Standard Block Profile Specifications

2019-11-18

THIS PAGE INTENTIONALLY LEFT BLANK

The City of Calgary | P.O. Box 2100 Stn. M | Calgary, AB, Canada T2P 2M5 | calgary.ca

Block Profile Standards for Subdivision Developments

Contents

The City of Calgary | P.O. Box 2100 Stn. M | Calgary, AB, Canada T2P 2M5 | calgary.ca

THIS PAGE INTENTIONALLY LEFT BLANK

The City of Calgary | P.O. Box 2100 Stn. M | Calgary, AB, Canada T2P 2M5 | calgary.ca

Document Revision History

Version	Summary of Change	Document Status	Published
0.1	Initial Draft (internal only)	Draft	N/A
0.2	Draft with changes from comments from Reviewers	Draft	
1.0	Final 2019 Release	Final	November 18, 2019

THIS PAGE INTENTIONALLY LEFT BLANK

The City of Calgary | P.O. Box 2100 Stn. M | Calgary, AB, Canada T2P 2M5 | calgary.ca

Section 1: As-Built Block Profile Standards

1-1 Introduction: CAD Block Profile

The Standard Block Profile Specification manual was designed to provide guidelines and specifications to draw a block profile. This manual describes the necessary information to be included on a block profile. These specifications were developed by The City of Calgary, Corporate Analytics & Innovation business unit. The City of Calgary CAD Standard is also applicable to the Block Profile drawings. There are drafting templates available to be downloaded from calgary.ca/CAD that have the drafting standards incorporated in them.

Definition of a Block Profile

An As-Built block profile is a detailed engineering drawing of a record containing municipally and provincially owned public features within public rights-of-way. The block profile plan is divided into three parts: two plan views and one profile, with the exception of major roads and large rights-of-way, which combine the two plan views into one (see sample As-Built block profile drawings available on the CAD Standards website).

Part One: The top plan view shows surface features, legal descriptions and bordering property data.

Part Two: The utility view shows public utility locations within the public right-of-way and related data.

Part Three: The profile shows public utility grades and related data.

Standard CAD Block Profile Specifications

General Information

These Block Profile Specifications are to be used when submitting As-Built block profiles to The City of Calgary for final As-Built approval.

The Block Profile Specifications manual and The City of Calgary CAD Standard are available on calgary.ca.

Block Profile Location

1) Only one block profile layout is permitted per title block. In some cases two separate block profile layouts within a title block is acceptable as long they are adjacent to each other along the same continuous street, lane or right-of-way without passing through an intersection.
2) The location of public utilities and roadway should be referenced from intersection to intersection of a street block within the Location Description field within the drawing title block. If the distance is longer than the extent of block profile then it should be referenced from intersection at a distance and direction away from it.
3) The location of swale on overland drainage right-of-way should be referenced from street/lane to street/lane. If the distance is longer than the extent of block profile then it should be referenced from street/lane at a distance and direction away from it.
4) If the location of utility is on a utility right-of-way, it should be referenced from street/lane to street/lane. If the distance is longer than the extent of block profile then it should be referenced from street/lane at a distance and direction away from it.
5) The location of storm pipe connecting to storm pond should be referenced from street/lane to a distance and direction away from it or to a pond.
6) Avoid placing an intersection or roundabout in the centre of block profile.
7) Two separate views is acceptable on the same block profile as long they are continuous to each other along the street, lane or right-of-way.

Title Block

1) One of the standard title blocks (as shown on the CAD Standards website, and available for download from within the General Template) shall be used. The following fields should be populated (which may be done through the Sheet Set Manager):
    a. Notes: Show the following metric note

        ALL PIPE SIZES ARE IN MILLIMETRES AND ALL DIMENSIONS ARE IN METRES UNLESS OTHERWISE NOTED.

    b. Sheet Title: The location of the profile should be referenced between intersecting streets or distanced from intersecting streets, and shown in the Sheet Title box. It should be displayed on three lines showing the street name on the first line, the “From” street on the next one, and the “To” street on the last one.

        Example:
        AUBURN BAY BV SE

FROM AUBURN BAY CR SE
TO AUBURN BAY VW SE

The Section, Township, Range, and Meridian should be shown directly below.
e.g., **SEC: 26 - TWP: 23 - RGE: 29 - W 4th M**

c. Date Submitted

d. Drawn By

2) The consultant's name is to be shown only in the space next to the City of Calgary logo in the title block as shown on the sample drawings.

3) The consultant is to remove the consultant's name after final approval by The City of Calgary staff.

Drawing Preparation

Prepare drawings in the manner illustrated on the attached Standard Block Profile sample sheets, which were created by using the template.

1) Sheet Layout

a) Use the standard North arrow as per the City of Calgary CAD Standard, and shown on the sample drawings.

b) Placement of the North arrow, and orientation shall be as defined in the City of Calgary CAD Standard.

c) Keep the NAD 83 label near the right-hand side of the title block.

d) Show pipe sizes in mm as per ASTM Specification (as shown in Appendix A) using 1 inch = 25 mm.

e) Show distances and location dimensions in metres to two decimal places.

f) Show invert elevations in metres to three decimal places.

g) Existing imperial dimensions are to be converted using the factor:

1 inch (1") = 25.4 mm

1 foot (1') = 0.3048 m

C.F.S. X 28.3147 = dm^3/s

h) To convert pipe sizes refer to the pipe size charts in Appendix A.

i) On block profiles do not show manhole numbers, Engineer's approval stamp or waterworks information (e.g., 150 X 150 X 150 tee, 90° bend, 250mm valve, etc.).

2) Scale

a) All block profiles are to be drawn in metric using the scales shown below:

i) Plan View Scale 1:500

ii) Profile View Scale

Horizontal 1:500

Vertical 1:50

Double Vertical 1:100 (only use when absolutely necessary)

b) Bar scales are required on block profile title blocks.

Updating Boundary Block Profiles

All affected City of Calgary block profiles bordering your project or adjoining a block profile in your project must be updated to show current information. For clarity, when tying into an existing structure (EX SS 'MH' or EX SD 'MH') block profiles are required to the next existing structure(s) in all directions. For approval these "Boundary" Block Profiles must be included with As-Built submissions.

As shallow utility information is not to be shown on the block profile, when updating a boundary drawing all shallow utility information should be removed. Block Profile Plan Information

(Refer to the sample drawings on the CAD Standards website that show examples of this)

For As-Built block profiles, only include the content described within Section 1 of this document, and make sure not to exclude the additional information that is typically included on design drawings as noted in Section 2-2.

1) Plan View

a) Block profiles should be georeferenced in the utility view to the City of Calgary's CAD Standard defined map projection specifications.

b) Block profiles are shown from intersection to intersection. And when intersections are not available then show from intersection to manhole or manhole to manhole.

c) Show two plan views (top plan view and a utility view) up to a right-of-way 30 m wide.

d) 30 m right-of-way or over, use one view.

e) The co-ordinate grid is required on roadways 30 m or greater or if co-ordinates are used to tie any information in the plan views.

f) Show all rights-of-way on the top plan view. Show only utility rights-of-way on the utility view.

g) Show Alberta Survey Control Monuments (ASCM) and High Precision Network Markers (HPN) on both the top and utility views (identification number on top view only). If an ASCM plug is used, show only in the top view.

2) Top Plan View

a) Show the legal layout, lot number, block number, plan number, cathodic test points, ASCM number, HPN marker, sidewalk, and catch basin installations with related data as shown on the sample drawings.

b) If using co-ordinates for layouts, calculate and plot distances at sea level but label with ground distances on the plan.

c) Co-ordinates are the only values shown as sea level.

d) Show all legal distances as per the registered plan.

e) Show the first two and the last two lot numbers of any consecutive lot sequence within a block. Show all non-consecutive lot numbers.

3) Utility View

a) Omit intermediate lot lines except where necessary to locate a utility feature (e.g., manhole, hydrant, etc.) in mid block. When used for location, add lot numbers on both sides of lot line.

b) Show all utilities such as sewer, water, manholes, valves, hydrants, catch basins, etc.

c) Reference each utility perpendicularly to a property line.

d) Indicate co-ordinates to tie down utility information when unable to dimension perpendicularly to property line (e.g., manholes, valves, bends, etc.). Minimum two dimensions perpendicularly to property lines are required to tie down utility structures & fittings such as manholes, valves, bends, hydrants, etc. If this cannot be achieved then use co-ordinates.

4) Profile

a) The profile and related data are shown on the bottom half of the drawing.

b) Show profile information in actual field length.

c) Show:

- Edge of pavement grades for major thorough roadways and freeways.
- Lip of gutter grades for streets.
- Centre line grades for lanes.

f) Show underground utility grades (elevation), manhole types, inverts and design data. See sample drawings.

d) Draw grades and utility locations to As-Built information.

e) A maximum elevation difference of 100 mm on the As-Built drawings will be allowed. The invert line should be redrawn if the differences are greater than 100 mm.

f) When inverts have been resurveyed, show the resurveyed elevation along with a line through the original elevation.

g) Elevations are placed at the right-hand side of the profile and repeated only when there is an elevation split in the profile.

h) Show elevations at every two-metre graduation and place on a heavy accented line. All elevations should be even numbers.

i) **All metric elevations on block profiles are to be Geodetic**. To convert old imperial elevations in City Datum, use the following equation:

(Imperial Elevation + 35.56')x0.3048.

j) On block profiles of 30 m roadways and larger, show utilities on adjacent roadways and or lanes on plan view only.

k) The profile on curved sections should be at true length at centre line length. This is to start at the BC or EC and revolve at that point. For profiles where there is no BC or EC, the starting point will be in the middle of the block profile.

l) Manhole rim elevations are required for all manholes.

m) If the grade is sufficiently steep, the profile shall use the normal vertical scale (1:50). If more than one split is needed, plot the profile at a double vertical scale (1:100).

1-2 Legal Survey Plans and Control Markers

See the City of Calgary CAD Standard for symbols, linetypes, and text styles used in Legal Survey Plans and Control Markers drafting.

Notes:

1) Accurately place Alberta Survey Control Monument (ASCM) and High Precision Network Marker (HPN) locations on the block profiles from co-ordinate information.
2) Show all registered plan numbers and utility right-of-way numbers. Show lot (first two and the last two lot numbers of any consecutive lot sequence within a block) and all block numbers on the top plan view of the block profile.
3) A block profile is required on utility rights-of-way where there is a concrete drainage gutter.
4) Show utility and utility access rights-of-way on both plan views. Show maintenance and access rights-of-way between owners only on the top plan view. Show overland drainage rights of way only on the top plan view.
5) Property line curve data should be shown (radius, length, and curve).

1-3 Sanitary and Storm Sewers

See the City of Calgary CAD Standard for symbol, linetypes, and text styles used in sanitary and storm sewers drafting.

For placement of design data for sanitary and storm lines, see sample drawings.

Notes:

1) Show catch basins on top plan view and utility view.
2) Catch basin leads are shown on utility view only. Indicate their sizes if the pipe is 300mm or larger. Show catch basin lead material if it's not PVC.
3) Identify type of catch basin and inlet control device (ICD) on plan view. Show size of ICD if there is one, otherwise no label.
4) Manhole rim elevations are required for all manholes.
5) Show all pipe materials on utility view.
6) The following abbreviations are to be used on block profiles:

   SD – storm (**S**torm **D**rain)

   SS – sanitary (**S**anitary **S**ewer)
7) Show the following items on the utility view:

GT	- grated top	PP	- plastic plug (placed after 1998)
SG	- safety grate	B	- bolted
S	- sealed	CF	- charcoal filter
PL	- padlocked	PA	- parson insert (placed prior to 1998)
F	- flagged	OGS	- oil & grit separator
NWL	- normal water level	HWL	- high water level
DB	- double barrel	EDB	- extra depth barrel
TMH	- test manhole		

8) Show services 150mm and larger.
9) Dimension all manholes and sewer mains to a property line (not to each other) if not co-ordinated.
10) Show storm and sanitary curve data radius, length and delta angle on the utility view, when the curve in the sewer line is not parallel to curve of the PL.
11) Draw all type 1-S manholes to scale and indicate which corner manhole access is located. There are defined symbols in the CAD Standard scaled for 1200, 1500, 1900, 2400, and 2800 mm square manholes.

12) Show shallow drainage systems for sidewalk.
13) Label Interior Drops or Exterior Drops when applicable in Profile View.
14) Storm pipe must have As-Built DESQ, VEL and CAP values in Profile View.
15) Storm and Sanitary pipes must have line assignment (dimensions) from pipe to property line on each segment (manhole to manhole).
16) Add flow arrows to all pipes.

Label features with the information shown on the table below. All Storm related features should be labelled on the V-STRM-TEXT layer, and all sanitary sewer features on the V-SSWR-TEXT layer:

Feature	Label	Example
Air Release	AR	AR
Catch Basin (Top Plan View)		TYPE C ICD 70
Catch Basin Lead	Size L	300 L
Catch Basin Twin Lead (Utility View)	Size Material L	300 PVC L
Catch Basin, Dry Wall	DW	DW
Catch Basin, Inlet Control Device Type R30	ICD R30	ICD R30
Catch Basin, Valve	V	V
Chamber, Valve	V	V
Cleanout	CO	CO
Control/Monitoring	CM	CM
Culvert	SD Size Material	SD 1200 CMP
Diversion	D	D
Encasement	Size Material ENC	300 YDI ENC
Flapper Gate	FP	FP
Flood Gate	FG	FG
Grated or Slotted Top	GT	GT
Inlet	IC	IC
Inlet/Outlet (Dry Pond)	I/O	I/O
Lake Control	LC	LC
Lift station	LS	LS
Manhole Vertical Line (Profile)	Manhole type	TYPE 5A
Manhole with In-line Check Valve	CVI	CVI
Manhole with Safety Frame	SG	SG
Manhole with Slip-on Check Valve	CVS	CVS
Metering Station	MS	MS
Monitoring	M	M

Feature	Label	Example
Oil Grid Separators	OGS	OGS
Outfall Structure with Screen	S	S
Outlet	OC	OC
Parson Insert (Placed prior to 1998)	PA	PA
Plastic Plug (Placed after 1998)	PP	PP
Pump Station	PS	PS
Sanitary Abandoned	SS Size Material AB	SS 300 CON AB
Sanitary Duct	SS W x H Material DUCT	SS 1800W X 2400H CON DUCT
Sanitary Force Main	SS Size Material FM	SS 300 ST FM
Sanitary Main	SS Size Material	SS 300 CON
Sanitary Main with Slip Liner	(Outer Pipe) SS Size Material (Inner Pipe) Size Material SL	SS 300 CON 250 PE SL
Sanitary Main with Slip Liner	SS Size Material - Material L	SS 300 CON - INSITU L
Sanitary Sludge Force Main	SS Size Material SL FM	SS 300 ST SL FM
Sanitary Syphon	SS Size Material SYP	SS 300 ST SYP
Sediment	SED	SED
Septic Tank	SEPTIC TANK	SEPTIC TANK
Septic Tank Dumping	SEPTIC TANK DUMP	SEPTIC TANK DUMP
Storm Abandoned	SD Size Material AB	SD 300 CON AB
Storm Duct	SD W X H Material DUCT	SD 1800W X 2400H CON DUCT
Storm Force Main	SD Size Material FM	SD 300 ST FM
Storm Lines - Top of Pipe (Profile)	TOP OF STORM	TOP OF STORM
Storm Main	SD Size Material	SD 300 CON
Storm Main with Slip Liner	(Outer Pipe) SD Size Material (Inner Pipe) Size Material SL	SD 300 CON 250 PE SL
Storm Polypropylene Profile Pipe	SD Size Material	SD 750 PP
Storm Pond text	Pond Description	NEW BRIGHTON POND A (56 WPA)
Storm Syphon	SD Size Material SYP	SD 300 CON SYP
Stormceptor	STC	STC
Sump Pit	SUMP	SUMP
Swale	Size SWALE Material	3.0 SWALE CON
Test Manhole	TMH	TMH
Weeping Tile	SD Size Material WTD	SD 250 CON WTD
Weir	W	W

1-4 Roads

See the City of Calgary CAD Standard for symbol, linetypes, and text styles used in roads drafting.

Notes:

1) Show lip of gutter on roads less than major road standard.
2) Show two decimal places for dimensioning lip of gutter, width of sidewalk and back of walk on top plan view.
3) Show width of roadway dimension (lip-to-lip) to two decimal places on top plan view.
4) Show lip of gutter curve data to two decimal places on top plan view.
5) Wheelchair ramps, bus shelters and pads are shown on top plan view. No dimensioning required.
6) Label Street Type with Abbreviations. (e.g., Country Hills Boulevard Northeast should read Country Hills BV NE).

Label features with the information shown on the table below. All text should be placed on the V-ROAD-TEXT layer:

Feature	Label	Example
Back of Walk Text	BW Dimension	BW 1.40
Centerline of Lane Text	℄ OF LANE	℄ OF LANE
Curb and Gutter (Major Roads) Text	Size Type C&G	0.50 STD C&B
Curb Wall Text	CW	CW
Curve Information	R=Dimension	R=150.00
Edge of Pavement (N&E) Text	EP N / EP E	EP N / EP E
Edge of Pavement (S&W) Text	EP S / EP W	EP S / EP W
Edge of Pavement Text	EP	EP
Fence Text	Size Type FENCE	1.80 CHAIN LINK FENCE
Guard Rail / Concrete Barrier Text	GUARD RAIL / CONC BARRIER	GUARD RAIL / CONC BARRIER
Lip of Gutter (N&E) Text	LG N / LG E	LG N / LG E
Lip of Gutter (S&W) Text	LG S / LG W	LG S / LG W
Lip of Gutter Median Text	LG M	LG M
Lip of Gutter Text	LG Dimension	LG 1.35
Rolled Curb Text	Dimension R	1.04 R
Sidewalk / WCR / Pathway / Driveway Text	Width Type	1.40 SEP
Vertical Curve Dimension Text	Distance VC K=K value	24.00 VC K=39.86

1-5 Water Infrastructure

See the City of Calgary CAD Standard for symbol, linetypes, and text styles used in water infrastructure drafting.

For placement of data and notes for water, see sample drawings.

Notes:

1) All water infrastructure features have to be dimensioned to property line.
2) Show all services 100mm and larger and show all park services.
3) Show all pipe materials on utility view and profile.
4) Water pipes must have line assignment (dimensions) from pipe to property line on each segment.
5) The following abbreviation is to be used on block profiles:

   PW – water (**P**otable **W**ater)

Label features with the information shown on the table below. All text should be placed on the V-WATR-TEXT layer:

Feature	**Label**	**Example**
Access Manhole	AM	AM
Access Opening	AO	AO
Air valve	AV	AV
Chamber, Meter	MC	MC
Chamber, PRV	PRV	PRV
Chamber, Valve	VC	VC
Check Valve	CV	CV
Encasement	Length OF Size Material IN Length Size Material ENC.	34m OF 300 ST IN 30 m 450 PVC ENC.
Historical Reference Marks		WATERWORKS W/O No. 443104-4-8747 DESIGN FILE 888224 MICRO 463-3151-001
Main Valve	MV	MV
Meter Pit	MP	MP
Outlet, Flanged with Blind Flange	FO	FO
Outlet, Flanged with Valve	FOV	FOV
Park Box	PK B	PK B
Pitometer Station	PIT	PIT
Washout Drain	WO	WO
Water Main / Service	PW Size Material	PW 250 PVC
Watermain Abandoned	PW Size Material AB	PW 250 PVC AB

Watermain with PE Insert	PW Size Material IN PW Size Material	PW 250 PVC IN PW 400 PVC

1-6 Miscellaneous Elements

See the City of Calgary CAD Standard for miscellaneous symbol, linetypes, and text styles used in making block profiles.

Information Included:

1) Rivers, Creeks, Channels and Storm Ponds
2) Bridges
3) Miscellaneous Elements
4) Original Ground Grades
5) Title Block and Grid Lines

Section 2: Design Block Profile Standards

The standard for design block profile drawings is similar to As-Built block profile with a few differences as described below:

2-1 Title Block

One of the standard title blocks available from the General Template should be used for the title block. Instead of filling in the information required for the As-Built title block, the fields for the design drawing should be used. This includes the following fields:

a) Project Name
b) Sheet Title
c) File Number
d) Engineer Drawing Number
e) Sheet ID – A unique standard sheet identifier, as defined in The City of Calgary CAD Standard
f) Sheet Count
g) Designed By / Designed Date
h) Drawn By / Drawn Date
i) Checked by / Checked Date
j) Drawing Status
k) Revision Number / Description / Date / By / Approved

2-2 Content

Everything that is described in the As-Built section of this document needs to be included as well as the following additional information:

- shallow utilities (if applicable)

- railroad tracks (if applicable)

- any construction notes (e.g. caution boxes, references to future work)

- show both existing features, and proposed design features using the defined standard symbology that differentiates them and highlights the proposed features.

- future assets and/or notes

Appendix A - Nominal Pipe Sizes: Water

Nominal Pipe Sizes Conversion Table	
Imperial Inch (Nominal)*	Metric 5.1mm (Nominal)
1/8 1/4 3/8	3 6 10
1/2 3/4 1	15 20 25
1 1/4 1 1/2 1 3/4	32 40 45
2 2 1/4 2 1/2	50 60 65
2 3/4 3 3 1/2	70 80 90
4 4 1/2 5	100 110 125
5 1/2 6 7	140 150 175
8 9 10	200 225 250
12 14 15	300 350 375
16 17 18	400 – 450
20 22 24	500 550 600

Pipe Sizes: Sewers (ASTM Specifications)

Concrete Pipe Conversion Table			
Inside Diametre		Length	
Inch	mm	Foot Inch	m
8	200	5′0″	1.55
10	250	5′0″	1.55
12	300	6′0″	1.85
15	375	7′6″	2.30
18	450	8′0″	2.45
21	525	8′0″	2.45
24	600	8′0″	2.45
27	675	8′0″	2.45
30	750	8′0″	2.45
36	900	8′0″	2.45
42	1050	8′0″	2.45
48	1200	8′0″	2.45
54	1350	8′0″	2.45
60	1500	8′0″	2.45
66	1650	8′0″	2.45
72	1800	8′0″	2.45
78	1950	8′0″	2.45
84	2100	8′0″	2.45
96	2400	8′0″	2.45
120	3000	8′0″	2.45

Notes:

1. Nominal dimension refers to inside diametre.
2. For additional metric dimensions, weights and ultimate strength information, contact pipe suppliers.

Appendix B - Abbreviations

Use the standard City of Calgary abbreviations on block profile drawings. The abbreviations are listed here, alphabetically by definition, as well as by abbreviation.

For street type abbreviations, do not place a period in the quadrant or street type (e.g., Country Hills Boulevard Northeast should read Country Hills BV NE).

Appendix C - Utility Records As-Built Drawings Submission Checklist

Following is the submission checklist used by utility records for As-Built drawings.

This checklist is subject to change over the time.

The City of Calgary reserves the right to override the block profile standard for block profile drawings under special circumstances.

ATTRIBUTE	COMPLETE & CORRECT	MISSING OR INCORRECT
TITLE BLOCK AND GENERAL INFORMATION		
Lower right corner should read "CORPORATE ANALYTICS & INNOVATION" under The City of Calgary text.		
FOR INFORMATION ONLY box: • Should be included in the lower left corner; • Must include disclaimer information (See Block Profile (BP) template for specifics).		
Section, Township, Range including meridian information should be in bottom right corner, in format as noted on the BP template.		
Drawing Title should be as follows: • Street Name (model space text height 2.0) • From ___ To ___ (model space text height 1.6) (see below example) • All title block addresses and all plan view addresses must be in capitals and must follow City abbreviations for street type Example: AUBURN BAY BV SE FROM AUBURN BAY CR SE TO AUBURN BAY VW SE		
Coordinate grid (NAD 83 – 3TM, Grid coordinates) must be used if: • the plan is equal to or greater than 30m, use one view for both plan and utility views; • the area is on a curve and no points of reference are in view (e.g.: no street intersections); or, • using northing and easting values to tie down a point such as sanitary or storm manholes or bend in water pipes. If coordinate grid is required, it must be shown on both legal plan and utility plan views.		
Ensure North arrow is shown on all drawings and is orientated to the correct direction		
Ensure all Block Profiles included in the drawing set		

Block Profile Standards for Subdivision Developments

ATTRIBUTE	COMPLETE & CORRECT	MISSING OR INCORRECT
LEGAL PLAN VIEW		
Plan / Block / Lot Numbers • Must be the current information registered at Alberta Land Titles • For lot numbers, show the first two and last two lot numbers for consecutive or all non consecutive numbers		
Lot Dimensions (optional) If lot dimensions are included they must be on all drawings and must be on all lines except where the dimension is repeated. In that instance, only one needs to be shown.		
Street Names, Street Types and Quadrants • Street Names o Full street name to be shown • Street Types o Use City abbreviations in capitals for all streets o Examples - BV, AV, HE, CM – full list available on page 121 of Standard BP Specifications Book. • Quadrants o Do not use periods in quadrants (should be NW, NE, SW, SE)		
Street width (distance between Property Lines (PL))		
Street Details – show following street details and values as appropriate: • LG – lip of gutter • BW – back of walkway • WALK – mono walkway (x.xxR is also acceptable) • SEP – separate walkway (SEP WALK is also acceptable) • STD C&G – standard curb & gutter • Roadway width (distance between LGs) – Text height=1.25 (Pavement is acceptable) • Width of the Median		
Road Curve Data – for all curved roads: • Show radius for all curb and gutter; and, • for large curved roads show Road Curve Data on the PL.		
Show Beginning of Curve (BC) and End of Curve (EC) tick marks on PL and LG		
UR/W (Utility Right of Way), MAR/W (Maintenance Access Right of Way), AR/W (Access Right of Way) • Display overlapping R/Ws (don't trim). • Show dimensions as text, rather than dimension lines, whenever possible.		
ODR/W (Overland Drainage Right of Way) • Display overlapping ODR/Ws (don't trim). • Show dimensions as a text, not dimension lines whenever possible. • Label swale types (grass, concrete, high-back, deep, etc) • Swale flow arrows in correct direction		
Catch basins • Show symbol and text (type of catch basin and indicator of No ICD or ICD and value) • Examples: TYPE 'C' or 'C' CB Storm DB NO ICD ICD R30 or R30		
Show mailboxes, bus pads, bus shelters • Do not dimension them.		
Remove miscellaneous text • Dimensions to mailboxes, any 'existing' text, any hatching, any reference to future construction, any road signs. • All text must reflect the as-built state and cannot include any future information.		

ATTRIBUTE	COMPLETE & CORRECT	MISSING OR INCORRECT
UTILITY PLAN VIEW		
Show UR/W line work without text		
Remove ODR/W, AR/W, MAR/W, fences and swales from Utility Plan views.		
Display all City utilities (water, sanitary, storm) using as set out in the BP Spec: • Proper utility, size and material (ie S 200PVC) for labels. • Flow arrows in the right direction shown for ST and S to MH and directing off the page. • Appropriate line type, line type scales, and line weights. • Accurate dimensions from the pipe to the PL. Dimensions should be parallel to or perpendicular to PL. Must provide two dimensions.		
Curve Data on pipes • When utilities are not an offset from the PL, display curve data (radius, length, curve)		
BC and EC tick marks on PL for Sanitary and Storm only. • Only show on pipes if that is the start of the revolved section.		
Tie Downs • Dimension any pipe, manhole and water bend to property and lot lines (show N, E coordinates if no PL available – coordinate grid must then be shown, at 0.00 precision). • Tie down fire hydrants and valves when they are not an extension of PL (but omit the typical 1.0m offset on valves from the water line. Include dimension if not typical 1.0).		
Show the following Manhole (MH) labels where appropriate: GT – Grated top; CF – Charcoal filter; S - Sealed PP – Plastic plug; F – Flagged; OGS – Oil Grit Separator SG – Safety grate; PA – Parson insert; TMH – Test manhole B - Bolted; PL – Pad locked		
Curved Sections on profile view • CURVED SECTION: when road profile is curved. Curve at BC or EC; if these do not exist, start in the middle of the block profile. Utility view and profile view will not align because curved sections in profile view are shown at true length (profiles are taken at road centreline, but show all pipes and follow utility alignment, not road alignment). • REVOLVED SECTION: when a pipe does not follow the common pipe alignment, but there is a profile for it.		
Catch basins • Keep symbols but remove text that is shown in legal plan view. • Indicate size if pipe is 300 or larger (e.g. 300L) and show material if not concrete (e.g.: 300 PVC L) • Add DB (Double barrel) text to catch basins where appropriate.		
Remove miscellaneous text - Existing or EX, any hatching, shallow utilities, any future or FUT text or lines		
Show encasements - All ENC should be shown as solid line • Storm & Sanitary – show the size, material and ENC (encasement) (e.g.: 300 YDI ENC). • Water – show length of size, material in length of size, material ENC ○ Example: 34 m OF 300 ST IN 34 m OF 450 PVC ENC		

ATTRIBUTE	COMPLETE & CORRECT	MISSING OR INCORRECT
PROFILE VIEW		
Show all manholes with complete rim elevation value. Examples: S MHR 1000.00 ST MHR 1000.00		
If there is a median, include lip of gutter text (LGN, LGS, and LGM).		
If there is a swale, note as CL SWALE.		
ORIGINAL GROUND line and text • If original ground will not fit into profile view even when converted to double vertical scale, place text indicating range of original ground (e.g. ORIGINAL GROUND at 1032 TO 1035)		
Ellipses on pipes running north/south or east/west (depends on plan view) • These should be labelled as a size of pipe (e.g.: S 300 PVC) below ellipses.		
Below manholes, show full manhole invert elevation value for pipes (e.g.: ST INV N 1047.~~831~~ 843)		
No hydrants in profile view		
Don't show any +/- signs, future text, existing text, hatching, reducer text (show red symbol), storm oversize construction text		
Show Insulation by using a dimension - above the pipe, or below the pipe • Label "INSULATION"		
Show Top of Storm line and text for Storm pipes greater than or equal to 375mm • Label "TOP OF STORM" • Not required for sanitary or water pipes		
Show Flow Data for storm pipes • Label design flow, velocity and capacity.		
Show encasements - All ENC should be shown as solid line • Storm & Sanitary – show the size, material and ENC (encasement) (e.g.: 300 YDI ENC). • Water – show length of size, material in length of size, material ENC ○ Example: 34 m OF 300 ST IN 34 m OF 450 PVC ENC		