

**City of Toronto
TECHNICAL SERVICES
Survey & Mapping**

**ENGINEERING SURVEY
MICROSTATION V8 GRAPHIC SPECIFICATION**

Version 1.2.0 (V010200)

December, 2010

DATA INTEGRATION SERVICES

TABLE OF CONTENTS

Topic	Page
Overview	3
Graphic Files Required for MicroStation V8	4
Graphic Specification by Feature Class	5
Cells by Feature Class	60
InRoads "Custom Text Operation" Definitions by Feature Code	73
Graphic Specification by Sequential Survey Feature Code Number	80
Cell Library Graphic symbology	108

OVERVIEW

This document defines the graphic specification of all **Bentley MicroStation V8** and above environment for the Engineering Survey Section of the City of Toronto.

The **level structure** was developed with attribute-based coding and the code harmonization project in mind. Each level name begins with the “**Feature Class**”, followed by the “**Feature**”, if applicable, and suffixed with “**SVY**” identifier for Engineering Survey. All logical words in the level name are separated by the underbar (_) character. A DGN Library (dgnlib) file has been created for the level names and should be used to assign/update the correct level structure for Engineering Survey design files.

Cells have been inherited from District 1 Engineering Surveys to look appropriate at a 1:200 scale. Cells reside inside a DGN library (dgnlib) as unique models. The cell DGN library is the cell library.

InRoads Survey Preferences (**XIN**), and earlier Inroads version (**fxp**, **fwf**) were created and/or updated to ensure adherence to the V8 level structure and cells library.

There are several tables and views available in this document that can be accessed by “hyperlinks” from the Table of Contents page. Outlines for contents of these tables/views are located at the onset of each section.

GRAPHIC FILES REQUIRED FOR THE MICROSTATION V8

The following files have been created for the MicroStation V8 and must be used for processing of Engineering Survey captured data:

1. MicroStation V8 Engineering Survey Seed Files

- EngSrv_V8_Seed.dgn 3D seed file
- EngSrv_V8_2D_Seed.dgn 2D seed file

2. MicroStation V8 Engineering Survey Level Library

- EngSrv_V8_Levels_V010200.dgnlib

3. MicroStation V8 Engineering Survey Cell Library

- EngSrv_V8_Cells_V010200.dgnlib

4. InRoads Configuration and Feature Code Files

- EngSrv_v8i_v010200.xin Inroads Preferences file. (post v8)
- EngSrv_Elev_v8i_v010200.xin Inroads Preferences Elevation text only. (post v8)
- EngSrv_V8_V010200.fxp configuration file (v8 2004)
- EngSrv_V8_V010200.fwf full graphics feature code (v8 2004)
- EngSrv_V8_elev_V010200.fwf elevation text feature code (v8 2004)

GRAPHIC SPECIFICATION BY “FEATURE CLASS”

This table or abstract is based on the “**Feature Class**” for each survey feature code, where each page defines a unique “Feature Class”.

The following fields (columns) are defined for each “**Feature Class**”:

Numeric Code	Unique feature number assigned to every Engineering Survey field code
Feature Definition	Name of feature belonging to the “Feature Class”
Level Name	MicroStation V8 level name
Line Colour	MicroStation V8 colour number
Line Weight	MicroStation V8 weight number
Line Style	MicroStation V8 line style number
Cell Name	MicroStation V8 cell name (if applicable)

Feature Classes are listed on the next page with “hyperlinks”. To return to this page, use the arrow (◀) next to the “Feature Class” name.

[Barrier](#)
[Breather](#)
[Bridge](#)
[Building](#)
[Cable](#)
[Catch Basin](#)
[Chamber](#)
[Conduit](#)
[Culvert](#)
[Curb](#)
[Drain](#)
[Duct Bank](#)
[Earthworks Feature](#)
[Electrical Utility](#)
[Fence](#)
[Fire Hydrant](#)
[Gas Utility](#)
[Gate](#)
[Handwell](#)
[Inlet / Outlet](#)
[Land Use](#)
[Manhole](#)
[Marker](#)
[Miscellaneous](#)

[Pedestal](#)
[Pipe](#)
[Pipeline Utility](#)
[Pole](#)
[Post](#)
[Recreation](#)
[Road](#)
[Sewer Pipe](#)
[Sign](#)
[Street Hardware](#)
[Structure](#)
[Survey Point](#)
[Tank](#)
[TeleComm](#)
[Topographic Feature](#)
[Track](#)
[Traffic Control](#)
[Trees](#)
[Valve](#)
[Vegetation](#)
[Vent](#)
[Walkway](#)
[Wall](#)
[Water Main](#)

[Waterway](#)
[Waterway Structure](#)

BARRIER

Numeric_Code	Feature_Definition	Level_Name	Line_Colour	Line_Weight	Line_Style	Cell_Name
100	Barrier: Guard rail	Barrier_Guard_Rail_SVY	0	1	Guide	
101	Barrier: Jersey barrier	Barrier_Jersey_SVY	0	1	0	
105	Bollard	Barrier_Bollard_SVY				23
135	Hand Rail	Barrier_Hand_Rail_SVY	0	1	HR	

BREATHER

Numeric_Code	Feature_Definition	Level_Name	Line_Colour	Line_Weight	Line_Style	Cell_Name
534	Breather	Breather_SVY				50
535	Breather 0.1	Breather_SVY				501
536	Breather 0.3	Breather_SVY				503

BRIDGE

Numeric_Code	Feature_Definition	Level_Name	Line_Colour	Line_Weight	Line_Style	Cell_Name
216	Bridge	Bridge_SVY	1	2	0	
217	Bridge: Abutment	Bridge_Abutment_SVY	112	4	0	
218	Bridge: Bottom of bridge	Bridge_SVY				71
219	Bridge: Top of bridge	Bridge_SVY	0	0	0	
280	Expansion Joint	Bridge_Expansion_Joint_SVY	112	1	2	
404	Railway Trestle	Bridge_SVY	0	0	0	
947	Bottom Wingwall on Apron	Bridge_Wingwall_SVY	24	3	0	
948	Wingwall top	Bridge_Wingwall_SVY	40	3	0	

BUILDING

Numeric_Code	Feature_Definition	Level_Name	Line_Colour	Line_Weight	Line_Style	Cell_Name
104	Building counter clockwise	Building_SVY				DOT
107	Deck	Building_Deck_SVY	0	2	0	
108	Deck: Edge of asphalt	Building_Deck_SVY	16	2	0	
109	Deck: Edge of concrete	Building_Deck_SVY	32	2	0	
110	Eaves	Building_Eaves_SVY	0	1	3	
113	Building clockwise	Building_SVY				dot
130	Garage	Building_Garage_SVY	16	0	Building1	
138	Patio	Building_Patio_SVY	0	3	0	
139	Porch Corner	Building_Porch_SVY				PC
140	Porch Top	Building_Porch_SVY				PCTOP
208	Areaway	Building_Areaway_SVY	135	2	0	
213	BLDG foundation	Building_Foundation_SVY	0	5	3	
214	BLDG vent	Building_Vent_SVY	0	0	0	
269	Door sill	Building_Door_Sill_SVY				CROSW
279	Entrance	Building_Entrance_SVY				CROSW
282	House Line	Building_SVY				71
283	Floor	Building_Floor_SVY				CROSW
385	Window Sill	Building_Window_Sill_SVY				CROSW
386	Window Well	Building_Window_Well_SVY	0	0	0	
458	Coal chute	Building_Coal_Chute_SVY				Coal
475	Stone/concrete pillar	Building_Pillar_SVY	0	2	0	
478	Poured concrete footing	Building_Footing_SVY	0	1	2	
604	Fire stand pipe	Building_Fire_Stand_Pipe_SVY				63

CABLE

Numeric_Code	Feature_Definition	Level_Name	Line_Colour	Line_Weight	Line_Style	Cell_Name
740	Cable: Hydro Cable	Cable_SVY	0	0	0	
763	Telephone (buried) cable	Cable_SVY	6	1	0	
778	Cable: Cable TV	Cable_SVY	23	1	0	
783	Cable: Metronet/ATT (buried) cable	Cable_SVY	0	0	0	
830	Cable unknown	Cable_SVY	0	1	0	

CATCH BASIN

Numeric_Code	Feature_Definition	Level_Name	Line_Colour	Line_Weight	Line_Style	Cell_Name
500	Catch basin: Single straight	Catch_Basin_Single_SVY				41
501	Catch basin: Single diagonal	Catch_Basin_Single_SVY				41D
502	Catch basin: Single Pyramid	Catch_Basin_Single_SVY				41P
503	Catch basin in walk	Catch_Basin_Single_Pup_SVY				41E
504	Catch basin: Circular CB	Catch_Basin_Single_SVY				41C
505	Catch basin: Double straight	Catch_Basin_Double_SVY				42
506	Catch basin: Double diagonal	Catch_Basin_Double_SVY				42D
507	Catch basin: grate Edge (outline)	Catch_Basin_Grate_SVY	40	1	0	
508	Pup	Catch_Basin_Pup_SVY				PUP
509	Catch basin: Chamber (outline)	Catch_Basin_Chamber_SVY	2	1	0	
510	Catch basin: Sump	Catch_Basin_Sump_SVY	0	0	0	

CHAMBER

Numeric_Code	Feature_Definition	Level_Name	Line_Colour	Line_Weight	Line_Style	Cell_Name
512	Sewer chamber centre	Chamber_Combined_SVY				Chamber
516	Combined Sewer: center of chamber	Chamber_Combined_SVY				71
517	Combined Sewer: edge of chamber	Chamber_Combined_SVY	9	1	0	
526	Dual Sewer: center of chamber	Chamber_Dual_SVY				71
527	Dual Sewer: edge of chamber (outline)	Chamber_Dual_SVY	2	1	0	
544	Sanitary Sewer: chamber (center)	Chamber_Sanitary_SVY				71
545	Sanitary Sewer: chamber Edge	Chamber_Sanitary_SVY	8	1	0	
546	Sanitary sewer: chamber	Chamber_Sanitary_SVY	8	1	2	
547	Sanitary Sewer: chamber Edge	Chamber_Sanitary_SVY	8	1	2	
548	Sanitary Sewer: meter chamber	Chamber_Sanitary_Meter_SVY	0	0	0	
549	Sanitary Sewer: meter chamber Edge	Chamber_Sanitary_Meter_SVY	24	1	2	
571	Storm Sewer: chamber (center of	Chamber_Storm_SVY				71
572	Storm Sewer: chamber Edge	Chamber_Storm_SVY	2	1	0	
573	Storm sewer: chamber (approximate	Chamber_Storm_SVY				46A
574	Storm Sewer: chamber Edge	Chamber_Storm_SVY	2	1	2	
575	Storm Sewer: meter chamber	Chamber_Storm_Meter_SVY				46M
576	Storm Sewer: meter chamber Edge	Chamber_Storm_Meter_SVY	2	1	2	
609	Manhole: Corner of "Valve Chamber" (square cover)	Chamber_Valve_SVY	1	1	0	
610	Manhole: Center of "Valve Chamber"	Chamber_Valve_SVY				55
630	Water Chamber: Valve chamber	Chamber_Valve_SVY				55
631	Water Chamber: Valve Chamber	Chamber_Water_SVY				55A
632	Water Chamber: Valve Chamber Edge	Chamber_Water_SVY	1	2	0	
633	Water Chamber: Meter chamber	Chamber_Water_Meter_SVY				59
634	Water Chamber: Meter chamber: Edge	Chamber_Water_Meter_SVY	1	1	0	
635	Water Chamber: Toronto Water Works	Chamber_Water_SVY	0	0	0	
639	Water Chamber: Top of flange	Chamber_Flange_SVY				71FL
665	Gas chamber	Chamber_Gas_SVY	68	0	0	
741	Hydro Chamber	Chamber_Hydro_SVY	3	1	0	
764	Edge (outline) of Telephone chamber	Chamber_Telephone_SVY	6	1	0	

Engineering Survey MicroStation V8 Graphic Specification

Numeric_Code	Feature_Definition	Level_Name	Line_Colour	Line_Weight	Line_Style	Cell_Name
784	Chamber: Metronet/ATT chamber	Chamber_Mnet_ATT_SVY	0	0	0	
833	Chamber : Floor elevation of chamber	Chamber_Floor_SVY				71
834	Chamber: Edge (outline) of unknown	Chamber_SVY	2	1	0	
835	Chamber: Inside Walls	Chamber_Wall_SVY	19	1	0	

CONDUIT

Numeric_Code	Feature_Definition	Level_Name	Line_Colour	Line_Weight	Line_Style	Cell_Name
410	Conduit TTC	Conduit_SVY	0	0	0	

CULVERT

Numeric_Code	Feature_Definition	Level_Name	Line_Colour	Line_Weight	Line_Style	Cell_Name
223	Culvert Double: Invert	Culvert_Double_SVY				71
224	Culvert Double: Top	Culvert_Double_SVY				144
225	Culvert Single: Invert	Culvert_Single_SVY				141
226	Culvert Single: Obvert	Culvert_Single_SVY				71
227	Culvert Single: Top	Culvert_Single_SVY				141
228	Culvert to scale	Culvert_SVY	3	3	0	
229	Culvert: Box culvert corner	Culvert_Box_SVY				71
230	Culvert: INV. OF CLAY pipe	Culvert_Drainage_Tile_SVY				71
234	Culvert: Top. OF CLAY pipe	Culvert_Drainage_Tile_SVY				71

CURB

Numeric_Code	Feature_Definition	Level_Name	Line_Colour	Line_Weight	Line_Style	Cell_Name
200	1m Back of curb	Curb_Road_SVY				1M
240	Curb: Curb at back (top)	Curb_Road_SVY				ELEVC
241	Curb: Curb at Gutter (top)	Curb_Road_SVY				CROSLB
242	Curb: Curb at Gutter (bottom)	Curb_Road_SVY				ELEVR
243	Curb: Edge of Concrete Gutter	Curb_Road_SVY	0	0	0	
244	Curb: Asphal-Bottom	Curb_Road_SVY	0	0	0	
245	Curb: Asphal-Top	Curb_Road_SVY	0	0	0	
246	Curb: Back of driveway curb	Curb_Driveway_SVY	4	3	0	
247	Curb: Back of parking lot curb	Curb_Parking_Lot_SVY	0	0	0	
248	Curb: Bottom of driveway curb	Curb_Driveway_SVY	3	3	0	
249	Curb: Bottom of parking lot curb	Curb_Parking_Lot_SVY	3	3	0	
250	Curb: Centerline-top of portable curb	Curb_Portable_SVY				PCU
251	Curb: Curb @ CB	Curb_Road_SVY				CROSW
252	Curb: Depression-cut (Bottom)	Curb_Depression_Cut_SVY	0	0	0	
253	Curb: Depression-cut (Top)	Curb_Depression_Cut_SVY	0	0	0	
254	Curb: Metal at Gutter (top)	Curb_Road_SVY	10	0	0	
255	Curb: metal-top	Curb_Road_SVY	0	0	0	
256	Curb: Monolithic curb & SW (Bottom)	Curb_Monolithic_SVY	35	3	0	
257	Curb: Monolithic curb & SW (Top)	Curb_Monolithic_SVY	36	3	0	
258	Curb: Top of driveway curb	Curb_Driveway_SVY	52	3	0	
259	Curb: Top of parking lot curb	Curb_Parking_Lot_SVY	0	0	0	
260	Curb: wood-bottom	Curb_Road_SVY	0	0	0	
261	Curb: wood-top	Curb_Road_SVY	0	0	0	
281	Gutter	Curb_Gutter_SVY	0	0	0	

DRAIN

Numeric_Code	Feature_Definition	Level_Name	Line_Colour	Line_Weight	Line_Style	Cell_Name
587	Drain	Drain_SVY				DR
588	Drain Line	Drain_SVY	84	0	2	

DUCT BANK

Numeric_Code	Feature_Definition	Level_Name	Line_Colour	Line_Weight	Line_Style	Cell_Name
742	Hydro Duct	Duct_Bank_SVY	3	1	0	
765	Duct: Telephone duct	Duct_Bank_SVY	22	1	0	
779	Duct: Cable TV duct	Duct_Bank_SVY	7	1	0	
785	Duct: Metronet/ATT duct	Duct_Bank_SVY	0	0	0	
831	Duct Edge (outline) of Unknown duct	Duct_Bank_SVY	0	1	3	

EARTHWORKS FEATURE

Numeric_Code	Feature_Definition	Level_Name	Line_Colour	Line_Weight	Line_Style	Cell_Name
206	Area: Edge of rip-rap	Earthworks_Rip_Rap_SVY	96	2	0	
211	Berm: Bottom	Earthworks_Berm_SVY	3	3	0	
212	Berm: Top	Earthworks_Berm_SVY	2	3	0	
263	Ditch: Back	Earthworks_Ditch_SVY	0	0	0	
264	Ditch: Bottom	Earthworks_Ditch_SVY	1	3	146	
265	Ditch: C/L of ditch	Earthworks_Ditch_SVY	1	3	146	
266	Ditch: Front	Earthworks_Ditch_SVY	0	2	0	
268	Ditch: Top ditch-road drainage	Earthworks_Road_Drainage_Ditch_SVY	0	0	0	
362	Swale	Earthworks_Swale_SVY	1	3	0	
363	Swale: C/L of Swale	Earthworks_Swale_SVY	1	3	3	
364	Test pit: ground at test-pit	Earthworks_Test_Pit_SVY				TSTPT
456	Borehole	Earthworks_Borehole_SVY				BH
457	Boulder/Rock	Earthworks_Boulders_SVY				ROCK
477	Topsoil pile	Earthworks_Topsoil_Pile_SVY	0	3	2	
559	Septic field: Edge	Earthworks_Septic_Field_SVY	8	1	0	
821	Shaft	Earthworks_Shaft_SVY	0	0	0	
992	Tree Pit	Earthworks_Tree_Pit_SVY				TP

ELECTRICAL UTILITY

Numeric_Code	Feature_Definition	Level_Name	Line_Colour	Line_Weight	Line_Style	Cell_Name
700	Hydro utility box; Edge (outline)	Electrical_Utility_Box_SVY				24
703	Hydro junction box	Electrical_Utility_Junction_Box_SVY				21E
704	Kiosk	Electrical_Utility_Transformer_Switching_Kiosk_SVY				24a
715	Overhead Hydro line	Electrical_Utility_OHW_SVY	0	3	0	
718	Miscellaneous electric item	Electrical_Utility_SVY				71
727	Spotlight	Electrical_Utility_Spotlight_SVY				SL
729	Tower transformer	Electrical_Utility_Tower_Transformer_SVY				26T
730	Edge (outline) of Hydro Tower	Electrical_Utility_Tower_SVY	3	1	0	
731	Transformer	Electrical_Utility_Transformer_SVY				TRNS
732	Transformer area	Electrical_Utility_Transformer_Area_SVY	0	3	0	
733	Transformer switching kiosk	Electrical_Utility_Transformer_Switching_Kiosk_SVY				34
743	Transformer U/G	Electrical_Utility_Transformer_SVY				25
744	Edge (outline) of underground	Electrical_Utility_Transformer_SVY	3	1	0	

FENCE

Numeric_Code	Feature_Definition	Level_Name	Line_Colour	Line_Weight	Line_Style	Cell_Name
120	Fence	Fence_SVY	0	1	145	
121	Fence: Board	Fence_SVY	0	0	BF	
122	Fence: Brick	Fence_SVY	66	1	145	
123	Fence: Chain Link	Fence_SVY	54	0	ChLF	
124	Fence: Combination	Fence_SVY	15	1	145	
125	Fence: Metal	Fence_SVY	53	1	145	
126	Fence: Post & Wire	Fence_SVY	77	1	145	
127	Fence: Stone	Fence_SVY	63	1	ChLF	
128	Fence: Wire	Fence_SVY	5	1	WF	
129	Fence: Wrought Iron	Fence_SVY	6	0	WIF	

FIRE HYDRANT

Numeric_Code	Feature_Definition	Level_Name	Line_Colour	Line_Weight	Line_Style	Cell_Name
600	Fire hydrant	Fire_Hydrant_SVY				56
601	Fire Hydrant: shut off valve cover	Fire_Hydrant_Shut_Off_Valve_Cover_SVY				54
602	Fire Hydrant: High pressuure Hydrant	Fire_Hydrant_SVY				56H
603	Fire Hydrant: Top of riser	Fire_Hydrant_Riser_SVY				71FH

GAS UTILITY

Numeric_Code	Feature_Definition	Level_Name	Line_Colour	Line_Weight	Line_Style	Cell_Name
650	Gas drip	Gas_Utility_Drip_SVY				38
651	Gas Drip 0.17 square	Gas_Utility_Drip_SVY				38
652	Gas Key	Gas_Utility_Key_SVY				37
655	Gas meter	Gas_Utility_Meter_SVY				GM
656	Gas regulator box	Gas_Utility_Regulator_Box_SVY				60
657	Gas regulator box Edge (outline)	Gas_Utility_Regulator_Box_SVY	0	0	0	

GATE

Numeric_Code	Feature_Definition	Level_Name	Line_Colour	Line_Weight	Line_Style	Cell_Name
131	Gate	Gate_SVY				67
132	Gate: Multi shot	Gate_SVY	5	0	WIF	
133	Gate: (single shot)	Gate_SVY				67
134	Gate: Parking Lot	Gate_SVY				67A

HANDWELL

Numeric_Code	Feature_Definition	Level_Name	Line_Colour	Line_Weight	Line_Style	Cell_Name
699	Hydro Handwell 0.50 dia	Handwell_Hydro_SVY				24a
702	Hydro handwell 0.32 dia	Handwell_Hydro_SVY				24
752	Handwell: Telephone handwell	Handwell_Telephone_SVY				24T
772	Handwell: Cable TV hanwell	Handwell_CableTV_SVY				24C
780	Metronet/ATT handwell	Handwell_Mnet_ATT_SVY				24M
811	Unknown handwell	Handwell_SVY				HW

INLET / OUTLET

Numeric_Code	Feature_Definition	Level_Name	Line_Colour	Line_Weight	Line_Style	Cell_Name
267	Ditch: Inlet	In_Out_Inlet_SVY				71
565	Outfall: Edge (outline) of sewer	In_Out_Outfall_SVY	2	1	0	
566	Outfall: INV OF OUTFALL PIPE	In_Out_Outfall_SVY				71
567	Outfall: TOP OF OUTFALL PIPE	In_Out_Outfall_SVY				71
941	back of Headwall	In_Out_Headwall_SVY	16	3	0	
942	Bottom of headwall	In_Out_Headwall_SVY	4	3	0	
943	Top of headwall	In_Out_Headwall_SVY	0	3	0	

LAND USE

Numeric_Code	Feature_Definition	Level_Name	Line_Colour	Line_Weight	Line_Style	Cell_Name
805	Dump limit	Land_Use_Dump_SVY	2	3	2	
812	Landfill site: Edge (limit)	Land_Use_Landfill_SVY	2	3	0	
904	Quarry: Edge (limit)	Land_Use_Quarry_SVY	0	3	2	

MANHOLE

Numeric Code	Feature Definition	Level Name	Line Colour	Line Weight	Line Style	Cell Name
403	Manhole: CPR/CNR Manhole (lid)	Manhole_Lid_SVY				600
411	MH: TTC Manhole (lid)	Manhole_Lid_TTC_SVY				TTCMH
511	Combined Sewer: center of manhole	Manhole_Combined_SVY				48
513	Combined Sewer: invert referece	Manhole_Combined_SVY				71
522	Dual Sewer: center of manhole (lid)	Manhole_Lid_Sewer_SVY				49
523	Dual Sewer: invert reference	Manhole_Dual_SVY				71
530	Sanitary Sewer: center of manhole	Manhole_Sanitary_SVY				47
531	Sanitary Sewer: manhole (lid	Manhole_Lid_Sanitary_SVY				47
532	Sanitary Sewer: invert reference	Manhole_Sanitary_SVY				71
538	SMH 0.68	Manhole_Lid_Sewer_SVY				SMH68
539	SMH 0.80	Manhole_Lid_Sewer_SVY				SMH8
561	Storm Sewer: manhole (center of	Manhole_Storm_SVY				SMH68
562	Storm Sewer: manhole (approximate	Manhole_Storm_SVY				46A
563	Storm Sewer: invert reference	Manhole_Storm_SVY				71
585	Abandoned manhole (lid)	Manhole_Lid_Abandoned_SVY				A
596	Top of risers	Manhole_Riser_SVY				71
611	Manhole: invert reference location	Manhole_SVY				71
612	Manhole: Toronto Water works 2/3 lid	Manhole_Lid_Water_SVY				TWW1
613	Manhole: Toronto Water Works	Manhole_Water_SVY				TWW
614	Manhole: Water "Meter Chamber"	Manhole_Meter_Chamber_SVY	0	0	0	
615	Manhole: High Pressure TWW	Manhole_Water_SVY				TWW3
638	Water Chamber: Maintenance Hole	Manhole_Chamber_Access_SVY				WMH
654	Gas manhole (lid)	Manhole_Lid_Gas_SVY				35
716	Hydro manhole (lid)	Manhole_Lid_Hydro_SVY				15
753	Telephone manhole (lid)	Manhole_Lid_Telephone_SVY				16
781	Metronet/AT&T/Rogers Manhole	Manhole_Lid_Mnet_ATT_SVY				MMH
800	TD HEAT: Steam MH (lid)	Manhole_Lid_SVY				266
813	Manhole: unknown	Manhole_Lid_SVY				44
838	GT Manhole 0.88 dia	Manhole_Lid_SVY				16

MARKER

Numeric_Code	Feature_Definition	Level_Name	Line_Colour	Line_Weight	Line_Style	Cell_Name
533	Sanitary sewer: Marker	Marker_Sewer_SVY				47M
564	Storm sewer: marker	Marker_Sewer_SVY				SM
624	Water Main: Marker	Marker_Water_SVY				WM
653	GAS Main MARKER	Marker_Gas_SVY				36
717	Hydro cable marker	Marker_Hydro_SVY				64
754	Underground Telephone cable marker	Marker_Underground_Cable_SVY				65
773	Marker: Underground Cable TV cable	Marker_Underground_Cable_SVY				CM
782	Metronet/ATT u/g cable marker	Marker_Underground_Cable_SVY				MNET
814	Marker: Oil pipeline marker	Marker_Underground_Utility_SVY				43

MISCELLANEOUS

Numeric Code	Feature Definition	Level Name	Line Colour	Line Weight	Line Style	Cell Name
450	Miscellaneous Line	Miscellaneous_SVY				71
451	NO ID	Miscellaneous_SVY				10
452	Area U/C	Miscellaneous_Construction_Zone_SVY				132
453	Backfill	Miscellaneous_SVY	0	0	0	
598	Monitoring Well	Miscellaneous_Well_SVY				MW
617	Sprinkler head	Miscellaneous_Sprinkler_Head_SVY				sprnkl
627	Well	Miscellaneous_Well_SVY				WELL
815	Pole: Edge (outline) of pole cribbing	Miscellaneous_Pole_Cribbing_SVY	0	0	0	
820	Pump gas	Miscellaneous_Pump_Gas_SVY				5
823	Weigh Scale: Corners	Miscellaneous_Weigh_Scale_SVY				71
832	Cathode Protector	Miscellaneous_SVY				CP
900	Buoys	Miscellaneous_Buoys_SVY				BOUY
905	Wooden crib	Miscellaneous_Crib_SVY	22	1	0	
915	Edge of rock outcrop	Miscellaneous_Rock_Outcrop_SVY	1	3	0	
944	Piling	Miscellaneous_Piling_SVY				P

PEDESTAL

Numeric_Code	Feature_Definition	Level_Name	Line_Colour	Line_Weight	Line_Style	Cell_Name
719	Pedestal Electric	Pedestal_SVY				21
745	Bell Telephone Box: outline	Pedestal_SVY	6	0	0	
758	Pedestal: Telephone pedestal	Pedestal_SVY				21T
774	Pedestal: Cable TV pedestal	Pedestal_SVY				252

PIPE

Numeric_Code	Feature_Definition	Level_Name	Line_Colour	Line_Weight	Line_Style	Cell_Name
231	Culvert: INV. OF CONC. Pipe	Pipe_SVY				71
232	Culvert: INV. of Corr.Metal Pipe	Pipe_SVY				71
233	Culvert: INV. OF PVC pipe	Pipe_SVY				71
235	Culvert: Top. OF CONC. Pipe	Pipe_SVY				71
236	Culvert: Top. of Corr.Metal Pipe	Pipe_SVY				71
237	Culvert: Top. OF PVC pipe	Pipe_SVY				71
589	Pipe: bottom of pipe	Pipe_SVY				71
590	Pipe: Invert of pipe	Pipe_SVY				71
591	Pipe: obvert of pipe	Pipe_SVY				71
592	Pipe: top of pipe	Pipe_SVY				71
593	Pipe: Concrete pipe inlet Invert	Pipe_SVY				71
594	Pipe: Concrete pipe outlet invert	Pipe_SVY				71
837	Top waste oil pipe	Pipe_Waste_Oil_SVY				WP

PIPELINE UTILITY

Numeric_Code	Feature_Definition	Level_Name	Line_Colour	Line_Weight	Line_Style	Cell_Name
666	Gas Main Centerline of pipeline	Pipeline_Utility_Gas_Main_SVY				71
667	Gas service line	Pipeline_Utility_Gas_Service_SVY	0	0	0	
836	Pipeline Centerline	Pipeline_Utility_Misc_Pipeline_SVY	0	3	0	

POLE

Numeric Code	Feature Definition	Level Name	Line Colour	Line Weight	Line Style	Cell Name
414	TTC pole	Pole_Street-Car_SVY				TTCPST
459	Flag pole	Pole_Flag_SVY				68
710	Light Standard	Pole_Light_Standard_SVY				27
711	Light Standard: Metal	Pole_Light_Standard_SVY				27M
712	Light Standard: Wood	Pole_Light_Standard_SVY				27W
713	Light Standard: Concrete	Pole_Light_Standard_SVY				27C
714	Light Standard: Base	Pole_Light_Standard_Base_SVY				27B
720	Hydro Pole	Pole_Hydro_SVY				26
721	Hydro pole concrete	Pole_Hydro_SVY				27C
722	Pole: Hydro pole Concrete round	Pole_Hydro_SVY				26C
723	Pole: Hydro pole Concrete square	Pole_Hydro_SVY				26CS
724	Pole: Hydro pole wood	Pole_Hydro_SVY				26w
725	Pole: Hydro pole wood round	Pole_Hydro_SVY				26W
726	Pole: Traffic light	Pole_Traffic_Signal_SVY				4
759	Telephone pole	Pole_Telephone_SVY				17
775	Cable TV camera pole	Pole_Camera_SVY				CAM
808	Guy pole	Pole_Guy_SVY				32
809	Guy wire	Pole_Guy_Wire_SVY				33
810	Guy wire: Multi-utility	Pole_Guy_Wire_SVY				330
816	Pole: Multi utility	Pole_SVY				PM
817	Pole: unidentified concrete pole	Pole_SVY				30C
818	Pole: Unknown utility	Pole_SVY				30

POST

Numeric_Code	Feature_Definition	Level_Name	Line_Colour	Line_Weight	Line_Style	Cell_Name
141	Post	Post_SVY				30
142	Post 0.1 dia.	Post_SVY				1B
143	Post: Bicycle Post	Post_Bicycle_SVY				30P
144	Post: Bus stop sign/post	Post_Bus_SVY				TS
145	Post: Sign Post 0.05 sp.	Post_Sign_SVY				1
146	Post: Sign Post 0.06 dia.	Post_Sign_SVY				1
147	Post: Sign Post 0.10 dia.	Post_Sign_SVY				1
148	Post: Sign Post 0.10 sq.	Post_Sign_SVY				1A
149	pcsbuttonpost	Post_Pedestrian_X-Walk_SVY				PCSBP

RECREATION

Numeric Code	Feature Definition	Level Name	Line Colour	Line Weight	Line Style	Cell Name
454	Basketball Backstop pole	Recreation_Backstop_Pole_SVY				BBBS
460	Football post	Recreation_Football_Uprights_SVY				FBP
464	Park: Playground	Recreation_Playground_SVY	0	2	2	
465	Park: Edge (outline) of amusement	Recreation_Amusement_Park_SVY	0	5	0	
466	Park: Playground Apparatus	Recreation_Playground_Apparatus_SVY	0	1	0	
467	Park: Soccer goal post	Recreation_Soccer_Goal_Post_SVY				71
468	Park: Stands	Recreation_Stands_SVY	16	1	0	
469	Pool	Recreation_Pool_SVY	1	3	0	
470	Running track: Edge of running track	Recreation_Running_Track_SVY	0	3	2	
473	Skating rink: Edge of skating rink	Recreation_Skating_Rink_SVY	0	1	2	
901	Edge (outline) of golf fairway	Recreation_Golf_Fairway_SVY	2	3	3	
902	Edge (outline) of golf sand trap or	Recreation_Golf_Sand_Trap_SVY	0	3	2	
903	Edge (outline) of golf tee area or	Recreation_Golf_Tee_Off_SVY	2	3	0	

ROAD

Numeric Code	Feature Definition	Level Name	Line Colour	Line Weight	Line Style	Cell Name
205	Area: Edge of grind area	Road_Grind_SVY	80	2	0	
207	Area: Edge of taper	Road_Taper_SVY	112	0	0	
220	Bus bay: Edge of bus bay	Road_Bus_Bay_SVY	0	0	0	
221	Cross Fall Break	Road_Cross_Fall_Break_SVY	0	2	0	
222	Crosswalk	Road_Crosswalk_SVY	23	1	0	
262	Dish Line	Road_Dish_Line_SVY	90	0	2	
270	Driveway	Road_Driveway_SVY	68	1	0	
271	Driveway: Asphalt	Road_Driveway_SVY	68	3	0	
272	Driveway: brick	Road_Driveway_SVY	22	3	0	
273	Driveway: C/L OF DRIVEWAY	Road_Driveway_SVY	0	2	0	
274	Driveway: concrete	Road_Driveway_SVY	20	3	0	
275	Driveway: dirt	Road_Driveway_SVY	22	3	3	
276	Driveway: gravel	Road_Driveway_SVY	0	3	3	
277	Driveway: stone	Road_Driveway_SVY	23	3	3	
287	Parking lot: Edge of asphalt	Road_Parking_Lot_SVY	16	3	0	
288	Parking lot: Edge of concrete	Road_Parking_Lot_SVY	20	3	0	
289	Parking lot: Edge of gravel	Road_Parking_Lot_SVY	0	3	3	
290	Parking lot: Edge of interlocking	Road_Parking_Lot_SVY	22	3	0	
291	Parking lot: Edge of parking lot	Road_Parking_Lot_SVY	0	3	0	
295	Ramp	Road_Ramp_SVY	0	0	3	
296	Lane line	Road_Traffic_Lane_SVY	0	2	0	
300	Road Centre Line	Road_SVY				CROSB
301	Road Crown	Road_Crown_SVY				CROSB
302	Road: Centerline of paved road (Approx.)	Road_SVY				713
303	Road: Centerline of unpaved road	Road_SVY				71
304	Road: Centerline tick	Road_SVY				CT
305	Edge of paved road	Road_SVY	0	3	0	
306	Curb: Edge of Brick Gutter	Road_SVY	8	0	0	
307	Road: Edge of concrete road	Road_SVY	119	0	0	
308	Gravel Road	Road_SVY	142	0	0	

Engineering Survey MicroStation V8 Graphic Specification

Numeric_Code	Feature_Definition	Level_Name	Line_Colour	Line_Weight	Line_Style	Cell_Name
309	Road: Edge of traffic lane	Road_Traffic_Lane_SVY	0	0	Paint	
310	Shoulder	Road_Shoulder_SVY	0	3	3	
311	Shoulder: Edge of Asphalt	Road_Shoulder_SVY	16	3	3	
312	Shoulder: Edge of Concrete	Road_Shoulder_SVY	20	3	3	
313	Shoulder: Edge of dirt	Road_Shoulder_SVY	22	3	3	
314	Shoulder: Edge of gravel	Road_Shoulder_SVY	32	3	3	
318	Splash Strip	Road_Splash_Strip_SVY	0	0	0	
319	driveable median	Road_Driveable_Median_SVY				71
400	Airport: Edge of unpaved airport	Road_Airport_Runway_SVY	0	3	2	
401	Airport:Edge of paved airport runway	Road_Airport_Runway_SVY	0	3	0	

SEWER PIPE

Numeric Code	Feature Definition	Level Name	Line Colour	Line Weight	Line Style	Cell Name
514	Combined Sewer: centerline of sewer	Sewer_Pipe_Combined_SVY				71
515	Combined Sewer: centeline of sewer	Sewer_Pipe_Combined_SVY	9	1	2	
518	Combined Sewer: bottom of pipe	Sewer_Pipe_Combined_SVY				71
519	Sewer pipe invert	Sewer_Pipe_Combined_SVY				pipe
520	Combined Sewer: obvert of pipe	Sewer_Pipe_Combined_SVY				71
521	Combined Sewer: top of pipe	Sewer_Pipe_Combined_SVY				71
524	Dual Sewer: centerline of sewer (Approx.)	Sewer_Pipe_Dual_SVY				71
525	Dual Sewer: centerline of sewer	Sewer_Pipe_Dual_SVY				71
541	Sanitary sewer: Centerline	Sewer_Pipe_Sanitary_SVY	8	1	0	
542	Sanitary sewer: Centerline (Approx.)	Sewer_Pipe_Sanitary_SVY				71
550	Sanitary sewer: bottom of pipe	Sewer_Pipe_Sanitary_SVY				71
551	Sanitary sewer: invert of pipe	Sewer_Pipe_Sanitary_SVY				71
552	Sanitary sewer: obvert of pipe	Sewer_Pipe_Sanitary_SVY				71
553	Sanitary sewer: top of pipe	Sewer_Pipe_Sanitary_SVY				71
554	Forced-Main Pipe	Sewer_Pipe_Forced_Main_SVY				71
555	Leachate: bottom of pipe	Sewer_Pipe_Leachate_SVY				71
556	Leachate: invert of pipe	Sewer_Pipe_Leachate_SVY				71
557	Leachate: obvert of pipe	Sewer_Pipe_Leachate_SVY				71
558	Leachate: top of pipe	Sewer_Pipe_Leachate_SVY				71
560	Sewer Flasher	Sewer_Pipe_Flusher_SVY				SF
568	Storm sewer: Centerline	Sewer_Pipe_Storm_SVY	2	1	0	
569	Storm sewer: Centerline	Sewer_Pipe_Storm_SVY	2	1	2	
577	Storm sewer: bottom of pipe	Sewer_Pipe_Storm_SVY				71
578	Storm sewer: invert of pipe	Sewer_Pipe_Storm_SVY				71
579	Storm sewer: obvert of pipe	Sewer_Pipe_Storm_SVY				71
580	Storm sewer: top of pipe	Sewer_Pipe_Storm_SVY				71
581	Weeping Tile	Sewer_Pipe_Weeping_Tile_SVY	50	1	0	
586	Proposed CL of Sewer	Sewer_Pipe_SVY	0	0	0	
595	SMH (line)	Sewer_Pipe_SVY				CROSG

SIGN

Numeric_Code	Feature_Definition	Level_Name	Line_Colour	Line_Weight	Line_Style	Cell_Name
102	Beacon	Sign_Beacon_SVY				22
103	Billboard	Sign_Billboard_SVY	3	3	0	
150	Sign	Sign_SVY				1
151	Sign: Flashing Traffic Sign	Sign_Flashing_Traffic_SVY				1FL
152	Sign: Guide Sign	Sign_Guide_SVY				1G
153	Sign: Park Sign	Sign_Park_SVY				1PRK
154	Sign: Private	Sign_SVY				PS
155	Sign: Private (multi pole)	Sign_SVY	0	2	0	
156	Sign: Railway	Sign_SVY				6A
157	Sign: Road (overhead)	Sign_Overhead_SVY	0	3	0	
158	Sign: Stop Sign	Sign_Stop_SVY				1
159	Sign: Traffic double sign	Sign_Double_Traffic_SVY	0	2	0	
160	Sign: Traffic single sign	Sign_Single_Traffic_SVY				1
161	Sign: Warning	Sign_Warning_SVY				1
162	Sign: Yeld Sign	Sign_Yield_SVY				1

STREET HARDWARE

Numeric_Code	Feature_Definition	Level_Name	Line_Colour	Line_Weight	Line_Style	Cell_Name
111	garbage bin	Street_Hardware_Garbage_Bin_SVY				GB
112	prkpermitdisp	Street_Hardware_Parking_Permit_Dispenser_SVY				PPD
114	Gabage\recycling Bin	Street_Hardware_Garbage_Bin_SVY				GRB
136	Mail Box	Street_Hardware_Mail_Box_SVY				66
137	Parking meter	Street_Hardware_Parking_Meter_SVY				2
455	Bench	Street_Hardware_Bench_SVY				BNCH
474	Statue	Street_Hardware_Statue_SVY	32	3	0	
804	Box: Edge (outline) of unknown	Street_Hardware_Box_SVY	120	1	0	
907	Planter	Street_Hardware_Planter_SVY	154	1	0	

STRUCTURE

Numeric Code	Feature Definition	Level Name	Line Colour	Line Weight	Line Style	Cell Name
106	Chimney Edge	Structure_Chimney_SVY	0	0	Building1	
165	Silo Edge	Structure_Silo_SVY	0	0	0	
284	Edge of Asphalt	Structure_Pad_SVY	0	0	2	
285	Pad: Edge of concrete pad	Structure_Pad_SVY				713
286	Pad: Edge of wooden pad	Structure_Pad_SVY	22	3	0	
336	Step	Structure_Step_SVY	4	3	0	
337	Step : Concrete	Structure_Step_SVY	36	3	0	
338	Step: Asphalt	Structure_Step_SVY	16	3	0	
339	Step: Brick	Structure_Step_SVY	22	3	0	
340	Step: Risers	Structure_Step_Risers_SVY	12	1	0	
341	Step: Stone	Structure_Step_SVY	24	3	0	
342	Step: Wood	Structure_Step_SVY	38	3	0	
412	TTC Concrete Pad	Structure_Pad_TTC_SVY	28	3	0	
413	TTC Asphalt Pad	Structure_Pad_TTC_SVY	24	3	0	
415	Shelter: TTC Bus Shelter	Structure_Bus_Shelter_SVY	0	2	0	
463	Miscellaneous Structure	Structure_Miscellaneous_SVY	0	3	0	
471	School portable	Structure_School_Portable_SVY	16	5	0	
472	Silo (PT of circle)	Structure_Silo_SVY				SILO
762	Edge (outline) of Telecommunications tower	Structure_Tower_Telecom_SVY	22	1	0	
777	Cable TV communication tower	Structure_Tower_CableTV_SVY	7	1	0	
822	Tower: Edge (outline) of Unknown	Structure_Tower_SVY	0	0	0	
930	Apron: Concrete Apron	Structure_Pad_SVY	16	3	0	
945	Garden shed	Structure_Garden_Shed_SVY	0	3	0	

SURVEY POINT

Numeric_Code	Feature_Definition	Level_Name	Line_Colour	Line_Weight	Line_Style	Cell_Name
10	Horizontal Control Monument	Survey_Monument_SVY				76
11	Control point	Survey_Point_SVY				77
12	Horizontal Control (backsight	Survey_Point_SVY				71
20	Station	Survey_Point_SVY				77
21	Point of intersection	Survey_Point_SVY				PI
22	Point of reverse curve	Survey_Point_SVY				71
23	Beginning of curve	Survey_Point_SVY				71
24	End of curve	Survey_Point_SVY				71
25	Point of compound curve	Survey_Point_SVY				71
26	Centre Line	Survey_Line_SVY				71
27	Base Line	Survey_Line_SVY	0	0	0	
28	O/S line	Survey_Line_SVY	0	0	0	
29	Tie Point	Survey_Point_SVY				71
30	Nail	Survey_Monument_SVY				71
40	Bench Mark	Survey_Monument_SVY				80
41	Temporary BM	Survey_Point_SVY				71
42	Turning Point	Survey_Point_SVY				71
69	MONUMENT: TORONTO SURVEY	Survey_Monument_SVY				82T
70	Legal Survey Monument	Survey_Monument_SVY				82L
71	CUT CROSS	Survey_Monument_SVY				84
72	BAR: SSIB	Survey_Monument_SVY				85
73	BAR: IB	Survey_Monument_SVY				85
74	BAR: ROCK POST	Survey_Monument_SVY				85
75	IRON PIPE	Survey_Monument_SVY				71
76	BAR: ROUND IRON BAR	Survey_Monument_SVY				85RND
77	CUT ARROW	Survey_Monument_SVY				CUT
78	CUT "T"	Survey_Monument_SVY				CUTT
79	NAIL & WASHER	Survey_Monument_SVY				71CNW
80	NAIL SPIKE	Survey_Monument_SVY				71
81	WOODEN STAKE	Survey_Point_Stake_SVY				WS

Engineering Survey MicroStation V8 Graphic Specification

Numeric_Code	Feature_Definition	Level_Name	Line_Colour	Line_Weight	Line_Style	Cell_Name
82	MONUMENT: CONC.(HIGHWAYS)	Survey_Monument_SVY				82H
83	MONUMENT: CUT STONE	Survey_Monument_SVY				82S
84	BAR: ROCK BAR	Survey_Monument_SVY				85
85	BUILDING CORNER	Survey_Line_SVY				71
86	CUT SCRATCH / MARK	Survey_Monument_SVY				CSM
87	BAR: SIB	Survey_Monument_SVY				85
88	BAR: SIB AND CAP	Survey_Monument_SVY				83
89	BAR: SUBDIVISION BAR	Survey_Monument_SVY				85
90	BAR: ROUND SIB	Survey_Monument_SVY				6FD
343	Street Line	Survey_Line_SVY	0	0	0	
462	Hub on line	Survey_Point_SVY				HOL
476	Top of grade stake	Survey_Point_Stake_SVY				GS
625	Water Main: Stake-out	Survey_Point_Stake_SVY	1	1	1	
658	Gas Stake out	Survey_Point_Stake_SVY	4	1	2	
728	Hydro Stake out	Survey_Point_Stake_SVY	3	1	2	
760	Stake out Underground Bell cable	Survey_Point_Stake_SVY	6	1	2	
776	Stake out Underground Cabel TV cable	Survey_Point_Stake_SVY	7	1	2	
786	Stake-out: U/G Metronet/ATT cable	Survey_Point_Stake_SVY	0	0	0	

TANK

Numeric_Code	Feature_Definition	Level_Name	Line_Colour	Line_Weight	Line_Style	Cell_Name
537	Septic Tank Top	Tank_Septic_SVY				71
540	Tank: Edge (outline)	Tank_SVY	0	3	0	
806	Fuel tank filler	Tank_Fuel_Tank_Filler_SVY				FF
807	Fuel tank vent	Tank_Fuel_Vent_SVY				FV
819	Propane tank	Tank_Propane_SVY	0	0	0	

TELECOMM

Numeric_Code	Feature_Definition	Level_Name	Line_Colour	Line_Weight	Line_Style	Cell_Name
750	Edge (outline) of telephone booth	TeleComm_Telephone_Booth_SVY	6	1	0	
751	Telephone booth	TeleComm_Telephone_Booth_SVY				TB
755	Miscellaneous telephone item	TeleComm_SVY				71
756	Overhead telephone line	TeleComm_OHW_SVY	0	0	0	
757	Pedestal: Telephone Booth Pedestal	TeleComm_Telephone_Booth_Pad_SVY				21T
761	Telephone jump wire interface	TeleComm_Jump_Wire_Interface_SVY				61T
770	Box: CABLE TV Junction box	TeleComm_Junction_Box_SVY				252
771	Edge (outline) of cable TV utility	TeleComm_CATV_Utility_SVY	6	0	0	

TOPOGRAPHIC FEATURE

Numeric_Code	Feature_Definition	Level_Name	Line_Colour	Line_Weight	Line_Style	Cell_Name
201	Area: Edge of asphalt	Topographic_Spot_Z_SVY	16	2	0	
202	Area: Edge of brick	Topographic_Spot_Z_SVY	112	2	0	
203	Edge of Brick	Topographic_Spot_Z_SVY	9	0	0	
204	Area: edge of gravel	Topographic_Spot_Z_SVY	64	2	0	
215	Breakline/fence	Topographic_Breakline_SVY	10	1	145	
315	Slope Bottom	Topographic_Slope_SVY	50	3	3	
316	Slope change	Topographic_Slope_SVY	50	3	3	
317	Slope Top	Topographic_Slope_SVY	50	3	3	
320	Spot elevation	Topographic_Spot_Z_SVY				CROSW
321	Spot elevation: Asphalt	Topographic_Spot_Z_SVY				713
322	Spot elevation: Brick	Topographic_Spot_Z_SVY				713
323	Spot elevation: Concrete	Topographic_Spot_Z_SVY				713
324	Spot elevation: Tile	Topographic_Spot_Z_SVY				CROSW
325	Spot elevation: Dirt	Topographic_Spot_Z_SVY				713
326	Spot elevation: Gravel	Topographic_Spot_Z_SVY				713
327	Spot elevation: Interlocking Stone	Topographic_Spot_Z_SVY				71
328	Spot elevation: Lawn/Sod/Grass	Topographic_Spot_Z_SVY				CROSW
329	Spot elevation: Pattern Concrete	Topographic_Spot_Z_SVY				71
330	Spot elevation: Paved	Topographic_Spot_Z_SVY				71
331	Spot Elevation: Slurry Seal	Topographic_Spot_Z_SVY	0	0	0	
332	Spot elevation: Stone	Topographic_Spot_Z_SVY				CROSW
333	Spot elevation: Unpaved	Topographic_Spot_Z_SVY				71
334	Spot elevation: Flagstone	Topographic_Spot_Z_SVY				713
335	Spot elevation: Wood	Topographic_Spot_Z_SVY				713
344	Spot Elevation: Granite	Topographic_Spot_Z_SVY	0	0	0	
910	Bottom of bank	Topographic_Slope_SVY	70	3	0	
911	Top of bank	Topographic_Slope_SVY	0	3	2	
925	Edge of grass	Topographic_Spot_Z_SVY	18	1	0	
931	Bottom of concrete bank	Topographic_Slope_SVY	0	0	0	
932	Top concrete Bank	Topographic_Slope_SVY	0	0	0	

TRACK

Numeric_Code	Feature_Definition	Level_Name	Line_Colour	Line_Weight	Line_Style	Cell_Name
405	Signal: Railroad signal	Track_Railway_Signal_SVY				6
406	Signal: Railway Signal control box	Track_Railway_Signal_Control_Box_SVY	0	0	0	
407	Switch: Railroad switch	Track_Railway_Switch_SVY				TTC switch
408	Track allowance	Track_Allowance_SVY				CROSR
409	Track: Railway Track	Track_SVY	0	1	0	
416	Track : TTC Street-Car	Track_Street-Car_SVY				CROSG
417	Track drain	Track_Drain_SVY				TRDR
418	Track: TTC LRT	Track_LRT_SVY	16	3	0	
419	Track: TTC Subway	Track_Subway_SVY	32	3	0	
421	TTC Switch/Drain	Track_Drain_SVY				TTCSW
422	TTC electrical switch	Track_Rails_SVY				TTC switch2

TRAFFIC CONTROL

Numeric_Code	Feature_Definition	Level_Name	Line_Colour	Line_Weight	Line_Style	Cell_Name
163	Signal control box	Traffic_Control_Signal_Control_Box_SVY				3
164	Signal control box: Edge (outline)	Traffic_Control_Signal_Control_Box_SVY	0	1	0	
166	Traffic sensor	Traffic_Control_Sensor_SVY	0	1	1	

TREES

Numeric_Code	Feature_Definition	Level_Name	Line_Colour	Line_Weight	Line_Style	Cell_Name
950	Trees: Coniferous	Trees_Coniferous_SVY				95
951	Trees: 0.1 diameter	Trees_Coniferous_SVY				95
952	Trees: 0.2 diameter	Trees_Coniferous_SVY				95
953	Trees: 0.3 diameter	Trees_Coniferous_SVY				95
954	Trees: 0.4 diameter	Trees_Coniferous_SVY				95
955	Trees: 0.5 diameter	Trees_Coniferous_SVY				95
956	Trees: 0.6 diameter	Trees_Coniferous_SVY				95
957	Trees: 0.7 diameter	Trees_Coniferous_SVY				95
958	Trees: 0.8 diameter	Trees_Coniferous_SVY				95
959	Trees: 0.9 diameter	Trees_Coniferous_SVY				95
960	Trees: 1.0 diameter	Trees_Coniferous_SVY				95
961	Trees: Point on Row-Coniferous	Trees_Coniferous_SVY				71
970	Trees: Deciduous	Trees_Deciduous_SVY				96
971	Trees: 0.1 diameter	Trees_Deciduous_SVY				96
972	Trees: 0.2 diameter	Trees_Deciduous_SVY				96
973	Trees: 0.3 diameter	Trees_Deciduous_SVY				96
974	Trees: 0.4 diameter	Trees_Deciduous_SVY				96
975	Trees: 0.5 diameter	Trees_Deciduous_SVY				96
976	Trees: 0.6 diameter	Trees_Deciduous_SVY				96
977	Trees: 0.7 diameter	Trees_Deciduous_SVY				96
978	Trees: 0.8 diameter	Trees_Deciduous_SVY				96
979	Trees: 0.9 diameter	Trees_Deciduous_SVY				96
980	Trees: 1.0 diameter	Trees_Deciduous_SVY				96
981	Trees: Point on Row-Deciduous	Trees_Deciduous_SVY				71
990	Edge (outline) of tree area	Trees_SVY	2	1	VegOut	
991	Sapling tree	Trees_SVY				95
993	Trees: Dripline	Trees_SVY	18	1	131	
994	Trees: Tree stump	Trees_SVY				97

VALVE

Numeric_Code	Feature_Definition	Level_Name	Line_Colour	Line_Weight	Line_Style	Cell_Name
599	Water Valve: 0.18 dia	Valve_Water_SVY				54a
616	Spindle Cover	Valve_Spindle_Cover_SVY	0	0	0	
618	Valve: Water valve cover	Valve_Cover_SVY				54
619	Valve: High pressure Toronto Water	Valve_Water_SVY				54HP
620	Valve: Toronto Water Works 0.28 Valve	Valve_Water_SVY				TWW4
621	Valve: Toronto Water Works 2/3 Valve	Valve_Water_SVY				TWW5
628	Valve: Water Valve	Valve_Water_SVY				54
636	Water Chamber: Air Valve	Valve_Air_SVY				54a
637	Water Chamber: Center of spindle	Valve_Spindle_SVY				71SP
659	Gas valve	Valve_Gas_SVY				37
660	Gas Valve 0.08 diameter	Valve_Gas_SVY				37v
661	Gas Valve 0.17 square	Valve_Gas_SVY				38
662	Gas valve 0.23 diameter	Valve_Gas_SVY				39

VEGETATION

Numeric_Code	Feature_Definition	Level_Name	Line_Colour	Line_Weight	Line_Style	Cell_Name
906	Flower bed: Edge (outline)	Vegetation_Flower_Bed_SVY	128	1	0	
920	Bush: Edge of Bush	Vegetation_Bush_SVY	2	1	132	
921	Single Bush	Vegetation_Bush_SVY				SHRB
922	Hedge: Edge (outline)	Vegetation_Hedge_SVY	2	1	Hedge	
923	Shrub	Vegetation_Shruh_SVY				SHRB
924	hedge centreline	Vegetation_Hedge_SVY	2	1	Hedge	

VENT

Numeric_Code	Feature_Definition	Level_Name	Line_Colour	Line_Weight	Line_Style	Cell_Name
420	Vent: TTC Vent	Vent_TTC_SVY	48	3	0	
663	Gas vent	Vent_Gas_SVY				39
664	Gas vent/grate Edge (outline)	Vent_Gas_SVY	4	1	0	
734	Electric Vent	Vent_SVY	19	1	0	
801	TD HEAT: Steam Vent	Vent_SVY				ST
802	Air vent/grate	Vent_SVY				VNT
803	Air vent/grate: Edge (outline)	Vent_SVY				VNT

WALKWAY

Numeric_Code	Feature_Definition	Level_Name	Line_Colour	Line_Weight	Line_Style	Cell_Name
292	Path	Walkway_Path_SVY	0	3	0	
293	Path: dirt	Walkway_Path_SVY	22	3	3	
294	Path: gravel	Walkway_Path_SVY	38	3	3	
350	SW-Asphalt Public	Walkway_Sidewalk_SVY	16	3	0	
351	Approach: Brick	Walkway_Sidewalk_SVY	102	0	0	
352	SW: Concrete Public	Walkway_Sidewalk_SVY	6	0	0	
353	SW-Public	Walkway_Sidewalk_SVY	0	3	0	
354	SW: Back of sidewalk	Walkway_Sidewalk_SVY				CROSB
355	SW: Edge of Asphalt private	Walkway_Sidewalk_SVY	16	3	0	
356	Approach: Asphalt	Walkway_Sidewalk_SVY	70	0	0	
357	Approach	Walkway_Sidewalk_SVY	5	0	0	
358	SW: Edge of gravel private	Walkway_Sidewalk_SVY	32	3	0	
359	SW: Edge of private sidewalk	Walkway_Sidewalk_SVY	0	3	0	
360	SW: Edge of stone private	Walkway_Sidewalk_SVY	24	3	0	
361	SW: Front of sidewalk	Walkway_Sidewalk_SVY	30	1	0	

WALL

Numeric Code	Feature Definition	Level Name	Line Colour	Line Weight	Line Style	Cell Name
167	Wall: Sound Barrier	Wall_Sound_Barrier_SVY	0	0	0	
370	Wall: Back top stone ret. Wall	Wall_Retaining_SVY	95	3	0	
371	Wall: Back top timber ret. Wal	Wall_Retaining_SVY	99	3	0	
372	Wall: Back top Brick ret. Wall	Wall_Retaining_SVY	123	3	0	
373	Wall: Back top concrete ret. Wall	Wall_Retaining_SVY	88	3	0	
374	Wall: Bottom Brick ret. Wall	Wall_Retaining_SVY	91	3	0	
375	Wall: Bottom concrete ret. Wall	Wall_Retaining_SVY	56	3	0	
376	Wall: Bottom of retaining wall	Wall_Retaining_SVY	0	3	0	
377	Wall: Bottom stone ret. Wall	Wall_Retaining_SVY	63	3	0	
378	Wall: Bottom timber ret. Wall	Wall_Retaining_SVY	67	3	0	
379	Wall: Top Brick ret. Wall	Wall_Retaining_SVY	107	3	0	
380	Retaining Wall	Wall_Retaining_SVY	71	1	0	
381	Wall: Top stone ret. Wall	Wall_Retaining_SVY	79	3	0	
382	Wall: Top timber ret. Wal	Wall_Retaining_SVY	83	3	0	
383	Wall: Top back of ret. Wall	Wall_Retaining_SVY	32	3	0	
384	Wall: Top of retaining wall	Wall_Retaining_SVY	16	3	0	
461	Hoarding	Wall_Hoarding_SVY	105	3	2	
933	Bottom of breakwall	Wall_Breakwall_SVY	0	0	0	
934	Bottom of breakwall	Wall_Breakwall_SVY	0	0	0	

WATER MAIN

Numeric Code	Feature Definition	Level Name	Line Colour	Line Weight	Line Style	Cell Name
597	Water Test Station 0.08 dia	Water_Main_SVY				WM
605	Key: Water service key	Water_Main_Service_Key_SVY				54
622	Water Main: Proposed CL of Water	Water_Main_SVY				71
623	Water Main: Centerline (approximate)	Water_Main_SVY	1	1	2	
626	Water Tower: Edge (Outline)	Water_Main_Tower_SVY	87	0	(Dot)	
640	Water Main: Bottom	Water_Main_SVY				71
641	Water Main: Centerline	Water_Main_SVY				71
642	Water Main: Invert	Water_Main_SVY				71
643	Water Main: Obvert	Water_Main_SVY				71
644	Watermain top of pipe	Water_Main_SVY	1	0	pipe 0.20	
645	Water Main: cap or plug	Water_Main_Cap_Plug_SVY				69
646	Water Main: Reducer	Water_Main_Reducer_SVY				62
647	Water Service Lead	Water_Main_Service_Lead_SVY	1	1	2	

WATERWAY

Numeric_Code	Feature_Definition	Level_Name	Line_Colour	Line_Weight	Line_Style	Cell_Name
912	Channel	Waterway_Channel_SVY	0	0	0	
913	Bottom of Creek	Waterway_Creek_SVY	1	3	3	
914	Centerline of Creek	Waterway_Creek_SVY	1	3	142	
916	Edge of Swamp / Marsh	Waterway_Swamp_Marsh_SVY	1	3	3	
917	Water Edge	Waterway_SVY	17	3	3	
918	Water Level	Waterway_Water_Level_SVY				WLM
919	Water Mark	Waterway_Water_Mark_SVY				WLM

WATERWAY STRUCTURE

Numeric_Code	Feature_Definition	Level_Name	Line_Colour	Line_Weight	Line_Style	Cell_Name
935	Edge (outline) of beaver dam	Waterway_Structure_Beaver_Dam_SVY	0	0	0	
936	Edge of dam	Waterway_Structure_Dam_SVY	3	3	0	
937	Top of dam/spillover	Waterway_Structure_Dam_SVY	19	3	0	
938	Edge of dock	Waterway_Structure_Dock_SVY	0	3	0	
939	Bottom of gabion	Waterway_Structure_Gabion_SVY	4	2	0	
940	Top of gabion	Waterway_Structure_Gabion_SVY	3	2	0	
946	Spillway: Centerline	Waterway_Structure_Spillway_SVY	16	3	0	

CELLS BY “FEATURE CLASS”

This table (abstract) defines “cells” associated with features, by “feature class”.

The following fields (columns) are defined:

Feature Class	Name of the Feature Class
Cell Name	Name of the Cell assigned for the feature
Feature Definition	Name of the Feature
Numeric Code	Numeric Survey Code
Level Name	MicroStation V8 Level Name

CELL USAGE – BY FEATURE CLASS

Feature_Class	Cell_Name	Feature_Definition	Numeric_Code	Level_Name
BARRIER	23	Bollard	105	Barrier_Bollard_SVY
BREATHER	501	Breather 0.1	535	Breather_SVY
	503	Breather 0.3	536	Breather_SVY
	50	Breather	534	Breather_SVY
BRIDGE	71	Bridge: Bottom of bridge	218	Bridge_SVY
BUILDING	Coal	Coal chute	458	Building_Coal_Chute_SVY
	CROSW	Door sill	269	Building_Door_Sill_SVY
	CROSW	Entrance	279	Building_Entrance_SVY
	63	Fire stand pipe	604	Building_Fire_Stand_Pipe_SVY
	CROSW	Floor	283	Building_Floor_SVY
	PC	Porch Corner	139	Building_Porch_SVY
	PCTOP	Porch Top	140	Building_Porch_SVY
	71	House Line	282	Building_SVY
	dot	Building clockwise	113	Building_SVY
	DOT	Building counter clockwise	104	Building_SVY
	CROSW	Window Sill	385	Building_Window_Sill_SVY
CATCH_BASIN	42	Catch basin: Double straight	505	Catch_Basin_Double_SVY
	42D	Catch basin: Double diagonal	506	Catch_Basin_Double_SVY
	PUP	Pup	508	Catch_Basin_Pup_SVY
	41E	Catch basin in walk	503	Catch_Basin_Single_Pup_SVY
	41P	Catch basin: Single Pyramid	502	Catch_Basin_Single_SVY
	41	Catch basin: Single straight	500	Catch_Basin_Single_SVY
	41D	Catch basin: Single diagonal	501	Catch_Basin_Single_SVY
	41C	Catch basin: Circular CB	504	Catch_Basin_Single_SVY
CHAMBER	71	Combined Sewer: center of chamber	516	Chamber_Combined_SVY
	Chamber	Sewer chamber centre	512	Chamber_Combined_SVY
	71	Dual Sewer: center of chamber	526	Chamber_Dual_SVY
	71FL	Water Chamber: Top of flange	639	Chamber_Flange_SVY
	71	Chamber : Floor elevation of chamber	833	Chamber_Floor_SVY

Engineering Survey MicroStation V8 Graphic Specification

Feature_Class	Cell_Name	Feature_Definition	Numeric_Code	Level_Name
	71	Sanitary Sewer: chamber (center)	544	Chamber_Sanitary_SVY
	46M	Storm Sewer: meter chamber	575	Chamber_Storm_Meter_SVY
	71	Storm Sewer: chamber (center of	571	Chamber_Storm_SVY
	46A	Storm sewer: chamber (approximate	573	Chamber_Storm_SVY
	55	Manhole: Center of "Valve Chamber"	610	Chamber_Valve_SVY
	55	Water Chamber: Valve chamber	630	Chamber_Valve_SVY
	59	Water Chamber: Meter chamber	633	Chamber_Water_Meter_SVY
	55A	Water Chamber: Valve Chamber	631	Chamber_Water_SVY
CULVERT	71	Culvert: Box culvert corner	229	Culvert_Box_SVY
	144	Culvert Double: Top	224	Culvert_Double_SVY
	71	Culvert Double: Invert	223	Culvert_Double_SVY
	71	Culvert: Top. OF CLAY pipe	234	Culvert_Drainage_Tile_SVY
	71	Culvert: INV. OF CLAY pipe	230	Culvert_Drainage_Tile_SVY
	141	Culvert Single: Invert	225	Culvert_Single_SVY
	71	Culvert Single: Obvert	226	Culvert_Single_SVY
	141	Culvert Single: Top	227	Culvert_Single_SVY
CURB	PCU	Curb: Centerline-top of portable curb	250	Curb_Portable_SVY
	1M	1m Back of curb	200	Curb_Road_SVY
	CROSW	Curb: Curb @ CB	251	Curb_Road_SVY
	CROSLB	Curb: Curb at Gutter (top)	241	Curb_Road_SVY
	ELEVC	Curb: Curb at back (top)	240	Curb_Road_SVY
	ELEVR	Curb: Curb at Gutter (bottom)	242	Curb_Road_SVY
DRAIN	DR	Drain	587	Drain_SVY
EARTHWORKS	BH	Borehole	456	Earthworks_Borehole_SVY
	ROCK	Boulder/Rock	457	Earthworks_Boulders_SVY
	TSTPT	Test pit: ground at test-pit	364	Earthworks_Test_Pit_SVY
	TP	Tree Pit	992	Earthworks_Tree_Pit_SVY
ELECTRICAL_UTILITY	24	Hydro utility box; Edge (outline)	700	Electrical_Utility_Box_SVY
	21E	Hydro junction box	703	Electrical_Utility_Junction_Box_SVY
	SL	Spotlight	727	Electrical_Utility_Spotlight_SVY
	71	Miscellaneous electric item	718	Electrical_Utility_SVY
	26T	Tower transformer	729	Electrical_Utility_Tower_Transformer_SVY

Engineering Survey MicroStation V8 Graphic Specification

Feature_Class	Cell_Name	Feature_Definition	Numeric_Code	Level_Name
	TRNS	Transformer	731	Electrical_Utility_Transformer_SVY
	25	Transformer U/G	743	Electrical_Utility_Transformer_SVY
	24a	Kiosk	704	Electrical_Utility_Transformer_Switching_Kiosk_SVY
	34	Transformer switching kiosk	733	Electrical_Utility_Transformer_Switching_Kiosk_SVY
FIRE_HYDRANT	71FH	Fire Hydrant: Top of riser	603	Fire_Hydrant_Riser_SVY
	54	Fire Hydrant: shut off valve cover	601	Fire_Hydrant_Shut_Off_Valve_Cover_SVY
	56H	Fire Hydrant: High pressure Hydrant	602	Fire_Hydrant_SVY
	56	Fire hydrant	600	Fire_Hydrant_SVY
GAS_UTILITY	38	Gas drip	650	Gas_Utility_Drip_SVY
	38	Gas Drip 0.17 square	651	Gas_Utility_Drip_SVY
	37	Gas Key	652	Gas_Utility_Key_SVY
	GM	Gas meter	655	Gas_Utility_Meter_SVY
	60	Gas regulator box	656	Gas_Utility_Regulator_Box_SVY
GATE	67A	Gate: Parking Lot	134	Gate_SVY
	67	Gate: (single shot)	133	Gate_SVY
	67	Gate	131	Gate_SVY
HANDWELL	24C	Handwell: Cable TV hanwell	772	Handwell_CableTV_SVY
	24a	Hydro Handwell 0.50 dia	699	Handwell_Hydro_SVY
	24	Hydro handwell 0.32 dia	702	Handwell_Hydro_SVY
	24M	Metronet/ATT handwell	780	Handwell_Mnet_ATT_SVY
	HW	Unknown handwell	811	Handwell_SVY
	24T	Handwell: Telephone handwell	752	Handwell_Telephone_SVY
INLET / OUTLET	71	Ditch: Inlet	267	In_Out_Inlet_SVY
	71	Outfall: TOP OF OUTFALL PIPE	567	In_Out_Outfall_SVY
	71	Outfall: INV OF OUTFALL PIPE	566	In_Out_Outfall_SVY
MANHOLE	WMH	Water Chamber: Maintenance Hole	638	Manhole_Chamber_Access_SVY
	71	Combined Sewer: invert referece	513	Manhole_Combined_SVY
	48	Combined Sewer: center of manhole	511	Manhole_Combined_SVY
	71	Dual Sewer: invert reference	523	Manhole_Dual_SVY
	A	Abandoned manhole (lid)	585	Manhole_Lid_Abandoned_SVY
	35	Gas manhole (lid)	654	Manhole_Lid_Gas_SVY
	15	Hydro manhole (lid)	716	Manhole_Lid_Hydro_SVY

Engineering Survey MicroStation V8 Graphic Specification

Feature_Class	Cell_Name	Feature_Definition	Numeric_Code	Level_Name
	MMH	Metronet/AT&T/Rogers Manhole	781	Manhole_Lid_Mnet_ATT_SVY
	47	Sanitary Sewer: manhole (lid	531	Manhole_Lid_Sanitary_SVY
	SMH68	SMH 0.68	538	Manhole_Lid_Sewer_SVY
	49	Dual Sewer: center of manhole (lid)	522	Manhole_Lid_Sewer_SVY
	SMH8	SMH 0.80	539	Manhole_Lid_Sewer_SVY
	16	GT Manhole 0.88 dia	838	Manhole_Lid_SVY
	266	TD HEAT: Steam MH (lid)	800	Manhole_Lid_SVY
	600	Manhole: CPR/CNR Manhole (lid)	403	Manhole_Lid_SVY
	44	Manhole: unknown	813	Manhole_Lid_SVY
	16	Telephone manhole (lid)	753	Manhole_Lid_Telephone_SVY
	TTCMH	MH: TTC Manhole (lid)	411	Manhole_Lid_TTC_SVY
	TWW1	Manhole: Toronto Water works 2/3 lid	612	Manhole_Lid_Water_SVY
	71	Top of risers	596	Manhole_Riser_SVY
	47	Sanitary Sewer: center of manhole	530	Manhole_Sanitary_SVY
	71	Sanitary Sewer: invert reference	532	Manhole_Sanitary_SVY
	46A	Storm Sewer: manhole (approximate	562	Manhole_Storm_SVY
	SMH68	Storm Sewer: manhole (center of	561	Manhole_Storm_SVY
	71	Storm Sewer: invert reference	563	Manhole_Storm_SVY
	71	Manhole: invert reference location	611	Manhole_SVY
	TWW3	Manhole: High Pressure TWW	615	Manhole_Water_SVY
	TWW	Manhole: Toronto Water Works	613	Manhole_Water_SVY
MARKER	36	GAS Main MARKER	653	Marker_Gas_SVY
	64	Hydro cable marker	717	Marker_Hydro_SVY
	47M	Sanitary sewer: Marker	533	Marker_Sewer_SVY
	SM	Storm sewer: marker	564	Marker_Sewer_SVY
	CM	Marker: Underground Cable TV cable	773	Marker_Underground_Cable_SVY
	65	Underground Telephone cable marker	754	Marker_Underground_Cable_SVY
	MNET	Metronet/ATT u/g cable marker	782	Marker_Underground_Cable_SVY
	43	Marker: Oil pipeline marker	814	Marker_Underground_Utility_SVY
	WM	Water Main: Marker	624	Marker_Water_SVY
MISCELLANEOUS	BOUY	Buoys	900	Miscellaneous_Buoys_SVY
	132	Area U/C	452	Miscellaneous_Construction_Zone_SVY

Engineering Survey MicroStation V8 Graphic Specification

Feature_Class	Cell_Name	Feature_Definition	Numeric_Code	Level_Name
	P	Piling	944	Miscellaneous_Piling_SVY
	5	Pump gas	820	Miscellaneous_Pump_Gas_SVY
	sprnkl	Sprinkler head	617	Miscellaneous_Sprinkler_Head_SVY
	10	NO ID	451	Miscellaneous_SVY
	CP	Cathode Protector	832	Miscellaneous_SVY
	71	Miscellaneous Line	450	Miscellaneous_SVY
	71	Weigh Scale: Corners	823	Miscellaneous_Weigh_Scale_SVY
	MW	Monitoring Well	598	Miscellaneous_Well_SVY
	WELL	Well	627	Miscellaneous_Well_SVY
PEDESTAL	252	Pedestal: Cable TV pedestal	774	Pedestal_SVY
	21T	Pedestal: Telephone pedestal	758	Pedestal_SVY
	21	Pedestal Electric	719	Pedestal_SVY
PIPE	71	Culvert: INV. OF CONC. Pipe	231	Pipe_SVY
	71	Pipe: bottom of pipe	589	Pipe_SVY
	71	Pipe: Invert of pipe	590	Pipe_SVY
	71	Pipe: obvert of pipe	591	Pipe_SVY
	71	Pipe: top of pipe	592	Pipe_SVY
	71	Pipe: Concrete pipe inlet Invert	593	Pipe_SVY
	71	Pipe: Concrete pipe outlet invert	594	Pipe_SVY
	71	Culvert: INV. OF PVC pipe	233	Pipe_SVY
	71	Culvert: INV. of Corr.Metal Pipe	232	Pipe_SVY
	71	Culvert: Top. of Corr.Metal Pipe	236	Pipe_SVY
	71	Culvert: Top. OF CONC. Pipe	235	Pipe_SVY
	71	Culvert: Top. OF PVC pipe	237	Pipe_SVY
	WP	Top waste oil pipe	837	Pipe_Waste_Oil_SVY
PIPELINE UTILITY	71	Gas Main Centerline of pipeline	666	Pipeline_Utility_Gas_Main_SVY
POLE	CAM	Cable TV camera pole	775	Pole_Camera_SVY
	68	Flag pole	459	Pole_Flag_SVY
	32	Guy pole	808	Pole_Guy_SVY
	330	Guy wire: Multi-utility	810	Pole_Guy_Wire_SVY
	33	Guy wire	809	Pole_Guy_Wire_SVY
	26W	Pole: Hydro pole wood round	725	Pole_Hydro_SVY

Engineering Survey MicroStation V8 Graphic Specification

Feature_Class	Cell_Name	Feature_Definition	Numeric_Code	Level_Name
	26C	Pole: Hydro pole Concrete round	722	Pole_Hydro_SVY
	26w	Pole: Hydro pole wood	724	Pole_Hydro_SVY
	27C	Hydro pole concrete	721	Pole_Hydro_SVY
	26	Hydro Pole	720	Pole_Hydro_SVY
	26CS	Pole: Hydro pole Concrete square	723	Pole_Hydro_SVY
	27B	Light Standard: Base	714	Pole_Light_Standard_Base_SVY
	27C	Light Standard: Concrete	713	Pole_Light_Standard_SVY
	27W	Light Standard: Wood	712	Pole_Light_Standard_SVY
	27M	Light Standard: Metal	711	Pole_Light_Standard_SVY
	27	Light Standard	710	Pole_Light_Standard_SVY
	TTCPST	TTC pole	414	Pole_Street-Car_SVY
	PM	Pole: Multi utility	816	Pole_SVY
	30C	Pole: unidentified concrete pole	817	Pole_SVY
	30	Pole: Unknown utility	818	Pole_SVY
	17	Telephone pole	759	Pole_Telephone_SVY
	4	Pole: Traffic light	726	Pole_Traffic_Signal_SVY
POST	30P	Post: Bicycle Post	143	Post_Bicycle_SVY
	TS	Post: Bus stop sign/post	144	Post_Bus_SVY
	PCSBP	pcsbuttonpost	149	Post_Pedestrian_X-Walk_SVY
	1	Post: Sign Post 0.06 dia.	146	Post_Sign_SVY
	1	Post: Sign Post 0.05 sp.	145	Post_Sign_SVY
	1A	Post: Sign Post 0.10 sq.	148	Post_Sign_SVY
	1	Post: Sign Post 0.10 dia.	147	Post_Sign_SVY
	30	Post	141	Post_SVY
	1B	Post 0.1 dia.	142	Post_SVY
RECREATION	BBBS	Basketball Backstop pole	454	Recreation_Backstop_Pole_SVY
	FBP	Football post	460	Recreation_Football_Uprights_SVY
	71	Park: Soccer goal post	467	Recreation_Soccer_Goal_Post_SVY
ROAD	CROSBP	Road Crown	301	Road_Crown_SVY
	71	driveable median	319	Road_Driveable_Median_SVY
	713	Road: Centerline of paved road (Approx.)	302	Road_SVY
	71	Road: Centerline of unpaved road	303	Road_SVY

Engineering Survey MicroStation V8 Graphic Specification

Feature_Class	Cell_Name	Feature_Definition	Numeric_Code	Level_Name
	CT	Road: Centerline tick	304	Road_SVY
	CROSB	Road Centre Line	300	Road_SVY
SEWER_PIPE	71	Combined Sewer: bottom of pipe	518	Sewer_Pipe_Combined_SVY
	71	Combined Sewer: centerline of sewer	514	Sewer_Pipe_Combined_SVY
	71	Combined Sewer: top of pipe	521	Sewer_Pipe_Combined_SVY
	71	Combined Sewer: obvert of pipe	520	Sewer_Pipe_Combined_SVY
	pipe	Sewer pipe invert	519	Sewer_Pipe_Combined_SVY
	71	Dual Sewer: centerline of sewer (Approx.)	524	Sewer_Pipe_Dual_SVY
	71	Dual Sewer: centerline of sewer	525	Sewer_Pipe_Dual_SVY
	SF	Sewer Flasher	560	Sewer_Pipe_Flusher_SVY
	71	Forced-Main Pipe	554	Sewer_Pipe_Forced_Main_SVY
	71	Leachate: bottom of pipe	555	Sewer_Pipe_Leachate_SVY
	71	Leachate: invert of pipe	556	Sewer_Pipe_Leachate_SVY
	71	Leachate: obvert of pipe	557	Sewer_Pipe_Leachate_SVY
	71	Leachate: top of pipe	558	Sewer_Pipe_Leachate_SVY
	71	Sanitary sewer: Centerline (Approx.)	542	Sewer_Pipe_Sanitary_SVY
	71	Sanitary sewer: bottom of pipe	550	Sewer_Pipe_Sanitary_SVY
	71	Sanitary sewer: invert of pipe	551	Sewer_Pipe_Sanitary_SVY
	71	Sanitary sewer: obvert of pipe	552	Sewer_Pipe_Sanitary_SVY
	71	Sanitary sewer: top of pipe	553	Sewer_Pipe_Sanitary_SVY
	71	Storm sewer: invert of pipe	578	Sewer_Pipe_Storm_SVY
	71	Storm sewer: obvert of pipe	579	Sewer_Pipe_Storm_SVY
	71	Storm sewer: bottom of pipe	577	Sewer_Pipe_Storm_SVY
	71	Storm sewer: top of pipe	580	Sewer_Pipe_Storm_SVY
	CROSG	SMH (line)	595	Sewer_Pipe_SVY
SIGN	22	Beacon	102	Sign_Beacon_SVY
	1FL	Sign: Flashing Traffic Sign	151	Sign_Flashing_Traffic_SVY
	1G	Sign: Guide Sign	152	Sign_Guide_SVY
	1PRK	Sign: Park Sign	153	Sign_Park_SVY
	1	Sign: Traffic single sign	160	Sign_Single_Traffic_SVY
	1	Sign: Stop Sign	158	Sign_Stop_SVY
	PS	Sign: Private	154	Sign_SVY

Engineering Survey MicroStation V8 Graphic Specification

Feature_Class	Cell_Name	Feature_Definition	Numeric_Code	Level_Name
	6A	Sign: Railway	156	Sign_SVY
	1	Sign	150	Sign_SVY
	1	Sign: Warning	161	Sign_Warning_SVY
	1	Sign: Yeld Sign	162	Sign_Yield_SVY
STREET_HARDWARE	BNCH	Bench	455	Street_Hardware_Bench_SVY
	GRB	Gabage\recycling Bin	114	Street_Hardware_Garbage_Bin_SVY
	GB	garbage bin	111	Street_Hardware_Garbage_Bin_SVY
	66	Mail Box	136	Street_Hardware_Mail_Box_SVY
	2	Parking meter	137	Street_Hardware_Parking_Meter_SVY
	PPD	prkpermitdisp	112	Street_Hardware_Parking_Permit_Dispenser_SVY
STRUCTURE	713	Pad: Edge of concrete pad	285	Structure_Pad_SVY
	SILO	Silo (PT of circle)	472	Structure_Silo_SVY
SURVEY_POINT	71	Centre Line	26	Survey_Line_SVY
	71	Nail	30	Survey_Monument_SVY
	71	IRON PIPE	75	Survey_Monument_SVY
	71CNW	NAIL & WASHER	79	Survey_Monument_SVY
	82L	Legal Survey Monument	70	Survey_Monument_SVY
	85	BAR: SUBDIVISION BAR	89	Survey_Monument_SVY
	84	CUT CROSS	71	Survey_Monument_SVY
	85	BAR: SSIB	72	Survey_Monument_SVY
	80	Bench Mark	40	Survey_Monument_SVY
	85	BAR: ROCK POST	74	Survey_Monument_SVY
	82T	MONUMENT: TORONTO SURVEY	69	Survey_Monument_SVY
	85RND	BAR: ROUND IRON BAR	76	Survey_Monument_SVY
	CUT	CUT ARROW	77	Survey_Monument_SVY
	CUTT	CUT "T"	78	Survey_Monument_SVY
	85	BAR: SIB	87	Survey_Monument_SVY
	83	BAR: SIB AND CAP	88	Survey_Monument_SVY
	6FD	BAR: ROUND SIB	90	Survey_Monument_SVY
	85	BAR: IB	73	Survey_Monument_SVY
	85	BAR: ROCK BAR	84	Survey_Monument_SVY
	71	NAIL SPIKE	80	Survey_Monument_SVY

Engineering Survey MicroStation V8 Graphic Specification

Feature_Class	Cell_Name	Feature_Definition	Numeric_Code	Level_Name
	82S	MONUMENT: CUT STONE	83	Survey_Monument_SVY
	CSM	CUT SCRATCH / MARK	86	Survey_Monument_SVY
	76	Horizontal Control Monument	10	Survey_Monument_SVY
	82H	MONUMENT: CONC.(HIGHWAYS)	82	Survey_Monument_SVY
	WS	WOODEN STAKE	81	Survey_Point_Stake_SVY
	GS	Top of grade stake	476	Survey_Point_Stake_SVY
	71	Turning Point	42	Survey_Point_SVY
	71	Temporary BM	41	Survey_Point_SVY
	HOL	Hub on line	462	Survey_Point_SVY
	71	Beginning of curve	23	Survey_Point_SVY
	71	Horizontal Control (backsight	12	Survey_Point_SVY
	71	Point of reverse curve	22	Survey_Point_SVY
	71	Tie Point	29	Survey_Point_SVY
	71	Point of compound curve	25	Survey_Point_SVY
	71	End of curve	24	Survey_Point_SVY
	PI	Point of intersection	21	Survey_Point_SVY
	71	BUILDING CORNER	85	Survey_Point_SVY
	77	Station	20	Survey_Point_SVY
	77	Control point	11	Survey_Point_SVY
TANK	FF	Fuel tank filler	806	Tank_Fuel_Tank_Filler_SVY
	FV	Fuel tank vent	807	Tank_Fuel_Vent_SVY
	71	Septic Tank Top	537	Tank_Septic_SVY
TELECOMM	61T	Telephone jump wire interface	761	TeleComm_Jump_Wire_Interface_SVY
	252	Box: CABLE TV Junction box	770	TeleComm_Junction_Box_SVY
	71	Miscellaneous telephone item	755	TeleComm_SVY
	21T	Pedestal: Telephone Booth Pedestal	757	TeleComm_Telephone_Booth_Pad_SVY
	TB	Telephone booth	751	TeleComm_Telephone_Booth_SVY
TOPOGRAPHIC_FEATURE	CROSW	Spot elevation: Stone	332	Topographic_Spot_Z_SVY
	CROSW	Spot elevation: Lawn/Sod/Grass	328	Topographic_Spot_Z_SVY
	713	Spot elevation: Gravel	326	Topographic_Spot_Z_SVY
	713	Spot elevation: Dirt	325	Topographic_Spot_Z_SVY
	CROSW	Spot elevation: Tile	324	Topographic_Spot_Z_SVY

Engineering Survey MicroStation V8 Graphic Specification

Feature_Class	Cell_Name	Feature_Definition	Numeric_Code	Level_Name
	713	Spot elevation: Concrete	323	Topographic_Spot_Z_SVY
	713	Spot elevation: Brick	322	Topographic_Spot_Z_SVY
	71	Spot elevation: Interlocking Stone	327	Topographic_Spot_Z_SVY
	CROSW	Spot elevation	320	Topographic_Spot_Z_SVY
	71	Spot elevation: Paved	330	Topographic_Spot_Z_SVY
	71	Spot elevation: Unpaved	333	Topographic_Spot_Z_SVY
	713	Spot elevation: Flagstone	334	Topographic_Spot_Z_SVY
	713	Spot elevation: Wood	335	Topographic_Spot_Z_SVY
	71	Spot elevation: Pattern Concrete	329	Topographic_Spot_Z_SVY
	713	Spot elevation: Asphalt	321	Topographic_Spot_Z_SVY
TRACK	CROSR	Track allowance	408	Track_Allowance_SVY
	TRDR	Track drain	417	Track_Drain_SVY
	TTCSW	TTC Switch/Drain	421	Track_Drain_SVY
	TTC switch2	TTC electrical switch	422	Track_Rails_SVY
	6	Signal: Railroad signal	405	Track_Railway_Signal_SVY
	TTC switch	Switch: Railroad switch	407	Track_Railway_Switch_SVY
	CROSG	Track : TTC Street-Car	416	Track_Street-Car_SVY
TRAFFIC_CONTROL	3	Signal control box	163	Traffic_Control_Signal_Control_Box_SVY
TREES	95	Trees: 0.5 diameter	955	Trees_Coniferous_SVY
	95	Trees: 0.4 diameter	954	Trees_Coniferous_SVY
	95	Trees: 0.6 diameter	956	Trees_Coniferous_SVY
	95	Trees: 0.3 diameter	953	Trees_Coniferous_SVY
	95	Trees: 0.7 diameter	957	Trees_Coniferous_SVY
	95	Trees: 0.8 diameter	958	Trees_Coniferous_SVY
	95	Trees: 0.2 diameter	952	Trees_Coniferous_SVY
	95	Trees: 0.9 diameter	959	Trees_Coniferous_SVY
	95	Trees: 1.0 diameter	960	Trees_Coniferous_SVY
	71	Trees: Point on Row-Coniferous	961	Trees_Coniferous_SVY
	95	Trees: Coniferous	950	Trees_Coniferous_SVY
	95	Trees: 0.1 diameter	951	Trees_Coniferous_SVY
	96	Trees: 0.3 diameter	973	Trees_Deciduous_SVY
	96	Trees: Deciduous	970	Trees_Deciduous_SVY

Engineering Survey MicroStation V8 Graphic Specification

Feature_Class	Cell_Name	Feature_Definition	Numeric_Code	Level_Name
	96	Trees: 0.1 diameter	971	Trees_Deciduous_SVY
	96	Trees: 0.2 diameter	972	Trees_Deciduous_SVY
	96	Trees: 0.4 diameter	974	Trees_Deciduous_SVY
	96	Trees: 0.5 diameter	975	Trees_Deciduous_SVY
	96	Trees: 0.6 diameter	976	Trees_Deciduous_SVY
	96	Trees: 0.7 diameter	977	Trees_Deciduous_SVY
	96	Trees: 0.8 diameter	978	Trees_Deciduous_SVY
	71	Trees: Point on Row-Deciduous	981	Trees_Deciduous_SVY
	96	Trees: 1.0 diameter	980	Trees_Deciduous_SVY
	96	Trees: 0.9 diameter	979	Trees_Deciduous_SVY
	95	Sapling tree	991	Trees_SVY
	97	Trees: Tree stump	994	Trees_SVY
VALVE	54a	Water Chamber: Air Valve	636	Valve_Air_SVY
	54	Valve: Water valve cover	618	Valve_Cover_SVY
	38	Gas Valve 0.17 square	661	Valve_Gas_SVY
	37	Gas valve	659	Valve_Gas_SVY
	39	Gas valve 0.23 diameter	662	Valve_Gas_SVY
	37v	Gas Valve 0.08 diameter	660	Valve_Gas_SVY
	71SP	Water Chamber: Center of spindle	637	Valve_Spindle_SVY
	54	Valve: Water Valve	628	Valve_Water_SVY
	54a	Water Valve: 0.18 dia	599	Valve_Water_SVY
	54HP	Valve: High pressure Toronto Water	619	Valve_Water_SVY
	TWW4	Valve: Toronto Water Works 0.28 Valve	620	Valve_Water_SVY
	TWW5	Valve: Toronto Water Works 2/3 Valve	621	Valve_Water_SVY
VEGETATION	SHRB	Single Bush	921	Vegetation_Bush_SVY
	SHRB	Shrub	923	Vegetation_Shrub_SVY
VENT	39	Gas vent	663	Vent_Gas_SVY
	VNT	Air vent/grate: Edge (outline)	803	Vent_SVY
	VNT	Air vent/grate	802	Vent_SVY
	ST	TD HEAT: Steam Vent	801	Vent_SVY
WALKWAY	CROSB	SW: Back of sidewalk	354	Walkway_Sidewalk_SVY
WATER_MAIN	69	Water Main: cap or plug	645	Water_Main_Cap_Plug_SVY

Engineering Survey MicroStation V8 Graphic Specification

Feature_Class	Cell_Name	Feature_Definition	Numeric_Code	Level_Name
	62	Water Main: Reducer	646	Water_Main_Reducer_SVY
	54	Key: Water service key	605	Water_Main_Service_Key_SVY
	71	Water Main: Proposed CL of Water	622	Water_Main_SVY
	WM	Water Test Station 0.08 dia	597	Water_Main_SVY
	71	Water Main: Obvert	643	Water_Main_SVY
	71	Water Main: Invert	642	Water_Main_SVY
	71	Water Main: Centerline	641	Water_Main_SVY
	71	Water Main: Bottom	640	Water_Main_SVY
WATERWAY	WLM	Water Level	918	Waterway_Water_Level_SVY
	WLM	Water Mark	919	Waterway_Water_Mark_SVY

CUSTOM TEXT OPERATIONS

This table (abstract) lists InRoads “custom operations” defined for codes, as found in the “.fwf” file.

The following fields (columns) are defined:

Code	Numeric Code
Feature Definition	Name of the Feature
Level Name	MicroStation V8 Level Name
CO	MicroStation V8 Colour Number
WT	MicroStation V8 Weight Number
LC	MicroStation V8 Line Style Number
FT	MicroStation V8 Font Number
TX	MicroStation V8 Text Size
Text	Text String

CUSTOM TEXT OPERATIONS

Code	Feature Definition	Level Name	co	wt	lc	ft	tx	Text
597	Water Test Station 0.08 dia		1	0		23	0.4	WTS
539	SMH 0.80							SMH
105	Bollard	Barrier_Bollard_SVY	0	0		23	0.4	Bol
535	Breather 0.1	Breather_SVY	38			23	0.4	SB
536	Breather 0.3	Breather_SVY	38	1		23	0.4	SB
218	Bridge: Bottom of bridge	Bridge_SVY	0	1	0	1	1	Bottom of Bridge
458	Coal chute	Building_Coal_Chute_SVY	0			23	0.4	Coal Chute
269	Door sill	Building_Door_Sill_SVY	0	1	0	23	0.4	D SILL
279	Entrance	Building_Entrance_SVY	0			23	0.4	E
283	Floor	Building_Floor_SVY	0			23	0.4	Floor
282	House Line	Building_SVY	0	1	0	1	0.4	Face of Bldg.
385	Window Sill	Building_Window_Sill_SVY	0	0	0	23	0.4	W Sill
508	Pup	Catch_Basin_Pup_SVY	2	0		23	0.4	Pup
510	Catch basin: Sump	Catch_Basin_Sump_SVY	0	1	0	1	1	C.B. Sump
516	Combined Sewer: center of chamber	Chamber_Combined_SVY	0	1	0	1	1	CTR. of Chamber
526	Dual Sewer: center of chamber	Chamber_Dual_SVY	0	1	0	1	1	CTR. of Chamber
833	Chamber : Floor elevation of chamber	Chamber_Floor_SVY	0	1	0	1	1	\$(ELEVATION)
544	Sanitary Sewer: chamber (center)	Chamber_Sanitary_SVY	0	1	0	1	1	CTR. of Chamber
571	Storm Sewer: chamber (center of	Chamber_Storm_SVY	0	1	0	1	1	CTR of Chamber
587	Drain	Drain_SVY	22	0	0	23	0.4	drain
456	Borehole	Earthworks_Borehole_SVY	0	1		23	0.4	BH
704	Kiosk	Electrical_Utility_Transformer_Switching_Kiosk_SVY	3	0		23	0.4	HW
602	Fire Hydrant: High pressure Hydrant	Fire_Hydrant_SVY	1	0		23	0.4	HP HYD
600	Fire hydrant	Fire_Hydrant_SVY	1	0		23	0.4	HYD
650	Gas drip	Gas_Utility_Drip_SVY	100	0		23	0.4	GD
651	Gas Drip 0.17 square	Gas_Utility_Drip_SVY	100	0		23	0.4	GD
652	Gas Key	Gas_Utility_Key_SVY	100	0	0	23	0.4	GK
655	Gas meter	Gas_Utility_Meter_SVY	100	0		23	0.4	GM
702	Hydro handwell 0.32 dia	Handwell_Hydro_SVY	3	0		23	0.4	HW
699	Hydro Handwell 0.50 dia	Handwell_Hydro_SVY	3	0		23	0.4	HW

Engineering Survey MicroStation V8 Graphic Specification

Code	Feature_Definition	Level_Name	co	wt	lc	ft	tx	Text
567	Outfall: TOP OF OUTFALL PIPE	In_Out_Outfall_SVY	0	1	0	1	1	Top of Pipe
566	Outfall: INV OF OUTFALL PIPE	In_Out_Outfall_SVY	0	1	0	1	1	INV. = \$(ELEVATION)
513	Combined Sewer: invert referece	Manhole_Combined_SVY	4	1	0	1	1	INV. REF. = \$(ELEVATION)
523	Dual Sewer: invert reference	Manhole_Dual_SVY	4	1	0	1	1	INV. REF. = \$(ELEVATION)
716	Hydro manhole (lid)	Manhole_Lid_Hydro_SVY	3	0		23	0.4	HMH
781	Metronet/AT&T/Rogers Manhole	Manhole_Lid_Mnet_ATT_SVY	6	0		23	0.4	Metronet
538	SMH 0.68	Manhole_Lid_Sewer_SVY	38	0		23	0.4	SMH
838	GT Manhole 0.88 dia	Manhole_Lid_SVY	6			23	0.4	GT
813	Manhole: unknown	Manhole_Lid_SVY		0		23	0.4	?
800	TD HEAT: Steam MH (lid)	Manhole_Lid_SVY	5	0		23	0.4	TDHC
753	Telephone manhole (lid)	Manhole_Lid_Telephone_SVY	6	0		23	0.4	BMH
612	Manhole: Toronto Water works 2/3 lid	Manhole_Lid_Water_SVY	1	0		23	0.4	TWW
596	Top of risers	Manhole_Riser_SVY	0	1	0	1	1	Top of Riser
532	Sanitary Sewer: invert reference	Manhole_Sanitary_SVY	4	1	0	1	1	INV. REF. = \$(ELEVATION)
563	Storm Sewer: invert reference	Manhole_Storm_SVY	0	1	0	1	1	INV. REF. = \$(ELEVATION)
611	Manhole: invert reference location	Manhole_SVY	4	1	0	1	1	INV. REF. = \$(ELEVATION)
613	Manhole: Toronto Water Works	Manhole_Water_SVY	1	0		23	0.4	TWW
615	Manhole: High Pressure TWW	Manhole_Water_SVY	1	0		23	0.4	HPTWW
717	Hydro cable marker	Marker_Hydro_SVY	3	0		23	0.4	HM
624	Water Main: Marker	Marker_Water_SVY		1		23	0.4	WM
450	Miscellaneous Line	Miscellaneous_SVY	0	1	0	1	1	\$(NOTES)
451	NO ID	Miscellaneous_SVY	0	1	0	1	1	\$(NOTES)
598	Monitoring Well	Miscellaneous_Well_SVY	1			23	0.4	Mwell
758	Pedestal: Telephone pedestal	Pedestal_SVY	6			23	0.4	BT Pedestal
594	Pipe: Concrete pipe outlet invert	Pipe_SVY	0	1	0	1	1	INV.= \$(ELEVATION)
593	Pipe: Concrete pipe inlet Invert	Pipe_SVY	0	1	0	1	1	INV.= \$(ELEVATION)
592	Pipe: top of pipe	Pipe_SVY	0	1	0	1	1	Top of Pipe
591	Pipe: obvert of pipe	Pipe_SVY	0	1	0	1	1	OBV.= \$(ELEVATION)
590	Pipe: Invert of pipe	Pipe_SVY	0	1	0	1	1	INV.= \$(ELEVATION)
589	Pipe: bottom of pipe	Pipe_SVY	0	1	0	1	1	Bottom of Pipe
459	Flag pole	Pole_Flag_SVY	0	0	0	23	0.4	FP
809	Guy wire	Pole_Guy_Wire_SVY	3	0	0	23	0.4	GUY

Engineering Survey MicroStation V8 Graphic Specification

Code	Feature_Definition	Level_Name	co	wt	lc	ft	tx	Text
723	Pole: Hydro pole Concrete square	Pole_Hydro_SVY	3			23	0.4	HE
722	Pole: Hydro pole Concrete round	Pole_Hydro_SVY	3	0		23	0.4	HE
724	Pole: Hydro pole wood	Pole_Hydro_SVY	126	0		23	0.4	HE
711	Light Standard: Metal	Pole_Light_Standard_SVY	71	0		23	0.4	LS
713	Light Standard: Concrete	Pole_Light_Standard_SVY	0	0		23	0.4	LS
710	Light Standard	Pole_Light_Standard_SVY	3	0		23	0.4	LS
414	TTC pole	Pole_Street-Car_SVY	0	0		23	0.4	TTC
759	Telephone pole	Pole_Telephone_SVY	6	0		23	0.4	BT
726	Pole: Traffic light	Pole_Traffic_Signal_SVY	3	0		23	0.4	TL
143	Post: Bicycle Post	Post_Bicycle_SVY	0	0		23	0.4	BP
148	Post: Sign Post 0.10 sq.	Post_Sign_SVY	0	0		23	0.4	SP
147	Post: Sign Post 0.10 dia.	Post_Sign_SVY	0	0		23	0.4	SP
145	Post: Sign Post 0.05 sp.	Post_Sign_SVY	0	0		23	0.4	SP
146	Post: Sign Post 0.06 dia.	Post_Sign_SVY	0	0		23	0.4	SP
142	Post 0.1 dia.	Post_SVY	0	0		23	0.4	Post
302	Road: Centerline of paved road (Approx.)	Road_SVY	0	1	0	1	1	
519	Sewer pipe invert	Sewer_Pipe_Combined_SVY	2					inv=\$(elevation)
520	Combined Sewer: obvert of pipe	Sewer_Pipe_Combined_SVY	0	1	0	1	1	Obvert
521	Combined Sewer: top of pipe	Sewer_Pipe_Combined_SVY	0	1	0	1	1	Top of Pipe
518	Combined Sewer: bottom of pipe	Sewer_Pipe_Combined_SVY	0	1	0	1	1	Bottom of Pipe
524	Dual Sewer: centerline of sewer (Approx.)	Sewer_Pipe_Dual_SVY	4	1	0	1	1	C.L. (Approx.)
525	Dual Sewer: centerline of sewer	Sewer_Pipe_Dual_SVY	4	1	0	1	1	C.L.
560	Sewer Flasher	Sewer_Pipe_Flasher_SVY	38			23	0.4	SF
554	Forced-Main Pipe	Sewer_Pipe_Forced_Main_SVY	0	1	0	1	1	Forced-Main Pipe
556	Leachate: invert of pipe	Sewer_Pipe_Leachate_SVY	0	1	0	1	1	INV= \$(ELEVATION)
557	Leachate: obvert of pipe	Sewer_Pipe_Leachate_SVY	0	1	0	1	1	OBV= \$(ELEVATION)
558	Leachate: top of pipe	Sewer_Pipe_Leachate_SVY	0	1	0	1	1	Leachate-Top of Pipe
555	Leachate: bottom of pipe	Sewer_Pipe_Leachate_SVY	0	1	0	1	1	Leachate-Bottom of Pipe
542	Sanitary sewer: Centerline (Approx.)	Sewer_Pipe_Sanitary_SVY	0	1	0	1	1	C.L. (Approx.)
551	Sanitary sewer: invert of pipe	Sewer_Pipe_Sanitary_SVY	0	1	0	1	1	INV= \$(ELEVATION)
552	Sanitary sewer: obvert of pipe	Sewer_Pipe_Sanitary_SVY	0	1	0	1	1	OBV= \$(ELEVATION)
553	Sanitary sewer: top of pipe	Sewer_Pipe_Sanitary_SVY	0	1	0	1	1	Top of Pipe

Engineering Survey MicroStation V8 Graphic Specification

Code	Feature_Definition	Level_Name	co	wt	lc	ft	tx	Text
550	Sanitary sewer: bottom of pipe	Sewer_Pipe_Sanitary_SVY	0	1	0	1	1	Bottom of Pipe
577	Storm sewer: bottom of pipe	Sewer_Pipe_Storm_SVY	0	1	0	1	1	Bottom of Pipe
580	Storm sewer: top of pipe	Sewer_Pipe_Storm_SVY	0	1	0	1	1	Top of Pipe
578	Storm sewer: invert of pipe	Sewer_Pipe_Storm_SVY	0	1	0	1	1	INV.= \$(ELEVATION)
579	Storm sewer: obvert of pipe	Sewer_Pipe_Storm_SVY	0	1	0	1	1	OBV.= \$(ELEVATION)
153	Sign: Park Sign	Sign_Park_SVY				1	1	PARKING
114	Gabage\recycling Bin	Street_Hardware_Garbage_Bin_SVY	0			23		GRB
137	Parking meter	Street_Hardware_Parking_Meter_SVY	0	0		23	0.4	PM
112	prkpermitdisp	Street_Hardware_Parking_Permit_Dispenser_SVY		0		23	0.4	PM
76	BAR: ROUND IRON BAR	Survey_Monument_SVY		1	0	23	0.4	RIB
80	NAIL SPIKE	Survey_Monument_SVY	0	0		23	0.4	Spike
75	IRON PIPE	Survey_Monument_SVY	0	1	0	1	1	IRON PIPE
71	CUT CROSS	Survey_Monument_SVY		0	0	23	0.4	CC
70	Legal Survey Monument	Survey_Monument_SVY	0			23	0.4	LSM
87	BAR: SIB	Survey_Monument_SVY		1	0	23	0.4	SIB
30	Nail	Survey_Monument_SVY	0	1	0	1	1	Nail
73	BAR: IB	Survey_Monument_SVY	0	0		23	0.4	IB
10	Horizontal Control Monument	Survey_Monument_SVY	0	0		23	0.4	HCP
24	End of curve	Survey_Point_SVY	0	1	0	1	1	E.C.
23	Beginning of curve	Survey_Point_SVY	0	1	0	1	1	B.C.
85	BUILDING CORNER	Survey_Point_SVY	0	1	0	1	1	
22	Point of reverse curve	Survey_Point_SVY	0	1	0	1	1	P.R.C.
12	Horizontal Control (backsight	Survey_Point_SVY	0	1	0	1	1	Backsight
42	Turning Point	Survey_Point_SVY	0	1	0	1	1	T.P.
41	Temporary BM	Survey_Point_SVY	0	1	0	1	1	P.T.P.
29	Tie Point	Survey_Point_SVY	0	1	0	1	1	Tie Point
25	Point of compound curve	Survey_Point_SVY	0	1	0	1	1	P.C.C.
20	Station	Survey_Point_SVY	3	0		23	0.4	STA
806	Fuel tank filler	Tank_Fuel_Tank_Filler_SVY	0	0		23	0.4	Fuel Fill
537	Septic Tank Top	Tank_Septic_SVY	0	1	0	1	1	Top of Tank
770	Box: CABLE TV Junction box	TeleComm_Junction_Box_SVY	7	0		23	0.4	cable
755	Miscellaneous telephone item	TeleComm_SVY	6	1	0	1	1	MISCELLANEOUS TELEPHONE ITEM

Engineering Survey MicroStation V8 Graphic Specification

Code	Feature_Definition	Level_Name	co	wt	lc	ft	tx	Text
751	Telephone booth	TeleComm_Telephone_Booth_SVY		0		23	0.4	TB
330	Spot elevation: Paved	Topographic_Spot_Z_SVY	0	1	0	1	0.4	Paved
344	Spot Elevation: Granite	Topographic_Spot_Z_SVY	0	0	0	23	0.4	Granite
335	Spot elevation: Wood	Topographic_Spot_Z_SVY	0	0	0	23	0.4	Wood
334	Spot elevation: Flagstone	Topographic_Spot_Z_SVY	0	0	0	23	0.4	Flag
333	Spot elevation: Unpaved	Topographic_Spot_Z_SVY	0	1	0	1	0.4	UNPAVED
332	Spot elevation: Stone	Topographic_Spot_Z_SVY	0	0	0	23	0.4	Stone
322	Spot elevation: Brick	Topographic_Spot_Z_SVY	0	0	0	23	0.4	Brick
331	Spot Elevation: Slurry Seal	Topographic_Spot_Z_SVY	0	0	0	23	0.4	Granite
323	Spot elevation: Concrete	Topographic_Spot_Z_SVY	0	0	0	23	0.4	Con
329	Spot elevation: Pattern Concrete	Topographic_Spot_Z_SVY	0	0	0	23	0.4	Patt Con
328	Spot elevation: Lawn/Sod/Grass	Topographic_Spot_Z_SVY	0	0	0	23	0.4	Grass
321	Spot elevation: Asphalt	Topographic_Spot_Z_SVY	0	0	0	23	0.4	Asph
326	Spot elevation: Gravel	Topographic_Spot_Z_SVY	0	0	0	23	0.4	Gravel
325	Spot elevation: Dirt	Topographic_Spot_Z_SVY	0	0	0	23	0.4	Dirt
327	Spot elevation: Interlocking Stone	Topographic_Spot_Z_SVY	0	1	0	1	0.4	INLK.
324	Spot elevation: Tile	Topographic_Spot_Z_SVY	0	0	0	23	0.4	Tile
405	Signal: Railroad signal	Track_Railway_Signal_SVY	0			23	0.4	CNR
163	Signal control box	Traffic_Control_Signal_Control_Box_SVY	0	0		23	0.4	SCB
991	Sapling tree	Trees_SVY	2	1	0	1	1	Sapling
994	Trees: Tree stump	Trees_SVY	2	0		23	0.4	Stump
636	Water Chamber: Air Valve	Valve_Air_SVY	1	0		23	0.4	WV
662	Gas valve 0.23 diameter	Valve_Gas_SVY	100	0		23	0.4	GV
661	Gas Valve 0.17 square	Valve_Gas_SVY	100	0		23	0.4	GV
660	Gas Valve 0.08 diameter	Valve_Gas_SVY	100	0	0	23	0.4	GK
628	Valve: Water Valve	Valve_Water_SVY	1	0		23	0.4	WK
620	Valve: Toronto Water Works 0.28 Valve	Valve_Water_SVY	1	0		23	0.4	WV
619	Valve: High pressure Toronto Water	Valve_Water_SVY	1	0		23	0.4	HPWV
599	Water Valve: 0.18 dia	Valve_Water_SVY	1	0	0	23	0.4	WV
663	Gas vent	Vent_Gas_SVY	100	0		23	0.4	GVent
832	Cathode Protector	Water_Main_Cathode_Protector_SVY	100	0		23	0.4	CP
605	Key: Water service key	Water_Main_Service_Key_SVY	1	0		23	0.4	WK

Engineering Survey MicroStation V8 Graphic Specification

Code	Feature_Definition	Level_Name	co	wt	lc	ft	tx	Text
644	Watermain top of pipe	Water_Main_SVY	0	1	0	1	1	Top of Pipe
642	Water Main: Invert	Water_Main_SVY	0	1	0	1	1	INV.= \$(ELEVATION)
641	Water Main: Centerline	Water_Main_SVY	0	1	0	1	1	C.L.
640	Water Main: Bottom	Water_Main_SVY	0	1	0	1	1	Bottom of Pipe
643	Water Main: Obvert	Water_Main_SVY	0	1	0	1	1	OBV.= \$(ELEVATION)

GRAPHIC SPECIFICATION BY SURVEY FEATURE CODE NUMBER

This section lists basic graphic information for each survey feature code in sequential order.

The following fields (columns) are defined:

Code	Numeric Code
Feature	Name of the Feature
Level Name	MicroStation V8 Level Name
CO	MicroStation V8 Colour Number
WT	MicroStation V8 Weight Number
LC	MicroStation V8 Line Style Number
Cell	Name of the Cell

ALL CODES (SEQUENTIAL ORDER)

Code	Feature	Level_Name	CO	WT	LC	Cell
10	Horizontal Control Monument	Survey_Monument_SVY				76
11	Control point	Survey_Point_SVY				77
12	Horizontal Control (backsight	Survey_Point_SVY				71
20	Station	Survey_Point_SVY				77
21	Point of intersection	Survey_Point_SVY				PI
22	Point of reverse curve	Survey_Point_SVY				71
23	Beginning of curve	Survey_Point_SVY				71
24	End of curve	Survey_Point_SVY				71
25	Point of compound curve	Survey_Point_SVY				71
26	Centre Line	Survey_Line_SVY				71
27	Base Line	Survey_Line_SVY	0	0	0	
28	O/S line	Survey_Line_SVY	0	0	0	
29	Tie Point	Survey_Point_SVY				71
30	Nail	Survey_Monument_SVY				71
40	Bench Mark	Survey_Monument_SVY				80
41	Temporary BM	Survey_Point_SVY				71
42	Turning Point	Survey_Point_SVY				71
69	MONUMENT: TORONTO SURVEY	Survey_Monument_SVY				82T
70	Legal Survey Monument	Survey_Monument_SVY				82L
71	CUT CROSS	Survey_Monument_SVY				84
72	BAR: SSIB	Survey_Monument_SVY				85
73	BAR: IB	Survey_Monument_SVY				85
74	BAR: ROCK POST	Survey_Monument_SVY				85
75	IRON PIPE	Survey_Monument_SVY				71

Engineering Survey MicroStation V8 Graphic Specification

Code	Feature	Level_Name	CO	WT	LC	Cell
76	BAR: ROUND IRON BAR	Survey_Monument_SVY				85RND
77	CUT ARROW	Survey_Monument_SVY				CUT
78	CUT "T"	Survey_Monument_SVY				CUTT
79	NAIL & WASHER	Survey_Monument_SVY				71CNW
80	NAIL SPIKE	Survey_Monument_SVY				71
81	WOODEN STAKE	Survey_Point_Stake_SVY				WS
82	MONUMENT: CONC.(HIGHWAYS)	Survey_Monument_SVY				82H
83	MONUMENT: CUT STONE	Survey_Monument_SVY				82S
84	BAR: ROCK BAR	Survey_Monument_SVY				85
85	BUILDING CORNER	Survey_Line_SVY				71
86	CUT SCRATCH / MARK	Survey_Monument_SVY				CSM
87	BAR: SIB	Survey_Monument_SVY				85
88	BAR: SIB AND CAP	Survey_Monument_SVY				83
89	BAR: SUBDIVISION BAR	Survey_Monument_SVY				85
90	BAR: ROUND SIB	Survey_Monument_SVY				6FD
100	Barrier: Guard rail	Barrier_Guard_Rail_SVY	0	1	Guide	
101	Barrier: Jersey barrier	Barrier_Jersey_SVY	0	1	0	
102	Beacon	Sign_Beacon_SVY				22
103	Billboard	Sign_Billboard_SVY	3	3	0	
104	Building counter clockwise	Building_SVY				DOT
105	Bollard	Barrier_Bollard_SVY				23
106	Chimney Edge	Structure_Chimney_SVY	0	0	Building1	
107	Deck	Building_Deck_SVY	0	2	0	
108	Deck: Edge of asphalt	Building_Deck_SVY	16	2	0	
109	Deck: Edge of concrete	Building_Deck_SVY	32	2	0	

Engineering Survey MicroStation V8 Graphic Specification

Code	Feature	Level_Name	CO	WT	LC	Cell
110	Eaves	Building_Eaves_SVY	0	1	3	
111	garbage bin	Street_Hardware_Garbage_Bin_SVY				GB
112	prkpermitdisp	Street_Hardware_Parking_Permit_Dispenser_SVY				PPD
113	Building clockwise	Building_SVY				dot
114	Gabage\recycling Bin	Street_Hardware_Garbage_Bin_SVY				GRB
120	Fence	Fence_SVY	0	1	145	
121	Fence: Board	Fence_SVY	0	0	BF	
122	Fence: Brick	Fence_SVY	66	1	145	
123	Fence: Chain Link	Fence_SVY	54	0	ChLF	
124	Fence: Combination	Fence_SVY	15	1	145	
125	Fence: Metal	Fence_SVY	53	1	145	
126	Fence: Post & Wire	Fence_SVY	77	1	145	
127	Fence: Stone	Fence_SVY	63	1	ChLF	
128	Fence: Wire	Fence_SVY	5	1	WF	
129	Fence: Wrought Iron	Fence_SVY	6	0	WIF	
130	Garage	Building_Garage_SVY	16	0	Building1	
131	Gate	Gate_SVY				67
132	Gate: Multi shot	Gate_SVY	5	0	WIF	
133	Gate: (single shot)	Gate_SVY				67
134	Gate: Parking Lot	Gate_SVY				67A
135	Hand Rail	Barrier_Hand_Rail_SVY	0	1	HR	
136	Mail Box	Street_Hardware_Mail_Box_SVY				66
137	Parking meter	Street_Hardware_Parking_Meter_SVY				2
138	Patio	Building_Patio_SVY	0	3	0	
139	Porch Corner	Building_Porch_SVY				PC

Engineering Survey MicroStation V8 Graphic Specification

Code	Feature	Level_Name	CO	WT	LC	Cell
140	Porch Top	Building_Porch_SVY				PCTOP
141	Post	Post_SVY				30
142	Post 0.1 dia.	Post_SVY				1B
143	Post: Bicycle Post	Post_Bicycle_SVY				30P
144	Post: Bus stop sign/post	Post_Bus_SVY				TS
145	Post: Sign Post 0.05 sp.	Post_Sign_SVY				1
146	Post: Sign Post 0.06 dia.	Post_Sign_SVY				1
147	Post: Sign Post 0.10 dia.	Post_Sign_SVY				1
148	Post: Sign Post 0.10 sq.	Post_Sign_SVY				1A
149	pcsbuttonpost	Post_Pedestrian_X-Walk_SVY				PCSBP
150	Sign	Sign_SVY				1
151	Sign: Flashing Traffic Sign	Sign_Flashing_Traffic_SVY				1FL
152	Sign: Guide Sign	Sign_Guide_SVY				1G
153	Sign: Park Sign	Sign_Park_SVY				1PRK
154	Sign: Private	Sign_SVY				PS
155	Sign: Private (multi pole)	Sign_SVY	0	2	0	
156	Sign: Railway	Sign_SVY				6A
157	Sign: Road (overhead)	Sign_Overhead_SVY	0	3	0	
158	Sign: Stop Sign	Sign_Stop_SVY				1
159	Sign: Traffic double sign	Sign_Double_Traffic_SVY	0	2	0	
160	Sign: Traffic single sign	Sign_Single_Traffic_SVY				1
161	Sign: Warning	Sign_Warning_SVY				1
162	Sign: Yeld Sign	Sign_Yield_SVY				1
163	Signal control box	Traffic_Control_Signal_Control_Box_SVY				3
164	Signal control box: Edge (outline)	Traffic_Control_Signal_Control_Box_SVY	0	1	0	

Engineering Survey MicroStation V8 Graphic Specification

Code	Feature	Level_Name	CO	WT	LC	Cell
165	Silo Edge	Structure_Silo_SVY	0	0	0	
166	Traffic sensor	Traffic_Control_Sensor_SVY	0	1	1	
167	Wall: Sound Barrier	Wall_Sound_Barrier_SVY	0	0	0	
200	1m Back of curb	Curb_Road_SVY				1M
201	Area: Edge of asphalt	Topographic_Spot_Z_SVY	16	2	0	
202	Area: Edge of brick	Topographic_Spot_Z_SVY	112	2	0	
203	Edge of Brick	Topographic_Spot_Z_SVY	9	0	0	
204	Area: edge of gravel	Topographic_Spot_Z_SVY	64	2	0	
205	Area: Edge of grind area	Road_Grind_SVY	80	2	0	
206	Area: Edge of rip-rap	Earthworks_Rip_Rap_SVY	96	2	0	
207	Area: Edge of taper	Road_Taper_SVY	112	0	0	
208	Areaway	Building_Areaway_SVY	135	2	0	
211	Berm: Bottom	Earthworks_Berm_SVY	3	3	0	
212	Berm: Top	Earthworks_Berm_SVY	2	3	0	
213	BLDG foundation	Building_Foundation_SVY	0	5	3	
214	BLDG vent	Building_Vent_SVY	0	0	0	
215	Breakline/fence	Topographic_Breakline_SVY	10	1	145	
216	Bridge	Bridge_SVY	1	2	0	
217	Bridge: Abutment	Bridge_Abutment_SVY	112	4	0	
218	Bridge: Bottom of bridge	Bridge_SVY				71
219	Bridge: Top of bridge	Bridge_SVY	0	0	0	
220	Bus bay: Edge of bus bay	Road_Bus_Bay_SVY	0	0	0	
221	Cross Fall Break	Road_Cross_Fall_Break_SVY	0	2	0	
222	Crosswalk	Road_Crosswalk_SVY	23	1	0	
223	Culvert Double: Invert	Culvert_Double_SVY				71

Engineering Survey MicroStation V8 Graphic Specification

Code	Feature	Level_Name	CO	WT	LC	Cell
224	Culvert Double: Top	Culvert_Double_SVY				144
225	Culvert Single: Invert	Culvert_Single_SVY				141
226	Culvert Single: Obvert	Culvert_Single_SVY				71
227	Culvert Single: Top	Culvert_Single_SVY				141
228	Culvert to scale	Culvert_SVY	3	3	0	
229	Culvert: Box culvert corner	Culvert_Box_SVY				71
230	Culvert: INV. OF CLAY pipe	Culvert_Drainage_Tile_SVY				71
231	Culvert: INV. OF CONC. Pipe	Pipe_SVY				71
232	Culvert: INV. of Corr.Metal Pipe	Pipe_SVY				71
233	Culvert: INV. OF PVC pipe	Pipe_SVY				71
234	Culvert: Top. OF CLAY pipe	Culvert_Drainage_Tile_SVY				71
235	Culvert: Top. OF CONC. Pipe	Pipe_SVY				71
236	Culvert: Top. of Corr.Metal Pipe	Pipe_SVY				71
237	Culvert: Top. OF PVC pipe	Pipe_SVY				71
240	Curb: Curb at back (top)	Curb_Road_SVY				ELEVC
241	Curb: Curb at Gutter (top)	Curb_Road_SVY				CROSLB
242	Curb: Curb at Gutter (bottom)	Curb_Road_SVY				ELEVR
243	Curb: Edge of Concrete Gutter	Curb_Road_SVY	0	0	0	
244	Curb: Asphal-Bottom	Curb_Road_SVY	0	0	0	
245	Curb: Asphal-Top	Curb_Road_SVY	0	0	0	
246	Curb: Back of driveway curb	Curb_Driveway_SVY	4	3	0	
247	Curb: Back of parking lot curb	Curb_Parking_Lot_SVY	0	0	0	
248	Curb: Bottom of driveway curb	Curb_Driveway_SVY	3	3	0	
249	Curb: Bottom of parking lot curb	Curb_Parking_Lot_SVY	3	3	0	
250	Curb: Centerline-top of portable curb	Curb_Portable_SVY				PCU

Engineering Survey MicroStation V8 Graphic Specification

Code	Feature	Level_Name	CO	WT	LC	Cell
251	Curb: Curb @ CB	Curb_Road_SVY				CROSW
252	Curb: Depression-cut (Bottom)	Curb_Depression_Cut_SVY	0	0	0	
253	Curb: Depression-cut (Top)	Curb_Depression_Cut_SVY	0	0	0	
254	Curb: Metal at Gutter (top)	Curb_Road_SVY	10	0	0	
255	Curb: metal-top	Curb_Road_SVY	0	0	0	
256	Curb: Monolithic curb & SW (Bottom)	Curb_Monolithic_SVY	35	3	0	
257	Curb: Monolithic curb & SW (Top)	Curb_Monolithic_SVY	36	3	0	
258	Curb: Top of driveway curb	Curb_Driveway_SVY	52	3	0	
259	Curb: Top of parking lot curb	Curb_Parking_Lot_SVY	0	0	0	
260	Curb: wood-bottom	Curb_Road_SVY	0	0	0	
261	Curb: wood-top	Curb_Road_SVY	0	0	0	
262	Dish Line	Road_Dish_Line_SVY	90	0	2	
263	Ditch: Back	Earthworks_Ditch_SVY	0	0	0	
264	Ditch: Bottom	Earthworks_Ditch_SVY	1	3	146	
265	Ditch: C/L of ditch	Earthworks_Ditch_SVY	1	3	146	
266	Ditch: Front	Earthworks_Ditch_SVY	0	2	0	
267	Ditch: Inlet	In_Out_Inlet_SVY				71
268	Ditch: Top ditch-road drainage	Earthworks_Road_Drainage_Ditch_SVY	0	0	0	
269	Door sill	Building_Door_Sill_SVY				CROSW
270	Driveway	Road_Driveway_SVY	68	1	0	
271	Driveway: Asphalt	Road_Driveway_SVY	68	3	0	
272	Driveway: brick	Road_Driveway_SVY	22	3	0	
273	Driveway: C/L OF DRIVEWAY	Road_Driveway_SVY	0	2	0	
274	Driveway: concrete	Road_Driveway_SVY	20	3	0	
275	Driveway: dirt	Road_Driveway_SVY	22	3	3	

Engineering Survey MicroStation V8 Graphic Specification

Code	Feature	Level_Name	CO	WT	LC	Cell
276	Driveway: gravel	Road_Driveway_SVY	0	3	3	
277	Driveway: stone	Road_Driveway_SVY	23	3	3	
279	Entrance	Building_Entrance_SVY				CROSW
280	Expansion Joint	Bridge_Expansion_Joint_SVY	112	1	2	
281	Gutter	Curb_Gutter_SVY	0	0	0	
282	House Line	Building_SVY				71
283	Floor	Building_Floor_SVY				CROSW
284	Edge of Asphalt	Structure_Pad_SVY	0	0	2	
285	Pad: Edge of concrete pad	Structure_Pad_SVY				713
286	Pad: Edge of wooden pad	Structure_Pad_SVY	22	3	0	
287	Parking lot: Edge of asphalt	Road_Parking_Lot_SVY	16	3	0	
288	Parking lot: Edge of concrete	Road_Parking_Lot_SVY	20	3	0	
289	Parking lot: Edge of gravel	Road_Parking_Lot_SVY	0	3	3	
290	Parking lot: Edge of interlocking	Road_Parking_Lot_SVY	22	3	0	
291	Parking lot: Edge of parking lot	Road_Parking_Lot_SVY	0	3	0	
292	Path	Walkway_Path_SVY	0	3	0	
293	Path: dirt	Walkway_Path_SVY	22	3	3	
294	Path: gravel	Walkway_Path_SVY	38	3	3	
295	Ramp	Road_Ramp_SVY	0	0	3	
296	Lane line	Road_Traffic_Lane_SVY	0	2	0	
300	Road Centre Line	Road_SVY				CROSB
301	Road Crown	Road_Crown_SVY				CROSB
302	Road: Centerline of paved road (Approx.)	Road_SVY				713
303	Road: Centerline of unpaved road	Road_SVY				71
304	Road: Centerline tick	Road_SVY				CT

Engineering Survey MicroStation V8 Graphic Specification

Code	Feature	Level_Name	CO	WT	LC	Cell
305	Edge of paved road	Road_SVY	0	3	0	
306	Curb: Edge of Brick Gutter	Road_SVY	8	0	0	
307	Road: Edge of concrete road	Road_SVY	119	0	0	
308	Gravel Road	Road_SVY	142	0	0	
309	Road: Edge of traffic lane	Road_Traffic_Lane_SVY	0	0	Paint	
310	Shoulder	Road_Shoulder_SVY	0	3	3	
311	Shoulder: Edge of Asphalt	Road_Shoulder_SVY	16	3	3	
312	Shoulder: Edge of Concrete	Road_Shoulder_SVY	20	3	3	
313	Shoulder: Edge of dirt	Road_Shoulder_SVY	22	3	3	
314	Shoulder: Edge of gravel	Road_Shoulder_SVY	32	3	3	
315	Slope Bottom	Topographic_Slope_SVY	50	3	3	
316	Slope change	Topographic_Slope_SVY	50	3	3	
317	Slope Top	Topographic_Slope_SVY	50	3	3	
318	Splash Strip	Road_Splash_Strip_SVY	0	0	0	
319	driveable median	Road_Driveable_Median_SVY				71
320	Spot elevation	Topographic_Spot_Z_SVY				CROSW
321	Spot elevation: Asphalt	Topographic_Spot_Z_SVY				713
322	Spot elevation: Brick	Topographic_Spot_Z_SVY				713
323	Spot elevation: Concrete	Topographic_Spot_Z_SVY				713
324	Spot elevation: Tile	Topographic_Spot_Z_SVY				CROSW
325	Spot elevation: Dirt	Topographic_Spot_Z_SVY				713
326	Spot elevation: Gravel	Topographic_Spot_Z_SVY				713
327	Spot elevation: Interlocking Stone	Topographic_Spot_Z_SVY				71
328	Spot elevation: Lawn/Sod/Grass	Topographic_Spot_Z_SVY				CROSW
329	Spot elevation: Pattern Concrete	Topographic_Spot_Z_SVY				71

Engineering Survey MicroStation V8 Graphic Specification

Code	Feature	Level_Name	CO	WT	LC	Cell
330	Spot elevation: Paved	Topographic_Spot_Z_SVY				71
331	Spot Elevation: Slurry Seal	Topographic_Spot_Z_SVY	0	0	0	
332	Spot elevation: Stone	Topographic_Spot_Z_SVY				CROSW
333	Spot elevation: Unpaved	Topographic_Spot_Z_SVY				71
334	Spot elevation: Flagstone	Topographic_Spot_Z_SVY				713
335	Spot elevation: Wood	Topographic_Spot_Z_SVY				713
336	Step	Structure_Step_SVY	4	3	0	
337	Step : Concrete	Structure_Step_SVY	36	3	0	
338	Step: Asphalt	Structure_Step_SVY	16	3	0	
339	Step: Brick	Structure_Step_SVY	22	3	0	
340	Step: Risers	Structure_Step_Risers_SVY	12	1	0	
341	Step: Stone	Structure_Step_SVY	24	3	0	
342	Step: Wood	Structure_Step_SVY	38	3	0	
343	Street Line	Survey_Line_SVY	0	0	0	
344	Spot Elevation: Granite	Topographic_Spot_Z_SVY	0	0	0	
350	SW-Asphalt Public	Walkway_Sidewalk_SVY	16	3	0	
351	Approach: Brick	Walkway_Sidewalk_SVY	102	0	0	
352	SW: Concrete Public	Walkway_Sidewalk_SVY	6	0	0	
353	SW-Public	Walkway_Sidewalk_SVY	0	3	0	
354	SW: Back of sidewalk	Walkway_Sidewalk_SVY				CROSB
355	SW: Edge of Asphalt private	Walkway_Sidewalk_SVY	16	3	0	
356	Approach: Asphalt	Walkway_Sidewalk_SVY	70	0	0	
357	Approach	Walkway_Sidewalk_SVY	5	0	0	
358	SW: Edge of gravel private	Walkway_Sidewalk_SVY	32	3	0	
359	SW: Edge of private sidewalk	Walkway_Sidewalk_SVY	0	3	0	

Engineering Survey MicroStation V8 Graphic Specification

Code	Feature	Level_Name	CO	WT	LC	Cell
360	SW: Edge of stone private	Walkway_Sidewalk_SVY	24	3	0	
361	SW: Front of sidewalk	Walkway_Sidewalk_SVY	30	1	0	
362	Swale	Earthworks_Swale_SVY	1	3	0	
363	Swale: C/L of Swale	Earthworks_Swale_SVY	1	3	3	
364	Test pit: ground at test-pit	Earthworks_Test_Pit_SVY				TSTPT
370	Wall: Back top stone ret. Wall	Wall_Retaining_SVY	95	3	0	
371	Wall: Back top timber ret. Wal	Wall_Retaining_SVY	99	3	0	
372	Wall: Back top Brick ret. Wall	Wall_Retaining_SVY	123	3	0	
373	Wall: Back top concrete ret. Wall	Wall_Retaining_SVY	88	3	0	
374	Wall: Bottom Brick ret. Wall	Wall_Retaining_SVY	91	3	0	
375	Wall: Bottom concrete ret. Wall	Wall_Retaining_SVY	56	3	0	
376	Wall: Bottom of retaining wall	Wall_Retaining_SVY	0	3	0	
377	Wall: Bottom stone ret. Wall	Wall_Retaining_SVY	63	3	0	
378	Wall: Bottom timber ret. Wall	Wall_Retaining_SVY	67	3	0	
379	Wall: Top Brick ret. Wall	Wall_Retaining_SVY	107	3	0	
380	Retaining Wall	Wall_Retaining_SVY	71	1	0	
381	Wall: Top stone ret. Wall	Wall_Retaining_SVY	79	3	0	
382	Wall: Top timber ret. Wal	Wall_Retaining_SVY	83	3	0	
383	Wall: Top back of ret. Wall	Wall_Retaining_SVY	32	3	0	
384	Wall: Top of retaining wall	Wall_Retaining_SVY	16	3	0	
385	Window Sill	Building_Window_Sill_SVY				CROSW
386	Window Well	Building_Window_Well_SVY	0	0	0	
400	Airport: Edge of unpaved airport	Road_Airport_Runway_SVY	0	3	2	
401	Airport:Edge of paved airport runway	Road_Airport_Runway_SVY	0	3	0	
403	Manhole: CPR/CNR Manhole (lid)	Manhole_Lid_SVY				600

Engineering Survey MicroStation V8 Graphic Specification

Code	Feature	Level_Name	CO	WT	LC	Cell
404	Railway Trestle	Bridge_SVY	0	0	0	
405	Signal: Railroad signal	Track_Railway_Signal_SVY				6
406	Signal: Railway Signal control box	Track_Railway_Signal_Control_Box_SVY	0	0	0	
407	Switch: Railroad switch	Track_Railway_Switch_SVY				TTC switch
408	Track allowance	Track_Allowance_SVY				CROSR
409	Track: Railway Track	Track_SVY	0	1	0	
410	Conduit TTC	Conduit_SVY	0	0	0	
411	MH: TTC Manhole (lid)	Manhole_Lid_TTC_SVY				TTCMH
412	TTC Concrete Pad	Structure_Pad_TTC_SVY	28	3	0	
413	TTC Asphalt Pad	Structure_Pad_TTC_SVY	24	3	0	
414	TTC pole	Pole_Street-Car_SVY				TTCPST
415	Shelter: TTC Bus Shelter	Structure_Bus_Shelter_SVY	0	2	0	
416	Track : TTC Street-Car	Track_Street-Car_SVY				CROSG
417	Track drain	Track_Drain_SVY				TRDR
418	Track: TTC LRT	Track_LRT_SVY	16	3	0	
419	Track: TTC Subway	Track_Subway_SVY	32	3	0	
420	Vent: TTC Vent	Vent_TTC_SVY	48	3	0	
421	TTC Switch/Drain	Track_Drain_SVY				TTCSW
422	TTC electrical switch	Track_Rails_SVY				TTC switch2
450	Miscellaneous Line	Miscellaneous_SVY				71
451	NO ID	Miscellaneous_SVY				10
452	Area U/C	Miscellaneous_Construction_Zone_SVY				132
453	Backfill	Miscellaneous_SVY	0	0	0	
454	Basketball Backstop pole	Recreation_Backstop_Pole_SVY				BBBS
455	Bench	Street_Hardware_Bench_SVY				BNCH

Engineering Survey MicroStation V8 Graphic Specification

Code	Feature	Level_Name	CO	WT	LC	Cell
456	Borehole	Earthworks_Borehole_SVY				BH
457	Boulder/Rock	Earthworks_Boulders_SVY				ROCK
458	Coal chute	Building_Coal_Chute_SVY				Coal
459	Flag pole	Pole_Flag_SVY				68
460	Football post	Recreation_Football_Uprights_SVY				FBP
461	Hoarding	Wall_Hoarding_SVY	105	3	2	
462	Hub on line	Survey_Point_SVY				HOL
463	Miscellaneous Structure	Structure_Miscellaneous_SVY	0	3	0	
464	Park: Playground	Recreation_Playground_SVY	0	2	2	
465	Park: Edge (outline) of amusement	Recreation_Amusement_Park_SVY	0	5	0	
466	Park: Playground Apparatus	Recreation_Playground_Apparatus_SVY	0	1	0	
467	Park: Soccer goal post	Recreation_Soccer_Goal_Post_SVY				71
468	Park: Stands	Recreation_Stands_SVY	16	1	0	
469	Pool	Recreation_Pool_SVY	1	3	0	
470	Running track: Edge of running track	Recreation_Running_Track_SVY	0	3	2	
471	School portable	Structure_School_Portable_SVY	16	5	0	
472	Silo (PT of circle)	Structure_Silo_SVY				SILO
473	Skating rink: Edge of skating rink	Recreation_Skating_Rink_SVY	0	1	2	
474	Statue	Street_Hardware_Statue_SVY	32	3	0	
475	Stone/concrete pillar	Building_Pillar_SVY	0	2	0	
476	Top of grade stake	Survey_Point_Stake_SVY				GS
477	Topsoil pile	Earthworks_Topsoil_Pile_SVY	0	3	2	
478	Poured concrete footing	Building_Footing_SVY	0	1	2	
500	Catch basin: Single straight	Catch_Basin_Single_SVY				41
501	Catch basin: Single diagonal	Catch_Basin_Single_SVY				41D

Engineering Survey MicroStation V8 Graphic Specification

Code	Feature	Level_Name	CO	WT	LC	Cell
502	Catch basin: Single Pyramid	Catch_Basin_Single_SVY				41P
503	Catch basin in walk	Catch_Basin_Single_Pup_SVY				41E
504	Catch basin: Circular CB	Catch_Basin_Single_SVY				41C
505	Catch basin: Double straight	Catch_Basin_Double_SVY				42
506	Catch basin: Double diagonal	Catch_Basin_Double_SVY				42D
507	Catch basin: grate Edge (outline)	Catch_Basin_Grate_SVY	40	1	0	
508	Pup	Catch_Basin_Pup_SVY				PUP
509	Catch basin: Chamber (outline)	Catch_Basin_Chamber_SVY	2	1	0	
510	Catch basin: Sump	Catch_Basin_Sump_SVY	0	0	0	
511	Combined Sewer: center of manhole	Manhole_Combined_SVY				48
512	Sewer chamber centre	Chamber_Combined_SVY				Chamber
513	Combined Sewer: invert referece	Manhole_Combined_SVY				71
514	Combined Sewer: centerline of sewer	Sewer_Pipe_Combined_SVY				71
515	Combined Sewer: centeline of sewer	Sewer_Pipe_Combined_SVY	9	1	2	
516	Combined Sewer: center of chamber	Chamber_Combined_SVY				71
517	Combined Sewer: edge of chamber	Chamber_Combined_SVY	9	1	0	
518	Combined Sewer: bottom of pipe	Sewer_Pipe_Combined_SVY				71
519	Sewer pipe invert	Sewer_Pipe_Combined_SVY				pipe
520	Combined Sewer: obvert of pipe	Sewer_Pipe_Combined_SVY				71
521	Combined Sewer: top of pipe	Sewer_Pipe_Combined_SVY				71
522	Dual Sewer: center of manhole (lid)	Manhole_Lid_Sewer_SVY				49
523	Dual Sewer: invert reference	Manhole_Dual_SVY				71
524	Dual Sewer: centerline of sewer (Approx.)	Sewer_Pipe_Dual_SVY				71
525	Dual Sewer: centerline of sewer	Sewer_Pipe_Dual_SVY				71
526	Dual Sewer: center of chamber	Chamber_Dual_SVY				71

Engineering Survey MicroStation V8 Graphic Specification

Code	Feature	Level_Name	CO	WT	LC	Cell
527	Dual Sewer: edge of chamber (outline)	Chamber_Dual_SVY	2	1	0	
530	Sanitary Sewer: center of manhole	Manhole_Sanitary_SVY				47
531	Sanitary Sewer: manhole (lid	Manhole_Lid_Sanitary_SVY				47
532	Sanitary Sewer: invert reference	Manhole_Sanitary_SVY				71
533	Sanitary sewer: Marker	Marker_Sewer_SVY				47M
534	Breather	Breather_SVY				50
535	Breather 0.1	Breather_SVY				501
536	Breather 0.3	Breather_SVY				503
537	Septic Tank Top	Tank_Septic_SVY				71
538	SMH 0.68	Manhole_Lid_Sewer_SVY				SMH68
539	SMH 0.80	Manhole_Lid_Sewer_SVY				SMH8
540	Tank: Edge (outline)	Tank_SVY	0	3	0	
541	Sanitary sewer: Centerline	Sewer_Pipe_Sanitary_SVY	8	1	0	
542	Sanitary sewer: Centerline (Approx.)	Sewer_Pipe_Sanitary_SVY				71
544	Sanitary Sewer: chamber (center)	Chamber_Sanitary_SVY				71
545	Sanitary Sewer: chamber Edge	Chamber_Sanitary_SVY	8	1	0	
546	Sanitary sewer: chamber	Chamber_Sanitary_SVY	8	1	2	
547	Sanitary Sewer: chamber Edge	Chamber_Sanitary_SVY	8	1	2	
548	Sanitary Sewer: meter chamber	Chamber_Sanitary_Meter_SVY	0	0	0	
549	Sanitary Sewer: meter chamber Edge	Chamber_Sanitary_Meter_SVY	24	1	2	
550	Sanitary sewer: bottom of pipe	Sewer_Pipe_Sanitary_SVY				71
551	Sanitary sewer: invert of pipe	Sewer_Pipe_Sanitary_SVY				71
552	Sanitary sewer: obvert of pipe	Sewer_Pipe_Sanitary_SVY				71
553	Sanitary sewer: top of pipe	Sewer_Pipe_Sanitary_SVY				71
554	Forced-Main Pipe	Sewer_Pipe_Forced_Main_SVY				71

Engineering Survey MicroStation V8 Graphic Specification

Code	Feature	Level_Name	CO	WT	LC	Cell
555	Leachate: bottom of pipe	Sewer_Pipe_Leachate_SVY				71
556	Leachate: invert of pipe	Sewer_Pipe_Leachate_SVY				71
557	Leachate: obvert of pipe	Sewer_Pipe_Leachate_SVY				71
558	Leachate: top of pipe	Sewer_Pipe_Leachate_SVY				71
559	Septic field: Edge	Earthworks_Septic_Field_SVY	8	1	0	
560	Sewer Flasher	Sewer_Pipe_Flusher_SVY				SF
561	Storm Sewer: manhole (center of	Manhole_Storm_SVY				SMH68
562	Storm Sewer: manhole (approximate	Manhole_Storm_SVY				46A
563	Storm Sewer: invert reference	Manhole_Storm_SVY				71
564	Storm sewer: marker	Marker_Sewer_SVY				SM
565	Outfall: Edge (outline) of sewer	In_Out_Outfall_SVY	2	1	0	
566	Outfall: INV OF OUTFALL PIPE	In_Out_Outfall_SVY				71
567	Outfall: TOP OF OUTFALL PIPE	In_Out_Outfall_SVY				71
568	Storm sewer: Centerline	Sewer_Pipe_Storm_SVY	2	1	0	
569	Storm sewer: Centerline	Sewer_Pipe_Storm_SVY	2	1	2	
571	Storm Sewer: chamber (center of	Chamber_Storm_SVY				71
572	Storm Sewer: chamber Edge	Chamber_Storm_SVY	2	1	0	
573	Storm sewer: chamber (approximate	Chamber_Storm_SVY				46A
574	Storm Sewer: chamber Edge	Chamber_Storm_SVY	2	1	2	
575	Storm Sewer: meter chamber	Chamber_Storm_Meter_SVY				46M
576	Storm Sewer: meter chamber Edge	Chamber_Storm_Meter_SVY	2	1	2	
577	Storm sewer: bottom of pipe	Sewer_Pipe_Storm_SVY				71
578	Storm sewer: invert of pipe	Sewer_Pipe_Storm_SVY				71
579	Storm sewer: obvert of pipe	Sewer_Pipe_Storm_SVY				71
580	Storm sewer: top of pipe	Sewer_Pipe_Storm_SVY				71

Engineering Survey MicroStation V8 Graphic Specification

Code	Feature	Level_Name	CO	WT	LC	Cell
581	Weeping Tile	Sewer_Pipe_Weeping_Tile_SVY	50	1	0	
585	Abandoned manhole (lid)	Manhole_Lid_Abandoned_SVY				A
586	Proposed CL of Sewer	Sewer_Pipe_SVY	0	0	0	
587	Drain	Drain_SVY				DR
588	Drain Line	Drain_SVY	84	0	2	
589	Pipe: bottom of pipe	Pipe_SVY				71
590	Pipe: Invert of pipe	Pipe_SVY				71
591	Pipe: obvert of pipe	Pipe_SVY				71
592	Pipe: top of pipe	Pipe_SVY				71
593	Pipe: Concrete pipe inlet Invert	Pipe_SVY				71
594	Pipe: Concrete pipe outlet invert	Pipe_SVY				71
595	SMH (line)	Sewer_Pipe_SVY				CROSG
596	Top of risers	Manhole_Riser_SVY				71
597	Water Test Station 0.08 dia	Water_Main_SVY				WM
598	Monitoring Well	Miscellaneous_Well_SVY				MW
599	Water Valve: 0.18 dia	Valve_Water_SVY				54a
600	Fire hydrant	Fire_Hydrant_SVY				56
601	Fire Hydrant: shut off valve cover	Fire_Hydrant_Shut_Off_Valve_Cover_SVY				54
602	Fire Hydrant: High pressuure Hydrant	Fire_Hydrant_SVY				56H
603	Fire Hydrant: Top of riser	Fire_Hydrant_Riser_SVY				71FH
604	Fire stand pipe	Building_Fire_Stand_Pipe_SVY				63
605	Key: Water service key	Water_Main_Service_Key_SVY				54
609	Manhole: Corner of "Valve Chamber" (square cover)	Chamber_Valve_SVY	1	1	0	
610	Manhole: Center of "Valve Chamber"	Chamber_Valve_SVY				55
611	Manhole: invert reference location	Manhole_SVY				71

Engineering Survey MicroStation V8 Graphic Specification

Code	Feature	Level_Name	CO	WT	LC	Cell
612	Manhole: Toronto Water works 2/3 lid	Manhole_Lid_Water_SVY				TWW1
613	Manhole: Toronto Water Works	Manhole_Water_SVY				TWW
614	Manhole: Water "Meter Chamber"	Manhole_Meter_Chamber_SVY	0	0	0	
615	Manhole: High Pressure TWW	Manhole_Water_SVY				TWW3
616	Spindle Cover	Valve_Spindle_Cover_SVY	0	0	0	
617	Sprinkler head	Miscellaneous_Sprinkler_Head_SVY				sprinkl
618	Valve: Water valve cover	Valve_Cover_SVY				54
619	Valve: High pressure Toronto Water	Valve_Water_SVY				54HP
620	Valve: Toronto Water Works 0.28 Valve	Valve_Water_SVY				TWW4
621	Valve: Toronto Water Works 2/3 Valve	Valve_Water_SVY				TWW5
622	Water Main: Proposed CL of Water	Water_Main_SVY				71
623	Water Main: Centerline (approximate)	Water_Main_SVY	1	1	2	
624	Water Main: Marker	Marker_Water_SVY				WM
625	Water Main: Stake-out	Survey_Point_Stake_SVY	1	1	1	
626	Water Tower: Edge (Outline)	Water_Main_Tower_SVY	87	0	(Dot)	
627	Well	Miscellaneous_Well_SVY				WELL
628	Valve: Water Valve	Valve_Water_SVY				54
630	Water Chamber: Valve chamber	Chamber_Valve_SVY				55
631	Water Chamber: Valve Chamber	Chamber_Water_SVY				55A
632	Water Chamber: Valve Chamber Edge	Chamber_Water_SVY	1	2	0	
633	Water Chamber: Meter chamber	Chamber_Water_Meter_SVY				59
634	Water Chamber: Meter chamber: Edge	Chamber_Water_Meter_SVY	1	1	0	
635	Water Chamber: Toronto Water Works	Chamber_Water_SVY	0	0	0	
636	Water Chamber: Air Valve	Valve_Air_SVY				54a
637	Water Chamber: Center of spindle	Valve_Spindle_SVY				71SP

Engineering Survey MicroStation V8 Graphic Specification

Code	Feature	Level_Name	CO	WT	LC	Cell
638	Water Chamber: Maintenance Hole	Manhole_Chamber_Access_SVY				WMH
639	Water Chamber: Top of flange	Chamber_Flange_SVY				71FL
640	Water Main: Bottom	Water_Main_SVY				71
641	Water Main: Centerline	Water_Main_SVY				71
642	Water Main: Invert	Water_Main_SVY				71
643	Water Main: Obvert	Water_Main_SVY				71
644	Watermain top of pipe	Water_Main_SVY	1	0	pipe 0.20	
645	Water Main: cap or plug	Water_Main_Cap_Plug_SVY				69
646	Water Main: Reducer	Water_Main_Reducer_SVY				62
647	Water Service Lead	Water_Main_Service_Lead_SVY	1	1	2	
650	Gas drip	Gas_Utility_Drip_SVY				38
651	Gas Drip 0.17 square	Gas_Utility_Drip_SVY				38
652	Gas Key	Gas_Utility_Key_SVY				37
653	GAS Main MARKER	Marker_Gas_SVY				36
654	Gas manhole (lid)	Manhole_Lid_Gas_SVY				35
655	Gas meter	Gas_Utility_Meter_SVY				GM
656	Gas regulator box	Gas_Utility_Regulator_Box_SVY				60
657	Gas regulator box Edge (outline)	Gas_Utility_Regulator_Box_SVY	0	0	0	
658	Gas Stake out	Survey_Point_Stake_SVY	4	1	2	
659	Gas valve	Valve_Gas_SVY				37
660	Gas Valve 0.08 diameter	Valve_Gas_SVY				37v
661	Gas Valve 0.17 square	Valve_Gas_SVY				38
662	Gas valve 0.23 diameter	Valve_Gas_SVY				39
663	Gas vent	Vent_Gas_SVY				39
664	Gas vent/grate Edge (outline)	Vent_Gas_SVY	4	1	0	

Engineering Survey MicroStation V8 Graphic Specification

Code	Feature	Level_Name	CO	WT	LC	Cell
665	Gas chamber	Chamber_Gas_SVY	68	0	0	
666	Gas Main Centerline of pipeline	Pipeline_Utility_Gas_Main_SVY				71
667	Gas service line	Pipeline_Utility_Gas_Service_SVY	0	0	0	
699	Hydro Handwell 0.50 dia	Handwell_Hydro_SVY				24a
700	Hydro utility box; Edge (outline)	Electrical_Utility_Box_SVY				24
702	Hydro handwell 0.32 dia	Handwell_Hydro_SVY				24
703	Hydro junction box	Electrical_Utility_Junction_Box_SVY				21E
704	Kiosk	Electrical_Utility_Transformer_Switching_Kiosk_SVY				24a
710	Light Standard	Pole_Light_Standard_SVY				27
711	Light Standard: Metal	Pole_Light_Standard_SVY				27M
712	Light Standard: Wood	Pole_Light_Standard_SVY				27W
713	Light Standard: Concrete	Pole_Light_Standard_SVY				27C
714	Light Standard: Base	Pole_Light_Standard_Base_SVY				27B
715	Overhead Hydro line	Electrical_Utility_OHW_SVY	0	3	0	
716	Hydro manhole (lid)	Manhole_Lid_Hydro_SVY				15
717	Hydro cable marker	Marker_Hydro_SVY				64
718	Miscellaneous electric item	Electrical_Utility_SVY				71
719	Pedestal Electric	Pedestal_SVY				21
720	Hydro Pole	Pole_Hydro_SVY				26
721	Hydro pole concrete	Pole_Hydro_SVY				27C
722	Pole: Hydro pole Concrete round	Pole_Hydro_SVY				26C
723	Pole: Hydro pole Concrete square	Pole_Hydro_SVY				26CS
724	Pole: Hydro pole wood	Pole_Hydro_SVY				26w
725	Pole: Hydro pole wood round	Pole_Hydro_SVY				26W
726	Pole: Traffic light	Pole_Traffic_Signal_SVY				4

Engineering Survey MicroStation V8 Graphic Specification

Code	Feature	Level_Name	CO	WT	LC	Cell
727	Spotlight	Electrical_Utility_Spotlight_SVY				SL
728	Hydro Stake out	Survey_Point_Stake_SVY	3	1	2	
729	Tower transformer	Electrical_Utility_Tower_Transformer_SVY				26T
730	Edge (outline) of Hydro Tower	Electrical_Utility_Tower_SVY	3	1	0	
731	Transformer	Electrical_Utility_Transformer_SVY				TRNS
732	Transformer area	Electrical_Utility_Transformer_Area_SVY	0	3	0	
733	Transformer switching kiosk	Electrical_Utility_Transformer_Switching_Kiosk_SVY				34
734	Electric Vent	Vent_SVY	19	1	0	
740	Cable: Hydro Cable	Cable_SVY	0	0	0	
741	Hydro Chamber	Chamber_Hydro_SVY	3	1	0	
742	Hydro Duct	Duct_Bank_SVY	3	1	0	
743	Transformer U/G	Electrical_Utility_Transformer_SVY				25
744	Edge (outline) of underground	Electrical_Utility_Transformer_SVY	3	1	0	
745	Bell Telephone Box: outline	Pedestal_SVY	6	0	0	
750	Edge (outline) of telephone booth	TeleComm_Telephone_Booth_SVY	6	1	0	
751	Telephone booth	TeleComm_Telephone_Booth_SVY				TB
752	Handwell: Telephone handwell	Handwell_Telephone_SVY				24T
753	Telephone manhole (lid)	Manhole_Lid_Telephone_SVY				16
754	Underground Telephone cable marker	Marker_Underground_Cable_SVY				65
755	Miscellaneous telephone item	TeleComm_SVY				71
756	Overhead telephone line	TeleComm_OHW_SVY	0	0	0	
757	Pedestal: Telephone Booth Pedestal	TeleComm_Telephone_Booth_Pad_SVY				21T
758	Pedestal: Telephone pedestal	Pedestal_SVY				21T
759	Telephone pole	Pole_Telephone_SVY				17
760	Stake out Underground Bell cable	Survey_Point_Stake_SVY	6	1	2	

Engineering Survey MicroStation V8 Graphic Specification

Code	Feature	Level_Name	CO	WT	LC	Cell
761	Telephone jump wire interface	TeleComm_Jump_Wire_Interface_SVY				61T
762	Edge (outline) of Telecommunications tower	Structure_Tower_Telecom_SVY	22	1	0	
763	Telephone (buried) cable	Cable_SVY	6	1	0	
764	Edge (outline) of Telephone chamber	Chamber_Telephone_SVY	6	1	0	
765	Duct: Telephone duct	Duct_Bank_SVY	22	1	0	
770	Box: CABLE TV Junction box	TeleComm_Junction_Box_SVY				252
771	Edge (outline) of cable TV utility	TeleComm_CATV_Utility_SVY	6	0	0	
772	Handwell: Cable TV hanwell	Handwell_CableTV_SVY				24C
773	Marker: Underground Cable TV cable	Marker_Underground_Cable_SVY				CM
774	Pedestal: Cable TV pedestal	Pedestal_SVY				252
775	Cable TV camera pole	Pole_Camera_SVY				CAM
776	Stake out Underground Cabel TV cable	Survey_Point_Stake_SVY	7	1	2	
777	Cable TV communication tower	Structure_Tower_CableTV_SVY	7	1	0	
778	Cable: Cable TV	Cable_SVY	23	1	0	
779	Duct: Cable TV duct	Duct_Bank_SVY	7	1	0	
780	Metronet/ATT handwell	Handwell_Mnet_ATT_SVY				24M
781	Metronet/AT&T/Rogers Manhole	Manhole_Lid_Mnet_ATT_SVY				MMH
782	Metronet/ATT u/g cable marker	Marker_Underground_Cable_SVY				MNET
783	Cable: Metronet/ATT (buried) cable	Cable_SVY	0	0	0	
784	Chamber: Metronet/ATT chamber	Chamber_Mnet_ATT_SVY	0	0	0	
785	Duct: Metronet/ATT duct	Duct_Bank_SVY	0	0	0	
786	Stake-out: U/G Metronet/ATT cable	Survey_Point_Stake_SVY	0	0	0	
800	TD HEAT: Steam MH (lid)	Manhole_Lid_SVY				266
801	TD HEAT: Steam Vent	Vent_SVY				ST
802	Air vent/grate	Vent_SVY				VNT

Engineering Survey MicroStation V8 Graphic Specification

Code	Feature	Level_Name	CO	WT	LC	Cell
803	Air vent/grate: Edge (outline)	Vent_SVY				VNT
804	Box: Edge (outline) of unknown	Street_Hardware_Box_SVY	120	1	0	
805	Dump limit	Land_Use_Dump_SVY	2	3	2	
806	Fuel tank filler	Tank_Fuel_Tank_Filler_SVY				FF
807	Fuel tank vent	Tank_Fuel_Vent_SVY				FV
808	Guy pole	Pole_Guy_SVY				32
809	Guy wire	Pole_Guy_Wire_SVY				33
810	Guy wire: Multi-utility	Pole_Guy_Wire_SVY				330
811	Unknown handwell	Handwell_SVY				HW
812	Landfill site: Edge (limit)	Land_Use_Landfill_SVY	2	3	0	
813	Manhole: unknown	Manhole_Lid_SVY				44
814	Marker: Oil pipeline marker	Marker_Underground_Utility_SVY				43
815	Pole: Edge (outline) of pole cribbing	Miscellaneous_Pole_Cribbing_SVY	0	0	0	
816	Pole: Multi utility	Pole_SVY				PM
817	Pole: unidentified concrete pole	Pole_SVY				30C
818	Pole: Unknown utility	Pole_SVY				30
819	Propane tank	Tank_Propane_SVY	0	0	0	
820	Pump gas	Miscellaneous_Pump_Gas_SVY				5
821	Shaft	Earthworks_Shaft_SVY	0	0	0	
822	Tower: Edge (outline) of Unknown	Structure_Tower_SVY	0	0	0	
823	Weigh Scale: Corners	Miscellaneous_Weigh_Scale_SVY				71
830	Cable unknown	Cable_SVY	0	1	0	
831	Duct Edge (outline) of Unknown duct	Duct_Bank_SVY	0	1	3	
832	Cathode Protector	Miscellaneous_SVY				CP
833	Chamber : Floor elevation of chamber	Chamber_Floor_SVY				71

Engineering Survey MicroStation V8 Graphic Specification

Code	Feature	Level_Name	CO	WT	LC	Cell
834	Chamber: Edge (outline) of unknown	Chamber_SVY	2	1	0	
835	Chamber: Inside Walls	Chamber_Wall_SVY	19	1	0	
836	Pipeline Centerline	Pipeline_Utility_Misc_Pipeline_SVY	0	3	0	
837	Top waste oil pipe	Pipe_Waste_Oil_SVY				WP
838	GT Manhole 0.88 dia	Manhole_Lid_SVY				16
900	Buoys	Miscellaneous_Buoys_SVY				BOUY
901	Edge (outline) of golf fairway	Recreation_Golf_Fairway_SVY	2	3	3	
902	Edge (outline) of golf sand trap or	Recreation_Golf_Sand_Trap_SVY	0	3	2	
903	Edge (outline) of golf tee area or	Recreation_Golf_Tee_Off_SVY	2	3	0	
904	Quarry: Edge (limit)	Land_Use_Quarry_SVY	0	3	2	
905	Wooden crib	Miscellaneous_Crib_SVY	22	1	0	
906	Flower bed: Edge (outline)	Vegetation_Flower_Bed_SVY	128	1	0	
907	Planter	Street_Hardware_Planter_SVY	154	1	0	
910	Bottom of bank	Topographic_Slope_SVY	70	3	0	
911	Top of bank	Topographic_Slope_SVY	0	3	2	
912	Channel	Waterway_Channel_SVY	0	0	0	
913	Bottom of Creek	Waterway_Creek_SVY	1	3	3	
914	Centerline of Creek	Waterway_Creek_SVY	1	3	142	
915	Edge of rock outcrop	Miscellaneous_Rock_Outcrop_SVY	1	3	0	
916	Edge of Swamp / Marsh	Waterway_Swamp_Marsh_SVY	1	3	3	
917	Water Edge	Waterway_SVY	17	3	3	
918	Water Level	Waterway_Water_Level_SVY				WLM
919	Water Mark	Waterway_Water_Mark_SVY				WLM
920	Bush: Edge of Bush	Vegetation_Bush_SVY	2	1	132	
921	Single Bush	Vegetation_Bush_SVY				SHRB

Engineering Survey MicroStation V8 Graphic Specification

Code	Feature	Level_Name	CO	WT	LC	Cell
922	Hedge: Edge (outline)	Vegetation_Hedge_SVY	2	1	Hedge	
923	Shrub	Vegetation_Shrub_SVY				SHRB
924	hedge centreline	Vegetation_Hedge_SVY	2	1	Hedge	
925	Edge of grass	Topographic_Spot_Z_SVY	18	1	0	
930	Apron: Concrete Apron	Structure_Pad_SVY	16	3	0	
931	Bottom of concrete bank	Topographic_Slope_SVY	0	0	0	
932	Top concrete Bank	Topographic_Slope_SVY	0	0	0	
933	Bottom of breakwall	Wall_Breakwall_SVY	0	0	0	
934	Bottom of breakwall	Wall_Breakwall_SVY	0	0	0	
935	Edge (outline) of beaver dam	Waterway_Structure_Beaver_Dam_SVY	0	0	0	
936	Edge of dam	Waterway_Structure_Dam_SVY	3	3	0	
937	Top of dam/spillover	Waterway_Structure_Dam_SVY	19	3	0	
938	Edge of dock	Waterway_Structure_Dock_SVY	0	3	0	
939	Bottom of gabion	Waterway_Structure_Gabion_SVY	4	2	0	
940	Top of gabion	Waterway_Structure_Gabion_SVY	3	2	0	
941	back of Headwall	In_Out_Headwall_SVY	16	3	0	
942	Bottom of headwall	In_Out_Headwall_SVY	4	3	0	
943	Top of headwall	In_Out_Headwall_SVY	0	3	0	
944	Piling	Miscellaneous_Piling_SVY				P
945	Garden shed	Structure_Garden_Shed_SVY	0	3	0	
946	Spillway: Centerline	Waterway_Structure_Spillway_SVY	16	3	0	
947	Bottom Wingwall on Apron	Bridge_Wingwall_SVY	24	3	0	
948	Wingwall top	Bridge_Wingwall_SVY	40	3	0	
950	Trees: Coniferous	Trees_Coniferous_SVY				95
951	Trees: 0.1 diameter	Trees_Coniferous_SVY				95

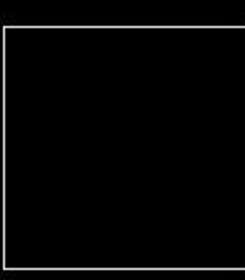
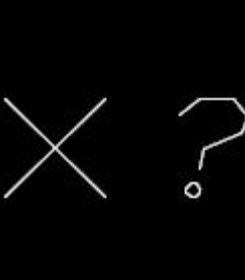
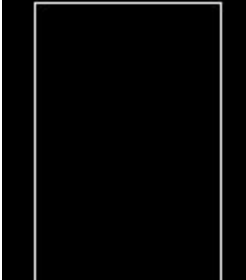
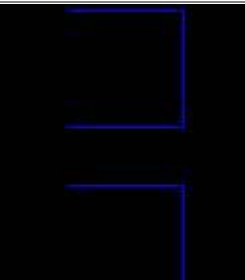
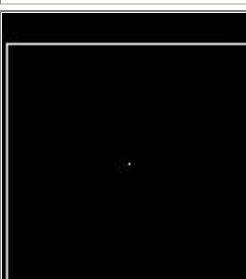
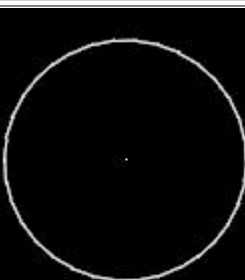
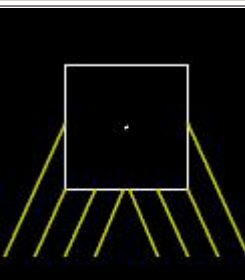
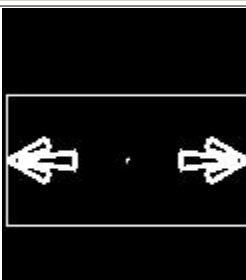
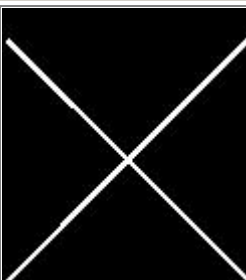
Engineering Survey MicroStation V8 Graphic Specification

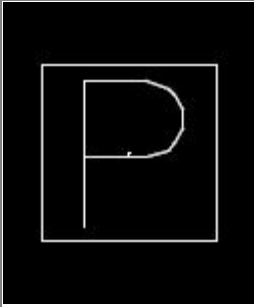
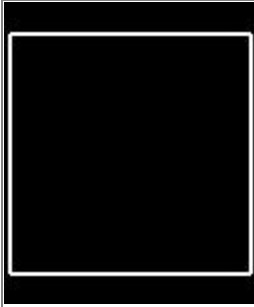
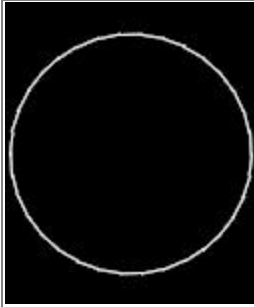
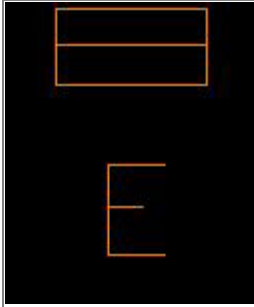
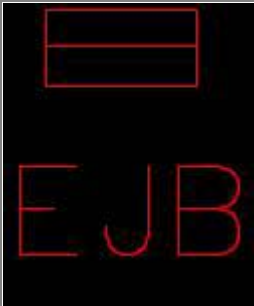
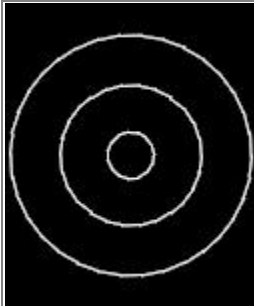
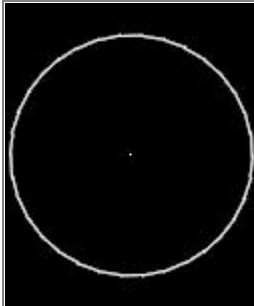
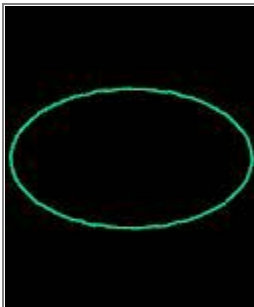
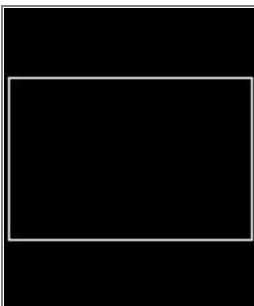
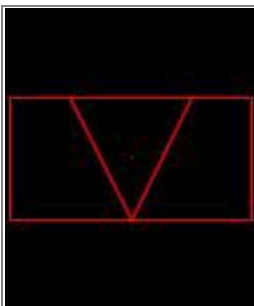
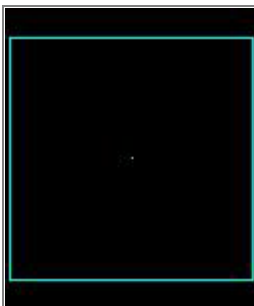
Code	Feature	Level_Name	CO	WT	LC	Cell
952	Trees: 0.2 diameter	Trees_Coniferous_SVY				95
953	Trees: 0.3 diameter	Trees_Coniferous_SVY				95
954	Trees: 0.4 diameter	Trees_Coniferous_SVY				95
955	Trees: 0.5 diameter	Trees_Coniferous_SVY				95
956	Trees: 0.6 diameter	Trees_Coniferous_SVY				95
957	Trees: 0.7 diameter	Trees_Coniferous_SVY				95
958	Trees: 0.8 diameter	Trees_Coniferous_SVY				95
959	Trees: 0.9 diameter	Trees_Coniferous_SVY				95
960	Trees: 1.0 diameter	Trees_Coniferous_SVY				95
961	Trees: Point on Row-Coniferous	Trees_Coniferous_SVY				71
970	Trees: Deciduous	Trees_Deciduous_SVY				96
971	Trees: 0.1 diameter	Trees_Deciduous_SVY				96
972	Trees: 0.2 diameter	Trees_Deciduous_SVY				96
973	Trees: 0.3 diameter	Trees_Deciduous_SVY				96
974	Trees: 0.4 diameter	Trees_Deciduous_SVY				96
975	Trees: 0.5 diameter	Trees_Deciduous_SVY				96
976	Trees: 0.6 diameter	Trees_Deciduous_SVY				96
977	Trees: 0.7 diameter	Trees_Deciduous_SVY				96
978	Trees: 0.8 diameter	Trees_Deciduous_SVY				96
979	Trees: 0.9 diameter	Trees_Deciduous_SVY				96
980	Trees: 1.0 diameter	Trees_Deciduous_SVY				96
981	Trees: Point on Row-Deciduous	Trees_Deciduous_SVY				71
990	Edge (outline) of tree area	Trees_SVY	2	1	VegOut	
991	Sapling tree	Trees_SVY				95
992	Tree Pit	Earthworks_Tree_Pit_SVY				TP

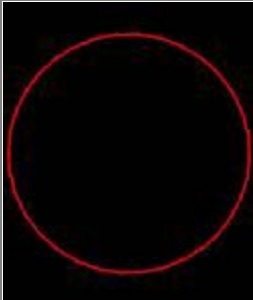
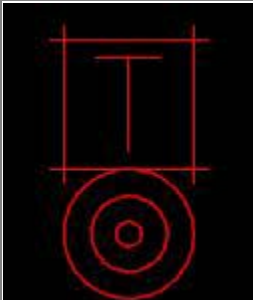
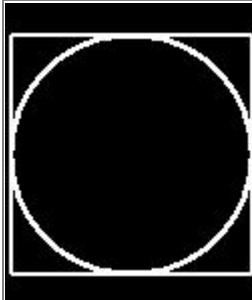
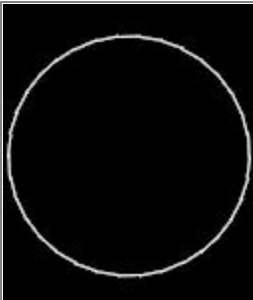
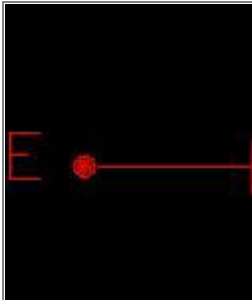
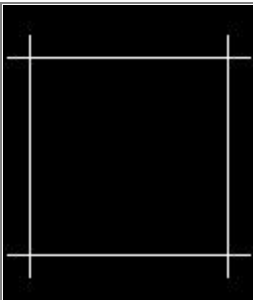
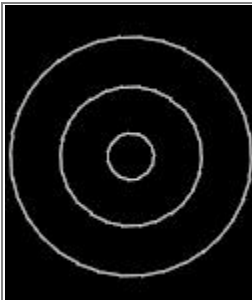
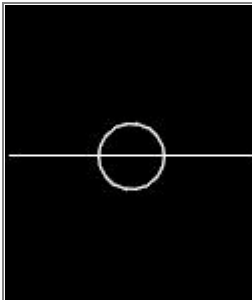
Engineering Survey MicroStation V8 Graphic Specification

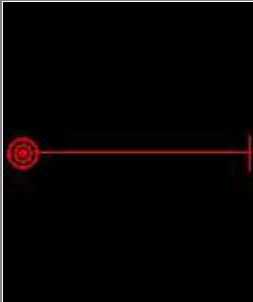
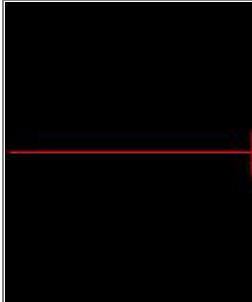
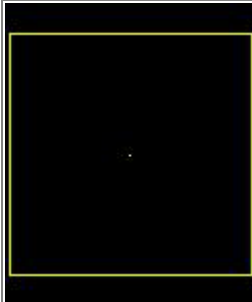
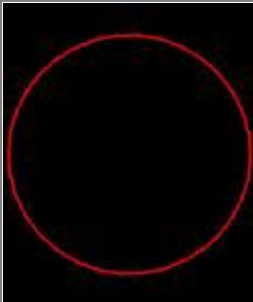
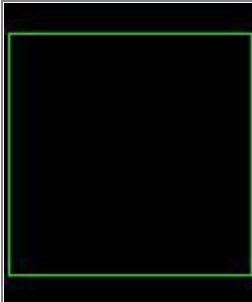
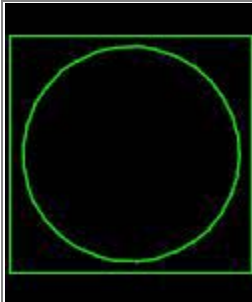
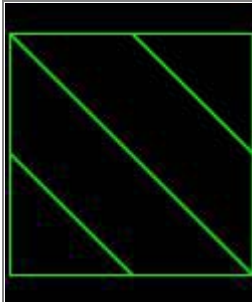
Code	Feature	Level_Name	CO	WT	LC	Cell
993	Trees: Dripline	Trees_SVY	18	1	131	
994	Trees: Tree stump	Trees_SVY				97

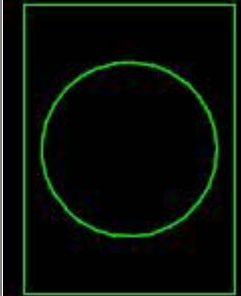
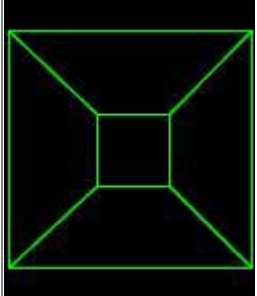
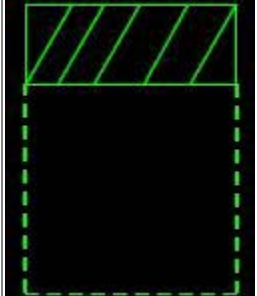
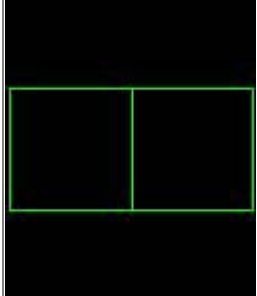
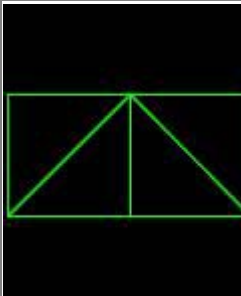
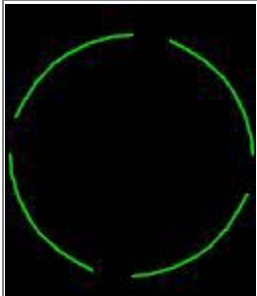
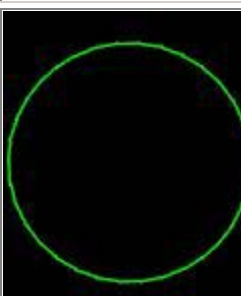
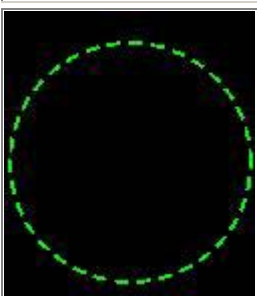
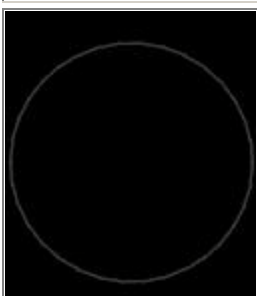
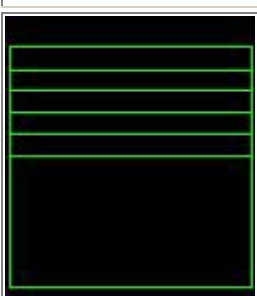
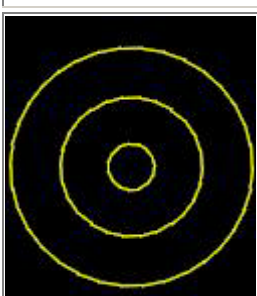
Cell Library Graphic Symbology

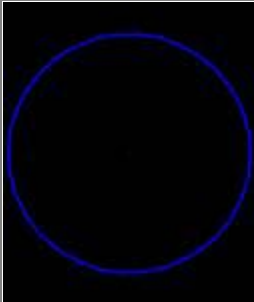
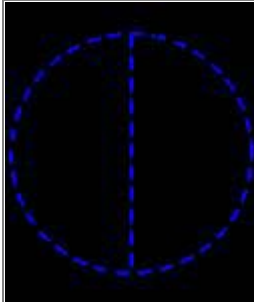
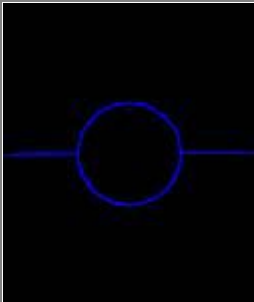
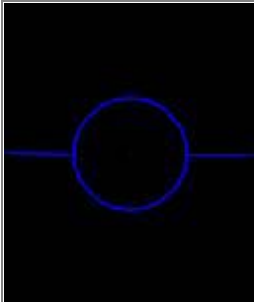
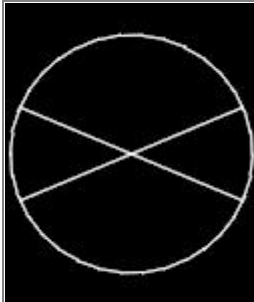
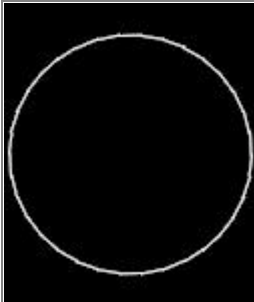
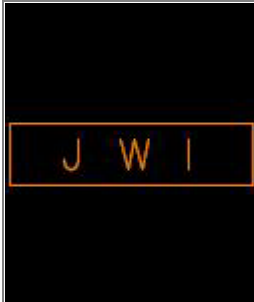
			
1	10	11x17	132
			
141	144	15	16
			
160	161	17	1A
			
1B	1FL	1G	1M

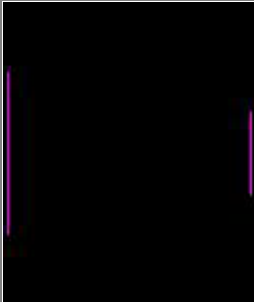
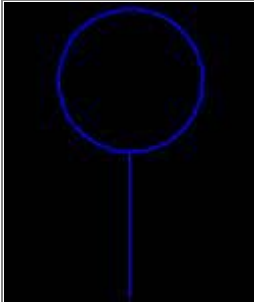
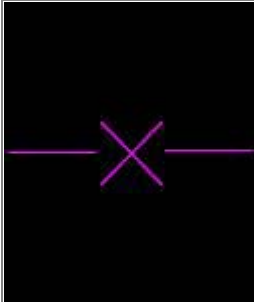
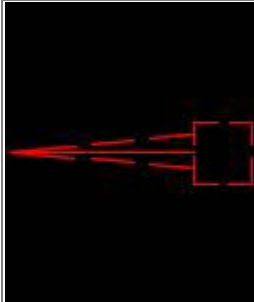
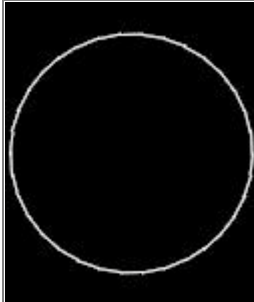
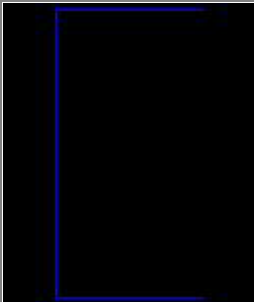
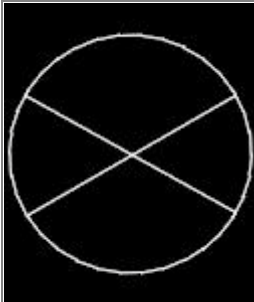
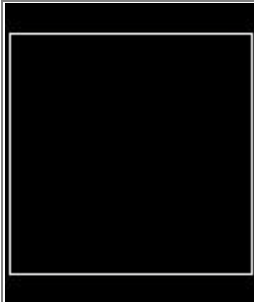
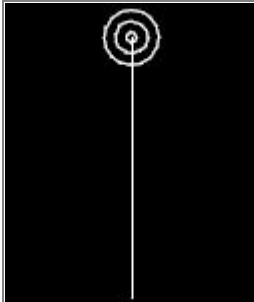
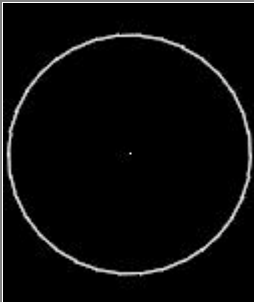
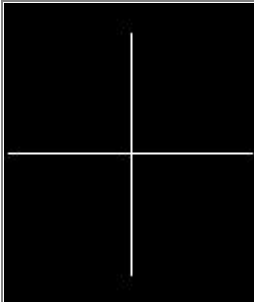
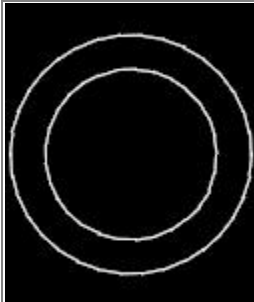
			
1PRK	1SET	2	21
			
21E	21t	22	23
			
24	24a	24C	24m
			
24T	24x36	25	252

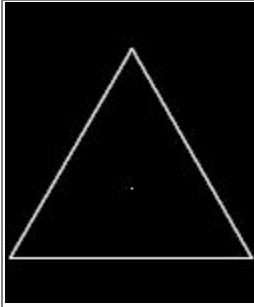
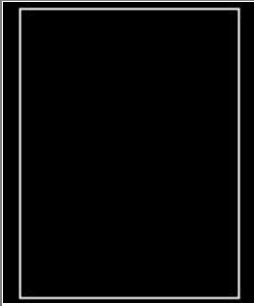
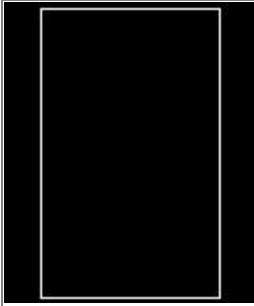
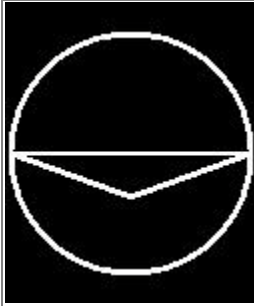
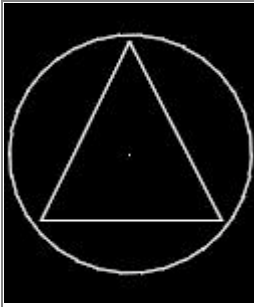
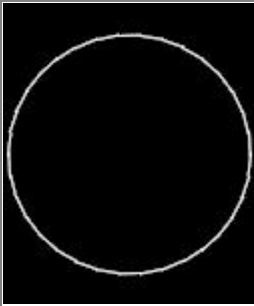
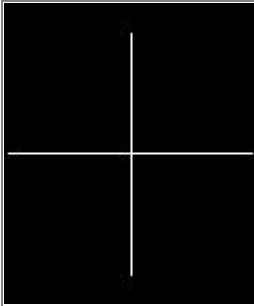
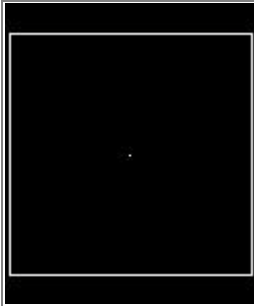
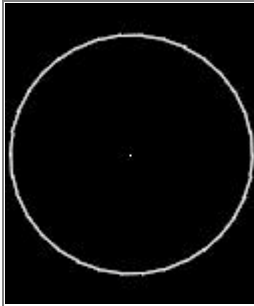
			
26	266	26C	26cs
			
26T	26w	27	27B
			
27c	27m	27W	29
			
3	30	30C	30p

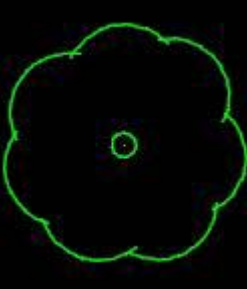
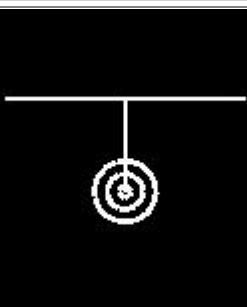
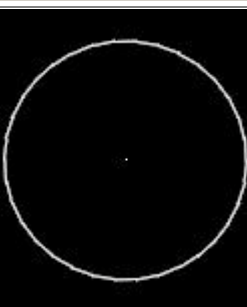
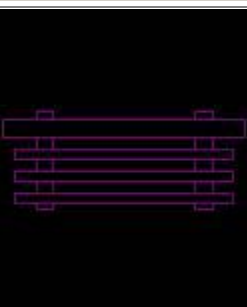
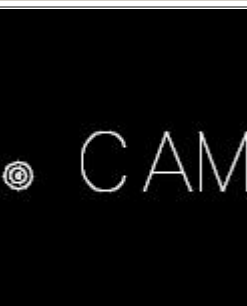
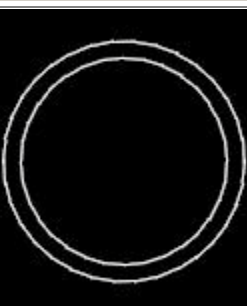
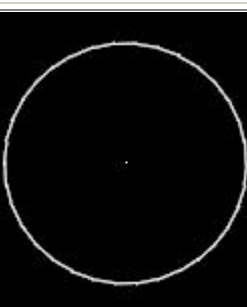
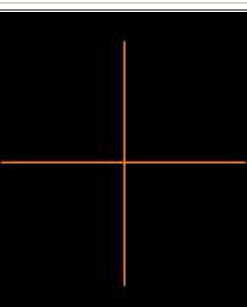
			
31	32	33	330
			
34	35	36	36x48
			
37	37v	38	39
			
4	41	41C	41D

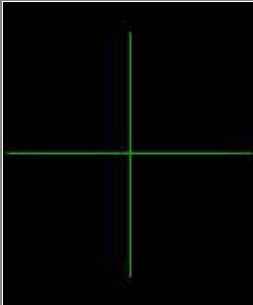
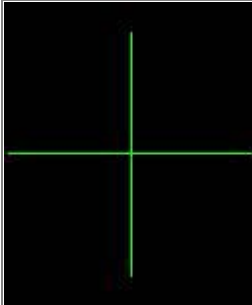
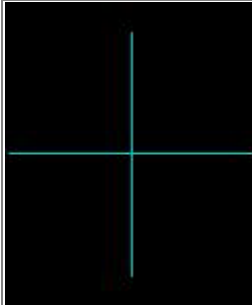
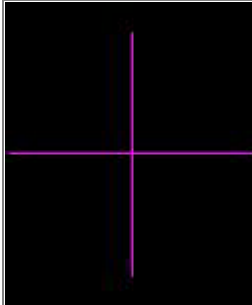
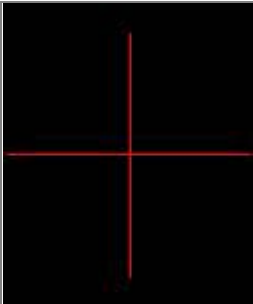
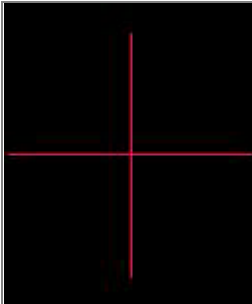
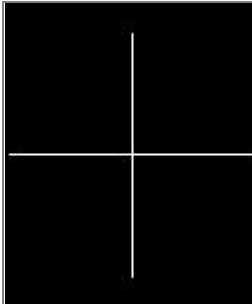
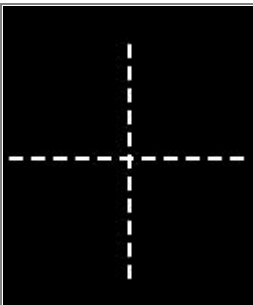
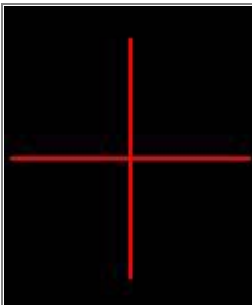
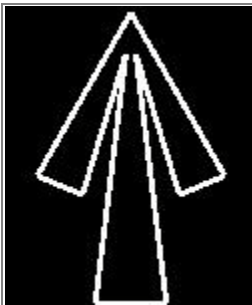
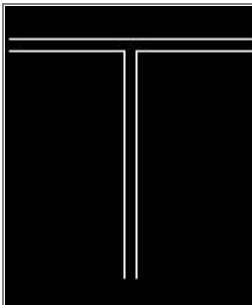
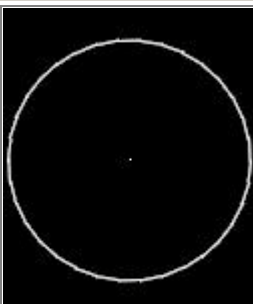
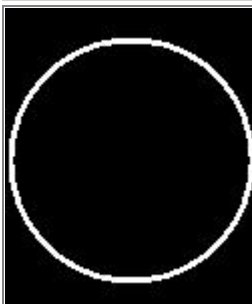
			
41E	41P	41UC	42
			
42D	43	44	45
			
46	46A	46M	47
			
47M	48	49	5

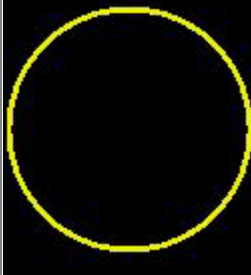
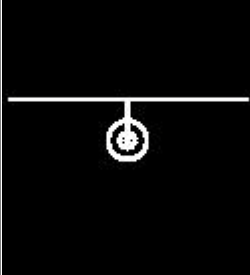
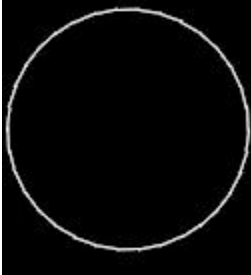
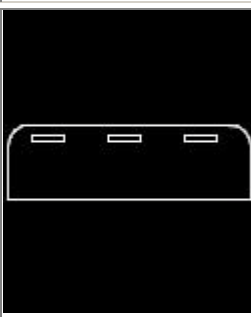
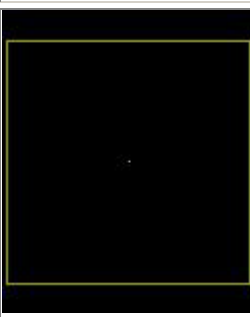
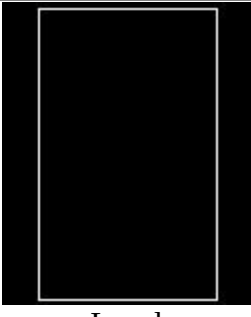
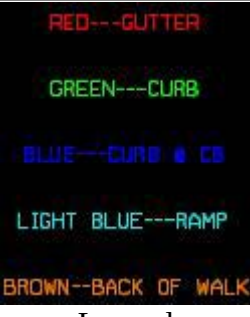
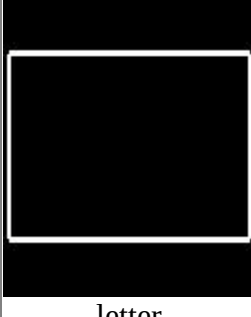
			
50	501	503	54
			
54a	54hp	55	55A
			
56	56h	59	6
			
60	600	601	61T

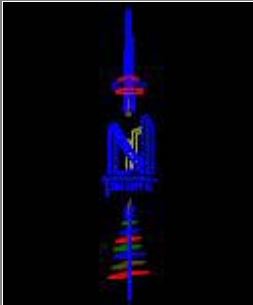
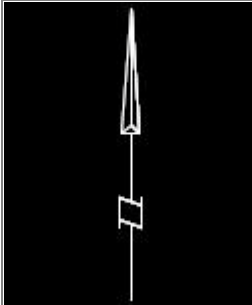
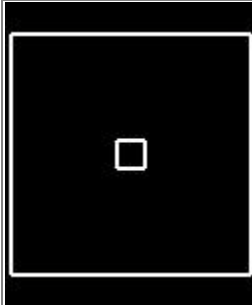
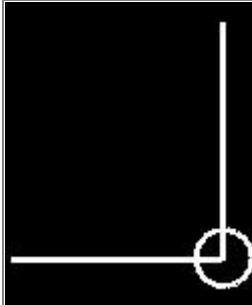
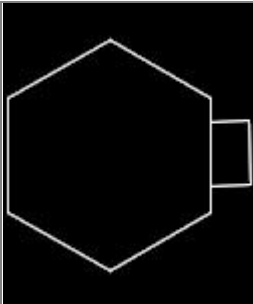
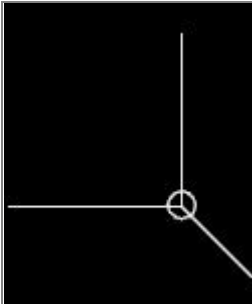
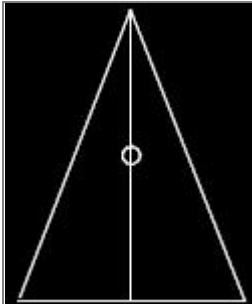
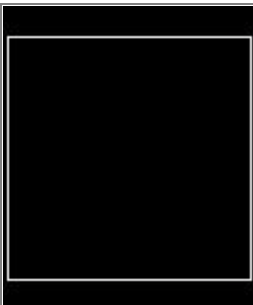
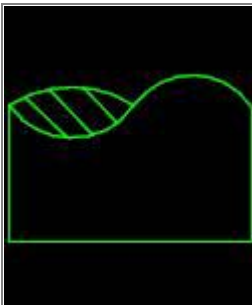
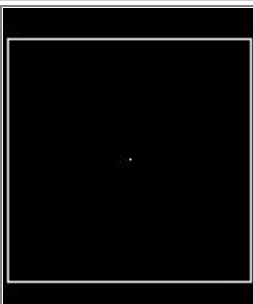
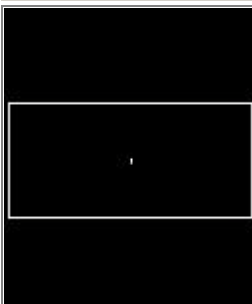
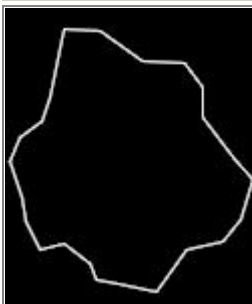
			
62	63	64	65
			
66	67	67A	68
			
69	6A	6FD	7
			
71	713	71CNW	71FH

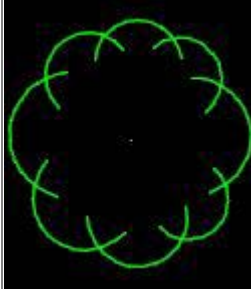
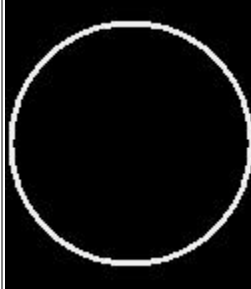
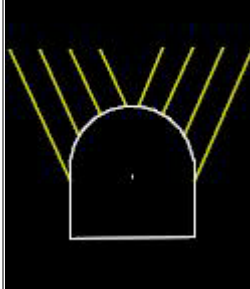
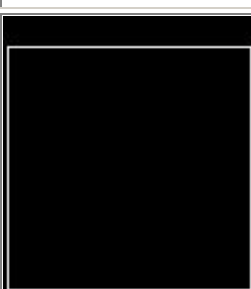
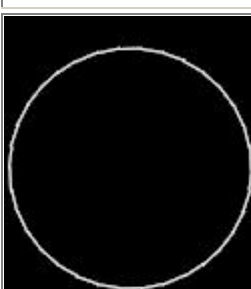
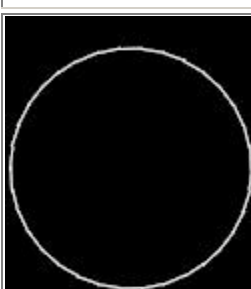
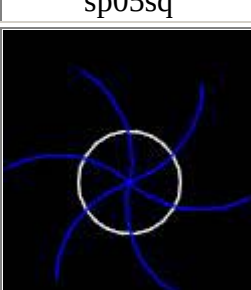
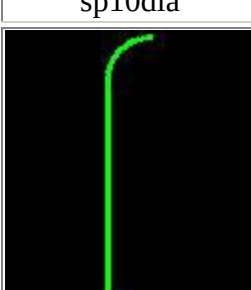
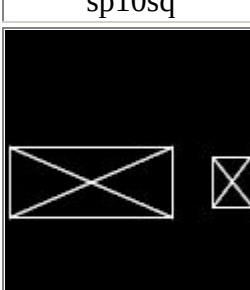
			
71FL	71SP	76	77
			
8.5x11	8.5x14	80	82
			
82H	82L	82S	82T
			
83	84	85	85RND

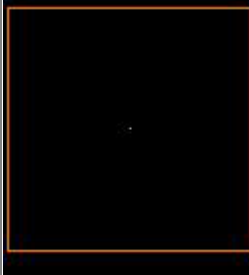
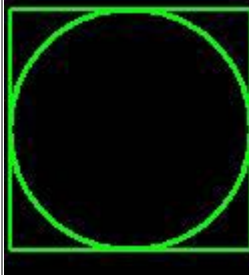
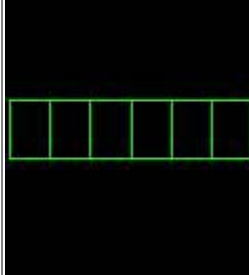
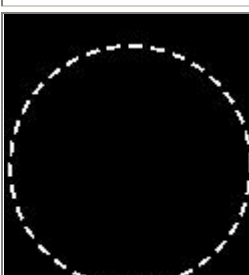
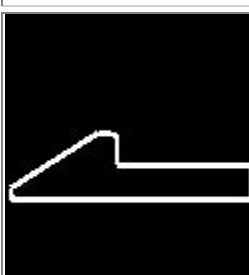
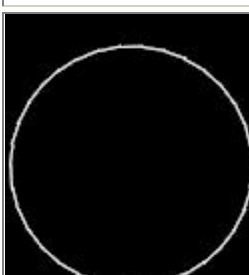
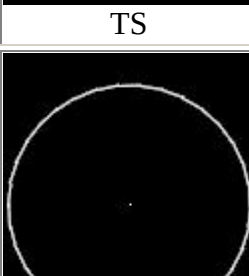
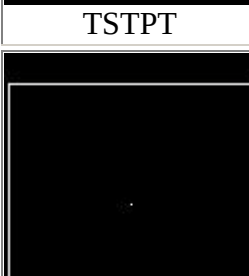
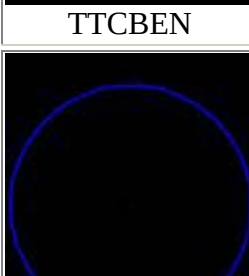
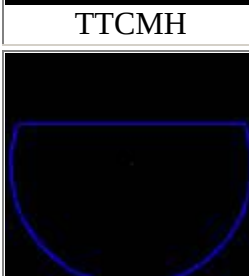
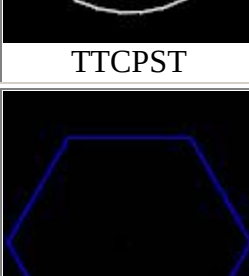
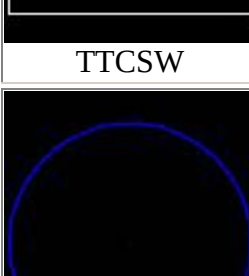
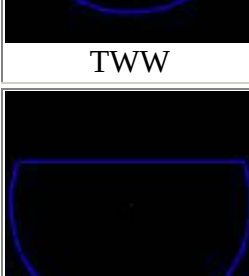
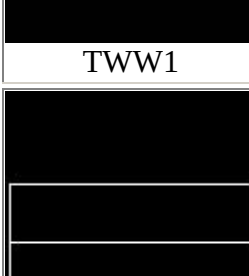
			
95	96	97	A
			
BBBS	BH	BNCH	BOUY
			
BS	CAM	Chamber	CM
			
Coal	CP	CROSB	CROSBR

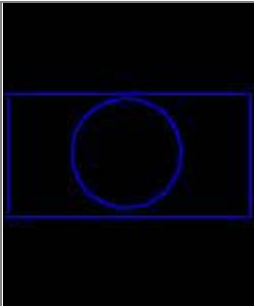
			
crosg	CROSG	CROSLB	CROSP
			
CROSR	CROSG	CROST	CROSW
			
CSM	CT	CUT	CUTT
			
dot	dr	ELEVC	ELEVR

			
ELEVS	FBP	FF	FV
			
GB	GM	GRB	GS
			
HOL	HW	Legal	Legend
			
letter	MMH	MNET	MW

			
Nord	NORTH	P	PC
			
PCSBP	PCTOP	PCU	PI
			
pillar	pipe	Planter	PM
			
ppd	PS	pup	ROCK

			
SF	shrb	SILO	SL
			
Slab	SM	SMH68	SMH8
			
sp05sq	sp06dia	sp10dia	sp10sq
			
sprnkl	ST	step	Switch

			
TB	TP	TRDR	TRNS
			
TS	TSTPT	TTCBEN	TTCMH
			
TTCPST	TTCSW	TWW	TWW1
			
TWW3	TWW4	TWW5	VNT

			
WELL	WLM	WM	WM2
			
WMH	WP	WS	