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801

Introduction

801.01 Purpose and Scope

Division 800 provides instruction and guidance for the preparation of contract drawings using Bentley's MicroStation® Computer-Aided Design and Drafting (CADD or CAD) software on all Washington State Ferries (WSF) projects. WSF is a division of the Washington State Department of Transportation (WSDOT), which uses the *Plans Preparation Manual* M 22-31 as a guideline for preparing PS&E documents. However, the *Plans Preparation Manual* applies primarily to roadway-type projects and does not adequately address the specific needs and variety of projects performed by WSF. The purpose of Division 800 is to supplement the WSDOT *Plans Preparation Manual* to meet WSF CADD requirements. The WSF CADD Standards and Procedures specified in Division 800 shall supplement those in the WSDOT *Plans Preparation Manual*.

Special exceptions to the use of MicroStation are those projects that include within their scope the construction of shore side buildings. Washington State Ferries depends on the WSDOT Facilities Branch or Consultants to provide the building design services necessary to complete that portion of the contract. In projects that incorporate items of work other than architecture there will be a "design limit" of 5 feet beyond the perimeter of the architectural work that will mark the boundary where the architectural and other discipline work will coincide.

801.02 Procedure for Revisions and Updates

(a) Project Specific CADD Standards

As with everything there are exceptions to the rules. The format for the PS&E CADD documents may be changed slightly by the Project Manager for WSF. In order to accommodate changes, the proposed variations to the CADD Manual shall be forwarded to the WSF CADD Coordinator for review and approval.

Changes can be made to text properties, line styles, level symbology and element attributes. There will, however, be no changes allowed in the layout of the WSF sheet borders.

802

WSF CADD Software

802.01 General

WSF only supports MicroStation[®] (Bentley Systems, Inc.) electronic CADD files. The importance of organization and consistency cannot be overemphasized as the electronic files prepared by consultants are frequently used as a basis for continued work or modifications. Electronic organization quality is equally important as the plotted deliverables.

All work submittals and deliverables must be created and developed in MicroStation[®] format and conform to Division 800, the Washington State Department of Transportation (WSDOT) *Plans Preparation Manual* (PPM), and the WSDOT *Bridge Design Manual* LRFD (BDM) (for Structures related issues). Structural work will be completed in accordance with Chapter 11 of the BDM as it pertains to detailing.

Any inconsistencies—electronic, aesthetic, or otherwise—with the previously noted manuals are the sole responsibility of the originators of the drawings to correct.

On any WSF project done by a consultant team, the prime consultant is responsible for insuring the CADD files are submitted in a “usable” MicroStation format.

All Computer-Aided Engineering (CAE) by the Washington State Ferries and its consultants must conform to the WSF CSPM, the WSDOT PPM, and in part, the WSDOT BDM. Any inconsistencies—electronic, aesthetic, or otherwise—with the WSF CSPM, WSDOT PPM, or the WSDOT BDM are the sole responsibility of the originators of the drawings to resolve. InRoads[®] is the standard CAE package and AutoTurn[®] is the standard turn radius analyzing software of WSDOT and WSF.

For all “in house” work the MicroStation[®] files will be accessed through the use of the desktop icon for MicroStation[®]. All work will be done in the Expanded Levels environment.

802.02 File Sharing/Delivery

WSF will accept files transported to it in the following formats:

- CD or DVD.
- Posting to the Consultant’s ftp site and made available to WSF for downloading.
- Uploading to the WSDOT ftp site at <ftp://ftp.wsdot.wa.gov/> and placed in a location made accessible for public or Consultant use.
- Uploading to the WSDOT secured ftp site. This requires the use of software that will accommodate the input of information that is required for access to these types of sites. The program recommended by WSDOT is FileZilla[®]. Access information can be obtained from the Project Manager.

All files must be in a format specified in this CADD Manual and be useable by MicroStation[®] **without** conversion.

803**MicroStation Resource and Support Files**

803.01 Fonts

MicroStation[®] font resource files are binary files created from font cells, true type and postscript shape fonts. MicroStation[®] has the ability to read multiple font resource files according to the paths set by the MS_SYMBRSC configuration variable in the selected workspace. WSF uses three font resource files (font.rsc, ntfont.rsc and wsf_font.rsc) all located in: C:\CAE_rsc\MS_63Level

WSF uses fonts 2, 42, and 50 in preparing PS&E plan sheets. All others are non-standard. It may be necessary to use non-standard fonts to maintain the formatting of information imported from other applications. For example an imported Excel spreadsheet may require certain True Type fonts in order to appear correctly.

Font 50 – (PSE_STD) is to be used for most information. **Font 2 – (STD)** is to be used only in places where font 50 cannot fit (e.g., dimensioning the width of roadway).

Font 42 – (FONT042) is used for names of cities, towns, interchanges, subdivisions, waterways, etc. Sometimes, other fonts come into the design file from foreign sources. Cartography uses special fonts when preparing Quad Maps. When Quad Maps are utilized in preparing details it is not necessary to change the fonts as long as the appearance is acceptable.

(a) Font 50/Special Characters

To access special text symbols in MicroStation[®], while placing text hold down ALT key and type decimal equivalent number.

At the left is the Font Table for the WSDOT/WSF font 50. All of the characters from 33 to 126 are available on the keyboard without doing anything special. Characters with numbers (located above the character) greater than 126 can be placed by holding down the ALT key and typing the number corresponding to the character. For example, to place the diameter symbol you would hold down the ALT key and typing 0195 (ALT+0195).

The special characters framed can be placed with the following:

The image shows a font table for font 50. The table is a grid of characters with their corresponding keyboard shortcuts. Callouts point to specific characters: Degree (°), Centerlin (¢), Diameter (∅), Steel Angles (⌄), Plus/minus (±), and Long Dash (—).

At the left is the **Font Table** for the WSDOT/WSF font 50. All of the characters from 33 to 126 are available on the keyboard without doing anything special. Characters with numbers (located above the character) greater than 126 can be placed by holding down the ALT key and typing the number corresponding to the character. For example, to place the diameter symbol you would hold down the ALT key and typing 0195 (ALT+0195).

The special characters framed can be placed with the following:

- ° => **Shift + 6 or ALT + 0094**
- ¢ => **(Accent) or ALT + 0096**
- ± => **ALT+0192**
- ∅ => **ALT+0195**
- => **ALT+0200**
- ⌄ => **ALT+0201**
- ⌋ => **ALT+0202**

Font Table for Font 50
Exhibit 800-1

803.02 Line Styles

The line styles developed for the WSDOT/WSF CADD system conforms to that specified in the *Plans Preparation Manual* and to what is currently in general use by the WSDOT.

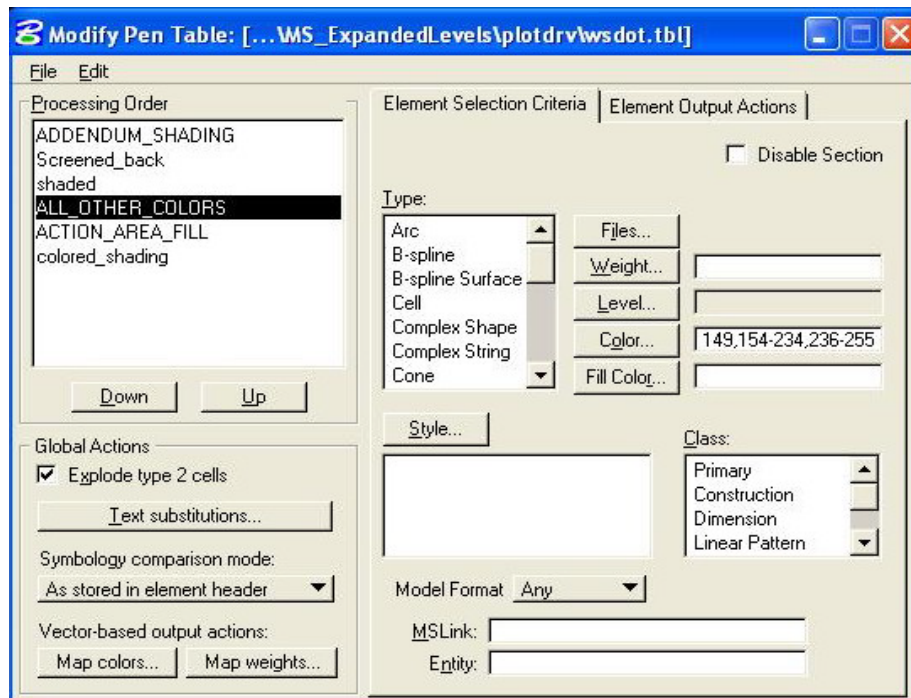
The 8 standard line styles as delivered with MicroStation[®] are shown. These line styles shall be used to prepare WSF design plans. See the *Plans Preparation Manual* for examples of all civil custom line styles available in the resource file (estylew.rsc).

<u>LINE STYLES</u>	
—————	LINE STYLE 0
.....	LINE STYLE 1
-----	LINE STYLE 2
-----	LINE STYLE 3
-----	LINE STYLE 4
.....	LINE STYLE 5
.....	LINE STYLE 6
-----	LINE STYLE 7

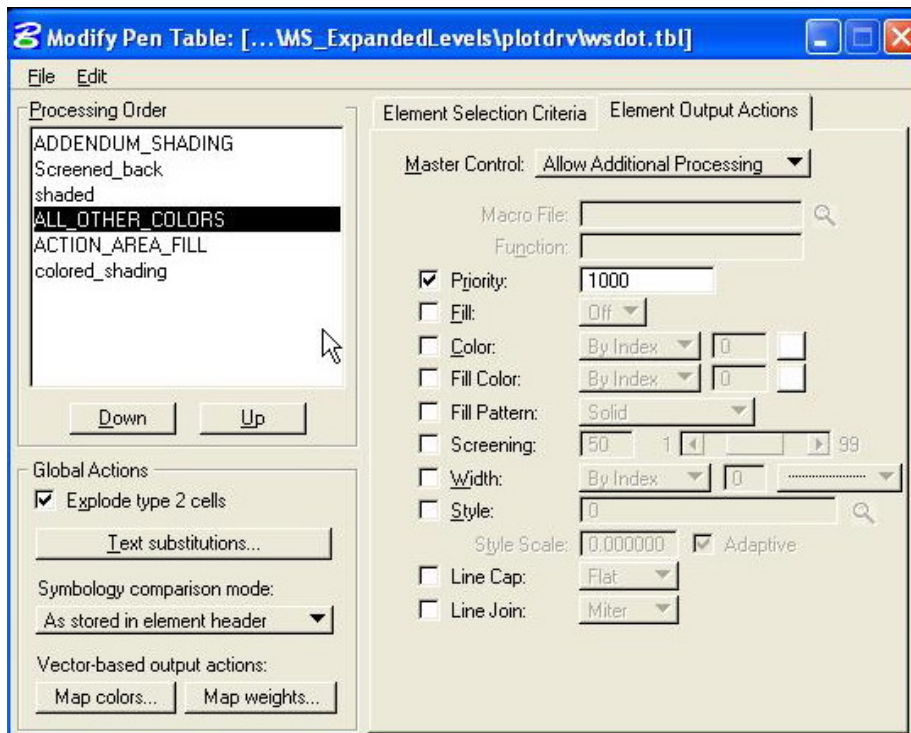
Line Styles
Exhibit 800-2

803.03 Pen Table

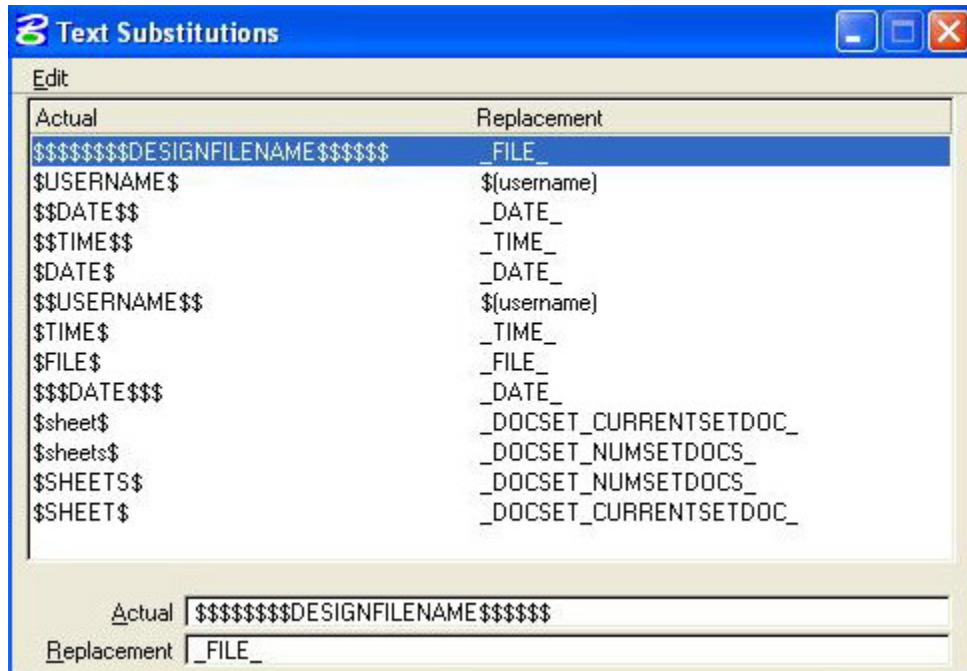
WSF uses the same pen table as is currently in use by WSDOT. The title of the pen table is wsdot.tbl. This file is also located in G:\cae_rsc\MS_ExpandedLevels\plotdrv\.



First section of pen table – Element Criteria
Exhibit 800-3



First section of pen table – Output Actions
Exhibit 800-4

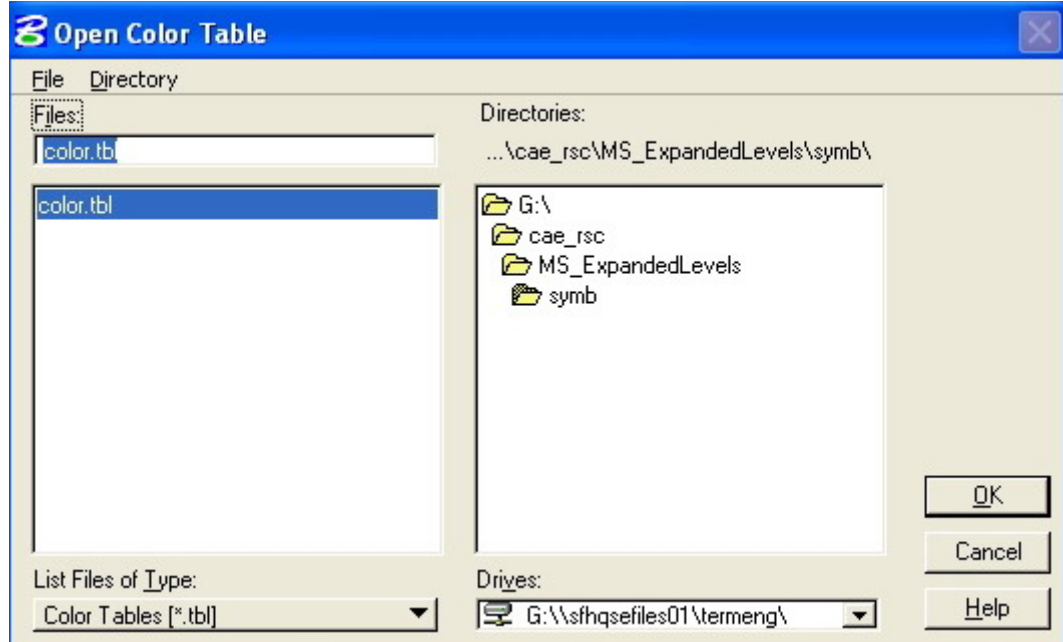


Text Substitutions for WSDOT.tbl
Exhibit 800-5

By placing the exact variable listed under **Actual**, MicroStation[®] will replace it with the value listed under **Replacement**. These values are taken from information on the computer or listed in the MicroStation[®] variable list. Note that by using the “\$sheet\$/ \$sheets\$” text substitution the operator is able to utilize the BATCHPLOT capability within MicroStation[®] and to have the sheet number and total number of sheets in the set being printed automatically applied at the time of printing.

803.04 Color Table

WSF uses a specific Color Table for the production of its CADD files. All CADD files must use this color table. The color table (**COLOR.tbl**) can be found on the shared drive at G:\cae_rsc\MS_ExpandedLevels\symb\COLOR.tbl. It can also be obtained from the WSF Design Team or the WSF CADD Coordinator.



Color Table
Exhibit 800-6

Note that colors 150-153 are used for half-toning or screening back printing. The amount of screening for each color will be as follows:

Color (by number)	R, G, B Value [±]	Percent "Screen back"	Approx. Color
150	100, 100, 100	40%	Dark Grey
151	130, 130, 130	50%	Grey
152	205, 205, 205	80%	Light Gray
153	230, 230, 230	90%	Lightest Grey
Color 160*	255, 255, 255	Wipe Out	White

RED, GREEN, BLUE values: RGB value = (255,255,255) is equal to WHITE and RGB = 0,0,0 is Black.

*Color 160 is used to block out anything underneath to keep clarity of drawing.

803.05 Seed Files

(a) General

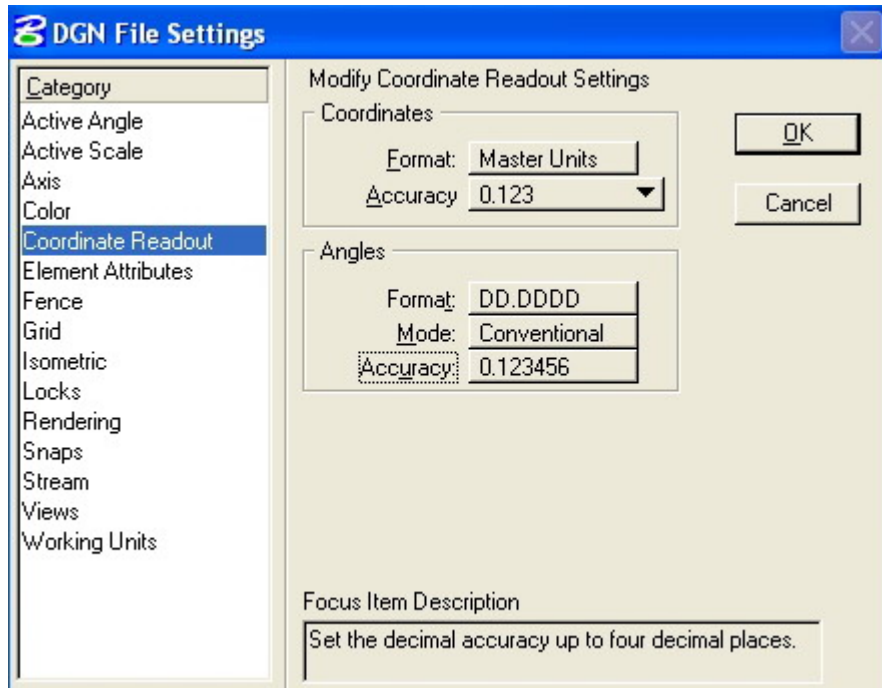
Washington State Ferries (WSF) uses a seed file for CADD files that are produced for PS&E sets. It is **WSF_seed.dgn** and it can be found in the shared drive directory C:\Users\Public\CAE\Standards\WSDOT\seed

The seed file is used mainly for the creation of plan sheets. It is also used for the preparation of Permit Drawings. Once a new file is created, the user should reference the project border which already has the **WSF_STD_CACHE.mst** file attached. These reference files can be moved, rotated and scaled, as needed for use with the civil site basemaps and civil master files. The seed file **WSF_seed.dgn** is also used for the creation of Architectural, Electrical, Structural, Mechanical, and WSF Standard Drawing plans.

(b) General & Civil Drawings: Working Units

The MicroStation[®] Working Units used for the Seed File for all CADD drawings prepared for PS&E plans are to include the following working unit parameters:

1. Coordinate Readout

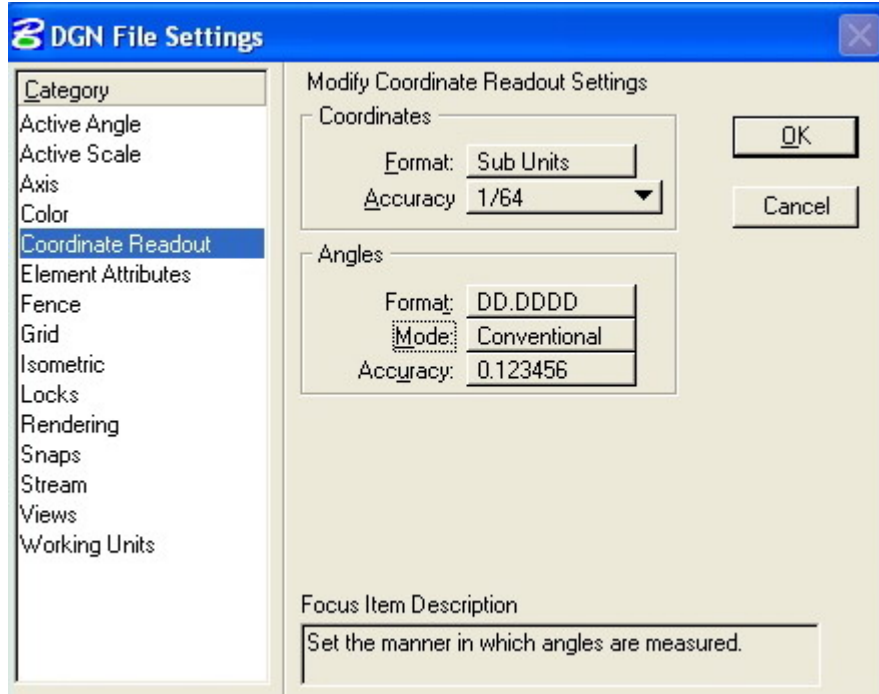


Coordinate readout for Civil & General Plans
Exhibit 800-7

(c) Structural, Electrical, Mechanical, & Architectural: Working Units

The MicroStation® Working Units used for the Seed File for all CADD drawings prepared for PS&E plans are to include the following working unit parameters:

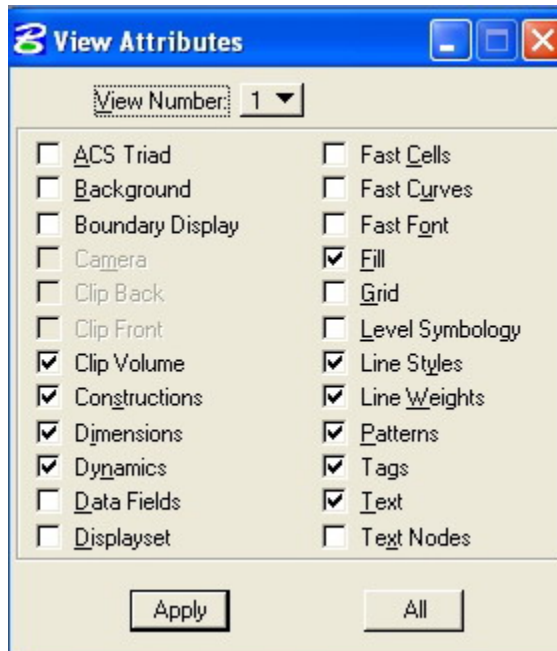
1. Coordinate Readout



Coordinate Readout For Structural, Electrical, Mechanical, & Architectural Plans
Exhibit 800-8

(d) View Attributes

The View Attributes for all WSF CADD files shall be set as follows:

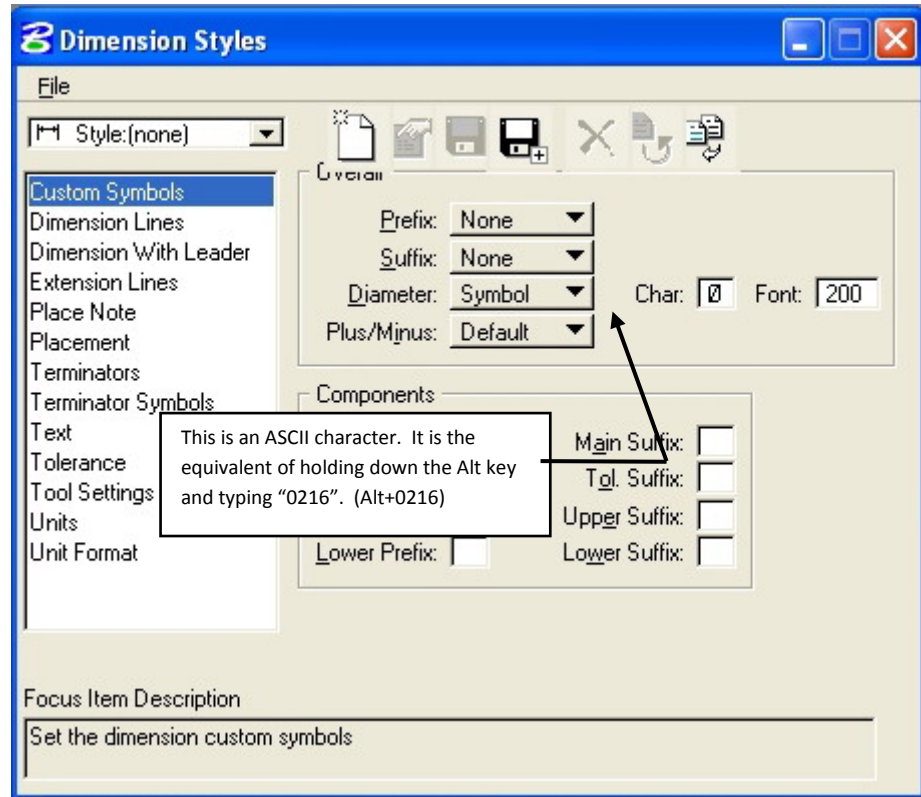


Initial View Attributes Settings
Exhibit 800-9

(e) Dimension Settings

Options for the Dimension Settings shall be as follows in Exhibits 800-10 through 800-20:

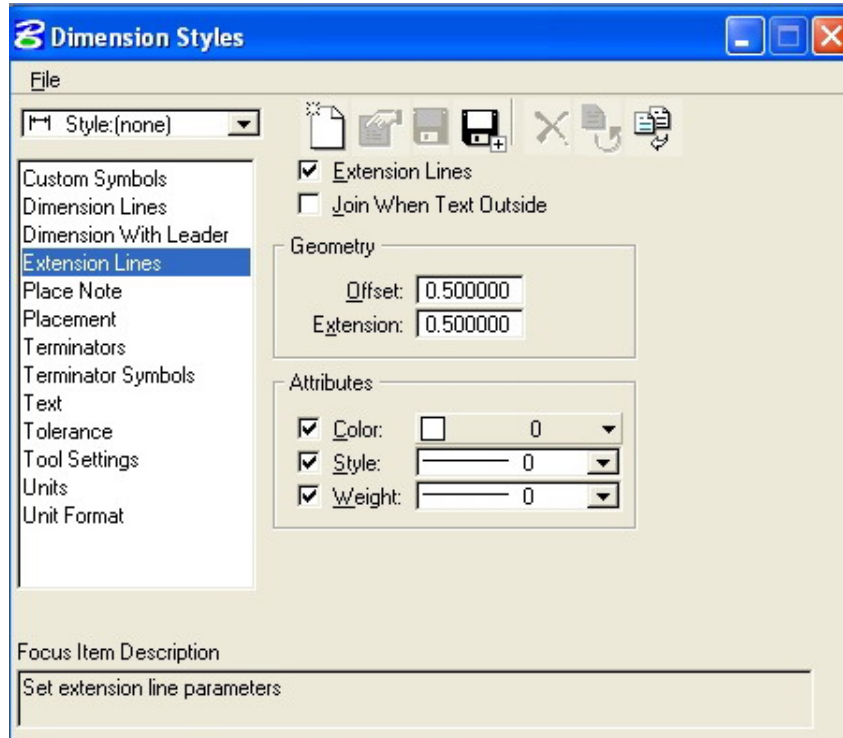
1. Custom Symbols



Dimension Custom Symbol
Exhibit 800-10

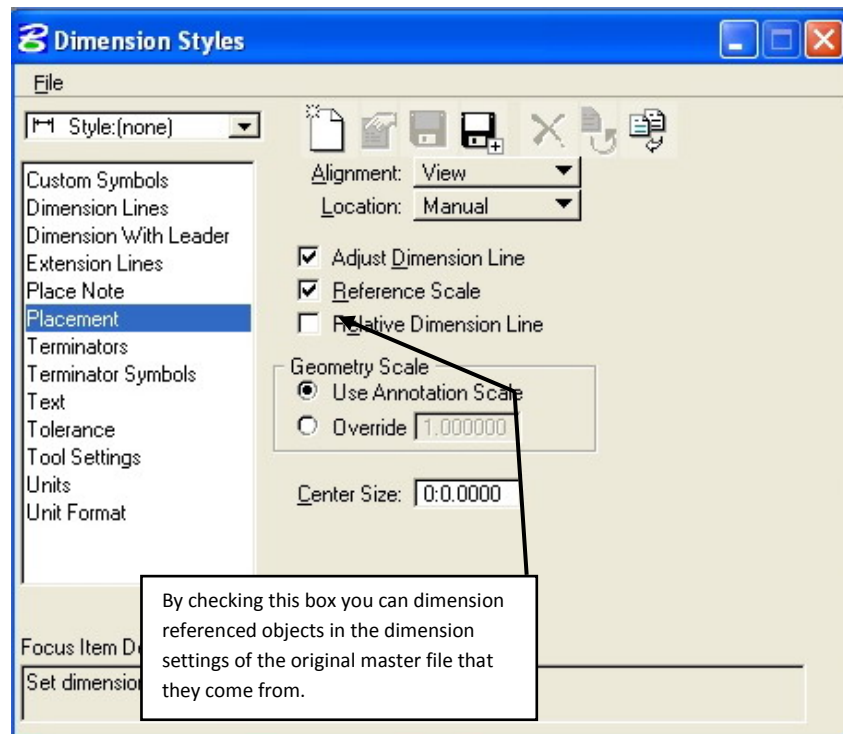
The diameter symbol “∅” in the font resource file for font 200.

2. Extension Lines



Dimension Extension Line
Exhibit 800-11

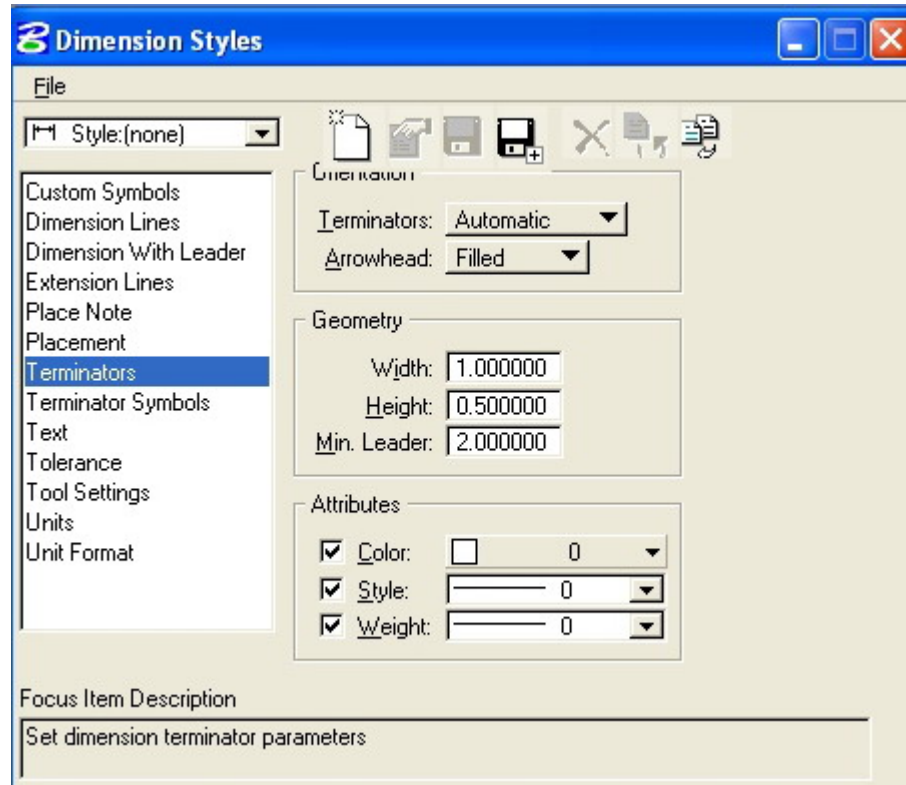
3. Placement



Dimension Placement
Exhibit 800-12

4. Terminators

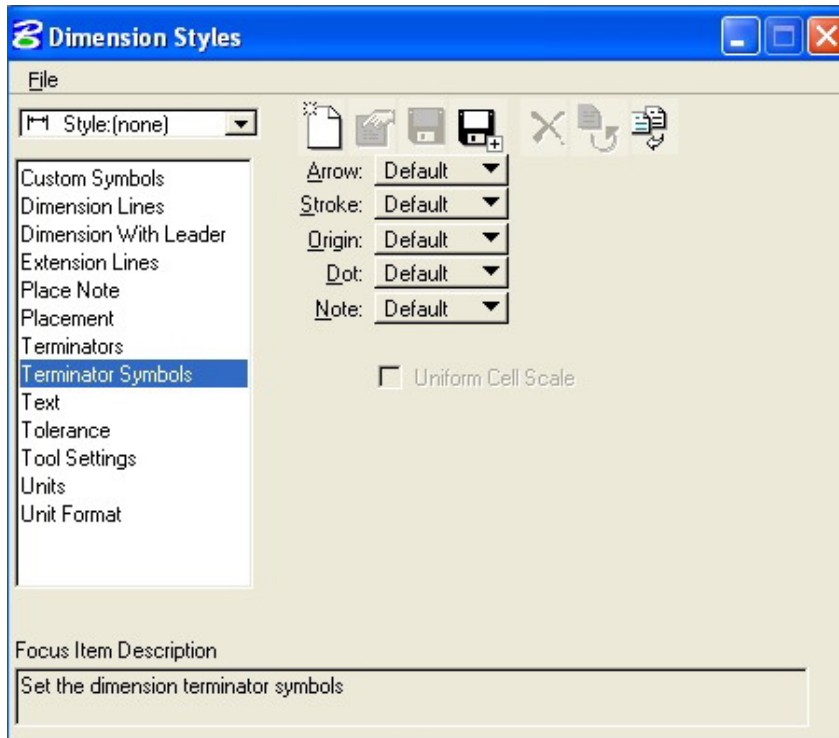
The **Default** terminator shall be used for all CADD applications. This includes but is not limited to dimensioning, text notes, and leaders.



Dimension Terminator
Exhibit 800-13

5. Terminator Symbols

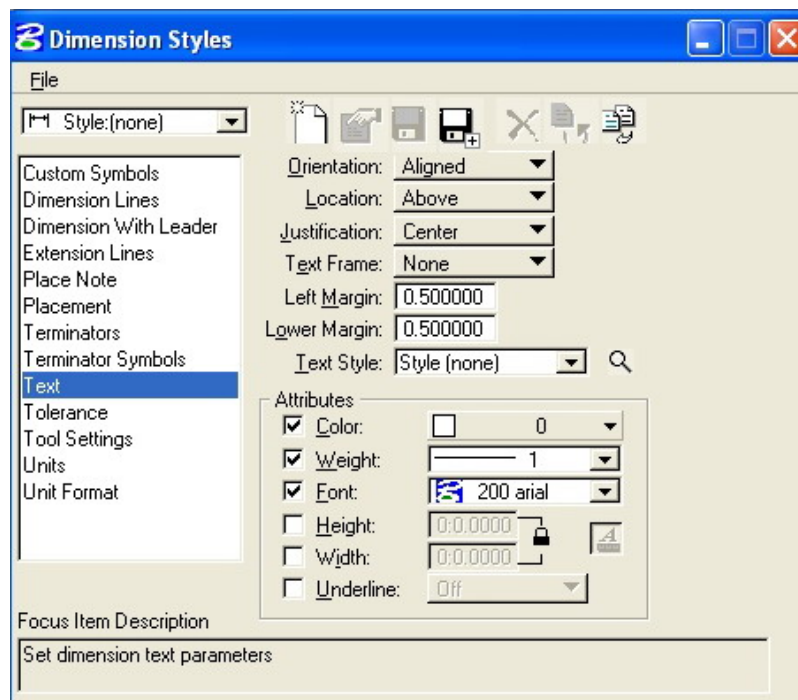
All terminator symbols shall use the MicroStation default settings as follows:



Dimension Terminator Symbols
Exhibit 800-14

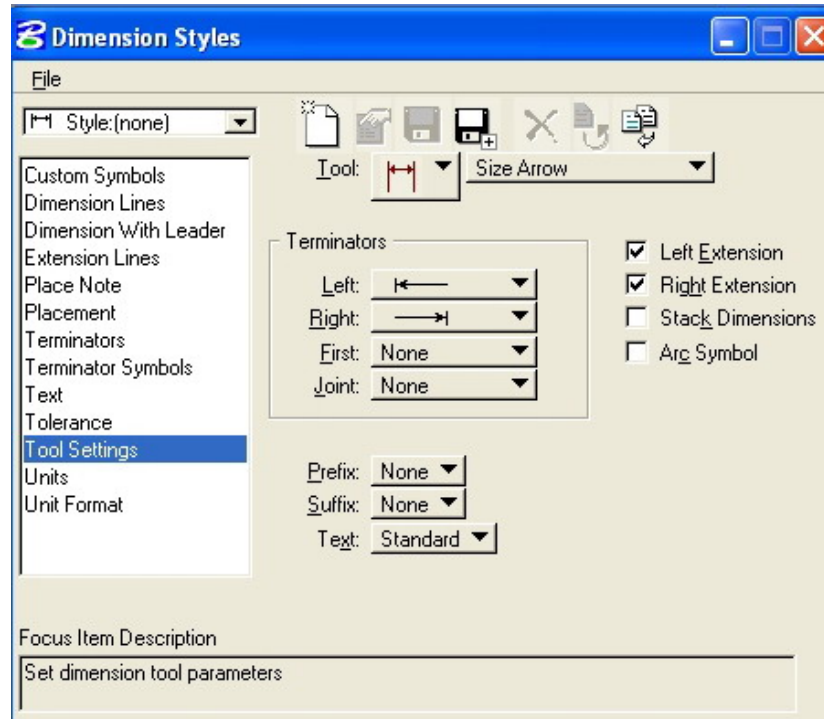
6. Text

Placement of dimension text will use the following settings:



Dimension Text
Exhibit 800-15

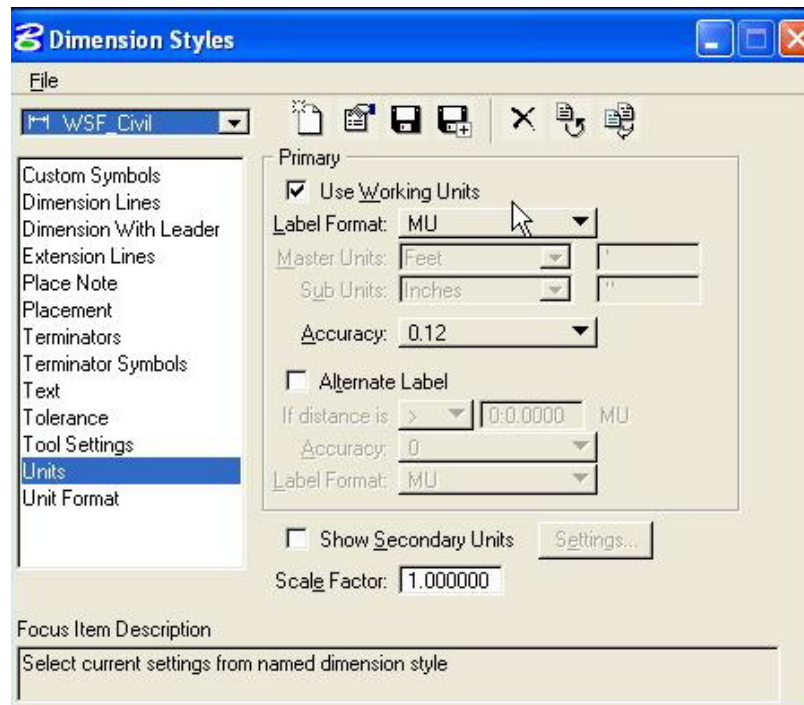
7. Tool Settings



Dimension Tool Settings
Exhibit 800-16

8. Civil Units

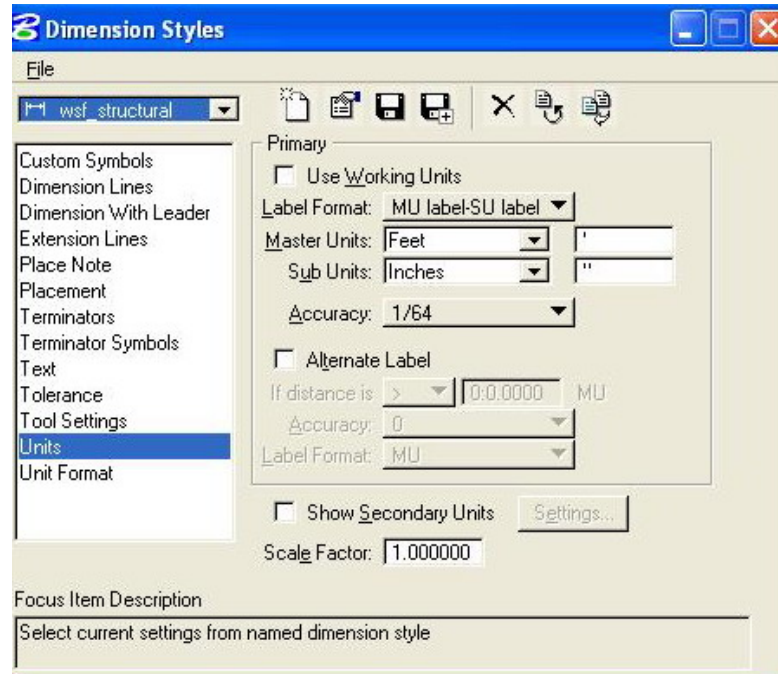
The unit format for Civil drafting will be set as follows:



Dimensions Units
Exhibit 800-17

9. Structural, Mechanical, Electrical, and Architectural Units

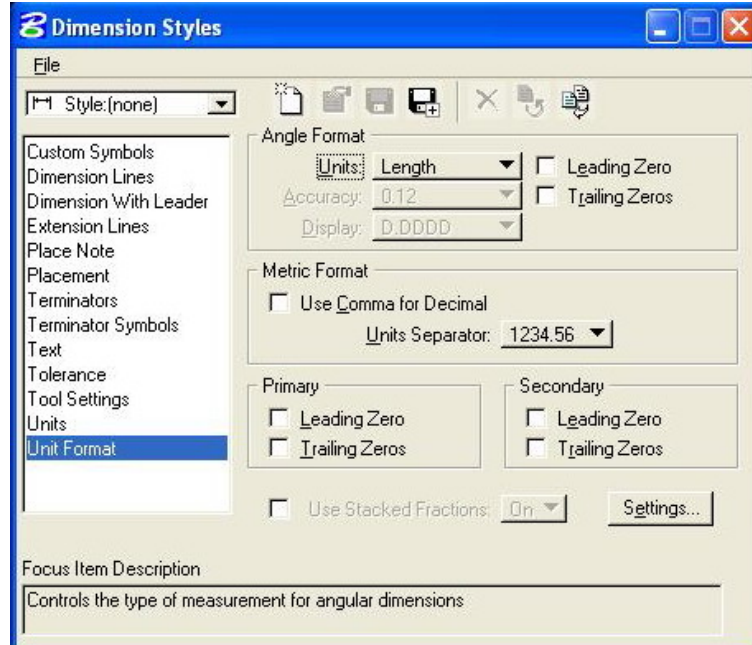
The unit format for Structural, Mechanical, Electrical, and Architectural drafting will be set as follows:



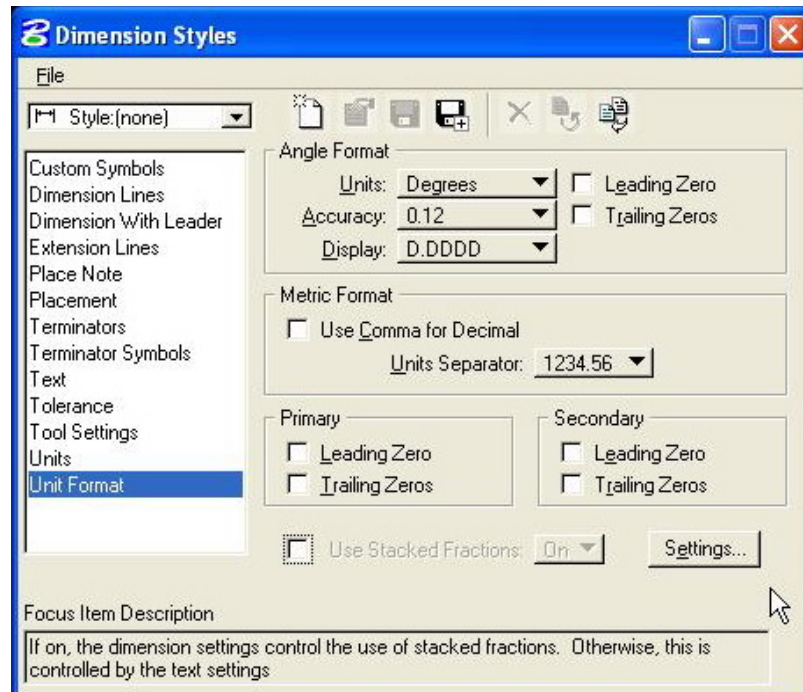
Dimension Units
Exhibit 800-18

10. Unit Format

The unit format for the seed file shall be set as follows for angular measurement and length measurement:



Dimension Unit Format
Exhibit 800-19



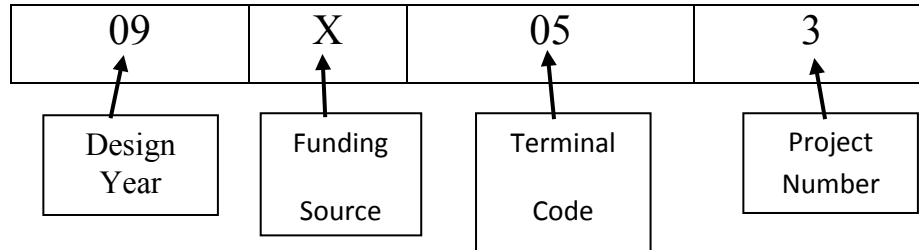
Unit Format for Angular Dimensions
Exhibit 800-20

Note that neither the leading zeros nor the following zeros are shown. This is consistent for all WSF CADD files except for Mechanical files. Mechanical files shall include following zeros as determined by the engineer.

804

Project Naming

804.01 Project Naming Convention



Where,

- 09 = the year that the project design was begun
- X = Maintenance or W = Capital Funding
- 05 = Terminal Code (Edmonds Ferry Terminal is shown)
- 3 = Third design project begun for the Edmonds terminal in design year

Terminal Codes			
Anacortes	= 01	Mukilteo	= 12
Bainbridge	= 02	Orcas	= 13
Bremerton	= 03	Point Defiance	= 14
Clinton	= 04	Port Townsend	= 15
Edmonds	= 05	Seattle	= 16
Eagle Harbor	= 06	Shaw	= 17
Fauntleroy	= 07	Sidney	= 18
Friday Harbor	= 08	Southworth	= 19
Coupeville*	= 09	System Wide	= 20
Kingston	= 10	Tahlequah	= 21
Lopez	= 11	Vashon	= 22

* Formerly Keystone

1. The project “name” or “number is generated by the Project Manager when they fill out the information in the “Cradle to Grave project number” file. The file can be found at: G:\Admin\C2G_Proj_Numbers\Project_Numbers.xls. The number will appear in the Terminal directory on the “G” drive with either the Work Order number or the contract number following it. The number accompanying the project number will indicate what phase of work the project is in, design or construction. (This will also be the number that employees charge to when they work on the project.)

Example: a design phase designation of - **09X053_XL4430**

Or,

a construction phase designation of - **09X053_8893**

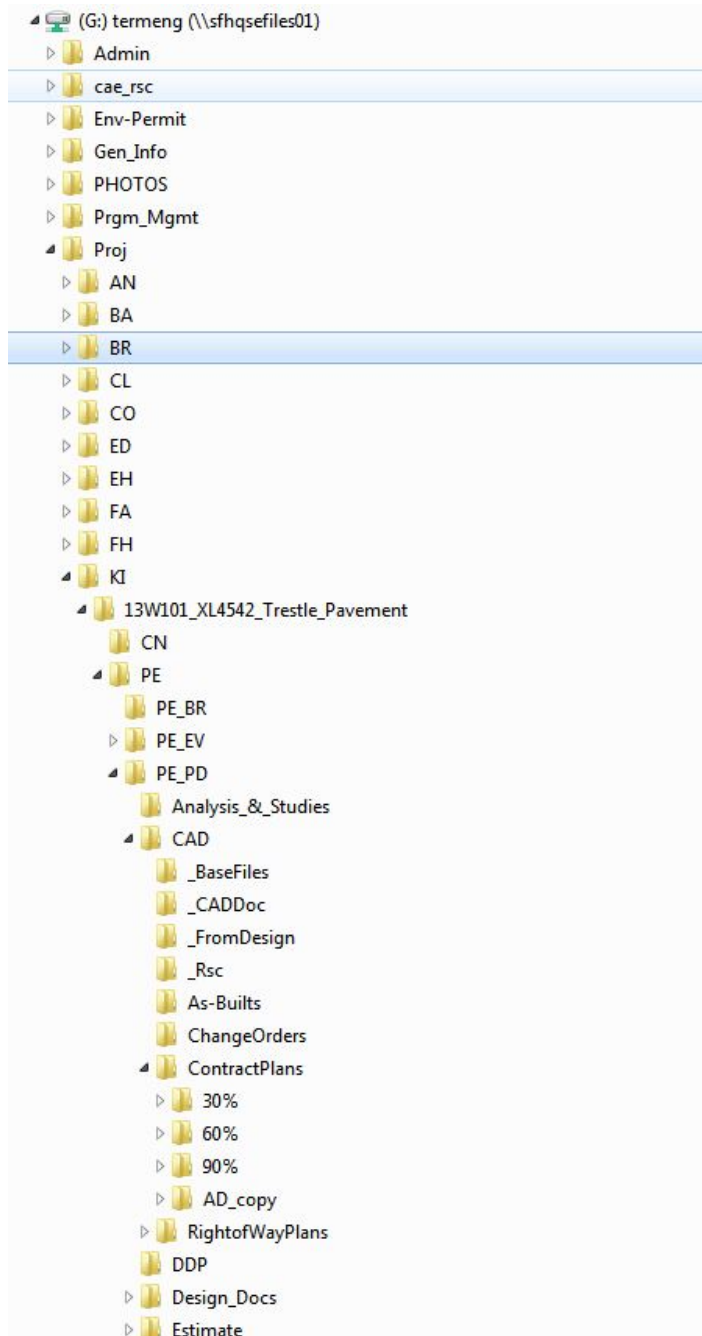
2. Upon completion of the design phase the CAD files for the project will be archived to the “U” drive using the assigned construction contract number with the project number appended to it.

805

Directory Structure

805.01 Project Directory

The following is a partial outline of the WSF file structure. Only directories that may be necessary to CADD production are shown. (Not all directories pertain specifically to CADD files).



Directories found under the “Proj No” are the same for all projects. The Template for the directory structure can be found under:

G:\Proj\Z-PM Standards\Standards-Project Management\Filing system\August 2009 File Structure Template

Typical Project File Directory
Exhibit 800-21

806

File Names

806.01 File Extensions

(a) Master Files and Basemaps (.mst)

Master files are files that contain information that is used by multiple drawings and/or by multiple disciplines. The information in the master file is drawn at 1:1 scale and in its true State Plane coordinate position when applicable. Proposed Master Files can be broken up by phase to add ease and controllability to plan development. The information is mostly line work with generally no text or dimensions. Additional master (mst) files can be added as needed to facilitate plan production. Master files are referenced to Deliverable files (.dlv) and make up the contents of the drawing.

Basemap, in this case, is a term to describe files that include existing background information to be used for the entire project. For Civil work it could mean the site plan with all surveyable surface features including topography. For Structural work it could mean a plan showing the location of all site structures, piles, caps, stringers, barriers, and etc. It could also be a detailed drawing of a transfer span that is used as a base from which to compile new plan sheets.

Typical master files/basemaps might include the following:

Filename	Logical name	Description
eaa###βχc_basemap.mst	ec_basemap	Existing Civil Basemap
eaa###βχc_bathy.mst	ec_bathy	Existing Bathymetry
eaa###βχs_framing.mst	es_framing	Existing Structural Framing
paa###βχc_basemap.mst	pc_basemap	Proposed Civil Basemap
paa###βχc_alignment.mst	pc_alignment	Proposed Alignment/Work Line
paa###βχs_basemap.mst	ps_basemap	Proposed Structural Basemap
paa###βχs_framing.mst	ps_framing	Proposed Structural Framing
paa###βχe_basemap.mst	pe_basemap	Proposed Electrical Basemap
paa###βχm_basemap.mst	pm_basemap	Proposed Mechanical Basemap
paa###βχc_outline.mst	pc_outline	Outlines of Phase 1 Construction
paa###βχc_outline.mst	pc_outline	Outlines of Phase 2 Construction
PSE_border.mst	border	Project Border

(b) Deliverable Files (.dlv)

Deliverable files are files that represent the sheets that make up the set of drawings submitted on a project. Deliverable files reference the title and border, sheets limits if needed, and existing and proposed information or details. The deliverable files contain the text and dimensions for the drawing. Do not reference deliverable files. Do not self-reference files. Work files may be temporarily referenced, but all unnecessary reference attachments shall be detached before project completion.

(c) Working Files (.dgn)

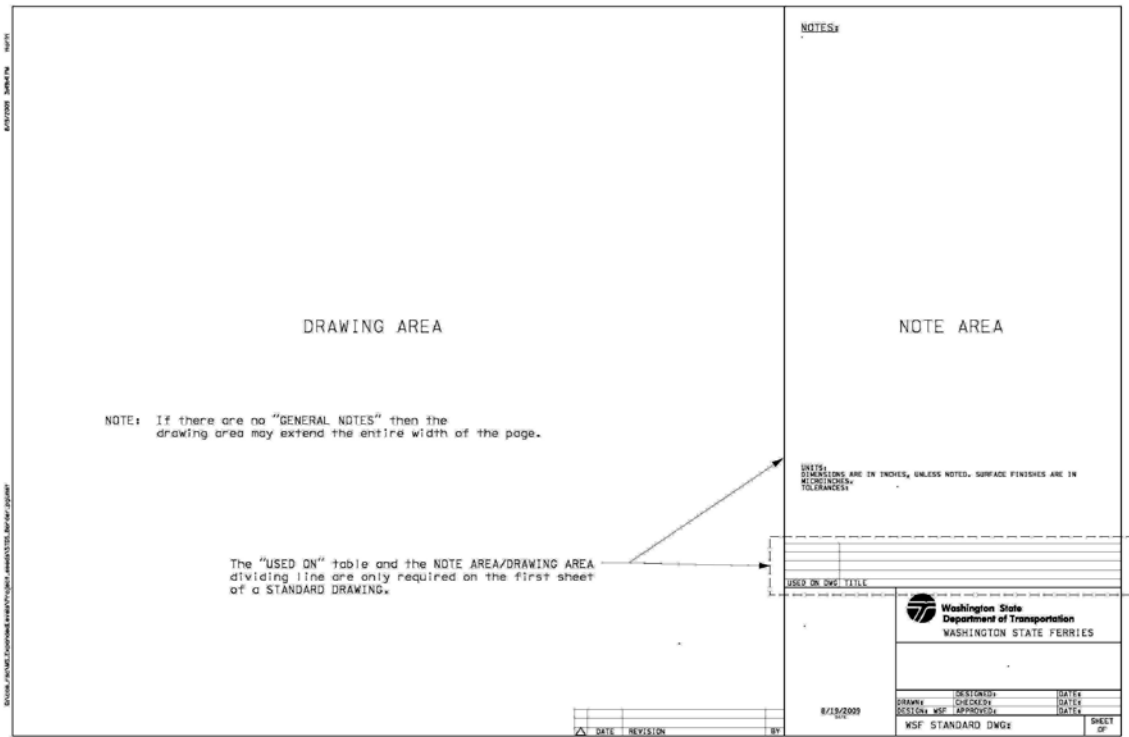
Files in the project directories that are not Deliverables or Master files, but include project information used by the engineers or technicians to test concepts, layouts, ideas, etc.

(d) Survey Basemaps

Survey Basemaps are to be considered as project master files. All Basemaps produced for WSF will be referenced to the Washington State North Zone US Survey Feet. They shall be correctly located and oriented in a file using the units designated for Civil CADD files. Coordinates will be directly readable from the CADD file.

(e) WSF Standard Drawings and Details

Washington State Ferries has standard drawings and details for a variety of parts and assemblies that it uses at all of the State’s Ferry Terminals.



**Plan sheet layout for WSF Standard Drawings
Exhibit 800-22**

(f) Backup Files

Backup files for project design shall only be created when a major revision to a Deliverable file is made. The backup is made so that if the revision is found to be in error a copy of the file, as it existed immediately prior to the change, will still exist.

The naming of a Backup file shall be the same as for a Deliverable file (see pg. 24 – **Deliverable Files**) except that the file extension will be “. bak” instead of “.dlv”.

Backup files are **not** to be created for the sole purpose of retaining a copy of the plan set at review points. If the Project Manager decides that a copy of the plans at review point is necessary a CD will be created to store the required contents of the project directory.

At project completion all backup files will be removed from the directory prior to archiving.

WSF keeps weekly backups of its main servers off-site at a secure storage facility. A request to restore the desired file shall be forwarded to the **WSF IT Help Desk** and will include:

- The last known “good” date of the file
- The Server that the file was housed on
- The name and directory path that the file can be found in

The Help desk can be contacted by email at WSFHelpDesk@wsdot.wa.gov or at 206-515-3800. In house CADD users can contact the Help desk by dialing “3800” on their phone.

Allow 2 to 3 working days for retrieval of the file.

Please note: The weekly tapes are archived for a term of one (1) year only. If you need to retrieve a file older than that you will either find it in the U drive archives (for in-house personnel) or you won’t find it.

806.02 File Naming

The “File Name” is the unique identification for each drawing. It is from a minimum of 12 to a maximum of 24 characters in length and is alpha/numeric in character. There will be no spaces in the file name. If a space is necessary then either the underscore symbol (“_”) or the hyphen (“-“) shall be used. Each design drawing shall be assigned a drawing number. The drawing numbering is defined by the discipline and plan number within that discipline.

(a) Discipline Designators

Exhibit 800-23 shows discipline designators for typical disciplines used by both master files and deliverables. These numbers will be listed on the project drawing list.

Designator	Discipline
a	Architectural
c	Civil
d	Design Report
e	Electrical
f	Fire Protection
g	General
h	Hydraulic Power Systems
i	Instrumentation and Control Systems
k	Cathodic Protection
l	Lighting
ls	Landscape(& Irrigation)
m	Mechanical
p	Permitting
s	Structural
sc	Security
t	Telecommunications
u	Site Utilities

Discipline Designators
Exhibit 800-23

(b) Master Files

Those files created for the project that become the project Master files shall be named using the following criteria:

Where, **xαα##βχd_#.....#.mst**

- x = e => if the file contains existing information
- p = > if the file contains proposed information
- d = > if the file contains demolition information
- αα##βχ = The project identification number (See Project Naming).
- d = Discipline Designator. See Table 1 – 6.02.01
- #.....# = Short description of work location – Maximum of 13 characters.
- .mst = Suffix denoting a **Master File**.

Example: The original basemap depicting **existing** conditions used for the civil drawings for project number **09X053** would be named:

e09X053c_basemap.mst

(c) Deliverable Files

Those files created for projects that are to be delivered for review or final submittal shall be named using the following criteria:

Where, **αα##βγdxx_xx_#.…….#.dlv**

- αα##βγ** = The project identification number (supplied by the WSF Project Manager).
- d** = Discipline Designation. See Table 1 – 6.02.01
- xx_xx** = Plan sheet number within the list of disciplinary drawings.
(Fourth sheet of series 10 = 10_04)
- #.…….#** = Short description of work location – Maximum of 13 characters. *
- .dlv** = Suffix denoting a **Deliverable File**.

Example: The fourth sheet in a series beginning with sheet 10.01 of the electrical drawings for project number **09X053** showing the transfer span electrical work would be named:

09X053e10_04_t-span.dlv

Note:* The description portion of the filename is optional and shall be removed from **deliverables prior to the 90 percent review submittal or when the sheet numbering is complete, whichever occurs first. Deliverable files being archived shall retain only the **Project ID**, **discipline**, and the **plan sheet number**.

(d) Working Files

Those files that will not contain a title or border and are for purposes other than addition to the deliverable plan set or creation of a Master file shall be named using the following criteria:

Where, **OINwαα##βγd_#.…….#.dgn**

- OIN** = Originator's initials
- w** = Denotes a working drawing
- αα##βγ** = The numerals of the project identification number (supplied by the WSF Project Manager).
- d** = Discipline Designation. See Table 1 – 6.02.01
- #.…….#** = Description of work – Maximum of 13 characters.
- .dgn** = Suffix denoting a standard MicroStation design file.

Example: A file created by the engineer Jeff Jefferson to make a sketch of a possible layout for onshore drainage work for the project SW02AX would be named:

JJw09X053c_onshore_drain.dgn

(e) Permitting Files

The permit drawings created for all WSF projects shall be considered to be Deliverable files. They will adhere to the following naming convention:

Where, $\alpha\alpha##\beta\gamma Pd_x_y_#\dots\dots\# .dlv$

- $\alpha\alpha##\beta\gamma$ = The numerals of the project identification number (supplied by the WSF Project Manager).
- P** = Permitting Code. See Table 1 – 6.02.01 for Discipline Designations. This character is upper case.
- d** = Discipline Code. See Table 1 – 6.02.01 for Discipline Designations. This character is upper case.
- x,y** = **x** = Number of the permit plan w/in the set of permit drawings.
y = Number of the drawings in the set of permit drawings.
- #.....#** = Short description of the type of permit (i.e., JARPA, Shoreline, Corps, etc.)
- .dlv** = Suffix denoting a **Deliverable File**.

Example: A Civil drawing that is the fourth sheet in the JARPA permit submittal consisting of 7 plans for Project **09X053** would be named:

09X053Pc_4_7_JARPA.dlv

(f) Standard Drawings

The WSF Standard Drawings are to be named using the following convention:

1. Upland	Assemblies: 1-A-XXX-#-@ [†] Parts: 1-P-XXX-#-@
2. Trestle	Assemblies: 2-A-XXX-#-@ Parts: 2-P-XXX-#-@
3. Transfer Span & Apron	Assemblies: 3-A-XXX-#-@ Parts: 3-P-XXX-#-@
4. Towers & Headframes	Assemblies: 4-A-XXX-#-@ Parts: 4-P-XXX-#-@
5. Overhead Loading	Assemblies: 5-A-XXX-#-@ Parts: 5-P-XXX-#-@
6. Wingwalls & Dolphins	Assemblies: 6-A-XXX-#-@ Parts: 6-P-XXX-#-@
7. Hydraulics	Assemblies: 7-A-XXX-#-@ Parts: 7-P-XXX-#-@
8. Electrical	Assemblies: 8-A-XXX-#-@ Parts: 8-P-XXX-#-@
9. Miscellaneous	Assemblies: 9-A-XXX-#-@ Parts: 9-P-XXX-#-@

File Naming for WSF Standard Drawings

Exhibit 800-24

[†]Where **XXX** is the drawing number assigned by the designer, “**#**” is the sheet number (1,2,3, etc.) and “**@**” is the revision (A= rev. A, B= rev. B, etc.)

Prior to naming the file, the designation must be obtained from the WSF employee responsible for the care and maintenance of the Standard Drawings.

Revisions of a Standard Drawing will be indicated by renaming the file. A letter will be added to the end of the name that corresponds to the revision number.

Example: The third revision of 3-A-051-2 would be

3-A-051-2-C.dlv

Completed Standard Drawings will be archived to the **U:\Standard Drawings\CADD** directory for local use.

807**Plan Sequence**

807.01 Plan Sequence List

The following is the general sequence for the required sheets that shall be used in assembling the plans for a WSF construction project:

I. General Sheets (See 800-12)

G01.00 - Project Index, Project Location and Vicinity Map
(Combined for smaller projects)

G01.00 - Project Location and Vicinity Map
(Separated for larger projects)

G01.01 - Project Index
(Separated for larger projects)

G02.00 - Sundry Site Plan

SQ1 - Summary of Quantities Sheet (if more than one SQ2, SQ3, etc.)
(These sheets are produced by a separate application called EBASE and are added to the plan set as hard copy)

II. Civil Plan Sheet Series (See 800-13)

III. Architectural Plan Sheet Series (per Architect submittal)

IV. Structural Plan Sheet Series (See 800-14)

V. Fluid Power Hydraulic Plan Sheet Series (See 800-15)

VI. Electrical Design Drawing Series (See 800-16)

VII. Mechanical Design Drawing Series (See 800-17)

Plan Sequence List

The preceding is a list of possible plan sheets, and is not intended to represent a project. The designer is to determine the actual plan sheets required to best depict the project. Even with logical combinations of plan sheet series, the following basic order of sheets shall be maintained:

1. Item Information (Quantity Tabulation/Structure Notes/Sign Specifications)
2. Plan Series (Site and Location specific drawings of the required work)
3. Details (Dimension and Material specific drawings of work noted in Plan Series)

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Drawing List

808.01 Drawing List Example

It is the responsibility of the user creating a new file to make sure that the entry gets made to the Drawing List. Furthermore, it is the responsibility of each CADD user who modifies the file, in any way, to update the contents of the Project Drawing List.

The template for the Drawing List can be found in the Shared Drive directory for those project personnel working on site at Washington State Ferries.

Drawing List and File Attachment (EXAMPLE) All files reside in				Project Name:					Notes:
Sheet No.	File Name	Title Contents	Owner	Attached Reference Files					
				File Name	Description	Originator	Scale	% Comp	
GENERAL ARRANGEMENT									
C10.01	09X053c10_01.dlv	Site Plan	BB	eSW02AXc_baseap.mst	Basemap	DR	1:500		<div style="border: 1px solid black; padding: 5px; width: fit-content;"> “% Comp” – defines the degree of completion for each sheet. </div>
				eSW02AXc_contour.mst	Contour map	SS	1:500		
				PSE_border.mst	Proj. Plan sht. Border	RG	1:100		
S09.01	09X053Xs09_01.dlv	Transfer Span Details	TB	PSE_border.mst	Proj. Plan sht. Border	RG	1:100		
H01.01	09X053h01_01.dlv	Hydraulic Controls	AM	PSE_border.mst	Proj. Plan sht. Border	RG	1:200		
M04.13	09X053m04_13.dlv	Transfer Span Cable System	JS	eSW02AXs_TS_detail.mst	Structural Transfer Span Details	HC	1/8"=1'		
				PSE_border.mst	Proj. Plan sht. Border	RG	1:8		
E01.05	09X053e01_05.dlv	Illumination Site Plan		eSW02AXc_baseap.mst	Basemap	DR	1:100		
				PSE_border.mst	Proj. Plan sht. Border	RG	1:200		

Example Drawing List (From Excel Template)
Exhibit 800-25

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Drafting Standards

809.01 Plan Sheet Size

The review and the advertisement plan sets shall require plan sheets to be 11-inch by 17-inch paper sheets. All symbols, text, and weights are to be sized to plot to the correct scale on 11×17 sheets.

If the contract plans have more than 225 sheets or contract provisions have more than 225 pages, they will have to be separated into volumes, with no volume having more than 225 sheets or pages. The break for volumes is to be made at a logical point in the package, which may not be at 225 sheets or pages. If a project has 275 plan sheets, and the last 80 are bridge sheets, the logical break would be between the civil sheets and the bridge sheets. If multiple volumes are required for the contract provisions, the logical break would be at the end of a main section. For example, break between ASPHALT CONCRETE PAVEMENT, and the following main section, CULVERTS. Do not place the break in the middle of a section. A complete drawing list will begin each volume of the plans.


FILE NAME: C:\work\mshs\Export\mshs\Project\mshs\000001\WSF_000001.dwg		DATE: 3/17/2018		TIME: 12:52:18 PM		DRAWN BY: mshs		CHECKED BY:		DESIGNED BY:		ENTERED BY:		MAX PROJ ENDR:		TWO ENDR INDR: M. MCINTOSH		ASST SECRETARY: D. MOSELEY		REVISION		DATE		BY		CONTRACT NO.		LOCATION		SHEET		OF		SHEET					
										 Washington State Department of Transportation WASHINGTON STATE FERRIES		TERMINAL NAME PROJECT DESCRIPTION PROJECT DESCRIPTION																											

Exhibit 800-26: Sheet layout for WSF Design Plan drawings

Sheet layout for WSF Design Plan drawings
Exhibit 800-26

(a) Plan Sheet Grid System

All PS&E contract drawings will use a grid system. The grid system will be used on all applicable sheets to help locate placement of various sheets. (See [Exhibit 800-27](#)). The following is an explanation of how the grid system is placed.

Trestle, Tie-Up Slip, and Passenger Only Walkways:

- Main rows of piles roughly aligned with the centerline of the trestle or the transfer span will be designated by a letter. The designation will ascend from the row furthest left of the centerline (looking offshore) to the row furthest to the right of centerline.
- Pile bents oriented transversely to the trestle or transfer span centerline will be designated by a number. The designation will ascend from the bulkhead to the last bent of trestle piles furthest offshore.
- Piles found between the main rows and bents will be given either a “letter.#” designation or a “#. #” designation depending on whether it is more convenient to identify the piles as a bent or a row. (Example: a pile midway between bent 11 and 12 and midway between rows D and E could be designated as bent 11.5 or as row D.5)

Wingwalls:

- Rows of piles that are parallel to the wingwall rub face will be designated by a number. The numbers will ascend going from front to back of the wingwalls.
- Rows of piles that are perpendicular to the wingwall rub face will be designated by a letter. The letters will ascend progressing from closest onshore to furthest offshore.
- Any pile that doesn't align with another pile will be given its own letter and number designations. Decimal designations will not be used for wingwalls.

Towers:

- Rows of piles that are parallel to the transfer span centerline will be designated with a letter. The letters will ascend progressing from the farthest from the transfer span centerline to the closest to the centerline.
- Rows of piles that are perpendicular to the transfer span centerline will be designated by a number. The numbers will ascend progressing from closest onshore to furthest offshore.
- Any pile that doesn't align with another pile will be given its own letter and number designations. Decimal designations will not be used for towers.

Fixed Dolphins:

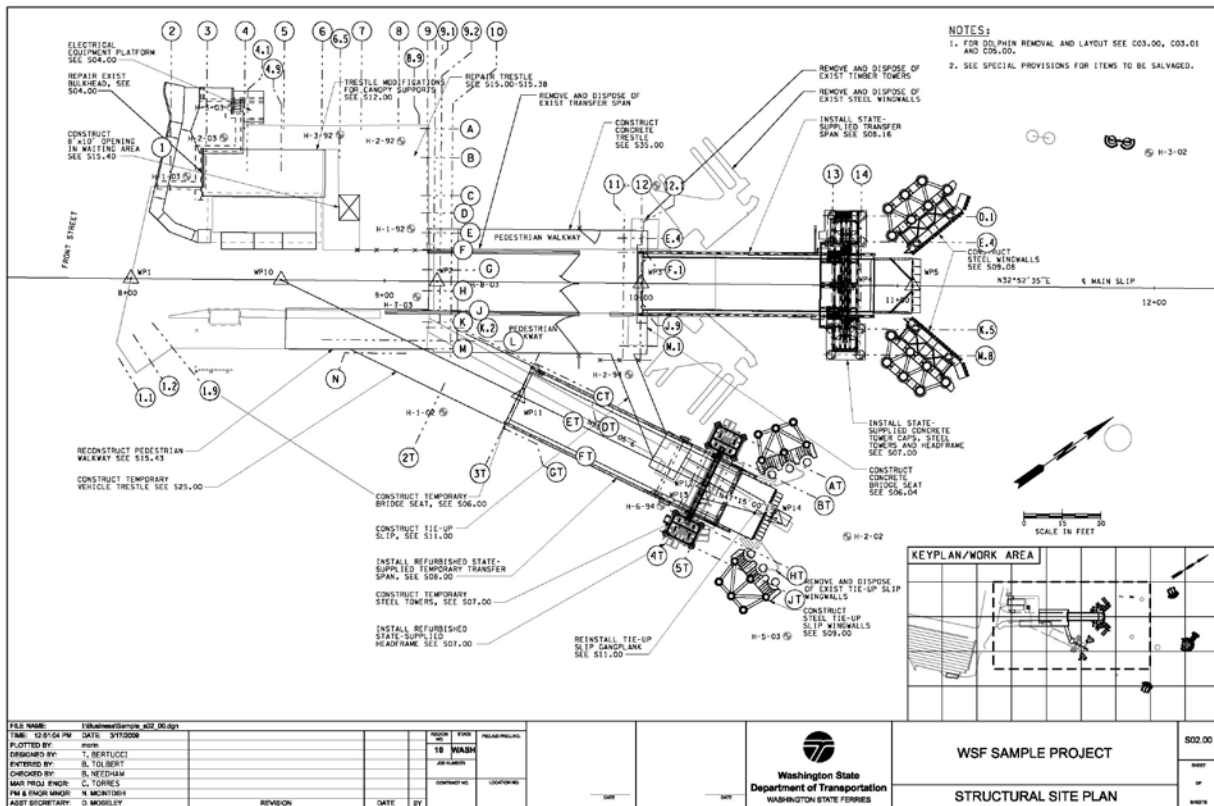
Fixed dolphins come in two different varieties, single sided and multisided. In the single sided type the face opposite the fenders is considered to be the back face. In the multisided type the side without fenders or the side closest onshore is considered to be the back side. In both varieties any piles that only support the fenders will be numbered in a clockwise direction, starting on the left. The numbering will continue from the last number used for pile designation within the diaphragm. The centerline of a dolphin will be that line that connects the center of the back face of the dolphin to the center of the opposite face.

- Rows of piles that are parallel to the dolphin centerline will be designated with a letter. The letters will ascend progressing from the furthest left of the centerline to the furthest right of the centerline.
- Rows of piles that are perpendicular to the dolphin centerline will be designated by a number. The numbers will ascend progressing from back of the dolphin to the front of the dolphin.

Floating Dolphins:

Floating dolphins are broken down into two parts, the floating dolphin itself, and the anchor system that holds the “floater” in place. The floater is made up of cast-in-place concrete placed in a cell structure. It is usually put in position with its long axis at a small angle from parallel to the slip centerline. The anchors are placed in relation to the floater and are either “in front” or “behind” it, with the front being closer to the centerline of the slip.

- The “Floater” – the floater’s grid system utilizes all of the cast-in-place cell walls to designate the grid lines. The walls that run parallel to the long axis of the floater are on lettered grid lines that ascend from the “back” to the “front” of the floater. The walls that run perpendicular to the long axis are labeled with a number and ascend from right to left when the floater is viewed from behind and looking toward centerline of the slip. The cells of the floater are designated by a number/letter pair that is taken from the lowest numbered and lettered grid lines that border them. An example would be: the cell that lays between grid lines C & D and 4&5 would be labeled cell 4C.
- The anchors are designated by a letter/number pair. The letter being either “B” or “F” depending on whether the anchor is in front of the floater or behind it. The number designation ascends from closest onshore to furthest offshore. Typical designations would be B1, B2... F1, F2, etc.



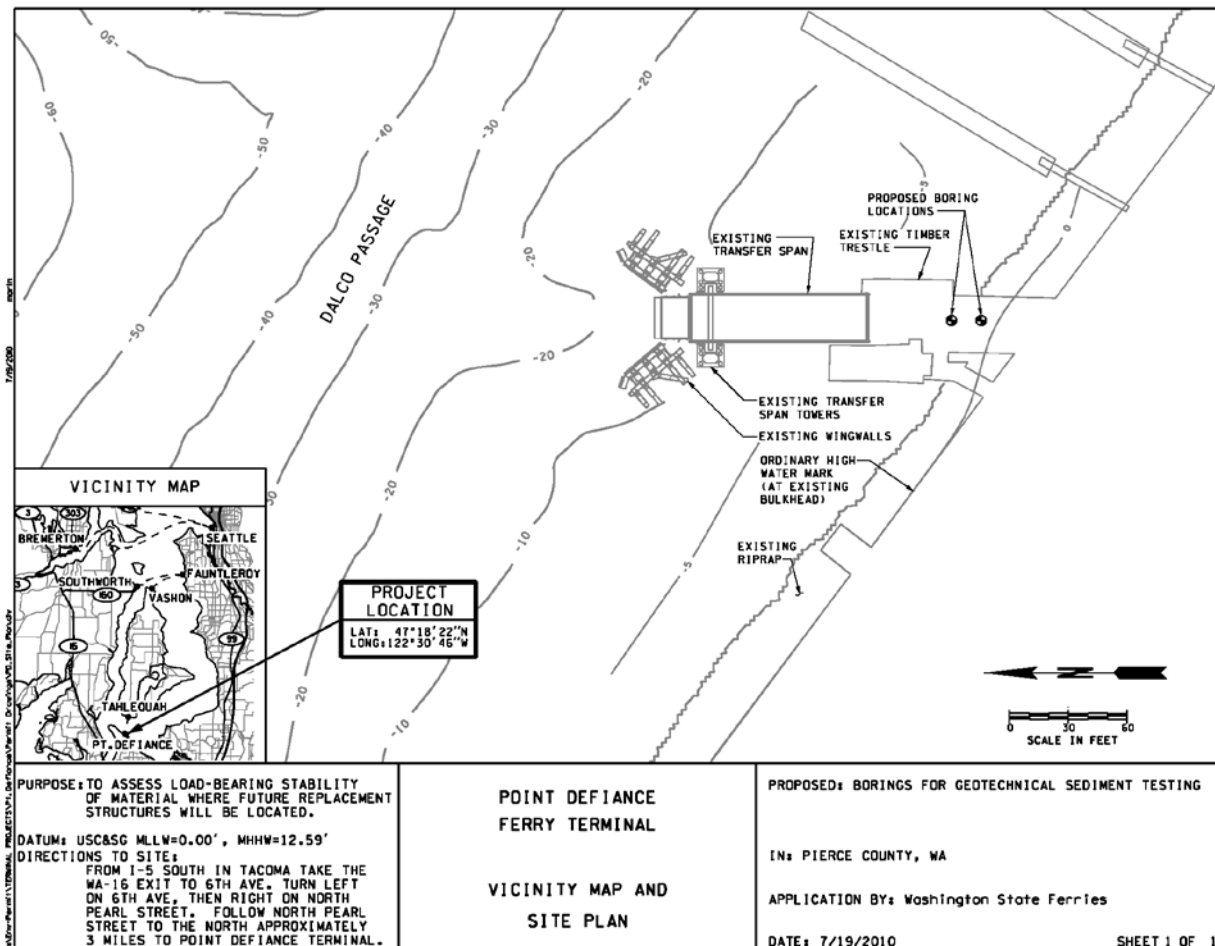
Sheet layout for WSF grid system
 Exhibit 800-27

Guidelines:

1. Use at bents and main structure lines
2. Number at top, ascending left to right
3. Letters at right, ascending alphabetically top to bottom.
4. Wing walls and dolphins use separate grid system.

809.02 Permit and Repair Letter Sheet Layout

Permit drawings are required to include but not limited to: Vicinity Map, Existing Conditions, Proposed Conditions, and details as required. This information can be divided into as many sheets as may be necessary by the complexity of the work.



Plan sheet layout for WSF Perm and Repair Letter Drawings
Exhibit 800-28

809.03 WSF Borders

Both the Standard Drawing border and the Project design border are formatted to print on 11x17 paper. The Permit border is formatted for printing on an 8½x11 sheet.

All of the borders are to be placed using the following method:

1. Place a copy of the required border files listed below in the CADD directory of the WSF project.
2. The border .mst file shall be referenced into the deliverable .dlv files for the project.
 - For site plans that have topographical type reference files, the border shall be scaled up or down and the base files shall remain true scale.
 - For detail sheets the border shall remain true scale while the master file containing the details will be scaled as required.

Text that is individual to each sheet shall be placed following the placement of the Title Block. This text will be part of the deliverable file but not part of the referenced files.

The following sheets are the templates of the WSF Permit border, the Plan Sheet border, and the Standard Drawing border. These files can be copied from the Shared Drive directory (G:\) at \cae_rsc\MS_ExpandedLevels\Project_seeds\.

Reference Name	Use
PERMIT_Border_8X11_L.mst	Landscape 8½x11 sheet border for environment permitting.
PERMIT_Border_8X11_P.mst	Portrait 8½x11 sheet border for environment permitting.
PERMIT_Border_11X17.mst	Standard 11x17 sheet border for environment permitting.
DESIGN_REPORT_8X11.mst	Standard 8½x11 sheet border for Design Report Figures.
DESIGN_REPORT_11X17.mst	Standard 11x17 sheet border for Design Report Figures.
PSE_Border.mst	Standard sheet border for PS&E plan sheets.
PROFILE_Border.mst	Standard sheet border for PS&E plan sheets when Plan and Profile are required (Civil working units).
PlanProfileSht_Border.mst	Same as Profile border except plan and profile appear on the same sheet.
Presentation_BORDER_8X11.mst	For use in public displays, meetings and agency presentations.
WSF_STD_CACHE.mst	Cache File for PS&E plans.
STDS_Border_pg1.mst (sht. 1)	Standard sheet borders for WSF Standard Drawings.
STDS_Border_additional_shts.mst (sht. 2)	

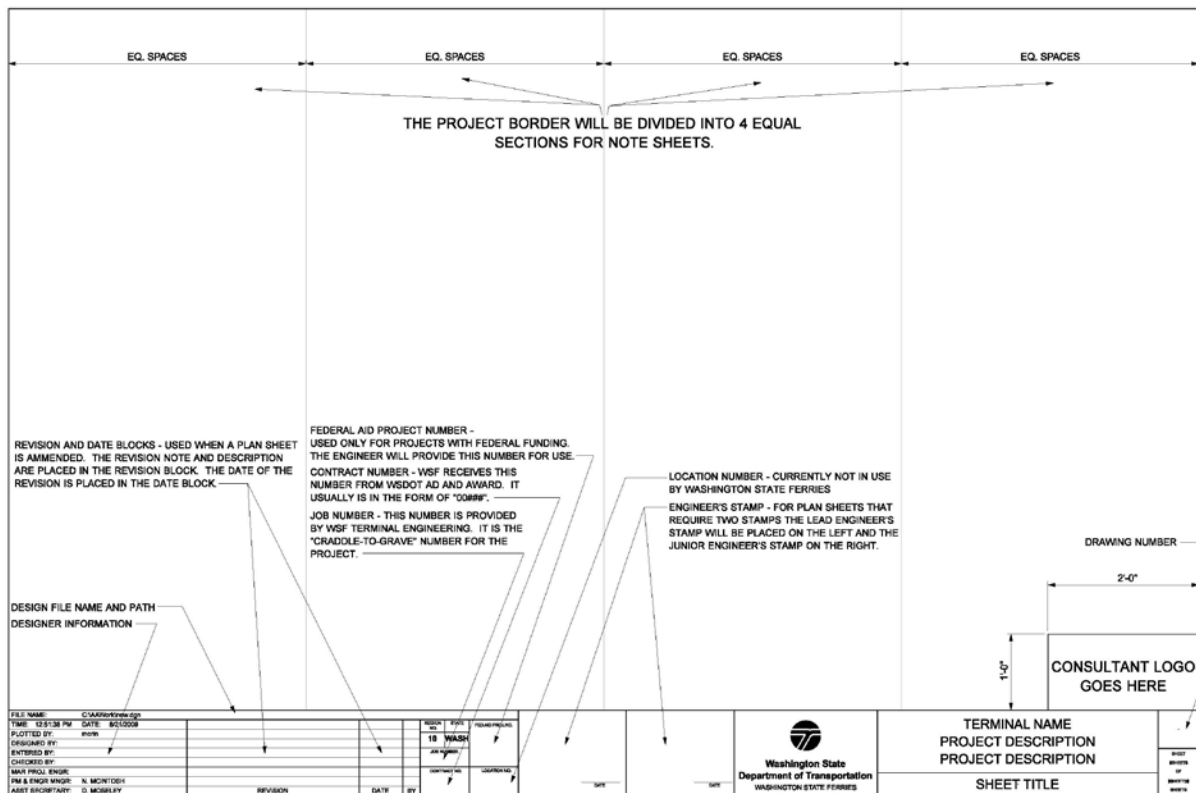
Standard Title Block and Borders *Exhibit 800-29*

WSF utilizes three (3) distinct borders for the plan sheets that are produced for its projects. The borders are broken down as follows: design drawings, permit drawings and WSF standard drawings.

(a) **Project Border Layout**

[Exhibit 800-30](#) shows how the Standard Project Border can be used under various circumstances. Depicted are the format additions to the Standard Project Border so that it can be used with a Consultant logo or divided up for use as a Standard Note Sheet. For Consultant prepared plans, the Consultant's seal, signature, and date signed shall be placed at half size on the plan sheet. The Consultant's logo shall be placed on every plan sheet prepared by the consultant (per the [Plans Preparation Manual](#) Section 400.05.C) in the lower right corner of the body of the sheet unless the plan sheet contains a Key Plan. In this case the Consultant's logo shall be placed immediately to the left of the Key Plan.

WSF requires that note sheets be arranged into 4 equal columns. All sections of notes are required to have headings pertaining to the notes.



Consultant Logo Title Block
Exhibit 800-30

(b) Standard Detail Sheet Layout

WSF requires that all details drafted to be placed on a separate detail sheet and placed at the end of each element criteria. Sections that are taken from a detail will still be considered SECTION VIEW's and will be labeled as such when placed on a sheet. The title SECTION VIEW will normally be placed between the DETAIL call out and the drawing.

Detail Guidelines:

1. Do not cross leader lines with each other or other symbology.
2. Make effort to align text callouts when space allows for it.
3. Convention for placing Leaders on all details will be upper left or lower right.
4. Line types and weights will be as per the original source drawing. Proposed features should be bold (wt. 2 to 4) and stand out. Existing features will use color 151 which appears as a screen back in a readable and reproducible weight (see Section 3.04 for RGB value of color 151)
5. Place text in clear areas on the sheet.
6. Show gridlines where they occur in detail.
7. Indicate direction of view.

(c) Standard Section Sheet Layout

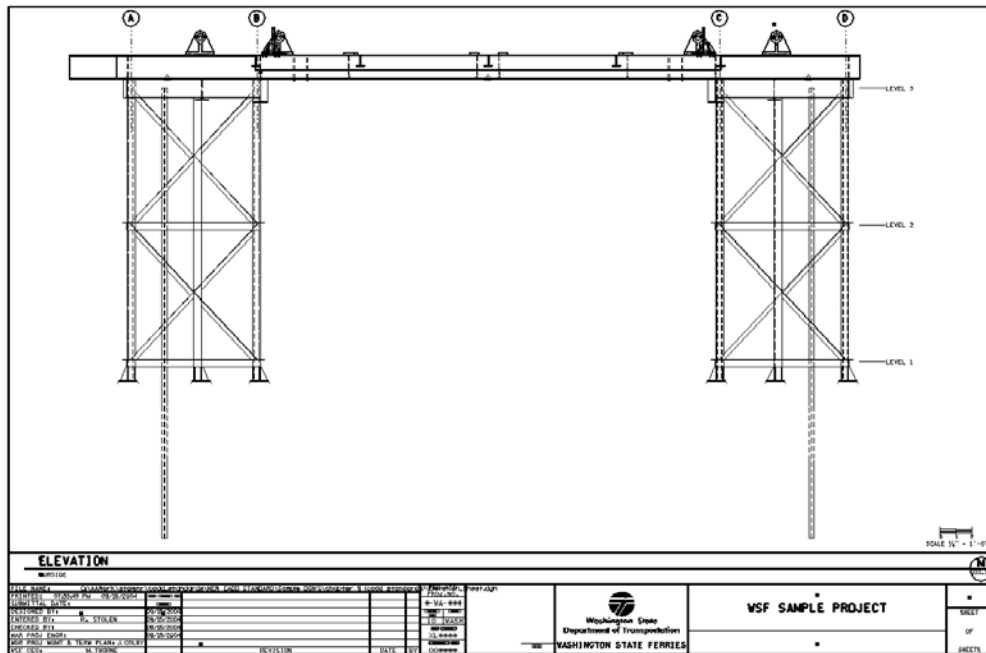
Sections are used to create a view perpendicular to the original source drawing. They are used to create a larger view of an area in the same orientation as the original. Sections are intended to provide detailed information at a larger horizontal or vertical distance than detail. When applicable, show gridline information in the section, thus giving a reference to where the information is relative to other sheet files. When putting sections together the information that is being cut should be dark and prominent where as all other information is considered beyond and grayed back, but readable and reproducible.

Section Guidelines:

1. Do not cross leader lines with each other or other symbology.
2. Make effort to align text callouts when space allows for it.
3. Convention for placing Leaders on all sections will be upper left or lower right.
4. Line types and weights will be as per the original source drawing.
5. Proposed features should be bold (wt. 2 to 4) and stand out.
6. Existing features will use color 151 which appears as a screen back in a readable and reproducible weight.
7. Place text in clear areas on the sheet.
8. Show gridlines where they occur in section.
9. Indicate direction of view.

(d) Standard Elevation Sheet Layout

Elevations are intended to show entire layout constructed of bent or gridline location. Where practical, elevations are normally shown as looking offshore, but certain elevations such as Bridge Seat or Tower elevations may require different orientation and will be labeled with the direction the plan reader is looking to see the view. (See figure 5).



Standard Elevation Sheet Layout
Exhibit 800-31

Elevation Guidelines:

1. Show gridlines in elevation where they occur.
2. Show information that is most pertinent in elevation.

809.04 WSF Monuments

(a) General

All reference files containing plan/site layouts will be drawn in Civil working units. All plan/site layouts will be on State plane coordinates. This will allow cross-referencing between all engineering disciplines. While this is beneficial for the purposes of cross-discipline referencing/checks it is a hindrance for using the layouts in detail plans using the structural working units. Therefore, it is required that all site plans and basemaps shall include the USGS monuments for the project site. These points will be used as reference points for scaling and rotating basemaps in Deliverable (.DLV) files. The points will be displayed as Cross-Discipline Reference Monuments. An example of the monument is shown on the Cache file.

(b) Monuments

The following figure lists the monument points and the associated coordinates for each:

Site Monuments			
Terminal	Mon. Names	Northing	Easting
Anacortes	IS2908	553,499.653	1,192,843.649
	TRACIE	554,588.385	1,193,234.439
	GP29020-15A	554,797.801	1,193,154.090
Bainbridge/Eagle	IS1824	230,965.043	1,225,969.095
Harbor	IS1825	231,634.274	1,226,907.853
	EAGLE	231,680.872	1,226,468.133
	TRAIL	231,898.876	1,225,971.523
Bremerton	GP18304-20	210,601.819	1,198,399.934
	GP18304-21	211,030.677	1,198,615.462
Clinton	GP15525-21	359,286.988	1,268,232.190
	GP15525-22	359,946.852	1,268,062.557
	CLINTON	359,374.685	1,268,203.261
Edmonds	EDMONDS	300,582.135	1,260,232.474
	JEFF RESET	300,331.033	1,259,750.353
	EDM-01	300,819.372	1,259,800.618
Fauntleroy	FAUNTLEROY	194,806.379	1,254,939.334
	FAUNTLEROY AZ	194,645.424	1,255,133.484
Friday Harbor	CANNERY	567,393.829	1,112,025.197
	CANDLE	571,500.356	1,113,788.829
	FRI-01	567,623.294	1,111,793.282
Coupeville	KEYSTONE	427,092.371	1,191,263.546
	KEYSTONE AZI	427,959.229	1,191,938.919
	ADMIRALTY WEST BASE	428,547.397	1,192,436.939
Kingston	KINGSTON	295,076.142	1,231,971.798
	KINGSTON AZI	296,016.931	1,232,527.430
	ROB	294,798.055	1,231,829.531
Lopez	GP28-4	573,061.469	1,146,215.477
	LPZ-01	579,153.337	1,144,013.732
	LPZ-02	579,521.013	1,144,004.808
Mukilteo	GP31525-132	349,234.803	1,279,967.811
	GP31525-133	349,415.000	1,279,510.869
	NEW MUK	348,759.798	1,279,488.468
Orcas	UW QUAKE	589,885.651	1,129,443.617
	UW QUAKE AZ	589,996.553	1,130,359.947

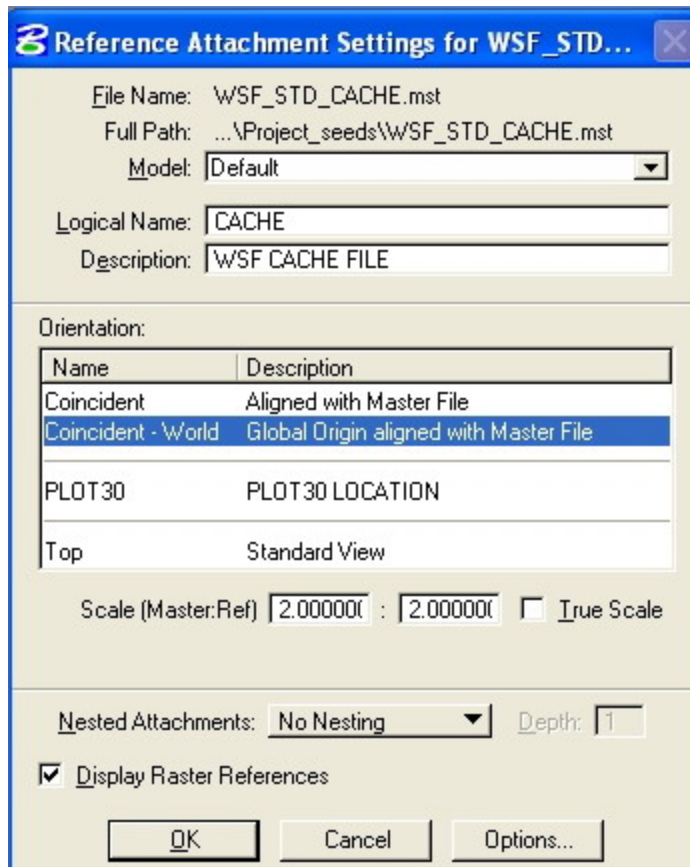
Site Monuments
Exhibit 800-32

Site Monuments			
Terminal	Mon. Names	Northing	Easting
Point Defiance	POINT DEFIANCE	726,004.578	1,140,318.710
	PT DEFIANCE AZ	725,578.106	1,140,910.730
	PDF	725,116.837	1,140,646.095
Port Townsend	PORT TOWNSEND AZ	411,607.290	1,169,716.832
	S 257 RESET 1983	411,410.407	1,169,117.383
Seattle	DAVE	223,142.323	1,268,962.393
	GP17005-51	223,148.425	1,268,928.191
	IS17200	223,137.946	1,269,514.672
Shaw	SH-01	584,672.108	1,132,943.275
	SH-02	585,118.469	1,133,383.819
	SH-03	584,674.211	1,133,145.122
Southworth	GP18160-13	191,168.643	1,228,351.516
	SOUTHWORTH	191,094.070	1,228,987.270
Tahlequah	TLQ-01	725,818.745	1,142,582.718
	TAHLEQUAH2	735,625.970	1,142,780.516
	IPT	748,333.897	1,146,957.007
Vashon	VASHON	189,828.429	1,237,430.191
	VASHON AZI	190,625.058	1,237,287.565
	944 6025 F	189,857.150	1,237,246.910

Site Monuments
Exhibit 800-32

809.05 Referencing Note

All reference files shall be given a Logical Name and a Description when they are attached.



Reference File Attachment
Exhibit 800-33

809.06 Sheet Numbering

The Drawing Number shall be placed in the upper right-hand corner of the Title Block. The font shall be font 200 and will be scaled to 1.33 times the standard text size as it appears on the standard plan sheet border.

The Index Numbers shall be placed in the lower right-hand corner of the Title Block. The font shall be font 200 and will be scaled to the standard text size as it appears on the standard plan sheet border. It will have a line spacing of 2.5.

The format for sheet numbering shall be:

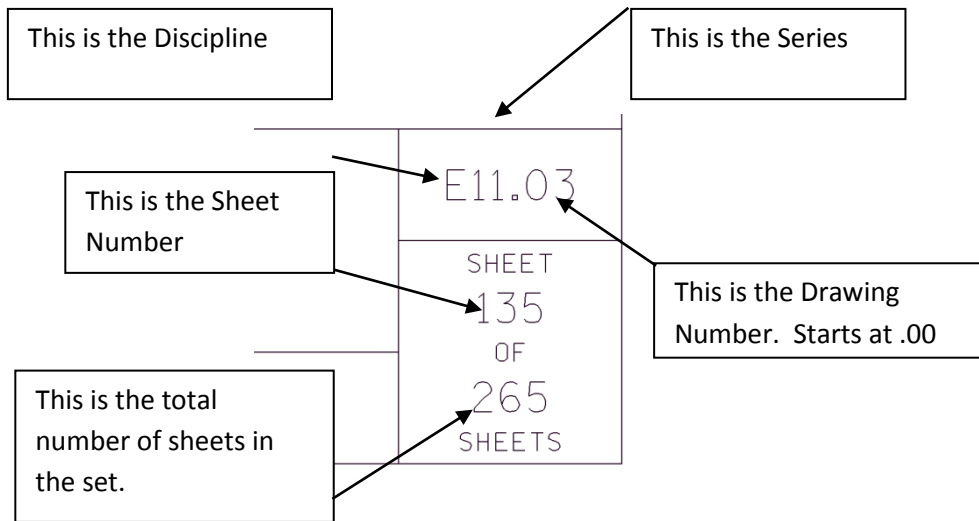
Dxx.xx

Where,

- D** Discipline designation (from Table 1 – 6.02.01)
- xx.xx** Four character sheet number

Following are examples on how to utilize the sheet numbering requirements.

Example: The electrical one-line diagrams are being placed on the series 11 sheets of the electrical plans. This sheet is the 135th sheet in a 265-sheet set. The third one-line diagram would have the sheet number:



809.07 Text

(a) General

WSF has added examples of the correct standard text size to the cache file.

The table below shows the relationship between the plotted size of the text and the size of the text when measured in MicroStation at the sheet location when the sheet border is placed at the scale shown.

When You Reference the Border at this Scale:	And You Place Text in the CADD file at this Size :	The Text will be this Size on an 11x17 Sheet:
1"=500'	31.25	1/16"
1"=200'	12.50	1/16"
1"=100'	6.25	1/16"
1"=60'	3.75	1/16"
1"=50'	3.15	1/16"
1"=40'	2.5	1/16"
1"=30'	1.875	1/16"
1"=20'	1.26	1/16"
1"=10'	.625	1/16"
$\frac{3}{4}$ "=1' (same as 1"=16')	1.00	1/16"
$\frac{1}{2}$ "=1' (same as 1"=24')	1.5	1/16"
$\frac{3}{8}$ "=1' (same as 1"=32')	2.00	1/16"
$\frac{1}{4}$ "=1' (same as 1"=48')	3.00	1/16"
$\frac{1}{8}$ "=1' (same as 1"=96')	6.00	1/16"

Placement of text (Derived using formula shown in the section on "Text Size")
Exhibit 800-34

For legibility, text and titles shall be all caps for the 11" × 17" contract plans.

(b) Text Size

The drawings are scaled at the time of plotting. It is important to place text at an appropriate CADD height within the drawing based on the intended scale of the plotted drawing.

Since WSF adheres to a minimum text size for its plan sheets, the following equation can be used to determine the text size to be placed on any scale plan sheet:

$$T_s = T_p \times S_s$$

Where,

T_p = text size on the paper (11x17)(inches)

T_s = text size in the "CACHE" file (feet)

S_s = sheet border scale (feet/inches)

Example: You want to place text onto a 1"=50' scale sheet so that it measures 1/16" (.0625")

So,

$$T_s = T_p \times S_s$$

Becomes,

$$T_s = (.0625") \times 50$$

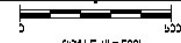

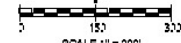
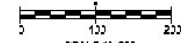
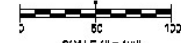
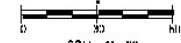
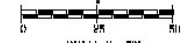
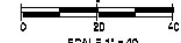
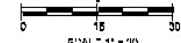
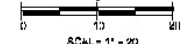
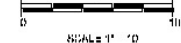
Thus,


















$$T_s = 3.125$$

809.08 Recommended Scales

Recommended drawing scales are indicated in Figure 8. The Scale Bars are accessible from the cache file.

Note: While Structural drawings will be drawn to scale there will be no scale bars placed on the Structural plan sheets (per the WSDOT BDM).

CIVIL SCALE BARS		
	500:1	1"=500'
	400:1	1"=400'
	300:1	1"=300'
	200:1	1"=200'
	100:1	1"=100'
	60:1	1"=60'
	50:1	1"=50'
	40:1	1"=40'
	30:1	1"=30'
	20:1	1"=20'
	10:1	1"=10'

VARIOUS DISCIPLINE SCALE BARS		
	16:1	1/8"=1'-0"
	8:1	1/4"=1'-0"
	5.333:1	3/16"=1'-0"
	4:1	1/2"=1'-0"
	2.667:1	5/16"=1'-0"
	2:1	3/8"=1'-0"
	1.333:1	7/16"=1'-0"
	1:1	1"=1'-0"
	1' 0"	1 1/8"=1'-0"
	1:3/4	3/4"=1'-0"
	2:1	1/2"=1'-0"
	4:1	1/4"=1'-0"
	1:1	1"=1'-0"
	2:3	1 1/2"=1'-0"
	1:3/4	3/4"=1'-0"
	1:6	3/8"=1'-0"
	1:12	1/2"=1'-0"

Drawing Scales
Exhibit 800-35

809.09 Addendums, Revisions and Change Orders

WSF uses the same method for identifying changes to drawings during the addendum and change order processes as WSDOT. Examples of Addenda, Revisions, and Change Order Documents can be found in the *Plans Preparation Manual* Appendix 5 “Addendum Preparation”. Additionally WSF uses “clouding” and revision triangles to indicate changes to the WSF Standard drawings. Specific changes to these drawings are clouded and appended with a revision triangle. Upon a new revision to the drawing the clouding from the previous revision is removed but the revision triangle remains as a note that the drawing has been previously revised.

809.10 Preliminary Stamps

All plan sheets are required to have a “Preliminary” or “Submittal” Stamp in the lower left corner until the final printing before sending to Olympia. This text is located in the WSF_STD_CACHE.mst file and should be placed in the project’s PSE_Border.mst file, not in the deliverable file.

809.11 Element Symbology

The use and application of the element attributes defined in this section shall be uniformly observed for the following reasons:

1. **Work Transfer** – To efficiently transfer work between functional units, CADD drawings must conform to a uniform data base arrangement - levels, etc. If all units do not use the same system, considerable time can be lost in learning a new system when work is transferred.
2. **Multi-Operators** – It is not uncommon for more than one person to work on the same drawing. For the level attributes to be meaningful, each operator must conform to a common level definition.
3. **Drawing Life** – At WSF, drawings are active for several years. How the data is entered today (i.e., what levels are used for what kinds of data) must be readily apparent for a long period. This problem is minimized with a uniform definition and use of the various levels.

809.12 Civil and Right-of-Way Level Symbology

WSF uses the WSDOT Level and Symbology (line color, style, and weight) schemes as found in the *Plans Preparation Manual* Division 3 and Division 5 for “onshore” work. All “offshore” work will utilize the WSF leveling schemes. Elements of work that bridge the gap between “onshore” and “offshore”, an overhead loading system for example, will utilize WSF symbology until the point that they become an integral part of the “onshore” structure. The determination of this “point” will be made by the State.

809.13 Existing Architectural Level Symbology

WSF uses the following existing architectural symbology (line color, style, and weight) schemes as follows:

Level Name	Description	Element Color	Line Style	Line Weight
SF_A_area	Area (Existing)	151	0	1
SF_A_area_iden	Area Identification (Existing)	151	0	1
SF_A_backgrnd	Background (Existing)	151	0	1
SF_A_cling	Cling (Existing)	151	0	1
SF_A_cling_patt	Cling Pattern (Existing)	151	0	1
SF_A_col	Column (Existing)	151	0	<u>1</u>
SF_A_detl	Architectural Detail (Existing)	151	0	1
SF_A_detl_iden	Detail Identification (Existing)	151	0	1
SF_A_detl_mcut	Architectural Cut Section (Existing)	151	0	1
SF_A_detl_patt	Detail Pattern (Existing)	151	0	1
SF_A_door	Door (Existing)	151	0	1
SF_A_door_iden	Door Identification (Existing)	151	0	1
SF_A_fence	Fence (Existing)	151	0	<u>1</u>
SF_A_flor	Floor Plan (Existing)	151	0	1
SF_A_flor_fixt	Flooring Fixtures (Existing)	151	0	<u>1</u>
SF_A_flor_iden	Flooring Identification (Existing)	151	0	1
SF_A_flor_ovhd	Flooring Overhead (Existing)	151	0	1
SF_A_flor_patt	Flooring Pattern (Existing)	151	0	1
SF_A_furn	Furnishing (Existing)	151	0	1
SF_A_furn_case	Furnishing Casement (Existing)	151	0	<u>1</u>
SF_A_furn_iden	Furnishing Identification (Existing)	151	0	1
SF_A_glaz	Glazing (Existing)	151	0	1
SF_A_glaz_iden	Glazing Identification (Existing)	151	0	1
SF_A_glaz_sill	Glazing Sill (Existing)	151	0	1
SF_A_graphic_fine	Graphics – Fine (Existing)	151	0	1
SF_A_grid	Grid Lines (Existing)	151	0	1
SF_A_grnd	Ground Line (Contour) (Existing)	151	0	1
SF_A_lev	Elevator (Existing)	151	0	<u>1</u>
SF_A_lev_iden	Elevator Identification (Existing)	151	0	1
SF_A_lev_otln	Elevator Outline (Existing)	151	0	<u>1</u>
SF_A_levator	Elevator (Existing)	151	0	1
SF_A_patt	Pattern (Existing)	151	0	1
SF_A_pedwalkway	Pedestrian Walkway (Existing)	151	0	1
SF_A_roof	Roof (Existing)	151	0	1
SF_A_roof_otln	Roof Outline (Existing)	151	0	1
SF_A_roof_patt	Roof Pattern (Existing)	151	0	1

Existing Architectural Symbology Exhibit 800-36

Level Name	Description	Element Color	Line Style	Line Weight
SF_A_sect	Section (Existing)	151	0	1
SF_A_sect_iden	Section Identification (Existing)	151	0	1
SF_A_sect_patt	Section Pattern (Existing)	151	0	1
SF_A_site	Site (Existing)	151	0	1
SF_A_site_lite	Sight Lighting (Existing)	151	0	1
SF_A_site_ovhd	Site Overhead (Existing)	151	0	1
SF_A_site_pole	Site Pole (Existing)	151	0	1
SF_A_site_undr	Site (Existing)	151	0	1
SF_A_soun	Sound Equipment (Existing)	151	0	1
SF_A_stair	Architectural Stairs (Existing)	151	0	1
SF_A_wall_fire	Fire Wall (Existing)	151	0	1
SF_A_wall_full	Full Wall (Existing)	151	0	1
SF_A_wall_patt	Wall Pattern (Existing)	151	0	1
SF_A_wall_prht	Partial Height Wall (Existing)	151	0	1

Existing Architectural Symbology
Exhibit 800-36

809.14 Architectural Demolition Symbology

WSF uses the following architectural demolition symbology (line color, style, and weight) schemes as follows:

Level Name	Description	Element Color	Line Style	Line Weight
SF_AD_area	Area (Demolition)	151	0	1
SF_AD_area_iden	Area Identification (Demolition)	151	0	1
SF_AD_backgrnd	Background (Demolition)	151	0	1
SF_AD_cling	Cling (Demolition)	151	0	1
SF_AD_cling_patt	Cling Pattern (Demolition)	151	0	1
SF_AD_col	Architectural Column (Demolition)	151	0	<u>1</u>
SF_AD_detl	Detail (Demolition)	151	0	1
SF_AD_detl_iden	Detail Identification (Demolition)	151	0	1
SF_AD_detl_mcut	Architectural Cut Section Detail (Demolition)	151	0	1
SF_AD_detl_patt	Detail Pattern (Demolition)	151	0	1
SF_AD_door	Door (Demolition)	151	0	1
SF_AD_door_iden	Door Identification (Demolition)	151	0	1
SF_AD_fence	Fence (Demolition)	151	0	<u>1</u>
SF_AD_flor	Floor Plan (Demolition)	151	0	1
SF_AD_flor_fixt	Flooring Fixtures (Demolition)	151	0	<u>1</u>
SF_AD_flor_iden	Flooring Identification (Demolition)	151	0	1
SF_AD_flor_ovhd	Flooring Overhead (Demolition)	151	0	1

Architectural Demolition Symbology
Exhibit 800-37

Level Name	Description	Element Color	Line Style	Line Weight
SF_AD_flor_patt	Flooring Pattern (Demolition)	151	0	1
SF_AD_furn	Furnishing (Demolition)	151	0	1
SF_AD_furn_case	Furnishing Casement (Demolition)	151	0	<u>1</u>
SF_AD_furn_iden	Furnishing Identification (Demolition)	151	0	1
SF_AD_glaz	Glazing (Demolition)	151	0	1
SF_AD_glaz_iden	Glazing Identification (Demolition)	151	0	1
SF_AD_glaz_sill	Glazing Sill (Demolition)	151	0	1
SF_AD_graphic_fine	Graphics – Fine (Demolition)	151	0	1
SF_AD_grid	Grid Lines (Demolition)	151	0	1
SF_AD_grnd	Ground Line (Contour) (Demolition)	151	0	1
SF_AD_lev	Elevator (Demolition)	151	0	<u>1</u>
SF_AD_lev_iden	Elevator Identification (Demolition)	151	0	1
SF_AD_lev_otln	Elevator Outline (Demolition)	151	0	<u>1</u>
SF_AD_levator	Elevator (Demolition)	151	0	1
SF_AD_patt	Pattern (Demolition)	151	0	1
SF_AD_pedwalkway	Pedestrian Walkway (Demolition)	151	0	1
SF_AD_roof	Roof (Demolition)	151	0	1
SF_AD_roof_otln	Roof Outline (Demolition)	151	0	1
SF_AD_roof_patt	Roof Pattern (Demolition)	151	0	1
SF_AD_sect	Section (Demolition)	151	0	1
SF_AD_sect_iden	Section (Demolition)	151	0	1
SF_AD_sect_patt	Section Pattern (Demolition)	151	0	1
SF_AD_wall_fire	Fire Wall (Demolition)	151	0	1
SF_AD_wall_full	Full Wall (Demolition)	151	0	1
SF_AD_wall_patt	Wall Pattern (Demolition)	151	0	1
SF_AD_wall_prht	Partial Height Wall (Demolition)	151	0	1

Architectural Demolition Symbolology
Exhibit 800-37

809.15 Proposed Architectural Symbology

WSF uses the following architectural proposed symbology (line color, style, and weight) schemes as follows:

Level Name	Description	Element Color	Line Style	Line Weight
sf_AP_area_iden	Area Identification (Proposed)	0	0	2
sf_AP_area	Area (Proposed)	1	0	<u>2</u>
sf_AP_backgrnd	Background (Proposed)	8	0	<u>2</u>
sf_AP_cling	Cling (Proposed)	0	0	2
sf_AP_cling_patt	Cling Pattern (Proposed)	0	0	<u>2</u>
sf_AP_col	Architectural Column (Proposed)	4	0	2
sf_AP_detl_iden	Detail Identification (Proposed)	0	0	2
sf_AP_detl_mcut	Cut Section Detail (Proposed)	1	0	4
sf_AP_detl	Detail (Proposed)	1	0	3
sf_AP_detl_patt	Detail Pattern (Proposed)	3	0	3
sf_AP_door	Door (Proposed)	3	0	<u>2</u>
sf_AP_door_iden	Door Identification (Proposed)	0	0	2
sf_AP_door	Door (Proposed)	2	0	<u>2</u>
sf_AP_elev_iden	Elevator Identification (Proposed)	0	0	2
sf_AP_elev_otln	Elevator Outline (Proposed)	1	0	<u>3</u>
sf_AP_elevator	Elevator (Proposed)	2	0	<u>2</u>
sf_AP_fence	Fence (Proposed)	3	0	<u>2</u>
sf_AP_flor_fixt	Flooring Fixtures (Proposed)	0	0	<u>2</u>
sf_AP_flor_iden	Flooring Identification (Proposed)	0	0	2
sf_AP_flor_ovhd	Flooring Overhead (Proposed)	4	0	<u>2</u>
sf_AP_flor	Flooring (Proposed)	0	0	2
sf_AP_flor_patt	Flooring Pattern (Proposed)	5	0	<u>2</u>
sf_AP_furn_case	Furnishing Casement (Proposed)	0	0	<u>2</u>
sf_AP_furn_iden	Furnishing Identification (Proposed)	0	0	2
sf_AP_furn	Furnishing (Proposed)	3	0	2
sf_AP_glaz_elev	Glazing Elevation (Proposed)	4	0	2
sf_AP_glaz_iden	Glazing Identification (Proposed)	0	0	2
sf_AP_glaz	Glazing (Proposed)	4	0	<u>1</u>
sf_AP_glaz_sill	Glazing Sill (Proposed)	3	0	<u>2</u>
sf_AP_GRAPHIC_FINE	Architectural: Graphic - Fine (Proposed)	163	0	1
sf_AP_GRAPHIC_HIDDEN	Architectural: Graphic - Hidden (Proposed)	1	3	1
sf_AP_GRAPHIC_LITE	Architectural: Graphic - Lite (Proposed)	1	0	1
sf_AP_GRAPHIC_SCREEN	Architectural: Graphic - Screen (Proposed)	152	0	1
sf_AP_grid	Grid (Proposed)	0	0	2
sf_AP_grnd	Ground Line (Contour) (Proposed)	2	0	<u>2</u>

Proposed Architectural Symbology Exhibit 800-38

Level Name	Description	Element Color	Line Style	Line Weight
sf_AP_patt	Pattern (Proposed)	3	0	<u>2</u>
sf_AP_pedwalkway	Pedestrian Walkway (Proposed)	5	0	<u>2</u>
sf_AP_roof_otln	Roofing Outline (Proposed)	1	0	<u>2</u>
sf_AP_roof	Roofing (Proposed)	3	0	2
sf_AP_roof_patt	Roofing Pattern (Proposed)	0	0	2
sf_AP_sect_iden	Section Identification (Proposed)	3	0	2
sf_AP_sect_mcut	Architectural Cut Section (Proposed)	1	0	<u>3</u>
sf_AP_sect	Section (Proposed)	3	0	2
sf_AP_sect_patt	Section Pattern (Proposed)	3	0	<u>2</u>
sf_AP_stair	Stairs (Proposed)	0	0	<u>2</u>
sf_AP_site_pole	Site - Pole (Proposed)	0	0	<u>2</u>
sf_AP_wall_fire	Wall - Fire (Proposed)	2	0	<u>2</u>
sf_AP_wall_full	Wall - Full (Proposed)	2	0	<u>2</u>
sf_AP_wall_patt	Wall - Pattern (Proposed)	3	0	2
sf_AP_WALL_PRHT	Architectural: Walls - Partial Height	2	0	<u>2</u>

Proposed Architectural Symbology
Exhibit 800-38

809.16 Existing Electrical Symbolology

WSF uses the following existing electrical symbolology (line color, style, and weight) schemes as follows:

Level Name	Description	Element Color	Line Style	Line Weight
SF_E_Buried_com	Buried Communication Line (Existing)	151	exbc	1
SF_E_Buried_Power	Buried Power (Existing)	151	UT_PW_UndGndPowerLine	1
SF_E_Buried_Tele	Buried Telephone Line (Existing)	151	UT_CM_UndGndTelephoneCable	1
SF_E_Buried_Fiber	Buried Fiber Optic (Existing)	151	UT_CM_UndGndFiberOptic	1
SF_E_Circuits	Circuits (Existing)	151	0	1
SF_E_Comm	Communication (Existing)	151	0	1
SF_E_Control	Control (Existing)	151	0	1
SF_E_Devices	Devices (Existing)	151	0	1
SF_E_Disconnect	Disconnect (Existing)	151	0	1
SF_E_Emerg_Light	Emergency Lighting (Existing)	151	0	1
SF_E_Emerg_Raceway	Emergency Raceway (Existing)	151	0	1
SF_E_Fire_Alarm	Fire Alarm (Existing)	151	0	1
SF_E_Fire_Alarm_Raceway	Fire Alarm Raceway (Existing)	151	0	1
SF_E_Generator	Generator (Existing)	151	0	1
SF_E_Grounding	Grounding (Existing)	151	0	1
SF_E_Junction_Box	Junction Box (Existing)	151	0	1
SF_E_Lighting	Lighting (Existing)	151	0	1
SF_E_Panelboard	Panelboard (Existing)	151	0	1
SF_E_Raceway	Raceway (Existing)	151	0	1
SF_E_Receptacle	Receptacle (Existing)	151	0	1
SF_E_Supports	Supports (Existing)	151	0	1
SF_E_Switchboard	Switchboard (Existing)	151	0	1
SF_E_Transformer	Transformer (Existing)	151	0	1
SF_E_Ovrhead_power	Overhead Power (Existing)	151	UT_PW_AbvGndPowerLine	1
SF_E_Ovrhead_Tele	Overhead Telephone Line (Existing)	151	UT_CM_AbvGndTelephoneCable	1
SF_E_Ovrhead_Fiber	Overhead Fiber Optic (Existing)	151	UT_CM_AbvGndOpticFiberCable	1
SF_E_Riser_Diagram	Riser Diagram (Existing)	151	0	1
SF_E_Schematic_Diagram	Schematic Diagram (Existing)	151	0	1
SF_E_Schematic_Fld_Wiring	Schematic Field Wiring (Existing)	151	2	1
SF_E_Text	Text (Existing)	151	0	1

Existing Electrical Symbolology Exhibit 800-39

809.17 Electrical Demolition Symbology

WSF uses the following demolition electrical symbology (line color, style, and weight) schemes as follows:

Level Name	Description	Element Color	Line Style	Line Weight
SF_ED_Buried_com	Buried Communication Line (Demolition)	4	exbc	2
SF_ED_Buried_Power	Buried Power (Demolition)	4	UT_PW_UndGndPowerLine	2
SF_ED_Buried_Tele	Buried Telephone Line (Demolition)	4	UT_CM_UndGndTelephoneCable	2
SF_ED_Buried_Fiber	Buried Fiber Optic (Demolition)	4	UT_CM_UndGndFiberOptic	2
SF_ED_Circuits	Circuits (Demolition)	4	0	2
SF_ED_Comm	Communication (Demolition)	4	0	2
SF_ED_Control	Control (Demolition)	4	0	2
SF_ED_Devices	Devices (Demolition)	4	0	2
SF_ED_Disconnect	Disconnect (Demolition)	4	0	2
SF_ED_Emerg_Light	Emergency Lighting (Demolition)	4	0	2
SF_ED_Emerg_Raceway	Emergency Raceway (Demolition)	4	0	2
SF_ED_Fire_Alarm	Fire Alarm (Demolition)	4	0	2
SF_ED_Fire_Alarm_Raceway	Fire Alarm Raceway (Demolition)	4	0	2
SF_ED_Generator	Generator (Demolition)	4	0	2
SF_ED_Grounding	Grounding (Demolition)	4	0	2
SF_ED_Junction_Box	Junction Box (Demolition)	4	0	2
SF_ED_Lighting	Lighting (Demolition)	4	0	2
SF_ED_Panelboard	Panelboard (Demolition)	4	0	2
SF_ED_Raceway	Raceway (Demolition)	4	0	2
SF_ED_Receptacle	Receptacle (Demolition)	4	0	2
SF_ED_Supports	Supports (Demolition)	4	0	2
SF_ED_Switchboard	Switchboard (Demolition)	4	0	2
SF_ED_Transformer	Transformer (Demolition)	4	0	2
SF_ED_Ovrhead_power	Overhead Power (Demolition)	4	UT_PW_AbvGndPowerLine	2
SF_ED_Ovrhead_Tele	Overhead Telephone Line (Demolition)	4	UT_CM_AbvGndTelephoneCable	2
SF_ED_Ovrhead_Fiber	Overhead Fiber Optic (Demolition)	4	UT_CM_AbvGndOpticFiberCable	2
SF_ED_Riser_Diagram	Riser Diagram (Demolition)	4	0	2
SF_ED_Schematic_Diagram	Schematic Diagram (Demolition)	4	0	2
SF_ED_Schematic_Fld_Wiring	Schematic Field Wiring (Demolition)	4	2	2
SF_ED_Text	Text (Demolition)	0	0	2

Electrical Demolition Symbology Exhibit 800-40

809.18 Proposed Electrical Symbology

WSF uses the following proposed electrical symbology (line color, style, and weight) schemes as follows:

Level Name	Description	Element Color	Line Style	Line Weight
SF_EP_Buried_com	Buried Communication Line (Proposed)	5	exbc	2
SF_EP_Buried_Power	Buried Power (Proposed)	5	UT_PW_UndGndPowerLine	2
SF_EP_Buried_Tele	Buried Telephone Line (Proposed)	5	UT_CM_UndGndTelephoneCable	2
SF_EP_Buried_Fiber	Buried Fiber Optic (Proposed)	5	UT_CM_UndGndFiberOptic	2
SF_EP_Circuits	Circuits (Proposed)	5	0	2
SF_EP_Comm	Communication (Proposed)	5	0	2
SF_EP_Control	Control (Proposed)	5	0	2
SF_EP_Devices	Devices (Proposed)	5	0	2
SF_EP_Disconnect	Disconnect (Proposed)	5	0	2
SF_EP_Emerg_Light	Emergency Lighting (Proposed)	5	0	2
SF_EP_Emerg_Raceway	Emergency Raceway (Proposed)	5	0	2
SF_EP_Fire_Alarm	Fire Alarm (Proposed)	5	0	2
SF_EP_Fire_Alarm_Raceway	Fire Alarm Raceway (Proposed)	5	0	2
SF_EP_Generator	Generator (Proposed)	5	0	2
SF_EP_Grounding	Grounding (Proposed)	5	0	2
SF_EP_Junction_Box	Junction Box (Proposed)	5	0	2
SF_EP_Lighting	Lighting (Proposed)	5	0	2
SF_EP_Panelboard	Panelboard (Proposed)	5	0	2
SF_EP_Raceway	Raceway (Proposed)	5	0	2
SF_EP_Receptacle	Receptacle (Proposed)	5	0	2
SF_EP_Supports	Supports (Proposed)	5	0	2
SF_EP_Switchboard	Switchboard (Proposed)	5	0	2
SF_EP_Transformer	Transformer (Proposed)	5	0	2
SF_EP_Ovrhead_power	Overhead Power (Proposed)	5	UT_PW_AbvGndPowerLine	2
SF_EP_Ovrhead_Tele	Overhead Telephone Line (Proposed)	5	UT_CM_AbvGndTelephoneCable	2
SF_EP_Ovrhead_Fiber	Overhead Fiber Optic (Proposed)	5	UT_CM_AbvGndOpticFiberCable	2
SF_EP_Riser_Diagram	Riser Diagram (Proposed)	5	0	2
SF_EP_Schematic_Diagram	Schematic Diagram (Proposed)	5	0	2
SF_EP_Schematic_Fld_Wiring	Schematic Field Wiring (Proposed)	5	2	2
SF_EP_Text	Text (Proposed)	0	0	2

Proposed Electrical Symbology Exhibit 800-41

809.19 General Sheet Symbology

WSF uses the following general sheet symbology (line color, style, and weight) schemes as follows:

Level Name	Description	Element Color	Line Style	Line Weight
SF_GN_border	Sheet Border	<u>0</u>	0	3
SF_GN_border_text	Sheet Border Text	0	0	1
SF_GN_coordinate_text	Coordinate Text	0	0	0
SF_GN_demo_hatch	Demolition Hatching	3	0	<u>2</u>
SF_GN_grid_bubble	Gid Bubble	0	0	<u>1</u>
SF_GN_grid_dim	Architectural: Dimensions - Demolition	2	0	1
SF_GN_grid_line	Grid Line	0	0	<u>1</u>
SF_GN_logo	Logo	2	0	4
SF_GN_matchline	Matchline	0	0	5
SF_GN_n_Arow	General: Arrow	1	0	1
SF_GN_NPLT		140	0	0
SF_GN_pe_seal	PE Stamp	0	0	<u>2</u>
SF_GN_plot_border	Plot Border	175	<u>6</u>	1
SF_GN_rev_cloud	Revision Cloud	3	0	3
SF_GN_rev_sym	Revision Symbology	3	0	3
SF_GN_rev_text	Revision Text	3	0	3
SF_GN_scale_bar	Scale Bar	0	0	2
SF_GN_section_cut	Section Cut	0	0	<u>2</u>
SF_GN_submittal_text	Submittal Text	<u>151</u>	0	0
SF_GN_symbol	Symbology	2	0	4
SF_GN_text	Text	0	0	2
SF_GN_titles	Titles	0	0	<u>3</u>
SF_GN_VPORT	General: Viewport	9	0	1
SF_GN_XREF	General: Insertion Layer for External References	7	0	0

General Sheet Symbology
Exhibit 800-42

809.20 Existing Landscape Symbology

WSF uses the following existing landscape sheet symbology (line color, style, and weight) schemes as follows:

Level Name	Description	Element Color	Line Style	Line Weight
SF_L_plnt_biocell_htch	biocell htch (Existing)	151	0	1
SF_L_plnt_legend_box	legend box (Existing)	151	0	<u>1</u>
SF_L_plnt_legend_htch	legend htch (Existing)	151	0	<u>1</u>
SF_L_plnt_low_plnt_htch	low plnt htch (Existing)	151	0	1
SF_L_plnt_nat_frst_htch	native forest htch (Existing)	151	0	1
SF_L_plnt_nat_grnd_cvr_htch	native ground cover htch (Existing)	151	0	1
SF_L_plnt_plnt_lines	plant lines (Existing)	151	0	<u>1</u>
SF_L_tr_grt	trench grate (Existing)	151	0	<u>1</u>
SF_L_trash can	trash can (Existing)	151	0	<u>1</u>
SF_L_area	area (Existing)	151	0	1
SF_L_area_t_o	area takeoffs (Existing)	151	0	1
SF_L_conc_htch	concrete htch (Existing)	151	0	1
SF_L_plnt_tree	columnar tree (Existing)	151	0	<u>1</u>
SF_L_plnt_dim text	dim text (Existing)	151	0	1
SF_L_bench	bench (Existing)	151	0	<u>1</u>
SF_L_plnt_turf	lawn (Existing)	151	0	1
SF_L_plnt_crush rock	crush rock (Existing)	151	0	1
SF_L_site_curb face	curb face (Existing)	151	0	<u>1</u>
SF_L_site_crushed rock htch	crushed rock htch (Existing)	151	0	<u>1</u>
SF_L_site_edges	edges (Existing)	151	0	<u>1</u>
SF_L_site_flag	flag (Existing)	151	0	<u>1</u>
SF_L_site_gc	gc (Existing)	151	0	<u>1</u>
SF_L_site_guide lines	guide lines (Existing)	151	0	<u>1</u>
SF_L_site_no plot	no plot (Existing)	151	0	1
SF_L_site_trash can	trash can (Existing)	151	0	1
SF_L_site_Aea line	area line (Existing)	151	0	1
SF_L_site_biocell	biocell (Existing)	151	0	1
SF_L_site_concrete	concrete (Existing)	151	0	1
SF_L_site_concrete htch	concrete htch (Existing)	151	0	1
SF_L_site_take offs	take offs (Existing)	151	0	1
SF_L_site_tr grate	truck grate (Existing)	151	0	1
SF_L_site_light rock	light rock (Existing)	151	0	2
SF_L_site_phone	phone (Existing)	151	0	2
SF_L_site_rock dark	rock dark (Existing)	151	0	2
SF_L_site_sign	sign (Existing)	151	0	2

Existing Landscape Symbology Exhibit 800-43

Level Name	Description	Element Color	Line Style	Line Weight
SF_L_site_bench	bench (Existing)	151	0	2
SF_L_site_heavy	heavy (Existing)	151	0	4
SF_L_site_leaning rail	leaning rail (Existing)	151	0	4
SF_L_site_rail	rail (Existing)	151	0	4
SF_L_site_wall	wall (Existing)	151	0	4
SF_L_site_fence	fence (Existing)	151	0	4
SF_L_site_gate	gate (Existing)	151	0	2
SF_L_site_ref	ref (Existing)	151	0	1
SF_L_site_flag htch	flag htch (Existing)	151	0	1
SF_L_site_crush rock	crush rock (Existing)	151	0	1
SF_L_site_nopt	nopt (Existing)	151	0	1
SF_L_site_zport	zport (Existing)	151	0	1
SF_L_site_zone	zone (Existing)	151	0	1
SF_L_site_guide lines	guide lines (Existing)	151	0	1
SF_L_site_no plot	no plot (Existing)	151	0	1
SF_L_site_line of work	line of work (Existing)	151	3	1
SF_L_site_concrete htch	concrete htch (Existing)	151	0	1
SF_L_site_sign htch	sign htch (Existing)	151	0	<u>1</u>
SF_L_psht_flag pole	flag pole (Existing)	151	0	<u>1</u>
SF_L_psht_htch	htch (Existing)	151	0	<u>1</u>
SF_L_psht_line	line (Existing)	151	0	<u>1</u>
SF_L_psht_phone	phone (Existing)	151	0	<u>1</u>
SF_L_psht_symb dark	symb dark (Existing)	151	0	<u>1</u>
SF_L_psht_bench	bench (Existing)	151	0	1
SF_L_psht_concrete	concrete (Existing)	151	0	1
SF_L_psht_legend box	legend box (Existing)	151	0	1
SF_L_psht_notes	notes (Existing)	151	0	1
SF_L_psht_symb	SF_L_psht_symb (Existing)	151	0	1
SF_L_psht_bus	bus (Existing)	151	0	<u>1</u>
SF_L_psht_machline	machline (Existing)	151	5	<u>1</u>
SF_L_psht_text	text (Existing)	151	0	<u>1</u>

Existing Landscape Symbology
Exhibit 800-43

809.21 Landscape Demolition Symbology

WSF uses the following landscape demolition sheet symbology (line color, style, and weight) schemes as follows:

Level Name	Description	Element Color	Line Style	Line Weight
SF_LD_area	rock dark (Demolition)	2	0	1
SF_LD_area_t_o	Sign (Demolition)	2	0	1
SF_LD_bench	Bench	5	0	<u>1</u>
SF_LD_conc_htch	Heavy (Demolition)	2	0	1
SF_LD_plnt_biocell_htch	leaning rail (Demolition)	2	0	1
SF_LD_plnt_crush rock	Rail (Demolition)	<u>151</u>	0	1
SF_LD_plnt_dim text	Wall (Demolition)	2	0	1
SF_LD_plnt_legend_box	Fence (Demolition)	1	0	<u>1</u>
SF_LD_plnt_legend_htch	Gate (Demolition)	1	0	<u>1</u>
SF_LD_plnt_low_plnt_htch	Ref (Demolition)	2	0	1
SF_LD_plnt_nat_frst_htch	flag htch (Demolition)	2	0	1
SF_LD_plnt_nat_grnd_cvr_htch	crush rock (Demolition)	2	0	1
SF_LD_plnt_plnt_lines	Nopt (Demolition)	1	0	<u>1</u>
SF_LD_plnt_tree	Zport (Demolition)	4	0	<u>1</u>
SF_LD_plnt_turf	Zone (Demolition)	<u>151</u>	0	1
SF_LD_psht_bench	guide lines (Demolition)	2	0	1
SF_LD_psht_bus	no plot (Demolition)	3	0	<u>1</u>
SF_LD_psht_concrete	line of work (Demolition)	2	0	1
SF_LD_psht_concrete htch	concrete htch (Demolition)	<u>151</u>	0	1
SF_LD_psht_dark rock	sign htch (Demolition)	4	0	<u>1</u>
SF_LD_psht_flag htch	flag pole (Demolition)	<u>151</u>	0	1
SF_LD_psht_flag pole	Htch (Demolition)	1	0	<u>1</u>
SF_LD_psht_htch	Line (Demolition)	1	0	<u>1</u>
SF_LD_psht_legend box	Phone (Demolition)	2	0	1
SF_LD_psht_line	symb dark (Demolition)	1	0	0
SF_LD_psht_machline	Bench (Demolition)	3	5	<u>1</u>
SF_LD_psht_nopl	Concrete (Demolition)	<u>151</u>	0	1
SF_LD_psht_notes	legend box (Demolition)	2	0	<u>1</u>
SF_LD_psht_phone	Notes (Demolition)	1	0	1
SF_LD_psht_symb	SF_L_psht_symb (Demolition)	2	0	1
SF_LD_psht_symb dark	symb dark (Demolition)	1	0	0
SF_LD_psht_text	Text (Demolition)	3	0	<u>1</u>
SF_LD_psht_zport lines	zport lines (Demolition)	3	0	<u>1</u>
SF_LD_site_line of work	line of work (Demolition)	151	3	1

Landscape Demolition Symbology Exhibit 800-44

Level Name	Description	Element Color	Line Style	Line Weight
SF_LD_site_Aea line	area line (Demolition)	2	0	1
SF_LD_site_bench	Bench (Demolition)	3	0	<u>1</u>
SF_LD_site_biocell	Biocell (Demolition)	2	0	1
SF_LD_site_concrete	Concrete (Demolition)	2	0	1
SF_LD_site_concrete htch	concrete htch (Demolition)	2	0	1
SF_LD_site_concrete htch	concrete htch (Demolition)	<u>151</u>	0	1
SF_LD_site_crush rock	crush rock (Demolition)	<u>151</u>	0	1
SF_LD_site_crushed rock htch	crushed rock htch (Demolition)	1	0	<u>1</u>
SF_LD_site_curb face	curb face (Demolition)	1	0	<u>1</u>
SF_LD_site_edges	Edges (Demolition)	1	0	<u>1</u>
SF_LD_site_fence	Fence (Demolition)	5	0	<u>1</u>
SF_LD_site_flag	Flag (Demolition)	1	0	0
SF_LD_site_flag htch	flag htch (Demolition)	151	0	<u>1</u>
SF_LD_site_gate	Gate (Demolition)	3	0	<u>1</u>
SF_LD_site_gc	Gc (Demolition)	1	0	<u>1</u>
SF_LD_site_guide lines	guide lines (Demolition)	1	0	<u>1</u>
SF_LD_site_guide lines	guide lines (Demolition)	152	0	1
SF_LD_site_heavy	Heavy (Demolition)	5	0	<u>1</u>
SF_LD_site_leaning rail	leaning rail (Demolition)	5	0	<u>1</u>
SF_LD_site_light rock	light rock (Demolition)	3	0	<u>1</u>
SF_LD_site_no plot	no plot (Demolition)	1	0	<u>1</u>
SF_LD_site_no plot	no plot (Demolition)	151	0	1
SF_LD_site_nopt	Nopt (Demolition)	<u>151</u>	0	1
SF_LD_site_phone	Phone (Demolition)	3	0	<u>1</u>
SF_LD_site_rail	Rail (Demolition)	5	0	<u>1</u>
SF_LD_site_ref	Ref (Demolition)	<u>5</u>	0	1
SF_LD_site_rock dark	rock dark (Demolition)	3	0	<u>1</u>
SF_LD_site_sign	Sign (Demolition)	3	0	<u>1</u>
SF_LD_site_sign htch	sign htch (Demolition)	<u>151</u>	0	<u>1</u>
SF_LD_site_take offs	take offs (Demolition)	2	0	1
SF_LD_site_tr grate	tr grate (Demolition)	2	0	1
SF_LD_site_trash can	trash can (Demolition)	1	0	<u>1</u>
SF_LD_site_wall	Wall (Demolition)	5	0	<u>1</u>
SF_LD_site_zone	Zone (Demolition)	<u>151</u>	0	1
SF_LD_site_zport	Zport (Demolition)	151	0	1
SF_LD_tr_grt	trench grate (Demolition)	1	0	<u>1</u>
SF_LD_trash can	trash can (Demolition)	1	0	<u>1</u>

Landscape Demolition Symbology
Exhibit 800-44

809.22 Proposed Landscape Symbology

WSF uses the following proposed landscape sheet symbology (line color, style, and weight) schemes as follows:

Level Name	Description	Element Color	Line Style	Line Weight
SF_LP_area	area	2	0	<u>2</u>
SF_LP_area_t_o	area takeoffs	2	0	1
SF_LP_bench	bench	5	0	<u>2</u>
SF_LP_conc_htch	concrete htch	2	0	<u>2</u>
SF_LP_plnt_biocell_htch	biocell htch	2	0	1
SF_LP_plnt_crush rock	crush rock	<u>151</u>	0	1
SF_LP_plnt_dim text	dim text	2	0	1
SF_LP_plnt_legend_box	legend box	1	0	<u>2</u>
SF_LP_plnt_legend_htch	legend htch	1	0	<u>2</u>
SF_LP_plnt_low_plnt_htch	low plnt htch	2	0	1
SF_LP_plnt_nat_frst_htch	native forest htch	2	0	1
SF_LP_plnt_nat_grnd_cvr_htch	native ground cover htch	2	0	1
SF_LP_plnt_plnt_lines	plant lines	1	0	<u>1</u>
SF_LP_plnt_tree	columnar tree	4	0	<u>2</u>
SF_LP_plnt_turf	lawn	<u>151</u>	0	1
SF_LP_psht_bench	bench	2	0	1
SF_LP_psht_bus	bus	3	0	2
SF_LP_psht_concrete	concrete	2	0	1
SF_LP_psht_concrete htch	concrete htch	<u>151</u>	0	1
SF_LP_psht_dark rock	dark rock	4	0	3
SF_LP_psht_flag htch	flag htch	<u>151</u>	0	1
SF_LP_psht_flag pole	flag pole	1	0	<u>1</u>
SF_LP_psht_htch	htch	1	0	<u>1</u>
SF_LP_psht_legend box	legend box	2	0	<u>2</u>
SF_LP_psht_line	line	1	0	<u>1</u>
SF_LP_psht_machline	machline	3	5	2
SF_LP_psht_nopl	nopl	<u>151</u>	0	1
SF_LP_psht_notes	notes	2	0	1
SF_LP_psht_phone	phone	1	0	<u>1</u>
SF_LP_psht_symb	SF_LP_psht_symb	2	0	1
SF_LP_psht_symb dark	symb dark	1	0	<u>2</u>
SF_LP_psht_text	text	3	0	2
SF_LP_psht_zport lines	zport lines	3	0	<u>2</u>
SF_LP_site_line of work	line of work	151	3	1

Proposed Landscape Symbology Exhibit 800-45

Level Name	Description	Element Color	Line Style	Line Weight
SF_LP_site_Aea line	area line	2	0	1
SF_LP_site_bench	bench	3	0	2
SF_LP_site_biocell	biocell	2	0	1
SF_LP_site_concrete	concrete	2	0	1
SF_LP_site_concrete htch	concrete htch	2	0	1
SF_LP_site_crush rock	crush rock	151	0	1
SF_LP_site_crushed rock htch	crushed rock htch	1	0	<u>1</u>
SF_LP_site_curb face	curb face	1	0	<u>1</u>
SF_LP_site_edges	edges	1	0	<u>1</u>
SF_LP_site_fence	fence	5	0	<u>2</u>
SF_LP_site_flag	flag	1	0	<u>1</u>
SF_LP_site_flag htch	flag htch	151	0	1
SF_LP_site_gate	gate	3	0	1
SF_LP_site_gc	gc	1	0	<u>1</u>
SF_LP_site_guide lines	guide lines	1	0	<u>1</u>
SF_LP_site_heavy	heavy	5	0	<u>3</u>
SF_LP_site_leaning rail	leaning rail	5	0	<u>2</u>
SF_LP_site_light rock	light rock	3	0	2
SF_LP_site_no plot	no plot	151	0	1
SF_LP_site_phone	phone	3	0	2
SF_LP_site_rail	rail	5	0	<u>2</u>
SF_LP_site_ref	ref	151	0	<u>2</u>
SF_LP_site_rock dark	rock dark	3	0	2
SF_LP_site_sign	sign	3	0	2
SF_LP_site_sign htch	sign htch	151	0	<u>2</u>
SF_LP_site_take offs	take offs	2	0	1
SF_LP_site_tr grate	tr grate	2	0	1
SF_LP_site_trash can	trash can	1	0	<u>1</u>
SF_LP_site_wall	wall	5	0	<u>2</u>
SF_LP_site_zone	zone	151	0	1
SF_LP_site_zport	zport	151	0	1
SF_LP_tr_grt	trench grate	1	0	<u>2</u>
SF_LP_trash can	trash can	1	0	<u>2</u>

Proposed Landscape Symbology
Exhibit 800-45

809.23 Existing Mechanical Symbology

WSF uses the following existing mechanical sheet symbology (line color, style, and weight) schemes as follows:

Level Name	Description	Element Color	Line Style	Line Weight
SF_M_base_plate	Base Plate (Proposed)	151	0	1
SF_M_bldg_HVAC	Building HVAC (Proposed)	151	0	1
SF_M_bldg_plumb_fixtures	Building Plumbing Fixtures (Proposed)	151	0	1
SF_M_bldg_plumb_piping	Building Plumbing Piping (Proposed)	151	3	1
SF_M_blocks	Blocks (Proposed)	151	0	1
SF_M_bracket	Brackets (Proposed)	151	0	1
SF_M_brakes	Brakes (Proposed)	151	0	1
SF_M_cw_cable	Counter Weight Cable (Proposed)	151	0	1
SF_M_cw_sheaves	Counter Weight Sheaves (Proposed)	151	0	1
SF_M_couplings	Couplings (Proposed)	151	0	1
SF_M_cylinders	Cylinders (Proposed)	151	0	1
SF_M_fasteners	Fasteners (Proposed)	151	0	1
SF_M_fire_line	Fire Lines (Proposed)	151	0	1
SF_M_ts_hoist	Hoist Gears (Proposed)	151	0	1
SF_M_ts_hoist_cables	Hoist Cable (Proposed)	151	0	1
SF_M_ts_hoist_sheaves	Hoist Sheaves (Proposed)	151	0	1
SF_M_HPU	HPU (Proposed)	151	0	1
SF_M_mounting_structure	Mounting Structure (Proposed)	151	0	1
SF_M_pins	Pins (Proposed)	151	0	1
SF_M_pumps	Pumps (includes pumps and pump motors) (Proposed)	151	0	1
SF_M_sanitary_sewer	Sanitary Sewer (Proposed)	151	0	1
SF_M_shafts	Shafts (Proposed)	151	0	1
SF_M_steel_hatch	pattern	151	0	1
SF_M_hyd_tube_&_hoses	Hydraulic Tubing and Hoses (Proposed)	151	0	1
SF_M_waterline	Waterline (Proposed)	151	0	1

Existing Mechanical Symbology Exhibit 800-46

809.24 Mechanical Demolition Symbology

WSF uses the following mechanical demolition sheet symbology (line color, style, and weight) schemes as follows:

Level Name	Description	Element Color	Line Style	Line Weight
SF_MD_base_plate	Base Plate (Demolition)	3	0	2
SF_MD_bldg_HVAC	Building HVAC (Demolition)	3	0	2
SF_MD_bldg_plumb_fixtures	Building Plumbing Fixtures (Demolition)	3	0	2
SF_MD_bldg_plumb_piping	Building Plumbing Piping (Demolition)	3	3	2
SF_MD_blocks	Blocks (Demolition)	3	0	2
SF_MD_bracket	Brackets (Demolition)	3	0	2
SF_MD_brakes	Brakes (Demolition)	3	0	2
SF_MD_cw_cable	Counter Weight Cable (Demolition)	3	0	2
SF_MD_cw_sheaves	Counter Weight Sheaves (Demolition)	3	0	2
SF_MD_couplings	Couplings (Demolition)	3	0	2
SF_MD_cylinders	Cylinders (Demolition)	3	0	2
SF_MD_fasteners	Fasteners (Demolition)	3	0	2
SF_MD_fire_line	Fire Lines (Demolition)	3	0	2
SF_MD_ts_hoist	Hoist System (includes motor, gearbox, & drums) (Demolition)	3	0	2
SF_MD_ts_hoist_cables	Hoist Cable (Demolition)	3	0	2
SF_MD_ts_hoist_sheaves	Hoist Sheaves (Demolition)	3	0	2
SF_MD_HPU	HPU (Demolition)	3	0	2
SF_MD_mounting_structure	Mounting Structure (Demolition)	3	0	2
SF_MD_pins	Pins (Demolition)	3	0	2
SF_MD_pumps	Pumps (includes pumps and pump motors) (Demolition)	3	0	2
SF_MD_sanitary_sewer	Sanitary Sewer (Demolition)	3	0	2
SF_MD_shafts	Shafts (Demolition)	3	0	2
SF_MD_steel_hatch	Steel Hatch Pattern (Demolition)	3	0	2
SF_MD_hyd_tube_&_hoses	Hydraulic Tubing and Hoses (Demolition)	3	0	2
SF_MD_waterline	Waterline (Demolition)	3	0	2

Mechanical Demolition Symbology Exhibit 800-47

WSF uses the following proposed mechanical sheet symbology (line color, style, and weight) schemes as follows:

Level Name	Description	Element Color	Line Style	Line Weight
SF_MP_base_plate	Base Plate (Proposed)	3	0	2
SF_MP_bldg_HVAC	Building HVAC (Proposed)	3	0	2
SF_MP_bldg_plumb_fixtures	Building Plumbing Fixtures (Proposed)	3	0	2
SF_MP_bldg_plumb_piping	Building Plumbing Piping (Proposed)	3	3	2
SF_MP_blocks	Blocks (Proposed)	3	0	2
SF_MP_bracket	Brackets (Proposed)	3	0	2
SF_MP_brakes	Brakes (Proposed)	3	0	2
SF_MP_cntr_wt_cable	Counter Weight Cable (Proposed)	3	0	2
SF_MP_cntr_wt_sheaves	Counter Weight Sheaves (Proposed)	3	0	2
SF_MP_couplings	Couplings (Proposed)	3	0	2
SF_MP_cylinders	Cylinders (Proposed)	3	0	2
SF_MP_fasteners	Fasteners (Proposed)	3	0	2
SF_MP_fire_line	Fire Lines (Proposed)	3	0	2
SF_MP_gears	Gears (Proposed)	3	0	2
SF_MP_ts_hoist	Hoist System (includes motor, gearbox, & drums) (Proposed)	3	0	2
SF_MP_ts_hoist_cables	Hoist Cables (Proposed)	3	0	2
SF_MP_ts_hoist_sheaves	Hoist Sheaves (Proposed)	3	0	2
SF_MP_hydraulics	Hydraulics (Proposed)	3	0	2
SF_MP_motors	Motors (Proposed)	3	0	2
SF_MP_mounting_structure	Mounting Structure (Proposed)	3	0	2
SF_MP_pins	Pins (Proposed)	3	0	2
SF_MP_pumps	Includes pumps and pump motors (Proposed)	3	0	2
SF_MP_sanitary_sewer	Sanitary Sewer (Proposed)	3	0	2
SF_MP_shafts	Shafts (Proposed)	3	0	2
SF_MP_steel_hatch	Hatch Pattern (Proposed)	3	0	2
SF_MP_tubing_hoses	Tubing and Hoses (Proposed)	3	0	2
SF_MP_waterline	Waterlines (Proposed)	3	0	2

Proposed Mechanical Symbology
Exhibit 800-48

809.25 Existing Security Symbology

WSF uses the following existing security sheet symbology (line color, style, and weight) schemes as follows:

Level Name	Description	Element Color	Line Style	Line Weight
SF_SC_Cameras	All Cameras (Existing)	151	0	1
SF_SC_Entry_sys	Door locks, card reader, Request for exit, Key, key pad, A/V signals (Existing)	151	0	1
SF_SC_Motion_det	Motion detectors (Existing)	151	0	1
SF_SC_Alarms	Alarms (Existing)	151	0	1
SF_SC_Conduits	Conduits (Existing)	151	0	1
SF_SC_Racks	Security equipment racks (Existing)	151	0	1
SF_SC_Cabinets	Misc. security cabinets (Existing)	151	0	1
SF_SC_ACP	Access Control Panel (Existing)	151	0	1
SF_SC_PDC	Power Distribution Cabinet (Existing)	151	0	1
SF_SC_UPS	Uninterruptable Power Supply (Existing)	151	0	1

Existing Security Symbology *Exhibit 800-49*

809.26 Security Demolition Symbology

WSF uses the following security demolition sheet symbology (line color, style, and weight) schemes as follows:

Level Name	Description	Element Color	Line Style	Line Weight
SF_SCD_Cameras	All Cameras (Demolition)	5	0	<u>2</u>
SF_SCD_Entry_sys	Door locks, card reader, Request for exit, Key, key pad, A/V signals (Demolition)	5	0	<u>2</u>
SF_SCD_Motion_det	Motion detectors (Demolition)	5	0	<u>2</u>
SF_SCD_Alarms	Alarms (Demolition)	5	0	<u>2</u>
SF_SCD_Conduits	Conduits (Demolition)	5	0	<u>2</u>
SF_SCD_Racks	Security equipment racks (Demolition)	5	0	<u>2</u>
SF_SCD_Cabinets	Misc. security cabinets (Demolition)	5	0	<u>2</u>
SF_SCD_ACP	Access Control Panel (Demolition)	5	0	<u>2</u>
SF_SCD_PDC	Power Distribution Cabinet (Demolition)	5	0	<u>2</u>
SF_SCD_UPS	Uninterruptable Power Supply (Demolition)	5	0	<u>2</u>

Security Demolition Symbology
Exhibit 800-50

809.27 Proposed Security Symbology

WSF uses the following proposed security sheet symbology (line color, style, and weight) schemes as follows:

Level Name	Description	Element Color	Line Style	Line Weight
SF_SCP_Cameras	All Cameras (Proposed)	6	0	2
SF_SCP_Entry_sys	Door locks, card reader, Request for exit, Key, key pad, A/V signals (Proposed)	6	0	2
SF_SCP_Motion_det	Motion detectors (Proposed)	6	0	2
SF_SCP_Alarms	Alarms (Proposed)	6	0	2
SF_SCP_Conduits	Conduits (Proposed)	6	0	2
SF_SCP_Racks	Security equipment racks (Proposed)	6	0	2
SF_SCP_Cabinets	Misc. security cabinets (Proposed)	6	0	2
SF_SCP_ACP	Access Control Panel (Proposed)	6	0	2
SF_SCP_PDC	Power Distribution Cabinet (Proposed)	6	0	2
SF_SCP_UPS	Uninterruptable Power Supply (Proposed)	6	0	2

Proposed Security Symbology Exhibit 800-51

809.28 Existing Structural Symbology

WSF uses the following proposed security sheet symbology (line color, style, and weight) schemes as follows:

Level Name	Description	Element Color	Line Style	Line Weight
SF_S_Breakline	Breakline (Existing)	151	0	1
SF_S_Cable	Cables (Existing)	151	0	1
SF_S_Centerline	Centerline (Existing)	151	0	1
SF_S_Chain	Chain (Existing)	151	0	1
SF_S_Conc_Curb	Concrete Curb (Existing)	151	0	1
SF_S_Conc_Foundation	Concrete Foundation (Existing)	151	0	1
SF_S_Conc_Hatch	Concrete Hatch (Existing)	151	0	1
SF_S_Conc_Member	Concrete Member (Existing)	151	0	1
SF_S_Conc_Pile	Concrete (Existing)	151	0	1
SF_S_Conc_Pile_Cap	Concrete Pile Cap (Existing)	151	0	1
SF_S_Conc_Sidewalk	Concrete Sidewalk (Existing)	151	0	1
SF_S_Conc_Slab	Concrete Slab (Existing)	151	0	1
SF_S_Dimension	Dimension (Existing)	151	0	1
SF_S_dol_anch_chain_lt	Floating Dolphin Anchor Chain (Left looking Offshore) (Existing)	151	0	<u>1</u>
SF_S_dol_anch_chain_rt	Floating Dolphin Anchor Chain (Right looking Offshore) (Existing)	151	0	<u>1</u>
SF_S_dol_anchor_lt	Floating Dolphin Anchor (Left looking Offshore) (Existing)	151	0	<u>1</u>

Existing Structural Symbology Exhibit 800-52

Level Name	Description	Element Color	Line Style	Line Weight
SF_S_dol_anchor_rt	Floating Dolphin Anchor (Right looking Offshore) (Existing)	151	0	<u>1</u>
SF_S_dol_float_lt	Floating Dolphin (Left looking Offshore) (Existing)	151	0	<u>1</u>
SF_S_dol_float_rt	Floating Dolphin (Right looking Offshore) (Existing)	151	0	<u>1</u>
SF_S_Fastener	Fastener (Existing)	151	0	1
SF_S_Groundline	Groundline (Existing)	151	0	1
SF_S_Ladder	Ladder (Existing)	151	0	1
SF_S_Life_Ring	Life Ring (Existing)	151	0	1
SF_S_Metal_Bracing	Metal Bracing (Existing)	151	0	1
SF_S_Mooring_Line	Mooring Line (Existing)	151	0	1
SF_S_Notes	Notes (Existing)	151	0	1
SF_S_Rebar	Rebar (Existing)	151	0	1
SF_S_Rub_Pad	Rub Pads (Existing)	151	0	1
SF_S_Rub_Rail	Rub Rail (Existing)	151	0	1
SF_S_Sign	Signing (Existing)	151	0	1
SF_S_Steel	Steel (Existing)	151	0	1
SF_S_Steel_Bracing	Steel Bracing (Existing)	151	0	1
SF_S_Steel_Decking	Steel Decking (Existing)	151	0	1
SF_S_Steel_Fender	Steel Fender (Existing)	151	0	1
SF_S_Steel_Girder	Steel Girder (Existing)	151	0	<u>1</u>
SF_S_Steel_Grating	Steel Grating (Existing)	151	0	1
SF_S_Steel_Hatch	Steel Hatch Pattern (Existing)	151	0	1
SF_S_Steel_Liftbeam	Steel Lift Beam (Existing)	151	0	1
SF_S_Steel_Mics	Steel Miscellaneous (Existing)	151	0	1
SF_S_Steel_Pile	Steel Pile (Existing)	151	0	1
SF_S_Steel_Pile_Cap	Steel Pile Cap (Existing)	151	0	1
SF_S_Steel_Post	Steel Post (Existing)	151	0	1
SF_S_Steel_Railing	Steel Railing (Existing)	151	0	1
SF_S_Stirrup	Stirrup (Existing)	151	0	1
SF_S_Support	Support (Existing)	151	0	1
SF_S_Text	Text (Existing)	151	0	1
SF_S_Timber	Timber (Existing)	151	0	1
SF_S_Timber_Curb	Timber Curb (Existing)	151	0	1
SF_S_Timber_Hatch	Timber Hatch (Existing)	151	0	1
SF_S_Timber_Pile	Timber Pile (Existing)	151	0	1
SF_S_Timber_Pile_Cap	Timber Pile Cap (Existing)	151	0	1
SF_S_Timber_Post	Timber Post (Existing)	151	0	1
SF_S_Timber_Railing	Timber Railing (Existing)	151	0	1
SF_S_Weld_Symbol	Timber Symbol (Existing)	151	0	1

Existing Structural Symbology
Exhibit 800-52

809.29 Structural Demolition Symbology

WSF uses the following proposed security sheet symbology (line color, style, and weight) schemes as follows:

Level Name	Description	Element Color	Line Style	Line Weight
SF_SD_Breakline	Breakline (Demolition)	3	0	<u>1</u>
SF_SD_Cable	Cables (Demolition)	3	0	<u>2</u>
SF_SD_Chain	Chain (Demolition)	3	0	<u>2</u>
SF_SD_Conc_Curb	Concrete Curb (Demolition)	3	0	<u>2</u>
SF_SD_Conc_Foundation	Concrete Foundation (Demolition)	3	0	<u>2</u>
SF_SD_Conc_Hatch	Concrete Hatch (Demolition)	3	0	<u>2</u>
SF_SD_Conc_Member	Concrete Member (Demolition)	3	0	<u>2</u>
SF_SD_Conc_Pile_Cap	Concrete (Demolition)	3	0	<u>2</u>
SF_SD_Conc_Pile	Concrete Pile Cap (Demolition)	3	0	<u>2</u>
SF_SD_Conc_Sidewalk	Concrete Sidewalk (Demolition)	3	0	<u>2</u>
SF_SD_Conc_Slab	Concrete Slab (Demolition)	3	0	<u>2</u>
SF_SD_demo_Hatch	Hatch Pattern (Demolition)	3	0	<u>2</u>
SF_SD_demo_Text	Demolition Text	3	0	<u>2</u>
SF_SD_dimension	Demolition Dimension	3	0	<u>2</u>
SF_SD_dol_anch_chain_lt	Floating Dolphin Anchor Chain (Left looking Offshore) (Demolition)	3	0	<u>2</u>
SF_SD_dol_anch_chain_rt	Floating Dolphin Anchor Chain (Right looking Offshore) (Demolition)	3	0	<u>2</u>
SF_SD_dol_anchor_lt	Floating Dolphin Anchor (Left looking Offshore) (Demolition)	3	0	<u>2</u>
SF_SD_dol_anchor_rt	Floating Dolphin Anchor (Right looking Offshore) (Demolition)	3	0	<u>2</u>
SF_SD_dol_float_lt	Floating Dolphin (Left looking Offshore) (Demolition)	3	0	<u>2</u>
SF_SD_dol_float_rt	Floating Dolphin (Right looking Offshore) (Demolition)	3	0	<u>2</u>
SF_SD_Fastener	Fastener (Demolition)	3	0	<u>2</u>
SF_SD_Ladder	Ladder (Demolition)	3	0	<u>2</u>
SF_SD_Life_Ring	Life Ring (Demolition)	3	0	<u>2</u>
SF_SD_Metal_Bracing	Metal Bracing (Demolition)	3	0	<u>2</u>
SF_SD_Mooring_Line	Mooring Line (Demolition)	3	0	<u>2</u>
SF_SD_Notes	Notes (Demolition)	3	0	<u>2</u>
SF_SD_Rebar	Rebar (Demolition)	3	0	<u>2</u>
SF_SD_Rub_Pad	Rub Pads (Demolition)	3	0	<u>2</u>
SF_SD_Rub_Rail	Rub Rail (Demolition)	3	0	<u>2</u>
SF_SD_Sign	Signing (Demolition)	3	0	<u>2</u>
SF_SD_Steel_Bracing	Steel Bracing (Demolition)	3	0	<u>2</u>
SF_SD_Steel	Steel (Demolition)	3	0	<u>2</u>
SF_SD_Steel_Decking	Steel Decking (Demolition)	3	0	<u>2</u>

Structural Demolition Symbology Exhibit 800-53

Level Name	Description	Element Color	Line Style	Line Weight
SF_SD_Steel_Fender	Steel Fender (Demolition)	3	0	<u>2</u>
SF_SD_Steel_Girder	Steel Girder (Demolition)	3	0	<u>2</u>
SF_SD_Steel_Grating	Steel Grating (Demolition)	3	0	<u>2</u>
SF_SD_Steel_Hatch	Steel Hatch Pattern (Demolition)	3	0	<u>2</u>
SF_SD_Steel_Liftbeam	Steel Lift Beam (Demolition)	3	0	<u>2</u>
SF_SD_Steel_Miscs	Steel Miscellaneous (Demolition)	3	0	<u>2</u>
SF_SD_Steel_Pile_Cap	Steel Pile Cap (Demolition)	3	0	<u>2</u>
SF_SD_Steel_Pile	Steel Pile (Demolition)	3	0	<u>2</u>
SF_SD_Steel_Post	Steel post (Demolition)	3	0	<u>2</u>
SF_SD_Steel_Railing	Steel Railing (Demolition)	3	0	<u>2</u>
SF_SD_Stirrup	Stirrup (Demolition)	3	0	<u>2</u>
SF_SD_Support	Support (Demolition)	3	0	<u>2</u>
SF_SD_Text	Text (Demolition)	3	0	1
SF_SD_Timber_Curb	Timber Curb (Demolition)	3	0	<u>2</u>
SF_SD_Timber	Timber (Demolition)	3	0	<u>2</u>
SF_SD_Timber_Hatch	Timber Hatch (Demolition)	3	0	<u>2</u>
SF_SD_Timber_Pile_Cap	Timber Pile (Demolition)	3	0	<u>2</u>
SF_SD_Timber_Pile	Timber Pile Cap (Demolition)	3	0	<u>2</u>
SF_SD_Timber_Post	Timber Post (Demolition)	3	0	<u>2</u>
SF_SD_Timber_Railing	Timber Railing (Demolition)	3	0	<u>2</u>
SF_SD_Weld_Symbol	Timber Symbol (Demolition)	3	0	<u>2</u>

Structural Demolition Symbology
Exhibit 800-53

809.30 Proposed Structural Symbology

WSF uses the following proposed security sheet symbology (line color, style, and weight) schemes as follows:

Level Name	Description	Element Color	Line Style	Line Weight
SF_SP_Breakline	Breakline (Proposed)	0	0	<u>2</u>
SF_SP_Cable	Cables (Proposed)	2	0	2
SF_SP_Centerline	Chain (Proposed)	0	0	<u>2</u>
SF_SP_Chain	Concrete Curb (Proposed)	0	0	2
SF_SP_Conc_Curb	Concrete Foundation (Proposed)	6	0	<u>2</u>
SF_SP_Conc_Foundation	Concrete Hatch (Proposed)	6	0	2
SF_SP_Conc_Hatch	Concrete Member (Proposed)	6	0	2
SF_SP_Conc_Member	Concrete (Proposed)	6	0	2
SF_SP_Conc_pile	Concrete Pile Cap (Proposed)	3	0	3
SF_SP_Conc_Sidewalk	Concrete Sidewalk (Proposed)	6	0	2
SF_SP_Conc_Slab	Concrete Slab (Proposed)	6	0	2
SF_SP_Dimension	Hatch Pattern (Proposed)	0	0	<u>2</u>
SF_SP_dol_anch_chain_lt	Floating Dolphin Anchor Chain (Left looking Offshore) (Proposed)	0	0	<u>2</u>
SF_SP_dol_anch_chain_rt	Floating Dolphin Anchor Chain (Right looking Offshore) (Proposed)	0	0	<u>2</u>
SF_SP_dol_anchor_lt	Floating Dolphin Anchor (Left looking Offshore) (Proposed)	0	0	<u>2</u>
SF_SP_dol_anchor_rt	Floating Dolphin Anchor (Right looking Offshore) (Proposed)	0	0	<u>2</u>
SF_SP_dol_float_lt	Floating Dolphin (Left looking Offshore) (Proposed)	0	0	<u>2</u>
SF_SP_dol_float_rt	Floating Dolphin (Right looking Offshore) (Proposed)	0	0	<u>2</u>
SF_SP_Fastener	Fastener (Proposed)	5	0	2
SF_SP_Groundline	Groundline (Proposed)	0	0	2
SF_SP_Ladder	Ladder (Proposed)	2	0	2
SF_SP_Life_Ring	Life Ring (Proposed)	2	0	2
SF_SP_Metal_Bracing	Metal Bracing (Proposed)	3	0	2
SF_SP_Mooring_Line	Mooring Line (Proposed)	0	0	<u>2</u>
SF_SP_Notes	Notes (Proposed)	0	0	<u>2</u>
SF_SP_Rebar	Rebar (Proposed)	4	0	2
SF_SP_Rub_Pad	Rub Pads (Proposed)	0	0	<u>2</u>
SF_SP_Rub_Rail	Rub Rail (Proposed)	0	0	<u>2</u>
SF_SP_Sign	Signing (Proposed)	0	0	<u>2</u>
SF_SP_Steel	Steel (Proposed)	3	0	2
SF_SP_Steel_pile	Steel Pile (Proposed)	3	0	<u>2</u>
SF_SP_Steel_pile_Cap	Steel Pile Cap (Proposed)	3	0	2
SF_SP_Steel_Bracing	Steel Bracing (Proposed)	3	0	2
SF_SP_Steel_Decking	Steel Decking (Proposed)	3	0	2

Proposed Structural Symbology Exhibit 800-54

Level Name	Description	Element Color	Line Style	Line Weight
SF_SP_Steel_Fender	Steel Fender (Proposed)	3	0	2
SF_SP_Steel_Grating	Steel Grating (Proposed)	3	0	2
SF_SP_Steel_Hatch	Steel Hatch Pattern (Proposed)	3	0	2
SF_SP_Steel_Liftbeam	Steel Lift Beam (Proposed)	3	0	2
SF_SP_Steel_Miscs	Steel Miscellaneous (Proposed)	3	0	2
SF_SP_Steel_Railing	Steel Railing (Proposed)	3	0	2
SF_SP_Stirrup	Stirrup (Proposed)	4	0	2
SF_SP_Support	Support (Proposed)	5	0	2
SF_SP_Text	Text (Proposed)	0	0	2
SF_SP_Timber	Timber (Proposed)	1	0	2
SF_SP_Timber_Curb	Timber Hatch (Proposed)	1	0	2
SF_SP_Timber_Hatch	Timber Pile (Proposed)	1	0	2
SF_SP_Timber_pile	Timber Pile Cap (Proposed)	1	0	2
SF_SP_Timber_pile_Cap	Timber Post (Proposed)	1	0	2
SF_SP_Timber_post	Timber Railing (Proposed)	1	0	2
SF_SP_Timber_Railing	Timber Symbol (Proposed)	1	0	2
SF_SP_Weld_Symbol	Weld Symbol (Proposed)	4	0	2

Proposed Structural Symbology
Exhibit 800-54

809.31 Abbreviations

Contract drawings may convey information by letter symbols and abbreviations. A letter symbol is a letter or group of letters contained within a line or symbol shape. All letter symbols shall be shown in a legend with the line work, and not in a list of abbreviations.

The use of abbreviations on contract drawings is not encouraged. Abbreviations should be used only where their meaning is unquestionably clear. When in doubt, spell it out.

Because this is a combined list for all engineering disciplines, and there are so many structures represented in a set of contract documents, many abbreviations listed have more than one meaning. Again, abbreviations should be used only where their meaning is unquestionably clear.

- Consistency is essential in using abbreviations. If an abbreviation is used on one part of the drawing, the same abbreviation shall be used whenever that structure is drawn. Do not abbreviate the word in one call-out and spell the word out in the next call-out.
- Do not use abbreviations in General Notes.
- Do not abbreviate words of five letters or fewer, except in schedules. A schedule column heading may need an abbreviation to reduce the size of the column and the overall size of the schedule.
- At times, the plural form is required on drawings. The following are examples of plurals in abbreviations:

DWG	SH	NO.
DWGs	SHs	NO.s

Abbreviation List

Term	Abbreviation	Term	Abbreviation
Abandon	ABDN	Air Supply Unit	ASU
Abbreviation	ABBR; ABBREV	Airtight	AT
Above Counter	AC	Air Turbine Motor	ATM
Above Finished Floor	AFF	Alarm Check Valve	ACV
Above Suspended Ceiling	ASC	Alcohol	ALC
Above Water Level	AWL	Alignment	ALIGN
Abrasive	ABRSV	Alkalinity	ALKY
Absolute	ABS	Alloy Steel	ALY STL
Abutment	ABUT	Alloy-Steel Protective Plating	ASPP
Accelerate	ACCEL	Alternate	ALT
Access Floor	ACFL	Alternating Current	AC
Accommodate	ACCOM	Alternating Current Synchronous	ACS
Accordance With	A/W	Alternator	ALTNTR
Account	ACCT	Altimeter	ALTM
Accumulate	ACCUM	Altitude Valve	ALTV
Acetylene	ACET	Aluminum	AL
Acoustic	ACST	Aluminum Conductor Steel-Reinforced	ACSR
Acre Feet	ACRE-FT	American Association of State Highway and Transportation Officials	AASHTO
Acrylic Plastic	ACR	American Bureau of Shipping	ABS
Acrylonitrile Butadiene Styrene	ABS	American Concrete Institute	ACI
Adapter	AD	American Gage Design Standard	AGDS
Addendum	ADD	American Institute of Steel Construction	AISC
Addition	ADDN	American Institute of Timber Construction	AITC
Adhere	ADH	American National Standard	AMER NATL STD
Adjacent	ADJ	American National Standards Institute	ANSI
Adjust	ADJ	American Petroleum Institute	API
Adjustable	ADJ	American Society for Testing and Materials	ASTM
Adjustable Speed	ADJ SP	American Steel Wire Gage	ASWG
Advanced Waste Treatment	AWT	American Welding Society	AWS
Aggregate	AGG	American Wire Gage	AWG
Air Blast Circuit Breaker	ABCB	Ammeter	AMM
Air Blast Transformer	ABT	Ammeter Switch	AS
Air-Break Switch	AB SW	Ammonia Removal and Recovery Process	ARRP
Air Circuit Breaker	ACB	Ammonium Nitrate	AM NIT
Air Circulating	ACIRC	Ammonium Sulfate	(NH ₄) ₂ SO ₄
Air Compressor	AC		
Air-Condition	AIR COND		
Air Cooled	ACLD		
Air Cooled Condensing Unit	ACU		
Air Release Valve	ARV		
Air Shutoff	ASHOF		

Term	Abbreviation	Term	Abbreviation
Amount	AMT	Asphalt Treated Base	ATB
Ampere	AMP	Assemble	ASSEM
Ampere-hour	AMP HR	Assembly	ASM
Ampere-hour Meter	AHM	Associate	ASSOC
Amplifier	AMPL	Association	ASSN
Anchor	AHR	As Soon As Possible	ASAP
Anchor Bolt	AB	Audio Frequency	AF
And So Forth	ETC	August	AUG
Angle	L	Authorize	AUTH
Angle Point	AP	Auto-Manual	AM
Angle Stop Valve	ASV	Automatic	AUTO
Annunciator	ANN	Automatic Transfer Switch	ATS
Anodize	ANDZ	Automatic Overload	AUTO OVLD
Analog	A	Automatic Reclosing	AUTO RECL
Antenna	ANT	Automatic Starter	AUTOSTRT
Aperture	APERT	Automatic Starting	AUTOSTRTG
Apparatus	APP	Automatic Stop and Check Valve	AUTO S&CV
Appendix	APPX	Automatic Transformer	AXFMR
Application	APPL	Autotransformer	AUTO XMFR
Approach	APRCH	Auto-Transformer Temperature Switch	TS
Approval	APPVL	Auxiliary	AUX
Approve	APPV	Auxiliary Power Unit	APU
Approved	APPRD	Auxiliary Register	AUXR
Approximate	APPROX	Auxiliary Switch (breaker) Normally Closed	ASC
Architecture	ARCH	Auxiliary Switch (breaker) Normally Open	ASO
Arcing	ARNG	Available	AVAIL
Arc Weld	ARCW	Avenue	AVE
Area Drain	AD	Average	AVG
Armature	ARM	Average Diameter	AVG DIA
Armature Accelerator	AA	Azimuth	AZ
Armature Shunt	ARMSHT	Background	BKGD
Armored	ARMD	Back of Pavement Seat	BPS
Armored Cable	ARM CA	Back to Back	B to B
Arrange	ARR	Backwash Supply Water	BWS
Arrester	ARSR	Backwash Wastewater	BWW
Asbestos	ASB	Ballast	BLST
Asbestos Cement	AC	Ball Valve	BV
Asbestos Cement Pipe	ASB CP	Barrier	BARR
Asphalt	ASPH	Base Line	BL
Asphalt Concrete	AC	Basement	BSMT
Asphaltic Concrete Pavement	ACP		
Asphalt Tile	AT		

Term	Abbreviation	Term	Abbreviation
Base Plate	BP	Break	BRK
Batten	BATT	Breaker	BRKR
Batter	BAT	Bridge	BR
Battery (electrical)	BAT	Bridge Drain	BR DR
Bearing	BRG	British Thermal Unit	BTU
Bedding	BDNG	Bronze	BRZ
Begin Horizontal Curve (Point of Curvature)	PC	Brown	BRN
Begin Vertical Curve	BVC	Building	BLDG
Bell and Flange	B&F	Building Line	BL
Bell and Spigot	B&S	Bulkhead	BHD
Bell End	BE	Buried Cable	BC
Bench Mark	BM	Bushing	BSHG
Bend Line	BL	Butterfly	BTFL
Bend Radius	BR	Butterfly Valve	BV
Between	BET	Cabinet	CAB
Bituminous	BITUM	Cabinet Unit Heater	CUH
Bituminous Surface Treatment	BST	Camber	CAM
Black Iron	BI	Cantilever	CANTIL
Black Steel Pipe, Schedule 40	BSP-80	Capacitor	CAP
Black Steel Pipe, Schedule 80	BSP-40	Capacity	CAP
Blanket	BLKT	Cap Screw	CS
Blind Flange	BF	Carbon Column	CC
Blocking	BLKG	Carbon Dioxide	CO2
Blower	BLO	Case Harden	CH
Blowoff	BO	Casement	CSMT
Board	BD	Casing	CSG
Board Foot	FBM	Casting	CSTG
Boiler	BLR	Cast-In-Place Concrete	CIPC
Bolt Center	BLT CTR	Cast Iron	CI
Bolt Circle	BC	Cast Iron Pipe	CIP
Booster	BSTR	Cast Iron Soil Pipe	CISP
Booster Coil	BC	Castle Nut	CAS NUT
Both Faces	BF	Cast Stone	CST
Both Sides	BS	Catalog	CAT
Both Ways	BW	Catch Basin	CB
Bottom	BOT	Cathode	CATH
Bottom Chord	BC	Cathode-ray Tube	CRT
Bottom Face	BF	Caulking	CLKG
Bottom Layer	BL	Ceiling	CLG
Boulevard	BLVD	Ceiling Height	CHT
Boundary	BDY	Celsius (formerly Centigrade)	C
Bracket	BRKT	Cement	CEM

Term	Abbreviation	Term	Abbreviation
Cement Asbestos	CEM ASB	Column	COL
Cement Concrete Pavement	CCP	Combination	COMB
Cement Treated Base	CTB	Combination Air Release Valve	CARV
Center	CTR	Communication	COMM
Center Line	CL	Company	CO
Center of Gravity	CG	Complete Penetration	CP
Center to Center	CTR to CTR; C/C	Compound	COMPD
Centimeter	CM	Compressed-Air Circuit Breaker	CACB
Central	CEN; CENT	Compression, Compressive	COMP
Central Control System	CCS	Compressor	CPRSR
Central Processing Unit	CPU	Computer-Auto-Manual	CAM
Centrifugal	CNTFGL	Computer-Manual	CM
Ceramic	CER	Concrete	CONC
Ceramic Tile	CT	Concrete Cylinder	CC
Chalkboard	CHBD	Concrete Cylinder Pipe	CCP
Chamfer	CHAM	Conc. Masonry Units	CMU
Change Order	CO	Conc. Reinforcing Steel Institute	CRSI
Channel	CHAN	Condensate Return	CR
Charge	CHG	Conductivity	COND
Charger	CHGR	Conductor	COND
Chemical	CHEM	Conductor Multiple (number indicated)	3/C
Chemical Oxygen Demand	COD	Conduit	CND; COND
Chemical Sludge	CMS	Connect	CON
Chlorinated PVC - Schedule 80	CPVC SCH80	Connection	CON
Chlorine	CL2	Connection Diagram	CON DIAG
Chlorine Gas	CG	Connector	CON
Chlorine Vacuum	CGV	Console	CSL
Circle	CIR	Constant Speed	CS
Circuit	CKT	Construction	CONSTR
Circuit Breaker	CB	Construction Joint	CJ
Circuit Closing	CKT CL	Continue	CONT
Circuit Opening	CKT OP	Continued	CONT
Circular	CIRC	Continuous	CONT
Circumference	CIRC; CIRCUM	Contract	CONTR
Classification	CLASS	Contract Limit Line	CLL
Clay Pipe	CP	Contractor	CONTR
Cleanout	CO	Control	CONT
Clearance	CLR	Control Cable	CC
Clino Bed	CLB	Control Panel	CP
Closet	CLO	Control Circuit	CONT CKT
Coefficient	COEF	Control Power Transformer	CPT
Cold Water	CW	Control Relay	CR

Term	Abbreviation	Term	Abbreviation
Control Room	CR	Cutoff	CO
Conventional	CONV	Cutoff Valve	COV
Conventional & Chemical Treatment	C&CT	Cutout	CO
Converter	CONV	Cutout Valve	COV
Coordinate	COORD	Cylinder	CYL
Copper	COP	Dead Load	DL
Corkboard	CKBD	December	DEC
Corner	COR	Decrease	DEC; DECR
Corner Guard	CG	Deflect	DEFL
Corporation	CORP	Deformed Bar Anchor	DBA
Corrosion	CRSN	Degree	DEG
Corrugate	CORR	Department	DEPT
Corrugated Metal	CM	Design	DSGN
Corrugated Metal Pipe	CMP	Designation	DES
Corrugated Steel Pipe	CSP	Detail	DET
Cosecant	CSC	Develop	DVL
Cosine	COS	Development	DEV
Cotangent	COT	Diagonal	DIAG
Counterclockwise	CCKW	Diagram	DIAG
Countersink	CSK	Diameter	DIAM
Counterweight	CTWT	Diaphragm	DIAPH
County	CO	Difference	DIFF
Coupling	CPLG	Differential	DIFF
Covered Walkway	CW	Differential Pressure	DP
Cross Arm	X-ARM	Digested Sludge	D/S
Cross Beam	X-BM	Digital	DGTL
Crossing	XING	Dimension	DIM
Cross Section	X-SECT	Direct	DIR
Crushed Surfacing Base Course	CSBC	Direct-Connect	DIR CON
Crushed Surfacing Top Course	CSTC	Direct Current	DC
Cubic Centimeter	CC; CM ³	Direct Digital Control	DDC
Cubic Foot	CU FT; FT ³ ; CF	Direct Drive	DDR
Cubic Foot Per Second	CFS; FT ³ /S	Direct Tension Indicators	DTI
Cubic Inch	CU IN; IN ³	Direction	DIR
Cubic Meters Per Second	CU M/S	Directional	DIR
Cubic Yard	CU YD; YD ³ ; CY	Disassemble	DISASM
Cubic Foot Per Minute	FT ³ /MIN	Discharge	DISCH
Cubic Meter	CM; M ³	Disconnect	DISC
Culvert	CULV	Disconnect Switch	DS
Current	CUR	Dissolved Oxygen	DO
Current Relay	CR	Distance	DIST
Current Transformer	CT	Distribution Box	DB

Term	Abbreviation	Term	Abbreviation
Distribution Panel	DPNL	Electric Power Distribution	EPD
Distributor	DISTR	Electric Water Cooler	EWC
Door Closer	DCL	Electrode	ELCTD
Door Stop	DST	Elementary	ELEM
Double	DBL	Elevate	ELEV
Double-Acting Door	DAD	Elevation	EL; ELEV
Double-Acting Steam	DASTM	Elevator	ELEV
Double-Hung Windows	DHW	Emergency	EMER
Double-Pole Double-Throw	DPDT	Emergency Overflow	EO
Double-Pole Double-Throw Switch	DPDT SW	Enamel	ENAM
Double-Pole Single-Throw	DPST	Encased	ENCSD
Double-Pole Single-Throw Switch	DPST SW	Enclose	ENCL
Double-Pole Switch	DP SW	Enclosure	ENCL
Douglas Fir	DF	End Vertical Curve	EVC
Dowel	DWL	End to End	E to E
Downspout	DS	Endwall	EW
Drain Board	DRB	Energize	ENRGZ
Drain Tile	DT	Energize Closed	EC
Drawer	DWR	Energize Open	EO
Drawing	DWG	Energy	ENGY
Drinking Fountain	DF	Engine	ENG
Drop Inlet	DI	Engineer	ENGR
Drop Manhole	DMH	Engineering	ENGRG
Ductile Iron	DI	Engrave	ENGRV
Ductile Iron Mechanical Joint	DIMJ	Enlarge, Enlarged	ENL
Ductile Iron Pipe	DIP	Entrance	ENTR
Dye Penetrant Testing	DT	Environment	ENVIR
Each Face	EF	Environmental	ENVIR
Each Layer	EL	Equally	EQL
Each Way	EW	Equally Spaced	EQL SP
Easement	EASE; ESMT	Equation	EQ
Eccentric	ECC	Equipment	EQUIP
Edge of Pavement	EP	Equivalent	EQUIV
Edge of Shoulder	ES	Erection	ERECT
Edge Thickness	ET	Escalator	ESC
Effluent	EFL	Estimate	EST
Elapsed Time Meter	ETM	Excavate	EX
Electric	ELEC	Excavation	EXC
Electrical	ELEC	Except	EXC
Electrical Load Center	ELC	Excluding	EXCL
Electrically Operated Valve	ELV	Exhaust	EXH
Electric-Motor Driven	EMD	Exhaust Fan	EF

Term	Abbreviation	Term	Abbreviation
Existing	EXIST	Four-Pole Switch	4P SW
Expand	EXP	Four-Way	4WAY
Expansion	EXP; EXPAN	Four-Wire	4W
Expansion Anchor	EXP AHR	Freeway	FWY
Expansion Joint	EXP JT	Frequency	FREQ
Explosion-Proof	EP	Fresh Air	FRA
Exposed	EXP	Fresh Water	FW
Extension	EXT	Fresh Water Pump	FWP
Exterior	EXT	Fuel Oil Return	FOR
External	EXT	Fuel Oil Supply	FOS
External Pipe Thread	EPT	Full Voltage Non-Reversing	FVNR
Extra Fine (threads)	E F	Full Voltage Reversing	FVR
Extra Strong	XSTR	Furnished By Others	FBO
Extreme High Water	EHW	Furred	FUR
Extreme Low Water	ELW	Furring	FUR
Fabricate	FAB	Gage Board	GABD
Face Brick	FB	Gallon	GAL
Face of Concrete	FOC	Gallons Per Day	GPD
Face of Finish	FOF	Gallons Per Hour	GPH
Face of Masonry	FOM	Gallons Per Minute	GPM
Face of Studs	FOS	Gallons Per Second	GPS
Face to Face	F to F	Galvanized (Hot Dip)	GALV
Facility	FACIL	Galvanized Iron	GALVI
Factory	FCTY	Galvanized Steel	GALVS
Factory Finish	FF	Galvanized Steel Pipe	GSP
Fahrenheit	F	Gas Fired Make Up Heater	GFMUH
Figure, Figures	FIG; FIGS	Gasket	GSKT
Finish	FIN	Gasoline	GAS
Fire Alarm	FA	Gate Valve	GTV
Federal Specification	FS	General	GENL
Feeder	FDR	General Special Provisions	GSP
Flat Head	FH	Generator	GEN
Flexible	FLEX	Girder	GIR
Footing	FTG	Glass Block	GLB
Forward	FWD	Glass Lined Cast Iron Pipe - Flanged Joint	GLCI
Forward Reverse	FR	Glass Lined Cast Iron Pipe - Mechanical Joint	GLCIMJ
Foundation	FDN	Glazed Concrete Masonry Unit	GCMU
Foundry	FDRY	Globe Valve	GLV
Four-Conductor	4/C	Government	GOVT
Four-Pole	4P	Grab Bar	GB
Four-Pole Double-Throw Switch	4PDT SW	Grating	GRTG
Four-Pole Single-Throw Switch	4PST SW		

Term	Abbreviation	Term	Abbreviation
Gravel	GVL	Highway	HWY
Grooved Coupling	GC	Hollow Core	HC
Grooved Coupling Fitting	GCF	Hollow Metal	HM
Ground	GR	Hollow Structural Section	HSS
Ground Face	GF	Hollow Tile	HT
Ground Fault Relay	GFR	Horizontal	HORIZ
Ground Fault Interrupter	GFI	Horsepower	HP
Guage	GA	Hose Bib	HB
Gypsum	GYP	Hose Rack	HR
Gypsum Dry Wall	GPDW	Hot Mix Asphalt	HMA
Gypsum Lath	GPL	Hot Water	HW
Gypsum Tile	GPT	Hot Water Heater	HWH
Gypsum Wallboard	GWB	Hot Water Return	HWR
Hand-Hole	HH	Hot Water Supply	HWS
Hand-Off-Auto	HOA	Housing	HSG
Hand-Off-Remote	HOR	Howler	HW
Hanger	HGR	Hub Drain	HD
Hardboard	HBD	Hub Joint	HJ
Hard-Drawn	HD DRN	Hundred	HUND
Hardness	HDNS	Hydraulic	HYDR
Handrail	HR	Hydrogen-Ion Concentration	PH
Hardware	HDWE	Hydrogen Peroxide	H2O2
Hardwood	HDWD	Identify	IDENT
Headed Anchor Stud	HAS	Ignition	IGN
Header	HDR	Illuminate	ILLUM
Head Joint	HJT	Incandescent	INCAND
Heater	HTR	Inch per Second	IPS
Heating	HTG	Inch-Pound	IN LB
Heating Ventilating and Air Conditioning	HVAC	Incinerator	INCIN
Heavy-Duty	HD	Include	INCL
Height	HGT	Increase	INCR
Hexagonal	HEX	Increment	INCR
High Early-Strength Cement	HES	Independent Wire Rope Core	IWRC
High Intensity Discharge	HID	Indicate	IND
High Pressure Sodium	HPS	Industry	IND
High Strength	HS	Influent	INFL
High Strength Bolt	HSB	Information	INF; INFO
High Voltage	HV	Inlet and Outlet	I&O
High Voltage Regulator	HVR	Inorganic	INORG
High Water	HW	Inside Diameter	ID
High Water Line	HWL	Inside Face	IF
High Water Mark	HWM	Inside Radius	IR

Term	Abbreviation	Term	Abbreviation
Install	INS	Landing	LDG
Installation	INS	Latching Relay	LR
Instrument	INST	Lateral	LATL
Insulate	INSUL	Latitude	LAT
Intake	INTK	Lavatory	LAV
Interconnection	INTCON	Layout	LO
Interior	INT	Leakage	LKG
Interlock	INTLK	Left Bank	LBK
Intermediate	INTERM	Left Hand	LH
Internal	INTL	Left Regular Lay	LRL
Internal Combustion	IC	Length	LG
Internal Pipe Thread	IPT	Length of Curve	LC
International Building Code	IBC	Letter	LTR
International Pipe Standard	IPS	Light Control	LC
Interrupting Capacity	IC	Lighting	LTG
Intersect	INTSCT	Lighting Contractor	LC
Interstate	I	Lightning Arrester	LA
Invert	INV	Lightproof	LP
Iron Pipe	IP	Light Switch	LTSW
Iron Pipe Size	IPS	Lightweight	LW
Iron Pipe Thread	IPT	Limit Switch	LS
Irregular	IRREG	Linear Feet	LF
Island	IS	Linear, Lineal	LIN
Janitor	JAN	Lintel	LNTL
January	JAN	Liquid	LIQ
Job Order	JO	Liquefied Petroleum Gas	LPG
Junction	JCT	Live Load	LL
Junction Box	JB	Loading	LDG
Keene's Cement Plaster	KCP	Loading Relay	LDR
Keeping	KPG	Local Panel	LP
Key Interlock	K	Local Remote	LR
Keyway	KWY	Locate	LCT
Kilonewton	KN	Locked	LKD
Kilowatt	KW	Locknut	LKNT
Kilovolt Ampere	KVA	Lockout Stop Push Button	LOS
Kilometer	KM	Lock Washer	LK WASH
Kilopunds	KIPS; K	Longitudinal	LONG
Kitchen	KIT	Long Radius	LR
Knock Down	KD	Louver	LVR
Laboratory	LAB	Louvered Door	LVD
Lag Bolt	LB	Lower Explosive Limit	LEL
Laminate	LAM	Low Point	LPT

Term	Abbreviation	Term	Abbreviation
Low-Water Line	LWL	Metal Floor Decking	MFD
Lumber	LBR	Metal Furring	MTRF
Machine	MACH	Metallic	MTLC
Machine Bolt	MB	Metallurgical	MET
Magnetic Control Coil	MCC	Metal Roof Decking	MRD
Maintenance	MAINT	Metal Threshold	MTHR
Male Pipe Thread	MPT	Meter (instrument)	MTR
Malleable	MALL	Meters	M
Malleable Iron	MI	Metering	MTR
Manhole	MH	Methylene Blue Active Substances	MBAS
Manhole Cover	MC	Metal Halide	MHD
Manual Auto	MA	Middle	MID
Manufacture	MFR	Miles Per Hour	MPH
Manufactured	MFD	Millimeter	MM
Manufacturer	MFR	Million Gallons per Day	MGD
Manufacturing	MFG	Mill Type Steel Pipe	MTS
Masonry	MSNRY	Millwork	MWK
Masonry Opening	MO	Minimum	MIN
Master Switch	MSW	Minute	MIN
Material	MATL	Miscellaneous	MISC
Material List	ML	Mixed Liquor	ML
Maximum	MAX	Modify	MOD
Maximum Capacity	MAX CAP	Modular	MOD
Maximum Water Surface	MWS	Modulate-Close	MC
Mean High Water	MHW	Modulate/Demodulate	MODEM
Mean Higher High Water	MHHW	Moisture	MSTRE
Mean Low Water	MLW	Molding	MLDG
Mean Lower Low Water	MLLW	Monument	MON
Mean Sea Level	MSL	Motor Control Center	MCC
Measure	MEAS	Motor Starter	MS
Mechanical	MECH	Motor Starter Panel	MSP
Mechanical Mounting Panel	MMP	Mounted	MTD
Mechanical Joint	MJ	Mounting	MTG
Mechanism	MECH	Mullion	MULL
Mercury Vapor	MERC	Multiplexer	MUX
Median	MDN	Nailable	NL
Medium	MED	Nameplate	NPL
Membrane	MEMB	National	NATL
Membrane Waterproofing	MWP	National Coarse (thread)	NC
Meridian	MER	National Electrical Code	NEC
Metal Casement Window	MCW	National Electrical Code Standards	NECS
Metal Door	METD	National Extra Fine (thread)	NEF

Term	Abbreviation	Term	Abbreviation
National Fine (thread)	NF	Open-Stop-Close	OSC
National Geodetic Vertical Datum 1929	NGVD 29	Operate	OPR
National Pipe Thread	NPT	Operation	OPN
National Wire Gauge	NWG	Opposite	OPP
Natural	NAT	Opposite Hand	OPH
Near Face	NF	Opposite Surface	OPS
Near Side	NS	Optional	OPTL
Necessary	NEC	Original	ORIG
Neutral	NEUT	Outlet	OUT
Night Light	NL	Output	OUT
Nipple	NIP	Outside Circumference	OC
No. 1 Water, Potable	1-W	Outside Diameter	OD
No. 2 Water, Chlorinated Effluent	2-W	Outside Face	OF
Noise Reduction	NR	Outside Radius	OR
Noise Reduction Coefficient	NRC	Out to Out	O to O
Non-Automatic	NA	Oval Head Machine Screw	OHMS
Non Destructive Testing	NDT	Oval Head Wood Screw	OHWS
Nonreinforced-Concrete Pipe	NRCP	Overcrossing	O-XING
Normal	NORM	Overcurrent	OC
Normally Closed	NC	Overcurrent Relay	OCR
Normally Open	NO	Overflow	OVFL
North American Vertical Datum 1988	NAVD 88	Overhead	OH
Northbound	NB	Overhead Loading	OHL
Not Applicable	NA	Overload	OVL
Not in Contract	NIC	Overload Relay	ORLY
Not to Scale	NTS	Oxygen	OXY
November	NOV	Package	PKG
Number	NO	Painted	PTD
October	OCT	Paper Towel Dispenser	PTD
Ohmmeter	OHM	Paper Towel Receptor	PTR
Oil Circuit Breaker	OCB	Parallel	PRL
Oil Circuit Re-closer	OCR	Parking	PK
Oil Mat	OM	Partial	PART
On Center	OC	Particle Board	PBD
On-Off-Auto	OOA	Partition	PTN
One-Pole	SP	Pascal	PA
Open-Close (D)	OC	Paving	PV
Open-Close-Auto	OCA	Pavement	PVMT
Open-Close-Open	OCO	Pedestal	PED
Opening	OPNG	Pedestrian	PED
Open Site Drain	OSD	Pedestrian Overhead Walkway	OHL
		Penetrate	PEN

Term	Abbreviation	Term	Abbreviation
Penetration	PEN	Point on Tangent	POT
Penny Nail (size)	D	Point on Vertical Curve	PVC
Percent	PCT	Polypropylene Lined	PPL
Perforate	PERF	Polyvinyl Chloride	PVC
Performance Evaluation and Review Technique	PERT	Porcelain Enamel	PE
Perimeter	PERI	Portable	PORT
Permanent	PERM	Portland Cement Concrete	PCC
Perpendicular	PERP	Position	POSN
Photocell	PC	Post-Tensioned Concrete	PSC
Pig Catch Point	PCP	Potable Water	POTW
Pilaster	P	Potential	POT
Piling	PLG	Potential Switch	PSW
Pillar	PLR	Potential Transformer	PT
Pipe Hanger	PH	Pound	LB
Pipeline	PPLN	Pound Per Cubic Foot	LB/FT ³ ; PCF
Pipe Sleeve	PSL	Pound Per Horsepower	LB/HP; PHP
Pipe Tap	PT	Pounds Per Square Foot	PSF; LBS/FT ²
Piping	PP	Pounds Per Square Inch	PSI; LBS/IN ²
Pivot Point	PP	Pounds Per Square Inch (Gauge)	PSIG
Plain End	PE	Power Amplifier	PA
Plan View	PV	Power and Lighting	P&L
Plans, Specifications and Estimates	PS&E	Power and Lighting Distribution	P&L DISTR
Plant Waste	PW	Power Circuit Breaker	PCB
Plaster	PLAS	Power Factor	PF
Plastic	PLSTC	Powerhouse	PWRH
Plastic Laminate	PLAM	Power Pole	PP
Plate Steel	PL	Power Takeoff	PTO
Platform	PLATF	Precast	PC
Plug Mold	PM	Prefabricated	PREFAB
Plug Valve	PV	Preferred	PFD
Plumbing	PLMB	Prefinished	PFN
Plunger	PLGR	Preliminary	PRELIM
Plywood	PLYWD	Premolded Joint Filler	P J F
Pneumatic	PNEU	Preparation	PREP
Point	PT	Prepare	PREP
Point of Compound Curve	PCC	Pressure	PRES
Point of Curvature	PC	Pressure Gauge	PG
Point of Intersection	PI	Pressure-Reducing Valve	PRV
Point of Reverse Curve	PRC	Pressure Relief Valve	PRFV
Point of Tangency	PT	Pressure Switch	PS
Point on Horizontal Curve	POC	Prestressed	PS
		Prestressed Concrete	PSC

Term	Abbreviation	Term	Abbreviation
Prestressed Concrete Pipe	PCP	Rectangle	RECT
Primary	PRIM	Rectangular	RECT
Primary Sludge	P/S	Rectifier	RECT
Priority	PRI	Reduced Voltage Non-Reversing	RVNR
Problem	PROB	Reduced Voltage Reversing	RVR
Procedure	PROC	Reducer	RDCR
Process and Instrumentation Diagram	P&ID	Redwood	RDW
Product	PROD	Reference	REF
Profile	PF	Reference Line	REFL
Project	PROJ	Refrigerator	REFR
Projection	PJTN	Regenerate Solution	RGS
Property	PROP	Regenerate Carbon	RGC
Property Line	PL	Regulator	REG
Public Address	PA	Reinforce	REINF
Puget Sound Power and Light	PSP&L	Reinforced Concrete	RC
Pull Box	PB	Reinforced Concrete Box	RCB
Pulse Duration	PD	Reinforced Concrete Culvert Pipe	RCCP
Pulse Frequency	PF	Reinforced Concrete Pipe	RCP
Pump Discharge	PDISCH	Reinforcing Steel	RST
Pump Station	PS	Relocated	RELOC
Pump Suction	PMP SCT	Remote	RMT
Push Button	PB	Remote Control	RC
Push-Button Station	PB STA	Remote Panel	RP
Push Button Switch	PB	Remote Multiplexing Module	RM
Push-on-Joint	PO	Remote Multiplexer	RM
Quadrant	QUAD	Removable Cover	REM COV
Quality	QUAL	Remove	RMV
Quantity	QTY	Remove and Replace	R&R
Radial	RDL	Replace	REPL
Radius	R; RAD	Reproduce	REPRO
Radiographic Testing	RT	Required	REQD
Railroad	RR	Reservoir	RSVR
Railway	RY	Resilient	RESIL
Rain Leader	RL	Resistor	RES
Rapid Access Device	RAD	Retaining	RTNG
Rating	RTG	Retaining Wall	RET WALL
Receiver	RCVR	Return	RTN
Receptacle	RCPT	Return Activated Sludge	RAS
Recess	REC	Return Air	RA
Recirculate	RECIRC	Reverse	REV
Recommend	RECM	Revise	REV
Recorder	RCDR	Revision	REV

Term	Abbreviation	Term	Abbreviation
Revolutions per Minute	RPM	Section	SECT
Right Angle	RTANG	Select	SEL
Right Bank	RBK	Selector	SEL
Right Hand	RH	Self-Tapping	SLFTPG
Right-Hand Drive	RH DR	Sensor	SNSR
Right-of-Way	R/W	Separate	SEP
Right Regular Lay	RRL	September	SEPT
Rigid Steel	RS	Serial	SER
Rigid Galvanized Steel	RGS	Settling	SETLG
Rigid Galvanized Steel PVC Coated	RGSP	Seven Conductor	7/C
Roadway	RDWY	Sewage	SEW
Rod Hole	RH	Sewage Gas	SG
Roller Bearing	RLR BRG	Sheathing	SHTHG
Roof Drain	RD	Sheet Glass	SG
Roof Hatch	RFH	Shelving	SH
Roofing	RFG	Shield	SHLD
Roof Vent	RV	Shored	SHO
Root Mean Square	RMS	Shoring	SHO
Rotate	ROT	Short Circuit Rating	SCR
Rough	RGH	Shoulder	SH; SHLD
Rough Opening	RO	Sidewalk	SD; SDWK
Round	RND	Siding	SDG
Round Head	RDH	Similar	SIM
Rubber	RBR	Single	SGL
Rubber Base	RB	Single Conductor	1/C
Rubber Lined Steel	RLS	Single-Phase	1 PH
Saddle	SDL	Single-Pole	SP
Safety Glass	SFGL	Single-Pole Double-Throw	SPDT
Sanitary	SAN	Single-Pole Double-Throw Switch	SPDT SW
Sanitary Sewer	SS	Single-Pole Single-Throw	SPST
Schedule	SCHED	Single-Pole Single-Throw Switch	SPST SW
Schematic	SCHEM	Single-Pole Switch	SP SW
Screen	SCRN	Sleeve	SLV
Screwed Joint	SCR	Slower-Faster	SF
Sea Level Rise	SLR	Socket Head Cap Screw	SHCS
Sealant	SNT	Soil Pipe	SP
Sealed	SLD	Solder	SLDR
Seamless	SMLS	Solenoid	SOL
Seating	STG	Solenoid Valve	SOLV
Seconds	SEC	Solid Core	SC
Secondary	SEC	Solids Handling System	SHS
Secondary Digested Sludge	SD/S	Solvent Weld Steel	SOL

Term	Abbreviation	Term	Abbreviation
Soundproof	SNDPRF	Street	ST
Southbound	SB	Strength	STR
Space Heater	SPH	Structural	STRL
Spacing	SPG	Structure	STRUCT
Speaker	SPKR	Submerged	SUBMG
Special	SPCL	Substation	SUBSTA
Special Provisions	SPEC PROV	Substitute	SUBST
Specification	SPEC	Suction	SUCT
Specific Gravity	SP GR	Sump Tank	SMTK
Speed Control Unit	SCU	Supply	SUP
Spent Carbon	SPC	Support	SPRT
Spent Regenerate	SP REG	Surface	SUR
Spot-Weld	SW	Surface Wash	SW
Square	SQ	Survey	SURV
Square Centimeter	CM ² ; SQ CM	Suspend	SUSP
Square Foot	FT ² ; SQ FT	Suspension	SPNSN
Square Head	SQH	Switch	SW
Square Inch	IN ² ; SQ IN	Switchboard	SWBD
Square Root	SQRT	Switchgear	SWGR
Square Yard	SQ YD; YD ²	Symbol	SYM
Stabilize	STAB	Symmetrical	SYM
Stabilizer	STAB	Symmetrical About	SYM ABT
Stainless	STNLS	Synchronize	SYNC
Stainless Steel	SST	System	SYS
Stairway	STWY	Tackboard	TKBD
Standard	STD	Tackstrip	TKS
Standard Cubic Feet per Minute	SCFM	Tangent	T; TAN
Standby	STBY	Taper Pipe Thread	NPT
Standoff	STDF	Taxiway	TWY
Standpipe	SP	T-Bar (structural shape)	T
Start and Stop	ST & SP	Technical	TECH
Starter	START	Telemetry	TLMY
Starting	STG	Telephone	TEL
State Route	SR	Television	TV
Station	STA	Temperature	TEMP
Stiffener	STIFF	Temperature Detector Relay	TD
Stirrup	STIR	Temperature Switch	TSW
Storage	STOR	Tempered Glass	TG
Storeroom	STRM	Template	TEMPL
Storm Drain	SD	Temporary	TEMP
Straight	STR	Temporary Bench Mark	TBM
Strainer	STR	Tentative	TENT

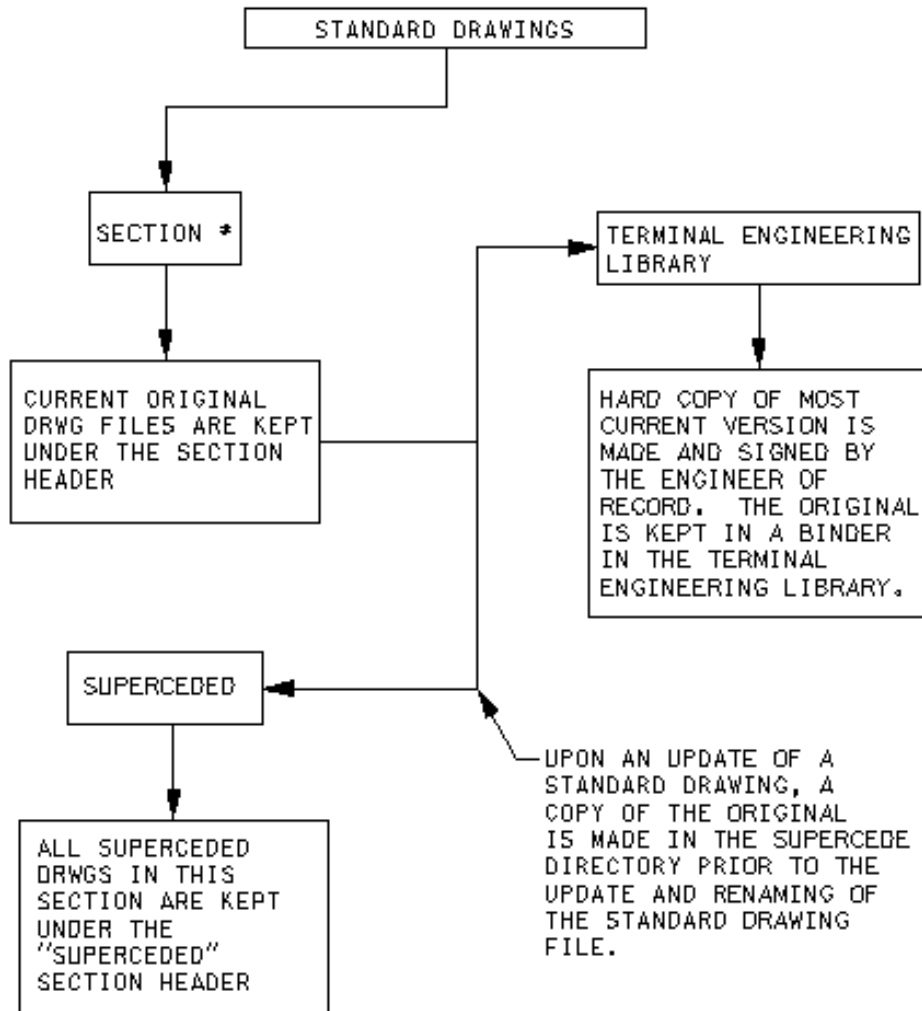
Term	Abbreviation	Term	Abbreviation
Terminal	TERM	Top of Concrete	TOC
Terminal Board	TB	Top of Curb	TOC
Terminal Junction Box	TJB	Top of Slab	TOS
Termination	TERMN	Top of Steel	TOS
Tertiary	TER	Top of Wall	TOW
Test Hole	TH	Topping	TOPG
Test-Off-Auto	TOA	Total Chlorine Residual	TCL2
Test Switch	TSW	Total Load	TLLD
Thermometer	THERM	Total Organic Carbon	TOC
Thermostat	THERMO	Total Oxygen Demand	TOD
Thickness	TH	Towel Bar	TB
Thousand	M	Township	T
Thousand (feet) Board Measure	MBM	Traffic	TRFC
Thousand Pounds	KIP	Transducer	XDCR
Thread	THD	Transformer	XFMR
Thread Both Ends	TBE	Transition	TRANS
Thread One End	TOE	Transition Coupling	TC
Three-Conductor	3/C	Transmitter	XMTR
Three-Phase	3PH	Transportation	TRANSP
Three-Pole	3P	Transverse	TRANS
Three-Pole Double-Throw	3PDT	Treated	TRTD
Three-Pole Single-Throw	3PST	Treatment	TR
Three-Way	3WAY	Tributary	TRIB
Three-Wire	3W	Trigonometry	TRIG
Threshold	THR	Triple-Pole	3P
Through	THRU	Triple-Pole Double-Throw	3PDT
Thrust Block	TB	Triple-Pole Double-Throw Switch	3PDT SW
Thrust Tie	TT	Triple-Pole Single-Throw	3PST
Timber	TMBR	Triple-Pole Single-Throw Switch	3PST SW
Time Clock	TC	Triple-Pole Switch	3P SW
Time Delay	TD	Triple-Throw	3T
Time-Delay Closing	TDC	Tubing	TBG
Time-Delay Opening	TDO	Turbidity	TURB
Time Delay Relay	TDR	Turning Point	TP
Timer Relay	TM	Twisted Shield Pair	TSP
Time-Repeat Cycle	TR	Two-Conductor	2/C
Toggle	TGL	Two-Phase	2PH
Toilet	T	Two-Pole	DPDT
Toilet Partition	TPTN	Two-Pole Double-Throw	DPDT
Tongue and Groove	T&G	Two-Pole Single-Throw	DPST
Top and Bottom	T&B	Two-Way	2WAY
Top Face	TF	Typical	TYP

Term	Abbreviation	Term	Abbreviation
Tyton Joint	TJ	Vinyl Fabric	VF
Ultimate	ULT	Vinyl Tile	VT
Ultrahigh Frequency	UHF	Vitrified Clay	V
Ultrahigh Density Polyethylene	UHDP	Vitrified Clay Pipe	VCP
Ultrahigh Molecular Weight Polyethylene	UHMW - PE	Vitrified Clay Tile	VCT
Ultrasonic Frequency	UF	V-Jointed	VJ
Ultrasonic Testing	UT	V-Joint	VJ
Undercrossing	U-XING	Volatile Hydrocarbons	VHC
Undercut	UC	Voltage	V
Underground	UGND	Voltage Regulator	VR
Underside	US	Voltage Relay	VRLY
Unfinished	UNFIN	Voltmeter	VM
Under Voltage Relay	UVR	Volume	V; VOL
Uniform	UNIF	Wainscot	WAS
Uniform Building Code	UBC	Wallboard	WLB
Unit Heater	UH	Wall Hung	WH
United Facilities Criteria	UFC	Wall to Wall	W/W
Universal	UNIV	Wall Vent	WV
Unless Otherwise Noted	UON	Warehouse	WHSE
Vacuum	VAC	Washer	WSHR
Valve Box	VB	Waste Activated Sludge	WAS
Valve Stem	VSTEM	Water Closet	WC
Vapor Barrier	VB	Water Heater	WH
Vapor Proof	VAP PRF	Water Line	WL
Variable	VAR	Water Meter	WM
Variable Speed	VS	Waterproof	WTRPRF
Var-Hour Meter	VARHM	Water Pump	WP
Velocity	VEL	Water Repellent	WR
Veneer	VNR	Water Seal Booster	WSB
Ventilator	VENT	Waterstop	WS
Vent Pipe	VP	Water Surface	WS
Vent Through Roof	VTR	Watertight	WTRTT
Vermiculite	VRM	Watt-hour	WH
Vertical	VERT	Watt-hour Meter	WHM
Vertical Curve	VC	Watt-hour Demand Meter	WHDM
Vertical Grain	VG	Wattmeter	WM
Very High Frequency	VHF	Weathering Sheet Steel	W
Very Low Frequency	VLf	Weatherproof (insul.)	WP
Vibrate	VIB	Weight	WT
Vibration	VIB	Welded Steel	WS
Vinyl Asbestos Tile	VAT	Welded Wire Fabric	WWF
Vinyl Base	VB	Welded Wire Rope	WWR

Term	Abbreviation
Wheel Bumper	WHB
Wide Flange (beam)	W
Winding	WDG
Wingwall	WW
Wire Gauge	WG
Wire Mesh	WM
Wire Mold	WM
Wireway	WW
Wiring	WRG
Without	W/O
Wood Stave	WOOD
Working Point	WP
Wrought Iron	WI
Wrought Steel	WS
Yellow	YEL

809.32 Standard Drawings

The only Standard Drawings to be included in a contract are copies of the signed originals kept in the Terminal Engineering Library. These are the only drawings that hold the Engineer of Record’s signature. Hard copies of the current Standard Drawings are made directly from the Library record set and included in the final printed version of the contract plans. To ensure that WSF maintains a history of changes to all the standard drawings the following diagram is used.

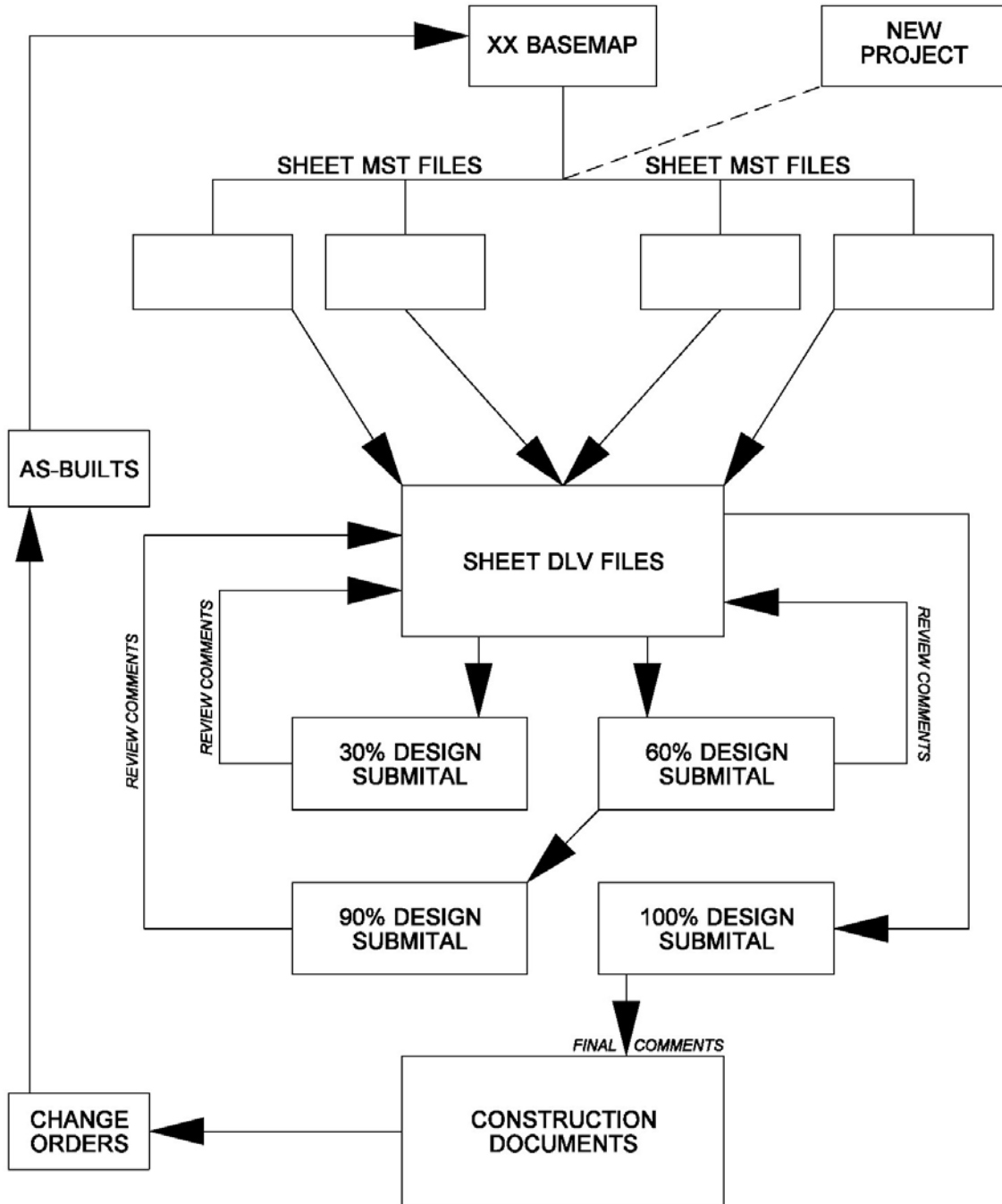


Standard Drawing Diagram
Exhibit 800-55

Under each section of standard drawings there will be found the current electronic version of the Standard Drawings within that section. Before revisions are made to the current file a copy of the deliverable (.dlv) and the master file (.mst) for the drawing is made in the “Superseded” sub-directory of the section. The new version of the Standard drawing’s deliverable and master files will then be saved with a new version letter in the file name. This is done to ensure that there is a record of the existing drawing before it is overwritten with a new version. Standard Drawing Files should never be used or found in any other than the Standard Drawings directory on the WSF’s Termlib server.

809.33 Updating Project Basemaps

To keep all project basemaps current, the following flow chart is used to help with the process in maintaining the basemap files. Updating project basemaps is important to reflect the current existing conditions for all new projects that will be started. As a project goes through the construction process and is completed, the CADD Lead for the project will then incorporate the changes into the project basemap. Once the project basemap is updated with the as-built information, it will then be copied to and stored as the updated basemap in the basemap directory found in the “Terminal Facilities Information” (Term_fac_Info) directory.



Project Plan Development & Updating Basemaps Flow Chart
 Exhibit 800-56

810.03 Review Submittals

Once the plan set has been prepared for submittal an experienced CADD operator must perform a drafting plan review. Once the plan set has been amended to incorporate changes from this review the plan set will be ready for distribution for review by WSF staff and other associated parties.

Once the plot files have successfully plotted, they are ready for PS&E archive submittal. The plan files will be copied to the folder titled with the next submittal stage. The files left in the just completed submittal folder will be compressed and left as a record to previous project submittals.

810.04 Final Submittals

Submittal of the final plan set will follow the same process as that for review submittals with the exception that; once the plans have been sealed and approved for transmittal to Olympia for Advertisement, the CADD Manager will archive the entirety of the project CADD directory to the Terminal Design archive on the U: drive.

Upon completion of the design portion of the project the design team leader shall generate a memorandum to the WSF CADD Manager. The memo shall request that a CD be created containing the contents of the project directory. A copy of this memo shall be given to the WSF Marine Project Engineer and a copy shall be placed in the project files.

The CD shall contain the entire final PS&E submittal. A copy of this CD will be archived with the Project archives kept at the home offices of Washington State Ferries Terminal Engineering.

810.05 Design File Archiving

Once the final submittal is completed and has been signed by all pertinent engineers, the files will be transferred to the U:\ drive (archive drive). After the files have been transferred it is considered a completed project and write access is restricted. A CD of the project along with any Standard drawings will be compiled and stored as a backup copy to that on the server.

810.06 As-Built Drawings

It is standard business practice for WSDOT to obtain As-built drawings at the close of the construction project. These drawings are to be continuously updated with the changes, substitutions, and as-built information that occur during the course of the project. Some As-built information will require changes be made to the WSF basemap.

CADD copies of the As-built drawings will be kept with the archived project CADD files in a folder labeled "AS-BUILTS"

G:\Term_Fac_Info\Terminal\Facility_Plans\Terminal_basemap.mst

Examples of work that require changes to the basemap are:

- Placement of new utility lines
- Construction of new on site structures
- Replacement of existing structures with more current technology
- Relocation of existing elements

(See [Section 809.33](#) for information on updating the project basemap.)

811**Environmental Permit Standards****811.01 Permit Drawing Checklist**

There are two different types of drawings required for permit applications: Joint Aquatic Resource Permits Application (JARPA) drawings and Substantial Shoreline Development drawings. JARPA drawings are submitted to the U.S. Army Corps of Engineers (Corps), the Washington Department of Fish and Wildlife (WDFW), the Washington Department of Ecology (Ecology), National Marine Fisheries Service (NMFS), and the U.S. Fish and Wildlife Service (USFWS). These agencies have different areas of jurisdiction and different regulatory mandates. Since the JARPA is the same for these agencies, each of their specific areas of jurisdiction must be shown on the drawings.

The Shoreline drawings are sent to local jurisdictions. Many local jurisdictions have their own requirements in addition to those required for the JARPA application. Differences include: scale, drawing size, and location of neighboring properties. The JARPA drawing works for some local jurisdictions, and can provide the basis for Shoreline drawings. An Environmental Permitting staff person will supply any additional information required by the City or County you are working in.

In addition to the Guidance for Completion of Drawings found in this section, the following information will assist in the preparation of permit drawings:

- Permit drawings, dimensions, scale bars, and contour lines will be in English measurement notation.
- Show the distance from MHHW to the point of Construction closest to shore and furthest from shore. If the area is too large to show sufficient detail in the plan view show the area or distance from MHHW to the work area on one sheet. Then include an additional sheet with a closer detail of the work.
- Show the depths of the work (i.e., for a dolphin, indicate the approximate depth of that dolphin) in contour intervals of 2 feet.
- Include Datum indicators.
- Include the Section, Township, and Range numbers for the terminal location.
- A vicinity map shall be placed in an upper corner of the plan view.
- All information shall be presented in a standard border.
- All drawings shall be to scale.

811.02 Format of Drawings

The following is a list of requirements for permit drawings.

(a) Guidance for Completion of Drawings

Required Drawings

Three types of illustrations are needed to properly depict the proposed activity: Vicinity Map, Plan View, and Cross-Sectional View. Coast Guard Bridge Permit drawings must also include clearance and elevation views. Drawings to scale should be prepared using clear printing, black ink, and the fewest number of sheets possible. Include the scale. The importance of clear accurate drawings cannot be overstated. At a minimum, drawings must contain the following information; other information may be required depending on project type. If you have questions regarding completing the drawings, call the appropriate agency.

1. Vicinity Map

A copy of a county or city road map, or a U.S. Geological Survey topographic map may be used. Include:

- a. North arrow.
- b. Name of water body (and river mile if appropriate).
- c. Location of the proposed activity (indicate with a circle, arrow, X, or similar symbol).
- d. Provide latitude and longitude of the site to the nearest second.
- e. Provide directions to the site – this is usually done using roads.

2. Plan View

This drawing illustrates the proposed project area as if you were looking down at the site from overhead.

- a. North arrow.
- b. Name of water body and direction of water flow.
- c. Location of existing shoreline. For Shoreline permits, show 200' landward and waterward of the shoreline. For tidal and non-tidal waters show the following:
 - i. **Tidal Waters:** Show the Mean Higher High and Mean Lower Low Water Marks, and/or wetland boundaries. Indicate elevation above datum.
 - ii. **Non-tidal waters:** Show the Ordinary High Water Mark or Line, Meander Line, and/or wetland boundary.
- d. Dimensions of the activity or structure and impervious surfaces, distance from property lines, and the distance it extends into the water body beyond the Mean Higher High, and Mean Low Water Mark or Line, and/or wetland boundaries, as appropriate.

- e. For Corps permits, indicate the distance to Federal projects and/or navigation channels (if applicable). To ascertain, call the Corps Regulatory Branch Office at (206) 764-3495.
- f. Show existing structures on subject and adjoining properties.
- g. Indicate adjoining property ownership.
- h. If fill material is to be placed, identify the type of material, amount of material (cubic yards), and area to be filled (acres).
- i. If project involves dredging, identify the type of material, amount of material (cubic yards), area to be dredged, method of dredging, and location of disposal site. Dredging in areas shallower than -10 feet needs to be clearly identified on drawings.
- j. Identify any part of the activity that has been completed.
- k. Indicate types and location of aquatic, wetland, riparian and upland vegetation.
- l. **The Following are not applicable on most projects—consult with the permitting department:**
 - i. Erosion control measures, stabilization of disturbed areas, etc.
 - ii. Utilities, including water, sanitary sewer, power and stormwater conveyance systems (e.g., bioswales).
 - iii. Indicate stormwater discharge points.
 - iv. Proposed landscaping where applicable (for complex landscape plans, please attach a separate drawing).
 - v. Where applicable, plans for development of areas on or off site as mitigation for impacts associated with the proposal.
 - vi. On all variance applications the plans shall clearly indicate where development could occur without approval of a variance, the physical features and circumstances on the property that provide a basis for the request, and the location of adjacent structures and uses.

3. Cross-Sectional View

This drawing illustrates the proposed activity as if it were cut from the side and/or front. Include:

- a. Location of water lines.
- b. Tidal Waters: Show the Mean Higher High and Mean Lower Low Water Marks or Lines, and/or wetland boundary.
- c. Non-tidal waters: Show the Ordinary High Water Mark or Line, and/or wetland boundary.
- d. Water depth or tidal elevation at waterward face of project.

- e. Dimensions of the activity or structure, and the distance it extends into the waterbody beyond the Mean Higher High and Mean Lower Low Water Mark or Line, and/or wetland boundaries.
 - f. Indicate dredge and/or fill grades as appropriate.
 - g. Indicate existing and proposed contours and elevations.
 - h. Indicate types and location of aquatic, wetland, and riparian vegetation present on site.
 - i. Indicate type and location of material used in construction and method of construction.
 - j. Indicate height of structure.
4. **Clearance and Elevation Views (Applies to Coast Guard Bridge Permits only)**
- a. Vertical clearance measured from Mean Higher (tidal waters) or Ordinary High (non-tidal water).
 - b. Horizontal clearance between piers or pilings.
 - c. Bottom elevation of the waterway at the bridge.

812**General Plan Sheets**

The following is a list and order of General Plan Sheets. Also included are starting numbering designations for the applicable plan sheet series.

**G01.00 PROJECT INDEX, PROJECT LOCATION AND VICINITY MAP
(COMBINED FOR SMALL PROJECTS)**

**G01.00 PROJECT LOCATION AND VICINITY MAP
(SEPARATE FOR LARGE PROJECTS)**

**G01.01 PROJECT INDEX
(FOR PROJECTS WITH GREATER THAN 80 SHEETS THE INDEX
WILL BE DONE SEPARATELY)**

G02.00 SUNDRY SITE PLANS
Sundry Site Plans are available for use at the following terminal locations:

- Anacortes
- Bainbridge Island
- Bremerton
- Clinton
- Eagle Harbor
- Edmonds
- Fauntleroy
- Friday Harbor
- Coupeville
- Kingston
- Lopez Island
- Mukilteo
- Orcas Island
- Point Defiance
- Port Townsend
- Seattle
- Shaw Island
- Southworth
- Tahlequah
- Vashon

SQ1 Summary of Quantities

These sheets are generated by [EBASE](#).

813

Civil Plan Sheet Series

The following is a list and order of General Plan Sheets. Also included are starting numbering designations for the applicable plan sheet series.

C00.00	CIVIL INDEX SHEET
C01.00	CIVIL GENERAL PLAN SHEETS BORROW, PIT, QUARRY, STOCKPILE, WASTE SITES & RECLAMATION PLANS
C02.00	STAGE CONSTRUCTION PLAN
C03.00	QUANTITY TABULATION SHEETS
C04.00	ALIGNMENT/RIGHT – OF – WAY/PAVING & GRADING PLAN SHEETS INCLUDES THE FOLLOWING SHEETS AND GENERAL ORDER:
	<u>C04.00</u> <u>MONUMENTATION</u>
	<u>C04.10</u> <u>ALIGNMENT</u>
	<u>C04.20</u> <u>SITE PREPARATION</u>
	<u>C04.30</u> <u>ROADWAY PROFILES</u>
	<u>C04.40</u> <u>GRADING PLANS</u>
	<u>X04.50</u> <u>ROADWAY SECTIONS</u>
<u>C05.00</u>	<u>SITE PREPARATION PLANS (IF ADDITIONAL NEEDED)</u> EXISTING TOPOGRAPHY, AND REMOVAL AND DEMOLITION WORK CAN BE SHOWN ON THE ALIGNMENT PLANS, BUT EXCESS DETAILS SHOULD BE SHOWN IN THIS SECTION.
<u>C06.00</u>	<u>EXISTING UTILITIES</u>
<u>C07.00</u>	<u>DRAINAGE PLANS/TESC PLANS</u> INCLUDES THE FOLLOWING SHEETS AND GENERAL ORDER: a. <u>DRAINAGE STRUCTURE NOTES</u> b. <u>DRAINAGE DETAILS</u>
<u>C08.00</u>	<u>UTILITY DETAILS</u> (ONLY IF THE CONTRACTOR WILL DO WORK ON EXISTING UTILITIES)
<u>C09.00</u>	<u>IRRIGATION & LANDSCAPE</u> a. <u>IRRIGATION STRUCTURE NOTES</u> b. <u>IRRIGATION PLANS</u> c. <u>IRRIGATION DETAILS</u> d. <u>LANDSCAPE & WETLANDS</u>
<u>C10.00</u>	<u>PAVING PLANS & PAVING DETAILS</u>
<u>C11.00</u>	<u>PAVEMENT MARKING PLANS & PAVEMENT MARKING DETAILS</u>
<u>C12.00</u>	<u>SIGNING PLANS</u>
<u>C13.00</u>	<u>TEMPORARY EROSION & SEDIMENT CONTROL (TESC) PLANS</u>
<u>C14.00</u>	<u>TRAFFIC CONTROL</u>

814**Structural Plan Sheet Series**

S00.00	STRUCTURAL INDEX
S01.00-S01.10	GENERAL
S02.00	SITE PLANS / DEMOLITION PLANS / DEMOLITION DETAILS
S03.00	PILES / PILING / SHAFT
S04.00	BULKHEAD / UPLAND
S05.00	TRESTLE
S06.00	BRIDGE SEAT
S07.00	TOWER/LIFT CYLINDER SHAFT
S08.00	HEADFRAME
S09.00	TRANSFER SPAN
S10.00	<u>APRON</u>
S11.00	<u>WIGNWALL</u>
S12.00	<u>DOLPHIN</u>
S13.00	<u>TIE-UP SLIP</u>
S14.00	<u>TERMINAL BUILDING</u>
S15.00	<u>OVERHEAD LOADING</u>
S16.00	<u>RAILING</u>
S17.00	<u>UNASSIGNED</u>
S18.00	<u>UNASSIGNED</u>

815***Fluid Power Hydraulic Plan Sheet Series***

H00.00	TRANSFER SPAN HYDRAULIC SYSTEM INDEX
<u>H00.1X</u>	<u>HYDRAULLIC SITE PLAN</u>
<u>H01.00</u>	TRANSFER SPAN HYDRAULIC SYSTEM NOTES
H02.00	TRANSFER SPAN HYDRAULIC SYSTEM SITE PLAN
H03.00	TRANSFER SPAN HYDRAULIC SYSTEM DEMOLITION
H04.00	TRANSFER SPAN HYDRAULIC SYSTEM INSTALLATION
H05.00	TRANSFER SPAN HYDRAULIC SYSTEM DETAILS
H06.00	OVERHEAD LOADING HYDRAULIC SYSTEM NOTES
H07.00	OVERHEAD LOADING HYDRAULIC SYSTEM SITE PLAN
H08.00	OVERHEAD LOADING HYDRAULIC SYSTEM DEMOLITION
H09.00	OVERHEAD LOADING HYDRAULIC SYSTEM INSTALLATION
H10.XX	OVERHEAD LOADING HYDRAULIC SYSTEM DETAILS

816***Electrical Design Drawing Series***

E00.00	ELECTRICAL SHEET INDEX
E01.00	ELECTRICAL SYMBOLS
E01.01	ELECTRICAL ABBREVIATIONS AND NOTES
<u>EA02.00</u>	<u>ELECTRICAL SITE PLAN – DEMOLITION</u>
<u>EA03.00</u>	<u>ELECTRICAL SITE PLAN</u>
<u>EA04.00</u>	<u>ELECTRICAL SITE POWER DISTRIBUTION ONELINE – DEMOLITION</u>
<u>EA05.00</u>	<u>ELECTRICAL SITE POWER DISTRIBUTION ONELINE</u>
<u>EA10.00</u>	<u>ELECTRICAL SITE TIE-UP SLIP– DEMOLITION</u>
<u>EA11.00</u>	<u>ELECTRICAL SITE TIE-UP SLIP</u>
<u>EA14.00</u>	<u>ELECTRICAL SITE ELECTRICAL DETAILS</u>
<u>EA15.00</u>	<u>ELECTRICAL PANEL SCHEDULES</u>
<u>EA16.00</u>	<u>ELECTRICAL SITE LIGHTING FIXTURE SCHEDULE</u>
<u>EA16.01</u>	<u>ELECTRICAL SITE LIGHTING PLAN</u>
<u>EA17.00</u>	<u>ELECTRICAL SITE SCHEMATICS</u>
<u>EA18.00</u>	<u>ELECTRICAL SITE CONDUIT AND WIRE SCHEDULE</u>
<u>EA19.00</u>	<u>ELECTRICAL SITE UNASSIGNED</u>
<u>EA20.00</u>	<u>ELECTRICAL SITE UNASSIGNED</u>
<u>EA40.00</u>	<u>ELECTRICAL SITE COMMUNICATION PLANS – DEMOLITION</u>
<u>EA41.00</u>	<u>ELECTRICAL SITE COMMUNICATION PLANS</u>
<u>EA42.00</u>	<u>ELECTRICAL SITE COMMUNICATION SITE BLOCK DIAGRAM – DEMOLITION</u>
	<u>ELECTRICAL SITE COMMUNICATION ONELINE - DEMOLITION</u>
<u>EA43.00</u>	<u>ELECTRICAL SITE COMMUNICATION SITE BLOCK DIAGRAM</u>
	<u>ELECTRICAL SITE COMMUNICATION ONELINE</u>
<u>EB08.00</u>	<u>BUILDING ELECTRICAL PLAN – DEMOLITION</u>
<u>EB09.00</u>	<u>BUILDING ELECTRICAL PLAN</u>
<u>EB14.00</u>	<u>BUILDING ELECTRICAL DETAILS</u>
<u>EB15.00</u>	<u>BUILDING PANEL SCHEDULES</u>
<u>EB16.00</u>	<u>BUILDING LIGHTING FIXTURE SCHEDULE</u>

<u>EB16.01</u>	<u>BUILDING LIGHTING PLAN</u>
<u>EB17.00</u>	<u>BUILDING SCHEMATICS</u>
<u>EB18.00</u>	<u>BUILDING CONDUIT AND CABLE SCHEDULE</u>
<u>EB19.00</u>	<u>BUILDING UNASSIGNED</u>
<u>EB20.00</u>	<u>BUILDING UNASSIGNED</u>
<u>EB40.00</u>	<u>BUILDING COMMUNICATION PLANS – DEMOLITION</u>
<u>EB41.00</u>	<u>BUILDING COMMUNICATION PLANS</u>
<u>EB42.00</u>	<u>BUILDING COMMUNICATION SITE BLOCK DIAGRAM – DEMOLITION</u>
	<u>BUILDING COMMUNICATION ONELINE - DEMOLITION</u>
<u>EB43.00</u>	<u>BUILDING COMMUNICATION SITE BLOCK DIAGRAM BUILDING COMMUNICATION ONELINE</u>
<u>EB44.00</u>	<u>BUILDING UNASSIGNED</u>
<u>EB45.00</u>	<u>BUILDING FIRE SYSTEM ONELINE</u>
<u>EB46.00</u>	<u>BUILDING FIRE SYSTEM PLANS</u>
<u>EC04.00</u>	<u>VEHICLE TRANSFER SPAN POWER DISTRIBUTION ONELINE – DEMOLITION</u>
<u>EC05.00</u>	<u>VEHICLE TRANSFER SPAN POWER DISTRIBUTION ONELINE</u>
<u>EC06.00</u>	<u>VEHICLE TRANSFER SPAN ELECTRICAL PLAN – DEMOLITION</u>
<u>EC07.00</u>	<u>VEHICLE TRANSFER SPAN ELECTRICAL PLAN</u>
<u>EC14.00</u>	<u>VEHICLE TRANSFER SPAN ELECTRICAL DETAILS</u>
<u>EC15.00</u>	<u>VEHICLE TRANSFER SPAN PANEL SCHEDULES</u>
<u>EC16.00</u>	<u>VEHICLE TRANSFER SPAN LIGHTING FIXTURE SCHEDULE</u>
<u>EC16.01</u>	<u>VEHICLE TRANSFER SPAN LIGHTING PLAN</u>
<u>EC17.00</u>	<u>VEHICLE TRANSFER SPAN SCHEMATICS</u>
<u>EC18.00</u>	<u>VEHICLE TRANSFER SPAN CONDUIT AND WIRE SCHEDULE</u>
<u>EC19.00</u>	<u>VEHICLE TRANSFER SPAN UNASSIGNED</u>
<u>EC20.00</u>	<u>VEHICLE TRANSFER SPAN UNASSIGNED</u>
<u>EC21.00</u>	<u>VEHICLE TRANSFER SPAN BLOCK DIAGRAM</u>
<u>EC22.00</u>	<u>VEHICLE TRANSFER SPAN PLC CABINET</u>
<u>EC23.00</u>	<u>VEHICLE TRANSFER SPAN BRIDGE CONTROL STATION (1PBS)</u>

<u>EC24.00</u>	<u>VEHICLE TRANSFER SPAN BRIDGE CONTROL STATION (2PBS)</u>
<u>EC25.00</u>	<u>VEHICLE TRANSFER SPAN ATTENDANT'S CONTROL STATION (3PBS)</u>
<u>EC26.00</u>	<u>VEHICLE TRANSFER SPAN LINE CONTROL CABINET</u>
<u>EC27.00</u>	<u>VEHICLE TRANSFER SPAN RELAY CONTROL CABINET</u>
<u>EC28.00</u>	<u>VEHICLE TRANSFER SPAN HYDRAULIC POWER UNIT (HPU) ELECTRICAL</u>
<u>EC29.00</u>	<u>VEHICLE TRANSFER SPAN MOTOR CONTROL PANEL</u>
<u>EC30.00</u>	<u>VEHICLE TRANSFER SPAN UNASSIGNED</u>
<u>ED12.00</u>	<u>OVERHEAD LOADING ELECTRICAL PLAN – DEMOLITION</u>
<u>ED13.00</u>	<u>OVERHEAD LOADING ELECTRICAL PLAN</u>
<u>ED14.00</u>	<u>OVERHEAD LOADING ELECTRICAL DETAILS</u>
<u>ED15.00</u>	<u>OVERHEAD LOADING PANEL SCHEDULES</u>
<u>ED16.00</u>	<u>OVERHEAD LOADING LIGHTING FIXTURE SCHEDULE</u>
<u>ED16.01</u>	<u>OVERHEAD LOADING LIGHTING PLAN</u>
<u>ED17.00</u>	<u>OVERHEAD LOADING SCHEMATICS</u>
<u>ED18.00</u>	<u>OVERHEAD LOADING CONDUIT AND WIRE SCHEDULE</u>
<u>ED19.00</u>	<u>OVERHEAD LOADING UNASSIGNED</u>
<u>ED20.00</u>	<u>OVERHEAD LOADING UNASSIGNED</u>
<u>ED31.00</u>	<u>OVERHEAD LOADING BLOCK DIAGRAM</u>
<u>ED32.00</u>	<u>OVERHEAD LOADING PLC CABINET</u>
<u>ED33.00</u>	<u>OVERHEAD LOADING OPERATOR'S CONTROL STATION</u>
<u>ED34.00</u>	<u>OVERHEAD LOADING UNASSIGNED</u>
<u>ED35.00</u>	<u>OVERHEAD LOADING UNASSIGNED</u>
<u>ED36.00</u>	<u>OVERHEAD LOADING LINE CONTROL CABINET</u>
<u>ED37.00</u>	<u>OVERHEAD LOADING RELAY CONTROL CABINET</u>
<u>ED38.00</u>	<u>OVERHEAD LOADING HYDRAULIC POWER UNIT (HPU) ELECTRICAL</u>
<u>ED39.00</u>	<u>OVERHEAD LOADING MOTOR CONTROL</u>

817**Mechanical Design Drawing Series**

M00.00	MECHANICAL INDEX
M00.1X	MECHANICAL NOTES
M02.00	MECHANICAL SITE PLAN
M03.00	CABLE HOIST & COUNTERWEIGHT SYSTEM STANDARD DRAWING LIST
M03.XX	CABLE HOIST & COUNTERWEIGHT SYSTEM ASSEMBLY AND DETAILS
M04.00	TIE-UP SLIP – GANGWAY HOIST SYSTEM ASSEMBLY AND DETAILS
M05.00	OVERHEAD PASSENGER LOADING ASSEMBLY AND DETAILS
M06.00	WATER / SEWER LINE SITE PLAN
M06.01	WATER / SEWER LINE DEMO
M07.00	MAIN SLIP – WATER / SEWER LINE
M08.00	AUX. SLIP – WATER / SEWER LINE
M09.00	TIE-UP SLIP – WATER / SEWER LINE