	Endwall for Cross Sections	10	0	2
	rdxssp	ExcavationLimits_dp	Excavation Limits on Cross Sections	0	0	1
	rdxssp	Fence_ex	Fence Lines on Cross Sections (Existing)	6	3	1
X	rdxssp	Fence_px	Fence Lines on Cross Sections	6	Fence1	2
X	rdxssp	FES_px	Flared End Sections for Cross Sections	10	0	2
	rdxssp	FlowArrow_dp	Flow Arrow	10	0	2
X	rdxssp	FOCBur_ex	Fiber Optics Cable (Buried) for XSections (Existing)	6	2	1
X	rdxssp	FOCBur_px	Fiber Optics Cable (Buried) for XSections	6	0	1
X	rdxssp	Gas_ex	Gas Pipe and Fittings, Misc for Xsections (Existing)	4	2	1
X	rdxssp	Gas_px	Gas Pipe and Fittings, Misc for Xsections	4	0	1
	rdxssp	GeotechFillPatt1	Geotechnical Fill Pattern - (earth, wood, muck, concrete, rock, riprap) as defined in project	3	0	0
	rdxssp	GeotechFillPatt1_px	Geotechnical Fill Pattern - (earth, wood, muck, concrete, rock, riprap) as defined in project	3	0	0
	rdxssp	GeotechFillPatt2	Geotechnical Fill Pattern - clay, sand	0	1	0
	rdxssp	GeotechFillPatt2_px	Geotechnical Fill Pattern - clay, sand	0	1	0
	rdxssp	GeotechFillPatt3	Geotechnical Fill Pattern - shell	3	1	0
	rdxssp	GeotechFillPatt3_px	Geotechnical Fill Pattern - shell	3	1	0
	rdxssp	GeotechFillPatt4	Geotechnical Fill Pattern - sand	4	0	0
	rdxssp	GeotechFillPatt4_px	Geotechnical Fill Pattern - sand	4	0	0
	rdxssp	GeotechFillPatt5	Geotechnical Fill Pattern - coquina	1	0	1
	rdxssp	GeotechFillPatt5_px	Geotechnical Fill Pattern - coquina	1	0	1
	rdxssp	GeotechFillPatt6	Geotechnical Fill Pattern - limestone	2	0	0
	rdxssp	GeotechFillPatt6_px	Geotechnical Fill Pattern - limestone	2	0	0
	rdxssp	GeotechFillPatt7	Geotechnical Fill Pattern - gravel	6	0	0
	rdxssp	GeotechFillPatt7_px	Geotechnical Fill Pattern - gravel	6	0	0
	rdxssp	GeotechFillPatt8	Geotechnical Fill Pattern - silt	0	0	1
	rdxssp	GeotechFillPatt8_px	Geotechnical Fill Pattern - silt	0	0	1
	rdxssp	GeotechMisc	Miscellaneous Geotechnical Elements	0	0	1
X	rdxssp	GravityWall_px	Gravity Wall for Cross Sections	11	0	2
X	rdxssp	GravWallBase_px	Proposed Gravity Wall Subgrade	3	0	2

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
	rdxssp	GridMaj_dp	Grid Lines Major in Profile and Cross Section	3	0	1
	rdxssp	GridMin_dp	Grid Lines Minor in Profile and Cross Section	0	0	0
	rdxssp	GridMinG_dp	Grid Lines Minor Sub 2 in Cross Section Sheets	20	0	0
	rdxssp	GridMinSub_dp	Grid Lines Minor Sub in Cross Section Sheets	20	0	0
	rdxssp	GSBWFill	GuidSign Black and White Fill Level for GuidSign Cells	0	0	1
	rdxssp	GSColorFill	GuidSign Color Fill Level for GuidSign Cells	2	0	1
	rdxssp	GSDims	GuidSign Dimensions	0	0	1
	rdxssp	GSOutline	GuidSign Outline Level for GuidSign Cells	0	0	2
	rdxssp	GSSign	GuidSign Panel and Tag	7	0	0
X	rdxssp	Guardrail_ex	Guardrail Lines on Cross Sections - Existing	0	1	2
X	rdxssp	Guardrail_px	Guardrail	0	0	1
X	rdxssp	Handrail_px	Handrail Lines on Cross Sections	9	0	1
	rdxssp	ImageAttachment_dp	Image Attachmentst	0	0	0
X	rdxssp	Inlet_px	Inlets on Cross Sections	10	0	2
X	rdxssp	InletBottom_px	Inlet Bottom on Cross Sections (All Types)	10	0	2
X	rdxssp	InterconCable	Cable Interconnect	1	intcon1	1
X	rdxssp	InterconCable_ep	Interconnect Cable (Existing)	1	intcon2	0
X	rdxssp	JunctBoxA	Junction Boxes (Aerial)	3	0	1
X	rdxssp	JunctBoxA_ep	Junction Boxes (Aerial) (Existing)	3	1	0
	rdxssp	KeyShtMisc	Key sheet Miscellaneous Items	0	0	2
	rdxssp	LaneDirArrow	Lane Directional Arrow	0	0	1
X	rdxssp	LARWLine_ex	Limited Access Right of Way on XSections (Existing)	4	EXLA	1
X	rdxssp	LARWLine_px	Limited Access ROW Lines on Cross Sections	4	LA	2
X	rdxssp	LateralLimits_px	Lateral Limits for Cross Sections	6	0	2
	rdxssp	LeaderLine_dp	Leader Line and terminator with Text	0	0	1
	rdxssp	LightingMisc	Lighting Miscellaneous Items	4	0	2
X	rdxssp	LightingSP	Lighting Service Points	0	0	1
X	rdxssp	LoadCenter	Load Center	2	0	1
X	rdxssp	LoadCenter_ep	Load Center (Existing)	2	5	0
	rdxssp	Logo_dp	Consultant Engineer of Record Logo	0	0	1
X	rdxssp	Luminaire	Luminaires (Decorative - All Types)	2	0	1
X	rdxssp	Manhole_px	Manhole on Cross Sections	10	0	2
X	rdxssp	MedianWallBase_px	Proposed Median Wall Subgrade	3	0	2
X	rdxssp	MES_px	Mitered End Section on Cross Sections	10	0	2
X	rdxssp	MetalButtons	Metal Buttons	0	0	2

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
	rdxssp	Miscellaneous0	Undefined proposed item - co blue wt 0	1	0	0
	rdxssp	Miscellaneous1	Undefined proposed item - co blue wt 1	1	0	1
	rdxssp	Miscellaneous2	Undefined proposed item - co blue wt 2	1	0	2
	rdxssp	Miscellaneous3	Undefined proposed item - co green wt 0	2	0	0
	rdxssp	Miscellaneous4	Undefined proposed item - co green wt 1	2	0	1
	rdxssp	Miscellaneous5	Undefined proposed item - co green wt 2	2	0	2
	rdxssp	Miscellaneous6	Undefined proposed item - co red wt 0	3	0	0
	rdxssp	Miscellaneous7	Undefined proposed item - co red wt 1	3	0	1
	rdxssp	Miscellaneous8	Undefined proposed item - co red wt 2	3	0	2
	rdxssp	Miscellaneous9	Undefined proposed item - co red wt 3	3	0	3
	rdxssp	NonPlottingEle_dp	Non plotting items such as construction elements and type 66 elements	4	0	0
	rdxssp	NorthArw_dp	North Arrows	0	0	2
X	rdxssp	ObjectMarker	Object and Reflective Markers	3	0	1
X	rdxssp	Overbuild_px	Overbuild Areas on Cross Sections	4	0	2
X	rdxssp	Overbuild1_px	Proposed Overbuild Binder Symbology (No Longer Used)	7	0	2
X	rdxssp	Overbuild2_px	Proposed Overbuild Base Symbology (No Longer Used)	7	0	2
X	rdxssp	OverheadSign	Overhead Sign Panels	0	0	2
X	rdxssp	OverheadSign_ep	Overhead Sign Panels (Existing)	0	3	1
X	rdxssp	OverheadStr	Mast Arm, Truss Assemblies, Signal Arms and Supports	0	0	2
X	rdxssp	OverheadStr_ep	Mast Arm, Truss Assemblies, Signal Arms and Supports (Existing)	0	3	1
X	rdxssp	Overlay_px	Proposed Overlay Layer for Cross Section	1	0	2
X	rdxssp	Overlay1_px	Proposed Overlay Layer for Cross Section	14	0	2
X	rdxssp	Overlay2_px	Proposed Overlay Layer for Cross Section	7	0	2
	rdxssp	Patternlines_ep	Cross Section Chain	2	1	0
	rdxssp	PatternLines1_dp	Pattern Lines for Cross Sections	3	0	2
	rdxssp	PatternLines2_dp	Pattern Lines for XSections alternate for side streets, critical xsections or drainage structures	4	0	2
	rdxssp	PatternLines3_dp	Pattern Lines for XSections alternate for side streets, critical xsections or drainage structures	5	0	2
X	rdxssp	PavedMedianBase_px	Proposed Paved Median Subgrade	3	0	2
	rdxssp	PavtAsph_ep	Asphalt Pavement Edge	0	3	1
X	rdxssp	PavtMessage	Pavement Message (All types)	0	0	1
X	rdxssp	PavtMessage_ep	Pavement Message (Existing - All types)	0	2	0
	rdxssp	PayItem_dp	Pay Item Number Label Elements	4	0	2
X	rdxssp	PipeCulvert_ep	Pipe Culvert	10	3	1
X	rdxssp	PipeCulvert_pr	Pipe Culvert in Profile	3	0	2
X	rdxssp	PipeCulvert_px	Pipe Culvert for Cross Section View	10	0	2

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
X	rdxssp	PlotBorder_dp	Plot Border	3	0	0
X	rdxssp	PMCeramic	Pavement Markers Ceramic	0	0	1
	rdxssp	PMMisc	Pavement Marking Miscellaneous Items	0	0	2
X	rdxssp	PMStripe(10-10-20)	Pavement Marking 10/10/20 Skip Traffic Stripe 6in Contrast	0	skip10/10/20contrast	2
X	rdxssp	PMStripe12B	Pavement Marking Traffic Stripe 12in Black	3	stripe12	4
X	rdxssp	PMStripe12W	Pavement Marking Traffic Stripe 12in White	0	stripe12	4
X	rdxssp	PMStripe12W(3-9)	Pavement Marking 3/9 Skip Traffic Stripe 12in White	0	stripe12	4
X	rdxssp	PMStripe12Y	Pavement Marking Traffic Stripe 12in Yellow	4	stripe12	4
X	rdxssp	PMStripe16B	Pavement Marking Traffic Stripe 16in Black	3	stripe16	5
X	rdxssp	PMStripe16W	Pavement Marking Traffic Stripe 16in White	0	stripe16	5
X	rdxssp	PMStripe16Y	Pavement Marking Traffic Stripe 16in Yellow	4	stripe16	5
X	rdxssp	PMStripe18B	Pavement Marking Traffic Stripe 18in Black	3	stripe18	6
X	rdxssp	PMStripe18W	Pavement Marking Traffic Stripe 18in White	0	stripe18	6
X	rdxssp	PMStripe18Y	Pavement Marking Traffic Stripe 18in Yellow	4	stripe18	6
X	rdxssp	PMStripe24W	Pavement Marking Traffic Stripe 24in White	0	stripe24	7
X	rdxssp	PMStripe24Y	Pavement Marking Traffic Stripe 24in Yellow	4	stripe24	7
X	rdxssp	PMStripe6B	Pavement Marking Traffic Stripe 6in Black	3	stripe06	2
X	rdxssp	PMStripe6B(10-30)	Pavement Marking 10/30 Skip Traffic Stripe 6in Black	3	stripe06	2
X	rdxssp	PMStripe6Bl	Pavement Marking Traffic Stripe 6in Blue	1	stripe06	2
X	rdxssp	PMStripe6DY	Pavement Marking Traffic Stripe 6in Double Yellow	4	dbl_line	2
X	rdxssp	PMStripe6W	Pavement Marking Traffic Stripe 6in White	0	stripe06	2
X	rdxssp	PMStripe6W(10-30)	Pavement Marking 10/30 Skip Traffic Stripe 6in White	0	stripe06	2
X	rdxssp	PMStripe6W(2-4)	Pavement Marking 2/4 Skip Traffic Stripe 6in White	0	stripe06	2
X	rdxssp	PMStripe6W(3-9)	Pavement Marking 3/9 Skip Traffic Stripe 6in White	0	stripe06	2
X	rdxssp	PMStripe6W(6-10)	Pavement Marking 6/10 Skip Traffic Stripe 6in White	0	stripe06	2
X	rdxssp	PMStripe6Y	Pavement Marking Traffic Stripe 6in Yellow	4	stripe06	2
X	rdxssp	PMStripe6Y(10-30)	Pavement Marking 10/30 Skip Traffic Stripe 6in Yellow	4	stripe06	2
X	rdxssp	PMStripe6Y(2-4)	Pavement Marking 2/4 Skip Traffic Stripe 6in Yellow	4	stripe06	2
X	rdxssp	PMStripe6Y(6-10)	Pavement Marking 6/10 Skip Traffic Stripe 6in Yellow	4	stripe06	2
X	rdxssp	PMStripe8B	Pavement Marking Traffic Stripe 8in Black	3	stripe06	3
X	rdxssp	PMStripe8W	Pavement Marking Traffic Stripe 8in White	0	stripe08	3
X	rdxssp	PMStripe8W(3-9)	Pavement Marking 3/9 Skip Traffic Stripe 8in White	0	stripe08	2
X	rdxssp	PMStripe8Y	Pavement Marking Traffic Stripe 8in Yellow	4	stripe08	3
X	rdxssp	PMStripe9C(10-30)	Pavement Marking 10/30 Skip Traffic Stripe 9in Contrast	0	skip 10/30 contrast	2
X	rdxssp	PMStripeVibeW	Pavement Marking Auditory and Vibratory 6in White	0	Vibratory	2

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
X	rdxssp	PMStripeVibeY	Pavement Marking Auditory and Vibratory 6in Yellow	4	Vibratory	2
	rdxssp	PointLocator_ep	Point Locator Symbol	4	0	0
X	rdxssp	PoleConc	Concrete Strain Pole	0	0	2
X	rdxssp	PoleConc_ep	Concrete Strain Pole (Existing)	0	2	1
X	rdxssp	PoleFound	Pole Foundation	0	0	2
X	rdxssp	PoleLight	Light Pole	2	0	1
X	rdxssp	PoleLight_ep	Light Pole (Existing)	2	2	1
X	rdxssp	PoleLightHM	High Mast Light Pole	3	0	1
X	rdxssp	PoleLightHM_ep	High Mast Light Pole (Existing)	2	2	1
	rdxssp	PoleLightID	Light Pole Location / ID	4	0	1
X	rdxssp	PolePower	Power Pole w/ Transformer	3	0	2
X	rdxssp	PoleShared	Power Pole Electric (Above Ground) Shared w/ Transformer	3	0	2
X	rdxssp	PoleSteelStrain	Steel Strain Pole	0	0	2
X	rdxssp	PoleSteelStrain_ep	Steel Strain Pole (Existing)	0	2	1
X	rdxssp	PoleTel	Telephone Pole	6	0	2
X	rdxssp	PoleUtil	Utility Pole	0	0	2
X	rdxssp	PoleWoodStrain	Wood Strain Pole	0	0	2
X	rdxssp	PoleWoodStrain_ep	Wood Strain Pole (Existing)	0	2	1
X	rdxssp	Pond_px	Pond Lines on Cross Sections	2	0	2
X	rdxssp	Power_ex	Power on Cross Sections (Existing)	3	2	1
X	rdxssp	Power_px	Power on Cross Sections	3	0	1
X	rdxssp	PropertyLine_ep	Property Lines	3	0	0
X	rdxssp	PullBox	Pull Boxes (All Types)	3	0	1
	rdxssp	ReferencePt_dp	Survey and Construction Reference Point Details and Elements	4	0	2
X	rdxssp	ReflPaintWht	Reflective Paint - Island Nose (White)	0	0	3
X	rdxssp	ReflPaintYel	Reflective Paint - Island Nose (Yellow)	4	0	3
	rdxssp	RegionBdry_dp	Boundary Line for Regions in Corridor Design (Autodesk)	0	0	0
X	rdxssp	RetainWall_px	Retaining Walls on Cross Sections	6	0	1
X	rdxssp	RipRap_px	Rip Rap, Rubble on Cross Sections	4	1	2
X	rdxssp	RPM_ep	Reflective Pavement Markers (Existing)	2	2	1
X	rdxssp	RPM1	Raised Pavement Markers, White	0	0	2
X	rdxssp	RPM2	Raised Pavement Markers, White - Red	3	0	2
X	rdxssp	RPM3	Raised Pavement Markers, Yellow	4	0	2
X	rdxssp	RPM4	Raised Pavement Markers, Yellow - Yellow	9	0	2
X	rdxssp	RPM5	Raised Pavement Markers, Yellow - Red	6	0	2

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
X	rdxssp	RPM6	Raised Pavement Markers, Blue	1	0	2
X	rdxssp	RumbleStrip1	Rumble Strips Continuous Array	0	rumble_cont	2
X	rdxssp	RumbleStrip2	Rumble Strips Skip Array	0	rumble_skip	2
X	rdxssp	RWLine	Right of Way Lines	4	RW	2
X	rdxssp	RWLine_ep	Right of Way Lines (Existing)	3	RW	1
X	rdxssp	RWLine_ex	ROW Lines on Cross Sections (Existing)	3	RW	1
X	rdxssp	RWLine_px	ROW Lines on Cross Sections	4	RW	2
X	rdxssp	SanitaryFM_ex	Force Main Lines on Cross Sections (Existing)	2	2	1
X	rdxssp	SanitaryFM_px	Force Main Lines on Cross Sections	2	0	1
X	rdxssp	SanitarySewer_ex	Sanitary Sewer Lines on Cross Sections (Existing)	10	2	0
X	rdxssp	SanitarySewer_px	Sanitary Sewer Lines on Cross Sections	2	0	1
X	rdxssp	SanitarySewerEff_px	Sanitary Effluent for Cross Sections	9	0	0
X	rdxssp	SawCuts	Saw Cuts	3	conduit1	0
	rdxssp	Scale_dp	Bar Scale, Scale Label Elements	0	0	2
	rdxssp	Scratch1_dp	A scratch level for temporary or informational items	4	0	0
	rdxssp	Scratch2_dp	A scratch level for temporary or informational items	5	0	0
	rdxssp	ScratchEle_dp	Level for Draft Elements, Temporary Elements, Etc. These Elements Do Not Plot	3	0	0
	rdxssp	ScratchEle2_dp	Level for Draft Elements, Temporary Elements, Etc. Do Not Plot	4	0	0
	rdxssp	SheetBorder_dp	Sheet Border	1	0	4
	rdxssp	SheetLines_dp	Sheet Lines	1	0	2
	rdxssp	SheetLinesMisc1_dp	Sheet Lines	1	0	0
	rdxssp	SheetLinesMisc2_dp	Sheet Lines	2	0	2
	rdxssp	SheetLinesMisc3_dp	Sheet Lines	3	0	2
	rdxssp	SheetLinesMisc4_dp	Sheet Lines	4	0	2
X	rdxssp	ShldrBase_px	Bottom of Proposed Paved Shoulder Base	3	0	2
X	rdxssp	ShldrBaseTop_px	Top of Proposed Paved Shoulder Base	3	0	2
X	rdxssp	ShldrPaved_px	Paved Shoulder Lines on Cross Sections	1	0	2
X	rdxssp	ShldrUnpaved_px	Grass Shoulder Lines on Cross Sections	2	0	2
X	rdxssp	ShldrWallBase_px	Proposed Shoulder Wall Subgrade	3	0	2
X	rdxssp	Sidewalk_ex	Sidewalk Elements in Cross Sections (Existing)	0	2	1
X	rdxssp	Sidewalk_px	Sidewalk Elements in Cross Sections	0	0	2
	rdxssp	SidewalkBack_er	Back of Sidewalk Line Profile (Existing)	2	2	1
	rdxssp	SidewalkBack_pr	Back of Sidewalk Line Profile	5	0	2
X	rdxssp	SidewalkBase_px	Proposed Sidewalk Subgrade	3	0	2
X	rdxssp	SignCantilever	Sign Symbol Cantilever	0	0	1

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
X	rdxssp	SignCantilever_ep	Sign Symbol Cantilever (Existing)	0	2	0
	rdxssp	SignDetail	Sign Details	0	0	2
	rdxssp	SignLettersAZ	Alphabet Cell Library Letter A-Z Numbers 0-9	0	0	0
	rdxssp	SignMisc	Miscellaneous Sign Symbols	1	0	2
	rdxssp	SignMisc_ep	Miscellaneous Sign Symbols (Existing)	1	1	1
X	rdxssp	SignPanel	Sign Panels - Regulatory	0	0	2
X	rdxssp	SignPanel_ep	Sign Panel Elements (Existing)	0	2	1
X	rdxssp	SignPanelBorder	Sign Panel Border on Sign Details	0	0	1
X	rdxssp	SignPanelC	Sign Panels - Civil	1	0	2
X	rdxssp	SignPanelDetRed	Sign Panel Details in Red	3	0	2
X	rdxssp	SignPanelG	Sign Panels - Guide	2	0	2
X	rdxssp	SignPanelI	Sign Panels - Special Interest	9	0	2
X	rdxssp	SignPanelT	Sign Panels - Construction	6	0	2
X	rdxssp	SignPanelW	Sign Panels - Warning	4	0	2
X	rdxssp	SignSpanwire	Span Wire Signing Assembly	2	0	1
X	rdxssp	SignSpanwire_ep	Span Wire Signing Assembly (Existing)	2	2	1
X	rdxssp	SignSpecial	Special Signs / Guide Signs	2	0	2
X	rdxssp	SignSupport	Ground Mounted Sign Support Symbol (All Types)	1	0	1
X	rdxssp	SignSymbol_px	Sign Structure and Foundation on Cross Sections	4	0	2
X	rdxssp	SignTruss	Sign Symbol Truss	3	0	1
X	rdxssp	SignTruss_ep	Sign Symbol Truss (Existing)	3	2	1
X	rdxssp	Slopes_px	Slope Lines on Cross Sections	9	0	2
X	rdxssp	SoilBoxes_px	Soil Boxes and Borings for Cross Sections	4	0	1
	rdxssp	SpecialDetails_px	Special Details_XS	6	0	1
X	rdxssp	Stabilization_px	Stabilization for Cross Sections	5	2	2
	rdxssp	StationTicL_dp	Station Tic Marks (Large) and Text	0	0	2
	rdxssp	StationTicS_dp	Station Tic Marks (Small) and Text	0	0	2
X	rdxssp	StreetLights_px	Street Lights for Cross Sections	3	0	1
	rdxssp	Structure_px	Signal and Sign Structures on Cross Sections	0	0	2
X	rdxssp	SubDsgn_px	Sub Design for Cross Sections	4	0	1
X	rdxssp	Subsoil_px	Subsoil Or Undercut for Cross Sections	4	0	2
X	rdxssp	SubsoilFinal_px	Subsoil Final for Multiline	18	0	1
X	rdxssp	SubsoilProp_px	Subsoil Proposed for Multiline	8	0	1
	rdxssp	SumBoxBorder_dp	Summary Boxes Borders	4	0	3
	rdxssp	SumBoxLines_dp	Summary Boxes Lines and Miscellaneous Items	4	0	1

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
	rdxssp	SumBoxLinesMin_dp	Summary Boxes Lines Minor Line and Miscellaneous Items	4	0	0
X	rdxssp	TeleBur_ex	Telephone for Cross Sections (Buried - Miscellaneous - Existing)	6	2	1
X	rdxssp	TeleBur_px	Telephone for Cross Sections (Buried) (Miscellaneous)	6	0	1
X	rdxssp	TemplateBottom_px	Bottom of Template for Multiline	6	0	1
X	rdxssp	TemplateFinal_px	Final Template for Multiline	2	0	1
X	rdxssp	TemplateTop_px	Top of Template for Multiline	7	0	1
X	rdxssp	TerrainLine_ex	Existing Ground Line for Multiline	5	0	1
	rdxssp	TextBLStation	Text - B/L Station and Tics	0	0	2
	rdxssp	TextConstEle	Text - Construction Element	0	0	1
	rdxssp	TextCurveData	Text - Curve Data Note	0	0	2
	rdxssp	TextDetails	Text - Detail Notes	4	0	2
	rdxssp	TextElevLabel	Elevation Labels	4	0	0
	rdxssp	TextGeotech	Text for soil borings and labels	0	0	2
	rdxssp	TextLabel	Text - Label	0	0	2
	rdxssp	TextLandscape	Text - Landscape Labels	0	0	1
	rdxssp	TextMajor	Text - Major	0	0	5
	rdxssp	TextMinor	Text - Minor	0	0	0
	rdxssp	TextMisc	Text - Miscellaneous	0	0	1
	rdxssp	TextNotes	Text - Notes	4	0	1
	rdxssp	TextProfLabel	Text - Profile, Horizontal and Vertical Axis Labels	0	0	2
	rdxssp	TextProjLabel	Text - Begin and End Project label with leader lines	1	0	2
	rdxssp	TextPtLabel	Point Labels	4	0	0
	rdxssp	TextShtNo	Text - Sheet Number	0	0	2
	rdxssp	TextSurveyLabel	Survey Text Labels	0	0	0
	rdxssp	TextTables	Text - Keysheet Indexes and Table Data	4	0	2
	rdxssp	TextTitle	Text - Title	0	0	3
	rdxssp	TextXSBL_dp	Cross Section Baseline Labels	0	0	2
	rdxssp	TextXSDrain_ex	Existing Drainage Labels	10	0	2
	rdxssp	TextXSDrain_px	Proposed Drainage Labels	10	0	2
	rdxssp	TextXSElev	Text - Cross Section Elevations	2	0	1
	rdxssp	TextXSElev_ex	Existing cross section elevations	2	0	1
	rdxssp	TextXSElev_px	Proposed cross section elevations	0	0	1
	rdxssp	TextXSGPKPts_dp	Points Labeled on Cross Sections	4	0	0
	rdxssp	TextXSNotes_dp	Cross Section Notes	0	0	2
	rdxssp	TextXSSlope_dp	Cross Section Slope Labels (rise:run format)	0	0	2

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
	rdxssp	TextXSSlopePvt_dp	Cross Section Pavement Slope Labels	0	0	2
X	rdxssp	TrafSeparator_ex	Traffic Separator (All Types) on Cross Sections (Existing)	6	2	1
X	rdxssp	TrafSeparator_px	Traffic Separator (All Types) on Cross Sections	6	0	2
X	rdxssp	TrafSeparatorBase_px	Proposed Traffic Separator Subgrade	3	0	2
	rdxssp	TypicalMisc	Typical Miscellaneous Items	0	0	2
	rdxssp	Utility_er	Existing Utilities in Profile View	3	2	1
	rdxssp	Utility_pr	Proposed Utilities in Profile View	3	0	2
	rdxssp	UtilsMisc_ex	Miscellaneous Utility Items on Cross Sections (Existing)	8	2	1
	rdxssp	UtilsMisc_px	Miscellaneous Utility Items on Cross Sections	8	0	1
	rdxssp	Vehicle	Vehicle for Calculating Turning Radius	7	0	2
	rdxssp	Viewport	Viewport (For AutoCAD Use)	3	0	0
	rdxssp	VoidArea_dx	Void Area_XS	1	0	0
X	rdxssp	Water_ex	Water for Cross Sections (Existing)	1	2	1
X	rdxssp	Water_px	Water for Cross Sections	1	0	1
X	rdxssp	WaterNP_px	Raw Water Pipes for Cross Sections	1	0	1
	rdxssp	Wetland_ep	Wetland Boundary for Cross Sections (Existing)	2	wetland	1
	rdxssp	WetlandEdge_ep	Edge of Mangrove, Wetlands (Marsh or Swamp)	2	wetland	0
	rdxssp	Xreference_dp	Reference Files (For AutoCAD Use)	0	0	1
	rdxssp	Xreference01_dp	Reference Files (For AutoCAD Use)	0	0	1
	rdxssp	Xreference02_dp	Reference Files (For AutoCAD Use)	0	0	1
	rdxssp	Xreference03_dp	Reference Files (For AutoCAD Use)	0	0	1
	rdxssp	Xreference04_dp	Reference Files (For AutoCAD Use)	0	0	1
	rdxssp	Xreference05_dp	Reference Files (For AutoCAD Use)	0	0	1
	rdxssp	Xreference06_dp	Reference Files (For AutoCAD Use)	0	0	1
	rdxssp	Xreference07_dp	Reference Files (For AutoCAD Use)	0	0	1
	rdxssp	Xreference08_dp	Reference Files (For AutoCAD Use)	0	0	1
	rdxssp	Xreference09_dp	Reference Files (For AutoCAD Use)	0	0	1
	rdxssp	Xreference10_dp	Reference Files (For AutoCAD Use)	0	0	1
X	rdxssp	XSBaseTop_px	Top of Proposed Base	3	0	2
	rdxssp	XSCell	GEOPAK Cross Section Cell and Profile Cell	8	0	1
X	rdxssp	XSExtendGrdLine_ex	Extend Ground Lines for Cross Sections (Existing)	21	2	1
X	rdxssp	XSGrdLine_ex	Ground Lines for Cross Sections (Existing)	2	2	1
X	rdxssp	XSGrdLine_px	Roadway Ground Lines on Cross Sections	1	0	2
	rdxssp	XSMisc_ex	Roadway Miscellaneous Items on Cross Sections (Existing)	4	3	1
	rdxssp	XSMisc_px	Cross Section Miscellaneous Items	0	0	2
	rdxssp	XSPt_ep	Cross Section Point, Station	2	1	0
	rdxssp	XSShapeDep01_dp	Cross Section Shape Dependent	11	0	2
	rdxssp	XSShapeDep02_dp	Cross Section Shape Dependent	12	0	2

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
	rdxssp	XSShapeDep03_dp	Cross Section Shape Dependent	13	0	2
	rdxssp	XSShapeDep04_dp	Cross Section Shape Dependent	14	0	2
	rdxssp	XSShapeDep05_dp	Cross Section Shape Dependent	15	0	2
	rdxssp	XSShapeDep06_dp	Cross Section Shape Dependent	16	0	2
	rdxssp	XSShapeDep07_dp	Cross Section Shape Dependent	17	0	2
	rdxssp	XSShapeDep08_dp	Cross Section Shape Dependent	18	0	2
	rdxssp	XSShapeDep09_dp	Cross Section Shape Dependent	19	0	2
	rdxssp	XSShapeDep10_dp	Cross Section Shape Dependent	20	0	2
	rdxssp	XSShapeIndep01_dp	Cross Section Shape Independent	1	0	2
	rdxssp	XSShapeIndep02_dp	Cross Section Shape Independent	2	0	2
	rdxssp	XSShapeIndep03_dp	Cross Section Shape Independent	3	0	2
	rdxssp	XSShapeIndep04_dp	Cross Section Shape Independent	4	0	2
	rdxssp	XSShapeIndep05_dp	Cross Section Shape Independent	5	0	2
	rdxssp	XSShapeIndep06_dp	Cross Section Shape Independent	6	0	2
	rdxssp	XSShapeIndep07_dp	Cross Section Shape Independent	7	0	2
	rdxssp	XSShapeIndep08_dp	Cross Section Shape Independent	8	0	2
	rdxssp	XSShapeIndep09_dp	Cross Section Shape Independent	9	0	2
	rdxssp	XSShapeIndep10_dp	Cross Section Shape Independent	10	0	2
X	rdxssp	XSTypical_px	Roadway Pavement Typical on Cross Sections	1	0	2

4.2.28 RIGHT OF WAY DETAIL FOR ROADWAY – RWDTRD

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
	rwdtrd	ActivePointCell_dp	Active Point Cell	4	0	10
	rwdtrd	AdhocPoint_dp	Adhoc Points Placed by SheetInfo	0	4	0
	rwdtrd	BaselineSurvey	Baseline Survey	0	0	2
	rwdtrd	CLConst_dp	Center Line of Construction	0	0	2
	rwdtrd	COGO_dp	COGO Information	3	0	1
	rwdtrd	CurveData_dp	Curve & Coordinate Data Elements incl PC, PT, PI symbols	4	0	2
	rwdtrd	CurveDataLabel_dp	Curve Data Labels PC,PI, PT	0	0	2
	rwdtrd	DimLines_dp	Dimension Lines, Corresponding Terminators, Equation Lines	0	0	1
X	rwdtrd	EaseLicLine	Easement License Agreement Line	5	6	0
X	rwdtrd	EaseLine_ep	Easement Lines (Existing)	1	PESMT	1
X	rwdtrd	EasePerpLine	Easement Lines Perpetual (Proposed)	4	PESMT	1

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
X	rwdtrd	EaseTempLine	Easement Lines Temporary (Proposed)	6	TEMPE	0
X	rwdtrd	EaseTempLine_ep	Easement Lines Temporary (Existing)	6	TEMPE	1
	rwdtrd	GovCityLimitLine_ep	Government:City Limit Line	3	CLIMIT	0
	rwdtrd	GovCountyLine_ep	Government:County Line	3	COLINE	3
	rwdtrd	GovQuarterLine_ep	Government:Quarter Section Line	3	QSEC	1
	rwdtrd	GovSectionLine_ep	Government:Section Line	10	SECLIN	2
	rwdtrd	GovStateLine_ep	Government:State Line	2	STL	3
	rwdtrd	GovTwpRgeLine_ep	Township / Range Lines	10	TWPRGE	2
	rwdtrd	ImageAttachment_dp	Image Attachments	0	0	0
X	rwdtrd	LARWLine	Limited Access Right of Way	4	LA	2
X	rwdtrd	LARWLine_ep	Limited Access Right of Way (Existing)	4	EXLA	1
	rwdtrd	LeaderLine_dp	Leader Line and terminator with Text	0	0	1
	rwdtrd	Miscellaneous0	Undefined proposed item - co blue wt 0	1	0	0
	rwdtrd	Miscellaneous1	Undefined proposed item - co blue wt 1	1	0	1
	rwdtrd	Miscellaneous2	Undefined proposed item - co blue wt 2	1	0	2
	rwdtrd	Miscellaneous3	Undefined proposed item - co green wt 0	2	0	0
	rwdtrd	Miscellaneous4	Undefined proposed item - co green wt 1	2	0	1
	rwdtrd	Miscellaneous5	Undefined proposed item - co green wt 2	2	0	2
	rwdtrd	Miscellaneous6	Undefined proposed item - co red wt 0	3	0	0
	rwdtrd	Miscellaneous7	Undefined proposed item - co red wt 1	3	0	1
	rwdtrd	Miscellaneous8	Undefined proposed item - co red wt 2	3	0	2
	rwdtrd	Miscellaneous9	Undefined proposed item - co red wt 3	3	0	3
	rwdtrd	NonPlottingEle_dp	Non plotting items such as construction elements and type 66 elements	4	0	0
	rwdtrd	NorthArw_dp	North Arrows	0	0	2
	rwdtrd	PayItem_dp	Pay Item Number Label Elements	4	0	2
	rwdtrd	PointLocator_ep	Point Locator Symbol	4	0	0
X	rwdtrd	PropertyLine_ep	Property Lines	3	0	0
	rwdtrd	ReferencePt_dp	Survey and Construction Reference Point Details and Elements	4	0	2
X	rwdtrd	RefPtAngleTie	Annotation:Angle Tie:Survey Reference Point / Detail	0	Angle	1
X	rwdtrd	RefPtLeader	Annotation:Leader:Survey Reference Point / Detail	0	ArrowPoint	1
X	rwdtrd	RefPtLine	Miscellaneous:Survey Reference Point Line / Detail	0	0	1
X	rwdtrd	RefPtStaTie	Annotation:Station Tie:Survey Reference Point / Detail	0	ArrowTie	0
X	rwdtrd	RefPtText	Annotation:Miscellaneous:Text: Survey Data Reference Point	0	0	1
X	rwdtrd	RRBaseline	Baseline:Rail Road Centerline	4	0	2

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
X	rwdtrd	RWLine	Right of Way Lines	4	RW	2
X	rwdtrd	RWLine_ep	Right of Way Lines (Existing)	3	RW	1
	rwdtrd	Scratch1_dp	A scratch level for temporary or informational items	4	0	0
	rwdtrd	Scratch2_dp	A scratch level for temporary or informational items	5	0	0
	rwdtrd	ScratchEle_dp	Level for Draft Elements, Temporary Elements, Etc. Do Not Plot	3	0	0
	rwdtrd	ScratchEle2_dp	Level for Draft Elements, Temporary Elements, Etc. Do Not Plot	4	0	0
	rwdtrd	StationTicL_dp	Station Tic Marks (Large) and Text	0	0	2
	rwdtrd	StationTicS_dp	Station Tic Marks (Small) and Text	0	0	2
X	rwdtrd	SubDivLine	Existing:Subdivision Line	5	0	0
	rwdtrd	TextBLStation	Text - B/L Station and Tics	0	0	2
	rwdtrd	TextConstEle	Text - Construction Element	0	0	1
	rwdtrd	TextCurveData	Text - Curve Data Note	0	0	2
	rwdtrd	TextDetails	Text - Detail Notes	4	0	2
	rwdtrd	TextElevLabel	Elevation Labels	4	0	0
	rwdtrd	TextLabel	Text - Label	0	0	2
	rwdtrd	TextLandscape	Text - Landscape Labels	0	0	1
	rwdtrd	TextMajor	Text - Major	0	0	5
	rwdtrd	TextMinor	Text - Minor	0	0	0
	rwdtrd	TextMisc	Text - Miscellaneous	0	0	1
	rwdtrd	TextNotes	Text - Notes	4	0	1
	rwdtrd	TextProfLabel	Text - Profile, Horizontal and Vertical Axis Labels	0	0	2
	rwdtrd	TextProjLabel	Text - Begin and End Project label with leader lines	1	0	2
	rwdtrd	TextPtLabel	Point Labels	4	0	0
	rwdtrd	TextShtNo	Text - Sheet Number	0	0	2
	rwdtrd	TextSurveyLabel	Survey Text Labels	0	0	0
	rwdtrd	TextTables	Text - Keysheet Indexes and Table Data	4	0	2
	rwdtrd	TextTitle	Text - Title	0	0	3
	rwdtrd	TextXSElev	Text - Cross Section Elevations	2	0	1
	rwdtrd	XSCell	GEOPAK Cross Section Cell and Profile Cell	8	0	1
	rwdtrd	Viewport	Viewport (For AutoCAD Use)	3	0	0
	rwdtrd	Xreference_dp	Reference Files (For AutoCAD Use)	0	0	1
	rwdtrd	Xreference01_dp	Reference Files (For AutoCAD Use)	0	0	1
	rwdtrd	Xreference02_dp	Reference Files (For AutoCAD Use)	0	0	1
	rwdtrd	Xreference03_dp	Reference Files (For AutoCAD Use)	0	0	1

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
	rwdtrd	Xreference04_dp	Reference Files (For AutoCAD Use)	0	0	1
	rwdtrd	Xreference05_dp	Reference Files (For AutoCAD Use)	0	0	1
	rwdtrd	Xreference06_dp	Reference Files (For AutoCAD Use)	0	0	1
	rwdtrd	Xreference07_dp	Reference Files (For AutoCAD Use)	0	0	1
	rwdtrd	Xreference08_dp	Reference Files (For AutoCAD Use)	0	0	1
	rwdtrd	Xreference09_dp	Reference Files (For AutoCAD Use)	0	0	1
	rwdtrd	Xreference10_dp	Reference Files (For AutoCAD Use)	0	0	1

4.2.29 RIGHT OF WAY – RWENG10

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
	rweng10	ActivePointCell_dp	Active Point Cell	4	0	10
	rweng10	AdhocPoint_dp	Adhoc Points Placed by SheetInfo	0	4	0
101	rweng10	BaselineCurveData	Cell:Baseline Curve Data	0	0	2
X	rweng10	BaselineFlagLT	Annotation:Begin End Baseline Flag Left	0	LEADERLT	2
X	rweng10	BaselineFlagRT	Annotation:Begin End Baseline Flag Right	0	LEADERRT	2
X	rweng10	BaselineLeaderWt0	Annotation:Leader:Baseline Survey (weight = 0)	0	ArrowPoint	0
X	rweng10	BaselineLeaderWt1	Annotation:Leader:Baseline Survey (weight = 1)	0	ArrowPoint	1
X	rweng10	BaselineLeaderWt2	Annotation:Leader:Baseline Survey (weight = 2)	0	ArrowPoint	2
X	rweng10	BaselineSideStreet	Baseline:Baseline Side Street	0	0	0
X	rweng10	BaselineStaTie	Annotation:Station Tie:Baseline Station Tie	0	ArrowTie	0
	rweng10	BaselineSurvey	Baseline Survey	0	0	2
X	rweng10	BaselineTangentLine	Miscellaneous:Baseline Curve Tangent (PC-PI-PT)	0	2	0
101	rweng10	BaselineTextWt0	Annotation:Text:Baseline Text (weight = 0)	0	0	0
101	rweng10	BaselineTextWt1	Annotation:Text:Baseline Text (weight = 1)	0	0	1
101	rweng10	BaselineTextWt2	Annotation:Text:Baseline Text (weight = 2)	0	0	2
X	rweng10	Building_ep	Buildings	1	0	0
X	rweng10	BuildingLeader	Annotation:Leader:Building	0	ArrowPoint	0
X	rweng10	BuildingStaTie	Annotation:Station Tie:Building	0	ArrowTie	0
101	rweng10	BuildingText	Annotation:Text:Buildings	0	0	0
X	rweng10	CLConst_dp	Center Line of Construction	0	0	2
X	rweng10	ClipBorder	Cell:Miscellaneous:R/W Clip Border	4	2	0

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
X	rweng10	ClipBorderLine	Cell:Miscellaneous:R/W Clip Border	4	0	4
X	rweng10	ClipBorderOutside	Cell:Miscellaneous:R/W Clip Border	3	0	0
X	rweng10	Closing-SameLine	Miscellaneous:Closing Line, Same Point, or Same Line	0	ArrowTie	0
101	rweng10	Closing-SameLineText	Miscellaneous:Text:Closing Line, Same Point, or Same Line	0	0	0
	rweng10	COGO_dp	COGO Information	3	0	1
X	rweng10	ConstLimits	Proposed:Limits of Construction Line	3	LOC	0
X	rweng10	ConstLimitsLeader	Annotation:Leader:Limits of Construction (Proposed)	3	ArrowPoint	0
X	rweng10	ConstLimitsStaTie	Annotation:Station Tie:Limits of Construction (Proposed)	3	ArrowTie	0
101	rweng10	ConstLimitsText	Annotation:Text: Limits of Construction (Proposed)	3	0	0
101	rweng10	CoordPtText	Annotation:Text:Miscellaneous:Coordinate Geometry Points	4	0	0
101	rweng10	DataBoxWt0	Cell:Miscellaneous:Data Table Wt0 For Text and Linear Elements	0	0	0
101	rweng10	DataBoxWt1	Cell:Miscellaneous:Data Table Wt1 For Text and Linear Elements	0	0	1
101	rweng10	DataBoxWt2	Cell:Miscellaneous:Data Table Wt2 For Text and Linear Elements	0	0	2
101	rweng10	DataBoxWt3	Cell:Miscellaneous:Data Table Wt3 For Text and Linear Elements	0	0	3
101	rweng10	DataBoxWt4	Cell:Miscellaneous:Data Table Wt4 For Text and Linear Elements	0	0	4
X	rweng10	DetailBorder	Miscellaneous: Border for Mapping Detail	0	3	3
X	rweng10	EaseLicLeader	Annotation:Leader:License (Proposed)	0	ArrowPoint	1
X	rweng10	EaseLicLine	Easement:License (Proposed)	0	LICENSE	1
X	rweng10	EaseLicStaTie	Annotation:Station Tie:License (Proposed)	0	ArrowTie	1
101	rweng10	EaseLicText	Annotation:Text:Easement Lines, License (Proposed)	0	0	1
X	rweng10	EaseLicWidthArrow	Annotation:Arrow:License Width (Proposed)	0	ARROW2	1
X	rweng10	EaseLine_ep	Easement:Easement Line (Existing)	1	2	0
X	rweng10	EaseLineCenterline_ep	Baseline:Centerline:Easement (Existing)	1	EECL	0
X	rweng10	EaseLineLeader_ep	Annotation:Leader:Easement (Existing)	1	ArrowPoint	0
X	rweng10	EaseLineStaTie_ep	Annotation:Station Tie:Easement (Existing)	1	ArrowTie	0
101	rweng10	EaseLineText_ep	Annotation:Text:Easement Lines (Existing)	1	0	0
X	rweng10	EaseLineWidthArrow_ep	Annotation:Arrow:Easement Width (Existing)	1	ARROW2	0
X	rweng10	EasePerpLeader	Annotation:Leader:Easement Perpetual (Proposed)	4	ArrowPoint	1
X	rweng10	EasePerpLine	Easement:Perpetual Easement Line (Proposed)	4	PESMT	2
X	rweng10	EasePerpStaTie	Annotation:Station Tie:Easement Perpetual (Proposed)	4	ArrowTie	1
101	rweng10	EasePerpText	Annotation:Text:Easement Lines, Perpetual (Proposed)	4	0	1
X	rweng10	EasePerpWidthArrow	Annotation:Arrow:Easement Perpetual Width (Proposed)	4	ARROW2	1
X	rweng10	EaseTempLeader	Annotation:Leader:Easement Temporary (Proposed)	6	ArrowPoint	1
X	rweng10	EaseTempLine	Easement:Temporary Easement Line (Proposed)	6	TEMPE	1

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
X	rweng10	EaseTempStaTie	Annotation:Station Tie:Easement Temporary (Proposed)	6	ArrowTie	1
101	rweng10	EaseTempText	Annotation:Text:Easement Lines, Temporary (Proposed)	6	0	1
X	rweng10	EaseTempWidthArrow	Annotation:Arrow:Easement Temporary Width (Proposed)	6	ARROW2	1
X	rweng10	Fence_ep	Fence (All)	6	Fence1	0
X	rweng10	FLMap1	Florida Map items - weight of 1	1	0	1
X	rweng10	FLMap2	Florida Map items - weight of 2	3	0	2
X	rweng10	FLMap3	Florida Map items - weight of 3	2	0	3
X	rweng10	FLMap4	Florida Map items - color 11 (Interstate)	11	0	3
X	rweng10	FLMap5	Florida Map items - style 7, wt. 5 (state line)	3	7	5
X	rweng10	GenNotesLeader	Annotation:Leader:Miscellaneous:General Notes	0	ArrowPoint	2
101	rweng10	GenNotesText	Annotation:Miscellaneous:Text: General Notes	0	0	2
X	rweng10	GovCityLimitHLine_ep	Government:City Limit Line (Hash Only)	3	Climit2	0
X	rweng10	GovCityLimitLine_ep	Government:City Limit Line	3	CLIMIT	0
X	rweng10	GovCountyLine_ep	Government:County Line	3	COLINE	3
X	rweng10	GovGrantLine_ep	Government:Grant Line	3	GRTL	2
X	rweng10	GovGreenLeaderWt0_ep	Annotation:Leader:Government (color = green)(weight = 0)	2	ArrowPoint	0
X	rweng10	GovGreenLeaderWt2_ep	Annotation:Leader:Government (color = green)(weight = 2)	2	ArrowPoint	2
X	rweng10	GovGreenStaTie_ep	Annotation:Station Tie:Government (color = green)	2	ArrowTie	0
101	rweng10	GovGreenTextWt0_ep	Annotation:Government Text Green Weight of 0	2	0	0
101	rweng10	GovGreenTextWt2_ep	Annotation:Government Text Green Weight of 2	2	0	2
X	rweng10	GovLotLine_ep	Government:Lot Line	3	0	0
X	rweng10	GovMeanderLine_ep	Government:Meander Line	3	3	1
X	rweng10	GovParkHLine_ep	Government:National or State Park or Forest Line (Hash Only)	2	NSPF2	0
X	rweng10	GovParkLine_ep	Government:National or State Park or Forest Line	2	NSPF	0
X	rweng10	GovQtrQtrLine_ep	Government:Quarter / Quarter Section Line	3	QSEC	0
X	rweng10	GovQuarterLine_ep	Government:Quarter Section Line	3	QSEC	1
X	rweng10	GovRedLeaderWt0_ep	Annotation:Leader:Government (color = red)(weight = 0)	3	ArrowPoint	0
X	rweng10	GovRedLeaderWt2_ep	Annotation:Leader:Government (color = red)(weight = 2)	3	ArrowPoint	2
X	rweng10	GovRedStaTie_ep	Annotation:Station Tie:Government (color = red)	3	ArrowTie	0
101	rweng10	GovRedTextWt0_ep	Annotation:Government Text Red Weight of 0	3	0	0
101	rweng10	GovRedTextWt2_ep	Annotation:Government Text Red Weight of 2	3	0	2
X	rweng10	GovSectionLine_ep	Government:Section Line	3	SECLIN	2
X	rweng10	GovStateLine_ep	Government:State Line	2	STL	3
X	rweng10	GovTwpRgeLine_ep	Government:Township and Range Government Survey Line	2	TWPRGE	3

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
	rweng10	ImageAttachment_dp	Image Attachments	0	0	0
X	rweng10	LARWLine	Proposed:Limited Access Right of Way Line	4	LA	3
X	rweng10	LARWLine_ep	Existing:Limited Access Right of Way Line	7	EXLA	0
X	rweng10	Logo_dp	Consultant Engineer of Record Logo	0	0	1
X	rweng10	MaintLeader	Annotation:Leader:Maintenance	4	ArrowPoint	2
X	rweng10	MaintLine	Proposed:Maintenance Line	4	0	4
X	rweng10	MaintStaTie	Annotation:Station Tie:Maintenance	4	ArrowTie	2
101	rweng10	MaintText	Annotation:Text: Maintenance	4	0	2
X	rweng10	MaintWidthArrow	Annotation:Arrow:Maintenance Width (Proposed)	4	ARROW2	2
X	rweng10	MapOutline_dp	Outline for key maps	0	0	5
	rweng10	MatchLineMask_dp	Mask Area for Match Line Overlap Areas (Autodesk)	0	0	0
X	rweng10	MHWL_TIITF_Leader	Annotation:Leader:TIITF:Mean High Water Lines or Ordinary High Water Lines	7	ArrowPoint	2
X	rweng10	MHWL_TIITF_Line	TIITF:Mean High Water LInes or Ordinary High Water Lines	7	0	3
X	rweng10	MHWL_TIITF_StaTie	Annotation:Station Tie:TIITF:Safe Upland Elevation Lines or Jurisdictional Lines	7	ArrowTie	2
101	rweng10	MHWL_TIITF_Text	Annotation:Text:TIITF:Mean High Water LInes or Ordinary High Water Lines	7	0	2
X	rweng10	MHWL_TIITF_WidthArrow	Annotation:Arrow:TIITF:Mean High Water LInes or Ordinary High Water Lines	7	ARROW2	2
X	rweng10	MonConcOpen	Cell:Monument,Concrete Open	4	0	1
X	rweng10	MonConcSolid	Cell:Monument, Concrete Solid	4	0	1
X	rweng10	MonConRW	Cell:Monument, Concrete RW	4	0	2
X	rweng10	MonLeader	Annotation:Leader:Found / Set Monuments (Not Government Corners)	4	ArrowPoint	0
X	rweng10	MonPermRW	Cell:Monument, RW Permanent (RW Survey Map)	4	0	2
X	rweng10	MonRodOpen	Cell:Monument, Rod Open	4	0	1
X	rweng10	MonRodSolid	Cell:Monument, Rod Solid	4	0	1
X	rweng10	MonStaTie	Annotation:Station Tie:Found / Set Monuments (Not Government Corners)	4	ArrowTie	0
101	rweng10	MonText	Annotation:Text:Found / Set Monuments (Not Government Corners)	4	0	0
X	rweng10	Monument_ep	Monuments (all), Stamped Disk or Plate, Photo Control Point, Aerial Targets	4	0	0
X	rweng10	Murphy_TIITF_Leader	Annotation:Leader:TIITF:Murphy Reservations Lines	2	ArrowPoint	1
X	rweng10	Murphy_TIITF_Line	TIITF: Upland TIITF:Murphy Reservations Lines	2	TIITF	1
X	rweng10	Murphy_TIITF_StaTIe	Annotation:Station Tie:TIITF:Murphy Reservations Lines	2	ArrowTie	1
101	rweng10	Murphy_TIITF_Text	Annotation:Text:TIITF:Murphy Reservations Lines	2	0	1
X	rweng10	Murphy_TIITF_WidthArrow	Annotation:Arrow:TIITF:Murphy Reservations Lines	2	ARROW2	1
	rweng10	NonPlottingEle_dp	Non plotting items such as construction elements and type 66 elements	4	0	0
X	rweng10	NonVehcLeader_ep	Annotation:Leader:Non Vehicular Access	3	ArrowPoint	0
X	rweng10	NonVehcLine_ep	Existing:Non-Vehicular Access Line	3	NONVH	0

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
X	rweng10	NonVehcStaTie_ep	Annotation:Station Tie:Non Vehicular Access	3	ArrowTie	0
101	rweng10	NonVehcText_ep	Annotation:Text:Non-Vehicular Access (Existing)	3	0	0
	rweng10	NorthArw_dp	North Arrows	0	0	2
101	rweng10	ParcelBubble100	Cell:Miscellaneous:Right of Way Parcel Bubble with Leader	3	0	2
101	rweng10	ParcelBubble700	Cell:Miscellaneous:Temporary Easement Parcel Bubble with Leader	6	0	2
101	rweng10	ParcelBubble800	Cell:Miscellaneous:Perpetual Easement Parcel Bubble with Leader	4	0	2
101	rweng10	ParcelBubble900	Cell:Miscellaneous:License Parcel Bubble with Leader	0	0	2
X	rweng10	Patternlines_ep	Cross Section Chain	2	1	0
	rweng10	PayItem_dp	Pay Item Number Label Elements	4	0	2
X	rweng10	PlotBorder_dp	Plot Border	3	0	0
X	rweng10	PointLocator_ep	Point Locator Symbol	4	0	0
X	rweng10	PropertyLine_ep	Existing:Property Line	7	0	0
X	rweng10	PropertyLineHook_ep	Cell:Miscellaneous:Property Line Hook	4	0	0
X	rweng10	PropertyLineLeader_ep	Annotation:Leader:Property Line (Existing)	7	ArrowPoint	0
X	rweng10	PropertyLineStaTie_ep	Annotation:Station Tie:Property Line (Existing)	7	ArrowTie	0
X	rweng10	PropertyLineSymbol_ep	Cell:Miscellaneous:Property Line Symbol	4	0	0
101	rweng10	PropertyLineText_ep	Annotation:Text:Property Line (Existing)	7	0	0
X	rweng10	ReferencePt_dp	Survey and Construction Reference Point Details and Elements	4	0	2
X	rweng10	RefPtAngleTie	Annotation:Angle Tie:Survey Reference Point / Detail	0	Angle	1
X	rweng10	RefPtLeader	Annotation:Leader:Survey Reference Point / Detail	0	ArrowPoint	1
X	rweng10	RefPtLine	Miscellaneous:Survey Reference Point Line / Detail	0	0	1
X	rweng10	RefPtStaTie	Annotation:Station Tie:Survey Reference Point / Detail	0	ArrowTie	0
X	rweng10	RefPtText	Annotation:Miscellaneous:Text: Survey Data Reference Point	0	0	1
X	rweng10	RFClipPoint	Cell:Miscellaneous:Point (Point Cell for RFCLIP Program)	4	0	10
X	rweng10	RRBaseline	Baseline:Rail Road Centerline	0	RR	0
X	rweng10	RRLeaderWt0	Annotation:Leader:Railroad (weight = 0)	0	ArrowPoint	0
X	rweng10	RRLeaderWt1	Annotation:Leader:Railroad (weight = 1)	0	ArrowPoint	1
X	rweng10	RRLeaderWt2	Annotation:Leader:Railroad (weight = 2)	0	ArrowPoint	2
101	rweng10	RRTextWt0	Annotation:Text:Railroad (weight = 0)	0	0	0
101	rweng10	RRTextWt1	Annotation:Text:Railroad (weight = 1)	0	0	1
101	rweng10	RRTextWt2	Annotation:Text:Railroad (weight = 2)	0	0	2
X	rweng10	RWandLA_Leader	Annotation:Leader:R/W & L/A (Proposed)	3	ArrowPoint	2
X	rweng10	RWandLA_Leader_ep	Annotation:Leader:R/W & L/A (Existing)	7	ArrowPoint	0
X	rweng10	RWandLA_StaTie	Annotation:Station Tie:R/W & L/A Lines (Proposed)	3	ArrowTie	2

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
X	rweng10	RWandLA_StaTie_ep	Annotation:Station Tie:R/W & L/A Lines (Existing)	7	ArrowTie	0
101	rweng10	RWandLA_Text	Annotation:Text:R/W & L/A Lines Taking Lines (Proposed)	3	0	2
101	rweng10	RWandLA_Text_ep	Annotation:Text:R/W & L/A Lines (Existing)	7	0	0
X	rweng10	RWandLA_WidthArrow	Annotation:Arrow:RW & LA Width (Proposed)	3	ARROW2	2
X	rweng10	RWandLA_WidthArrow_ep	Annotation:Arrow:RW & LA Width (Existing)	7	ARROW2	0
X	rweng10	RWLine	Proposed:Right of Way Line	4	RW	3
X	rweng10	RWLine_ep	Existing:RW Line	7	RW	0
X	rweng10	Scale_dp	Bar Scale, Scale Label Elements	0	0	2
X	rweng10	Scratch1_dp	A scratch level for temporary or informational items	4	0	0
X	rweng10	Scratch2_dp	A scratch level for temporary or informational items	5	0	0
X	rweng10	ScratchEle_dp	Level for Draft Elements, Temporary Elements, Etc. Do Not Plot	3	0	0
	rweng10	ScratchEle2_dp	Level for Draft Elements, Temporary Elements, Etc. Do Not Plot	4	0	0
X	rweng10	ScratchElements	Scratch:None Plotting Level for Draft Elements, Temporary Elements, Etc.	3	0	0
X	rweng10	ScratchLevel1	Scratch:Level for Undefined Items - weight of 1	0	0	1
X	rweng10	ScratchLevel2	Scratch:Level for Undefined Items - weight of 2	0	0	2
X	rweng10	ScratchLevel3	Scratch:Level for Undefined Items - weight of 3	0	0	3
101	rweng10	SegCurveData	Cell:Miscellaneous:Segmented Curve Data (Place on Text Symbology of Assoc. Element)	0	0	0
X	rweng10	SheetBorder_dp	Sheet Border	1	0	4
X	rweng10	SheetLines_dp	Sheet Lines	1	0	2
X	rweng10	SheetLinesMisc1_dp	Sheet Lines	1	0	0
X	rweng10	SheetLinesMisc2_dp	Sheet Lines	2	0	2
X	rweng10	SheetLinesMisc3_dp	Sheet Lines	3	0	2
X	rweng10	SheetLinesMisc4_dp	Sheet Lines	4	0	2
	rweng10	SheetLinesSignature_dp	Sheet Lines Signature	1	2	0
X	rweng10	SideStLeaderWt1	Annotation:Leader:Side Street (weight = 1)	0	ArrowPoint	1
X	rweng10	SideStLeaderWt2	Annotation:Leader:Side Street (weight = 2)	0	ArrowPoint	2
X	rweng10	SideStStaTie	Annotation:Station Tie:Side Street	0	ArrowTie	0
101	rweng10	SideStTextWt1	Annotation:Text:Side Street Curve Data, Curve & Coordinate Box Text	0	0	1
101	rweng10	SideStTextWt2	Annotation:Text:Side Street Data:Stations,Names,Leader Lines&Circles for (PC,PT,PI,POT)	0	0	2
X	rweng10	StationTicL_dp	Station Tic Marks (Large) and Text	0	0	2
X	rweng10	StationTicS_dp	Station Tic Marks (Small) and Text	0	0	2
101	rweng10	SubBlockNumberText	Cell:Miscellaneous:Subdivision:Text:Block Number Enter Data Field	5	0	2
X	rweng10	SubDivDelineator	Annotation:Subdivision Delineator Line for Subdivision Terminator	5	0	1

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
X	rweng10	SubDivLine	Existing:Subdivision Line	5	0	0
101	rweng10	SubDivLineText	Annotation:Text:Subdivision: Lines & Vacated / Original Lot Lines (Existing)	5	0	0
101	rweng10	SubDivNameText	Annotation:Text:Subdivision: Plat Name (Existing)	5	0	2
X	rweng10	SubDivRW_WidthArrow	Annotation:Arrow:Subdivision	5	ARROW2	0
X	rweng10	SubDoubleArrow	Annotation:Subdivision: Boundary Arrows Double <<---->>	5	SUBDIV2	1
101	rweng10	SubLotNumberText	Annotation:Text:Subdivision: Lot Numbers	5	0	1
X	rweng10	SubSingleArrow	Annotation:Subdivision: Boundary Arrows <---->	5	SUBDIV	1
X	rweng10	SubSingleLTArrow	Annotation:Subdivision: Boundary Arrows Single Left <----	5	SUBDIVLT	1
X	rweng10	SubSingleRTArrow	Annotation:Subdivision: Boundary Arrows Single Right ---->	5	SUBDIVRT	1
X	rweng10	SubTwoLTArrow	Annotation:Subdivision: Boundary Arrows Two Left <<---->	5	SUBDIV2LT	1
X	rweng10	SubTwoLTOnlyArrow	Annotation:Subdivision: Boundary Arrows Two Left Only <<----	5	SUBDIV2LTOnly	1
X	rweng10	SubTwoRTArrow	Annotation:Subdivision: Boundary Arrows Two Right <---->>	5	SUBDIV2RT	1
X	rweng10	SubTwoRTOnlyArrow	Annotation:Subdivision: Boundary Arrows Two Right Only ---->>	5	SUBDIV2RTOnly	1
X	rweng10	SubVacOrigLotLeader	Annotation:Leader:Subvivision:Lines & Vacated / Original Lot Lines (Existing)	5	ArrowPoint	0
X	rweng10	SubVacOrigLotLine	Existing:Subdivision Vacated or Original Lot Line	5	5	0
X	rweng10	SubVacOrigLotStaTie	Annotation:Station Tie:Subdivision Vacated & Original Lot	5	ArrowTie	0
X	rweng10	SUEL_TIITF_Leader	Annotation:Leader:DEP:TIITF:Safe Upland Elevation Lines or Jurisdictional Lines	2	ArrowPoint	2
X	rweng10	SUEL_TIITF_Line	DEP:TIITF:Safe Upland Elevation Lines or Jurisdictional Lines established by DEP methodology	2	PESMT	3
X	rweng10	SUEL_TIITF_StaTie	Annotation:Station Tie:DEP:TIITF:Safe Upland Elevation Lines or Jurisdictional Lines	2	ArrowTie	2
101	rweng10	SUEL_TIITF_Text	Annotation:Text:DEP:TIITF:Safe Upland Elevation Lines or Jurisdictional Lines	2	0	2
X	rweng10	SUEL_TIITF_WidthArrow	Annotation:Arrow:DEP:TIITF:Safe Upland Elevation Lines or Jurisdictional Lines	2	ARROW2	2
101	rweng10	TabOwnshpText	Annotation:Text:Miscellaneous: Table of Ownerships	0	0	1
X	rweng10	TextLabel	Text - Label	0	0	2
X	rweng10	TextMajor	Text - Major	0	0	5
X	rweng10	TextMinor	Text - Minor	0	0	0
X	rweng10	TextMisc	Text - Miscellaneous	0	0	1
X	rweng10	TextNotes	Text - Notes	4	0	1
X	rweng10	TextShtNo	Text - Sheet Number	0	0	2
101	rweng10	TextSurveyLabel	Survey Text Labels	0	0	0
X	rweng10	TextTables	Text - Keysheet Indexes and Table Data	4	0	2
X	rweng10	TextTitle	Text - Title	0	0	3
X	rweng10	TopoMisc_ep	Miscellaneous Topography	0	3	1

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
101	rweng10	TopoText_ep	Annotation:Text:Miscellaneous: All Other Topograhic Element Lables (Reference Files)	0	0	0
	rweng10	Viewport	Viewport (For AutoCAD Use)	3	0	0
X	rweng10	WaterEdge	Annotation:Mapping Boundary for Rivers, Streams, or Lakes	7	WaterMapBoundary	0
	rweng10	Xreference_dp	Reference Files (For AutoCAD Use)	0	0	1
	rweng10	Xreference01_dp	Reference Files (For AutoCAD Use)	0	0	1
	rweng10	Xreference02_dp	Reference Files (For AutoCAD Use)	0	0	1
	rweng10	Xreference03_dp	Reference Files (For AutoCAD Use)	0	0	1
	rweng10	Xreference04_dp	Reference Files (For AutoCAD Use)	0	0	1
	rweng10	Xreference05_dp	Reference Files (For AutoCAD Use)	0	0	1
	rweng10	Xreference06_dp	Reference Files (For AutoCAD Use)	0	0	1
	rweng10	Xreference07_dp	Reference Files (For AutoCAD Use)	0	0	1
	rweng10	Xreference08_dp	Reference Files (For AutoCAD Use)	0	0	1
	rweng10	Xreference09_dp	Reference Files (For AutoCAD Use)	0	0	1
	rweng10	Xreference10_dp	Reference Files (For AutoCAD Use)	0	0	1

4.2.30 TRAFFIC CONTROL - TCDSRD

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
	tcdsrd	ActivePointCell_dp	Active Point Cell	4	0	10
	tcdsrd	AdhocPoint_dp	Adhoc Points Placed by SheetInfo	0	4	0
X	tcdsrd	AdvWarnPanel	Advance Warning Arrow Panels	4	0	2
X	tcdsrd	Aggregate	Aggregate	8	0	1
X	tcdsrd	ArtificialCovering	Artificial Coverings	10	0	2
X	tcdsrd	AsphaltConc	Asphaltic Concrete Quantity Shapes	6	0	3
X	tcdsrd	AsphaltMilling	Asphalt Milling Quantity Shapes	7	0	2
	tcdsrd	AsphaltMisc	Asphalt Miscellaneous Material	1	0	1
X	tcdsrd	Attenuator	Attenuation Systems	6	attenuator	1
X	tcdsrd	AttenuatorTM	Attenuator Truck Mount	6	0	2
X	tcdsrd	Barricade	Barricade	0	0	1
X	tcdsrd	Barricade1	Barricade Symbol Type 1 or 2 at 15' spacing	0	barricade1	1
X	tcdsrd	Barricade2	Barricade Symbol Type 1 or 2 at 30' spacing	0	barricade2	1
X	tcdsrd	Barricade3	Barricade Symbol Type 1 or 2 at 50' spacing	0	barricade3	1
X	tcdsrd	Barricade4	Barricade Symbol Type 1 or 2 at 100' spacing	0	barricade4	1

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
X	tcdsrd	BarrierWall	Barrier Wall All Types	6	0	2
X	tcdsrd	Base	Base Material (All Types)	3	0	2
	tcdsrd	BaselineSurvey	Baseline Survey	0	0	2
X	tcdsrd	Bridge	Bridge	0	0	2
X	tcdsrd	CandG_ex	Curb and Gutter for Cross Sections (All Types) (Existing)	4	2	1
X	tcdsrd	CandG_px	Curb and Gutter for Cross Sections (All Types)	4	0	2
X	tcdsrd	CandGBase_px	Curb and Gutter Base on Cross Sections	3	0	1
	tcdsrd	CLConst_dp	Center Line of Construction	0	0	2
	tcdsrd	ClipBorder_dp	CLIP Border	3	0	0
	tcdsrd	ClipDrawingBound_dp	CLIP Drawing Boundary	3	3	0
	tcdsrd	Cloud_dp	Construction Cloud	7	0	2
X	tcdsrd	CmpFlashbrdRiser	Cmp Flashboard Riser	10	0	2
	tcdsrd	COGO_dp	COGO Information	3	0	1
X	tcdsrd	ConcPvtSC	Concrete Surface Coloring	9	0	1
X	tcdsrd	Concrete	Concrete Areas (All Types plus miscellaneous)	0	0	2
X	tcdsrd	ConcSlabs	Concrete Slabs	0	0	2
X	tcdsrd	Cone	Cone and Tubular Marker	6	0	2
	tcdsrd	ConstArea_dp	Construction Area Crosshatch	0	0	1
	tcdsrd	ConstLimits	Construction Limits	3	LOC	2
	tcdsrd	ConstLines	Construction Lines and References	1	0	0
X	tcdsrd	CrossWalk1	Emphasis Crosswalk 6ft High	0	crosswalk1	4
X	tcdsrd	CrossWalk2	Emphasis Crosswalk 10ft High	0	crosswalk2	4
X	tcdsrd	CurbBack	Back of Curb	4	0	1
X	tcdsrd	CurbFace	Curb and Gutter (Face)	4	0	1
X	tcdsrd	CurbRamp	Curb Cut Ramp	8	0	1
	tcdsrd	CurveData_dp	Curve & Coordinate Data Elements incl PC, PT, PI symbols	4	0	2
	tcdsrd	CurveDataLabel_dp	Curve Data Labels PC,PI, PT	0	0	2
X	tcdsrd	Delineator	Delineators (All Types)	4	0	1
	tcdsrd	DimLines_dp	Dimension Lines, Corresponding Terminators, Equation Lines	0	0	1
X	tcdsrd	DirArrowsPavt	Pavement Marking Directional Arrows	0	0	1
X	tcdsrd	Ditch	Ditch Top	7	6	1
X	tcdsrd	DitchBot	Ditch Bottom	10	0	2
X	tcdsrd	DitchPavt	Ditch Pavement Including Quantity Shapes	3	0	1
	tcdsrd	DitchProfLt_er	Ditch Profile Left (Existing)	8	3	1
	tcdsrd	DitchProfLt_pr	Ditch Profile Left	8	0	1

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
	tcdsrd	DitchProfMdn_er	Ditch Profile Median (Existing)	10	3	1
	tcdsrd	DitchProfMdn_pr	Ditch Profile Median	10	0	1
	tcdsrd	DitchProfRt_er	Ditch Profile Right (Existing)	9	3	1
	tcdsrd	DitchProfRt_pr	Ditch Profile Right	9	0	1
	tcdsrd	DrainDivideArw	Drainage Divide Arrow	0	0	1
	tcdsrd	DrainDivides00	Drainage Divides	10	2	4
	tcdsrd	DrainDivides00_ep	Drainage Divides (Existing)	9	2	4
	tcdsrd	DrainDivides01	Drainage Divides	10	2	4
	tcdsrd	DrainDivides01_ep	Drainage Divides (Existing)	9	2	4
	tcdsrd	DrainDivides02	Drainage Divides	10	2	4
	tcdsrd	DrainDivides02_ep	Drainage Divides (Existing)	9	2	4
	tcdsrd	DrainDivides03	Drainage Divides	10	2	4
	tcdsrd	DrainDivides03_ep	Drainage Divides (Existing)	9	2	4
	tcdsrd	DrainDivides04	Drainage Divides	10	2	4
	tcdsrd	DrainDivides04_ep	Drainage Divides (Existing)	9	2	4
	tcdsrd	DrainDivides05	Drainage Divides	10	2	4
	tcdsrd	DrainDivides05_ep	Drainage Divides (Existing)	9	2	4
	tcdsrd	DrainDivides06	Drainage Divides	10	2	4
	tcdsrd	DrainDivides06_ep	Drainage Divides (Existing)	9	2	4
	tcdsrd	DrainDivides07	Drainage Divides	10	2	4
	tcdsrd	DrainDivides07_ep	Drainage Divides (Existing)	9	2	4
	tcdsrd	DrainDivides08	Drainage Divides	10	2	4
	tcdsrd	DrainDivides08_ep	Drainage Divides (Existing)	9	2	4
	tcdsrd	DrainDivides09	Drainage Divides	10	2	4
	tcdsrd	DrainDivides09_ep	Drainage Divides (Existing)	9	2	4
	tcdsrd	DrainMisc	Miscellaneous Drainage Items	10	0	2
X	tcdsrd	DrainStruct_pr	Drainage Structures (All Types)	10	0	2
X	tcdsrd	DrainStruct_px	Misc Drainage Structures and Elements for XSections	10	0	2
	tcdsrd	Drum	Drum	6	0	1
X	tcdsrd	EaseLicLine	Easement License Agreement Line	5	6	0
X	tcdsrd	EasePerpLine	Easement Lines Perpetual	4	PESMT	1
X	tcdsrd	EaseTempLine	Easement Lines Temporary	6	TEMPE	0
X	tcdsrd	Fence	Fence, Sand Fence	6	Fence1	1
X	tcdsrd	FenceLt	Fence Limited Access Left	6	laflt	1
X	tcdsrd	FenceRt	Fence Limited Access Right	6	lafrt	1

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
X	tcdsrd	Flag	Orange Flag and / or Flagman	6	0	1
X	tcdsrd	FlashingLight	Flashing Lights (All Types)	0	0	1
X	tcdsrd	FlowPaths	Time of Concentration Flow Paths	10	1	1
X	tcdsrd	Gabions	Gabion Baskets or Mats	10	0	2
X	tcdsrd	Gabions_ep	Gabion Baskets or Mats (Existing)	10	1	2
X	tcdsrd	GovTwpRgeLine_ep	Township / Range Lines	10	TWPRGE	2
X	tcdsrd	Grass	Grass, Seeding and Mulching Areas	2	1	2
	tcdsrd	GridMaj_dp	Grid Lines Major in Profile and Cross Section	3	0	1
	tcdsrd	GridMin_dp	Grid Lines Minor in Profile and Cross Section	0	0	0
	tcdsrd	GridMinSub_dp	Grid Lines Minor Sub in Cross Section Sheets	20	0	0
X	tcdsrd	Guardrail	Guardrail	0	0	2
X	tcdsrd	Guardrail_px	Guardrail	0	0	1
X	tcdsrd	GuardrailDbl	Guardrail Double Face	0	grdbl	1
X	tcdsrd	GuardrailEndAch	Guardrail End Anchorage	0	0	1
X	tcdsrd	GuardrailLt	Guardrail Left	0	grail1	1
X	tcdsrd	GuardrailRt	Guardrail Right	0	grail2	1
X	tcdsrd	GuyWire	Guy Wire	3	0	0
	tcdsrd	HardscapeDetails	Paving Details, Fence Railing, Stamped Asphalt	4	0	2
	tcdsrd	ImageAttachment_dp	Image Attachmentst	0	0	0
X	tcdsrd	InletProt	Rock Bags and Sand Bagging	10	Rockbag	2
	tcdsrd	KeyShtMisc	Key sheet Miscellaneous Items	0	0	2
X	tcdsrd	LARWLine	Limited Access Right of Way	4	LA	2
X	tcdsrd	LARWLine_ep	Limited Access Right of Way (Existing)	4	EXLA	1
	tcdsrd	LeaderLine_dp	Leader Line and terminator with Text	0	0	1
	tcdsrd	Logo_dp	Consultant Engineer of Record Logo	0	0	1
	tcdsrd	MatchLines_dp	Match Lines with Text, Arrows for Station Notations	1	0	2
	tcdsrd	Miscellaneous0	Undefined proposed item - co blue wt 0	1	0	0
	tcdsrd	Miscellaneous1	Undefined proposed item - co blue wt 1	1	0	1
	tcdsrd	Miscellaneous2	Undefined proposed item - co blue wt 2	1	0	2
	tcdsrd	Miscellaneous3	Undefined proposed item - co green wt 0	2	0	0
	tcdsrd	Miscellaneous4	Undefined proposed item - co green wt 1	2	0	1
	tcdsrd	Miscellaneous5	Undefined proposed item - co green wt 2	2	0	2
	tcdsrd	Miscellaneous6	Undefined proposed item - co red wt 0	3	0	0
	tcdsrd	Miscellaneous7	Undefined proposed item - co red wt 1	3	0	1
	tcdsrd	Miscellaneous8	Undefined proposed item - co red wt 2	3	0	2

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
	tcdsrd	Miscellaneous9	Undefined proposed item - co red wt 3	3	0	3
	tcdsrd	NonPlottingEle_dp	Non plotting items such as construction elements and type 66 elements	4	0	0
	tcdsrd	NorthArw_dp	North Arrows	0	0	2
X	tcdsrd	ObjectMarker	Object and Reflective Markers	3	0	1
X	tcdsrd	OverheadSign	Overhead Sign Panels	0	0	2
X	tcdsrd	OverheadSign_ep	Overhead Sign Panels (Existing)	0	3	1
X	tcdsrd	OverheadStr	Mast Arm, Truss Assemblies, Signal Arms and Supports	0	0	2
X	tcdsrd	OverheadStr_ep	Mast Arm, Truss Assemblies, Signal Arms and Supports (Existing)	0	3	1
X	tcdsrd	PavtMessage	Pavement Message (All types)	0	0	1
X	tcdsrd	PavtMessage_ep	Pavement Message (Existing - All types)	0	2	0
	tcdsrd	PavtMiscMat	Miscellaneous Pavement Quantity Items (Bituminous Material, Cover Material, Mesh, etc.)	11	0	1
	tcdsrd	PavtXover_ep	Crossovers and Detours (Temporary)	0	3	0
	tcdsrd	PayItem_dp	Pay Item Number Label Elements	4	0	2
X	tcdsrd	PedDetector	Pedestrian Detector	0	0	2
X	tcdsrd	Pedestal	Pedestal	1	0	1
X	tcdsrd	Pedestal_ep	Pedestal (Existing)	1	2	1
X	tcdsrd	PedHead	Pedestrian Head (All Types)	1	0	1
X	tcdsrd	PedHead_ep	Pedestrian Head (All Types) (Existing)	0	2	1
X	tcdsrd	PlotBorder_dp	Plot Border	3	0	0
X	tcdsrd	PMCeramic	Pavement Markers Ceramic	0	0	1
	tcdsrd	PMMisc	Pavement Marking Miscellaneous Items	0	0	2
X	tcdsrd	PMStripe(10-10-20)	Pavement Marking 10/10/20 Skip Traffic Stripe 6in Contrast	0	skip10/10/20contrast	2
X	tcdsrd	PMStripe12B	Pavement Marking Traffic Stripe 12in Black	3	stripe12	4
X	tcdsrd	PMStripe12W	Pavement Marking Traffic Stripe 12in White	0	stripe12	4
X	tcdsrd	PMStripe12W(3-9)	Pavement Marking 3/9 Skip Traffic Stripe 12in White	0	stripe12	4
X	tcdsrd	PMStripe12Y	Pavement Marking Traffic Stripe 12in Yellow	4	stripe12	4
X	tcdsrd	PMStripe16B	Pavement Marking Traffic Stripe 16in Black	3	stripe16	5
X	tcdsrd	PMStripe16W	Pavement Marking Traffic Stripe 16in White	0	stripe16	5
X	tcdsrd	PMStripe16Y	Pavement Marking Traffic Stripe 16in Yellow	4	stripe16	5
X	tcdsrd	PMStripe18B	Pavement Marking Traffic Stripe 18in Black	3	stripe18	6
X	tcdsrd	PMStripe18W	Pavement Marking Traffic Stripe 18in White	0	stripe18	6
X	tcdsrd	PMStripe18Y	Pavement Marking Traffic Stripe 18in Yellow	4	stripe18	6
X	tcdsrd	PMStripe24W	Pavement Marking Traffic Stripe 24in White	0	stripe24	7
X	tcdsrd	PMStripe24Y	Pavement Marking Traffic Stripe 24in Yellow	4	stripe24	7
X	tcdsrd	PMStripe6B	Pavement Marking Traffic Stripe 6in Black	3	stripe06	2

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
X	tcdsrd	PMStripe6B(10-30)	Pavement Marking 10/30 Skip Traffic Stripe 6in Black	3	stripe06	2
X	tcdsrd	PMStripe6Bl	Pavement Marking Traffic Stripe 6in Blue	1	stripe06	2
X	tcdsrd	PMStripe6DY	Pavement Marking Traffic Stripe 6in Double Yellow	4	dbl_line	2
X	tcdsrd	PMStripe6W	Pavement Marking Traffic Stripe 6in White	0	stripe06	2
X	tcdsrd	PMStripe6W(10-30)	Pavement Marking 10/30 Skip Traffic Stripe 6in White	0	stripe06	2
X	tcdsrd	PMStripe6W(2-4)	Pavement Marking 2/4 Skip Traffic Stripe 6in White	0	stripe06	2
X	tcdsrd	PMStripe6W(3-9)	Pavement Marking 3/9 Skip Traffic Stripe 6in White	0	stripe06	2
X	tcdsrd	PMStripe6W(6-10)	Pavement Marking 6/10 Skip Traffic Stripe 6in White	0	stripe06	2
X	tcdsrd	PMStripe6Y	Pavement Marking Traffic Stripe 6in Yellow	4	stripe06	2
X	tcdsrd	PMStripe6Y(10-30)	Pavement Marking 10/30 Skip Traffic Stripe 6in Yellow	4	stripe06	2
X	tcdsrd	PMStripe6Y(2-4)	Pavement Marking 2/4 Skip Traffic Stripe 6in Yellow	4	stripe06	2
X	tcdsrd	PMStripe6Y(6-10)	Pavement Marking 6/10 Skip Traffic Stripe 6in Yellow	4	stripe06	2
X	tcdsrd	PMStripe8B	Pavement Marking Traffic Stripe 8in Black	3	stripe06	3
X	tcdsrd	PMStripe8W	Pavement Marking Traffic Stripe 8in White	0	stripe08	3
X	tcdsrd	PMStripe8W(3-9)	Pavement Marking 3/9 Skip Traffic Stripe 8in White	0	stripe08	2
X	tcdsrd	PMStripe8Y	Pavement Marking Traffic Stripe 8in Yellow	4	stripe08	3
X	tcdsrd	PMStripe9C(10-30)	Pavement Marking 10/30 Skip Traffic Stripe 9in Contrast	0	skip 10/30 contrast	2
X	tcdsrd	PMStripeVibeW	Pavement Marking Auditory and Vibratory 6in White	0	Vibratory	2
X	tcdsrd	PMStripeVibeY	Pavement Marking Auditory and Vibratory 6in Yellow	4	Vibratory	2
	tcdsrd	PointLocator_ep	Point Locator Symbol	4	0	0
X	tcdsrd	PolePower	Power Pole w/ Transformer	3	0	2
X	tcdsrd	PoleShared	Power Pole Electric (Above Ground) Shared w/ Transformer	3	0	2
X	tcdsrd	PoleSteelStrain	Steel Strain Pole	0	0	2
X	tcdsrd	PoleSteelStrain_ep	Steel Strain Pole (Existing)	0	2	1
X	tcdsrd	PoleTel	Telephone Pole	6	0	2
X	tcdsrd	PoleUtil	Utility Pole	0	0	2
X	tcdsrd	PoleWoodStrain	Wood Strain Pole	0	0	2
X	tcdsrd	PoleWoodStrain_ep	Wood Strain Pole (Existing)	0	2	1
X	tcdsrd	PropertyLine_ep	Property Lines	3	0	0
	tcdsrd	RailroadMisc_ep	RR Switch, Warning Sign, Milepost	11	0	0
	tcdsrd	ReferencePt_dp	Survey and Construction Reference Point Details and Elements	4	0	2
X	tcdsrd	RockGravelStone	Rock, Gravel, Stone, Boulders, Etc.	1	0	2
X	tcdsrd	RPM_ep	Reflective Pavement Markers (Existing)	2	2	1
X	tcdsrd	RPM1	Raised Pavement Markers, White	0	0	2
X	tcdsrd	RPM2	Raised Pavement Markers, White - Red	3	0	2

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
X	tcdsrd	RPM3	Raised Pavement Markers, Yellow	4	0	2
X	tcdsrd	RPM4	Raised Pavement Markers, Yellow - Yellow	9	0	2
X	tcdsrd	RPM5	Raised Pavement Markers, Yellow - Red	6	0	2
X	tcdsrd	RPM6	Raised Pavement Markers, Blue	1	0	2
X	tcdsrd	RWLine	Right of Way Lines	4	RW	2
X	tcdsrd	RWLine_ep	Right of Way Lines (Existing)	3	RW	1
	tcdsrd	Scale_dp	Bar Scale, Scale Label Elements	0	0	2
	tcdsrd	Scratch1_dp	A scratch level for temporary or informational items	4	0	0
	tcdsrd	Scratch2_dp	A scratch level for temporary or informational items	5	0	0
	tcdsrd	ScratchEle_dp	Level for Draft Elements, Temporary Elements, Etc. Do Not Plot	3	0	0
	tcdsrd	ScratchEle2_dp	Level for Draft Elements, Temporary Elements, Etc. Do Not Plot	4	0	0
101	tcdsrd	SedimentBarrier	Synthetic Bales and Staked Silt Fences	10	*hay_bales	2
101	tcdsrd	SedimentBarrier	Synthetic Bales and Staked Silt Fences	10	*silt_fence	2
	tcdsrd	SheetBorder_dp	Sheet Border	1	0	4
	tcdsrd	SheetLines_dp	Sheet Lines	1	0	2
	tcdsrd	SheetLinesMisc1_dp	Sheet Lines	1	0	0
	tcdsrd	SheetLinesMisc2_dp	Sheet Lines	2	0	2
	tcdsrd	SheetLinesMisc3_dp	Sheet Lines	3	0	2
	tcdsrd	SheetLinesMisc4_dp	Sheet Lines	4	0	2
	tcdsrd	ShldrHatch	Paved Shoulder Hatch Pattern	1	0	1
X	tcdsrd	ShldrPaved	Paved Shoulder Line	1	0	1
	tcdsrd	ShldrPaved_ep	Shoulder Edge, Paved	1	3	0
X	tcdsrd	SidewalkConc	Sidewalk Concrete Shape	0	0	2
X	tcdsrd	SignalCable	Signal Cable	3	signal_cable	1
X	tcdsrd	SignalCableAccs	Signal Cable Accessories	0	0	2
X	tcdsrd	SignalDetail	Signal Details	0	0	1
	tcdsrd	SignalHead	Signal Head Section Details	2	0	1
X	tcdsrd	SignalHead_ep	Signal Head Section Details (Existing)	2	2	0
	tcdsrd	SignalMisc	Signal Miscellaneous Equipment	3	0	1
X	tcdsrd	SignalSOP	S.O.P. Box and Movements	0	0	2
X	tcdsrd	SignalSym	Signal Head Symbols	0	0	1
X	tcdsrd	SignalSym_ep	Signal Head Symbols (Existing)	3	2	0
X	tcdsrd	SignCantilever	Sign Symbol Cantilever	0	0	1
X	tcdsrd	SignCantilever_ep	Sign Symbol Cantilever (Existing)	0	2	0
	tcdsrd	SignDetail	Sign Details	0	0	2

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
	tcdsrd	SignLettersAZ	Alphabet Cell Library Letter A-Z Numbers 0-9	0	0	0
	tcdsrd	SignMisc	Miscellaneous Sign Symbols	1	0	2
	tcdsrd	SignMisc_ep	Miscellaneous Sign Symbols (Existing)	1	1	1
X	tcdsrd	SignPanel	Sign Panels - Regulatory	0	0	2
X	tcdsrd	SignPanel_ep	Sign Panel Elements (Existing)	0	2	1
X	tcdsrd	SignPanelBorder	Sign Panel Border on Sign Details	0	0	1
X	tcdsrd	SignPanelC	Sign Panels - Civil	1	0	2
X	tcdsrd	SignPanelDetRed	Sign Panel Details in Red	3	0	2
X	tcdsrd	SignPanelG	Sign Panels - Guide	2	0	2
X	tcdsrd	SignPanelI	Sign Panels - Special Interest	9	0	2
X	tcdsrd	SignPanelT	Sign Panels - Construction	6	0	2
X	tcdsrd	SignPanelW	Sign Panels - Warning	4	0	2
X	tcdsrd	SignSpanwire	Span Wire Signing Assembly	2	0	1
X	tcdsrd	SignSpanwire_ep	Span Wire Signing Assembly (Existing)	2	2	1
X	tcdsrd	SignSpecial	Special Signs / Guide Signs	2	0	2
X	tcdsrd	SignSupport	Ground Mounted Sign Support Symbol (All Types)	1	0	1
X	tcdsrd	SignSymbol_px	Sign Structure and Foundation on Cross Sections	4	0	2
X	tcdsrd	SignTruss	Sign Symbol Truss	3	0	1
X	tcdsrd	SignTruss_ep	Sign Symbol Truss (Existing)	3	2	1
X	tcdsrd	Sod	Performance Sod	2	0	2
	tcdsrd	SpecialDetails	Special Details	6	0	1
X	tcdsrd	Stabilization	Stabilization Material Lines and Shapes	9	0	2
	tcdsrd	StationTicL_dp	Station Tic Marks (Large) and Text	0	0	2
	tcdsrd	StationTicS_dp	Station Tic Marks (Small) and Text	0	0	2
	tcdsrd	Structure	Structures	0	0	2
	tcdsrd	SumBoxBorder_dp	Summary Boxes Borders	4	0	3
	tcdsrd	SumBoxLines_dp	Summary Boxes Lines and Miscellaneous Items	4	0	1
	tcdsrd	SumBoxLinesMin_dp	Summary Boxes Lines Minor Line and Miscellaneous Items	4	0	0
	tcdsrd	TCZMisc	Traffic Control Miscellaneous Items	3	0	1
X	tcdsrd	TCZSign	Traffic Control Sign Symbol	6	0	2
X	tcdsrd	TCZSign1	Traffic Control Sign Symbol at 200' Spacing	6	sign3	2
X	tcdsrd	TCZSign2	Traffic Control Sign Symbol at 400' Spacing	6	sign2	2
X	tcdsrd	TCZSign3	Traffic Control Sign Symbol at 500' Spacing	6	sign1	2
X	tcdsrd	TempBarrierWall	Barrier Wall (Temporary)	6	0	2
	tcdsrd	TextBLStation	Text - B/L Station and Tics	0	0	2

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
	tcdsrd	TextConstEle	Text - Construction Element	0	0	1
	tcdsrd	TextCurveData	Text - Curve Data Note	0	0	2
	tcdsrd	TextDetails	Text - Detail Notes	4	0	2
	tcdsrd	TextElevLabel	Elevation Labels	4	0	0
	tcdsrd	TextLabel	Text - Label	0	0	2
	tcdsrd	TextLandscape	Text - Landscape Labels	0	0	1
	tcdsrd	TextMajor	Text - Major	0	0	5
	tcdsrd	TextMinor	Text - Minor	0	0	0
	tcdsrd	TextMisc	Text - Miscellaneous	0	0	1
	tcdsrd	TextNotes	Text - Notes	4	0	1
	tcdsrd	TextProfLabel	Text - Profile, Horizontal and Vertical Axis Labels	0	0	2
	tcdsrd	TextProjLabel	Text - Begin and End Project label with leader lines	1	0	2
	tcdsrd	TextPtLabel	Point Labels	4	0	0
	tcdsrd	TextShtNo	Text - Sheet Number	0	0	2
	tcdsrd	TextSurveyLabel	Survey Text Labels	0	0	0
	tcdsrd	TextTables	Text - Keysheet Indexes and Table Data	4	0	2
	tcdsrd	TextTitle	Text - Title	0	0	3
	tcdsrd	TextXSElev	Text - Cross Section Elevations	2	0	1
X	tcdsrd	TrafSeparator	Traffic Separator (All Types)	6	0	1
X	tcdsrd	TrafSeparator_px	Traffic Separator (All Types) on Cross Sections	6	0	2
X	tcdsrd	TurbidityBarrier1	Turbidity Barrier 1 (floating)	10	barrier1	2
X	tcdsrd	TurbidityBarrier2	Turbidity Barrier 2 (staked)	10	barrier2	2
	tcdsrd	TurbidityBarrier2_ep	Turbidity Barrier (Staked) (Existing)	10	1	2
	tcdsrd	TurbidityBarrier1_ep	Turbidity Barrier (Floating) (Existing)	10	1	2
X	tcdsrd	Turf	Performance Truf	100	0	2
	tcdsrd	TypicalMisc	Typical Miscellaneous Items	0	0	2
	tcdsrd	XSCell	GEOPAK Cross Section Cell and Profile Cell	8	0	1
X	tcdsrd	XSTypical_px	Roadway Pavement Typical on Cross Sections	1	0	2
	tcdsrd	Viewport	Viewport (For AutoCAD Use)	3	0	0
	tcdsrd	Xreference_dp	Reference Files (For AutoCAD Use)	0	0	1
	tcdsrd	Xreference01_dp	Reference Files (For AutoCAD Use)	0	0	1
	tcdsrd	Xreference02_dp	Reference Files (For AutoCAD Use)	0	0	1
	tcdsrd	Xreference03_dp	Reference Files (For AutoCAD Use)	0	0	1
	tcdsrd	Xreference04_dp	Reference Files (For AutoCAD Use)	0	0	1
	tcdsrd	Xreference05_dp	Reference Files (For AutoCAD Use)	0	0	1

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
	tcdsrd	Xreference06_dp	Reference Files (For AutoCAD Use)	0	0	1
	tcdsrd	Xreference07_dp	Reference Files (For AutoCAD Use)	0	0	1
	tcdsrd	Xreference08_dp	Reference Files (For AutoCAD Use)	0	0	1
	tcdsrd	Xreference09_dp	Reference Files (For AutoCAD Use)	0	0	1
	tcdsrd	Xreference10_dp	Reference Files (For AutoCAD Use)	0	0	1

4.2.31 EXISTING TOPOGRAPHY FOR ROADWAY - TOPORD

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight	Point / Line	Feature
	topord	ArchSite_ep	Archeological Site	2	0	1	L	ARST
	topord	Attenuator_ep	Attenuator Systems	0	0	1	L	ATTN
	topord	BankMent_ep	Embankment (Manmade, Top or Bottom)	9	3	0	L	BNK
	topord	BarrierWall_ep	Barrier Wall All Types	6	3	0	L	BARW
	topord	BarrierWall_ep	Precast Barrier Wall (Temp)	6	3	0	L	TMPW
	topord	BaselineSurvey	Baseline Survey	0	0	2		
	topord	Beacons_ep	Beacons and Path Illumination	0	0	1	P	BN
	topord	BLSurveyCntrl_ep	Baseline Survey Control	0	0	2	L	BLC
	topord	BLSurveyField_ep	Baseline Field Survey	0	0	2	L	BL
	topord	BLSurveySymbl_ep	Baseline Survey Symbol	0	0	0	P	BL
	topord	Bollard_ep	Bollards	0	2	1	P	BOL
	topord	Bridge_ep	Bridge Approaches and Slabs	0	3	1	L	APRS
	topord	BridgeEle_ep	Bridge Elements	0	1	0	L	BRDG
	topord	Building_ep	Buildings	1	0	0	L	BLDG
	topord	BusStop_ep	Bench, Bus Stop	8	3	0	P	BNCH
	topord	CableBarrier_ep	Cable Barrier	0	Cable_Barrier	1	L	CBR
	topord	Canal_ep	Canal, Lock	7	3	0	L	CAN
	topord	CattleGuard_ep	Cattle Guard	7	1	0	P	CGD
	topord	CGBack_ep	Curb and Gutter (Back)	4	3	0	L	CGB
	topord	CGep_ep	Curb / Curb and Gutter (at EP & FL)	0	3	0	L	CG
	topord	CGFace_ep	Face of Curb and Gutter	4	3	0	L	CGF
	topord	ConcSlabs_ep	Concrete Slabs	0	1	1	L	CSL
	topord	Core_ep	Core Sample or Test Hole	9	0	0	P	CSH

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight	Point / Line	Feature
	topord	CurbRamp_ep	Curb Cut Ramp	2	3	0	L	CCR
	topord	CurveDataLabel_dp	Curve Data Labels PC,PI, PT	0	0	2		
	topord	Deck_ep	Deck / Porch	7	1	0	L	DECK
	topord	DelineatorPost_ep	Delineator Post, Existg Metal and Flexible	4	1	1	P	DLP
	topord	Ditch_ep	Ditch (Top, Bottom and Flow Lines)	7	6	0	L	DTCH
	topord	DitchPavt_ep	Ditch Pavement	0	1	0	L	DTCHP
	topord	Docks_ep	Docks and Wharfs	0	1	0	L	DOCK
	topord	Dolphins_ep	Dolphins and Fenders	7	1	0	P	DF
	topord	Driveway_ep	Driveway (Drive, Lane, Turnouts)	7	3	0	L	DWY
	topord	DummyChains_ep	Dummy Chains	0	0	1	L	DUMB
	topord	Fence_ep	Fence (All)	6	Fence1	0	L	FNC
	topord	FloodLight_ep	Flood Light	3	1	1	P	FLD
	topord	Furnace_ep	Incinerator, Boiler, or Furnace	8	1	0	P	INCN
	topord	Gates_ep	Gates	7	3	0	L	GT
	topord	GlareScrn_ep	Glare Screen & Blinds	0	{ curtain }	0	L	GS
	topord	GroundShot_ep	Ground Shot for DTM Densification	2	0	0	P	GDN
	topord	GuardrailDbl_ep	Guardrail Double Face	0	grdbl	0	L	GRDBL
	topord	GuardrailLt_ep	Guardrail Left	0	grail1	0	L	GRL
	topord	GuardrailRt_ep	Guardrail Right	0	grail2	0	L	GRR
	topord	Handrail_ep	Handrails	9	3	0	L	HNDRL
	topord	Hole_ep	Hole	8	1	0	P	HOLE
	topord	ImageAttachment_dp	Image Attachmentst	0	0	0		algnrd
	topord	LaneLine_ep	Lane Lines	0	LaneLine_exist	1	L	LL
	topord	LeaderLine_dp	Leader Line and terminator with Text	0	0	1		
	topord	Mailbox_ep	Mailbox(s)	8	1	0	P	MBX
	topord	MiscEquip_ep	Flag Pole	8	1	0	P	FP
	topord	MiscEquip_ep	Parking Meter	8	1	0	P	PKGM
	topord	Monument_ep	5/8 Rod and Cap	4	0	0	P	IRC
	topord	Monument_ep	Aerial Targets	4	0	0	P	AT
	topord	Monument_ep	Concrete Monument (Cast)	4	0	0	P	CMON
	topord	Monument_ep	Concrete Monument (Poured)	4	0	0	P	PMON
	topord	Monument_ep	Deep Rod Mark	4	0	0	P	DRM
	topord	Monument_ep	Drill Hole, Plug (Control Monumentation)	4	0	0	P	DH
	topord	Monument_ep	Hub and Tac	4	0	0	P	SAT

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight	Point / Line	Feature
	topord	Monument_ep	Metal Pipe, Rod, Bar (Control)	4	0	0	P	PIP
	topord	Monument_ep	Nail, Spike, Pin (Control Monumentation)	4	0	0	P	NL
	topord	Monument_ep	Other Marker? (Control Monumentation)	4	0	0	P	OM
	topord	Monument_ep	Post, Stake, Staub (Control Monumentation)	4	0	0	P	PST
	topord	Monument_ep	Stamped Disk	4	0	0	P	STMD
	topord	Monument_ep	Stamped Plate	4	0	0	P	STMP
	topord	ParkEquip_ep	Campstove, Grill, Firepit, BBQ	9	2	0	P	CMPST
	topord	ParkEquip_ep	Playground Equipment	9	2	0	P	PLEQ
	topord	Patternlines_ep	Cross Section Chain	2	1	0	L	XSC
	topord	Pavemk_ep	Handicap Pavement Marking	0	2	0	P	HNDC
	topord	Pavemk_ep	Pavement Markings (Other)	0	2	0	L	PMRK
	topord	Pavemk_ep	Straight Direction Arrow	0	2	0	P	STAROW
	topord	Pavemk_ep	Straight and Turn Arrow	0	2	0	P	STATRN
	topord	Pavemk_ep	Turn Arrow	0	2	0	P	TA
	topord	PavtAsph_ep	Asphalt Pavement Edge	0	3	1	L	AP
	topord	PavtConc_ep	Concrete Pavement (Edges)	0	3	1	L	CPVT
	topord	PavtConcJoints_ep	Concrete Pavement (Joints)	1	5	1	L	CPVJ
	topord	PavtCrown_ep	Asphalt Pavement (Crown)	0	4	1	L	AC
	topord	PavtCrown_ep	Concrete Pavement (Crown)	0	4	1	L	CPVC
	topord	PavtMisc_ep	Pavement Parking Lot/Guardrail/Misc Pavement	7	3	0	L	MP
	topord	PavtTractorXing_ep	Tractor Crossings	0	3	1	L	TX
	topord	PavtXover_ep	Crossovers and Detours (Temporary)	0	3	0	L	XO
	topord	PedSignal_ep	Pedestrian Signal Unit, Signage	0	2	0	P	PS
	topord	Piling_ep	Piling, Piers, or Column	8	3	0	P	PIL
	topord	PointLocator_ep	Point Locator Symbol	4	0	0	P	
	topord	PumpIsland_ep	Pump Island	7	3	1	L	PMPIS
	topord	RailroadMisc_ep	RR Milepost	11	0	0	P	RRMP
	topord	RailroadMisc_ep	RR Switch	11	0	0	P	RRS
	topord	RailroadMisc_ep	RR Warning Sign	11	0	0	P	RRWS
	topord	RailroadMisc_ep	RR Signal with Gate	11	0	0	P	SWG
	topord	RailroadTracks_ep	Railroad Tracks (Rail, Bed)	4	3	0	L	RR
	topord	RailroadXing_ep	RR Crossing (Roadway Platforms), RR Signal w/ Gate	11	3	0	L	RRX
	topord	RefPtLine	Miscellaneous:Survey Reference Point Line / Detail	0	0	1	L	REFL
	topord	RefPtText	Annotation:Miscellaneous:Text: Survey Data Reference Point	0	0	1		

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight	Point / Line	Feature
	topord	RipRap_ep	Rip Rap, Rubble	4	3	1	L	RIP
	topord	RRBaseline	Baseline: Rail Road Centerline	4	0	2	L	RRCL
	topord	Scratch1_dp	A scratch level for temporary or informational items	4	0	0		
	topord	Scratch2_dp	A scratch level for temporary or informational items	5	0	0		
	topord	SeaWalls_ep	Sea Walls	0	1	3	L	SEAW
	topord	ShldrPaved_ep	Shoulder Edge, Paved	1	3	0	L	SHLDR
	topord	ShldrUnpaved_ep	Unpaved Shoulders	0	3	0	L	UNPS
	topord	Shrub_ep	Shrubs (all), Shrub Boundary, Ornamental Plants	2	0	0	L	HED
	topord	Shrub_ep	Hedges and Shrubs (Boundary)	2	0	0	P	OP
	topord	Shrub_ep	Ornamental Plant	2	0	0	P	SHR
	topord	Shrub_ep	Shrub, Bush	2	0	0	P	SHRC
	topord	Shrub_ep	Coniferous Shrub	2	0	0	P	SHRD
	topord	SidewalkBack_ep	Sidewalk (Backs)	2	3	0	L	SWKB
	topord	SidewalkFront_ep	Sidewalk (Fronts)	1	3	0	L	SWK
	topord	Signal_ep	Signal Head	3	1	1	P	SIG
	topord	Signal_ep	Signal on Pedestal	3	1	1	P	SIGP
	topord	SignalLoop_ep	Traffic Detector Loops	7	1	2	L	TFD
	topord	SignalMisc_ep	Signal Controller	3	2	0	P	SIGC
	topord	SignalSupport_ep	Signal Supports including Mast Arm	3	2	0	P	SMA
	topord	SignMulti_ep	Multi-column Sign (Large Sign)	0	3	1	L	MS
	topord	SignMulti_ep	Multi-column Sign (Small Sign)	0	3	1	P	SMS
	topord	SignSingle_ep	Sign (Single Support)	3	2	0	P	SSS
	topord	SignSupport_ep	Trusses and Cantilevers for Overhead Signs	0	3	1	L	SGNT
	topord	Silo_ep	Silo	11	2	0	P	SILO
	topord	Slopes_ep	Levees, Dikes, or Dams (Top or Bottom)	9	3	0	L	LV
	topord	Slopes_ep	Natural Slopes (Top or Bottom)	9	3	0	L	SLP
	topord	SpanWire_ep	Signal / Span Wire Pole	3	2	0	P	SSP
	topord	SpanWire_ep	Signal / Span Wire Pole	3	2	0	L	SSW
	topord	Stairs_ep	Stairways, Steps	0	3	1	L	STP
	topord	StationTicL_dp	Station Tic Marks (Large) and Text	0	0	2		
	topord	StationTicS_dp	Station Tic Marks (Small) and Text	0	0	2		
	topord	Stream_ep	Stream Edge	1	3	0	L	STRM
	topord	Stream_ep	Stream Center	1	3	0	L	STRMC
	topord	StreamMisc_ep	Buoy	7	0	0	P	BUOY

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight	Point / Line	Feature
	topord	StreamMisc_ep	Stream or Tide Gauge	7	0	0	P	TG
	topord	Stump_ep	Stump	2	0	0	P	STM
	topord	TankStor_ep	Storage Tank	11	3	0	P	STTK
	topord	TankUG_ep	Fill Cap (Underground Tank)	3	1	0	P	FC
	topord	TextBLStation	Text - B/L Station and Tics	0	0	2		
	topord	TextCurveData	Text - Curve Data Note	0	0	2		
	topord	TextElevLabel	Elevation Labels	4	0	0		
	topord	TextLabel	Text - Label	0	0	2		
	topord	TextMisc	Text - Miscellaneous	0	0	1		
	topord	TextNotes	Text - Notes	4	0	1		
	topord	TextPtLabel	Point Labels	4	0	0		
	topord	TextSurveyLabel	Survey Text Labels	0	0	0	P	NOTE
	topord	TextSurveyLabel	Survey Text Labels	0	0	0	P	MISC
	topord	TopoMisc_ep	Miscellaneous Topography	0	3	1	L	MISC
	topord	TrafSeparator_ep	Traffic Separator	6	3	0	L	TFSP
	topord	Trail_ep	Roadway, Trail (Unpaved)	9	3	1	L	RD
	topord	Trash_ep	Dumpster, Trash Disposal	9	0	0	P	DMP
	topord	Treadle_ep	Treadle	7	1	5	L	TRD
	topord	Tree_ep	Tree	2	0	0	P	TREE
	topord	Tree_ep	Coniferous Tree	2	0	0	P	TREEC
	topord	Tree_ep	Citrus Tree	2	0	0	P	TREECI
	topord	Tree_ep	Cypress Tree	2	0	0	P	TREECY
	topord	Tree_ep	Deciduous Tree	2	0	0	P	TREED
	topord	Tree_ep	Oak Tree	2	0	0	P	TREEOA
	topord	Tree_ep	Palm Tree	2	0	0	P	TREEPA
	topord	Tree_ep	Palm Tree Cluster	2	0	0	P	TREEPC
	topord	Tree_ep	Pine Tree	2	0	0	P	TREEPI
	topord	TreeLine_ep	Groves & Orchards (Boundary)	2	woodline	0	L	GRV
	topord	TreeLine_ep	Scattered Trees (Boundary)	2	woodline	0	L	SCT
	topord	TreeLine_ep	Woods Line	2	woodline	0	L	WDL
	topord	Tributary_ep	Spring (Water Source)	1	0	0	P	SPR
	topord	Viewport	Viewport (For AutoCAD Use)	3	0	0		
	topord	Walls_ep	Walls	9	3	1	L	WALL
	topord	WaterEdge_ep	Edge of Water	7	3	0	L	WEDG
	topord	Wetland_ep	W.M.D. & D.E.P. Wetlands	1	wetland_ep	0	L	DEP

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight	Point / Line	Feature
	topord	WetlandEdge_ep	CORPS Wetlands (Marsh or Swamp)	2	wetland_ep	0	L	COE
	topord	WetlandEdge_ep	Edge of Mangrove	2	wetland_ep	0	L	EM
	topord	WetlandEdge_ep	Edge of Wetlands (Marsh or Swamp)	2	wetland_ep	0	L	MAR
	topord	WetlandSym_ep	Marsh Symbol	2	1	0	P	MAR
	topord	WetlandSym_ep	Wetland Point	2	1	0	P	WLPT
	topord	WindMill_ep	Wind Mill	1	1	0	P	WIM
	topord	XSPt_ep	Cross Section Point, Station	2	1	0	P	XS
	topord	Xreference_dp	Reference Files (For AutoCAD Use)	0	0	1		
	topord	Xreference01_dp	Reference Files (For AutoCAD Use)	0	0	1		
	topord	Xreference02_dp	Reference Files (For AutoCAD Use)	0	0	1		
	topord	Xreference03_dp	Reference Files (For AutoCAD Use)	0	0	1		
	topord	Xreference04_dp	Reference Files (For AutoCAD Use)	0	0	1		
	topord	Xreference05_dp	Reference Files (For AutoCAD Use)	0	0	1		
	topord	Xreference06_dp	Reference Files (For AutoCAD Use)	0	0	1		
	topord	Xreference07_dp	Reference Files (For AutoCAD Use)	0	0	1		
	topord	Xreference08_dp	Reference Files (For AutoCAD Use)	0	0	1		
	topord	Xreference09_dp	Reference Files (For AutoCAD Use)	0	0	1		
	topord	Xreference10_dp	Reference Files (For AutoCAD Use)	0	0	1		

4.2.32 EXISTING TOPOGRAPHY FOR RIGHT OF WAY – TOPORW

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight	Point / Line	Feature
	toporw	BarrierWall_ep	Barrier Wall All Types	6	3	0	L	BARW
	toporw	BarrierWall_ep	Precast Barrier Wall (Temp)	6	3	0	L	TMPW
	toporw	Basin_ep	Sediment Basin, Retention Pond	10	3	1	L	BAS
	toporw	Bridge_ep	Bridge Approaches and Slabs	0	3	1	L	APRS
	toporw	BridgeEle_ep	Bridge Elements	0	1	0	L	BRDG
	toporw	Building_ep	Buildings	1	0	0	L	BLDG
	toporw	ConcSlabs_ep	Concrete Slabs	0	1	1	L	CSL
	toporw	Deck_ep	Deck / Porch	7	1	0	L	DECK
	toporw	DitchPavt_ep	Ditch Pavement	0	1	0	L	DTCHP
	toporw	Docks_ep	Docks and Wharfs	0	1	0	L	DOCK

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight	Point / Line	Feature
	toporw	Driveway_ep	Driveway (Drive, Lane, Turnouts)	7	3	0	L	DWY
	toporw	DummyChains_ep	Dummy Chains	0	0	1	L	DUMB
	toporw	Fence_ep	Fence (All)	6	Fence1	0	L	FNC
	toporw	Gates_ep	Gates	7	3	0	L	GT
	toporw	ImageAttachment_dp	Image Attachmentst	0	0	0		algnrd
	toporw	InletDBI_ep	Ditch Bottom Inlet	10	3	1	L	DTCHI
	toporw	JunctBox_ep	Junct. Box / Service Cabinet (Elec/Tel)	3	0	0	P	SRVC
	toporw	Luminaire_ep	Street Light / Pole	3	0	0	P	LP
	toporw	MiscEquip_ep	Flag Pole	8	0	0	P	FP
	toporw	MiscEquip_ep	Parking Meter	8	0	0	P	PKGM
	toporw	Piling_ep	Piling, Piers, or Column	8	3	0	P	PIL
	toporw	PointLocator_ep	Point Locator Symbol	4	0	0	P	
	toporw	PolePower_ep	Power Pole	3	1	0	P	PP
	toporw	PolePower_ep	Power Pole with Transformer	3	1	0	P	PPT
	toporw	PolePower_ep	Share Pole	3	1	0	P	SHP
	toporw	PolePower_ep	Share Pole with Transformer	3	1	0	P	SHPT
	toporw	PoleTel_ep	Telephone Pole	6	0	0	P	TELP
	toporw	Power_ep	Power Lines (Aerial)	3	e-oe	0	L	PWR
	toporw	Power_ep	High Voltage Transmission Line	3	e-oe	0	L	HVL
	toporw	PumpIsland_ep	Pump Island	7	3	1	L	PMPIS
	toporw	RailroadMisc_ep	RR Milepost	11	0	0	P	RRMP
	toporw	RailroadMisc_ep	RR Switch	11	0	0	P	RRS
	toporw	RailroadMisc_ep	RR Warning Sign	11	0	0	P	RRWS
	toporw	RailroadMisc_ep	RR Signal with Gate	11	0	0	P	SWG
	toporw	RRBaseline	Baseline: Rail Road Centerline	0	RR	0	L	RRCL
X	toporw	RRTextWt0	Annotation:Text:Railroad (weight = 0)	0	0	0		
	toporw	SateDish_ep	Sattelite Dish Antenna	6	0	0	P	SATD
	toporw	SeaWalls_ep	Sea Walls	0	1	3	L	SEAW
	toporw	SidewalkBack_ep	Sidewalk (Backs)	2	3	0	L	SWKB
	toporw	SidewalkFront_ep	Sidewalk (Fronts)	1	3	0	L	SWK
	toporw	SignMulti_ep	Multi-column Sign (Large Sign)	0	3	1	L	MS
	toporw	SignMulti_ep	Multi-column Sign (Small Sign)	0	3	1	P	SMS
	toporw	SignSingle_ep	Sign (Single Support)	3	0	0	P	SSS

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight	Point / Line	Feature
	toporw	SignSupport_ep	Trusses and Cantilevers for Overhead Signs	0	3	1	L	SGNT
	toporw	Silo_ep	Silo	11	0	0	P	SILO
	toporw	Stairs_ep	Stairways, Steps	0	3	1	L	STP
	toporw	Stream_ep	Stream Edge	1	3	0	L	STRM
	toporw	Stream_ep	Stream Center	1	3	0	L	STRMC
	toporw	TankStor_ep	Storage Tank	11	0	0	P	STTK
	toporw	TankUG_ep	Fill Cap (Underground Tank)	3	0	0	P	FC
	toporw	TextElevLabel	Elevation Labels	4	0	0		
	toporw	TextMisc	Text - Miscellaneous	0	0	1		
	toporw	TextPtLabel	Point Labels	4	0	0		
	toporw	TextSurveyLabel	Survey Text Labels	0	0	0	P	NOTE
	toporw	TextSurveyLabel	Survey Text Labels	0	0	0	P	MISC
	toporw	TopoMisc_ep	Miscellaneous Topography	0	3	1	L	MISC
	toporw	Tower_ep	Antenna	3	0	0	P	ANT
	toporw	Tower_ep	Transmission Tower (Single Column)	3	0	0	P	CLMT
	toporw	Tower_ep	High Mast Lighting Poles	3	0	0	P	HML
	toporw	Trail_ep	Roadway, Trail (Unpaved)	9	3	1	L	RD
	toporw	Viewport	Viewport (For AutoCAD Use)	3	0	0		
	toporw	Walls_ep	Walls	9	3	1	L	WALL
	toporw	WaterEdge_ep	Edge of Water	7	3	0	L	WEDG
	toporw	Wells_ep	Wells, Monitoring Wells, Taps	1	0	0	P	WELL
	toporw	Wells_ep	Well Monitoring, Taps	1	0	0	P	MONW
	toporw	Wetland_ep	W.M.D & D.E.P. Wetlands	1	wetland_ep	0	L	DEP
	toporw	WetlandEdge_ep	Edge of Wetlands (Marsh of Swamp)	2	wetland_ep	0	L	MAR
	toporw	WetlandEdge_ep	CORPS Wetlands (Marsh of Swamp)	2	wetland_ep	0	L	COE
	toporw	WetlandEdge_ep	Edge of Mangrove	2	wetland_ep	0	L	EM
	toporw	WetlandSym_ep	Marsh Symbol	2	0	0	P	MAR
	toporw	WetlandSym_ep	Wetland Point	2	0	0	P	WLPT
	toporw	Xreference_dp	Reference Files (For AutoCAD Use)	0	0	1		
	toporw	Xreference01_dp	Reference Files (For AutoCAD Use)	0	0	1		
	toporw	Xreference02_dp	Reference Files (For AutoCAD Use)	0	0	1		
	toporw	Xreference03_dp	Reference Files (For AutoCAD Use)	0	0	1		
	toporw	Xreference04_dp	Reference Files (For AutoCAD Use)	0	0	1		
	toporw	Xreference05_dp	Reference Files (For AutoCAD Use)	0	0	1		
	toporw	Xreference06_dp	Reference Files (For AutoCAD Use)	0	0	1		

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight	Point / Line	Feature
	toporw	Xreference07_dp	Reference Files (For AutoCAD Use)	0	0	1		
	toporw	Xreference08_dp	Reference Files (For AutoCAD Use)	0	0	1		
	toporw	Xreference09_dp	Reference Files (For AutoCAD Use)	0	0	1		
	toporw	Xreference10_dp	Reference Files (For AutoCAD Use)	0	0	1		

4.2.33 TYPICAL SECTION DATA – TYPDRD

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
	typdrd	ActivePointCell_dp	Active Point Cell	4	0	10
	typdrd	AdhocPoint_dp	Adhoc Points Placed by SheetInfo	0	4	0
X	typdrd	AdvWarnPanel	Advance Warning Arrow Panels	4	0	2
X	typdrd	AsphaltConc	Asphaltic Concrete Quantity Shapes	6	0	3
X	typdrd	AsphaltMilling	Asphalt Milling Quantity Shapes	7	0	2
X	typdrd	AsphaltMilling_px	Asphalt Milling Lines on Cross Sections	7	0	2
	typdrd	AsphaltMisc	Asphalt Miscellaneous Material	1	0	1
X	typdrd	AsphaltMisc_px	Miscellaneous Pavement on Cross Sections	1	0	2
X	typdrd	Attenuator	Attenuation Systems	6	attenuator	1
X	typdrd	AttenuatorTM	Attenuator Truck Mount	6	0	2
X	typdrd	Barricade	Barricade	0	0	1
X	typdrd	Barricade1	Barricade Symbol Type 1 or 2 at 15' spacing	0	barricade1	1
X	typdrd	Barricade2	Barricade Symbol Type 1 or 2 at 30' spacing	0	barricade2	1
X	typdrd	Barricade3	Barricade Symbol Type 1 or 2 at 50' spacing	0	barricade3	1
X	typdrd	Barricade4	Barricade Symbol Type 1 or 2 at 100' spacing	0	barricade4	1
X	typdrd	BarrierWall	Barrier Wall All Types	6	0	2
X	typdrd	BarrierWall_ex	Barrier Wall for Cross Section (Existing)	6	3	1
X	typdrd	BarrierWall_px	Barrier Wall for Cross Section	6	0	2
X	typdrd	Base	Base Material (All Types)	3	0	2
X	typdrd	Base_ex	Base Material for Cross Sections (All Types) (Existing)	3	3	1
X	typdrd	Base_px	Base Material for Cross Sections (All Types)	3	0	2
	typdrd	BaselineSurvey	Baseline Survey	0	0	2
X	typdrd	Berm_px	Berm (Top, Front, or Back) for Cross Sections	10	0	2
X	typdrd	BoxCulvert	Box Culvert	10	0	2

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
X	typdrd	CandG_ex	Curb and Gutter for Cross Sections (All Types) (Existing)	4	2	1
X	typdrd	CandG_px	Curb and Gutter for Cross Sections (All Types)	4	0	2
X	typdrd	CandGBase_px	Curb and Gutter Base on Cross Sections	3	0	1
	typdrd	CLConst_dp	Center Line of Construction	0	0	2
	typdrd	Cloud_dp	Construction Cloud	7	0	2
	typdrd	COGO_dp	COGO Information	3	0	1
X	typdrd	ConcPavt	Concrete Pavement Edges	10	0	2
X	typdrd	ConcPvtSC	Concrete Surface Coloring	9	0	1
X	typdrd	Concrete	Concrete Areas (All Types plus miscellaneous)	0	0	2
X	typdrd	ConcSlabs	Concrete Slabs	0	0	2
X	typdrd	Conduit_px	Conduit and Encasements on Cross Sections	3	0	1
X	typdrd	Cone	Cone and Tubular Marker	6	0	2
	typdrd	ConstArea_dp	Construction Area Crosshatch	0	0	1
	typdrd	ConstLimits	Construction Limits	3	LOC	2
	typdrd	ConstLines	Construction Lines and References	1	0	0
X	typdrd	CurbBack	Back of Curb	4	0	1
X	typdrd	CurbFace	Curb and Gutter (Face)	4	0	1
X	typdrd	CurbRamp	Curb Cut Ramp	8	0	1
	typdrd	CurveData_dp	Curve & Coordinate Data Elements incl PC, PT, PI symbols	4	0	2
	typdrd	CurveDataLabel_dp	Curve Data Labels PC,PI, PT	0	0	2
	typdrd	DimLines_dp	Dimension Lines, Corresponding Terminators, Equation Lines	0	0	1
X	typdrd	DirArrowsPavt	Pavement Marking Directional Arrows	0	0	1
X	typdrd	Ditch	Ditch Top	7	6	1
X	typdrd	Ditch_px	Ditch Top for Cross Sections	7	0	2
X	typdrd	DitchBot	Ditch Bottom	10	0	2
X	typdrd	DitchBot_px	Ditch Bottom for Cross Sections	10	0	2
X	typdrd	DitchPavt	Ditch Pavement Including Quantity Shapes	3	0	1
X	typdrd	DitchPavt_px	Ditch Pavement for Cross Sections	3	0	3
	typdrd	DitchProfLt_er	Ditch Profile Left (Existing)	8	3	1
	typdrd	DitchProfLt_pr	Ditch Profile Left	8	0	1
	typdrd	DitchProfMdn_er	Ditch Profile Median (Existing)	10	3	1
	typdrd	DitchProfMdn_pr	Ditch Profile Median	10	0	1
	typdrd	DitchProfRt_er	Ditch Profile Right (Existing)	9	3	1
	typdrd	DitchProfRt_pr	Ditch Profile Right	9	0	1
X	typdrd	DrainStruct_pr	Drainage Structures (All Types)	10	0	2

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
X	typdrd	DrainStruct_px	Misc Drainage Structures and Elements for XSections	10	0	2
X	typdrd	Driveway_px	Driveway Lines on Cross Sections	7	0	2
X	typdrd	DrivewayBase_px	Proposed Driveway Subgraee	3	0	2
	typdrd	Drum	Drum	6	0	1
	typdrd	Earthwork1_px	Earthwork (color 0)	0	0	1
	typdrd	Earthwork2_px	Earthwork (color 1)	1	0	1
	typdrd	Earthwork3_px	Earthwork (color 2)	2	0	1
	typdrd	Earthwork4_px	Earthwork (color 3)	3	0	1
	typdrd	Earthwork5_px	Earthwork (color 4)	4	0	1
X	typdrd	EaseLicLine	Easement License Agreement Line	5	6	0
X	typdrd	EasePerpLine	Easement Lines Perpetual	4	PESMT	1
X	typdrd	EasePerpLine_px	Easement Lines Perpetual on Cross Sections	4	PESMT	1
X	typdrd	EaseTempLine	Easement Lines Temporary	6	TEMPE	0
X	typdrd	EaseTempLine_px	Easement Lines Temporary on Cross Sections	6	TEMPE	0
X	typdrd	Endwall	Endwall (All Types)	10	0	2
X	typdrd	Endwall_px	Endwall for Cross Sections	10	0	2
X	typdrd	EOP	Edge of Pavement	0	0	2
	typdrd	ExcavationLimits_dp	Excavation Limits on Cross Sections	0	0	1
X	typdrd	Fence	Fence, Sand Fence	6	Fence1	1
	typdrd	Fence_ex	Fence Lines on Cross Sections (Existing)	6	3	1
X	typdrd	Fence_px	Fence Lines on Cross Sections	6	Fence1	2
X	typdrd	FenceLt	Fence Limited Access Left	6	laflt	1
X	typdrd	FenceRt	Fence Limited Access Right	6	lafrt	1
X	typdrd	FES	Flared End Sections	10	0	2
X	typdrd	FES_px	Flared End Sections for Cross Sections	10	0	2
X	typdrd	FlashingLight	Flashing Lights (All Types)	0	0	1
X	typdrd	FOCBur_px	Fiber Optics Cable (Buried) for XSections	6	0	1
X	typdrd	Gas_px	Gas Pipe and Fittings, Misc for Xsections	4	0	1
	typdrd	GeotechFillPatt1	Geotechnical Fill Pattern - (earth, wood, muck, concrete, rock, riprap) as defined in project	3	0	0
	typdrd	GeotechFillPatt1_px	Geotechnical Fill Pattern - (earth, wood, muck, concrete, rock, riprap) as defined in project	3	0	0
	typdrd	GeotechFillPatt2	Geotechnical Fill Pattern - clay, sand	0	1	0
	typdrd	GeotechFillPatt2_px	Geotechnical Fill Pattern - clay, sand	0	1	0
	typdrd	GeotechFillPatt3	Geotechnical Fill Pattern - shell	3	1	0
	typdrd	GeotechFillPatt3_px	Geotechnical Fill Pattern - shell	3	1	0
	typdrd	GeotechFillPatt4	Geotechnical Fill Pattern - sand	4	0	0

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
	typdrd	GeotechFillPatt4_px	Geotechnical Fill Pattern - sand	4	0	0
	typdrd	GeotechFillPatt5	Geotechnical Fill Pattern - coquina	1	0	1
	typdrd	GeotechFillPatt5_px	Geotechnical Fill Pattern - coquina	1	0	1
	typdrd	GeotechFillPatt6	Geotechnical Fill Pattern - limestone	2	0	0
	typdrd	GeotechFillPatt6_px	Geotechnical Fill Pattern - limestone	2	0	0
	typdrd	GeotechFillPatt7	Geotechnical Fill Pattern - gravel	6	0	0
	typdrd	GeotechFillPatt7_px	Geotechnical Fill Pattern - gravel	6	0	0
	typdrd	GeotechFillPatt8	Geotechnical Fill Pattern - silt	0	0	1
	typdrd	GeotechFillPatt8_px	Geotechnical Fill Pattern - silt	0	0	1
	typdrd	GeotechMisc	Miscellaneous Geotechnical Elements	0	0	1
X	typdrd	GovTwpRgeLine_ep	Township / Range Lines	10	TWPRGE	2
	typdrd	GPKDrBack_dp	Back Point on Drainage Cells	2	2	2
	typdrd	GPKDrBottom_dp	Bottom Point on Drainage Cells	3	3	2
	typdrd	GPKDrCellIns_dp	Cell Insertion Point on Drainage Cells	4	4	2
	typdrd	GPKDrCentroid_dp	Point on Centroid for Drainage	7	7	2
	typdrd	GPKDrFront_dp	Front Point on Drainage Cells	1	1	2
	typdrd	GPKDrPipe_dp	Point on Drainage Pipe	6	6	2
	typdrd	GPKDrPipeCir_dp	Point on Pipe Circular	6	6	0
X	typdrd	Grass	Grass, Seeding and Mulching Areas	2	1	2
X	typdrd	GravityWall	Gravity Wall	11	0	1
X	typdrd	GravityWall	Gravity Wall	11	0	1
X	typdrd	GravityWall_px	Gravity Wall for Cross Sections	11	0	2
X	typdrd	GravWallBase_px	Proposed Gravity Wall Subgrade	3	0	2
	typdrd	GridMaj_dp	Grid Lines Major in Profile and Cross Section	3	0	1
	typdrd	GridMin_dp	Grid Lines Minor in Profile and Cross Section	0	0	0
	typdrd	GridMinSub_dp	Grid Lines Minor Sub in Cross Section Sheets	20	0	0
	typdrd	GroundCover	Groundcover Edge Symbol	2	0	1
	typdrd	GroundCoverHatch	Groundcover Hatch Pattern	2	0	0
X	typdrd	Guardrail	Guardrail	0	0	2
X	typdrd	Guardrail_px	Guardrail	0	0	1
X	typdrd	GuardrailDbl	Guardrail Double Face	0	grdbl	1
X	typdrd	GuardrailEndAch	Guardrail End Anchorage	0	0	1
X	typdrd	GuardrailLt	Guardrail Left	0	grail1	1
X	typdrd	GuardrailRt	Guardrail Right	0	grail2	1
X	typdrd	Handrail	Handrails	9	0	1

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
X	typdrd	Handrail_px	Handrail Lines on Cross Sections	9	0	1
	typdrd	HardscapeDetails	Paving Details, Fence Railing, Stamped Asphalt	4	0	2
	typdrd	ImageAttachment _dp	Image Attachmentst	0	0	0
X	typdrd	Inlet_px	Inlets on Cross Sections	10	0	2
X	typdrd	InletBottom_px	Inlet Bottom on Cross Sections (All Types)	10	0	2
X	typdrd	InletBottomJ	Inlet Bottom Type J	10	0	1
X	typdrd	InletBottomP	Inlet Bottom Type P	10	0	1
X	typdrd	InletCurb	Curb Inlet (All Types)	10	0	2
X	typdrd	InletDBI	Ditch Bottom Inlet (All Types)	10	0	2
X	typdrd	InletGutter	Gutter Inlet (All Types)	10	0	2
X	typdrd	InletMedian	Median Barrier Inlet	10	0	2
	typdrd	KeyShtMisc	Key sheet Miscellaneous Items	0	0	2
	typdrd	LaneDirArrow	Lane Directional Arrow	0	0	1
X	typdrd	LARWLine	Limited Access Right of Way	4	LA	2
X	typdrd	LARWLine_ep	Limited Access Right of Way (Existing)	4	EXLA	1
X	typdrd	LARWLine_ex	Limited Access Right of Way on XSections (Existing)	4	EXLA	1
X	typdrd	LARWLine_px	Limited Access ROW Lines on Cross Sections	4	LA	2
X	typdrd	LateralLimits_px	Lateral Limits for Cross Sections	6	0	2
	typdrd	LeaderLine_dp	Leader Line and terminator with Text	0	0	1
	typdrd	LightingMisc	Lighting Miscellaneous Items	4	0	2
X	typdrd	LightingSP	Lighting Service Points	0	0	1
	typdrd	Logo_dp	Consultant Engineer of Record Logo	0	0	1
X	typdrd	Luminaire	Luminaires (Decorative - All Types)	2	0	1
X	typdrd	Manhole	Manhole (Drainage and Unknown)	10	0	2
X	typdrd	Manhole_px	Manhole on Cross Sections	10	0	2
X	typdrd	MedianWallBase_px	Proposed Median Wall Subgrade	3	0	2
X	typdrd	MES	Mitered End Section	10	0	2
X	typdrd	MES_px	Mitered End Section on Cross Sections	10	0	2
	typdrd	Miscellaneous0	Undefined proposed item - co blue wt 0	1	0	0
	typdrd	Miscellaneous1	Undefined proposed item - co blue wt 1	1	0	1
	typdrd	Miscellaneous2	Undefined proposed item - co blue wt 2	1	0	2
	typdrd	Miscellaneous3	Undefined proposed item - co green wt 0	2	0	0
	typdrd	Miscellaneous4	Undefined proposed item - co green wt 1	2	0	1
	typdrd	Miscellaneous5	Undefined proposed item - co green wt 2	2	0	2
	typdrd	Miscellaneous6	Undefined proposed item - co red wt 0	3	0	0

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
	typdrd	Miscellaneous7	Undefined proposed item - co red wt 1	3	0	1
	typdrd	Miscellaneous8	Undefined proposed item - co red wt 2	3	0	2
	typdrd	Miscellaneous9	Undefined proposed item - co red wt 3	3	0	3
	typdrd	NonPlottingEle_dp	Non plotting items such as construction elements and type 66 elements	4	0	0
X	typdrd	Overbuild_px	Overbuild Areas on Cross Sections	4	0	2
X	typdrd	Overbuild1_px	Proposed Overbuild Binder Symbology (No Longer Used)	7	0	2
X	typdrd	Overbuild2_px	Proposed Overbuild Base Symbology (No Longer Used)	7	0	2
X	typdrd	Overlay_px	Proposed Overlay for Cross Sections	1	0	2
X	typdrd	Overlay1_px	Proposed Overlay for Cross Sections	14	0	2
X	typdrd	Overlay2_px	Proposed Overlay for Cross Sections	7	0	2
	typdrd	PatternLines1_dp	Pattern Lines for Cross Sections	3	0	2
	typdrd	PatternLines2_dp	Pattern Lines for XSections alternate for side streets, critical xsections or drainage structures	4	0	2
	typdrd	PatternLines3_dp	Pattern Lines for XSections alternate for side streets, critical xsections or drainage structures	5	0	2
X	typdrd	PavedMedianBase_px	Proposed Paved Median Subgrade	3	0	2
	typdrd	PavtAsph_ep	Asphalt Pavement Edge	0	3	1
	typdrd	PavtCrown	Pavement Crown	16	0	2
X	typdrd	PavtMessage	Pavement Message (All types)	0	0	1
X	typdrd	PavtMessage_ep	Pavement Message (Existing - All types)	0	2	0
	typdrd	PayItem_dp	Pay Item Number Label Elements	4	0	2
	typdrd	PipeCulvert_ep	Pipe Culvert	10	3	1
X	typdrd	PipeCulvert_pr	Pipe Culvert in Profile	3	0	2
X	typdrd	PipeCulvert_px	Pipe Culvert for Cross Section View	10	0	2
X	typdrd	PlotBorder_dp	Plot Border	3	0	0
	typdrd	PMMisc	Pavement Marking Miscellaneous Items	0	0	2
X	typdrd	PMStripe12B	Pavement Marking Traffic Stripe 12in Black	3	stripe12	4
X	typdrd	PMStripe12W	Pavement Marking Traffic Stripe 12in White	0	stripe12	4
X	typdrd	PMStripe12W(3-9)	Pavement Marking 3/9 Skip Traffic Stripe 12in White	0	stripe12	4
X	typdrd	PMStripe12Y	Pavement Marking Traffic Stripe 12in Yellow	4	stripe12	4
X	typdrd	PMStripe16B	Pavement Marking Traffic Stripe 16in Black	3	stripe16	5
X	typdrd	PMStripe16W	Pavement Marking Traffic Stripe 16in White	0	stripe16	5
X	typdrd	PMStripe16Y	Pavement Marking Traffic Stripe 16in Yellow	4	stripe16	5
X	typdrd	PMStripe18B	Pavement Marking Traffic Stripe 18in Black	3	stripe18	6
X	typdrd	PMStripe18W	Pavement Marking Traffic Stripe 18in White	0	stripe18	6
X	typdrd	PMStripe18Y	Pavement Marking Traffic Stripe 18in Yellow	4	stripe18	6
X	typdrd	PMStripe24W	Pavement Marking Traffic Stripe 24in White	0	stripe24	7

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
X	typdrd	PMStripe24Y	Pavement Marking Traffic Stripe 24in Yellow	4	stripe24	7
X	typdrd	PMStripe6B	Pavement Marking Traffic Stripe 6in Black	3	stripe06	2
X	typdrd	PMStripe6B(10-30)	Pavement Marking 10/30 Skip Traffic Stripe 6in Black	3	stripe06	2
X	typdrd	PMStripe6Bl	Pavement Marking Traffic Stripe 6in Blue	1	stripe06	2
X	typdrd	PMStripe6DY	Pavement Marking Traffic Stripe 6in Double Yellow	4	dbl_line	2
X	typdrd	PMStripe6W	Pavement Marking Traffic Stripe 6in White	0	stripe06	2
X	typdrd	PMStripe6W(10-30)	Pavement Marking 10/30 Skip Traffic Stripe 6in White	0	stripe06	2
X	typdrd	PMStripe6W(2-4)	Pavement Marking 2/4 Skip Traffic Stripe 6in White	0	stripe06	2
X	typdrd	PMStripe6W(3-9)	Pavement Marking 3/9 Skip Traffic Stripe 6in White	0	stripe06	2
X	typdrd	PMStripe6W(6-10)	Pavement Marking 6/10 Skip Traffic Stripe 6in White	0	stripe06	2
X	typdrd	PMStripe6Y	Pavement Marking Traffic Stripe 6in Yellow	4	stripe06	2
X	typdrd	PMStripe6Y(10-30)	Pavement Marking 10/30 Skip Traffic Stripe 6in Yellow	4	stripe06	2
X	typdrd	PMStripe6Y(2-4)	Pavement Marking 2/4 Skip Traffic Stripe 6in Yellow	4	stripe06	2
X	typdrd	PMStripe6Y(6-10)	Pavement Marking 6/10 Skip Traffic Stripe 6in Yellow	4	stripe06	2
X	typdrd	PMStripe8B	Pavement Marking Traffic Stripe 8in Black	3	stripe06	3
X	typdrd	PMStripe8W	Pavement Marking Traffic Stripe 8in White	0	stripe08	3
X	typdrd	PMStripe8W(3-9)	Pavement Marking 3/9 Skip Traffic Stripe 8in White	0	stripe08	2
X	typdrd	PMStripe8Y	Pavement Marking Traffic Stripe 8in Yellow	4	stripe08	3
X	typdrd	PMStripeVibeW	Pavement Marking Auditory and Vibratory 6in White	0	Vibratory	2
X	typdrd	PMStripeVibeY	Pavement Marking Auditory and Vibratory 6in Yellow	4	Vibratory	2
	typdrd	PointLocator_ep	Point Locator Symbol	4	0	0
X	typdrd	PoleConc	Concrete Strain Pole	0	0	2
X	typdrd	PoleConc_ep	Concrete Strain Pole (Existing)	0	2	1
X	typdrd	PoleFound	Pole Foundation	0	0	2
X	typdrd	PoleLight	Light Pole	2	0	1
X	typdrd	PoleLight_ep	Light Pole (Existing)	2	2	1
X	typdrd	PoleLightHM	High Mast Light Pole	3	0	1
X	typdrd	PoleLightHM_ep	High Mast Light Pole (Existing)	2	2	1
	typdrd	PoleLightID	Light Pole Location / ID	4	0	1
X	typdrd	PolePower	Power Pole w/ Transformer	3	0	2
X	typdrd	PoleShared	Power Pole Electric (Above Ground) Shared w/ Transformer	3	0	2
X	typdrd	PoleSteelStrain	Steel Strain Pole	0	0	2
X	typdrd	PoleSteelStrain_ep	Steel Strain Pole (Existing)	0	2	1
X	typdrd	PoleTel	Telephone Pole	6	0	2
X	typdrd	PoleUtil	Utility Pole	0	0	2

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
X	typdrd	PoleWoodStrain	Wood Strain Pole	0	0	2
X	typdrd	PoleWoodStrain_ep	Wood Strain Pole (Existing)	0	2	1
X	typdrd	Pond_px	Pond Lines on Cross Sections	2	0	2
X	typdrd	Power_px	Power on Cross Sections	3	0	1
X	typdrd	PropertyLine_ep	Property Lines	3	0	0
	typdrd	ReferencePt_dp	Survey and Construction Reference Point Details and Elements	4	0	2
X	typdrd	RetainWall	Retaining Wall System	6	0	1
X	typdrd	RetainWall_pr	Retaining Wall Profile	9	0	2
X	typdrd	RetainWall_px	Retaining Walls on Cross Sections	6	0	1
X	typdrd	RipRap_px	Rip Rap, Rubble on Cross Sections	4	1	2
X	typdrd	RWLine	Right of Way Lines	4	RW	2
X	typdrd	RWLine_ep	Right of Way Lines (Existing)	3	RW	1
X	typdrd	RWLine_ex	ROW Lines on Cross Sections (Existing)	3	RW	1
X	typdrd	RWLine_px	ROW Lines on Cross Sections	4	RW	2
X	typdrd	SanitaryFM_px	Force Main Lines on Cross Sections	2	0	1
X	typdrd	SanitarySewer_ex	Sanitary Sewer Lines on Cross Sections (Existing)	10	2	0
X	typdrd	SanitarySewer_px	Sanitary Sewer Lines on Cross Sections	2	0	1
	typdrd	Scratch1_dp	A scratch level for temporary or informational items	4	0	0
	typdrd	Scratch2_dp	A scratch level for temporary or informational items	5	0	0
	typdrd	ScratchEle_dp	Level for Draft Elements, Temporary Elements, Etc. Do Not Plot	3	0	0
	typdrd	ScratchEle2_dp	Level for Draft Elements, Temporary Elements, Etc. Do Not Plot	4	0	0
	typdrd	SheetBorder_dp	Sheet Border	1	0	4
	typdrd	SheetLines_dp	Sheet Lines	1	0	2
	typdrd	SheetLinesMisc1_dp	Sheet Lines	1	0	0
	typdrd	SheetLinesMisc2_dp	Sheet Lines	2	0	2
	typdrd	SheetLinesMisc3_dp	Sheet Lines	3	0	2
	typdrd	SheetLinesMisc4_dp	Sheet Lines	4	0	2
X	typdrd	ShldrBase_px	Bottom of Proposed Paved Shoulder Base	3	0	2
X	typdrd	ShldrBaseTop_px	Top of Proposed Paved Shoulder Base	3	0	2
	typdrd	ShldrHatch	Paved Shoulder Hatch Pattern	1	0	1
X	typdrd	ShldrPaved	Paved Shoulder Line	1	0	1
X	typdrd	ShldrPaved_px	Paved Shoulder Lines on Cross Sections	1	0	2
X	typdrd	ShldrUnpaved	Unpaved Shoulder Line	0	0	0
X	typdrd	ShldrUnpaved_px	Grass Shoulder Lines on Cross Sections	2	0	2
X	typdrd	ShldrWallBase_px	Proposed Shoulder Wall Subgrade	3	0	2

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
X	typdrd	Shrub	Shrubs	2	0	1
X	typdrd	Sidewalk_ex	Sidewalk Elements in Cross Sections (Existing)	0	2	1
X	typdrd	Sidewalk_px	Sidewalk Elements in Cross Sections	0	0	2
X	typdrd	SidewalkBack	Sidewalk Back	2	0	1
X	typdrd	SidewalkBase_px	Proposed Sidewalk Subgrade	3	0	2
X	typdrd	SidewalkConc	Sidewalk Concrete Shape	0	0	2
X	typdrd	SidewalkFront	Sidewalk Front	1	0	1
X	typdrd	Slopes	Slopes (Top, Bottom)	9	3	0
X	typdrd	Slopes_px	Slope Lines on Cross Sections	9	0	2
X	typdrd	Sod	Performance Sod	2	0	2
X	typdrd	SoilBoxes_px	Soil Boxes and Borings for Cross Sections	4	0	1
	typdrd	SpecialDetails_px	Special Details_XS	6	0	1
X	typdrd	Stabilization	Stabilization Material Lines and Shapes	9	0	2
X	typdrd	Stabilization_px	Stabilization for Cross Sections	5	2	2
	typdrd	StationTicL_dp	Station Tic Marks (Large) and Text	0	0	2
	typdrd	StationTicS_dp	Station Tic Marks (Small) and Text	0	0	2
X	typdrd	StreetLights	Street Lights	2	0	1
X	typdrd	StreetLights_px	Street Lights for Cross Sections	3	0	1
	typdrd	Structure_px	Signal and Sign Structures on Cross Sections	0	0	2
X	typdrd	SubDsgn_px	Sub Design for Cross Sections including subbase	4	0	1
X	typdrd	Subsoil_px	Subsoil Or Undercut for Cross Sections	4	0	2
X	typdrd	SubsoilFinal_px	Subsoil Final for Multiline	18	0	1
X	typdrd	SubsoilProp_px	Subsoil Proposed for Multiline	8	0	1
	typdrd	SumBoxBorder_dp	Summary Boxes Borders	4	0	3
	typdrd	SumBoxLines_dp	Summary Boxes Lines and Miscellaneous Items	4	0	1
	typdrd	SumBoxLinesMin_dp	Summary Boxes Lines Minor Line and Miscellaneous Items	4	0	0
X	typdrd	TemplateBottom_px	Bottom of Template for Multiline	6	0	1
X	typdrd	TemplateFinal_px	Final Template for Multiline	2	0	1
X	typdrd	TemplateTop_px	Top of Template for Multiline	7	0	1
X	typdrd	TerrainLine_ex	Existing Ground Line for Multiline	5	0	1
	typdrd	TextBLStation	Text - B/L Station and Tics	0	0	2
	typdrd	TextConstEle	Text - Construction Element	0	0	1
	typdrd	TextCurveData	Text - Curve Data Note	0	0	2
	typdrd	TextDetails	Text - Detail Notes	4	0	2
	typdrd	TextElevLabel	Elevation Labels	4	0	0

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
	typdrd	TextGeotech	Text for soil borings and labels	0	0	2
	typdrd	TextLabel	Text - Label	0	0	2
	typdrd	TextLandscape	Text - Landscape Labels	0	0	1
	typdrd	TextMajor	Text - Major	0	0	5
	typdrd	TextMinor	Text - Minor	0	0	0
	typdrd	TextMisc	Text - Miscellaneous	0	0	1
	typdrd	TextNotes	Text - Notes	4	0	1
	typdrd	TextProfLabel	Text - Profile, Horizontal and Vertical Axis Labels	0	0	2
	typdrd	TextProjLabel	Text - Begin and End Project label with leader lines	1	0	2
	typdrd	TextPtLabel	Point Labels	4	0	0
	typdrd	TextShtNo	Text - Sheet Number	0	0	2
	typdrd	TextSurveyLabel	Survey Text Labels	0	0	0
	typdrd	TextTables	Text - Keysheet Indexes and Table Data	4	0	2
	typdrd	TextTitle	Text - Title	0	0	3
	typdrd	TextXSElev	Text - Cross Section Elevations	2	0	1
X	typdrd	TrafSeparator	Traffic Separator (All Types)	6	0	1
X	typdrd	TrafSeparator_px	Traffic Separator (All Types) on Cross Sections	6	0	2
X	typdrd	TrafSeparatorBase_px	Proposed Traffic Separator Subgrade	3	0	2
X	typdrd	Tree	Trees, Tree Line Pattern	2	0	1
X	typdrd	TreeGrate	Tree Grate	5	0	1
X	typdrd	TreeProtection	Tree Protection Symbol	5	0	2
X	typdrd	Turf	Performance Truf	100	0	2
	typdrd	TypicalMisc	Typical Miscellaneous Items	0	0	2
X	typdrd	UnderDrain	Underdrains (All Types)	10	0	2
	typdrd	Utility_er	Existing Utilities in Profile View	3	2	1
	typdrd	Utility_pr	Proposed Utilities in Profile View	3	0	2
	typdrd	UtilsMisc_px	Miscellaneous Utility Items on Cross Sections	8	0	1
	typdrd	Vehicle	Vehicle for Calculating Turning Radius	7	0	2
	typdrd	Viewport	Viewport (For AutoCAD Use)	3	0	0
	typdrd	VoidArea_dx	Void Area_XS	1	0	0
X	typdrd	Water	Water Line	1	w	2
	typdrd	Water_ep	Water Line (all sizes)	1	e-w	1
X	typdrd	Water_ex	Water for Cross Sections (Existing)	1	2	1
X	typdrd	Water_px	Water for Cross Sections	1	0	1
	typdrd	Xreference_dp	Reference Files (For AutoCAD Use)	0	0	1

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
	typdrd	Xreference01_dp	Reference Files (For AutoCAD Use)	0	0	1
	typdrd	Xreference02_dp	Reference Files (For AutoCAD Use)	0	0	1
	typdrd	Xreference03_dp	Reference Files (For AutoCAD Use)	0	0	1
	typdrd	Xreference04_dp	Reference Files (For AutoCAD Use)	0	0	1
	typdrd	Xreference05_dp	Reference Files (For AutoCAD Use)	0	0	1
	typdrd	Xreference06_dp	Reference Files (For AutoCAD Use)	0	0	1
	typdrd	Xreference07_dp	Reference Files (For AutoCAD Use)	0	0	1
	typdrd	Xreference08_dp	Reference Files (For AutoCAD Use)	0	0	1
	typdrd	Xreference09_dp	Reference Files (For AutoCAD Use)	0	0	1
	typdrd	Xreference10_dp	Reference Files (For AutoCAD Use)	0	0	1
X	typdrd	XSBaseTop_px	Top of Proposed Base	3	0	2
	typdrd	XSCell	GEOPAK Cross Section Cell and Profile Cell	8	0	1
X	typdrd	XSExtendGrdLine_ex	Extend Ground Lines for Cross Sections (Existing)	21	2	1
X	typdrd	XSGrdLine_ex	Ground Lines for Cross Sections (Existing)	2	2	1
X	typdrd	XSGrdLine_px	Roadway Ground Lines on Cross Sections	1	0	2
	typdrd	XSMisc_px	Cross Section Miscellaneous Items	0	0	2
	typdrd	XSShapeDep01_dp	Cross Section Shape Dependent	11	0	2
	typdrd	XSShapeDep02_dp	Cross Section Shape Dependent	12	0	2
	typdrd	XSShapeDep03_dp	Cross Section Shape Dependent	13	0	2
	typdrd	XSShapeDep04_dp	Cross Section Shape Dependent	14	0	2
	typdrd	XSShapeDep05_dp	Cross Section Shape Dependent	15	0	2
	typdrd	XSShapeDep06_dp	Cross Section Shape Dependent	16	0	2
	typdrd	XSShapeDep07_dp	Cross Section Shape Dependent	17	0	2
	typdrd	XSShapeDep08_dp	Cross Section Shape Dependent	18	0	2
	typdrd	XSShapeDep09_dp	Cross Section Shape Dependent	19	0	2
	typdrd	XSShapeDep10_dp	Cross Section Shape Dependent	20	0	2
	typdrd	XSShapeIndep01_dp	Cross Section Shape Independent	1	0	2
	typdrd	XSShapeIndep02_dp	Cross Section Shape Independent	2	0	2
	typdrd	XSShapeIndep03_dp	Cross Section Shape Independent	3	0	2
	typdrd	XSShapeIndep04_dp	Cross Section Shape Independent	4	0	2
	typdrd	XSShapeIndep05_dp	Cross Section Shape Independent	5	0	2
	typdrd	XSShapeIndep06_dp	Cross Section Shape Independent	6	0	2
	typdrd	XSShapeIndep07_dp	Cross Section Shape Independent	7	0	2
	typdrd	XSShapeIndep08_dp	Cross Section Shape Independent	8	0	2
	typdrd	XSShapeIndep09_dp	Cross Section Shape Independent	9	0	2

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
	typdrd	XSShapeIndep10_dp	Cross Section Shape Independent	10	0	2
X	typdrd	XSTypical_px	Roadway Pavement Typical on Cross Sections	1	0	2

4.2.34 TYPICAL SECTION SHEETS - TYPSRD

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
	typsrd	ActivePointCell_dp	Active Point Cell	4	0	10
	typsrd	AdhocPoint_dp	Adhoc Points Placed by SheetInfo	0	4	0
X	typsrd	AdvWarnPanel	Advance Warning Arrow Panels	4	0	2
X	typsrd	AsphaltConc	Asphaltic Concrete Quantity Shapes	6	0	3
X	typsrd	AsphaltMilling	Asphalt Milling Quantity Shapes	7	0	2
X	typsrd	AsphaltMilling_px	Asphalt Milling Lines on Cross Sections	7	0	2
	typsrd	AsphaltMisc	Asphalt Miscellaneous Material	1	0	1
X	typsrd	AsphaltMisc_px	Miscellaneous Pavement on Cross Sections	1	0	2
X	typsrd	Attenuator	Attenuation Systems	6	attenuator	1
X	typsrd	AttenuatorTM	Attenuator Truck Mount	6	0	2
X	typsrd	Barricade	Barricade	0	0	1
X	typsrd	Barricade1	Barricade Symbol Type 1 or 2 at 15' spacing	0	barricade1	1
X	typsrd	Barricade2	Barricade Symbol Type 1 or 2 at 30' spacing	0	barricade2	1
X	typsrd	Barricade3	Barricade Symbol Type 1 or 2 at 50' spacing	0	barricade3	1
X	typsrd	Barricade4	Barricade Symbol Type 1 or 2 at 100' spacing	0	barricade4	1
X	typsrd	BarrierWall	Barrier Wall All Types	6	0	2
X	typsrd	BarrierWall_px	Barrier Wall for Cross Section	6	0	2
X	typsrd	Base	Base Material (All Types)	3	0	2
X	typsrd	Base_ex	Base Material for Cross Sections (All Types) (Existing)	3	3	1
X	typsrd	Base_px	Base Material for Cross Sections (All Types)	3	0	2
	typsrd	BaselineSurvey	Baseline Survey	0	0	2
X	typsrd	Berm_px	Berm (Top, Front, or Back) for Cross Sections	10	0	2
X	typsrd	BoxCulvert	Box Culvert	10	0	2
X	typsrd	CandG_ex	Curb and Gutter for Cross Sections (All Types) (Existing)	4	2	1
X	typsrd	CandG_px	Curb and Gutter for Cross Sections (All Types)	4	0	2
X	typsrd	CandGBase_px	Curb and Gutter Base on Cross Sections	3	0	1
	typsrd	CLConst_dp	Center Line of Construction	0	0	2

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
	typsrd	Cloud_dp	Construction Cloud	7	0	2
	typsrd	COGO_dp	COGO Information	3	0	1
X	typsrd	ConcPavt	Concrete Pavement Edges	10	0	2
X	typsrd	ConcPvtSC	Concrete Surface Coloring	9	0	1
X	typsrd	Concrete	Concrete Areas (All Types plus miscellaneous)	0	0	2
X	typsrd	ConcSlabs	Concrete Slabs	0	0	2
X	typsrd	Conduit_px	Conduit and Encasements on Cross Sections	3	0	1
X	typsrd	Cone	Cone and Tubular Marker	6	0	2
	typsrd	ConstArea_dp	Construction Area Crosshatch	0	0	1
	typsrd	ConstLimits	Construction Limits	3	LOC	2
	typsrd	ConstLines	Construction Lines and References	1	0	0
X	typsrd	CurbBack	Back of Curb	4	0	1
X	typsrd	CurbFace	Curb and Gutter (Face)	4	0	1
X	typsrd	CurbRamp	Curb Cut Ramp	8	0	1
	typsrd	CurveData_dp	Curve & Coordinate Data Elements incl PC, PT, PI symbols	4	0	2
	typsrd	CurveDataLabel_dp	Curve Data Labels PC,PI, PT	0	0	2
	typsrd	DimLines_dp	Dimension Lines, Corresponding Terminators, Equation Lines	0	0	1
X	typsrd	DirArrowsPavt	Pavement Marking Directional Arrows	0	0	1
X	typsrd	Ditch	Ditch Top	7	6	1
X	typsrd	Ditch_px	Ditch Top for Cross Sections	7	0	2
X	typsrd	DitchBot	Ditch Bottom	10	0	2
X	typsrd	DitchBot_px	Ditch Bottom for Cross Sections	10	0	2
X	typsrd	DitchPavt	Ditch Pavement Including Quantity Shapes	3	0	1
X	typsrd	DitchPavt_px	Ditch Pavement for Cross Sections	3	0	3
	typsrd	DitchProfLt_er	Ditch Profile Left (Existing)	8	3	1
	typsrd	DitchProfLt_pr	Ditch Profile Left	8	0	1
	typsrd	DitchProfMdn_er	Ditch Profile Median (Existing)	10	3	1
	typsrd	DitchProfMdn_pr	Ditch Profile Median	10	0	1
	typsrd	DitchProfRt_er	Ditch Profile Right (Existing)	9	3	1
	typsrd	DitchProfRt_pr	Ditch Profile Right	9	0	1
X	typsrd	DrainStruct_pr	Drainage Structures (All Types)	10	0	2
X	typsrd	DrainStruct_px	Drainage Structures for Cross Sections	10	0	2
X	typsrd	Driveway_px	Driveway Lines on Cross Sections	7	0	2
X	typsrd	DrivewayBase_px	Proposed Driveway Subgrade	3	0	2
	typsrd	Drum	Drum	6	0	1

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
	typsrd	Earthwork1_px	Earthwork (color 0)	0	0	1
	typsrd	Earthwork2_px	Earthwork (color 1)	1	0	1
	typsrd	Earthwork3_px	Earthwork (color 2)	2	0	1
	typsrd	Earthwork4_px	Earthwork (color 3)	3	0	1
	typsrd	Earthwork5_px	Earthwork (color 4)	4	0	1
X	typsrd	EaseLicLine	Easement License Agreement Line	5	6	0
X	typsrd	EasePerpLine	Easement Lines Perpetual	4	PESMT	1
X	typsrd	EasePerpLine_px	Easement Lines Perpetual on Cross Sections	4	PESMT	1
X	typsrd	EaseTempLine	Easement Lines Temporary	6	TEMPE	0
X	typsrd	EaseTempLine_px	Easement Lines Temporary on Cross Sections	6	TEMPE	0
X	typsrd	Endwall	Endwall (All Types)	10	0	2
X	typsrd	Endwall_px	Endwall for Cross Sections	10	0	2
X	typsrd	EOP	Edge of Pavement	0	0	2
	typsrd	ExcavationLimits_dp	Excavation Limits on Cross Sections	0	0	1
X	typsrd	Fence	Fence, Sand Fence	6	Fence1	1
	typsrd	Fence_ex	Fence Lines on Cross Sections (Existing)	6	3	1
X	typsrd	Fence_px	Fence Lines on Cross Sections	6	Fence1	2
X	typsrd	FenceLt	Fence Limited Access Left	6	laflt	1
X	typsrd	FenceRt	Fence Limited Access Right	6	lafrt	1
X	typsrd	FES	Flared End Sections	10	0	2
X	typsrd	FES_px	Flared End Sections for Cross Sections	10	0	2
X	typsrd	FlashingLight	Flashing Lights (All Types)	0	0	1
X	typsrd	FOCBur_px	Fiber Optics Cable (Buried) for XSections	6	0	1
X	typsrd	Gas_px	Gas Pipe and Fittings, Misc for Xsections	4	0	1
	typsrd	GeotechFillPatt1	Geotechnical Fill Pattern - (earth, wood, muck, concrete, rock, riprap) as defined in project	3	0	0
	typsrd	GeotechFillPatt1_px	Geotechnical Fill Pattern - (earth, wood, muck, concrete, rock, riprap) as defined in project	3	0	0
	typsrd	GeotechFillPatt2	Geotechnical Fill Pattern - clay, sand	0	1	0
	typsrd	GeotechFillPatt2_px	Geotechnical Fill Pattern - clay, sand	0	1	0
	typsrd	GeotechFillPatt3	Geotechnical Fill Pattern - shell	3	1	0
	typsrd	GeotechFillPatt3_px	Geotechnical Fill Pattern - shell	3	1	0
	typsrd	GeotechFillPatt4	Geotechnical Fill Pattern - sand	4	0	0
	typsrd	GeotechFillPatt4_px	Geotechnical Fill Pattern - sand	4	0	0
	typsrd	GeotechFillPatt5	Geotechnical Fill Pattern - coquina	1	0	1
	typsrd	GeotechFillPatt5_px	Geotechnical Fill Pattern - coquina	1	0	1
	typsrd	GeotechFillPatt6	Geotechnical Fill Pattern - limestone	2	0	0

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
	typsrd	GeotechFillPatt6_px	Geotechnical Fill Pattern - limestone	2	0	0
	typsrd	GeotechFillPatt7	Geotechnical Fill Pattern - gravel	6	0	0
	typsrd	GeotechFillPatt7_px	Geotechnical Fill Pattern - gravel	6	0	0
	typsrd	GeotechFillPatt8	Geotechnical Fill Pattern - silt	0	0	1
	typsrd	GeotechFillPatt8_px	Geotechnical Fill Pattern - silt	0	0	1
	typsrd	GeotechMisc	Miscellaneous Geotechnical Elements	0	0	1
X	typsrd	GovTwpRgeLine_ep	Township / Range Lines	10	TWPRGE	2
	typsrd	GPKDrBack_dp	Back Point on Drainage Cells	2	2	2
	typsrd	GPKDrBottom_dp	Bottom Point on Drainage Cells	3	3	2
	typsrd	GPKDrCellIns_dp	Cell Insertion Point on Drainage Cells	4	4	2
	typsrd	GPKDrCentroid_dp	Point on Centroid for Drainage	7	7	2
	typsrd	GPKDrFront_dp	Front Point on Drainage Cells	1	1	2
	typsrd	GPKDrPipe_dp	Point on Drainage Pipe	6	6	2
	typsrd	GPKDrPipeCir_dp	Point on Pipe Circular	6	6	0
X	typsrd	Grass	Grass, Seeding and Mulching Areas	2	1	2
X	typsrd	GravityWall	Gravity Wall	11	0	1
X	typsrd	GravityWall_px	Gravity Wall for Cross Sections	11	0	2
X	typsrd	GravWallBase_px	Proposed Gravity Wall Subgrade	3	0	2
	typsrd	GridMaj_dp	Grid Lines Major in Profile and Cross Section	3	0	1
	typsrd	GridMin_dp	Grid Lines Minor in Profile and Cross Section	0	0	0
	typsrd	GridMinSub_dp	Grid Lines Minor Sub in Cross Section Sheets	20	0	0
	typsrd	GroundCover	Groundcover Edge Symbol	2	0	1
	typsrd	GroundCoverHatch	Groundcover Hatch Pattern	2	0	0
X	typsrd	Guardrail	Guardrail	0	0	2
X	typsrd	Guardrail_px	Guardrail	0	0	1
X	typsrd	GuardrailDbl	Guardrail Double Face	0	grdbl	1
X	typsrd	GuardrailEndAch	Guardrail End Anchorage	0	0	1
X	typsrd	GuardrailLt	Guardrail Left	0	grail1	1
X	typsrd	GuardrailRt	Guardrail Right	0	grail2	1
X	typsrd	Handrail	Handrails	9	0	1
X	typsrd	Handrail_px	Handrail Lines on Cross Sections	9	0	1
	typsrd	HardscapeDetails	Paving Details, Fence Railing, Stamped Asphalt	4	0	2
	typsrd	ImageAttachment_dp	Image Attachmentst	0	0	0
X	typsrd	Inlet_px	Inlets on Cross Sections	10	0	2
X	typsrd	InletBottom_px	Inlet Bottom on Cross Sections (All Types)	10	0	2

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
X	typsrd	InletBottomJ	Inlet Bottom Type J	10	0	1
X	typsrd	InletBottomP	Inlet Bottom Type P	10	0	1
X	typsrd	InletCurb	Curb Inlet (All Types)	10	0	2
X	typsrd	InletDBI	Ditch Bottom Inlet (All Types)	10	0	2
X	typsrd	InletGutter	Gutter Inlet (All Types)	10	0	2
X	typsrd	InletMedian	Median Barrier Inlet	10	0	2
	typsrd	KeyShtMisc	Key sheet Miscellaneous Items	0	0	2
	typsrd	LaneDirArrow	Lane Directional Arrow	0	0	1
X	typsrd	LARWLine	Limited Access Right of Way	4	LA	2
X	typsrd	LARWLine_ep	Limited Access Right of Way (Existing)	4	EXLA	1
X	typsrd	LARWLine_ex	Limited Access Right of Way on XSections (Existing)	4	EXLA	1
X	typsrd	LARWLine_px	Limited Access ROW Lines on Cross Sections	4	LA	2
X	typsrd	LateralLimits_px	Lateral Limits for Cross Sections	6	0	2
	typsrd	LeaderLine_dp	Leader Line and terminator with Text	0	0	1
	typsrd	LightingMisc	Lighting Miscellaneous Items	4	0	2
X	typsrd	LightingSP	Lighting Service Points	0	0	1
	typsrd	Logo_dp	Consultant Engineer of Record Logo	0	0	1
X	typsrd	Luminaire	Luminaires (Decorative - All Types)	2	0	1
X	typsrd	Manhole	Manhole (Drainage and Unknown)	10	0	2
X	typsrd	Manhole_px	Manhole on Cross Sections	10	0	2
X	typsrd	MedianWallBase_px	Proposed Median Wall Subgrade	3	0	2
X	typsrd	MES	Mitered End Section	10	0	2
X	typsrd	MES_px	Mitered End Section on Cross Sections	10	0	2
	typsrd	Miscellaneous0	Undefined proposed item - co blue wt 0	1	0	0
	typsrd	Miscellaneous1	Undefined proposed item - co blue wt 1	1	0	1
	typsrd	Miscellaneous2	Undefined proposed item - co blue wt 2	1	0	2
	typsrd	Miscellaneous3	Undefined proposed item - co green wt 0	2	0	0
	typsrd	Miscellaneous4	Undefined proposed item - co green wt 1	2	0	1
	typsrd	Miscellaneous5	Undefined proposed item - co green wt 2	2	0	2
	typsrd	Miscellaneous6	Undefined proposed item - co red wt 0	3	0	0
	typsrd	Miscellaneous7	Undefined proposed item - co red wt 1	3	0	1
	typsrd	Miscellaneous8	Undefined proposed item - co red wt 2	3	0	2
	typsrd	Miscellaneous9	Undefined proposed item - co red wt 3	3	0	3
	typsrd	NonPlottingEle_dp	Non plotting items such as construction elements and type 66 elements	4	0	0

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
X	typsrd	Overbuild_px	Overbuild Areas on Cross Sections	4	0	2
X	typsrd	Overbuild1_px	Proposed Overbuild Binder Symbology (No Longer Used)	7	0	2
X	typsrd	Overbuild2_px	Proposed Overbuild Base Symbology (No Longer Used)	7	0	2
X	typsrd	Overlay_px	Proposed Overbuild for Cross Sections	1	0	2
X	typsrd	Overlay1_px	Proposed Overbuild for Cross Sections	14	0	2
X	typsrd	Overlay2_px	Proposed Overbuild for Cross Sections	7	0	2
	typsrd	PatternLines1_dp	Pattern Lines for Cross Sections	3	0	2
	typsrd	PatternLines2_dp	Pattern Lines for XSections alternate for side streets, critical xsections or drainage structures	4	0	2
	typsrd	PatternLines3_dp	Pattern Lines for XSections alternate for side streets, critical xsections or drainage structures	5	0	2
X	typsrd	PavedMedianBase_px	Proposed Paved Median Subgrade	3	0	2
	typsrd	PavtAsph_ep	Asphalt Pavement Edge	0	3	1
	typsrd	PavtCrown	Pavement Crown	16	0	2
X	typsrd	PavtMessage	Pavement Message (All types)	0	0	1
X	typsrd	PavtMessage_ep	Pavement Message (Existing - All types)	0	2	0
	typsrd	PayItem_dp	Pay Item Number Label Elements	4	0	2
	typsrd	PipeCulvert_ep	Pipe Culvert	10	3	1
X	typsrd	PipeCulvert_pr	Pipe Culvert in Profile	3	0	2
X	typsrd	PipeCulvert_px	Pipe Culvert for Cross Section View	10	0	2
X	typsrd	PlotBorder_dp	Plot Border	3	0	0
	typsrd	PMMisc	Pavement Marking Miscellaneous Items	0	0	2
X	typsrd	PMStripe12B	Pavement Marking Traffic Stripe 12in Black	3	stripe12	4
X	typsrd	PMStripe12W	Pavement Marking Traffic Stripe 12in White	0	stripe12	4
X	typsrd	PMStripe12W(3-9)	Pavement Marking 3/9 Skip Traffic Stripe 12in White	0	stripe12	4
X	typsrd	PMStripe12Y	Pavement Marking Traffic Stripe 12in Yellow	4	stripe12	4
X	typsrd	PMStripe16B	Pavement Marking Traffic Stripe 16in Black	3	stripe16	5
X	typsrd	PMStripe16W	Pavement Marking Traffic Stripe 16in White	0	stripe16	5
X	typsrd	PMStripe16Y	Pavement Marking Traffic Stripe 16in Yellow	4	stripe16	5
X	typsrd	PMStripe18B	Pavement Marking Traffic Stripe 18in Black	3	stripe18	6
X	typsrd	PMStripe18W	Pavement Marking Traffic Stripe 18in White	0	stripe18	6
X	typsrd	PMStripe18Y	Pavement Marking Traffic Stripe 18in Yellow	4	stripe18	6
X	typsrd	PMStripe24W	Pavement Marking Traffic Stripe 24in White	0	stripe24	7
X	typsrd	PMStripe24Y	Pavement Marking Traffic Stripe 24in Yellow	4	stripe24	7
X	typsrd	PMStripe6B	Pavement Marking Traffic Stripe 6in Black	3	stripe06	2
X	typsrd	PMStripe6B(10-30)	Pavement Marking 10/30 Skip Traffic Stripe 6in Black	3	stripe06	2

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
X	typsrd	PMStripe6Bl	Pavement Marking Traffic Stripe 6in Blue	1	stripe06	2
X	typsrd	PMStripe6DY	Pavement Marking Traffic Stripe 6in Double Yellow	4	dbl_line	2
X	typsrd	PMStripe6W	Pavement Marking Traffic Stripe 6in White	0	stripe06	2
X	typsrd	PMStripe6W(3-9)	Pavement Marking 3/9 Skip Traffic Stripe 6in White	0	stripe06	2
X	typsrd	PMStripe6W(10-30)	Pavement Marking 10/30 Skip Traffic Stripe 6in White	0	stripe06	2
X	typsrd	PMStripe6W(2-4)	Pavement Marking 2/4 Skip Traffic Stripe 6in White	0	stripe06	2
X	typsrd	PMStripe6W(6-10)	Pavement Marking 6/10 Skip Traffic Stripe 6in White	0	stripe06	2
X	typsrd	PMStripe6Y	Pavement Marking Traffic Stripe 6in Yellow	4	stripe06	2
X	typsrd	PMStripe6Y(10-30)	Pavement Marking 10/30 Skip Traffic Stripe 6in Yellow	4	stripe06	2
X	typsrd	PMStripe6Y(2-4)	Pavement Marking 2/4 Skip Traffic Stripe 6in Yellow	4	stripe06	2
X	typsrd	PMStripe6Y(6-10)	Pavement Marking 6/10 Skip Traffic Stripe 6in Yellow	4	stripe06	2
X	typsrd	PMStripe8B	Pavement Marking Traffic Stripe 8in Black	3	stripe06	3
X	typsrd	PMStripe8W	Pavement Marking Traffic Stripe 8in White	0	stripe08	3
X	typsrd	PMStripe8W(3-9)	Pavement Marking 3/9 Skip Traffic Stripe 8in White	0	stripe08	2
X	typsrd	PMStripe8Y	Pavement Marking Traffic Stripe 8in Yellow	4	stripe08	3
X	typsrd	PMStripeVibeW	Pavement Marking Auditory and Vibratory 6in White	0	Vibratory	2
X	typsrd	PMStripeVibeY	Pavement Marking Auditory and Vibratory 6in Yellow	4	Vibratory	2
	typsrd	PointLocator_ep	Point Locator Symbol	4	0	0
X	typsrd	PoleConc	Concrete Strain Pole	0	0	2
X	typsrd	PoleConc_ep	Concrete Strain Pole (Existing)	0	2	1
X	typsrd	PoleFound	Pole Foundation	0	0	2
X	typsrd	PoleLight	Light Pole	2	0	1
X	typsrd	PoleLight_ep	Light Pole (Existing)	2	2	1
X	typsrd	PoleLightHM	High Mast Light Pole	3	0	1
X	typsrd	PoleLightHM_ep	High Mast Light Pole (Existing)	2	2	1
	typsrd	PoleLightID	Light Pole Location / ID	4	0	1
X	typsrd	PolePower	Power Pole w/ Transformer	3	0	2
X	typsrd	PoleShared	Power Pole Electric (Above Ground) Shared w/ Transformer	3	0	2
X	typsrd	PoleSteelStrain	Steel Strain Pole	0	0	2
X	typsrd	PoleSteelStrain_ep	Steel Strain Pole (Existing)	0	2	1
X	typsrd	PoleTel	Telephone Pole	6	0	2
X	typsrd	PoleUtil	Utility Pole	0	0	2
X	typsrd	PoleWoodStrain	Wood Strain Pole	0	0	2
X	typsrd	PoleWoodStrain_ep	Wood Strain Pole (Existing)	0	2	1
X	typsrd	Pond_px	Pond Lines on Cross Sections	2	0	2

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
X	typsrd	Power_px	Power on Cross Sections	3	0	1
X	typsrd	PropertyLine_ep	Property Lines	3	0	0
	typsrd	ReferencePt_dp	Survey and Construction Reference Point Details and Elements	4	0	2
X	typsrd	RetainWall	Retaining Wall System	6	0	1
X	typsrd	RetainWall_pr	Retaining Wall Profile	9	0	2
X	typsrd	RetainWall_px	Retaining Walls on Cross Sections	6	0	1
X	typsrd	RipRap_px	Rip Rap, Rubble on Cross Sections	4	1	2
X	typsrd	RWLine	Right of Way Lines	4	RW	2
X	typsrd	RWLine_ep	Right of Way Lines (Existing)	3	RW	1
X	typsrd	RWLine_ex	ROW Lines on Cross Sections (Existing)	3	RW	1
X	typsrd	RWLine_px	ROW Lines on Cross Sections	4	RW	2
X	typsrd	SanitaryFM_px	Force Main Lines on Cross Sections	2	0	1
X	typsrd	SanitarySewer_ex	Sanitary Sewer Lines on Cross Sections (Existing)	10	2	0
X	typsrd	SanitarySewer_px	Sanitary Sewer Lines on Cross Sections	2	0	1
	typsrd	Scratch1_dp	A scratch level for temporary or informational items	4	0	0
	typsrd	Scratch2_dp	A scratch level for temporary or informational items	5	0	0
	typsrd	ScratchEle_dp	Level for Draft Elements, Temporary Elements, Etc. These Elements Do Not Plot	3	0	0
	typsrd	ScratchEle2_dp	Level for Draft Elements, Temporary Elements, Etc. Do Not Plot	4	0	0
	typsrd	SheetBorder_dp	Sheet Border	1	0	4
	typsrd	SheetLines_dp	Sheet Lines	1	0	2
	typsrd	SheetLinesMisc1_dp	Sheet Lines	1	0	0
	typsrd	SheetLinesMisc2_dp	Sheet Lines	2	0	2
	typsrd	SheetLinesMisc3_dp	Sheet Lines	3	0	2
	typsrd	SheetLinesMisc4_dp	Sheet Lines	4	0	2
X	typsrd	ShldrBase_px	Bottom of Proposed Paved Shoulder Base	3	0	2
X	typsrd	ShldrBaseTop_px	Top of Proposed Paved Shoulder Base	3	0	2
	typsrd	ShldrHatch	Paved Shoulder Hatch Pattern	1	0	1
X	typsrd	ShldrPaved	Paved Shoulder Line	1	0	1
X	typsrd	ShldrPaved_px	Paved Shoulder Lines on Cross Sections	1	0	2
X	typsrd	ShldrUnpaved	Unpaved Shoulder Line	0	0	0
X	typsrd	ShldrUnpaved_px	Grass Shoulder Lines on Cross Sections	2	0	2
X	typsrd	ShldrWallBase_px	Proposed Shoulder Wall Subgrade	3	0	2
X	typsrd	Shrub	Shrubs	2	0	1
X	typsrd	Sidewalk_ex	Sidewalk Elements in Cross Sections (Existing)	0	2	1

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
X	typsrd	Sidewalk_px	Sidewalk Elements in Cross Sections	0	0	2
X	typsrd	SidewalkBack	Sidewalk Back	2	0	1
X	typsrd	SidewalkBase_px	Proposed Sidewalk Subgrade	3	0	2
X	typsrd	SidewalkConc	Sidewalk Concrete Shape	0	0	2
X	typsrd	SidewalkFront	Sidewalk Front	1	0	1
X	typsrd	Slopes	Slopes (Top, Bottom)	9	3	0
X	typsrd	Slopes_px	Slope Lines on Cross Sections	9	0	2
X	typsrd	Sod	Performance Sod	2	0	2
X	typsrd	SoilBoxes_px	Soil Boxes and Borings for Cross Sections	4	0	1
	typsrd	SpecialDetails_px	Special Details_XS	6	0	1
X	typsrd	Stabilization	Stabilization Material Lines and Shapes	9	0	2
X	typsrd	Stabilization_px	Stabilization for Cross Sections	5	2	2
	typsrd	StationTicL_dp	Station Tic Marks (Large) and Text	0	0	2
	typsrd	StationTicS_dp	Station Tic Marks (Small) and Text	0	0	2
X	typsrd	StreetLights	Street Lights	2	0	1
X	typsrd	StreetLights_px	Street Lights for Cross Sections	3	0	1
	typsrd	Structure_px	Signal and Sign Structures on Cross Sections	0	0	2
X	typsrd	SubDsgn_px	Sub Design for Cross Sections including subbase	4	0	1
X	typsrd	Subsoil_px	Subsoil Or Undercut for Cross Sections	4	0	2
X	typsrd	SubsoilFinal_px	Subsoil Final for Multiline	18	0	1
X	typsrd	SubsoilProp_px	Subsoil Proposed for Multiline	8	0	1
	typsrd	SumBoxBorder_dp	Summary Boxes Borders	4	0	3
	typsrd	SumBoxLines_dp	Summary Boxes Lines and Miscellaneous Items	4	0	1
	typsrd	SumBoxLinesMin_dp	Summary Boxes Lines Minor Line and Miscellaneous Items	4	0	0
X	typsrd	TemplateBottom_px	Bottom of Template for Multiline	6	0	1
X	typsrd	TemplateFinal_px	Final Template for Multiline	2	0	1
X	typsrd	TemplateTop_px	Top of Template for Multiline	7	0	1
X	typsrd	TerrainLine_ex	Existing Ground Line for Multiline	5	0	1
	typsrd	TextBLStation	Text - B/L Station and Tics	0	0	2
	typsrd	TextConstEle	Text - Construction Element	0	0	1
	typsrd	TextCurveData	Text - Curve Data Note	0	0	2
	typsrd	TextDetails	Text - Detail Notes	4	0	2
	typsrd	TextElevLabel	Elevation Labels	4	0	0
	typsrd	TextGeotech	Text for soil borings and labels	0	0	2

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
	typsrd	TextLabel	Text - Label	0	0	2
	typsrd	TextLandscape	Text - Landscape Labels	0	0	1
	typsrd	TextMajor	Text - Major	0	0	5
	typsrd	TextMinor	Text - Minor	0	0	0
	typsrd	TextMisc	Text - Miscellaneous	0	0	1
	typsrd	TextNotes	Text - Notes	4	0	1
	typsrd	TextProfLabel	Text - Profile, Horizontal and Vertical Axis Labels	0	0	2
	typsrd	TextProjLabel	Text - Begin and End Project label with leader lines	1	0	2
	typsrd	TextPtLabel	Point Labels	4	0	0
	typsrd	TextShtNo	Text - Sheet Number	0	0	2
	typsrd	TextSurveyLabel	Survey Text Labels	0	0	0
	typsrd	TextTables	Text - Keysheet Indexes and Table Data	4	0	2
	typsrd	TextTitle	Text - Title	0	0	3
	typsrd	TextXSElev	Text - Cross Section Elevations	2	0	1
X	typsrd	TrafSeparator	Traffic Separator (All Types)	6	0	1
X	typsrd	TrafSeparator_px	Traffic Separator (All Types) on Cross Sections	6	0	2
X	typsrd	TrafSeparatorBase_px	Proposed Traffic Separator Subgrade	3	0	2
X	typsrd	Tree	Trees, Tree Line Pattern	2	0	1
X	typsrd	TreeGrate	Tree Grate	5	0	1
X	typsrd	TreeProtection	Tree Protection Symbol	5	0	2
X	typsrd	Turf	Performance Truf	100	0	2
	typsrd	TypicalMisc	Typical Miscellaneous Items	0	0	2
X	typsrd	UnderDrain	Underdrains (All Types)	10	0	2
	typsrd	Utility_er	Existing Utilities in Profile View	3	2	1
	typsrd	Utility_pr	Proposed Utilities in Profile View	3	0	2
	typsrd	UtilsMisc_px	Miscellaneous Utility Items on Cross Sections	8	0	1
	typsrd	Vehicle	Vehicle for Calculating Turning Radius	7	0	2
	typsrd	Viewport	Viewport (For AutoCAD Use)	3	0	0
	typsrd	VoidArea_dx	Void Area_XS	1	0	0
X	typsrd	Water	Water Line	1	w	2
	typsrd	Water_ep	Water Line (all sizes)	1	e-w	1
X	typsrd	Water_ex	Water for Cross Sections (Existing)	1	2	1
X	typsrd	Water_px	Water for Cross Sections	1	0	1
	typsrd	Xreference_dp	Reference Files (For AutoCAD Use)	0	0	1

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
	typsrd	Xreference01_dp	Reference Files (For AutoCAD Use)	0	0	1
	typsrd	Xreference02_dp	Reference Files (For AutoCAD Use)	0	0	1
	typsrd	Xreference03_dp	Reference Files (For AutoCAD Use)	0	0	1
	typsrd	Xreference04_dp	Reference Files (For AutoCAD Use)	0	0	1
	typsrd	Xreference05_dp	Reference Files (For AutoCAD Use)	0	0	1
	typsrd	Xreference06_dp	Reference Files (For AutoCAD Use)	0	0	1
	typsrd	Xreference07_dp	Reference Files (For AutoCAD Use)	0	0	1
	typsrd	Xreference08_dp	Reference Files (For AutoCAD Use)	0	0	1
	typsrd	Xreference09_dp	Reference Files (For AutoCAD Use)	0	0	1
	typsrd	Xreference10_dp	Reference Files (For AutoCAD Use)	0	0	1
X	typsrd	XSBaseTop_px	Top of Proposed Base	3	0	2
	typsrd	XSCell	GEOPAK Cross Section Cell and Profile Cell	8	0	1
X	typsrd	XSExtendGrdLine_ex	Extend Ground Lines for Cross Sections (Existing)	21	2	1
X	typsrd	XSGrdLine_ex	Ground Lines for Cross Sections (Existing)	2	2	1
X	typsrd	XSGrdLine_px	Roadway Ground Lines on Cross Sections	1	0	2
	typsrd	XSMisc_px	Cross Section Miscellaneous Items	0	0	2
	typsrd	XSShapeDep01_dp	Cross Section Shape Dependent	11	0	2
	typsrd	XSShapeDep02_dp	Cross Section Shape Dependent	12	0	2
	typsrd	XSShapeDep03_dp	Cross Section Shape Dependent	13	0	2
	typsrd	XSShapeDep04_dp	Cross Section Shape Dependent	14	0	2
	typsrd	XSShapeDep05_dp	Cross Section Shape Dependent	15	0	2
	typsrd	XSShapeDep06_dp	Cross Section Shape Dependent	16	0	2
	typsrd	XSShapeDep07_dp	Cross Section Shape Dependent	17	0	2
	typsrd	XSShapeDep08_dp	Cross Section Shape Dependent	18	0	2
	typsrd	XSShapeDep09_dp	Cross Section Shape Dependent	19	0	2
	typsrd	XSShapeDep10_dp	Cross Section Shape Dependent	20	0	2
	typsrd	XSShapeIndep01_dp	Cross Section Shape Independent	1	0	2
	typsrd	XSShapeIndep02_dp	Cross Section Shape Independent	2	0	2
	typsrd	XSShapeIndep03_dp	Cross Section Shape Independent	3	0	2
	typsrd	XSShapeIndep04_dp	Cross Section Shape Independent	4	0	2
	typsrd	XSShapeIndep05_dp	Cross Section Shape Independent	5	0	2
	typsrd	XSShapeIndep06_dp	Cross Section Shape Independent	6	0	2
	typsrd	XSShapeIndep07_dp	Cross Section Shape Independent	7	0	2
	typsrd	XSShapeIndep08_dp	Cross Section Shape Independent	8	0	2

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
	typsrd	XSShapeIndep09_dp	Cross Section Shape Independent	9	0	2
	typsrd	XSShapeIndep10_dp	Cross Section Shape Independent	10	0	2
X	typsrd	XSTypical_px	Roadway Pavement Typical on Cross Sections	1	0	2

4.2.35 UTILITIES ADJUSTMENT - UTADRD

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
	utadrd	ActivePointCell_dp	Active Point Cell	4	0	10
	utadrd	AdhocPoint_dp	Adhoc Points Placed by SheetInfo	0	4	0
	utadrd	Beacons_ep	Beacons and Path Illumination	0	0	1
X	utadrd	Capacitor	Capacitors (All Types)	3	0	1
	utadrd	CATV_ep	Cable TV Line (Aerial)	6	e-otv	0
X	utadrd	CATVAer	Cable TV Line (Aerial)	6	otv	1
X	utadrd	CATVBur	Cable TV Line (Buried)	6	btv	1
	utadrd	CATVBur_ep	Cable TV Line (Buried)	6	e-btv	1
X	utadrd	CATVBur_px	Cable TV and Miscellaneous on Cross Sections	6	0	1
X	utadrd	CATVCond	Cable TV Conduit System	6	conduit1	1
	utadrd	CATVCond_ep	Cable TV Conduit System	6	0	1
	utadrd	CATVMisc	Cable TV Service Box	6	0	1
	utadrd	CATVMisc_ep	Cable TV Service Box, Pole	6	1	1
	utadrd	COGO_dp	COGO Information	3	0	1
X	utadrd	Conduit	Conduit for Utilities and Encasements	3	conduit1	1
	utadrd	Conduit_ep	Utility Conduit & Encasements	3	e-cas	0
X	utadrd	ConduitAG	Conduit – Above Ground	4	lite_cond4	1
X	utadrd	ConduitBG	Conduit In Box Girder	5	lite_cond5	1
X	utadrd	ConduitBG_ep	Conduit In Box Girder (Existing)	5	exlite_cond5	0
X	utadrd	ConduitBM	Conduit – Bridge Mount	5	lite_cond5	1
X	utadrd	ConduitC	Conduit Lead-in Cable	3	0	0
X	utadrd	ConduitDB	Conduit – Directional Bore	2	lite_cond2	1
X	utadrd	ConduitJ	Conduit Jacked Underpavement	1	lite_cond3	1
X	utadrd	ConduitJ_ep	Conduit Jacked (Existing)	1	exlite_cond3	0
X	utadrd	ConduitJB	Conduit – Jack & Bore Under Rail	3	lite_cond3	1

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
X	utadrd	ConduitOT	Conduit – Open Trench	1	lite_cond1	1
X	utadrd	ConduitSM	Conduit Surface Mounted	4	lite_cond4	1
X	utadrd	ConduitSM_ep	Conduit Surface Mounted (Existing)	4	exlite_cond4	0
X	utadrd	ConduitUG	Conduit Underground	3	lite_cond1	1
X	utadrd	ConduitUG_ep	Conduit Underground (Existing)	3	exlite_cond1	0
X	utadrd	ConduitUP	Conduit Underpavement	2	lite_cond2	1
X	utadrd	ConduitUP_ep	Conduit Underpavement (Existing)	2	exlite_cond2	0
X	utadrd	Controller_ep	Controller and Accessories (Existing)	0	2	1
X	utadrd	ControllerB_ep	Controller - Base Mounted (Existing)	0	2	1
X	utadrd	ControllerP_ep	Controller Pole Mount (Existing)	0	2	1
	utadrd	Core_ep	Core Sample or Test Hole	9	0	0
	utadrd	DimLines_dp	Dimension Lines, Corresponding Terminators, Equation Lines	0	0	1
	utadrd	DummyChains_ep	Dummy Chains	0	0	1
X	utadrd	EaseLicLine	Easement License Agreement Line	5	6	0
X	utadrd	ElecMeter	Meter (Electric)	3	0	1
X	utadrd	ElectPS	Electrical Power Service Miscellaneous	3	0	1
X	utadrd	ElectPSB	Electrical (Buried)	3	be	2
X	utadrd	ElectPSO	Electrical Outlet	3	0	1
X	utadrd	ElectServWire	Electrical Service Wire	3	0	2
X	utadrd	FireHydrant	Fire Hydrant	1	0	1
	utadrd	FireHydrant_ep	Fire Hydrant	1	1	1
	utadrd	FloodLight_ep	Flood Light	3	1	1
	utadrd	FOBur_ep	Fiber Optics Cable (Underground)	6	e-bfo	0
X	utadrd	FOCAer	Fiber Optics Cable (Aerial)	6	ofo	1
X	utadrd	FOCBur	Fiber Optics Cable (Buried)	6	bfo	1
X	utadrd	Gas	Gas Pipe and Fittings	4	g	1
	utadrd	Gas_ep	Gas Line (all sizes)	4	e-g	1
X	utadrd	GasMeter	Meter (Gas)	4	0	1
	utadrd	GasMisc	Gas Regulator and Miscellaneous Items	4	0	0
	utadrd	GasReg_ep	Gas Regulator	4	1	1
X	utadrd	Gauges	Gauges	0	0	1
	utadrd	Gauges_ep	Gauges	0	1	1
X	utadrd	Generator	Emergency Generator	0	0	2
	utadrd	GridMaj_dp	Grid Lines Major in Profile and Cross Section	3	0	1
	utadrd	GridMin_dp	Grid Lines Minor in Profile and Cross Section	0	0	0

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
	utadrd	GridMinSub_dp	Grid Lines Minor Sub in Cross Section Sheets	20	0	0
	utadrd	Guys_ep	Guy Anchor, Guy pole, Span Guys	3	1	1
X	utadrd	GuyWire	Guy Wire	3	0	0
	utadrd	ImageAttachment_dp	Image Attachmentst	0	0	0
X	utadrd	InterconCable_ep	Interconnect Cable (Existing)	1	intcon2	0
X	utadrd	JunctBox	Junction Boxes, Service Cabinet (Elec/Tel)	3	0	1
	utadrd	JunctBox_ep	Junct. Box / Service Cabinet (Elec/Tel)	3	1	1
X	utadrd	JunctBoxA	Junction Boxes (Aerial)	3	0	1
X	utadrd	JunctBoxA_ep	Junction Boxes (Aerial) (Existing)	3	1	0
	utadrd	LeaderLine_dp	Leader Line and terminator with Text	0	0	1
	utadrd	LiteCond_ep	Street Lighting Conductors	3	exlite_cond1	0
X	utadrd	LoadCenter	Load Center	2	0	1
X	utadrd	LoadCenter_ep	Load Center (Existing)	2	5	0
	utadrd	Logo_dp	Consultant Engineer of Record Logo	0	0	1
X	utadrd	LoopLI_ep	Loop Lead-In (Existing)	3	2	0
X	utadrd	Loops_ep	Loop Assembly (All Types) (Existing)	2	2	2
X	utadrd	Luminaire	Luminaires (Decorative - All Types)	2	0	1
	utadrd	Luminaire_ep	Street Light / Pole	3	1	1
	utadrd	ManholeCover_ep	Manhole Cover (Cable TV)	6	1	1
	utadrd	ManholeCovUnk_ep	Manhole Cover (Unknown)	0	1	1
	utadrd	ManholeCovW_ep	Manhole Cover (Water)	1	1	1
X	utadrd	ManholeCvrUnk	Manhole Cover (Unknown)	0	0	0
X	utadrd	ManholeElec	Manhole (Electric)	3	0	1
	utadrd	ManholeElec_ep	Manhole (Electric)	3	1	1
X	utadrd	ManholeGas	Manhole (Gas)	4	0	1
	utadrd	ManholeGas_ep	Manhole (Gas)	4	1	1
X	utadrd	ManholeSS	Manhole (Sanitary Sewer)	2	0	1
	utadrd	ManholeSS_ep	Manhole (Sanitary Sewer)	2	1	1
X	utadrd	ManholeSW	Manhole (Storm Water)	10	0	1
	utadrd	ManholeSW_ep	Manhole (Storm Water)	10	1	1
X	utadrd	ManholeTel	Manhole (Telephone)	6	0	1
	utadrd	ManholeTel_ep	Manhole (Telephone)	6	1	1
	utadrd	MatchLines_dp	Match Lines with Text, Arrows for Station Notations	1	0	2
	utadrd	MeterElec_ep	Meter (Electric)	3	1	1

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
	utadrd	MeterElecUG_ep	Meter (Electric) (Underground)	3	1	1
	utadrd	MeterGas_ep	Meter (Gas)	4	1	1
	utadrd	MeterUnk	Meter (Unknown) PROPOSED UNKNOWN ELEMENT	0	0	0
	utadrd	MeterUnk_ep	Meter (Unknown)	0	1	1
	utadrd	MeterWater_ep	Meter (Water)	1	1	1
	utadrd	Miscellaneous0	Undefined proposed item - co blue wt 0	1	0	0
	utadrd	Miscellaneous1	Undefined proposed item - co blue wt 1	1	0	1
	utadrd	Miscellaneous2	Undefined proposed item - co blue wt 2	1	0	2
	utadrd	Miscellaneous3	Undefined proposed item - co green wt 0	2	0	0
	utadrd	Miscellaneous4	Undefined proposed item - co green wt 1	2	0	1
	utadrd	Miscellaneous5	Undefined proposed item - co green wt 2	2	0	2
	utadrd	Miscellaneous6	Undefined proposed item - co red wt 0	3	0	0
	utadrd	Miscellaneous7	Undefined proposed item - co red wt 1	3	0	1
	utadrd	Miscellaneous8	Undefined proposed item - co red wt 2	3	0	2
	utadrd	Miscellaneous9	Undefined proposed item - co red wt 3	3	0	3
	utadrd	NonPlottingEle_dp	Non plotting items such as construction elements and type 66 elements	4	0	0
	utadrd	NorthArw_dp	North Arrows	0	0	2
X	utadrd	Oil	Oil Pipeline, Petroleum	4	pet	2
X	utadrd	OverheadSign_ep	Overhead Sign Panels (Existing)	0	3	1
X	utadrd	OverheadStr_ep	Mast Arm, Truss Assemblies, Signal Arms and Supports (Existing)	0	3	1
	utadrd	Patternlines_ep	Cross Section Chain	2	1	0
	utadrd	PayItem_dp	Pay Item Number Label Elements	4	0	2
X	utadrd	Pedestal_ep	Pedestal (Existing)	1	2	1
X	utadrd	PedHead_ep	Pedestrian Head (All Types) (Existing)	0	2	1
	utadrd	PedSignal_ep	Pedestrian Signal Unit, Signage	0	2	0
X	utadrd	PlotBorder_dp	Plot Border	3	0	0
	utadrd	PointLocator_ep	Point Locator Symbol	4	0	0
X	utadrd	PoleConc	Concrete Strain Pole	0	0	2
X	utadrd	PoleConc_ep	Concrete Strain Pole (Existing)	0	2	1
X	utadrd	PoleFound	Pole Foundation	0	0	2
X	utadrd	PoleLight	Light Pole	2	0	1
X	utadrd	PoleLight_ep	Light Pole (Existing)	2	2	1
X	utadrd	PoleLightHM	High Mast Light Pole	3	0	1
X	utadrd	PoleLightHM_ep	High Mast Light Pole (Existing)	2	2	1
	utadrd	PoleLightID	Light Pole Location / ID	4	0	1

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
X	utadrd	PolePower	Power Pole w/ Transformer	3	0	2
	utadrd	PolePower_ep	Power Pole with or without Transformer, shared pole	3	1	1
X	utadrd	PoleShared	Power Pole Electric (Above Ground) Shared w/ Transformer	3	0	2
X	utadrd	PoleSteelStrain	Steel Strain Pole	0	0	2
X	utadrd	PoleSteelStrain_ep	Steel Strain Pole (Existing)	0	2	1
X	utadrd	PoleTel	Telephone Pole	6	0	2
	utadrd	PoleTel_ep	Telephone Pole	6	1	1
X	utadrd	PoleUtil	Utility Pole	0	0	2
X	utadrd	PoleWoodStrain	Wood Strain Pole	0	0	2
X	utadrd	PoleWoodStrain_ep	Wood Strain Pole (Existing)	0	2	1
	utadrd	Power_ep	Existing Overhead Electric Power Conductors (Distribution & Transmission)	3	e-oe	0
	utadrd	PowerBur_ep	Existing Buried Electric Power Conductors (Distribution & Transmission)	3	e-be	1
	utadrd	PowerBurCond_ep	Secondary Conductor Buried	3	e-be	0
	utadrd	PowerCapcUG_ep	Capacitors (Underground)	3	1	1
	utadrd	PowerCond_ep	Conductors (primary distribution)	3	e-oe	1
	utadrd	PowerElecOut_ep	Electrical Outlet	3	1	1
	utadrd	PowerMisc	Fuses, Reclosures, Regulator, Sectionalizers	3	0	0
	utadrd	PowerMisc_ep	Capacitors (Above Ground), Switchgear, Transformer, Electrical Service Box	3	1	1
X	utadrd	PullBox	Pull Boxes (All Types)	3	0	1
	utadrd	PullBox_ep	Wiring Pull Box	3	1	1
X	utadrd	PumpNonPet	Pump (Non Petroleum)	1	0	0
	utadrd	PumpNonPet_ep	Pump (Non Petroleum)	1	1	1
	utadrd	ReferencePt_dp	Survey and Construction Reference Point Details and Elements	4	0	2
	utadrd	Sanitary_ep	Sanitary Sewer (all sizes)	2	e-s	1
X	utadrd	SanitaryFM	Force Main	2	s	1
	utadrd	SanitaryFM_ep	Force Main (all sizes)	2	e-s	1
	utadrd	SanitaryMisc_ep	Cleanout, Sanitary Effluent (Open channel)	2	1	1
X	utadrd	SanitarySewer	Sanitary Sewer	2	s	1
X	utadrd	SanitarySewerEff	Sanitary Sewer Effluent NPW	5	npw	0
X	utadrd	SanitarySewerEff_px	Sanitary Effluent for Cross Sections	9	0	0
	utadrd	SanitarySewerMisc	Sewer Miscellaneous Items	2	0	0
	utadrd	SateDish_ep	Sattelite Dish Antenna	6	4	1
	utadrd	Scale_dp	Bar Scale, Scale Label Elements	0	0	2
	utadrd	Scratch1_dp	A scratch level for temporary or informational items	4	0	0
	utadrd	Scratch2_dp	A scratch level for temporary or informational items	5	0	0

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
	utadrd	ScratchEle_dp	Level for Draft Elements, Temporary Elements, Etc. Do Not Plot	3	0	0
	utadrd	ScratchEle2_dp	Level for Draft Elements, Temporary Elements, Etc. Do Not Plot	4	0	0
	utadrd	SheetBorder_dp	Sheet Border	1	0	4
	utadrd	SheetLines_dp	Sheet Lines	1	0	2
	utadrd	SheetLinesMisc1_dp	Sheet Lines	1	0	0
	utadrd	SheetLinesMisc2_dp	Sheet Lines	2	0	2
	utadrd	SheetLinesMisc3_dp	Sheet Lines	3	0	2
	utadrd	SheetLinesMisc4_dp	Sheet Lines	4	0	2
	utadrd	Signal_ep	Signal Head, Signal on Pedestal	3	1	1
X	utadrd	SignalHead_ep	Signal Head Section Details (Existing)	2	2	0
	utadrd	SignalLoop_ep	Traffic Detector Loops	7	1	2
	utadrd	SignalMisc_ep	Miscellaneous Signal Equipment Existing including control unit	3	2	0
	utadrd	SignalSupport_ep	Signal Supports including Mast Arm	3	2	0
X	utadrd	SignalSym_ep	Signal Head Symbols (Existing)	3	2	0
X	utadrd	SignCantilever_ep	Sign Symbol Cantilever (Existing)	0	2	0
	utadrd	SignMulti_ep	Multi-column Sign (All Signs)	0	3	1
X	utadrd	SignPanel_ep	Sign Panel Elements (Existing)	0	2	1
	utadrd	SignSingle_ep	Sign (Single Support)	3	2	0
X	utadrd	SignSpanwire	Span Wire Signing Assembly	2	0	1
X	utadrd	SignSpanwire_ep	Span Wire Signing Assembly (Existing)	2	2	1
	utadrd	SignSupport_ep	Trusses and Cantilevers for Overhead Signs	0	3	1
X	utadrd	SignTruss_ep	Sign Symbol Truss (Existing)	3	2	1
	utadrd	SpanWire_ep	Signal / Span Wire Pole	3	2	0
X	utadrd	Sprinkler	Sprinkler Head	1	0	0
	utadrd	Sprinkler_ep	Sprinkler Head	1	1	1
X	utadrd	SteamPipe	Steam Pipes	1	stm	1
X	utadrd	StreetLights	Street Lights	2	0	1
	utadrd	SumBoxBorder_dp	Summary Boxes Borders	4	0	3
	utadrd	SumBoxLines_dp	Summary Boxes Lines and Miscellaneous Items	4	0	1
	utadrd	SumBoxLinesMin_dp	Summary Boxes Lines Minor Line and Miscellaneous Items	4	0	0
X	utadrd	Switchgear	Switchgear and Appurtenances	3	0	0
	utadrd	Tele_ep	Telephone Line (aerial)	6	e-ot	0
X	utadrd	TeleAer	Telephone Line (Aerial)	6	ot	1
X	utadrd	TeleBur	Telephone (Buried)	6	bt	1
	utadrd	TeleBur_ep	Telephone (all sizes Buried), Duct, Toll	6	e-bt	1

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
X	utadrd	TeleBur_px	Telephone for Cross Sections (Buried) (Miscellaneous)	6	0	1
	utadrd	TeleMisc	Telephone Service Box, Booth or Pedestal	6	0	0
	utadrd	TeleMisc_ep	Telephone Service Box, Booth or Pedestal	6	1	1
	utadrd	TextBLStation	Text - B/L Station and Tics	0	0	2
	utadrd	TextConstEle	Text - Construction Element	0	0	1
	utadrd	TextCurveData	Text - Curve Data Note	0	0	2
	utadrd	TextDetails	Text - Detail Notes	4	0	2
	utadrd	TextElevLabel	Elevation Labels	4	0	0
	utadrd	TextLabel	Text - Label	0	0	2
	utadrd	TextLandscape	Text - Landscape Labels	0	0	1
	utadrd	TextMajor	Text - Major	0	0	5
	utadrd	TextMinor	Text - Minor	0	0	0
	utadrd	TextMisc	Text - Miscellaneous	0	0	1
	utadrd	TextNotes	Text - Notes	4	0	1
	utadrd	TextProfLabel	Text - Profile, Horizontal and Vertical Axis Labels	0	0	2
	utadrd	TextProjLabel	Text - Begin and End Project label with leader lines	1	0	2
	utadrd	TextPtLabel	Point Labels	4	0	0
	utadrd	TextShtNo	Text - Sheet Number	0	0	2
	utadrd	TextSurveyLabel	Survey Text Labels	0	0	0
	utadrd	TextTables	Text - Keysheet Indexes and Table Data	4	0	2
	utadrd	TextTitle	Text - Title	0	0	3
	utadrd	TextXSElev	Text - Cross Section Elevations	2	0	1
	utadrd	TopoMisc_ep	Miscellaneous Topography	0	3	1
X	utadrd	Tower	High Mast Light Poles or Towers, Transmission Tower, Antenna	3	0	0
	utadrd	Tower_ep	High Mast Light Poles or Towers, Transmission Tower, Antenna	3	1	1
X	utadrd	TransformerAer	Transformer Unit (Above Ground)	3	0	0
X	utadrd	TransformerBur	Transformer (Underground)	3	0	1
X	utadrd	TransmissionAer	Proposed Overhead Electric Power Conductors (Distribution & Transmission)	3	oe	0
X	utadrd	TransmissionBur	Proposed Buried Electric Power Conductors (Distribution & Transmission)	3	be	1
X	utadrd	TransmissionT	Transmission Tower Single	3	0	0
	utadrd	UtilMisc_ep	Miscellaneous Utilities	0	0	0
	utadrd	UtilsMisc	Miscellaneous Utility Items	8	0	1
X	utadrd	UtilsProposed	Proposed Facilities/Utilities as shown in Utility Adjustments	9	0	2
X	utadrd	Valve	Valve, Valve Box (Unknown) PROPOSED UNKNOW VALVE	0	0	1
	utadrd	Valve_ep	Valve, Valve Box	0	1	1

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
X	utadrd	ValveCover	Valve Cover (Unknown) PROPOSED UNKNOW VALVE	0	0	1
	utadrd	ValveCover_ep	Valve Cover	0	1	1
X	utadrd	ValveCvrEff	Valve Cover (Effluent)	5	0	1
	utadrd	ValveCvrEff_ep	Valve Cover (Effluent)	5	1	1
X	utadrd	ValveCvrGas	Valve Cover (Gas)	4	0	1
	utadrd	ValveCvrGas_ep	Valve Cover (Gas)	4	1	1
X	utadrd	ValveCvrSewer	Valve Cover (Sewer)	2	0	1
	utadrd	ValveCvrSewer_ep	Valve Cover (Sewer)	2	1	1
X	utadrd	ValveCvrWater	Valve Cover (Water)	1	0	1
	utadrd	ValveCvrWater_ep	Valve Cover (Water)	1	1	1
X	utadrd	ValveCvrWaterNP	Water Line Non Potable	5	0	1
	utadrd	ValveCvrWaterNP_ep	Valve Cover (Non-potable Water)	5	1	1
X	utadrd	ValveGas	Valve, Valve Box (Gas)	4	0	1
	utadrd	ValveGas_ep	Valve (Gas), Valve Box	4	1	1
X	utadrd	ValveSewer	Valve, Valve Box (Sewer)	2	0	1
	utadrd	ValveSewer_ep	Valve (Sewer), Valve Box	2	1	1
X	utadrd	ValveWater	Valve, Valve Box (Water)	1	0	1
	utadrd	ValveWater_ep	Valve (Water), Valve Box	1	1	1
	utadrd	ValveWaterNP_ep	Valve (Non-potable Water), Valve Box	8	1	1
	utadrd	Vault_ep	Vaults Above Grade and Below Grade	3	1	0
X	utadrd	Vaults	Vaults Above Grade and Below Grade	3	0	0
X	utadrd	VaultsRW	Vaults (Raw Water)	1	0	0
	utadrd	Vent	Vent (Unknown) PROPOSED UNKNOW VENT	0	0	0
	utadrd	Vent_ep	Vent	0	1	1
X	utadrd	VentGas	Vent (Gas)	4	0	0
	utadrd	VentGas_ep	Vent (Gas)	4	1	1
X	utadrd	VentSewer	Vent (Sewer)	2	0	0
	utadrd	VentSewer_ep	Vent (Sewer)	2	1	1
	utadrd	Viewport	Viewport (For AutoCAD Use)	3	0	0
X	utadrd	Water	Water Line	1	w	2
	utadrd	Water_ep	Water Line (all sizes)	1	e-w	1
X	utadrd	WaterFct	Standpipe and Water Faucet	1	0	0
X	utadrd	WaterFilter	Water Filter	5	0	2
X	utadrd	WaterMeter	Water Meter	1	0	2
	utadrd	WaterMisc_ep	Faucet, Standpipe	1	1	1

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
X	utadrd	WaterNP_px	Raw Water Pipes for Cross Sections	1	0	1
X	utadrd	Well	Well	1	1	1
X	utadrd	WellMon	Well Monitoring	1	0	1
	utadrd	Wells_ep	Wells, Monitoring Well, Taps	1	1	1
	utadrd	XSCell	GEOPAK Cross Section Cell and Profile Cell	8	0	1
	utadrd	Xreference_dp	Reference Files (For AutoCAD Use)	0	0	1
	utadrd	Xreference01_dp	Reference Files (For AutoCAD Use)	0	0	1
	utadrd	Xreference02_dp	Reference Files (For AutoCAD Use)	0	0	1
	utadrd	Xreference03_dp	Reference Files (For AutoCAD Use)	0	0	1
	utadrd	Xreference04_dp	Reference Files (For AutoCAD Use)	0	0	1
	utadrd	Xreference05_dp	Reference Files (For AutoCAD Use)	0	0	1
	utadrd	Xreference06_dp	Reference Files (For AutoCAD Use)	0	0	1
	utadrd	Xreference07_dp	Reference Files (For AutoCAD Use)	0	0	1
	utadrd	Xreference08_dp	Reference Files (For AutoCAD Use)	0	0	1
	utadrd	Xreference09_dp	Reference Files (For AutoCAD Use)	0	0	1
	utadrd	Xreference10_dp	Reference Files (For AutoCAD Use)	0	0	1

4.2.36 UTILITIES EXISTING - UTEXRD

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight	Point / Line	Feature
	utexrd	Beacons_ep	Beacons and Path Illumination	0	0	1	P	BN
	utexrd	CATV_ep	Cable TV Line (Aerial)	6	e-otv	0	L	CATV
	utexrd	CATVBur_ep	Cable TV Line (Buried)	6	e-btv	1	L	BCATV
	utexrd	CATVCond_ep	Cable TV Conduit System	6	0	1	L	CATVC
	utexrd	CATVMisc_ep	Cable TV Service Box, Pole	6	1	1	P	CATVS
	utexrd	Conduit_ep	Utility Conduit & Encasements	3	e-cas	0	L	DUCT
	utexrd	FireHydrant_ep	Fire Hydrant	1	1	1	P	FH
	utexrd	FloodLight_ep	Flood Light	3	1	1	P	FLD
	utexrd	FOAer_ep	Fiber Optics Cable (Overhead)	6	e-ofo	0	L	FOC
	utexrd	FOBur_ep	Fiber Optics Telephone (Size Unknown)	6	e-bfo	0	L	FO
	utexrd	FOBur_ep	Fiber Optics Cable (Underground)	6	e-bfo	0	L	FOCU
	utexrd	FOBur_ep	Fiber Optics Telephone (Underground)	6	e-bfo	0	L	FOU
	utexrd	Gas_ep	Gas Line (all sizes)	4	e-g	1	L	GAS
	utexrd	Gas_ep	Gas Test & Miscellaneous	4	e-g	1	L	GTM

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight	Point / Line	Feature
	utexrd	GasReg_ep	Gas Regulator	4	1	1	P	RG
	utexrd	Gauges_ep	Gauges	0	1	1	P	GA
	utexrd	Guys_ep	Guy Anchor	3	1	1	P	GYA
	utexrd	Guys_ep	Guy Pole (Deadman)	3	1	1	P	GYP
	utexrd	Guys_ep	Span Guys	3	1	1	L	GYS
	utexrd	ImageAttachment_dp	Image Attachmentst	0	0	0		algnrd
	utexrd	JunctBox_ep	Junct. Box / Service Cabinet (Elec/Tel)	3	1	1	P	SRVC
	utexrd	LeaderLine_dp	Leader Line and terminator with Text	0	0	1		
	utexrd	LiteCond_ep	Street Lighting Conductors	3	exlite_cond1	0	L	SLC
	utexrd	Luminaire_ep	Street Light / Pole	3	1	1	P	LP
	utexrd	ManholeCover_ep	Manhole Cover (Cable TV)	6	1	1	P	MHCATV
	utexrd	ManholeCovUnk_ep	Manhole Cover (Unknown)	0	1	1	P	MH
	utexrd	ManholeCovW_ep	Manhole Cover (Water)	1	1	1	P	MHW
	utexrd	ManholeElec_ep	Manhole (Electric)	3	1	1	P	MHE
	utexrd	ManholeGas_ep	Manhole (Gas)	4	1	1	P	MHG
	utexrd	ManholeSS_ep	Manhole (Sanitary Sewer)	2	1	1	P	MHS
	utexrd	ManholeSW_ep	Manhole (Storm Water)	10	1	1	P	MHD
	utexrd	ManholeTel_ep	Manhole (Telephone)	6	1	1	P	MHT
	utexrd	MeterElec_ep	Meter (Electric)	3	1	1	P	ME
	utexrd	MeterElecUG_ep	Meter (Electric) (Underground)	3	1	1	P	MEU
	utexrd	MeterGas_ep	Meter (Gas)	4	1	1	P	MG
	utexrd	MeterUnk_ep	Meter (Unknown)	0	1	1	P	M
	utexrd	MeterWater_ep	Meter (Water)	1	1	1	P	MW
	utexrd	Oil_ep	Oil Line (all sizes)	4	e-pet	1	L	PETRO
	utexrd	PipeEncase_ep	Pipe Encasements	0	e-cas	1	L	PIPEN
	utexrd	PointLocator_ep	Point Locator Symbol	4	0	0		
	utexrd	PolePower_ep	Power Pole	3	1	1	P	PP
	utexrd	PolePower_ep	Power Pole with Transformer	3	1	1	P	PPT
	utexrd	PolePower_ep	Shared Pole	3	1	1	P	SHP
	utexrd	PolePower_ep	Shared Pole with Transformer	3	1	1	P	SHPT
	utexrd	PoleTel_ep	Telephone Pole	6	1	1	P	TELP
	utexrd	Power_ep	High Voltage Transmission Line	3	e-oe	0	L	HVL
	utexrd	Power_ep	Power Lines (Aerial)	3	e-oe	0	L	PWR
	utexrd	PowerBur_ep	Buried Power (Unknown Size)	3	e-be	1	L	BPWR
	utexrd	PowerBur_ep	Buried Conductors (Transmission)	3	e-be	1	L	TRANS

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight	Point / Line	Feature
	utexrd	PowerBurCond_ep	Secondary Conductor Buried	3	e-be	0	L	BSEC
	utexrd	PowerBurCond_ep	Secondary Conductor Buried	3	e-be	0	L	SEC
	utexrd	PowerCapcUG_ep	Capacitors (Underground)	3	1	1	L	CAPB
	utexrd	PowerCond_ep	Conductors (primary distribution)	3	e-oe	1	L	PRI
	utexrd	PowerElecOut_ep	Electrical Outlet	3	1	1	P	ELEO
	utexrd	PowerMisc_ep	Capacitors (Above Ground)	3	1	1	L	CAPA
	utexrd	PowerMisc_ep	Electric Service Box (Large)	3	1	1	L	ELECS
	utexrd	PowerMisc_ep	Fuses (Existing)	3	1	1	L	FUSE
	utexrd	PowerMisc_ep	Switchgear & Appurtenances	3	1	1	L	SW
	utexrd	PowerMisc_ep	Transformer	3	1	1	P	TRNF
	utexrd	PullBox_ep	Wiring Pull Box	3	1	1	P	WPB
	utexrd	Pump_ep	Pump (Petroleum / Fuel)	7	1	1	P	PMPF
	utexrd	Pump_ep	Pump Station	7	3	1	P	PMPST
	utexrd	PumpNonPet_ep	Pump (Non Petroleum)	1	1	1	P	PMP
	utexrd	Sanitary_ep	Sanitary Sewer (all sizes)	2	e-s	1	L	SS
	utexrd	SanitaryDumpSta_ep	Dump Station (SS)	2	2	1	P	DMPS
	utexrd	SanitaryFM_ep	Force Main (all sizes)	2	e-s	1	L	FM
	utexrd	SanitaryMisc_ep	Cleanout	2	1	1	P	CLNO
	utexrd	SanitaryMisc_ep	Pump Station (Sanitary Sewer)	2	1	1	P	PMPST
	utexrd	SanitaryMisc_ep	Sanitary Effluent (Open channel)	2	1	1	L	SE
	utexrd	SateDish_ep	Satellite Dish Antenna	6	4	1	P	SATD
	utexrd	Sprinkler_ep	Sprinkler Head	1	1	1	P	SPH
	utexrd	Steam_ep	Steam	4	e-stm	1	L	STEAM
	utexrd	Tele_ep	Telephone Line (aerial)	6	e-ot	0	L	TEL
	utexrd	TeleBur_ep	Buried Telephone (all sizes), Duct, Toll	6	e-bt	1	L	BT
	utexrd	TeleBur_ep	Buried Telephone, DUCT	6	e-bt	1	L	BTD
	utexrd	TeleBur_ep	Buried Telephone, TOLL	6	e-bt	1	L	BTT
	utexrd	TeleMisc_ep	Telephone Booth	6	1	1	P	TB
	utexrd	TeleMisc_ep	Telephone Service Box (Large)	6	1	1	L	TELS
	utexrd	TeleMisc_ep	Telephone Pedestal / Service	6	1	1	P	TPD
	utexrd	TextElevLabel	Text - Elevation Labels	4	0	0		
	utexrd	TextMisc	Text - Miscellaneous	0	0	1		
	utexrd	TextNotes	Text - Notes	4	0	1		
	utexrd	TextPtLabel	Text - Point Labels	4	0	0		
	utexrd	TextSurveyLabel	Text - Survey Text Labels	0	0	0		

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight	Point / Line	Feature
	utexrd	Tower_ep	Antenna	3	1	1	P	ANT
	utexrd	Tower_ep	Transmission Tower (Single Column)	3	1	1	P	CLMT
	utexrd	Tower_ep	High Mast Lighting Poles	3	1	1	P	HML
	utexrd	UtilMisc_ep	Miscellaneous Utilities	0	0	0	L	
	utexrd	Valve_ep	Valve Box	0	1	1	P	VB
	utexrd	Valve_ep	Valve	0	1	1	P	VLV
X	utexrd	ValveBFP_ep	Valve (Back Flow Preventer), ValvleBox	0	1	1	P	VLVB
	utexrd	ValveCover_ep	Valve Cover (Unknown)	0	1	1	P	VC
	utexrd	ValveCvrEff_ep	Valve Cover (Effluent)	5	1	1	P	VCEF
	utexrd	ValveCvrGas_ep	Valve Cover (Gas)	4	1	1	P	VCG
	utexrd	ValveCvrSewer_ep	Valve Cover (Sewer)	2	1	1	P	VCS
	utexrd	ValveCvrWater_ep	Valve Cover (Water)	1	1	1	P	VCW
	utexrd	ValveCvrWaterNP_ep	Valve Cover (Non-potable Water)	5	1	1	P	VCNPW
	utexrd	ValveCvrWaterNP_ep	Valve Cover (Raw Water)	5	1	1	P	VCRW
	utexrd	ValveGas_ep	Valve Box (Gas)	4	1	1	P	VBG
	utexrd	ValveGas_ep	Valve (Gas)	4	1	1	P	VLVG
	utexrd	ValveSewer_ep	Valve Box (Sewer)	2	1	1	P	VBS
	utexrd	ValveSewer_ep	Valve (Sewer)	2	1	1	P	VLVS
	utexrd	ValveWater_ep	Valve Box (Water)	1	1	1	P	VBW
	utexrd	ValveWater_ep	Valve (Water)	1	1	1	P	VLVW
	utexrd	ValveWaterNP_ep	Valve Box (Non-potable Water)	5	1	1	P	VBNPW
	utexrd	ValveWaterNP_ep	Valve (Non-potable Water)	5	1	1	P	VLVNPW
	utexrd	Vault_ep	Vaults Above Grade	3	1	0	L	AGV
	utexrd	Vault_ep	Vaults Below Grade	3	1	0	L	BGV
	utexrd	Vent_ep	Vent	0	1	1	P	VNT
	utexrd	VentGas_ep	Vent (Gas)	4	1	1	P	VNTG
	utexrd	VentSewer_ep	Vent (Sewer)	2	1	1	P	VNTS
	utexrd	Viewport	Viewport (For AutoCAD Use)	3	0	0		
	utexrd	Water_ep	Water Line (all sizes)	1	e-w	1	L	WL
	utexrd	WaterMisc_ep	Faucet	1	1	1	P	FAU
	utexrd	WaterMisc_ep	Standpipe	1	1	1	P	SP
	utexrd	WaterNP_ep	Non-potable Water Line (all sizes)	5	e-npw	1	L	NPWL
	utexrd	Wells_ep	Well Monitoring, Taps	1	1	1	P	MONW
	utexrd	Xreference_dp	Reference Files (For AutoCAD Use)	0	0	1		
	utexrd	Xreference01_dp	Reference Files (For AutoCAD Use)	0	0	1		
	utexrd	Xreference02_dp	Reference Files (For AutoCAD Use)	0	0	1		

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight	Point / Line	Feature
	utexrd	Xreference03_dp	Reference Files (For AutoCAD Use)	0	0	1		
	utexrd	Xreference04_dp	Reference Files (For AutoCAD Use)	0	0	1		
	utexrd	Xreference05_dp	Reference Files (For AutoCAD Use)	0	0	1		
	utexrd	Xreference06_dp	Reference Files (For AutoCAD Use)	0	0	1		
	utexrd	Xreference07_dp	Reference Files (For AutoCAD Use)	0	0	1		
	utexrd	Xreference08_dp	Reference Files (For AutoCAD Use)	0	0	1		
	utexrd	Xreference09_dp	Reference Files (For AutoCAD Use)	0	0	1		
	utexrd	Xreference10_dp	Reference Files (For AutoCAD Use)	0	0	1		

4.2.37 UTILITIES PROPOSED - UTPRRD

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
	utprrd	ActivePointCell_dp	Active Point Cell	4	0	10
	utprrd	AdhocPoint_dp	Adhoc Points Placed by SheetInfo	0	4	0
	utprrd	Beacons_ep	Beacons and Path Illumination	0	0	1
X	utprrd	Capacitor	Capacitors (All Types)	3	0	1
	utprrd	CATV_ep	Cable TV Line (Aerial)	6	e-otv	0
X	utprrd	CATVAer	Cable TV Line (Aerial)	6	otv	1
X	utprrd	CATVBur	Cable TV Line (Buried)	6	btv	1
	utprrd	CATVBur_ep	Cable TV Line (Buried)	6	e-btv	1
X	utprrd	CATVBur_px	Cable TV and Miscellaneous on Cross Sections	6	0	1
X	utprrd	CATVCond	Cable TV Conduit System	6	conduit1	1
	utprrd	CATVCond_ep	Cable TV Conduit System	6	0	1
	utprrd	CATVMisc	Cable TV Service Box	6	0	1
	utprrd	CATVMisc_ep	Cable TV Service Box, Pole	6	1	1
	utprrd	COGO_dp	COGO Information	3	0	1
X	utprrd	Conduit	Conduit for Utilities and Encasements	3	conduit1	1
	utprrd	Conduit_ep	Utility Conduit & Encasements	3	e-cas	0
X	utprrd	ConduitAG	Conduit – Above Ground	4	lite_cond4	1
X	utprrd	ConduitBG	Conduit In Box Girder	5	lite_cond5	1
X	utprrd	ConduitBG_ep	Conduit In Box Girder (Existing)	5	exlite_cond5	0
X	utprrd	ConduitBM	Conduit – Bridge Mount	5	lite_cond5	1

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
X	utprrd	ConduitC	Conduit Lead-in Cable	3	0	0
X	utprrd	ConduitDB	Conduit – Directional Bore	2	lite_cond2	1
X	utprrd	ConduitJ	Conduit Jacked Underpavement	1	lite_cond3	1
X	utprrd	ConduitJ_ep	Conduit Jacked (Existing)	1	exlite_cond3	0
X	utprrd	ConduitJB	Conduit – Jack & Bore Under Rail	3	lite_cond3	1
X	utprrd	ConduitOT	Conduit – Open Trench	1	lite_cond1	1
X	utprrd	ConduitSM	Conduit Surface Mounted	4	lite_cond4	1
X	utprrd	ConduitSM_ep	Conduit Surface Mounted (Existing)	4	exlite_cond4	0
X	utprrd	ConduitUG	Conduit Underground	3	lite_cond1	1
X	utprrd	ConduitUG_ep	Conduit Underground (Existing)	3	exlite_cond1	0
X	utprrd	ConduitUP	Conduit Underpavement	2	lite_cond2	1
X	utprrd	ConduitUP_ep	Conduit Underpavement (Existing)	2	exlite_cond2	0
X	utprrd	Controller_ep	Controller and Accessories (Existing)	0	2	1
X	utprrd	ControllerB_ep	Controller - Base Mounted (Existing)	0	2	1
X	utprrd	ControllerP_ep	Controller Pole Mount (Existing)	0	2	1
	utprrd	DimLines_dp	Dimension Lines, Corresponding Terminators, Equation Lines	0	0	1
	utprrd	DummyChains_ep	Dummy Chains	0	0	1
X	utprrd	EaseLicLine	Easement License Agreement Line	5	6	0
X	utprrd	ElecMeter	Meter (Electric)	3	0	1
X	utprrd	ElectPS	Electrical Power Service Miscellaneous	3	0	1
X	utprrd	ElectPSB	Electrical (Buried)	3	be	2
X	utprrd	ElectPSO	Electrical Outlet	3	0	1
X	utprrd	ElectServWire	Electrical Service Wire	3	0	2
X	utprrd	FireHydrant	Fire Hydrant	1	0	1
	utprrd	FireHydrant_ep	Fire Hydrant	1	1	1
	utprrd	FloodLight_ep	Flood Light	3	1	1
	utprrd	FOBur_ep	Fiber Optics Cable (Underground)	6	e-bfo	0
X	utprrd	FOCAer	Fiber Optics Cable (Aerial)	6	ofo	1
X	utprrd	FOCBur	Fiber Optics Cable (Buried)	6	bfo	1
X	utprrd	GasMeter	Meter (Gas)	4	0	1
X	utprrd	Gauges	Gauges	0	1	1
	utprrd	Gauges_ep	Gauges	0	1	1
X	utprrd	Generator	Emergency Generator	0	0	2
	utprrd	Guys_ep	Guy Anchor, Guy pole, Span Guys	3	1	1

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
X	utprrd	GuyWire	Guy Wire	3	0	0
	utprrd	ImageAttachment_dp	Image Attachmentst	0	0	0
X	utprrd	InterconCable_ep	Interconnect Cable (Existing)	1	intcon2	0
X	utprrd	JunctBox	Junction Boxes, Service Cabinet (Elec/Tel)	3	0	1
	utprrd	JunctBox_ep	Junct. Box / Service Cabinet (Elec/Tel)	3	1	1
X	utprrd	JunctBoxA	Junction Boxes (Aerial)	3	0	1
X	utprrd	JunctBoxA_ep	Junction Boxes (Aerial) (Existing)	3	1	0
	utprrd	LeaderLine_dp	Leader Line and terminator with Text	0	0	1
	utprrd	LiteCond_ep	Street Lighting Conductors Existing	3	exlite_cond1	0
X	utprrd	LoadCenter	Load Center	2	0	1
X	utprrd	LoadCenter_ep	Load Center (Existing)	2	5	0
X	utprrd	LoopLI_ep	Loop Lead-In (Existing)	3	2	0
X	utprrd	Loops_ep	Loop Assembly (All Types) (Existing)	2	2	2
X	utprrd	Luminaire	Luminaires (Decorative - All Types)	2	0	1
	utprrd	Luminaire_ep	Street Light / Pole	3	1	1
	utprrd	ManholeCover_ep	Manhole Cover (Cable TV)	6	1	1
	utprrd	ManholeCovUnk_ep	Manhole Cover (Unknown)	0	1	1
	utprrd	ManholeCovW_ep	Manhole Cover (Water)	1	1	1
X	utprrd	ManholeCvrUnk	Manhole Cover (Unknown)	0	0	0
X	utprrd	ManholeElec	Manhole (Electric)	3	0	1
	utprrd	ManholeElec_ep	Manhole (Electric)	3	1	1
X	utprrd	ManholeGas	Manhole (Gas)	4	0	1
	utprrd	ManholeGas_ep	Manhole (Gas)	4	1	1
X	utprrd	ManholeSS	Manhole (Sanitary Sewer)	2	0	1
	utprrd	ManholeSS_ep	Manhole (Sanitary Sewer)	2	1	1
X	utprrd	ManholeSW	Manhole (Storm Water)	10	0	1
	utprrd	ManholeSW_ep	Manhole (Storm Water)	10	1	1
X	utprrd	ManholeTel	Manhole (Telephone)	6	0	1
	utprrd	ManholeTel_ep	Manhole (Telephone)	6	1	1
	utprrd	MeterElec_ep	Meter (Electric)	3	1	1
	utprrd	MeterElecUG_ep	Meter (Electric) (Underground)	3	1	1
	utprrd	MeterGas_ep	Meter (Gas)	4	1	1
	utprrd	MeterUnk	Meter (Unknown) PROPOSED UNKNOWN ELEMENT	0	0	0
	utprrd	MeterUnk_ep	Meter (Unknown)	0	1	1

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
	utprrd	MeterWater_ep	Meter (Water)	1	1	1
	utprrd	Miscellaneous0	Undefined proposed item - co blue wt 0	1	0	0
	utprrd	Miscellaneous1	Undefined proposed item - co blue wt 1	1	0	1
	utprrd	Miscellaneous2	Undefined proposed item - co blue wt 2	1	0	2
	utprrd	Miscellaneous3	Undefined proposed item - co green wt 0	2	0	0
	utprrd	Miscellaneous4	Undefined proposed item - co green wt 1	2	0	1
	utprrd	Miscellaneous5	Undefined proposed item - co green wt 2	2	0	2
	utprrd	Miscellaneous6	Undefined proposed item - co red wt 0	3	0	0
	utprrd	Miscellaneous7	Undefined proposed item - co red wt 1	3	0	1
	utprrd	Miscellaneous8	Undefined proposed item - co red wt 2	3	0	2
	utprrd	Miscellaneous9	Undefined proposed item - co red wt 3	3	0	3
	utprrd	NonPlottingEle_dp	Non plotting items such as construction elements and type 66 elements	4	0	0
X	utprrd	Oil	Oil Pipeline, Petroleum	4	pet	2
X	utprrd	OverheadSign_ep	Overhead Sign Panels (Existing)	0	3	1
X	utprrd	OverheadStr_ep	Mast Arm, Truss Assemblies, Signal Arms and Supports (Existing)	0	3	1
	utprrd	Patternlines_ep	Cross Section Chain	2	1	0
	utprrd	PayItem_dp	Pay Item Number Label Elements	4	0	2
X	utprrd	Pedestal_ep	Pedestal (Existing)	1	2	1
X	utprrd	PedHead_ep	Pedestrian Head (All Types) (Existing)	0	2	1
	utprrd	PedSignal_ep	Pedestrian Signal Unit, Signage	0	2	0
	utprrd	PointLocator_ep	Point Locator Symbol	4	0	0
X	utprrd	PoleConc	Concrete Strain Pole	0	0	2
X	utprrd	PoleConc_ep	Concrete Strain Pole (Existing)	0	2	1
X	utprrd	PoleFound	Pole Foundation	0	0	2
X	utprrd	PoleLight	Light Pole	2	0	1
X	utprrd	PoleLight_ep	Light Pole (Existing)	2	2	1
X	utprrd	PoleLightHM	High Mast Light Pole	3	0	1
X	utprrd	PoleLightHM_ep	High Mast Light Pole (Existing)	2	2	1
	utprrd	PoleLightID	Light Pole Location / ID	4	0	1
X	utprrd	PolePower	Power Pole w/ Transformer	3	0	2
	utprrd	PolePower_ep	Power Pole with or without Transformer, shared pole	3	1	1
X	utprrd	PoleShared	Power Pole Electric (Above Ground) Shared w/ Transformer	3	0	2
X	utprrd	PoleSteelStrain	Steel Strain Pole	0	0	2
X	utprrd	PoleSteelStrain_ep	Steel Strain Pole (Existing)	0	2	1

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
X	utprrd	PoleTel	Telephone Pole	6	0	2
	utprrd	PoleTel_ep	Telephone Pole	6	1	1
X	utprrd	PoleUtil	Utility Pole	0	0	2
X	utprrd	PoleWoodStrain	Wood Strain Pole	0	0	2
X	utprrd	PoleWoodStrain_ep	Wood Strain Pole (Existing)	0	2	1
	utprrd	Power_ep	Existing Overhead Electric Power Conductors (Distribution & Transmission)	3	e-oe	0
	utprrd	PowerBur_ep	Existing Buried Electric Power Conductors (Distribution & Transmission)	3	e-be	1
	utprrd	PowerBurCond_ep	Secondary Conductor Buried	3	e-be	0
	utprrd	PowerCapcUG_ep	Capacitors (Underground)	3	1	1
	utprrd	PowerCond_ep	Conductors (primary distribution)	3	e-oe	1
	utprrd	PowerElecOut_ep	Electrical Outlet	3	1	1
	utprrd	PowerMisc	Fuses, Reclosures, Regulator, Sectionalizers	3	0	0
	utprrd	PowerMisc_ep	Capacitors (Above Ground), Switchgear, Transformer, Electrical Service Box	3	1	1
X	utprrd	PullBox	Pull Boxes (All Types)	3	0	1
	utprrd	PullBox_ep	Wiring Pull Box	3	1	1
	utprrd	PumpNonPet_ep	Pump (Non Petroleum)	1	1	1
	utprrd	ReferencePt_dp	Survey and Construction Reference Point Details and Elements	4	0	2
	utprrd	Sanitary_ep	Sanitary Sewer (all sizes)	2	e-s	1
	utprrd	SanitaryDumpSta_ep	Dump Station (SS)	2	2	1
X	utprrd	SanitaryFM	Force Main	2	s	1
	utprrd	SanitaryFM_ep	Force Main (all sizes)	2	e-s	1
	utprrd	SanitaryMisc_ep	Cleanout, Sanitary Effluent (Open channel)	2	1	1
X	utprrd	SanitarySewer	Sanitary Sewer	2	s	1
X	utprrd	SanitarySewerDSta	Sewer Dump Station	2	0	0
X	utprrd	SanitarySewerEff	Sanitary Sewer Effluent NPW	5	npw	0
X	utprrd	SanitarySewerEff_px	Sanitary Effluent for Cross Sections	9	0	0
	utprrd	SanitarySewerMisc	Sewer Miscellaneous Items	2	0	0
	utprrd	SateDish_ep	Sattelite Dish Antenna	6	4	1
	utprrd	Scratch1_dp	A scratch level for temporary or informational items	4	0	0
	utprrd	Scratch2_dp	A scratch level for temporary or informational items	5	0	0
	utprrd	ScratchEle_dp	Level for Draft Elements, Temporary Elements, Etc. These Elements Do Not Plot	3	0	0
	utprrd	ScratchEle2_dp	Level for Draft Elements, Temporary Elements, Etc. Do Not Plot	4	0	0
	utprrd	Signal_ep	Signal Head, Signal on Pedestal	3	1	1
X	utprrd	SignalHead_ep	Signal Head Section Details (Existing)	2	2	0

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
	utprrd	SignalLoop_ep	Traffic Detector Loops	7	1	2
	utprrd	SignalMisc_ep	Miscellaneous Signal Equipment Existing including control unit	3	2	0
	utprrd	SignalSupport_ep	Signal Supports including Mast Arm	3	2	0
X	utprrd	SignalSym_ep	Signal Head Symbols (Existing)	3	2	0
X	utprrd	SignCantilever_ep	Sign Symbol Cantilever (Existing)	0	2	0
	utprrd	SignMulti_ep	Multi-column Sign (All Signs)	0	3	1
X	utprrd	SignPanel_ep	Sign Panel Elements (Existing)	0	2	1
	utprrd	SignSingle_ep	Sign (Single Support)	3	2	0
X	utprrd	SignSpanwire	Span Wire Signing Assembly	2	0	1
X	utprrd	SignSpanwire_ep	Span Wire Signing Assembly (Existing)	2	2	1
	utprrd	SignSupport_ep	Trusses and Cantilevers for Overhead Signs	0	3	1
X	utprrd	SignTruss_ep	Sign Symbol Truss (Existing)	3	2	1
	utprrd	SpanWire_ep	Signal / Span Wire Pole	3	2	0
X	utprrd	Sprinkler	Sprinkler Head	1	0	0
	utprrd	Sprinkler_ep	Sprinkler Head	1	1	1
X	utprrd	SteamPipe	Steam Pipes	1	stm	1
X	utprrd	StreetLights	Street Lights	2	0	1
X	utprrd	Switchgear	Switchgear and Appurtenances	3	0	0
	utprrd	Tele_ep	Telephone Line (aerial)	6	e-ot	0
X	utprrd	TeleAer	Telephone Line (Aerial)	6	ot	1
X	utprrd	TeleBur	Telephone (Buried)	6	bt	1
	utprrd	TeleBur_ep	Telephone (all sizes Buried), Duct, Toll	6	e-bt	1
X	utprrd	TeleBur_px	Telephone for Cross Sections (Buried) (Miscellaneous)	6	0	1
	utprrd	TeleMisc	Telephone Service Box, Booth or Pedestal	6	0	0
	utprrd	TeleMisc_ep	Telephone Service Box, Booth or Pedestal	6	1	1
	utprrd	TextBLStation	Text - B/L Station and Tics	0	0	2
	utprrd	TextConstEle	Text - Construction Element	0	0	1
	utprrd	TextCurveData	Text - Curve Data Note	0	0	2
	utprrd	TextDetails	Text - Detail Notes	4	0	2
	utprrd	TextElevLabel	Text - Elevation Labels	4	0	0
	utprrd	TextLabel	Text - Label	0	0	2
	utprrd	TextLandscape	Text - Landscape Labels	0	0	1
	utprrd	TextMajor	Text - Major	0	0	5
	utprrd	TextMinor	Text - Minor	0	0	0

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
	utprrd	TextMisc	Text - Miscellaneous	0	0	1
	utprrd	TextNotes	Text - Notes	4	0	1
	utprrd	TextProfLabel	Text - Profile, Horizontal and Vertical Axis Labels	0	0	2
	utprrd	TextProjLabel	Text - Begin and End Project label with leader lines	1	0	2
	utprrd	TextPtLabel	Text - Point Labels	4	0	0
	utprrd	TextShtNo	Text - Sheet Number	0	0	2
	utprrd	TextSurveyLabel	Text - Survey Text Labels	0	0	0
	utprrd	TextTables	Text - Keysheet Indexes and Table Data	4	0	2
	utprrd	TextTitle	Text - Title	0	0	3
	utprrd	TextXSElev	Text - Cross Section Elevations	2	0	1
	utprrd	TopoMisc_ep	Miscellaneous Topography	0	3	1
X	utprrd	Tower	High Mast Light Poles or Towers, Transmission Tower, Antenna	3	0	0
	utprrd	Tower_ep	High Mast Light Poles or Towers, Transmission Tower, Antenna	3	1	1
X	utprrd	TransformerAer	Transformer Unit (Above Ground)	3	0	0
X	utprrd	TransformerBur	Transformer (Underground)	3	0	1
X	utprrd	TransmissionAer	Proposed Overhead Electric Power Conductors (Distribution & Transmission)	3	oe	0
X	utprrd	TransmissionBur	Proposed Buried Electric Power Conductors (Distribution & Transmission)	3	be	1
X	utprrd	TransmissionT	Transmission Tower Single	3	0	0
	utprrd	UtilMisc_ep	Miscellaneous Utilities	0	0	0
	utprrd	UtilsMisc	Miscellaneous Utility Items	8	0	1
X	utprrd	UtilsProposed	Proposed Facilities/Utilities as shown in Utility Adjustments	9	0	2
X	utprrd	Valve	Valve, Valve Box (Unknown) PROPOSED UNKNOW VALVE	0	0	1
	utprrd	Valve_ep	Valve, Valve Box	0	1	1
X	utprrd	ValveCover	Valve Cover (Unknown) PROPOSED UNKNOW VALVE	0	0	1
	utprrd	ValveCover_ep	Valve Cover	0	1	1
X	utprrd	ValveCvrEff	Valve Cover (Effluent)	5	0	1
	utprrd	ValveCvrEff_ep	Valve Cover (Effluent)	5	1	1
X	utprrd	ValveCvrGas	Valve Cover (Gas)	4	0	1
	utprrd	ValveCvrGas_ep	Valve Cover (Gas)	4	1	1
X	utprrd	ValveCvrSewer	Valve Cover (Sewer)	2	0	1
	utprrd	ValveCvrSewer_ep	Valve Cover (Sewer)	2	1	1
X	utprrd	ValveCvrWater	Valve Cover (Water)	1	0	1
	utprrd	ValveCvrWater_ep	Valve Cover (Water)	1	1	1
X	utprrd	ValveCvrWaterNP	Water Line Non Potable	5	0	1

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
	utprrd	ValveCvrWaterNP_ep	Valve Cover (Non-potable Water)	5	1	1
X	utprrd	ValveGas	Valve, Valve Box (Gas)	4	0	1
	utprrd	ValveGas_ep	Valve (Gas), Valve Box	4	1	1
X	utprrd	ValveSewer	Valve, Valve Box (Sewer)	2	0	1
	utprrd	ValveSewer_ep	Valve (Sewer), Valve Box	2	1	1
X	utprrd	ValveWater	Valve, Valve Box (Water)	1	0	1
	utprrd	ValveWater_ep	Valve (Water), Valve Box	1	1	1
	utprrd	ValveWaterNP_ep	Valve (Non-potable Water), Valve Box	8	1	1
	utprrd	Vault_ep	Vaults Above Grade and Below Grade	3	1	0
X	utprrd	Vaults	Vaults Above Grade and Below Grade	3	0	0
X	utprrd	VaultsRW	Vaults (Raw Water)	1	0	0
	utprrd	Vent	Vent (Unknown) PROPOSED UNKNOW VENT	0	0	0
	utprrd	Vent_ep	Vent	0	1	1
X	utprrd	VentGas	Vent (Gas)	4	0	0
	utprrd	VentGas_ep	Vent (Gas)	4	1	1
X	utprrd	VentSewer	Vent (Sewer)	2	0	0
	utprrd	VentSewer_ep	Vent (Sewer)	2	1	1
	utprrd	Viewport	Viewport (For AutoCAD Use)	3	0	0
X	utprrd	Water	Water Line	1	w	2
	utprrd	Water_ep	Water Line (all sizes)	1	e-w	1
X	utprrd	WaterFct	Standpipe and Water Faucet	1	0	0
X	utprrd	WaterFilter	Water Filter	5	0	2
X	utprrd	WaterMeter	Water Meter	1	0	2
	utprrd	WaterMisc_ep	Faucet, Standpipe	1	1	1
X	utprrd	WaterNP	Water Line Non Potable	5	npw	2
X	utprrd	WaterNP_px	Raw Water Pipes for Cross Sections	1	0	1
X	utprrd	Well	Well	1	1	1
X	utprrd	WellMon	Well Monitoring	1	0	1
	utprrd	Wells_ep	Wells, Monitoring Well, Taps	1	1	1
	utprrd	XSCell	GEOPAK Cross Section Cell and Profile Cell	8	0	1
	utprrd	Xreference_dp	Reference Files (For AutoCAD Use)	0	0	1
	utprrd	Xreference01_dp	Reference Files (For AutoCAD Use)	0	0	1
	utprrd	Xreference02_dp	Reference Files (For AutoCAD Use)	0	0	1
	utprrd	Xreference03_dp	Reference Files (For AutoCAD Use)	0	0	1

Critical Level	Rule	Level Name	Level Description	ByLevel Color	ByLevel Style	Bylevel Weight
	utprrd	Xreference04_dp	Reference Files (For AutoCAD Use)	0	0	1
	utprrd	Xreference05_dp	Reference Files (For AutoCAD Use)	0	0	1
	utprrd	Xreference06_dp	Reference Files (For AutoCAD Use)	0	0	1
	utprrd	Xreference07_dp	Reference Files (For AutoCAD Use)	0	0	1
	utprrd	Xreference08_dp	Reference Files (For AutoCAD Use)	0	0	1
	utprrd	Xreference09_dp	Reference Files (For AutoCAD Use)	0	0	1
	utprrd	Xreference10_dp	Reference Files (For AutoCAD Use)	0	0	1

THIS PAGE LEFT BLANK INTENTIONALLY.

Table of Contents

CHAPTER 5 - PROJECT STRUCTURE 5-1

5.1 INTRODUCTION 5-1
5.2 STANDARD PROJECT DIRECTORY 5-1
5.2.1 Classical Electronic Delivery –vs– Digital Delivery Projects 5-1
5.2.2 Create Project 5-2
5.2.3 Discipline Sub-directories 5-2
5.2.3.1 Sub-Directories Under the Discipline Directories 5-2
5.2.4 Custom Sub-directories 5-2
5.2.5 Engineering Data Sub-directories 5-3
5.2.6 Standard Project Directory Format 5-3
5.3 STANDARD FILE NAMES 5-6
5.3.1 Standard Design File Naming Convention 5-6
5.3.2 Print Image File Naming Convention 5-6
5.3.2.1 Sheet Numbers 5-7
5.3.2.2 Print Image File Naming Format 5-8
5.3.3 Standard File Name Extensions 5-9
5.3.4 Duplicate Files 5-11
5.4 REFERENCE FILES 5-11
5.5 FILE SHARING AND MERGING 5-12
5.6 PROJECT INDEXING AND JOURNALING 5-13
5.6.1 Index Guidelines and Format 5-13
5.6.2 Journal Guidelines and Format 5-14

THIS PAGE LEFT BLANK INTENTIONALLY.

Chapter 5 - PROJECT STRUCTURE

CADD Production Criteria Handbook

5.1 INTRODUCTION

This chapter defines the standard Florida Department of Transportation (FDOT) project structure. Deviations should always be documented and the appropriate Project Management staff should be informed and concur.

5.2 STANDARD PROJECT DIRECTORY

The data for each FDOT Project is organized and delivered using a standard directory structure as defined in this chapter. This promotes consistency, predictability and repeatability (CPR). In order to ensure the uniqueness of the Project directory name, the project directory root folder will be named the FDOT Financial Project Identification Number (FPID), using a minimum of all eleven digits. The FPID is available from FDOT Project Management. New (seed) projects should be created using tools developed and provided by the Engineering / CADD Systems Office (ECSO), and delivered with the FDOT CADD Software. FDOT provides an application called FileChecker to help confirm directory structures and file names.

5.2.1 CLASSICAL ELECTRONIC DELIVERY –VS– DIGITAL DELIVERY PROJECTS

In May of 2000, FDOT directed that all plans prepared with CADD would be delivered electronically. The “Classical” Electronic Delivery process and the tools available to support that process were required. Since then, FDOT recognizes there are opportunities for efficiencies. Several of the following chapters in this Handbook will describe more efficient “Digital” Delivery processes and deliverables in contrast with the Classical Electronic Delivery. However, the Classical Electronic Delivery process and tools will remain for projects currently using those classical processes and tools.

5.2.2 CREATE PROJECT

The Create Project application, included in Electronic Delivery tools, creates the "seed" project directory structure and prompts the user for additional project specific information. A seed project is a copy of the FDOT standard directory structure created under the project directory (FPID) name as defined in this chapter.

The project directory contains standard sub-directories for defined disciplines, PEDDS data, along with support and resource files specific to the project. For Classical Electronic Delivery Projects, when a sub-directory is not used in a specific project, the unused sub-directory in the standard directory structure shall remain intact. However Digital Delivery projects allow unused sub-folders of the project directory to be deleted. Sub-folders have a purpose for the file content they will receive, for example, a cell library developed for a specific project has a dedicated holding sub-directory, *cell* in the standard project directory structure.

For Classical Electronic Delivery projects, the *_META_INFO* sub-folder contains the files created and used by PEDDS and used by the FDOT workspace to establish the top level of the project directory structure. Therefore only one *_META_INFO* sub-directory shall exist anywhere in a project's directory structure. Digital Delivery projects may not use PEDDS for Signing and Sealing, instead relying upon certificate based Digital Signatures. Regardless, the *_META_INFO* sub-directory shall remain in the project directory, and that this folder is used by the FDOT workspace to establish the top level of the project directory structure.

5.2.3 DISCIPLINE SUB-DIRECTORIES

The discipline sub-directories are defined for the division of work by file ownership. Roadway designers would typically place their files (the files they create and "own") under the ***\Roadway*** sub-directory, Surveyors under the ***\Survey*** sub-directory, and so forth. In some cases, disciplines may have work that overlaps with other areas of a design. For example, if a roadway designer develops the drainage sheets, the files produced would, by the above convention, go in the ***\Roadway*** directory, rather than the **\Drainage** directory, as the "roadway" designer is the owner of the work. However, if so desired, the files could be put in the ***\Drainage*** sub-directory, but file management permissions (for access control systems such as TIMS, ProjectWise, etc.) must be taken into consideration.

5.2.3.1 Sub-Directories Under the Discipline Directories

In some cases, it is desirable to create "non-standard" sub-directories for additional segregation of work. This is common when multiple parties work on a single discipline design and the data must be managed and merged, or when subdivision of the files into additional folders just makes sense. These additional sub-directories can be created under the discipline specific standard project sub-directories to accommodate these circumstances. **These custom sub-directories shall adhere to the restrictions for sub-directory names as defined in the following section of this handbook.**

5.2.4 CUSTOM SUB-DIRECTORIES

Custom sub-directories can be created under the standard discipline sub-directory folders, but are not to be created under the root directory for the project.

Certain characters are not readable by some programs for sub-directory names and must be avoided. Limited alphanumeric characters, dashes (-), and underscores (_) are the only permissible characters. Spaces are not to be used in any directory, or file name for an FDOT project. Directory names must not exceed 16 characters. Examples of characters that should NEVER be used in sub-directory (or file) names include: &, %, |, $,?, <, >, !, and so forth (even if permissible by the Windows Operating System (OS)). Some characters represent escape sequences to certain programs and will just cause problems.

File full path lengths are also generally limited to 255 characters total. This must be taken into account when creating directory (and file) names (for overall path length) and limit the number of sub-directory levels below the project level. Remember that, even if you have a path mapped to a logical drive letter during development, the computer (or application) must resolve the full Universal Naming Convention (UNC) path length which could exceed the 255 character limit for some applications. Try to keep your custom directory and file names as concise as possible.

5.2.5 ENGINEERING DATA SUB-DIRECTORIES

Each discipline sub-directory contains an additional sub-directory named *eng_data*. These sub-directories are designated to hold the sheet image files of the plan sheets printed for that discipline, and the Quality Control (QC) reports (produced by the QC tools). Note that in a Digital Delivery, plan sheets may not be printed to the *eng_data* sub-folders (more about this later), but printed directly to a multi-sheet PDF of the plans.

5.2.6 STANDARD PROJECT DIRECTORY FORMAT

The FDOT standard project directory structure and file naming conventions are based on the normal Classical Electronic Delivery workflow of FDOT projects and the separation of work. For Classical projects, none of the sub-folders shown in the table following are to be renamed or deleted. However for Digital Delivery projects, any unused (empty) subfolder can be deleted with the exception of ***_meta_info***.

The standard project directory structure with a description of each directory's purpose:

Folder Names		Purpose
Project Name (FPID) - Root Project folder contains *fpid*PLANS.PDF for Digital Delivery Projects. For Classical Electronic Delivery Project, the root Project folder contains: Project.pdf, FileChecker.htm, ProjectIndex.xml, SheetInfo.xml, SheetNDX.htm, etc.		
	_meta_info	Files used by the PEDDS application (and the FDOT Workspace)
	_Shortcuts	Data shortcuts (data for Civil 3D projects only - not for MicroStation)
	\admin	Administrative documents (email, correspondence, etc.)
	\eng_data	These \eng_data subfolders contain prints of plan sheets and QC reports, typically
	\arch	Architectural design files
	\eng_data	
	\brinspect	Bridge Inspection files
	\eng_data	
	\Cell (Block)	Project specific cell libraries (or project Block libraries for Civil 3D)
	\concepts	Various preliminary concepts
	\eng_data	
	\const	Construction files (i.e.: "As-builts")
	\eng_data	
	\data	Project data files (i.e.: journals, material backgrounds for rendering, pen tables, print configuration files, etc.)
	\drainage	Drainage calculation and design files
	\eng_data	
	\emo	Environmental Management files
	\eng_data	
	\estimates	Estimates files
	\eng_data	
	\geotech	Geotechnical data files
	\eng_data	
	\ITS	Intelligent Transportation Systems design files
	\eng_data	
	\landscp	Landscape design files

Folder Names		Purpose
	\eng_data	
\lighting		Lighting design files
	\eng_data	
\maint		Maintenance department (This is not Maintenance of Traffic).
	\eng_data	
\material		Other Materials data files
	\eng_data	
\out		Other Output files
\permits		Permits for various items (i.e.: ponds, driveways, mailboxes, etc.)
	\eng_data	
\planning		Planning files
	\eng_data	
\preestim		Preliminary estimates files
	\eng_data	
\roadway		Roadway design files, also may include the “Comp Book”
	\eng_data	
\rwmap		Right of Way Mapping files
	\eng_data	
\seed		Project specific seed files
\signals		Signalization design files
	\eng_data	
\signing		Signing and Pavement Marking design files
	\eng_data	
\specs		Specification package
	\eng_data	
\struct		Structure calculations and design files
	\eng_data	
\survey		Survey database and files
	\eng_data	
\symb		Project specific resource files for fonts and custom line styles
\trafops		Traffic Operations data files
	\eng_data	
\utils		Utility data and design files
	\eng_data	

The image to the right is a screen shot of Windows Explorer displaying the directory structure of a Classical Electronic Delivery project. This directory structure is always delivered with the Project CD delivery of a Classical Electronic Delivery.

For Digital Delivery projects, with the exception of the _meta_info folder, empty folders may be eliminated when delivering the Digital Delivery projects.

5.3 STANDARD FILE NAMES

This section describes the file naming conventions used for all graphical design files, standard input files and criteria files. In the event a particular file type needed for the project is not addressed, consult with either the Project Manager or the District CADD Manager to determine the proper file name to use.

FDOT identifies all standard graphic file names as "Critical" or "Non-critical." Critical files are frequently used in downstream applications, shared across disciplines and used in quantifying pay items. These critical files must meet a minimum compliancy threshold for CADD symbology as detailed in Chapter 7. Standard file names are discipline specific and are detailed within the respective discipline chapters of this Handbook.

5.3.1 STANDARD DESIGN FILE NAMING CONVENTION

FDOT utilizes standard naming conventions for design files. Some of the automation implemented in various tools provided by FDOT depends on naming conventions being met. More importantly, the naming convention confers information to the downstream user of the data contained in the design file.

Standard design file names should follow this format: **AAAABB##.ext**

Where **AAAA** = Abbreviated File Description,

BB = Discipline Denotation,

= Sequence Number *(padded integer, i.e. "00", "01", "02" … "99", used to sequence additional files of the same Description/Discipline),*

ext = File Extension indicating the type of file.

Example: The first proposed roadway cross section file would be named – **rdxsrd01.dgn**

The first six (6) characters of the standard design file naming convention discussed above are critical for QC software and symbology filters. If it is necessary to add additional descriptive information in the design filename, this descriptive information should be inserted after the discipline denotation "BB" and preceding the sequence number "##". Doing so should be only on rare exception. Example: ***rdxsrd_rampa_01.dgn***, indicating this proposed cross section file includes ramp A. Large projects might necessitate the need to exceed two digit sequence numbers (100+); otherwise the sequence should be limited two digits. FDOT delivers a CreateFile application to assist in producing Design files with the proper naming convention.

5.3.2 PRINT IMAGE FILE NAMING CONVENTION

For MicroStation projects, ***Sheet Navigator*** is an interactive application (or runs in the background by **Electronic Delivery Indexer (EDI)**) to extract the sheet and title block data from design files containing sheets. The source design file name and data extracted from those files yields resulting image file names (and defines the sheet's relationship to which plans component of the project). ***Sheet Navigator*** uses the ***SheetInfo.xml*** control file to provide the component order for sheets also using their location in the project directory structure, and in conjunction with the sheet number prefix. The Sheetinfo.xml control file defines the standard search criteria to identify sheets in a project and is located in the FDOT CADD Software *\mdlapps* sub-directory.

AutoCAD Civil 3D projects use a similar tool called ***Sheet Set Organizer (SSO)***. SSO also uses the source design file name, and data extracted from the Sheet Layouts in AutoCAD to contribute resulting image file names (and defines the sheet's relationship to which plans component of the project).

The printing of individual sheets to a unique sheet image files described below is only required for Classical Electronic Delivery projects. For Digital Delivery projects, an Adobe Acrobat Portable Document Format (PDF) of the plans may be produced by whatever means available.

In Classical Electronic Delivery, one print image file was produced for each sheet in a plans set. This was necessary because Florida Board rules required each sheet of plans to be individually Signed and Sealed, and ambiguity could arise as to which professional Signatory was responsible for which sheet if a multi-sheet document needed to be Signed and Sealed by more than one Signatory.

For Digital Delivery, multi-sheet files representing the plans may be produced and Signed and Sealed. Recently the Boards have clarified their rules regarding notice of accountability within electronic files Signed and Sealed by a professional, and decisions were made to resolve any potential ambiguity regarding who is responsible for what sheet. These developments open the door for widespread use of a PDF to represent the entire plans set. Adobe PDF files are ubiquitous, and are the desired format for producing an electronic image of plans. These files have rich support for Public Key Infrastructure (PKI), including certificate based Digital Signing and Sealing. More information will be provided later in this Handbook regarding a comprehensive PDF of the plans, which may be Digitally Signed and Sealed.

5.3.2.1 Sheet Numbers

Sheet numbers used in the title blocks of plan sheets can be composed of multiple parts using the format: **AAA-####Z.**

AAA Represents the Sheet Number Prefix, using multiple alpha characters as placeholders. Refer to the FDOT Plans Preparation Manual and Structures Manual for Prefix definitions.

####(Z) Defines the numeric order of the sheets within the Project Component. The (Z) allows for the insertion of appended sheets after the project has started. A single alpha character suffix, A-Z, is added for each subsequent sheet inserted.

(Examples: S-001A, S-001B, PNC-01, A-15, A-16, T-1, T-2, and 1, 2, 3, etc).

Structures and Architecture disciplines have extended the sheet numbering schema and the respective discipline instructions should be consulted for guidance. These are found at:

FDOT Structures Manual
http://www.dot.state.fl.us/structures/StructuresManual/CurrentRelease/StructuresManual.shtm

This Handbook, Chapter 23
http://www.dot.state.fl.us/ecso/downloads/publications/CriteriaHandBook/

The following shows how ***Sheet Navigator / SSO*** and ***EDI*** will interpret sheet numbers to attempt to discern what plans component each sheet belongs to:

Prefix	Component
No prefix	Roadway Plans *(Typically - only an integer is used for sheet number)*
CTL	Roadway Plans
GR	Roadway Plans
PNC	Roadway Plans
TR	Roadway Plans
UTV	Roadway Plans
GS	Signing and Pavement Marking Plans
S	Signing and Pavement Marking Plans
GT	Signalization Plans
PTM	Signalization Plans
T	Signalization Plans
GL	Lighting Plans
L	Lighting Plans
GI	Intelligent Transportation System (ITS) Plans
IT	Intelligent Transportation System (ITS) Plans
LD	Landscape Plans
Begins with "A"	Architectural Plans
Begins with “B”	Structures Plans
Begins with "U"	Utility Joint Participation Agreement Plans

Roadway plans are typically the primary component of an FDOT Project plans set containing multiple plans components and can have non-prefixed sheet numbers (1,2,3,… etc.). Other disciplines can be the primary plans component only in the absence of a Roadway plan component. For example: a Lighting only project may omit the plans component prefix, and use the numbering format of 1, 2, 3, etc, although this practice is strongly discouraged.

5.3.2.2 Print Image File Naming Format

EDI / SSO implements an output file naming scheme for print image files that removes ambiguity about which sheet the file represents (regardless of the sheet-numbering scheme used in the design file) and supports the more complex sheet numbering now being expected by some disciplines. This applies to Classical Electronic Delivery projects, as Digital Delivery projects do not require individual Sheet image files to be delivered. If individual sheets are printed, even if a Digital Delivery is elected, the format file naming convention will be followed as shown below:

EX: 01_BB1-1A_keysrd01.extension

Plans Component Code Sheet # Parent Drawing File Name

Note Image file extension will be .PS for PostScript files, .PDF for Adobe Acrobat Portable Document files, .TIF for tagged image format files, etc. Note that PDF is the preferred file format.

Plans Component Code [01] The first two numbers represent the Plans Component with zero (0) padding used as place holder (for file name sorting purposes).

The FDOT Standard Plans Component codes (corresponding to the PPM components) are as follows:

01 – Roadway Plans

02 – Signing and Pavement Marking Plans

03 – Signalization Plans

04 – Intelligent Transportation System (ITS) Plans

05 – Lighting Plans

06 – Landscaping Plans

07 – Architectural Plans

08 – Structures Plans

09 – Utility Work by Highway Contractor Agreement Plans

10 – Right of Way Maps

99 – Unknown

Sheet # After the Plans Component Code, an underscore (_) is inserted as a separator, followed by the actual sheet number (i.e.: BB1-1A) appearing in the title block of the sheet.

Parent Drawing File Name After the Sheet #, an underscore (_) is inserted as a separator followed by the name of the source design files (i.e.: keysrd01).

5.3.3 STANDARD FILE NAME EXTENSIONS

File Name	Ext.	Saved-in Folder
3 Port Criteria Files	.3pc	Most appropriate discipline folder
Adobe Acrobat Files for sheet image files	.pdf	Discipline folder's \eng_data subfolder if Classical Electronic Delivery
AutoCAD ASCII Drawing Interchange file Format	.dxf	Most appropriate discipline folder
AutoCAD Design Files	.dwg	Most appropriate discipline folder
AutoCAD Drawing Sheet Set	.dst	\eng_data subfolder for the discipline
AutoCAD Drawing Template *(if user created)*	.dwt	\seed subfolder of the project
AutoCAD Linetype *(if user created)*	.lin	\symb subfolder of the project
AutoCAD Printer Configuration *(if user created)*	.pc3	\eng_data subfolder for discipline
AutoCAD Shape Compiled *(if user created)*	.shx	\symb subfolder of the project
AutoCAD Shape Files are ASCII Files *(if user created)*	.shp	\symb subfolder of the project
AutoCAD Style Tables *(if user created)*	.stb	\eng_data subfolder for discipline
Cell Count Report	.ccp	Most appropriate discipline folder
Civil 3D Data Shortcuts	.xml	_Shortcuts subfolder of the project
Comma Separated Values	.csv	Most appropriate discipline folder
Coordinate Geometry Database Files	.gpk	Most appropriate discipline folder
Corridor Modeling Alignment Database	.alg	Most appropriate discipline folder
Corridor Modeling Cross Section Labeling Preference File	.xlp	Most appropriate discipline folder
Corridor Modeling Drafting Standards	.xin	Most appropriate discipline folder
Corridor Modeling Roadway Design Preference File	.rdp	Most appropriate discipline folder
Corridor Modeling Roadway Designer database	.ird	Most appropriate discipline folder
Corridor Modeling Surface Database	.dtm	Most appropriate discipline folder
Corridor Modeling Template Library	.itl	Most appropriate discipline folder
Cross Section Sheet Design Files *(No longer used in V8 or XM, but may be allowed.)*	.shg	Most appropriate discipline folder
Cross Section Sheet Layout Files *(No longer used in V8 or XM, but may be allowed.)*	.plg	Most appropriate discipline folder
Crystal Reports	.rpt	Most appropriate discipline folder
Descartes Raster Image Files	.hmr	Most appropriate discipline folder

File Name	Ext.	Saved-in Folder
Electronic Delivery Index Settings Files	.edi	Project Root folder
GDM QC Rule Files	.rul	Most appropriate discipline folder
GEOPAK COGO Database	.gpk	Most appropriate discipline folder
GEOPAK Criteria Files	.x	Most appropriate discipline folder
GEOPAK D&C Manager Database Files	.ddb	Most appropriate discipline folder
GEOPAK Input Files	.inp	Most appropriate discipline folder
GEOPAK Project Manager project File	.prj	Most appropriate discipline folder
GEOPAK Surface Database	.tin	Most appropriate discipline folder
Log File	.log	Most appropriate discipline folder
Microsoft Excel Spreadsheets	.xls	Most appropriate discipline folder
Microsoft Word Documents	.doc	Most appropriate discipline folder
MicroStation & GEOPAK Resource Files	.rsc	\eng_data subfolder for discipline
MicroStation Batch Print Job Files	.job	\eng_data subfolder for discipline
MicroStation Cell Libraries	.cel	Cell Folder
MicroStation Design Files	.dgn	Most appropriate discipline folder
MicroStation Pen Tables	.tbl	\eng_data subfolder for discipline
MicroStation Print Drivers	.plt	\eng_data subfolder for discipline
MicroStation Print Organizer Print Set	.pset	Most appropriate discipline folder
MicroStation Project Configuration	.pcf	Project Root folder
MicroStation Standards Database	.dgnlib	\symb if copied to local project
Postscript Sheet Image Files	.ps	\eng_data subfolder for discipline
QC Exception Files	.xcp	\eng_data subfolder for discipline
QC Reports, QC"folder name"	.rpt, .txt	\eng_data subfolder for discipline
Web Pages	.htm	Project Root folder and \data subfolder
Web Pages	.html	Project Root folder and \data subfolder
XML Files	.xml	Project Root folder and \data subfolder

5.3.4 DUPLICATE FILES

There shall be no duplicate CADD (.dgn, dwg, etc) file names within a project directory structure. This is necessary to ensure proper reference attachment in CADD files**.** FDOT delivers the ***FileChecker*** application that can be used to help find duplicate filenames with the project directory structure.

When using FDOT's workspace in MicroStation, **a sub-directory** named "_meta_info" must be present in the root of the project to have proper attachments of reference files within the project. The FDOT workspace configuration in MicroStation is set up such that, when attaching a reference file, the software looks for the _meta_info directory, then goes up one folder level (the root directory of the project) and scans down the entire project directory structure, listing all directories below that level in the reference file path. The first occurrence of the file name found is used as the reference file.

AutoCAD relies upon the attachment method (always use relative path, never full or no path) to find its references.

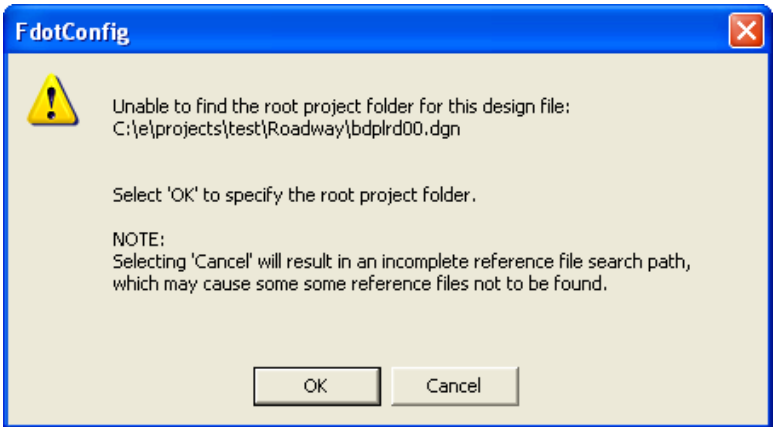
5.4 REFERENCE FILES

A reference file can be a MicroStation design file, an AutoCAD design file, a raster image file (such as a SID, TIF, or HMR) or a PDF. A reference file is attached as a "background file" to an active design file being edited, thus allowing multiple users to share the information in the reference file without the need to copy the file(s) into the active design file directory, or copy the referenced file's content into the active design file.

Important	Under no circumstances should the absolute or full path be used when attaching a reference file. Use relative referencing - ALWAYS. All reference files for the project must reside within the project directory structure.

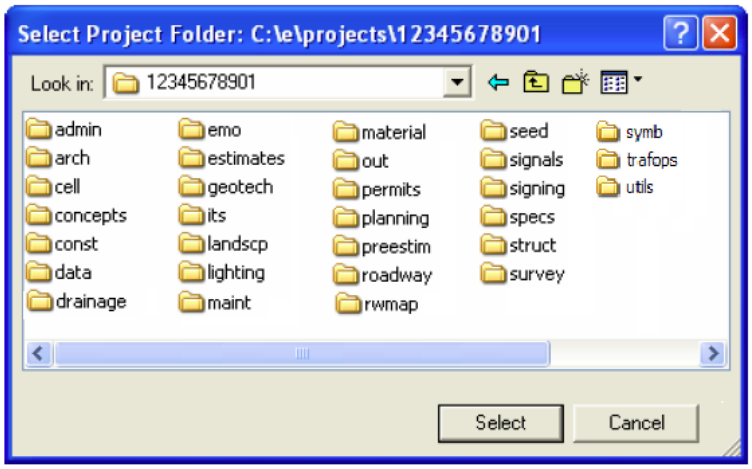
In MicroStation this capability is managed by an application (FDOTCONFIG) that is run at startup of any MicroStation file opened in the FDOT workspace. This application looks for the _meta_info folder and then moves up one folder to set the parent directory of the project. It then dynamically sets the MicroStation configuration variable, MS_RFDIR, to search downward from the parent directory through all the found subdirectories to identify any reference files. Therefore all design files for a project must reside in the standard FDOT directory structure or its subdirectories in order to be located as a reference file. If it is necessary to reference a file that is external to the project, it must be done through the FDOTCONFIG application. FDOTConfig will manage the path to the file for referencing purposes. This capability is available from the FDOT Menu option ***Actions > Reference File Utilities > Attach Project External Reference Files***. The configuration variable that initiates this application is preset in the FDOT workspace in the *sitefdot.txt* file.

When a file is opened in MicroStation in an FDOT workspace, if the _meta_info does not exist, the user will be prompted to define the parent folder of the project, so that the application can set the search path for reference files. See the image below.



If Cancel is selected any reference to the models of files located in different subdirectories will not be displayed because the MS_RFDIR variable could not be populated automatically.

If OK is selected the user will be given the opportunity to define the root of the project. The user can then navigate to the root of the project, named for the Financial Project Identification Number. In the example below notice the directory shown in the title bar of the dialog. A _meta_info folder will be created directly under the directory shown in the title bar.



Important: If duplicate file names exist in the sub-directories of the project, MicroStation will attach the first matching filename it finds in the path. Therefore, duplicate file names are prohibited.

5.5 FILE SHARING AND MERGING

Every Classical Electronic Delivery project will utilize and incorporate the entire FDOT Standard Directory Structure during development regardless of the project requirements. Digital Delivery projects permit unused sub-directories to be deleted. Data for each discipline is maintained in its sub-directory. **If a discipline requires information from another discipline, the needed design file(s) or individual models shall be referenced from the original directory, not copied**.

There are times when disciplines share files with other disciplines, such as the case where Roadway must differentiate between existing edge of pavement to be replaced and that to remain. This is because the elements representing existing edge of pavement often span several plan sheets.

For example, the Signing and Pavement marking design file (*DSGNSP*) references the Roadway design file (*DSGNRD*) and the Topography file (*TOPORD*). These files should not be copied into the Signing and Pavement Marking discipline sub-directory unless absolutely necessary.

Note If there is a specific justification to copy a file into another directory, the filename must be modified to reflect the discipline file name usage. For example, topord01.dgn (from the .\survey sub-directory) would become toposp01.dgn, if copied to the .\signing sub-directory, or as a minimum the sequence number would change to ensure that there is no doubt the copied file differs from the original file.

The data producer is responsible to ensure that up-to-date content of the original file is always reflected in their copied design file. Making copies of design files to different locations is strongly discouraged for this reason.

5.6 PROJECT INDEXING AND JOURNALING

5.6.1 INDEX GUIDELINES AND FORMAT

FDOT Project Index files will be produced and delivered in accordance with the FDOT CADD Manual only for Classical Electronic Delivery projects. Digital Delivery Projects do not rely upon the Index, as the user/designer has full control and responsibility for placing the plan sheets into the PDF file that will eventually represent the Plans Set. For Classical Electronic Delivery projects, the purpose of the index is to document delivered project print sheet image files and their source design files belonging to the plan set. The index is then used by downstream programs to produce a PDF of the overall plans set, and for other purposes.

FDOT provides the software tool, Electronic Delivery Indexer (EDI) for MicroStation projects to produce FDOT Project Indexes in the required formats. Since the index files are text based in .XML format, a user could conceivably produce these by other means, albeit with difficulty. Likewise for AutoCAD Civil 3D projects, the Sheet Set Organizer (SSO) is used to produce the index.

Indexes are crucial to the successful use of the electronic data in Classical Electronic Delivery projects by downstream customers. They should be updated and reviewed as the work progresses. These indexes may be maintained by software in the Electronic Delivery software suite mentioned above. The indexes noted above include:

- **Index.XML**

This is a comprehensive index of file attribute meta-data produced by the EDI which contains all indexed data as mined, or user input attribute data for the graphics files of the project. This file is placed by software in the root directory of the project. This file is not required of Digital Delivery Projects.

- **ProjectIndex.XML**

This is the primary index of all plan sheets and their associated files produced by the EDI, or SSO applications. From this index, an HTML report can be produced (Sheetndx.htm) by the EDI or SSO that is used as an interface to the plans image files by persons who do not have the FDOT Electronic Delivery software loaded, such as contractors, the public, etc. This file is also placed in the root directory of the project. This file is not required of Digital Delivery Projects.

- **ProjectFiles.HTM**

This is a report of project files (documentation) and their “EDMS” comments included with the delivery, and produced by EDI. EDMS comments are additional metadata that users can add to file descriptions when documenting those files using EDI. Projectfiles.htm differs from Index.XML in that for many files of a standard name, EDI will look up what that file type represents and include that in the documentation for that file present in the delivery. If the data producer added EDMS comments to any given file using EDI, those comments will be represented in the output ProjectFiles.HTM. This file is also placed in the root directory of the project. This file is not required of Digital Delivery Projects.

The EDI application also provides the following:

- Mining of attribute data from design files being indexed, which includes properties, such as global origin, working units, attached reference files, etc. Design files containing plan sheets have additional sheet index information, such as sheet number, title, etc. Sheet Navigator application is called by to pass this sheet index data to EDI.

Note EDI relies upon data produced by Sheet Navigator, an FDOT software process running in the MicroStation environment which tags sheets in the MicroStation DGN file. If Sheet Navigator has not been executed, the sheets within the design file have not been tagged. Though a manual method is provided in EDI to enter/edit sheet information, the manual method for building the index is significantly more time consuming, and therefore not recommended. The main purpose of the manual edit function is to provide additional or corrective data that will add intelligence about a file or sheet.

- Provides the interface to the Journals, which are Rich Text Format (RTF) files, (changed from XML format in previous EDI releases).Allows users to manually record comment data to the attribute index files using EDI as the interface. Note that since EDI would not be used, typically, in a Digital Delivery, an EDI Journal would not get produced. Any Project documentation the design / development team wishes to include should be done so by whatever means that team has at their disposal.
- Produces the index of plans sheets (Sheetndx.htm) used in the advertisement for letting, which also uses ProjectIndex.XML as input.
- Produces an index of files (ProjectFiles.XML) with the option to save a report in HTML format (ProjectFiles.htm).
- Produces a single file (Project.PDF), containing all indexed sheets in the project found in the project root folder.
- Provides for batch printing of sheets to the specified formats in this Handbook.

For AutoCAD Civil 3D projects, the Sheet Set Organizer (SSO) application replaces EDI. SSO also creates: Projectindex.xml, Sheetndx.htm, and Project.PDF. SSO does not have any journaling capability.

5.6.2 JOURNAL GUIDELINES AND FORMAT

Project documentation is delivered in accordance with the FDOT CADD Manual. The purpose of this documentation is to detail design aspects and decisions made during the life of the project, documenting processes used during the course of design that would be communicated to a down-stream user of the project data.

The Project Journal files may be delivered with the Project documentation to document the activities of a given professional discipline, or may be created to document a particular design activity (i.e. creating cross sections), or be the personal journal of a user/designer. Journal file entries should document methods employed, procedures used, decisions made, problems encountered, fixes included or other issues encountered during the design process.

For example: If custom line styles were created, the justification for the custom line style and the resource file name containing the custom line style should be documented in the Journal. Any information that would help in the regeneration of CADD files and/or prints should be recorded. The geometry information, database, controlling alignment, profile names, relevant survey and cross section information and the methodology used to obtain the final geometric controls in the CADD product should be recorded.

EDI includes the functionality to create and maintain Journals. Rich Text Format (RTF) Journals are created by EDI. Create additional Journals in the RTF format as needed. Using EDI, Journal files are stored in the **\data** sub-folder of projects and are maintained as RTF files.

The Journal tool in EDI currently provided by FDOT has the following properties:

- Creates / edits a journal file through a dialog box. The journal file can be viewed with a standard editor or by the journal tool.
- Provides for automated text entry.
- Allows pre-loaded text inserts (a type of pick list), with user and company information. Each journal entry is date stamped.
- Provides for adding custom (reusable) text inserts.
- Allows for the storage and viewing of images attached to Journals.

The indexing tools mentioned in this chapter are documented in the Electronic Delivery software interface and in the applications themselves. Videos have been created to document the operation of these tools and can be found on the FDOT website at:

http://www.dot.state.fl.us/ecso/downloads/clips/

Table of Contents

CHAPTER 6 - PRINTING IMAGE FILES 6-1

6.1 PRINTS 6-1
6.2 PRINT BORDERS 6-1
6.3 IMAGE FILES 6-1
6.4 FOREIGN PLAN SHEETS 6-2
6.5 FDOT PRINT DRIVERS 6-2
6.5.1 MicroStation Half-Toning 6-2
6.5.2 Quality and Reproduction 6-3

THIS PAGE LEFT BLANK INTENTIONALLY.

Chapter 6 - PRINTING IMAGE FILES

CADD Production Criteria Handbook

6.1 PRINTS

The Florida Department of Transportation (FDOT) Computer Aided Design and Drafting (CADD) Manual requires all print images used as electronic plans sheets to be generated from the native MicroStation or AutoCAD graphics design files. This applies whether the project is a Classical Electronic Delivery, with a sheet print image files produced as an individual file for each sheet in the plans, or a Digital Delivery where multi-sheet Portable Document Format (PDF) file(s) are produced for the plans set. To assist users producing paper prints of the images for Classical Electronic Delivery, FDOT developed utilities that complement printing and are included with the FDOT CADD software. These utilities support the production of the required images. In addition, they facilitate the creation of the print files in accordance with the file name standards.

All sheet images are produced to scale. Note that not all printer hardware will print paper sheets exactly to scale, even if the source print image file is to scale. Standard FDOT sheet borders are defined for each discipline. Sample print drivers are also provided to generate "drawn to scale" sheet images. Standard sheet borders delivered with the FDOT CADD Software comply with the FDOT sheet formats as defined in the Plans Preparation Manual and other controlling procedure and reflects the file name, directory path and the date and time of the print.

6.2 PRINT BORDERS

FDOT standard sheets have a print border embedded in the each sheet cell. The FDOT predefined search criteria is illustrated in the table below.

Note *PlotBorder_dp* and *ShtPlotBorder_c* are the current print border level symbologies used in the FDOT Software.

	Border 1	Border 2	Border 3	Border 4	Border 5
Type	Shape	Shape			Shape
Level	PlotBorder_dp	PlotBorderSht	PlotShape	ShtPlotBorder_c	51
Color	BYLEVEL	BYLEVEL	BYLEVEL	BYLEVEL	3

Note Typical print border size for 11x17 prints: 16.5" x 10.6".

6.3 IMAGE FILES

The Adobe PDF format print drivers are implemented by both Bentley and Autodesk as a leading print format. Therefore FDOT now prefers PDF as the format over PostScript.

For those sheets that are electronically signed and sealed by a Professional Engineer, the following note shall be placed legibly on the sheet. See the Plans Preparation Manual, Volume 1, Chapter 19, section 19.2.2, for further information.

"NOTICE: THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE SIGNED AND SEALED UNDER RULE 61G15-23.003, F.A.C." *

Note The Rule number referenced is determined by the discipline of the professional that is signing and sealing (i.e. for Architects, this Rule is 61G1-16.005, F.A.C.; for Geologists, this Rule is 61G16-2.005, F.A.C.; for Landscape Architects the Rule is 61G10-11.011, F.A.C.; and for Surveyors, this Rule is 5J-17.062, F.A.C.).

6.4 FOREIGN PLAN SHEETS

In some cases, users have no choice but to scan pre-existing hardcopy foreign plan sheets to create electronic sheet files. For example, some plan sheets may already exist as hardcopies, and were signed & sealed conventionally by wet ink signature and impression seal. This can occur when either pre-existing plans are incorporated into the electronic delivery, or a professional discipline does not have legal authority to sign and seal their plans electronically. In such cases, those plans should be scanned at minimum of 300 DPI resolution (or higher if warranted), to PDF, or Group-4 TIFF format, according to ***State of Florida Electronic Records and Records Management Practices***. When scanning, use the lightest contrast setting possible such that reprints from the electronic scans have a minimum of scanned artifacts and speckling and print legibly.

When PDF files are produced, the user must ensure that no encryption or other PDF security is embedded in the PDF (see Document Restriction Summary in the Security Tab of the PDF file properties). File naming of the scanned sheet files should closely follow the conventions described in Chapter 5 of this Handbook, and names shall contain no spaces or special characters, with the exception of the underscore "_" or dash "-" characters.

If scanning hardcopy plans that bear a raised seal, then the raised seal should be shaded / burnished with a pencil or by other means before scanning so the seal appears clearly in the scanned image. Scanned existing plan sheets that are already signed and sealed on paper will not also be signed and sealed electronically - with either PEDDS or Digital Signature. However they may be signed-only (not sealed) by a responsible party to take accountability only for their inclusion within a contemporary electronic plans set (using the appropriate qualifiers or exculpatory language).

The user must also ensure that the result of the scan bears a legible image when viewed on the computer screen, as well as the image can be re-printed to a legible print hardcopy.

6.5 FDOT PRINT DRIVERS

The print drivers and the sheet cells provided with the FDOT software are used to generate plots to scale. All Bentley print drivers now have raster printing enabled. These drivers are called "examples," due to the various site-specific configurations and types of printers that may be encountered. The print drivers have been tested and work with the printers for which they were developed. Each printer has its own "printable" area defined for a paper size which may differ slightly from printer model to printer model. It is the sole responsibility of the person performing the prints to ensure hardcopy printing is operating acceptably for their hardware.

Note See the CPCH Chapter 3, Section 3.5, Print Driver Configuration Files, for a list of the FDOT delivered print drivers.

6.5.1 MicroStation Half-Toning

The color 20 is used to define half-toning in the printer driver files supplied by FDOT. Half-toning of the minor grid lines on the cross section sheets, the profile portion of the plan/profile sheet and the profile sheet has been approved by FDOT as shown in the *Plans Preparation Manual, Volume II* exhibits. The FDOT Project Manager must approve half-toning of any other graphical element in the design file.

Some FDOT districts have specified the half-toning of certain reference files from one discipline to another. For example, the topography file could be half-toned when referenced to the proposed design. This must be approved on a per district basis.

A pen table can be set up to equate any referenced file to color 20, thus half-toning the entire reference file at print time.

6.5.2 Quality and Reproduction

Printed output from the design files and plan sheet image files must be legible and of a quality to be reproducible on 2nd generation copies. Line weights/thicknesses as defined in CPCH Chapter 3.8.4 are default settings in the print drivers, but may need to be adjusted, depending on printer hardware, to product the required quality of printed documents.

THIS PAGE LEFT BLANK INTENTIONALLY.

Table of Contents

CHAPTER 7 - CADD QUALITY ASSURANCE/QUALITY CONTROL 7-1

7.1 GENERAL 7-1
7.2 THE PROFESSIONAL OF RECORD 7-1
7.3 ELECTRONIC DELIVERY PROCESS MANAGEMENT 7-3
7.4 QUALITY ASSURANCE (QA) – CENTRAL OFFICE ROLE 7-3
7.4.1 QA Reports 7-3
7.5 QUALITY CONTROL (QC) – DATA PRODUCERS' ROLE 7-3

THIS PAGE LEFT BLANK INTENTIONALLY.

Chapter 7 - CADD QUALITY ASSURANCE/QUALITY CONTROL

CADD Production Criteria Handbook

7.1 GENERAL

Offices under the direction of the Florida Department of Transportation (FDOT) Chief Engineer are responsible for determining the critical Quality Assurance (QA) requirements for their functional areas and have developed plans to monitor those requirements. The Engineering/CADD Systems Office (ECSO) defines the critical Quality requirements for electronic deliverables in the Computer Aided Design and Drafting (CADD) Manual and this Handbook. These include standard file formats and components for data delivery, adherence to a standard project directory structure, file naming conventions and standard graphic symbology for electronic plans. ECSO also establishes a QA monitoring plan for CADD in FDOT to facilitate compliance with these electronic deliverable requirements.

FDOT standards require that graphical elements in all critical design files which are shared across disciplines, or used in quantity calculations for pay items, or used in automation by downstream applications meet a minimum of 95% threshold compliance for standard level symbology. The threshold percentage is the number of graphical elements in the design file on the prescribed level symbology divided by the total number of elements in that design file. If submitted critical files do not meet threshold requirements, a written variance from the FDOT Project Manager with supporting documentation shall be included within the project Journal. A minimum 80% threshold compliance for level symbology is targeted for non-critical design files.

Every design file shall meet the threshold of compliance as defined in any CADD Quality Control (QC) plan or scope of work approved by the Districts. Within these compliance thresholds requirements, FDOT provides an allowance for up to ten (10) exceptions to prescribed level symbology standards. A Standard Rule defines the prescribed level symbology of a design file. An allowable exception is a deviation from standards defined in a Standard Rule for a given project directory. For example, if a municipality required a special symbology for an element needed that was not covered in a Standard Rule, that element could be drawn on the special symbology, and all occurrences of that symbology would be counted as only one exception.

7.2 THE PROFESSIONAL OF RECORD

Whether it be product or management practice, what must occur is sound, uninterrupted legal record of the project data. Therefore it is important that both the data producer and the FDOT make a sensible effort to ensure the documents supporting the signing and sealing of files electronically by a professional signatory and the securing of the electronic delivery be preserved in a manner consistent with those responsibilities under the rules of the Boards of Professional Regulation in Florida.

Districts should emphasize all the practices implied by the rules of the Florida Boards of Professional Regulation and implemented in the Professional's Electronic Data Delivery System (PEDDS) software and in certificate based Digital Signature. For example in PEDDS, the Signature Documents are as important as the data, since without these documents, the data is not considered signed and sealed electronically under Board rules. As such, the Signatory's seal cannot be authenticated. Likewise, the Manifest Document speaks to the integrity of the entire delivery, and should also receive attention and care for its preservation as part of the delivery of data.

For these reasons, some data producers have begun the practice of scanning the final signed paper version of Manifest Document, and the paper signed and sealed Signature Documents into PDF format, including them in the _meta_info folder of the project before delivery to FDOT.

Since the _meta_info folder is treated differently during the securing and authentication process by PEDDS, it is possible to place files into the _meta_info folder after a project data set has been secured without violating the security paradigm PEDDS uses. The person responsible should take special care not to overwrite PEDDS files managed in this _meta_info folder, including adding files without file extensions, zero-byte files, or files whose file name might conflict with the operation of PEDDS.

The practice mentioned above does not excuse the data producer or the Department from their responsibility to preserve the paper records of the Signatory Documents or Manifest Documents for a project since these bear the wet ink signature and impression seal. FDOT shall maintain the paper copies of these documents until it is determined how these records may be preserved in other media that meets the requirements of the Florida Boards of Professional Regulation.

For Digital Signing and Sealing, Adobe Acrobat Portable Document Format (PDF) supports certificate signatures that allow one to sign PDF files with a certificate-based digital ID. The approach is to work with a certificate ID issued by a trusted third party certificate authority. Certificate signatures are known as Digital Signatures.

Regulated transactions such as the development and submission of engineering plans, specifications, reports, surveys, and etcetera require high assurance when signing documents. When documents are distributed electronically, it is important that recipients can:

- Verify document authenticity – confirming the identity of each person signing the document
- Verify document integrity – confirming that the document has not been altered

Certificate-based signatures provide both of these security services. FDOT has chosen to use certificate-based digital signature infrastructure using third party certificate authorities to provide independent identity validation.

Once certificate-based digital IDs are acquired by professional Signatories, they can use the Adobe Acrobat software (or other PDF editors) to sign PDF files and validate files received from others. Digital Signature allows one to:

- Sign documents
  - Sign PDF files using certificate IDs
  - Place a signature box anywhere on the appropriate page or sheet
  - Add multiple signatures to a document, or page
  - Add a time stamp to the document
  - Certify a document with a visible (or hidden) signature so that recipients can verify authenticity with or without seeing a visible signature on the page currently being viewed
  - Automatically embed certificate data to support long-term validation
- Validate documents
  - Validate all signatures, confirming the identity of everyone who signed the document
  - Validate document integrity by tracking all previously signed versions of a document to verify changes made during the document's lifecycle
- Set privileges and permissions for others
  - Certify a document while leaving portions of it available for form filling, additional signatures, or comments
  - Use Acrobat software to enable users of Reader 9 or later add additional signatures with certificate IDs
  - Use Acrobat to encrypt a PDF document with a certificate ID to restrict editing, or copying.

7.3 ELECTRONIC DELIVERY PROCESS MANAGEMENT

Each district is responsible for having a management plan for quality control of the electronic delivery. It is expected that quality control plans comply with the CADD Manual and this Handbook.

7.4 QUALITY ASSURANCE (QA) – CENTRAL OFFICE ROLE

The Central Office role for Quality Assurance (QA) is to monitor the districts' individual Quality Control (QC) Plans in accordance with the *CADD Manual*. This involves establishing procedures and standards for electronic deliverables and reviewing district compliance with these items. QA also encourages continuous improvement through sharing both ideas and improved technology advances.

> ***Note*** Districts will be expected to ensure that their own Process Management Plan is in place for Electronic Delivery and that projects comply with that process.

7.4.1 QA Reports

The CADD Quality Assurance Reviews (QAR) of the districts' will be conducted according to the Department procedure and will be based on the published CADD QA monitoring plans of both the districts and ECSO. Reports are distributed to the district Secretaries and other affected offices.

7.5 QUALITY CONTROL (QC) – DATA PRODUCERS' ROLE

Each district shall maintain an established review process to determine and report the quality and compliance levels of project data as it relates to CADD.

FDOT provides tools to help ensure the creation of the standard project directory structure, standard file names and the standard symbology of all design files, in accordance with the specifications in this Handbook. QC software is also provided to check a design file's adherence to the FDOT level-symbology standards at any time during the production phase of the project. The main tools are listed below with further detailed explanation in the sections to follow.

- *FileChecker* – Provides reporting for certain portions of the Electronic Delivery compliance with standards and business rules.
- *QC Software* – The *QC Inspector* is software that contains tools used to check, correct and report the compliancy of elements within any design file against the FDOT CADD Standards. Aside from any corrective functionality in relation to elements, QC Inspector tools do not write any additional information into the design file. All checking and reporting is performed in real time and the results recorded into reporting documents that are saved to the current active project. The following functions of QC Inspector are included:
    - *QC Overwatch* – Runs during the closing of a design file checking all elements within all models of the current design file against the FDOT CADD Standards, then displays the percentage of compliancy.
    - *QC Check* - Runs a check on all elements within all models of the current design file against the FDOT CADD Standards, then displays the percentage of compliancy.
    - *QC Quick* –Interactive QC checking and correction tool. This displays all Invalid (non-standard) element information in a QC Quick report.
    - *QC Batch Report* – Interactive tool that runs a check on all elements within all models of the current design file against the FDOT CADD Standards, and then creates a Quality Control (QC) Summary Report required for the electronic delivery of all FDOT Project submittals. An optional QC Detailed Report is also available for the user to produce to detail any errors within the selected group of design files.

> **Important:** The FDOT2010 version of the CPCH serves as the transitional and final period for moving from the old GDM QC Process and Software to the new QC Inspector Process and Software described above.

THIS PAGE LEFT BLANK INTENTIONALLY.

Table of Contents

CHAPTER 8 - ELECTRONIC DELIVERY 8-1

8.1 GENERAL 8-1
8.2 PROJECT DATA SET CONTRASTED TO THE BID SET 8-1
8.3 PROJECT DIRECTORY / BID SET EXAMPLES 8-3
8.4 FILE NAME CONVENTIONS FOR ELECTRONIC DELIVERY 8-5
8.4.1 Classical Electronic Delivery projects 8-5
8.4.2 Digital Delivery projects 8-5
8.5 PRE-PRODUCTION 8-6
8.6 PRODUCTION 8-7
8.6.1 Classical Electronic Delivery projects 8-7
8.6.2 Digital Delivery Projects 8-8
8.6.3 Engineering Data 8-9
8.6.4 Data for Machine Control in Construction 8-13
8.6.5 Maximum Corridor Frequency Interval Spacing 8-15
8.6.6 Merging External Project Files 8-15
8.6.7 Reviewing the Project 8-16
8.6.8 Sign and Seal Project Files 8-17
8.6.8.1 Classical Electronic Delivery with PEDDS 8-17
8.6.8.2 Digital Delivery with Digital Signature 8-17
8.6.9 Securing the Project for Delivery 8-18
8.6.10 Authentication of a Delivery 8-18
8.6.11 Media Requirements for Delivery 8-18
8.6.12 Compliance Certification 8-18
8.7 POST-PRODUCTION 8-20
8.8 REVISIONS 8-20
8.8.1 Classical Electronic Delivery 8-20
8.8.2 Digital Delivery 8-21
8.9 STRUNG PROJECTS 8-22
8.10 RE-LET PROJECTS AND ROLL BACK REVISIONS 8-22
8.11 DESIGN BUILD PROJECTS 8-22

THIS PAGE WAS LEFT BLANK INTENTIONALLY.

Chapter 8 - ELECTRONIC DELIVERY

CADD Production Criteria Handbook

8.1 GENERAL

The Electronic Delivery process is centered on the preparation and use of secured project deliveries.

Note *See Chapter 1.6 Glossary of Terms in the Handbook for definitions of terms used in this chapter.*

8.2 PROJECT DATA SET CONTRASTED TO THE BID SET

As defined in the CADD Manual, the Project dataset includes all files used or produced during the course of production and delivered in the Electronic Delivery folder structure. This differs from the Bid Set, which is used to advertise the project for letting.

The Bid Set is a subset of the Project dataset files and differs depending upon if the Classical, or Digital Delivery is performed.

Classical Electronic Delivery Bid Set	***Digital Delivery Bid Set***
Project.pdf represents the plans and is retained in the project \root folder. Individual sheet image files are created for each sheet in the plans and signed and sealed individually.	*fpid*-PLANS[-].pdf is a composite of all plan sheets and delivered separate from the project folder structure. This file is signed and sealed with Digital Signature. Revisions to this file are named *fpid*-PLANS-REV##[-].PDF.
The Specifications file is named *fpid*.pdf and retained in the \Specs subfolder of the project.	The Specifications file is named *fpid*-SPECS[-].pdf and delivered separate from the project folder structure. The Supplemental Specifications file is named *fpid*-SPECS-SUPP##[-].PDF. This file is signed and sealed with Digital Signature.
Does not include CADD Data or Engineering data files	Includes a ZIP file (*fpid*-CADD[-].ZIP) of the Project Directory structure containing the CADD (Native DGN's or DWG's of the platform used to design the project) and supporting data files. This file is the only file delivered outside and separate from the project folder structure. This file is not signed and sealed. See more on this file later in this Chapter.
SetMaker is used to create this Bid Set from the Project dataset.	Bid Set for *fpid*-CADD[-].ZIP is created manually.
Comp Book is not delivered to the contractor with the Bid Set.	Comp Book is delivered to the contractor and is named *fpid*-COMPBOOK.PDF. Delivered separate from the project folder structure. Revisions to the Compbook are named *fpid*-COMPBOOK-REV##.PDF.

> **Note** *The fpid-CADD[-].ZIP will be made available to contractor for bidding. The existing naming convention standards and directory structure in the CPCH will be preserved in the delivered fpid-CADD[-].ZIP for Bid Sets. Empty project folders/directories will be removed from project directory structure. Files that are redacted by the designer that he/she does not deem useful to the contractor for creating an accurate bid, or necessary for constructing the project are not included in fpid-CADD[-].ZIP. The goal is to provide the data to empower Automated Machine Guidance in construction. Advertising projects with the Engineering Data (i.e. LandXML of the route geometrics [points, alignments, and profiles], and models [surfaces of the pre-construction Existing Ground, and the as-designed proposed Surfaces]) is desired.*

The Bid Set retains the same folder structure as the Project dataset for those folders containing files (all empty folders are automatically removed by the SetMaker application designed for this task).

> **Note** *Please refer to Chapter 24, Specifications Standards - regarding the handling and inclusion of Technical Special Provisions (TSPs) in the Bid Set.*

- **Production of *fpid*-CADD[-].ZIP**

The Bid Set for Digital Delivery projects that the contractor receives will include *fpid*-PLANS[-].PDF, fpid-SPECS[-].PDF, *fpid*-CompBook.PDF and *fpid*-CADD[-].ZIP. The *fpid*-CADD[-].ZIP file contains the Project directory structure; however the files listed below have been redacted:

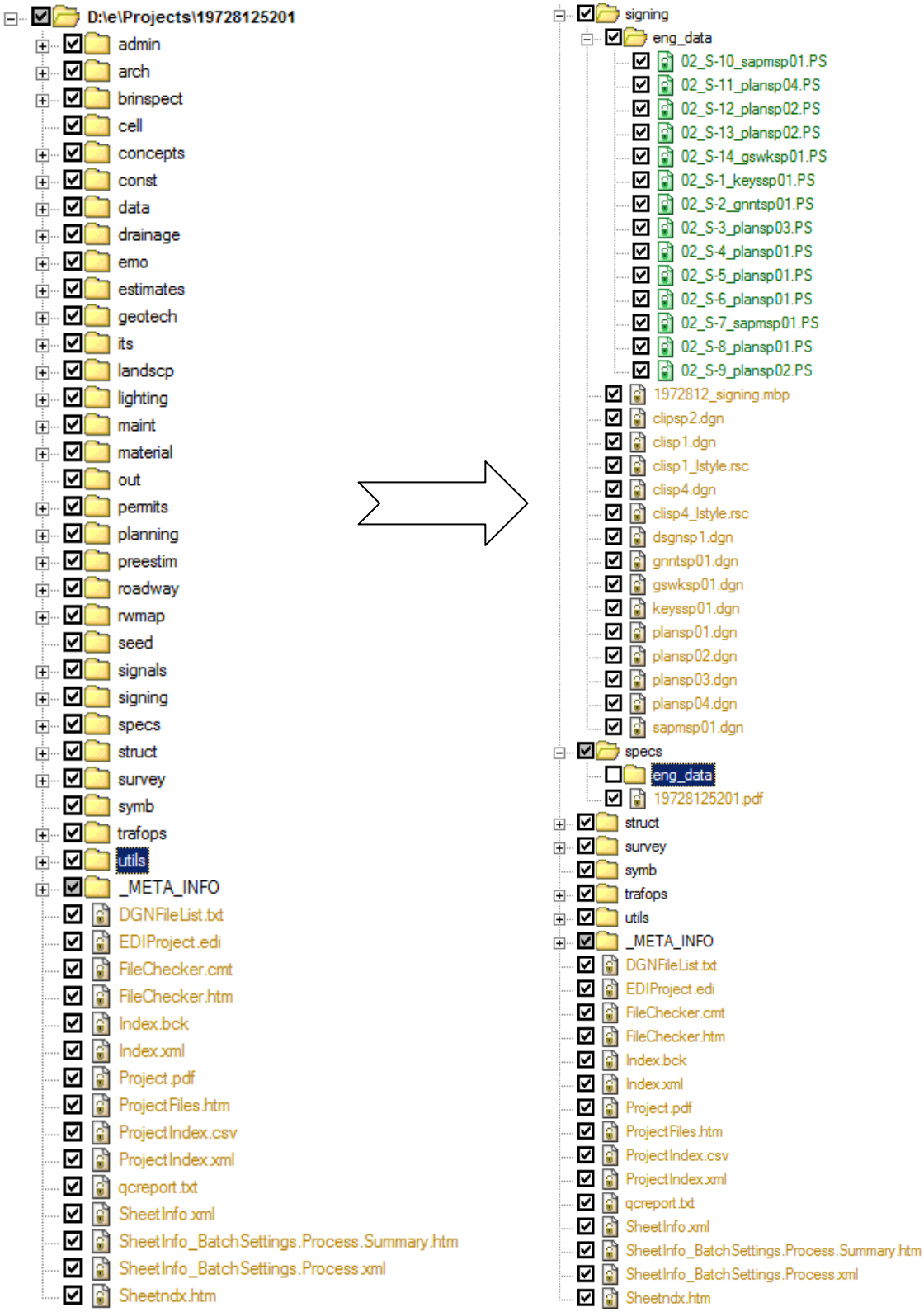
- *fpid*-PLANS[-].PDF (typically located in the \root of the Project Directory folder)
- *fpid*-SPECS[-].PDF (typically located in the \Specs Project sub-directory folder)
- *fpid*-COMPBOOK.PDF (typically located in the \Roadway Project sub-directory folder)
- Any other files the designer does not deem the contractor needs to bid or build the job.

The *fpid*-CADD[-].ZIP is delivered as a separate file outside of the Project Directory where the remaining files for the project are found. This is to avoid unnecessary duplication of data within the Project Directory. Beyond the files listed in the bullets above, the designer should determine what files should remain to support the plans and facilitate the contractor constructing the project through automated means. As a minimum, the *fpid*-CADD[-].ZIP should include:

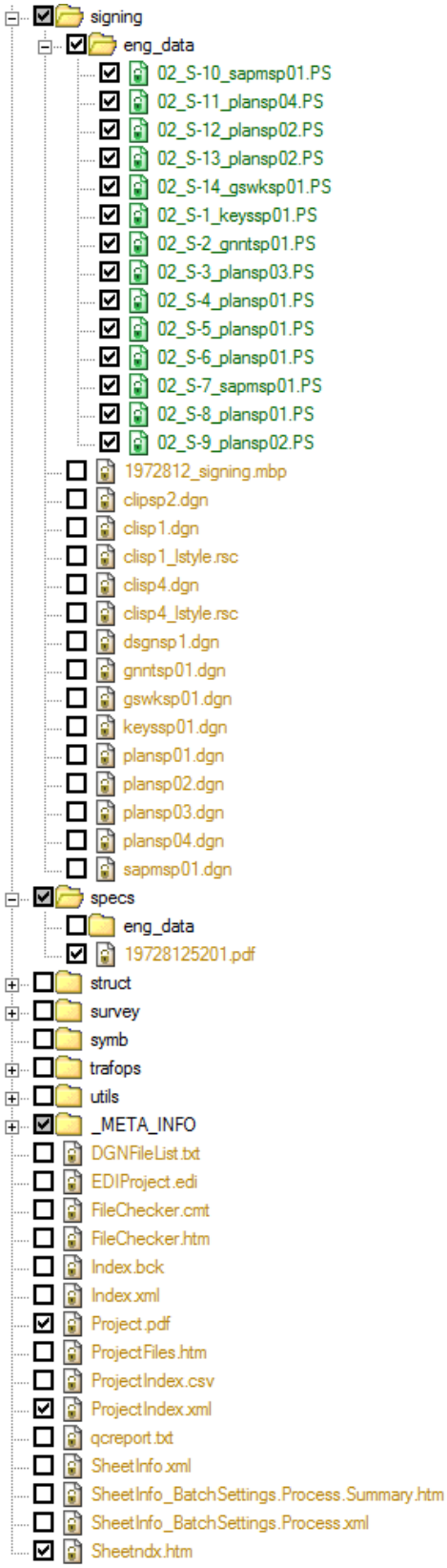
- CADD drawing files
- Engineering data files described in Section 8.7.1 below
- Summary of Quantity Sheet backups, such as, shapes, points, and area identifications

8.3 PROJECT DIRECTORY / BID SET EXAMPLES

The following images are taken from the SetMaker application. A Project dataset directory structure is shown on the left hand side. The right hand image expands the directory structure and shows files for Classical Electronic Delivery that would be included in the Project dataset delivery.



The following image shows the selection from the *SetMaker* application which defines the files (boxes checked) that are to be included in the Bid Set for a Classical Electronic Delivery. Many files that are not necessary for the advertisement; nor folders that do not contain data for the Classical Electronic Delivery Bid Set are not included.



8.4 FILE NAME CONVENTIONS FOR ELECTRONIC DELIVERY

8.4.1 CLASSICAL ELECTRONIC DELIVERY PROJECTS

For Classical Electronic Delivery the following table illustrates the file names used in each successive revision:

Original Delivery	***Revision 1/ Supplement1***	***Revision 2/ Supplement1***	***Revision 3/ Supplement2***
ProjectIndex.XML	ProjectIndex.XML	ProjectIndex.XML	ProjectIndex.XML
Project.PDF	Project1.PDF	Project2.PDF	Project3.PDF
Sheetndx.HTM	Sheetndx1.HTM	Sheetndx2.HTM	Sheetndx3.HTM
	Deltandx1.HTM	Deltandx2.HTM	Deltandx3.HTM
	Revison1.PDF	Revision2.PDF	Revision3.PDF
ProjectFiles.HTM	ProjectFiles.HTM	ProjectFiles.HTM	ProjectFiles.HTM
fpid.PDF TSP1.PDF, TSP2.PDF…	*fpid*SUPP01.PDF	*fpid*SUPP01.PDF	*fpid*SUPP02.PDF

Note *Multiple TSP files may exist in the delivery.*

8.4.2 DIGITAL DELIVERY PROJECTS

For Digital Delivery the following table illustrates the file names used for each successive revision (for the Bid Set):

Original Delivery	***Revision 1/ Supplement1***	***Revision 2/ Supplement1***
fpid-CADD[-].ZIP	*fpid*-CADD-REV01[-].ZIP	*fpid*-CADD-REV02[-].ZIP
fpid-PLANS[-].PDF	*fpid*-PLANS-REV01[-].PDF	*fpid*-PLANS-REV02[-].PDF
fpid-COMPBOOK.PDF	*fpid*-COMPBOOK-REV01.PDF	*fpid*-COMPBOOK-REV02.PDF
fpid-SPECS[-].PDF *fpid*-SPECS-TSP[BOE#][-].PDF	*fpid*-SPECS-SUPP01[-].PDF *fpid*-SPECS-TSP[BOE#]-SUPP01[-].PDF	*fpid*-SPECS-SUPP01[-].PDF *fpid*-SPECS-TSP[BOE#]-SUPP01[-].PDF

Note *Comp Book revisions may not be required with every plans revision, such as, the case with Signing and Marking revision plans where quantities are tabulated in Tabulation of Quantities sheets.*

Listed below are sample file names using the Digital Delivery naming convention shown above:

Original Delivery	***Revision 1/ Supplement1***	***Revision 2/ Supplement1***
12345678901-CADD.zip	12345678901-CADD-REV01.zip	12345678901-CADD-REV02.zip
12345678901-CADD-ConsultA.zip	12345678901-CADD-REV01-ConsultA.zip	12345678901-CADD-REV02-ConsultA.zip
12345678901-CADD-ConsultB.zip	12345678901-CADD-REV01-ConsultB.zip	12345678901-CADD-REV02-ConsultB.zip
12345678901-PLANS.pdf	12345678901-PLANS-REV01.pdf	12345678901-PLANS-REV02.pdf
12345678901-PLANS-ROADWAY.pdf	12345678901-PLANS-REV01-ROADWAY.pdf	12345678901-PLANS-REV02-ROADWAY.pdf
12345678901-PLANS-SIGNING.pdf	12345678901-PLANS-REV01-SIGNING.pdf	12345678901-PLANS-REV02-SIGNING.pdf
12345678901-COMPBOOK.pdf	12345678901-COMPBOOK-REV01.pdf	12345678901-COMPBOOK-REV02.pdf
12345678901-SPECS.pdf	12345678901-SPECS-SUPP01.pdf	12345678901-SPECS-SUPP01.pdf
12345678901-SPECS-TSP560-A.pdf	12345678901-SPECS-TSP560-SUPP01-A.pdf	12345678901-SPECS-TSP560-SUPP01-A.pdf

Name the files starting with more general information on the left and move to the more specific on the right.

For example; begin with the *fpid* number, entering all 11 digits without dashes; then the item description (PLANS, SPECS, ASBUILT, etc.), then revision or supplement number (REV## or SUPP##), and finally any naming [-] specific to the project *(optional)*.

This file naming convention allows project files to collate as they are sorted and combined in a single folder. Text, numbers and dashes are allowed. Characters that interfere with operating system path specifications or XML paths must be excluded, such as underline and spaces along with (/ \ . : , < & # >).

8.5 PRE-PRODUCTION

Pre-Production involves creation of a “seed” project to provide an environment for meeting CADD standards. Activities include the creation of the project directory structure. The project must begin correctly so FDOT standards for Electronic Delivery can be met.

The Electronic Delivery software contains several tools to create a project directory structure with the appropriate project information. This newly generated project, referred to as the “seed project”.

> ***Note*** *In-house projects are managed through the TIMS project management software, and the district will define the method by which they will initialize in-house projects.*

The *Professionals Electronic Data Delivery System (PEDDS)* application has a module that is used to enter key financial, administrative and location data into the project as project identification information. This project identification information is contained in an XML file format (ProjectID.xml) in the \eng_data sub-folder of the project. It is the FDOT’s responsibility to provide much of this information to the consultant. PEDDS should also be used to secure the seed project prior to handoff to the prime consultant or from the prime to his sub-consultant.

8.6 PRODUCTION

During the production phase, several tasks must be performed prior to the creation of the media to deliver the data meeting FDOT Electronic Delivery requirements specified here and in the CADD Manual. Prior approval should be obtained for any alternate media, besides CR-ROM or DVD-ROM, to be used for delivery of the data to FDOT.

A summary of General tasks during the Production Phase include:

- Understand and follow the directory structure and file naming requirements for Electronic Delivery.
- Draw CADD design files to FDOT Standards as defined in this Handbook, using the workspaces and resources provided. Deliver any non-standard user created CADD resources, such as custom created cell libraries, etc. in appropriate folders and document their use.
- Document all approved deviations from FDOT standards in the project journal file(s) including documenting important methods used and decisions made during design.
- Create required engineering data and quantity output files.
- Generate Quality Control (QC) Reports for all design files using the CADD QC tools provided. These reports indicate compliance to file naming and CADD element symbology standards.
- Merge any external project files into the project directory structure, including all files from sub-consultants, external reference files, scanned images for sheets (if any) and specifications documents.
- Bundle any non-standard graphics dependent resource files into the project sub-directory **\symb** (to include user created fonts and/or line styles)
    - **\cell** (to include project specific / user created cell or block libraries).
- Check for any duplication of files and resolve (documenting reasons for duplications). Remove non-essential file duplication. Remove non-essential “junk” files.
- Review the project for completeness and accuracy. The application FileChecker is provided to help assist with this task.

8.6.1 CLASSICAL ELECTRONIC DELIVERY PROJECTS

For Classical Electronic Delivery projects, the Designer will create and maintain the project Index and journal files.

A summary of Classical Electronic Delivery tasks in addition to the General tasks during the Production Phase include:

- Use the Sheet Navigator application in MicroStation to test that each design file containing sheets is properly identified and tagged with sheet administrative data. Every sheet should be accounted for by this application, unless the source of the sheet is external to MicroStation (i.e. a scanned file). Likewise the Sheet Set Organizer is used to accomplish a similar function in AutoCAD Civil 3D.
- Create final plot images files from graphics design files containing the sheets for Classical Electronic Delivery projects.
- For Classical Electronic Delivery projects use the Electronic Deliver Indexer (EDI) or Sheet Set Organizer (SSO) to create the indexes of plan sheets and files. EDI and SSO are also used to batch plot sheets to image files.
- For Classical Electronic Delivery projects use EDI or SSO to create final versions of the Index reports, including an HTML format version for use in the letting.

- For Classical Electronic Delivery projects, if it is a revision, create the Revision Report (Deltandx#.htm) using the ProjectDelta.
- For Classical Electronic Delivery projects, use EDI or SSO to create the composite Acrobat file (Project#.PDF) of all the plan sheets. Likewise, if the project represents a revision, create the revision PDF (Revision#.pdf) containing those sheets that were revised.
- Electronically sign and/or sign and seal files (plan sheets and specifications files, engineering reports, etc.), as required, using PEDDS.
- Secure the entire project dataset with PEDDS for secure delivery of all project data to FDOT.
- Create the Secured Project CD-ROM (or DVD-ROM) with the appropriate labels and the required checklist (include PEDDS documents if Electronic Signing and Sealing was used).
- For Classical Electronic Delivery and if required by the District, create the Bid Set dataset using the SetMaker application.
- For Classical Electronic Delivery projects and if the project is a Strung Project, use the Strung Project application to create the Strung Data Set from Bid Set data sets created in the previous step. Secure the Strung Project delivery with PEDDS.
- Create Bid Set CD-ROM, as required, with the appropriate labels and PEDDS documents for Classical Electronic Delivery Projects.
- Authenticate hardcopy media (CD-ROM, DVD-ROM, etc) with PEDDS to ensure the data is readable and represents the secured project delivery.

8.6.2 DIGITAL DELIVERY PROJECTS

Digital Delivery does not require an Index or the use of the tools used to maintain the Index, but requires *fpid*PLANS.PDF file(s) to be produced.

When producing the *fpid*PLANS.PDF, there are important considerations to be made:

- File size of the PDF files being produced must be considered. The larger the PDF files get, the more difficult they are to manage, particularly if they have to be transmitted over the Internet (as when the advertisement takes place).
- Produce *fpid*-PLANS[-].PDF in Black and White, unless color hardcopy printing is required from that file. Production of the PDF in color enlarges the file size considerably.
- The number of plan sheets also effects file size. If the overall plans set will exceed 700 sheets, then strongly consider breaking up *fpid*-PLANS[-].PDF into smaller sections by Plans Component. For example: *fpid*-PLANS-Roadway.PDF, *fpid*-PLANS-Signalization.PDF, etc., where the Component name is appended to the PDF that contains that Key Sheet and Component sheets. Not only will the resulting files be smaller, but each of these separate component files of the plans will Digitally Sign and Seal faster and be easier to administer Signatories, if multiple ones are involved in the Signing and Sealing process.

A summary of additional Digital Delivery tasks during the Production Phase include:

- For Digital Delivery projects, create *fpid*-PLANS[-].PDF for the original delivery, and *fpid*-PLANS-REV##[-].PDF for revisions.
- Digital Delivery projects will use certificate based Digital Signature.
- Digital Delivery project files and data must be put together manually to create the Bid Set.For Digital Delivery, each “Lead” and “Goes-with” Project dataset and Bid Set data is delivered separately. The application StrungProject is not used for Digital Delivery.

8.6.3 ENGINEERING DATA

In addition to the delivery of all files used or produced during the course of the Project CD deliverable, the ***FDOT CADD Manual*** requires the inclusion of certain engineering *data files* for critical geometrics in the design. These include the alignments, profiles, cross sections, and surfaces. Critical geometric items like the centerline and profile of the proposed mainline roadway, side streets, special ditches, utilities, etc., are included.

- **Delivery Standards for Engineering Data**

The required formats for engineering data files for a project as part of the electronic delivery includes LandXML, which covers basic route geometry element types, and is readable by FDOT software systems, such as GEOPAK and Civil3D. FDOT utilizes LandXML for one means of delivering critical geometrics, and is readable by known construction AMG equipment and software.

The LandXML format defines a data exchange format for:

Point data	Profiles
Curve data (circular arcs)	Cross Sections
Spiral data	Terrain Model Surfaces
Chains (with station equations)	Hydrology and Hydraulics.

LandXML is also widely supported by many other civil engineering software.

- **Cross Sections**

Although LandXML defines a specification for the exchange of cross section data, FDOT has legacy systems (Multiline) that do not support LandXML cross sections (and functional sections within FDOT that do not use contemporary CADD software). The designer shall also create and deliver cross sections in a text file format called a Multi-line GEN file. These include existing ground terrain, bottom of the proposed template, etc. to define those materials defined in the FDOT Design Standards Indexes 500 and 505. Users are strongly encouraged to reference the Multiline application training posted on the ECSO website.

The *Multi-Line General File format* can represent cross section shots, alignment station equations, horizontal offsets and limits. The ASCII text file format of a Multi-line GEN file is documented in the following pages.

❖ Comments Section of a GEN File

This section of the surface definition contains records that are comment in nature. The information that should be included in these comments is:

- Definition of what each Limits Table represents
- Definition of what the surface or surface feature code represents
- Definition of the Alignment and Profile (if applicable) that is referenced by the Cross Section data. The geometry of the alignment is not contained in the .GEN file, so adequate description needs to be documented so an end-user of the data can establish the proper relationships.

➢ Example of Comments section of a GEN file:

```
$ These are cross sections for Centerline US9A
$ This data is in ENGLISH units
$ Limits Table A is Federal Aid Participation limits
$ Surface EXIST is Pre-Construction Existing Ground
$ Horizontal Alignment is CHAIN SR9A1 found in US9A.XML
$ Feature of Surface EXIST is feature code EXIST
```

Notes on the format above:

- Keyword "$" precedes any remarks needed
- Description of any included Limits Tables
- Description of any surfaces included (i.e. Surface EXIST)
- Alignment referenced by the cross section data
- Feature code assignments
- Other comments as necessary

❖ Station Equation Section of a GEN File

If station equations are present in the cross sections, an **EQUATIONS table** must be present defining the region over which those equations apply. A new station equation region is started when a station equation is introduced into the alignment, where the ahead stationing differs from the back stationing at the given cross section where the equation is introduced.

➢ Example of Equations section:

```
EQUATIONS
EQ R1 23+50.000   23+10.000
EQ R2 24+76.000   24+90.000
EQ R3 53+22.000   53+55.250
END EQUATIONS
```

Notes on the format above:

- Keyword "**EQUATIONS**" to start station equation section
- 1st station equation region "1" begins at station 23+50 back, 23+10 ahead
- 2nd station equation region "2" begins at station 24+76 back, 24+90 ahead
- 3rd station equation region "3" begins at station 53+33 back, 53+55 ahead
- Keyword "**END EQUATIONS**" to end station equation section

❖ Limits Table Section of a GEN File

If the project has lateral limits represented in the cross sections (such as excavation limits, construction limits, R/W, etc.), these limits will be represented in a **LIMITS table**. The **LIMITS** table represents a pair of offsets at a particular cross section where a limit or pair of limits exists. A new **LIMITS** table will be included for each set of limits produced for a particular cross section or set of cross sections.

➢ Example of Limits section:

```
LIMITS TABLE A
LI  23+00.000          -42.000     39.000
LI  24+00.000 R1       -46.000     34.000
LI  25+00.000 R2       -46.000     34.000
LI  54+00.000 R3       -50.000     30.000
END LIMITS
```

Notes on the format above:

- Keyword "**LIMITS TABLE**" to indicate offset limits
- Limits are defined with keyword "**LI**" followed by **station** and **region**. The leftmost offset is first (negative if left of centerline, positive if right) and rightmost is next. If more than one set of limits are needed per station, a second limits table (In this case "LIMITS TABLE B") may be required.
- Keyword "**END LIMITS**" indicates the end of the end of limits table.

- Cross Section Data of a GEN File

The cross section for each surface represented is introduced with the command **GROUND** followed by the surface definition. For each type of surface (i.e. Existing Ground, Proposed Template, Subsoil Excavation, etc.), a **GROUND** section will appear in the format covering the station range for which that surface applies.

Standard Surface Descriptions	Line type
Roadway Sub-Design Template	A
Original Borrow Terrain	B
Tolerance Line	C
Original Channel Terrain	D
Extra Depth Subsoil	E
Final Roadway	F
Final Subsoil	G
High	H
Final Borrow	J
Final Channel	K
Low	L
Channel Template	O
Pre-Construction Roadway Terrain	P
Roadway Template Bottom of Base	R
Roadway Template Top of Surface	S
Original Roadway Terrain	T
Unassigned	I, M, N, Q, U, V, W, X , Y

For a given station on a particular surface, the station, the region that the station falls in and the points on the cross section (represented by offset-elevation pairs) are entered on a line.

- The points are ordered left-most offset to right-most offset as read left to right along the line.
- White space separates the offset and elevation and the adjacent offset/elevation pairs (other points on the cross section).
- Offsets left of centerline are indicated by a minus sign “-” in front of the offset. Offsets right of centerline are unsigned.
- A zero offset point (centerline) is not necessary, but is highly recommended, as that would leave no confusion concerning how to interpolate the centerline elevation.
- The maximum line-length is 132 characters, so multiple lines may be used to include all of the points necessary for a given surface on a particular cross section.
- Each surface definition must be provided in the complete format as shown. Only station equations and limits tables’ sections may be omitted from a surface definition if they do not exist for the given cross sections.

- Example of Cross Section Data (in this case existing Ground sections):

```
GROUND EXISTING GROUND SURFACE
XS 23+00.000     -60.000 21.300  .000 18.300   50.000 16.700
XS 24+00.000 R1  -50.000 17.000  .000 16.300   30.000 14.000
XS 24+00.000 R1   50.000 22.000
XS 25+00.000 R2  -50.000 17.000  .000 15.800   30.000 14.300
XS 26+00.000 R2  -50.000 17.000  .000 15.600   30.000 14.600
XS 27+00.000 R2  -50.000 17.000  .000 15.900   30.000 14.800
XS 28+00.000 R2  -50.000 17.000  .000 16.300   30.000 15.100
XS 28+00.000 R2   50.000 19.000   75.000 16.300
XS 28+50.000 R2  -50.000 17.000  .000 16.500   30.000 15.400
XS 29+00.000 R2  -50.000 17.000  .000 16.800   30.000 14.800
XS 30+00.000 R2  -50.000 17.000  .000 16.300   30.000 14.500
XS 31+00.000 R2  -50.000 17.000  .000 16.100   30.000 14.300
XS 32+00.000 R2  -50.000 17.000  .000 15.800   30.000 14.700
XS 33+00.000 R2  -50.000 17.000  .000 15.600   30.000 14.300
END GROUND
```

Notes on the format above:

- Each surface defined in the cross section will have its own set of data in the format as shown.
- Keyword "**GROUND"** shall be followed by comments identifying the surface.
- Keyword "**XS**" followed by station, region, and offset, elevation pairs (up to 132 characters per line)
- Keyword "**END GROUND**" indicating end of cross sections

Other GROUND sections should be included for the finish surface of the proposed roadway, as well as the bottom of the base, sub grade, and any other soil layers that must be excavated (A4, A6, A8, etc). Other Ground Sections might start like the following, indicating the surface being represented by the data:

```
GROUND MULTILINE DATA LINE TYPE R    ← Roadway Template Bottom of Base
GROUND MULTILINE DATA LINE TYPE T    ← Original Terrain
```

- **Quantity Files**

Engineering data supporting quantity calculations will be delivered according to the guidelines and formats defined by Final Estimates in the Computation Methods for Design, Construction and Final Estimates Handbook found here:

http://www.dot.state.fl.us/construction/Manuals/finalest/newcompbook/NewSampleCompbook.shtm

8.6.4 DATA FOR MACHINE CONTROL IN CONSTRUCTION

FDOT strongly encourages 3D design and modeling for all projects to facilitate contractor use of Automated Machine Guidance (AMG), also known as machine control. AMG technology can reduce time and cost of construction because of greater productivity by equipment operators, fewer grade checks needed, greener construction, greater safety, less rework, and less survey staking. Contractors invest in AMG for safety, productivity, and to stay competitive. AMG technology is now an industry standard and contractors will be increasingly dependent on electronic design data for bidding and construction. Providing electronic design data during project advertisement allows contractors to produce estimates faster and consider different staging scenarios. Contractors claim this reduces their risk and should produce better bids.

AMG uses positioning devices such as Global Positioning Satellite navigation systems (GPS), total stations, or survey grade rotating laser levels to determine real time X, Y, and Z positions of construction equipment and compares the position against a digital model of the proposed design. The model can include horizontal alignments, profiles, cross-sections, two dimensional (2D) and three dimensional (3D) graphics data which include original ground and proposed design surfaces. This model data can be exported to the formats need by the AMG equipment by the contractor. A computer display on the construction equipment shows the equipment operator several perspectives and delta values of his position compared to the design surface model and other entities in the data.

In general, projects characterized by the following are the best candidates for modeling and AMG:

- Projects with large amounts of earthwork or paving, including new corridors or significant reconstruction.
- Projects with a good GPS environment for receiving satellite signals, or enough line of sight for using total station and laser controlled systems.
- Projects with designs based on an accurate existing ground Digital Terrain Models (DTM).

Designing using a 3D workflow must start at the beginning of the project to create the needed files, and is contingent upon data being tied to an AMG field usable coordinate system and datum. The overall reduction of design and construction costs by modeling and AMG will be realized. The 3D workflow enables the project development team to visualize potential impacts and promote intense collaboration during the planning and design process. Discovering design errors by inspection of the 3D models will reduce costly change orders during construction.

The use of modeling will require conversion of CADD data to AMG formats. This conversion is the responsibility of the contractor, as the contractor may have special needs that the designer may not anticipate. However the formats of Electronic Delivery data prescribed by this Handbook should enable a successful translation.

The electronic files delivered with the design are provided as a courtesy to the contractor. The Contracts Administration Office releases this CADD data with accompanying exculpatory language stating the contractor cannot use the data as a basis for claims. Contractors will be completely responsible for any digital data converted or derived from model data provided by design. Post-design services may employ the designer to convert model data to needed AMG formats. Since the intention of the FDOT is to encourage 3D modeling and AMG in construction, means for accountability and certification of 3D models will be forthcoming.

Types of modeling data needed:

- **Control**

The field monument survey control for the design of the project needs to be clearly transmitted to the contractor, including the coordinate system and datum of that control. This is important because the contractor must calibrate his AMG equipment to that control.

- **Alignments/PGLs**

Already described in Section 8.6.1; LandXML files of the controlling alignments and profiles that represent the controlling geometry of the project may be used or can be extracted from other CADD files delivered. These tie all other data provided directly to the contract plans set. The data must be in the coordinate system of the control that can resolve to the field and congruent to all the other data that will be provided.

- **Surfaces**

Surfaces created during design using CADD software indicate the designer's intent. Surfaces from the original terrain survey represent the existing conditions at the time of the design. As a minimum, the pre-design existing (Ground) surface, as well as the finished construction (Top) surface will be delivered. LandXML should typically be delivered for the surfaces on most projects and same surfaces also delivered as 3D graphics files in the native CADD systems (corridor surfaces in DGN or DWG). Surfaces represented by LandXML files can become unwieldy for larger projects (surfaces should be represented in LandXML files of less than 500 MB per surface-file), so it may be necessary to subdivide a project's surface data into logical sections when delivering large LandXML surface files.

Note *For example, a relatively small TIN surface (32,208 points, 63,462 triangles) can be represented as LandXML file of 4.99 MB. So a LandXML file of approximately 100 times this data volume could be manageable as LandXML. Since LandXML is text, it will compress significantly when creating a ZIP to deliver the data (for example, a 50 Megabyte LandXML file of a TIN surface will ZIP down to approximately 10 Megabytes for delivery).*

Surfaces should also be delivered in contemporary MicroStation DGN or AutoCAD DWG 3D graphics formats (meeting FDOT CADD standards for symbology), and are most usable when each surface is separated into their own drawing file.

Note *Points and Break lines should be contained in the surface files described above.*

Note *If the native to CADD system used to produce those surfaces mentioned above stores surface data in alternative formats, as such the case with GEOPAK .TIN, a GEOPAK .DAT, an InROADS / GEOPAK Roadway Modeler .DTM, then those files must also be delivered.*

- **Breaklines**

Hard surface breaks must be respected during construction (i.e. edges of pavement, shoulder breaks, ditch profiles, etc.) and need to be provided to enhance the surface data. These aid the field AMG equipment operator during grading and string-less staking operations by preventing the "shaving" that could occur as the equipment transitions the break.

8.6.5 MAXIMUM CORRIDOR FREQUENCY INTERVAL SPACING

Design software used by FDOT samples the 3D corridor models at user defined intervals in order to create surfaces. To ensure reasonable accuracy in surface models for AMG operations, maximum interval is described below.

> ***Note*** *The designer may sample more frequently to more accurately represent his design model in the exported surface files, although there is limiting return (larger files and poorer computer performance) if sampling too frequently.*

Corridor Model Geometrics	Facility Design Speed	Maximum Interval
Horizontal or Vertical Curves	Less Than or Equal To 45 mph	5 feet spacing maximum
Horizontal or Vertical Curves	Greater Than 45 mph	25 feet spacing maximum
Horizontal or Vertical Alignment in Tangency	All Speeds	25 feet spacing maximum

Additional sampling intervals may be needed at critical horizontal geometry points (i.e. PC's, PT's), superelevation transition points, profile geometry points (i.e. PVC's, PVT's), and profile high/low points.

The designer must also add sampling at other critical points along the corridor, such as change of typical section, critical drainage locations, approach and interior to intersections, median crossovers, etc.

8.6.6 MERGING EXTERNAL PROJECT FILES

Files must be merged into the main project directory structure prior to securing the project for delivery. These include CADD System dependency files, and files provided from outside sources, such as those produced by sub-consultants.

- **CADD System Dependency Files**

Certain CADD System files that are used, or referenced, might reside external to the project directory during the production phase. Before delivery to FDOT, these files must be placed in the appropriate locations within the FDOT project directory structure. It is highly recommended that these files be included in the project directory structure early on in the project development and verified that referencing functions work properly. Reference files must also be attached without the "save full path" option, and should be located by their relative paths from the root project directory.

For printing purposes, any user created custom line style / type, font resource, and cell / block library files used for the project must be included with the project in the sub-directory **\symb**. In addition, any external design files that are referenced, such as sheet border files, must be copied to the project directory. This allows future customers of the data the ability to view or recreate prints matching the original delivery.

> ***Note*** *The designer does not need to include the FDOT standard CADD resources delivered by the FDOT CADD Software (MicroStation or AutoCAD resources). However, the FDOT CADD Software version information must be provided in the project journal.*

- **Files from Outside Sources**

Files that come from an outside source include files produced by a sub-consultant. Files from sub-consultants shall be delivered to the primary consultant, or the FDOT designer, following the same requirements for Electronic Delivery.

8.6.7 REVIEWING THE PROJECT

A baseline checklist found in the Electronic Delivery software and in Section 8.6.12 of this Handbook may be employed to help the producer consider critical items in this important review. Note that some FDOT districts have their own supplemental checklists which provide additional detail. Note there are tools in the FDOT CADD Software Suite (including QC and FileChecker) to ensure quality control which helps enable a successful review.

> ***Note*** *Contact your District Project Manager for specific District Supplemental Electronic Delivery requirements.*

For example, a start of items to review might include:

- Take particular care to look for missing sheets, gaps in the numbering, or duplicate sheet numbering, etc.
- Make certain the Electronic Plan Note appears on all plan sheets indicating the source of the official record (Sheet Navigator can assist with the placement of this note).
- If Sheet Navigator indicates all sheets are accounted for, the project should be further reviewed with the Electronic Delivery Indexer (EDI) for Classical Electronic Delivery.
- Ascertain whether an image file (.PS, .PDF, or .TIF format) is available for each sheet in the electronic plans for Classical Electronic Delivery, or that *fpid*-PLANS[-].PDF contains all sheets, in order, and rotated properly for Digital Delivery.
- It is also important to review the Comments about particular files using the Electronic Delivery Indexer (Classical Electronic Delivery). These comments should supplement the documentation in your project Journal(s).
- Double-check that the Journal(s) for the project is complete and accurate.

FileChecker can be used to find multiple files in the project directory structure with the same file name, but different content. Likewise, it can find files with the same content, but different filenames. These tools should be used to find and resolve potential file naming problems. Remember that FileChecker is only a tool to aid the producer find potential issues in their Electronic Delivery! Using FileChecker doesn't excuse the producer from performing a thorough review.

Once the producer is certain all components of the project are accurate, correct and complete, PEDDS will be used for Signing and Sealing Classical Electronic Deliveries, or certificate based Digital Signature will be used for Digital Delivery. PEDDS will be used to secure the Project CD data set before delivery to FDOT.

8.6.8 SIGN AND SEAL PROJECT FILES

8.6.8.1 CLASSICAL ELECTRONIC DELIVERY WITH PEDDS

The requirements for signing and sealing information stored in electronic files have been defined by the Boards of Professional Regulation and Volume I, Chapter 19 of the FDOT Plans Preparation Manual. For each professional in responsible charge who signs and seals files in a project, the PEDDS program generates:

- A Signature file, which defines the files that are being signed and sealed (this is an XML format file found in the *_meta_info* directory of the project). The signature file identifies files signed by the professional Signatory - including the file's SHA-1 hash code, and any qualifiers (conditions) the signatory placed on the signing of a particular file.
- A Signature Document (a report) generated after a signatory elects to sign and seal selected files. This document is printed, signed, dated, and sealed with a seal approved by the respective Board of Professional Regulation. This document secures the files signed and sealed by the professional, using the SHA-1 hash code computed for the signature file itself. If a non-licensed signatory selects files to sign (typically using his/her driver's license number), then the signature document is printed, signed and dated, but is not sealed with an impression seal.

Important: The signature document must be preserved and protected and must never be lost or separated from the data it is associated with. Without this document the associated data cannot be truly authenticated and thus, cannot be considered a legal record.

Note *Finished sheets that will imminently become Signed and Sealed (electronically) shall bear the electronic signature note as shown in the FDOT Plans Preparation Manual exhibits. The note should not be applied to sheets during the early course of plans preparation to minimize the potential for confusion by a recipient that a sheet may be signed and sealed. The note must be applied at final delivery.*

8.6.8.2 DIGITAL DELIVERY WITH DIGITAL SIGNATURE

Digital Signatures used for signing FDOT documents must comply with Florida Administrative Code governing the specific discipline for the professional signing those documents. Digital Delivery project designers will use Digital Signature instead of PEDDS.

In compliance with the above, an Access Certificates for Electronics Services (ACES) digital certificate shall be use to ensure authenticity and accountability in citizen-to-government, business-to-government, and government-to-government electronic transactions. An ACES digital certificate is an electronic identity issued by a Certification Authority that establishes an individual's identity per the Federal Government Services Administration (GSA) standards when using electronic transactions, and there are several 3rd party Certificate Authorities that issue such certificates.

When applying Digital Signatures, many software applications allow the signature to have an "appearance." As a minimum, use a visible signature, with the text name of the Signatory (not an image), and the date-time stamp at the instant of signing. Do not include any watermark or overlay, unless it is an image of the "wet ink" signature of the Signatory. Do not include company logos, or other images within the Digital Signature appearance. The reason for signing may be placed in a text block where there is more space available and the reason is not restricted.

Note *Finished sheets that will imminently become Signed and Sealed (digitally) shall bear the electronic signature note as shown in the FDOT Plans Preparation Manual exhibits. The note should not be applied to sheets during the early course of plans preparation to minimize the potential for confusion by a recipient that a sheet may be signed and sealed. The note must be applied at final delivery.*

8.6.9 SECURING THE PROJECT FOR DELIVERY

PEDDS includes a process to secure the complete project directory, including all contained files for delivery. This securing process is run after all the project files are finished (and for electronic signature after all signature files have been created, printed, and the Signature Documents are signed, dated, and sealed).

The process of securing a project for delivery creates a Manifest Document containing the computed hash code of the Manifest File (Manifest.XML - which lists all files in the project with their individual hashes), thus securing ALL the files in the project directory. The Manifest Document is printed, signed, and dated (but is not sealed), by a project manager (or data manager), and delivered to FDOT along with the media containing the complete project submittal.

> ***Note*** *Digital Signature secures each file signed separately. PEDDS is still used to secure a Project CD deliverable where Digital Signature was used to sign and seal files.*

8.6.10 AUTHENTICATION OF A DELIVERY

PEDDS and its paper reports received with the project will be used by FDOT to authenticate a project. The Authentication Report generated by the authentication process in PEDDS will be compared against the Manifest and Signature documents submitted with the delivery. If the project submitted is found to generate the same hash codes, the delivery will be considered authenticated.

8.6.11 MEDIA REQUIREMENTS FOR DELIVERY

All electronic projects submitted to FDOT will be on write protected physical media (CD-ROM or DVD-ROM) unless otherwise approved by the FDOT Project Manager. If the project is too large to fit on one CD/DVD, then the process for delivery to FDOT must be reviewed with the FDOT Project Manager before splitting the project on multiple CD/DVDs or choosing an alternate media. All Project CD's must have a Project Identification Label with the required information shown below:

- Financial Project ID Number of Project:
- Project Description *(including County and State Road numbers, local road designation):*
- Firm or District Performing the Work
- Name of FDOT and Consultant Project Manager(s)
- Creation Date of the Media
- Disk (#) of (Total #) *(if multiple ROMs are needed)*
- Delivery Type Label *(Project CD, Bid Set CD, etc.)*
- Anticipated Letting Date for the Project

> ***Note*** *After burning project data to a ROM, or other media for delivery to the FDOT, that media should be authenticated with PEDDS to ensure no changes were introduced during the media production process prior to submission to FDOT.*

With the cost of USB memory drives (thumb drives) and corresponding increase of capacity, this media will be grow in popularity for delivery. If such a drive is delivered, it shall be labeled as a minimum with the *fpid* number and district.

8.6.12 COMPLIANCE CERTIFICATION

All Electronic Deliveries for FDOT Projects are to be delivered to the FDOT Project Manager, unless an alternate agreement is reached. A Compliance Certification (or similar document), as provided on the following page should accompany the documents in all FDOT Project deliveries.

> ***Note*** *Districts may use a more comprehensive form in their Quality Assurance processes than the one shown on the following page. FDOT is working toward a single version meeting the needs of all Districts.*

The Compliance Certification Checklist Report shown on the following page contains a baseline checklist of items that should be checked before a final submittal.

Compliance Certification Checklist Report

All electronic data submittals are to be transmitted to the FDOT Project Manager. The following questions shall be addressed before submittal, and this or similar report given to the Project Manager along with the submittal.

- ☐ 1. Have project journal(s) been created containing all necessary project information?
- ☐ 2. Is the listing of the software packages and versions used to create all delivered files included in the journal?
- ☐ 3. Are all the native files generated by the CADD/Design software in checklist item 2 included in the delivery package?
- ☐ 4. Are design graphics files compliant with the FDOT CADD standards for directory structure, file naming, and element symbology?
- ☐ 5. Does the submittal include all user-created CADD System resource files (line styles, fonts, etc.) that may have been used with the project?
- ☐ 6. Has the QC software been run against the graphics design files? Are the resultant QC Reports of compliance included in the delivery submittal? Has FileChecker been run to verify directory structure, file naming standard, etc.?
- ☐ 7. Have the prescribed engineering data files been created and submitted for the alignments, profiles, and surfaces in the formats described in the CADD Production Criteria Handbook? Is this information stored in the appropriate directories?
- ☐ 8. Have Multi-line general file format files been created and included for the surfaces represented in the cross sections?
- ☐ 9. Have images for the plans been been checked and included for all sheets in the plan set? PDF format? Checked for Sheet size, Scale, Rotation/Orientation?
- ☐ 10. Are the files representing the plans, referenced by Chapter 19 of the FDOT Plans Preparation Manual, signed and sealed? Is the Electronic Plan Note on each sheet?
- ☐ 11. Has the entire delivery been secured with PEDDS? Has the resulting Manifest Document been signed?
- ☐ 12. If Electronic Signature used, are hardcopy reports of the PEDDS documents included, printed and signed? This includes the signed and initialed Manifest Documents and all signed Signatory Documents. If Digital Signature used, are the correct files signed with the appropriate Digital Certificate and independently validated? Does FDOT have the root certificate installed for the certificate Authority used?
- ☐ 13. Has the final media for submission been properly labeled and re-checked to make sure the data is readable and can be authenticated?
- ☐ 14. For Classical Electronic Delivery, has a Project.PDF file been included that contains all sheets that are defined by the delivery's index?
- ☐ 15. For Classical Electronic Delivery, has an index report SheetNDX.htm file been included that links all sheets that are defined by the delivery's index for the plans?

FPID: _____

Date of Scope: _____

Certified by EOR: _____

8.7 POST-PRODUCTION

The "Post-Production Phase" involves the review and acceptance of an Electronic Delivery, and making that delivery available to FDOT internal services for posting. Functions include the receipt and authentication of the delivery media, and placement of the project data into systems designed for general access to the data.

Upon receipt of the secured Electronic Delivery package and the accompanying documents, it may be authenticated using PEDDS by FDOT's designated representative for accepting project data. The electronic submittal checklist(s) will also be reviewed for completion.

Following the requirements in this Handbook does not guarantee an acceptable work product, as this Handbook does not address the quality of the engineering or survey work performed.

Once the electronic submittal is accepted, the electronic project will be imported into FDOT file management systems for subsequent use. Copies of the submittal media may be distributed among various stakeholders, such as Construction and Maintenance.

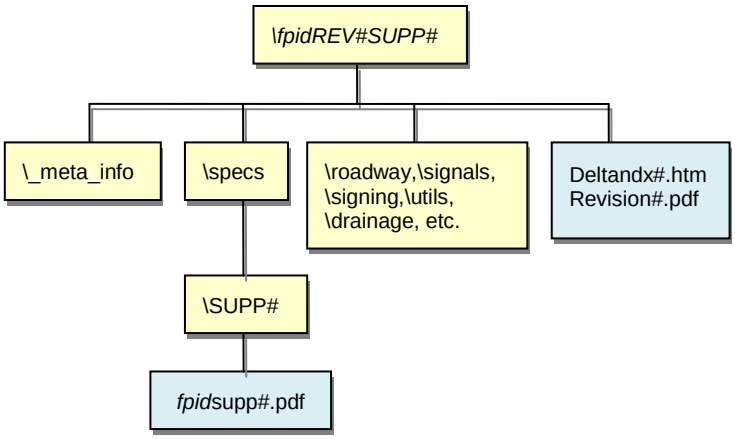
8.8 REVISIONS

8.8.1 CLASSICAL ELECTRONIC DELIVERY

Revisions are modifications after the Electronic Delivery has been accepted by Project Review. Central Office or District plans processing units require the revised "Bid Set" data submittal to use a specific directory naming convention for revisions and / or supplements for Classical Electronic Delivery. This convention can be created with the SetMaker tool, but the user must be aware of the conventions (it's not automatic).

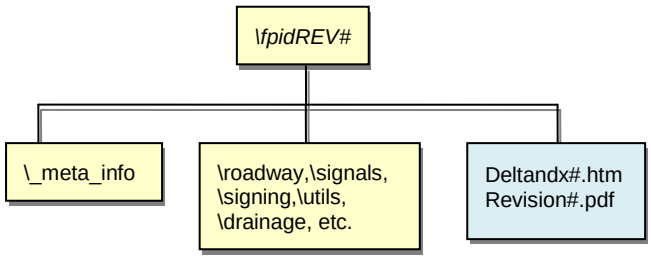
Note *Project root folder renaming does not apply for the "Project CD" submissions (that directory name NEVER changes, regardless of which revision); only the subsets created for revisions and/or supplements ("Bid Set CD") have their root folders renamed.*

When both a plans revision and specifications changes (called a supplement) are needed, the directory structure (and content) for the "Bid Set" subset for the revision 1 and supplement 1 is shown below:

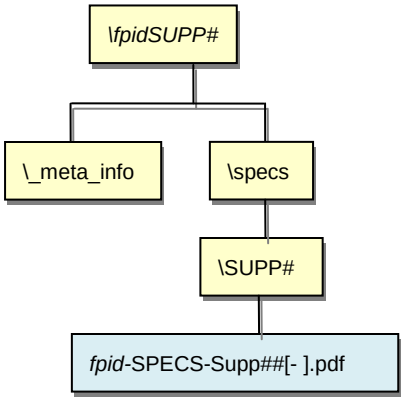


Note *A complete "Project CD" deliverable, named the original project name, is usually required to be submitted with each contemporary revision to the project. The directory naming conventions shown in these diagrams apply only to "Bid Set" subsets extracted from those revised "Project CD" submissions on Classical Electronic Delivery projects.*

If there are **plans revisions only** to a Classical Electronic Delivery, the following directory structure would be used:



If there are specifications supplements only, the following directory structure would be used:



The *root directory name* for "Bid Set CD" data sets created for a revision and/or supplement are then:

Event	***Project CD***	***Plans & Specs (Revision) CD***
Original Delivery	*fpid*	*fpid*
Revision 1	*fpid*	*fpid*REV1
Supplement 1	*fpid*	*fpid*SUPP1
Revision 2	*fpid*	*fpid*REV2
Revision 3 and Supplement 2	*fpid*	*fpid*REV3SUPP2

Important: When preparing the revision, do not over plot any signed and sealed file from an earlier delivery – doing so will make the Signatory of those files not Authenticate in PEDDS.

8.8.2 DIGITAL DELIVERY

Digital Delivery Bid Sets do not require the directory structure as previously shown. The Bid Set for Digital Delivery is the set of files described in Section 8.2 through Section 8.4.

8.9 STRUNG PROJECTS

Classical Electronic Delivery of “strung projects” involves the act of combining two or more independent and secured project data sub-sets (Bid Sets) together. Stringing projects involves combining the data in a way that the end-user of the data (typically a contractor) can reasonably navigate “lead” and “goes-with” sub-project data comprising the strung project.

Users must be familiar with the process of creating “Bid Set” data sub-sets from “Project” data sets. These must be created prior to project stringing. An application named StrungProject is included in the Electronic Delivery software suite for this operation.

Digital Deliveries differ, in that each “lead” and “goes-with” project is delivered as separate data sets, and never combined or intermingled. The StrungProject application is not needed for Digital Deliveries.

8.10 RE-LET PROJECTS AND ROLL BACK REVISIONS

In rare cases, projects must be re-let. If no revisions have occurred to the project that must be re-Let, FDOT will simply re-advertise and Let the project with the submitted Project CD or Bid Set CD data. However if a revision has been applied to the project to be re-Let, then the revision is no longer germane and the re-Let project is essentially an original Letting all over again. In this case, the data producer may be asked to roll back the revision indexing as if the delivery was an original delivery. This could involve updating the plan sheets to remove the revision enumerations - potentially removing the notations a revision has even occurred.

Note *The changes to plans that were once identified as a revision are now considered simply a plan change.*

8.11 DESIGN BUILD PROJECTS

The scope defines the deliverable FDOT receives from the design build contractor.

Table of Contents

CHAPTER 9 - RIGHT OF WAY MAPPING STANDARDS 9-1

9.1 GENERAL 9-1
9.2 STANDARD FILE NAMES 9-1
9.3 SEED FILES SETTINGS 9-3
9.4 TEXT 9-4
9.4.1 True Type Font 9-4
9.4.2 Text Size 9-5
9.5 MICROSTATION LINE STYLES 9-5
9.6 CELL LIBRARY 9-8
9.7 LEVEL AND SYMBOLOGY STANDARDS 9-10
9.8 R/W CADD WORKSPACE 9-10
9.9 GEOPAK FEATURE PREFERENCES 9-11

THIS PAGE WAS LEFT BLANK INTENTIONALLY.

Chapter 9 - RIGHT OF WAY MAPPING STANDARDS

CADD Production Criteria Handbook

9.1 GENERAL

This chapter will describe the minimum CADD requirements for Right of Way (R/W) Mapping operations.

9.2 STANDARD FILE NAMES

Florida Department of Transportation (FDOT) utilizes standard file naming conventions. Some of the automation implemented in various tools provided by FDOT depends on naming conventions being met. More importantly, the naming convention confers information to the downstream customer of the data.

The standard file names for Right of Way graphics files shall be a maximum of an eight character file name with a .dgn or .dwg extension and should follow the format: **AABBBB##.ex*t***

Where

AA = Abbreviated Group Description *(shall be two letters)*,

BBBB = Sheet Type *(shall be four letters)*,

= Sequence Number (*padded two digit integer, i.e. "00", "01", "02" … "99", used to sequence additional files of the same Description/Discipline)*

Example: **RWDETL01.DGN**:

Where

RW = Right of Way Mapping Group,

DETL = Detail Sheet,

01 = Sequence Number 1,

DGN = extension for MicroStation design file

Note *Please see CPCH Chapter 5 for more information for extensions .*

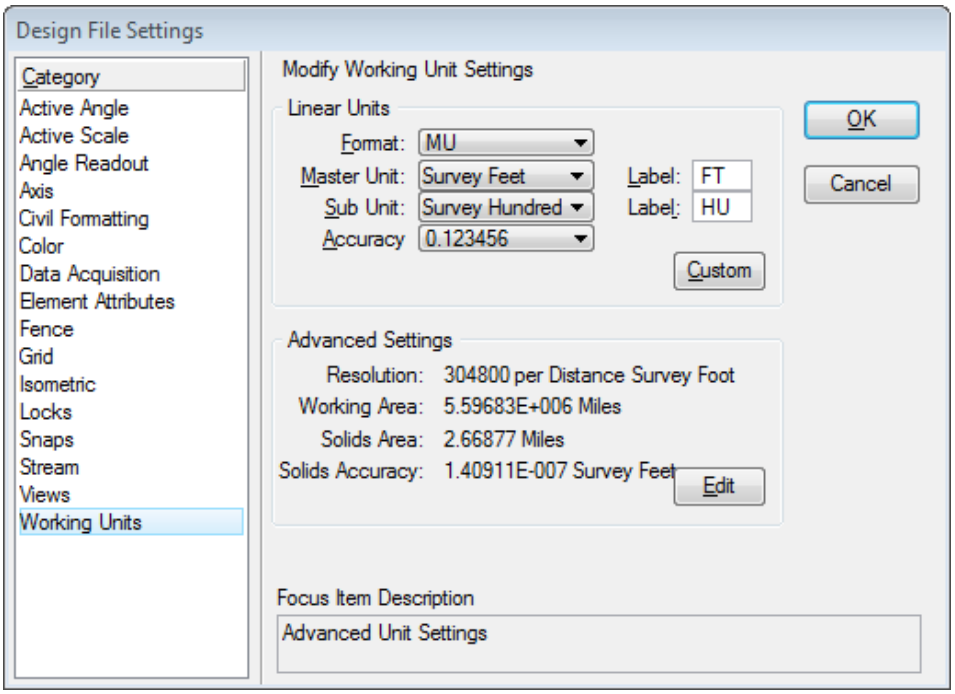
The following table defines the Right of Way Mapping File Name Standards in regards to FDOT Projects with the understanding that each file name will include sequential numbering.

Critical File	File Name	Model	File Description	Rule File	MicroStation Seed File	Civil 3D Template File
	CS%%%%%%%*	default	Control Survey Master Design File (Enter 7 digit No.)	rweng10	rwseed2d.dgn	rweng10.dwt
X	CSCOVR*	default	Control Survey Cover Sheet	rweng10	rwseed2d.dgn	CSCOVR.dwt
X	CSDETL*	default	Control Survey Detail Sheet	rweng10	rwseed2d.dgn	CSDETL.dwt
X	CSKEYM*	default	Control Survey Key Map Sheet	rweng10	rwseed2d.dgn	CSDETL.dwt
	MM%%%%%%%*	default	Maintenance Map Master Design File (Enter 7 digit No.)	rweng10	rwseed2d.dgn	rweng10.dwt
X	MMCOVR*	default	Maintenance Map Cover Sheet	rweng10	rwseed2d.dgn	MMCOVR.dwt
X	MMDETL*	default	Maintenance Map Detail Sheet	rweng10	rwseed2d.dgn	MMDETL.dwt
X	MMKEYM*	default	Maintenance Map Key Map Sheet	rweng10	rwseed2d.dgn	MMDETL.dwt
	RW%%%%%%%*	default	R/W Master Detail Design File (Enter 7 digit No.)	rweng10	rwseed2d.dgn	rweng10.dwt
X	RWCOVR*	default	R/W Cover Sheet	rweng10	rwseed2d.dgn	RWCOVR.dwt
X	RWDETL*	default	R/W Detail Sheet	rweng10	rwseed2d.dgn	RWDETL.dwt
X	RWFACS*	default	R/W Cover Sheet FA Project	rweng10	rwseed2d.dgn	RWCOVR.dwt
X	RWKEYM*	default	R/W Key Map Sheet	rweng10	rwseed2d.dgn	RWDETL.dwt
X	RWPNCTAB*	default	R/W Project Network Control Tabulation Sheet	rweng10	rwseed2d.dgn	RWDETL.dwt
X	RWPR*	default	R/W Parcel Sketch Sheet (11”x17” Landscape)	rweng10	rwseed2d.dgn	RWPS.dwt
X	RWPS*	default	R/W Parcel Sketch Sheet (8.5”x11” Portrait)	rweng10	rwseed2d.dgn	RWPS.dwt
X	RWSPS*	default	R/W Specific Purpose Survey Sheet	rweng10	rwseed2d.dgn	RWSPS.dwt
X	RWTAB*	default	R/W Tabulation Sheet	rweng10	rwseed2d.dgn	RWTAB.dwt
	CTLSRD*	default	Survey Project Network Control Sheets	open	rwseed2d.dgn	RWDETL.dwt
	SIGNRW*	default	Digital Signatures (Multi)	rweng10	rwseed2d.dgn	digitalsignature.dwt
	TOPORW*	default	ROW Mapping file containing existing Topography for mapping purposes only	toporw	rwseed2d.dgn	TOPORW.DWT

9.3 SEED FILES SETTINGS

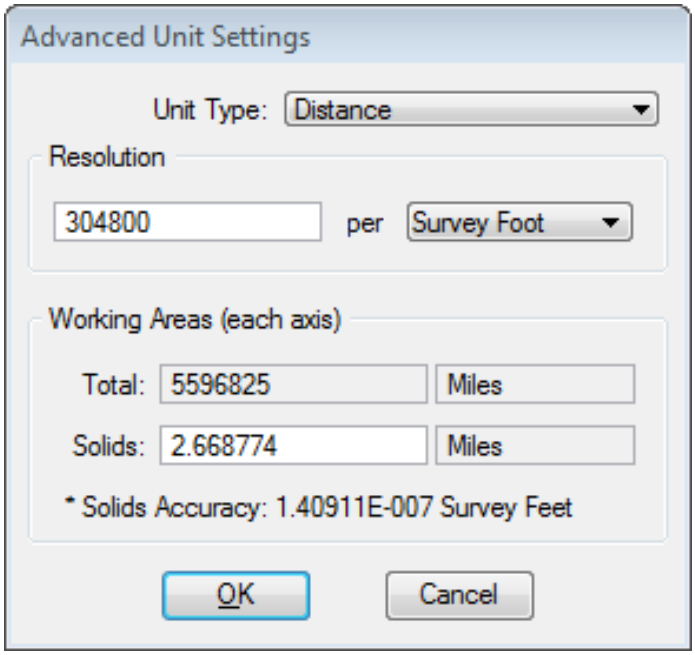
- **English Seed File Settings**

English Working Units for MicroStation are set to “US Survey Foot” standard (1 Survey Foot = 1200 / 3937meters = 0.3048006096012192). The seed file for Right of Way Mapping is “RWSEED2D.DGN”. The design file global origin shall be center of the design plane 0, 0.



- **Advanced Working Unit Settings**

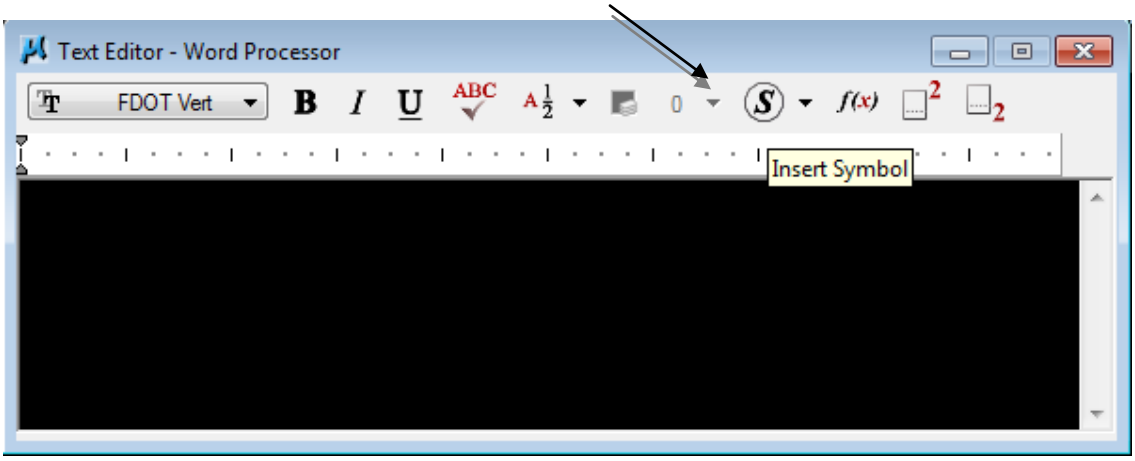
The Edit button opens the Advanced Unit Settings dialog box. This setting defines the units of resolution per master unit (US Survey Foot) which subsequently calculates the dimensions of the design plane. The Advanced Unit Settings should appear as shown here.



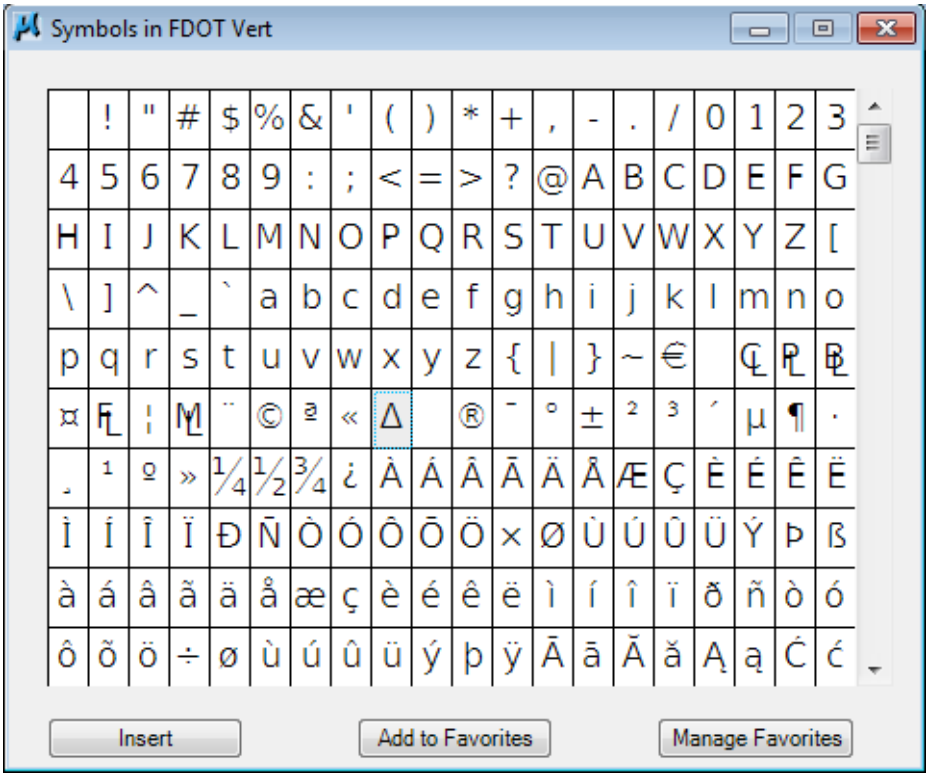
9.4 TEXT

9.4.1 TRUE TYPE FONT

The FDOT2010 workspace uses true type fonts (ttf). Specifically, FDOT Vert and FDOT Vert Mono true type fonts. There are also bold and heavy versions of both fonts; FDOT Vert Bold, FDOT Vert Heavy, FDOT Vert Mono Bold and FDOT Vert Mono Heavy. These fonts are stored in the files FDOTVert.ttf, FDOTVertBold.ttf, FDOTVertHeavy.ttf, FDOTVertMono.ttf FDOTVertMonoBold.ttf and FDOTVertMonoHeavy.ttf. Special symbol characters are also included in the FDOT true type font files. These characters may be accessed via the Insert Symbol tool provided in the MicroStation word processor dialog.



These characters include: fractions, mathematical symbols, survey symbols, boring symbols, Greek letters, and Super/Sub Scripts.



Note *FDOT "Mono" fonts are fixed pitch fonts for use in columns and tables to make text line up properly.*

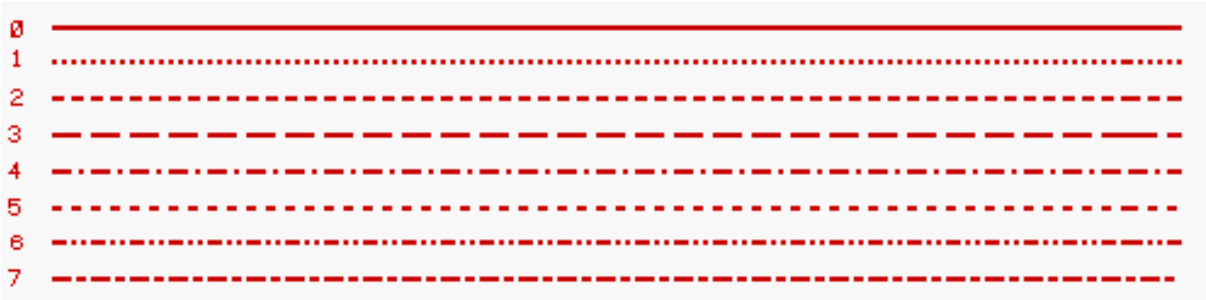
9.4.2 TEXT SIZE

The following tables of text sizes are recommended text sizes for all right of way mapping projects at a given scale. **Readability** of text data should be considered as priority; however no text should be smaller than 3.2' on a 1" = 40' scale (0.08" actual plotted size).

- **Recommended Base Text Sizes for R/W Mapping (English)**
- **D-SIZE (24"x36")**

SCALE	RECOMMENDED TEXT SIZES
1" = 5'	0.5'
1" = 10'	1.0'
1" = 20'	2.0'
1" = 30'	3.0'
1" = 40'	4.0'
1" = 50'	5.0'
1" = 100'	10.0'
1" = 200'	20.0'
1" = 400'	40.0'

9.5 MICROSTATION LINE STYLES



- **Custom Line Styles**

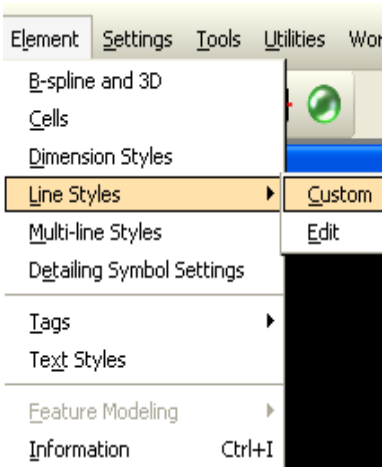
In addition to the standard line styles shown above, MicroStation allows for the creation of "Custom Line Styles". MicroStation line styles can be set as the active line style using "LC=" key-in. For English units, "**RWLINENG.RSC**" was created at a 1:1 scale. Standard MicroStation line styles are based on output device coordinates, and therefore are not truly WYSIWYG, as are custom line styles. Use custom line styles instead of patterned lines. When using Right of Way Mapping custom line styles, it is important to set the correct active custom line style scale.

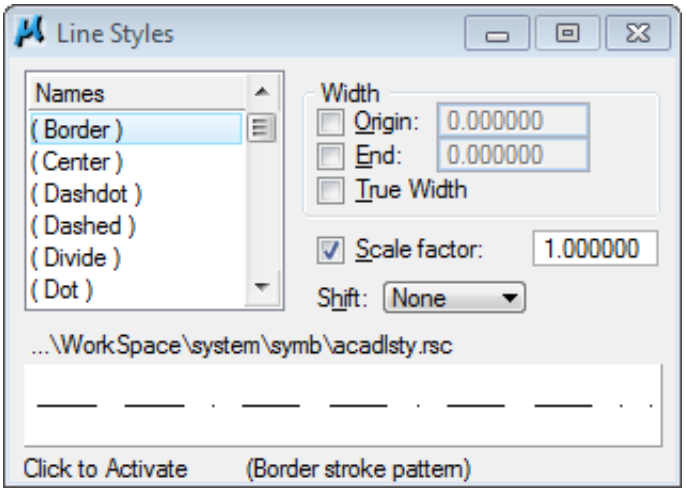
For example: to place an English custom line styles simply set the scale the same as the drawing scale.

Note *Only FDOT line style resource ".RSC" files should be used.*

To set custom line style scale:

Select the MicroStation menu option: **Element > Line Styles > Custom**.





- **Right of Way Mapping Custom Line Styles**

Note *Symbols in tables are not displayed at their required weights / thickness.*

NAME	SYMBOL
ANGLE – Angle Delineator	
ARROW2 – R/W Width	
ARROWPOINT	
ARROWTIE	
CLIMIT - City Limit	
CLIMIT2 – City Limit(Hash Only)	
COLINE – County Line	
EECL – Existing Easement Centerline	
EXLA – Existing L/A RW	
EXRW – Existing State Road R/W	
GRTL - Grant Line	
LA - Proposed L/A RW	

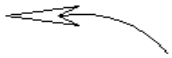
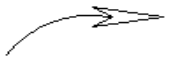
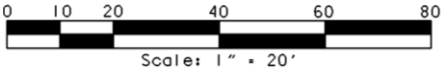
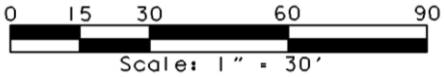
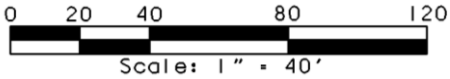
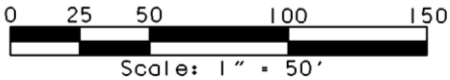
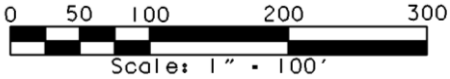
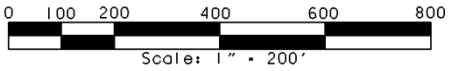
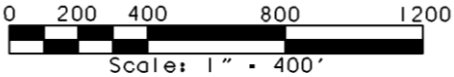
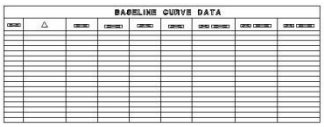
NAME	SYMBOL
LEADERLT – Leader Left	
LEADERRT – Leader Right	
LICENSE – License	
LOC - Limits of Construction	
NONVH - Non-Vehicular Access Line	
NSPF - Nat./State Park/Forest	
NSPF2 – Nat./State Park/Forest (Hash Only)	
PESMT - Perpetual Ease.	
QSEC - ¼ Section Line	
RR - Railroad	
SECLIN - Section Line	
STL - State Line	
SUBDIV – Subdivision Arrow	
SUBDIV2 – Arrows2	
SUBDIV2LT – Arrows 2 LT.	
SUBDIV2LTOnly – Arrows 2 LT.	
SUBDIV2RT – Arrows 2 RT.	
SUBDIV2RTOnly – Arrows 2 RT. Only	
SUBDIVLT	
SUBDIVRT	
TEMPE – Temporary Easement	
TIITF – Murphy Reservation Line	
TWPRGE – Township/Range	
WaterMapBoundary	

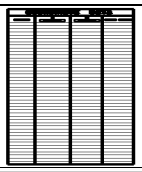
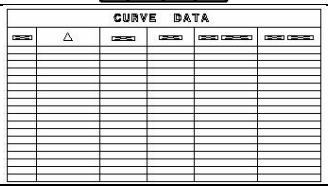
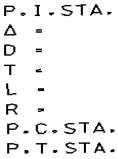
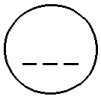
9.6 CELL LIBRARY

R/W cell library is ROW.CEL.

Important! *R/W Cells must be placed with the True Scale toggle "ON".*

- **CELL TABLE**

ELEMENT	TYPE	SYMBOL	Macro
ARROW TERMINATOR LEFT (Place on ByLevel of Text Element Relative Toggle "ON")	C = ARRWLG		**Place Delineator**
ARROW TERMINATOR RIGHT (Place on ByLevel of Text Element Relative Toggle "ON")	C = ARRWRG		**Place Delineator**
LINE TERMINATOR@POINT G = Graphic type cell	C =ARRLT		**Place Delineator**
LINE TERMINATOR@POINT G = Graphic type cell	C =ARRRT		**Place Delineator**
BAR SCALE 1" = 20'	C = BS20		**Place Bar Scale**
BAR SCALE 1" = 30'	C = BS30		**Place Bar Scale**
BAR SCALE 1" = 40'	C = BS40		**Place Bar Scale**
BAR SCALE 1" = 50'	C = BS50		**Place Bar Scale**
BAR SCALE 1" = 100'	C = BS100		**Place Bar Scale**
BAR SCALE 1" = 200'	C = BS200		**Place Bar Scale**
BAR SCALE 1" = 400'	C = BS400		**Place Bar Scale**
BASELINE CURVE DATA BOX (Used with GEOPAK Table Tutorial)	C = BLBOX		
BASELINE SYMBOL	C = BL		

ELEMENT	TYPE	SYMBOL	Macro
CENTERLINE SYMBOL	C = CL		
CONCRETE MONUMENT OPEN	C = MONSQ		
CONCRETE MONUMENT SOLID	C = MONSQS		
CONCRETE R/W MONUMENT (R/W MONUMENTATION MAP)	C = MON		
COORDINATE DATA BOX (Used with GEOPAK Table Tutorial)	C = COORD		
CURVE DATA BOX (Used with GEOPAK Table Tutorial)	C = CURBOX		
CURVE DATA (English) (Used with GEOPAK Table Tutorial)	C = CDATA		
NORTH ARROW	C = NOARR		
PARCEL BUBBLE 100	C = PB100		
PARCEL BUBBLE 700	C = PB700		
PARCEL BUBBLE 800	C = PB800		
PARCEL BUBBLE 900	C = PB900		
PERMANENT R/W MONUMENT (R/W MONUMENTATION MAP)	C = PRWM		
PROPERTY LINE HOOK	C= PLHOOK		

ELEMENT	TYPE	SYMBOL	Macro
PROPERTY LINE HOOK	C= PLHTOP		
PROPERTY LINE HOOK	C =PLHBOT		
PROPERTY LINE SYMBOL	C = PL		
ROD MONUMENT OPEN	C = MONRD		
ROD MONUMENT SOLID	C = MONRDS		
SEGMENTED CURVE CHORD DIST./BEARING (Used with GEOPAK Table Tutorial)	C = SEGCUR	Δ = L = R = C.D. = C.B. =	
SPRING LINE (Place on Symbology of Assoc. Element)	C=SPRING		**Place SpringLine**

9.7 LEVEL AND SYMBOLOGY STANDARDS

Refer to the Standard Rule Tables in Chapter 4 of this Handbook for the listing of Right of Way (RWENG10) elements and their symbologies. The list of elements shown may not contain all of the elements that appear within a Right of Way map, as this list would be extensive. The elements shown are those that are required for specific types of Right of Way maps.

All Right of Way Levels are 'Critical' levels, meaning that the attributes: Level, Color, Style and Weight will all be checked for Quality Control (QC) compliancy. The exception is for Text levels, where the Style attribute will be set as Non-Critical and excluded from compliance checking.

Note *R/W elements must match the standard symbology for the R/W file they reside in. Non-R/W elements will be drawn in the symbology of their intended file type. For example: edge of pavement drawn in RWDETL01.DGN would be given the symbology as if drawn for DSGNRD01.DGN. All R/W level symbologies must use ByLevel settings.*

9.8 R/W CADD WORKSPACE

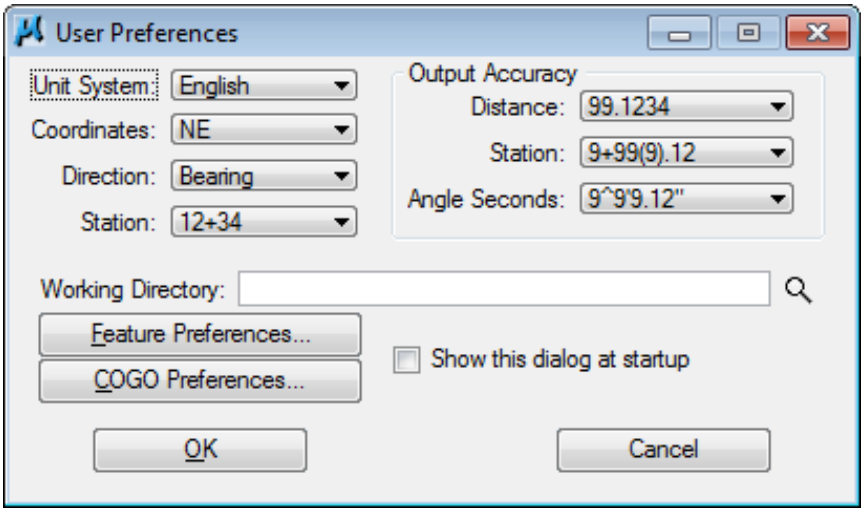
FDOT CADD Software for MicroStation, as outlined in Chapter 2 of this handbook, delivers the FDOT Menu with many tools which incorporates the R/W Mapping CADD Standards, Cell Libraries, Custom Line Styles, Notes, etc. to assist Right of Way Mapping in the plans preparation of FDOT projects. FDOT Right of Way Mapping training manual is also provided to outline these tools and can be accessed from the Engineering / CADD Systems Office:

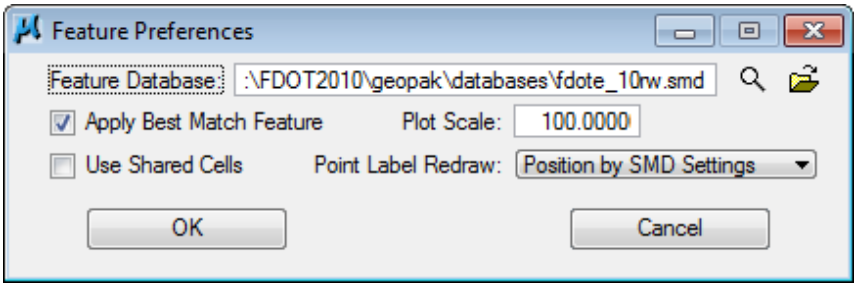
http://www.dot.state.fl.us/ecso/downloads/documentation/RightofWayMapping/RightofWayMapping.shtm

9.9 GEOPAK FEATURE PREFERENCES

GEOPAK COGO uses feature attributes to plot elements in the design file. These Feature attributes are defined in a Survey Database (database fdote_10rw.smd), and should automatically be attached when using the FDOT2010 software. The GEOPAK configuration variable GPK_SURVMNGR_SMDFILE controls this.

The user can verify which database is being used or change to another database from the GEOPAK User Pre**ferences** dialog. This dialog can be accessed by selecting form the Applications menu **GEOPAK > Road/Site/Survey > Preferences**. Select the **Feature Preference…** button to display the **Feature Preference** dialog shown below.





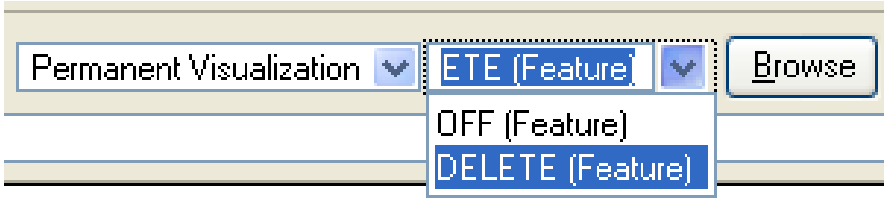
The Feature Preference dialog shows the attached .smd file. A different working database can be located and attached if desired.

Plot Scale defines the scale at which linear elements such as custom line styles and cells will be plotted. It is important that the user set this prior to plotting elements into the design file project from the Coordinate Geometry dialog.

There are three **Visualization** settings on the Coordinate Geometry dialog used to control plotting of feature elements into the design file:

- ✓ *Disable Visualization* – When active no elements are visualized during the COGO session.
- ✓ *Temporary Visualization* – When active elements utilizing the feature symbology (or default symbology if no feature is present) are displayed during the COGO session.
- ✓ *Permanent Visualization* – When active elements utilizing the feature symbology (or default symbology if no feature is present) are displayed during the COGO session. Upon exiting the COGO session the elements remain in the design file.

There are two **Feature** settings on the Coordinate Geometry dialog used to control plotting of feature elements into the design file:



- **OFF (Feature)** When the Off option is set, any element subsequently stored does not have a Feature attached.
- **Delete (Feature)** The Delete Feature deletes any feature on subsequent commands, or does not attach features to newly stored elements.

Table of Contents

CHAPTER 10 - ENVIRONMENTAL MANAGEMENT STANDARDS 10-1

10.1 GENERAL 10-1
10.2 STANDARD FILE NAMES 10-1

THIS PAGE WAS LEFT BLANK INTENTIONALLY.

Chapter 10 - ENVIRONMENTAL MANAGEMENT STANDARDS

CADD Production Criteria Handbook

10.1 GENERAL

The Environmental Management Office (EMO) has complete responsibility for the project development phase. The intent is to give latitude and discretion in performing project analysis, project development, engineering, public involvement and environmental required tasks while maintaining the necessary level of Florida Department of Transportation (FDOT) Computer Aided Design and Drafting (CADD) standards for the products of EMO.

The Project Development and Environmental Clearance process is oriented to presenting the project to the permitting and regulatory agencies, politicians and the general public in a format which is clear and easy to understand. Production plans do not become important until after Location and Design Concept Acceptance is obtained. The goal is to create a presentation that is useful to the plans development process, but public presentation is the primary concern.

10.2 STANDARD FILE NAMES

FDOT utilizes standard naming conventions for all of its files. Automation implemented in various tools provided by FDOT in the CADD Software delivery is dependent on this naming convention being met. More importantly, the naming convention confers data information to the downstream customer.

Standard file names should follow this format: AAAABB##.ex*t*

Where **AAAA** = *abbreviated file description*, **BB** = *Discipline Denotation, ## =Sequence number.*

Note *See Chapter 5 for more information about file naming.*

The following table defines the EMO File Name Standards in regards to FDOT Projects with the understanding that each file name will include sequential numbering. Standard Model names are also provided in the following table.

Note *See Chapter 4 for the symbology standards for each applicable Standard Rule.*

File Type	Critical File	File Name	Model Name	File Description	Standard Rule	MicroStation Seed File	Civil 3D Template File
Borders & Sheets		BDBREM*	default	Border Sheet Reference File for Bridge Hydraulic Sheet	planrd	fdotseed2d.dgn	
Borders & Sheets		BDPLEM*	default	Border Sheet Reference File for Plan Sheet	planrd	fdotseed2d.dgn	
Borders & Sheets		BDPPEM*	default	Border Sheet Reference File for Plan & Profile Sheet	plprrd	fdotseed2d.dgn	
Borders & Sheets		BDPREM*	default	Border Sheet Reference File for Profile Sheet	plprrd	fdotseed2d.dgn	
Borders & Sheets	X	BDXSEM*	rdxsrd	Border Sheet Reference File for Cross-Section Sheet	rdxsrd	fdotseedxs.dgn	
Borders & Sheets		GNNTEM*	default	General Notes	planrd	fdotseed2d.dgn	genplanrd.dwt
Borders & Sheets		LDPREM*	default	Lateral Ditch Plan / Profile Sheet	plprrd	fdotseed2d.dgn	plprrd.dwt
Borders & Sheets		PLANEM*	default	Plan Sheet	planrd	fdotseed2d.dgn	SHPLAN.dwt
Borders & Sheets		PLAYEM*	default	Project Layout Sheets	planrd	fdotseed2d.dgn	planrd.dwt
Borders & Sheets		PLPREM*	default	Plan & Profile Sheets	plprrd	fdotseed2d.dgn	SHPlanProfStd.dwt

File Type	Critical File	File Name	Model Name	File Description	Standard Rule	MicroStation Seed File	Civil 3D Template File
Borders & Sheets		PRDSEM*	default	Project Profile Layout	planrd	fdotseed2d.dgn	planrd.dwt
Borders & Sheets		PROFEM*	default	Profile Sheets	plprrd	fdotseed2d.dgn	SHProfile.dwt
Clipping		CLIPEM*	default	Clip Borders	cliprd	fdotseed2d.dgn	cliprd.dwt
Clipping		MTPLEM*	default	Motif file for plan sheets	planrd	fdotseed2d.dgn	planrd.dwt
Clipping		MTPREM*	default	Motif file for profile sheets	plprrd	fdotseed2d.dgn	planrd.dwt
Cross Sections	X	LDXSEM*	rdxsrd Rdxsrd Pattrd Xsshrd	Lateral Ditch Cross-Sections Lateral Ditch Cross-Sections Lateral Ditch Pattern Lines Lateral Ditch Shapes	rdxsrd	fdotseedxs.dgn	rdxsrd.dwt
Cross Sections	X	PDXSEM*	Rdxsrd_shg Rdxsrd Pattrd Xsshrd	Lateral Ditch Cross Section Sheets Pond Cross-Sections Pond Pattern Lines Pond Shapes	pdxsrd	fdotseedxs.dgn	pdxsrd.dwt
Cross Sections	X	RDXSEM*	Rdxsrd_shg Rdxsrd Pattrd Xsshrd	Pond Cross Section Sheets Roadway Cross-Sections Roadway Pattern Lines Roadway Shapes	rdxsrd	fdotseedxs.dgn	rdxsrd.dwt
Existing DTM		GDTMEM*	default	Digital Terrain Model / TIN Model - 3D	dtmrd	fdotseed3d.dgn	dtmrd.dwt
Existing Topography		TOPOEM*	default	Topography-Existing (Utility & Drainage not included)	topord	fdotseed2d.dgn	topord.dwt
Key Sheets		KEYSEM*	default	Key Sheet	keysht	fdotseedkeymap.dgn	keysht.dwt
Project Network Control		PNCSEM*	default	Survey Project Network Control Sheets	planrd	fdotseed2d.dgn	ctlsrd.dwt
Proposed Design		ALGNEM*	algnrd	Alignment Layout	algnrd	fdotseed2d.dgn	algnrd.dwt
Proposed Design		BKSWEM*	default	Back of Sidewalk Profiles	plprrd	fdotseed2d.dgn	plprrd.dwt
Proposed Design		CURCEM*	default	Curve or Coordinate Data Sheet	planrd	fdotseed2d.dgn	genplanrd.dwt
Proposed Design	X	DSGNEM*	default	Proposed Design	dsgnrd	fdotseed2d.dgn	dsgnrd.dwt
Proposed Design		DSPFEM*	default	Proposed Profile	plprrd	fdotseed2d.dgn	plprrd.dwt
Proposed Design		GCTREM*	default	Contours 2D	dtmrd	fdotseed2d.dgn	dtmrd.dwt
Proposed Design		INTDEM*	default	Intersection/Interchange Details	planrd	fdotseed2d.dgn	planrd.dwt
Proposed Design		INTPEM*	default	Intersection/Interchange Profiles	plprrd	fdotseed2d.dgn	plprrd.dwt
Proposed Design		MITGEM*	default	Mitigation Areas	planrd	fdotseed2d.dgn	planrd.dwt
Proposed Design		PDPLEM*	default	Pond Design	drprrd	fdotseed2d.dgn	drprrd.dwt
Proposed Design	X	QTDSEM*	default	Quantity Computation Shapes/Calculations	qtdsrd	fdotseed2d.dgn	qtdsrd.dwt
Proposed Design	X	QUANEM*	default	Quantity Computation Details	qtdsrd	fdotseed2d.dgn	qtdsrd.dwt

File Type	Critical File	File Name	Model Name	File Description	Standard Rule	MicroStation Seed File	Civil 3D Template File
Proposed Design		RWDTEM*	default	Right of Way Details for Roadway	rwdtrd	fdotseed2d.dgn	rwdrd.dwt
Proposed Design		SCGREM*	default	Selective Clearing & Grubbing Sheet	planrd	fdotseed2d.dgn	planrd.dwt
Proposed Design		SIGNEM*	default	Digital Signatures (Multi)	open	fdotseed2d.dgn	digitalsignature.dwt
Proposed Design		SWPPEM*	default	Storm Water Pollution Prevention Plan	planrd	fdotseed2d.dgn	planrd.dwt
Proposed Design		TEXTEM*	default	Text Labels & Miscellaneous Descriptions	planrd	fdotseed2d.dgn	
Proposed Design		WETLEM*	default	Wetlands Delineation Sheet	planrd	fdotseed2d.dgn	planrd.dwt
Special Details		SPDTEM*	default	Special Details Sheet	open	fdotseed2d.dgn	spdtrd.dwt
Summary Boxes / Tables		BRHYEM*	default	Bridge Hydraulics Recommendation Sheet	planrd	fdotseed2d.dgn	planrd.dwt
Summary Boxes / Tables		BXCLEM*	default	Box Culvert Wingwall Design & Special Details	drdtrd	fdotseed2d.dgn	drdtrd.dwt
Summary Boxes / Tables		CESSEM*	default	Summary of Pay Item Sheets	planrd	fdotseed2d.dgn	genplanrd.dwt
Summary Boxes / Tables		SUMQEM*	default	Summary of Quantities Sheets	planrd	fdotseed2d.dgn	genplanrd.dwt
Traffic Control		TCDSEM*	default	Traffic Control Design	tcdsrd	fdotseed2d.dgn	tcdsrd.dwt
Traffic Control		TCDTEM*	default	Traffic Control Detail Sheet	tcdsrd	fdotseed2d.dgn	tcdsrd.dwt
Traffic Control		TCGNEM*	default	Traffic Control General Note Sheets	planrd	fdotseed2d.dgn	genplanrd.dwt
Traffic Control		TCPLEM*	default	Traffic Control Plan Sheets	tcdsrd	fdotseed2d.dgn	tcdsrd.dwt
Traffic Control		TCTYEM*	default	Traffic Control Typical Section Sheets	tcdsrd	fdotseed2d.dgn	tcdsrd.dwt
Typical Sections		TYPDEM*	default	Typical Data Sheet	typdrd	fdotseed2d.dgn	typdrd.dwt
Typical Sections		TYPSEM*	default	Typical Section Sheets & Details	typsrd	fdotseed2d.dgn	typsrd.dwt
Utilities		UTADEM*	default	Utility Adjustment Sheets	utadrd	fdotseed2d.dgn	utadrd.dwt
Utilities		UTEXEM*	default	Utilities - Existing	utexrd	fdotseed2d.dgn	utexrd.dwt
Utilities	X	UTPREM*	default	Utilities - Proposed	utprrd	fdotseed2d.dgn	utprrd.dwt
Verified Utilities		SBVHEM*	default	Summary of Verified Utilities (2D)	planrd	fdotseed2d.dgn	
Verified Utilities		UTVHEM*	default	Summary of Verified Utilities (2D)	planrd	fdotseed2d.dgn	genplanrd.dwt

THIS PAGE WAS LEFT BLANK INTENTIONALLY.

Table of Contents

CHAPTER 11 - SURVEY STANDARDS 11-1

11.1 GENERAL 11-1
11.2 STANDARD FILE NAMES 11-1
11.3 DATA FILES CREATED BY SURVEY 11-2
11.4 RESOURCE FILES 11-2
11.4.1 CAiCE Feature Table 11-2
11.4.2 CAiCE Cell Library 11-2
11.4.3 CAiCE Translation Table 11-2
11.4.4 Additional CAiCE Tables and Cell Libraries 11-3
11.4.5 CAiCE Special Characters 11-3
11.5 GEOPAK SURVEY & DATA ACQUISITION 11-4
11.6 SURVEYING DATA 11-4
11.7 LEVEL AND SYMBOLOGY STANDARDS 11-4
11.8 COUNTY MAPPING 11-5

THIS PAGE WAS LEFT BLANK INTENTIONALLY.

Chapter 11 - SURVEY STANDARDS

CADD Production Criteria Handbook

11.1 GENERAL

This chapter will describe the minimum CADD requirements for Survey operations.

11.2 STANDARD FILE NAMES

FDOT utilizes standard naming conventions for all of its files. Automation implemented in various tools provided by FDOT in the CADD Software delivery is dependent on this naming convention being met. More importantly, the naming convention confers data information to the downstream customer.

Standard file names should follow this format: AAAABB##.ex*t*

Where **AAAA** = *abbreviated file description*, **BB** = *Discipline Denotation, ## =Sequence number.*

Note *See Chapter 5 for more information about file naming.*

The following table defines the Survey File Name Standards in regards to FDOT Projects with the understanding that each file name will include sequential numbering. Standard Model names are also provided, however, it is not mandatory to use more than the default model, with the exception of those listed in this table.

Note *See Chapter 4 for the symbology standards for each applicable Standard Rule.*

File Type	Critical File	File Name	Model Name	File Description	Standard Rule	MicroStation Seed File	Civil 3D Template File
Drainage	X	DREXRD*	default	Drainage Structures - Existing	drexrd	fdotseed2d.dgn	drexrd.dwt
Existing DTM		GDTMRD*	default	Digital Terrain Model / TIN Model - 3D	dtmrd	fdotseed3d.dgn	dtmrd.dwt
Existing Topography	X	TOPORD*	default	Topography - Existing	topord	fdotseed2d.dgn	topord.dwt
Existing Topography		TREERD*	default	Tree Survey Sheet	topord	fdotseed2d.dgn	topord.dwt
Existing Utilities	X	UTEXRD*	default	Utilities - Existing	utexrd	fdotseed2d.dgn	utexrd.dwt
Project Network Control		CTLSRD*	default	Survey Project Network Control Sheets	planrd	fdotseed2d.dgn	ctlsrd.dwt
Survey Development		SURVRD*	default	Survey Development Model	open	fdotseed3d.dgn	survey.dwt
Verified Utilities	X	UTVHRD*	default	Survey of Verified Utilities (3D version of UTEXRD.dgn)	utexrd	fdotseed3d.dgn	utexrd.dwt

11.3 DATA FILES CREATED BY SURVEY

Additional geometry input files are also created for delivery to design. For example, files of existing profiles, chains, points, etc. All data delivered to FDOT, including necessary directories and survey files, should be placed under the \Survey discipline folder, which the FDOT standard directory structure includes for this purpose. Additional sub-directories may be created under the \Survey discipline folder to segregate and organize data.

For Example: the case where a CAiCE project is placed within the project directory structure under the \Survey discipline folder for delivery.

Note *See Chapter 5 for requirements for creating additional sub-folders in the project directory structure.*

11.4 RESOURCE FILES

CAiCE and GEOPAK use a feature table to look-up appropriate element symbology for given objects, defined by their "feature" found in the survey. Civil 3D uses similar technology.

For CAiCE, the feature table is found in the directory named ***x:\FDOT2010\CAiCE\FTB\,*** where "***x***" is the workstation drive letter. The naming convention for this table includes "E" for English units and "10" for the 2010 standards.

11.4.1 CAiCE FEATURE TABLE

The CAiCE feature table id named ***FDOTE_10.ftb*** that is required to correlate the level numbers (200+ through 9xxx) used in CAiCE to the level names corresponding to the MicroStation DGN library file. This table is placed in the \CAiCE\FTB\ directory.

A corresponding feature table called ***FDOTE_10.ftm*** is also loaded to the x:\FDOT2010\CAiCE\FTB\ directory to control symbology on alignment chains (Geometry Chains with stationing). This table is used by the *Settings > Object Display >Geometry Chains* command in CAiCE to control the proper symbology of alignment stationing, station tics, and station labels based upon scale.

Note *The name of the **.ftm** feature table must match the name of the active **.ftb** feature table in use during a CAiCE session.*

- **Feature List Files**

Feature List files, ***FDOTTOPO.lis*****,** ***FDOTDran.lis*****, and** ***FDOTUtil.lis*****,** are also installed into the x:\FDOT2010\CAiCE\FTB\ directory to assist the user in creating the CAiCE screen graphics containing the appropriate data for producing the three typical graphics files required by design, ***TOPORD00.dgn*****,** ***DREXRD00.dgn*****, and** ***UTEXRD00.dgn*****.** These List files are listings of the feature codes that belong in the respective design files. Consult your CAiCE documentation on the use of List files.

Note *An FDOT CAiCE application, Theme Viewer, can accomplish a similar function to using CAiCE list files.*

11.4.2 CAiCE CELL LIBRARY

MicroStation Cell libraries cannot be used or attached by CAiCE directly. The MicroStation cell library is translated to CAiCE's own version of a cell library (*.CCL versus *.CEL, hence **SYENG10.ccl** and **SURVEY10.ccl**).

11.4.3 CAiCE TRANSLATION TABLE

A CAiCE Translation Table, ***Edgntype.tbl***, is another resource file provided for CAiCE that maps CAiCE line styles to MicroStation custom line styles. This table is in the FDOT10 Software Install at the x:\FDOT2010\CAiCE\DGN\ subdirectory.

Note *To have compatibility with MicroStation's long name cells and levels, two files, DGNCell.TBL and DGNLevel.tbl, must reside under your \CAiCE\DGN\V8 directory.*

11.4.4 ADDITIONAL CAiCE TABLES AND CELL LIBRARIES

Additional CAiCE feature tables and cell libraries are also provided for existing topography files, created for Right-of-Way mapping purposes. Mapping uses additional consolidation of certain monument symbols and has other symbolization requirements. The tables and cell libraries included are:

- **FDOTE_10RW.FTB**

  Feature table containing the topography features used in ROW Mapping

- **FDOTE_10RW.FTM**

  Corresponding table for controlling alignment / chain symbology and bearing / distance chain labeling (attaches automatically when FDOTE_80RW.FTB is attached)

- **Survey10.CCL**

  CAiCE format of the cell library for use in ROW mapping

- **Survey10.CEL**

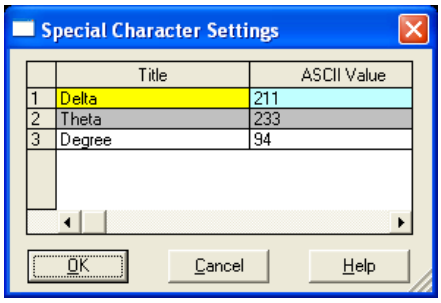
  MicroStation format of the topo cell library for use in ROW mapping

11.4.5 CAiCE SPECIAL CHARACTERS

Note *CAiCE does not support True Type Fonts. Fonts 48 & 58 used by CAiCE will have to be manually replaced by True Type Fonts in MicroStation if the CDG2V8 Macro is used for importing CAiCE data.*

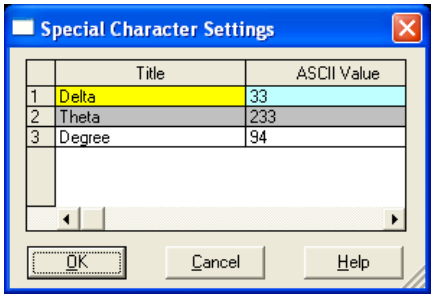
- **CAiCE font 48 and translating to MicroStation**

  Font 48 does not use the standard ASCII table for all special characters. In particular, the degree symbol " ° " for MicroStation requires that CAiCE place the hat symbol " ^ " in CAiCE text strings so MicroStation will look correct when data is translated to MicroStation graphics. To force CAiCE to substitute the " ^ " for the degree " ° ", CAiCE needs to be set by selecting the menu options: *Settings* > *Special Characters* and set the ASCII value of 94 to represent degrees as shown in the figure to the right.



- **Right of Way project font 58 in MicroStation.**

  If exporting to a Right of Way map, CAiCE needs to be set by selecting the menu items: *Settings* > *Special Characters* and set the ASCII value 33 to the Delta symbol as shown in the figure to the right.



11.5 GEOPAK SURVEY & DATA ACQUISITION

For GEOPAK, the Survey application uses a feature table called *FDOTE_10.smd*. This feature table is installed into the *x:\FDOT2010\geopak\databases* directory by the FDOT2010 Software Install routine ('x' is the drive letter where the FDOT2010 software is installed). The *FDOTE_10.smd* should be used when processing field measurement .OBS files, importing CAiCE KCP files, reading GEOPAK Input files and visualizing features with the Survey Display dialogue box or the COGO Navigator. The *FDOTE_10RW.smd* feature table is the Right of Way counterpart feature table and should be used when importing or visualizing Right of Way features or products such as the *TOPORW.dgn* file.

Both GEOPAK and CAiCE use the similar cell libraries for survey graphics. The cell libraries (*SYENG.cel* for Roadway design and *SURVEY.cel* for Right of Way) should be referenced from the *x:\FDOT2010\RESOURCES\Cell* directory.

11.6 SURVEYING DATA

The FDOT Surveying Procedure, Topic 550-030-101A and the Surveying Handbook governs the requirements for survey procedure for FDOT projects.

The Surveying Handbook is available at:

http://www.dot.state.fl.us/surveyingandmapping/doc_pubs.shtm

Note *Civil 3D surveying deliverables must be developed within Civil 3D to be compatible with Autodesk workflows. Surfaces and Alignments are specific formats within Civil 3D. Point objects and figures (chains) are also specific to Civil 3D. Converting Surveying deliverable MicroStation DGN files to DWG or vice versa will not create an acceptable deliverable in the current workflows for either Bentley or Autodesk products.*

11.7 LEVEL AND SYMBOLOGY STANDARDS

Symbology Standards that apply to FDOT Projects are set up under a listing of Standard Level Names with specific ByLevel Color, Style and Weight attributes. These levels are grouped under specific Standard Rules which are associated to each valid Standard Filename of each Discipline for the purpose of performing the Quality Control check for FDOT Standard compliancy of each FDOT project design file. Section 11.2 of this chapter provides for the complete Standard File Name listing with associated Standard Rules.

Note *Refer to Chapter 4 CADD Standard Rules to review the each associated Standard Rule with allowable Levels and Symbology.*

11.8 COUNTY MAPPING

The production of County Maps is an internal function of the FDOT Surveying and Mapping Office. This document refers to the graphical symbology standards used for the production of those maps for reference. For information regarding file naming conventions and other standards in use during the production of FDOT County maps, contact the Geographic Mapping Office in the FDOT Surveying and Mapping Office at (850) 245-1555.

File Type	Description	Color	Line Style	Weight	Cell
All	Adjacent County and State Text				
All	Airport Names				
All	Airport Runways			6	
All	Airports Commercial				cscapt
All	Airports Commercial				cap
All	Airports Landing Strip or Private Airport				cslstp
All	Airports Landing Strip or Private Airport				ldarsp
All	Airports Military				csmfld
All	Airports Military				milffad
All	Backdrop	30			
All	Backdrop	60			
All	Bay				2
All	Bay Text				2
All	Bayou and Harbor etc				3
All	Bayou and Harbor etc Text				3
All	Boundary Section Lines (hidden)	31			
All	Bridges			0	
All	Bridges			1	
All	Bridges Interstate	1			
All	Bridges and Drawbridges County Highways	4			
All	Bridges and Drawbridges County Highways Text	8			
All	Bridges and Drawbridges Local Roads				
All	Bridges and Drawbridges Local Roads Text	18			
All	Bridges and Drawbridges State Highways	3			
All	Bridges and Drawbridges State Highways Text	7			
All	Bridges and Drawbridges Toll Roads	5			
All	Bridges and Drawbridges Toll Roads Text	5			
All	Bridges and Drawbridges US Highways	2			
All	Bridges and Drawbridges US Highways Text	6			
All	Bridges Interstate Text	4			
All	Cities Incorporated Area			0	
All	Cities Incorporated Linear Boundaries			1	
All	City Streets			1	
All	Coastal Waterway				csicw
All	Coastal Waterway Text				10
All	College or University	71			
All	College or University Text	30			8
All	Communities and Subdivisions Names without Post Office				3
All	Communities Names with Post Office				2
All	Connecting Roads			2	
All	Coordinate ticks Lat Longs				csotic
All	Coordinate ticks State Plane				csstic
All	County Boundary		7	6	
All	County Parks	70			
All	County Parks Text	148			10
All	County Roads Related Text				
All	County Route Divided Highway Outline and Fill				

File Type	Description	Color	Line Style	Weight	Cell
All	County Routes Highway Center Lines			3	
All	County Routes Ramps			2	
All	County Seat				cscose
All	County Seat Names			4	
All	County Seat Names			6	
All	Culture			0	
All	Culture			1	
All	Culture			2	
All	Culture Text				1
All	Cut Border				
All	Extended Township Lines	43	3	2	
All	Forbes Purchase		3	3	
All	Forbes Purchase Section lines		3	0	
All	Forbes Purchase Township and Range Lines		3	2	
All	Geographic Features Text			1	
All	Heliports				csheli
All	Intermittent Ponds				1
All	Intermittent Ponds Text				8
All	Interstate Divided Highway Outline and Fill				
All	Interstate Highway Center Lines			3	
All	Interstate Ramps			2	
All	Interstates Related Text				
All	Islands				
All	Islands Text Coastal (Keys etc)			2	
All	Islands Text Inland (Hammocks and Ridges etc)				1
All	Lakes and Ponds				
All	Lakes and Ponds Text				9
All	Land Grant Boundaries		4	0	
All	Legend				
All	Local Roads Divided Highway Outline and Fill				
All	Local Roads Improved	11		1	
All	Local Roads Paved	11		2	
All	Local Roads Related Cells				cslgf0
All	Local Roads Related Cells				cslgf1
All	Local Roads Related Cells				cslgf2
All	Local Roads Related Cells				cslgf3
All	Local Roads Related Cells				cslgf4
All	Local Roads Related Cells				csp1
All	Local Roads Related Cells				csp2
All	Local Roads Related Cells				cspnf1
All	Local Roads Related Cells				cspnf2
All	Local Roads Related Cells				cspsf1
All	Local Roads Related Cells				cspsf2
All	Local Roads Related Text				
All	Local Roads Unimproved	10		1	
All	Mangroves				mg
All	Mangroves				csman1
All	Mangroves				smg
All	Map Border				
All	Map Border Text and Cells				
All	Map Information Text and Cells				
All	Map Information Text and Cells				
All	Masks for Road Features				
All	Masks for Text				
All	Military Bases	66			
All	Military Bases Text	146			7

File Type	Description	Color	Line Style	Weight	Cell
All	Narrow Canals		5		
All	Narrow Canals		5		
All	Narrow Canals		5		
All	Narrow Canals Text				7
All	Narrow River Creek and Branch and Slough	12		1	
All	Narrow River Creek and Branch and Slough	12		1	
All	Narrow River Creek and Branch and Slough	12		1	
All	Narrow River Creek and Branch and Slough Text				6
All	National Forest	65			
All	National Forest Text	44			1
All	National Park	69			
All	National Park Text	44			2
All	National Wildlife Refuge and Preserve	75			
All	National Wildlife Refuge and Preserve Text	144			3
All	Ocean and Gulf				1
All	Ocean and Gulf Text				1
All	Other Incorporated Names			2	
All	Other Incorporated Names			3	
All	Other Survey Related Text				3
All	Planning Number Interstates				cssir1
All	Planning Number Interstates				cssir2
All	Planning Number Interstates				cssir3
All	Planning Number US Highways				cssus1
All	Planning Number US Highways				cssus2
All	Planning Number US Highways				cssus3
All	Planning Number US Highways				cssus1
All	Planning Number US Highways				cssus2
All	Planning Number US Highways				cssus3
All	Populations				1
All	Quad Borders				
All	Railroad Stations				csrsta
All	Railroads	3			
All	Railroads Text				
All	Road shields County Roads				cs1crs
All	Road shields County Roads				cs2crs
All	Road shields County Roads				cs3crs
All	Road shields County Roads				cs4crs
All	Road shields Interstates				cs1irs
All	Road shields Interstates				cs2irs
All	Road shields Interstates				cs3irs
All	Road shields State Highways				cs1srs
All	Road shields State Highways				cs2srs
All	Road shields State Highways				cs3srs
All	Road shields Toll roads				cs1trs
All	Road shields Toll roads				cs2trs
All	Road shields Toll roads				cs3trs
All	Road shields Toll roads				cstps
All	Road shields US Highways				cs1urs
All	Road shields US Highways				cs2urs
All	Road shields US Highways				cs3urs
All	Road shields US Highways Alternate				cs1usa
All	Road shields US Highways Alternate				cs2usa
All	Road shields US Highways Alternate				cs3usa
All	Road shields US Highways Business				cs1usb
All	Road shields US Highways Business				cs2usb
All	Road shields US Highways Business				cs3usb

File Type	Description	Color	Line Style	Weight	Cell
All	Seaplane facility				csseap
All	Section Lines		0	0	
All	Section Numbers				1
All	State Boundary		6	6	
All	State Capital				cscptl
All	State Forest	67			
All	State Forest Text	145			4
All	State Park	14			
All	State Park Text	145			5
All	State Prisons	124			
All	State Prisons Text	124			9
All	State Roads Related Text				
All	State Route Divided Highway Outline and Fill				
All	State Routes Highway Center Lines			3	
All	State Routes Ramps			2	
All	State Survey Lines		1	1	
All	State Wildlife Refuge and Preserve	72			
All	State Wildlife Refuge and Preserve	74			
All	State Wildlife Refuge and Preserve Text	147			6
All	Street Related Text				
All	Strip Mining Area	117			
All	Survey by Others		2	1	
All	Survey Correction Text within map				4
All	Swamps				sw3
All	Swamps	15			
All	Swamps Text	45			
All	Toll Divided Highway Outline and Fill				
All	Toll Highway Center Lines			3	
All	Toll Ramps			2	
All	Toll roads Related Text				
All	Town Centers				cscctr
All	Township and Range lines		0	2	
All	Township and Range Tics				csttic
All	Township and Range Text				2
All	Triangulation Station				cstria
All	Triangulation Station				trista
All	Triangulation Station Text	97			2
All	Uninventoried Roads and Features				
All	US Highways Related Text				
All	US Route Divided Highway Outline and Fill				
All	US Routes Highway Center Lines			3	
All	US Routes Ramps			2	
All	Wide Rivers and Canals	12		1	4
All	Wide Rivers and Canals Text				5
All	Wildlife Management Area Text	94			11

Table of Contents

CHAPTER 12 - DRAINAGE STANDARDS 12-1

12.1 GENERAL 12-1
12.2 STANDARD FILE NAMES 12-1
12.2.1 File Sharing and Merging 12-2
12.3 RESOURCE FILES 12-2
12.4 ENGINEERING DATA 12-3
12.5 PACKAGING 12-3

THIS PAGE WAS LEFT BLANK INTENTIONALLY.

Chapter 12 - DRAINAGE STANDARDS

CADD Production Criteria Handbook

12.1 GENERAL

The purpose of this chapter is to provide Computer Aided Design and Drafting (CADD) standards for Florida Department of Transportation (FDOT) projects generated by Roadway Design and Drainage Design. (See also Chapter 13 for Roadway Design)

12.2 STANDARD FILE NAMES

FDOT utilizes standard naming conventions for all of its files. Some of the automation implemented in various tools provided by FDOT depends on naming conventions being met. More importantly, the naming convention confers information to the downstream customer of the data.

Standard file names should follow this format: ***AAAABB##.ext***

Where **AAAA** = abbreviated file description, **BB** = Discipline Denotation, ## =*Sequence number.*

Note *Please see Chapter 5 of this document for more information.*

The following table defines the Drainage File Name Standards in regards to FDOT Projects with the understanding that each file name will include sequential numbering. For other standard file names refer to the Roadway Chapter, Chapter 13. Since most Drainage files are shared with Roadway, the two groups must coordinate the creation and ownership of these files. Standard Model names are also provided, however, it is not mandatory to use more than the default model, with the exception of those listed in this table.

Note *See Chapter 4 for the symbology standards for each applicable Standard Rule.*

File Type	Critical File	File Name	Model Name	File Description	Standard Rule	MicroStation Seed File	Civil 3D Template File
Borders & Sheets		BDDMRD*	default	Border Sheet Reference File for Drainage Map Sheet	planrd	fdotseed2d.dgn	
Borders & Sheets		LDPRRD*	default	Lateral Ditch Plan / Profile Sheet	plprrd	fdotseed2d.dgn	plprrd.dwt
Cross Sections	X	DRXSRD*	rdxsrd Pattrd Xsshrd Rdxsrd_shg	Drainage Structure Cross Sections Drainage Structure Pattern Lines Drainage Structure Shapes Drainage Structure Cross Section Sheets	drxsrd	fdotseedxs.dgn	drxsrd.dwt
Cross Sections	X	LDXSRD*	Rdxsrd Pattrd Xsshrd Rdxsrd_shg	Lateral Ditch XSections,Pattern Line & Shapes Lateral Ditch Pattern Lines Lateral Ditch Shapes Lateral Ditch Cross Section Sheets	rdxsrd	fdotseedxs.dgn	rdxsrd.dwt
Cross Sections	X	PDXSRD*	rdxsrd Pattrd Xsshrd Rdxsrd_shg	Pond Cross Sections Pond Pattern Lines Pond Shapes Pond Cross Section Sheets	pdxsrd	fdotseedxs.dgn	pdxsrd.dwt

File Type	Critical File	File Name	Model Name	File Description	Standard Rule	MicroStation Seed File	Civil 3D Template File
Drainage		DRDTRD*	default	Drainage Detail Sheet	drdtrd	fdotseed2d.dgn	drdtrd.dwt
Drainage		DREXRD*	default	Drainage Structures - Existing	drexrd	fdotseed2d.dgn	drexrd.dwt
Drainage		DRFLRD*	default	Drainage Flood Data Form	drprrd	fdotseed2d.dgn	drprrd.dwt
Drainage		DRMPRD*	default	Drainage Map	drmprd	fdotseed2d.dgn	drmprd.dwt
Drainage		DROMRD*	default	Drainage Optional Materials Tabulation	planrd	fdotseed2d.dgn	genplanrd.dwt
Drainage	X	DRPRRD*	default	Drainage Structures - Proposed	drprrd	fdotseed2d.dgn	drprrd.dwt
Proposed Design		PDPLRD*	default	Pond Design	drprrd	fdotseed2d.dgn	drprrd.dwt
Proposed Design		SWPPRD*	default	Storm Water Pollution Prevention Plan	plprrd	fdotseed2d.dgn	plprrd.dwt
Proposed Design		TEXTDR*	default	Text Labels & Miscellaneous Descriptions	planrd	fdotseed2d.dgn	
Proposed Design		WETLRD*	default	Wetlands Delineation for Drainage	planrd	fdotseed2d.dgn	planrd.dwt
Summary Boxes / Tables		BRHYRD*	default	Bridge Hydraulics Recommendation Sheet	planrd	fdotseed2d.dgn	planrd.dwt
Summary Boxes / Tables		BXCLRD*	default	Box Culvert Wingwall Design and Special Details	drdtrd	fdotseed2d.dgn	drdtrd.dwt
Summary Boxes / Tables		SUMDRD*	default	Summary of Drainage Structures	planrd	fdotseed2d.dgn	genplanrd.dwt

12.2.1 FILE SHARING AND MERGING

Every project utilizes the standard directory structure regardless of the project requirements. Data for each discipline is maintained in its sub-directory. **If a discipline requires information from another discipline, the needed file(s) shall be referenced from the original directory, not copied**.

12.3 RESOURCE FILES

Engineering CADD Systems Office (ECSO) provides software resources for CADD Drainage plans design using GEOPAK. However, some districts also utilize other Drainage applications, such as, Automated Storm Sewer Analysis and Design (ASAD). The Drainage databases produced by GEOPAK Drainage, ASAD or any other Drainage applications shall be delivered with the project upon completion.

12.4 ENGINEERING DATA

The Drainage discipline directory contains the additional sub-directory named **\eng_data.** This sub-directory was designated to contain the following:

- Image files of the plan sheets for the drainage design, if applicable
- Quality Control Reports
- Engineering Data output files
- Drainage Reports, including the drainage databases used in the development of the reports
- All supplemental hand calculations (scanned and saved in PDF format)
- Other data pertinent to the overall drainage design

12.5 PACKAGING

Listed below are files created by Roadway that are to be treated as Drainage files:

- Drainage Detail Sheets (DRDTRD00.DGN)
- Drainage Existing Structures (DREXRD00.DGN)
- Flood Data Form (DRFLRD00.DGN)
- Drainage Map (DRMPRD00.DGN - The Drainage Map, if required in the Plans Preparation Manual (PPM), shall be included in the final submittal – this is no longer at the discretion of the individual District.)
- Drainage Proposed Structures (DRPRRD00.DGN)
- Drainage Structure Cross Sections (DRXSRD00.DGN)
- Summary of Drainage Structures (SUMDRD00.DGN)

THIS PAGE WAS LEFT BLANK INTENTIONALLY.

Table of Contents

CHAPTER 13 - ROADWAY STANDARDS.....13-1

13.1 GENERAL 13-1
13.2 STANDARD FILE NAMES 13-1

THIS PAGE WAS LEFT BLANK INTENTIONALLY.

Chapter 13 - ROADWAY STANDARDS

CADD Production Criteria Handbook

13.1 GENERAL

Computer Aided Design and Drafting (CADD) standards for component plans are defined in their respective chapters. See the Florida Department of Transportation (FDOT) Plans Preparation Manual (PPM) Volume 2 for the Sequence of Plans Preparation and the definition of component plans.

13.2 STANDARD FILE NAMES

FDOT utilizes standard naming conventions for all of its files. Some of the automation implemented in various tools provided by FDOT depends on naming conventions being met. More importantly, the naming convention confers information to the downstream customer of the data.

Standard file names should follow this format: **AAAABB##.ext**

Where **AAAA** = *abbreviated file description*, **BB** = *Discipline Denotation, ## =Sequence number.*

Note *Please see Chapter 5 of the document for more information.*

The following table defines the Roadway File Name Standards in regards to FDOT Projects with the understanding that each file name will include sequential numbering. If these file types are used by other disciplines, the first four characters of the file name shall remain the same, but the fifth and sixth characters shall reflect the discipline name. Each discipline chapter details their own Standard File Names. Standard Model names are also provided, however, it is not mandatory to use more than the default model, with the exception of those listed in this table.

Note *See Chapter 4 for the symbology standards for each applicable Standard Rule.*

File Type	Critical File	File Name	Model Name	File Description	Standard Rule	MicroStation Seed File	Civil 3D Template File
Borders & Sheets		BDBRRD*	default	Border Sheet Reference File for Bridge Hydraulic Sheet	planrd	fdotseed2d.dgn	
Borders & Sheets		BDDMRD*	default	Border Sheet Reference File for Drainage Map Sheet	planrd	fdotseed2d.dgn	
Borders & Sheets		BDPLRD*	default	Border Sheet Reference File for Plan Sheet	planrd	fdotseed2d.dgn	
Borders & Sheets		BDPPRD*	default	Border Sheet Reference File for Plan/Profile Sheet	plprrd	fdotseed2d.dgn	
Borders & Sheets		BDPRRD*	default	Border Sheet Reference File for Profile Sheet	plprrd	fdotseed2d.dgn	
Borders & Sheets		BDXSRD*	rdxsrd	Border Sheet Reference File for Cross-Section Sheet	rdxsrd	fdotseedxs.dgn	
Borders & Sheets		GNNTRD*	default	General Notes Sheet	planrd	fdotseed2d.dgn	genplanrd.dwt
Borders & Sheets		LDPRRD*	default	Lateral Ditch Plan / Profile Sheet	plprrd	fdotseed2d.dgn	plprrd.dwt
Borders & Sheets		PLANRD*	default	Plan Sheet	planrd	fdotseed2d.dgn	SHPLAN.dwt
Borders & Sheets		PLAYRD*	default	Project Layout Sheets	planrd	fdotseed2d.dgn	planrd.dwt
Borders & Sheets		PLPRRD*	default	Plan & Profile Sheets	plprrd	fdotseed2d.dgn	SHPlanProfStd.dwt

File Type	Critical File	File Name	Model Name	File Description	Standard Rule	MicroStation Seed File	Civil 3D Template File
Borders & Sheets		PRDSRD*	default	Project Profile Layout	plprrd	fdotseed2d.dgn	plprrd.dwt
Borders & Sheets		PROFRD*	default	Profile Sheets	plprrd	fdotseed2d.dgn	SHProfile.dwt
Clipping		CLIPRD*	default	Clip Borders	cliprd	fdotseed2d.dgn	cliprd.dwt
Clipping		MTPLRD*	default	Motif file for plan sheets	planrd	fdotseed2d.dgn	planrd.dwt
Clipping		MTPRRD*	default	Motif file for profile sheets	plprrd	fdotseed2d.dgn	planrd.dwt
Cross Sections		AMGMRD*	default	Automated Machine Guidance Model (3D)	open	fdotseed3d.dgn	dtmrd.dwt
Cross Sections		GKLNRD*	default	Geopak Lines for Existing Features	topord	fdotseed2d.dgn	
Cross Sections		DRXSRD*	Rdxsrd Pattrd Xsshrd Rdxsrd_shg	Drainage Structure XSections,Pattern Lines & Shapes Drainage Structure Pattern Lines Drainage Structure Shapes Drainage Structure Cross Section Sheets	drxsrd	fdotseedxs.dgn	rdxsrd.dwt
Cross Sections	X	LDXSRD*	rdxsrd Pattrd Xsshrd Rdxsrd_shg	Lateral Ditch Cross-Sections Lateral Ditch Pattern Lines Lateral Ditch Shapes Lateral Ditch Cross Section Sheets	rdxsrd	fdotseedxs.dgn	rdxsrd.dwt
Cross Sections	X	PDXSRD*	Rdxsrd Pattrd Xsshrd Rdxsrd_shg	Pond XSections,Pattern Lines & Shapes Pond Pattern Lines Pond Shapes Pond Cross Section Sheets	pdxsrd	fdotseedxs.dgn	pdxsrd.dwt
Cross Sections	X	RDXSRD*	rdxsrd Pattrd Xsshrd Rdxsrd_shg	Roadway Cross-Sections Roadway Pattern Lines Roadway Shapes Roadway Cross Section Sheets	rdxsrd Pattrd Xsshrd Rdxsrd_shg	fdotseedxs.dgn	rdxsrd.dwt
Drainage		DRDTRD*	default	Drainage Detail Sheet	drdtrd	fdotseed2d.dgn	drdtrd.dwt
Drainage		DREXRD*	default	Drainage Structures - Existing	drexrd	fdotseed2d.dgn	drexrd.dwt
Drainage		DRFLRD*	default	Drainage Flood Data Form	drprrd	fdotseed2d.dgn	drprrd.dwt
Drainage		DRMPRD*	default	Drainage Map	drmprd	fdotseed2d.dgn	drmprd.dwt
Drainage		DROMRD*	default	Drainage Optional Materials Tabulation	planrd	fdotseed2d.dgn	genplanrd.dwt
Drainage	X	DRPRRD*	default	Drainage Structures - Proposed	drprrd	fdotseed2d.dgn	drprrd.dwt
Existing DTM		GDTMRD*	default	Digital Terrain Model / TIN Model - 3D	dtmrd	fdotseed3d.dgn	dtmrd.dwt
Existing Topography		TOPOEM*	default	Topography-Existing (Locations for Environmental Concerns)	topord	fdotseed2d.dgn	topord.dwt
Existing Topography	X	TOPORD*	default	Topography-Existing (Utility & Drainage not included)	topord	fdotseed2d.dgn	topord.dwt
Key Sheets		KEYSRD*	default	Key Sheet	keysht	fdotseedkeymap.dgn	keysht.dwt

File Type	Critical File	File Name	Model Name	File Description	Standard Rule	MicroStation Seed File	Civil 3D Template File
Project Network Control		CTLSRD*	default	Survey Project Network Control Sheets	planrd	fdotseed2d.dgn	ctlsrd.dwt
Proposed Design		ALGNRD*	algnrd	Alignment Layout	algnrd	fdotseed2d.dgn	algnrd.dwt
Proposed Design		BKSWRD*	default	Back of Sidewalk Profiles	plprrd	fdotseed2d.dgn	plprrd.dwt
Proposed Design	X	CORRRD*	default	Corridor Design Model	dsgnrd	fdotseed2d.dgn	dsgnrd.dwt
Proposed Design		CURCRD*	default	Curve or Coordinate Data Sheet	planrd	fdotseed2d.dgn	genplanrd.dwt
Proposed Design	X	DSGNRD*	default	Proposed Design	dsgnrd	fdotseed2d.dgn	dsgnrd.dwt
Proposed Design		DSPFRD*	default	Proposed Profile	plprrd	fdotseed2d.dgn	plprrd.dwt
Proposed Design		GCTRRD*	default	Contours 2D	dtmrd	fdotseed2d.dgn	dtmrd.dwt
Proposed Design		INTDRD*	default	Intersection/Interchange Details	planrd	fdotseed2d.dgn	planrd.dwt
Proposed Design		INTPRD*	default	Intersection/Interchange Profiles	plprrd	fdotseed2d.dgn	plprrd.dwt
Proposed Design		MITGRD*	default	Mitigation Areas	planrd	fdotseed2d.dgn	planrd.dwt
Proposed Design		PDPLRD*	default	Pond Design	drprrd	fdotseed2d.dgn	drprrd.dwt
Proposed Design	X	QTDSRD*	default	Quantity Computation Shapes/Calculations	qtdsrd	fdotseed2d.dgn	qtdsrd.dwt
Proposed Design	X	QUANRD*	default	Quantity Computation Details	qtdsrd	fdotseed2d.dgn	qtdsrd.dwt
Proposed Design		RWDTRD*	default	Right of Way Details for Roadway	rwdtrd	fdotseed2d.dgn	rwdrd.dwt
Proposed Design		SCGRRD*	default	Selective Clearing & Grubbing Sheet	planrd	fdotseed2d.dgn	planrd.dwt
Proposed Design		SIGNRD*	default	Digital Signatures (Multi)	open	fdotseed2d.dgn	digitalsignature.dwt
Proposed Design		SWPPRD*	default	Storm Water Pollution Prevention Plan	plprrd	fdotseed2d.dgn	plprrd.dwt
Proposed Design		TEXTDR*	default	Text Labels & Miscellaneous Descriptions	planrd	fdotseed2d.dgn	
Proposed Design		TEXTRD*	default	Text Labels & Miscellaneous Descriptions	planrd	fdotseed2d.dgn	
Proposed Design		WETLRD*	default	Wetlands Delineation Sheet	planrd	fdotseed2d.dgn	planrd.dwt
Special Details		CSINRD*	default	Concrete Slab Inventory	planrd	fdotseed2d.dgn	genplanrd.dwt
Special Details		SPDTRD*	default	Special Details Sheet	open	fdotseed2d.dgn	spdtrd.dwt
Summary Boxes / Tables		BRHYRD*	default	Bridge Hydraulics Recommendation Sheet	planrd	fdotseed2d.dgn	planrd.dwt
Summary Boxes / Tables		BXCLRD*	default	Box Culvert Wingwall Design & Special Details	drdtrd	fdotseed2d.dgn	drdtrd.dwt
Summary Boxes / Tables		CESSRD*	default	Summary of Pay Item Sheets	planrd	fdotseed2d.dgn	genplanrd.dwt
Summary Boxes / Tables		SUMDRD*	default	Summary of Drainage Structures	planrd	fdotseed2d.dgn	genplanrd.dwt

File Type	Critical File	File Name	Model Name	File Description	Standard Rule	MicroStation Seed File	Civil 3D Template File
Summary Boxes / Tables		SUMQRD*	default	Summary of Quantities Sheets	planrd	fdotseed2d.dgn	genplanrd.dwt
Traffic Control	X	TCDSRD*	default	Traffic Control Design	tcdsrd	fdotseed2d.dgn	tcdsrd.dwt
Traffic Control		TCDTRD*	default	Traffic Control Detail Sheet	tcdsrd	fdotseed2d.dgn	tcdsrd.dwt
Traffic Control		TCGNRD*	default	Traffic Control General Note Sheets	planrd	fdotseed2d.dgn	genplanrd.dwt
Traffic Control		TCPLRD*	default	Traffic Control Plan Sheets	tcdsrd	fdotseed2d.dgn	tcdsrd.dwt
Traffic Control		TCTYRD*	default	Traffic Control Typical Section Sheets	typsrd	fdotseed2d.dgn	typsrd.dwt
Typical Sections		TYPDRD*	default	Typical Data Sheet	typdrd	fdotseed2d.dgn	typdrd.dwt
Typical Sections		TYPSRD*	default	Typical Section Sheets & Details	typsrd	fdotseed2d.dgn	typsrd.dwt
Utilities		UTADRD*	default	Utility Adjustment Sheets	utadrd	fdotseed2d.dgn	utadrd.dwt
Utilities	X	UTEXRD*	default	Utilities - Existing	utexrd	fdotseed2d.dgn	utexrd.dwt
Utilities	X	UTPRRD*	default	Utilities - Proposed	utprrd	fdotseed2d.dgn	utprrd.dwt
Verified Utilities		SBVHRD*	default	Summary of Verified Utilities (2D)	planrd	fdotseed2d.dgn	genplanrd.dwt
Verified Utilities		UTVHRD*	default	Summary of Verified Utilities (2D)	planrd	fdotseed2d.dgn	genplanrd.dwt
Verified Utilities		UTVHRD*	default	Survey of Verified Utilities (3D version of utexrd.dgn)	utexrd	fdotseed3d.dgn	utexrd.dwt

Table of Contents

CHAPTER 14 - SIGNING & PAVEMENT MARKING STANDARDS 14-1

14.1 GENERAL 14-1
14.2 STANDARD FILE NAMES 14-1
14.3 SIGN DESIGN 14-2
14.4 GUIDSIGN 14-2
14.5 AUTOTURN 14-3

THIS PAGE WAS LEFT BLANK INTENTIONALLY.

Chapter 14 - SIGNING & PAVEMENT MARKING STANDARDS

CADD Production Criteria Handbook

14.1 GENERAL

Signing and Pavement Marking Plans are usually a component set of plans (see Chapter 13). However, if the Signing and Pavement Marking Plans are the lead plan set, then the standards set in Chapter 13, Roadway Standards, pertaining to elements that are specific to the lead plan set, shall apply to the Signing and Pavement Marking plan set (i.e., Traffic Control files and elements, preliminary estimate sheets, etc.)

Florida Department of Transportation (FDOT) Projects requiring minor Signing and Pavement Marking construction work may include these features detailed on sheets in the Roadway Plans. If this is the case, the Signing and Pavement Markings element symbology standards within this chapter shall still apply. However, an exception to the Standard Rules must be created and documented in the Roadway discipline journal file.

When prepared as component plans, they shall be assembled as a separate plan set complete with a key sheet, tabulation of quantities and all other relevant Signing and Pavement Marking sheets. The sheets shall be numbered consecutively, with sheet numbers prefixed by the letter "S".

14.2 STANDARD FILE NAMES

FDOT utilizes standard naming conventions for all of its files. Some of the automation implemented in various tools provided by FDOT depends on naming conventions being met. More importantly, the naming convention confers information to the downstream customer of the data.

Standard file names should follow this format: **AAAABB##.ext**

Where **AAAA** = *abbreviated file description*, **BB** = *Discipline Denotation, ## =Sequence number.*

Note *Please see Chapter 5 of this document for more information.*

The following table defines the Signing & Pavement Marking File Name Standards in regards to FDOT Projects with the understanding that each file name will include sequential numbering. Standard Model names are also provided, however, it is not mandatory to use more than the default model, with the exception of those listed in this table.

Note *See Chapter 4 for the symbology standards for each applicable Standard Rule.*

File Type	Critical File	File Name	Model Name	File Description	Standard Rule	MicroStation Seed File	Civil 3D Template File
Borders & Sheets		BDPLSP*	default	Border for Plan Sheets when sheet is referenced	planrd	fdotseed2d.dgn	
Borders & Sheets		BDXSSP*	rdxsrd	Border for Cross Section Sheet when sheet is referenced	rdxssp	fdotseedxs.dgn	
Borders & Sheets		GNNTSP*	default	General Notes	planrd	fdotseed2d.dgn	genplanrd.dwt
Borders & Sheets		PLANSP*	default	Plan Sheet	planrd	fdotseed2d.dgn	SHPLAN.dwt
Clipping		CLIPSP*	default	Clip Borders	cliprd	fdotseed2d.dgn	cliprd.dwt
Clipping		MTPLSP*	default	Motif file for plan sheets	planrd	fdotseed2d.dgn	planrd.dwt

File Type	Critical File	File Name	Model Name	File Description	Standard Rule	MicroStation Seed File	Civil 3D Template File
Clipping		MTPRSP*	default	Motif file for profile sheets	plprrd	fdotseed2d.dgn	planrd.dwt
Cross Sections	X	RDXSSP*	rdxsrd	Cross-Sections	rdxssp	fdotseedxs.dgn	rdxssp.dwt
Existing Topography		TOPOSP*	default	Topography - Existing	topord	fdotseed2d.dgn	topord.dwt
Key Sheets		KEYSSP*	default	Key Sheet	keysht	fdotseedkeymap.dgn	keysht.dwt
Proposed Design		AUTOSP*	default	AutoTurn Turning Radius Data	autosp	fdotseed2d.dgn	autosp.dwt
Proposed Design	X	DSGNSP*	default	Proposed Design	dsgnsp	fdotseed2d.dgn	dsgnsp.dwt
Proposed Design		SAPMSP*	default	Layout as a Typical Design or Passing Zone	dsgnsp	fdotseed2d.dgn	dsgnsp.dwt
Proposed Design		SIGNSP*	default	Digital Signatures (Multi)	open	fdotseed2d.dgn	digitalsignature.dwt
Proposed Design		TEXTSP*	default	Text Labels & Miscellaneous Descriptions	planrd	fdotseed2d.dgn	
Special Details		GSWKSP*	default	Guide Sign Work Sheet & Details	gswksp	fdotseed2d.dgn	gswksp.dwt
Special Details		MSARSP*	default	Mast Arm Detail for Signing	msarsp	fdotseed2d.dgn	msarsp.dwt
Special Details		SPDTSP*	default	Special Details - Miscellaneous	open	fdotseed2d.dgn	spdtrd.dwt
Special Details		SPSGSP*	default	Special Sign Details for Overhead	open	fdotseed2d.dgn	spdtrd.dwt
Summary Boxes / Tables		CESSSP*	default	Summary of Pay Item Sheets	planrd	fdotseed2d.dgn	genplanrd.dwt
Summary Boxes / Tables		TABQSP*	default	Tabulation of Quantity Sheets	planrd	fdotseed2d.dgn	genplanrd.dwt

14.3 SIGN DESIGN

The DrawSign Program is an application that draws sign panels and posts and determines the corresponding pay item of the assembly based on the wind load and post properties. The DrawSign application requires use of the GEOPAK and GEOPAK Design and Computation (D&C) Manager database (FDOT2010.ddb) to provide automated pay item association.

14.4 GUIDSIGN

GuidSIGN is the standard sign design software for FDOT. However, using GuidSIGN is not required and other sign design programs available in the industry may be used. FDOT Symbology Standards shall still be met regardless of the software used.

GuidSIGN is designed as a tool to create sign panels. Sign panels design and creation require two (2) separate files: GSWKSP*.dgn (DWG) for sign panel design and the worksheet and the DSGNSP*.dgn (DWG) file for sign panel placement on the project.. There is no limit to the number of sign panels that can be placed in a file. A particular effort was made to allow users to create sign panels with as little input as possible and with little or no knowledge of sign standards.

In addition to the GuidSIGN worksheet design file required for all non-standard sign designs by the Plans Preparation Manual, a DXF output of the sign, for use by a Sign Cutting Shop, shall be provided for creation of the sign panel.

14.5 AUTOTURN

AutoTURN is the standard turn radius design software for FDOT. However, using AutoTURN is not required. Other turn radius design software available in the industry may be used for designing the turn radius of road intersections. FDOT Symbology Standards shall still be met regardless of the software used.

AutoTURN is CADD based software that simulates low speed turning maneuvers for highway vehicles. AutoTURN operates in both AutoCAD and MicroStation environments. AutoTURN may be used to define vehicles and determine vehicle tire tracking and sweep paths. AutoTURN can be used in the design of road intersections, parking garages, loading ramps and the majority of vehicular facilities.

THIS PAGE WAS LEFT BLANK INTENTIONALLY.

Table of Contents

CHAPTER 15 - SIGNALS STANDARDS 15-1

15.1 GENERAL 15-1
15.2 STANDARD FILE NAMES 15-1

THIS PAGE WAS LEFT BLANK INTENTIONALLY.

Chapter 15 - SIGNALS STANDARDS

CADD Production Criteria Handbook

15.1 GENERAL

Signalization Plans are usually a component set of plans (see Chapter 13). However, if the Signalization Plans are the lead plan set, then the standards set in Chapter 13, Roadway Standards, pertaining to elements that are specific to the lead plan set shall apply to the Signalization plan set (i.e., Traffic Control files and elements, preliminary estimate sheets, etc.)

Florida Department of Transportation (FDOT) Projects requiring minor signalization construction work may include these features detailed on sheets in the Roadway Plans. If this is the case, the Signalization element symbology standards within this chapter shall still apply. However, an exception to the Standard Rules must be created and documented in the Roadway discipline journal file.

When prepared as component plans, they shall be assembled as a separate plan set complete with a key sheet, tabulation of quantities and all other relevant signalization sheets. The sheets shall be numbered consecutively, with sheet numbers prefixed by the letter "T". The Signalization Plans show the construction details, signal phasing and other relevant data.

15.2 STANDARD FILE NAMES

FDOT utilizes standard naming conventions for all of its files. Some of the automation implemented in various tools provided by FDOT depends on naming conventions being met. More importantly, the naming convention confers information to the downstream customer of the data.

Standard file names should follow this format: ***AAAABB##.ext***

Where AAAA = *abbreviated file description*, BB = *Discipline Denotation,* ## =S*equence number.*

Note Please see Chapter 5 of this document for more information.

The following table defines the Signals File Name Standards in regards to FDOT Projects with the understanding that each file name will include sequential numbering. Standard Model names are also provided, however, it is not mandatory to use more than the default model, with the exception of those listed in this table.

Note See Chapter 4 for the symbology standards for each applicable Standard Rule.

File Type	Critical File	File Name	Model Name	File Description	Standard Rule	MicroStation Seed File	Civil 3D Template File
Borders & Sheets		BDPLSG*	default	Border Sheet Reference File for Plan Sheets	planrd	fdotseed2d.dgn	
Borders & Sheets		GNNTSG*	default	General Notes Sheet	planrd	fdotseed2d.dgn	genplanrd.dwt
Borders & Sheets		PLANSG*	default	Plan Sheet	dsgnsg	fdotseed2d.dgn	dsgnsg.dwt
Clipping		CLIPSG*	default	Clip Borders	cliprd	fdotseed2d.dgn	cliprd.dwt
Clipping		MTPLSG*	default	Motif file for plan sheets	planrd	fdotseed2d.dgn	planrd.dwt
Clipping		MTPRSG*	default	Motif file for profile sheets	plprrd	fdotseed2d.dgn	planrd.dwt
Existing Topography		TOPOSG*	default	Topography - Existing	topord	fdotseed2d.dgn	topord.dwt
Key Sheets		KEYSSG*	default	Key Sheet	keysht	fdotseedkeymap.dgn	keysht.dwt

File Type	Critical File	File Name	Model Name	File Description	Standard Rule	MicroStation Seed File	Civil 3D Template File
Proposed Design	X	DSGNSG*	default	Proposed Design & Signal information	dsgnsg	fdotseed2d.dgn	dsgnsg.dwt
Proposed Design		SIGNSG*	default	Digital Signatures (Multi)	open	fdotseed2d.dgn	digitalsignature.dwt
Proposed Design		TEXTSG*	default	Text Labels & Miscellaneous Descriptions	planrd	fdotseed2d.dgn	
Special Details		GSWKSG*	default	Guide Sign Work Sheet & Details	gswksp	fdotseed2d.dgn	gswksp.dwt
Special Details		SSDTSG*	default	Special Details for Signs & Miscellaneous Items	dsgnsg	fdotseed2d.dgn	dsgnsg.dwt
Special Details		VHLPSG*	default	Special Loop Details & Instructions	dsgnsg	fdotseed2d.dgn	dsgnsg.dwt
Summary Boxes / Tables		CESSSG*	default	Summary of Pay Items	planrd	fdotseed2d.dgn	genplanrd.dwt
Summary Boxes / Tables		MSSGSG*	default	Mast Arm Detail & Tables	dsgnsg	fdotseed2d.dgn	dsgnsg.dwt
Summary Boxes / Tables		PLDTSG*	default	Pole Tabulation & Details for All Types	dsgnsg	fdotseed2d.dgn	dsgnsg.dwt
Summary Boxes / Tables		TABQSG*	default	Tabulation of Quantity Sheets	planrd	fdotseed2d.dgn	genplanrd.dwt

Note Symbology standards for guide signs, special signs and sign details as specified in Chapter 14 shall apply.

Table of Contents

CHAPTER 16 - HIGHWAY LIGHTING STANDARDS 16-1

16.1 GENERAL 16-1
16.2 STANDARD FILE NAMES 16-1
16.3 AGI32 LIGHTING SOFTWARE 16-2

THIS PAGE WAS LEFT BLANK INTENTIONALLY.

Chapter 16 - HIGHWAY LIGHTING STANDARDS

CADD Production Criteria Handbook

16.1 GENERAL

Highway Lighting Plans are usually a component set of plans (see Chapter 13). However, if the Highway Lighting Plans are the lead plan set, then the standards set in Chapter 13, Roadway Standards, pertaining to elements that are specific to the lead plan set shall apply to the Highway Lighting plan set (i.e., Traffic Control files and elements, preliminary estimate sheets, etc.)

When prepared as component plans, Highway Lighting Plans shall be assembled as a separate plan set complete with a key sheet, tabulation of quantities and all other relevant lighting sheets. The sheets shall be numbered consecutively, with sheet numbers prefixed by the letter "L".

16.2 STANDARD FILE NAMES

Florida Department of Transportation (FDOT) utilizes standard naming conventions for all of its files. Automation implemented in various tools provided by FDOT depends on this naming conventions being met. More importantly, the naming convention confers information to the downstream customer of the data.

Standard file names should follow this format: AAAABB##.ext

Where AAAA = *abbreviated file description*, BB = *Discipline Denotation,* ## =S*equence number.*

Note Please see Chapter 5 of this document for more information.

The following table defines the Lighting File Name Standards in regards to FDOT Projects with the understanding that each file name will include sequential numbering. Standard Model names are also provided, however, it is not mandatory to use more than the default model, with the exception of those listed in this table.

Note See Chapter 4 for the symbology standards for each applicable Standard Rule.

File Type	Critical File	File Name	Model Name	File Description	Standard Rule	MicroStation Seed File	Civil 3D Template File
Borders & Sheets		BDPLLT*	default	Border Sheet Plan	planrd	fdotseed2d.dgn	
Borders & Sheets		GNNTLT*	default	General Notes	planrd	fdotseed2d.dgn	genplanrd.dwt
Borders & Sheets		PLANLT*	default	Plan Sheet	planrd	fdotseed2d.dgn	SHPLAN.dwt
Clipping		CLIPLT*	default	Clip Borders	cliprd	fdotseed2d.dgn	cliprd.dwt
Clipping		MTPLLT*	default	Motif file for plan sheets	planrd	fdotseed2d.dgn	planrd.dwt
Clipping		MTPRLT*	default	Motif file for profile sheets	plprrd	fdotseed2d.dgn	planrd.dwt
Existing Topography		TOPOLT*	default	Topography - Existing	topord	fdotseed2d.dgn	topord.dwt
Key Sheets		KEYSLT*	default	Key Sheet	keysht	fdotseedkeymap.dgn	keysht.dwt
Proposed Design	X	DSGNLT*	default	Proposed Design	dsgnlt	fdotseed2d.dgn	dsgnlt.dwt
Proposed Design		SIGNLT*	default	Digital Signatures (Multi)	open	fdotseed2d.dgn	digitalsignature.dwt
Proposed Design		TEXTLT*	default	Text Labels & Miscellaneous Descriptions	planrd	fdotseed2d.dgn	

File Type	Critical File	File Name	Model Name	File Description	Standard Rule	MicroStation Seed File	Civil 3D Template File
Special Details		CNPLLT*	default	Special Pole Detail Sheets (All Types)	dsgnlt	fdotseed2d.dgn	dsgnlt.dwt
Special Details		JCDTLT*	default	Jacking Detail Sheet	open	fdotseed2d.dgn	spdtrd.dwt
Special Details		LUDTLT*	default	Luminare & Foundation Detail Sheet (All Types)	dsgnlt	fdotseed2d.dgn	dsgnlt.dwt
Special Details		SRPTLT*	default	Service Point Detail Sheets	open	fdotseed2d.dgn	spdtrd.dwt
Summary Boxes / Tables		CESSLT*	default	Summary of Pay Item Sheets	planrd	fdotseed2d.dgn	genplanrd.dwt
Summary Boxes / Tables		PLDTLT*	default	Pole Data Sheets	open	fdotseed2d.dgn	spdtrd.dwt
Summary Boxes / Tables		TABQLT*	default	Tabulation of Quantity Sheets	planrd	fdotseed2d.dgn	genplanrd.dwt

16.3 AGI32 LIGHTING SOFTWARE

AGI32 Lighting Software is the standard Lighting Design software for FDOT. However, using AGI32 is not required. Other Lighting design software available in the industry may be used for FDOT Lighting Design. If AGI32 is not used, FDOT Symbology Standards shall still be met to be compliant with Computer Aided Design and Drafting (CADD) Standard Rules and Electronic Plans Delivery.

Table of Contents

CHAPTER 17 - LANDSCAPE STANDARDS 17-1

17.1 GENERAL 17-1
17.2 STANDARD FILE NAMES 17-1

THIS PAGE WAS LEFT BLANK INTENTIONALLY.

Chapter 17 - LANDSCAPE STANDARDS

CADD Production Criteria Handbook

17.1 GENERAL

"Landscape" or landscaping" means any vegetation, mulches, orrigation systems and any site amenities, such as, street furniture, decorative paving, fences and lighting (excluding public utility street and area lighting). Landscape plans may be a component set of plans (see Chapter 13), or be prepared independently.

Florida Department of Transportation (FDOT) Projects with minor Landscaping may include these features on separate sheets in the roadway plans set or features may be detailed on the Roadway plans sheets.

When prepared as component plans, they shall be assembled as a separate plan set complete with a key sheet, tabulation of quantities and all other relevant Landscape sheets. The sheets shall be numbered consecutively with the sheet numbers prefixed by the letters "LD".

A complete set of Landscape plans can include the following:

1. Key Sheet
2. Tabulation of Quantities
3. Planting Sheets
4. Irrigation Layout
5. Details Sheet
6. Other relevant plan sheets as required Pay Items Notes, General Notes or Maintenance Notes and Schedules.

The components should be listed on the Roadway Key Sheet under the "Components of Contract Plan Sets" heading.

17.2 STANDARD FILE NAMES

FDOT utilizes standard naming conventions for all of its files. Some of the automation implemented in various tools provided by FDOT depends on naming conventions being met. More importantly, the naming convention confers information to the downstream customer of the data.

Standard file names should follow this format: **AAAABB##.ext**

Where **AAAA** = *abbreviated file description*, **BB** = *Discipline Denotation, ##* =*Sequence number.*

Note Please see Chapter 5 of this document for more information.

The following table defines the Landscaping File Name Standards in regards to FDOT Projects with the understanding that each file name will include sequential numbering. Standard Model names are also provided, however, it is not mandatory to use more than the default model, with the exception of those listed in this table.

Note See Chapter 4 for the symbology standards for each applicable Standard Rule.

File Type	Critical File	File Name	Model Name	File Description	Standard Rule	MicroStation Seed File	Civil 3D Template File
Borders & Sheets		BDPLLD*	default	Border Referencing for Sheet Plan	planrd	fdotseed2d.dgn	
Borders & Sheets		GNNTLD*	default	General Notes	planrd	fdotseed2d.dgn	genplanrd.dwt
Borders & Sheets		PLANLD*	default	Plan Sheet	planrd	fdotseed2d.dgn	SHPLAN.dwt
Borders & Sheets		PLAYLD*	default	Project Layout Sheet	planrd	fdotseed2d.dgn	planrd.dwt
Clipping		CLIPLD*	default	Clip Borders	cliprd	fdotseed2d.dgn	cliprd.dwt
Clipping		MTPLLD*	default	Motif file for plan sheets	planrd	fdotseed2d.dgn	planrd.dwt
Clipping		MTPRLD*	default	Motif file for profile sheets	plprrd	fdotseed2d.dgn	planrd.dwt
Existing Topography		TOPOLD*	default	Topography - Existing	topord	fdotseed2d.dgn	topord.dwt
Key Sheets		KEYSLD*	default	Key Sheet	keysht	fdotseedkeymap.dgn	keysht.dwt
Proposed Design	X	DSGNLD*	default	Proposed Landscape (Planting) Design	dsgnld	fdotseed2d.dgn	dsgnld.dwt
Proposed Design		HSDTLD*	default	Hardscape details	planrd	fdotseed2d.dgn	planrd.dwt
Proposed Design		IRRGLD*	default	Proposed Irrigation Design	irrgld	fdotseed2d.dgn	irrgld.dwt
Proposed Design		SIGNLD*	default	Digital Signatures (Multi)	open	fdotseed2d.dgn	digitalsignature.dwt
Proposed Design		TMOTLD*	default	Technical Maintenance Plan	dsgnld	fdotseed2d.dgn	dsgnld.dwt
Special Details		DETLLD*	default	Details	open	fdotseed2d.dgn	spdtrd.dwt
Special Details		GRDTLD*	default	Proposed Grading	planrd	fdotseed2d.dgn	planrd.dwt
Summary Boxes / Tables		CESSLD*	default	Summary of Pay Items	planrd	fdotseed2d.dgn	genplanrd.dwt
Summary Boxes / Tables		TABQLD*	default	Tabulation of Quantity Sheets	planrd	fdotseed2d.dgn	genplanrd.dwt

Note Hardscape Design files will use the same symbology standards as the Landscape Design file.

Table of Contents

CHAPTER 18 - STRUCTURES STANDARDS 18-1

18.1 GENERAL 18-1
18.2 STANDARD FILE NAMES 18-2
18.3 RESOURCE FILES 18-12
18.4 ENGINEERING DATA 18-12
18.5 LEVEL AND SYMBOLOGY STANDARDS 18-14
18.5.1 Borders and Scales 18-19
18.5.1.1. Borders 18-19
18.5.1.2. Scales 18-20
18.5.2 Text Sizes and Weights 18-21
18.5.3 Colors 18-22
18.5.4 Special Symbols 18-22
18.5.5 Dimension Settings 18-22
18.6 REFERENCE FILES 18-22

THIS PAGE WAS LEFT BLANK INTENTIONALLY.

Chapter 18 - STRUCTURES STANDARDS

CADD Production Criteria Handbook

18.1 GENERAL

The use and generation of Computer Aided Design and Drafting (CADD) files by Structures in regards to Florida Department of Transportation (FDOT) Projects shall be in accordance with the general standards for all disciplines, unless superseded by instructions contained within this chapter.

The following table defines the resource files and features used for the FDOT Workspace.

File Format	V8i
Standard Rule	spst10
Named Levels	Yes
Text/Dimensions Styles	strlevels.dgnlib
Annotation Scale	Yes
Font Files	FDOT/FDOTMONO
Level Library	strlevels.dgnlib
Models Allowed	Yes
Seed File	StructuresSeed.dgn
Template Files	StructuresTemplateDetail.dwt StructuresTemplatePlan.dwt
Main Cell Library	TTF_V8Structures.cel
Color Table	Color.tbl

18.2 STANDARD FILE NAMES

Florida Department of Transportation (FDOT) utilizes standard naming conventions for all of its files. Some of the automation implemented in various tools provided by FDOT depends on naming conventions being met. More importantly, the naming convention confers information to the downstream customer of the data.

Standard file names for Bridges should follow this format: ***B#AAAA…##.[ext]***

- **B#** = Bridge Plans Sequence Number,
- **AAAA…** = Abbreviated File Description,
- **##** = Sequence Number.

Example: First EndBent sheet of Bridge 1 in a plan set would be named *B1EndBent01.dgn*

Files created by the Structures Office for other disciplines shall remain in the *\struct* discipline folder, the sheet numbers will be prefixed with the target disciplines sheet prefixes.

Note See Volume 2, Chapter 3 of the Structures Detailing Manual for complete details on Electronic Delivery Compliant sheet numbering instructions.

Use the Structures Menu option Create File application to ensure files are named to FDOT Standards. The following pages display a table listing the FDOT Standard file names for reference purposes.

Files containing Data Table cells (previously semi-standards) should be named *B#DataTable##.dgn* and should be placed in the plans with the corresponding component detail sheet. Files marked as (Geotech) 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 should follow Geotech standards listed in Chapter 20.

Existing Bridge plan sheets will be in Portable Document Format (PDF) and manually inserted into the Electronic Index using sheet numbers as provided in the table below. Existing Bridge Plans should not be handled in DGN format.

The following table defines the Structures File Name Standards in regards to FDOT Projects with the understanding that each file name will include sequence numbering. The Sheet Order is the default order, but may be modified to suit project specific requirements.

Structures Plans Naming Convention and Numbering Convention					
Sheet Order	**File Name**	**Suggested Sheet Title**	**Sheet Prefix**	**Drawing Prefix ***	**As-Built Plans System - Structure Type**
** - Optional* *** - Lead or Component Key Sheet*					
1	B#KeySheet.dgn	Bridge Key Sheet **	B-##	*	Key Sheet
2	B#Index.dgn	Index of Sheets	B-##	*	Gen. Notes, Index of Bridge Sheets, Pay Item Notes
3	B#TRNSPORTStructures.dgn	Summary of Pay Items Sheet (For Structures only projects)	B-##, …	*	Gen. Notes, Index of Bridge Sheets, Pay Item Notes
4	B#GeneralNotes.dgn	General Notes	B#-##	*	Gen. Notes, Index of Bridge Sheets, Pay Item Notes
5	B#PlanElev.dgn	Plan and Elevation	B1-##,B2-##, …	*	Plan and Elevation
6	B#VertCurveSuperEL.dgn	Profile Grade & Superelevation Transition	B1-##,B2-##, …	*	Plan and Elevation
7	B#BridgeHydro.dgn	Bridge Hydraulic Recommendations	B1-##,B2-##, …	*	Bridge Hydraulic Recommendation Sheet
8	B#ConstNotes.dgn	Construction Notes	B1-##,B2-##, …	*	Miscellaneous Details
9	B#ConstDet.dgn	Construction Details	B1-##,B2-##, …	*	Miscellaneous Details
10	B#ConstSeq.dgn	Construction Sequence	B1-##,B2-##, …	*	Miscellaneous Details
11	B#RemoveExist.dgn	Removal of Existing Structures	B1-##,B2-##, …	*	Miscellaneous Details
12	B#BridgeSection.dgn	Section Through Bridge	B1-##,B2-##, …	*	Miscellaneous Details
13	B#CPTGeo.dgn	CPT Soundings (Geotech)	B1-##,B2-##, …	*	Miscellaneous Details
14	B#Boring.dgn	Report of Core Borings (Geotech)	B1-##,B2-##, …	*	Report of Core Borings
15	B#FoundLay.dgn	Foundation Layout	B1-##,B2-##, …	*	Foundation Layout
16	B#PileData.dgn	Pile Data Table	B1-##,B2-##, …	*	Foundation Layout
17	B#PileDet.dgn	Pile Details	B1-##,B2-##, …	*	Foundation Layout
18	B#DrillShaft.dgn	Drilled Shaft Data Table	B1-##,B2-##, …	*	Foundation Layout
19	B#DrillShaftDeT.dgn	Drilled Shaft Details	B1-##,B2-##, …	*	Intermediate Bents or Piers
20	B#Footing.dgn	Footing	B1-##,B2-##, …	*	Intermediate Bents or Piers
21	B#FootingDet.dgn	Footing Details	B1-##,B2-##, …	*	Intermediate Bents or Piers
22	B#EndBent.dgn	End Bent	B1-##,B2-##, …	*	End Bents Details
23	B#EndBentDet.dgn	End Bent Details	B1-##,B2-##, …	*	End Bents Details
24	B#IntBent.dgn	Intermediate Bent	B1-##,B2-##, …	*	Intermediate Bents or Piers
25	B#IntBentDet.dgn	Intermediate Bent Details	B1-##,B2-##, …	*	Intermediate Bents or Piers
26	B#Pier.dgn	Pier	B1-##,B2-##, …	*	Intermediate Bents or Piers
27	B#PierDet.dgn	Pier Details	B1-##,B2-##, …	*	Intermediate Bents or Piers

Structures Plans Naming Convention and Numbering Convention					
Sheet Order	**File Name**	**Suggested Sheet Title**	**Sheet Prefix**	**Drawing Prefix ***	**As-Built Plans System - Structure Type**
28	B#BeamLay.dgn	Beam Layout	B1-##,B2-##, …	*	Superstructure Sheets
29	B#BeamLayAASHTO.dgn	AASHTO Beam Layout	B1-##,B2-##, …	*	Superstructure Sheets
30	B#BeamLayBulbT.dgn	Bulb-T Beam Layout	B1-##,B2-##, …	*	Superstructure Sheets
31	B#BeamLayFub.dgn	Florida U-Beam Layout	B1-##,B2-##, …	*	Superstructure Sheets
32	B#BeamLayInvT.dgn	Inverted T Beam Layout	B1-##,B2-##, …	*	Superstructure Sheets
33	B#BeamLayT.dgn	T Beam Layout	B1-##,B2-##, …	*	Superstructure Sheets
34	B#PrestSlab.dgn	Prestressed Slab Units	B1-##,B2-##, …	*	Superstructure Sheets
35	B#TypicalSection.dgn	Typical Section Through Bridge Deck	B1-##,B2-##, …	*	Superstructure Sheets
36	B#FinishGrEL.dgn	Finish Grade Elevations	B1-##,B2-##, …	*	Superstructure Sheets
37	B#Camber.dgn	Camber Diagrams	B1-##,B2-##, …	*	Superstructure Sheets
38	B#FramingPlan.dgn	Framing Plan	B1-##,B2-##, …	*	Superstructure Sheets
39	B#Superst.dgn	Superstructure	B1-##,B2-##, …	*	Superstructure Sheets
40	B#SuperstDet.dgn	Superstructure Details	B1-##,B2-##, …	*	Superstructure Sheets
41	B#ClosureJoint.dgn	Closure Joint Details	B1-##,B2-##, …	*	Beam Sheets
42	B#CrossFrameDet.dgn	Cross Frame Details	B1-##,B2-##, …	*	Beam Sheets
43	B#DiaphragmDet.dgn	Diaphragm Details	B1-##,B2-##, …	*	Beam Sheets
44	B#ErectSeq.dgn	Erection Sequence	B1-##,B2-##, …	*	Beam Sheets
45	B#ErectProced.dgn	Erection Procedure for Launching Girder	B1-##,B2-##, …	*	Beam Sheets
46	B#FieldSplice.dgn	Bolted Field Splice	B1-##,B2-##, …	*	Beam Sheets
47	B#FieldSpliceDet.dgn	Bolted Field Splice Details	B1-##,B2-##, …	*	Beam Sheets
48	B#FloorBeam.dgn	Floor Beams	B1-##,B2-##, …	*	Beam Sheets
49	B#SteelGirder.dgn	Steel Girder	B1-##,B2-##, …	*	Beam Sheets
50	B#SteelDet.dgn	Steel Girder Details	B1-##,B2-##, …	*	Beam Sheets
51	B#Stiffener.dgn	Stiffener Details	B1-##,B2-##, …	*	Beam Sheets
52	B#BearingDet.dgn	Bearing Details	B1-##,B2-##, …	*	Superstructure Sheets
53	B#PierPTDet.dgn	Precast Pier Post-Tensioning Details	B1-##,B2-##, …	*	Superstructure Sheets
54	B#SegDimCap.dgn	Pier Cap Segment Dimensions	B1-##,B2-##, …	*	Superstructure Sheets
55	B#TransPTPier.dgn	Pier Transverse Post-Tensioning	B1-##,B2-##, …	*	Superstructure Sheets

Structures Plans Naming Convention and Numbering Convention					
Sheet Order	**File Name**	**Suggested Sheet Title**	**Sheet Prefix**	**Drawing Prefix ***	**As-Built Plans System - Structure Type**
56	B#SegLayout.dgn	Segment Layout	B1-##,B2-##, …	*	Superstructure Sheets
57	B#JointCoord.dgn	Segment Joint Coordinates	B1-##,B2-##, …	*	Superstructure Sheets
58	B#SegDimBox.dgn	Segment Dimensions	B1-##,B2-##, …	*	Superstructure Sheets
59	B#ReinfSeg.dgn	Segment Reinforcing	B1-##,B2-##, …	*	Superstructure Sheets
60	B#SegDimDev.dgn	Deviation Segment Dimensions	B1-##,B2-##, …	*	Superstructure Sheets
61	B#ReinfDevSeg.dgn	Deviation Segment Reinforcing	B1-##,B2-##, …	*	Superstructure Sheets
62	B#SegDimPier.dgn	Pier Segment Dimensions	B1-##,B2-##, …	*	Superstructure Sheets
63	B#ReinfPierSeg.dgn	Pier Segment Reinforcing	B1-##,B2-##, …	*	Superstructure Sheets
64	B#SegDimAbut.dgn	Abutment Segment Dimensions	B1-##,B2-##, …	*	Superstructure Sheets
65	B#ReinfAbutSeg.dgn	Abutment Segment Reinforcing	B1-##,B2-##, …	*	Superstructure Sheets
66	B#ReinfClosureSeg.dgn	Closure Segment Reinforcing	B1-##,B2-##, …	*	Superstructure Sheets
67	B#BulkheadSeg.dgn	Bulkhead Segment Details	B1-##, B2-##, …	*	Superstructure Sheets
68	B#LongPT.dgn	Longitudinal Post-Tensioning Layout	B1-##,B2-##, …	*	Superstructure Sheets
69	B#ContinuityTend.dgn	Continuity Tendon Layout	B1-##,B2-##, …	*	Superstructure Sheets
70	B#FuturePTLay.dgn	Future Post-Tensioning Layout	B1-##,B2-##, …	*	Superstructure Sheets
71	B#PTDet.dgn	Post-Tensioning Details	B1-##,B2-##, …	*	Superstructure Sheets
72	B#PTQuantities.dgn	Post-Tensioning Quantities	B1-##,B2-##, …	*	Superstructure Sheets
73	B#TendonCurveDet.dgn	Tendon Curvature Details	B1-##,B2-##, …	*	Superstructure Sheets
74	B#TransPTAbut.dgn	Abutment Segment Transverse Post-Tensioning	B1-##,B2-##, …	*	Superstructure Sheets
75	B#TransTendonDet.dgn	Transverse Post-Tensioning Details	B1-##,B2-##, …	*	Superstructure Sheets
76	B#SegConstSeq.dgn	Construction Sequence (PT)	B1-##,B2-##, …	*	Superstructure Sheets
77	B#BearingPads.dgn	Neoprene Bearing Pads	B1-##,B2-##, …	*	Superstructure Sheets
78	B#BearingPlates.dgn	Beveled Bearing Plates	B1-##,B2-##, …	*	Superstructure Sheets
79	B#PotBearing.dgn	Pot Bearing Details	B1-##,B2-##, …	*	Superstructure Sheets
80	B#JackingDet.dgn	Jacking Details	B1-##,B2-##, …	*	Superstructure Sheets
81	B#ExpJointDet.dgn	Expansion Joint Details	B1-##,B2-##, …	*	Superstructure Sheets
82	B#SlidingPlate.dgn	Traffic / Pedestrian Railing Sliding Plate Assembly	B1-##,B2-##, …	*	Superstructure Sheets
83	B#ApproachSlab.dgn	Approach Slab	B1-##,B2-##, …	*	Miscellaneous Details
84	B#ConduitDet.dgn	Utility Conduit Details	B1-##,B2-##, …	*	Miscellaneous Details

Structures Plans Naming Convention and Numbering Convention					
Sheet Order	**File Name**	**Suggested Sheet Title**	**Sheet Prefix**	**Drawing Prefix ***	**As-Built Plans System - Structure Type**
85	B#JunctionBox.dgn	Junction Box	B1-##,B2-##, …	*	Miscellaneous Details
86	B#DrainDet.dgn	Drain Details	B1-##,B2-##, …	*	Miscellaneous Details
87	B#LadderDet.dgn	Ladder Details	B1-##,B2-##, …	*	Miscellaneous Details
88	B#MiscDet.dgn	Miscellaneous Details	B1-##,B2-##, …	*	Miscellaneous Details
89	B#SidewalkDet.dgn	Sidewalk Details	B1-##,B2-##, …	*	Miscellaneous Details
90	B#SurfaceFinish.dgn	Surface Finish Details	B1-##,B2-##, …	*	Miscellaneous Details
91	B#FenderSystem.dgn	Fender System	B1-##,B2-##, …	*	Miscellaneous Details
92	B#FenderDet.dgn	Fender Details	B1-##,B2-##, …	*	Miscellaneous Details
93	B#RiprapRubble.dgn	Rubble Riprap	B1-##,B2-##, …	*	Miscellaneous Details
94	B#SlopeProtectionConcrete.dgn	Concrete Slope Protection	B1-##,B2-##, …	*	Miscellaneous Details
95	B#ScourPlan.dgn	Plan View of Scour Protection	B1-##,B2-##, …	SP-##	Miscellaneous Details
96	B#BotContourMap.dgn	Bottom Contour Map	B1-##,B2-##, …	SP-##	Miscellaneous Details
97	B#ScourProf.dgn	Profile of Scour Protection	B1-##,B2-##, …	SP-##	Miscellaneous Details
98	B#ScourDetail.dgn	Scour Protection Details	B1-##,B2-##, …	SP-##	Miscellaneous Details
99	B#RiprapSand.dgn	Sand Cement Riprap	B1-##,B2-##, …	SP-##	Miscellaneous Details
100	B#MiscStrTempBridge.dgn	Temporary Bridge Details	B1-##,B2-##, …	*	Miscellaneous Details
101	B#AccessOpen.dgn	Access Opening	B1-##,B2-##, …	*	Miscellaneous Details
102	B#MaintLight.dgn	Maintenance Lighting Plan	B1-##,B2-##, …	*	Miscellaneous Details
103	B#MaintLightDet.dgn	Maintenance Lighting Details	B1-##,B2-##, …	*	Miscellaneous Details
104	B#Handrail.dgn	Handrail	B1-##,B2-##, …	*	Miscellaneous Details
105	B#CompTestSetup.dgn	Compression Test Setup	B1-##,B2-##, …	LT-##	Miscellaneous Details
106	B#DrillShaftLT123.dgn	Drilled Shaft Load Test Sites 1,2&3	B1-##,B2-##, …	LT-##	Miscellaneous Details
107	B#LTSumDrillShaft.dgn	Drilled Shaft Load Test Program Summary	B1-##,B2-##, …	LT-##	Miscellaneous Details
108	B#InstruDet.dgn	Instrumentation Details	B1-##,B2-##, …	LT-##	Miscellaneous Details
109	B#LateralLT.dgn	Lateral Load Test Details	B1-##,B2-##, …	LT-##	Miscellaneous Details
110	B#LTFrame.dgn	Load Test Frame Configuration	B1-##,B2-##, …	LT-##	Miscellaneous Details
111	B#LTBraceDet.dgn	Load Test Reaction Girder Bracing Details	B1-##,B2-##, …	LT-##	Miscellaneous Details
112	B#LTGirderDet.dgn	Load Test Reaction Girder Details	B1-##,B2-##, …	LT-##	Miscellaneous Details
113	B#OsterbergCell.dgn	Osterberg Cell 3000 ton Load Testing Device	B1-##,B2-##, …	LT-##	Miscellaneous Details

Structures Plans Naming Convention and Numbering Convention					
Sheet Order	**File Name**	**Suggested Sheet Title**	**Sheet Prefix**	**Drawing Prefix ***	**As-Built Plans System - Structure Type**
114	B#LTSumPile.dgn	Pile Load Test Program Summary	B1-##,B2-##, …	LT-##	Miscellaneous Details
115	B#PlatformDet.dgn	Service Platform Deck and Frame Details	B1-##,B2-##, …	LT-##	Miscellaneous Details
116	B#StatnamicLT.dgn	Statnamic Load Test Details	B1-##,B2-##, …	LT-##	Miscellaneous Details
117	B#RebarList.dgn	Reinforcing Bar List	B1-##,B2-##, …		Reinforcing Bar List
118	B#BP-Notes.dgn	Bascule Pier Notes	B1-##,B2-##, …	BP-##	Movable Bridge - Structural
119	B#BP-Plan.dgn	Bascule Pier Plan	B1-##,B2-##, …	BP-##	Movable Bridge - Structural
120	B#BP-Elevations.dgn	Bascule Pier Elevations	B1-##,B2-##, …	BP-##	Movable Bridge - Structural
121	B#BP-Sections.dgn	Bascule Pier Sections	B1-##,B2-##, …	BP-##	Movable Bridge - Structural
122	B#BP-StlFraming.dgn	Bascule Pier Steel Framing	B1-##,B2-##, …	BP-##	Movable Bridge - Structural
123	B#BP-Details.dgn	Bascule Pier Details	B1-##,B2-##, …	BP-##	Movable Bridge - Structural
124	B#BP-Misc.dgn	Bascule Pier Miscellaneous	B1-##,B2-##, …	BP-##	Movable Bridge - Structural
125	B#BP-Quantities.dgn	Bascule Pier Quantities	B1-##,B2-##, …	BP-##	Movable Bridge - Structural
126	B#BP-Reinforcing.dgn	Bascule Pier Reinforcing	B1-##,B2-##, …	BP-##	Movable Bridge - Structural
127	B#BP-Barlist.dgn	Bascule Pier Bar Lists	B1-##,B2-##, …	BP-##	Movable Bridge - Structural
128	B#RP-Notes.dgn	Rest Pier Notes	B1-##,B2-##, …	RP-##	Movable Bridge - Structural
129	B#RP-Plan.dgn	Rest Pier Plan	B1-##,B2-##, …	RP-##	Movable Bridge - Structural
130	B#RP-Elevations.dgn	Rest Pier Elevations	B1-##,B2-##, …	RP-##	Movable Bridge - Structural
131	B#RP-Sections.dgn	Rest Pier Sections	B1-##,B2-##, …	RP-##	Movable Bridge - Structural
132	B#RP-StlFraming.dgn	Rest Pier Steel Framing	B1-##,B2-##, …	RP-##	Movable Bridge - Structural
133	B#RP-Details.dgn	Rest Pier Details	B1-##,B2-##, …	RP-##	Movable Bridge - Structural
134	B#RP-Misc.dgn	Rest Pier Miscellaneous	B1-##,B2-##, …	RP-##	Movable Bridge - Structural
135	B#RP-Quantities.dgn	Rest Pier Quantities	B1-##,B2-##, …	RP-##	Movable Bridge - Structural
136	B#RP-Reinforcing.dgn	Rest Pier Reinforcing	B1-##,B2-##, …	RP-##	Movable Bridge - Structural
137	B#RP-Barlist.dgn	Rest Pier Bar Lists	B1-##,B2-##, …	RP-##	Movable Bridge - Structural
138	B#BL-Notes.dgn	Bascule Leaf Notes	B1-##,B2-##, …	BL-##	Movable Bridge - Structural
139	B#BL-SpanLockDet.dgn	Bascule Leaf Span Lock Details	B1-##,B2-##, …	BL-##	Movable Bridge - Structural
140	B#BL-SpanLockPlan.dgn	Bascule Leaf Span Lock Plan	B1-##,B2-##, …	BL-##	Movable Bridge - Structural
141	B#BL-Sections.dgn	Bascule Leaf Sections	B1-##,B2-##, …	BL-##	Movable Bridge - Structural
142	B#BL-ClearDiagram.dgn	Bascule Leaf Clearance Diagram	B1-##,B2-##, …	BL-##	Movable Bridge - Structural

Structures Plans Naming Convention and Numbering Convention					
Sheet Order	**File Name**	**Suggested Sheet Title**	**Sheet Prefix**	**Drawing Prefix ***	**As-Built Plans System - Structure Type**
143	B#BL-ForceDiagram.dgn	Bascule Leaf Force Diagram	B1-##,B2-##, …	BL-##	Movable Bridge - Structural
144	B#BL-FramePlan.dgn	Bascule Leaf Framing Plan	B1-##,B2-##, …	BL-##	Movable Bridge - Structural
145	B#BL-Girders.dgn	Bascule Leaf Main Girders	B1-##,B2-##, …	BL-##	Movable Bridge - Structural
146	B#BL-FloorBeams.dgn	Bascule Leaf Floor Beams	B1-##,B2-##, …	BL-##	Movable Bridge - Structural
147	B#BL-Strings.dgn	Bascule Leaf Stringers	B1-##,B2-##, …	BL-##	Movable Bridge - Structural
148	B#BL-Bracing.dgn	Bascule Leaf Bracing	B1-##,B2-##, …	BL-##	Movable Bridge - Structural
149	B#BL-CantBracket.dgn	Bascule Leaf Cantilever Bracket	B1-##,B2-##, …	BL-##	Movable Bridge - Structural
150	B#BL-TrunGirder.dgn	Bascule Leaf Trunnion Girder	B1-##,B2-##, …	BL-##	Movable Bridge - Structural
151	B#BL-CounterWeight.dgn	Bascule Leaf Counter Weight	B1-##,B2-##, …	BL-##	Movable Bridge - Structural
152	B#BL-CntrWghtGirder.dgn	Bascule Leaf Counter Weight Girder	B1-##,B2-##, …	BL-##	Movable Bridge - Structural
153	B#BL-Deck.dgn	Bascule Leaf Deck	B1-##,B2-##, …	BL-##	Movable Bridge - Structural
154	B#BL-Details.dgn	Bascule Leaf Misc. Details	B1-##,B2-##, …	BL-##	Movable Bridge - Structural
155	B#BL-JointAssembly.dgn	Bascule Leaf Joint Assemblies	B1-##,B2-##, …	BL-##	Movable Bridge - Structural
156	B#BL-SideWalk.dgn	Bascule Leaf Sidewalk	B1-##,B2-##, …	BL-##	Movable Bridge - Structural
157	B#BL-TraffRail.dgn	Bascule Leaf Traffic Railing	B1-##,B2-##, …	BL-##	Movable Bridge - Structural
158	B#BL-PedRail.dgn	Bascule Leaf Pedestrian Railing	B1-##,B2-##, …	BL-##	Movable Bridge - Structural
159	B#BL-AccPlatforms.dgn	Bascule Leaf Access Platforms	B1-##,B2-##, …	BL-##	Movable Bridge - Structural
160	B#MechNotes.dgn	Mechanical Notes	B1-##,B2-##, …	BM-##	Movable Bridge - Mechanical
161	B#MechPlan.dgn	Mechanical Plan	B1-##,B2-##, …	BM-##	Movable Bridge - Mechanical
162	B#MechElev.dgn	Mechanical Elevation	B1-##,B2-##, …	BM-##	Movable Bridge - Mechanical
163	B#MechDet.dgn	Mechanical Details	B1-##,B2-##, …	BM-##	Movable Bridge - Mechanical
164	B#MechSect.dgn	Mechanical Sections	B1-##,B2-##, …	BM-##	Movable Bridge - Mechanical
165	B#MiscMechDet.dgn	Miscellaneous Mechanical Details	B1-##,B2-##, …	BM-##	Movable Bridge - Mechanical
166	B#PinionDet.dgn	Pinion Details	B1-##,B2-##, …	BM-##	Movable Bridge - Mechanical
167	B#TrunAssem.dgn	Trunnion Assembly	B1-##,B2-##, …	BM-##	Movable Bridge - Mechanical
168	B#TrunDet.dgn	Trunnion Details	B1-##,B2-##, …	BM-##	Movable Bridge - Mechanical
169	B#DriveAssem.dgn	Drive Assembly	B1-##,B2-##, …	BM-##	Movable Bridge - Mechanical
170	B#GateAssem.dgn	Gate Assembly	B1-##,B2-##, …	BM-##	Movable Bridge - Mechanical
171	B#HydraNote.dgn	Hydraulic Notes	B1-##,B2-##, …	BM-##	Movable Bridge - Mechanical

Structures Plans Naming Convention and Numbering Convention					
Sheet Order	**File Name**	**Suggested Sheet Title**	**Sheet Prefix**	**Drawing Prefix ***	**As-Built Plans System - Structure Type**
172	B#HydraCylDet.dgn	Hydraulic Cylinder Details	B1-##,B2-##, …	BM-##	Movable Bridge - Mechanical
173	B#HydraSchem.dgn	Hydraulic Schematic	B1-##,B2-##, …	BM-##	Movable Bridge - Mechanical
174	B#ElecNotes.dgn	Electric Notes	B1-##,B2-##, …	BE-##	Movable Bridge - Electrical
175	B#CCTVDet.dgn	CCTV Details	B1-##,B2-##, …	BE-##	Movable Bridge - Electrical
176	B#CommLayout.dgn	Communications Layout	B1-##,B2-##, …	BE-##	Movable Bridge - Electrical
177	B#ConduitRiser.dgn	Conduit Riser	B1-##,B2-##, …	BE-##	Movable Bridge - Electrical
178	B#ControlDesk.dgn	Control Desk	B1-##,B2-##, …	BE-##	Movable Bridge - Electrical
179	B#DriveDiag.dgn	Drive Diagram	B1-##,B2-##, …	BE-##	Movable Bridge - Electrical
180	B#ElecFloorplan.dgn	Electrical Floor Plan	B1-##,B2-##, …	BE-##	Movable Bridge - Electrical
181	B#GeneratorDet.dgn	Generator Details	B1-##,B2-##, …	BE-##	Movable Bridge - Electrical
182	B#Grounding.dgn	Grounding and Lighting Protection	B1-##,B2-##, …	BE-##	Movable Bridge - Electrical
183	B#IOpoints.dgn	Input Output Points, PLC	B1-##,B2-##, …	BE-##	Movable Bridge - Electrical
184	B#LadderLogic.dgn	Ladder Logic, PLC	B1-##,B2-##, …	BE-##	Movable Bridge - Electrical
185	B#OpSeq.dgn	Operating Sequence Flowchart	B1-##,B2-##, …	BE-##	Movable Bridge - Electrical
186	B#PanelBoardSch.dgn	Panel Board Schedule	B1-##,B2-##, …	BE-##	Movable Bridge - Electrical
187	B#SingleLine.dgn	Single Line Diagram	B1-##,B2-##, …	BE-##	Movable Bridge - Electrical
188	B#SubCableDet.dgn	Submarine Cable Details	B1-##,B2-##, …	BE-##	Movable Bridge - Electrical
189	B#SurgeSup.dgn	Surge Suppression Details	B1-##,B2-##, …	BE-##	Movable Bridge - Electrical
190	B#ElecMachLayout.dgn	Electrical Machinery Layout	B1-##,B2-##, …	BE-##	Movable Bridge - Electrical
191	B#MiscElecDet.dgn	Miscellaneous Electrical Details	B1-##,B2-##, …	BE-##	Movable Bridge - Electrical
192	B#Legend.dgn	Symbol Legend	B1-##,B2-##, …	BE-##	Movable Bridge - Electrical
193	B#MCC.dgn	Motor Control Center	B1-##,B2-##, …	BE-##	Movable Bridge - Electrical
194	B#ThreeLineDiag.dgn	Three Line Diagram	B1-##,B2-##, …	BE-##	Movable Bridge - Electrical
195	B#TrafCtrlDet.dgn	Traffic Control Details	B1-##,B2-##, …	BE-##	Movable Bridge - Electrical
196	B#NaviLightDet.dgn	Navigation Lighting System Details	B1-##,B2-##, …	BE-##	Miscellaneous Details
197	B#TowerDet.dgn	Control Tower Details	B1-##,B2-##, …	BT-##	Miscellaneous Details
198	B#TowerLighting.dgn	Control Tower Lighting	B1-##,B2-##, …	BT-##	Miscellaneous Details
199	B#TowerLayout.dgn	Tower, Lighting and Pier Layout	B1-##,B2-##, …	BT-##	Miscellaneous Details
200	B#Plumbing.dgn	Plumbing	B1-##,B2-##, …	BT-##	Miscellaneous Details

Structures Plans Naming Convention and Numbering Convention					
Sheet Order	**File Name**	**Suggested Sheet Title**	**Sheet Prefix**	**Drawing Prefix ***	**As-Built Plans System - Structure Type**
201	B#WorkID.dgn	Work Identification Sheet	B1-##,B2-##, …	BT-##	Miscellaneous Details
202	B#SitePlan.dgn	Site Plan for Rest Area	B1-##,B2-##, …	BT-##	Miscellaneous Details
203	B#CatwalkDet.dgn	Catwalk Details	B1-##,B2-##, …	BT-##	Miscellaneous Details
204	B#PedBridgeDataTable##.dgn	Pedestrian Bridge Data	BP-##	*	Pedestrian Bridge Sheets
205	B#WallControl.dgn	Wall Control Drawing	BW-##	W1-##,W2-##, …	Retaining Wall Sheets
206	B#Bulkhead.dgn	Bulkhead	BW-##	W1-##,W2-##, …	Retaining Wall Sheets
207	B#BulkheadDet.dgn	Bulkhead Details	BW-##	W1-##,W2-##, …	Retaining Wall Sheets
208	B#CrashWall.dgn	Crash Wall	BW-##	W1-##,W2-##, …	Retaining Wall Sheets
209	B#SheetPileWallAnch.dgn	Anchored Sheet Pile Wall	BW-##	W1-##,W2-##, …	Retaining Wall Sheets
210	B#SheetPileWallCant.dgn	Cantilever Sheet Pile Wall	BW-##	W1-##,W2-##, …	Retaining Wall Sheets
211	B#MSEwall.dgn	MSE Wall	BW-##	W1-##,W2-##, …	Retaining Wall Sheets
212	B#RetainingWall.dgn	Retaining Wall	BW-##	W1-##,W2-##, …	Retaining Wall Sheets
213	B#SheetPileWall.dgn	Sheet Pile Retaining Wall	BW-##	W1-##,W2-##, …	Retaining Wall Sheets
214	B#SheetPileWallST.dgn	Steel Sheet Pile Retaining Wall	BW-##	W1-##,W2-##, …	Retaining Wall Sheets
215	B#SheetPileWallConc.dgn	Concrete Sheet Pile Retaining Wall	BW-## / none	W1-##,W2-##, …	Retaining Wall Sheets
216	B#SoundBarrier.dgn	Sound Barriers	BW#-## / none	SB1-##, SB2-##, ...	
	WallControl.dgn	Wall Control Drawing *(Non-Bridge Related)*	BW-##	W1-##,W2-##, …	Retaining Wall Sheets
	Bulkhead.dgn	Bulkhead *(Non-Bridge Related)*	BW-##	W1-##,W2-##, …	Retaining Wall Sheets
	BulkheadDet.dgn	Bulkhead Details *(Non-Bridge Related)*	BW-##	W1-##,W2-##, …	Retaining Wall Sheets
	CrashWall.dgn	Crash Wall *(Non-Bridge Related)*	BW-##	W1-##,W2-##, …	Retaining Wall Sheets
	SheetPileWallAnch.dgn	Anchored Sheet Pile Wall *(Non-Bridge Related)*	BW-##	W1-##,W2-##, …	Retaining Wall Sheets
	SheetPileWallCant.dgn	Cantilever Sheet Pile Wall *(Non-Bridge Related)*	BW-##	W1-##,W2-##, …	Retaining Wall Sheets
	MSEwall.dgn	MSE Wall *(Non-Bridge Related)*	BW-##	W1-##,W2-##, …	Retaining Wall Sheets
	RetainingWall.dgn	Retaining Wall *(Non-Bridge Related)*	BW-##	W1-##,W2-##, …	Retaining Wall Sheets
	SheetPileWall.dgn	Sheet Pile Retaining Wall *(Non-Bridge Related)*	BW-##	W1-##,W2-##, …	Retaining Wall Sheets
	SheetPileWallST.dgn	Steel Sheet Pile Retaining Wall *(Non-Bridge Related)*	BW-##	W1-##,W2-##, …	Retaining Wall Sheets
	SheetPileWallConc.dgn	Concrete Sheet Pile Retaining Wall *(Non-Bridge Related)*	BW-## / none	W1-##,W2-##, …	Retaining Wall Sheets
	SoundBarrier.dgn	Sound Barriers *(Non-Bridge Related)*	BW#-## / none	SB1-##, SB2-##, ...	

Structures Plans Naming Convention and Numbering Convention					
Sheet Order	**File Name**	**Suggested Sheet Title**	**Sheet Prefix**	**Drawing Prefix ***	**As-Built Plans System - Structure Type**
217	B#MiscStr.dgn B#MiscStrClvt.dgn B#MiscStrMastarm.dgn B#MiscStrHighMast.dgn B#MiscStrOHSign.dgn	Varies Culvert Mastarms High Mast Light Poles Overhead Sign Structures	B#-## / none		
218	B#ExistingPlans.pdf	Existing Bridge Plans	BX#-##	BX-##	Existing Bridge Sheets
219	B#DataTableLoadRating.dgn	Load Rating Charts	B1-##,B2-##, …	*	Load Rating Charts
Varies	B#DataTable##.dgn	(Design Standards) Data Tables	B#-##	*	(Varies – See Section 18.2)
	B#Preliminary.dgn	Preliminary Plan and Elevation			
	StrBorder.dgn	Referencing Structures Borders			
	MiscStr.dgn	Varies			
	MiscStrClvt.dgn	Culvert			
	MiscStrMastarm.dgn	Mastarms			
	MiscStrHighMast.dgn	High Mast Light Poles			
	MiscStrOHSign.dgn	Overhead Sign Structures			
	SIGNST.dgn	Digital Signatures (Multi)			

18.3 RESOURCE FILES

Files created for the Structures discipline shall use the resource files included with the FDOT CADD Software package. All files created for Structures Plans sheets shall be created from the supplied Structures seed files.

The Structures Seed file for the FDOT2010 workspace differs from other standard seed files in both working units and unit labeling.

The StrLevels.dgnlib library file contains the definitions for Levels, Text, & Dimension styles.

Note In V8 format files, working units DO NOT define design plane size, only the current method of measurement. Therefore, the design plane is the same size for all seed files.

18.4 ENGINEERING DATA

Engineering Data to be delivered with each project shall be located in the *…\eng_data* directory and include:

- ASCII files containing Q/C reports
- Image files of all Structures Plan sheets
- All computer input and output files used in the design (in native file formats and printed to PDF format)
- All supplemental design hand calculations (scanned and saved in PDF or TIFF file formats)

Create separate sub-directories in the *...struct* directory for each bridge and/or structure in the project. Name these sub-directories using the sheet prefix and bridge numbers (when applicable). Locate the MicroStation design files for each bridge under the named sub-directory and create an *...eng_data* sub-directory in each, for the Engineering Data

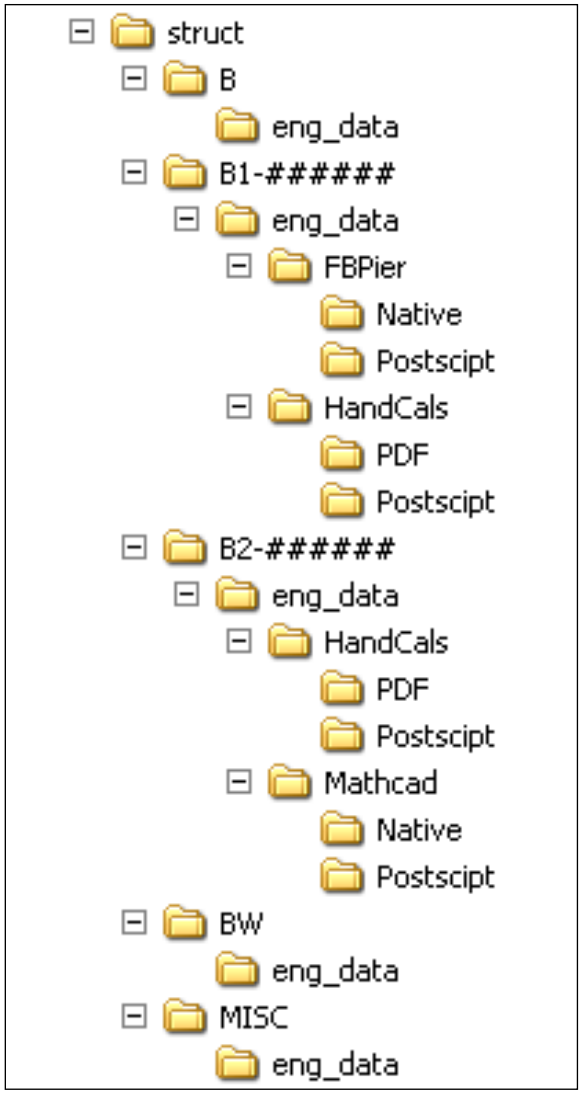
(e.g.*...\struct\B\eng_data; \struct\B1-######\eng_data;* etc.).

Print the sheet image files from the graphics design files. Print image files of all other output files from the design and/or analysis programs. If the project requires electronic signing and sealing, all the sheet image files located in the *…\eng_data* sub-directory shall be electronically signed & sealed.

Computer input and output files include files used for all aspects of bridge, retaining wall, and/or miscellaneous structures design. These include, but are not limited to, files generated from the following computer programs:

- FDOT Structural Software (listed in CADD Customer Support Guide)
- GTStrudl
- STADD
- RISA
- Mathcad Spreadsheets
- Excel Spreadsheets
- FBPier
- LEAP Software
- BD2
- MDX
- BC
- Adapt

Create a sub-directory in the *…\struct\B#-#####\eng_data* sub-directory for each bridge and/or structure in the project and then create a sub-directory for each program used, with two sub-directories, *\PostScript* and *\Native*. Place the appropriate input and output files in each sub-directory. Only sign and seal these PostScript files when required by Contract. Scan any supplemental hand calculations used in the design and save the files in either PDF or TIFF and PostScript formats. Create a sub-directory in the *…\struct\B#-######\eng_data* sub-directory called *\HandCals*, with two sub-directories, *\PostScript* and *\PDF* (or TIFF), and place the appropriate files in each sub-directory. (See figure below)



18.5 LEVEL AND SYMBOLOGY STANDARDS

For the FDOT workspace, element symbologies are defined in the *StrLevels.dgnlib* file and shall be selected from the MicroStation level picker. Each level contains a defined color, line weight, line style, and plot property. Color shall remain set to BYLEVEL ***(except where indicated with ** in the table below)***, line weight & line style may be modified as needed. User created levels ARE NOT allowed. If additional levels are needed, contact the Structures Design Office. The level named "Default" is not QC compliant and shall not be used for drawing elements. When updated, the *StrLevels.dgnlib* level library supersedes the symbology table below.

Structures Standard Level and Symbology Table

Level	Description	ByLevel Color	ByLevel Style	ByLevel Weight	Plot ?
ActivePts-ConstElements	Active Points & Drawing Construction Elements	99	0	0	No
AdhocPoint_dp	Adhoc Points Placed by Sheetinfo	0	4	0	
AppSlabConc	Concrete	2	0	3	Yes
AppSlabConc_h	Concrete Hidden	2	2	2	Yes
ArchBlocks	Architectural Blocks	0	0	0	Yes
BaseLineSurvey	Baseline Survey or Profile Grade Line	3	6	0	Yes
BeamConc	Beams Concrete	2	0	3	Yes
BeamConc_h	Beams Concrete Hidden	2	2	2	Yes
Bearings	Pot, Rocker, Masonry Plates	6**	0	1	Yes
Bolts	Miscellaneous Bolts for Details	6	0	0	Yes
Bolts_h	Miscellaneous Bolts for Details - Hidden	6	1	0	Yes
Border	Border Elements	0	0	1	Yes
Casework	Casework	1	0	1	Yes
Casework_h	Casework Hidden	1	3	0	Yes
Ceiling	Ceiling	0	0	1	Yes
Ceiling_h	Ceiling Hidden	0	3	0	Yes
CLConst	Centerline Construction or Centerline Survey	3	7	0	Yes
CL_Major	Centerline Major - Use as needed	3	7	0	Yes
CL_Minor	Centerline Minor - Use as needed	0	4	0	Yes
ConcArch_walls	Concrete Architectural Walls	1	0	2	Yes
ConcArch_walls_h	Concrete Architectural Walls Hidden	1	3	1	Yes
CounterWeight	CounterWeight	2	0	0	Yes
CounterWeight_h	CounterWeight Hidden	2	2	2	Yes
DDConstruction	Dimension Driven Cell Construction Lines	71	0	0	No
DDDimensions	Dimension Driven Dimensions	71	0	0	No
DeckSteel	Steel Grid Bridge Decking	6	0	1	Yes
Dimension	Dimension Lines	0	0	0	Yes
Doors	Doors	1	0	1	Yes
Doors_h	Doors Hidden	1	3	0	Yes
DrainDeck	Scuppers, Deck Inlets	3	0	1	Yes
DrainMisc	Drain Miscellaneous Hardware	3	0	1	Yes
DrainPipe	Drain Pipes PVC, Galvanized	3	0	1	Yes
DrShaftConc	Drilled Shaft Concrete	2	0	3	Yes
DrShaftConc_h	Drilled Shaft Concrete Hidden	2	2	2	Yes
ElectricalConduit	Electrical Conduit	7	0	0	Yes

Level	Description	ByLevel Color	ByLevel Style	ByLevel Weight	Plot ?
ExistingMisc	Existing Misc.	3	1	0	Yes
ExistingRebar	Existing Reinforcing	84	1	0	Yes
ExistingUtility	Existing Utilities Electrical; FOC, Telephone, CableTV etc.	86	1	0	Yes
ExistSubStruct	Existing Bridge Substructure, Piers & Bents; Existing Piling	5	1	0	Yes
ExistSuperStruct	Existing Bridge Superstructure: Existing Beams & Diaphragms	5	1	0	Yes
Ext_Misc	Exterior Miscellaneous	3**	0	0	Yes
Ext_Misc_h	Exterior Miscellaneous Hidden	3**	3	0	Yes
Ext_Ornimental	Exterior Ornamentation	6	0	0	Yes
Ext_Ornimental_h	Exterior Ornamentation Hidden	6	3	0	Yes
Fascia	Fascia	4	0	1	Yes
Fascia_h	Fascia Hidden	4	3	0	Yes
FencePosts	Fence Posts for Details	6	0	1	Yes
Fencing	Bridge Mounted Chain Link Fencing	6	0	1	Yes
Fire_Equipment	Fire Equipment	1	0	1	Yes
Fire_Equipment_h	Fire Equipment Hidden	1	3	0	Yes
Floor	Floor	3	0	2	Yes
Floor_h	Floor Hidden	3	3	1	Yes
Furniture	Furniture	1	0	1	Yes
Furniture_h	Furniture Hidden	1	3	0	Yes
Glazing	Glazing	1	0	1	Yes
Glazing_h	Glazing Hidden	1	3	0	Yes
GroundLines	Proposed; Existing	2	0	1	Yes
Guardrail	Guardrail & Post, Thrie & W Beam	1	0	1	Yes
Guardrail_h	Guardrail & Post, Thrie & W Beam - Hidden	1	1	1	Yes
Gypsum_board	Gypsum Board	1	0	1	Yes
Gypsum_board_h	Gypsum Board Hidden	1	3	0	Yes
HVAC_Equip	HVAC Equipment	5	0	2	Yes
HVAC_Equip_h	HVAC Equipment Hidden	5	5	1	Yes
HVAC_Misc	HVAC Miscellaneous	3	0	1	Yes
HVAC_Misc_h	HVAC Miscellaneous Hidden	3	5	0	Yes
HVAC_Return	HVAC Return	5	0	2	Yes
HVAC_Return_h	HVAC Return Hidden	5	2	1	Yes
HVAC_Supply	HVAC Supply	5	0	2	Yes
HVAC_Supply_h	HVAC Supply Hidden	5	3	1	Yes
ImageAttachment_dp	Image Attachment	0	0	0	Yes
Insulation	Insulation	3	0	1	Yes
Insulation_h	Insulation Hidden	3	3	0	Yes
Int_Mis_h	Interior Miscellaneous Hidden	3	3	0	Yes
Int_Misc	Interior Miscellaneous	3	0	1	Yes
Leader	Leader lines, Weld Symbols	0	0	0	Yes
LeafSteel	Leaf Structural Steel	6	0	0	Yes
LeafSteel_h	Leaf Structural Steel Hidden	6	2	2	Yes
Lighting	Lighting Bridge/Sign Mounted	31	0	0	Yes
Lighting_h	Lighting Bridge/Sign Mounted Hidden	31	2	0	Yes

Level	Description	ByLevel Color	ByLevel Style	ByLevel Weight	Plot ?
LightingArch	Lighting Architectural	0	0	0	Yes
LightingArch_h	Lighting Architectural	0	0	2	Yes
MachineCompFixed	Machinery Components Fixed	7	0	2	Yes
MachineCompFixed_h	Machinery Components Fixed Hidden	7	2	1	Yes
MachineCompMoving	Machinery Components Moving	3	0	2	Yes
MachineCompMovng_h	Machinery Components Moving Hidden	3	2	1	Yes
MachineWeldments	Machine Weldments	4	0	2	Yes
MachineWeldments_h	Machine Weldments Hidden	4	2	1	Yes
Masonry	Masonry	3	0	1	Yes
Masonry_h	Masonry Hidden	3	3	0	Yes
Metal Framing	Metal Framing	4	0	1	Yes
Metal Framing_h	Metal Framing	4	3	0	Yes
Miscellaneous	No defined symbology	3**	0	1	Yes
NavLight	Navigational Lights	7	0	0	Yes
NavLight_h	Navigational Lights Hidden	7	2	0	Yes
PadMisc	Bearing/Misc Pads	1**	0	1	Yes
ParapetConc	Parapet Concrete	2	0	3	Yes
Patterning	All; any	3	0	1	Yes
Patternlines_ep	Cross Section Chain	2	1	0	
PayItem_dp	Pay Item Number Label Elements	4	0	2	
PedRail	Pedestrian Rail, Bullet, Picket & Guardrail	3	0	1	Yes
PedRailMisc	Handrail Hardware Bullet, Picket & Guardrail	3	0	1	Yes
PileConc	Piles Concrete	2	0	3	Yes
PileConc_h	Piles Concrete Hidden	2	2	2	Yes
PilePlastic	Pile Plastic	1	0	1	Yes
PilePlastic_h	Pile Plastic Hidden	1	2	2	Yes
PileSteel	Piles Steel H-Piles & Pipe	6	0	1	Yes
PileSteel_h	Piles Steel H-Piles & Pipe Hidden	6	2	1	Yes
PileTimber	Pile Timber	142	0	1	Yes
PileTimber_h	Pile Timber Hidden	142	2	1	Yes
PipeHydraulic	Hydraulic Pipe	7	0	1	Yes
PipeHydraulic_h	Hydraulic Pipe Hidden	7	2	0	Yes
PlotBorder_dp	Plot Border	3	0	0	No
Plumbing_Fixtures	Plumbing Fixtures	1	0	2	Yes
Plumbing_Fixtures_h	Plumbing Fixtures Hidden	1	5	1	Yes
Plumbing_Supply	Plumbing Supply	1	0	2	Yes
Plumbing_Supply_h	Plumbing Supply Hidden	1	3	1	Yes
Plumbing_Waste	Plumbing Waste	1	0	2	Yes
Plumbing_Waste_h	Plumbing Waste Hidden	1	2	1	Yes
PointLocator_ep	Geopak Point Locator for COGO SMD Database	4	0	0	
PostTension	Post-Tensioning Steel Strands & Bars	6	0	1	Yes
PostTension_h	Post-Tensioning Steel Hidden Strands & Bars	6	2	1	Yes
PostTension2	Post-Tensioning Steel Strands & Bars	46**	0	1	Yes
PostTension2_h	Post-Tensioning Steel Strands & Bars	46**	0	1	Yes
PostTension3	Post-Tensioning Steel Strands & Bars	46**	0	1	Yes
PostTension3_h	Post-Tensioning Steel Strands & Bars	46**	0	1	Yes

Level	Description	ByLevel Color	ByLevel Style	ByLevel Weight	Plot ?
PostTensionDucts	Post Tension Ducts Plastic & Metal	1	0	1	Yes
PostTensionGrout	Post Tension Grout	2	0	1	Yes
PostTensionMisc	Post Tensioning Hardware, Trumpets, Vents & Misc. Items	1	0	1	Yes
PrestressSteel	Prestressing Steel	36	0	1	Yes
PrestressSteel_h	Prestressing Steel Hidden	36	2	1	Yes
RailingArch	Railing Architectural	6	0	2	Yes
RailingArch_h	Railing Architectural Hidden	6	3	1	Yes
RRBaselin	Rail road	3	rr2	0	Yes
Rebar	Reinforcing Major	4	0	1	Yes
Rebar_h	Reinforcing Hidden	4**	2	1	Yes
Rebar10	Auxiliary Rebar	4**	0	1	Yes
Rebar11	Auxiliary Rebar	4**	0	1	Yes
Rebar2	Auxiliary Rebar	4**	0	1	Yes
Rebar3	Auxiliary Rebar	4**	0	1	Yes
Rebar4	Auxiliary Rebar	4**	0	1	Yes
Rebar5	Auxiliary Rebar	4**	0	1	Yes
Rebar6	Auxiliary Rebar	4**	0	1	Yes
Rebar7	Auxiliary Rebar	4**	0	1	Yes
Rebar8	Auxiliary Rebar	4**	0	1	Yes
Rebar9	Auxiliary Rebar	4**	0	1	Yes
ReferencePt_dp	Survey Data Reference Point Details & El	4	0	2	
Roof_Misc	Roof Miscellaneous	3	0	1	Yes
Roof_Misc_h	Roof Miscellaneous Hidden	3	2	0	Yes
Roof_Structure	Roof Structure	4	0	2	Yes
Roof_Structure_h	Roof Structure Hidden	4	3	1	Yes
Roofing	Roofing	4	0	1	Yes
Roofing_h	Roofing Hidden	4	2	0	Yes
RWLine_ep	Right of Way lines	3	{ Chain Double-Dash }	1	Yes
SchemElectric	Electrical Schematic	7	0	1	Yes
SchemElectricProp	Electrical Schematic Proposed	7	0	1	Yes
SchemHydraulicAux	Hydraulic Schematic Auxiliary	4	0	1	Yes
SchemHydraulicMain	Hydraulic Schematic Main	7	0	1	Yes
SchemTextLine	Schematic Text Line	0	0	1	Yes
SchemTextRung	Schematic Text Rung	4	0	1	Yes
SheetPileConc	Wall Sheet Precast	2	0	3	Yes
SheetPileConc_h	Wall Sheet Precast Hidden	2	2	2	Yes
SheetPileSteel	Wall Sheet Pile Steel	6	0	1	Yes
SheetPileSteel_h	Wall Sheet Pile Steel Hidden	6	2	2	Yes
Signage	Bridge Mounted Signs & Cantilever Sign Structures	6	0	1	Yes
Signage_h	Bridge Mounted Signs & Cantilever Sign Structures Hidden	6	2	1	Yes
SignageArch	Signage Architectural	0	0	1	Yes
SignageArch_h	Signage Architectural Hidden	0	3	0	Yes

Level	Description	ByLevel Color	ByLevel Style	ByLevel Weight	Plot ?
SignMisc	Sign Miscellaneous Plates & Hardware	3	0	1	Yes
SignMisc_h	Sign Miscellaneous Plates & Hardware Hidden	3	2	1	Yes
SlopeProtection	Sand Cement Riprap, Slope Pavement; Rubble Riprap	3	0	3	Yes
SlopeProtection_h	Sand Cement Riprap, Slope Pavement; Rubble Riprap Hidden	3	0	3	Yes
Soffit	Soffit	4	0	1	Yes
Soffit_h	Soffit Hidden	4	3	0	Yes
Stairs	Stairs	6	0	2	Yes
Stairs_h	Stairs Hidden	6	3	1	Yes
SteelArch_Misc	Steel Architectural Miscellaneous	4	0	1	Yes
SteelArch_Misc_h	Steel Architectural Miscellaneous Hidden	4	3	0	Yes
SteelDiapXFram	Steel Diaphragms & Cross Frames	6	0	1	Yes
SteelDiapXFram_h	Steel Diaphragms & Cross Frames Hidden	6	2	0	Yes
SteelGirder	Steel Girder, Stringers, Trusses	6	0	1	Yes
SteelGirder_h	Steel Girder Stringers, Trusses Hidden,	6	2	0	Yes
SteelMisc	Steel Miscellaneous Stiffeners, Plates, Bolts etc.	6	0	1	Yes
SteelMisc_h	Steel Miscellaneous Hidden Stiffeners, Plates, Bolts etc.	6	2	0	Yes
StrMisc	Structural Miscellaneous	3**	0	1	Yes
StrMisc_h	Structural Miscellaneous Hidden	3**	2	1	Yes
StrMiscConc	Structural Miscellaneous Concrete	2**	0	3	Yes
StrMiscConc_h	Structural Miscellaneous Concrete Hidden	2**	2	2	Yes
Stucco	Stucco	1	0	0	Yes
Stucco_h	Stucco Hidden	1	3	0	Yes
SubStrConc	Substructure Concrete	2	0	3	Yes
SubStrConc_h	Substructure Concrete Hidden	2	2	3	Yes
SubStrConc2	Substructure Concrete Misc	2	0	3	Yes
SubStrConc2_h	Substructure Concrete Misc Hidden	2	2	3	Yes
SupstrConc	Concrete Deck, Segmental Box	2	0	3	Yes
SupstrConc_h	Concrete Deck, Segmental Box Hidden	2	2	2	Yes
SupstrConc2	Concrete Diaphragms, etc	2	0	3	Yes
SupstrConc2_h	Concrete Diaphragms, etc Hidden	2	2	2	Yes
Symbols	All Symbols not covered by Structures Site Menu	0	0	1	Yes
SymbolsElectric	Electrical Symbols	0	0	1	Yes
Tables	Data Tables	0	0	1	Yes
TextNotes	Text Notes	0	0	0	
TextRdwyInitials	Text - Roadway Initials	0	0	1	
TextStructShtNo	Sheet Number for Structures border sheet numbers	0	0	0	
TextStructures	Structures Text	0	0	1	Yes
TextStructuresLabel	Used By Sheet Navigator	0	0	0	
TrafBarrierConc	Traffic Barrier Concrete	2	0	3	Yes
UtilityCableTV	Utility Cable TV	6	0	0	Yes
UtilityFiberOptics	Utility Fiber Optics	6	0	0	Yes

Level	Description	ByLevel Color	ByLevel Style	ByLevel Weight	Plot ?
UtilityGasMain	Utility Gas Main	0	0	0	Yes
UtilityPower	Utility Power	2	0	0	Yes
UtilitySewer	Utility Sewer	3	0	0	Yes
UtilityTelephone	Utility Telephone	6	0	0	Yes
UtilityWater	Utility Water	7	0	0	Yes
Walkways-Ladders	Steel Ladder & Walkway Components; Timber, Steel, Plastic Landings & Catwalks	6	0	1	Yes
WallConc	Wall Coping Concrete	2	0	3	Yes
WallConc_h	Wall Coping Concrete Hidden	2	2	2	Yes
WallHardware	Wall Hardware	3	0	0	Yes
WallMSEPanel	Wall MSE Panels	2	0	3	Yes
WallMSEPanel_h	Wall MSE Panels Hidden	2	2	2	Yes
WallsArch	Interior Walls	6	0	2	Yes
WallsArch_h	Interior Walls Hidden	6	3	1	Yes
WallSoundConc	Precast Soundwall Concrete	2	0	3	Yes
WallSoundConc_h	Precast Soundwall Concrete Hidden	2	2	2	Yes
WallTempCritical	Wall Temporary Critical	3	0	1	Yes
WallTempCritical_h	Wall Temporary Critical Hidden	3	2	1	Yes
WaterLines	Water Line, Symbol	15	0	1	Yes
Whaler	Whalers, Timber, Plastic	142	0	1	Yes
Windows	Windows	3	0	2	Yes
Windows_h	Windows Hidden	3	3	1	Yes
Wood	Wood	142	0	1	Yes
Wood_h	Wood Hidden	142	3	0	Yes

18.5.1 BORDERS AND SCALES

18.5.1.1. BORDERS

Draw all elements at "Full Size" completely before placing text or dimensions. After drawing all elements, determine the "Overall" Border scale required. Scale any details up or down as required at this time. Select the appropriate Border scale from the Structures Menu and place the Border Cell. Sheets that reside in the Structures Component of the plan set shall use the Structures Border cell “Sheet-Border”. 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”. For FDOT2010 files, once the border scale is set, the Annotation Scale should be set via Structures Menu at the matching scale.

Select the text style from the Structures Menu, then place text and Dimensions. It is helpful to show the scale of the drawing and related details inside the display area of the file, but outside of the Sheet Border area. This is helpful to all users who work on the file.

18.5.1.2. SCALES

The following chart is intended to aid the user in determining the appropriate scale for placing the border and text on a drawing based on the actual size of the drawing. Calculations are based on a 9.60" x 15.40 drawing area inside the border.

Architect's Scales

Drawing Scale	Active Scale (AS)	Height (FT.)	Width (FT.)
1/16" = 1'	192	153.59	246.39
3/32" = 1'	128	102.40	164.26
1/8" = 1'	96	76.80	123.20
3/16" = 1'	64	51.20	82.13
1/4" = 1'	48	38.40	61.60
3/8" = 1'	32	25.60	41.07
½" = 1'	24	19.20	30.80
3/4" = 1'	16	12.80	20.53
1" = 1'	12	9.60	15.40
1 ½" = 1'	8	6.40	10.27
3" = 1'	4	3.20	5.13
6" = 1'	2	1.60	2.57
1 = 1	1	.80	1.28

Engineer's Scales

Drawing Scale	Active Scale (AS)	Height (FT.)	Width (FT.)
1" = 500'	6000	4799.81	7699.69
1" = 400'	4800	3839.85	6159.75
1" = 300'	3600	2879.88	4619.82
1" = 250'	3000	2399.90	3849.85
1" = 200'	2400	1919.92	3079.88
1" = 150'	1800	1439.94	2309.91
1" = 120'	1440	1161.95	1847.93
1" = 100'	1200	959.96	1539.94
1" = 80'	960	767.97	1231.95
1" = 60'	720	575.98	923.96
1" = 50'	600	479.98	769.97
1" = 40'	480	383.98	615.98
1" = 30'	360	287.99	461.98
1" = 20'	240	191.99	307.99
1" = 15'	180	143.99	230.99
1" = 10'	120	96.00	153.99

FORMULAS:

Architect's Scale:

AS = 12 / Drawing Scale,

Ex. 1/4" = .25 in., then 12 / .25 = 48, Therefore AS = 48.

W = Sheet Width (in.) / Drawing Scale

Ex. 1/4" = .25 in., then 15.36/ .25 = 61.44, Therefore W = 61.44.

H = Sheet Height (in.) / Drawing Scale

Ex. 1/4" = .25 in., then 9.72 / .25 = 38.88, Therefore H = 38.88.

Engineer's Scale:

AS = 12 x Drawing Scale,

Ex. 1"=500', then 12 x 500 = 6000, Therefore AS = 6000.

W = Sheet Width (in.) x Drawing Scale.

Ex. 1"=500', then 15.36 x 500 = 7680, Therefore W = 7680.

H = Sheet Height (in.) x Drawing Scale,

Ex. 1"=500', then 9.72 x 500 = 4860, Therefore H = 4860.

18.5.2 TEXT SIZES AND WEIGHTS

For FDOT2010 workspace:

Annotation = 0.0063 x (Annotation Scale). The use of annotation scale allows the text and dimensioning to be rescaled easily via the Scale > Annotation Scale Structures Menu items.

The SDO uses special, custom fonts in its drawings and CADD programs; specifically, the FDOT and FDOTMono true type fonts (ttf). These fonts are stored in the FDOT.ttf and FDOTMono.ttf files supplied with the FDOT CADD software.

The zDOTFont.rsc and StructuresFont.rsc resource files are delivered in the FDOT2010 software suite providing support for legacy MicroStation fonts 168, 169, 68, and 69. These fonts should not be used for new production work.

The Structures Menu provides all needed text sizes. The minimum Annotation text size after plotting shall be .0063'.

All standard text sizes may be selected from the Structures Menu.

TITLE	FONT	SIZE (Ft)
Revisions Initials	FDOT FDOT	.0050 .0058
Annotation/Table Data	FDOT	.0063
View/Sheet/Sect Titles	FDOTBold	.0080
Large	FDOTBold	.0084
Larger	FDOTBold	.0100

Note Sizes shown are at 1:1 ratio.

18.5.3 COLORS

Colors depend on the color table attached to the design file. Therefore, it is important that "color.tbl" provided by MicroStation is attached to all structures design files.

18.5.4 SPECIAL SYMBOLS

Special symbol characters are provided in the delivered FDOT true type font files. These characters may be accessed via the Insert Symbol tool provided in the MicroStation Word processor dialog.

These characters include but are not limited to: fractions, mathematical symbols, survey symbols, boring symbols, Greek letters, Super/Sub Scripts.

18.5.5 DIMENSION SETTINGS

Dimension styles are defined in the *strslevels.dgnlib*. Styles are provided for Dimensioning and Notes for various terminators and leaders. Make every effort to use automatic dimensioning with element association enabled.

18.6 REFERENCE FILES

Information from other disciplines such as roadway, utilities, etc. should not be copied into Structures design files, as they will be flagged as invalid by the Quality Control Program and adversely affect the Quality Compliance Report.

When it is necessary to use or present this type of information, reference it into the Structures design file using relative paths.

Table of Contents

CHAPTER 19 - UTILITIES STANDARDS 19-1

19.1 INTRODUCTION OF UTILITY COORDINATION OF CADD FILES 19-1
19.2 UTILITY FILE COORDINATION OPTIONS 19-1
19.2.1 Sharing of Graphic Files 19-1
19.2.2 ASCII Input File 19-1
19.2.3 Geographic Information System (GIS) File 19-1
19.3 UTILITY COORDINATION WORKFLOW 19-2
19.3.1 Phase I Utility Coordination Workflow 19-2
19.3.2 Phase II Utility Coordination Workflow 19-2
19.3.3 Phase III Utility Coordination Workflow 19-3
19.3.4 Phase IV Utility Coordination Workflow 19-3
19.4 EXCHANGE OF GRAPHICS FILES 19-4
19.4.1 Standard File Names 19-4
19.5 UTILITY PLANS 19-5
19.6 ASCII FILE NAME CONVENTIONS 19-5
19.6.1 ASCII Header Convention 19-5
19.6.2 Format of Station and Offset ASCII File 19-6
19.6.3 Format of Northing and Easting ASCII File 19-7
19.6.4 ASCII Input File Examples 19-8
19.7 UTILITY SCANNED IMAGES 19-11

THIS PAGE WAS LEFT BLANK INTENTIONALLY.

Chapter 19 - UTILITIES STANDARDS

CADD Production Criteria Handbook

19.1 INTRODUCTION OF UTILITY COORDINATION OF CADD FILES

The purpose of this chapter is to define guidelines for the sharing of data between the District Offices and the Utility Agency/Owner (UAO) and the final file format required for Florida Department of Transportation (FDOT) electronic submittals.

19.2 UTILITY FILE COORDINATION OPTIONS

There are three options available for the UAO to share files with FDOT:

- Exchange of graphic files (DGN or DWG) – the preferred option
- Creation of ASCII files
- Import of Geographic Information System (GIS) data

19.2.1 SHARING OF GRAPHIC FILES

Graphic design files are created to FDOT Computer Aided Design and Drafting (CADD) Standards and returned to the District for review. The UAO will use these files as references to create the existing or proposed utility files. These files (existing or proposed) would also be submitted back to the District. It is the District's responsibility to coordinate with the UAO for delivery of graphic files or the second possible option - American Standard Code for Information Interchange (ASCII) files.

19.2.2 ASCII INPUT FILE

The second option is the ASCII input file that can be created from existing or proposed utilities. The ASCII file format will be either in Station/Offset or in Northing/Easting (state plane coordinates). These files will contain information pertinent to the utility, as well as the type of utility and where it is located referenced to the (survey baseline) alignment or state plane coordinates.

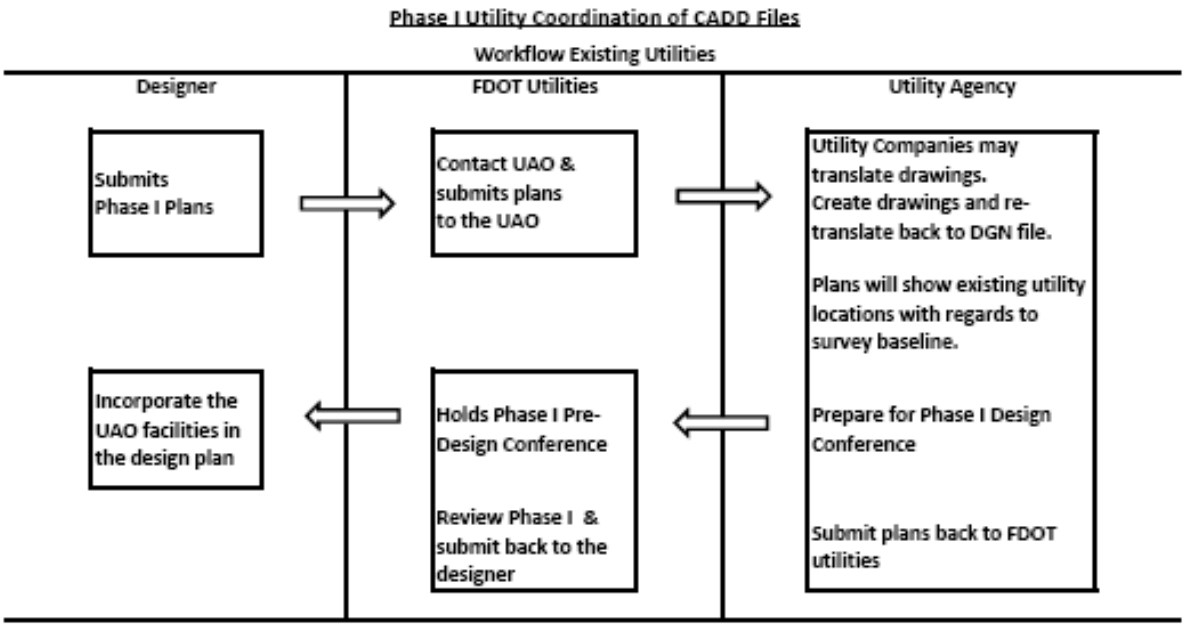
19.2.3 GEOGRAPHIC INFORMATION SYSTEM (GIS) FILE

In the event that a UAO maintains a GIS database of utility data, that data may be exchanged in GIS shape files.

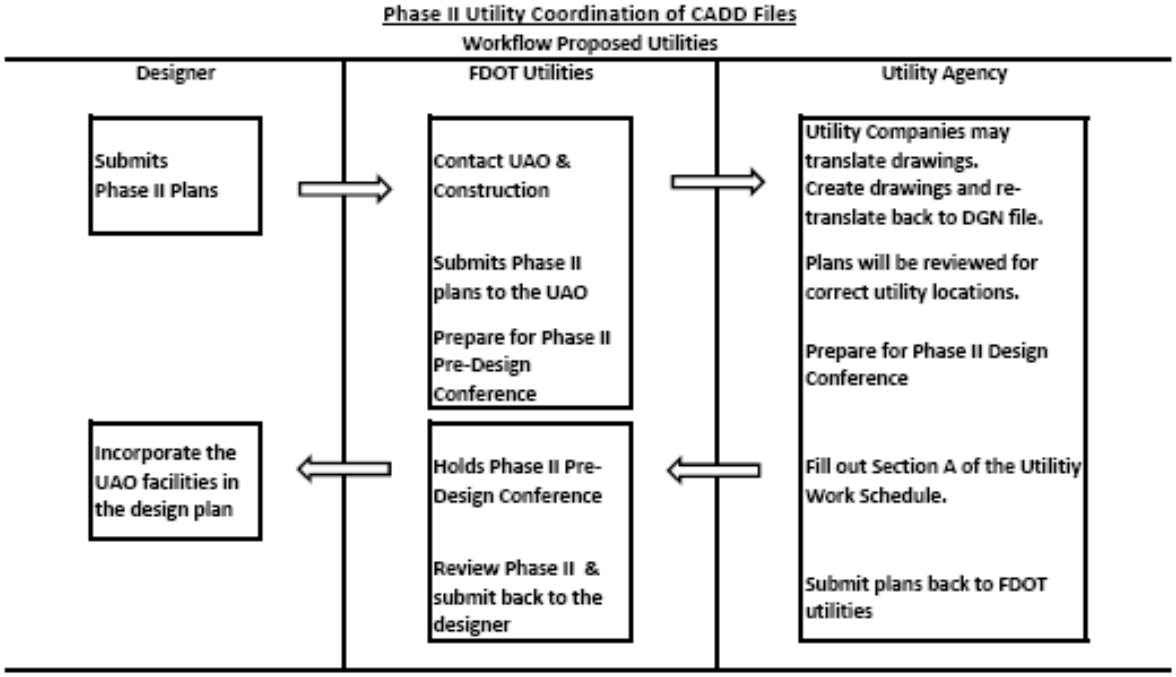
19.3 UTILITY COORDINATION WORKFLOW

Each workflow is shown as a flow chart from the Designer to the FDOT District Utilities Office, then to the Utility Agency and back to the FDOT District Utilities Office and finally to the Designer.

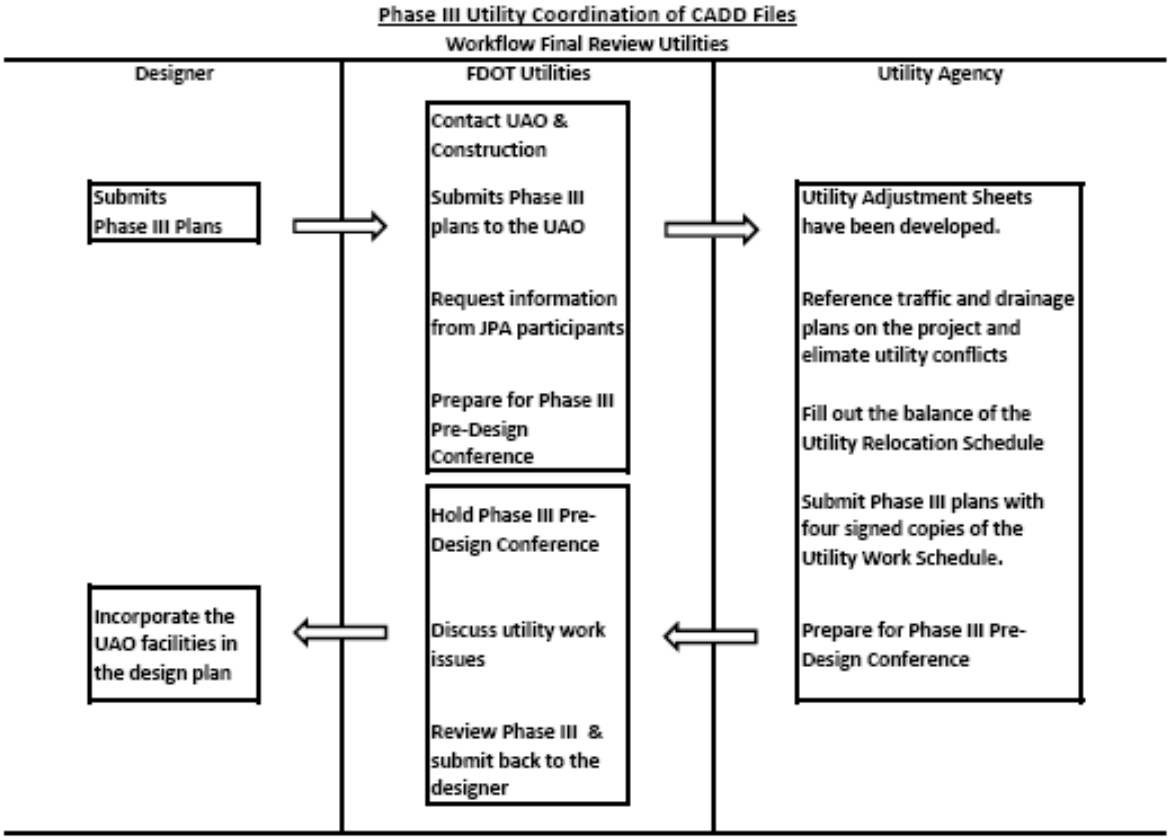
19.3.1 PHASE I UTILITY COORDINATION WORKFLOW



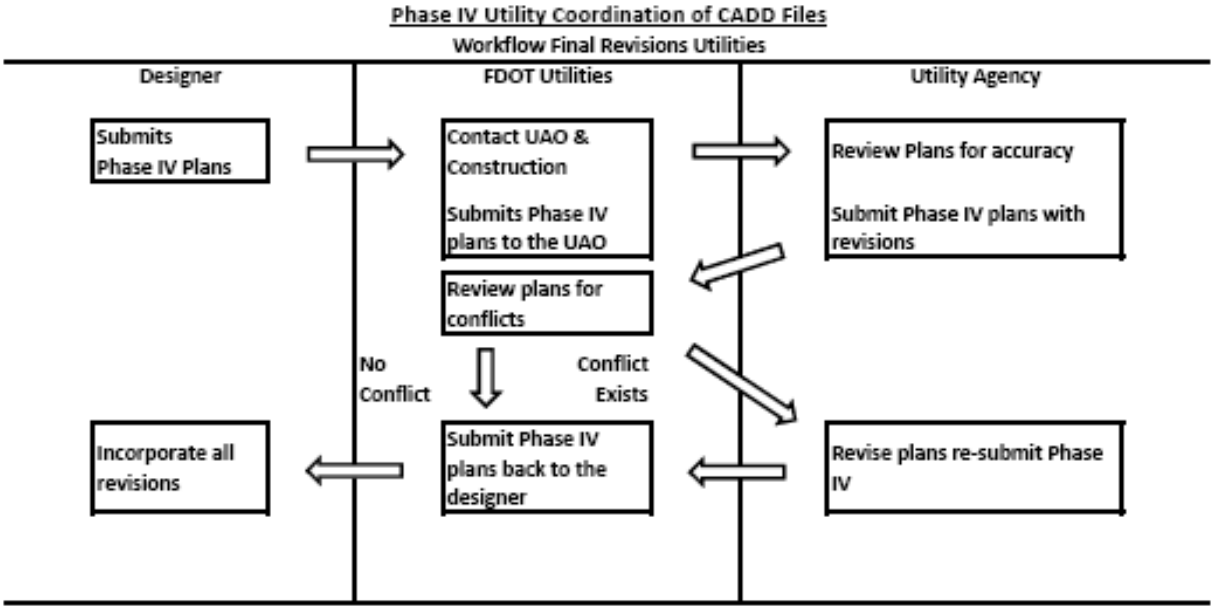
19.3.2 PHASE II UTILITY COORDINATION WORKFLOW



19.3.3 PHASE III UTILITY COORDINATION WORKFLOW



19.3.4 PHASE IV UTILITY COORDINATION WORKFLOW



19.4 EXCHANGE OF GRAPHICS FILES

After the FDOT District Utilities Office (via Utility Coordinator) has received the current phase submittal from the Roadway Designer, they will contact the involved utilities and notify them of the phase submittal. The UAO will then receive the phase documents from FDOT that will contain the Roadway Plans, the necessary CADD files and any Utility Relocation Agreements and Schedules. The required electronic files include the proposed roadway design; the existing topography, the existing and proposed ROW and the existing utilities gathered from the survey and previously supplied data.

No editing of any files provided by FDOT is permitted. The UAO will be placing data into newly created files at all times. File naming standards should be maintained at all times.

19.4.1 STANDARD FILE NAMES

FDOT utilizes standard naming conventions for all of its files. Some of the automation implemented in various tools provided by FDOT depends on naming conventions being met. More importantly, the naming convention confers information to the downstream customer of the data.
Standard file names should follow this format: **AAAABB##.ext**

Where **AAAA** = *abbreviated file description*, **BB** = *Discipline Denotation*, ## =*Sequence number.*

Note Please see Chapter 5 of this document for more information.

If the Utility work is accomplished by a Highway Contractor as a separate contract (UWHC plans), the discipline designation for the file name is “UW”.

For example a utility adjustment file name would be utaduw01.dgn.

If the utility adjustments are included in the Roadway plan set the discipline designation for the file name is “RD”. For example a utility adjustment file name would be utadrd01.dgn. See Chapter 13 for the standard Utility file names defined for use by Roadway Design.

The following table defines the Utilities File Name Standards in regards to FDOT Projects with the understanding that each file name will include sequence numbering. Standard Model names are also provided, however, it is not mandatory to use more than the default model, with the exception of those listed in this table.

Note See Chapter 4 for the symbology standards for each applicable Standard Rule.

File Type	Critical File	File Name	Model Name	File Description	Standard Rule	MicroStation Seed File	Civil 3D Template File
Borders & Sheets		BDPLUW*	default	UWHC Border Sheet Reference File for Plan Sheets	planrd	fdotseed2d.dgn	
Borders & Sheets		GNNTUW*	default	UWHC General Notes	planrd	fdotseed2d.dgn	genplanrd.dwt
Borders & Sheets		PLANUW*	default	UWHC Plan Sheet	planrd	fdotseed2d.dgn	planrd.dwt
Borders & Sheets		PLPRUW* (UTEXRD*)	default	UWHC Plan & Profile Sheet	plprrd	fdotseed2d.dgn	SHPlanProfStd.dwt
Borders & Sheets		PROFUW*	default	UWHC Profile Sheet	plprrd	fdotseed2d.dgn	SHProfile.dwt
Clipping		CLIPUW*	default	UWHC Clip Borders	cliprd	fdotseed2d.dgn	cliprd.dwt
Clipping		MTPLUW*	default	UWHC Motif file for plan sheets	planrd	fdotseed2d.dgn	planrd.dwt
Clipping		MTPRUW*	default	UWHC Motif file for profile sheets	plprrd	fdotseed2d.dgn	planrd.dwt
Existing Topography		TOPOUW*	default	Topography - Existing (No Utilities or Drainage included)	topord	fdotseed2d.dgn	topord.dwt
Key Sheets		KEYSUW*	default	UWHC Key Sheet	keysht	fdotseedkeymap.dgn	keysht.dwt

File Type	Critical File	File Name	Model Name	File Description	Standard Rule	MicroStation Seed File	Civil 3D Template File
Proposed Design		TEXTUW*	default	UWHC Text Labels & Miscellaneous Descriptions	planrd	fdotseed2d.dgn	
Utilities		UTADUW* (UTADRD*)	default	UWHC Utility Adjustment Sheet	utadrd	fdotseed2d.dgn	utadrd.dwt
Utilities		UTDTUW*	default	UWHC Special Details	open	fdotseed2d.dgn	spdtrd.dwt
Utilities	X	UTEXUW* (UTEXRD*)	default	UWHC Utilities - Existing	utexrd	fdotseed2d.dgn	utexrd.dwt
Utilities	X	UTPRUW* (UTPRRD*)	default	UWHC Utilities - Proposed	utprrd	fdotseed2d.dgn	utprrd.dwt
Verified Utilities		SBVHUW*	default	UWHC Summary of Verified Utilities (2D)	planrd	fdotseed2d.dgn	
Verified Utilities	X	UTVHUW*	default	UWHC Survey of Verified Utilities (3D version of UTEXRD.dgn)	utexrd	fdotseed3d.dgn	utexrd.dwt

19.5 UTILITY PLANS

Major highway construction elements such as pavement areas, bridges, drainage structures, right of way, lane widths, control of access limits and highway-straight-line numbers should appear in the Utility plans.

The FDOT plans marked by the UAO shall use the following color code:

- ***Red:*** Existing utilities either (a) to be removed or relocated horizontally or (b) to be placed out-of-service (deactivated) but left in place.
- ***Green:*** Existing utilities to remain in place with no adjustment.
- ***Brown:*** Either (a) existing utilities to be adjusted vertically but to remain in the same horizontal alignment, or (b) completely new utilities to be installed.

One set of the plans should be returned to FDOT with each copy of the Utility Agreement.

19.6 ASCII FILE NAME CONVENTIONS

The file naming convention for this input file will be *utilex##.inp* for existing utilities and *utilpr##.inp* for proposed utilities. Where ## will be a sequencing number (01, 02, 03 etc.).

Each electronic ASCII report file will be stored on media according to the FDOT CADD Deliverable Standards. When delivery is made, the ASCII report will be accompanied by a printed hardcopy.

Provided are four examples of input files. Two examples are of Station/Offset and two are of Northing/Easting, each with and without explicit elevations or depth of cover.

19.6.1 ASCII HEADER CONVENTION

These files will follow a standard format and its header is described below:

1. "Name:" -- Utility Owner's Name.
2. "Date:" -- Month, Day, Year (optional: Time).
3. "Proj:" -- Project Financial Number
4. "Type:" -- Type of Utility (Existing or Proposed).
5. "File:" -- Filename
6. "Cont:" -- Utility Owner's Contact Person responsible for creating the report.
7. "Note:" -- Any Additional Information that will describe the utility.

19.6.2 FORMAT OF STATION AND OFFSET ASCII FILE

The Station Offset Report method consists of generating a report, which will locate key utility points along a defined alignment. The report will store those points in the form of a utility chain.

Example of Point Location: LOC 10020 ON CHA blsr54 STA 18+89.760 OFF -8.534 $BT100

Format of the Command: LOCATE n ON CHAIN name STA station OFF offset $description

LOC	Initiates the locate command.
N	Determines the utility point number (begin with 10,000).
ON	Determines how to locate the utility point.
CHA	Initiates the read chain name command.
NAME	Describes the chain name, usually of the survey baseline, that is provided by FDOT.
STA	Initiates the find station command.
Station	Display's the utility point's station location.
OFF	Initiates the offset distance command.
Offset	The offset distance value, "+" for positive to the right and "-"for negative to the left, to the chain.
Description	The description has two options, the first showing the EL option with a defined elevation and the feature code. The second option shows the feature code and a defined depth of cover.

- **Example of Station Offset Option 1, Defined Elevation**

  LOC 10029 ON CHA blsr54 STA 19+79.818 OFF -8.530 $ EL 2.806000 BT100

The above statement locates point 10029 on chain blsr54 at station19+79.818 left 8.530 at elevation 2.80600 as a feature BT100 or Buried Telephone 100 pair.

- **Example of Station Offset Option 2, Fixed Depth of Cover**

  LOC 10020 ON CHA blsr54 STA 18+89.760 OFF -8.534 $ BT12

The above statement locates point 10020 on chain blsr54 at station 18+89.760 left 8.534 as a feature BT12 or Buried Telephone 12 pair. In the header of the file, there is a line that states the depth of cover. "All elevations assume a 0.750 meter depth of cover."

- **The Store Chain Command**

The store chain command will store a range of points as a utility chain. It provides the point range, the chain name and the feature that describe the utility chain. The format is shown below:

Command	STO CHA BT50A 10020 - 10023 $ BT50 list: BT1 - BT4
Format	STORE CHAIN name list $description
Store	Initiates the Store Chain Command.
Chain	Initiates the Read Chain Name Command.
Name	Names the Utility Chain (BT12 etc.).
Range	Defines a range of stores utility points.
$ Comment	Initiates a comment insertion.
Description	Describes the list of utility point numbers, which make the utility chain.

19.6.3 FORMAT OF NORTHING AND EASTING ASCII FILE

The Northing and Easting report method consists of generating a report which stores key utility points according to their relative State Plane Coordinates (X, Y, and Z) and stores this information in the form of a utility chain.

The store point command is shown below:

Command	S 10020 N 430059.370000 E 127421.085000 EL 2.513 $ BT100
Format	Store n N northing E easting EL elevation $description
S	Initiates the Store Point command.
n	Defines the utility point number (above 10,000).
N	Initiates the read Northing command.
Northing	Establishes the Y, horizontal coordinate.
E	Initializes the read Easting command.
Easting	Establishes the X, horizontal coordinate.
EL	Initiates either the read elevation command or uses a defined depth of cover.
Elevation	The Elevation argument has two options, the EL option with a defined read elevation. Second option is a defined depth of cover.
Description	This describes the utility feature code.

- **Example of Nothing Easting Option 1, Defined Elevation**

  S 10020 N 430059.370000 E 127421.085000 EL 2.513000 $ BT12

The above statement stores the point 10020 at 127421.085000/430059.370000 (X, Y) at elevation 2.513000 with a feature code of BT12 (Buried Telephone 12 pair).

- **Example of Northing Easting Option 2, Fixed Depth of Cover**

  S 10020 N 430059.370000 E 127421.085000 $ BT12

The above statement stores the point 10020 at 127421.085000/430059.370000 (X, Y) at a given depth of cover with a feature code of BT12 (Buried Telephone 12 pair).

- **The Store Chain Command**

The store chain command will store a range of points as a utility chain. It provides the point range, chain name and the feature that describes the utility chain. The format is shown below:

Command	STO CHA BT50A 10020 - 10023 $ BT50 list: BT1 - BT4
Format	STORE CHAIN name list $ description
Store	Initiates the Store Chain Command.
Chain	Initiates the Read Chain Name Command.
Name	Names the Utility Chain (BT12 etc.).
Range	Defines a range of stores utility points.
$ Comment	Initiates a comment insertion.
Description	Describes the list of utility point numbers, which make the utility chain.

19.6.4 ASCII INPUT FILE EXAMPLES

- **Northing Easting, no elevation**

```
$*********************************************************$
$************ Name: General Telephone Company *************$
$************ Date: Nov 5, 1999 08:00:00      *************$
$************ Proj: c:\proj\14570\1519        *************$
$************ Type: Existing Buried Telephone *************$
$************ File: utilex04.inp (Metric)     *************$
$************ Cont: Alex Bell (813) 975-6000  *************$
$ Note: All elevations assume a 0.750 meter depth of cover $
$*********************************************************$
S 10020 N 430059.370000  E 127421.085000  $ BT1
S 10021 N 430059.342000  E 127420.188000  $ BT2
S 10022 N 430058.733000  E 127420.235000  $ BT3
S 10023 N 430058.772000  E 127421.112000  $ BT4
S 10024 N 430025.015000  E 127425.677000  $ BT5
S 10025 N 430024.463000  E 127425.921000  $ BT6
S 10026 N 430024.120000  E 127425.150000  $ BT7
S 10027 N 430024.711000  E 127424.906000  $ BT8
S 10028 N 430010.203000  E 127442.371000  $ BT9
S 10029 N 430010.404000  E 127441.806000  $ BT10
S 10030 N 430009.593000  E 127441.488000  $ BT11
S 10031 N 430009.365000  E 127442.088000  $ BT12
S 10032 N 430011.003000  E 127472.172000  $ BT13
S 10033 N 430010.111000  E 127472.198000  $ BT14
S 10034 N 430010.091000  E 127471.575000  $ BT15
S 10035 N 430010.963000  E 127471.555000  $ BT16
S 10036 N 429939.130000  E 127431.218000  $ BT17
S 10037 N 429939.202000  E 127432.171000  $ BT18
S 10038 N 429940.582000  E 127432.122000  $ BT19
S 10039 N 429940.518000  E 127431.231000  $ BT20
S 10040 N 429974.677000  E 127481.061000  $ BT25
S 10041 N 429974.731000  E 127481.671000  $ BT26
S 10042 N 429973.882000  E 127481.730000  $ BT27
S 10043 N 429973.821000  E 127481.144000  $ BT28

$ BT50 list: BT1-BT4
STO CHA BT50A 10020-10023

$ BT75 list: BT17-BT20
STO CHA BT75A 10036-10039

$ BT100 list: BT5-BT8
STO CHA BT100A 10024-10027

$ BT200 list: BT9-BT12
STO CHA BT200A 10028-10031

$ BT300 list: BT13-BT16
STO CHA BT300A 10032-10035

$ BT400 list: BT25-BT28
STO CHA BT400A 10040-10043
```

- **Northing and Easting Example with Elevation**

```
$*********************************************************$
$************ Name: General Telephone Company ************$
$************ Date: Nov 5, 1999 08:00:00      ************$
$************ Proj: c:\proj\14570\1519        ************$
$************ Type: Existing Buried Telephone ************$
$************ File: utilex03.inp (Metric)     ************$
$************ Cont: Alex Bell (813) 975-6000  ************$
$*********************************************************$
S 10020 N 430059.370000  E 127421.085000  EL 2.513000  $ BT1
S 10021 N 430059.342000  E 127420.188000  EL 2.532000  $ BT2
S 10022 N 430058.733000  E 127420.235000  EL 2.533000  $ BT3
S 10023 N 430058.772000  E 127421.112000  EL 2.502000  $ BT4
S 10024 N 430025.015000  E 127425.677000  EL 2.483000  $ BT5
S 10025 N 430024.463000  E 127425.921000  EL 2.470000  $ BT6
S 10026 N 430024.120000  E 127425.150000  EL 2.517000  $ BT7
S 10027 N 430024.711000  E 127424.906000  EL 2.530000  $ BT8
S 10028 N 430010.203000  E 127442.371000  EL 2.793000  $ BT9
S 10029 N 430010.404000  E 127441.806000  EL 2.806000  $ BT10
S 10030 N 430009.593000  E 127441.488000  EL 2.800000  $ BT11
S 10031 N 430009.365000  E 127442.088000  EL 2.788000  $ BT12
S 10032 N 430011.003000  E 127472.172000  EL 2.564000  $ BT13
S 10033 N 430010.111000  E 127472.198000  EL 2.576000  $ BT14
S 10034 N 430010.091000  E 127471.575000  EL 2.563000  $ BT15
S 10035 N 430010.963000  E 127471.555000  EL 2.551000  $ BT16
S 10036 N 429939.130000  E 127431.218000  EL 2.310000  $ BT17
S 10037 N 429939.202000  E 127432.171000  EL 2.250000  $ BT18
S 10038 N 429940.582000  E 127432.122000  EL 2.286000  $ BT19
S 10039 N 429940.518000  E 127431.231000  EL 2.266000  $ BT20
S 10040 N 429974.677000  E 127481.061000  EL 2.671000  $ BT25
S 10041 N 429974.731000  E 127481.671000  EL 2.639000  $ BT26
S 10042 N 429973.882000  E 127481.730000  EL 2.698000  $ BT27
S 10043 N 429973.821000  E 127481.144000  EL 2.679000  $ BT28

$ BT50 list: BT1-BT4
STO CHA BT50A 10020-10023

$ BT75 list: BT17-BT20
STO CHA BT75A 10036-10039

$ BT100 list: BT5-BT8
STO CHA BT100A 10024-10027

$ BT200 list: BT9-BT12
STO CHA BT200A 10028-10031

$ BT300 list: BT13-BT16
STO CHA BT300A 10032-10035

$ BT400 list: BT25-BT28
STO CHA BT400A 10040-10043
```

- **Station Offset Example with Assumed Depth of Cover**

```
$*************************************************************$
$************ Name: General Telephone Company  ************$
$************ Date: Nov 5, 1999 08:00:00       ************$
$************ Proj: c:\proj\14570\1519         ************$
$************ Type: Existing Buried Telephone  ************$
$************ File: utilex02.inp (Metric)      ************$
$************ Cont: Alex Bell (813) 975-6000   ************$
$ Note: All elevations assume a 0.750 meter depth of cover $
$*************************************************************$
LOC 10020 ON CHA blsr54 STA 18+89.760 OFF -8.534  $ BT1
LOC 10021 ON CHA blsr54 STA 18+99.818 OFF -8.530  $ BT2
LOC 10022 ON CHA blsr54 STA 19+09.018 OFF -8.524  $ BT3
LOC 10023 ON CHA blsr54 STA 19+19.018 OFF -8.540  $ BT4
LOC 10024 ON CHA blsr54 STA 19+29.760 OFF -8.534  $ BT5
LOC 10025 ON CHA blsr54 STA 19+39.818 OFF -8.530  $ BT6
LOC 10026 ON CHA blsr54 STA 19+49.018 OFF -8.524  $ BT7
LOC 10027 ON CHA blsr54 STA 19+59.018 OFF -8.540  $ BT8
LOC 10028 ON CHA blsr54 STA 19+69.760 OFF -8.534  $ BT9
LOC 10029 ON CHA blsr54 STA 19+79.818 OFF -8.530  $ BT10
LOC 10030 ON CHA blsr54 STA 19+89.018 OFF -8.524  $ BT11
LOC 10031 ON CHA blsr54 STA 19+99.018 OFF -8.540  $ BT12
LOC 10032 ON CHA blsr54 STA 20+09.760 OFF -8.534  $ BT13
LOC 10033 ON CHA blsr54 STA 20+19.818 OFF -8.530  $ BT14
LOC 10034 ON CHA blsr54 STA 20+29.018 OFF -8.524  $ BT15
LOC 10035 ON CHA blsr54 STA 20+39.018 OFF -8.540  $ BT16
LOC 10036 ON CHA blsr54 STA 19+49.760 OFF +8.534  $ BT17
LOC 10037 ON CHA blsr54 STA 19+59.818 OFF +8.530  $ BT18
LOC 10038 ON CHA blsr54 STA 19+69.018 OFF +8.524  $ BT19
LOC 10039 ON CHA blsr54 STA 19+79.018 OFF +8.540  $ BT20
LOC 10040 ON CHA blsr54 STA 19+89.760 OFF +8.534  $ BT25
LOC 10041 ON CHA blsr54 STA 19+99.818 OFF +8.530  $ BT26
LOC 10042 ON CHA blsr54 STA 20+09.018 OFF +8.524  $ BT27
LOC 10043 ON CHA blsr54 STA 20+19.018 OFF +8.540  $ BT28

$ BT50 list: BT1-BT4
STO CHA BT50A 10020-10023

$ BT75 list: BT17-BT20
STO CHA BT75A 10036-10039

$ BT100 list: BT5-BT8
STO CHA BT100A 10024-10027

$ BT200 list: BT9-BT12
STO CHA BT200A 10028-10031

$ BT300 list: BT13-BT16
STO CHA BT300A 10032-10035

$ BT400 list: BT25-BT28
STO CHA BT400A 10040-10043
```

- **Station Offset Example with Elevation**

```
$*********************************************************$
$************ Name: General Telephone Company ************$
$************ Date: Nov 5, 1999 08:00:00      ************$
$************ Proj: c:\proj\14570\1519        ************$
$************ Type: Existing Buried Telephone ************$
$************ File: utilex01.inp (Metric)     ************$
$************ Cont: Alex Bell (813) 975-6000  ************$
$*********************************************************$
LOC 10020 ON CHA blsr54 STA 18+89.760 OFF -8.534    $ EL 2.513000  BT1
LOC 10021 ON CHA blsr54 STA 18+99.818 OFF -8.530    $ EL 2.532000  BT2
LOC 10022 ON CHA blsr54 STA 19+09.018 OFF -8.524    $ EL 2.533000  BT3
LOC 10023 ON CHA blsr54 STA 19+19.018 OFF -8.540    $ EL 2.502000  BT4
LOC 10024 ON CHA blsr54 STA 19+29.760 OFF -8.534    $ EL 2.483000  BT5
LOC 10025 ON CHA blsr54 STA 19+39.818 OFF -8.530    $ EL 2.470000  BT6
LOC 10026 ON CHA blsr54 STA 19+49.018 OFF -8.524    $ EL 2.517000  BT7
LOC 10027 ON CHA blsr54 STA 19+59.018 OFF -8.540    $ EL 2.530000  BT8
LOC 10028 ON CHA blsr54 STA 19+69.760 OFF -8.534    $ EL 2.793000  BT9
LOC 10029 ON CHA blsr54 STA 19+79.818 OFF -8.530    $ EL 2.806000  BT10
LOC 10030 ON CHA blsr54 STA 19+89.018 OFF -8.524    $ EL 2.800000  BT11
LOC 10031 ON CHA blsr54 STA 19+99.018 OFF -8.540    $ EL 2.788000  BT12
LOC 10032 ON CHA blsr54 STA 20+09.760 OFF -8.534    $ EL 2.564000  BT13
LOC 10033 ON CHA blsr54 STA 20+19.818 OFF -8.530    $ EL 2.576000  BT14
LOC 10034 ON CHA blsr54 STA 20+29.018 OFF -8.524    $ EL 2.563000  BT15
LOC 10035 ON CHA blsr54 STA 20+39.018 OFF -8.540    $ EL 2.551000  BT16
LOC 10036 ON CHA blsr54 STA 19+49.760 OFF +8.534    $ EL 2.310000  BT17
LOC 10037 ON CHA blsr54 STA 19+59.818 OFF +8.530    $ EL 2.250000  BT18
LOC 10038 ON CHA blsr54 STA 19+69.018 OFF +8.524    $ EL 2.286000  BT19
LOC 10039 ON CHA blsr54 STA 19+79.018 OFF +8.540    $ EL 2.266000  BT20
LOC 10040 ON CHA blsr54 STA 19+89.760 OFF +8.534    $ EL 2.671000  BT25
LOC 10041 ON CHA blsr54 STA 19+99.818 OFF +8.530    $ EL 2.639000  BT26
LOC 10042 ON CHA blsr54 STA 20+09.018 OFF +8.524    $ EL 2.698000  BT27
LOC 10043 ON CHA blsr54 STA 20+19.018 OFF +8.540    $ EL 2.679000  BT28

$ EL 2.000000 BT50 list: BT1-BT4
STO CHA BT50A 10020-10023

$ EL 2.000000 BT75 list: BT17-BT20
STO CHA BT75A 10036-10039

$ EL 2.000000 BT100 list: BT5-BT8
STO CHA BT100A 10024-10027

$ EL 2.000000 BT200 list: BT9-BT12
STO CHA BT200A 10028-10031

$ EL 2.000000 BT300 list: BT13-BT16
STO CHA BT300A 10032-10035

$ EL 2.000000 BT400 list: BT25-BT28

STO CHA BT400A 10040-10043
```

19.7 UTILITY SCANNED IMAGES

If the utilities are handled through a joint utility agreement and electronic files are not provided to the District for the Utility plans, the paper plans must be scanned. The format must be a published format with a minimum resolution of 300DPI. The preferred formats are Adobe PDF or Group 4 TIFFS.

THIS PAGE WAS LEFT BLANK INTENTIONALLY.

Table of Contents

CHAPTER 20 - GEOTECHNICAL STANDARDS 20-1

20.1 GENERAL 20-1
20.2 STANDARD FILE NAMES 20-1
20.3 ENGINEERING DATA 20-2
20.4 SOIL SURVEY 20-3
20.5 SOIL BORING DATA 20-3

THIS PAGE WAS LEFT BLANK INTENTIONALLY.

Chapter 20 - GEOTECHNICAL STANDARDS

20.1 GENERAL

Geotechnical Plans are included in the Roadway Plan Set as Soil Survey, Soil Boring and Bridge Data Sheets.

20.2 STANDARD FILE NAMES

Florida Department of Transportation (FDOT) utilizes standard naming conventions for all of its files. Some of the automation implemented in various tools provided by FDOT depends on naming conventions being met. More importantly, the naming convention confers information to the downstream customer of the data.

Standard file names should follow this format: **AAAABB##.ext**

Where **AAAA** = abbreviated file description, **BB** = Discipline Denotation, ## =Sequence number.

Note Please see Chapter 5 of this document for more information.

Files that are associated with specific bridges will be prepended with a B# prefix corresponding to the appropriate bridge number.

Note See Chapter 18 of this document for bridge specific filenames & sheet numbering requirements.

The following table defines the Geotechnical File Name Standards in regards to FDOT Projects with the understanding the each file name will include sequence numbering. Standard Model names are also provided, however, it is not mandatory to use more than the default model, with the exception of those listed in this table.

Note See Chapter 4 for the symbology standards for each applicable Standard Rule.

File Type	Critical File	File Name	Model Name	File Description	Standard Rule	MicroStation Seed File	Civil 3D Template File
Geotech		clvgeo*	default	Box Culvert Auger & SPT Borings	geotech	fdotseed2d.dgn	geotech.dwt
Geotech		ltgeo*	default	Lighting Borings	geotech	fdotseed2d.dgn	geotech.dwt
Geotech		mtgeo*	default	Mitigation Borings	geotech	fdotseed2d.dgn	geotech.dwt
Geotech		pdgeo*	default	Pond Borings	geotech	fdotseed2d.dgn	geotech.dwt
Geotech		rdgeo*	default	Augers Borings	geotech	fdotseed2d.dgn	geotech.dwt
Geotech		rdssgeo*	default	Roadway Soil Survey Sheet	geotech	fdotseed2d.dgn	geotech.dwt
Geotech		sggeo*	default	Signal SPT Borings	geotech	fdotseed2d.dgn	geotech.dwt
Geotech		sngeo*	default	Signs SPT Borings	geotech	fdotseed2d.dgn	geotech.dwt
Roadway		cptgeo*	default	CPT Soundings	geotech	fdotseed2d.dgn	geotech.dwt
Roadway		msewgeo*	default	MSE Wall SPT Borings	geotech	fdotseed2d.dgn	geotech.dwt
Roadway		nwgeo*	default	Noise Wall SPT Borings	geotech	fdotseed2d.dgn	geotech.dwt
Roadway		rtwgeo*	default	Retaining Wall SPT Borings	geotech	fdotseed2d.dgn	geotech.dwt
Roadway		spgeo*	default	Sheet Pile Wall SPT Borings	geotech	fdotseed2d.dgn	geotech.dwt
Structures		B#BORING*	default	Report of Core Borings	geotech	StructuresSeed.dgn	StructuresTemplatePlan.dwt

File Type	Critical File	File Name	Model Name	File Description	Standard Rule	MicroStation Seed File	Civil 3D Template File
Structures		B#CPTGEO*	default	CPT Soundings	geotech	StructuresSeed.dgn	StructuresTemplatePlan.dwt
Structures		B#MSEWGEO*	default	MSE Wall SPT Borings	geotech	StructuresSeed.dgn	StructuresTemplatePlan.dwt
Structures		B#NWGEO*	default	Noise Wall SPT Borings	geotech	StructuresSeed.dgn	StructuresTemplatePlan.dwt
Structures		B#RTWGEO*	default	Retaining Wall SPT Borings	geotech	StructuresSeed.dgn	StructuresTemplatePlan.dwt
Structures		B#SPGEO*	default	Sheet Pile Wall SPT Borings	geotech	StructuresSeed.dgn	StructuresTemplatePlan.dwt

20.3 ENGINEERING DATA

Engineering Data to be delivered with each project should be located in the …\eng_data directory and include:

- ASCII files containing Q/C reports
- Image files of each sheet in the plan set
- Soil boring data

The image files are to be printed from the graphics design files containing the sheets. If the project is electronically Signed & Sealed, the sheet image files located in the **…\Eng_data** directory are the files to be Signed & Sealed.

Geotechnical information shall be delivered in CSV Format as shown in the examples below. FDOT has adopted the following standard file naming convention for CSV file imports for the Geotechnical Utility in Geopak:

Borehole *Boreholetpk.brh* - Borehole location data and seasonal high water and design high water data.

Material *Material.mtl* - Strata Data and Core data.

Standard Penetration Test (SPT) boring information may be drawn using the FDOT Report a Core Boring Tool.

Example: Boreholetpk.brh

borehole_name,chain_name,station,offset,water_elev_type,water_elev_0,water_elev_0_date,water_elev_24,water_elev_24_date

Borehole-01,CLCON,78+00.00,15,DOC,3,8/9/2007,5,8/10/2007

Borehole-02,CLCON,80+00.00,3,DOC,2,8/20/2007,4,8/21/2007

Borehole-03,CLCON,83+00.00,3,DOC,3,8/23/2007,5,8/24/2007

Borehole-04,CLCON,85+00.00,4,DOC,2,8/24/2007,4,8/25/2007

Example: Material.mtl

borehole_name,material_name,doc_or_se,type_of_elev

Borehole-01,1,10,DOC

Borehole-02,1,5,DOC

Borehole-02,2,7,DOC

Borehole-02,3,9,DOC

Borehole-03,1,3,DOC

Borehole-03,2,6,DOC

Borehole-04,1,2,DOC

Borehole-04,2,5,DOC

Borehole-04,3,7,DOC

Borehole-04,4,10,DOC

20.4 SOIL SURVEY

The plans will include the information about the soil classification on the soil survey sheet and by showing the boring data soil boxes on the cross section sheets.

20.5 SOIL BORING DATA

The soil boring data shall be provided to the Roadway designer in a format to facilitate the drawing of the data on the cross section sheets.

Note For help and instructions on specific functions and use of GEOPAK's Geotechnical Tool, please see the GEOPAK help file.

THIS PAGE WAS LEFT BLANK INTENTIONALLY.

Table of Contents

CHAPTER 21 - CONSTRUCTION STANDARDS..... 21-1

21.1 GENERAL 21-1
21.2 STANDARD FILE NAMES 21-1

THIS PAGE WAS LEFT BLANK INTENTIONALLY.

Chapter 21 - CONSTRUCTION STANDARDS

CADD Production Criteria Handbook

21.1 GENERAL

The use and generation of CADD files by Construction will be in accordance with the general standards applied to all disciplines.

21.2 STANDARD FILE NAMES

Florida Department of Transportation (FDOT) utilizes standard naming conventions for all of its files. Some of the automation implemented in various tools provided by FDOT depends on naming conventions being met. More importantly, the naming convention confers information to the downstream customer of the data.

Standard file names should follow this format: **AAAABB##.ext**

Where **AAAA** = *abbreviated file description*, **BB** = *Discipline Denotation*, ## =S*equence number.*

Note *Please see Chapter 5 of this document for more information.*

The following table defines the Construction File Name Standards in regards to FDOT Projects with the understanding the each file name will include sequence numbering. The standard file names defined by the design disciplines will be applied except the portion defining the discipline will be "CN" instead of "RD". Example: *DSGNRD01.DGN* will be *DSGNCN01.DGN*.

Standard Model names are also provided, however, it is not mandatory to use more than the default model, with the exception of those listed in this table.

Note *See Chapter 4 for the symbology standards for each applicable Standard Rule.*

File Type	Critical File	File Name	Model Name	File Description	Standard Rule	MicroStation Seed File	Civil 3D Template File
Cross Sections	X	PDXSCN*	rdxsrd	Pond Cross Sections	rdxsrd	fdotseedxs.dgn	rdxsrd.dwt
Cross Sections	X	RDXSCN*	rdxsrd	Roadway Cross Sections	rdxsrd	fdotseedxs.dgn	rdxsrd.dwt
Drainage	X	DREXCN*	default	Drainage Structures - Existing	drexrd	fdotseed2d.dgn	drexrd.dwt
Drainage	X	DRPRCN*	default	Drainage Structures - Proposed	drprrd	fdotseed2d.dgn	drprrd.dwt
Drainage	X	DRXSCN*	rdxsrd	Drainage Structure Cross Sections	rdxsrd	fdotseedxs.dgn	rdxsrd.dwt
Existing Topography		TOPOCN*	default	Topography - Existing	topord	fdotseed2d.dgn	topord.dwt
Proposed Design	X	DSGNCN*	default	Proposed Design	dsgnrd	fdotseed2d.dgn	dsgnrd.dwt
Proposed Design	X	DSPFCN*	default	Proposed Profile	plprrd	fdotseed2d.dgn	plprrd.dwt
Proposed Design		SIGNCN*	default	Digital Signatures (Multi)	open	fdotseed2d.dgn	digitalsignature.dwt
Proposed Design	X	TEXTCN*	default	Text Labels & Miscellaneous Descriptions	planrd	fdotseed2d.dgn	
Traffic Control	X	TCDSCN*	default	Traffic Control Design	tcdsrd	fdotseed2d.dgn	tcdsrd.dwt
Utilities	X	UTEXCN*	default	Utilities - Existing	utexrd	fdotseed2d.dgn	utexrd.dwt
Utilities	X	UTPRCN*	default	Utilities - Proposed	utprrd	fdotseed2d.dgn	utprrd.dwt

THIS PAGE WAS LEFT BLANK INTENTIONALLY.

Table of Contents

CHAPTER 22 - INTELLEGENT TRANSPORTATION SYSTEMS (ITS) STANDARDS..... 22-1

22.1 GENERAL 22-1
22.2 STANDARD FILE NAMES 22-1

THIS PAGE WAS LEFT BLANK INTENTIONALLY.

Chapter 22 - INTELLEGENT TRANSPORTATION SYSTEMS (ITS) STANDARDS

CADD Production Criteria Handbook

22.1 GENERAL

ITS Plans are usually a component set of plans. Florida Department of Transportation (FDOT) Projects with minor ITS involvement may include these features on various applicable sheets in the Roadway plans set. They can also be shown in the Signalization plans set or on applicable Signalization sheets.

22.2 STANDARD FILE NAMES

FDOT utilizes standard naming conventions for all of its files. Some of the automation implemented in various tools provided by FDOT depends on naming conventions being met. More importantly, the naming convention confers information to the downstream customer of the data.

Standard file names should follow this format: ***AAAABB##.ext***

Where **AAAA** = abbreviated file description, **BB** = Discipline Denotation, ## =Sequence number.

Note Please see Chapter 5 of this document for more information.

The following table defines the ITS File Name Standards in regards to FDOT Projects with the understanding that each file name will include sequential numbering. Standard Model names are also provided, however, it is not mandatory to use more than the default model, with the exception of those listed in this table.

Note See Chapter 4 for the symbology standards for each applicable Standard Rule.

File Type	Critical File	File Name	Model Name	File Description	Standard Rule	MicroStation Seed File	Civil 3D Template File
Borders & Sheets		BDPLIT*	default	Border Sheet Reference Model for Plan Sheet	planrd	fdotseed2d.dgn	
Borders & Sheets		BDXSIT*	rdxsrd	Border Cross-Section Sheet when Referenced	rdxsrd	fdotseedxs.dgn	
Borders & Sheets		GNNTIT*	default	General Notes	planrd	fdotseed2d.dgn	genplanrd.dwt
Borders & Sheets		PLANIT*	default	Plan Sheet	planrd	fdotseed2d.dgn	SHPLAN.dwt
Borders & Sheets		PLAYIT*	default	Plan Layout Sheets	planrd	fdotseed2d.dgn	SHPLAN.dwt
Borders & Sheets		SPLYIT*	default	Splice Layout Sheets	planrd	fdotseed2d.dgn	planrd.dwt
Clipping		CLIPIT*	default	Clip Borders	cliprd	fdotseed2d.dgn	cliprd.dwt
Clipping		MTPLIT*	default	Motif file for plan sheets	planrd	fdotseed2d.dgn	planrd.dwt
Clipping		MTPRIT*	default	Motif file for profile sheets	plprrd	fdotseed2d.dgn	planrd.dwt
Cross Sections	X	SSXSIT*	rdxsrd	Sign Support Cross-Sections	rdxssp	fdotseedxs.dgn	rdxssp.dwt
Key Sheets		KEYSIT*	default	Key Sheet	keysht	fdotseedkeymap.dgn	keysht.dwt

File Type	Critical File	File Name	Model Name	File Description	Standard Rule	MicroStation Seed File	Civil 3D Template File
Proposed Design	X	DSGNIT*	default	Proposed Signalization Design & information	itssp	fdotseed2d.dgn	itssp.dwt
Proposed Design	X	DSLTIT*	default	Proposed Lighting Design	itssp	fdotseed2d.dgn	itssp.dwt
Proposed Design	X	DSPMIT*	default	Proposed Signing & Pavement Marking Design	itssp	fdotseed2d.dgn	itssp.dwt
Proposed Design		INTDIT*	default	Intersection / Interchange Details	planrd	fdotseed2d.dgn	planrd.dwt
Proposed Design		SIGNIT*	default	Digital Signatures (Multi)	open	fdotseed2d.dgn	digitalsignature.dwt
Proposed Design		TEXTIT*	default	Text Labels & Miscellaneous Descriptions	planrd	fdotseed2d.dgn	
Special Details		GSWKIT*	default	Guide Sign Work Sheet & Details	gswksp	fdotseed2d.dgn	gswksp.dwt
Special Details		JCDTIT*	default	Jacking Detail Sheet	open	fdotseed2d.dgn	spdtrd.dwt
Special Details		LUDTIT*	default	Luminaire Detail Sheet (All Types)	open	fdotseed2d.dgn	spdtrd.dwt
Special Details		NWDTIT*	default	Communications Network Details	open	fdotseed2d.dgn	spdtrd.dwt
Special Details		NWLYIT*	default	Communications Network Layout/Block diagram	open	fdotseed2d.dgn	spdtrd.dwt
Special Details		SGDTIT*	default	Special Signal Details	open	fdotseed2d.dgn	spdtrd.dwt
Special Details		SPDTIT*	default	Splice Diagrams	open	fdotseed2d.dgn	spdtrd.dwt
Special Details		SPSGIT*	default	Dynamic Message Sign Detail for Overhead Signs	open	fdotseed2d.dgn	spdtrd.dwt
Special Details		SRPTIT*	default	Service Point Detail Sheets	itssp	fdotseed2d.dgn	itssp.dwt
Special Details		SSDTIT*	default	Special Sign Details & Miscellaneous Details	planrd	fdotseed2d.dgn	planrd.dwt
Special Details		VHDTIT*	default	Vehicle Detector Details & Instructions	itssp	fdotseed2d.dgn	itssp.dwt
Summary Boxes / Tables		CESSIT*	default	Summary of Pay Items	planrd	fdotseed2d.dgn	genplanrd.dwt
Summary Boxes / Tables	X	MSSGIT*	default	Mast Arm Detail and Tables	itssp	fdotseed2d.dgn	itssp.dwt
Summary Boxes / Tables		PLDTIT*	default	Pole Tabulation & Details for All Types	open	fdotseed2d.dgn	spdtrd.dwt
Summary Boxes / Tables		SLBRIT*	default	Soil Borings for Poles & Overhead Structures	geotech	fdotseed2d.dgn	planrd.dwt
Summary Boxes / Tables		TABQIT*	default	Tabulation Quantity Sheet	planrd	fdotseed2d.dgn	genplanrd.dwt
Traffic Control		TCDTIT*	default	Traffic Control Design Sheet	itssp	fdotseed2d.dgn	itssp.dwt
Utilities		UTADIT*	default	Utility Adjustment Sheets	utadrd	fdotseed2d.dgn	utadrd.dwt

Table of Contents

CHAPTER 23 - ARCHITECTURAL STANDARDS 23-1

23.1 GENERAL 23-1
23.2 ADOPT CADD FILE FORMAT 23-1
23.3 ADOPTED CADD STANDARDS 23-2
23.4 ARCHITECTURAL PROJECTS 23-2
23.5 DELINEATION BETWEEN ARCHITECTURAL & ENGINEERING PLANS 23-3
23.6 STANDARD FILE NAMES 23-4
23.6.1 Standard Model File Names 23-4
23.6.2 Standard Sheet File Names 23-5
23.6.3 Detail File Name Format 23-6
23.6.4 Schedule File Name Format 23-6
23.7 ENGINEERING DATA 23-6
23.8 LEVEL AND SYMBOLOGY STANDARDS 23-6
23.8.1 Architectural Scale Chart 23-7
23.8.2 Text Type, Size and Line Weight 23-7
23.9 LAYERING STANDARDS 23-9
23.10 FILE STRUCTURE 23-10
23.11 ELECTRONIC SIGNING AND SEALING 23-10
23.12 ELECTRONIC SUBMITTAL 23-10

THIS PAGE WAS LEFT BLANK INTENTIONALLY.

Chapter 23 - ARCHITECTURAL STANDARDS

CADD Production Criteria Handbook

23.1 GENERAL

Architectural plans consist of all sheets pertaining to Architectural (Building) design, and their component plans. These plans may be comprised of any/all of:

- General Plans
- Hazard Material Plans
- Survey Plans (Follow Survey CADD Standards)
- Geotechnical Plans (Follow Geotechnical CADD Standards)
- Civil Plans (Follow Roadway CADD Standards)
- Landscape Plans (Follow Landscape CADD Standards)
- Structural Plans
- Architectural Plans
- Interior Plans
- Fire Protection Plans
- Plumbing Plans
- Mechanical Plans
- Electrical Plans

This example plan set represents a Florida Department of Transportation (FDOT) Project where the building is the focal point of the project. Architectural (often referred to as “Building”) projects within the Right of Way typically do not include Survey, Civil, Geotechnical, or Landscape plans. These disciplines are normally included in the Roadway Plans. However, when present in the Architectural Plans, the FDOT Computer Aided Design and Drafting (CADD) standards of the appropriate discipline shall be used.

Bascule Bridge Control House Architectural plans are to be prepared using the FDOT Structures CADD Standards.

23.2 ADOPT CADD FILE FORMAT

FDOT has adopted AutoCAD as the standard CADD format for Architectural projects. All CADD files for Architectural plan sets, including those disciplines within the building (i.e. plumbing, mechanical, electrical and structural) shall be submitted in AutoCAD (dwg) format. Plans outside the building envelope shall follow the FDOTCADD standard format for the discipline as defined in their respective chapters herein.

23.3 ADOPTED CADD STANDARDS

FDOT has adopted the National CAD Standards as the standard format for Building Projects. This chapter is a synopsis of the National CAD Standards. More information can be found at:

National CAD Standard
National Institute of Building Sciences
1090 Vermont Ave., NW, Suite 700
Washington, D.C. 20005-4905
202-289-1092
Website: http://www.buildingsmartalliance.org/ncs

National Cad Standard also includes chapters from the following organizations:

U.S.CADD/GIS Technology Center
US Army Engineer Research and Development Center
Attn: CEERD-ID (S. Spangler)
3909 Halls Ferry Road
Vicksburg, MS 39180-6199

CAD Layer Guidelines
American Institute of Architects (AIA)
1735 New York Ave, NW
Washington, D.C. 20006
Website: www.aia.org

Uniform Drawing System (UDS)
Construction Specifications Institute
601 Madison Street
Alexandria, Va. 22314-1791
800-689-2900
Website: http://www.csinet.org

23.4 ARCHITECTURAL PROJECTS

Architectural standards apply to the building and building related disciplines outlined in the following list of project types.

- **Building Projects**
  - Work Program Projects
    - *Rest Areas*
    - *Weigh Stations*
  - Fixed-Capital Outlay (FCO) Projects
    - *Office Buildings*
    - *Construction & Maintenance Facilities*
    - *Other 'Off Right Of Way (ROW)' Facilities*

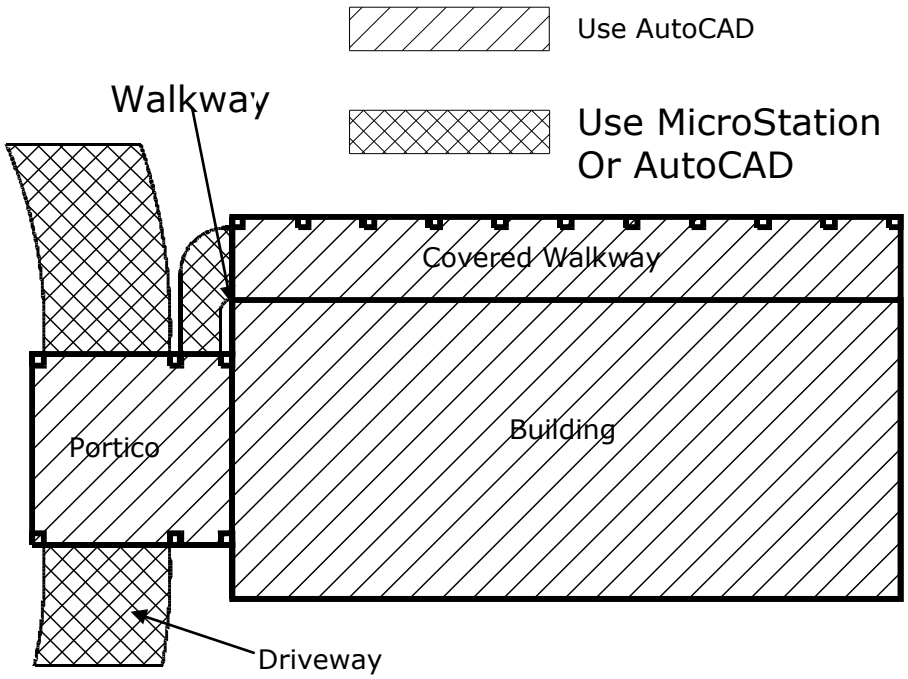
23.5 DELINEATION BETWEEN ARCHITECTURAL & ENGINEERING PLANS

- **Delineation Line at 'foot print' of Building**
  - Face of Exterior Wall
  - Area enclosed by buildings Columns and/or Walls; i.e. Porticos, Carports, covered Walkways and Covered Patios
  - Roof and Building Overhangs

Use AutoCAD *inside* the Delineation Line and MicroStation *outside* the Delineation Line.

Items inside the Delineation Line Includes 'Building-Oriented' Facilities & Equipment that are typically designed by an Architect, including but not limited to, picnic shelters, planters which are part of the building and site furniture in covered areas.

CADD Delineation Example



Items outside the delineation or "foot print" of Building shall be produced and submitted following the CADD standards for their discipline as defined in their respective chapters herein, including but not limited to:

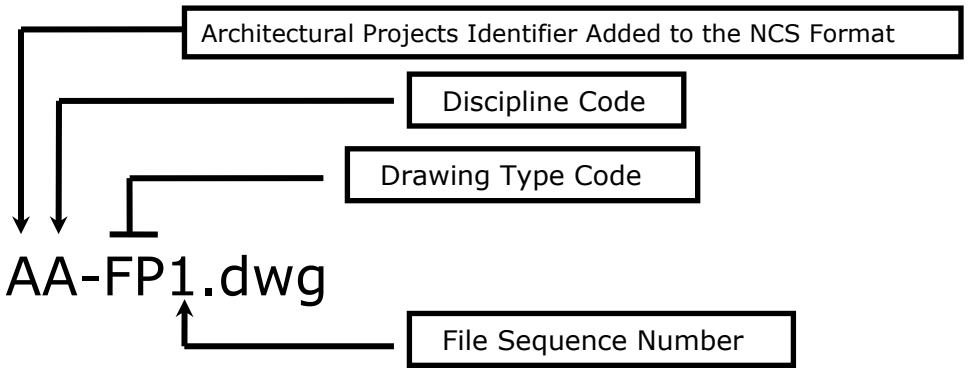
- **Pavement**
  - Driveways, Parking, Sidewalks
- **Landscape Plans**
- **Site Utilities**
  - Electrical, Water, Sanitary Sewer, Storm Sewer, Drainage
- **Site Fencing and Walls**

23.6 STANDARD FILE NAMES

23.6.1 *Standard Model File Names*

Model files are 3D for large plans, elevations or sections that contain the physical building components (walls, doors, water piping, beams…). These files are drawn at full scale. These files are referenced in whole or part into sheet files where text and dimensions are added, then printed.

- **Naming components**
  - Architectural Projects Identifier
  - Discipline Codes
  - Drawing Type Codes (General and Discipline related)
  - File Sequence Number



Note Architectural Projects Identifier: A _-_ _ _.dwg

Add "A" before Discipline Code as published in National CAD Standards. This distinguishes Building drawings from Roadway and Structures Plans.

Examples: Project Identifiers, Codes and File Sequence Numbers. For more detailed information refer to National CADD Standards.

- **Architectural Project Identifier**

  A _-_ _ _.dwg .....Architectural, this differentiates architectural building projects from bridges and roadway projects.

- **Discipline Code**

  _ E-_ _ _.dwg .....Electrical
  _ M-_ _ _.dwg ..... Mechanical
  _ P-_ _ _.dwg ..... Plumbing
  ETC.

- **Drawing Type Code (general and discipline related)**

  _ _-FP _.dwg ..... Floor Plan
  _ _-DP _.dwg ..... Dimension Plan
  _ _-XP _.dwg .....Existing Plan
  ETC.

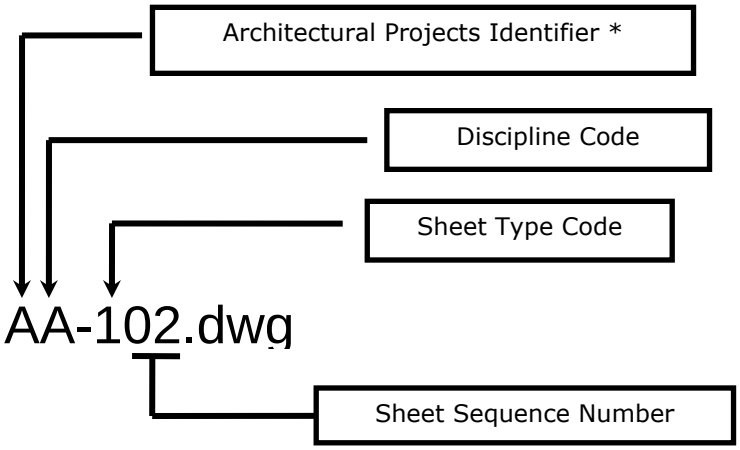
- **File Sequence Number**

  _ _-_ _ 1.dwg.....1st drawing file in sequence
  _ _-_ _ 2.dwg.....2nd drawing file in sequence
  _ _-_ _ 3.dwg..... 3rd drawing file in sequence

23.6.2 *Standard Sheet File Names*

A sheet file is a border sheet with dimensions and/or text added to a portion of a referenced model file. Plotted sheet files make up the plans set.

- **Naming Components**
  - Architectural Projects Identifier
  - Discipline Code
  - Sheet Type Code
  - Sheet Sequence Number



Examples: Project Identifiers, Codes and Sheet File Sequence Numbers. For more detailed information refer to National CAD Standards.

- **Architectural Project Identifier**

  A _-_ _ _.dwg ..... Architectural, this differentiates Architectural building projects from bridges and Roadway projects.

- **Discipline Code**

  _ E-_ _ _.dwg ..... Electrical
  _ M-_ _ _.dwg ..... Mechanical
  _ P-_ _ _.dwg ..... Plumbing

- **Drawing Type Code (general and discipline related)**

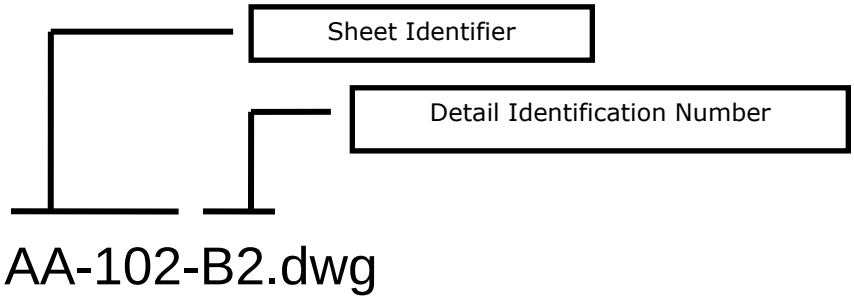
  _ _-1 _ _.dwg ..... Floor Plan
  _ _-2 _ _.dwg ..... Elevation
  _ _-3 _ _.dwg ..... Sections

- **File Sequence Number**

  _ _-_ 0 1.dwg ..... 1st sheet in sequence
  _ _-_ 0 2.dwg ..... 2nd sheet in sequence
  _ _-_ 0 3.dwg ..... 3rd sheet in sequence

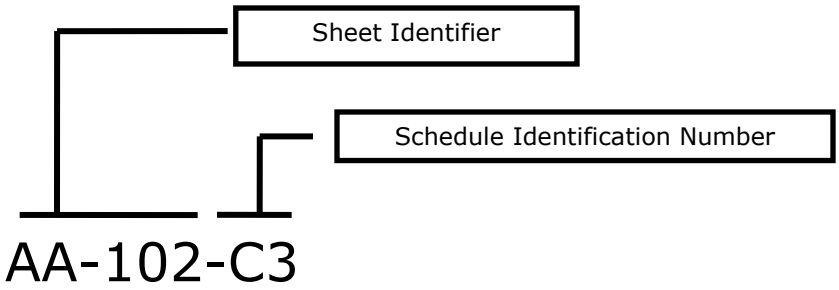
23.6.3 *Detail File Name Format*

The Detail File Name includes the sheet identifier and the detail identification number. Sheet Identifier is the sheet file that the detail is placed in. The detail identification number represents the location of the detail within the sheet file border.



23.6.4 *Schedule File Name Format*

The Schedule File Name includes the sheet identifier and the schedule identification number. Sheet Identifier is the sheet file that the detail is placed in. The detail identification number represents the location of the schedule within the sheet file border.



23.7 ENGINEERING DATA

The Architectural discipline directory contains an additional sub-directory named **\eng_data**. This sub-directory is designated to contain the sheet image files of the plan sheets for the Architecture design, quality control reports, ASCII Engineering Data output files and other data pertinent to the overall design.

23.8 LEVEL AND SYMBOLOGY STANDARDS

Refer to the National CAD Standards and Layer Symbology produced by the U.S.CADD/GIS Technology Center, US Army Engineer Research and Development Center for Symbology standards. These standards include model file names, sheet file names, detail file names, schedule file names, abbreviations, symbols, layers, line and line attributes, text and text attributes.

All drawings should be drawn at Full Scale. Large drawings (model files) are normally brought (whole or part) into sheet files where text and dimensions are added, then plotted. Sheet files are 1:1, the model files are scaled when referenced into the sheet file.

23.8.1 *Architectural Scale Chart*

The following chart is intended to aid the user in determining the appropriate scale for placing the border and text on a drawing based on the actual size of the drawing. Calculations are based on a 9 1/2" x 15 1/2" drawing area inside the border.

Drawing Scales for Sheets			
Note: Sheet files shall be assembled in paper space & plotted at 1:1			
Architectural Scales		**Engineering Scales**	
Drawing Scale	**Plot Scale**	**Drawing Scale**	**Plot Scale**
Full size	1	1″ = 5′	60
6″ = 1′-0″	2	1″ = 10′	120
3″ = 1′-0″	4	1″ = 20′	240
1 ½″ = 1′-0″	8	1″ = 30′	360
1″ = 1′-0″	12	1″ = 40′	480
¾″ = 1′-0″	16	1″ = 50′	600
½″ = 1′-0″	24	1″ = 100′	1200
3/8″ = 1′-0″	32	1″ = 200′	2400
¼″ = 1′-0″	48	1″ = 500′	6000
3/16" = 1'-0"	64	1″ = 1000′	12000
1/8″ = 1′-0″	96	1″ = 1250′	15000
3/32" = 1'-0"	128	1″ = 2500′	30000
1/16″ = 1′-0″	192	1″ = 5000′	60000

FORMULAS: AS = 12 x Drawing Scale, Ex. 1" = 10', then 12 x 10 = 120, Therefore AS = 120.

23.8.2 *Text Type, Size and Line Weight*

Use the following table to determine the appropriate line weight for each text height. Text line weights are applicable for text places in model and sheet files. Text heights in this chart are used for text in sheet files that are places in paper space.

Text Type	**Line Weight (In) All Scales**	**Height (In) 1:1 Scale**
Special Small/Revisions	0.18 mm/ 0.007 in	3/32″
Annotation	0.25 mm/ 0.010 in	1/8″
View/Sheet/Sect Titles	0.35 mm/ 0.014 in	5/32″
Large	0.50 mm/ 0.020 in	3/16″

Note Sizes shown are a 1:1 ratio.

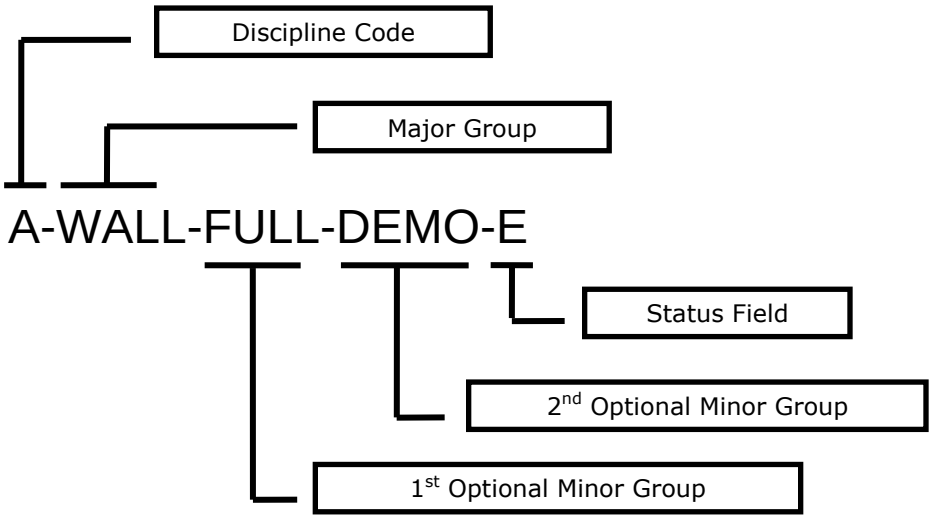
The following charts are intended to aid the user in determining the appropriate text size when placing common text in the Model File. Scale for placing the border and text on a drawing based on the actual size of the drawing. Calculations are based on a 9 1/2" x 15 1/2" drawing area inside the border.

Text Size for Sheets Using Architectural Scales				
Note: For text placed in model files, text in paper space at 1:1				
Drawing Scale	**Text Size**			
	3/32"	1/8"	5/32"	3/16"
Full size	3/32"	1/8"	5/32"	3/16"
6″ = 1′-0″	3/16"	1/4"	5/16"	3/8"
3″ = 1′-0″	3/8"	1/2"	5/8"	3/4"
1 ½″ = 1′-0″	3/4"	1"	1 1/4"	1 1/2"
1″ = 1′-0″	1 1/8"	1 1/2"	1 7/8"	2 1/4"
¾″ = 1′-0″	1 1/2"	2"	2 1/2"	3"
½″ = 1′-0″	2 1/4"	3"	3 3/4"	4 1/2"
3/8″ = 1′-0″	3"	4"	5"	6"
¼″ = 1′-0″	4 1/2"	6"	7 1/2"	9"
3/16" = 1'-0"	6"	8"	10"	1'
1/8″ = 1′-0″	9"	1'-0"	1-3"	1'-6"
3/32" = 1'-0"	1'	1-4"	1'-8"	2'
1/16″ = 1′-0″	1'-6"	2'	2'-6"	3'

Text Size for Sheets Using Engineering Scales				
Note: For text placed in model files, text in paper space at 1:1				
Drawing Scale	**Text Size**			
	3/32"	1/8"	5/32"	3/16"
1″ = 5′	5 5/8"	7 1/2"	9 3/8"	11 1/4"
1″ = 10′	11 1/4"	1'-3"	1'-6 3/4"	1'-10 1/2"
1″ = 20′	1'-10 1/2"	2'-6"	3'-1 1/2"	3'-9"
1″ = 30′	2'-9 3/4"	3'-9"	4'-8 1/4"	5'-7 1/2"
1″ = 40′	3'-9 1/2"	5'	6'-3"	7'-6"
1″ = 50′	4'-8 1/4"	6'-3"	7'-9 3/4"	9'-4 1/2"
1″ = 100′	9'-4 1/2"	12'-6"	15'-7 1/2"	18'-9"
1″ = 200′	18'-9"	25'	31'3"	37'-6"
1″ = 500′	46'-10 1/2"	62'-6"	78'-1 1/2"	93'-9"
1″ = 1000′	93'-9"	125'	156'-3"	187'-6"
1″ = 1250′	117'-2 1/4"	156'-3"	195'-3 3/4"	234'-4 1/2"
1″ = 2500′	234'-4 1/2"	306'-6"	390'-7 1/2"	468'-9"
1″ = 5000′	468'-9"	625'	781'-3"	937'-6"

23.9 LAYERING STANDARDS

All layer names shall follow the format detailed in the National CAD Standards. Below is a brief description of the layer naming convention.



Examples: Codes, Groups and Fields.

- **Discipline Code**

A-_ _ _ _-_ _ _ _-_	Architectural
E-_ _ _ _-_ _ _ _-_	Electrical
F-_ _ _ _-_ _ _ _-_	Fire Protection
M-_ _ _ _-_ _ _ _-_	Mechanical
ETC.	

- **Major Group**

-WALL- _ _ _-_	Walls
-DOOR- _ _ _-_	Doors
-LITE- _ _ _-_	Lighting fixtures
-COLS- _ _ _-_	Columns
ETC.	

- **1st Optional Minor Group**

_-_ _ _ _-FULL-_	Full height
_-_ _ _ _-DIMS-_	Dimension
ETC.	

- **2nd Optional Minor Group**

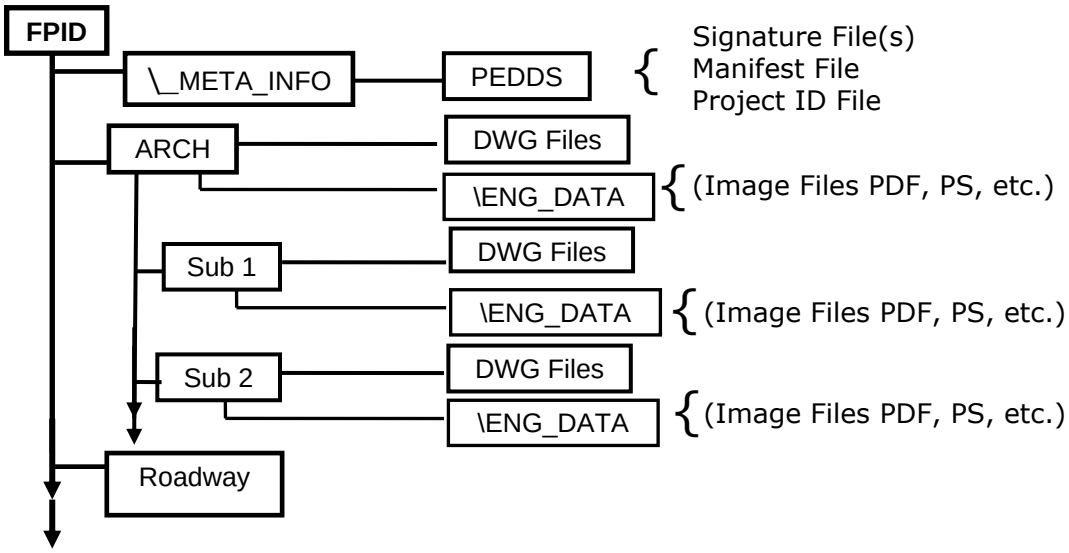
_-_ _ _ _-_ _ _ _-IDEN-_	Identification
_-_ _ _ _-_ _ _ _-PATT-_	Pattern
ETC.	

- **Status Field**

_-_ _ _ _-_ _ _ _-N	New work
_-_ _ _ _-_ _ _ _-D	Demolition
_-_ _ _ _-_ _ _ _-T	Temporary work
_-_ _ _ _-_ _ _ _-F	Future work
ETC.	

23.10 FILE STRUCTURE

The DOT uses a specific file structure for all electronic submittals. The following file structure shall be used for all Architectural projects.



23.11 ELECTRONIC SIGNING AND SEALING

The Florida Department of Business and Professional Regulation (BPR) approved Architects to electronically sign and seal Plans and Specifications. Architects may use either Electronic Signature or Digital Signature per Rule. See Chapter 8 of this Handbook and 2012 Florida Statutes Part 1 ELECTRONIC SIGNATURES Chapters 668.001-668.006 for more information.

Helpful link:

2012 Florida Statutes Part 1 ELECTRONIC SIGNATURES Chapters 668.001-668.006

23.12 ELECTRONIC SUBMITTAL

The Office of Design and Structures have defined the procedures for Structure As-built retention in a memorandum.

Drawing files used to create a project should be submitted on CD-ROM media. The CD shall have all files in a directory tree as described Chapter 13, Roadway Standards. The delivery CD is the “official” CD and should be kept in a safe place during the life of the project.

When the office responsible for the Structures project receives the CD, the contents of the CD shall be authenticated using PEDDS to ensure the data on the CD has not been modified.

The next step in the process is to create a project on the server or workstation that meets the FDOT directory structure standards. Using the Create Project Application provided with the FDOT CADD Software ensures adherence to this standard. See documentation on the Create Project Application for complete details.

Copy files from the delivered CD into the corresponding project directory created above.

Table of Contents

CHAPTER 24 - SPECIFICATION STANDARDS 24-1

24.1 GENERAL 24-1
24.2 STANDARD FILE NAMING CONVENTION 24-1
24.2.1 Classical Electronic Delivery 24-1
24.2.2 Digital Delivery 24-1
24.3 RESOURCE FILES 24-2
24.4 TECHNICAL SPECIAL PROVISIONS – SIGNING AND SEALING 24-2
24.5 ELECTRONIC FILE STRUCTURE 24-2
24.5.1 Classical Electronic Delivery 24-3
24.5.2 Digital Delivery 24-4
24.6 ADDITIONAL INSTRUCTIONS FOR SPEC-PACKAGE SUBMITTAL 24-5
24.6.1 Classical Electronic Delivery 24-5
24.6.2 Digital Delivery 24-5

THIS PAGE WAS LEFT BLANK INTENTIONALLY.

Chapter 24 - SPECIFICATION STANDARDS

CADD Production Criteria Handbook

24.1 GENERAL

Specifications shall be prepared in accordance with Specifications Package Preparation Procedure (Topic Number 630-010-005) and the Specifications Handbook coordinated through the District Specifications Offices and available on the Specifications website:

http://www.dot.state.fl.us/specificationsoffice/PackagePreparation/Default.shtm

24.2 STANDARD FILE NAMING CONVENTION

24.2.1 CLASSICAL ELECTRONIC DELIVERY

Specification file naming convention for Classical Electronic Delivery submittals is: *fpid*.pdf, where: *fpid* = full (11digit) Financial Project Identification Number.

Supplement file naming convention for Classical Electronic Delivery submittals is: *fpid*SUPP#.pdf, where:

- *fpid* = full (11digit) Financial Project Identification Number without dashes,
- SUPP = Identifier
- # = sequential numbering of the supplements: 1, 2, 3, etc.

Original Delivery	***Supplement1***	***Supplement2***
fpid.PDF	*fpid*SUPP1.PDF	*fpid*SUPP2.PDF

24.2.2 DIGITAL DELIVERY

For Digital Delivery Bid Sets, the Specification files are copied out of the folder structure for delivery on the Bid CD.

Specification file naming convention for Digital Delivery submittals is: *fpid*-SPECS[-].pdf,

where:

- *fpid* = full (11digit) Financial Project Identification Number without dashes.
- SPECS = item description
- [-] = any additional naming specific to the project (optional)

Supplement file naming convention for Digital Delivery submittals is: *fpid*-SPECS-SUPP##[-].pdf, where:

- *fpid* = full (11digit) Financial Project Identification Number without dashes,
- SPECS = item description
- SUPP = Identifier
- ## = sequential numbering of the supplements: 01, 02, 03, etc.
- [-] = any additional naming specific to the project (optional)

Original Delivery	***Supplement1***	***Supplement2***
fpid-SPECS[-].PDF *fpid*-SPECS-TSP[BOE#][-].PDF	*fpid*-SPECS-SUPP01[-].PDF *fpid*-SPECS-TSP[BOE#]-SUPP01[-].PDF	*fpid*-SPECS-SUPP02[-].PDF *fpid*-SPECS-TSP[BOE#]-SUPP02[-].PDF

Note When a Digital Delivery is performed, the Specification file delivered with the Bid Set is copied to the file name *fpid*SPECS.pdf and this file name does not reside in Specification directory structure shown in Section 24.5.

For example; begin with the fpid number, then the item description (SPECS), then supplement number (SUPP##), and finally any naming [-] specific to the project (optional).

This file naming convention allows project files to collate as they are sorted and combined in a single folder. Text, numbers and dashes are allowed. Characters that interfere with operating system path specifications or XML paths must be excluded, such as underline and spaces along with (/ \ . : , < & # >).

24.3 RESOURCE FILES

Statewide implemented specifications files are distributed by the State Specifications Office through the District Specifications Offices.

24.4 TECHNICAL SPECIAL PROVISIONS – SIGNING AND SEALING

When the use of a Technical Special Provision (TSP) is authorized by the District Specifications Office, the PDF of the TSP file(s) is individually signed and sealed (electronically or manually) and also becomes part of the overall project's Specifications package.

For Classical Electronic Delivery each TSP file(s) must be created and separately signed and sealed with an individual signatory using Professionals' Electronic Data Delivery (PEDDS).

For Digital Delivery certificate based Digital Signature may be used.

In both Classical and Digital Delivery, the TSP must include the electronic statement incorporated on the TSP cover page. When a TSP is manually signed and sealed, it must be scanned in grey scale for seal visibility and no electronic statement is needed.

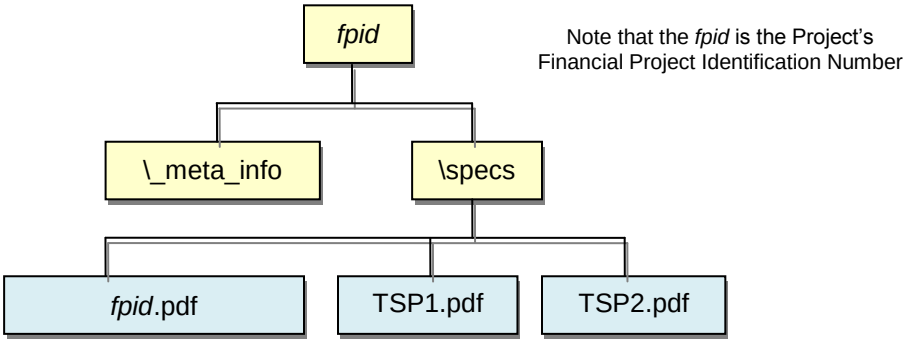
24.5 ELECTRONIC FILE STRUCTURE

- Specifications Directory Structure (Specs only projects)
- Supplemental Specifications Directory Structure (Specs only projects)
- Technical Special Provisions (TSP)*

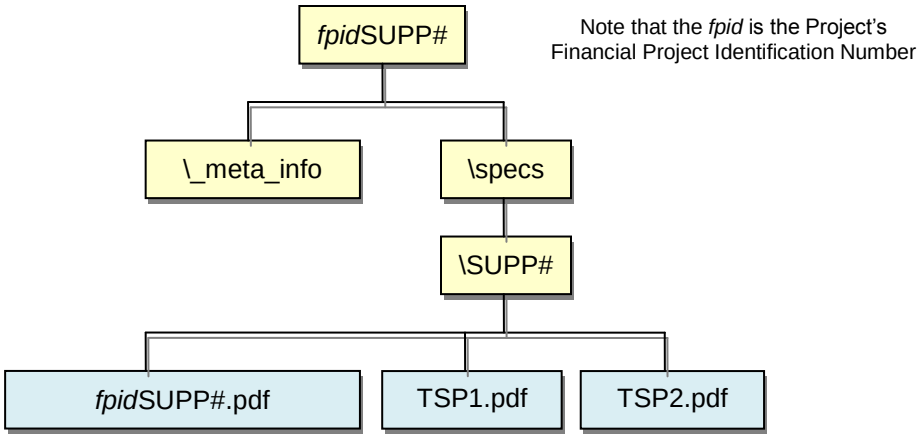
Note If a TSP is applicable to the project, then the directory for TSP(s) would apply to both the Project CD and Bid CD data set. Multiple TSP files may exist in the delivery.

24.5.1 CLASSICAL ELECTRONIC DELIVERY

Example of a Specifications Package Directory Structure

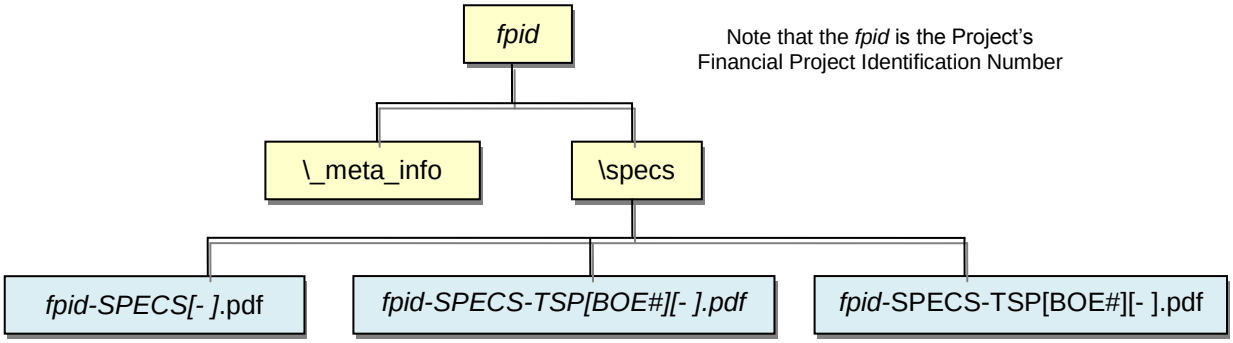


Example of a Supplemental Specifications Package Directory Structure

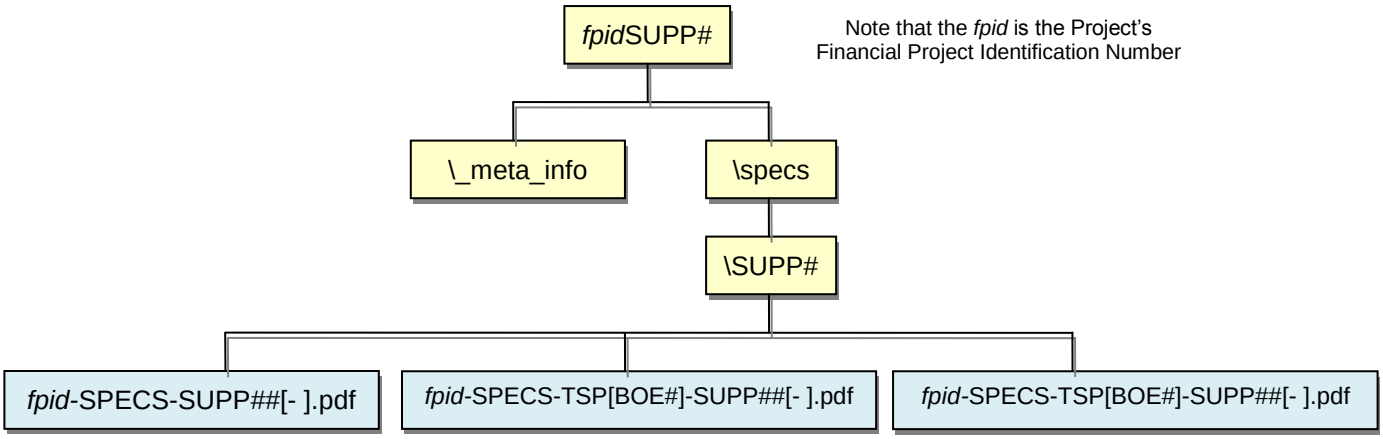


24.5.2 DIGITAL DELIVERY

Example of a Specifications Package Directory Structure



Example of a Supplemental Specifications Package Directory Structure



Note See Chapter 8.5 of this Handbook for more information.

24.6 ADDITIONAL INSTRUCTIONS FOR SPEC-PACKAGE SUBMITTAL

24.6.1 CLASSICAL ELECTRONIC DELIVERY

1. Create the project directory using all eleven digits of *fpid* No. (i.e., 12345678900).
2. Inside the created (project) *FPID* directory, create a *specs* sub-directory. This is where the Specifications package file (*fpid*.pdf) is placed.
3. Sign and seal the Specifications package file (*fpid*.pdf) with PEDDS. This utilizes the *_meta_info* sub-directory under the root Project directory (where the *specs* sub-directory also resides).
4. For Supplements, continue to use the ORIGINAL *FPID* directory created in Step 1. Delete all files in the *specs* sub-directory. If PEDDS was used, delete all signatory files in the *_meta_info* sub-directory.
5. For Supplements, create a *supp#* sub-directory under the *specs* sub-directory. This is where the Supplement package file (*fpid*SUPP#.pdf) is placed.
6. For Classical Electronic Delivery, sign and seal the Supplement package file (*fpid*SUPP#.pdf) with PEDDS.

Note **DO NOT** re-submit the entire Specification package for Supplementals.

24.6.2 DIGITAL DELIVERY

1. *Create the project directory using all eleven digits of fpid No. (i.e., 12345678900).*
2. *Inside the created (project) \FPID directory, create a \specs sub-directory. This is where the Specifications package file (fpid-SPECS[-].pdf) is placed.*
3. *Digital Delivery does not use PEDDS and the _meta_info sub-directory is not required.*
4. *For Supplements, continue to use the ORIGINAL \FPID directory created in Step 1. Delete all files in the \specs sub-directory.*
5. *For Supplements, create a \supp# sub-directory under the \specs sub-directory. This is where the Supplement package file (fpid-SPECS-SUPP##[-].pdf) is placed.*
6. *For Digital Delivery, use digital signature to sign and seal the Supplement package file (fpid-SPECS-SUPP##[-].pdf).*

Note **DO NOT** re-submit the entire Specification package for Supplementals.

THIS PAGE WAS LEFT BLANK INTENTIONALLY.