
Metro Vancouver Development Cost Charges:
Evaluation of Potential Financial Impacts of
Metro Vancouver DCC Rate Increases
on New Urban Development Projects

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Prepared for:
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By:
coriolis 
CONSULTING CORP.

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Summary

Background and Context

1. Metro Vancouver needs to ensure water and sewer infrastructure is available to support new residential and non-residential developments in a rapidly growing region.
2. Metro Vancouver is facing large increases in the cost to deliver this growth related infrastructure and has limited funding tools.
3. Metro Vancouver currently collects two separate DCC charges as part of its funding sources: a regional liquid waste DCC and a regional water DCC. Under the existing rates, DCCs only recover a share of the capital costs associated with new urban development.
4. On March 22, 2024, Metro Vancouver adopted a new bylaw (“Metro Vancouver Regional District Development Cost Charge Bylaw No. 1369, 2023”) which increased its regional liquid waste DCC rates, increased its regional water DCC rates, and introduced a new DCC for regional parkland acquisition. The liquid waste and water DCC rate increases and the new parkland acquisition DCC will be phased in over three years (with new rates as of January 1, 2025, January 1, 2026, and January 1, 2027).
5. The DCCs collected from new residential and non-residential developments in the region will help pay for the infrastructure needed to allow new development to occur.
6. The Metro Vancouver DCC rate increases are significant and will lead to increased construction costs for new development projects. Like any other cost increase, the increased DCCs will lead to one of three different potential impacts (or a combination of these) on new urban development:
 - A reduction in development site land values, which can occur if the increased cost can be passed back to landowners (e.g. when the value of a development site under its existing use, such as a house or low density commercial building, is lower than the land value supported by redevelopment).
 - An increase in the market price (sales prices or rents) of new units/floorspace, which can occur if the increased cost reduces the number of projects that are financially viable for development, creating downward pressure on the supply of new product in the market which, in the face of continued demand, can result in increased market prices for new (and existing) product.
 - A reduction in profit margins for new projects, which can occur if the increased cost cannot be passed along to buyers/renters of the new space and cannot be passed back to landowners (e.g. if the site was already purchased).

Which of these three outcomes (or combination) is most likely and the actual impact will depend on the dynamics of the market (e.g., supply of development sites, viability of new development, amount of new product), which can only be determined via detailed financial analysis for a large sample of case study development projects throughout the region.

Scope:

To help gauge the possible financial impacts of its new DCC rates on urban development projects in the region, Metro Vancouver retained Coriolis Consulting Corp. to complete detailed financial analysis for a large sample of case study development projects throughout the region. The analysis considers a range of development projects (e.g. single family, townhouse, apartment, commercial, industrial) in different locations in the region.

It is important to note that many factors affect the financial performance of new development projects:

- Changes in market conditions (e.g. changes in financing rates, hard construction costs, unit sales prices, apartment rents, commercial and industrial lease rates) affect development economics. Market conditions have changed significantly over the past two years and will continue to evolve.
- In addition, the policies and regulations of other levels of government also affect the economics of new development in the region. For example, the Province recently passed new legislation (Bills 16, 44, 46, and 47) that will affect the development approvals process, zoning, minimum permitted densities and parking requirements near transit stations, municipal finance tools (such as DCCs, ACCs and density bonusing), and inclusionary housing requirements.

Local governments are now in the process of implementing policy, regulatory and zoning changes based on the new Provincial legislation, which will impact the financial viability of development projects (some positively and some negatively).

This analysis focuses on the impact of the increased Metro Vancouver DCC rates, not the impact of changes in market conditions or upcoming municipal policy changes that could affect the financial viability of development projects. However, it should be noted that there are many other factors that will affect development economics in the region over the next year or two.

Main Findings:

1. In the absence of DCCs, funding for growth related costs associated with Metro Vancouver's liquid waste, water, and regional parks capital programs would need to come entirely from a combination of long-term debt, contributions from the operating budget (e.g. utility/user fees), reserves, and external contributions (e.g. interagency and senior level government grants).
2. The recently adopted increases to Metro Vancouver DCCs are significant and will add to the cost of new construction.

Based on detailed financial analysis for a large cross-section of case study development projects throughout the region, the likely impact of the Metro Vancouver DCC rate increases can be summarized as follows:

- a) Single Family subdivision - For single family subdivisions, the primary impact of the increased DCCs will be reduced market land values for sites that are subdivision candidates. Land values for subdivision candidates could be negatively impacted in the range of 1% (in higher land value locations) to 4% (in lower land value locations).
- b) Townhouse - The impact on townhouse projects will vary depending on the location:
 - The primary impact of the increased DCCs for strata townhouse projects in urbanized areas where projects involve redevelopment of existing homes (most locations in the region) will be to reduce the pool of sites that are financially viable for redevelopment which could slow the pace of new townhouse development. This could lead to higher townhouse unit prices. The increases would likely be a maximum of about 2% to 3% depending on the neighbourhood.
 - In locations where townhouse development is occurring in greenfield locations or more rural areas (such as parts of Langley, parts of Surrey and parts of Maple Ridge), the primary impact of the increased DCC rates will be reduced market land values for sites that are townhouse candidates. Land values for townhouse sites could be negatively impacted in the range of 9% to 15% in greenfield areas.

- c) 4 to 6 Storey Strata Apartment - In most cases, the increased Metro Vancouver DCCs on lowrise strata projects cannot be passed back to landowners. Therefore, the increased DCCs will reduce the pool of lowrise apartment sites that are financially viable for redevelopment which could slow the pace of new lowrise strata apartment development. This could lead to higher lowrise strata apartment unit prices. The increases would likely be a maximum of about 2% to 3% depending on the location (the increase could be higher if a municipality requires a below market component).

It should be noted that there are some locations where 4 to 6 storey strata apartment projects (at the new DCC rates) will support a land value that is higher than the value supported by the existing use of the property so, in these cases, the impact of the DCC rate increases will be reduced land values for development sites. This is limited to situations where any required amenity contributions are low or end unit prices are high. However, these situations are not typical for 4 to 6 storey strata projects in Metro Vancouver.

- d) Highrise Strata Apartment - For highrise strata apartment projects, the primary impacts of the increased DCCs will be:
- Reduced land values for highrise strata apartment sites. Land values could be negatively impacted in the range of 3% (in high land value locations) to 31% (in lower land value locations).
 - Reduced ability of highrise strata apartment rezonings to provide contributions to amenities or affordable housing because of the impact on the value of the additional rezoned density.
- e) Rental Apartment - The financial viability of market rental apartment development is challenging under current market conditions in most locations throughout Metro Vancouver. For rental apartment projects, the increased Metro Vancouver DCCs cannot be passed back to landowners. Therefore, the primary impact of the increased DCCs for rental apartment projects will be to reduce the pool of sites that are financially viable for redevelopment which could slow the pace of new rental apartment development. This could lead to higher apartment rental rates. The rent increases would likely be a maximum of about 2% to 3% depending on the location.
- f) Non-Market Apartment – Metro Vancouver provides a DCC waiver to affordable rental housing projects when the applicant is a non-profit. So, there would be no impact from the increased Metro Vancouver DCC rates on non-profit housing projects. However, in cases where the applicant is a private developer (who is building affordable housing units on behalf of a non-profit), the current Metro Vancouver DCC waiver does not apply. Therefore, these projects will be more costly to construct and will likely need additional funding or will need to set higher rents for the new units (unless the DCC waiver bylaw is amended to provide a waiver for these types of projects).
- g) Office – Office development is unlikely to be viable in most locations in Metro Vancouver under current market conditions. The increased DCC rates will reduce the pool of sites that are financially viable for redevelopment which could slow the pace of new office development (although the pace of office development is likely to be low in any case in the short term). This could lead to higher office lease rates and office unit values. The increases would likely be a maximum of about 1% to 2% depending on the location.
- h) Industrial – The impact of the increased Metro Vancouver DCC rates on industrial projects will vary depending on the location:
- In existing industrial areas where redevelopment is occurring, the increased Metro Vancouver DCCs will reduce the pool of sites that are financially viable for redevelopment which could slow the pace of new higher density industrial development. This could result in increased lease rates

or strata unit values at any new industrial projects. The increase would likely be on the order of about 2% depending on location.

- In locations where new industrial development is occurring in greenfield locations or more rural areas, the primary impact of the increased DCC will be reduced market land values for sites that are industrial development candidates. Land values for greenfield industrial sites could be negatively impacted by about 5%.
3. For residential project types expected to experience an increase in unit prices or rents, the increase would likely be a maximum of about 2% to 3% depending on the type of project and the neighbourhood. As a comparison, a 3% to 4% increase in construction costs could lead to the same unit price or rent increases if passed along to buyers and renters.
 4. Although our analysis indicates that developers of some type of projects should be able to pass the Metro Vancouver DCC rate increases back to landowners, this is not possible for developers who acquired sites prior to the announcement of the DCC rate increases. In these cases, the rate increase cannot be passed back to landowners (as the site was already acquired), so the DCC rate increase will negatively impact profitability. This could result in developers delaying projects and waiting for market conditions to change. This may result in unit price (or rent) impacts depending on the number of developers that delay projects.
 5. The Metro Vancouver DCCs are one factor that can affect the financial viability of development, but development economics are also influenced by many market factors and by government policies.

Market conditions have changed significantly over the past two years and will likely continue to change over the coming year or two.

In addition, municipalities are in the process of amending land use policies and regulations in response to new Provincial legislation (Bills 16, 44, 46, and 47) that will affect the development approvals process, zoning, minimum permitted densities and parking requirements near transit stations, municipal finance tools (such as DCCs, ACCs and density bonusing) and inclusionary housing requirements.

As changes are implemented by municipalities, some could positively impact the financial viability of development projects (such as faster approvals, higher densities near transit stations, elimination of parking requirements near transit stations, increased unit yield on low density residential lots and clarity on amenity contributions). Others may (depending on implementation details) negatively impact the financial viability of development projects, such as inclusionary housing requirements, expanded DCCs, and new ACCs.

Because municipalities are currently working through policy changes to address the new Provincial legislation, any potential impacts (and the scale of any impacts) are unclear at this time.

Metro Vancouver should consider continuing to evaluate the impacts of its adopted DCC rate increases over the implementation period. Completing updated financial analysis after municipalities have made any changes to municipal land use policies and development regulations will allow Metro Vancouver to monitor the impacts of its DCC program in the context of changes to municipal policies and changes in market conditions. Future financial analysis of the impacts of Metro Vancouver's DCC program on the viability of development in the region should continue to evaluate impacts by type of development and by sewerage area.

1.0 Introduction

1.1 Background

Metro Vancouver collects development cost charges (DCCs) from new residential and non-residential developments in the region to help pay for the new liquid waste and water infrastructure needed to provide services to the future occupants of these buildings. In March 2024, Metro Vancouver adopted increases to its liquid waste and water DCC rates that will be phased in over three years, with new rates commencing as of January 1, 2025, January 1, 2026, and January 1, 2027.¹

In addition, Metro Vancouver will start collecting a new regional park acquisition DCC in January 2025 to help fund regional parkland acquisition. The regional park DCC rates will increase on January 1, 2026 and January 1, 2027 as well.

Metro Vancouver's objective in charging DCCs is to help ensure that new development in the region funds the capital costs of regional liquid waste, water, and park expansion projects required to serve new development. In the absence of DCCs, funding for Metro Vancouver's liquid waste, water, and regional parks capital programs would need to come from a combination of long-term debt, contributions from the operating budget (e.g. utility/user fees), reserves, and external contributions (e.g. interagency and senior level government grants).

Increased DCCs lead to increased project costs (in the absence of any reduction in other costs). Like any other cost increase, increased DCCs can lead to three different potential impacts:

- A reduction in development site land values if the increased cost can be passed back to landowners. This can occur when the value of a development site under its existing use (e.g. house, low density commercial building) is lower than the land value supported by redevelopment.
- An increase in the market price (sales prices or rents) of new units/floorspace. This can occur if the increased cost reduces the number of projects that are financially viable for development, creating downward pressure on the supply of new product in the market. Decreasing new supply in the face of continued demand will likely result in increased market prices for new (and existing) product.
- A reduction in profit margins for new projects. This can occur if the increased cost cannot be passed along to buyers/renters of the new space and cannot be passed back to landowners (e.g. if the site was already purchased and development proceeds before market pricing adjusts).

Which of these three outcomes (or combination) is most likely and the actual impact will depend on the dynamics of the market (e.g., supply of development sites, viability of new development, amount of new product), which can only be determined via detailed financial analysis for a large sample of case study development projects throughout the region.

To help understand the potential implications of the new regional parkland acquisition DCC and the increased regional liquid waste and water DCC rates on urban development projects, Metro Vancouver retained Coriolis Consulting Corp. to complete detailed financial analysis for a large sample of case study development projects throughout the region.

This report summarizes our approach, analysis, and key findings.

¹ Metro Vancouver adopted "Metro Vancouver Regional District Development Cost Charge Bylaw No. 1369, 2023" on March 22, 2024.

1.2 Impacts of Market Factors and Other Government Policy Changes

There are many market factors that affect the economics of new development, such as changes in:

- Market demand (unit sales prices, apartment rents, commercial and industrial lease rates).
- Hard construction costs.
- Financing rates.

Market conditions have changed significantly in Metro Vancouver over the past two years and will likely continue to change over the next year (e.g. interest rates are now dropping after reaching a peak in mid-2023).

Prior to approving the new DCC rates in early 2024, Metro Vancouver retained Coriolis Consulting Corp. to provide a comparison of the potential financial impact on the economics of new development of its proposed DCC rate increases with changes in other market factors that had occurred over the previous 12 month period.² This work illustrated that the proposed DCC rate increases (which have now been adopted) were similar to the impact from the 12 month change in financing rates, significantly less than the impact of the 12 month change in hard construction costs, and significantly less than the impact of the 12 month change in unit prices and rents (this was as of September 2023).

In addition to Metro Vancouver DCCs, the policies and regulations of other levels of government also affect the economics of new development in the region. For example, the Province recently passed new legislation (Bills 16, 44, 46, and 47) that will affect the development approvals process, zoning, minimum permitted densities and parking requirements near transit stations, municipal finance tools (such as DCCs, ACCs and density bonusing) and inclusionary housing requirements.

Local governments are now in the process of implementing policy, regulatory and zoning changes based on the new Provincial legislation, which will impact the financial viability of development projects.

Some of these changes may positively impact the financial viability of development projects, such as faster approvals, higher densities near transit stations, elimination of parking requirements near transit stations, increased unit yield on low density residential lots (small scale multi-unit housing) and clarity on amenity contributions. Others may (depending on implementation details) negatively impact the financial viability of development projects, such as inclusionary housing requirements, expanded DCCs, and new ACCs.

Metro Vancouver municipalities are currently working through policy changes to address the new Provincial legislation, but most have not yet implemented many changes. The analysis summarized in this report takes into account municipal policy as of June 2024. However, as municipal policies are adjusted (likely over the next year or two), these changes will also impact development economics.

The analysis in this report focuses on the impact of the increased Metro Vancouver DCC rates, not the impact of changes in market conditions or upcoming municipal policy changes that could affect the financial viability of development projects. However, it should be noted that there are many other factors that will affect development economics in the region over the next year or two.

² Coriolis Consulting Corp., “Metro Vancouver Development Cost Charges: Comparison of Potential Financial Impact on New Development of Metro Vancouver’s Proposed DCC Rate Increases and Changes in Other Market Factors”, September 16, 2023.

1.3 Professional Disclaimer

This document may contain estimates and forecasts of future growth and urban development prospects, estimates of the financial performance of possible future urban development projects, opinions regarding the likelihood of approval of development projects, and recommendations regarding development strategy or municipal policy. All such estimates, forecasts, opinions, and recommendations are based in part on forecasts and assumptions regarding population change, economic growth, policy, market conditions, development costs and other variables. The assumptions, estimates, forecasts, opinions, and recommendations are based on interpreting past trends, gauging current conditions, and making judgments about the future. As with all judgments concerning future trends and events, however, there is uncertainty and risk that conditions change or unanticipated circumstances occur such that actual events turn out differently than as anticipated in this document, which is intended to be used as a reasonable indicator of potential outcomes rather than as a precise prediction of future events.

Nothing contained in this report, express or implied, shall confer rights or remedies upon, or create any contractual relationship with, or cause of action in favor of, any third party relying upon this document.

In no event shall Coriolis Consulting Corp. be liable to Metro Vancouver or any third party for any indirect, incidental, special, or consequential damages whatsoever, including lost revenues or profits.

2.0 Metro Vancouver’s DCC Rates

2.1 Regional Liquid Waste DCCs

The Metro Vancouver liquid waste DCC rates were introduced in 1997 and updated in 2017. On March 22, 2024, Metro Vancouver adopted Bylaw No. 1369 which implements phased liquid waste DCC rate increases over a three-year period. The new rates come into effect as of January 1, 2025 (step 1), January 1, 2026 (step 2), and January 1, 2027 (step 3).

Exhibit 1 shows the current regional liquid waste DCC rates and the new regional liquid waste DCC rates. For our analysis, we focus on the *increase* between the existing rates and the new rate as of January 1, 2027.

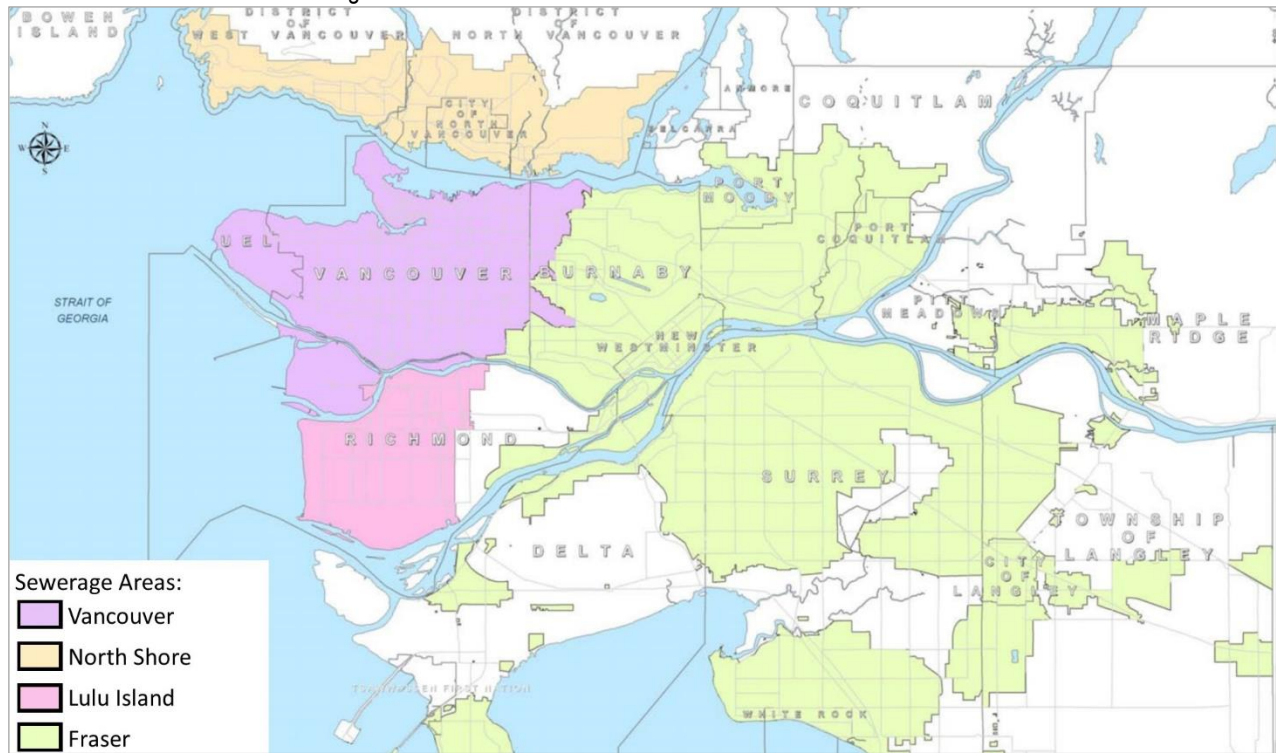
As shown in Exhibit 1, the regional liquid waste DCC rates vary by type of development and by sewerage area. Exhibit 2 shows the four sewerage areas in the region (Vancouver, North Shore, Lulu Island, and Fraser).

The existing liquid waste DCC rates reflect a 17.5% assist factor (i.e. 82.5% of *development-related* capital costs are funded through the DCC). The new liquid waste DCC rates reflect a 1% assist factor as of January 2027 (i.e. 99% of development-related liquid waste capital costs will be funded through the DCC).

Exhibit 1: Existing and New Metro Vancouver Liquid Waste DCC Rates

	Existing Liquid Waste DCC rates	Liquid Waste DCC rates as of Jan 1, 2025	Liquid Waste DCC rates as of Jan 1, 2026	Liquid Waste DCC rates as of Jan 1, 2027	Increase from Existing Rates to Jan 1, 2027 Rates
Vancouver Sewerage Area:					
Single Family Residential	\$ 3,335	\$ 10,498	\$ 11,290	\$ 12,476	\$ 9,141
Townhouse	\$ 2,983	\$ 9,583	\$ 10,316	\$ 11,400	\$ 8,417
Apartment	\$ 1,988	\$ 6,298	\$ 6,772	\$ 7,484	\$ 5,496
Non Residential	\$ 1.63	\$ 5.30	\$ 5.70	\$ 6.30	\$ 4.67
North Shore Sewerage Area:					
Single Family Residential	\$ 3,300	\$ 9,760	\$ 10,478	\$ 11,557	\$ 8,257
Townhouse	\$ 2,786	\$ 8,996	\$ 9,658	\$ 10,652	\$ 7,866
Apartment	\$ 2,030	\$ 6,005	\$ 6,448	\$ 7,111	\$ 5,081
Non Residential	\$ 1.67	\$ 5.00	\$ 5.37	\$ 5.92	\$ 4.25
Lulu Island West Sewerage Area:					
Single Family Residential	\$ 3,313	\$ 5,683	\$ 6,152	\$ 6,855	\$ 3,542
Townhouse	\$ 2,756	\$ 4,927	\$ 5,333	\$ 5,943	\$ 3,187
Apartment	\$ 2,042	\$ 3,516	\$ 3,806	\$ 4,241	\$ 2,199
Non Residential	\$ 1.54	\$ 2.55	\$ 2.76	\$ 3.08	\$ 1.54
Fraser Sewerage Area:					
Single Family Residential	\$ 6,254	\$ 11,443	\$ 12,311	\$ 13,613	\$ 7,359
Townhouse	\$ 5,390	\$ 10,016	\$ 10,775	\$ 11,914	\$ 6,524
Apartment	\$ 4,269	\$ 7,302	\$ 7,855	\$ 8,686	\$ 4,417
Non Residential	\$ 3.30	\$ 5.41	\$ 5.82	\$ 6.43	\$ 3.13

Exhibit 2: Metro Vancouver Sewerage Areas



Source: Metro Vancouver.

2.2 Regional Water DCCs

The Metro Vancouver water DCC rates were established effective April 28, 2023. On March 22, 2024, Metro Vancouver adopted Bylaw No. 1369 which implements water DCC rate increases phased in over a three-year period. The new rates come into effect as of January 1, 2025 (step 1), January 1, 2026 (step 2), and January 1, 2027 (step 3).

Exhibit 3 shows the current regional water DCC rates and the new regional water DCC rates, which vary by type of development. For our analysis, we focus on the *increase* between the existing rates and the new rate as of January 1, 2027.

Until the introduction of the regional water DCC, larger regional water infrastructure (such as water treatment facilities, reservoirs, water mains and pump stations that deliver the water to the municipalities) was primarily paid for by Metro Vancouver through user fees along with long-term debt, reserves, contributions from the operating budget, and external contributions. The water capital program includes projects needed to meet the needs of a growing population, maintenance of aging infrastructure, upgrades to improve the resiliency of the regional water system, and projects to achieve goals such as climate change mitigation.

The existing water DCC rates reflect a 50% assist factor. The new water DCC rates reflect a 1% assist factor as of January 2027 (i.e. 99% of development-related water infrastructure capital costs will be funded through the DCC).

Exhibit 3: Existing and New Metro Vancouver Water DCC Rates

	Existing Water DCC rates	Water DCC rates as of Jan 1, 2025	Water DCC rates as of Jan 1, 2026	Water DCC rates as of Jan 1, 2027	Increase from Existing Rates to Jan 1, 2027 Rates
Residential Lot Development Unit	\$ 6,692	\$ 10,952	\$ 16,926	\$ 19,714	\$ 13,022
Townhouse	\$ 5,696	\$ 9,839	\$ 15,206	\$ 17,710	\$ 12,014
Apartment	\$ 4,261	\$ 6,791	\$ 10,495	\$ 12,223	\$ 7,962
Non Residential	\$ 3.39	\$ 5.30	\$ 8.19	\$ 9.54	\$ 6.15

2.3 Regional Parkland Acquisition DCCs

Metro Vancouver's parks capital program is currently "funded primarily by reserve funds."³ Metro Vancouver has established a new regional parkland acquisition DCC that will come into effect in January 2025 to help ensure that new development in the region helps fund the cost of major park development and parkland acquisition required to serve growth.

As with its other DCCs, Bylaw No. 1369 implements the new regional parkland acquisition DCC in a phased process over three years. As of January 1, 2027, the regional parkland acquisition DCC will reflect a 1% assist factor (i.e. 99% of development-related park development and acquisition capital costs would be funded through the DCC).

Exhibit 4 shows the current regional park DCC rates (\$0) and the new regional park DCC rates, which vary by type of development. For our analysis, we focus on the *increase* between the existing rates and the new rate as of January 1, 2027.

Exhibit 4: Existing and New Metro Vancouver Parkland Acquisition DCC Rates

	Existing Park DCC rates	Park DCC rates as of Jan 1, 2025	Park DCC rates as of Jan 1, 2026	Park DCC rates as of Jan 1, 2027	Increase from Existing Rates to Jan 1, 2027 Rates
Residential Lot Development Unit	none	\$ 491	\$ 981	\$ 1,943	\$ 1,943
Townhouse	none	\$ 442	\$ 884	\$ 1,751	\$ 1,751
Apartment	none	\$ 303	\$ 606	\$ 1,199	\$ 1,199
Non Residential	none	\$ 0.24	\$ 0.48	\$ 0.94	\$ 0.94

2.4 Combined Impact of Metro Vancouver's New and Increased DCC Rates

For our analysis, we focus on the *increase* between the existing rates and the new rates as of January 1, 2027. Exhibit 5 shows the combined existing regional DCC rates, combined new regional DCC rates as of January 1, 2027, and the total increase from the existing rates to the new rates.

The combined DCC rate *increases* when fully implemented by January 1st, 2027 are as follows:

- \$18,506 to \$24,106 per single family lot (depending on location).

³ Metro Vancouver, "Memorandum - 2023 - 2027 Financial Plan - Regional Parks" from the General Manager, Parks and Environment and the Director, Regional Parks, to the Regional Parks Committee. October 6, 2022, page 5. Available online at: <https://metrovancouver.org/about-us/Documents/financial-plan-standing-committee-reports-2027.pdf>

EVALUATION OF POTENTIAL FINANCIAL IMPACTS OF METRO VANCOUVER DCC RATE INCREASES ON NEW URBAN DEVELOPMENT PROJECTS

- \$16,952 to \$22,182 per townhouse unit (depending on location).
- \$11,360 to \$14,657 per apartment unit (depending on location).
- \$8.63 to \$11.76 per square foot for non-residential space (depending on location).

The financial analysis that is summarized in Section 5.0 of this report evaluates the financial ability of new development projects to support the total increase in Metro Vancouver’s DCCs between the existing rates and the new rates as of January 1, 2027.

Exhibit 5: Total Increase from Metro Vancouver’s Existing DCC Rates to the New Metro Vancouver DCC Rates as of January 1, 2027

	Existing DCC rates				New DCC Rates as of Jan 1, 2027				Change from Existing DCC Rates to Jan 1, 2027 DCC Rates			
	Water	Liquid Waste	Park	Total	Water	Liquid Waste	Park	Total	Water	Liquid Waste	Park	Total Change
Vancouver Sewerage Area:												
Single Family Residential	\$ 6,692	\$ 3,335	none	\$ 10,027	\$ 19,714	\$ 12,476	\$ 1,943	\$ 34,133	\$ 13,022	\$ 9,141	\$ 1,943	\$ 24,106
Townhouse	\$ 5,696	\$ 2,983	none	\$ 8,679	\$ 17,710	\$ 11,400	\$ 1,751	\$ 30,861	\$ 12,014	\$ 8,417	\$ 1,751	\$ 22,182
Apartment	\$ 4,261	\$ 1,988	none	\$ 6,249	\$ 12,223	\$ 7,484	\$ 1,199	\$ 20,906	\$ 7,962	\$ 5,496	\$ 1,199	\$ 14,657
Non Residential	\$ 3.39	\$ 1.63	none	\$ 5.02	\$ 9.54	\$ 6.30	\$ 0.94	\$ 16.78	\$ 6.15	\$ 4.67	\$ 0.94	\$ 11.76
North Shore Sewerage Area:												
Single Family Residential	\$ 6,692	\$ 3,300	none	\$ 9,992	\$ 19,714	\$ 11,557	\$ 1,943	\$ 33,214	\$ 13,022	\$ 8,257	\$ 1,943	\$ 23,221
Townhouse	\$ 5,696	\$ 2,786	none	\$ 8,482	\$ 17,710	\$ 10,652	\$ 1,751	\$ 30,113	\$ 12,014	\$ 7,866	\$ 1,751	\$ 21,632
Apartment	\$ 4,261	\$ 2,030	none	\$ 6,291	\$ 12,223	\$ 7,111	\$ 1,199	\$ 20,533	\$ 7,962	\$ 5,081	\$ 1,199	\$ 14,242
Non Residential	\$ 3.39	\$ 1.67	none	\$ 5.06	\$ 9.54	\$ 5.92	\$ 0.94	\$ 16.40	\$ 6.15	\$ 4.25	\$ 0.94	\$ 11.34
Lulu Island West Sewerage Area:												
Single Family Residential	\$ 6,692	\$ 3,313	none	\$ 10,005	\$ 19,714	\$ 6,855	\$ 1,943	\$ 28,512	\$ 13,022	\$ 3,542	\$ 1,943	\$ 18,506
Townhouse	\$ 5,696	\$ 2,756	none	\$ 8,452	\$ 17,710	\$ 5,943	\$ 1,751	\$ 25,404	\$ 12,014	\$ 3,187	\$ 1,751	\$ 16,952
Apartment	\$ 4,261	\$ 2,042	none	\$ 6,303	\$ 12,223	\$ 4,241	\$ 1,199	\$ 17,663	\$ 7,962	\$ 2,199	\$ 1,199	\$ 11,360
Non Residential	\$ 3.39	\$ 1.54	none	\$ 4.93	\$ 9.54	\$ 3.08	\$ 0.94	\$ 13.56	\$ 6.15	\$ 1.54	\$ 0.94	\$ 8.63
Fraser Sewerage Area:												
Single Family Residential	\$ 6,692	\$ 6,254	none	\$ 12,946	\$ 19,714	\$ 13,613	\$ 1,943	\$ 35,270	\$ 13,022	\$ 7,359	\$ 1,943	\$ 22,324
Townhouse	\$ 5,696	\$ 5,390	none	\$ 11,086	\$ 17,710	\$ 11,914	\$ 1,751	\$ 31,375	\$ 12,014	\$ 6,524	\$ 1,751	\$ 20,289
Apartment	\$ 4,261	\$ 4,269	none	\$ 8,530	\$ 12,223	\$ 8,686	\$ 1,199	\$ 22,108	\$ 7,962	\$ 4,417	\$ 1,199	\$ 13,578
Non Residential	\$ 3.39	\$ 3.30	none	\$ 6.69	\$ 9.54	\$ 6.43	\$ 0.94	\$ 16.91	\$ 6.15	\$ 3.13	\$ 0.94	\$ 10.22

3.0 Land Economics and DCCs

New urban development (e.g. residential units, employment space) drives the need for expanded regional liquid waste and water infrastructure as well as the need for expanded regional parkland. There is a compelling rationale for the idea that new urban development should help pay for new regional liquid waste infrastructure, new regional water infrastructure, and regional parkland acquisition. At the same time, there are concerns that DCCs can have a direct impact on the cost of new development and therefore add to residential sales prices and/or commercial and industrial lease rates, which is generally regarded as an undesirable outcome.

The market dynamics of DCCs are complex. Land is unique compared to other forms of capital. Labour, money, and materials can all move around based on where they will obtain the optimum value or return. Land, however, cannot move, so its value is based on what it can be used for in its local market context.

In an urban region such as Metro Vancouver, properties have at least two candidates for what an appraiser would call the highest and best use, or the use that supports the highest land value in an open, competitive marketplace:

- *Value based on existing use:* One candidate is the amount that a user (e.g. a homeowner, a business owner) or an investor would pay for the property to keep it in its present use (e.g. a single family house, an older low density rental apartment building, an older retail space, or a strip mall). This existing use supports a value based on what users or investors are willing to pay to keep and use the property as is (e.g. to live in, to run a business in, or to collect the rent from).
- *Land value under redevelopment:* The second candidate is the amount a developer is willing and able to pay to acquire the property, demolish the existing use, and profitably build something new, typically at a higher density. The amount a developer can pay depends on the market value of the completed new use and the cost of creating this new use.

When the value supported by the existing use exceeds the land value a developer can pay, the property generally remains as is. This is the case for many properties that appear as though they “ought” to be development sites, because some older low density commercial properties or older single detached homes in places zoned for higher density development are simply more valuable in their current use than a developer can afford to pay for them based on redevelopment potential.

On the other hand, when the land value supported by the redevelopment of a site exceeds the value of the existing use, then redevelopment usually occurs.

The land value supported by redevelopment can be determined by an approach called residual land value analysis (also known as pro forma analysis). This is a way of determining how much a developer can afford to pay for a particular site.

The steps in residual land value analysis are as follows:

1. First, the total revenues related to building and selling (or leasing) a new project on a site are estimated.
2. Next, all product creation costs (except land) are deducted. These include construction costs, professional fees, financing, and all permit fees and levies.
3. Next, an allowance for developer profit is deducted, which is a target that is budgeted into the analysis rather than left to chance as whatever happens to remain after project completion. Market forces tend to produce market-wide consistency in target profit levels (i.e. if profits are too low, some participants will leave the business, which over time will lead to higher prices and higher profits because the supply of new units will fall; if profits are high, some new participants will enter the business).

4. Finally, deducting all costs and targeted profit from revenue leaves the residual amount that a developer can afford to pay for land.

In a competitive marketplace, developers are “price-takers” for revenues and creation costs:

- They cannot simply add the cost of a new or increased DCC onto the asking prices for new floorspace. Adding a new or increased DCC onto the asking price would imply that purchasers are willing to pay more for space that is subject to DCCs than they would pay for comparable space in comparable neighbourhoods with lower (or no) DCCs. This does not happen because prices are set by the interaction between supply and demand. Unless there is a monopoly on a commodity, no supplier can unilaterally set price simply because costs are higher.
- Similarly, they cannot arbitrarily reduce other creation costs.

Development takes time, ties up capital, and involves risk, so developers need to achieve a level of profit that makes the business worthwhile. As noted above, developer profit margins are set by the competitive marketplace: there is a basement rate of profit set by the fact that developers would not be willing to undertake projects below some minimum threshold of profitability (and lenders are not likely to lend money for projects that are too “thin”) and a ceiling rate set by competition from other developers (a developer who tries to extract too much profit will have to try to achieve higher unit prices than other similar projects, tries to obtain labour or materials at less than market price, or tries to buy development sites for less than market value, none of which are likely to be sustainable business strategies).

Therefore, a new or increased DCC reduces the residual amount that a developer can afford to pay for land. Said another way, developers will respond to a new or increased DCC by seeking to lower the bid price for development sites by an amount equal to the new or increased DCC. This is no different than how developers respond to a site that (for example) has soil contamination and needs remedial work. A developer would be willing to pay less for such a site, by an amount equal to the cost of soil remediation work needed to make the net cost of the site equivalent to comparable land with no soil contamination problems.

The key to understanding and anticipating the ultimate impact of a new or increased DCC, therefore, is to understand how the DCC is likely to affect the supply of land available for new development. The impact for each site will depend on the characteristics of individual properties, market conditions, the objectives of individual owners, and other factors, so it is the overall combined impact across the land market that determines the ultimate impact.

There are three possible outcomes of an increased DCC:

- *A reduction in land values for redevelopment sites.* If a new or increased DCC lowers developers’ bid price for land, but this price is still sufficiently higher than the value supported by the existing use, there is no impact on the housing or commercial/industrial market. Landowners still have an incentive to sell into the market (as the land value still exceeds the existing use value), developers can outbid users or investors who want the existing use, and new units and floorspace still flow to the market at the pace they would have before the new or increased DCC. Developers experience the same total project cost (albeit made up of different line items – lower land costs and higher DCC costs) as they would face without the new or increased DCC, the same amount of new development happens, and there is no reason for demand to change, so prices to consumers and profits for developers remain where they were before the new or increased DCC. The only impact is that land values for redevelopment sites are lower than they otherwise would have been.
- *An increase in the market price (sales prices or rents) of new units/floorspace.* If the increased DCC (or any new cost) drives developers’ bid price for redevelopment sites below the value supported by the existing use, developers will not be able to obtain development sites at the same pace as before the

introduction of the increased DCC (i.e. more sites will remain in their existing use and the supply of development sites will be reduced). If this reduction in the availability of development sites is large and widespread, the supply of new product will be reduced. If the pool of development sites and therefore the supply of new product is reduced, in the face of continued demand for housing or commercial/industrial space, this can lead to increased market prices for new (and existing) product.

- *A reduction in profit margins for new projects.* If the increased cost cannot be passed along to buyers/renters of the new space and cannot be passed back to landowners (e.g. if the site was already purchased), the outcome can be a reduction in profit margins for new projects.

The financial analysis summarized in this report aims to determine how Metro Vancouver's new and increased regional DCC rates are likely to affect the amount developers can pay for land and the implications for the supply of land that is financially attractive for redevelopment, to help inform Metro Vancouver about which of the three outcomes (or combination) is most likely.

4.0 Approach to Financial Analysis and Case Studies

As outlined in Section 1.2, the analysis summarized in this report focuses on the impact of the increased Metro Vancouver DCC rates, not the impact of other market factors or upcoming municipal policy changes that could affect the financial viability of development projects.

4.1 Approach to Financial Analysis

Our analysis included the following main steps:

1. We confirmed the new and increased DCC rates with Metro Vancouver.
2. We completed market research to determine inputs to the financial analysis such as construction costs, interest rates, residential unit sales prices, apartment unit rents, commercial lease rates, and industrial lease rates. The financial analysis is based on market conditions and construction costs as of Q2 of 2024.
3. We selected representative case study sites for our evaluation of possible financial impacts. The financial viability of redevelopment varies throughout the region depending on a site's location, existing use and zoning (which influence existing value), proposed use, redevelopment density, and other land use regulations (such as CAC or density bonus policies). Therefore, we identified a variety of different case study sites that are considered representative of the kinds of redevelopment opportunities that exist in locations anticipated to be a focus of development in the region (based on existing land use policies as of June 2024).

We analyzed a total of 41 case studies. Exhibit 6 summarizes the number of case studies by location and by type of project. These sites are all in locations that are good candidates for redevelopment, based on municipal policy and market interest. While it is not possible to analyze the impact of a new or increased DCC on every possible type of project and existing situation in the region, these case studies represent a wide range of potential redevelopment projects in terms of existing land use, density, building form, tenure and location. Therefore, impacts on these hypothetical projects from Metro Vancouver's increased DCCs will be broadly indicative of the potential impact on similar types of redevelopment projects in these areas.

Note that the case study financial analysis does not include institutional development, as it is not a market use, or stand-alone retail development, as stand-alone retail development rarely occurs in Metro Vancouver. However, retail is included in the mixed-use redevelopment case studies that we analyzed where policies require or encourage grade level commercial space.

Exhibit 6: Summary of Case Studies Analyzed

Sewerage Area:	Single family	Townhouse	Apartment or Mixed-Use			Office	Industrial	Total
			4 to 6 storey strata apartment or mixed-use	Highrise strata apartment or mixed-use	Market rental apartment or mixed-use			
Vancouver	0	2	2	2	3	1	1	11
North Shore	0	1	1	1	1	0	1	5
Lulu Island	1	1	1	1	0	1	1	6
Fraser	3	5	4	2	1	2	2	19
Total	4	9	8	6	5	4	5	41

4. For each case study, we estimated the property value supported by the existing use of the site:

- For income producing properties (commercial, industrial), the existing use value is the capitalized value of the net income stream generated by the existing improvements. This is the value that an investor would be willing to pay for the property to retain the existing improvements and collect rent for the long term. This is the minimum price that a developer would need to pay for the site to acquire it for redevelopment purposes.
 - For existing single family or duplex properties, the existing use value is the estimated value of the property as an existing residence. For residential properties that require assembly, we assume that the developer would also need to pay a 20% premium over existing value in order to create an incentive for the existing homeowners to all sell simultaneously for redevelopment.
5. Using pro forma analysis, we determined whether redevelopment is financially viable under current market conditions and Metro Vancouver's existing DCC rates. For each case study, we modelled the financial performance of a new development project based on the applicable allowable use and density (and other development regulations) at the site using residual land value analysis (pro forma analysis as described in Section 3.0). We considered two measures of viability:
- We calculated whether redevelopment supports a land value that is higher than the value supported by the existing use (from step 4 above).
 - We also used the pro forma analysis to estimate the profit margin that would be generated by the redevelopment concept if the property was acquired at the value supported by the existing use of the property (from step 4 above).

Our analysis for each case study scenario incorporates other existing municipal and regional DCCs and any fixed rate local government Community Amenity Contributions (CACs) or density bonus contributions where applicable, as of June 2024.

Based on a combination of these two approaches, we evaluated whether development is likely financially viable under current market conditions, current municipal policies, and the current Metro Vancouver DCC rates.

6. We then re-analyzed each scenario (in step 5) using the increased Metro Vancouver DCC rates (January 1st, 2027) to estimate the approximate impact of the new Metro Vancouver DCC rates on:
- The supportable land value for the site.
 - The estimated profitability of the project if the site is acquired at the value supported by the existing improvements (second bullet in step 5 above).
 - The project viability.
 - Any change in unit sales prices (or rents) needed to off-set the DCC increase.
7. To evaluate the potential impacts on viability, land prices and end unit prices, we used the following approach:
- In cases where the estimated supportable land value (after accounting for the new increased DCC) is higher than the estimated value supported by the existing use at a site, we assume that the increased DCC costs can be passed back to landowners resulting in a lower land acquisition cost. If the land value declines, but still remains higher than the value of the existing use, then a landowner still has an incentive to sell for redevelopment rather than retain the property in its existing use. So in these cases, the primary impact is a reduction in development site land values not an increase in end unit prices.
 - In cases where the estimated supportable land value (after accounting for the new increased DCC) is lower than the estimated value supported by the existing use at a site, we assume that any reduction in development site land values cannot be passed back to landowners because the

landowner would be better off (financially) holding the site under its existing use rather than selling for redevelopment. If this is the case, the increased DCC can reduce the number of sites that are financially viable for development, creating downward pressure on the supply of new product in the market. Decreasing new supply in the face of continued demand will likely result in increased market prices for new (and existing) product.

8. We summarized the results of all of the case studies to identify the implications and draw key conclusions.

4.2 Overview of Case Studies

We analyzed 41 different case studies, which can be summarized as follows:

- Four single family subdivisions (DCCs are charged at subdivision if new single family lots are created).
- Nine townhouse development sites.
- Eight 4 to 6 storey wood frame strata apartment (or mixed-use) development sites.
- Six highrise concrete strata apartment (or mixed-use) development sites.
- Five rental apartment (or mixed-use) development sites.
- Four office development sites.
- Five industrial development sites.

The case study sites and assumed redevelopment scenarios are described below.

Site 1: Single Family Subdivision – 2 Lots – Coquitlam

This site is an existing 8,700 square foot single family lot improved with an older house in Coquitlam. Planning policy supports rezoning and subdivision of this lot into two smaller infill single family lots.

Site 2: Single Family Subdivision – 8 Lots – Coquitlam

This site is a 45,000 square foot single family lot improved with an older house in Coquitlam. Planning policy supports rezoning and subdivision of this lot into eight smaller single family lots.

Site 3: Single Family Subdivision – 30 Lots – Langley Township

This site is 5.0 acres and is improved with an older single-family dwelling. Planning policy supports rezoning and subdivision into 30 single family lots under the “residential” Official Community Plan (OCP) designation.

Site 4: Single Family Subdivision – 2 Lots – Richmond

This site is a 19,000 square foot single family lot improved with an older single family home in Richmond. Planning policy supports rezoning and subdivision into two infill single family lots under the “NRES” OCP designation.

Site 5: Townhouse – North Vancouver District

This site is an assembly of three single family lots improved with older homes in the District of North Vancouver. The combined site area is 22,200 square feet. Planning policy allows townhouses at 1.2 FSR⁴ under the RES4 OCP designation.

⁴ FSR stands for Floor Space Ratio (sometimes referred to as FAR or Floor Area Ratio). This is a common measure of the maximum density permitted (or achievable) at a site in municipal zoning bylaws. An FSR of 2.0 would mean that the maximum permitted floorspace at a property is 2.0 times the size of the site. This could take a variety of building forms in terms of site coverage and number of storeys.

Site 6: Townhouse – Langley Township

This site is a 46,600 square foot single family lot improved with an older home in the Township of Langley. Planning policy supports rezoning to allow townhouse use at 22 units per acre. Our financial analysis assumes townhouse development at an overall density of 0.75 FSR (22 units per acre).

Site 7: Townhouse – Higher Density – Maple Ridge

This site is an assembly of three large single family lots improved with older homes in Maple Ridge. The combined site size is about 61,000 square feet. Planning policy supports rezoning to allow townhouse use. We assume a new townhouse project is developed at 0.95 FSR under the RM-5 zoning district.

Site 8: Townhouse – Lower Density Option – Maple Ridge

This site is a 42,700 square foot rural single family residential property in Maple Ridge. Planning policy supports rezoning to allow townhouse use under the Silver Valley Plan at 35 units per hectare. We assume that 0.6 FSR is achievable on this property under current planning policy.

Site 9: Townhouse – Richmond

This site is an assembly of two large lots with older single family dwellings and a combined site area of 22,440 square feet. Current planning policy allows townhouse development at 0.9 FSR. We assume the site is redeveloped with townhouses at 0.9 FSR.

Site 10: Townhouse – North Surrey

This site is an assembly of two single family lots improved with older homes in North Surrey. The combined site size is about 24,000 square feet. Planning policy supports rezoning to allow townhouse use at 30 units per acre. Our financial analysis assumes townhouse development at an overall density of 1.0 FSR (30 units per acre).

Site 11: Townhouse – Lower Density Option – North Surrey

This site is a 43,400 square foot single family lot improved with an older home in North Surrey. Planning policy supports rezoning to allow townhouse use at 15 units per acre. Our financial analysis assumes townhouse development at an overall density of 0.75 FSR (15 units per acre).

Site 12: Townhouse – Vancouver East

This site is an assembly of three older single family dwellings in East Vancouver with a combined lot area of 15,300 square feet. City of Vancouver planning policy allows townhouse development up to 1.2 FSR on this site. Our financial analysis assumes that a developer would build townhouses at 1.2 FSR with surface parking on this site.

Site 13: Townhouse – Vancouver West

This site is an assembly of three older single family dwellings on the West Side of Vancouver with a combined lot area of about 22,500 square feet. Townhouse development is permitted under existing zoning at 1.2 FSR. Our analysis assumes townhouse development at 1.2 FSR with underground parking.

Site 14: 6 Storey Strata Apartment – Coquitlam

This site is an assembly of two older homes plus a duplex property. The combined site is about 24,800 square feet and current planning policy allows apartment development at 2.3 FSR. Our analysis assumes a developer would build a 6 storey woodframe strata apartment project at 2.3 FSR.

Site 15: 4 Storey Strata Apartment – Maple Ridge

This site is an assembly of three large single family lots improved with older single-family homes in Maple Ridge. The combined site size is about 61,000 square feet. Planning policy supports rezoning to allow apartment use. Our financial analysis assumes 4 storey woodframe strata apartment development at an overall density of 1.9 FSR.

Site 16: Mixed-use 6 Storey Strata Apartment – North Delta

This site is an assembly of five single family lots improved with older single family homes in North Delta. The combined site size is about 36,000 square feet. Planning policy supports rezoning to strata apartment use. Our financial analysis assumes a 6 storey wood frame strata apartment project at a density of 2.2 FSR.

Site 17: 6 Storey Strata Apartment – North Vancouver District

This site is an assembly of four older single family homes in North Vancouver District with a combined land area of approximately 16,100 square feet. Planning policy allows up to 2.5 FSR through rezoning. We assume a developer would rezone and build a 6 storey wood frame strata apartment building at a density of 2.5 FSR.

Site 18: Mixed-Use 6 Storey Strata Apartment – Richmond

This site is improved with an older service commercial building on a 37,000 square foot site. Current planning policy allows lowrise mixed-use apartment development under the T5 OCP designation. We assume a developer would build a 2.45 FSR 6 storey strata apartment building with retail at grade. Our financial analysis includes market rental and below market rental housing as is required by current City of Richmond policy. Current policy requires strata residential rezoning proposals with over 60 units to provide 15% of the total habitable residential floor area as low end of market rental (LEMUR) and 15% of the total habitable residential floor area excluding LEMUR space to be market rental in the City Centre.

Site 19: 6 Storey Strata Apartment – North Surrey

This site is an assembly of five single family lots improved with older homes in North Surrey. The combined site size is about 41,000 square feet. Planning policy supports rezoning to allow apartment use. Our financial analysis assumes 6 storey wood frame strata apartment development at an overall density of 2.5 FAR.

Site 20: 6 Storey Strata Apartment – Vancouver East

This site is an assembly of five single family lots in East Vancouver improved with older homes. The assembly is about 20,100 square feet and the Grandview Woodland Plan allows 2.65 FSR. We assume a developer would build a 6 storey strata apartment building at this site.

Site 21: 6 Storey Strata Apartment – Vancouver West

This site is an assembly of one duplex lot and one single family lot on the West Side of Vancouver, both with older low density improvements. The combined site size is about 16,600 square feet. The Cambie Corridor Plan allows up to 2.25 FSR on this site. Our financial analysis assumes that a developer would build a 6 storey concrete strata apartment building at this site.

Site 22: Highrise Strata Apartment – Vancouver East

This site is a 20,800 square foot property in East Vancouver improved with an existing low density commercial building. The Norquay Village Plan allows up to 3.8 FSR mixed-use apartment. For our financial analysis, we assume that a developer would build a concrete strata apartment building with ground floor retail at 3.8 FSR.

Site 23: Highrise Strata Apartment – Vancouver West

This site is an assembly of two older single storey commercial properties on the West Side of Vancouver. The combined site area is about 29,500 square feet and current zoning allows strata apartment development

at 3.3 FSR. We assume a developer would build a concrete strata apartment building with ground floor retail at 3.3 FSR at this site.

Site 24: Highrise Strata Apartment – Langley City

This site is a 51,000 square foot assembly in the City of Langley that is improved with older low density commercial buildings. Planning policy supports rezoning to allow high density mixed-use commercial and apartment use. Our financial analysis assumes a concrete mixed-use apartment and retail project at an overall density of 5.5 FSR.

Site 25: Highrise Strata Apartment – North Vancouver City

This site is a 23,500 square foot assembly in the City of North Vancouver improved with older low density commercial buildings. The OCP designation allows 4.0 FSR mixed-use. For the financial analysis, we assume that a developer would build a highrise concrete strata apartment building with ground floor retail at the maximum allowable density of 4.0 FSR.

Site 26: Highrise Strata Apartment – Richmond

This 28,500 square foot site is located in Richmond and is improved with an older low density commercial building. Current planning policy supports high density mixed-use multifamily development based on the T6 Urban Core OCP designation. We assume a developer would build a concrete strata apartment building with commercial at grade at 3.45 FSR. Our financial analysis includes market rental and below market rental housing as is required by current City of Richmond policy. Current policy requires strata residential rezoning proposals with over 60 units to provide 15% of the total habitable residential floor area as LEMR units and 15% of the total habitable residential floor area excluding the LEMR space to be market rental in the City Centre.

Site 27: Highrise Strata Apartment – Surrey

This 21,000 square foot site in Surrey City Centre is improved with an older single storey commercial building. Planning policy supports rezoning to allow high density mixed-use commercial and apartment use. Our financial analysis assumes a highrise mixed-use apartment and retail project at an overall density of 9.0 FSR.

Site 28: 6 Storey Rental Apartment – North Vancouver City

This site is an assembly of two existing low density rental apartment buildings in the City of North Vancouver. The site is about 21,000 square feet and is designated R5 under the existing OCP, which allows rental development up to 2.6 FSR. We assume that a developer would build a 6 storey wood frame rental apartment building. Current City policy requires 10% of the units to be below market rental units.

Site 29: 6 Storey Rental Apartment – Surrey

This 41,100 square foot site in North Surrey is an assembly of five single family lots improved with older homes. The site is designated in the OCP for apartment development at 2.5 FSR. Our analysis assumes development with a 6 storey 2.5 FSR wood frame rental building.

Site 30: 5 Storey Rental Apartment – Vancouver East

This 15,000 square foot site in East Vancouver is an assembly of four single family lots, each improved with an older home. Under current planning policy, 5 storey rental apartment development at 2.2 FSR is permitted on this site. Our financial analysis assumes a 5 storey 2.2 FSR wood frame rental apartment project would be built at this site.

Site 31: 5 Storey Rental Apartment – Vancouver West

This 26,200 square foot site is an assembly of three single family lots on the West Side of Vancouver, each improved with an older home. Under current planning policy, purpose-built rental at 5 storeys and 2.2 FSR is permitted on this site. Our financial analysis assumes that a 5 storey 2.2 FSR wood frame rental apartment building would be built at this site.

Site 32: Highrise Rental Apartment – Vancouver West

This 22,000 square foot site on the West Side of Vancouver is improved with an older 3 storey rental apartment building. Current planning policy supports purpose-built rental apartment development at 6.5 FSR with 20% allocated to below market rental. We assume a developer would build a highrise rental building with 20% below market rental at this site.

Site 33: Office Project – Coquitlam

This 16,000 square foot site is located in Coquitlam City Centre and is improved with older low density commercial space. Current planning policy supports rezoning to allow office use. Our financial analysis assumes retail and office development at an overall density of 2.0 FSR. The analysis assumes the commercial space is sold as individual strata units as most new commercial space built in this area has been strata (not leasehold) in recent years.

Site 34: Office Project – Richmond

This 75,700 square foot site in Richmond City Centre is improved with older low density commercial space. Current planning policy supports rezoning to allow high density commercial use. Our financial analysis assumes a highrise office and retail project at an overall density of 3.0 FSR. The analysis assumes the commercial space is sold as individual strata units as most new commercial space built in this area has been strata (not leasehold) in recent years.

Site 35: Office Project – Surrey City Centre

This 61,000 square foot site in Surrey City Centre is improved with an older single storey commercial building. Current planning policy supports rezoning to allow high density commercial use. Our financial analysis assumes a highrise office and retail project at an overall density of 4.2 FSR. The analysis assumes the commercial space is sold as individual strata units as new commercial projects in this area have primarily been strata (not leasehold) in recent years.

Site 36: Office Project – Vancouver West

This site is a 23,000 square foot site in the Broadway Corridor on the west side of Vancouver. It is improved with an older low density commercial building and current planning policy supports office redevelopment up to 9.0 FSR. Our analysis assumes a highrise office and retail project at an overall density of 9.0 FSR. The analysis assumes the commercial space is leasehold (not strata) which is common in this area due to City policy.

Site 37: Light Industrial Project – South Vancouver

This site is located in South Vancouver and is about 87,000 square feet. It is improved with an existing older single storey industrial building. Existing zoning allows up to 3.0 FSR of stacked industrial. Our financial analysis assumes that a developer would build a multi-level industrial (and office) building at 3.0 FSR. The analysis assumes the new space is sold as individual strata units (not leased) which is a common approach for new projects in this area.

Site 38: Light Industrial Project – North Vancouver District

This site is in the District of North Vancouver and is about 20,000 square feet. It is improved with an older low density building. We assume a developer would build a 0.6 FSR industrial warehouse at this site. The analysis assumes the new space is sold as individual strata units (not leased) which is a common approach for new industrial projects in North Vancouver.

Site 39: Light Industrial Project – Pitt Meadows

This is a 43,000 square foot site located in Pitt Meadows that is improved with an older low density industrial building plus an outdoor storage area. Our financial analysis assumes a light industrial project is built at an overall density of 0.6 FSR. The analysis assumes the new industrial space is leasehold (not strata) which is common in this area.

Site 40: Light Industrial Project – Richmond

This 39,200 square site is located in Richmond and zoned for industrial use. The site is currently occupied by an older single storey industrial building. Our financial analysis assumes leasehold industrial redevelopment at 0.6 FSR.

Site 41: Light Industrial Project – Surrey

This site is a 217,000 square foot rural residential property located in the Campbell Heights area of Surrey. It is improved with an older residence plus storage buildings. Current planning policy supports rezoning to allow industrial use. Our financial analysis assumes a light industrial project at an overall density of 0.6 FSR. The analysis assumes the new industrial space is leasehold (not strata).

5.0 Summary of Financial Analysis Results

The impact of the increased Metro Vancouver DCC will vary by the type of new development project so we divided the analysis into eight different categories by type of project, including:

1. Single family subdivision.
2. Strata townhouse.
3. Lowrise (4 to 6 storey) market strata apartment.
4. Highrise market strata apartment.
5. Market rental apartment.
6. Non-profit housing.
7. Office.
8. Light industrial.

The following sections provide a summary of the results of the case study financial analysis by project type. As previously noted, a total of 41 case studies were analyzed. The results of the financial analysis are summarized in Exhibits 7 to 13.

Each exhibit shows the following information for each case study site and redevelopment scenario:

1. Case study number.
2. Location.
3. Description of redevelopment scenario.
4. Description of existing use.
5. Whether the redevelopment scenario is financially viable under the current Metro Vancouver DCC rates assuming the developer acquires the site at the value supported by its existing use (note this may be less than the current land value supported by existing land use policy). For this measure:
 - Any scenario that generates (a) a land value under redevelopment that is higher than the land value supported by the existing use and (b) a profit margin of 15%⁵ (on total costs) or more was categorized as viable. In these cases, there is an opportunity to pass any increased DCCs back to the existing landowner (unless the site has already been acquired by the developer) creating no impact on profit or unit prices.
 - Any scenario that generates a project margin is between 10% and 15%⁶ was categorized as likely viable. Although these scenarios may be viable, there is no room to pass the increased DCC rate back to the landowner.
 - Any scenario that generates a profit margin less than 10% was categorized as not likely viable. For these scenarios, there is no room to pass the increased DCC rate back to the landowner (but few of these projects would likely go ahead under the current rate and current market conditions).

⁵ For market rental apartment projects, this threshold profit margin is 12% not 15%.

⁶ For market rental apartment projects, this threshold profit margin is 10% to 12% (not 15%).

6. The estimated impact on supportable land value (shown as a percentage of existing land value) of the total combined increase in Metro Vancouver’s DCC rates between the current rates and the rates as of January 1, 2027.
7. Whether the redevelopment scenario is financially viable under Metro Vancouver’s new DCC rates (using the same “viable,” “likely viable”, and “not likely viable” categories as outlined in point 5 above).
8. The potential impact of Metro Vancouver’s new DCC rates on the estimated profit margin (shown as percentage point impact) from the redevelopment scenario if the land acquisition cost cannot be reduced (for example, if the site was already purchased).
9. The potential impact of Metro Vancouver’s new DCC rates on end unit prices shown as a percentage of unit prices/rents (assuming the increased DCC reduces the number of development sites available, which creates downward pressure on the supply of new product and, in the context of continued demand, can increase end unit prices).

5.1 Single Family Subdivision

Exhibit 7 summarizes our analysis for the single family subdivision case studies.

Exhibit 7: Summary of Financial Analysis for the Single Family Subdivision Case Studies

Case Study Site	Location	Redevelopment Scenario	Existing Use	Is Project Viable as a Redevelopment Site at Existing DCC Rates?	Decrease in Supportable Land Value in Development Scenario due to Increase in DCC Rate	Is Project Viable as a Redevelopment Site at Proposed DCC Rate?	Decrease in Profit Margin Due to Increase in DCC if Land Cost Fixed (percentage points)	Increase in Unit Sales Prices or Rents Required to Off-Set DCC Increase if Land Cost Fixed
1	Coquitlam	2 lot subdivision	Old single family home	Likely	-1%	Likely	-1.2	1.3%
2	Coquitlam	6 lot subdivision	Acreage lot	Yes	-2%	Yes	-11.5	1.3%
3	Langley Township	30 lot subdivision	Acreage lot	Yes	-4%	Yes	-10.8	1.3%
4	Richmond	2 lot subdivision	Old single family home	Likely	-1%	Likely	-0.7	0.9%

Our analysis indicates that subdivision of existing single family properties in Metro Vancouver into multiple single family lots is financially viable. Infill subdivision (one lot subdivided into two) is less viable (but many of these lots can now be developed with small scale multi-unit housing as an alternative).

Subdivision usually supports land values that are higher than the value supported by the existing use of the property (typically older larger lot single family homes or rural properties). Therefore, the main impact of the increased Metro Vancouver DCCs on single family subdivision projects will be to reduce land values for sites that are subdivision candidates.

We anticipate that most sites that are candidates for single family subdivision will continue to be viable for subdivision under the increased Metro Vancouver DCCs, so we would not expect significant impacts on the pace of single family subdivision or significant impacts on end lot and/or new home prices.

For single family subdivisions, we think that the primary impacts of the increased DCCs will be:

- Reduced market land values for sites that are subdivision candidates. Our analysis indicates that land values for subdivision candidates could be negatively impacted in the range of 1% (in higher land value locations) to 4% (in lower land value locations).

- If the increased DCC did result in higher new single family lot prices, the maximum increase in new lot prices would be about 1% (the resulting increase in the completed new home prices would be smaller as the lot value only accounts for a share of the new home cost).

5.2 Strata Townhouse Projects

Exhibit 8 summarizes our analysis for the townhouse case studies.

Exhibit 8: Summary of Financial Analysis for the Townhouse Case Studies

Case Study Site	Location	Redevelopment Scenario	Existing Use	Is Project Viable as a Redevelopment Site at Existing DCC Rates?	Decrease in Supportable Land Value in Development Scenario due to Increase in DCC Rate	Is Project Viable as a Redevelopment Site at Proposed DCC Rate?	Decrease in Profit Margin Due to Increase in DCC if Land Cost Fixed (percentage points)	Increase in Unit Sales Prices or Rents Required to Off-Set DCC Increase if Land Cost Fixed
5	District of North Vancouver	Townhouse at 1.2 FSR	Older single family homes	Likely	-8%	Not likely	-2.1	2.4%
6	Langley	Townhouse with Garage Parking at 0.75 FSR	Acreage lot	Yes	-15%	Yes	-2.7	3.0%
7	Maple Ridge	Townhouse with Garage Parking at 0.95 FSR	Large lot single family homes	Likely	-14%	Likely	-3.0	3.3%
8	Maple Ridge	Townhouse with Garage Parking at 0.6 FSR	Acreage lot	Yes	-12%	Yes	-2.8	2.6%
9	Richmond	Townhouse with Garage Parking at 0.9 FSR	Older large lot single family homes	Likely	-5%	Likely	-1.6	2.5%
10	Surrey	Townhouse with Garage Parking at 1.0 FSR	Older large lot single family homes	Not likely	-9%	Not likely	-2.2	2.9%
11	Surrey	Townhouse with Garage Parking at 0.75 FSR	Acreage lot	Yes	-9%	Likely	-1.8	2.2%
12	Vancouver East Side	Townhouse with Surface Parking at 1.2 FSR	Older single family homes	Likely	-5%	Not Likely	-2.3	2.1%
13	Vancouver West Side	Townhouse with Underground Parking at 1.2 FSR	Older single family homes	Not likely	-4%	Not likely	-1.4	1.6%

The case study analysis indicates two different outcomes for townhouse projects depending on the type of location and type of existing use.

1. In locations where townhouse development is occurring through the redevelopment of existing urban single family properties (most locations in the region), the financial viability of townhouse development is marginal at the current Metro Vancouver DCC rates. In these locations, land values supported by townhouse development are typically not higher than the value supported by the existing use (e.g., older single family houses).

So, in most cases, the increased Metro Vancouver DCCs on townhouse projects in urbanized areas cannot be passed back to landowners. Therefore, the primary impacts of the increased DCCs for strata townhouse projects in urbanized areas of the region will be:

- The increased DCC rates will reduce the pool of sites that are financially viable for redevelopment which could slow the pace of new townhouse development.
 - A slower pace of new supply will result in higher unit prices at townhouse projects.
 - To offset the higher DCC rates, the required increase in townhouse unit prices would likely range between about 2% to 3% depending on location.
2. In locations where townhouse development is occurring in greenfield locations or more rural areas (such as parts of Langley, parts of Surrey and parts of Maple Ridge), our case study analysis indicates that the value supported by the existing use is relatively low and the increased Metro Vancouver DCCs can likely be passed back to landowners. So we think that the primary impact of the increased Metro Vancouver DCC rates in greenfield locations will be reduced market land values for sites that are townhouse candidates. Our analysis indicates that land values for townhouse sites in greenfield areas could be negatively impacted in the range of 9% to 15%.

5.3 Lowrise (4 to 6 storey) Market Strata Apartment Projects

Exhibit 9 summarizes our analysis for the 4 to 6 storey strata apartment case studies.

Exhibit 9: Summary of Financial Analysis for 4 to 6 Storey Strata Apartment Case Studies

Case Study Site	Location	Redevelopment Scenario	Existing Use	Is Project Viable as a Redevelopment Site at Existing DCC Rates?	Decrease in Supportable Land Value in Development Scenario due to Increase in DCC Rate	Is Project Viable as a Redevelopment Site at Proposed DCC Rate?	Decrease in Profit Margin Due to Increase in DCC if Land Cost Fixed (percentage points)	Increase in Unit Sales Prices or Rents Required to Off-Set DCC Increase if Land Cost Fixed
14	Coquitlam	Lowrise woodframe strata at 2.5 FSR	Older single family homes + duplex	Yes	-11%	Yes	-2.3	2.4%
15	Maple Ridge	Lowrise woodframe strata at 1.9 FSR	Older large lot single family homes	Likely	-35%	Likely	-2.8	3.2%
16	North Delta	Lowrise woodframe strata at 2.2 FSR	Older single family homes	Likely	-16%	Likely	-2.7	2.9%
17	District of North Vancouver	Lowrise woodframe strata at 2.5 FSR	Older single family homes	Likely	-11%	Likely	-2.4	2.2%
18	Richmond	Mixed-use woodframe strata at 2.45 FSR	Older commercial building	Likely	-32%	Not likely	-3.4	4.5%
19	Surrey	Lowrise woodframe strata at 2.5 FSR	Older single family homes	Yes	-13%	Likely	-2.2	2.7%
20	Vancouver East Side	Lowrise woodframe strata at 2.65 FSR	Older single family homes	Yes	-7%	Likely	-0.6	2.4%
21	Vancouver West Side	Lowrise concrete strata at 2.25 FSR	Older single family home + duplex	Yes	-4%	Yes	-1.6	1.4%

Our case study analysis indicates that, in most locations in the region, the land value supported by 4 to 6 storey strata apartment development is either similar to or lower than the value supported by the existing use of the property (after accounting for existing municipal policies that require contributions to affordable housing or amenities).

So, in most cases, the increased Metro Vancouver DCCs cannot be passed back to landowners. Therefore, the primary impacts of the increased DCCs for 4 to 6 storey strata apartment projects will be:

1. The increased Metro Vancouver DCC rates will reduce the pool of sites that are financially viable for redevelopment which could slow the pace of new 4 to 6 storey strata apartment development.
2. A slower pace of new supply will result in higher strata unit prices at 4 to 6 storey projects.
3. To offset the higher Metro Vancouver DCC rates, the required increase in unit prices would likely range between about 2% to 3% depending on the location (if the project is required to include inclusionary below market units, then the required increase on the market strata component is higher as the strata component only accounts for a share of total floorspace).

However, it should be noted that there are some locations where 4 to 6 storey strata apartment projects (at the new DCC rates) will support a land value that is higher than the value supported by the existing use of the property. In these limited circumstances, we would not expect significant impacts on the pace of new 4 to 6 storey strata development or impacts on new unit prices. Instead, we would expect a reduction in development site land values.

For example, our case studies for Coquitlam and the West Side of Vancouver indicate that the primary impact would be a reduction in development site land values (in the range of 4% to 11%) rather than an impact on new unit prices. These outcomes show that when amenity contribution requirements are relatively low (Coquitlam case) or end unit prices are high (West Side of Vancouver), the primary impact would be a reduction in development site values. However, these situations are not typical for 4 to 6 storey strata projects in Metro Vancouver.

5.4 Highrise Market Strata Apartment Projects

Exhibit 10 summarizes our analysis for the highrise strata apartment case studies.

Exhibit 10: Summary of Financial Analysis for Highrise Strata Apartment Case Studies

Case Study Site	Location	Redevelopment Scenario	Existing Use	Is Project Viable as a Redevelopment Site at Existing DCC Rates?	Decrease in Supportable Land Value in Development Scenario due to Increase in DCC Rate	Is Project Viable as a Redevelopment Site at Proposed DCC Rate?	Decrease in Profit Margin Due to Increase in DCC if Land Cost Fixed (percentage points)	Increase in Unit Sales Prices or Rents Required to Off-Set DCC Increase if Land Cost Fixed
22	Vancouver East Side	Mixed-use Concrete at 3.8 FSR	Older commercial building	Yes	-10%	Yes	-1.9	1.9%
23	Vancouver West Side	Mixed-use Concrete at 3.3 FSR	Older commercial buildings	Yes	-3%	Yes	-2.1	1.3%
24	City of Langley	Mixed-use Concrete at 5.5 FSR	Older commercial buildings	Yes	-31%	Yes	-2.3	2.4%
25	City of North Vancouver	Mixed-use Concrete at 4.0 FSR	Older commercial buildings	Yes	-7%	Yes	-1.7	1.3%
26	Richmond	Mixed-use Concrete at 3.45 FSR	Older commercial building	Not likely	-54%	Not likely	-3.1	4.0%
27	Surrey	Mixed-use Concrete at 9.0 FAR	Older commercial building	Yes	-21%	Yes	-2.7	2.2%

Our analysis indicates that (in almost all cases) highrise strata apartment development throughout the region supports land values that are higher than the value supported by the existing use of the property (highrise sites are often improved with lower density commercial buildings or lower density residential improvements). The high densities that are permitted on these types of sites typically create land values that significantly exceed the value of the site under its existing use.

Therefore, the main impact of the increased Metro Vancouver DCCs will be to reduce land values for highrise development sites. We anticipate that most highrise apartment sites will continue to be viable for redevelopment under the Metro Vancouver DCCs, so we would not expect significant impacts on the pace of highrise strata apartment development or significant impacts on end unit prices.

For highrise strata apartment, we think that the primary impacts of the increased Metro Vancouver DCCs will be:

- Reduced land values for highrise strata apartment sites. Our analysis indicates that land values could be negatively impacted in the range of 3% (high land value locations) to 31% (lower land value locations)⁷.
- Reduced ability of highrise strata apartment rezonings to provide contributions to amenities or affordable housing because of the impact on the value of the additional rezoned density.

Exceptions could include:

- Sites that were purchased by highrise developers prior to the announcement of the increased regional DCCs (as the site is already purchased). For these sites, the developer would likely face reduced profitability if they proceed in the short term (our case study analysis indicates a potential impact on project margins in the range of 1.9 to 3.1 percentage points). This would likely result in some highrise projects being delayed until market conditions change.
- Municipalities where permitted highrise densities and building heights are relatively low and municipal policies require significant below market inclusionary housing units and/or amenity contributions. However, development in these types of location is already unlikely to be viable under current market conditions and current Metro Vancouver DCC rates.

5.5 Market Rental Apartment Projects

Exhibit 11 summarizes our analysis for the rental apartment case studies.

Exhibit 11: Summary of Financial Analysis for Rental Apartment Case Studies

Case Study Site	Location	Redevelopment Scenario	Existing Use	Is Project Viable as a Redevelopment Site at Existing DCC Rates?	Decrease in Supportable Land Value in Development Scenario due to Increase in DCC Rate	Is Project Viable as a Redevelopment Site at Proposed DCC Rate?	Decrease in Profit Margin Due to Increase in DCC if Land Cost Fixed (percentage points)	Increase in Unit Sales Prices or Rents Required to Off-Set DCC Increase if Land Cost Fixed
28	North Vancouver City	Wood Frame Rental with 10% BMR at 2.6 FSR	Older rental buildings	Likely	-9%	Not likely	-2.6	2.3%
29	Surrey	Wood Frame Rental at 2.5 FSR	Older single family homes	Not likely	-26%	Not likely	-3.4	3.2%
30	Vancouver East Side	Wood Frame Rental at 2.2 FSR	Older single family homes	Not likely	-12 %	Not likely	-2.1	2.3%
31	Vancouver West Side	Wood Frame Rental at 2.2 FSR	Older single family homes	Yes	-8%	Likely	-2.6	2.1%
32	Vancouver West Side	Concrete Rental with 20% BMR at 6.5 FSR	Older rental building	Yes	-11%	Likely	-2.2	2.2%

Our case study analysis indicates that the financial viability of market rental apartment development is marginal under current market conditions in most locations throughout Metro Vancouver at the current DCC

⁷ The impact of the increased DCC rates in dollars per square foot of buildable floorspace (or dollars per unit) is similar in lower and higher land value locations, so the percentage impact on land value is higher when the starting land value is lower.

rates. Rental development typically does not support increased land value over the value supported by the existing use.

So, the increased Metro Vancouver DCCs on rental apartment projects cannot be passed back to landowners. Therefore, the primary impacts of the increased DCCs for market rental apartment projects will be:

1. The increased Metro Vancouver DCC rates will reduce the pool of sites that are financially viable for redevelopment which could slow the pace of new rental development.
2. A slower pace of new rental unit supply will result in higher monthly rents at rental projects.
3. To off-set the increased DCC rates, our analysis indicates that the required increase in new average monthly unit rents would likely range between about 2% to 3% depending on location.

5.6 Non-profit Housing Projects

Metro Vancouver provides a DCC waiver to affordable rental housing projects when the applicant is a non-profit. So, there would be no impact from the increased Metro Vancouver DCC rates on non-profit housing projects.

However, in cases where the applicant is a private developer (who is building affordable housing units on behalf of a non-profit), the current Metro Vancouver DCC waiver does not apply. Therefore, these projects will be more costly to construct and will likely need additional funding or will need to set higher rents for the new units (unless the DCC waiver bylaw is amended to provide a waiver for these types of projects).

5.7 Office Projects

Exhibit 12 summarizes our analysis for office case studies.

Exhibit 12: Summary of Financial Analysis for Office Case Studies

Case Study Site	Location	Redevelopment Scenario	Existing Use	Is Project Viable as a Redevelopment Site at Existing DCC Rates?	Decrease in Supportable Land Value in Development Scenario due to Increase in DCC Rate	Is Project Viable as a Redevelopment Site at Proposed DCC Rate?	Decrease in Profit Margin Due to Increase in DCC if Land Cost Fixed (percentage points)	Increase in Unit Sales Prices or Rents Required to Off-Set DCC Increase if Land Cost Fixed
33	Coquitlam	Mixed-use strata office at 2.0 FSR	Older commercial building	Not likely	-48%	Not Likely	-0.9	1.6%
34	Richmond	Mixed-use strata office at 3.0 FSR	Older commercial building	Not likely	-36%	Not likely	-1.0	1.4%
35	Surrey	Mixed-use strata office at 4.2 FSR	Older commercial building	Not likely	Not calculated as negative land residual	Not likely	-1.3	1.5%
36	Vancouver West Side	Mixed-use leasehold office at 9.0 FSR	Older commercial building	Not likely	-13%	Not likely	-1.2	1.8%

The office market in most parts of Metro Vancouver is experiencing relatively high vacancy as well as reduced building values (asset values).

Our case study analysis indicates new office development is unlikely to be financially viable under current market conditions in most parts of Metro Vancouver at the current DCC rates. So, office development will

likely only occur in unique circumstances (e.g. built for a specific end-user or required under municipal policy as part of a mixed-use project). Currently, office development does not support increased land value over the value supported by the existing use at the sites we tested.

So, the increased Metro Vancouver DCCs on office projects cannot be passed back to landowners. Therefore, the primary impacts of the increased Metro Vancouver DCCs for office projects will be:

1. The increased DCC rates will reduce the pool of sites that are financially viable for redevelopment which could slow the pace of new office development (although development is unlikely to be viable at the current DCC rates in any case).
2. A slower pace of new supply could result in increased lease rates or strata unit values at any new office projects than in the absence of the higher DCC rate (although the pace of office development is likely to be low in any case in the short term).
3. To off-set the increased DCC rates, our analysis indicates that the required increase in average lease rates or strata office unit prices would likely range between about 1% to 2% depending on location.

5.8 Industrial Projects

Exhibit 13 summarizes our analysis for the light industrial case studies.

Exhibit 13: Summary of Financial Analysis for Industrial Case Studies

Case Study Site	Location	Redevelopment Scenario	Existing Use	Is Project Viable as a Redevelopment Site at Existing DCC Rates?	Decrease in Supportable Land Value in Development Scenario due to Increase in DCC Rate	Is Project Viable as a Redevelopment Site at Proposed DCC Rate?	Decrease in Profit Margin Due to Increase in DCC if Land Cost Fixed (percentage points)	Increase in Unit Sales Prices or Rents Required to Off-Set DCC Increase if Land Cost Fixed
37	Vancouver East Side	Multi-storey industrial at 3.0 FSR	Older single storey industrial	Likely	-22%	Not Likely	-2.0	2.4%
38	District of North Vancouver	Industrial at 0.6 FSR	Older single storey industrial	Likely	-3%	Not Likely	-1.6	1.8%
39	Pitt Meadows	Industrial at 0.6 FSR	Older single storey industrial	Not likely	-5%	Not likely	-1.9	3.4%
40	Richmond	Industrial at 0.6 FSR	Older single storey industrial	Likely	-4%	Likely	-1.7	2.0%
41	Surrey	Industrial at 0.6 FSR	Acreage residential	Yes	-5%	Yes	-3.1	2.2%

The case study analysis indicates two different outcomes for industrial projects depending on the type of location.

1. In locations where new industrial development is occurring through the redevelopment of existing older industrial properties (such as Vancouver, Burnaby, North Vancouver, parts of Richmond and parts of the Fraser Valley), the land values supported by new industrial development are typically equal to or lower than the value supported by the older existing industrial building.

So, in most cases, the increased Metro Vancouver DCCs on new industrial buildings in developed industrial areas cannot be passed back to landowners. Therefore, the primary impacts of the increased DCCs for new industrial projects in locations that are experiencing redevelopment will be:

- The increased DCC rates will reduce the pool of sites that are financially viable for redevelopment which could slow the pace of new higher density industrial development.
 - A slower pace of new supply could result in increased lease rates or strata unit values at any new industrial projects than in the absence of the higher DCC rate.
 - To off-set the increased DCC rates, our analysis indicates that the required increase in average lease rates or strata industrial unit prices would likely be about 2% (the case studies range between 1.8% and 2.4% depending on location).
2. In locations where new industrial development is occurring in greenfield locations or more rural areas (such as parts of Langley, parts of Surrey and parts of Maple Ridge), our case study analysis indicates that the value supported by the existing use in these types of locations is relatively low and the increased Metro Vancouver industrial DCCs can likely be passed back to landowners. So we think that the primary impact of the increased DCC rates in these greenfield locations will be reduced market land values for sites that are industrial development candidates. Our analysis indicates that land values for greenfield industrial sites could be negatively impacted by about 5%.

5.9 Summary of Impacts

The approved Metro Vancouver DCC rate increases are significant and will add to the cost of new construction. Like any other cost increase, the increased DCCs will lead to one of three different potential impacts (or a combination):

- A reduction in development site land values if the increased cost can be passed back to landowners.
- An increase in the market price (sales prices or rents) of new units due to a reduction in the pool of sites that are attractive for redevelopment and an impact on the pace of new supply.
- A reduction in profit margins for new projects. This can occur if the increased cost cannot be passed along to buyers/renters of the new space and cannot be passed back to landowners (if the site was already purchased).

The outcome will vary by type of project and by location in the region depending on market factors.

Exhibit 14 provides a summary of our key findings by type of development project.

Exhibit 14: Summary of Likely Impact of Increased Metro Vancouver DCC Rates

Project Type	Impact on Market Value of Development Sites	Impact on Number of Sites that are Attractive for Redevelopment	Impact on End Unit Prices/Rents to Off-Set DCC Increase
Single family Subdivision	Likely to be passed back to landowners in the form of reduced values for sites that are subdivision candidates, with impact on land values of about 1% to 4% depending on location	Likely limited impact	Limited impact ⁸
Strata Townhouse	Unlikely to be passed back to landowners in urbanized locations (existing single family properties) Likely to be passed back to landowners where development occurs on acreage or greenfield development sites – such as in parts of Surrey, Langley, Maple Ridge – with impact on land values of about 9% to 15% depending on location	Likely to reduce the number of sites attractive for redevelopment in urbanized areas Likely limited impact where development occurs on acreage sites or greenfield locations	Potential increase of about 2% to 3% in townhouse unit sales prices in urbanized areas Limited impact where development occurs on acreage or greenfield sites ⁸
4 to 6 Storey Strata Apartment	Unlikely to be passed back to landowners other than in limited circumstances - such as the highest value locations in the region or municipalities with no current amenity or housing requirements	Likely to reduce the number of sites attractive for redevelopment	Potential increase of about 2% to 3% in 4 to 6 storey strata apartment unit sales prices (this could be higher if projects are required to include below market units)
Highrise Strata Apartment	Likely to be passed back to landowners in the form of reduced values for development sites with impact on land values of about 3% to 31% depending on location	Limited impact but may delay some projects ⁹	Limited impact ¹⁰
Market Rental Apartment Projects	Unlikely to be passed back to landowners	Likely to reduce the number of sites attractive for rental redevelopment	Potential increase of about 2% to 3% in average monthly rents for apartment units
Non-Market Rental Apartment Projects ¹¹	Not analyzed	Not analyzed	No impact due to DCC waiver

(exhibit continues on following page)

⁸ If development site landowners elect to not sell at a reduced price and hold properties off the market, then this could lead to increased new home prices or rents. The price impact would depend on the number landowners that chose to retain their property rather than sell.

⁹ Any impacts would be focused on projects where the land was purchased prior to the announcement of the Metro Vancouver DCC rate increases and/or in municipalities where permitted highrise densities are relatively low but municipal policies require inclusionary housing units and/or amenity contributions.

¹⁰ If development site landowners elect to not sell at a reduced price and hold properties off the market (or developers elect to delay planned projects because they previously purchased a site and cannot pass the DCC cost back to the landowner), then this could lead to increased unit prices or rents. The unit price impact would depend on the number landowners that chose to retain their property rather than sell and the number of developers who already own a site but elect to delay a planned project.

¹¹ This assumes the applicant is a non-profit and is eligible for the Metro Vancouver DCC waiver. If the applicant is a for-profit developer, then the project is not currently eligible for a waiver, so the project costs would increase leading to a requirement for higher rents or additional equity invested to the project.

Exhibit 14 (continued): Summary of Likely Impact of Increased Metro Vancouver DCC Rates

Project Type	Impact on Market Value of Development Sites	Impact on Number of Sites that are Attractive for Redevelopment	Impact on End Unit Prices/Rents to Off-Set DCC Increase
Office Projects	Unlikely to be passed back to landowners	Likely to reduce the number of sites attractive for office redevelopment	Potential increase of about 1% to 2% in office rents or strata unit values
Industrial Projects	Unlikely to be passed back to landowners in locations where industrial redevelopment occurring in urbanized areas Likely to be passed back to landowners where industrial development occurs in greenfield locations – such as parts of Surrey, Langley, Maple Ridge – with impact on land values of about 5%	Likely to reduce the number of sites attractive for redevelopment in existing industrial areas Likely limited impact where development occurs on acreage sites or greenfield locations	Potential increase of about 2% in industrial rents or strata unit values in redeveloping industrial areas Limited impact in greenfield locations

As noted, all of our analysis is based on the full approved Metro Vancouver DCC rate increase (January 1st 2027 DCC rates). The approved increases will be spread over a three year period.

6.0 Conclusions

The key points from our evaluation are as follows:

1. The infrastructure provided by Metro Vancouver is a critical part of supporting new urban development in the region so new development should help fund the growth related costs. The DCCs collected from new residential and non-residential developments in the region help pay for the infrastructure needed to allow new development to occur.
2. In the absence of DCCs, funding for growth related costs associated with Metro Vancouver's liquid waste, water, and regional parks capital programs would need to come entirely from a combination of long-term debt, contributions from the operating budget (e.g. utility/user fees), reserves, and external contributions (e.g. interagency and senior level government grants).
3. The Metro Vancouver DCC rate increases are significant and will add to the cost of new construction.
4. Like any other cost increase, the increased DCCs will lead to one of three different potential impacts (or a combination):
 - a) A reduction in development site land values if the increased cost can be passed back to landowners. This can occur when the value of a development site under its existing use (e.g. house, low density commercial building) is lower than the land value supported by redevelopment.
 - b) An increase in the market price (sales prices or rents) of new units/floorspace. This can occur if the increased cost reduces the number of projects that are financially viable for development, creating downward pressure on the supply of new product in the market. Decreasing new supply in the face of continued demand will likely result in increased market prices for new (and existing) product.
 - c) A reduction in profit margins for new projects. This can occur if the increased cost cannot be passed along to buyers/renters of the new space and cannot be passed back to landowners (e.g. if the site was already acquired by the developer and development proceeds in the short term before market unit prices adjust).

Based on detailed financial analysis for a large cross-section of case study development projects throughout the region, the likely impact of the Metro Vancouver DCC rate increases can be summarized as follows:

- a) Single Family subdivision - For single family subdivisions, we think that the primary impacts of the increased DCCs will be reduced market land values for sites that are subdivision candidates. Our analysis indicates that land values for subdivision candidates could be negatively impacted in the range of 1% (in higher land value locations) to 4% (in lower land value locations).
- b) Townhouse - The impact on townhouse projects will vary depending on the location:
 - The primary impact of the increased DCCs for strata townhouse projects in urbanized areas where projects involve redevelopment of existing homes, the increased DCC rates will reduce the pool of sites that are financially viable for redevelopment which could slow the pace of new townhouse development. This could lead to slightly higher townhouse unit prices. The increases would likely be a maximum of about 2% to 3% depending on the neighbourhood.
 - In locations where townhouse development is occurring in greenfield locations or more rural areas (such as parts of Langley, parts of Surrey and parts of Maple Ridge), we think that the primary impact of the increased Metro Vancouver DCC rates will be reduced market land values for sites that are townhouse candidates. Our analysis indicates that land values for townhouse sites could be negatively impacted in the range of 9% to 15% in greenfield areas.

- c) 4 to 6 Storey Strata Apartment - In most cases, the increased Metro Vancouver DCCs on lowrise strata projects cannot be passed back to landowners. Therefore, the increased DCCs will reduce the pool of lowrise apartment sites that are financially viable for redevelopment which could slow the pace of new 4 to 6 storey strata apartment development. This could lead to higher lowrise strata apartment unit prices. The increases would likely be a maximum of about 2% to 3% depending on the location (the increase could be higher if a municipality requires a below market component).

It should be noted that there are some locations where 4 to 6 storey strata apartment projects (at the new DCC rates) will support a land value that is higher than the value supported by the existing use of the property. This is limited to situations where any required amenity contributions are low or end unit prices are high. However, these situations are not typical for 4 to 6 storey strata projects in Metro Vancouver.

- d) Highrise Strata Apartment - For highrise strata apartment projects, we think that the primary impacts of the increased DCCs will be:
- Reduced land values for highrise strata apartment sites. Our analysis indicates that land values could be negatively impacted in the range of 3% (in high land value locations) to 31% (in lower land value locations).
 - Reduced ability of highrise strata apartment rezonings to provide contributions to amenities or affordable housing because of the impact on the value of the additional rezoned density.
- e) Rental Apartment - The financial viability of market rental apartment development is marginal under current market conditions in most locations throughout Metro Vancouver. For rental apartment projects, we do not think that the increased Metro Vancouver DCCs can be passed back to landowners. Therefore, the primary impact of the increased DCCs for market rental apartment projects will be to reduce the pool of sites that are financially viable for redevelopment which could slow the pace of new market rental apartment development. This could lead to higher apartment rental rates. The rent increases would likely be a maximum of about 2% to 3% depending on the location.
- f) Non-Market Apartment – Metro Vancouver provides a DCC waiver to affordable rental housing projects when the applicant is a non-profit. So, there would be no impact from the increased Metro Vancouver DCC rates on non-profit housing projects. However, in cases where the applicant is a private developer (who is building affordable housing units on behalf of a non-profit), the current Metro Vancouver DCC waiver does not apply. Therefore, these projects will be more costly to construct and will likely need additional funding or will need to set higher rents for the new units (unless the DCC waiver bylaw is amended to provide a waiver for these types of projects).
- g) Office – Office development is unlikely to be viable in most locations in Metro Vancouver under current market conditions. We think that the increased Metro Vancouver DCC rates will reduce the pool of sites that are financially viable for redevelopment which could slow the pace of new office development (although the pace of office development is likely to be low in any case in the short term). This could lead to higher office lease rates and office unit values. The increases would likely be a maximum of about 1% to 2% depending on the location.
- h) Industrial – The impact on industrial projects will vary depending on the location:
- In existing industrial areas where redevelopment is occurring, the increased DCCs will reduce the pool of sites that are financially viable for redevelopment which could slow the pace of new higher density industrial development. This could result in increased lease rates or strata unit

values at any new industrial projects. The increase would likely be on the order of about 2% depending on location.

- In locations where new industrial development is occurring in greenfield locations or more rural areas, we think that the primary impact of the increased DCC will be reduced market land values for sites that are industrial development candidates. Our analysis indicates that land values for greenfield industrial sites could be negatively impacted by about 5%.
5. For residential project types expected to experience an increase in unit prices or rents, the increase would likely be a maximum of about 2% to 3% depending on the type of project and the neighbourhood. As a comparison, a 3% to 4% increase in construction costs could lead to the same unit price or rent increases if passed along to buyers and renters.
 6. Although our analysis indicates that developers of some type of projects should be able to pass the Metro Vancouver DCC rate increases back to landowners, this is not possible for developers who acquired sites prior to the announcement of the DCC rate increases. In these cases, the rate increases cannot be passed back to landowners (as the site was already acquired), so the DCC rate increases will negatively impact profitability. This could result in developers delaying projects until market conditions change. This may result in unit price (or rent) impacts depending on the number of developers that delayed projects.
 7. The Metro Vancouver DCCs are one factor that can affect the financial viability of development, but development economics are also influenced by many market factors and by government policies.

Market conditions have changed significantly over the past two years and will likely continue to change over the coming year or two.

In addition, municipalities are in the process of amending land use policies and regulations in response to new Provincial legislation (Bills 16, 44, 46, and 47) that will affect the development approvals process, zoning, minimum permitted densities and parking requirements near transit stations, municipal finance tools (such as DCCs, ACCs and density bonusing) and inclusionary housing requirements.

As changes are implemented by municipalities, some could positively impact the financial viability of development projects, (such as faster approvals, higher densities near transit stations, elimination of parking requirements near transit stations, increased unit yield on low density residential lots and clarity on amenity contributions). Others may (depending on implementation details) negatively impact the financial viability of development projects, such as inclusionary housing requirements, expanded DCCs, and new ACCs.

Because municipalities are currently working through policy changes to address the new Provincial legislation, any potential impacts (and the scale of any impacts) are unclear at this time.

Metro Vancouver should consider continuing to evaluate the impacts of its adopted DCC rate increases over the implementation period. Completing updated financial analysis after municipalities have made any changes to municipal land use policies and development regulations will allow Metro Vancouver to monitor the impacts of its DCC program in the context of changes to municipal policies and changes in market conditions. Future financial analysis of the impacts of Metro Vancouver's DCC program on the viability of development in the region should continue to evaluate impacts by type of development and by sewerage area.