

Volusia County

FLORIDA

PUBLIC WORKS DEPARTMENT

CADD Production Standards Manual
October, 2007

“...committed to provide responsive, courteous, quality service to all public works customers in the most efficient and cost effective manner possible.”



VOLUSIA COUNTY GOVERNMENT

is...

“Dedicated to Quality Service”

TABLE OF CONTENTS

<u>SECTION</u>	<u>PAGE NO.</u>
CHAPTER 1 - Introduction	1-1
CHAPTER 2 - Project Journal and Deliverable Format.....	2-1
CHAPTER 3 - Project Directory Structure & Format.....	3-1
CHAPTER 4 - Interchangeable Terminology & Colors	4-1
CHAPTER 5 - Highway Lighting.....	5-1
CHAPTER 6 - Landscape.....	6-1
CHAPTER 7 - Roadway.....	7-1
CHAPTER 8 - Signing & Pavement Marking	8-1
CHAPTER 9 - Signalization	9-1
CHAPTER 10-Survey - Topo.....	10-1
CHAPTER 11-Plats.....	11-1
CHAPTER 12-Utilities.....	12-1
APPENDICIES	
INDEX	

Chapter 1

INTRODUCTION

Chapter 1 - Introduction

Purpose

The electronic files created during the process of developing a Computer Aided Design and Drafting (CADD) project for Volusia County are to be shared and referenced by many different individuals and must satisfy various needs. The electronic files must be shareable in a format that all parties can utilize. Therefore, CADD processes must be established for disciplines that share in the CADD development workflow. This CADD Production Standards Manual outlines the required standards, conventions and formats necessary to ensure the most usable CADD data set to the foreseeable users of the CADD data, while providing the producer/developer of the CADD data information necessary to accomplish the task.

Scope

The material presented within this guideline will be monitored as a critical requirement under the CADD Quality Assurance plan. This document is written for CADD users producing plans and maps for Volusia County.

General

Chapter 334 of the Florida Statutes, known as the Florida Transportation Code, establishes the responsibilities of the State, Counties, and Municipalities for the planning and development of the transportation systems serving the people of Florida, with the objective of assuring development of an integrated, balanced statewide system. The Code's purpose is to protect the safety and general welfare of the people of the State and to preserve and improve all transportation facilities in Florida.

Under Section 334.044(2), the Code sets forth the powers and duties the County has to develop and adopt uniform minimum standards and criteria for the design, construction, maintenance, and operation of public roads.

The guidelines in this Volusia CADD Production Manual represent minimum requirements that must be met for the development of our projects. While the guidelines contained in this writing provide a basis for uniform CADD practice for Sarasota projects, precise rules that would apply to all possible situations that may arise are impossible to give. Situations will exist where these standards will not apply. If variances from the Volusia County CADD Production Standards are necessary for a project, they must be approved in writing by the Volusia County Project Manager and documented in the Project Journal file as defined herein.

Chapter 2

Project Journal and Deliverable Formats

Chapter 2 – Project Journal and Deliverable Formats

Project Journal

A project journal will be an electronic document produced, updated, and stored in the main project directory. It will aid downstream users of the CADD data in utilizing the CADD work in their processes. While there is no specific format, the journal will at least contain:

- A listing (Project Index) of the files contained within the project directory, including brief descriptions, and where the files are located
- Documentation about the data including, but not limited to, major processes used, special CADD decisions made, exceptions to standards that were used, problems encountered, and all other pertinent issues that arose during the course of the CADD work
- Design software used, particular software settings
- All information necessary for the regeneration or use of those files by subsequent users of the CADD data
- Geometry database, controlling alignment elements, alignment and profile names, relevant survey information, cross sections and the methodology used to obtain the final geometric controls.

Deliverable Formats

All geospatial information including plans, surveys, map and aerial photography will be provided in AutoCad or the ESRI Personal Geodatabase format. This data will be referenced by a minimum of three (3) coordinates in the Florida State Plane Coordinate System, East Zone in US Survey Feet. The horizontal datum is NAD83/(1990) and the vertical datum is NAVD 88 Feet, in accordance with Florida Statutes, Chapter 177.151. AutoCad files will follow the Volusia County Public Works AutoCad standard format. This digital information is to be provided on CDs or DVDs.

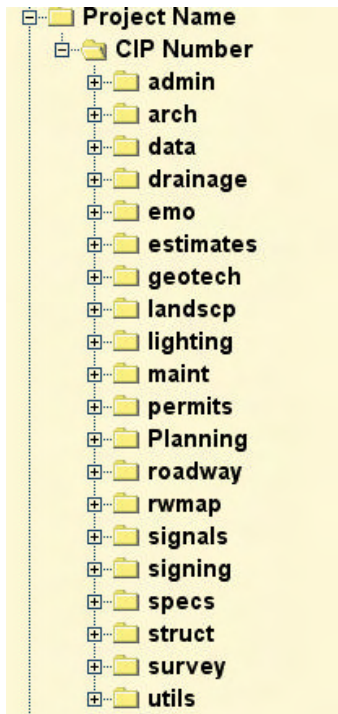
All text and graphic information will be provided in the Volusia County standard Microsoft Office software (Microsoft Excel, Word, PowerPoint, etc.) and in the Adobe (PDF) format, unless otherwise specified. This digital information is also to be provided on CDs or DVDs.

Chapter 3

Project Directory Structure and File Names

The Standard Project Directory Format:

Every project will utilize the standard directory structure regardless of the project requirements, even if the specific project does not include all of the disciplines listed in the standard structure. Data for each discipline will be maintained in its sub-directory, thus insuring the ability to merge data from different providers or disciplines at time of delivery. If a discipline requires information from another discipline, the needed files should be referenced from the original directory and not copied. For example, the Roadway design file will reference the survey (topo) file and not be copied into the Roadway discipline directory.



Project Number - Fourth digits number

admin - Administration documents

arch - Architectural

data - Data files specific to the project

drainage - Drainage calculations and files

emo - Environmental management

estimates - Estimates and costs

geotech - Geotech files

landscp - Landscaping

lighting - Highway lighting

maint - Maintenance of Traffic

permits - Permits for environmental requirements

planning - planning files

roadway - Roadway Design

rwmmap - Right-of-Way Maps

signals - Signals

signing - Signing & pavement marking

specs - Specifications

struct - Structures

survey - Survey archives and files

utils - Utility adjustment files

Standard File Names

The file naming convention shall be used for all design files, standard input files and criteria files. In the event a particular file type that is needed for the project is not addressed in this document, use the file naming convention as a template, or consult the project manager or the county CADD Manager to determine the proper file name and its parameters. Document all files, both standard and project specific in the Project Index file.

File Names

FILE NAMING CONVENTION

File names consist of 8 characters following this example:

AAAABB##.ext

where AAAA = *File description*, BB = *Discipline*, ## = *Sequence number*, ext = *Extension*

Example: The first roadway cross section file created would be named - rdxsrd01.dwg

Note: If necessary the sequence number can exceed two digits.

Description	Highway Lighting Plans	Landscape Plans	Roadway Plans	Signalization Plans	Signing & Marking Plans
Border Sheet Plan	BDPLLT00	BDPLLS00	BDPLRD00	BDPLSG00	BDPLSP00
Cross Section Sheet			RDXS RD00		
Cross Section Pattern			PATTRD00		
Detail Sheet	DETLT00	DETL S00	DETL RD00	DETL SG00	DETL SP00
Digital Terrain Model & Ground Contour			GDTMRD00		
Drainage Map			DRMPRD00		
Drainage Proposed Structures (Plan)			DRPRRD00		
Drainage Structures Sheet (Sections)			DRSTRD00		
General Notes Sheet	GNNTLT00	GNNTLS00	GNNTRD00	GNNTSG00	GNNTSP00
Intersection/Interchange Details			INTDRD00		
Key Sheet	KEYSLT00	KEYSLS00	KEYSRD00	KEYSSG00	KEYSSP00
Maintenance of Traffic Sheet			MOTSRD00		
MOT Detail Sheet			MOTDRD00		
MOT Layout Sheet			MOTLRD00		
Plan & Profile Sheet			PLPRRD00		
Plan Sheet	PLANLT00	PLANLS00	PLANRD00	PLANS G00	PLANSP00
Profile Sheet			PROFRD00		
Project Layout Sheet			PLAYRD00		
Proposed Design	DSGNLT00	DSGNLS00	DSGNRD00	DSGN SG00	DSGN SP00
Proposed Storm Sewer System Sheet			STMPRD00		
Retention Area Sheet			RETARD00		
Summary of Drainage Structures			SUMDRD00		
Summary of Quantities Sheet		SUMQLS00	SUMQRD00		
Tabulation Quantity Sheet	TABQLT00			TABQSG00	TABQSP00
Topographical Existing	TOPOLT00	TOPOLS00	TOPORD00	TOPOSG00	TOPOSP00
Typical Section Sheet			TYP SRD00		
Utilities Existing			UTEXRD00		
Utilities Proposed			UTPRRD00		
Utility Adjustments Sheet			UTADRD00		
Wetlands and Jurisdictional Lines			WETLRD00		

Chapter 4

Interchangeable Terminology and Color

Line Weight

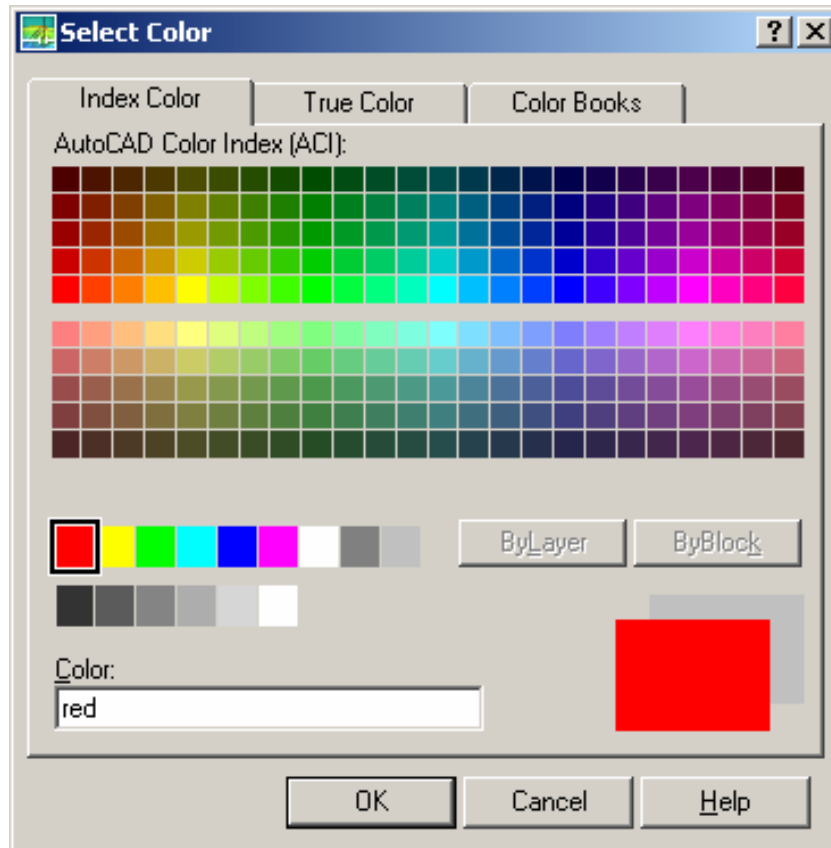
Line weight is an index in the range 0 to 30 that designates the weight or thickness of the line used to draw or plot a graphic element. Each element has its own line weight. The first position defines weight 0, second weight 1, and third weight 2 and so on up to weight 31. The standard line thickness or width of a plotted graphic element in inches or millimeters for Laser, Electrostatic, or Ink Jet plotter shall be as follows:

Line Weight	Weight (Inches)	Weight (MM)
0	0.003	0.070
1	0.005	0.130
2	0.010	0.250
3	0.015	0.380
4	0.020	0.500
5	0.025	0.640
6	0.030	0.750
7	0.035	0.900
8	0.040	1.200
9	0.045	1.150
10	0.050	1.300
11	0.055	1.400
12	0.060	1.530
13	0.065	1.650
14	0.070	1.780
15	0.075	1.900
16	0.080	2.000
17	0.085	2.150
18	0.090	2.300
19	0.095	2.400
20	0.100	2.600
21	0.105	2.700
22	0.110	2.800
23	0.115	2.950
24	0.120	3.050
25	0.125	3.175
26	0.130	3.300
27	0.135	3.430
28	0.140	3.500
29	0.145	3.700
30	0.150	3.800

0.00 mm
0.05 mm
0.09 mm
0.13 mm
0.15 mm
0.18 mm
0.20 mm
0.25 mm
0.30 mm
0.35 mm
0.40 mm
0.50 mm
0.53 mm
0.60 mm
0.70 mm
0.80 mm
0.90 mm
1.00 mm
1.06 mm
1.20 mm
1.40 mm
1.58 mm
2.00 mm
2.11 mm

Colors

AutoCad Color



AutoCAD Line Styles

Center	
Center (.5x)	
Center (2x)	

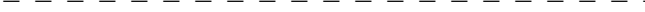
Continuous	
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Dash dot	
DASHDOT2 (.5x)	
DASHDOTX2 (2x)	

DASHED	
DASHED2 (.5x)	
DASHEDX2 (2x)	

DIVIDE	
DIVIDE2 (.5x)	
DIVIDEX2 (2x)	

DOT	
DOT2 (.5x)	
DOTX2 (2x)	

HIDDEN	
HIDDEN2 (.5x)	
HIDDENX2 (2x)	

PHANTOM	
PHANTOM2 (.5x)	
PHANTOMX2 (2x)	

HIGHWAY LIGHTING

Highway Lighting

General

Highway Lighting plans are usually a component set of plans (see Chapter 7). However, if the Highway Lighting Plans are the lead plan set, then the standards set in Chapter 7, Roadway Standards, pertaining to elements that are specific to the lead plan set shall apply to the Highway Lighting plan set. When prepared as component plans, Highway Lighting Plans shall be assembled as a separate plan set complete with a key sheet, tabulation of quantities and all other relevant highway lighting sheets. The sheets shall be numbered consecutively with the sheet numbers prefixed by the letter "L".

CADD Standard Symbology

Highway Lighting

Description	AutoCad Layer	Color	Wt(mm)	Line Type
Conduit Boring	ConduitBR	1	0.250	Cont.
Conduit Boring (Existing)	ConduitBR_ex	15	0.070	Hidden
Conduit In Box Girder	ConduitBG	1	0.250	Cont.
Conduit in Box Girder (Existing)	ConduitBG_ex	12	0.070	Hidden
Conduit Jacked	ConduitJ	3	0.250	Cont.
Conduit Jacked (Existing)	ConduitJ_ex	10	0.070	Hidden
Conduit Surface Mounted	ConduitSM	4	0.250	Cont.
Conduit Surface Mounted (Exist.)	ConduitSM_ex	12	0.070	Hidden
Conduit Underground	ConduitUG	7	0.250	Cont.
Conduit Underground (Exist.)	ConduitUG_ex	14	0.070	Hidden
High Mast Light Pole	PoleLightHM	7	0.250	Cont.
Hight Mast Light Pole (Exist.)	PoleLightHM_ex	12	0.070	Hidden
Light Pole	PoleLight	7	0.250	Cont.
Light Pole (Existing)	PoleLight_ex	11	0.070	Hidden
Lighting Miscellaneous	LightMisc	6	0.250	Cont.
Lighting Service Points	LightSP	3	0.250	Cont.
Load Center	LoadCenter	7	0.250	Cont.
Load Center (Existing)	LoadCenter_ex	14	0.070	Hidden
Pull Boxes	PullBox	3	0.250	Cont.
Text – Dimension	Textdim	7	0.250	Cont.

Description	AutoCad Layer	Color	Wt(mm)	Line Type
Text – Label	Textlabel	7	0.250	Cont.
Text – Notes	Textnote	7	0.250	Cont.
Text – Miscellaneous	Textmisc	7	0.250	Cont.

LANDSCAPE

Landscape

General

“Landscape” or landscaping means any vegetation, mulches, irrigation systems and any site amenities, such as, street furniture, decorative paving, fences and lighting (excluding public utility street and area lighting). Landscape plans may be a component set of plans, or be prepared independently. Projects with minor landscaping may include these features on separate sheets in the roadway plans set or features may be detailed on the roadway plans sheets. When prepared as component plans, they shall be assembled as a separate plan set complete with a key sheet, tabulation of quantities and all other relevant landscape sheets. The sheets shall be numbered consecutively with the sheet numbers prefixed by the letter “LD”.

CADD Standard Symbolology

Landscape

Description	AutoCad Layer	Color	Wt(mm)	Line Type
Baseline Survey	BLSurvey	7	0.400	Cont.
Center Line of Construction	CL	7	0.500	Cont.
Clearing and Grubbing Limits	CGlimit	5	0.250	Cont.
Clear Sight Lines and Limits	ClearSight	4	0.400	Dashed
Clear Zone	ControlZone	7	0.250	Center/Dot
Driveway	Driveway	7	0.250	Cont.
Easement Lines	Easement	4	0.400	Dashed
Edge of Pavement	EOP	7	0.250	Cont.
Fence	Fence	6	0.250	
Flower Edge / Flower Symbol	Flower	2	0.250	Cont.
Grade Line Profile (Prop.)	PGL	7	0.400	Cont.
Grade Line Profile (Exist)	Ex_PGL	5	0.070	Hidden
Grade Section Patterns	GradeSec	1	0.250	Cont.
Irrigation	Irrigation	7	0.250	Cont.
Lights / Light Poles	StreetLights	2	0.250	Cont.
Landscaping Miscellaneous	Landmisc	6	0.250	Cont.
Limited Access Right of Way	LAROW	1	0.400	
Mowing and Maintenance Areas	MowingArea	7	0.250	Cont.
Mulch Area	Mulch	3	0.250	Cont.
North Arrow and Scale	NARROW	7	0.250	Cont.

Description	AutoCad Layer	Color	Wt(mm)	Line Type
Paved Shoulder Line	Paved_Shoulder	5	0.250	Cont.
Property Line	PL	1	0.250	Phantom
Retention Area	Retention	5	0.250	Cont.
Right of Way Lines (Prop.)	ROW_Prop	1	0.400	Phantom
Right of Way Line (Exist.)	ROW_Ex	2	0.150	Phantom2
Shrubs	Shrub	3	0.250	Cont.
Sidewalk	Sidewalk	3	0.250	Cont.
Sod Line	Sod	3	0.250	Cont.
Station Tic Marks (CL Const.)	Sta_tic_CL	3	0.400	Cont.
Station Tic Marks (BL Survey)	Sta_tic_BL	1	0.250	Cont.
Text – BL Station	Text_BL	7	0.400	Cont.
Text – CL Station	Text_CL	7	0.500	Cont.
Text – Dimension	Textdim	7	0.250	Cont.
Text – Label	Textlabel	7	0.250	Cont.
Text – Notes	Textnote	7	0.250	Cont.
Text – Miscellaneous	Textmisc	7	0.250	Cont.
Traffic Separator	TrafSep	7	0.250	Cont
Trees	Tree	3	0.250	Cont.

ROADWAY

Roadway Plans

General

The “Contract Plans Set” depicts in detail the required construction work. This set consists of the Roadway Plans (all sheets pertaining to roadway design) and component plans. The component plans are:

1. Signing and Pavement Markings Plans
2. Signalization Plans
3. Lighting Plans
4. Landscape Plans

CADD standards for component plans are defined in their respective chapters. Though many component plans use roadway element symbology, the primary symbology standard. Roadway symbology shall not be modified for other disciplines use except when specifically stated in that discipline’s Chapter.

CADD Standard Symbology

Roadway Plans

Description	AutoCad Layer	Color	Wt(mm)	Line Type
Barricade	Barricade	2	0.250	Cont.
Barrier Wall	Barrier_wall	2	0.250	Cont.
Baseline Survey	BLSurvey	7	0.400	Cont.
Border Line	Border	5	0.750	Cont.
Bridge	Bridge	4	0.250	Cont.
Building	BLDG	1	0.250	Cont.
Center Line of Construction	CL	7	0.500	Cont.
Concrete Slabs	ConcSlab	7	0.250	Cont.
Cross Sections (Exist.)	XS_Exist.	2	0.150	Hidden
Cross Sections (Prop.)	XS	5	0.250	Cont.
Curb andGutter	CG	7	0.250	Cont.
Curb Cut Ramp	Curbramp	5	0.250	Cont.
Curve Data	Curvedata	7	0.250	Cont.
Drainage Pipes	Drain_Pipe	6	0.500	Cont.
Drainage Structures	Drain_Struc	6	0.250	Cont
Driveway	Driveway	7	0.250	Cont.
DTM Triangles	DTMTriangles	7	0.150	Cont.
Easement Lines	Easement	4	0.500	Dashed
Edge of Pavement	EOP	3	0.250	Cont.

Volusia County CADD Production Standards Manual

Description	AutoCad Layer	Color	Wt(mm)	Line Type
Fence (Exist.)	Ex_Fence	10	0.100	
Fence (Prop.)	Fence	6	0.250	Cont.
Grade Line Profile (Prop.)	PGL	7	0.400	Cont.
Grade Line Profile (Exist)	Ex_PGL	8	0.150	Hidden
Grade Line Profile Left (Prop.)	PGLL	1	0.250	Cont.
Grade Line Profile Left (Exist.)	Ex_PGLL	9	0.150	Hidden
Grade Line Profile Right (Prop.)	PGLR	2	0.250	Cont.
Grade Line Profile Right (Exist.)	Ex_PGLR	6	0.150	Hidden
Gravity Wall	Gravity_Wall	7	0.250	Cont.
Guardrail	Guardrail	4	0.250	Cont.
Guiderail (Handrail)	Guiderail	4	0.250	Cont.
Limited Access Right of Way	LAROW	1	0.400	
Milling and Resurfacing Limits	Milling_Limits	1	0.250	Cont.
North Arrow and Scale	NARROW	7	0.250	Cont.
Paved Shoulder Line	Paved_Shoulder	5	0.250	Cont.
Property Line	PL	1	0.250	Phantom
Reference Point (Survey)	Ref	7	0.250	Cont.
Right of Way Lines (Prop.)	ROW	1	0.400	Phantom
Right of Way Line (Exist.)	Ex_ROW	2	0.150	Phantom
Rip Rap Rubble	RipRap	4	0.250	Phantom
Sidewalk	Sidewalk	3	0.250	Cont.
Soil Boring	Soil	2	0.250	Cont.
Station Tic Marks (CL Const.)	Sta_tic_CL	7	0.250	Cont.

Description	AutoCad Layer	Color	Wt(mm)	Line Type
Station Tic Marks (BL Survey)	Sta_tic_BL	1	0.150	Cont.
Text – Border	Text_Border	7	0.250	Cont.
Text – BL Station	Text_BL	7	0.250	Cont.
Text – CL Station	Text_CL	7	0.500	Cont.
Text – Dimension	Textdim	7	0.250	Cont.
Text – Label	Textlabel	7	0.250	Cont.
Text – Notes	Textnote	7	0.250	Cont.
Text – Miscellaneous	Textmisc	7	0.250	Cont.
Traffic Separator	TrafSep	7	0.250	Cont
Wetland Boundary	Wetland	5	0.250	Dash

SIGNING & PAVEMENT MARKING

Signing and Pavement Marking

General

Signing and Pavement Marking Plans are usually a component set of plans (see Chapter 7). However, if the Signing and Pavement Marking Plans are the lead plan set, then the standards set in Chapter 7, Roadway Standards, pertaining to elements that are specific to the lead plan set shall apply to the Signing and Pavement Marking plan set. When prepared as component plans, they shall be assembled as a separate plan set complete with a key sheet, tabulation of quantities and all other relevant signing and pavement marking sheets. The sheets shall be numbered consecutively, with sheet numbers prefixed by the letter "S".

Signing and Pavement Marking

General

Signing and Pavement Marking Plans are usually a component set of plans (see Chapter 7). However, if the Signing and Pavement Marking Plans are the lead plan set, then the standards set in Chapter 7, Roadway Standards, pertaining to elements that are specific to the lead plan set shall apply to the Signing and Pavement Marking plan set. When prepared as component plans, they shall be assembled as a separate plan set complete with a key sheet, tabulation of quantities and all other relevant signing and pavement marking sheets. The sheets shall be numbered consecutively, with sheet numbers prefixed by the letter “S”.

CADD Standard Symbology

Signing and Pavement Marking

Description	AutoCad Layer	Color	Wt(mm)	Line Type
Directional Arrow	PMArrow	7	0.500	Cont.
Directional Arrow (Exist.)	PMArrow_ex	7	0.250	Hidden
Emphasis Crosswalk	Crosswalk	7	0.500	Cont.
Emphasis Crosswalk (Exist.)	Crosswalk_ex	7	0.250	Hidden
Object and Reflective Markers	ObjectMarker	2	0.250	Cont.
Pavt. Marking 10/30 Skip 6" White	10_30Skip_White	7	0.250	
Pavt. Marking 10/30 Skip 6" Yellow	10_30Skip_Yellow	7	0.250	
Pavt. Marking 2/4 Skip 6" White	2_4Skip_White	7	0.250	
Pavt. Marking 2/4 Skip 6" Yellow	2_4Skip_Yellow	2	0.250	
Pavt. Marking 6/10 Skip 6" White	6_10Skip_White	7	0.250	
Pavt. Marking 6/10 Skip 6" Yellow	6_10Skip_Yellow	2	0.250	
Pavt. Marking 6/10 Skip 6" Yellow	6_10Skip_Yellow	2	0.250	
Pavement Marking 6" White	6_White	7	0.250	Cont.
Pavement Marking 6" Yellow	6_Yellow	2	0.250	Cont.
Pavement Marking 8" White	8_White	7	0.400	Cont.
Pavement Marking 8" Yellow	8_Yellow	2	0.400	Cont.
Pavement Marking 12" White	12_White	7	0.500	Cont.
Pavement Marking 12" Yellow	12_Yellow	2	0.500	Cont.
Pavement Marking 18" White	18_White	7	0.650	Cont.
Pavement Marking 18" Yellow	18_Yellow	2	0.650	Cont.

Description	AutoCad Layer	Color	Wt(mm)	Line Type
Pavement Marking 24" White	24_White	7	0.800	Cont.
Pavement Message (Prop.)	PMes	7	0.800	Cont
Pavement Message (Exist.)	PMes_ex	7	0.250	Hidden
Raised Pavement Markers	RPM	7	0.250	
Sign Panels	Sign	7	0.250	Cont.
Sign Panels (Exist.)	Sign_ex	10	0.200	Hidden
Special Signs (Guide Signs)	Sign_sp	7	0.250	Cont.
Turning Radius	Turning_radius	5	0.500	
Text – Dimension	Textdim	7	0.250	Cont.
Text – Label	Textlabel	7	0.250	Cont.
Text – Notes	Textnote	7	0.250	Cont.
Text – Miscellaneous	Textmisc	7	0.250	Cont.

SIGNALIZATION

Signalization

General

Signalization Plans are usually a component set of plans (see Chapter 7). However, if the Signalization Plans are the lead plan set, then the standards set in Chapter 7, Roadway Standards, pertaining to elements that are specific to the lead plan set shall apply to the Signalization plan set. When prepared as component plans, they shall be assembled as a separate plan set complete with a key sheet, tabulation of quantities and all other relevant signalization sheets. The sheets shall be numbered consecutively, with sheet numbers prefixed by the letter "T". The Signalization Plans show the construction details, signal phasing and other relevant data.

CADD Standard Symbology

Signalization

Description	AutoCad Layer	Color	Wt(mm)	Line Type
Cable Interconnect	InterconCable	1	0.250	Cont.
Cable Interconnect (Existing)	InterconCable_ex	10	0.100	Hidden
Concrete Strain Pole	PoleConc	7	0.250	Cont.
Concrete Strain Pole (Existing)	PoleConc_ex	11	0.100	Hidden
Controller Accessories	Controller	7	0.250	Cont.
Controller Accessories (Existing)	Controller_ex	10	0.100	Hidden
Controller Pole Mount	ControllerP	1	0.250	Cont.
Controller Pole Mount (Existing)	ControllerP_ex	10	0.250	Hidden
Loop Assembly	Loops	3	0.250	Cont.
Loop Assembly (Existing)	Loops_ex	12	0.100	Hidden
Mast Arm	Mastarm	17	0.250	Cont.
Mast Arm (Existing)	Mastarm_ex	11	0.100	Hidden
Messenger Wire	MessWire	5	0.250	Cont.
Pedestrian Detector	PedDetector	5	0.250	Cont.
Pull Boxes	Pullbox	7	0.250	Cont.
Pull Boxes (Existing)	Pullbox_ex	1	0.100	Hidden
S.O.P. Box and Movements	SignalSOP	2	0.250	Cont.
Signal Cable	SignalCable	7	0.250	Cont.
Signal Details	SignalDetail	7	0.250	Cont.
Signal Head Section Details	SignalHead	1	0.250	Cont.

Volusia County CADD Production Standards Manual

Description	AutoCad Layer	Color	Wt(mm)	Line Type
Signal Head Section Details(Existing)	SignalHead_ex	12	0.250	Hidden
Signal Head Symbols	SignalSym	7	0.250	Cont.
Signal Head Symbols (Existing)	SignalSym_ex	10	0.100	Hidden
Signal Miscellaneous	SignalMisc	7	0.250	Cont.
Strain Pole – Steel, Wood	PoleStrain	7	0.250	Cont.
Strain Pole – Steel, Wood (Existing)	PoleStrain_ex	11	0.100	Hidden
Text – Dimension	Textdim	7	0.250	Cont.
Text – Label	Textlabel	7	0.250	Cont.
Text – Notes	Textnote	7	0.250	Cont.
Text – Miscellaneous	Textmisc	7	0.250	Cont.

SURVEY (TOPO)

Survey - Topo

Description	AutoCad Layer	Color	Wt(mm)	Line Type
Asphalt Pavement Crown	apc	12	0.100	Dashed
Baseline Survey	BLSurvey	5	0.400	Cont.
Box Culverts Concrete	CBC	12	0.100	Hidden
Bridge	Bridge	14	0.100	Dashed
Building	bldg	11	0.100	Hidden
Cable TV	Catv	16	0.100	Hidden
Center Line of Construction	CL	7	0.500	Cont.
Concrete Monument	CM	1	0.250	Cont.
Concrete Slabs	ConcSlab	7	0.250	Cont.
Cross Sections (Exist.)	XS_Exist.	12	0.100	Hidden
Cross Sections (Prop.)	XS	5	0.250	Cont.
Curb andGutter	CG	17	0.100	Hidden
Curb Cut Ramp	Curbramp	15	0.100	Hidden
Drainage Structures	Drain	16	0.100	Hidden
Driveway	Driveway	17	0.100	Hidden
Edge of Pavement	EOP	17	0.100	Hidden
Edge of Woods Line	treelines	13	0.100	Cont.
Fence (Exist.)	fence	12	0.100	
Fiber Optics Cable	FOC	10	0.100	Hidden
Fire Hydrant	FH	15	0.100	Hidden
Force Main	San	10	0.100	Hidden

Volusia County CADD Production Standards Manual

Description	AutoCad Layer	Color	Wt(mm)	Line Type
Gas Line	Gas	11	0.100	Hidden
Grade Line Profile (Exist)	Ex_PGL	12	0.750	Hidden
Gravity Wall	Gravity_Wall	11	0.100	Hidden
Guardrail	Guardrail	12	0.100	Hidden
Guiderail (Handrail)	Guiderail	13	0.100	Hidden
Guy Anchor	Guy	15	0.100	Hidden
Limited Access Right of Way	LAROW	4	0.100	Phantom
Mailbox	MB	10	0.100	Hidden
North Arrow and Scale	NARROW	7	0.250	Cont.
Paved Shoulder Line	Shoulder	15	0.100	Hidden
Power Lines (Aerial)	OE	14	0.100	Hidden
Property Line	PL	1	0.250	Phantom
Reference Point (Survey)	Ref	2	0.250	Cont.
Right of Way Lines (Prop.)	ROW_Prop	1	0.400	Phantom
Right of Way Line (Exist.)	ROW_Ex	15	0.150	Phantom2
Sanitary Sewer	SS	16	0.100	Hidden
Shrub	Shrub	17	0.100	Hidden
Sidewalk	Sidewalk	3	0.100	Hidden
Soil Boring	Soil	2	0.250	Cont.
Station Tic Marks (CL Const.)	Sta_tic_CL	7	0.250	Cont.
Station Tic Marks (BL Survey)	Sta_tic_BL	7	0.250	Cont.
Storm Sewer	STS	18	0.100	Hidden

Description	AutoCad Layer	Color	Wt(mm)	Line Type
Survey Control	Survey_cont	2	0.150	Cont.
Swale	Swale	10	0.100	Hidden
Telephone (Buried)	Tel	13	0.100	Hidden
Text – BL Station	Text_BL	7	0.400	Cont.
Text – CL Station	Text_CL	7	0.500	Cont.
Text – Dimension	Textdim	7	0.250	Cont.
Text – Label	Textlabel	7	0.250	Cont.
Text – Notes	Textnote	7	0.250	Cont.
Text – Miscellaneous	Textmisc	7	0.250	Cont.
Topo (Misc.)	TopoMisc	10	0.100	Hidden
Top of Bank	TOB	13	0.100	Hidden
Tree	Tree	12	0.100	Hidden
Water Main	WM	15	0.100	Hidden
Wetland Boundary	Wetland	5	0.500	Dash

PLATS

Plats

Description	AutoCad Layer	Color	Wt(mm)	Line Type
Block Number	Block_num	7	0.500	Cont.
Canal	Canal	5	0.250	Cont.
Canal Text	Canal_txt	2	0.250	Cont.
Centerline Street	CL	7	0.500	Center
Drainage Easement	Drainage_esmt	6	0.500	Hidden
Golfcourse	Golfcourse	3	0.250	Cont.
Golfcourse Text	Golfcourse_txt	2	0.250	Cont.
Lake	Lake	5	0.250	Cont.
Lake Text	Lake_txt	2	0.250	Cont.
Lot Line	Lot_line	7	0.500	Cont.
Lot Number	Lot_num	2	0.500	Cont.
Miscellaneous Easement	Misc_esmt	1	0.500	Hidden
Plat Boundary	Plat_boundary	7	0.750	Cont.
Preserve	Preserve	3	0.250	Cont.
Private Street	Private_st	1	0.150	Hidden
Private Street Name	Private_st_name	2	0.250	Cont.
Road	Road	1	0.250	Cont.
Road Name	Road_name	2	0.250	Cont.
Street	Street	1	0.250	Cont.
Street Name	Street_name	2	0.250	Cont.
Subdivision Name	Sub_name	2	0.400	Cont.

Description	AutoCad Layer	Color	Wt(mm)	Line Type
Subdivision ID	Sub_ID	7	0.400	Cont.
Utility Easement	Utility_esmt	7	0.500	Hidden

UTILITIES

County Utility Standards:

The following is the County preference regarding layer naming, line types, color, weight and other conventions for utility service plans developed for the Utility Department. These standards are applicable for water, reclaimed water and waste water (sewer).

Volusia County AutoCad Layers

(Water Utilities)

Water

<u>Description</u>	<u>AutoCad Layer</u>	<u>Color</u>	<u>Line Weight</u>	<u>Line Type</u>
Abandoned Water Main	VcAbdWm	5	0.15 mm	Cont.
Abandoned Water Main Text	VcAbdWmTxt	5	0.15 mm	Cont.
Air Release Valve (WM)	VcWmArv	5	0.80 mm	Dash
Air Release Valve Text (WM)	VcWmArvTxt	5	0.80 mm	Dash
Butterfly Valve (2 inch WM)	Vc2BvWm	5	0.80 mm	Dash
Butterfly Valve (4 inch WM)	Vc4BvWm	5	0.80 mm	Dash
Butterfly Valve (6 inch WM)	Vc6BvWm	5	0.80 mm	Dash
Butterfly Valve (8 inch WM)	Vc8BvWm	5	0.80 mm	Dash
Butterfly Valve (10 inch WM)	Vc10BvWm	5	0.80 mm	Dash
Butterfly Valve (12 inch WM)	Vc12BvWm	5	0.80 mm	Dash
Butterfly Valve (16 inch WM)	Vc16BvWm	5	0.80 mm	Dash
Butterfly Valve (18 inch WM)	Vc18BvWm	5	0.80 mm	Dash
Butterfly Valve (24 inch WM)	Vc24BvWm	5	0.80 mm	Dash
Blow-Off (WM)	VcBoWm	5	0.80 mm	Cont.
Blow-Off Text (WM)	VcBoWmTxt	5	0.80 mm	Cont.
Cross (WM)	VcCrossWm	5	0.80 mm	Dash
Ductile Iron Water Main (2 inch)	Vc2DiWm	5	0.80 mm	Dash
Ductile Iron Water Main (4 inch)	Vc4DiWm	5	0.80 mm	Dash
Ductile Iron Water Main (6 inch)	Vc6DiWm	5	0.80 mm	Dash
Ductile Iron Water Main (8 inch)	Vc8DiWm	5	0.80 mm	Dash
Ductile Iron Water Main (10 inch)	Vc10DiWm	5	0.80 mm	Dash
Ductile Iron Water Main (12 inch)	Vc12DiWm	5	0.80 mm	Dash
Ductile Iron Water Main (16 inch)	Vc16DiWm	5	0.80 mm	Dash
Ductile Iron Water Main (18 inch)	Vc18DiWm	5	0.80 mm	Dash
Ductile Iron Water Main (24 inch)	Vc24DiWm	5	0.80 mm	Dash
Ductile Iron Water Main Text	VcDiWmTxt	5	0.80 mm	Cont.
Utility Easement	VcEasm	5		Cont.
Utility Easement Text	VcEasmTxt	5		Cont.
Fire Line (2 inch)	Vc2FireLine	5		Dash
Fire Line (4 inch)	Vc4FireLine	5		Dash
Fire Line (6 inch)	Vc6FireLine	5		Dash
Fire Line (8 inch)	Vc8FireLine	5		Dash
Fire Line (10 inch)	Vc10FireLine	5		Dash
Fire Line (12 inch)	Vc12FireLine	5		Dash
Fire Line	VcFireLineTxt	5		Dash
Fire Hydrant	VcFh	5		Dash
Galvanized Iron Water Main (2 inch)	Vc2GWm	5	0.80 mm	Cont.
Galvanized Iron Water Main (4 inch)	Vc4GWm	5	0.80 mm	Cont.
Galvanized Iron Water Main (6 inch)	Vc6GWm	5	0.80 mm	Cont.
Galvanized Iron Water Main (8 inch)	Vc8GWm	5	0.80 mm	Cont.
Galvanized Iron Water Main (10 inch)	Vc10GWm	5	0.80 mm	Cont.
Galvanized Iron Water Main (12 inch)	Vc12GWm	5	0.80 mm	Cont.
Galvanized Iron Water Main (16 inch)	Vc16GWm	5	0.80 mm	Cont.
Galvanized Iron Water Main (18 inch)	Vc18GWm	5	0.80 mm	Cont.

Volusia County CADD Production Standards Manual

Galvanized Iron Water Main (24 inch)	Vc24GWm	5	0.80 mm	Cont.
Galvanized Iron Water Main Text	VcGWmTxt	5	0.80 mm	Cont.
Gate Valve (2 inch WM)	Vc2GvWm	5		Dash
Gate Valve (4 inch WM)	Vc4GvWm	5		Dash
Gate Valve (6 inch WM)	Vc6GvWm	5		Dash
Gate Valve (8 inch WM)	Vc8GvWm	5		Dash
Gate Valve (10 inch WM)	Vc10GvWm	5		Dash
Gate Valve (12 inch WM)	Vc12GvWm	5		Dash
Gate Valve (16 inch WM)	Vc16GvWm	5		Dash
Gate Valve (18 inch WM)	Vc18GvWm	5		Dash
Gate Valve (24 inch WM)	Vc24GvWm	5		Dash
Irrigation Meter (WM)	VcIrrMeterWm	5		Dot
Irrigation Meter Text (WM)	VcIrrMeterWmTxt	5		Dot
Meter Assembly (5/8 inch WM)	Vc5_8MeterWm	5		Dot
Meter Assembly (3/4 inch WM)	Vc3_4MeterWm	5		Dot
Meter Assembly (1 WM)	Vc1MeterWm	5		Dot
Meter Assembly (1.5 inch WM)	Vc1.5MeterWm	5		Dot
Meter Assembly (2 WM)	Vc2MeterWm	5		Dot
Meter Assembly (4 WM)	Vc4MeterWm	5		Dot
Meter Assembly (6 WM)	Vc6MeterWm	5		Dot
Meter Assembly (8 WM)	Vc8MeterWm	5		Dot
Meter Assembly (10 WM)	Vc10MeterWm	5		Dot
Meter Assembly (12 WM)	Vc12MeterWm	5		Dot
Meter Assembly Text (WM)	VcMeterWmText	5		Dot
Plug or Cap (2 inch WM)	Vc2PlugWm	5	0.80 mm	Cont.
Plug or Cap (4 inch WM)	Vc4PlugWm	5	0.80 mm	Cont.
Plug or Cap (6 inch WM)	Vc6PlugWm	5	0.80 mm	Cont.
Plug or Cap (8 inch WM)	Vc8PlugWm	5	0.80 mm	Cont.
Plug or Cap (10 inch WM)	Vc10PlugWm	5	0.80 mm	Cont.
Plug or Cap (12 inch WM)	Vc12PlugWm	5	0.80 mm	Cont.
Plug or Cap (16 inch WM)	Vc16PlugWm	5	0.80 mm	Cont.
Plug or Cap (18 inch WM)	Vc18PlugWm	5	0.80 mm	Cont.
Plug or Cap (24 inch WM)	Vc24PlugWm	5	0.80 mm	Cont.
Polyvinyl Chloride Water Main (2 inch)	Vc2PvcWm	5	0.80 mm	Cont.
Polyvinyl Chloride Water Main (4 inch)	Vc4PvcWm	5	0.80 mm	Cont.
Polyvinyl Chloride Water Main (6 inch)	Vc6PvcWm	5	0.80 mm	Cont.
Polyvinyl Chloride Water Main (8 inch)	Vc8PvcWm	5	0.80 mm	Cont.
Polyvinyl Chloride Water Main (10 inch)	Vc10PvcWm	5	0.80 mm	Cont.
Polyvinyl Chloride Water Main (12 inch)	Vc12PvcWm	5	0.80 mm	Cont.
Polyvinyl Chloride Water Main (16 inch)	Vc16PvcWm	5	0.80 mm	Cont.
Polyvinyl Chloride Water Main (18 inch)	Vc18PvcWm	5	0.80 mm	Cont.
Polyvinyl Chloride Water Main (24 inch)	Vc24PvcWm	5	0.80 mm	Cont.
Polyvinyl Chloride Water Main Text	VcPvcWmTxt	5	0.80 mm	Cont.
Raw Water Main (2 inch)	Vc2RawWm	5	0.80 mm	Dot
Raw Water Main (4 inch)	Vc4RawWm	5	0.80 mm	Dot
Raw Water Main (6 inch)	Vc6RawWm	5	0.80 mm	Dot
Raw Water Main (8 inch)	Vc8RawWm	5	0.80 mm	Dot
Raw Water Main (10 inch)	Vc10RawWm	5	0.80 mm	Dot
Raw Water Main (12 inch)	Vc12RawWm	5	0.80 mm	Dot
Raw Water Main (16 inch)	Vc16RawWm	5	0.80 mm	Dot
Raw Water Main (18 inch)	Vc18RawWm	5	0.80 mm	Dot
Raw Water Main (24 inch)	Vc24RawWm	5	0.80 mm	Dot

Volusia County CADD Production Standards Manual

Raw Water Main Text	VcRawWmTxt	5	0.80 mm	Dot
Reducer (WM)	VcReducerWm	5		Dash
Reject Water Main	VcRejectWm	5	0.80 mm	Dot
Reject Water Main Text	VcRejectWmTxt	5	0.80 mm	Dot
Tee (WM)	VcTeeWm	5		Dash
Water Service	VcWs	5	0.80 mm	Cont.
Water Service Text	VcWsTxt	5	0.80 mm	Cont.
Water Treatment Plant	VcWTP	5	0.80 mm	Dot
Water Treatment Plant Text	VcWTPTxt	5	0.80 mm	Dot
Well (Raw, Production, or Potable)	VcWell	5		Dot
Well Text	VcWellTxt	5		Dot
Wye (WM)	VcWyeWm	5	0.80 mm	Dash
Back Flow Preventer (1 inch)	Vc1Bfp	5		Cont.
Back Flow Preventer (2 inch)	Vc2Bfp	5		Cont.
Back Flow Preventer (3 inch)	Vc3Bfp	5		Cont.
Back Flow Preventer (4 inch)	Vc4Bfp	5		Cont.
Back Flow Preventer (6 inch)	Vc6Bfp	5		Cont.
Back Flow Preventer (8 inch)	Vc8Bfp	5		Cont.
Back Flow Preventer (10 inch)	Vc10Bfp	5		Cont.
Back Flow Preventer (12 inch)	Vc12Bfp	5		Cont.
Fire Line Double Ckeck Assembly (2 inch)	Vc2FIDca	5		Cont.
Fire Line Double Ckeck Assembly (4 inch)	Vc4FIDca	5		Cont.
Fire Line Double Ckeck Assembly (6 inch)	Vc6FIDca	5		Cont.
Fire Line Double Ckeck Assembly (8 inch)	Vc8FIDca	5		Cont.
Fire Line Double Ckeck Assembly (10 inch)	Vc10FIDca	5		Cont.
Fire Line Double Ckeck Assembly (12 inch)	Vc12FIDca	5		Cont.
H.D.P.E Water Main (2 inch)	Vc2HdpeWm	5	0.80 mm	Cont.
H.D.P.E Water Main (4 inch)	Vc4HdpeWm	5	0.80 mm	Cont.
H.D.P.E Water Main (6 inch)	Vc6HdpeWm	5	0.80 mm	Cont.
H.D.P.E Water Main (8 inch)	Vc8HdpeWm	5	0.80 mm	Cont.
H.D.P.E Water Main (10 inch)	Vc10HdpeWm	5	0.80 mm	Cont.
H.D.P.E Water Main (12 inch)	Vc12HdpeWm	5	0.80 mm	Cont.
H.D.P.E Water Main (16 inch)	Vc16HdpeWm	5	0.80 mm	Cont.
H.D.P.E Water Main (18 inch)	Vc18HdpeWm	5	0.80 mm	Cont.
H.D.P.E Water Main (24 inch)	Vc24HdpeWm	5	0.80 mm	Cont.
H.D.P.E Water Main Text	VcHdpeWmtxt	5	0.80 mm	Cont.

Volusia County AutoCad Layers

(Water Utilities)

Reclaimed Water

<u>Description</u>	<u>AutoCad Layer</u>	<u>Color</u>	<u>Line Weight</u>	<u>Line Type</u>
Abandoned Reclaimed Line	VcAbdRec	6	0.15 mm	Cont.
Abandoned Reclaimed Line Text	VcAbdRecTxt	6	0.15 mm	Cont.
Air Release Valve (Rec)	VcArvRec	6	0.70 mm	Dash
Air Release Valve Text (Rec)	VcArvRecTxt	6	0.70 mm	Dash
Butterfly Valve (2 inch Rec)	Vc2BvRec	6	0.70 mm	Dash
Butterfly Valve (4 inch Rec)	Vc4BvRec	6	0.70 mm	Dash
Butterfly Valve (6 inch Rec)	Vc6BvRec	6	0.70 mm	Dash
Butterfly Valve (8 inch Rec)	Vc8BvRec	6	0.70 mm	Dash
Butterfly Valve (10 inch Rec)	Vc10BvRec	6	0.70 mm	Dash
Butterfly Valve (12 inch Rec)	Vc12BvRec	6	0.70 mm	Dash
Butterfly Valve (16 inch Rec)	Vc16BvRec	6	0.70 mm	Dash
Butterfly Valve (18 inch Rec)	Vc18BvRec	6	0.70 mm	Dash
Butterfly Valve (24 inch Rec)	Vc24BvRec	6	0.70 mm	Dash
Blow-Off (Rec)	VcBoRec	6	0.70 mm	Cont.
Blow-Off Text (Rec)	VcBoRecTxt	6	0.70 mm	Cont.
Cross (Rec)	VcCrossRec	6	0.70 mm	Dash
Ductile Iron Reclaimed Line (2 inch)	Vc2DiRec	6	0.70 mm	Dash
Ductile Iron Reclaimed Line (4 inch)	Vc4DiRec	6	0.70 mm	Dash
Ductile Iron Reclaimed Line (6 inch)	Vc6DiRec	6	0.70 mm	Dash
Ductile Iron Reclaimed Line (8 inch)	Vc8DiRec	6	0.70 mm	Dash
Ductile Iron Reclaimed Line (10 inch)	Vc10DiRec	6	0.70 mm	Dash
Ductile Iron Reclaimed Line (12 inch)	Vc12DiRec	6	0.70 mm	Dash
Ductile Iron Reclaimed Line (16 inch)	Vc16DiRec	6	0.70 mm	Dash
Ductile Iron Reclaimed Line (18 inch)	Vc18DiRec	6	0.70 mm	Dash
Ductile Iron Reclaimed Line (24 inch)	Vc24DiRec	6	0.70 mm	Dash
Ductile Iron Reclaimed Line Text	VcDiRecTxt	6	0.70 mm	Cont.
Galvanized Iron Reclaimed Line (2 inch)	Vc2GRec	6	0.70 mm	Cont.
Galvanized Iron Reclaimed Line (4 inch)	Vc4GRec	6	0.70 mm	Cont.
Galvanized Iron Reclaimed Line (6 inch)	Vc6GRec	6	0.70 mm	Cont.
Galvanized Iron Reclaimed Line (8 inch)	Vc8GRec	6	0.70 mm	Cont.
Galvanized Iron Reclaimed Line (10 inch)	Vc10GRec	6	0.70 mm	Cont.
Galvanized Iron Reclaimed Line (12 inch)	Vc12GRec	6	0.70 mm	Cont.
Galvanized Iron Reclaimed Line (16 inch)	Vc16GRec	6	0.70 mm	Cont.
Galvanized Iron Reclaimed Line (18 inch)	Vc18GRec	6	0.70 mm	Cont.
Galvanized Iron Reclaimed Line (24 inch)	Vc24GRec	6	0.70 mm	Cont.
Galvanized Iron Reclaimed Line Text	VcGRecTxt	6	0.70 mm	Cont.
Gate Valve (2 inch Rec)	Vc2GvRec	6		Dash
Gate Valve (4 inch Rec)	Vc4GvRec	6		Dash
Gate Valve (6 inch Rec)	Vc6GvRec	6		Dash
Gate Valve (8 inch Rec)	Vc8GvRec	6		Dash
Gate Valve (10 inch Rec)	Vc10GvRec	6		Dash
Gate Valve (12 inch Rec)	Vc12GvRec	6		Dash
Gate Valve (16 inch Rec)	Vc16GvRec	6		Dash
Gate Valve (18 inch Rec)	Vc18GvRec	6		Dash

Gate Valve (24 inch Rec)	Vc24GvRec	6		Dash
Plug or Cap (2 inch Rec)	Vc2PlugRec	6	0.70 mm	Cont.
Plug or Cap (4 inch Rec)	Vc4PlugRec	6	0.70 mm	Cont.
Plug or Cap (6 inch Rec)	Vc6PlugRec	6	0.70 mm	Cont.
Plug or Cap (8 inch Rec)	Vc8PlugRec	6	0.70 mm	Cont.
Plug or Cap (10 inch Rec)	Vc10PlugRec	6	0.70 mm	Cont.
Plug or Cap (12 inch Rec)	Vc12PlugRec	6	0.70 mm	Cont.
Plug or Cap (16 inch Rec)	Vc16PlugRec	6	0.70 mm	Cont.
Plug or Cap (18 inch Rec)	Vc18PlugRec	6	0.70 mm	Cont.
Plug or Cap (24 inch Rec)	Vc24PlugRec	6	0.70 mm	Cont.
Polyvinyl Chloride Reclaimed Line (2 inch)	Vc2PvcRec	6	0.70 mm	Cont.
Polyvinyl Chloride Reclaimed Line (4 inch)	Vc4PvcRec	6	0.70 mm	Cont.
Polyvinyl Chloride Reclaimed Line (6 inch)	Vc6PvcRec	6	0.70 mm	Cont.
Polyvinyl Chloride Reclaimed Line (8 inch)	Vc8PvcRec	6	0.70 mm	Cont.
Polyvinyl Chloride Reclaimed Line (10 inch)	Vc10PvcRec	6	0.70 mm	Cont.
Polyvinyl Chloride Reclaimed Line (12 inch)	Vc12PvcRec	6	0.70 mm	Cont.
Polyvinyl Chloride Reclaimed Line (16 inch)	Vc16PvcRec	6	0.70 mm	Cont.
Polyvinyl Chloride Reclaimed Line (18 inch)	Vc18PvcRec	6	0.70 mm	Cont.
Polyvinyl Chloride Reclaimed Line (24 inch)	Vc24PvcRec	6	0.70 mm	Cont.
Polyvinyl Chloride Reclaimed Line Text	VcPvcRecTxt	6	0.70 mm	Cont.
Reducer (Rec)	VcReducerRec	6		Dash
Tee (Rec)	VcTeeRec	6		Dash
Reclaimed Service	VcRs	6	0.70 mm	Cont.
Reclaimed Service Text	VcRsTxt	6	0.70 mm	Cont.
Wye (Rec)	VcWyeRec	6	0.70 mm	Dash
Utility Easement	VcEasm	5		Cont.
Utility Easement Text	VcEasmTxt	5		Cont.
Meter Assembly (5/8 inch Rec)	Vc5_8MeterRec	6		Dot
Meter Assembly (3/4 inch Rec)	Vc3_4MeterRec	6		Dot
Meter Assembly (1 Rec)	Vc1MeterRec	6		Dot
Meter Assembly (1.5 inch Rec)	Vc1.5MeterRec	6		Dot
Meter Assembly (2 Rec)	Vc2MeterRec	6		Dot
Meter Assembly (4 Rec)	Vc4MeterRec	6		Dot
Meter Assembly (6 Rec)	Vc6MeterRec	6		Dot
Meter Assembly (8 Rec)	Vc8MeterRec	6		Dot
Meter Assembly (10 Rec)	Vc10MeterRec	6		Dot
Meter Assembly (12 Rec)	Vc12MeterRec	6		Dot
Meter Assembly Text (Rec)	VcMeterWmText	6		Dot
H.D.P.E Reclaimed (2 inch)	Vc2HdpeRec	6	0.70 mm	Cont.
H.D.P.E Reclaimed (4 inch)	Vc4HdpeRec	6	0.70 mm	Cont.
H.D.P.E Reclaimed (6 inch)	Vc6HdpeRec	6	0.70 mm	Cont.
H.D.P.E Reclaimed (8 inch)	Vc8HdpeRec	6	0.70 mm	Cont.
H.D.P.E Reclaimed (10 inch)	Vc10HdpeRec	6	0.70 mm	Cont.
H.D.P.E Reclaimed (12 inch)	Vc12HdpeRec	6	0.70 mm	Cont.
H.D.P.E Reclaimed (16 inch)	Vc16HdpeRec	6	0.70 mm	Cont.
H.D.P.E Reclaimed (18 inch)	Vc18HdpeRec	6	0.70 mm	Cont.
H.D.P.E Reclaimed (24 inch)	Vc24HdpeRec	6	0.70 mm	Cont.
H.D.P.E Reclaimed Text	VcHdpeRectxt	6	0.70 mm	Cont.

Volusia County AutoCad Layers

(Water Utilities)

Wastewater

<u>Description</u>	<u>AutoCad Layer</u>	<u>Color</u>	<u>Line Weight</u>	<u>Line Type</u>
Abandoned Sewer	VcAbdSewer	3	0.15 mm	Cont.
Abandoned Sewer Text	VcAbdSewerTxt	3	0.15 mm	Cont.
Air Release Valve (FM)	VcFmArv	3	0.90 mm	Dash
Air Release Valve Text (FM)	VcFmArvTxt	3	0.90 mm	Dash
Butterfly Valve (2 inch FM)	Vc2BvFm	3	0.90 mm	Dash
Butterfly Valve (3 inch FM)	Vc3BvFm	3	0.90 mm	Dash
Butterfly Valve (4 inch FM)	Vc4BvFm	3	0.90 mm	Dash
Butterfly Valve (6 inch FM)	Vc6BvFm	3	0.90 mm	Dash
Butterfly Valve (8 inch FM)	Vc8BvFm	3	0.90 mm	Dash
Butterfly Valve (10 inch FM)	Vc10BvFm	3	0.90 mm	Dash
Butterfly Valve (12 inch FM)	Vc12BvFm	3	0.90 mm	Dash
Butterfly Valve (16 inch FM)	Vc16BvFm	3	0.90 mm	Dash
Butterfly Valve (18 inch FM)	Vc18BvFm	3	0.90 mm	Dash
Butterfly Valve (24 inch FM)	Vc24BvFm	3	0.90 mm	Dash
Blow-Off (FM)	VcFmBo	3	0.90 mm	Cont.
Blow-Off Text (FM)	VcFmBoTxt	3	0.90 mm	Cont.
Cross (FM)	VcCrossFm	3	0.90 mm	Dash
Cross (San)	VcCrossSan	3	0.90 mm	Dash
Ductile Iron Force Main (2 inch)	Vc2DiFm	3	0.90 mm	Dash
Ductile Iron Force Main (3 inch)	Vc3DiFm	3	0.90 mm	Dash
Ductile Iron Force Main (4 inch)	Vc4DiFm	3	0.90 mm	Dash
Ductile Iron Force Main (6 inch)	Vc6DiFm	3	0.90 mm	Dash
Ductile Iron Force Main (8 inch)	Vc8DiFm	3	0.90 mm	Dash
Ductile Iron Force Main (10 inch)	Vc10DiFm	3	0.90 mm	Dash
Ductile Iron Force Main (12 inch)	Vc12DiFm	3	0.90 mm	Dash
Ductile Iron Force Main (16 inch)	Vc16DiFm	3	0.90 mm	Dash
Ductile Iron Force Main (18 inch)	Vc18DiFm	3	0.90 mm	Dash
Ductile Iron Force Main (24 inch)	Vc24DiFm	3	0.90 mm	Dash
Ductile Iron Force Main Text	VcDiFmTxt	3	0.90 mm	Cont.
Utility Easement	VcEasm	5		Cont.
Utility Easement Text	VcEasmTxt	5		Cont.
Gate Valve (2 inch)	Vc2Gv	3		Dash
Gate Valve (3 inch)	Vc3Gv	3		Dash
Gate Valve (4 inch)	Vc4Gv	3		Dash
Gate Valve (6 inch)	Vc6Gv	3		Dash
Gate Valve (8 inch)	Vc8Gv	3		Dash
Gate Valve (10 inch)	Vc10Gv	3		Dash
Gate Valve (12 inch)	Vc12Gv	3		Dash
Gate Valve (16 inch)	Vc16Gv	3		Dash
Gate Valve (18 inch)	Vc18Gv	3		Dash
Gate Valve (24 inch)	Vc24Gv	3		Dash
Plug or Cap (2 inch FM)	Vc2FmPlug	3	0.90 mm	Cont.
Plug or Cap (3 inch FM)	Vc3FmPlug	3	0.90 mm	Cont.
Plug or Cap (4 inch FM)	Vc4FmPlug	3	0.90 mm	Cont.

Volusia County CADD Production Standards Manual

Plug or Cap (6 inch FM)	Vc6FmPlug	3	0.90 mm	Cont.
Plug or Cap (8 inch FM)	Vc8FmPlug	3	0.90 mm	Cont.
Plug or Cap (10 inch FM)	Vc10FmPlug	3	0.90 mm	Cont.
Plug or Cap (12 inch FM)	Vc12FmPlug	3	0.90 mm	Cont.
Plug or Cap (16 inch FM)	Vc16FmPlug	3	0.90 mm	Cont.
Plug or Cap (18 inch FM)	Vc18FmPlug	3	0.90 mm	Cont.
Plug or Cap (24 inch FM)	Vc24FmPlug	3	0.90 mm	Cont.
Plug or Cap (2 inch San)	Vc2SanPlug	3	0.90 mm	Cont.
Plug or Cap (3 inch San)	Vc3SanPlug	3	0.90 mm	Cont.
Plug or Cap (4 inch San)	Vc4SanPlug	3	0.90 mm	Cont.
Plug or Cap (6 inch San)	Vc6SanPlug	3	0.90 mm	Cont.
Plug or Cap (8 inch San)	Vc8SanPlug	3	0.90 mm	Cont.
Plug or Cap (10 inch San)	Vc10SanPlug	3	0.90 mm	Cont.
Plug or Cap (12 inch San)	Vc12SanPlug	3	0.90 mm	Cont.
Plug or Cap (16 inch San)	Vc16SanPlug	3	0.90 mm	Cont.
Plug or Cap (18 inch San)	Vc18SanPlug	3	0.90 mm	Cont.
Plug or Cap (24 inch San)	Vc24SanPlug	3	0.90 mm	Cont.
Polyvinyl Chloride Force Main (2 inch)	Vc2PvcFm	3	0.90 mm	Cont.
Polyvinyl Chloride Force Main (3 inch)	Vc3PvcFm	3	0.90 mm	Cont.
Polyvinyl Chloride Force Main (4 inch)	Vc4PvcFm	3	0.90 mm	Cont.
Polyvinyl Chloride Force Main (6 inch)	Vc6PvcFm	3	0.90 mm	Cont.
Polyvinyl Chloride Force Main (8 inch)	Vc8PvcFm	3	0.90 mm	Cont.
Polyvinyl Chloride Force Main (10 inch)	Vc10PvcFm	3	0.90 mm	Cont.
Polyvinyl Chloride Force Main (12 inch)	Vc12PvcFm	3	0.90 mm	Cont.
Polyvinyl Chloride Force Main (16 inch)	Vc16PvcFm	3	0.90 mm	Cont.
Polyvinyl Chloride Force Main (18 inch)	Vc18PvcFm	3	0.90 mm	Cont.
Polyvinyl Chloride Force Main (24 inch)	Vc24PvcFm	3	0.90 mm	Cont.
Polyvinyl Chloride Force Main Text	VcPvcFmTxt	3	0.90 mm	Cont.
Polyvinyl Chloride Sanitary (2 inch)	Vc2PvcSan	3	0.90 mm	Cont.
Polyvinyl Chloride Sanitary (3 inch)	Vc3PvcSan	3	0.90 mm	Cont.
Polyvinyl Chloride Sanitary (4 inch)	Vc4PvcSan	3	0.90 mm	Cont.
Polyvinyl Chloride Sanitary (6 inch)	Vc6PvcSan	3	0.90 mm	Cont.
Polyvinyl Chloride Sanitary (8 inch)	Vc8PvcSan	3	0.90 mm	Cont.
Polyvinyl Chloride Sanitary (10 inch)	Vc10PvcSan	3	0.90 mm	Cont.
Polyvinyl Chloride Sanitary (12 inch)	Vc12PvcSan	3	0.90 mm	Cont.
Polyvinyl Chloride Sanitary (16 inch)	Vc16PvcSan	3	0.90 mm	Cont.
Polyvinyl Chloride Sanitary (18 inch)	Vc18PvcSan	3	0.90 mm	Cont.
Polyvinyl Chloride Sanitary (24 inch)	Vc24PvcSan	3	0.90 mm	Cont.
Polyvinyl Chloride Sanitary Text	VcPvcSanTxt	3	0.90 mm	Cont.
Reducer (FM)	VcReducerFm	3		Dash
Reducer (San)	VcReducerSan	3		Dash
Tee (FM)	VcTeeFm	3		Dash
Tee (San)	VcTeeSan	3		Dash
Sewer Service	VcSanLat	3	0.90 mm	Cont.
Sewer Service Text	VcSanLatTxt	3	0.90 mm	Cont.
Wye	VcWyeFm	3	0.90 mm	Dash
Wye	VcWyeSan	3	0.90 mm	Dash
Meter Assembly (5/8 inch FM)	Vc5_8MeterFm	3		Dot
Meter Assembly (3/4 inch FM)	Vc3_4MeterFm	3		Dot
Meter Assembly (1 FM)	Vc1MeterFm	3		Dot
Meter Assembly (1.5 inch FM)	Vc1.5MeterFm	3		Dot
Meter Assembly (2 FM)	Vc2MeterFm	3		Dot

Volusia County CADD Production Standards Manual

Meter Assembly (4 FM)	Vc4MeterFm	3		Dot
Meter Assembly (6 FM)	Vc6MeterFm	3		Dot
Meter Assembly (8 FM)	Vc8MeterFm	3		Dot
Meter Assembly (10 FM)	Vc10MeterFm	3		Dot
Meter Assembly (12 FM)	Vc12MeterFm	3		Dot
Meter Assembly Text (FM)	VcMeterFmText	3		Dot
Lift Station	VcLs	3		Cont.
Lift Station Text	VcLsTxt	3		Cont.
Waste Water Treatment Plant	VcWWTP	3		Cont.
Waste Water Treatment Plant Text	VcWwtpTxt	3		Cont.
Grinder Pump - Low Pressure System	VcGp	3	0.90 mm	Cont.
Clean Out (Gravity)	VcCoG	3		Dot
Clean Out Text (Gravity)	VcCoGTxt	3		Dot
Flow Arrow (FM)	VcFaFm	3	0.90 mm	Cont.
Flow Arrow (Gravity)	VcFaG	3	0.90 mm	Cont.
Manhole	VcMh	3	0.90 mm	Dot
H.D.P.E Force Main (2 inch)	Vc2HdpeFm	3	0.90 mm	Cont.
H.D.P.E Force Main (3 inch)	Vc3HdpeFm	3	0.90 mm	Cont.
H.D.P.E Force Main (4 inch)	Vc4HdpeFm	3	0.90 mm	Cont.
H.D.P.E Force Main (6 inch)	Vc6HdpeFm	3	0.90 mm	Cont.
H.D.P.E Force Main (8 inch)	Vc8HdpeFm	3	0.90 mm	Cont.
H.D.P.E Force Main (10 inch)	Vc10HdpeFm	3	0.90 mm	Cont.
H.D.P.E Force Main (12 inch)	Vc12HdpeFm	3	0.90 mm	Cont.
H.D.P.E Force Main (16 inch)	Vc16HdpeFm	3	0.90 mm	Cont.
H.D.P.E Force Main (18 inch)	Vc18HdpeFm	3	0.90 mm	Cont.
H.D.P.E Force Main (24 inch)	Vc24HdpeFm	3	0.90 mm	Cont.
H.D.P.E Force Main Text	VcHdpeFmtxt	3	0.90 mm	Cont.