

2019-2026

UTILITIES CAPITAL PROGRAM AND DCL PROJECT LIST

Engineering Services



July 2018

Overview

The Utilities Capital Program identifies and assesses the utilities projects required to service the needs of forecasted development activity in the City, as covered in Council-approved land use policies.

The Utilities Capital Program is the basis for which the Utilities Development Cost Levy (DCL) is calculated. The Utilities DCL collects the growth-related portion of development project costs in order to fund upgrades to neighbourhood serving infrastructure.

Utilities Capital Program and Costs

Costs were prepared in 2018 dollars and do not include inflation.

Tables 1 and 2 below provide a high-level summary of the anticipated programs/projects included in the DCL capital program (for a detailed list, refer to the detailed lists provided later in this document). As shown, the gross capital program cost is \$1.02 billion. Removing costs that are not eligible for DCLs (e.g. costs associated with benefit to existing developments and fee payers), the net recoverable DCL cost is \$543 million. This is to be recovered from new development until 2026 by the Utilities DCL.

Table 1: Summary of 2019-2026 Utilities Capital Program (Gross Costs)

Item	Gross Costs
Benefit to Existing Development (City funded)	\$472.8 M
Municipal Assist Factor (City funded)	\$5.5 M
DCL Recoverable (Developer funded Growth Costs)	\$543.3 M
Total Cost	\$1,021.6 M

Table 2: Summary of 2019-2026 DCL Recoverable Costs

Service	Total DCL Recoverable Costs
Sewers (Sanitary & Drainage) <ul style="list-style-type: none"> • Pump Stations • Trunk & neighbourhood sanitary sewer/ drainage pipes 	\$430.1 M
Green Infrastructure <ul style="list-style-type: none"> • Swales • Neighbourhood green infrastructure • Laneway retrofits 	\$90.5 M
Water <ul style="list-style-type: none"> • Distribution mains • Transmission mains • System modifications 	\$22.8 M
Total	\$543.3 M

Timing of Projects

The Utilities DCL projects in this document are based on the anticipated pace and expected locations of future growth. Should development and growth occur differently, then the timing of individual projects may have to change as well; therefore, the projects, and in particular their timelines and extents of work shown, should be regarded as conceptual and are subject to and expected to change.

Annual Updates

The information found in the Utilities Capital Program is based on the best technical program/project and costing information available at the time of completing the study. This includes the City's growth forecast which is based on approved policy, as well as known and anticipated development, and their location and timing. The Utilities DCL Program reflect the needs arising from the forecast location, amount and timing of development. As community planning proceeds and development occurs, it is anticipated that the capital program needs will be adjusted to reflect the actual location, amount and timing of development. On an annual basis, the City will review and adjust the DCL capital program to ensure it reflects the intensity and location of growth. This update will include changes to the timing and nature of projects, and may include the substitution of projects, in and out of the program, to meet the servicing needs arising from development.

Table 3: Sewer Related DCL Project List (2019-2026)

Project ID	Project Description	Project Priority	Growth Allocation	Growth Cost	Non-Growth Cost	Other Funding	Total Cost
City Wide Projects							
	Northeast Norquay Village Sewer Separation	Medium Term (5-8 years)	37%	\$4,758,000	\$8,242,000	\$0	\$13,000,000
	South Granville (Marpole) Sewer Separation	Short Term (1-4 years)	47%	\$7,755,000	\$8,745,000	\$0	\$16,500,000
	Sanitary Sewer upgrade on Western Street and E 1 st Avenue	Short Term (1-4 years)	90%	\$5,072,880	\$552,120	\$0	\$5,625,000
	Sanitary Upgrade on William Street from Glen Drive to Vernon Drive	Short Term (1-4 years)	81%	\$1,121,100	\$266,400	\$0	\$1,387,500
	Strathcona Park Sanitary Upgrade	Short Term (1-4 years)	89%	\$2,658,000	\$342,000	\$0	\$3,000,000
	Fremlin Trunk Sewer and Outfall	Short Term (1-4 years)	48%	\$4,680,300	\$5,144,700	\$0	\$9,825,000
	6 th -Victoria-Broadway Trunk Sewer Separation	Medium Term (5-8 years)	0%	\$0	\$12,500,000	\$0	\$12,500,000
	E 10 th and E 11 th Sewer Separation	Medium Term (5-8 years)	83%	\$3,658,650	\$766,350	\$0	\$4,425,000
	E 6 th Ave and Mclean Sanitary Upgrade	Medium Term (5-8 years)	89%	\$2,836,875	\$350,625	\$0	\$3,187,500
	General City Wide Storm and Sanitary Upgrades*	Short Term (1-4 years)	52%	\$8,884,149	\$8,264,065	\$0	\$17,148,214
	General City Wide Storm and Sanitary Upgrades*	Medium Term (5-8 years)	67%	\$46,575,046	\$22,826,740	\$0	\$69,401,786
	Arbutus Greenway Storm Trunk	Short Term (1-4 years)	100%	\$16,000,000	\$0	\$0	\$16,000,000
	Arbutus Greenway Storm Trunk	Medium Term (5-8 years)	100%	\$26,000,000	\$0	\$0	\$26,000,000
	Little Mountain Trunk Upgrade	Short Term (1-4 years)	37%	\$8,436,000	\$14,364,000	\$0	\$22,800,000
	Kerr Street Drainage Works	Medium Term (5-8 years)	100%	\$3,750,000	\$0	\$0	\$3,750,000
	Kinross Street Drainage Works	Short Term (1-4 years)	100%	\$1,650,000	\$0	\$0	\$1,650,000
	East Fraser Lands Drainage Pump Station	Medium Term (5-8 years)	100%	\$10,500,000	\$0	\$0	\$10,500,000

Table 3: Sewer Related DCL Project List (2019-2026)

Project ID	Project Description	Project Priority	Growth Allocation	Growth Cost	Non-Growth Cost	Other Funding	Total Cost
	Grandview Boundary	Short Term (1-4 years)	100%	\$1,700,000	\$0	\$0	\$1,700,000
	Grandview Boundary	Medium Term (5-8 Years)	100%	\$1,700,000	\$0	\$0	\$1,700,000
	Sanitary Pump Station Upgrades	Short Term (1-4 years)	37%	\$5,000,000	\$8,500,000	\$0	\$13,500,000
	Sanitary Pump Station Upgrades	Medium Term (5-8 years)	37%	\$5,000,000	\$8,500,000	\$0	\$13,500,000
	Hydraulic Model	Short Term (1-4 years)	100%	\$500,000	\$0	\$0	\$500,000
	Sewer Growth Planning	Short Term (1-4 years)	100%	\$650,000	\$0	\$0	\$650,000
	Sewer Growth Planning	Medium Term (5-8 years)	100%	\$650,000	\$0	\$0	\$650,000
	Sewer Renewal	Short Term (1-4 years)	10%	\$13,647,250	\$122,825,250	\$0	\$136,472,500
	Sewer Renewal	Medium Term (5-8 years)	10%	\$23,857,300	\$214,715,700	\$0	\$238,573,000
	Integrated Utility Planning	Short Term (1-4 years)	25%	\$2,000,000	\$6,000,000	\$0	\$8,000,000
	Integrated Utility Planning	Medium Term (5 - 8 years)	25%	\$2,000,000	\$6,000,000	\$0	\$8,000,000
City Wide Project Totals				\$211,040,550	\$448,904,950	\$0	\$659,945,500
Cambie Corridor Projects							
	Cambie Corridor Stage 1 - North	Short Term (1-4 years)	71%	\$24,353,714	\$9,947,292	\$0	\$34,301,006
	Cambie Corridor Stage 1 - Ash & Cambie	Short Term (1-4 years)	78%	\$8,913,730	\$2,514,129	\$0	\$11,427,859
	Cambie Corridor Stage 1 - Columbia Park Area	Short Term (1-4 years)	68%	\$9,301,265	\$4,377,065	\$0	\$13,678,330
	Cambie Corridor Stage 1 - Columbia Park Area	Medium Term (5-8 years)	68%	\$3,438,974	\$1,618,340	\$0	\$5,057,314
	Cambie Corridor - Stage 2	Short Term (1-4 years)	78%	\$614,926	\$173,441	\$0	\$788,367

Table 3: Sewer Related DCL Project List (2019-2026)

Project ID	Project Description	Project Priority	Growth Allocation	Growth Cost	Non-Growth Cost	Other Funding	Total Cost
	Cambie Corridor - Stage 2	Medium Term (5-8 years)	76%	\$26,614,099	\$8,351,044	\$0	\$34,965,143
	Groundwater Monitoring	Short Term (1-4 years)	100%	\$98,625	\$0	\$0	\$98,625
	Groundwater Monitoring	Medium Term (5-8 years)	100%	\$20,000	\$0	\$0	\$20,000
	South Cambie Regional Sanitary and Drainage Capacity Upgrades	Medium Term (5-8 years)	100%	\$150,000,000	\$0	\$0	\$150,000,000
Cambie Corridor Totals				\$223,355,333	\$26,981,311	\$0	\$250,336,644
City Wide and Cambie Corridor Total				\$434,395,883	\$475,886,261	\$0	\$910,282,144
Short Term Projects (1-4 years)				\$123,036,939	\$192,015,462	\$0	\$315,052,401
Medium Term Projects (5-8 years)				\$311,358,944	\$283,870,799	\$0	\$595,229,743

Notes:

All Costs are in 2018 Dollars

Other Funding* includes funds provided from other sources including rezoning conditions and Federal and Provincial grants.

* Non-growth costs are preliminary and are subject to change based on identified projects

Table 4: Green Infrastructure Related DCL Project List (2019-2026)

Project ID	Project Description	Project Priority	Growth Allocation	Growth Cost	Non-Growth Cost	Other Funding	Total Cost
City Wide Projects							
	Cartier St S of 67th Av. -	Short Term (1-4 years)	100%	\$92,000	\$0	\$0	\$92,000
	Cassier South Sewer Separation Project - GI	Short Term (1-4 years)	100%	\$2,712,000	\$0	\$0	\$2,712,000
	Permeable Pavement Demonstration Sites	Short Term (1-4 years)	100%	\$1,200,000	\$0	\$0	\$1,200,000
	10th Ave (Willow to Cambie)	Short Term (1-4 years)	100%	\$339,000	\$0	\$0	\$339,000
	Active Transportation Corridors & Spot Improvements (general)	Short Term (1-4 years)	100%	\$1,932,000	\$0	\$0	\$1,932,000
	Drake Street Bikeway	Short Term (1-4 years)	100%	\$452,000	\$0	\$0	\$452,000
	Gastown Complete Street Improvements - Transportation Component	Short Term (1-4 years)	100%	\$528,000	\$0	\$0	\$528,000
	Georgia Gateway West	Short Term (1-4 years)	100%	\$1,130,000	\$0	\$0	\$1,130,000
	Granville Bridge - Active Transportation Improvements	Short Term (1-4 years)	100%	\$184,000	\$0	\$0	\$184,000
	Kitsilano Beach Seawall	Short Term (1-4 years)	100%	\$230,000	\$0	\$0	\$230,000
	Richards Street (Cordova to seawall)	Short Term (1-4 years)	100%	\$904,000	\$0	\$0	\$904,000
	School Safety & Active Route Improvements	Short Term (1-4 years)	100%	\$184,000	\$0	\$0	\$184,000
	Transit Related Improvements	Short Term (1-4 years)	100%	\$184,000	\$0	\$0	\$184,000
	Citywide District Scale GI pilot projects	Short Term (1-4 years)	100%	\$380,000	\$0	\$0	\$380,000
	St George Rainway & Mt Pleasant GI Improvements	Short Term (1-4 years)	100%	\$1,808,000	\$0	\$0	\$1,808,000
	Public Realm Implementation Planning and Investigation for Design	Short Term (1-4 years)	56%	\$2,616,000	\$1,840,000	\$200,000	\$4,656,000
	Citywide Green Infrastructure Planning	Short Term (1-4 years)	70%	\$8,527,000	\$3,264,000	\$335,000	\$12,126,000
	Water quality & GI Monitoring Program	Short Term (1-4 years)	25%	\$304,000	\$911,000	\$0	\$1,215,000
	Private Realm Implementation Planning	Short Term (1-4 years)	54%	\$2,973,000	\$0	\$2,523,000	\$5,496,000

Table 4: Green Infrastructure Related DCL Project List (2019-2026)

Project ID	Project Description	Project Priority	Growth Allocation	Growth Cost	Non-Growth Cost	Other Funding	Total Cost
	Park Realm Implementation Programs and Projects	Short Term (1-4 years)	50%	\$300,000	\$300,000	\$0	\$600,000
	Targeted Park GI Retrofits (Vanier Park)	Short Term (1-4 years)	100%	\$736,000	\$0	\$0	\$736,000
	Mt Pleasant - St. George Rainway	Medium Term (5-8 years)	100%	\$1,400,000	\$0	\$0	\$1,400,000
	Grandview Woodlands	Medium Term (5-8 years)	100%	\$1,400,000	\$0	\$0	\$1,400,000
	Norquay Village	Medium Term (5-8 years)	100%	\$1,400,000	\$0	\$0	\$1,400,000
	Marpole	Medium Term (5-8 years)	100%	\$1,400,000	\$0	\$0	\$1,400,000
	Strathcona	Medium Term (5-8 years)	100%	\$17,700,000	\$0	\$0	\$17,700,000
	Green Infrastructure Projects CityWide	Medium Term (5-8 years)	100%	\$2,570,000	\$0	\$0	\$2,570,000
City Wide Project Totals				\$53,585,000	\$6,315,000	\$3,058,000	\$62,958,000
Cambie Corridor Projects							
	GI Design - Area A	Short Term (1-4 years)	100%	\$387,750	\$0	\$0	\$387,750
	Laneway retrofit	Short Term (1-4 years)	100%	\$1,275,000	\$0	\$0	\$1,275,000
	Cambie Bike Lane - King Ed to 35 Ave	Short Term (1-4 years)	100%	\$2,250,000	\$0	\$0	\$2,250,000
	GI Design - Area B	Short Term (1-4 years)	100%	\$1,384,835	\$0	\$0	\$1,384,835
	Columbia Park Area Neighbourhood Rainwater Management*	Short Term (1-4 years)	100%	\$12,140,438	\$0	\$0	\$12,140,438
	Alberta greenway	Short Term (1-4 years)	100%	\$6,448,969	\$0	\$0	\$6,448,969
	GI Design - Area C	Short Term (1-4 years)	100%	\$1,147,740	\$0	\$0	\$1,147,740
	Heather Street	Medium Term (5-8 years)	100%	\$5,706,000	\$0	\$0	\$5,706,000
	Laneway retrofit	Short Term (1-4 years)	100%	\$1,875,000	\$0	\$0	\$1,875,000
	Tisdall Street bioswale	Medium Term (5-8 years)	100%	\$2,853,000	\$0	\$0	\$2,853,000

Table 4: Green Infrastructure Related DCL Project List (2019-2026)

Project ID	Project Description	Project Priority	Growth Allocation	Growth Cost	Non-Growth Cost	Other Funding	Total Cost
	GI Design - Area D and Other	Medium Term (5-8 years)	100%	\$230,340	\$0	\$0	\$230,340
	Laneway retrofit	Medium Term (5-8 years)	100%	\$1,500,000	\$0	\$0	\$1,500,000
	Cambie Park bioswale	Medium Term (5-8 years)	100%	\$594,000	\$0	\$0	\$594,000
Cambie Corridor Totals				\$37,793,072	\$0	\$0	\$37,793,072
City Wide and Cambie Corridor Total				\$91,378,072	\$6,315,000	\$3,058,000	\$100,751,072
Short Term Projects (1-4 years)				\$54,624,732	\$6,315,000	\$3,058,000	\$63,997,732
Medium Term Projects (5-8 years)				\$36,753,340	\$0	\$0	\$36,753,340

Notes:

All Costs are in 2018 Dollars

Other Funding' includes funds provided from other sources including rezoning conditions and Federal and Provincial grants.

* Rainwater will be managed in public open spaces where feasible. Utilization of Columbia Park or other parks for rainwater management are subject to an integrated park master planning process and approved implementation - all subject to Park Board Approval.

Table 5: Water Related DCL Project List (2019-2026)

Project ID	Project Description	Project Priority	Growth Allocation	Growth Cost	Non-Growth Cost	Other Funding	Total Cost
City Wide Projects							
	Little Mountain Upgrades E 35th, Quebec to Main E 37th, Ontario to Main Ontario St, E 35th to E 37th	Short Term (Years 1-4)	100%	\$1,116,000	\$0	\$0	\$1,116,000
	Mount Pleasant Upgrades Guelph	Short Term (Years 1-4)	100%	\$84,000	\$0	\$0	\$84,000
	Grandview Woodlands (Anticipated 1/3 build-out in 8 years) E 7th Ave, Clark to Woodland E 8th Ave, Clark to Commercial E 10th Ave, Commercial to Victoria E 11th Ave, Commercial to Victoria Pressure Boundary Shift at Lakewood and E 1st	Short Term (Years 1-4)	100%	\$1,224,000	\$0	\$0	\$1,224,000
	Outside Planned Areas Arbutus, King Edward to South - Upgrade	Short Term (Years 1-4)	100%	\$189,000	\$0	\$0	\$189,000
	Marpole Oak St, W 64th to W 67th	Short Term (Years 1-4)	100%	\$568,000	\$0	\$0	\$568,000
	Water Model Water Model Demand Updates Water Model Rebuild	Short Term (Years 1-4)	75%	\$234,000	\$78,000	\$0	\$312,000
	Marpole Alberta St, W 58th to W 59th Cambie St (West Side), W 62nd to W 63rd Cambie St (East Side), W 63rd to W 64th Cambie St (West Side), W 64th Ave to 65th W 58th Ave, Cambie to Alberta W 65th Ave, Lord to Cambie	Medium Term (Years 5-8)	100%	\$1,585,000	\$0	\$0	\$1,585,000

Table 5: Water Related DCL Project List (2019-2026)

Project ID	Project Description	Project Priority	Growth Allocation	Growth Cost	Non-Growth Cost	Other Funding	Total Cost
	False Creek Flats Upgrades (Anticipated 1/3 buildout in 8 years) National Ave, Thorton to Chess Thorton St Extension, South to National Thorton St, Evans to National Chess St, Evans to National Evans Ave- Breggs to Glen 1200 Station Ave	Medium Term (Years 5-8)	100%	\$675,000	\$0	\$0	\$675,000
	Jericho Lands Pressure Boundary Shift at Discovery and W 8th L/N W 9th Ave, Discovery to Courtaney	Medium Term (Years 5-8)	100%	\$261,000	\$0	\$0	\$261,000
	Outside Planned Areas Grant St, Slocan to Kaslo Grant St @ Renfrew Kaslo St, E 20th to E 22nd	Medium Term (Years 5-8)	100%	\$757,000	\$0	\$0	\$757,000
City Wide Project Totals				\$6,693,000	\$78,000	\$0	\$6,771,000

Table 5: Water Related DCL Project List (2019-2026)

Project ID	Project Description	Project Priority	Growth Allocation	Growth Cost	Non-Growth Cost	Other Funding	Total Cost
Cambie Corridor Projects							
	Alberta St, W 43rd to W 42nd						
	Alberta St, W 44th to W 43rd						
	Ash St, McGuigan to W 37th						
	Ash St, W 27th to W 29th						
	Cambie St (East Side), W 35th to W 36th						
	Cambie St (East Side), W 36th to W 37th						
	Cambie St (East Side), W 39th to W 40th						
	Cambie St (East Side), W 41st to W 42nd						
	Cambie St (East Side), W 42nd to W 44th						
	Cambie St (East Side), W 58th to W 62nd						
	Elizabeth St, W 39th to W 41st						
	Heather St, McGuigan to W 37th	Short Term (Years 1-4)	100%	\$9,086,000	\$0	\$0	\$9,086,000
	Kersland Dr, W 35th to W 37th						
	L/E Cambie St, W 33rd to W 35th						
	L/W Cambie St, W 24th to W King Edward						
	McGuigan Ave, Heather to Ash						
	W 33rd Ave, Cambie to Kersland Reservoir (Transmission)						
	W 33rd Ave, Cambie to L/E Cambie St						
	W 35th Ave, Cambie to Kersland						
	W 37th Ave, Oak to Heather						
	W 38th Ave, Cambie to Alberta						
	W 39th Ave, Manson to Ash St						
	W 40th Ave, Cambie to Alberta						

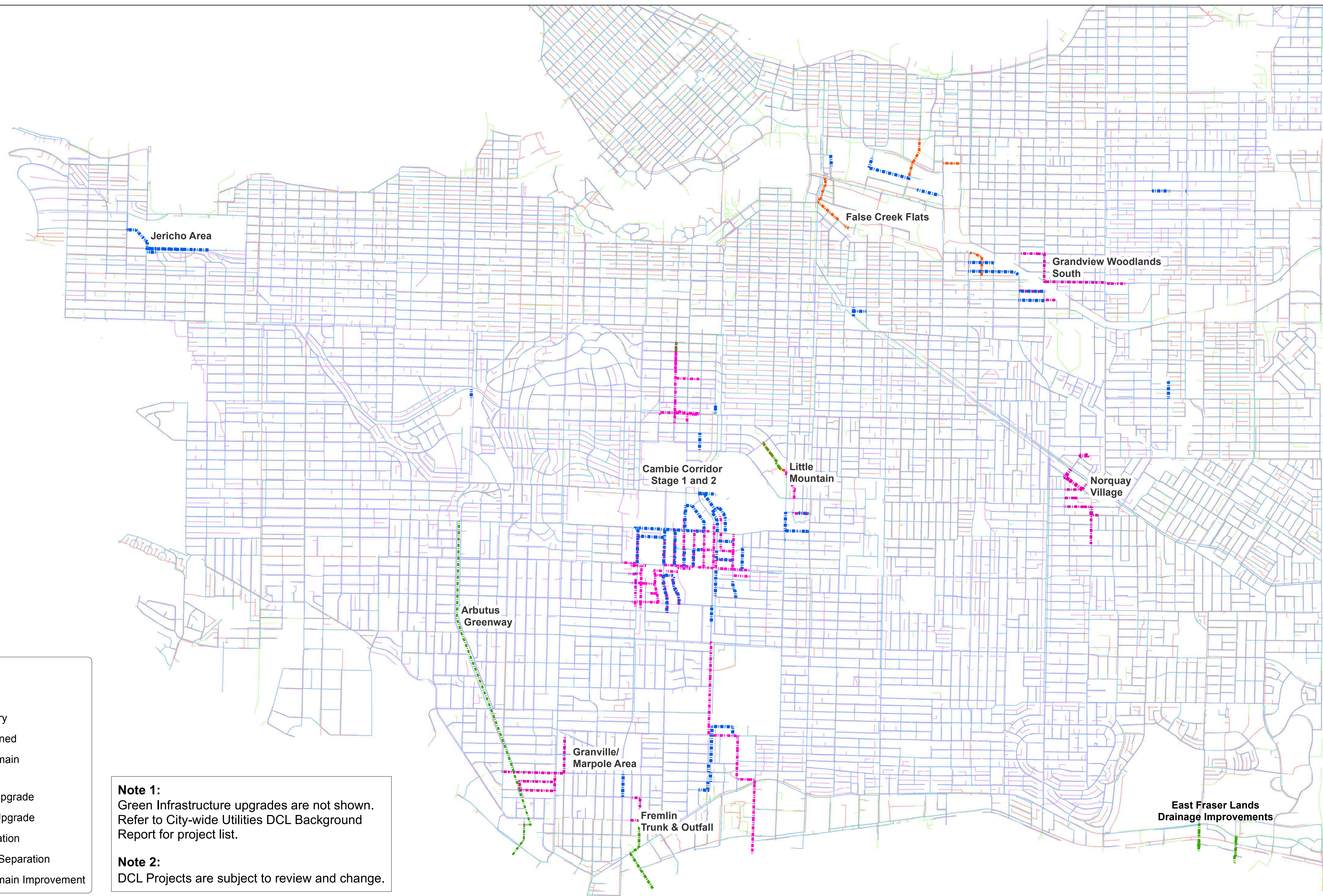
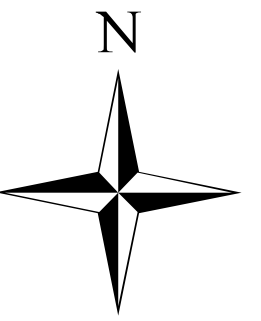
Table 5: Water Related DCL Project List (2019-2026)

Project ID	Project Description	Project Priority	Growth Allocation	Growth Cost	Non-Growth Cost	Other Funding	Total Cost
	Baillie St, W 37th Ave to W 41st Ave Cambie St, W 45th to W 46th Heather St, W 39th to W 41st (Distribution) Manson, W 39th Ave to W 41st Ave Oak St, W 38th, to W 41st Tisdall St, W 42nd to W 45th W 37th Ave, Heather to Ash W 38th Ave, Oak to Willow W 42nd Ave, Across Oak St W 42nd Ave, Willow to Tisdall W 43rd Ave, Across Oak St Willow St, L/N W 44th to W 46th Willow St, W 37th to W 41st Willow St, W 42nd to L/N W 44th	Medium Term (Years 5-8)	100%	\$8,260,000	\$0	\$0	\$8,260,000
Cambie Corridor Totals				\$17,346,000	\$0	\$0	\$17,346,000
LESS: Already Allocated DCL Funds		Short Term (Years 1-4)		(\$1,050,000)			(\$1,050,000)
City Wide and Cambie Corridor Total				\$22,989,000	\$78,000	\$0	\$23,067,000
Short Term Projects (1-4 years)				\$11,451,000	\$78,000	\$0	\$11,529,000
Medium Term Projects (5-8 years)				\$11,538,000	\$0	\$0	\$11,538,000

Notes:

All Costs are in 2018 Dollars

Other Funding* includes funds provided from other sources including rezoning conditions and Federal and Provincial grants.



Legend

- Storm
- Sanitary
- Combined
- Watermain

Project Type

- SAN Upgrade
- STM Upgrade
- Separation
- Trunk Separation
- Watermain Improvement

Note 1:
Green Infrastructure upgrades are not shown. Refer to City-wide Utilities DCL Background Report for project list.

Note 2:
DCL Projects are subject to review and change.



Project Map - Development Cost Levies - Water and Sewer 2019 - 2026 Projects

Figure 3	Project No:
Scale: 1:20,000	Date: July 2018
0 200 400 Meters	Prepared By: NN
	Approved By: MDR

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