CITY OF VANCOUVER

POLICY REPORT

Report Date:	June 22, 2018
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Meeting Date:	July 11, 2018

TO: Standing Committee on City Finance and Services

FROM: General Manager of Engineering Services
General Manager of Planning, Urban Design and Sustainability

SUBJECT: City-wide Utilities Financing Growth Strategy and Cambie Corridor Utilities Servicing Plan, and associated amendments to the Cambie Corridor Plan

RECOMMENDATIONS

A. THAT Council approve the new framework for financing growth-triggered utility infrastructure upgrades comprised of a City-wide Utilities Infrastructure Upgrade List and a new City-wide Utilities Development Cost Levy (DCL).

B. Subject to approval of Recommendation A, THAT Council:

i. Adopt in principle, a new Vancouver City-wide Utilities Development Cost Levy (DCL) By-Law, with rates that will be levied in addition to other DCL Districts as detailed in Appendix A and as set out in Appendix B and that includes a DCL rate phase-in for East side higher density residential development.

With new DCL rates to be effective September 30, 2018.

ii. Approve, in principle, an amendment to the Area Specific DCL By-law No. 9418 by removing the Grandview Boundary Development Cost Levy, with rates applicable to Grandview Boundary reduced to $0/square foot, including nominal rates as set out in Appendix C, and, further that staff report back on amendments to the Southeast False Creek and False Creek Flats Area Specific DCL Levy Districts to align with City-wide DCL framework.

With new DCL rates to be effective September 30, 2018.

iii. Approve, in principle, an amendment to the Vancouver DCL By-law and the Area Specific DCL By-law as set out in Appendix C and Appendix D to remove the construction cost limit in the waiver for for-profit affordable rental housing and instruct staff to report back in early 2019 with recommendations to address utilities and public amenities requirements arising from for-profit affordable rental housing which may be eligible for DCL waivers subject to meeting certain conditions.

iv. Instruct the Director of Legal Services to bring forward for enactment by-laws generally in accordance with Recommendation B in order to enact a new Vancouver (City-wide) Utilities By-law and amend the Vancouver (City-wide) DCL By-law No. 9755 and the Area Specific DCL By-law No. 9418.

C. THAT subject to approval of Recommendations A and B, Council endorse the Utilities Servicing Plan (USP) for the Cambie Corridor, and associated groundwater and rainwater requirements.

D. THAT Council direct staff to amend the Cambie Corridor Plan to add areas for townhouses; specifically, the 00 and 100 blocks of W 26th Avenue, and the 100 blocks of W 42nd, 43rd, 44th, and the north side of 45th Avenue.

E. THAT Council approve new and adjusted fixed CAC targets for Cambie Corridor and Marpole Community Plan areas, as presented in this report and which take effect upon Council approval of this report.

If Council approves Recommendations A, B and C, the following steps are recommended to proceed with implementation:

F. THAT Council repeal the current interim rezoning policy for Cambie Corridor (2015).

G. THAT the General Manager, Planning, Urban Design, and Sustainability be instructed to update the Cambie Corridor Plan and the Marpole Community Plan implementation chapters to reflect the Utilities Servicing Plan.

REPORT SUMMARY

Vancouver has been growing and will continue to grow under current area plans and zoning. More people will place more demands on sewer, drainage and water services. A key issue is how to accommodate new residents and employees while also maintaining the level of services for those who live and work here. According to regional and city projections, 1 million more people are expected to arrive in the region and over 150,000 more are expected in the city by 2041. The City is making significant efforts to ensure that there is adequate housing and job space to accommodate this growth. Public amenities and infrastructure play a large role in making Vancouver one of the most livable cities in the world as well as supporting a robust economy. Delivering and maintaining utilities infrastructure is also fundamental to supporting growth and making our city a healthy place for all, which includes ensuring that new residents are served by adequately sized water, sewer and drainage services.

In May 2018, City Council approved the Cambie Corridor Plan, which will make the Cambie Corridor the biggest growth area outside of downtown with over 50,000 new residents anticipated by 2041, and include new job space for over 9,000 employees. To accommodate this growth, the City will need to invest in significant water, sewer, and drainage utility infrastructure. Future area plans are anticipated to also trigger utility upgrades to accommodate significant growth in other neighbourhoods.

Historically, the replacement and upsizing of water and sewer utilities to accommodate growth has been generally secured through rezoning/development conditions. This “first in” approach has at times, put a significant burden on initial large development that triggers an infrastructure upgrade – as they must pay for the infrastructure required to service their development, while subsequent developments get to benefit from the increased infrastructure capacity without needing to contribute towards the upgrade.

Development Cost Levies (DCLs) are a useful financing tool because they help: ensure that “growth pays for growth”; allocate costs fairly across multiple developers; and, secure funding for growth-related projects. Accordingly, DCLs are key to the City’s long-term financial sustainability. Established as a city-wide tool in the early 2000s, DCLs in Vancouver were primarily used to help finance growth-related parks, housing, childcare, and transportation infrastructure. City-wide DCLs at the time did not include funding for water, sewer, or drainage services. In 2017, the City updated its DCL approach to be consistent with other cities in the region – by adding water, sewer, and drainage as DCL eligible services, albeit at an introductory level.

The recommended new framework for financing water, sewer and drainage utilities upgrades to support growth includes a long-term capital program and the introduction of a dedicated City-wide Utilities DCL. The Utilities DCL Program (i.e., list of capital projects) identifies approximately $1 Billion in total infrastructure costs. Approximately 50% of total costs are allocated to development as many of these projects provide a benefit to both existing and future residents. This new framework provides an equitable way of sharing growth-related utilities costs amongst new development. The provision of a detailed DCL capital project list provides more clarity on the works the City will be constructing, timing of those works and requirements for developers. City-wide utilities growth planning will identify demands based on past trends, market forecast, and policy plans adopted by Council. These key areas are then identified for growth-triggered upgrades and provide neighbourhood serving capacity, rather than solely benefiting a single development. This approach also allows utility servicing to be considered, designed, and constructed as a city-wide system – acknowledging the impacts to both regional and municipal infrastructure “downstream”.

This city-wide financing growth strategy will include the Cambie Corridor as the first utility servicing plan to be completed alongside the land use plan, outlining a sequenced plan to deliver the neighbourhood serving infrastructure. It also recommends the onsite management of rainwater through green infrastructure tools and recommends enforcement of on-site groundwater requirements to limit the impact of growth on existing aging infrastructure nearing capacity.

In addition to infrastructure, new and improved amenities will also be needed to support growth. The report recommends new and updated Community Amenity Contribution rates for the Cambie Corridor and Marpole Community Plan areas, which support their respective public benefits strategies.

Lastly, the report recommends including additional blocks for townhouses in the Cambie Corridor Plan, as a follow-up to Council's direction on May 1, 2018 to further explore this land use change in coordination with the Utilities Servicing Plan.

COUNCIL AUTHORITY/PREVIOUS DECISIONS

In 2003, Council adopted the Financing Growth Policy that sets the framework for the collection and allocation of DCLs to help pay for eligible capital facilities needed for growth: parks, housing, childcare, and engineering infrastructure. The Policy set the framework for City-wide Development Cost Levy (DCLs) rates and how DCL revenue is allocated.

In 2017, Council approved the Vancouver City-wide Development Cost Levy Update (2017-2026). The approved adjustments to the DCL allocations reflected: i) Council priorities on housing and childcare, ii) the availability of DCLs collected but not yet deployed for parks, and iii) the gradual transition from development/rezoning conditions to DCLs for eligible water and sewer infrastructure to enhance predictability and transparency.

On May 1, 2018 Council approved the updated Cambie Corridor Plan that incorporates all phases of planning into one comprehensive document, and directed staff to report back on a Utilities Servicing Plan and Financing Growth Strategy to support the utility infrastructure required to accommodate the significant population growth expected in the Cambie Corridor. Council further directed staff to consider and report back on the inclusion of several specified blocks for townhouses.

Relevant policies:

- City-wide Financing Growth Policy (2003)
- Rezoning for Sustainable Large Developments (2010)
- Greenest City 2020 Action Plan (GCAP) (2011)
- Climate Change Adaptation Strategy (2012)
- Transportation 2040 (2012)
- Coastal Flood Risk Assessment Program – Phase I (2012)
- Vancouver Food Strategy (2013)
- Urban Forest Strategy (2014)
- Healthy City Strategy (2014)
- Marpole Community Plan (2014)
- Cambie Corridor Phase 3 Scope of Work (2015)
- Vancouver City-wide Integrated Rainwater Management Plan (2016)
- Biodiversity Strategy (2016)
- Coastal Flood Risk Assessment Program – Phase II (2016)
- Green Buildings Policy for Rezonings (2017)
- Complete Streets Policy Framework and Related By-law Changes (2017)
- City-wide DCL Update (2017)

- Coastal Flood Risk Assessment Program – Phase III (2017)
- Housing Vancouver Strategy (2017)
- Rain City Strategy (2017)
- Energy and Water Efficiency Updates in the Building By-law (2018)
- Cambie Corridor Plan (2018)

CITY MANAGER'S/GENERAL MANAGER'S COMMENTS

The City Manager, General Manager of Engineering Services and the General Manager of Planning, Urban Design & Sustainability recommend approval of the foregoing.

Utilities services are the backbone of the community. They provide critical services, including delivering water and managing waste thereby protecting health and the environment. Underscoring this, nearly 90% of the 2,300 respondents to an April 2018, Capital Planning survey identified water and sewer infrastructure as the top two most important City assets. Without upgrading utilities infrastructure capacity, there is an increased risk for insufficient water for fire protection, overland flooding and compromised sewer capacity.

A dedicated City-wide Utilities DCL will provide developers with a predictable and transparent mechanism for growth-triggered upgrades. This is an approach that is consistent with other Canadian municipalities.

As our water and sewers are replaced, they will be modernized to implement an integrated water management approach. This will expand the current toolkit from buried pipe and conventional engineered infrastructure to include the installation of green infrastructure (nature-based solutions), and strategies to protect our groundwater resources. This approach will help the City become more resilient to climate change, while supporting growth and livability.

This report has been prepared collaboratively through an interdepartmental process and has involved the development industry and public engagement at various points prior to presentation to City Council.

REPORT

Background/Context

Utilities Overview and City-wide Servicing Challenges
Managing the city’s water (drinking water, rain water and wastewater) for health and sanitation is a basic and fundamental City-provided service.

The City is responsible for managing all of the City’s water related services and infrastructure (replacement value over $8 billion) and for meeting all regulatory requirements to preserve human health and health of the environment.

The water, sewer, and green infrastructure teams represent over 300 staff and administer a budget of over $240 million dollars annually. An operating budget supports efforts to repair system components and perform preventative maintenance and a capital budget is used to renew/replace system components to ensure that the City's assets are well managed. System performance and asset condition is closely tracked in accordance with asset management principles to inform corresponding renewal programs.

Water management services include:

- The transmission and distribution of high quality drinking water;
- Collection and conveyance of sanitary wastewater to Metro Vancouver Wastewater Treatment facilities;
- Managing rainwater using a variety of tools such as piped systems and green infrastructure; and
- Securing groundwater resources as an emergency water source, source of non-potable water and a future drinking water source to augment regional supply.

The majority of Vancouver's water, sewer, and drainage infrastructure was built in the post-war period of the 1950s and 1960s. Since that time, the extra capacity built into these systems when originally designed has been consumed by incremental growth. The gradual transition from a city of single family neighbourhoods to denser, more compact forms of development has increased pressures on our existing utility systems.

Pressures on utility systems include:

- **Population increase** – It is expected that the city-wide resident population will increase by 7,000 per year. This increases wastewater generation and drinking water use despite the water efficiency gains associated with robust water conservation efforts.

- **Density –** Replacing predominantly single family neighbourhoods with higher density forms increases site coverage and impervious areas that generates considerably more rain runoff that needs to be managed

- **Climate change –** Models predict more frequent rain events and intensity, hotter summers and greater risk of fires, putting further stress on regional drinking water storage and increased risk of flooding.

- **Deeper excavations** – Underground parkades and basement levels increase the risk of intercepting the water table. If hydrogeological conditions are not appropriately anticipated and designed for, groundwater may enter the sewer system, even though it is prohibited. Groundwater intrusion causes stress on the City's systems that are not designed for conveyance of ground water, reducing the level of service of the system and further degrades the ability to accommodate growth. It also degrades the City's ability to rely on groundwater sources to augment regional water supply.

- **Combined sewer/drainage systems** – When the sewer and drainage system was built in the 1950s and 1960s, the system was designed as a combined system. A combined system is designed so that during dry weather, wastewater is conveyed to the regional wastewater treatment plants, but during rain events the combined flow discharges to the receiving water bodies. As a member municipality of Metro

Vancouver, the City of Vancouver has adopted the 2010 Integrated Liquid Waste and Resource Management Plan, which includes a commitment by the City to eliminate combined sewer flows by 2050 in the Vancouver Sewage Area.

Upgrading utility systems to support growth is critically important to mitigate the following risks:

Risk	Consequence
Increased combined sewer overflows	Degradation of foreshore environment, recreational water quality, and habitat
Increased urban flooding and sewer backups	Risk to human health, damage to public and private property
Regulatory non-compliance	Risk to operating permit for water system, inability to meet combined sewer flow obligations
Inadequate water supply for firefighting	Risk to health and safety of citizens and property

Current Mechanisms for Growth Driven Utility Upgrades
When land use intensifies, assessments are undertaken to determine whether existing systems are able to handle the additional demands associated with new land uses and increased population. If the existing systems are unable to handle the additional demands, upgrades are required to create additional capacity. This has generally been accomplished by replacing undersized pipe with larger diameter pipes as far downstream as needed to create the additional capacity. For sewer and drainage infrastructure, underground pipe upgrades, pump stations and other works are generally referred to as “grey infrastructure”. Over the last few years, the City has adopted best practices in drainage servicing through the adoption of the Rain City Strategy and a “green infrastructure” toolkit to manage rainwater onsite and in the public realm to reduce the demands on underground utility infrastructure.

At least two mechanisms exist to secure the necessary upgrades triggered by growth: (1) rezoning conditions on development, and (2) through the application of a Development Cost Levy.

1. <u>Rezoning conditions</u>

The responsibility to upgrade the utilities is assigned to the developer and applied to them through a Services Agreement formalized upon Council approval of a rezoning application.

As our water, sewer and drainage systems are nearing capacity, the frequency of rezoning applications triggering utility upgrades has increased significantly. Between 2017 and 2018, utility upgrades were required for ~70% of all rezoning applications, versus 20% between 2014 and 2016. Based on feedback from the development community, rezoning conditions for offsite upgrades create a number of challenges, including:

- **Lack of clarity on the extent of required upgrades at project outset** - Creates challenges in negotiating land acquisitions.

- **Perceived inequity among developments** - Development applications near recently upgraded mains 'win' and only need to connect to the main, while others adjacent to a system near capacity could be responsible for significant off-site upgrades.

- **Results in patchwork upgrading of the utility networks** – Lost opportunity to plan or design at the neighbourhood or district scale level; addresses only local conditions.

- **Doesn't allow the implementation of best practices or systems approach to utility servicing** – generally defaults to conventional 'grey infrastructure' pipeline design.

2. <u>A new City-wide Utilities DCL</u>

The City retained Urban Systems in early 2018 to assist with the City-wide Utilities DCL update. Urban Systems is recognized in Western Canada for providing expert advice in the area of development cost charge updates. Urban Systems assisted City staff in updating its growth forecast, working with staff to assemble a DCL capital program with costs, and developing a set of preliminary DCL rates that recover the growth-related capital costs.

The updated City-wide Utilities DCL is based on a 2019-2026 timeframe and identifies the following:

- Future population and employment growth based on approved plans and policy, take-up within existing zoning and inclusion of in-stream development projects (as of February 2018)
- Future growth needs for sewer, water and drainage
- Growth costs for sewer, water and drainage capital programs (as of June 2018)
- New City-wide Utilities DCL rates

Growth Forecast:
DCLs are determined based on assumptions about the way in which the city is anticipated to grow. The first step is to forecast the type and location of anticipated development against which the charges will apply. City staff updated its growth forecast over a 10 year period (2017-2026) and anticipates that there will be approximately 70,000 new residents and 35,000 new employees in Vancouver. Residential growth is expected to continue to be dominated by new apartments, through redevelopment and further intensification. Most of this new residential growth is anticipated in the West End, Downtown, Cambie Corridor, Marpole, Mount Pleasant and Killarney (East Fraser Lands), consistent with these area plans. Employment growth is forecast to be three-quarters commercial development (office and retail) and one-quarter industrial/mixed employment with most of this growth occurring in the Downtown and Strathcona (False Creek Flats) local areas. For a detailed review of the development forecast, including

floor area and residential unit forecast, refer to the Urban Systems Background Study in Appendix E of this report.

Figure 1: City-wide Growth Projection to 2026

Development Type	Growth Projection*
Low Density Residential	3,300 units
Townhouse Residential	1,900 units
Apartment Residential	47,000 units
Industrial	700,000 sq.ft.
Mixed Employment	2,800,000 sq.ft.
Commercial	8,000,000 sq.ft.

*updated May 2018

DCL Utilities Capital Program and Costs (2019-2026): A development-related capital forecast for the 2019-2026 period was prepared for sewers, water and drainage. The forecast identifies development-related programs/projects and costs, and forms the basis of DCLs rates calculation. Costs were prepared in 2018 dollars and do not include inflation.

The following is a high-level summary of the anticipated programs/projects included in the DCL capital program (for a detailed list, see the Urban Systems Background Study in Appendix E):

- Sanitary System Upgrades: $389 million
- Rainwater and Drainage: $612 million
- Water System Upgrades: $39 million

Figures 2 and 3 provide a summary of utilities cost allocations for each service category over the 2019-2026 period. As shown, the gross capital project costs amount to $1.03 billion. Removing costs that are not eligible for DCL (e.g. costs associated with benefit to existing developments and fee payers), the net recoverable DCL cost (DCL rate supported) is reduced to $547 million, which is the amount expected to be recovered from new development until 2026. For a detailed review of capital program costs by service area, refer to Urban Systems Background Study in Appendix E.

Figure 2: 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**

Figure 3: Summary of 2019-2026 DCL Recoverable Costs

Service	Total DCL Recoverable Costs
Sewers (Sanitary & Drainage) • Pump Stations • Trunk & neighbourhood sanitary sewer/ drainage pipes	$430.1 M
Green Infrastructure • Swales • Neighbourhood green infrastructure • Laneway retrofits	$90.5 M
Water • Distribution mains • Transmission mains • System modifications	$22.8 M
Total	**$543.3 M**

The DCL Background Study, in Appendix E, supports the DCL rate calculations presented in this report, and 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, known and anticipated development, and their location and timing. The growth-related capital programs 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. It is a generally recognized practice in DCL frameworks to review and adjust the DCL capital program regularly to ensure it is up-to-date and reflects the intensity and location of growth. This will include changing the timing and nature of projects, and will also likely include the substitution of projects, in and out of the program, to meet the servicing needs arising from development.

Strategic Analysis

Staff's analysis is summarized relative to the recommendations of this report.

Recommendation A: Approve a new framework for financing growth-triggered utility infrastructure upgrades

A new approach to utilities upgrades is recommended to support the implementation of land use plans and provide strategic and coordinated investment in infrastructure for water management.

This approach allows the advancement of City objectives, such as affordable housing and jobs, and integrated water management policies and design. The proposed long-term strategy improves clarity on timing and requirements for developers, resulting in a more transparent and reliable process. This strategy also aligns with best practices from other jurisdictions.

The proposed City-wide Financing Growth Strategy includes two components:

1. City-Wide Utilities Infrastructure Upgrade List including neighbourhood Utility Servicing Plans (USPs)
2. A new City-wide Utilities DCL to finance specific projects identified on the upgrade list

1. City-wide Utilities Infrastructure Upgrade List and neighbourhood Utility Servicing Plans (USPs)

The first component of the long-term utility strategy is a list of City-wide utility upgrade projects necessary to support proposed growth between 2019 and 2026 (See Appendix E for the full project list). The project list includes a schedule of anticipated growth-related utility upgrades based on population growth projections expected in neighbourhoods across the city. The overall capital project list amounts to approximately $1 billion in costs amongst sewer, water and drainage works. The identified capital projects are located city-wide. The portion of these works that is growth related amounts to approximately $550 million and the non-growth portion amounts to approximately $450 million. Growth projections are based on past trends, market forecasts, and policy plans adopted by Council. These figures are then modeled by staff to determine increased demands and to identify components of our sewer, drainage and water networks that would require upgrading to provide the level of service needed to support growth. The stressed portions of the utility networks are further reviewed and grouped to form projects and serve as the basis for the City-wide Utilities Infrastructure Upgrade List.

Engineering studies, modeling and staff resourcing to continue utility planning efforts alongside land use planning activities are also included in the project list as direct costs associated with growth. The projects listed are growth-triggered upgrades and provide neighbourhood serving capacity, rather than solely benefiting a single development. The responsibility to deliver lateral service connections and local infrastructure, generally along a block frontage, deemed to solely benefit a new development will continue to be assigned to the developer through conditions of development. The guiding principles for applying developer responsibility for delivery of utilities are shown in Appendix F.

When new community or area policy plans are developed and approved by Council, the City will seek to develop concurrent and coordinated Utility Servicing Plans to support additional growth. This will allow the neighbourhood serving utility infrastructure to be constructed ahead of new developments. This also allows utility servicing to be considered, designed, and constructed as a system, acknowledging the impacts to both regional and municipal infrastructure. A systems approach to design increases the awareness that drinking water is treated and distributed to residents from regional supply reservoirs on the North Shore and wastewater is conveyed through a vast collection system to regional treatment plants well downstream of where the additional loading from population growth is happening.

The Utilities Servicing Plan to support the first 8 years of growth for the Cambie Corridor has been incorporated into the project list. Detailed discussion for the Cambie Corridor Utilities Servicing Plan follows in the body of this report.

The City will review and update the project list annually to adapt to market trends associated with development activity in the city, and to ensure that infrastructure is upgraded where it is most needed.

2. A new City-wide Utilities DCL to fund detailed projects identified on the upgrade list

The City is proposing to introduce a separate City-wide DCL for utilities to improve transparency and certainty for developers. The fees collected from developers will help fund the cost of growth-related utilities infrastructure. The City has generated a DCL project list for the 2019-2026 period and has apportioned the growth-related versus benefit-to-existing costs for each project. The portion of these works that is growth related amounts to approximately $550 million. The city-wide project list can be found in the Urban Systems Background report in Appendix E. The DCL rates charged reflect the impact growth has on infrastructure and help ensure developers pay their fair share of infrastructure costs. The City-wide Utilities DCL would be paid by almost all applicants prior to building permit issuance stage and would be levied on a City-wide basis in addition to the existing City-wide DCL. Nearly all major municipalities in Canada use DCLs or their equivalent to help pay for growth-related utilities because they are considered one of the most stable and fair ways to fund growth needs.

Recommendation B: Adopt new Vancouver City-wide Utilities DCL By-Law rates including a DCL rate phase-in for East side higher density residential development, remove the Grandview-Boundary Area Specific DCL District, amend and report back on the DCL waiver for for-profit affordable market rental housing

Table 1 below summarizes the recommended new City-wide Utilities DCL rates that support required growth-related DCL-eligible utilities upgrades. The *Vancouver Charter* stipulates a 12-month rate protection for in-stream applications to clear the approvals process without being impacted by the rate increase. In addition, staff are recommending that east side higher density residential DCL rates be phased-in over a two year period recognizing difficulties that some forms of development may have adjusting to the new rate . The east side rate phase-in for higher density residential starts at 50% of the DCL rate on September 30, 2018, increases to 75% on September 30, 2019, and to the full DCL rate by September 30, 2020. For applicants that cannot take advantage of the 12 month in-stream rate protection, the recommended DCL rate phase-in would allow new east side development time to adjust financial proformas and land purchases to account for the new DCL rates. The geographic boundary of the east side is generally defined as east of Ontario Street and includes the Downtown Eastside (see DCL by-law in Appendix B for a map of the East and West sides of Vancouver).

Table 1 compares current and proposed Utilities DCL rates. The current Utilities DCL is embedded within the existing City-wide DCL and the proposed new Utilities rate enhances and expands on the introductory costs and rates established in the 2017 City-wide DCL update when utilities were first introduced as a DCL eligible category. To calculate updated DCL rates, the growth-related capital program costs were divided into the gross floor space forecast to arrive at the base DCL charge (more details on the rate calculation process can be found in the Urban Systems Background Report in Appendix E).

Table 1: Recommended City-wide Utilities DCL Rates ($/square foot)

Rate Category	**Utilities Portion of DCL Current ($/sf)**	**Proposed Utilities DCL ($/sf)** (effective Sept 30, 2018)
Lower Density Residential (under 1.2 FSR)	$0.34	$2.32
Medium Density Residential (at or above 1.2 FSR to 1.5 FSR)	$0.73	$5.04
Higher Density Residential (over 1.5 FSR)	$1.46	$10.09
Industrial*	$0.58	$2.02
Mixed Employment** (Light Industrial)	$1.09	$3.78
Commercial & Other Uses	$1.46	$5.04

* Industrial rate applies to following zoning districts: I-2, M-1, M-1A, M-2, MC-1, MC-2
** Mixed Employment applied to following light industrial zoning districts: IC-1, IC-2, IC-3, I-1, I-1A, I-1B, I-4

Note: East side higher density residential to be phased-in as follows: 50% of full DCL rate as of September 30, 2018, increased to 75% on September 30, 2019 and then increased to the full DCL rate by September 30, 2020.

As part of the DCL update, the City retained Coriolis Consulting Corp. to undertake an assessment of the potential impact of DCL rate changes, arising from the review on the amount, rate and location of development in the city. The Coriolis assessment evaluated the financial viability of new development projects in Vancouver to support increased

DCL rates and this information was utilized to inform the implementation of new DCL rates. A range of case study sites was selected from across the City, and for each site it was determined whether an increased DCL rate was financially viable for development. A summary of the Coriolis report is attached in Appendix G, while the full Coriolis report is located on the City's project website.

The Coriolis study generally noted the following:

- New residential development downtown and on the west side of the city could accommodate the proposed rate increases.
- New residential development on the east side of the city has less ability to absorb the new DCL costs without impacting economic feasibility.
- For new non-residential development, Coriolis found in last year's DCL report to the City that an increased DCL rate would have a negative impact on sites that are currently viable for redevelopment. For new industrial development, it would be challenging for most projects to support any increase in DCL rates given the inherent challenging economics. Similarly, it would also be challenging for most new office development to support an increased DCL rate.
- In all cases where there is a DCL rate increase, it is preferable to phase-in the rate increase so new development can adjust to the increased costs.

If Council approves the new DCL rates recommended in this report, and development activity remains steady, there is a potential to collect approximately $550 million in City-wide Utilities DCL revenue to 2026.

Based on a review of comparable regional municipalities, Vancouver's proposed City-wide DCL rates continue to be in-line, but at the higher end of comparable development cost charges in the Metro Vancouver region. Vancouver's non-residential DCL rates (office and industrial) are the highest regionally.

DCL Waiver for for-profit affordable rental housing
Projects creating new rental supply, where 100% of the residential development is rental in tenure are eligible for a DCL waiver for the rental portion of the development. Under current DCL By-laws, DCLs for rental housing can be waived for "for-profit affordable rental housing" where the tenure is secured through a Housing Agreement. Projects that include existing rental units (e.g. alterations or extensions) are not eligible for the waiver. The DCL waiver regulates maximum unit size and rents by unit type and hard construction cost for the project.

Staff is undertaking a review of appropriate enabling tools, market conditions, project viability with regards to for-profit affordable market rental housing projects. This review will also assess the utilities and public amenities requirements triggered by rental housing and options to address such demands. The DCL waiver for for-profit affordable rental housing will be extended to the new Utilities DCL by-law on a temporary basis no longer than 2020, while staff report back in Spring of 2019 on a complete review of the DCL rental waiver program and possible adjustment to align with Housing Vancouver Strategy objectives around delivery of affordable rental housing units. It is acknowledged that new apartment development (rental or strata) puts growth demands on utilities infrastructure that will require service upgrades. Waiving DCLs for an increasing number of rental projects require alternative funding to address the infrastructure gap, which is extremely challenging given the City's constrained financial capacity and limited ability to raise taxes and fees to offset these growth costs.

As an interim measure ahead of staff's report back on the DCL waiver in 2019, it is recommended that the maximum construction cost be removed across all DCL by-laws as criteria regulating the issuance of DCL waivers. The rationale for the interim measure is to address a growing trend of affordable housing projects not being able to meet the DCL waiver criteria due to rapid increases in construction costs, pushing them higher than what is regulated through the waiver. The City's third party economic consultant (Coriolis Consulting) advises that the waiver is necessary to allow rental projects to be viable, particularly with the introduction of the new City-wide Utilities DCL. Without an achievable DCL waiver, many rental projects will no longer be viable. The eligibility criteria for DCL waivers will be revisited when staff comprehensively report back in 2019, on the DCL waiver for for-profit affordable market rental housing.

Rationalization of DCL Districts
In 2002, Council approved the Grandview Boundary Industrial Area Plan (later renamed from "Industrial" to "Mixed Employment") along with a set of rezoning policies and development guidelines. The vision for the area was to transition from light industrial and large format retail to high tech uses near rapid transit. This was anticipated to increase the number of jobs in the area by 10,000 over 25 years. At the same time, Council also approved an area-specific DCL, which originally allocated 90% toward water, sewer, road and sidewalk infrastructure and 10% toward parks.

The Plan implemented the I-3 zone as a way to encourage high tech uses in the area, but it was met with limited demand because of the narrow range of General Office uses permitted. However, rezonings that permitted greater flexibility in General Office uses contributed to a 150% increase in the number of jobs in the area from 4,000 to approximately 10,000 by 2011. In response, Council amended the rezoning and development policies and guidelines in 2011 to expand the range of General Office uses that could be considered.

The expanded range of General Office uses brought greater potential for employment growth in the area. In order to service this growth, the Public Benefit Strategy was amended in 2012 to allocate 100% of the area-specific DCL revenue toward the construction, expansion, and replacement of sewer facilities. Other works such as water and transportation infrastructure, childcare, and parks are to be delivered through rezoning conditions, the City-wide DCL and other funding sources.

The current area-specific DCL rate for Grandview Boundary is $0.91/sq.ft. for commercial uses and $3.64/sq.ft. for light industrial/mixed employment uses. To date, the Grandview Boundary DCL has collected $1.9 million in cash and has only spent/allocated $450,000 on arterial projects. At present, developers in the Grandview Boundary area are subject to the Area-specific DCL as well as the Vancouver (City-wide) DCL. The proposed Utilities DCL would fulfill the same functions as the current area-specific DCL and the utilities portion of the Vancouver (City-wide) DCL. Staff therefore recommends the removal of Grandview Boundary as a layered area-specific DCL to avoid duplicate utilities costs for developers.

Both the False Creek Flats DCL and Southeast False Creek DCL Districts cannot be easily removed as layered area-specific DCLs. Although the proposed Utility DCL has some overlap with the infrastructure allocation in the False Creek Flats DCL, it does not capture transportation infrastructure and has no overlap with the park and childcare allocations. Staff will report back on how to reallocate False Creek Flats area-specific DCL revenues in order to avoid duplicate utility costs to developers. The Southeast False Creek DCL faces similar challenges as the False Creek Flats DCL; both have utility and non-utility allocations, and the utility portion of the area-specific DCL combines sewer, water and drainage infrastructure with highway facilities. Staff will report back in 2019 on how to reallocate the Southeast False Creek area-specific DCLs in order to avoid duplicate utility costs to developers.

Recommendation C: Endorse the Utilities Servicing Plan for the Cambie Corridor

On May 1, Council approved the updated Cambie Corridor Plan. The Plan, together with recently approved policy statements and rezonings on Major Project sites, and the Marpole Community Plan (2014), enables significant change and growth in the Corridor. By 2041, the Corridor is anticipated to grow by up to 51,500 additional residents and 9,200 jobs.

Accommodating the land use changes and population growth in the plan area (roughly 9% of the City) requires that the entirety of the sewer and drainage network and a significant portion of the water system be redesigned and reconstructed. Rebuilding these networks to accommodate the full buildout of this plan in the conventional manner will take decades at a cost estimated at over $750 million.

The Utilities Servicing Plan provides an opportunity to reexamine the way the City plans for water and utility management. Each component of the plan for Cambie Corridor is discussed below.

1. Prioritized list of projects to be constructed over the next 8 years (2019-2026) to be delivered in two stages (2019-2022, 2023-2026).

Upon Council approval of the Cambie Corridor Plan, the approved land uses, policy objectives and utility systems were analyzed to establish a staged plan for the utility buildout. The infrastructure buildout sequence was developed to enable the delivery of affordable housing and job space while ensuring the utilities could be designed and constructed effectively over time. The prioritization of the upgrade areas was based on the existing system capacity (determined through hydraulic modeling and flow monitoring), housing and job growth potential in each area, development interest, and the ability to efficiently deliver the infrastructure. Development is possible throughout the Corridor; however, the financial obligations will vary depending on geographic area and may include offsite infrastructure upgrades. The infrastructure buildout sequence will facilitate the City-initiated rezoning ("prezoning") of townhouse areas in Stage 1 in the short-term (anticipated for referral and public hearing in summer/fall of 2018). A detailed map of the Cambie Corridor, stages of infrastructure delivery and guidelines for developer obligations are included in Appendix F and H.

2. Requirement for basic onsite rainwater management

Best practice, and a common requirement from many other municipalities in Metro Vancouver, is for property owners to manage a portion of storm water (mostly rain water) on site as a demand management measure to reduce the impact on the City system. The requirement for rainwater management already exists city-wide for all rezoning applications. The Utilities Servicing Plan recommends expanding this requirement beyond rezoning sites to include all development and building permit applications within the Corridor over time, consistent with the recommendations from the Integrated Rainwater Management Plan. A draft bulletin detailing the requirements and application process are included for reference in Appendix I.

3. Requirement for basic onsite groundwater management

Recent development in the Cambie Corridor has shown evidence of a shallow ground water table posing challenges during the construction and occupancy phase of new development. As permanent discharge of groundwater into the City sewer system is prohibited due to its impact to sewer system capacity, a groundwater management plan for all developments within the Corridor will be required. A draft bulletin detailing the requirements and application process are included for reference in Appendix J.

4. Development of a comprehensive and integrated water management plan for the Corridor

The scale of utility upgrades to support the Cambie Corridor Plan presents a significant opportunity to modernize our infrastructure and approach to water management services. In addition, the natural attributes of the area (i.e. high soil infiltration potential and high groundwater aquifer) and the City's goals on environmental protection, climate change adaptation, community resilience and healthy and green neighbourhoods presents a significant opportunity to implement an integrated water management approach to water system design.

The intent is to use integrated strategies to provide more cost-effective services to a growing area in a way that maximizes benefits for other community objectives around resilience, natural systems and livability. Tools that may be included in this approach are: potable water conservation and efficiency, rainwater management, green infrastructure, non-potable water systems, water re-use, and approaches to sanitary wastewater collection and conveyance.

It is expected that integrated water strategies, which includes green infrastructure, will need to be applied extensively throughout the Corridor on both public and private property. These strategies will rely heavily on diverting and reducing wastewater flows away from the sewer systems to reduce the size of the conventional sewer network. For example, rainwater is intended to be managed as much as possible, near where it lands, to limit the reliance on the downstream sewer system.

As such, over the next three years, the City will be developing an integrated water management plan throughout the Cambie Corridor, to implement efficient, resilient and cost-effective water management measures in coordination with the 8-year conventional services upgrade plan.

The results of these plans developed for the Cambie Corridor will be used to inform similar approaches for other areas of the city.

<u>Recommendation D: Amend the Cambie Corridor Plan to include select areas for townhouses</u>

On May 1, 2018, Council directed staff to further study the area east of Yukon Street and south of King Edward Avenue ("Area 1", Figure 4) as well as the area east of Columbia Park south of 41st Avenue ("Area 2", Figure 5) for expansion of townhouse options, concurrent with the technical work on the Utilities Servicing Plan and Financing Growth strategy.

Figure 4

Figure 5

Townhouses (Cambie Corridor Plan)
Study area (potential expansion of townhouses)

Subsequent analysis of the identified blocks determined that townhouses are a supportable built form for the area and are compatible with the neighbourhood context.

Staff also consulted with residents in both areas through in-person meetings and an on-line survey. For detailed results of the on-line survey, please refer to Appendix K.

In the King Edward Avenue area, two evening meetings were held, attended by approximately 28 people; 29 households completed the survey (55% response rate). In the 0 block of W 26th Avenue, over 80% of respondents supported townhouses on their block. In the 100 block, opinions were split with 42% of respondents in favour of townhouses, and 50% not in favour. Given the relatively even results in the 100 block, and in order to keep a continuous townhouse built form along W. 26th Ave, staff recommend including both identified blocks for townhouses. This approach enables greater choice of housing for residents while acknowledging they may choose to remain in their current detached residential forms, which are highly compatible with townhouses.

In the Columbia Park area, approximately 20 people attended the information session. Fourteen households completed the survey (14% response rate), 79% of which were in favour of townhouses on their blocks. Staff recommend including these identified blocks for townhouses.

The Utilities Servicing Plan has identified stages for utility investment based on infrastructure capacity, opportunities and constraints. Both the King Edward Avenue area and the Columbia Park area are outside the first stage of investment, and are not anticipated to be rezoned by the City in the short term. However, identifying these areas for townhouses in the Cambie Corridor Plan will allow for gradual change and, over the long-term, provide more housing opportunities and choice in the Cambie Corridor in proximity to amenities and services—particularly for families and those seeking ground-oriented housing forms.

As the Cambie Corridor Plan is a policy document, these amendments do not require a public hearing.

Recommendation E: Proposed target Community Amenity Contributions for Cambie Corridor and Marpole

To support the anticipated population growth in the Cambie Corridor, the Cambie Corridor Plan (2018) includes a comprehensive Public Benefits Strategy (PBS) that provides strategic direction for long-term capital investments to support livable, healthy and sustainable neighbourhoods. The PBS consists of detailed priority investments for the first 10 years and beyond, with an approximate value of $687 million. These will be funded through a combination of contributions from development, including City-wide Development Cost Levies (DCLs) and Community Amenity Contributions (CACs), as well as from property taxes and utility fees (for renewal of existing amenities and infrastructure) and partnership contributions from other governments and non-profit partners.

There are three basic approaches to obtaining Community Amenity Contributions from development:

1. Community Amenity Contributions from developer-initiated rezonings, as follows:

    a. *Fixed CAC targets:* To provide more certainty for developers, land owners and the City, more fixed CAC targets are being proposed for Cambie Corridor, including in mixed-use areas that required a negotiated approach under the previous Cambie Corridor Plan (Table 2). These proposed rates have been lowered from the initial draft rates by a minimum of 10% to help offset the proposed utilities DCL. These reduced rates are supportable in that they still contribute sufficient funding towards the delivery of the PBS. A map showing where the rates apply can be found in Appendix L. In accordance with the *CAC Through Rezonings Policy*, routine, lower density secured market rental rezoning applications may be exempt from a CAC. As per the *CAC Through Rezonings Policy*, most commercial-only rezoning applications in the Cambie Corridor will be negotiated for a CAC.

b. *Pre-set affordable housing targets:* Rezonings in specific areas, for example within parts of the Oakridge Municipal Town Centre, will be required to provide a specific amount of affordable housing (social or below market rental) to achieve the maximum height and floor space specified in the Plan. The affordable housing component constitutes the community amenity contribution, and no additional CACs are required.

c. *Site-specific negotiated approach:* Some rezonings will contribute in-kind or cash CACs based on a negotiated approach. These are generally projects on arterial sites in the Oakridge Municipal Town Centre (MTC) and Unique Sites.

Table 2: Fixed CAC targets for Cambie Corridor

Category	**Existing CAC Target** ($/sf of additional density)	**Proposed CAC Target** ($/sq.ft. of additional density)
Cambie Corridor “Phase 3” sites (off arterial)		
Townhouse *	n/a	$55.00
4-storey residential	n/a	$72.00
Cambie “Phase 2” sites (on arterial)		
4-storey residential	$68.18	$72.00
4-storey mixed-use	negotiated	$20.00
6-storey residential	$68.18	$103.00
6-10 storey mixed use	negotiated	$112.00
Marpole		
6-storey residential	$66.55	$81.00

*in areas identified for townhouses that will not be rezoned by the City in the short-term

Note: Routine, lower density secured market rental rezoning applications may be exempt from a CAC. Most commercial-only rezoning applications in the Cambie Corridor will be negotiated for a CAC.

The proposed CAC targets shown in Table 2 would take effect upon Council approval. In order to ensure fairness to rezoning applications that have been submitted prior to the adoption of new CAC targets, in-stream rezoning applications are exempt from CAC target increases provided that a rezoning application has been submitted to the City and a rezoning application fee has been paid.

2. <u>Proposed Density Bonus zoning Contributions</u> (for information – to be considered by Council on July 24, 2018):

The proposed townhouse zone includes a density bonus provision. The density bonus provision defines an outright density that can be achieved without any amenity contribution (base density) and additional density that may be achieved, to a maximum set out in the by-law, with provision of a per square metre financial contribution towards amenities or affordable housing. The proposed rate for the new Cambie townhouse zone and updated rates for the RM-8 and RM-9 zones in Marpole (see Table 3) will be introduced with the new townhouse zone, to be considered by Council on July 24, 2018. Please refer to Appendix L for a map showing where the rates are proposed to apply.

Table 3: Proposed rate for the Cambie townhouse zone and updated rates for the RM-8 and RM-9 zones in Marpole (for Council consideration on July 24, 2018)

Category	**Existing rate** ($/sf of additional density)	**Proposed Rate** ($/sq.ft. of additional density)
Cambie Corridor		
Townhouse (new zone)	n/a	$55.00
Marpole		
Townhouse (remaining RM-8/RM-8N)	$12.10	$20.00
4-storey residential (remaining RM-9/RM-9N)	FSR 0.75 – 1.2: $12.10 FSR 1.2 – 2.0: $66.55	$66.55 (removed tiered structure of DB)

The above fixed CAC target and Density Bonus rates are recommended on the basis of community amenities needs and costs, as identified in the PBS, as well as a consultant analysis of the financial feasibility of development to contribute to new amenities. The City commits to re-evaluate and recalibrate the above rates every three years, or sooner if public benefit costs or project viability conditions change.

Recommendation F: Repeal current interim rezoning policy for Cambie Corridor (2015)

As part of the launch of the Cambie Corridor Phase 3 planning process in April 2015, Council approved an interim rezoning policy to limit rezoning applications during plan development. The policy set out the circumstances under which new rezonings or heritage revitalization agreements could be considered during the Phase 3 planning process. With the approval of the updated Cambie Corridor Plan in May 2018, and subject to Council's approval of the Utilities Servicing Plan, the interim rezoning policy is no longer relevant and should be repealed.

Recommendation G: Update the Cambie Corridor Plan and the Marpole Community Plan implementation chapters to reflect the Utilities Servicing Plan

Subject to Council endorsing the Utilities Servicing Plan, staff will update the implementation chapters of the Cambie Corridor Plan and Marpole Community Plan accordingly. As these plans are policy documents, these housekeeping updates do not require a public hearing.

Stakeholder Engagement

Work on a new City-wide Utilities DCL was first signalled to Council in July 2017, through the update of the City-wide DCL. Since March 2018, the development industry has been regularly informed about the DCL work through letters, email updates, DCL bulletin updates, and through the launch of a project website. On June 7th, staff held a development industry information meeting at City Hall where approximately 70 people attending. On June 28th, staff held a public information meeting primarily on the Cambie Corridor Utilities Servicing Plan, but also on the proposed new DCL. See Table 4, below for an overview of the main communication points with public and development industry.

Industry groups also assisted with communications by circulating the City materials and information to their members with their own mail-outs or e-newsletters.

Table 4: Key Dates in Stakeholder Engagement

Date	Event
Jul 25, 2017	Council approves Utilities DCL at introductory level
March 5, 2018	Consultation with UDI (Cambie Corridor Utilities Servicing Plan)
Mar 15-23, 2018	• Project website launched • DCL bulletin updated • Letters sent to development industry
March 16, 2018	Consultation with UDI (Cambie Corridor Utilities Servicing Plan & Utilities DCL)
Apr 11, 2018	Update to UDI Liaison
Jun 5, 2018	Preliminary rates released
Jun 7, 2018	• Consultation event • UDI Liaison update
Jun 15, 2018	Feedback from development industry received
Jun 28, 2018	Public meeting
Jul 11, 2018	Council
Sep 30, 2018	DCL By-law enacted, DCL rate protection begins
Sep 30, 2019	DCL rate protection ends

Appendix M contains the letters and emails received.

Implications/Related Issues/Risk

Financial

Development contributions such as DCLs, CACs and Density Bonus Contributions are the primary funding source for public amenities and infrastructure necessary to support growth. This reduces the impact on property taxes and other City funding sources.

Should Council approve the proposed DCL rates, and assuming development activity level remains steady, it is anticipated that over the next 8 years (2019-2026) $550 million in DCL revenue could be generated. This estimate has already taken into consideration forgone DCL revenues arising from:

- phase-in approach for east side high density residential - $9.0 million
- waiver for rental residential properties through 2020 - $4.2 million

The proposed list of projects was evaluated to determine the growth versus non-growth component. The non-growth component of the project value, where applicable, will be funded through existing utilities fees as contemplated in the Capital Plan.

The temporary extension of the for-profit affordable rental housing waiver subject to the 2019 Housing Review, the recommended phase-in period for the east side of Vancouver, as well as the in-stream rate protection will mean that the new DCL revenue stream will not begin until Fall 2019. A funding strategy is currently being developed for the first two years to mitigate the temporary cash flow impact. This will ensure that the infrastructure is designed and constructed as per schedule indicated in this report.

For comparative purposes, if the proposed utilities work ($550 million) were to be funded from property tax and utility fees instead of the proposed Utilities DCLs, it would require a 4.2% tax increase, 40% sewer fee increase and 5.4% water fee increase. This is not recommended as it does not align with the principle of ‘growth pays for growth.’

Financial Implications for Development

As part of the DCL review, the City retained Coriolis Consulting Corp. to undertake an assessment of the potential impact of DCL rate changes, arising from the review on the quantum, rate and location of development in the city. The Coriolis assessment evaluated the financial viability of new development projects in Vancouver to support the DCL rates. The Coriolis study noted the following:

- New residential development downtown and on the west side could accommodate the proposed rate increases.
- New residential development on the east side has less ability to absorb the new DCL costs without impacting economic feasibility.

- It would be challenging for most new industrial development and office development to support any increase in DCL rates given the inherent challenging economics.

The recommended DCL rates and phase-in approach are consistent with the Coriolis analysis. Based on a review of comparable regional municipalities, Vancouver's proposed City-wide DCL rates (including both amenities and utilities) continue to be in-line with development cost charges in the Metro Vancouver region. However, it is noted that the non-residential City-wide DCL rates are at the higher end of regional rates.

The City's Financing Growth policies are based upon the principle development contributions should not deter development or harm housing affordability. Independent review of the market impacts of development contributions found the primary impact of these in Vancouver is to put downward pressure on the value of land for redevelopment. Affordability should not be negatively affected as long as rates are set so they do not impede the steady supply of development sites. Given current and recent development activity levels there is little evidence that this supply has been or will be affected by the proposed rates.

Human Resources

The recommendations in this report will require additional resources to support the successful implementation of the new City-wide framework to manage growth triggered utility upgrades. The resources requirements are embedded in the Capital Program list attached in Appendix E.

Environmental

The city-wide framework described in this report is in line with best practices in financing growth triggered utility upgrades and also allows the thoughtful planning and upgrading of water, sewage and rain water management improvements in the City. A comprehensive integrated systems approach to managing water will allow the City to make smart investments in providing these essential services to preserve public health and the environment. Providing robust, reliable drinking water, rain water and wastewater services are essential for meeting our regulatory obligations under the Provincial Drinking Water Protection Regulation and the Municipal Wastewater Regulation.

Legal

Council is authorized to enact a DCL By-law under the authority of section 523D of the *Vancouver Charter*. Council also enjoys broad authority over matters of zoning and development and sewerage and drainage works.

CONCLUSION

Delivering and maintaining utilities infrastructure is fundamental to ensuring a healthy city. With the projected growth of the Cambie Corridor, there is a need to ensure that new residents are served by adequately sized water and sewer services and that these upgrades to the City's utility network integrate best management practices and contribute to greater overall resiliency of the system.

The recommended City-wide Utilities DCL framework is a major and necessary shift in the way the City plans for utility upgrades and finances growth. It incorporates best practices from other cities across Canada to support fairness, transparency, clarity, and certainty for developers and land owners.

The eight year capital utility upgrade plan is intended to be a living document that will be reviewed and adapted to growth and development trends, and resiliency planning.

In addition to infrastructure upgrades, new and updated fixed rate CACs will facilitate the delivery of amenities needed to support growth in the Cambie Corridor and Marpole areas.

Lastly, new land use changes to include additional blocks for townhouses in the Cambie Corridor Plan will increase housing choice throughout the Corridor, with more options for families with children and those seeking ground-oriented housing options.

* * * * *

Proposed New City-wide Utilities DCL By-Law Rates

Category/Use	Utilities DCL ($/sq.ft.) Sept 30, 2018
RESIDENTIAL	
Residential at or below 1.2 FSR and Laneway House	$2.32
Medium Density Residential Above 1.2 to 1.5 FSR	$5.04
Higher Density Residential Above 1.5 FSR	$10.09
Higher Density Residential Above 1.5 FSR (East side)*	$5.04
NON-RESIDENTIAL	
Industrial (I-2, M-1, M-1A, M-1B, M-2, MC-1, MC-2 Zoning Districts)	$2.02
Mixed Employment (Light Industrial) (IC-1, IC-2, IC-3, I-1, I-3, I-4, I-1A, I-1B Zoning Districts)	$3.78
Commercial & Other	$5.04

* East side higher density residential to be phased-in as follows: 50% of full DCL rate as of September 30, 2018, increased to 75% on September 30, 2019 and then increased to the full DCL rate by September 30, 2020.

Category/Use	Reduced DCL Rate Sept 30, 2018	Unit/ Area cost
CULTURAL, INSTITUTIONAL, SOCIAL		
School use	$ 0.51	/ sq.ft.
Parking Garage	$ 0.10	/ sq.ft.
Childcare Use	$ 10.00	Per Building Permit
Temporary Building	$ 10.00	
Community Energy Centre	$ 10.00	
Artist Studio Class A & Class B	$ 10.00	
Community Centre/Neighbourhood House	$ 10.00	
Library	$ 10.00	
Public Authority Use	$ 10.00	
Social Service Centre	$ 10.00	

VANCOUVER UTILITIES DEVELOPMENT COST
CITY OF VANCOUVER
BRITISH COLUMBIA

LEVY BY-LAW NO. XXXX

**This By-law is printed under and
by authority of the Council of
the City of Vancouver**

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BY-LAW NO.

A By-law to impose development cost levies for utilities in the city

PREAMBLE

Council is satisfied that the amounts raised by levies imposed by this By-law in the general area are unlikely to exceed the estimated costs of projects for the general area.

Council has determined that imposing levies in the amounts set out in this By-law in the general area to contribute to the costs of projects for the general area are fair and equitable.

Council is excluding those areas of land described in Part 1 of Schedule A from this By-law because Council has previously determined that development anticipated in those areas will contribute to the need to provide capital projects, and has previously imposed development cost levies with respect to those areas.

Council is excluding those areas of land described in Parts 2 and 3 of Schedule A from this By-law because Council has previously determined that development anticipated in those areas will contribute to the need to provide capital projects, and has previously provided for them by way of official development plans, comprehensive district rezoning, alternate funding arrangements, or other appropriate measures.

THE COUNCIL OF THE CITY OF VANCOUVER, in public meeting, enacts as follows:

SECTION 1
INTERPRETATION

Name of By-law

1.1 The name of this By-law, for citation, is the “Vancouver Utilities Development Cost Levy By-law”.

Definitions

1.2 In this By-law:

"Artist Studio - Class A", which means the use of premises for the production of dance, live music, creative writing, painting, drawings, pottery or sculpture, video, moving or still photography, none of which involves amplified sound or one or more of the materials or processes specified under Artist Studio - Class B, but does not include premises used for residential purposes;

"Artist Studio - Class B", which means the use of premises for the production of (a) dance or live music involving electronically amplified sound, (b) moving or still photography (excluding video) involving on-site film processing, (c) paintings, drawings, pottery or sculpture involving the use of fibreglass, epoxy and other toxic or hazardous materials or one or more of the following processes: welding, woodworking, spray painting, silk screening or fired ceramics, but does not include premises used for residential purposes;

"building permit" means a building permit issued under the Building By-law;

"child care" means the use of premises operated as a community care facility by one or more persons licensed under the Community Care and Assisted Living Act of British Columbia, as amended or replaced from time to time, on a not for profit basis, for "group child care", "preschool", multi-age child care in accordance with Child Care Licensing Regulation B.C. Reg. No. 332/2007, as amended or replaced from time to time, and may include the use of flexible space operated for child services as determined by the Director of Social Planning for the city but excludes premises operated for "family child care";

"Community Centre /Neighbourhood House" means a community centre /neighbourhood house generally accessible to the public and no smaller than 50 square meters in floor area;

"development" means any construction, alteration, or extension of all or part of a building or structure that requires issuance of a building permit, and includes a surface parking lot but excludes repair or renovation work, being repair or renovation of a building or structure that does not increase the floor area of that building or structure;

"FSR" means floor space ratio as that term is defined in the Zoning and Development By-law.

"floor area" means the floor area of a development set out in the development permit that applies at the time of entitlement to delivery of the building permit authorizing the development;

"for-profit affordable rental housing" means a new building containing multiple dwelling units, which meets the requirements of section 3.1A to be for-profit affordable rental housing, but does not include alterations of or extensions to those dwelling units;

"general area" means all land within the boundaries of the city as described in Schedule A Part 1, except for those areas of land described in Schedule A Parts 2 and 3;

"industrial zone" means:

(a) any zoning district designated as "Industrial" by section 9.1 of the Zoning and Development By-law, and includes the following zones: I-2, M-1, M-1A, M-1B, M-2, MC-1, MC-2 zoning districts; and

(b) the land zoned by CD-1 By-law No. 6654 with respect only to those uses that the by-law permitted on the date of its enactment;

"laneway house" has the meaning ascribed to it by section 2 of the Zoning and Development By-law;

"levy" means development cost levy;

"library" means a library generally accessible to the public and no smaller than 50 square meters in floor space;"

"mixed-employment (light industrial)" means the following zones: (IC-1, IC-2, IC-3, I-1, I-3, I-4, I-1A, I-1B zoning districts);

"parking garage" means all or a portion of a building or structure the principal or intended principal use of which is the parking or storage of motor vehicles but excludes all or a portion of a building or structure that provides no more than four motor vehicle parking or storage spaces accessory to a residential use;

"prime rate" means the floating annual percentage rate of interest established from time to time by the Bank of Montreal, 595 Burrard Street, Vancouver, British Columbia as the base rate that the Bank uses to determine rates of interest charged by it for Canadian dollar loans to customers in Canada and designated by the Bank of Montreal as the prime rate;

"project" means any capital project described in section 2.2 and Schedule C;

"Public Authority Use" means a Public Authority use limited to Police Station or Fire Hall;

"replacement housing" has the meaning given to it in section 523D(2.2) of the Vancouver Charter;

"school" means an institution of learning regularly giving instruction to children that is either:

(a) under the jurisdiction of The Board of School Trustees of School District No. 39 (Vancouver) constituted under the *School Act,* or

(b) accepted by the Ministry of Education of the Province of British Columbia, or its successor in function, as providing instruction equivalent to that furnished in the schools referred to in subparagraph (a) above;

"social housing", for the purposes of section 523D(10)(d) of the Vancouver Charter, means rental housing:

(a) in which at least 30% of the dwelling units are occupied by households with incomes below housing income limits, as set out in the current "Housing Income Limits" table published by the British Columbia Housing Management Commission, or equivalent publication;

(b) which is owned by a non-profit corporation, by a non-profit co-operative association, or by or on behalf of the city, the Province of British Columbia, or Canada; and

(c) in respect of which the registered owner or ground lessee of the freehold or leasehold title to the land on which the housing is situate has granted to the city a section 219 covenant, housing agreement, or other security for the housing commitments required by the city, registered against the freehold or leasehold title, with such priority of registration as the city may require;

except that in the HA-2 district; in the area of the FC-1 district located north of National Avenue; in the area of the M-1, I-2, RT-3 and RM-3A districts located north of Venables Street, Malkin Avenue and Prior Street, south of Hastings Street, east of Gore Avenue and west of Clark Drive; in the Downtown-Eastside Oppenheimer district; and in the area of the Downtown district denoted as C2 on Map 1 of the Downtown Official Development Plan; social housing means rental housing:

(d) in which at least one third of the dwelling units are occupied by persons eligible for either Income Assistance or a combination of basic Old Age Security pension and Guaranteed Income Supplement and are rented at rates no higher than the shelter component of Income Assistance;

(e) which is owned by a non-profit corporation, by a non-profit co-operative association, or by or on behalf of the city, the Province of British Columbia, or Canada; and

(f) in respect of which the registered owner or ground lessee of the freehold or leasehold title to the land on which the housing is situate has granted to the city a section 219 covenant, housing agreement, or other security for the housing commitments required by the city, registered against the freehold or leasehold title, with such priority of registration as the city may require.

"surface parking lot" means a parking lot established on the surface of land that has no portion of a building or structure above or below it; and

"temporary building" means a temporary building, structure, or shelter for which a building permit is necessary under the Building By-law.

Table of contents

1.3 The table of contents for this By-law is for convenient reference only, and is not for assistance in interpreting or enforcing this By-law.

Schedules

1.4 The schedules attached to this By-law form part of this By-law.

Severability

1.5 A decision by a court that any part of this By-law is illegal, void, or unenforceable severs that part from this By-law and is not to affect the balance of this By-law.

SECTION 2
LEVY AREA

Levy area

2.1 Council designates that the general area is subject to imposition of a levy under this By-law.

2.2 Development cost levies are imposed under this by-law for the purpose of providing funds to assist the City in paying the capital cost of providing, constructing, altering, or expanding sewage, water, drainage facilities.

SECTION 3
DEVELOPMENT COST LEVIES

Imposition of levies

3.1 Subject to this By-law, Council imposes, on every person entitled to delivery of a building permit authorizing development in the general area, the levies set out in Schedule C.

Waiver for for-profit-affordable housing

3.2 Notwithstanding section 3.1, Council waives the levy otherwise required under Schedule C for construction of for-profit affordable rental housing in accordance with sections 3.1A and 3.1B of the Vancouver Development Cost Levy By-law No. 9755.

General levy

3.3 Schedule C sets out the levies imposed under this By-law, and is based on floor area.

Application of levy to less than four dwelling units

3.4 A levy is payable where a building permit authorizes the construction, alteration, or extension of a building that, after the construction, alteration, or extension, will:

(a) contain less than four self-contained dwelling units;

(b) be put to no other use other than residential use in those dwelling units; and

(c) in the case of an alteration or extension, except for the alteration or extension of a garage into a laneway house, include an addition of 46.5 m^2 or more of floor area.

Alteration or extension of existing building or structure

3.5 If a development consists only of the alteration or extension of an existing building or structure to increase its floor area, except for the alteration or extension of a garage into a laneway house, the levy applies only to the additional floor area.

Staged development

3.6 If a development takes place in stages authorized by separate building permits, a levy is payable, under section 3.3 with respect to each such building permit.

Aggregate levy

3.7 If a development includes uses, or buildings or structures, to which different levies apply, the levy for the development is to be the aggregate of them.

Payment of levy by installments

3.8 Rather than paying a levy upon issuance of a building permit, the person responsible for payment of the levy, at the time and as a condition of issuance of the building permit, may:

(a) pay $100.00 to the city; and

(b) post with the city an irrevocable and unconditional letter of credit for the balance of the amount of the levy, together with an amount equal to one year's interest thereon at a rate that is two percent above the prime rate on the day of application for the building permit, for a term of not less than 12 months.

Realization on security

3.9 The city may realize on the letter of credit referred to in section 3.8, or on any renewal of it:

(a) within 30 days before the date of its expiry unless, before the date 11 months following the date of its issuance, the person who posted the letter of credit or its renewal posts with the city a renewal or further renewal of the letter of credit on the same terms and conditions as the original letter of credit except that fixing of the prime rate is to occur on the day of renewal or further renewal of the letter of credit; or

(b) if the levy that it secures remains unpaid on the date of issuance of the occupancy permit permitting occupancy of the development in respect of which the levy is payable.

Default in payment of levy installments

3.10 If a levy payable by installments under section 3.8 of this By-law or any portion of it remains unpaid after its due date, Council authorizes the Collector of Taxes to insert the amount of the levy, or unpaid portion, in the real property tax roll as a charge imposed with respect to the parcel or parcels in relation to which the city issued the building permit.

Change in use of excluded floor area

3.11 If the conversion of space that is not floor area to a use that makes it floor area occurs Council deems such space to be floor area as at the date of issuance of the building permit authorizing its development.

Change in use of excluded land or development

3.12 If the development or change of use of land or a building or structure, that is exempt from a levy, makes it subject to a levy, such levy is due and payable at the time of such development, alteration, or change of use.

SECTION 4
ENACTMENT

Force and effect

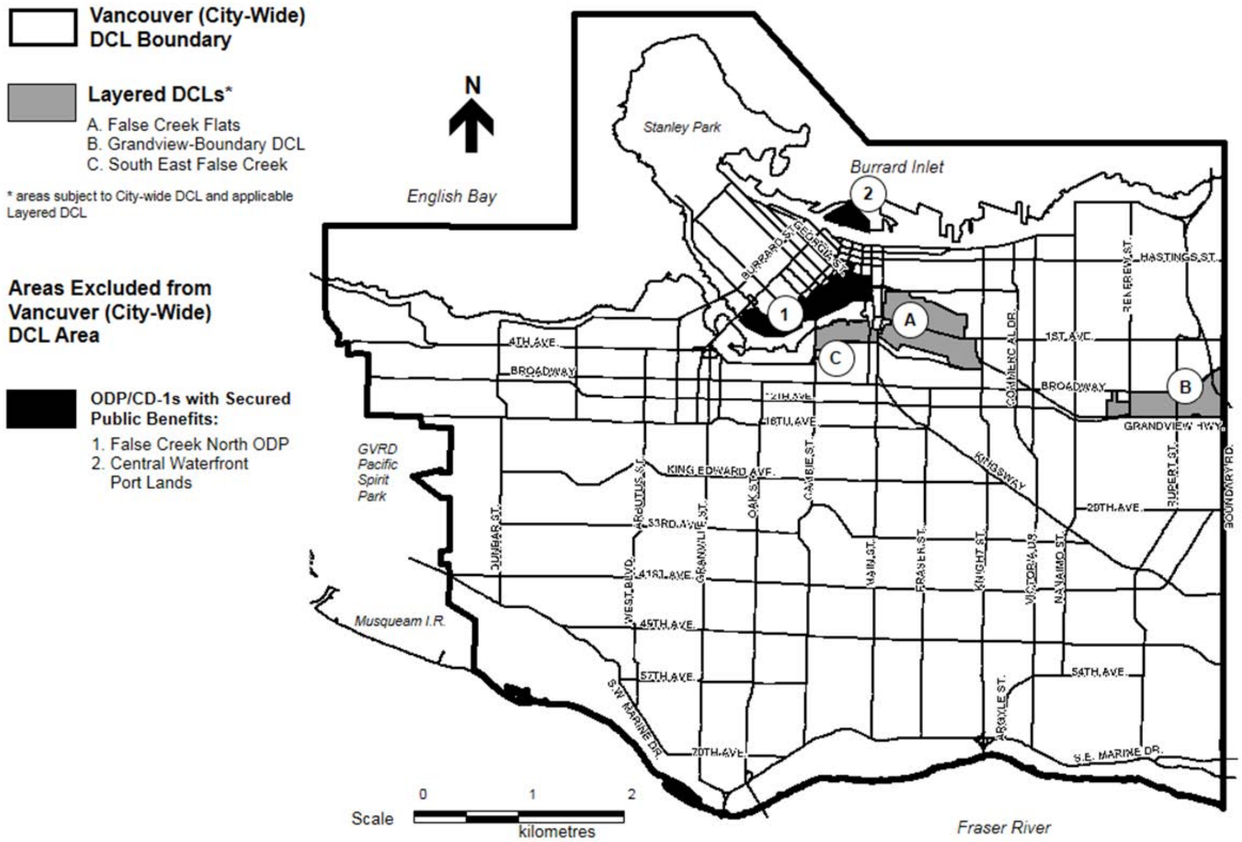
4.1 This By-law is to come into force and take effect on the date of its enactment.

ENACTED by Council this day of ,
2018

Mayor

City Clerk

SCHEDULE "A" - PART 1



note: boundaries of highlighted areas area approximate and shown for illustrative purposes only.

SCHEDULE A - PART 2

Those areas of land listed in Column 1, and designated or described,
as at January 28, 2000, in the by-laws listed in Column 2

Column 1	**Column 2**
Lands zoned CD (Comprehensive Development District) and subject to the False Creek North Official Development Plan	By-law No. 6650

SCHEDULE A - PART 3

PID 024-041-238
Lot B

PID 024-041-246
Lot C

PID 024-041-254
Lot D

Public Harbour of Burrard Inlet
New Westminster District
Plan LMP36518

SCHEDULE "C"

Schedule C - City-wide Utilities Development Cost Levy Rates

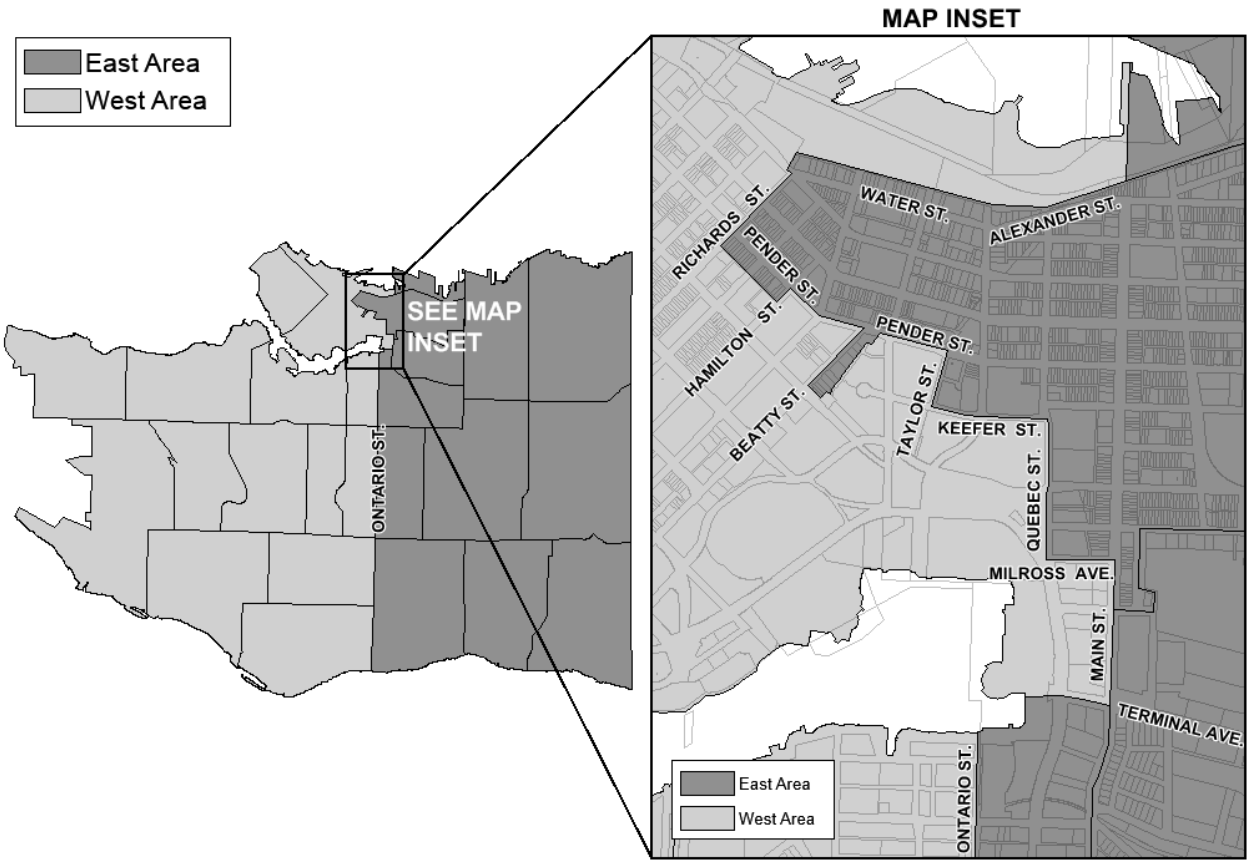
Category/Use	Total Development Cost Levy	Unit/ area cost	Rate Effective September 30, 2018
RESIDENTIAL			
Residential at or below 1.2 FSR and Laneway House	$ 24.97	Per m^2	**$ 24.97**
Medium Density Residential Above 1.2 to 1.5 FSR	$ 54.25	Per m^2	**$ 54.25**
Higher Density Residential Above 1.5 FSR (West Area)	$ 108.61	Per m^2	**$ 108.61**
Higher Density Residential Above 1.5 FSR (East Area)*		Per m^2	**$ 54.30**
NON-RESIDENTIAL			
Industrial (I-2, M-1, M-1A, M-1B, M-2, MC-1, MC-2 Zoning Districts)	$ 21.74	Per m^2	**$ 21.74**
Mixed Employment (Light Industrial) (IC-1, IC-2, IC-3, I-1, I-3, I-4, I-1A, I-1B Zoning Districts)	$ 40.69	Per m^2	**$ 40.69**
Commercial & Other	$ 54.25	Per m^2	**$ 54.25**

* 50% of levy in 2018 applied to East Area. Rate to be implemented in full by September 30, 2020. East Area and West Area determined by Appendix A.

Category/Use	Rate	Unit/ Area cost
CULTURAL, INSTITUTIONAL, SOCIAL		
School use	$5.49	Per m2
Parking Garage	$1.08	Per m2
Childcare Use	$10.00	Per Building Permit
Temporary Building	$10.00	
Community Energy Centre	$10.00	
Artist Studio Class A & Class B	$10.00	
Community Centre/Neighbourhood House	$10.00	
Library	$10.00	
Public Authority Use	$10.00	
Social Service Centre	$10.00	

Appendix A

Vancouver Map - East and West Areas



Area Specific Development Cost Levy By-law No. 9418

**A By-law to amend
Area Specific Development Cost Levy By-law No. 9418
regarding Grandview Boundary levies**

THE COUNCIL OF THE CITY OF VANCOUVER, in public meeting, enacts as follows:

1. This By-law amends the indicated provisions of Area Specific Development Costs Levy By-law No 9418.

2. In section 3.1A:

   a. Council strikes section 3.1A(e);

   b. Council renumbers s. 3.1A (f) as s. 3.1A (e); and

   c. Council adds the word "and" at the end of section 3.1A (d).

3. In section 3.1B, Council strikes section 3.1B (f) and replaces it with:

   "(f) all units of all unit types must meet all the requirements in section 3.1A (a) and (b), and all units of all unit types must be used to calculate the averages specified in 3.1A (c) and (d) , except that a building that contains studio units, one bedroom units and two bedroom units that meet all requirements in 3.1A (a),(b),(c),and (d) qualifies for a waiver for all those units in each of those unit types on a pro rata basis even if the building contains three bedroom units that do not meet the requirements in section 3.1A (d), in which case none of the 3 bedroom units qualifies for the waiver. "

4. In section 3.8 Council strikes "$9.78" and replaces it with "$0.00".

5. In section 3.8 (a) Council strikes "$39.14" and replaces it with "$0.00".

6. In sections 3.8((b) and 3.8(c) Council strikes "$1.08" and replaces it with "$0.00".

7. In sections 3.8 (d), 3.8(e), 3.8(f), 3.8(g), 3.8(h), 3.8(i) and 3.8(j) Council strikes "$10.00" and replaces them all with "$0.00".

8. A decision by a court that any part of this By-law is illegal, void, or unenforceable severs that part from this By-law, and is not to affect the balance of this By-law.

9. This By-law is to come into force and take effect upon enactment, except for sections 4, 5, 6 and 7, which are to come into force and take effect on September 30, 2018.

ENACTED by Council this day of , 2018

Mayor

City Clerk

Vancouver (City-wide) Development Cost Levy By-law No. 9755

A By-law to amend
Vancouver Development Cost Levy By-law No. 9755
Regarding the for-profit affordable rental housing waiver

1. THE COUNCIL OF THE CITY OF VANCOUVER, in public meeting, enacts as follows:

2. This By-law amends the indicated provisions of By-law No. 9755.

3. In section 3.1A:

   a. Council strikes section 3.1A (e);

   b. Council renumbers section 3.1A (f) as section 3.1A (e); and

   c. Council adds the word "and" at the end of section 3.1A (d).

4. In section 3.1B, Council strikes section 3.1B (f) and replaces it with:

   "(f) all units of all unit types must meet all the requirements in section 3.1A (a) and (b), and all units of all unit types must be used to calculate the averages specified in 3.1A (c) and (d) , except that a building that contains studio units, one bedroom units and two bedroom units that meet all requirements in 3.1A (a),(b),(c),and (d) qualifies for a waiver for all those units in each of those unit types on a pro rata basis even if the building contains three bedroom units that do not meet the requirements in section 3.1A (d), in which case none of the 3 bedroom units qualifies for the waiver. "

5. A decision by a court that any part of this By-law is illegal, void, or unenforceable severs that part from this By-law, and is not to affect the balance of this By-law.

6. This By-law is to come into force and take effect upon enactment.

ENACTED by Council this day of , 2018

Mayor

City Clerk

Appendix E

Prepared for

CITY OF VANCOUVER

UTILITIES DEVELOPMENT COST LEVY

Final Report

URBAN systems

PREPARED FOR:

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URBAN systems

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EXECUTIVE SUMMARY

Background

Development cost levies (DCLs) are charges imposed on development to fund growth-related capital and parks projects. The City of Vancouver (the City) currently collects DCLs for replacement housing, utilities (water, sanitary, and drainage), transportation, parks, and childcare facilities. DCLs are a useful financing tool because they help: ensure that "growth pays for growth"; allocate costs fairly across multiple developers; and, secure funding for growth-related projects. Accordingly, DCLs are key to the City's long-term financial sustainability.

In 2017, the City-wide DCL program was expanded to include utilities as a first step towards helping the City fund growth-related utilities infrastructure. That update was considered only a first step for two main reasons:

- Only high-level programmatic costs were defined (i.e., no specific capital projects or costs were identified)
- The growth program was not fully funded (i.e., $120 Million in identified costs was left unfunded)

The City initiated this update to address these limitations and to incorporate newly available information on anticipated growth and infrastructure needs (primarily from the Cambie Corridor Plan, which was approved in May 2018). The overarching purpose of this update is to improve transparency and certainty for developers regarding how growth-related capital costs will be funded.

2018 Updates

This DCL update involved the following:

- Identifying specific growth-related utilities projects – the Utilities DCL program now includes $488 Million in specific projects and $55 Million in programmatic growth-related DCL recoverable costs
- Updating growth estimates to reflect newly approved land use plans (e.g., Cambie Corridor)
- Updating project costs to reflect current construction and land costs
- Integrating the Grandview-Boundary layered DCL (i.e., the Grandview-Boundary layered DCL has been removed and rolled into the City-wide Utilities DCL)
- Establishing a growth program that is fully funded by DCLs (99%)

Utilities DCL Program

The Utilities DCL Program (i.e., list of projects) identifies approximately $1 Billion in total infrastructure costs. Approximately half of total costs are allocated to development as many of these projects provide a benefit to both existing and future residents. The non-growth portion would be funded by the City through other tools (e.g., utility fees, property taxes). The City also provides support through what is called the "Municipal Assist Factor", which has been set at 1% of costs allocated to development. The DCL recoverable (i.e., the amount to be collected through DCLs) is $543 Million. A summary of the Utilities DCL program costs is provided below.

Table ES 1
Utilities DCL Program Costs

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

[1] Includes funding from other sources such as re-zoning conditions and Federal and Provincial grants.

The new Utilities DCL program replaces the interim utilities program that is in the current City-wide DCL.

Proposed Utilities DCL Rates

Proposed Utilities DCL rates as determined by this update are provided in Table ES 2.

Table ES 2
Proposed Utilities DCL Rates ($/sq.ft.)

Land Use	Utilities Development Cost Levy [1]
Residential At or below 1.2 FSR and Laneway House	$2.32
Medium Density Residential Above 1.2 to 1.5 FSR	$5.04
Higher Density Residential Above 1.5 FSR	$10.09
Industrial (I-2, M-1, M-1A, M-1B, M-2, MC-1, MC-2 Zoning Districts)	$2.02
Mixed Employment (Light Industrial) (IC-1, IC-2, IC-3, I-1, I-3, I-4, I-1A, I-1B Zoning Districts)	$3.78
Commercial & Other	$5.04

[1] The Utilities DCL By-Law will include the same DCL waivers and reduced DCL rates as those provided in the City's other DCL District By-laws.

Application of the Utilities DCL

The Utilities DCL will apply City-wide and will be levied in conjunction with the City-wide DCL (i.e., developers will pay both the Utilities DCL and the City-wide DCL). The utilities portion of the current City-wide DCL will be removed on September 30, 2019 after the 12 months of DCL rate protection expires. The proposed Utilities DCL rates will be effective September 30, 2018.

Total proposed DCL rates (i.e., the Utilities DCL rates plus the existing City-wide DCL rates) are provided in Table ES 3. Residential DCL rates increase by 50% and non-residential rates increase by 20%.

Table ES 3
Proposed DCL Rates – Total ($/sq.ft.)

Land Use	Current (Sept 2018) Total DCL[1, 2]	Proposed Total DCL[2,3]
Residential At or below 1.2 FSR and Laneway House	$4.03	$6.01
Medium Density Residential Above 1.2 to 1.5 FSR	$8.66	$12.97
Higher Density Residential Above 1.5 FSR	$17.34	$25.97
Industrial (I-2, M-1, M-1A, M-1B, M-2, MC-1, MC-2 Zoning Districts)	$6.91	$8.35
Mixed Employment (Light Industrial) (IC-1, IC-2, IC-3, I-1, I-3, I-4, I-1A, I-1B Zoning Districts)	$13.01	$15.70
Commercial & Other	$17.34	$20.92

[1] In 2017, Council chose to phase in City-wide DCLs at 50% of recommended rates. The City is expected to adopt the full recommended DCL rates effective September 30, 2018. The full rates are used for comparison purposes.

[2] As per current City practice, DCL rates are adjusted annually to account for inflation. These rates do not include future annual DCL inflationary adjustments.

[3] The Utilities DCL By-Law will include the same DCL waivers and reduced DCL rates as those provided in the City's other DCL District By-laws.

PART 1. INTRODUCTION

1.1 Purpose

Development cost levies (DCLs) are charges imposed on development to fund growth-related capital projects. The City of Vancouver (the City) currently collects DCLs for replacement housing, utilities (water, sanitary, and drainage), transportation, parks, and childcare facilities. DCLs are a useful financing tool because they help: ensure that "growth pays for growth"; allocate costs fairly across multiple developers; and secure funding for growth-related projects. Accordingly, DCLs are key to the City's long-term financial sustainability.

In 2017, the City-wide DCL program was expanded to include utilities as a first step towards helping the City fund growth-related utility infrastructure. That update was considered only a first step for two main reasons:

- Only high-level programmatic costs were defined (i.e., no specific capital projects or costs were identified)
- The program was not fully funded - $120 Million in identified costs was left unfunded

The City initiated this update to address these limitations and to incorporate newly available information on anticipated growth and infrastructure needs (primarily from the Cambie Corridor Plan, which was approved in May 2018). The overarching purpose of this update is to improve transparency and certainty for developers regarding how growth-related capital costs will be funded.

1.2 Utilities DCLs

Prior to 2017 when a utilities component was added to the City-wide DCL, the City relied on negotiations at the time of re-zoning to secure needed utility infrastructure. The City also relied on latent available capacity in existing pipes to defer upgrading infrastructure. As the scale and complexity of development has increased, so too has the scale and complexity of related infrastructure needs. Given these pressures, the City now needs to take full advantage of all available tools to finance these utility projects. The new Utilities DCL is one tool that will significantly improve the City's ability to deliver growth-related utility infrastructure. Nearly all major municipalities in Canada have DCLs (or their equivalent) for utilities because they are considered one of the most stable and fair ways to fund growth needs.

Development is expected to impact the City's utility infrastructure in a number of ways:

- **Water –** More people living and working in the City means more water use in the City. Water is needed not only for domestic uses (e.g., bathing, washing dishes, drinking), but also for fighting fires. The water system needs to have enough capacity to not only deliver the water people need on a daily basis, but to also deliver adequate flows during a fire. The Utilities DCL will help fund needed improvements to the City's water system to meet increased demand from growth.

- **Sanitary Sewer –** If more people live/work in the City, more wastewater is generated. The City is currently in the process of separating its combined sewers (stormwater and wastewater are currently conveyed in the same pipe in some areas of the City) to improve service for all City residents. Growth increases demands on the combined system, and therefore: a) expedites the need to separate combined sewers; and b) necessitates increased system capacity. This Utilities DCL will help fund those needed upgrades.
- **Drainage & Green Infrastructure –** Additional development increases demands on the City's drainage and green infrastructure systems. As neighbourhoods densify, imperviousness increases. Increased imperviousness results in more runoff entering the City's drainage system and can also result in more pollutants entering the system. Development also has a potential impact on groundwater as deeper excavations intercept the groundwater table. The Utilities DCL will fund projects to address these needs.

Each of the City's water, sanitary sewer, drainage and green infrastructure systems are City-wide systems. All development throughout the City either directly or indirectly benefits from planned upgrades. The Utilities DCL is therefore levied City-wide, an approach that is consistent with Provincial best practices and approaches in the vast majority of other communities in the region.

As per the Vancouver Charter, DCLs cannot be used to fund ongoing operations and maintenance or infrastructure renewal that does not have a growth component. Accordingly, the new Utilities DCL will only be used to fund growth-related utility infrastructure needs.

1.3 DCL Update Process

The new City-wide Utilities DCL was developed based on the following process:

- **Step 1: Estimate Growth** – The first step in the DCL update was to estimate growth to 2026 (this time horizon is consistent with the existing City-wide DCL). Because land uses differ in terms of their infrastructure needs, growth estimates were developed for various residential densities as well as for industrial, commercial, and mixed-use land uses.
- **Step 2: Identify Infrastructure Needs** – The second step in the DCL update was to identify utility infrastructure needed to support the growth estimated in Step 1. Only projects that were needed for growth, needed by 2026, and served more than a single development were included in the DCL program.

- **Step 3: Allocate Benefit and apply Municipal Assist Factor** – Most DCL-eligible projects also provide a benefit to existing residents. For those projects, only a portion of the project costs will be recovered through DCLs. The City also contributes an amount of the costs allocated to growth by applying a municipal assist factor (MAF). Total costs less the amount allocated to existing residents and the MAF results in DCL recoverable costs (i.e., the costs to be recovered by growth).
- **Step 4: Calculate Preliminary DCL Rates** – The growth estimates were combined with the DCL recoverable project costs to yield a preliminary DCL rate.
- **Step 5: Consult the Development Community** – The preliminary rates were presented to the development community to obtain their feedback.
- **Step 6: Council Considers and Adopts By-Law** – The final step in the DCL update is for Council to formally adopt a new Utilities DCL By-Law.

Throughout this update process, the DCL program was developed to be consistent with the following legislation, plans, and policy guides:

- Vancouver Charter
- City-wide Financing Growth Policy (2003)
- City-wide DCL Update (2017)
- City land use plan, including the Cambie Corridor Plan, 2018
- City utility servicing plans and strategies, including
- B.C. Development Cost Charges Best Practices Guide

PART 2. DCL KEY ELEMENTS

While the City is not required to obtain the approval of the Inspector of Municipalities prior to adopting a DCL by-law, the City has opted to follow the Development Cost Charge Best Practice Guide (prepared by the Ministry of Municipal Affairs and Housing). The Best Practices Guide identifies key elements that should be considered when determining DCL rates. Table 1 outlines the key elements, decisions and supporting rationale used in this update. The table also indicates whether the proposed approach aligns with the Best Practice Guide.

Table 1
DCL Key Elements

Key Element	Proposed DCL Update	Rationale	Aligns with Best Practices Guide?
Time Frame	8 Years	Aligns with land use planning and capital planning time frames and the timeframe for the City-wide DCL	✓
City-wide or area-specific charge	City-wide	All DCL projects are components of City-wide infrastructure systems and therefore provide a City-wide benefit	✓
Grant Assistance	None	No identified DCL projects require grant funding	✓
Developer Contribution	None	No identified DCL projects include a developer contribution	✓
Interim Financing	None	No financing is included on any DCL projects	✓
Benefit Allocation	10-100%	• Projects less than 100% reflect benefit to existing and future development • Projects at 100% provide exclusive benefit to new development	✓
Municipal Assist Factor	All infrastructure types – 1%	Vancouver is contributing the minimum recommended assist factor to ensure the long- term financial sustainability of the City	✓
Units of charge	Per square foot of gross floor area	Per square foot of gross floor area is used for all land uses as impact on infrastructure is expected to correlate with floor space	✓

PART 3. GROWTH ESTIMATES AND EQUIVALENCIES

Growth estimates to 2026 were provided by the City based on the City-wide Development Capacity Model. The model reflects all approved land use plans as of June 1st, 2018, including the recently approved Cambie Corridor Plan. See **Appendix A** for further details on growth estimates.

3.1 Residential Growth Estimates

The City expects to grow by 70,000 people by 2026. Consistent with the approach used in the current City-wide DCL, the Utilities DCL calculation is based on gross floor area of anticipated residential development. The Utilities DCL will also be levied on the same land use categories as the current City-wide DCL.

The Vancouver Charter mandates DCL exemptions for certain types of development, the most significant of which is social housing (see Section 7.1 for a complete discussion of DCL exemptions). The DCL calculation is based on growth estimates net of anticipated social housing floor space. Table 2 provides a summary of residential growth estimates used in the DCL calculation.

Table 2
City-wide Residential Growth Projections (to 2026)

Land Use	Total New Development[1]	
	Gross Floor Area (ft^2)	Gross Floor Area Net of DCL Exemptions (ft^2)[2]
Residential At or below 1.2 FSR and Laneway House	16,790,665	16,790,665
Medium Density Residential Above 1.2 to 1.5 FSR	2,787,404	2,787,404
Higher Density Residential Above 1.5 FSR	48,185,995	47,387,915
Total Residential Growth	**67,764,065**	**66,965,984**

[1] Includes development that replaces existing development.
[2] These estimates are used in the DCL calculation.

3.2 Non - Residential Growth Estimates

By 2026, the City expects to add another 35,000 jobs. Consistent with the approach used in the current City-wide DCL, the Utilities DCL calculation is based on gross floor area of anticipated non-residential development. The Utilities DCL will also be levied on the same land use categories as the current City-wide DCL. Estimated future growth for non-residential land uses is noted in Table 3.

Table 3
City-wide Non-Residential Growth Projections (to 2026)

Development Type	Total New Development (ft ^{2} of gross floor area)[1]
Industrial (I-2, M-1, M-1A, M-1B, M-2, MC-1, MC-2 Zoning Districts)	957,182
Mixed Employment (Light Industrial) (IC-1, IC-2, IC-3, I-1, I-3, I-4, I-1A, I-1B Zoning Districts)	3,828,729
Commercial & Other	10,996,432

[1]Includes development that replaces existing development.

3.3 Weighting Factors

Different land uses are expected to generate different levels of infrastructure needs per square foot of gross floor area. To help ensure costs are allocated across the various land uses fairly, this difference is accounted for by weighting the raw growth estimates. This weighting factors used in the Utilities DCL calculation generally reflect those used in the current City-wide DCL. The non-residential weighting factors have been adjusted downwards to reflect a lower impact (per square foot of gross floor area) on infrastructure needs. The use of weighting factors like those in Table 4 is a standard approach used by communities in British Columbia who levy development cost charges. See the DCL calculation sheet in **Appendix B** for information on how the weighting factors are incorporated into the DCL calculation.

Table 4
Weighting Factors

Land Use	Weighting Factor (per ft^{2})
Residential At or below 1.2 FSR and Laneway House	0.230
Medium Density Residential Above 1.2 to 1.5 FSR	0.5
Higher Density Residential Above 1.5 FSR	1
Industrial (I-2, M-1, M-1A, M-1B, M-2, MC-1, MC-2 Zoning Districts)	0.2
Mixed Employment (Light Industrial) (IC-1, IC-2, IC-3, I-1, I-3, I-4, I-1A, I-1B Zoning Districts)	0.375
Commercial & Other	0.5

PART 4. DCL PROJECTS AND COSTS

4.1 DCL Eligible Projects

The DCL program (i.e., list of DCL projects) was developed by the City based on recently completed engineering analysis. To be DCL eligible, a project must be needed to serve growth and provide a benefit to more than one developer. Projects that meet these criteria and are planned for construction by 2026 were included in the DCL project list. Growth-related projects that the City does not expect to construct by 2026 fall outside of the DCL time horizon and are, therefore, not included in this DCL program.

Table 5 provides a summary of the methodologies used to identify the City's utility infrastructure growth needs.

Table 5
Utility Upgrades – Methodology

Infrastructure Types	Methodology
Sewers (Sanitary & Drainage)	• A 2026 population growth scenario was assessed using a high level sewer system model. Segments of sanitary sewers to be upgraded to support the new residents or jobs were identified. • 2026 population growth was distributed by block and by neighbourhood. Imperviousness due to greater site coverage associated with more intense land uses results in more runoff and pollutants entering the drainage system. Neighbourhood improvements for drainage pipe upgrades were identified.
Green Infrastructure	2026 population growth was distributed by block and by neighbourhood. Imperviousness due to greater site coverage associated with more intense land uses results in more runoff and pollutants entering the drainage system. Neighbourhood improvements for green infrastructure were identified.
Water	The forecasted 2026 population growth scenario was assessed by the City's hydraulic model to determine pipe segments that would need to be replaced to support the increased fire flow requirements and peak domestic demands.

Table 6 lists program components. All of the upgrades are part of City-wide systems. See **Appendix B** for a detailed list of DCL utilities projects to 2026.

Table 6
Utilities DCL Program Components

Infrastructure Class	Program Components
Sewers (Sanitary & Drainage)	• Pump Stations • Trunk & neighbourhood sanitary/drainage pipes
Green Infrastructure	• Swales • Neighbourhood green infrastructure • Laneway retrofits
Water	• Distribution mains • Transmission mains • System modifications

4.2 Benefit Allocation

Given that the City is a built-out urban community experiencing infill redevelopment, most DCL eligible utilities projects provide benefit to both existing and new development. Only the portion of costs allocated to development can be included in the DCL calculation. To allocate benefit, the City accounted for: a) the benefit that existing users would receive from upgrading an existing pipe that is already slated for renewal (i.e., the benefit from an extended service life); and b) that upgrading a pipe to serve growth expedites the City's renewal program and imposes costs on existing residents earlier than would have otherwise been required. Table 7 provides a summary of the benefit allocations by infrastructure type.

Table 7
Benefit Allocations

Service	Benefit Allocation
Sewers (Sanitary & Drainage)	10-100 %
Green Infrastructure	25-100%
Water	75-100%

4.3 Municipal Assist Factor

Like all other municipalities in British Columbia, the City agrees to pay for a portion of growth-related costs through what is called the Municipal Assist Factor (MAF). The City has set the MAF at 1% of growth-related costs for utilities. Most communities use an MAF of 1%.

4.4 DCL Program Costs

The Utilities DCL capital costs reflect current construction and land costs. No interest on long-term debt is included in the DCL program. The DCL recoverable is calculated based on the total capital costs less municipal contributions through the Municipal Assist Factor and non-growth-related capital costs. The full DCL program and calculations are included in **Appendix B**. An overview of the DCL costs by infrastructure type is provided in Table 8.

Table 8
DCL Program Overview and Capital Costs[1]

Service	Total Capital Costs	Benefit Allocation	Municipal Assist Factor	DCL Recoverable Program Costs	Municipal Costs [2]
Sewers (Sanitary & Drainage)	$897.8 M	10-100 %	1%	$430.1 M	$467.7 M
Green Infrastructure	$100.8 M	25-100%	1%	$90.5 M	$10.3 M
Water	$23.1 M	75-100%	1%	$22.8 M	$0.3 M
Total	**$1,021.6 M**	**n/a**	**n/a**	**$543.3 M**	**$478.3 M**

[1] Costs may not add exactly due to rounding.

[2] Includes municipal assist factor and portion allocated to existing development.

PART 5. UTILITIES DCL RATES

5.1 Proposed Rates

If approved by Council, the proposed Utilities DCL will be effective September 30, 2018. A comparison of current DCL utilities (included in the existing City-wide program) and proposed Utilities DCL rate is provided in Table 9.

Table 9
Utilities DCL Rate Comparison ($/sq.ft.)

Land Use	Utilities Portion of DCL Current (Sept 2018)[1, 2]	Proposed Utilities Development Cost Levy[3]	Change
Residential At or below 1.2 FSR and Laneway House	$0.34	$2.32	+ $1.98
Medium Density Residential Above 1.2 to 1.5 FSR	$0.73	$5.04	+$4.31
Higher Density Residential Above 1.5 FSR	$1.46	$10.09	+$8.63
Industrial (I-2, M-1, M-1A, M-1B, M-2, MC-1, MC-2 Zoning Districts)	$0.58	$2.02	+$1.44
Mixed Employment (Light Industrial) (IC-1, IC-2, IC-3, I-1, I-3, I-4, I-1A, I-1B Zoning Districts)	$1.09	$3.78	+$2.69
Commercial & Other	$1.46	$5.04	+$3.58

[1] In 2017, Council chose to phase in City-wide DCLs at 50% of recommended rates. The City is expected to adopt the full recommended DCL rates effective September 30, 2018. The full rates are used for comparison purposes.

[2] As per current City practice, DCL rates are adjusted annually to account for inflation. These rates do not include future annual DCL inflationary adjustments.

[3] The Utilities DCL By-Law will include the same DCL waivers and reduced DCL rates as those provided in the City's other DCL District By-laws.

Total current and proposed DCLs collected for replacement housing, utilities (water, sanitary, and drainage), transportation, parks, and childcare facilities are provided in Table 10.

Table 10
Proposed Total DCL Rate Comparison ($/sq.ft.)

Land Use	Current (Sept 2018) Total DCL[1, 2]	Proposed Total DCL (Sept 2018)[2,3]
Residential At or below 1.2 FSR and Laneway House	$4.03	$6.01
Medium Density Residential Above 1.2 to 1.5 FSR	$8.66	$12.97
Higher Density Residential Above 1.5 FSR	$17.34	$25.97
Industrial (I-2, M-1, M-1A, M-1B, M-2, MC-1, MC-2 Zoning Districts)	$6.91	$8.35
Mixed Employment (Light Industrial) (IC-1, IC-2, IC-3, I-1, I-3, I-4, I-1A, I-1B Zoning Districts)	$13.01	$15.70
Commercial & Other	$17.34	$20.92

[1] In 2017, Council chose to phase in City-wide DCLs at 50% of recommended rates. The City is expected to adopt the full recommended DCL rates effective September 30, 2018. The full rates are used for comparison purposes.

[2] As per current City practice, DCL rates are adjusted annually to account for inflation. These rates do not include future annual DCL inflationary adjustments.

[3] The Utilities DCL By-Law will include the same DCL waivers and reduced DCL rates as those provided in the City's other DCL District By-laws.

5.2 In-Stream Applications

The new Utilities DCL rates will be in force immediately after the Utilities DCL By-Law is adopted; however, the Vancouver Charter provides special protection from rate increases for development applications that are submitted prior to the adoption date.

In-stream protection applies to building permit applications received prior to the adoption of the new Utilities DCL By-Law. Protection is also extended to rezoning and development permit applications that are submitted prior to the adoption of the new Utilities DCL By-Law and that will result in a building permit within 12 months of the adoption of the Bylaw. Section 523 D (8.2 and 8.3) outline the criteria that must be met for an application to qualify for in-stream protection.

If an application meets the required criteria and is submitted prior to the adoption of the new Utilities DCL By-Law, it will be provided protection from rate increases for a period of twelve months after the adoption date.

PART 6. STAKEHOLDER CONSULTATION

On July 25, 2017, Council approved the City-wide DCL, which included an introductory utilities component. The City has been engaging with the development industry since March 2018 on the Utilities DCL program through in-person and online updates as shown in Table 11.

Table 11
Utilities DCL Timeline

Date	Event
Mar 15-23, 2018	• Project website launched • DCL bulletin updated • Letters sent to development industry
Apr 11, 2018	Update to UDI Liaison
June 5, 2018	Preliminary rates released
June 7, 2018	• Public consultation event • UDI Liaison update
June 15-22, 2018	Feedback from development industry received
June 28, 2018	Public meeting on Cambie Corridor Utilities Servicing Plan and Financing Strategy
July 11, 2018	Council for by-law adoption
Sept 30, 2018 (anticipated)	• DCL by-law enacted • DCL rate protection begins
Sept 30, 2019 (anticipated)	DCL rate protection ends

The City requested written feedback by June 15, 2018 from stakeholders on the proposed DCL program and rates. In response to stakeholder requests, the City accepted late comments.

Proposed DCL rates will be presented to Council on July 11, 2018 for decision.

PART 7. DCL IMPLEMENTATION

7.1 Bylaw Exemptions

The Vancouver Charter mandates DCL exemptions for the following types of development:

- Places of worship exempt from taxation;
- Repairs or renovations;
- Residential development where unit sizes are no larger than 29 sq.m.; and
- Social housing.

See Section 523D of the Vancouver Charter for further details on exemptions. The City has opted to also provide a DCL exemption for repairs or renovations that do not result in additional floor area (note: the City charges DCLs on additional floor area due to renovations and on the full floor area where a garage is converted into a laneway house).

The Vancouver Charter also provides an exemption for residential developments with fewer than 4 dwelling units; however, the Vancouver Charter also allows the City to adopt a by-law to charge this type of development. Consistent with the City-wide DCL, the Utilities DCL will apply to residential developments with fewer than four self-contained dwelling units.

7.2 DCL Waivers and Reductions

The Vancouver Charter provides the City with the discretionary authority to waive or reduce DCLs for certain types of development to promote affordable housing and low impact development. The City current provides a waiver for for-profit-affordable housing in the City-wide DCL and plans to extend this waiver to the Utilities DCL. Development must meet specific criteria to qualify for the waiver as stipulated in the Utilities DCL By-law. The City will be reporting back on the future of the DCL waiver program in early 2019. If no report back occurs, the City will phase out waivers by 2020.

7.3 Collection of Charges – Building Permit

The DCL is collected as a condition of Building Permit issuance, and the levy is calculated at the rate in effect on the date of issuance.

APPENDIX A

Growth Estimates

Appendix A-1
City of Vancouver Gross Floor Area Estimates
2019 - 2026

	2019-2026 Gross Residential Floor Area (Replacement & Net New)				2019-2026 Gross Job Floor Area (Replacement & Net New)		
Geography	RS Gross	Townhouse	Apartment	Total	Commercial	Industrial	Total
Local Areas	16,790,665	2,787,404	48,185,995	67,764,065	10,996,432	4,785,911	15,782,342
Arbutus Ridge	1,463,176	-	588,974	2,052,150	384,634	-	384,634
Downtown (including Stanley Park)	-	-	6,899,380	6,899,380	6,315,676	-	6,315,676
Dunbar-Southlands	2,415,455	-	240,702	2,656,157	43,326	-	43,326
Fairview	-	-	902,253	902,253	455,010	22,658	477,668
Grandview-Woodland	73,676	-	144,093	217,770	8,588	234,652	243,240
Hastings-Sunrise	909,192	-	216,472	1,125,664	131,279	-	131,279
Kensington-Cedar Cottage	692,136	131,643	761,587	1,585,366	(13,458)	-	(13,458)
Kerrisdale	1,591,193	-	492,192	2,083,385	88,793	-	88,793
Killarney	691,666	-	2,744,979	3,436,645	186,020	-	186,020
Kitsilano	506,346	-	427,544	933,890	91,822	-	91,822
Marpole	709,370	448,310	6,758,562	7,916,242	58,774	319,850	378,624
Mount Pleasant	-	-	2,730,019	2,730,019	52,860	249,258	302,117
Oakridge	1,124,753	811,298	7,111,204	9,047,254	1,686,618	-	1,686,618
Renfrew-Collingwood	924,859	193,743	1,017,051	2,135,653	902,771	-	902,771
Riley Park	823,680	300,096	4,503,618	5,627,394	300,753	-	300,753
Shaughnessy	860,514	73,801	442,706	1,377,021	(3,046)	-	(3,046)
South Cambie	354,192	828,514	6,960,759	8,143,466	279,970	-	279,970
Strathcona	-	-	1,583,918	1,583,918	154,103	3,959,493	4,113,596
Sunset	1,134,214	-	213,968	1,348,181	(68,885)	-	(68,885)
Victoria-Fraserview	1,265,116	-	(50,985)	1,214,131	416	-	416
West End	-	-	3,413,484	3,413,484	(56,088)	-	(56,088)
West Point Grey	1,251,128	-	83,515	1,334,643	(3,504)	-	(3,504)

Source:
City of Vancouver May 9, 2018

Appendix A-2
City of Vancouver Total Estimated New Development Analysis

Land Use	TOTAL ESTIMATED NEW DEVELOPMENT		TOTAL ESTIMATED GROWTH LESS EXEMPTIONS[2]	
	2019-2026[1]	2020-2026	2019-2026[1]	2020-2026[3]
Low density residential	16,790,665	14,691,832	16,790,665	14,691,832
Medium density residential	2,787,404	2,692,471	2,787,404	2,692,471
High density residential	48,185,995	42,579,136	47,387,915	41,880,816
Industrial (Heavy)	957,182	837,534	957,182	837,534
Mixed Employment (Light Industrial)	3,828,729	3,373,794	3,828,729	3,373,794
Commercial and Other	10,996,432	9,750,256	10,996,432	9,750,256
Total	**83,546,407**	**73,925,023**	**82,748,327**	**73,226,703**

Source:
City of Vancouver May 28, 2018, analysis by Urban Systems Ltd.

Notes:
[1] RZ approved projects are assumed to move forward in 2019
[2] Total estimated growth is reduced by anticipated social housing units that are exempt from DCL when criteria set out by the City is met. Revised growth estimates account for anticipated 290 units per year with average unit size of 344
[3] Growth estimates used in DCL calculations

APPENDIX B

DCL Program and Calculations

Table 1: Sewer Development Cost Levy Project List (2019-2026)

Project ID	Project Description	Project Priority	Growth Allocation	Growth	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		$13,000,000
	South Granville (Marpole) Sewer Separation	Short Term (1-4 years)	47%	$ 7,755,000	$ 8,745,000		$16,500,000
	Sanitary Sewer upgrade on Western Street and E 1st Avenue	Short Term (1-4 years)	90%	$ 5,072,880	$ 552,120		$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		$1,387,500
	Strathcona Park Sanitary Upgrade	Short Term (1-4 years)	89%	$ 2,658,000	$ 342,000		$3,000,000
	Fremlin Trunk Sewer and Outfall	Short Term (1-4 years)	48%	$ 4,680,300	$ 5,144,700		$9,825,000
	E 10th and E 11th Sewer Separation	Medium Term (5-8 years)	83%	$ 3,658,650	$ 766,350		$4,425,000
	E 6th Ave and Mclean Sanitary Upgrade	Medium Term (5-8 years)	89%	$ 2,836,875	$ 350,625		$3,187,500
	General City Wide Storm and Sanitary Upgrades*	Short Term (1-4 years)	52%	$ 8,884,149	$8,264,065		$17,148,214
	General City Wide Storm and Sanitary Upgrades*	Medium Term (5-8 years)	67%	$ 46,575,046	$22,826,740		$69,401,786
	Arbutus Greenway Storm Trunk	Short Term (1-4 years)	100%	$16,000,000	$0		$16,000,000
	Arbutus Greenway Storm Trunk	Medium Term (5-8 years)	100%	$26,000,000	$0		$26,000,000
	Little Mountain Trunk Upgrade	Short Term (1-4 years)	37%	$8,436,000	$14,364,000		$22,800,000
	Kerr Street Drainage Works	Medium Term	100%	$3,750,000	$0		$3,750,000

Project ID	Project Description	Project Priority	Growth Allocation	Growth	Non-Growth Cost	Other Funding	Total Cost
		(5-8 years)					
	Kinross Street Drainage Works	Short Term (1-4 years)	100%	$1,650,000	$0		$1,650,000
	East Fraser Lands Drainage Pump Station	Medium Term (5-8 years)	100%	$10,500,000	$0		$10,500,000
	Grandview Boundary	Short Term (1-4 years)	100%	$1,700,000	$0		$1,700,000
	Grandview Boundary	Medium Term (5-8 Years)	100%	$1,700,000	$0		$1,700,000
	Sanitary Pump Station Upgrades	Short Term (1-4 years)	37%	$5,000,000	$8,500,000		$13,500,000
	Sanitary Pump Station Upgrades	Medium Term (5-8 years)	37%	$5,000,000	$8,500,000		$13,500,000
	Hydraulic Model	Short Term (1-4 years)	100%	$500,000	$0		$500,000
	Sewer Growth Planning	Short Term (1-4 years)	100%	$650,000	$0		$650,000
	Sewer Growth Planning	Medium Term (5-8 years)	100%	$650,000	$0		$650,000
	Sewer Renewal	Short Term (1-4 years)	10%	$13,647,250	$122,825,250		$136,472,500
	Sewer Renewal	Medium Term (5-8 years)	10%	$23,857,300	$214,715,700		$238,573,000
	Integrated Utility Planning	Short Term (1-4 years)	25%	$2,000,000	$6,000,000		$8,000,000
	Integrated Utility Planning	Medium Term (5 - 8 years)	25%	$2,000,000	$6,000,000		$8,000,000
City Wide Project Totals				$211,040,550	$436,404,950	$0	$647,445,500
Cambie Corridor Projects							
	Cambie Corridor Stage 1 - North	Short Term (1-4 years)	71%	$24,353,714	$9,947,292		$34,301,006

Project ID	Project Description	Project Priority	Growth Allocation	Growth	Non-Growth Cost	Other Funding	Total Cost
	Cambie Corridor Stage 1 - Ash & Cambie	Short Term (1-4 years)	78%	$8,913,730	$2,514,129		$11,427,859
	Cambie Corridor Stage 1 - Columbia Park Area	Short Term (1-4 years)	68%	$9,301,265	$4,377,065		$13,678,330
	Cambie Corridor Stage 1 - Columbia Park Area	Medium Term (5-8 years)	68%	$3,438,974	$1,618,340		$5,057,314
	Cambie Corridor - Stage 2	Short Term (1-4 years)	78%	$614,926	$173,441		$788,367
	Cambie Corridor - Stage 2	Medium Term (5-8 years)	76%	$26,614,099	$8,351,044		$34,965,143
	Groundwater Monitoring	Short Term (1-4 years)	100%	$98,625	$0		$98,625
	Groundwater Monitoring	Medium Term (5-8 years)	100%	$20,000	$0		$20,000
	South Cambie Regional Sanitary and Drainage Capacity Upgrades	Medium Term (5-8 years)	100%	$150,000,000	$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	$463,386,261	$0	$897,782,144

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	$271,370,799	$0	$582,729,743

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 2: Green Infrastructure Development Cost Levy Project List (2019-2026)

Project ID	Project Description	Project Priority	Growth Allocation	Growth	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

Project ID	Project Description	Project Priority	Growth Allocation	Growth	Non-Growth Cost	Other Funding	Total Cost
	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
	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 City-Wide	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

Project ID	Project Description	Project Priority	Growth Allocation	Growth	Non-Growth Cost	Other Funding	Total Cost
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
	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

Project ID	Project Description	Project Priority	Growth Allocation	Growth	Non-Growth Cost	Other Funding	Total Cost
Short Term Projects (1-4 years)				$54,624,732	$6,315,000	$3,058,000	$63,997,732
Medium Term Projects (4-8 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 3: Water Development Cost Levy Project List (2019-2026)

Project ID	Project Description	Project Priority	Growth Allocation	Growth	Non-Growth Cost	Other Funding	Total Cost
	Little Mountain Upgrades E 35th, Quebec to Main E 37th, Ontario to Main Ontario St, E 35th to E 37th	Years 1-4	100%	$ 1,116,000	$ -	$ -	$ 1,116,000
	Mount Pleasant Upgrades Pressure Boundary Shift at Kingsway and Guelph	Years 1-4	100%	$ 84,000	$ -	$ -	$ 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	Years 1-4	100%	$ 1,224,000	$ -	$ -	$ 1,224,000
	Outside Planned Areas Arbutus, King Edward to South - Upgrade	Years 1-4	100%	$ 189,000	$ -	$ -	$ 189,000
	Marpole Oak St, W 64th to W 67th	Years 1-4	100%	$ 568,000	$ -	$ -	$ 568,000
	Cambie Corridor 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 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	Years 1-4	100%	$ 9,086,000	$ -	$ -	$ 9,086,000
	Water Model Water Model Demand Updates Water Model Rebuild	Years 1-4	75%	$ 234,000	$ 78,000	$ -	$ 312,000

Project ID	Project Description	Project Priority	Growth Allocation	Growth	Non-Growth Cost	Other Funding	Total Cost
	Cambie Corridor						
	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	Years 5-8	100%	$ 8,260,000	$ -	$ -	$ 8,260,000
	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						
	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	Years 5-8	100%	$ 1,585,000	$ -	$ -	$ 1,585,000
	Cambie St (West Side), W 64th Ave to 65th						
	W 58th Ave, Cambie to Alberta						
	W 65th Ave, Lord to Cambie						
	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	Years 5-8	100%	$ 675,000	$ -	$ -	$ 675,000
	Chess St, Evans to National						
	Evans Ave- Breggs to Glen						
	1200 Station Ave						
	Jericho Lands						
	Pressure Boundary Shift at Discovery and W 8th	Years 5-8	100%	$ 261,000	$ -	$ -	$ 261,000
	L/N W 9th Ave, Discovery to Courtaney						
	Outside Planned Areas						
	Grant St, Slocan to Kaslo						
	Grant St @ Renfrew	Years 5-8	100%	$ 757,000	$ -	$ -	$ 757,000
	Kaslo St, E 20th to E 22nd						
	LESS: Already Allocated DCL Funds	Years 1-4		$ (1,050,000)			$ (1,050,000)
	Total			$ 22,989,000	$ 78,000	$ -	$ 23,067,000
Short Term Projects (1-4 years)				$ 11,451,000	$ 78,000	$ -	$ 11,529,000
Medium Term Projects (5-8years)				$ 11,538,000	$ -	$ -	$ 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.

City of Vancouver
Proposed Utilities DCL (Water, Sewers and Drainage) Calculation

A: Utilities Impact Calculation					
Land Use	Col. (1)	Col. (2)	Col. (3)	Col. (4) = Col. (1) x Col. (3)	Col. (5) = Col. (4) / (a)
	Estimated New Development [1 2]	Unit	Weighting Factor	Weighted GFA	% of Weighted GFA
Low density residential	14,691,832	sq. ft. GFA	0.230	3,379,121	6%
Medium density residential	2,692,471	sq. ft. GFA	0.500	1,346,236	3%
High density residential (incl. exemptions)	41,880,816	sq. ft. GFA	1.000	41,880,816	79%
Industrial (Heavy) [3]	837,534	sq. ft. GFA	0.200	167,507	0%
Mixed Employment (Light Industrial) [3]	3,373,794	sq. ft. GFA	0.375	1,265,173	2.39%
Commercial and Other	9,750,256	sq. ft. GFA	0.500	4,875,128	9%
Total	73,226,703			52,913,980 (a)	100%
B: Unit Utilities DCL Calculation					
Costs Allocated to Growth		$548,762,955			
Municipal Assist (1%)		$5,487,630			
Total DCLs Recoverable		$543,275,325	(b)		
Less: Existing DCL Reserve Funds		$9,577,868	(c)		
Net Amount to be Paid by DCLs		**$533,697,458**	(d) = (b) - (c)		
DCL per Equivalent Unit		$10.09	(e) = (d) / (a)		
C: Resulting Utilities DCLs					**DCL Revenue Estimates**
Low density residential		$2.32	per sq ft GFA	(e) x Col (3)	$34,082,268
Medium density residential		$5.04	per sq ft GFA	(e) x Col (3)	$13,578,311
High density residential		$10.09	per sq ft GFA	(e) x Col (3)	$422,415,491
Industrial (Heavy)		$2.02	per sq ft GFA	(e) x Col (3)	$1,689,497
Mixed Employment (Light Industrial)		$3.78	per sq ft GFA	(e) x Col (3)	$12,760,700
Commercial and Other		$5.04	per sq ft GFA	(e) x Col (3)	$49,171,192
					$533,697,458

Notes:

[1] Excludes development in 2019, assuming all 2019 DCLs will be subject to existing rates.

[2] Excludes social housing that is exempt from DCLs

[3] Industrial floor area is apportioned based on 35% Industrial (Heavy) and 65% Mixed Employment (Light Industrial). This approach is consistent with the City-wide DCL calculation.

CITY OF VANCOUVER

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

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

Y:\SEWER_DESIGN\PLANNING\Projects\100 City-Wide\106 DCL\GIS\530 MXD\WaterSewer 2019-2026 Capital Projects_PC.mxd

Guidelines for Developer Responsibility in Delivering Utilities

City-wide

- Developers will be responsible for delivering local serving utility infrastructure, generally along block frontages and upgrades where there is little to no benefit beyond the development

- Payment of Utilities Development Cost Levies, to support City delivery of neighbourhood serving infrastructure included in the Utilities DCL Capital Program List

- If neighbourhood serving infrastructure to the development site is not included in the Utilities DCL Capital Program, then the Developer is responsible*

- Utilities DCL Project List will be reviewed and adjusted annually to reflect available funding levels, forecasted revenue, servicing of neighbourhoods with greatest growth potential and those neighbourhoods where development is occurring

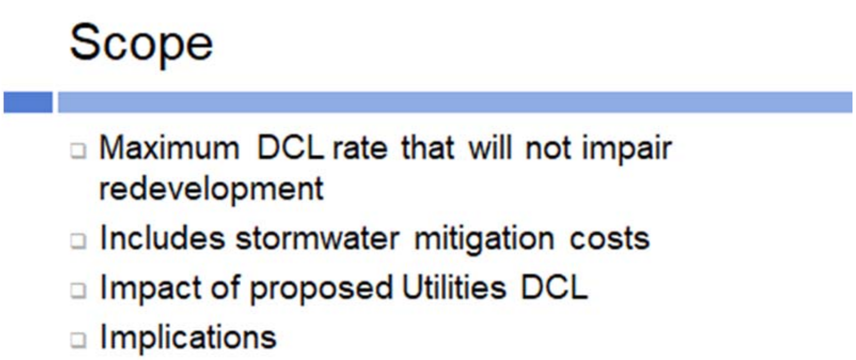
Cambie-Corridor

Guidelines for Developer Responsibilities in the Cambie Corridor

	Stage 1 (2019 - 2022)	Stage 2 (2023 - 2026)		Future Stage
		Applications received on or after January 1, 2023	Applications received before January 1, 2023	
Rainwater and Groundwater Management Requirements	✓	✓	✓	✓
Applicant Contribution to Utilities DCL	✓	✓	✓	✓
Rezoning Conditions for Local Servicing Upgrades **	✓	✓	✓	✓
Rezoning Conditions for Off-Site Utilities Upgrades	✗ *	✗ *	✓ ***	✓
Priority Level for the City Application Reviewing Process	High Priority	High Priority	Medium Priority	Low Priority

* The City will be responsible for off-site upgrades in Stage 1 areas and Stage 2 after 2023, subject to DCL revenue
** Water, sewer, and drainage servicing upgrades that generally only benefit the development
*** Subject to the City's consideration of financing options and capacity to allow off-site upgrades ahead of schedule

Coriolis - Impact of proposed new city-wide Utilities DCL on financial viability of redevelopment



Existing Value vs Land Value

- What is the site's value under existing use (e.g. house, commercial building)?
- How much can a developer afford to pay for a redevelopment site (land value)?
- If land value exceeds existing use value ➔ redevelopment opportunity

Impact of Increased DCL

- Increased DCL reduces amount a developer can afford to pay for a site
- If DCL too high, can change development sites into holding properties
- Fewer development sites ➔ reduced pace of new unit construction
- Reduced unit supply with continued demand ➔ market-wide price increase

Approach to Evaluation

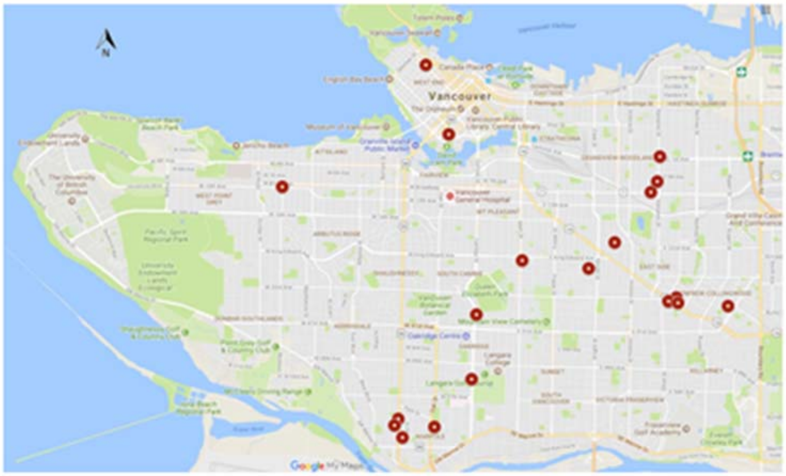
- Select residential case study sites
- Analyze financial viability of redevelopment under existing DCL, including:
  - Cost of proposed stormwater mitigation requirements
  - Proposed Translink DCCs (2020)
  - Proposed DB/CAC rates for Cambie Corridor/Marpole
- Calculate maximum DCL that can be supported so redevelopment value exceeds value under existing use
- Did not analyze office and industrial case studies

Case Studies

	Strata Apartment or Mixed-Use	Townhouse or Duplex Use	Rental Apartment Use
Downtown Sites	2	0	0
West Side Sites	5	4	1
East Vancouver Sites	7	5	1
Total	14	9	2

- Existing zoning, bonus density districts, rezonings in fixed rate CAC locations
- Excluded sites subject to negotiated CAC

Location of Case Study Sites



Financial Room for Increased DCL

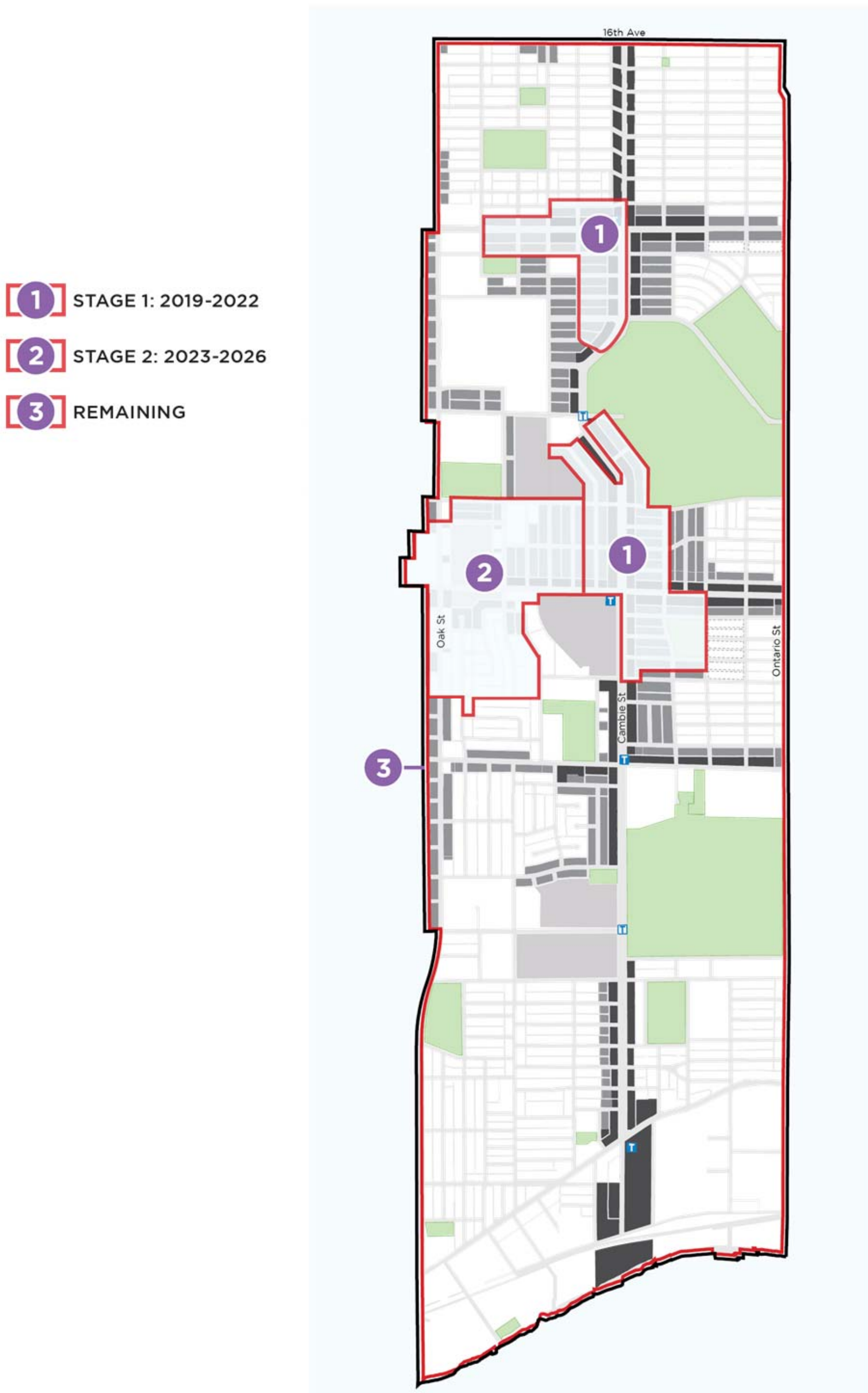
		Room to Increase DCL	
	Existing DCL Rates*	DT & West Side	East Side
Residential at or below 1.2 FSR	$4.03	$0 - $2	$0
Residential 1.2 to 1.5 FSR	$8.66	$20+	$20+
Residential above 1.5 FSR	$17.34	$10 - $20+	$0 - $20+
Industrial	$5.55	limited	limited
Commercial and Other	$13.91	limited	limited
Mixed Employment	$10.44	limited	limited

*September 30, 2018

Comment on Draft Utilities DCL Rates

	Existing DCL Rates	Draft DCL Rate	Comments
Residential at or below 1.2 FSR	$4.03	$2.34	• Analysis shows little room for DCL rate increase in most locations so potential impact on development viability. • Could reduce proposed DB payment to offset increase in DCL rate.
Residential between 1.2 - 1.5	$8.66	$5.08	• Analysis shows significant room to increase DCL rate in all locations so little or no impact expected.
Residential above 1.5 FSR	$17.34	$10.16*	• Significant room to increase DCL rate in West Side and Downtown locations so little or no impact expected. • Woodframe development viability likely to be impacted in some East Side locations. Phased-in approach for East Side will mitigate impacts on development viability.
Industrial	$5.55	$2.03	• Little room for DCL rate increase so potential impact on development viability.
Commercial & Other	$13.91	$3.81	• Little room for DCL increase under existing zoning (unless strata commercial) so potential impact on development viability.
Mixed Employment	$10.44	$5.08	• Little room for DCL rate increase so potential impact on development viability.

Cambie Corridor Staged Approach - Map



Rainwater Management Bulletin – Draft for Reference

In this Bulletin, the following definitions apply:

“Green infrastructure” means an approach to water management that mimics the natural water cycle by reducing and treating rainwater at its source while delivering environmental, social, and economic benefits.

“Rainwater” means rainfall and other natural precipitation.

“Best management practice” means common best practices to improve rainwater management.

“Rainwater drainage” means runoff that is the result of rainfall or other natural precipitation or from melting snow or ice.

“Rainwater management system” means the system for collecting, retaining, detaining, treating or conveying rainwater, and includes:

i. the catch basins, sewers and pumps that make up the rainwater drainage collection and conveyance system; and
i. the rainwater drainage facilities, structures, landscapes, green infrastructure or other best management practices used for storage, management and treatment to reduce runoff or improve the quality of the rainwater

but does not include plumbing or service connections in buildings.

“Rainwater management plan” is the means by which rainwater resource concerns are addressed during development. It will provide the size, location and configuration of all rainwater drainage systems on the site as well as associated methodology, calculations, and plan drawings that demonstrate how the rainwater management criteria will be met.

Introduction

Onsite rainwater management is needed to mitigate the impacts of increased yearly precipitation due to climate change, increased development density, and decreased pervious surfaces that allow rainwater to infiltrate, all of which when combined will increase the occurrence of excess rainwater overwhelming the sewers leading to combined sewer overflows. The use of water sensitive site design and green infrastructure practices or source controls keeps harmful stormwater pollutants from entering our receiving waters and adds resiliency to the City’s drainage system, which is predicted to experience wetter winters, drier summers, and more frequent occurrence of intense storms.

The purpose of this bulletin is to provide applicants within the Cambie Corridor information on the process and required submissions related to onsite rainwater management that meets the City-wide Integrated Rainwater Management Plan (IRMP) requirements for retention, rate control, cleaning, and safe conveyance. Sites having a total site size of 8,000m2 or more, or containing 45,000 m2 or more of new development floor area, are to follow the requirements laid out in the Rezoning Policy for Sustainable Large Developments.

<u>Rainwater Management Requirements</u>

Applicants will be required to produce a Rainwater Management Plan (RWMP) that details how the onsite rainwater management system meets the requirements outlined below, prepared, signed and sealed by a subject matter expert (Professional Engineer), subject to review. The applicant is to demonstrate how the proposed system will meet the following:

1. Volume Reduction
    1.1. Runoff from the first 24 mm of rainfall from all areas, including rooftops, paved areas, and landscape must be retained and treated on site.

        1.1.1. Landscape areas over native subsoils with appropriately sized growing medium meet the 24 mm retention requirement, see Design Resources below for guidance on sizing topsoil for rainwater management.
        1.1.2. All proposed landscape areas are to ensure adequate growing medium for both horticultural and rainwater management needs.

    1.2. The applicant must prioritize methods of retention according to the three tiers below, beginning with Tier 1. Justification must be provided for using the 2nd and 3rd tier options and acceptable exemptions have been outlined below. The tiers are as follows:

        Tier 1 Priority: Provide volume reducing green infrastructure practices. For example, rainwater can be kept on site for rainwater harvesting for re-use, green roofs, and soil infiltration.

        Tier 2 Priority: Provide treatment and retention in non-infiltrating landscapes. For example, rainwater can be directed to absorbent landscape on slab, closed bottom planter boxes, and lined bioretention systems.

        Tier 3 Priority: Provide treatment and detention as per Requirement 2, Release Rate, outlined below.

    <u>Acceptable Exemptions</u>

    Justifications for not using 1st tier green infrastructure practices will be reviewed at the discretion of the City. Exemptions may be granted, but are not limited to, the following reasons:

    Tier 1 Exemptions:
    - Low infiltration capacity (e.g. less than 1.5 mm/hr)
    - Limited available space for engineered infiltration systems due to onsite tree retention
    - Seasonally high groundwater table or bedrock within 0.6m of the bottom of the practice
    - Contamination concerns (as supported by a preliminary geotechnical study, see submission requirements below)

- Slope stability concerns (as supported by a preliminary geotechnical study, see submission requirements below)

Tier 2 Exemptions:

- Limited available space for non-infiltrating facilities due to onsite tree retention

2. Release Rate

2.1. The rainwater management system for the building(s) and site shall be designed such that the peak flow rate discharged to the sewer under post-development conditions is not greater than the peak pre-development flow rate for the return period specified in the City of Vancouver's Intensity-Duration-Frequency curve (IDF curve)(see attached IDF curves). The City of Vancouver's 2014 IDF curve shall be utilized for pre-development design flow calculations, and the City's 2100 IDF curve, which takes into account the effects of climate change, shall be utilized for post-development design flow calculations. Pre-development, in this context, means the site's immediate use preceding development.

3. Water Quality

The water quality improvement requirements are outlined below. These requirements vary depending on the type of pollutant generating surface.

3.1. The first 24 mm of rainfall from all pervious and impervious surfaces shall be treated to remove 80% Total Suspended Solids (TSS) by mass prior to discharge from the site. For impervious surfaces with high pollutant loads, including roads, driveways, and parking lots the rainfall depth to be treated increases to the first 48 mm of rainfall. Treatment can be provided by either one green infrastructure practice or structural Best Management Practice (BMP) or by means of a treatment train comprised of multiple green infrastructure practices or structural BMPs that can be demonstrated to meet the 80% TSS reduction target.

3.1.1. Vegetated practices or absorbent landscapes that infiltrate or filter the appropriate water quality volume (based on the type of pollutant generating surface) through a minimum of 450mm of growing medium are assumed to meet the quality requirement. The Metro Vancouver Stormwater Source Control Design Guidelines referenced above outline growing medium specifications.

3.1.2. For proposed proprietary treatment devices:

3.1.2.1. Provide product information for all treatment practices.

3.1.2.2. Products need to meet the above standard and be certified by either the Washington State Department of Ecology's Technology Assessment Protocol – Ecology Program (TAPE) or the current list of Environmental Technology Verification (ETV) Canada verified technologies. The applicant may propose other technologies but must provide supporting information that shows the technology meets the standard.

<u>Design Resources</u>

The Metro Vancouver Stormwater Source Control Design Guidelines is available as a design resource to address the above volume reduction and water quality requirements, and also contains information on construction considerations and staging as well as facility maintenance.

http://www.metrovancouver.org/services/liquid-waste/LiquidWastePublications/StormwaterSourceControlDesignGuidelines2012StormwaterSourceControlDesignGuidelines2012.pdf

Submission Requirements

At time of an application to rezone a development site: Submissions for an application to rezone must include the following elements:

- A preliminary Rainwater Management Plan, outlining the rainwater management approach to be taken on site and how the project will meet the requirements for volume reduction, rate control, and quality. This approach is to inform a detailed Rainwater Management plan that is to be submitted at the time of Development Permit submission. The Rainwater Management Plan must be coordinated with the open space plan, site plan, landscape plans and all approved policies and guidelines in respect to the project.

  RWMP submissions must include the following elements:

  - Pre-development site plan showing orthophoto, existing drainage areas , and onsite and downstream offsite drainage appurtenances;
  - A proposed site plan that delineates building location, underground parking extents, and drainage areas and includes the area measurements for pervious/impervious areas. The site plan should also identify appropriately sized green infrastructure practices for each of the drainage areas;
  - Hydrologic and hydraulic analysis prepared by a qualified professional in the area of rainwater management showing how the site will meet the above requirements;
  - Justifications for not using Tier 1 green infrastructure practices must be included in the RWMP;
  - Details on how the rainwater management requirements set out above will be achieved through the development phases and once all development phases are complete; and
  - Supplementary documentation for any proprietary products that clearly demonstrates how they meet the requirements; and

- A preliminary geotechnical study supporting assumptions made in the preliminary RWMP, that includes the following:
  - An evaluation of the potential for and risks of onsite rainwater infiltration, such as slope stability and soil contamination;
  - Results of infiltration testing at likely locations for infiltration practices and a proposed design infiltration rate;
  - Soil stratigraphy; and
  - Depth to bedrock and seasonally high groundwater at likely locations for infiltration practices.

Prior to the Enactment of a By-law to rezone a development site: Every applicant will be required to provide a final signed and sealed RWMP completed by a professional Engineer. The content and supporting documentation is to be updated to reflect all material changes to the proposed development and new/refined supporting data, calculations, plans, reports and other materials following submission of the preliminary RWMP.

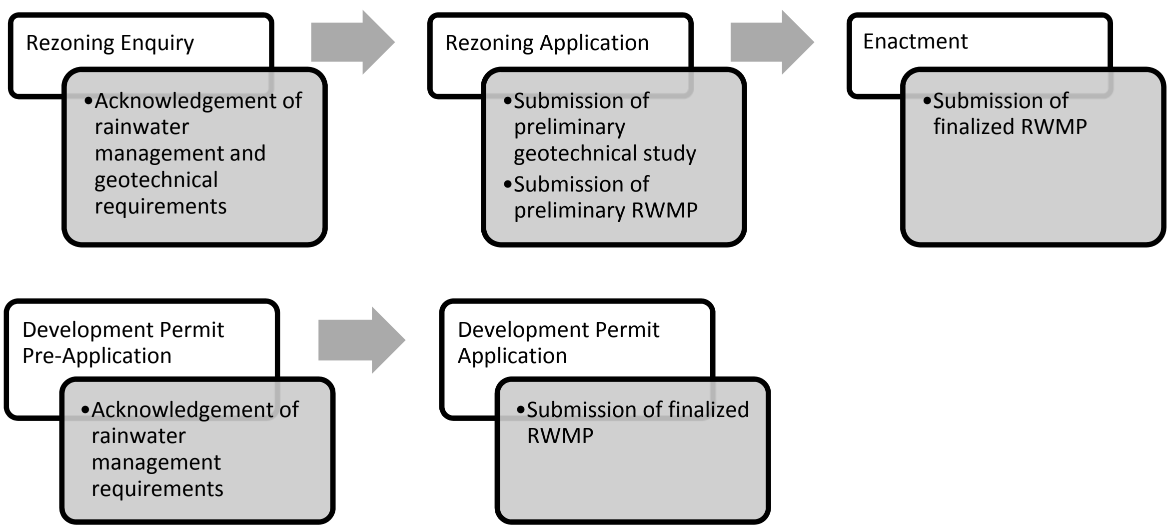
Specifically, the final RWMP shall include:

1. Final hydrologic and hydraulic analysis based upon the final design of the rainwater management system;
2. Confirmation that access has been provided for maintaining the rainwater management system, such as providing truck access for pumping out sediment traps; and
3. A maintenance and operation guide for the rainwater management system that is provided to the eventual owner or party responsible for maintenance.

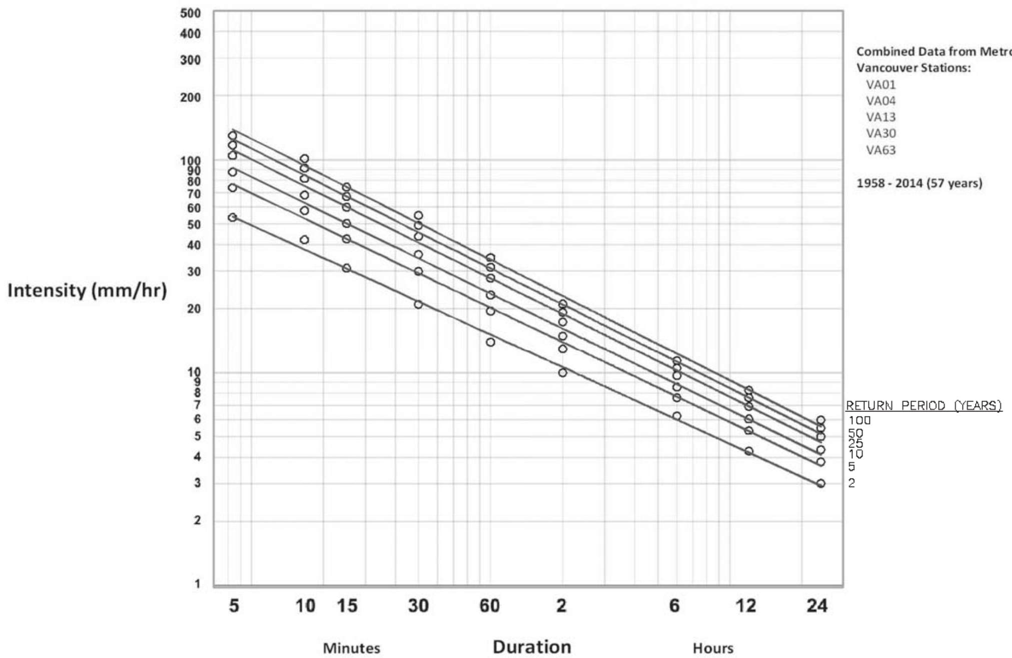
Prior to Development Permit Application:

- For applicants proceeding from a rezoning: no additional reporting on the rainwater management system is required following the submission of the final RWMP at the time of Enactment.
- For applicants applying directly at the development permit stage: a preliminary RWMP is not required and applicants are to submit a finalized RWMP, that includes the same minimum elements described above for the preliminary and final RWMP submissions and has been signed and sealed by a qualified engineer.

Application flow diagram



City of Vancouver - IDF Curves (2014)



INTENSITY DURATION FREQUENCY (IDF) EQUATION
INTERPOLATION COEFFICIENTS (2014)

$R = A * T^{B}$

WHERE:
T = TIME IN HOURS
A,B = COEFFICIENTS
R – RAINFALL INTENSITY IN mm/hr

RECURRANCE INTERVAL	PROBABILITY	A	B
1 IN 2 YR	50%	15.13	–0.514
1 IN 5 YR	20%	20.21	–0.538
1 IN 10 YR	10%	23.56	–0.548
1 IN 25 YR	4%	27.78	–0.558
1 IN 50 YR	2%	30.90	–0.563
1 IN 100 YR	1%	34.00	–0.567

SOURCE:
"VANCOUVER RAINFALL STUDY AND IDF UPDATE," URBAN SYSTEMS LTD, VANCOUVER BC, DECEMBER 2015.

APPLICATION

10 YEAR – DESIGN, BUSINESS, COMMERCIAL AND INDUSTRIAL AREAS.
5 YEAR – DESIGN, RESIDENTIAL AREAS, INVESTIGATIONS

MINIMUM INLET TIME

RESIDENTIAL AREA	10 MINS.
BUSINESS	5 MINS.
CENTRAL BUSINESS DISTRICT & WEST END	5 MINS.

CITY OF VANCOUVER

CITY OF VANCOUVER - ENGINEERING SERVICES

RAINFALL IDF GRAPH AND MINIMUM PIPE SLOPES AND EQUATIONS

SCALE: N.T.S.
DATE: AUG 2016 DESIGN:
DWG. NO. S-4.1
REVISION:...1....

PLOTTED: Tuesday, September 06, 2016 7:40:42 AM
THIS PRINT SUPERSEDES ALL PRINTS OF THIS DRAWING BEARING PREVIOUS REVISION NUMBERS
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Groundwater Management Bulletin – Draft for reference

In this Bulletin, the following definitions apply:

"Groundwater" means water occurring below the surface of the ground within voids within a soil or rock matrix.

"Water table" means the level below which the ground is saturated with water at a pressure of 1 atmosphere or greater.

"Hydrogeological Study" is a review of the occurrence, distribution and effect of groundwater. The Hydrogeological Study may be brief, or it may incorporate a Groundwater Management Plan and/or an Impact Assessment, depending on the potential impact the development has on the groundwater system.

"Groundwater Management Plan" is a document that outlines a comprehensive approach to the planning, design, implementation, and operation of on-site groundwater management techniques to meet the requirements. It is required for submission as part of the Hydrogeological Study when it is anticipated that the development site will intercept the water table.

"Impact Assessment" is a document that outlines any potential or realized environmental impacts which may or will result from extraction of groundwater on the development site. It is required for submission as part of the Hydrogeological Study when groundwater extraction is proposed at the development site.

Introduction

The purpose of this bulletin is to provide applicants information on the required process and submissions related to on-site groundwater monitoring and management.

In order to preserve sewer capacity, reduce the risk of combined sewer overflows, and maintain wastewater treatment effectiveness, groundwater flows are prohibited from entering the sewer system. This restriction aligns with Strategy 1.1.14 of the Metro Vancouver 2010 Integrated Liquid Waste and Resource Management Plan and the Greater Vancouver Sewage & Drainage District Sewer Use By-law No. 299, 2007 Section 5.1.

The Quadra Sands Aquifer lies beneath the Cambie Corridor (see Figure 1). Based on ongoing investigations from existing wells and boreholes, the water table lies approximately 10 m below ground surface. The primary source for recharge of the groundwater is infiltration of precipitation.

The aquifer ranges from unconfined to confined, and based on limited provincially registered well records, there are some areas with flowing artesian conditions (under positive pressure). On October 2017, the Province of BC issued a well drilling advisory for Vancouver, Burnaby and New Westminster to alert persons to where flowing artesian conditions may occur and precautions necessary for preventing complications and unnecessary costs. Refer to British Columbia's website for 'Well Drilling Advisories' for more information.[1]

Hydrogeological Study Requirements

These requirements apply to all developments on private property within the Cambie Corridor.

Applicants will be required to produce a Hydrogeological Study that details how the onsite groundwater management system meets requirements outlined below, prepared, signed, and sealed by a Certified Professional with experience in hydrogeology, subject to review. The applicant is to demonstrate how they meet the following:

1. **Groundwater Discharge to Sewer**

No post-construction groundwater discharge is permitted to the City's sewer infrastructure.

2. **Groundwater Extraction**

If groundwater extraction is required as part of the construction works, it must be proven that there are no significant negative impacts.

Submission Requirements

At time of Rezoning Application: Applicants for rezoning will be required to:

a. Produce a review of the hydrogeology of the study area, in preparation for the Hydrogeological Study that is to be submitted prior to the enactment of any rezoning by-law, including:
    i. Underlying stratigraphy,
    ii. Existing wells;
    iii. Local groundwater extraction (e.g. construction dewatering) rates and locations;
    iv. Planned monitoring wells;
    v. Approximate water levels (historical and current); and
    vi. Other relevant information, as appropriate.
b. Acknowledge that a Groundwater Management Plan (as part of the Hydrogeological Study) may be required prior to enactment of the rezoning by-law. The Groundwater Management Plan must be based on extended groundwater monitoring to establish high groundwater table elevations, which could impact building/foundation and site design.

Any applicant for a rezoning should be aware that:

1. The Hydrogeological Study's "Groundwater Management Plan" (if applicable) must provide that no groundwater is discharged to the City's sewer system post-construction.
2. The Hydrogeological Study's "Impact Assessment" (if applicable) must provide that no significant negative impacts result from any proposed groundwater extraction.

Prior to Rezoning Enactment: Every applicant will be required to produce a Hydrogeological Study, signed and sealed by a Certified Professional with experience in hydrogeology, which shall include:

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[1] Province of BC Well Drilling Advisory: https://www2.gov.bc.ca/gov/content/environment/air-land-water/water/groundwater-wells/information-for-well-drillers-well-pump-installers/well-drilling-advisories)

1. A minimum of 3 months of uninterrupted water table monitoring, capturing the yearly high groundwater table. Monitoring wells are to be located within the development site, and the depths shall generally exceed the anticipated foundation depth by 2 m;
2. Written statement indicating whether the proposed development will intercept the annual high water table;
3. As an alternative to 1 and 2 above, a signed report by a Certified Professional with experience in hydrogeology confirming that the proposed development will not intercept the high water table.
   - If the applicant submits an alternative report, but the water table is intercepted at any time during construction, the Certified Professional must immediately report this to the City of Vancouver, and work shall cease until a Hydrogeological Study can be completed.
   - An alternative report under 3 is not permitted for developments on underlying peat layers or proposed developments greater than 3.7 m (12 ft) below ground surface.
4. If the proposed development will intercept the water table, the following items will be required in the Hydrogeological Study:
   a) Aquifer characteristics (including water level record, estimated hydraulic conductivity, and estimated hydraulic gradient);
   b) A plan of elevation contours for the seasonal water table elevation, superimposed on a ground surface elevation plan;
   c) A site cross-section indicating the elevation of the deepest subsurface works (e.g. elevator shafts, parkades) with the low and high water table elevations;
   d) A Groundwater Management Plan that outlines how no groundwater is discharged into City sewers post-construction. Every Groundwater Management Plan must include
      i. An estimate of the groundwater flow rate into the proposed development works, if applicable;
      ii. A site plan and/or cross sections showing groundwater management solutions; and
      iii. The anticipated groundwater flow rate to be temporarily discharged during construction, and discharge location (i.e. sanitary, combined, or storm sewer), if applicable.
5. If any groundwater extraction is proposed, an Impact Assessment must be submitted as part of the Hydrogeological Study in order to be considered for City approval. The Impact Assessment must demonstrate that no significant negative impacts result from groundwater extraction, and must include:
   i. Anticipated flow rates;
   ii. Ground subsidence;
   iii. Impact to nearby wells;
   iv. Evaluation of potential effects on known contaminant plumes; and
   v. Discharge water quality.

Prior to Development Permit Application:

- <u>For applicants proceeding from a rezoning, the City requires</u> a finalized Hydrogeological Study, based on the Hydrogeological Study from the rezoning submission, signed and sealed by a Certified Professional with experience in hydrogeology.
- <u>For applicants applying directly at the development permit stage</u> the City requires a finalized Hydrogeological Study, signed and sealed by a Professional with experience in hydrogeology.

The application for a development permit must include a finalized Hydrogeological Study, which incorporates:

1. Finalized Groundwater Management Plan (if applicable) that provides that no groundwater is to be discharged into City sewers post-development; and
2. Finalized Impact Assessment, (if applicable) that demonstrates that there are no significant negative impacts from groundwater extraction on site.

Application flow diagram

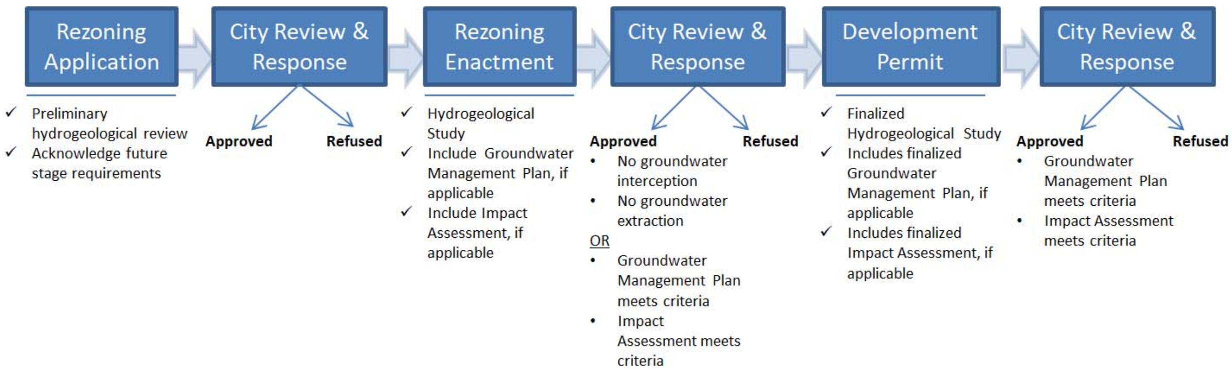
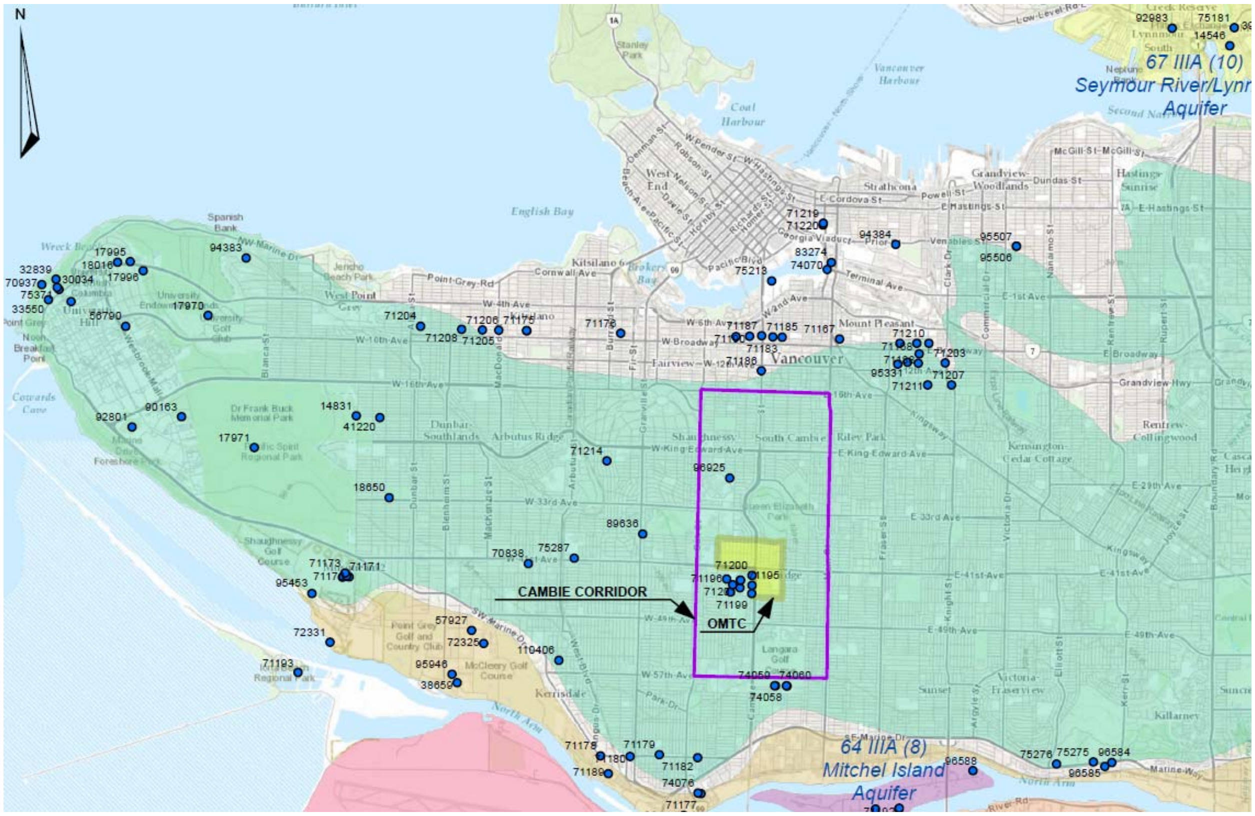


Figure 1 **Mapped Aquifers and Registered Ministry of Environment Water Wells (Piteau 2018)**



Survey results from on-line survey for additional townhouse areas

To consult with local residents, letters were mailed to the owners and tenants (if applicable) of the identified properties as well as a buffer area that included adjacent and potentially affected properties. Staff met with residents from the King Edward Avenue area and held an information session at Columbia Park. A feedback survey was made available online from May 9 to May 29, 2018 to collect input on the proposed expansion of the townhouse area.

<u>King Edward Area – 0 and 100 blocks of W. 26th Ave.:</u>

In the King Edward Avenue area, a total of 29 households completed the survey (55% response rate). Out of the 16 households in the 0 block of W 26th Ave, 10 households agree or strongly agree with the proposed change, 1 household strongly disagrees, 1 household is neutral, and 4 households have not responded. Out of the 15 households in the 100 block of W 26th Ave, 5 households agree or strongly agree with the proposed change, 6 households disagree or strongly disagree, 1 household is neutral, and 3 households have not responded.

Key themes from comments of those that **agree** with the proposed changes: (comments mostly from the 0 block)

- Support for additional blocks for townhouses, especially on deep lots, to increase the supply for townhouses
- Desire to see more family-oriented housing close to schools and bike lanes
- Some feel that the 100 block of W 26th Ave. has a unique condition across the street from a school, which will minimize the potential impacts to the neighbourhood
- Some would also like to see the north side of Peveril Avenue to be included in the townhouse area

Key themes from comments of those that **disagree** with the proposed changes: (comments mostly from the 100 block)

- Concern about livability of the area and change of neighborhood character
- Concern about limited capacity of infrastructure, schools and amenities to support population growth
- Some feel that the original Plan maintains the integrity of the neighbourhood and has already enabled sufficient supply for townhouses
- Some feel that the original Plan was developed based on extensive community consultation and should not be changed on a tight timeline

*Respondents (from both sides) generally feel that the 0 and 100 blocks should be considered separately.

<u>Columbia Park area (100 blocks of West 42nd, 43rd, 44th Ave. and north side of 45th Ave.</u>

In the Columbia Park area, a total of 14 households completed the survey (12% response rate). The majority of respondents support the expansion of townhouse options to the identified blocks. 79% of the respondents agree or strongly agree with the proposed inclusion, and 21% of the respondents disagree or strongly disagree.

Key themes from comments of those that **agree** with the proposed changes:

- Support for more density with increased housing supply to improve housing affordability
- Support for more family-oriented housing close to parks and schools

- Desire to see more housing around the park with a coherent form

Key themes from comments of those that **disagree** with the proposed changes:

- Concern about the capacity of infrastructure, hospitals, schools and other community services
- Concern about pace of change and potential impacts to the neighbourhood (e.g. noise, traffic, parking, etc.)
- Concern about potential increase in property tax
- Some feel that the plan has already delivered significant amount of density

Additional comments were submitted by emails from the south side of 100 block W 45th Ave. Comments include concern about potential impacts of townhouses across from the street, and desire to be included for townhouses.

Proposed CAC and Density Bonus Rates

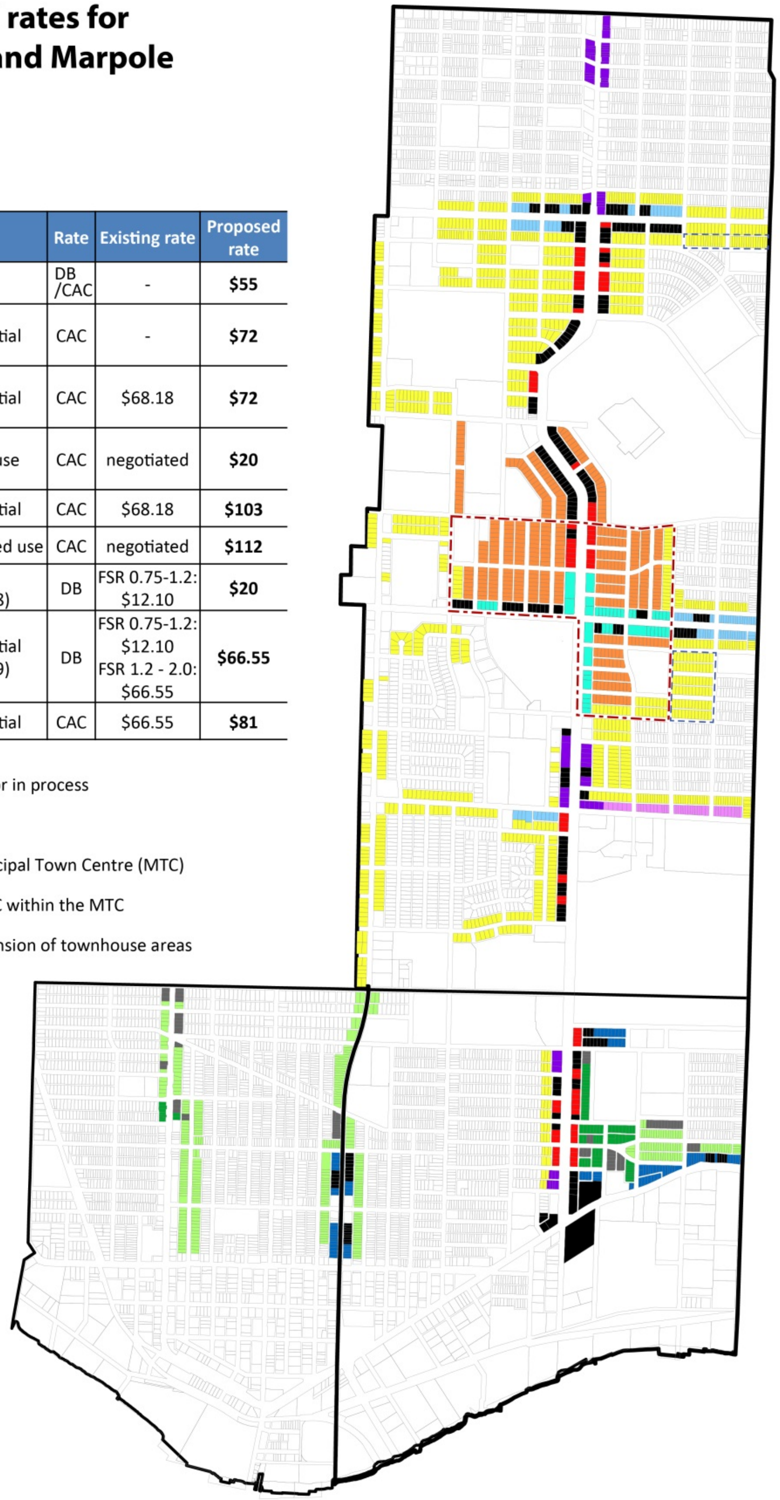
Proposed DB/CAC rates for Cambie Corridor and Marpole

June 2018

Plan	Legend	Category	Rate	Existing rate	Proposed rate
Cambie Phase 3	Yellow	Townhouse	DB /CAC	-	**$55**
	Orange	4 storey residential	CAC	-	**$72**
Cambie Phase 2	Light blue	4 storey residential	CAC	$68.18	**$72**
	Pink	4 storey mixed-use	CAC	negotiated	**$20**
	Red	6 storey residential	CAC	$68.18	**$103**
	Purple	6-10 storey mixed use	CAC	negotiated	**$112**
Marpole	Light green	Townhouse (remaining RM-8)	DB	FSR 0.75-1.2: $12.10	**$20**
	Green	4 storey residential (remaining RM-9)	DB	FSR 0.75-1.2: $12.10 FSR 1.2 - 2.0: $66.55	**$66.55**
	Blue	6 storey residential	CAC	$66.55	**$81**

- Black: RZ completed or in process
- Grey: DE completed
- Red dashed outline: Oakridge Municipal Town Centre (MTC)
- Turquoise: Negotiated CAC within the MTC
- Blue dashed outline: Proposed expansion of townhouse areas

Note: the proposed rate for the Cambie townhouse zone and updated rates for the RM-8 and RM-9 zones in Marpole would be introduced with the new townhouse zone.



Correspondence Received

From: David Hutniak <davidh@landlordbc.ca>
Date: June 11, 2018 at 3:29:03 PM PDT
To: "Kelley, Gil" <Gil.Kelley@vancouver.ca>
Cc: David Hutniak <davidh@landlordbc.ca>
Subject: Propose Utility DCL and the Kelly Curve!

"The City must drive a significant shift toward rental, social, and supportive housing, as well as greater diversity of forms in our ground-oriented housing stock. Housing and affordability must reflect the diversity of those most in need of this housing."
City of Vancouver, *Housing Vancouver Strategy*, p. 3. November 2017

Hi Gil,

The City of Vancouver faces the need to fund approximately $1 billion dollars of new sewer and groundwater management systems over the course of the coming two decades. Corialis Consulting was hired by the City to determine the impact of raising the Utility DCL rate on developments by property type and neighbourhood. Corialis determined that numerous residential development areas and property types can withstand a significant increase including the downtown core, many areas in the westside and single family homes. **Corialis also found that purpose-built rental (apartment) projects, neither Eastside nor Westside, can withstand the rate increase as proposed, regardless of neighbourhood, along with certain types of lower-cost strata construction such as wood-frame market condo and townhouse in some Eastside neighbourhoods.**

Because the Housing Vancouver Strategy focuses on a significant shift to rental and social housing, and because affordability for a wide range of demographics is the prime concern of this strategy, implementing this rate increase in a progressive fashion would help achieve these goals. Buyers and occupants of new single-family homes, luxury condominiums and downtown core condominiums have a much greater ability to pay the increased DCL fees than do renters, Eastside townhouse dwellers and supportive housing occupants, among others.

By introducing a **progressive curve** which recognizes the value contribution that affordable and sustainable solutions such as purpose-built rental housing brings now and most importantly, in the future as rental prices for older buildings moderate with age, the City of Vancouver will be implementing a policy tool which perfectly advances its housing priorities as outlined in its Housing Strategy. The regressive, flat rate approach the City is proposing with this Utility DCL will allow the occupants of new multi-million dollar homes to pay the same rate per square foot as renters in Eastside and Westside PBR rental homes, thus entitling luxury property occupants to continue to see Utility DCL costs around the 1% of pro-forma mark, while punishing social housing, missing middle townhome and infill projects and market PBR rental projects by holding such costs around the 3% to 4% mark.

Introducing a progressive rate structure for Utility DCLs establishes a key precedent for dense, urban municipalities in North America which seek to address the lack of affordable options for middle and lower income residents. This principle, championed by Gil Kelley, General Manager of Planning, Urban Design, and Sustainability at the City of Vancouver, will be known as the **Kelley Curve**! Kind of has a nice ring to it, doesn't it.

We would appreciate your serious consideration Gil. This is not the time to add significant costs to PBR development. Thank you!

David Hutniak
Chief Executive Officer
LandlordBC - BC's top resource for owners and managers of rental housing
Phone: 604.733.9440 ext. 202 | Fax: 604.733.9420 | Mobile: 604.644.6838
Email: davidh@landlordbc.ca
Website: www.landlordbc.ca

LANDLORDBC
BC's top resource for owners and managers of rental housing

From: Cynthia Jagger [mailto:cynthia@goodmanreport.com]
Sent: Tuesday, June 12, 2018 10:58 AM
To: Clibbon, Chris
Subject: RE: Proposed New City-wide Utilities DCL - City of Vancouver stakeholder presentation materials

Hi Chris,

Thanks for the information and for the discussion today.

As confirmed on the phone and in the session put on by the City last week, it is my understanding that for a new rental development, these added fees would apply (+/-$26.00 psf for combined DCL over 1.5 FSR) and that they are subject to annual inflation. On a small/medium sized 50,000 SF project (+/-60 units), this would be around $1.3 million in DCL's. There is a waiver option should a developer move through the Rental 100 (or other similar) program but only if certain criteria are met, including 'starting rents', 'income-tied' unit requirements, 25-35% family units and construction cost maximums. Please let me know if any of this is incorrect.

As we continue to operate in an increasing cost environment, it is my experience through discussions with QS's, cost consultants, the development community, buyers and sellers of rental sites, as well as running my own models, that qualifying for these programs is increasing difficult, if not impossible because of many factors, especially if one does not have the benefit of a low land cost base (i.e. purchased years and years ago). Construction costs and labour shortages are among the most significant challenges at this time.

It would be beneficial if these programs did not include cost maximums so that more sites could qualify under these City programs. If a developer cannot meet the cost maximum, an additional $26 psf in DCL's, on top of already expensive costs, Federal GST payment, etc., etc., would have the potential result of many rental projects being shelved.

Thank you,

Cynthia Jagger*, B.A. DULE, AACI, P. App (Retired)

Principal

The Goodman Report
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t: 604.899.1122

Broker / HQ Commercial
320-1385 West 8th Ave.
Vancouver, BC V6H 3V9

*Personal Real Estate Corporation

From: Abdul Jiwan [mailto:abdulj@redbrickproperties.ca]
Sent: Tuesday, June 12, 2018 11:25 AM
To: Clibbon, Chris
Subject: Proposed new Citywide Utilities DCL

Chris,

Thank you for the opportunity to provide feedback on this new DCL. We are owners, operators, and developers of purpose built market rental properties. We are currently building the first market rental multi-family building in Coquitlam in the last forty years. We have not yet developed in the City of Vancouver. However, I have reviewed the presentation material on the City's website and the proposed new DCLs appear to be onerous. The municipal fees are adding up to make market rental housing development unattractive in our opinion. I suggest you reconsider these fees with respect to market rental proposals. Otherwise, it may be very difficult to achieve the necessary supply of rental housing to meet the exploding demand for this form of housing.

Sincerely,
Abdul

--

Abdul F. Jiwan, M.B.A.
President
Redbrick Properties Inc.
#210 - 522 Seventh Street
New Westminster, B.C.
V3M 5T5

604 522 5210 Direct
604 862 5358 Mobile
604 522 5035 Fax
abdulj@redbrickproperties.ca
https://redbrickproperties.ca/

Check out our latest rental project:
Residences at The Heights!

From: Aly Jiwan [mailto:alyj@redbrickproperties.ca]
Sent: Tuesday, June 12, 2018 11:52 AM
To: Clibbon, Chris
Subject: Proposed Citywide Utilities DCLs

Dear Mr. Clibbon,

I'm writing to provide feedback on the proposed new citywide utilities DCLs.

We own and develop new purpose-built market rental buildings in Greater Vancouver. We are currently developing the first new rental building in Coquitlam in 40 years.

We would like to develop new rental housing in the City of Vancouver. As you may be aware, the economics of building rental housing is very challenging; especially in the current high construction and land cost environment. I have reviewed the proposed new DCLs and find them to be prohibitive. I respectfully suggest that these DCLs should be waived entirely for market purpose-built rental buildings (and not be tied to rent maximums). As you know, there is a huge need for new rental housing supply, but cost increases such as these new DCLs will defeat the goal of providing more supply of market rental housing which is an essential part of an affordable housing strategy.

Sincerely,
Aly Jiwan

--

Aly F. Jiwan BA, MA (Econ.)
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www.redbrickproperties.ca
Check out our latest project: https://theheightscoquitlam.com/

QUALITY LIVING BY
REDBRICK
PROPERTIES

From: Craig Jorgensen s.22(1) Personal and Confidential
Sent: Thursday, June 14, 2018 12:02 AM
To: Clibbon, Chris
Subject: Comments on City Wide Utilities DCL Proposal

Hi Chris,

I was made aware that you are accepting comments on the proposed city wide utilities DCL. I writing on behalf of Generation Squeeze as their Code Red/Housing First Ambassador for Vancouver.

It is deeply concerning the impact the proposed move to a fixed rate per sq ft DCL would have the forms of housing that are most in need. In the progress report on the housing strategy released today two forms of housing were identified as being behind their city set targets. Townhomes are only reaching 38% while purpose built rental are only at 41%. In the presentation materials that were shared with me, it appears that the sub 1.2 FSR class of housing was projected to be the least able to accommodate the proposed changes. Zoning districts for townhomes max out at 1.2 FSR.

This proposal also needs a more detailed impact on the economics of purpose-built rental. While some projects do qualify for a DCL waiver, many do not and are at particular risk of not proceeding. The impact of this policy chance on this form of housing needs to be known.

Many Thanks,

Craig Jorgensen

WESGROUP

June 15, 2018

Donny Wong
Branch Manager- Integrated Water Management
Engineering Services
City of Vancouver
453 W 12th Ave
Vancouver BC
V5Y 1V4

Re: Proposed new Citywide Utilities DCL

Mr. Wong,

Thank you for hosting a stakeholder consultation session on the proposed new Utilities DCL and new Cambie Corridor storm water/groundwater requirements on June 7th. Wesgroup owns and manages multiple properties throughout Vancouver, including along the Cambie Corridor as well as our large master plan community, the River District in East Fraser Lands (EFL). We are concerned about the proposed new Citywide Utilities DCL for several reasons and which impact our properties differently.

Specifically, in EFL, we request that the City fully exempt the community from this Utilities DCL. Wesgroup, as the master developer of the community is responsible for the full servicing requirements - roads, utilities, district energy and site preparation for parks and affordable housing whereas the City's responsibilities for Public Amenities are to construct parks, childcare, a community centre on land provided by Wesgroup. For example, Wesgroup has delivered a fully separated sewer system that diverts all storm collected in a catchment greater than the boundaries of EFL directly into the Fraser River. We also have upgraded and built new sanitary pump stations and all water infrastructure necessary to meet the ultimate buildout approved in EFL. The extent of this servicing is reflective of the fact that EFL is a 130 acre site so while on the face we are defined similarly to other large sites, we are unique and much more self sustaining.

The East Fraser Lands Public Amenity Financial Plan & Strategy (2010) notes that "Council endorsed the principle that all DCLs and CACs accruing to the City from EFL would be utilized to fund the public amenities identified in the ODP." Applying an additional Citywide Utilities DCL would not only be an unfair burden on a site that is effectively self-sustaining it would contravene the established principle that funds generated in EFL are to pay for amenities within the community. Further, it was noted in the Financial Plan & Strategy that "the City may need to provide interim funding/financing in situations where the delivery of amenities and available funding were out of synch." To address a funding shortfall, staff recommended pursuing allocation of citywide DCLs from outside of EFL, among other solutions. To-date, the delivery of public amenities is out of synch with the pace of development and no other funds have been brought in by the City from other areas to pay for public amenities at EFL. To now implement a City-wide fee on EFL to fund public infrastructure in other areas of the City would be an unfair imposition.

We strongly believe that further consultation on this matter is needed. At EFL, this could constitute a cost increase of over $40 million to the build-out of the community for unrelated infrastructure. We understand that the City may be looking at an indexed rate for the east and west sides of the City as financial analysis has shown that projects on the east side may not have the ability to pay - we strongly urge the same train of thought be applied here. We would also like to point out the affordability impact in that new homes at EFL are some of the most affordable in the City and any additional charges will put

WESGROUP

undue pressure on pricing and will have a significant impact on project viability for secured market rental. Additionally, with this proposed increase along with the new Transit levy and significant cost increase to Metro Vancouver Development Cost Charges, a holistic look at the rapidly increasing fees is needed when considering this.

Outside of our River District community, we appreciate staff's work modelling growth impact and producing much needed servicing plans for the City's essential services. This is a significant step towards achieving certainty in the development process – an outcome Wesgroup strongly supports. However, we understand that the initial phases of the DCL program will not eliminate off-site rezoning conditions from all sites and we are concerned that this results in severe inequality. We therefore strongly support the use of front-ender and late-comer agreements. We trust the City will take all necessary efforts to consider front ender agreements in all cases and to continue to lobby for the legislative rights to apply late comers. Please let us know how we can help support the latter. This will provide significant relief for both sides.

Finally, we understand that the proposed hydrogeological report and groundwater management plan (as applicable) will be required prior to DP submission where no rezoning is contemplated. This can have severe financial impacts depending on the project timing and effectively stall projects for up to half a year. We propose staff allow this to be a "prior-to" condition. The results of such a report should not affect the development review process rather inform the more detailed plans delivered at a BP stage. This should allow for ample time to react should the hydrogeological report be completed concurrent with the development application review. The City could also require an applicant to acknowledge the potential for this condition should a report not be available at the time of application and if the City is concerned of this being perceived as a "late hit".

We understand that the City is planning to host another engagement with the owners of large master-plan sites. We cannot stress enough the importance of a subsequent discussion relating to above concerns and before it is discussed publicly at Council.

Thank you,

Brad Jones
Vice President, Development
Wesgroup Properties

Cc: Beau Jarvis, Wesgroup Properties
Ryan The, Wesgroup Properties
Jerry Dobrovolny, City of Vancouver
Chris Clibbon, City of Vancouver
Susan Haid, City of Vancouver
Kirsten Robinson, City of Vancouver
Chalys Joseph, City of Vancouver

From: Patrick Dore s.22(1) Personal and Confidential
Sent: Friday, June 15, 2018 9:27 AM
To: Clibbon, Chris
Subject: Re: Proposed New City-wide Utilities DCL - City of Vancouver stakeholder presentation materials

Hello Chris,

My comments are as follows:

First, I do understand the need for additional sewerage and the costs of same. I assume Engineering has done its work and the funds are in fact needed.

I am looking at building a purpose-built rental building. Owing to some factors on site, we may need to use non-combustible construction and/or hybrid construction. In speaking with our QS, it is apparent that our costs will be above the waiver limit. Because the limit is a historical marker reset once per year, not every project or developer will qualify for the waiver on the cost basis. For the project I am contemplating, this DCL increase will add $7,000 approx. for each rental suite I would be delivering (over and above the additional DCLs which I already factored in at the 2017-18 rate). This is not helpful to building a purpose-built rental building which has long-standing benefit for the community in the years and decades ahead. I would imagine builders of missing middle Eastside townhomes and woodframe apartments are in the same position - but they lack the opportunity for a waiver.

The City's consultant, Corialis, stated that there are areas of the City which can easily withstand the DCL increase and others which cannot. The DCL rate should reflect ability to pay and the social desirability of the project, regardless of whether or not it qualifies for any waiver. This will encourage and spur the delivery of housing which meets the needs of local income earners. What I see, and please correct me if I am mistaken, is that westside and downtown luxury concrete projects and single family homes, while also getting the same 56% increase to total DCL rate, are not as hard hit because these rates represent just a fraction of a percentage point of proforma, of maybe around 1% for concrete condo downtown and about half a percentage point for single family. By contrast, for my project, DCL has pushed total proforma cost up over 1.5% to the point they are approaching 4.5% of total proforma. The impact on purpose-built rental which does not qualify for the waiver is effectively double or triple that of condo and single family.

I would also imagine that the waiver program as it currently exists might need to be revisited because it necessarily will become 56% more costly to administer once this increase takes effect.

Charging the same flat dollar rate to developers of socially-desirable housing such as purpose-built rental and missing middle housing as that paid by developers of luxury housing exacerbates the cost issues present in our construction market. Public sentiment is strongly in favour of affordability. Any change you make to the DCL rate to encourage socially-desirable housing projects which do not qualify for the DCL waiver will have the strong support of the public. I appeal to you on the basis of fairness to reconsider the flat rate structure proposed and to instead levy the DCL increase based on ability to pay as determined by the Corialis report, with waivers for those projects which provide additional affordability.

Truly,

Patrick Dore

GENERATION | **squeeze**

June 14, 2018

Attention: Chris Clibbon, City of Vancouver (Chris.Clibbon@vancouver.ca)

Re: Sewer Rate Increases

Generation Squeeze very much appreciates that the City needs more money for major infrastructure improvements as the population is growing, and neighbourhoods are evolving. However, we would encourage the City to refine their Development Cost Levy rates to shelter Purpose Built Rental and non-market housing from rate increases by comparison with other housing types. According to the Housing Vancouver Strategy, Purpose Built Rental is among the most desperately needed housing types, and a top priority is providing housing and support for our most vulnerable residents. The City would therefore be well advised to design DC Levy Rate adjustments in ways that incentivize investment in PBR, social, and non-market housing, rather than be neutral across housing types. The latter risks reinforcing the pattern of building homes and condos that already exist in our local market and continue to be out of reach financially for median to low incomes.

Sincerely,

s.22(1) Personal and Confidential
[redacted]

Dr. Paul Kershaw

s.22(1) Personal and Confidential
[redacted]

Rachel Selinger

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www.udi.bc.ca

June 21, 2018

Chris Clibbon
Planner II
Planning, Urban Design & Sustainability Dept.
City of Vancouver
453 West 12th Avenue
Vancouver, BC V5Y 1V4

Dear Mr. Clibbon:

Re: Development Cost Levy (DCL) Increase for Utilities

I would like to thank you and City of Vancouver staff for meeting with the Urban Development Institute (UDI) several times as the City developed its DCL for utility infrastructure. UDI has long supported the development industry paying for its fair share of the costs of growth. We recognize that substantial new infrastructure works are needed along the Cambie Corridor and other parts of the City to allow for new development. UDI also supports the DCL mechanism over the use of off-site agreements to fund this infrastructure as DCLs are more transparent, fair and provide more certainty to our members regarding what their costs will be. However, we have several concerns, questions and recommendations regarding the City's proposals.

To begin, the increases are extremely high. For the commercial and industrial sectors, the increases are over 30%, and will be higher than comparative municipalities in the region. Coriolis has indicated there is little financial room for these projects to accept increased development costs without hindering their viability. ***UDI recommends for the commercial and industrial sectors that the City consider increasing the Assist Factor beyond 1% or reduce the Linkage Fees on these projects.*** We note that over time these projects provide the City with substantial revenues because the commercial/residential tax ratio in Vancouver is 4.4:1, and these sites require less municipal services.

For some residential types, the DCL increases are even higher at approximately 60%; making them among the highest in the region. These charges also do not include the much higher Community Amenity Contributions, the Inclusionary Zoning requirements, and Development Contribution Expectations ($330 to $425 per additional sq. ft. along the Broadway Corridor) in Vancouver. Given the substantial increases, ***we recommend that the City phase in the rates – as was done when the 2017 City-wide DCL Update was implemented.*** The new rates could be phased in over three years.

We understand from our meeting on June 7 that most rental projects would also face difficulty with the substantial DCL increases. ***The City may be contemplating a waiver for these projects, and UDI would support this. However, we would like to discuss this approach further with staff.*** Would the revenue for the waivers come from general revenues, or would other developers be subsidizing the waivers through increased DCLs? We understand the latter option would not be allowed under provincial legislation.

In terms of what is being funded under the Utility DCL program, ***UDI would like to ensure that in the areas where DCL infrastructure works have been identified, there will be no additional requests for off-site works under the Rezoning process – outside of the local service infrastructure.*** The key advantage of having a Utility DCL program is the elimination of surprise costs to developers late in the process.

We would also like to have further discussions with you and City staff regarding how the DCL Front-ender Agreements will work. Some UDI members may wish to proceed with their projects out of sequence, but would still like to be rebated for the costs of the utility infrastructure they provide the City.

For areas of the City where DCL utility infrastructure has not been identified, developers may face a double hit in what they pay if they proceed out of sequence. They will be required to build the City utility infrastructure and also pay the city-wide DCLs. Under provincial rules, they will not be able to be rebated for the DCL infrastructure they have built through Front-ender Agreements. ***We are pleased that the City is planning to regularly update its Utility DCL Program. However, it is important that this occur as soon as possible, so DCL works can be identified, which will allow developers to take advantage of DCL Front-ender Agreements.*** This is critically important work as it will ensure that developers have cost certainty and are not double-paying for infrastructure works. It will also help ensure that the right-sizing of pipes are provided in areas facing significant new development. In particular, we hope the planning work for the Broadway Corridor will include a detailed utility servicing plan, so issues and delays do not arise when the Broadway Planning Program is completed.

If there are long delays in this utility service planning work in areas of the City where development is occurring, we suggest that the City contemplate reducing the CAC/Inclusionary Zoning requirements in those areas where DCL utility infrastructure has not been identified to offset the added costs. This would be particularly helpful along the Cambie Corridor where proposed target CACs are still being contemplated.

At our June 7 meeting, a UDI member recommended that the City also adopt the approach used by other local governments for redevelopment projects. Developers should only pay DCLs on the net increase in density on a site. It is not best practice to charge projects for existing floor areas as DCLs are only supposed to fund new growth.

Furthermore, we understand that in order to incentivize larger, more livable decks the City currently exempts these spaces from CACs. However, this approach has not been applied to DCLs. UDI requests a consistent application regarding how deck space is considered with regard to FSR within the *Zoning & Development Bylaw*. We recommend that the City consider redefining deck areas and area overages on decks as not counting towards FSR. Certainly, the additional deck space would not impact the utility infrastructure that the DCLs are being used to fund.

UDI would also be interested to understand when and how the layered DCLs for the False Creek Flats and Southeast False Creek will be removed, and what the impact on DCL rates will be within those areas and across the City.

We thank you and City staff for meeting with UDI on this important matter, and would be pleased to further discuss the issues that we have raised with you. If you have any questions, please do not hesitate to contact us.

Yours sincerely

Anne McMullin
President & CEO

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