VANCOUVER BOARD OF PARKS AND RECREATION

Report Date: October 8, 2025
VanRIMS No.: 08-3000-30
Submit comments to the Board

TO: Park Board Chair and Commissioners
FROM: Director, Business Services
SUBJECT: Park Board Parking Strategy - Report Back

RECOMMENDATIONS

A. THAT the Board approve the Park Board Parking Strategy as policy guidelines to support improved user experience, financial sustainability and operations of parking lots under its jurisdiction.

B. THAT the Park Board approve the implementation plan, developed in consultation with partners, for a 12-month paid parking pilot at Hillcrest, Kerrisdale, and Trout Lake Community Centres and adjacent park spaces, including 3 hours of free parking for community centre patrons, and $3.50/hour rate between 6:00 a.m. and 10:00 p.m.

C. THAT the Park Board approve the implementation plan for a 12-month paid parking pilot at Langara Golf Course, with a $4.25/hour market rate between 6:00 a.m. and 10:00 p.m. and complimentary parking offered to golf patrons.

D. THAT the Park Board approve the implementation plan for a 1-month paid parking pilot at VanDusen Botanical Garden, for the 2026 Festival of Lights period, between 4:00 p.m. and 10:00 p.m. at a $25 event rate.

E. THAT the Park Board receive for information, the option of an Amenity Improvement Fee (AIF) to retain a portion of parking revenue within Park Board, linking it directly to the type of asset from which it is generated.

F. THAT the Park Board direct staff to report back in Q4 2026 on the paid parking pilot, outlined in this report, after continued consultation of partners.

G. THAT the Park Board direct staff to share this report and the Park Board Parking Strategy with Mayor & Council, for information, in accordance with the Audit of Park Board Revenue Management

PURPOSE AND SUMMARY

The purpose of this report is to share a revised Park Board Parking Strategy (Strategy) with the Board and seek approval for this policy to improve user experience, achieve financial sustainability and support parking lot operations. The report includes proposed implementation plan(s) for a paid parking pilot program developed in consultation with partners and exploration of options to retain revenue within Park Board and link to sites where it is generated.

The Strategy and approach for implementation originally shared with the Board in April 2025 has been revised to include *3 hours of free parking for community centre patrons* at the selected pilot sites of Hillcrest, Kerrisdale and Trout Lake Community Centres. This implementation plan directly responds to concerns for equity, barriers to service, consistency and impacts to programming that staff heard through meaningful consultation with our partners.

For commercial service areas, the revised Strategy narrows the pilot scope to Langara Golf Course as the highest impacted golf course and VanDusen Botanical Gardens during the Festival of Lights as a challenging period for parking management. The implementation plans for these sites includes complimentary parking for golf patrons at Langara as it is considered part of their regular green fees and operating outside of program times for the Vancouver Botanical Gardens Association at VanDusen to limit impact on their members, volunteers and services.

In response to the Board's direction to explore options to retain revenue within Park Board and connect back to sites where it is generated, the application of an Amenity Improvement Fee on paid parking is considered.

BOARD AUTHORITY / PREVIOUS DECISIONS

Per the Vancouver Charter, the Park Board has exclusive jurisdiction and control over all areas designated as permanent and temporary parks in the City of Vancouver, including any structures, programs and activities, fees, and improvements that occur within those parks. The Board may pass, amend, and repeal by-laws for the control, regulation, protection, and government of these parks and of persons who may be therein.

On November 18, 2024, the Board approved the 2025 Fees and Charges, including introduction of an Amenity Improvement Fee.

On June 4, 2025, the Board approved permanent adoption of paid parking at Spanish Banks Beach Park following presentation of the Spanish Banks Paid Parking Pilot – Report Back.

On April 14, 2025, the Board approved the Comprehensive Fee-setting Framework, which provides a consistent policy for setting fees by connecting level of public investment to the delivery of public good – services that result in indirect benefits to all residents of Vancouver.

Also on April 14, 2025, the Board referred the Park Board Parking Strategy back to staff to consult with partners on an implementation plan for the paid parking pilot, identify options for retaining revenue and report back on Golf Courses and VanDusen after full cost recovery models were completed.

CONTEXT AND BACKGROUND

When access to recreation is limited by high parking demand, services are challenged for funding and parking infrastructure is no longer suited to current needs, paid parking creates opportunities for more effective service delivery. This report proposes a paid parking pilot at select sites with highly utilized parking lots and good connections to transportation alternatives while exploring options for revenue retention.

Paid parking implemented at an affordable rate is a proven method for encouraging parking space turnover, discouraging walk-off and all-day use and incentivizing walking and rolling for those that are able, ensuring availability of parking spaces. Revenue generated from parking management supports public service delivery in combination with taxpayer contributions, and paid parking

contributes to parking lot improvements such as redesigned drop-off areas and enforcement of overnight parking that benefit users accessing Park Board services.

Equity and Public Benefit
Public concerns for paid parking are often framed around affordability and equity. Any consideration of equity in vehicle access to parks and recreation should also include recognizing the cost that transit users pay for access.

For the lowest income users who cannot afford the vehicle costs to purchase, insure and maintain, or users unable to drive (including for equity deserving reasons), transit is the best option for accessing public services outside of walking or rolling distance. A single adult transit fare within Vancouver is currently $3.35, comparable to an affordable market rate for 1 hour of parking and without exemption for community centre patrons.

Free parking for parks and recreation is subsidized by all taxpayers, whether they drive or not. As vehicle access to these services can be necessary and provides some public good in facilitating healthy communities, setting an affordable rate for paid parking connects a portion of the cost to the individual while generating revenue to invest in public services that benefit all community members.

Revisions to the Park Board Parking Strategy
Since the April 2025 presentation of the Strategy to the Board, minor changes were made to paid parking pilot site selection based on further analysis and refined focus on those most highly impacted by parking challenges. Hastings Community Centre, New Brighton Pool and Fraserview Golf Course are no longer proposed for the paid parking pilot.

More comprehensive changes to the approach for implementation to ensure access to important public services and limit impacts on partners are described, informed by close consultation with Community Centre Associations (CCAs) and staff responsible for commercial services at golf courses and botanical gardens.

DISCUSSION
Between April and October 2025, Strategy staff met with Hillcrest, Kerrisdale and Trout Lake Community Centre Associations twice each – first to discuss and receive feedback on proposed implementation of the paid parking pilot and mitigate impacts, and second to share the approach developed with their input for final adjustment and confirmation of support. Apart from Hillcrest, where staff met with the Association President and colleague only, these discussions took the form of dedicated evening workshops up to 2 hours in length well attended by the CCA boards. Members of the Kerrisdale Seniors Centre attended the first workshop for that site.

What We Heard
Staff clearly heard concerns for the impact paid parking may have on patrons accessing services provided by partners at the proposed community centres. It was also understood that the need for vehicle parking is higher at these facilities due to the number of services provided for seniors and families, and that many patrons attend multiple programs or value informal social connections before and after programs for health and well-being.

Staff also learned more about the challenges these parking lots face, including high volumes with some users walking off site to access nearby workplaces or shopping areas. The lots themselves

were described as poorly designed, frequently unsafe and with inadequate drop-off areas, small stall sizes and lacking accessible features and end-of-trip facilities, particularly for cargo and e-bikes increasingly popular for transporting children and equipment.

The CCAs had many questions on paid parking times and exemptions, special events and co-located uses, communications and signage, payment systems and how revenue generated from paid parking is distributed back to parks and recreation services. There was support for the consultation process for listening and incorporating feedback into the proposal, and for continued engagement and adjustment as the pilot is implemented, if approved by the Board.

Implementation Plan for Community Centre Paid Parking Pilot
For Hillcrest, Kerrisdale and Trout Lake community centres, staff propose a 12-month paid parking pilot with 3-hours of free parking for community centre patrons to support the delivery of programs by partner associations and meet the unique needs of patrons more likely to require vehicle use.

Rates would be set at $3.50/hour between 6am and 10pm and apply to community centre patrons after 3 hours and to park users parking at community centres and lots in adjacent park spaces such as Riley Park, Kerrisdale Park and John Hendry Park. The application of paid parking to park users, without the 3-hours free parking specific to community centre patrons, is proposed to improve parking management and access to spaces, ensure the financial sustainability of the pilot and fund enforcement and lot management improvements.

Park Board and fulltime CCA staff will be exempt from all parking fees and subsidized monthly parking passes will be made available to volunteers and program contractors providing more than 3 hours of services at one time several times a month. Special considerations for events will be reviewed on a case-by-case basis to support community celebration.

Staff commit to continued engagement with CCAs on the paid parking pilot with discussions at 6-month and 12-month milestones. This engagement is intended to adapt and refine pilot implementation based on interim learnings and feedback, with the goal to maintain access to recreation services, support program delivery and improve pilot implementation. To limit impacts on residents near selected facilities, staff have been working closely with City Engineering, who engaged residents on their preferences for permit or paid parking in adjacent areas, should the pilot move forward.

Implementation Plans for Commercial Services Paid Parking Pilots
The commercial services at Langara Golf Course and VanDusen Botanical Garden are challenged with high demand parking and unique service delivery needs. To effectively manage parking demand while ensuring user fees remain competitive and reflective of full costs, specific implementation plans are proposed for these services.

Langara Golf Course
Paid parking is proposed at Langara Golf Course following consideration of the full cost of service delivery and recommendations for business optimization and service improvements in the Golf Services Review. Through pilot implementation, golf users would be exempt from paying parking fees, as the cost of parking is rolled into golf fees and the balance of associated revenues, as the duration of a golf round and related activities can be several hours, and as transit access is difficult with the necessary equipment. Free parking would be accessed by kiosk sign-in. Paid parking

fees at market-rate $4.25/hour would apply from 6am to 10pm to other users of the parking lot, capturing several non-golf and non-park uses.

VanDusen Botanical Garden
Paid parking is proposed at VanDusen Botanical Garden for the 2026 period of the Festival of Lights to manage exceptionally high demand for that Park Board-operated event while limiting impacts on services provided by the Vancouver Botanical Gardens Association, including access for members and volunteers. The Festival of Lights pilot is pushed to 2026 due to the runway needed for appropriate communication to guests and incorporating this new event-related item into marketing materials. Paid parking fees at an event parking rate of $25 with a maximum stay of 3 hours would apply between 4pm and 10pm from November 28, 2026, to January 4, 2027, with a portion of revenues funding parking attendants to improve user experiences.

Retaining Parking Revenue Within Park Board
Staff explored options to retain parking revenue within Park Board to directly fund either capital or operating expenses and link parking revenues directly to the type of asset they are generated from. This work responds to discussion and direction provided by the Board at the April 2025 Strategy presentation.

Parking fees are collected as revenues by the City of Vancouver through EasyPark, a non-profit City-owned corporation. A small portion of fees are used to cover administration, and a Parking Tax recently raised from 24 to 29% is paid to TransLink to support transit improvements. An additional 5% GST is deducted from each fee.

Collected net revenues generated by paid parking under the jurisdiction of the Park Board are redistributed by the City in combination with tax-based operating funds within the annual Operating Budget each year. These revenues cover fixed cost increases and fund the delivery of parks and recreation services. The overall funding structure is outlined in the Vancouver Charter and staff were limited in their ability to identify alternatives outside of that framework.

Amenity Improvement Fee
However, an opportunity for both retaining revenues and linking them directly to the type of asset they are generated from has been previously initiated by the Board – the Amenity Improvement Fee (AIF). AIF is a nominal surcharge applied onto an existing rate or fee, collected into a reserve fund administered by Park Board and reinvested in the form of one-time amenity improvements. Phase 1 of AIF was approved by the Board in 2024 and implemented across a range of commercial fees in January 2025

A second phase of AIF was considered by staff as a 5% fee on paid parking, suggested to fund washroom and accessibility improvements at destination parks and accessibility and end-of-trip improvements at community centres. The use of parking revenue for washroom improvements at destination parks would capture revenue from non-taxpayers to support underfunded amenities serving users traveling distances by vehicle, including those with accessibility needs. There and at community centres, accessibility improvements would provide tangible benefits for people who require a vehicle to access services, while end of trip improvements at community centres support transportation alternatives, including for family users with cargo or e-bikes.

With fees for several services, including parking, projected to increase to better meet budget challenges, and with the Province's increase of the Parking Tax from 24 to 29%, the additional application of AIF on paid parking is not recommended by staff at this time to maintain affordability

and limit the combined impact of multiple increases. However, any future AIF considerations will be brought forward to the Park Board as part of future Fees and Charges reports.

FINANCIAL CONSIDERATIONS

Previous high-level revenue projections for the paid parking pilot proposed in April 2025 were for $3M. With adjustments to the proposed sites, times and with application of 3-hours of free parking for community centre patrons, estimated net revenues across the year of the pilot are $1.5M. The table below outlines differences in revenue between three possible scenarios:

Scenario	Estimated Net Revenue	Notes
Original approach with mitigation measures	**$3M**	Presented to the Board in April 2025.
3 hours free parking for community centre patrons	**$1.5M**	Developed and supported through engagement with partner Associations. Park spaces do not apply with exceptions for Hillcrest and John Hendry Parks. Langara Golf Course proposed without fees for golfers and VanDusen proposed for Festival of Lights only.
Pilot not approved by the Board	**$0**	Not recommended – poor parking demand management, not financially sustainable and no improvements to parking lots.

Consultancy for the Park Board Parking Strategy was procured in 2023, with a team of Transportation Planners, Engineers and engagement professionals supporting data collection, analysis and policy development. These services cost $280,000, with return on investment expected through paid parking optimization to manage demand and improve operations.

OTHER CONSIDERATIONS

While not repeated directly in this report, the Parking Strategy includes best practices and policies related to waiving parking fees for Musqueam, Squamish and Tsleil-Waututh Nations' members at Stanley Park, improving enforcement operations and meeting EV and micromobility targets without negatively impacting park spaces.

CONCLUSION AND NEXT STEPS

The revised and improved policies within the Strategy and the proposed implementation plans for paid parking pilots at select community centres and business services are recommended by staff to ensure access and improved user experiences, generate revenue to reinvest in parks and recreation services and enhance how outdated parking infrastructure functions and operates for current and future needs.

If approved for implementation, staff will report back on the paid parking pilot, including with better data gathered through sign-in kiosks, after 12 months of delivery and following continued consultation with partner Community Centre Associations.

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PARK BOARD PARKING STRATEGY

VANCOUVER BOARD OF PARKS AND RECREATION

Policy Framework

October 2025

We acknowledge that the parks, recreation facilities, and their parking lots discussed in this project are built on the unceded territories and homelands of xwməθkwəyəm (Musqueam), Sḵwx̱wú7mesh (Squamish), and səlilwətaɬ (Tsleil-Waututh) Nations.

We thank them for having cared for these lands and waters since time immemorial and look forward to working with them in partnership as we continue to build this great city together.

Board of Commissioners (2022-2026):

Laura Christensen (Chair)
Brennan Bastyovanszky
Tom Digby
Angela Haer
Marie-Claire Howard
Scott Jensen
Jas Virdi

Leadership Team:

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John Brodie, Director of Business Services
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Natalie Froehlich, Director of Finance
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Community Centre Associations (CCAs)

Thank you to all those who participated in the process of developing this Strategy.
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Additional thanks to all that contributed to the development of the Strategy not listed here, including Recreation Managers and Supervisors, Business Services staff, Park Planning and Development staff, VanDusen Botanical Garden staff, Vancouver Botanical Gardens Association, and City of Vancouver Engineering and Sustainability staff.

Table of Contents

FIGURES

TABLES

EXECUTIVE SUMMARY

Executive Summary

Vancouver Board of Parks and Recreation (Park Board) engaged Bunt & Associates Engineering Ltd. (Bunt) to develop a Policy Framework for a Park Board Parking Strategy (Strategy) to help guide the future management and use of parking facilities serving parks and recreation facilities across the city under its jurisdiction.

Parking is provided at many parks and recreation facilities for access to Park Board's services by those with a private vehicle. Where demand is high and alternatives exist, charging reasonable fees for parking is an opportunity to better manage access, increase revenue for investment in community parks and recreation services, and support parking lot operations.

Free parking for parks and recreation is subsidized by all taxpayers, whether they drive or not. As vehicle access to these services can be necessary and provides some public good in facilitating healthy communities, setting an affordable rate for paid parking connects a portion of the cost to the individual while generating revenue to invest in public services that benefit all community members.

Good parking management is one of the most significant opportunities to increase revenue for the Park Board to address the growing maintenance and renewal needs of parks and recreation assets in Vancouver.

The Strategy aims to improve park user experience and access, achieve financial sustainability, and support operations and management of parking infrastructure. To achieve in a way that best meets the needs of Association partners and public users, the framework is designed to serve as a living document that will evolve over time as technology and community needs develop.

Monitoring the success of this framework will be an important part of its implementation, along with reviewing and updating the policies to best provide public benefits through Vancouver's parks and recreation facilities.

This Strategy introduces the steps and guidelines for identifying suitable locations for paid parking implementation alongside other recommendations for improved user experience and more effective operations. To determine the need for paid parking implementation or adjustments at each facility, a comprehensive two-step decision-making process is used. The first step involves evaluating each facility's parking demand by combining parking utilization (i.e., how much of the existing parking supply is used during peak periods) and facility usage intensity (i.e., a measure of how intensively the facility is used). The second step involves assessing the facility's accessibility via sustainable transportation, including transit. Combining the first and second steps, parking management strategies are identified. This relationship is outlined in **Table E1**.

TABLE E1 Sustainable Mode Accessibility Matrix and Recommended Actions

PARKING DEMAND	SUSTAINABLE MODE FACILITIES		
	EXCELLENT ACCESS	MODERATE ACCESS	LIMITED ACCESS
HIGH PARKING DEMAND	**Implement Paid Parking or Increase Parking Fees** For facilities already operating with paid parking. Monitor to ensure demand is managed.	**Implement Paid Parking** Enhance on-site amenities and prioritize sustainable modes; advocate for external improvements, including for drop-off and increased accessibility.	**Implement Paid Parking + On-site Improvements** Prioritize on-site amenities (bike, micromobility, etc.) and external improvements, including drop-off and increased accessibility.
MEDIUM PARKING DEMAND	**Implement Paid Parking** Monitor to ensure demand is managed.	**Phased Paid Parking** Phase implementation of paid parking (peak-time or event-based fees) and enhance on-site amenities; advocate for external improvements.	**Phased Paid Parking + On-Site Improvements** Phase implementation of paid parking (peak-time or event-based fees); prioritize on-site amenities; advocate for external improvements.
LOW PARKING DEMAND	**No Immediate Need for Paid Parking** Continue monitoring.	**No Immediate Need for Paid Parking** Continue monitoring.	**No Immediate Need for Paid Parking** Continue monitoring.

Implementing paid parking requires a phased approach, as illustrated in **Figure E1**, which starts from data gathering, engagement with partners (including Community Centre Associations), selection of pilot facilities for paid parking implementation, and monitoring the program for continuous improvements. In implementing the plan, impacts to priority user groups need to be reviewed with consideration for mitigation measures to minimize the impacts, such as periods of free parking for community centre patrons, staff and volunteer parking policies, equitable access strategies, and sustainable transportation amenities.

FIGURE E1 Implementation Phase

Revenue impact analysis needs to be conducted to assess the potential revenue and effect of different mitigation approaches to understand overall financial sustainability.

Potential measures for consideration include:

Free Parking Periods or Discounted Passes for Program Participants

Discounted Rates for Vulnerable User Groups

Integration of Parking Costs into Memberships or Fees (where applicable)

Tiered and Dynamic Parking Rates

Once paid parking is implemented, effective enforcement of parking policies is essential to ensure compliance, optimize resource utilization, and enhance user experience across all park categories. Enforcement of paid parking in Park Board lots is managed by EasyPark, a city-owned non-profit corporation. The enforcement policy options outlined in this Policy Framework provide a toolkit of approaches for EasyPark to consider in their ongoing collaboration with Park Board staff. Many measures, such as incorporation of new technologies, are already in use across the Park Board's system of managed paid parking lots.

Shared Micromobility

Shared micromobility, i.e., bike share and the ongoing rollout of a shared e-scooter system, are important initiatives for providing alternate transportation and reducing impacts on vehicle parking for individual users (with less applicability to seniors and families). Park Board should consider collaborating on the installation of bike share and/or shared e-scooter stations within or adjacent to parks based on criteria such as available parking spaces and revenue, right-of-way availability, utility connections, third-party maintenance, and impact on park space and operations.

EV Charging Needs

Presently, less than 1% of the parking stall supply available to Park Board customers and staff are EV charging capable. This is disproportionately low to the current 5% EV representation of the regional automobile fleet, and inadequate to accommodate the future projections of 90+% EV representation on the area road system by Year 2050.

To better support future EV charging needs, Park Board may consider adding more EV charging stations within Park Board parking lots. However, park locations and parking lots often pose significant challenges – including high costs and infrastructure impacts, demand on staff resources dedicated to core services, and impacts on public park space. Consequently, implementation should be carefully evaluated through pilot projects and on a case-by-case basis to ensure cost-effectiveness, feasibility, and minimal disruption to existing park access and operations.

1

INTRODUCTION

Introduction

This parking policy framework will help guide the Park Board on tackling challenges along with tools to increase parking efficiency that enhance functionality and user experience, optimize revenue opportunities, and improve operations and connectivity with interfacing land uses.

Some parks and recreation facilities operated by the Park Board are served by adjacent parking lots under the jurisdiction of another government organization, such as City of Vancouver or Vancouver School Board; policy recommendations apply only to those under the jurisdiction of the Park Board, but may be provided as considerations for implementation by other groups.

Sound parking management can help generate increased revenue for the Park Board to address the growing maintenance and renewal needs of parks and recreation assets in Vancouver.

The Vancouver Board of Parks and Recreation operates a substantial number of public parking spaces in Vancouver. These parking lot spaces support access to core services and amenities such as destination parks, community parks, community centres and recreational facilities, while also providing spaces for local economic activity such as filming, special events, and businesses operating in park areas.

Of the 180 parking lots operated by Park Board, the majority are free parking and only 13 are paid parking - operated and managed through an arrangement with EasyPark. The net revenues generated by the paid parking lots are a significant non-tax funding source for Park Board that supports various services that do not have a direct user-fee funding mechanism, such as the ongoing maintenance and upkeep of sport fields and sport courts, public washrooms, playgrounds, and other hardworking and well-used amenities. These paid parking systems simultaneously improve parking circulation and availability in high demand areas.

Despite the significant role parking plays in both access to, and funding for, core park services and amenities, parking in many Park Board-operated spaces is increasingly challenging. Parking shortages and low turnover of spaces have become regular occurrences at more popular destinations and facilities. These ongoing inefficiencies impact access to services and contribute to traffic congestion in and around parks and recreation facilities.

2

POLICY FRAMEWORK ELEMENTS

Policy Framework Elements

The Strategy introduces the steps and guidelines for identifying suitable locations for paid parking implementation.

The framework has been developed based on decision-making criteria such as:

- **Parking demand**
- **Facility usage**
- **Access to alternative transportation**

The Strategy aims to improve park user experience and access, achieve financial sustainability, and support operations and management of parking infrastructure.

The scoring system and decision-making criteria are based on existing parking demand data, engagement with Community Centre Associations and Vancouver Botanical Garden Association partners (Association partners) and user groups, and our current knowledge and understanding of best practices.

However, this policy framework is designed to serve as a living document that will evolve over time as technology and community needs develop. Monitoring success will be an important part of implementation, along with reviewing and updating the policies to best provide public benefits through Vancouver's parks and recreation facilities.

2.1 Different Policy Frameworks for Different Types of Parks and Facilities

Parks and facilities vary significantly in their scale and purposes, from destination parks that attract visitors for events and large-scale activities from across the region and beyond, to community centre facilities that cater primarily to local residents for social interaction, cultural programming, daily enjoyment of exercise, and many other benefits. By tailoring the implementation criteria to each park or facility category, the Strategy can more accurately reflect the specific needs of each park or facility while connecting service delivery to communities that need them most.

This approach ensures that parking management strategies are data-driven and precisely targeted, considering key factors like event frequency, amenity availability, and peak usage times that can vary greatly between park and facility types. This customized scoring method enables more effective decision-making and resource allocation, helping to optimize parking solutions and enhance the visitor experience at each site. The following sections outline the proposed parking management policy framework and implementation criteria for the different types of parks and recreation facilities under the jurisdiction of the Vancouver Park Board.

Destination Parks

Destination parks are major attractions that draw visitors from across the city and beyond, are large in size and number of amenities, and capable of hosting large-scale events. Effective parking management in these parks is crucial due to high demand, particularly during peak seasons and for special events.

Community Parks

Community parks are smaller than destination parks and primarily service Vancouver residents for community gatherings, events, and activities. Often with recreation amenities such as sports fields and courts, community parks promote physical activity and wellness without drawing significant visitors from outside the region.

Community Centres and Recreation Facilities

Community centres and recreation facilities are essential hubs, often jointly operated with a Community Centre Association, that cater to residents by offering a variety of programs, classes, sports events, and fitness activities. They serve a wide range of user groups, including families with children, seniors, persons with disabilities, and folks from a range of socio-economic backgrounds.

2.2 Existing Conditions

The recommendations outlined in the Strategy are informed by an analysis of existing conditions undertaken by the project team, which provided insights into parking supply, utilization, revenue trends, and partner and user feedback. These findings directly shape the proposed scoring system and parking management strategies, ensuring that the policy is data-driven and reflective of current conditions.

2.2.1 DESTINATION PARKS

Key findings:

Parking Inventory

Destination parks have a significant parking supply of 4,600 spaces distributed across 94 parking lot facilities, highlighting the need for effective management during high-demand periods.

Seasonal Patterns

Q3 (July to September) represents the peak revenue period for destination parks, contributing 45% of annual revenue, while Q1 (January to March) and Q4 (October to December) combined account for only 25%. This emphasizes the need for flexible, seasonal pricing strategies.

Revenue Trends

In 2023, destination parks generated the overall highest total parking revenue ($8.6 million) among the different categories of parks, but the average revenue per stall ($2,300) was lower than that of community parks ($2,900), indicating opportunities to enhance revenue efficiency.

EV Charging Gaps

The major destination parks in the city are presently deficient in terms of electric vehicle (EV) charging stations (only 0.3% of the parking supply). With increasing EV usage, there is an opportunity to expand EV infrastructure and support sustainability goals, particularly at destination parks, where users may be travelling from farther distances and staying longer, suggesting appropriate Level 2 chargers where it makes sense.

2.2.2 COMMUNITY PARKS

Key findings:

Parking Inventory

There are 58 community park parking lots in the City of Vancouver providing a total of 4,000 parking spaces across each park, accounting for nearly 40% of Vancouver parks spaces.

Seasonal Patterns

Community parks, often being the focal point of local neighbourhood gatherings and sports activities, see a sharp increase in revenue moving from Q1 to Q2, driven by improved weather and the scheduling of local events, and a significant drop from Q3 to Q4. This correlates with the end of summer and the beginning of the school year, impacting local visitor numbers who transition back to regular schedules.

Revenue Trends

In 2023, community parks generated approximately $1.6 million in total parking revenue, exceeding the overall revenue from the managed paid parking lots currently at community centres and achieving the highest average revenue per stall ($2,900) of all park categories. These results suggest that community parks offer efficiency in per-stall revenue generation.

EV Charging Gaps

Less than 1% of community park parking spaces offer EV charging facilities, whereas an average of 3% of vehicles parking in the community parks parking lots were observed to be EV vehicles, indicating that potential EV demands exceed current EV parking supplies.

2.2.3 COMMUNITY CENTRES AND RECREATION FACILITIES

Key findings include:

Parking Utilization

Community centres exhibit an average parking utilization rate of 70% during peak times, indicating that parking facilities are effectively used but may experience congestion during high-demand periods. Notably, some facilities like Kerrisdale Community Centre reached 100% utilization — maximum capacity with high potential for congestion.

User Demographics and Equity Considerations

A significant portion of community centre visitors that were engaged through Intercept Surveys were seniors (65+), persons with disabilities, and parents or caregivers with children. These groups have greater and specific parking needs, such as accessible parking spaces, drop-off zones, and short-term parking for pick-up and drop-off. Intercept Survey findings highlighted that 14% of respondents reported living with a disability, and 34% felt their accessibility needs were not being met. This indicates that there is room for improving accessible parking.

High Demand for EV Charging

Community centres exhibit higher demands for electric vehicle (EV) charging spaces compared to other park typologies. At peak times, EV charging stations were fully occupied in some locations, indicating an opportunity to expand EV infrastructure to meet visitor needs and support sustainability goals.

Consistent Revenue Streams

In 2023, community centres with managed paid parking generated a total parking revenue of $598,000, with an average revenue per stall of $2,100. Unlike other park categories, community centres show minimal seasonal fluctuation, maintaining a relatively consistent revenue stream throughout the year. This consistency is likely due to the indoor nature of their facilities, which attract visitors year-round regardless of weather conditions.

User Feedback on Parking Experience

While 72% of Intercept Survey respondents were satisfied with their parking experience, 28% expressed dissatisfaction due to limited parking availability, especially during special events, and concerns about safety and maintenance. Visitors at some centres without paid parking reported issues with parking availability and accessibility, particularly for accessible stalls and drop-off locations. Some Community Centre Associations that have paid parking at their facility reported safety issues and challenges accommodating parking demand during events.

Peak Usage Times and Event Impact

Peak parking utilization often occurs during specific times of the day, such as mornings and early evenings, and is significantly impacted by classes, programs, and special events. Facilities frequently host activities that draw diverse user groups, resulting in fluctuating parking demand that may require dynamic management strategies to meet different needs for different times of day.

Predominant Use of Personal Vehicles

Most Intercept Survey respondents (67%) arrived by personal vehicle, emphasizing the importance of effective parking management at these facilities. This reliance underscores the need for accessible and adequate parking options, as well as promoting sustainable transportation modes for those able to use those options.

Accessibility and Safety Concerns

Stakeholder feedback highlighted concerns about the availability of accessible parking stalls, safety issues within parking lots (e.g., lighting and security concerns, unsafe conditions in underground parking lots, etc.), and the need for better parking lot maintenance. These issues affect user satisfaction and accessibility, particularly for vulnerable groups such as seniors and persons with disabilities.

These findings underscore the importance of implementing tailored parking management strategies at community centres and recreation facilities that address utilization rates, user needs, and equity. By incorporating these insights into the Strategy, the proposed scoring system can more effectively guide decisions on paid parking implementation, adjustments to existing parking policies, and investments in infrastructure improvements such as lighting, drop off areas, and accessibility features.

2.3 Objectives and Principles for Parking Management

The parking management policy is guided by the following objectives:

Capacity Management

Efficiently manage high and fluctuating parking demand to prevent congestion and improve parking turnover rates.

User Satisfaction

Improve the overall parking experience by addressing safety concerns, providing clear information, and ensuring that parking policies align with user needs and maximizing public good.

Revenue Optimization

Enhance revenue generation to support parks and recreation services through dynamic pricing strategies.

Accessibility

Ensure parking facilities are conveniently accessible to all visitors, especially for those with disabilities.

Equity

Consider fair and inclusive access to parking for all user groups, particularly vulnerable populations such as seniors, persons with disabilities, and low-income families and individuals.

Sustainability

Promote sustainable transportation options to reduce environmental impact and reliance on personal vehicles.

2.4 Scoring System and Criteria

To determine the need for paid parking implementation or adjustments at each facility, a comprehensive two-step decision-making process is proposed.

This approach utilizes decision matrices that consider both parking demand and the availability of sustainable transportation options, ensuring that parking policies are equitable, data-driven, and aligned with broader sustainability objectives.

The scoring system and decision-making criteria are based on existing parking demand data, consultation with Association partners, and our current knowledge and understanding of best practices. Monitoring the success of this framework will be an important part of its implementation, along with reviewing and updating the scoring system and criteria as technology and user needs evolve over time.

2.4.1 STEP 1: ASSESS PARKING DEMAND

The first step involves evaluating each facility's parking demand by combining parking utilization (i.e., how much of the existing parking supply is used during peak periods) and facility usage intensity (i.e., a measure of how intensively the facility is used), as described below.

Parking Utilization

Monitoring parking utilization rates during peak periods is critical for understanding demand and making informed decisions about parking management. The peak periods are defined as the times when parking demand is highest, which may vary by facility but typically includes weekday mornings and evenings, and weekend afternoons. High parking utilization during peak periods can lead to congestion, increased search times for parking, and visitor frustration. By focusing on peak utilization, facilities can implement strategies to effectively manage demand when it matters most.

High Utilization
Above 85% occupancy during peak periods.

Medium Utilization
Between 60% and 85% occupancy during peak periods.

Low Utilization
Below 60% occupancy during peak periods.

Facility Usage Intensity

Facility usage intensity reflects the level of activity at a facility, combining the frequency of events and the diversity of amenities available.

Special events significantly influence parking demands at parks. Frequent large-scale events such as festivals, concerts, and sports competitions attract high numbers of visitors, causing temporary spikes in parking demand. Parks hosting more than 10 major events per year experience significant parking challenges during these times. Events occur more frequently at community centres, including weddings, community gatherings, sporting competitions, cultural celebrations, educational workshops, and private meetings and functions.

The variety and number of amenities available in parks significantly influence their attractiveness to visitors and, consequently, parking demand. Parks with a broad range of facilities, such as swimming pools, arenas, and sports fields, tend to attract larger crowds who stay for longer durations. These amenities serve as the park's primary draw, increasing the likelihood of reaching or exceeding parking capacity. Amenities at community centres also have an impact on demand; however, there tends to be a wider variety of amenities available at community centres than at parks. Some examples of the types of events and amenities to consider for each park typology are summarized in **Table 2.1**.

TABLE 2.1 Examples of Events and Amenities

FACILITY USAGE	FACILITY TYPE		
	DESTINATION PARK	**COMMUNITY PARK**	**COMMUNITY CENTRE OR RECREATION FACILITY**
EVENTS	• Festivals • Concerts • Sports competitions	• Farmer's markets • Sports games • Cultural gatherings	• Sports games • Fitness classes • Birthday parties
AMENITIES	• Beaches • Sports fields • Outdoor venues • Playgrounds	• Sports fields • Picnic shelters • Natural areas • Playgrounds	• Swimming pools • Skating rinks • Fitness centres • Multi-purpose rooms

The combination of event frequency and diversity of amenities is indicative of facility usage intensity, as outlined in **Table 2.2**.

TABLE 2.2 Facility Usage Intensity Chart

FACILITY USAGE INTENSITY	FACILITY TYPE		
	DESTINATION PARK	COMMUNITY PARK	COMMUNITY CENTRE OR RECREATION FACILITY
HIGH	Hosts more than 50 annual events **or** offers more than 20 types of amenities.	Hosts more than 30 annual events **or** offers more than 10 types of amenities.	Hosts more than 10 monthly events **or** offers more than 10 types of amenities.
MEDIUM	Hosts 20 to 50 annual events **or** offers 15 to 20 types of amenities.	Hosts 5 to 10 annual events **or** offers 6 to 10 types of amenities.	Hosts 5 to 10 monthly events **or** offers 5 to 10 types of amenities.
LOW	Hosts less than 20 annual events **or** offers less than 15 types of amenities.	Hosts less than 5 annual events **or** offers less than 5 types of amenities.	Hosts less than 5 monthly events **or** offers less than 5 types of amenities.

Parking Demand Matrix

The combination of facility usage intensity and parking utilization is presented in **Table 2.3**, which determines the overall parking demand for each facility.

TABLE 2.3 Parking Demand Matrix

FACILITY USAGE INTENSITY	PARKING UTILIZATION		
	HIGH	MEDIUM	LOW
HIGH	**High Parking Demand**	**High Parking Demand**	Medium Parking Demand
MEDIUM	**High Parking Demand**	Medium Parking Demand	Low Parking Demand
LOW	Medium Parking Demand	Low Parking Demand	Low Parking Demand

2.4.2 STEP 2: DETERMINE RECOMMENDED ACTION BASED ON SUSTAINABLE MODE FACILITIES

The second step involves assessing the facility's accessibility via sustainable transportation, including transit. By combining the parking demand from step 1 with the sustainable mode facilities rating, appropriate parking management strategies can be identified.

Access to sustainable mode facilities reduces reliance on personal vehicles for those able to access a transportation alternative. It is recognized that access to recreation facilities by bicycle and transit can be challenging for certain users, such as people accessing programs for all abilities or families attending hockey practice or games with large gear bags. The criterion for assessment includes:

External Criteria

The external sustainable mode facility rating is determined based on the following off-site criteria:

Excellent Transit Accessibility

The facility is within 400 meters of a skytrain station; **or**,

The facility is within 200 meters of a Frequent Transit Network (FTN) bus stop, including B-Line stops.

Proximity to Greenways

The facility is directly connected to high quality active transportation corridors for walking, biking, and rolling for people of all ages, abilities and identities.

Adequate lighting is provided along these routes for safety during early morning and evening hours.

Availability of Shared Micromobility

The facility is in an area served by shared micromobility services (e.g., Mobi bike-share or the shared e-scooter stations being implemeneted in the city).

Internal Criteria

The internal sustainable mode facility rating is determined based on the availability of on-site amenities, as summarized in **Table 2.4**.

TABLE 2.4 On-Site Sustainable Transportation Amenities

CRITERIA	FACILITY TYPE		
	DESTINATION PARK	COMMUNITY PARK	COMMUNITY CENTRE OR RECREATION FACILITY
BICYCLE PARKING	Provides 12 or more short-term bicycle parking spaces.	Provides 6 or more short-term bicycle parking spaces.	Provides 12 or more short-term bicycle parking spaces **and** provides a minimum of 1 long-term bicycle parking space for every 6 employees.
END-OF-TRIP FACILITIES	Provides indoor washrooms, showers, and changing rooms.	Provides indoor washrooms and changing rooms.	Provides indoor washrooms, showers, changing rooms, and clothing lockers.
WAYFINDING SIGNAGE	Offers on-site multi-modal wayfinding signage.	Offers on-site multi-modal wayfinding signage.	Offers on-site multi-modal wayfinding signage **and** offers transit schedules and maps within the facility.

Sustainable Mode Facility Ratings

By combining both internal and external factors, access to sustainable modes can be rated for each park and community centre as summarized in **Table 2.5**.

TABLE 2.5 Sustainable Mode Facility Ratings

RATING	FACILITY TYPE		
	DESTINATION PARK	COMMUNITY PARK	COMMUNITY CENTRE OR RECREATION FACILITY
EXCELLENT	Meets at least 4 total criteria including 2 external criteria.	Meets at least 4 total criteria including 2 external criteria.	Meets at least 5 total criteria including 2 external criteria.
MODERATE	Meets at least 3 total criteria including 1 external criterion.	Meets at least 3 total criteria including 1 external criterion.	Meets at least 3 total criteria including 2 external criteria.
LIMITED	Meets 2 or less criteria.	Meets 2 or less criteria.	Meets 2 or less criteria.

By comparing the parking demand with the sustainable mode facilities rating, the recommended parking management actions can be determined. This relationship is outlined in **Table 2.6**.

TABLE 2.6 Sustainable Mode Accessibility Matrix and Recommended Actions

PARKING DEMAND	SUSTAINABLE MODE FACILITIES		
	EXCELLENT ACCESS	MODERATE ACCESS	LIMITED ACCESS
HIGH PARKING DEMAND	**Implement Paid Parking or Increase Parking Fees** for facilities already operating with paid parking. Monitor to ensure demand is managed.	**Implement Paid Parking** Consider enhancing on-site amenities and prioritize sustainable modes. Advocate for external improvements.	**Implement Paid Parking + On-site Improvements** Prioritize on-site amenities (bike/micromobility, showers, etc.). Advocate for external improvements.
MEDIUM PARKING DEMAND	**Implement Paid Parking** Monitor to ensure demand is managed.	**Phased Paid Parking** Consider phased implementation of paid parking (peak-time or event-based fees) and enhancing on-site amenities. Advocate for external improvements.	**Phased Paid Parking + On-Site Improvements** Consider phased implementation of paid parking (peak-time or event-based fees). Prioritize on-site amenities. Advocate for external improvements.
LOW PARKING DEMAND	**No Immediate Need for Paid Parking** Continue monitoring.	**No Immediate Need for Paid Parking** Continue monitoring.	**No Immediate Need for Paid Parking** Continue monitoring.

2.4.3 POLICY RECOMMENDATIONS BASED ON OUTCOMES

Implement Paid Parking

Facilities with *high* or *medium* parking demand and *excellent* or *moderate* access:

- ☐ Introduce paid parking or increase parking fees to manage high demand effectively, promote turnover, and encourage the use of sustainable transportation modes.

Implement Paid Parking with On-Site Improvements

Facilities with *high* parking demand and *moderate* access:

- ☐ Implement paid parking while investing in on-site enhancements, such as better pick-up/drop-off facility, and prioritize sustainable transportation options, such as adding bike parking including for cargo-bike, end-of-trip facilities, or micromobility docking stations.
- ☐ Advocate and collaborate with relevant authorities to improve off-site transportation options where possible.

Phased Paid Parking

Facilities with *medium* parking demand and *moderate* access:

- ☐ Gradually introduce paid parking, potentially starting during peak times or events while also considering enhancing on-site sustainable transportation amenities.
- ☐ Advocate for external improvements where feasible.

Phased Paid Parking Implementation with On-Site Improvements

Facilities with *medium* parking demand and *limited* access:

- ☐ Gradually introduce paid parking, potentially starting during peak times or events while prioritizing on-site sustainable transportation amenities.
- ☐ Advocate for external improvements where feasible.

No Immediate Need for Paid Parking

Facilities with *low* parking demand:

- ☐ Continue monitoring parking utilization and focus on other improvements, such as enhancing user experience or promoting facility programs.

3

IMPLEMENTATION PLAN

Implementation Plan

Implementing paid parking requires a phased approach, from data gathering and engagement with Association partners, to implementation and monitoring that ensures accountability to the community.

In implementing the Strategy, impacts to priority user groups first need to be understood. Potential mitigation measures, such as periods of free parking for community centre patrons and other equitable access strategies, staff and volunteer parking policies, and sustainable transportation amenities can then be considered. Coordination with City Engineering staff for approaches to nearby neighbourhood or curbside parking is required to ensure impacts on local residents are minimized.

Continued engagement with Association partners as the Strategy is implemented is an important aspect of this process. Through the course of implementation and prior to the Fees and Charges update near the end of the year, staff responsible for implementation will engage Association partners in the pilot and successive phases, providing a direct staff conduit to the effective delivery of policy and ongoing parking management.

Input gathered from Association partners will inform how Strategy implementation is refined over time to meet changing needs, building on Park Board staff's dedication to closely engaging community members and strengthening partner relationships to provide services together.

3.1 Implementation Phases

The following roadmap outlines a phased approach for implementing the Strategy. This roadmap ensures that policies are effectively rolled out, monitored, and refined over time, aligning with policy objectives and promoting sustainability, equity, and operational efficiency.

3.1.1 IMPLEMENTATION SUMMARY

PHASE 1
Data Collection & Monitoring

- ☐ Conduct Data Collection
- ☐ Distribute User Surveys
- ☐ Establish Data Management Systems

PHASE 2
Policy Development & Engagement

- ☐ Apply Decision Matrices
- ☐ Review Neighbourhood Parking Restrictions
- ☐ Draft Tailored Parking Policies
- ☐ Engage Partners
- ☐ Adjust Policies

PHASE 3
Pilot Programs & Adjustments

- ☐ Select Pilot Facilities
- ☐ Launch Communications Strategy
- ☐ Implement Pilot Program
- ☐ Offer Equitable Access Measures
- ☐ Monitor and Evaluate

PHASE 4
Implementation & Improvement

- ☐ Implement Finalized Policies
- ☐ Enhance On-Site Supportive Amenities
- ☐ Communicate with Users
- ☐ Establish Ongoing Monitoring

3.1.2 IMPLEMENTATION ROADMAP

PHASE 1

Data Collection & Monitoring

OBJECTIVE

Gather accurate and comprehensive data to inform decision-making and apply the decision matrices effectively.

1 Conduct Comprehensive Data Collection

a. Parking Utilization Surveys:
- Collect detailed data on parking utilization during peak periods across different days of the week and seasons.
- Utilize technologies such as parking sensors, ticketing systems, or manual counts to ensure accuracy.

b. Facility Usage Data:
- Record the number and types of events hosted monthly.
- Document the range and number of amenities offered at each facility.

c. Sustainable Transportation Access Assessment:
- Map the proximity of each facility to SkyTrain stations, FTN bus stops, greenways, and availability of micromobility services.
- Assess on-site sustainable transportation amenities.

d. Identify gaps in both external sustainable transportation infrastructure and on-site amenities.

2 Implement User Surveys

a. Gather demographic information and feedback on transportation preferences, barriers, and awareness of sustainable transportation options.

b. Assess user awareness and perceptions of both external accessibility and on-site amenities related to sustainable transportation.

3 Establish Data Management Systems

a. Develop databases to store and analyze collected data.

b. Ensure data is updated regularly to reflect changes over time, including updates to external infrastructure and on-site improvements.

OUTCOME

- ☐ **A comprehensive dataset to accurately assess each facility using the decision matrices.**
- ☐ **Identification of facilities with high parking demand and their sustainable transportation accessibility levels.**

Phase 2

Policy Development & Engagement

OBJECTIVE

Develop detailed parking policies and engage partners and users for input and support, focusing on actionable steps within the facility's control and advocating for external improvements.

1 Apply Decision Matrices

a. Use the data collected to classify each park or facility's parking demand and sustainable mode facilities accessibility, incorporating both external and on-site factors.

b. Determine recommended actions for each facility based on the decision matrix.

2 Review Parking Restrictions in the Surrounding Neighbourhood

a. Identify streets in the surrounding neighbourhood that may experience parking spillover once paid parking is implemented.

b. Work with the City of Vancouver staff to mitigate impacts to surrounding streets, such as implementing permit parking on residential or paid/time-restricted parking along commercial streets where identified.

3 Draft Tailored Parking Policies

a. Develop specific parking management strategies for each park or facility, including considerations for paid parking implementation, on-site sustainable transportation enhancements, equitable access measures, and advocacy efforts for external improvements.

4 Engage Partners

a. Consult with Association partners, staff, and residents (in collaboration with City staff).

b. Present proposed policies and gather feedback to address concerns and improve equity and accessibility.

5 Adjust Policies Based on Feedback

a. Incorporate stakeholder input to refine parking policies, ensuring they are practical and address the needs of all parties.

b. Ensure policies consider the needs of vulnerable groups and do not disproportionately impact any user group.

6 Develop Communication Plans

a. Create clear communication materials to inform users about upcoming changes.

b. Include information on alternative transportation options and benefits of the new policies.

OUTCOME

- ☐ **Well-informed, data-driven parking policies tailored to each facility, focusing on both on-site enhancements and advocacy for external improvements.**
- ☐ **Partner input and support for the proposed changes and collaborative efforts.**

Phase 3

Pilot Programs & Adjustments

OBJECTIVE

Test the proposed parking strategies on a small scale to evaluate effectiveness, make necessary adjustments, and initiate advocacy efforts for external sustainable transportation improvements.

1 Select Pilot Facilities

a. Select a representative sample of priority facilities from each park category based on scoring criteria.

2 Launch Communication Strategy

a. Launch a pre-pilot communication and outreach strategy.

b. Develop communications materials to raise awareness of pilot programs and provide outlets for feedback.

3 Implement Pilot Program

a. Introduce paid parking systems at parks and facilities where recommended.

b. Enhance on-site amenities and advocate for off-site improvements near pilot sites.

4 Offer Equitable Access Measures

a. Provide discounted rates or passes to targeted user groups through the Leisure Access Pass system.

b. Offer the option to purchase parking passes as membership or program add-on fees where appropriate.

5 Monitor and Evaluate

a. Incorporate partner input to refine parking policies, ensuring they are practical and address the needs of all parties.

b. Ensure policies consider the needs of vulnerable groups and do not disproportionately impact any user group.

OUTCOME

- ☐ **Validated and effective parking management strategies, including successful on-site enhancements and progress in advocacy efforts.**
- ☐ **Adjusted policies ready for broader implementation.**

Phase 4

Full Implementation & Continuous Improvement

OBJECTIVE

Roll out the refined parking management strategies across all relevant facilities and establish processes for ongoing improvement.

1 Implement Finalized Policies

a. Apply the tailored parking policies focusing on demand management and sustainable mode support.

b. Ensure consistency in implementation while allowing for park or facility-specific adjustments.

2 Enhance On-Site Sustainable Transportation Amenities

a. Invest in supportive amenities such as bicycle parking including cargo bike parking, upgrading end-of-trip facilities, improving pedestrian pathways and accessibility features, and providing transit information.

3 Communicate with Users

a. Inform users of changes, highlighting benefits such as improved parking availability, enhanced on-site amenities, and efforts to improve external sustainable transportation options.

4 Establish Ongoing Monitoring

a. Continue collecting data on parking, revenue, user satisfaction, and the effectiveness of the program.

b. Regularly review and update policies to reflect changing needs, including with Association partners.

OUTCOME

- ☐ **Successful implementation of parking management strategies that manage demand, promote sustainability, ensure equitable access, and offer an adaptive management approach that responds to changing conditions.**

3.2

Mitigating Unintended Consequences

Paid parking implementation may negatively impact a number of user groups, including but not limited to:

- Seniors
- Persons with disabilities
- Families with children
- Low-income earners (all ages)
- Children and youth
- Newcomers
- Volunteers
- Staff

Park Board staff hosted an initial workshop with Community Centre Associations (CCAs) and key staff members to gain an understanding of which user groups may be most affected and how the policy framework may be developed to mitigate impacts.

Following direction from the Park Board, staff then engaged more closely with the CCAs representing sites selected for the paid parking pilot to address concerns for equity, barriers to service, consistency and impacts to programming. Input gathered through this process, along with feedback from other engagement and approved Park Board policies and initiatives, helped define important user groups potentially facing impacts, along with mitigation measures to address those impacts, as summarized in **Table 3.1**.

Considering the impacts to these user groups is critical to successful development and implementation of paid parking policies at parks, community centres, and other facilities.

TABLE 3.1 Impacts and Potential Mitigation Measures for Priority User Groups

USER GROUP	IMPACTS	MITIGATION MEASURES
STAFF	**Staff Recruitment and Retention Issues** Parking-related challenges make it difficult to recruit and retain staff, with some opting for roles in municipalities with better parking options. **Parking Costs and Accessibility Concerns** High parking costs and inconvenient payment processes can discourage staff from working shifts and create financial strain. **Operational and Logistical Challenges** Limited parking and logistical hurdles, such as deliveries and staff availability, hinder effective operations. Staffing shortages caused by paid parking could compromise the ability to deliver programs effectively.	**Paid Parking Exemptions for Staff Delivering Core Services** Provide staff with parking passes or paid parking exemptions during their shifts to ensure the continued delivery of important core parks and recreation services. Extend to Association partner staff necessary for day to day operations. **Incentives for Alternative Modes of Transportation** Incentivize alternatives to driving through improved end of trip facilities and by providing or considering discounts for transit passes and sustainable transportation mode services. **Reserved and Designated Parking Spaces** Allocate reserved stalls or staff-specific parking spaces, including stalls with EV charging stations where applicable.
MST NATIONS	**Barriers to Accessing Unceded, Traditional Territory** Paid parking at sites of high cultural importance for Musqueam, Squamish, and Tsleil-Waututh Nations, particularly in Stanley Park, create barriers for Nations' members accessing their unceded, traditional territories for important cultural practices, stewardship activities, and other uses.	**Paid Parking Exemption for MST Nations Members** Provide paid parking exemptions to members of the local Nations, piloted at Stanley Park, and considered for other sites or system-wide application through the ongoing UNDRIP Action Plan, to support access and advance Reconciliation initiatives. Work with the Nations to establish a registry for members, modeled after the approach used for staff parking.
VOLUNTEERS AND CONTRACTED PROGRAMMERS	**Decreased Volunteer Participation** Concerns that there will be a noticeable decrease in people willing to volunteer, partly due to the financial burden of parking costs. Contractors may also be hesitant to accept work at affected sites. **Transportation and Accessibility Challenges** Inconvenient transit options and a lack of alternative transportation make it difficult for volunteers to access sites, further deterring participation. **Implementation Issues** Concerns about the practicality of implementing systems like sign-out cards for volunteer parking to track and manage these issues.	**Free Parking Period and Discounted Parking** Provide 3 hours of free parking for community centre patrons, covering the majority of volunteers and programmers, with discounted parking passes available to those providing services for longer periods. **Transit Pass Subsidies** Explore subsidies for volunteer transit passes to make transportation more affordable. **Phased and Communicate Approach** Roll-out approach in collaboration with Association partners to create an effective working model with an accompanying communication plan.

Table 3.1 Continued

USER GROUP	IMPACTS	MITIGATION MEASURES
VULNERABLE USER GROUPS (SENIORS, LOW INCOME FAMILY, PERSONS WITH DISABILITIES, ETC.)	**Financial and Accessibility Barriers** Financial challenges with paid parking and struggle with the physical accessibility of sites, including hills and limited transit options. **Difficulty with Technology** Challenges using machines, apps, or pay stations, particularly those without credit cards or who are less familiar with technology.	**Free Parking Period** Provide 3 hours of free parking for community centre patrons, ensuring access to one program with informal time for social connection, or two programs back to back. **Discounted or Paid Parking Exemptions Options** Offer reduced parking rates during the day, especially in the early morning and other times of lower utilization. Connect to the Leisure Access Pass program for access to programs where financial barriers are most significant. **Simplified Access and Payment** Integrate paid parking digital services and consider incorporating into existing systems like the One Card. Ensure parking options are user friendly through implementation and continued improvements.

3.3 Additional Considerations for Paid Parking Implementation

Implementing paid parking requires careful consideration to ensure it supports operational goals without negatively impacting accessibility, equity, and Park Board policy directions. The following considerations address key aspects including equitable access strategies, staff parking policies, access for Musqueam, Squamish, and Tsleil-Waututh Nations' members, dynamic pricing structures, promotion of sustainable transportation, safety enhancements, user engagement, monitoring and evaluation, and financial considerations.

3.3.1 EQUITABLE ACCESS STRATEGIES

To ensure that parking fees do not become a barrier to access, a variety of approaches are available for consideration:

Free Parking Period

Provide 3 hours of free parking for community centre patrons to address concerns for equity, barriers to service, consistency and impacts to programming.

Discounted Parking for Vulnerable User Groups

Provide reduced rates or subsidized passes for seniors, persons with disabilities, low-income patrons and families.

- Implement a parking pass program with discounted rates for Leisure Access Pass Program participants, with consideration for ease of use and ensuring privacy.
- Provide reduced parking rates during specific and/or underutilized times for programs serving vulnerable user groups (dynamic pricing).

Introduction of Parking Pass as a Top-up Option to Recreation Passes

- Offer a parking pass as a top-up option to those purchasing a Flexipass (recreation pass) which can work for one, three, or 12-month periods.

Flexible Payment Options

- Offer short-term parking rates to accommodate users attending specific programs or events.

Promote Transit, Carpooling and Ridesharing

- Consider incentives for transit users, and families in particular, such as reduced fees for some services or other perks.
- Encourage users to share rides by promoting carpooling in communication materials and program administration with priority locations for carpool parking.
- Partner with rideshare services to offer discounts or promotions for facility users.

3.3.2 STAFF AND PROGRAM ADMINISTRATOR PARKING

Considering the needs of staff and program administrators is essential when developing comprehensive parking policies.

Employees play a crucial role in the operation of community centres, recreation, and other facilities. Access to parking directly impacts their ability to perform their duties effectively and for ensuring on-call employee availability and staff retention that contributes to the continued delivery of recreation services. Ensuring parking access for Community Centre Association staff, such as daily childcare staff, was also an important piece of feedback through the close engagement of Community Centre Associations in developing the parking strategy.

Staff identified as providing daily services at a facility will be provided paid parking exemptions for their workplace during the time of their shift. The number of spaces required for each facility to accommodate necessary staff will vary by site, and likely across seasons, determined through engagement during implementation. The goal is to reduce impacts to staff availability for key service delivery without discouraging staff from using other modes of transportation or impacting public access and revenue generation by using spaces for times of personal use. Additionally, facilities should consider implementing strategies to encourage sustainable commuting options among employees. Examples of effective approaches for longer-term implementation could include:

Transit Subsidies

Offering financial assistance for public transit passes can reduce commuting costs for staff and encourage the use of public transportation, thereby decreasing parking demand and contributing to environmental sustainability goals. Park Board regular full-time, regular part time, and temporary full-time staff are eligible for a transit pass discount.

Carpool Matching Services

Facilitating carpool arrangements among staff members can lower the number of single-occupancy vehicles. Providing preferential or reserved parking spaces for carpooling employees, potentially at reduced rates, further incentivizes this option.

Secure Bicycle Storage

Installing secure and convenient bicycle parking facilities encourages staff to cycle to work, supporting healthy lifestyles and reducing reliance on personal vehicles.

Bike Share and Micromobility Memberships or Subsidies

Providing access to bike-share programs or subsidies for micromobility services (such as e-scooters) offers flexible and sustainable commuting alternatives for staff. Discounts for shared e-scooters and bikeshare are available to Park Board staff.

Implementing these strategies not only supports staff in transitioning to sustainable transportation modes but also helps manage parking resources more effectively. By considering staff needs and promoting alternative commuting options, facilities can enhance employee satisfaction while aligning with broader sustainability objectives.

3.3.3 INCREASING ACCESS FOR MEMBER OF MUSQUEAM, SQUAMISH, AND TSLEIL-WAUTUTH NATIONS

All parking lots administered by the Park Board in Vancouver are on the unceded, traditional territory of the Musqueam, Squamish, and Tsleil-Waututh (MST) Nations.

Many parks and beaches are areas of archaeological, cultural, and ecological significance for the Nations, and represent some of the last undeveloped areas of land in their traditional territories to access important aspects of their cultures.

Park Board staff received a request through the Stanley Park Intergovernmental Working Group to waive paid parking fees in Stanley Park for MST Nations' members. To reduce barriers to the Nations in accessing their own lands, build better relationships, and promote connection between cultures, paid parking exemption for members of the MST Nations will be provided within Stanley Park in the pilot phase of implementation. Later phases will consider extending access through paid parking exemptions to other parks and facilities, supported by the findings from the first phase for process improvements, and as determined through ongoing intergovernmental discussion within the UNDRIP Action Plan.

Following suggestions from the Nations to follow the process established with another municipality and using an existing model in place for Park Board staff, paid parking exemption will be administered through a registration system where license plates are input into a database. Considering the proportion of Nations' members to the overall visitors to Park Board paid parking lots, impacts on revenue would be low while providing high value both to the Nations and for the Park Board's delivery of public good by promoting connection across cultures and to place.

3.3.4 DYNAMIC AND TIERED PARKING RATES FOR USERS

Implementing dynamic and tiered parking rates can effectively manage parking demand while accommodating the diverse needs of facility users. By adjusting parking fees based on time, duration, or specific user groups, parks and facilities can promote equitable access and optimize parking resource utilization.

Tiered Pricing Structures

Tailoring parking rates to align with facility programming, and vice versa, can enhance accessibility for vulnerable user groups. For instance, if the centre offers senior classes during specific times of the day, parking fees can be reduced during those periods to support senior patrons. Generally, findings suggest community centres already program senior classes to occur during times that are underutilized for parking (mid-day), and this alignment is recommended to ensure lower fees continue to be aligned with seniors on fixed incomes. This approach acknowledges the importance of making facilities accessible to vulnerable populations and encourages participation in community programs.

Demand and Event-Based Pricing

Adjusting parking rates according to peak and off-peak times helps manage congestion and maximizes revenue.

- Implement higher parking fees during peak seasons to manage increased demand.
- Offer reduced rates during off-peak periods to encourage facility usage.
- Implement higher rates during times throughout the day that are known to have high parking demands to promote turnover.
- Offer reduced rates to encourage facility usage during quieter periods.
- Implement variable pricing during special events that significantly increase parking demand.

By adopting dynamic and tiered parking rates, facilities can address the fluctuating parking needs associated with diverse programming schedules and user groups, enhancing accessibility while effectively managing resources.

By adjusting parking fees based on time, duration, or specific user groups, parks and facilities can promote equitable access and optimize parking resource utilization.

3.3.5 EVENT PARKING MANAGEMENT

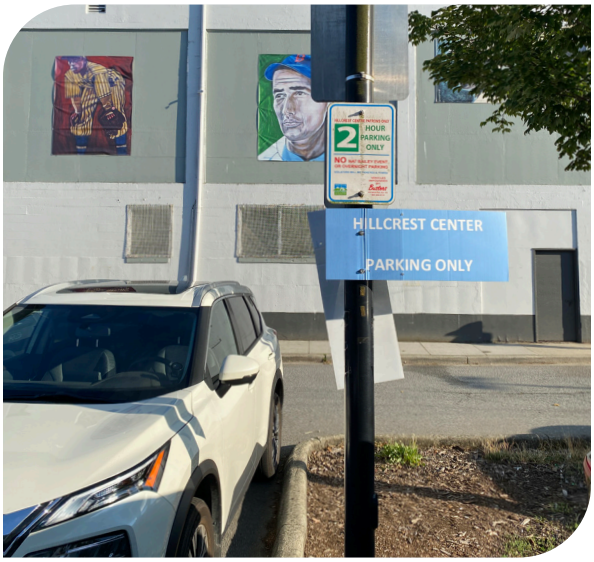
Special events permitted through the Park Board, such as large-scale weddings, community gatherings, sporting events, cultural celebrations, educational workshops, and private parties, can significantly impact parking demand. Effective management of event parking is essential to accommodate increased demand and ensure a positive experience for all visitors.

Flat Event Rates

Consider introducing a flat parking rate for event attendees to simplify the payment process and encourage compliance (e.g., flat event rate per vehicle for the duration of the event could be implemented).

Designated Event Parking Areas

Allocate specific parking areas for event attendees to help manage increased demand and maintain availability for regular facility users. Provide clear directional signage to event parking zones to reduce confusion and congestion.



Booking Procedures

Encourage event organizers to arrange parking as part of the event planning process. Outline any necessary permits, fees, or documentation required for event parking and work with organizers to estimate attendance and adjust parking allocations accordingly.

Shuttle Bus Services

Provide shuttle bus services between the facility and nearby transit stations/exchanges to provide alternative transportation options during large events. Consider using a portion of the event parking fees to fund these services. Further consider bundling the cost of shuttle bus services with the cost of event tickets to increase convenience for event goers choosing not to travel by private vehicle.

3.3.6 GOLF COURSE PARKING

Golf courses under the control of the Park Board require special consideration for implementation of paid parking to align with the commercial services offered and unique lengths of customer use. The Park Board generates revenues from golf fees, equipment rentals and sales, and food and beverage services during golf user parking periods many times longer than the average durations elsewhere.

Golf users are more likely to travel further distances and with gear requiring a vehicle and difficult to transport by bicycle or transit. Parking revenues must be considered in tandem with golf user fees and other revenue streams to ensure market rate access remains competitive. This allows for the Park Board to generate the highest total revenues while managing walk-off and other uses of the golf course parking lots through paid parking implementation.

A kiosk-based sign-in system that applies to golf users may be explored after full costing and the appropriate balance of revenues (through both golf services and paid parking) for supporting parks and recreation services is determined.

3.3.7 VANDUSEN BOTANICAL GARDEN PARKING

The Park Board jointly operates VanDusen Botanical Garden with the Vancouver Botanical Gardens Association. Revenue streams at this site include garden admissions and memberships, gift shop sales, rental fees for weddings, corporate and other events, special event ticket sales for events such as Festival of Lights, educational camps and class fees, donations, and leaseholder revenue from the Garden Cafe and Shaughnessy Restaurant. Many of these revenue streams come from products and services that are market-based and in sectors with a competitive landscape.

Similar to golf courses, paid parking management would need to be balanced with the impact on revenue streams and consideration of full costing to remain competitively priced and attractive in terms of value.

Provision of paid parking exemptions for staff, subsidized passes for volunteers, and ensuring access to vulnerable user groups through the Leisure Access Pass program would apply as they do for jointly operated community centres.

The Festival of Lights period, generally from late November through to early January each year from 4pm to 10pm each day, is a time of exceptionally high parking demand. A specific paid parking pilot is appropriate to better manage parking for this Park Board-operated event while limiting impacts on services provided by the Vancouver Botanical Gardens Association, including access for members and volunteers.

Due to the runway needed for appropriate communication to guests and incorporating this new event-related item into marketing materials, this pilot could be considered for 2026. Event parking rates would apply and a portion of revenues would be used to fund parking attendants to improve user experiences.

3.3.8 BUS PARKING MANAGEMENT

Destination parks require specialized strategies for bus and event parking to manage special events and the high volume of visitors arriving by tour buses. While bus visits to community centres and recreation facilities are less frequent than at destination parks, accommodating them effectively when they occur is important, such as for school field trips, community group outings, or special programs. Given the infrequency of these visits, having a flexible approach that allows for temporary allocation of parking spaces on an as-needed basis is recommended.

Designated Bus Parking Areas

Specific areas within destination parks must be designated for bus parking to accommodate the higher number of buses. Additionally, these areas must be strategically located to minimize congestion and ensure pedestrian safety.

Signage and Wayfinding

Clear signage directing drivers to appropriate parking zones must be provided to improve traffic flow.

Bus Parking Rates

Implement a tiered pricing system based on bus capacity, and respecting equitable access for Leisure Access Pass and other community centre special programs that provide trips to destinations parks to community members who may otherwise have difficulty accessing these spaces.

Idling Restrictions

Anti-idling policies must be introduced and enforced in destination parks to reduce emissions, increase air quality, and protect natural environments.

Reservation Systems

Encourage tour operators to reserve bus parking spaces in advance, especially during peak seasons and major events. Clear instructions and contact information must be provided for booking arrangements.

On-Demand Bus Parking Allocation

Advance Notification Required

Facilities may request that groups planning to arrive by bus notify the facility in advance, preferably at least 48 hours before the visit. This advance notice allows staff to arrange appropriate parking accommodations without disrupting regular parking availability.

Temporary Parking Arrangements

On the day of the visit, staff can temporarily designate parking spaces to accommodate the bus by coning off or marking the necessary number of regular parking stalls. This approach ensures the bus can park and maneuver safely while minimizing the impact on other parking users.

Space Requirements

The number of parking spaces blocked off would be determined based on the bus dimensions and parking facility configuration.

Compensatory Bus Parking Rates

Set bus parking rates to compensate for the lost revenue from the regular parking spaces that are temporarily blocked off. This involves calculating the total potential revenue those spaces would have generated during the time they are unavailable.

Operational Considerations

Staff Coordination

Facility staff could coordinate the placement of cones or markers to reserve the necessary space prior to the bus's arrival.

Arrival and Departure Times

Establishing clear arrival and departure times ensures the reserved spaces are utilized efficiently and returned to general use promptly after the bus departs.

Environmental Considerations

Enforcing anti-idling policies may reduce emissions and promote environmental sustainability.

Pedestrian Safety

Designing safe walking paths for passengers disembarking from the bus to the facility entrance enhances safety.

Communication

Booking Procedures

Provide clear instructions on how to book bus parking, including contact information and any required forms, facilitates the process for group organizers.

Policy Awareness

Inform bus drivers and group organizers of parking rates, time restrictions, and facility rules to promote compliance and smooth operations.

Confirmation Details

Upon booking, provide a confirmation email that includes a map of the parking area and any special instructions.

3.3.9 PROMOTING SUSTAINABLE TRANSPORTATION

Encouraging the use of sustainable transportation options is vital for reducing parking congestion, minimizing environmental impact, and enhancing accessibility for all users. Community centres and other facilities can promote alternative transportation through a combination of infrastructure enhancements, educational initiatives, and incentive programs.

Education and Awareness

Providing visitors with information about available alternative transportation options can facilitate a shift away from reliance on personal vehicles. This includes educating users about nearby public transit routes, micromobility stations, and bike-share programs. Displaying this information prominently on facility websites, informational brochures, and onsite signage helps visitors plan their journeys using sustainable modes of transport.

Enhanced Cycling Facilities

Improving bicycle parking facilities by installing secure racks and/or storage, accommodating cargo bikes and e-bikes, and providing covered shelters will encourage cycling as a viable option. Ensuring that these facilities are conveniently located and well-maintained enhances user confidence and convenience.

Carpool Incentives

Offering designated parking spaces for carpooling visitors, potentially at lower rates, incentivizes shared vehicle use, understanding that enforcement of carpool use can be a challenge. These preferential parking spots can be located closer to facility entrances, providing an added convenience that encourages visitors to carpool.

Rewards Programs

Implementing programs that reward users for utilizing sustainable transportation methods can motivate behavior change. For example, offering loyalty points or credits redeemable for facility services (such as class discounts or merchandise) to visitors who arrive by bike, public transit, or carpool can encourage ongoing commitment to sustainable commuting.

3.3.10 SAFETY AND ACCESSIBILITY ENHANCEMENTS

Ensuring safety and accessibility within parking facilities is crucial for user satisfaction. Accessible parking spaces should meet or exceed governing bylaw requirements and actual demand. Regular maintenance of parking surfaces, lighting, and signage enhances safety and the overall user experience. Designing clear and safe pedestrian routes from parking areas to facility entrances, including features like clearly marked crosswalks (i.e., signage and pavement markings) with adequate lighting, curb extensions (or parking end islands) to ensure adequate sight lines to crosswalks, ramps, and tactile indicators for visually impaired users, improves accessibility for all visitors.

3.3.11 USER COMMUNICATION AND ENGAGEMENT

Effective communication is key to the successful implementation of parking policies. Providing clear and consistent signage regarding parking policies, rates, and regulations helps users understand and comply with the rules. Updating facility websites with detailed parking information, including maps, rates, and alternative transportation options, ensures that visitors can plan their trips accordingly. Utilizing mobile applications to provide real-time parking availability, facilitate payments, and offer navigation assistance enhances the user experience and convenience.

3.3.12 MONITORING AND EVALUATION

Implementing systems to monitor parking usage patterns, turnover rates, and peak demand periods is essential for ongoing management. Regular surveys can assess user satisfaction, preferences, and areas for improvement. Establishing key performance indicators (KPIs) allows for the evaluation of parking policy effectiveness, focusing on metrics such as revenue targets, utilization rates, and user satisfaction levels. Regularly reviewing and adjusting parking policies based on data analysis and user feedback ensures they remain effective and aligned with facility objectives. Pilot programs can test new initiatives on a small scale before full implementation, allowing for necessary refinements.

Providing clear and consistent signage regarding parking policies, rates, and regulations helps users understand and comply with the rules.

3.3.13 FINANCIAL CONSIDERATIONS

Evaluating the costs and benefits of proposed initiatives, such as infrastructure improvements or technology upgrades, helps prioritize investments.

Communicating how parking revenue is utilized, to improve delivery of parks and recreation services, enhances transparency and fosters community support.

In conclusion, these additional considerations are crucial for ensuring that the implementation of paid parking policies is effective, equitable, and aligned with broader community objectives. By addressing equitable access, staff needs, dynamic pricing, sustainable transportation promotion, safety, and user engagement, policies can enhance user satisfaction, support environmental goals, and optimize resource utilization. Thoughtful implementation of these strategies ensures that parking management contributes positively to operations and community well-being.

When considering these strategies, it is important to assess their financial implications to ensure they are sustainable and align with the Parks Board's operational goals. A revenue impact analysis, detailed in the following section, provides a framework for evaluating the potential revenue effects of different parking policies and strategies. By analyzing the financial outcomes, decision-makers can make informed choices that balance accessibility, equity, and financial sustainability.

4

REVENUE IMPACT ANALYSIS

Revenue Impact Analysis

Building upon the parking management framework and the additional considerations discussed, it is crucial to evaluate the financial implications of implementing various parking mitigation measures.

A revenue impact analysis can help assess the potential revenue effects of different measures and help staff and decision-makers understand how each measure may affect revenue generation and overall financial sustainability to make informed decisions that balance financial objectives with goals of accessibility, equity, and user satisfaction.

The Park Board's interest in revenue generation is driven by a desire to address the growing maintenance and renewal needs of parks and recreation assets and sustain service delivery while reducing the burden on taxpayers. This approach was approved through the *Think Big Action Plan (2023)*, which included direction to optimize parking revenue.

Parking fees are collected as revenues by the City of Vancouver through EasyPark, a non-profit city-owned corporation. A small portion to cover administration and 29% parking tax paid to Translink to support transit improvements (recently increased from 24%) with 5% GST is deducted from each fee.

Collected net revenues generated by paid parking under the jurisdiction of the Park Board are redistributed in combination with tax-based operating funds within the annual operating budget to cover fixed cost increases and fund the delivery of parks and recreation services each year.

The approaches evaluated in this analysis focuses on community centres and recreation facilities but can be extended to other park categories where appropriate.

It is important to integrate this analysis with the implementation roadmap to ensure that financial assessments align with the phased approach to policy implementation and adjustments.

4.1 Purpose of the Revenue Impact Analysis

The revenue impact analysis serves three key purposes:

Inform Decision-Making

Provides quantitative estimates of how different parking policies will impact revenue, aiding in the selection of strategies that align with operational and financial goals.

Balance Objectives

Helps balance the need for revenue generation with commitments to equity and accessibility for all user groups.

Optimize Pricing Strategies

Assists in determining appropriate pricing levels for parking passes, rates, and discounts to achieve desired outcomes without compromising financial sustainability.

4.2 Methodology Overview

4.2.1 ANALYSIS PROCEDURE

The Revenue Impact Analysis Methodology

Step 1: Establishing a Baseline Revenue Projection

- Calculates the expected parking revenue under standard* conditions without the implementation of new measures/policies.
- For facilities currently offering free parking, the baseline represents the projected revenue if standard paid parking is introduced without special rates or discounts.

Step 2: Modeling Policy Scenarios

- Adjusts variables to reflect each proposed policy option, such as periods of free parking, offering discounts, implementing tiered rates, or introducing parking passes.
- Considers changes in user behavior, parking utilization, and operational factors.

Step 3: Comparing Scenarios to Baseline

- Evaluates the difference in projected revenue between each scenario and the baseline to assess the financial impact.
- Identifies potential revenue increases or decreases associated with each policy.

Step 4: Analyzing Results and Refinements**

- Interprets the financial implications alongside other factors such as user accessibility, equity considerations, and operational feasibility.
- Assists in determining whether adjustments to pricing or policy parameters are necessary to meet objectives.

* "Standard conditions" assumes that paid parking has been implemented across all parking spaces with a fixed hourly parking rate.

**Engaging partners and users, such as CCAs, VBGA, staff, and facility users, in the data collection and policy refinement process is crucial to improve the accuracy of inputs and foster support for policies. Feedback can be gathered through surveys, workshops, or public meetings.

4.2.2 REQUIRED INPUTS FOR ANALYSIS

To accurately evaluate each scenario, the following inputs are needed:

Facility Characteristics

- **Total Number of Parking Spaces**
  Capacity of the parking facility.
- **Operating Hours and Days**
  Times when the parking facility is open.
- **Current Parking Utilization Rates**
  Average occupancy rates during different periods.
- **Average Parking Duration per Vehicle**
  Typical length of stay for visitors.

Current Parking Fees

- **Standard Hourly or Daily Rates**
  Existing or proposed base rates for parking.

User Demographics and Behavior

- **Number of Program Participants**
  Users enrolled in facility programs.
- **Frequency of Visits**
  How often different user groups visit (e.g., daily, weekly).
- **Percentage of Users Eligible for Discounts/Passes**
  Proportion of visitors who may receive special rates.

Policy Parameters

- **Free Parking Periods**
  If proposed and applicable, such as for community centre patrons.
- **Proposed Parking Rates and Discount Levels**
  Details of any changes to pricing.
- **Price of Annual or Monthly Parking Passes**
  Costs for users purchasing passes.
- **Details of Tiered or Dynamic Pricing Structures**
  How rates vary by time or duration.
- **Number of Parking Spaces Converted for Specific Uses**
  Such as accessible or pick-up/drop-off zones.

Note: The analysis inputs can be obtained from various sources, including existing facility records, parking utilization studies, user surveys, and program enrollment data. Accurate and reliable data are essential for producing meaningful results. It is important to note that inputs like changes in user behavior are dynamic and require ongoing data collection and refinement. This iterative process benefits from real-world observations and aligns with the Implementation Roadmap's emphasis on continuous improvement.

4.3 Application of the Analysis

4.3.1 POLICY OPTIONS

In applying a revenue impact analysis, staff assess the financial implications of each proposed parking policy relative to the baseline projection.

Option A: Free Parking Periods

For any proposed period of free parking, such as for community centre patrons, impact on net revenue and funding infrastructural and operational improvements must be considered to achieve a balance of parking management, financial viability, and reduction of barriers for user groups.

Option B: Parking Passes for Program Participants

For parking passes for program participants, the analysis estimates the optimal pricing for passes to balance affordability with revenue needs. It evaluates how the sale of passes might reduce daily parking fee income and whether pass sales would compensate for this loss.

Option C: Discounted Rates for Vulnerable Groups

When considering discounted rates for vulnerable groups, the analysis examines how different discount levels affect revenue. It determines the maximum discount that can be offered without jeopardizing financial sustainability, considering the proportion of users eligible for discounts and potential changes in parking utilization.

Option D: Conversion to Accessible or Pick-Up/Drop-Off Spaces

When evaluating the conversion to accessible or pick-up/drop-off spaces, the analysis calculates revenue implications of reallocating/repurposing parking spaces. It balances potential revenue loss from reduced general parking spaces with benefits gained from improved accessibility and user satisfaction.

Option E: Integration of Parking Costs into Fees

For the integration of parking costs into user fees, the analysis assesses how bundling parking fees with certain commercial user fees impacts overall revenue and uptake of services. It evaluates whether this integration encourages more frequent service use by providing an easier system for parking payment and if adjustments to fee or paid parking pricing are necessary to optimize revenues and enhance user experience.

Option F: Tiered and Dynamic Parking Rates

In the case of tiered and dynamic parking rates, the analysis models how varying rates during peak and off-peak times influence parking demand and revenue. It helps set rates that manage demand effectively while maintaining revenue targets, considering user acceptance of complex pricing structures.

4.3.2 USING THE ANALYSIS FOR POLICY OPTIMIZATION

The revenue impact analysis serves as a strategic tool for optimizing parking policies to achieve a balance between financial sustainability and meeting needs for accessibility, equity, and user satisfaction. By testing various scenarios, staff can adjust policy parameters to identify the most effective strategies. For example, the analysis can help determine the optimal pricing for annual parking passes by finding a price point that is affordable for users yet sufficient to offset potential revenue losses from daily parking fees. It can also aid in setting appropriate discount rates for priority groups by evaluating how different discount levels impact revenue.

Moreover, the analysis enables the exploration of the cumulative effects of implementing multiple policies simultaneously. Decision-makers can assess how combined strategies – such as implementation of parking passes and discounted fee for vulnerable user groups – interact to affect overall revenue and user behavior. This comprehensive approach ensures that policies are not developed in isolation but are part of an integrated strategy aligned with the facility's objectives.

By basing decisions on quantitative data, the analysis reduces reliance on assumptions and enhances the effectiveness of policy choices. It helps identify potential financial risks and opportunities associated with each option, allowing for proactive adjustments to policy design. This data-driven approach promotes a more efficient allocation of resources and better outcomes for both the facility and its users.

By basing decisions on quantitative data, the analysis reduces reliance on assumptions and enhances the effectiveness of policy choices.

4.3.3 BENEFITS OF THE REVENUE IMPACT ANALYSIS

The revenue impact analysis offers several significant benefits:

Strategic Planning Support

It provides clear, data-driven insights into how different parking policies will affect revenue generation, which is crucial for budgeting and financial forecasting. This information enables facilities to plan effectively for operational needs, future investments, and potential enhancements to services or infrastructure.

Continuous Improvement

As policies are implemented, actual data on parking utilization and revenue can be collected and compared against projections. This real-world feedback allows decision-makers to refine and adjust policies to better meet objectives, respond to changing conditions, and address unforeseen challenges. The iterative nature of this process ensures that parking strategies remain effective, relevant, and aligned with both financial goals and the needs of the community.

4.3.4 LIMITATIONS AND ASSUMPTIONS

While the revenue impact analysis tool can provide valuable projections on the financial effects of various parking policies, it is based on certain assumptions that may not fully capture future realities. Factors such as changes in user behavior, economic fluctuations, policy compliance rates, and unforeseen external influences can significantly impact actual outcomes. For instance, users might alter their parking habits in response to new policies in ways that differ from initial predictions, or economic shifts could affect overall facility usage.

Recognizing these limitations is crucial for transparency and for setting realistic expectations among Association partners and user groups. It emphasizes the importance of viewing the revenue impact analysis as a dynamic tool rather than a definitive forecast. As such, the analysis should be continuously refined with real-time data collected from pilot programs, engagement, and ongoing monitoring as outlined in the implementation roadmap.

This iterative process allows facilities to adjust policies based on actual performance, enhance user engagement, and respond effectively to changing conditions. By embracing this adaptive approach, parking management strategies can remain evidence-based, flexible, and aligned with the overarching mission to serve the community's needs effectively and sustainably.

5

ENFORCEMENT POLICY

Enforcement Policy

Effective enforcement of parking policies is essential to ensure compliance, optimize resource utilization, and enhance user experience across all park categories.

EasyPark, a city-owned non-profit corporation, has been managing parking enforcement for the Vancouver Park Board lots for several years.

This section summarizes industry-standard enforcement tools and approaches that EasyPark has largely adopted at Park Board paid parking locations. In addition to acknowledging existing practices, these guidelines also highlight potential areas where EasyPark's data-driven insights could help refine operations, especially as new paid parking locations are introduced or existing lots are upgraded.

5.1

Objectives

Compliance Enhancement

Continue to ensure adherence to parking regulations through effective enforcement mechanisms.

Operational Efficiency

Streamline enforcement processes using advanced technologies to reduce operational costs and improve accuracy, building on EasyPark's current tools and strategy.

User Convenience

Provide seamless and user-friendly payment and validation options.

Revenue Protection

Minimize revenue loss due to non-compliance and parking misuse by leveraging existing technology integrations and citation processes.

Equity and Fairness

Apply enforcement measures consistently to all users, ensuring fair access to parking resources.

5.2 Technology Integration for Paid Parking Enforcement

EasyPark already leverages a robust technology system – including T2 Systems, FastField, Waybook, Offstreet, Monday.com, Zendesk, Fennix, Smarking, Umojo, and Zello – to manage day-to-day enforcement and operations. These tools enable real-time dispatching, optimize workforce allocation, and streamline enforcement workflows. Below is a high-level overview of the broader technologies commonly used in the parking industry, many of which are already part of EasyPark's current framework.

5.2.1 LICENSE PLATE RECOGNITION (LPR)

Overview

License Plate Recognition (LPR) technology uses cameras to capture and recognize vehicle license plates automatically. EasyPark currently employs LPR at Park Board lots to improve accuracy and reduce manual patrol requirements.

Applications

- **Efficient Monitoring:** Enables real-time monitoring of parked vehicles without the need for physical patrols.
- **Automated Enforcement:** Streamlines the process of identifying violations and issuing citations.
- **Access Control:** Facilitates entry and exit management in gated parking facilities.

Potential Enhancement

- **Coverage Gaps:** Identify and address any locations or time periods where LPR coverage can be expanded.
- **Periodic Evaluation:** Regularly assess system effectiveness (e.g., read accuracy, reliability) using data collected through the LPR, and explore potential improvements/expansions.

5.2.2 MOBILE ENFORCEMENT APPLICATIONS

Overview

Use of mobile apps on smartphones or tablets by parking enforcement officers.

Applications

EasyPark's enforcement teams rely on mobile technology for:

- **Digital Citation Issuance:** Officers can issue citations electronically, reducing paperwork and errors.
- **Evidence Collection:** Ability to capture photos and notes for each violation.

Potential Enhancement

- **Integration with LPR:** These apps can seamlessly connect with LPR data and permit databases, enabling immediate cross-referencing of vehicle license plates to verify valid permits or prior violations. This tight integration cuts down on manual checks, allows for real-time validation, and expedites the enforcement process.

5.3 Payment Methods

EasyPark has implemented a multi-channel payment approach, which includes mobile apps, online portals, and physical pay stations, to accommodate diverse user needs. When introducing or upgrading paid parking locations, Park Board and EasyPark may consider the advantages and drawbacks of each method, as summarized in **Table 5.1**.

TABLE 5.1 Payment Methods Summary

PAYMENT METHOD	ADVANTAGES	DISADVANTAGES
MOBILE PAYMENT APPS AND WEBSITES Users can pay for parking by entering their vehicle and payment details through dedicated mobile applications and online portals which can be accessed using QR codes.	**Convenience** Pay and extend parking remotely. **Reduced Hardware** Less reliance on physical payment terminals.	**Limited Accessibility** These payment options may not be accessible to all users, such as those who do not have access to a credit card or mobile device and those who are less familiar with technology. **Additional Costs** App or website owner may charge additional fees for services.
PHYSICAL PAYMENT TERMINALS Accepts cash or cashless payments through tap-enabled cards, Apple Pay, Google Pay, etc. at a physical terminal.	**Security** Secure transaction processing for cashless payments. **User Interface** Ensure terminals are user-friendly and accessible.	**Increased Maintenance** Cash handling requires maintenance and may pose security risks. **Potential Queuing** These payment options are inconvenient and may cause delays when users are parking if there is a line to use the machine. **Reliance on Network Connection** Terminals rely on a strong network connection to function. **Inconvenience** Users are required to return to the machine if they wish to extend their stay.
PARKING PASSES AND PERMITS Users hold annual, monthly, or daily parking passes by registering their license plate or displaying a parking permit.	**Variable Rates for Different Users** Allows for issuance of discounted or free passes to select user groups such as LAP and staff. **Accessible Approach** Makes payment simple and convenient for users who do not have access to a credit card or mobile device and those who are less familiar with technology. **Convenience** Users do not need to purchase parking each time they access the facility.	**Potential Increase in Driving:** Parking pass costs are not directly tied to each trip, which may lead some users to choose driving over other modes. However, this effect can be balanced through demand management strategies, such as variable pricing, usage tracking, and digital permit validation, ensuring that passes meet essential needs without significantly discouraging alternative transportation options.

5.4 Operating Styles

EasyPark already enforces various operating styles, such as Pay-and-Display, Pay-by-Plate, and Pay-by-Stall, across Park Board parking lots. **Table 5.2** provides a summary of common operating styles, acknowledging that any major shift (e.g., introducing gates or expanding LPR coverage) would need a cost-benefit analysis and operational Return on Investment (ROI) study.

TABLE 5.2 Operating Style Summary

OPERATING STYLE	ADVANTAGES	DISADVANTAGES
PAY-AND-DISPLAY WITH PARKING ENFORCEMENT OFFICERS Users display a ticket on their dashboard after payment.	**Traditional Method** Simple method that has been used traditionally, making it a familiar style for many users.	**Inconvenience** Requires users to return to their vehicle. **Enforcement Effort** Manual checking needed, less efficient.
PAY-BY-STALL WITH PARKING ENFORCEMENT OFFICERS Payment is linked to a specific parking stall number.	**Ease of Enforcement** Simplifies compliance checks using mobile enforcement applications. **User Convenience** No need to return to the vehicle after payment.	**Potential for Misuse** Potential for misuse if users do not enter the correct stall number.
PAY-BY-PLATE WITH PARKING ENFORCEMENT OFFICERS Users pay by entering their license plate number.	**Ease of Enforcement** Simplifies compliance checks using LPR. **User Convenience** No need to return to the vehicle after payment.	**Higher Costs** Requires use of vehicles equipped with of LPR cameras.
TICKETED PARKING WITH GATES Users take a ticket upon entering and pay at an automated station when exiting, gate lifts after payment.	**Access Control** Prevents unauthorized entry. **Revenue Assurance** Reduces potential for non-payment.	**Higher Costs** Significant capital investment and maintenance. **Potential Queues** Entry and exit delays during peak times.
LICENSE PLATE RECOGNITION (LPR) WITH GATES LPR cameras record license plates; payment linked to plate number. Users pay via mobile app or kiosk; gate opens automatically for authorized vehicles.	**Seamless Experience** Faster entry and exit without tickets. **Efficient Enforcement** Automates compliance checks.	**Technology Dependence** Requires reliable LPR systems. **Privacy Concerns** Addresses data protection and user consent. **Capital Costs** Significantly higher upfront investment.

Table 5.2 Continued

OPERATING STYLE	ADVANTAGES	DISADVANTAGES
RESTRICTED ACCESS CARDS AND DIGITAL PERMITS WITH GATES Provide employees and authorized personnel with access cards or digital permits.	**Controlled Access** Manages employee parking spaces effectively. **Usage Monitoring** Tracks parking usage patterns among staff. **Security** Restricts unauthorized access to designated parking areas.	**Incentivizes Driving** Users who may have otherwise used alternate modes for a portion of their trips are incentivized to drive to make use of their pass.

5.5 Other Considerations

Implementing effective enforcement strategies is crucial for ensuring compliance and optimizing operations.

5.5.1 REGULAR MONITORING AND PATROLS

EasyPark conducts scheduled patrols based on historical data and real-time demand. Targeted enforcement in high-demand zones during peak times remains an effective strategy. Further patrol optimization can be guided by citation data, violation trends, and real-time analytics from EasyPark's technology suite.

5.5.2 VIOLATION MANAGEMENT

Citation Issuance

- Digital and streamlined through EasyPark's mobile applications.

Appeals Process

- **Enforcement Responsibility:** Disputes are handled directly by EasyPark.
- **Communication & Accessibility:** An online platform or portal can be used for users to submit appeals digitally. Citation notices to include an email address or phone number, along with straightforward steps, timelines, and required documentation, ensuring a fair and transparent appeals process.

5.5.3 DATA ANALYSIS AND REPORTING

Performance Metrics

- Leveraging EasyPark's citation compliance rates, revenue recovery figures, and patrol effectiveness data can inform future enhancements or expansions.

Continuous Improvement

- Regular feedback loops between EasyPark and the Park Board allow for strategic adjustments to enforcement policies.

5.5.4 OVERNIGHT PARKING RESTRICTIONS

Policy

- Prohibit overnight parking unless authorized.

Monitoring & Enforcement

- **Flexible Approaches:** Overnight activity can be monitored through LPR checks, routine patrols, or a combination of both, depending on facility size and usage patterns.
- **Cost-Benefit Analyses:** If high levels of overnight violations are observed, consider evaluating capital-intensive solutions such as gated systems. While installing gates can reduce ongoing enforcement costs (e.g., by physically preventing entry after certain hours), the feasibility may vary by location due to upfront costs, operational constraints, and user access needs.
- **Site-Specific Application:** Not all facilities will require, or be suitable for, gated controls; decisions should be guided by operational data and cost-effectiveness.

5.5.5 MISUSE PREVENTION

Policy

- Prohibit unauthorized use of designated parking spaces unless a permit is displayed.

Enforcement

- Ensure only authorized vehicles occupy designated spaces (e.g., accessible, staff, or reserved spots).
- Conduct routine checks, supplemented by technology, to deter and identify misuse.

5.6 Conclusions & Next Steps

EasyPark's existing enforcement framework already covers most of the technologies and strategies outlined in this document. Moving forward, the Park Board and EasyPark can work together to:

Use Data for Continuous Refinement

- ☐ Incorporate EasyPark's metrics (citation rates, payment compliance, etc.) to tailor enforcement and address any operational gaps.

Assess Expansion Needs

- ☐ Where necessary, explore additional LPR coverage, mobile app upgrades, or new payment station installations – supported by a cost-benefit analysis.

Refine Policies for New Locations

- ☐ For upcoming paid parking facilities, the same suite of technologies can be rolled out, ensuring consistent enforcement across the Park Board system.

6

EV CHARGING

EV Charging

Presently only 44 parking spaces (0.4%) of the 10,300-parking stall supply available to Park Board customers and staff are EV charging capable which is disproportionately low to the current 5% EV representation of the regional automobile fleet, and inadequate to accommodate the projections of 90+% EV representation on the area road system by Year 2050.

However, considered through the lens of parks and recreation service delivery, EV charging (and in particular Level 3 fast charging), is not a priority service for the Park Board. The Park Board provides parking for access to parks and recreation services. EV users may still use regular parking spaces to park their vehicle to reach these services; the ability to charge an EV vehicle is not an essential service delivering on the Park Board's mandate. Installation and management of EV charging infrastructure can pose challenges related to the context of parks and recreation facilities and their management.

In the spirit of collaboration and to support sustainability initiatives, Park Board is interested in identifying opportunities for collaboration with the City and third parties on opportunities for EV charging expansion where it does not negatively impact the delivery of parks and recreation services and to improve user experiences for those accessing parks with electric vehicles.

The growing mismatch between EV usage and EV charging opportunities at existing parks is addressed by establishing a methodology for increasing access to EV charging without placing strain on Park Board's delivery of parks and recreation services and stewardship of public park spaces.

6.1

Current EV Charging Policies

6.1.1 EV REQUIREMENTS – COV PARKING BYLAW

The City of Vancouver Parking Bylaw EV charging requirements for new developments supports the future use and demand of EV vehicles and charging requirements.

The current requirements are as follows:

- 100% of resident parking stalls in new multi-unit buildings require EV Level 2 charging infrastructure.
- Where parking spaces are provided for non-dwelling uses, except hotel and bed and breakfast accommodation uses, an energized outlet must be installed in at least 45% of the parking spaces provided, of which at least 5% of the total number of parking spaces provided, or two parking spaces, whichever is greater, must be capable of Level 2 charging or higher and may not implement an Electric Vehicle Energy Management System.
- Where parking spaces are provided for hotel or bed and breakfast accommodation uses, an energized outlet capable of providing Level 2 charging or higher must be installed in each parking space.

6.1.2 BC HYDRO EV PROGRAM

The BC Hydro and City of Vancouver transportation electrification strategic collaboration involves developing multiple public EV charging station sites in the along with implementing broader solutions to support transportation electrification throughout the city. BC Hydro's goal is to have 325 fast chargers (approximately 450 DC ports) at 145 fast charging sites by the end of 2025.

BC Hydro's *Electrification Plan* supports the Province's *CleanBC Plan* with a goal that by 2030, 90% of cars sold in British Columbia will be a zero-emission vehicle. BC Hydro is supporting this plan by expanding its public fast charging network across the province and introducing new programs to support commercial fleets, including large trucks and buses, to switch from carbon-emitting gasoline and diesel to clean electricity.

The City of Vancouver is advancing renewably powered transportation by improving and expanding its public EV charging network, implementing policy to support home charging, increasing the number of EVs in its fleet, and working with business and other levels of government.

Scope of Activities

The following areas of strategic priorities have been identified as opportunities for collaboration:

- ☐ Electric vehicle charging infrastructure: public, fleet, employee/workplace, residential
- ☐ Vehicle electrification: passenger, medium/heavy duty, specialty
- ☐ Other street-level electrification: e-bikes, food trucks, film kiosks
- ☐ Policy and bylaws
- ☐ Research and pilots

Areas identified for advances on electric vehicle charging infrastructure:

- **Public charging:** Expand public charging, advance BC Hydro owned and operated public EV charging hubs, and consider and align with the city's accessibility guidelines for EV charging.
- **Fleet charging:** Refer to the BC Hydro EV fleet program, identify potential fleet customers and locations in Vancouver, identify potential commercial truck EV charging locations, support Vancouver with its fleet electrification plans, and identify opportunities for car-share only charging stations.
- **Employee/workplace charging:** Participate in EV-related rebate programs offered by BC Hydro or administered by BC Hydro on behalf of CleanBC.
- **Residential charging infrastructure:** Refer to EV-related rebate programs offered by or administered by BC Hydro and the city's Rental EV Charging Retrofit Program offer, which includes multi-unit residential buildings. Also, address the issue of "garage orphans" (EV drivers/residents without capacity for EV charging at home) via curbside charging or other solutions.

6.2 EV Future Projections

EV adoption is growing in Metro Vancouver and is anticipated to rapidly accelerate over the next decade, driven by increasing consumer interest, decreasing costs, and especially the BC zero-emission vehicle (ZEV) sales mandate. The Government of British Columbia proposed update to this regulation will bring the mandate to 26% of sales by 2026, 90% by 2030, and 100% by 2035.

According to forecasting conducted by Dunsky for Metro Vancouver, TransLink and BC Hydro[1,2], the number of light-duty EVs on the road in the region will surpass 0.5 million by 2033 and 1 million by 2038. While the rate of adoption is somewhat uncertain, the end state objective is known—by 2035, 100% of sales will be EVs, resulting in a near complete fleet turnover by 2050 if not sooner. **Figure 6.1** shows the forecasted EVs on the roadway in Metro Vancouver while **Figure 6.2** presents the forecasted EV's on the road by 2050 for battery electric vehicles (BEV) and plug-in hybrid electric vehicles (PHEV).

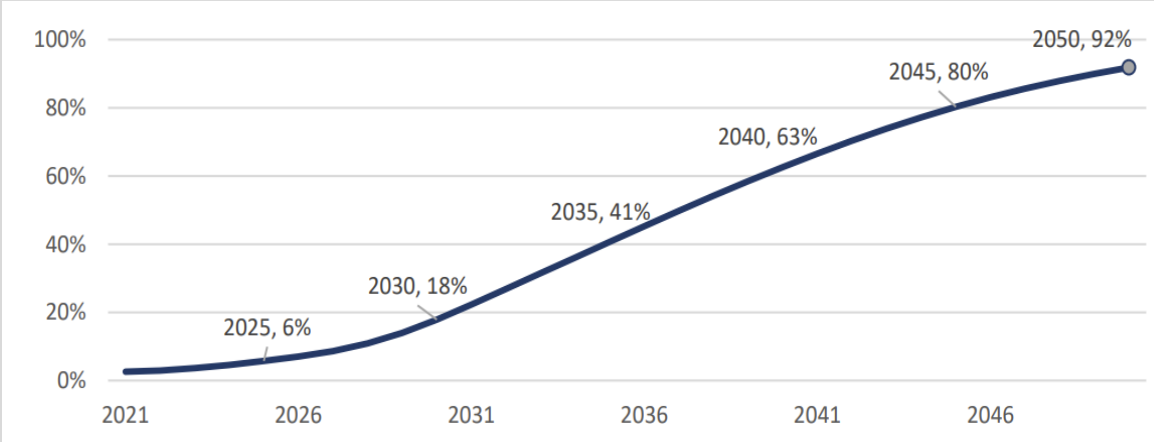


Figure 6.1: Forecasted EVs on the road in Metro Vancouver as a % of all Light Duty Vehicles
Source: Regional Electric Vehicle Charging Analysis and Guidance Report (Figure 1)

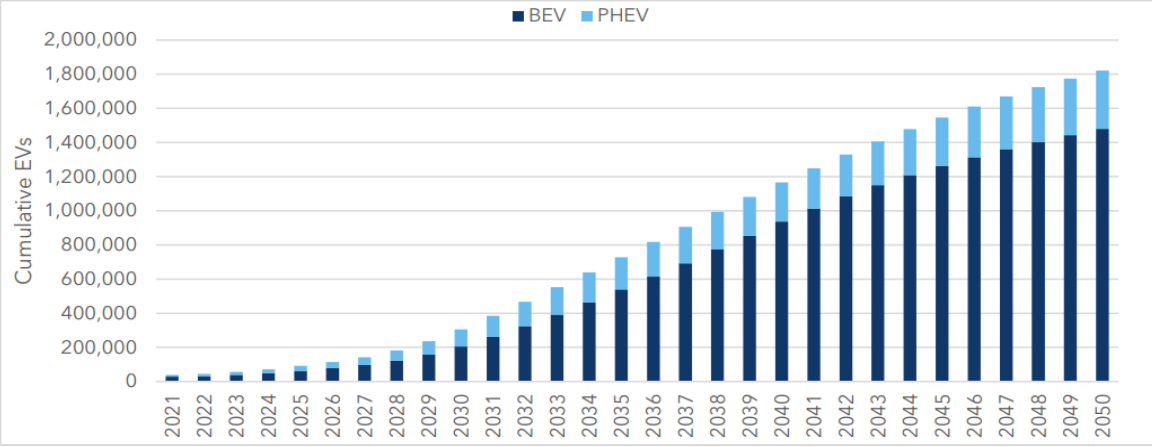


Figure 6.2: Forecasted Cumulative EVs
Source: Keeping it Current: Guidance for Collaborative Deployment of EV Charging in Metro Vancouver (Figure 6-1)

[1] Keeping it Current: Guidance for Collaborative Deployment of EV Charging in Metro Vancouver
[2] Regional Electric Vehicle Charging Analysis and Guidance

As illustrated in the graph, it is anticipated that over 1.8 million EVs will be in use by 2050. This growth in adoption will require a substantial increase in charging infrastructure. The number and type of public ports required depends especially on the degree of access to home charging among adopters or potential adopters.

Many Metro Vancouver residents do not have access to off-street parking and/or electric vehicle charging at home and would rely on public charging facilities. 13 of 24 Metro Vancouver municipalities, covering most of Metro Vancouver's population, have adopted parking design requirements in parking or zoning bylaws requiring EV ready parking for 100% or near-100% of residential parking in new developments. These rules ensure that charging equipment can be easily installed in any parking provided in new developments.

Cumulatively, by 2035, it is projected that Metro Vancouver will need:

- 2,200 to 2,900 public Direct Current Fast Charging (DCFC) ports, also referred to as Level 3 rapid charging on corridors, community hubs and for taxi and ride hailing vehicles, and
- 32,000 to 47,000 public Level 2 charging (L2) ports of which about two-thirds would be workplace charging.

The ability for building retrofit is uncertain, thus a high and low building retrofit scenario (High = about 90% of existing multifamily building of existing multifamily building units' parking spaces are made EV ready by 2035, Low = 0% additional EV charging to existing multifamily buildings) have been assumed for analysis purposes as they would change the demand for public charging infrastructure.

Table 6.1 shows the total number of ports and installed power that would be required across the region, cumulatively.

Table 6.1: Projected Charging Demand (Cumulative)

METRIC	SCENARIO	CURRENT	2025	2030	2035	2040	2045	2050
VEHICLES ON THE ROAD								
Total Number of LDV on the Road (millions)	All	1.5	1.6	1.7	1.8	1.9	1.9	2.0
Light-duty EVs (thousands)	All	44	91	304	728	1,166	1,547	1,821
CHARGING NEEDS (CUMULATIVE)								
Total Public DCFC	High Retro.	270	931	1,196	2,152	3,362	4,203	4,627
	Low Retro.	270	937	1,415	2,926	4,911	6,574	7,707
Total Public L2 (including workplace)	High Retro.	1,660	6,857	19,401	32,460	40,027	47,857	54,781
	Low Retro.	1,660	6,907	23,696	46,729	62,228	79,906	97,622
Total Multifamily Parking Spaces Retrofit (cumulative)	High Retro.	22,396	34,769	278,350	353,754	353,754	353,754	353,754
	Low Retro.	22,396	0	0	0	0	0	0

Source: Adapted from Keeping it Current: Guidance for Collaborative Deployment of EV Charging in Metro Vancouver (Table 6-1)

6.3 Opportunities & Challenges

Potential Revenues

The operation of EV charging infrastructure presents opportunities for potential revenues:

- **User fees -** for parking and/or for use of charging infrastructure.
- **Advertising -** featured on charging infrastructure, screens, and apps.

Equity & Barriers

Transportation equity is an important aspect to consider and should be applied to the transportation electrification infrastructure. Cost of electric vehicles and access to electric vehicle charging are the predominant barriers to EV adoption. A summary table of common barriers faced by priority communities/groups are presented in **Table 6.2**.

Priority communities who likely face greater barriers to EV charging in Metro Vancouver include:

- First Nations
- Racialized people
- Recent immigrants
- Low-income people
- Multifamily building residents
- Renters
- Taxi and ride hailing drivers
- People with disabilities
- Unbanked people
- Non-English speakers
- Women and gender non-confirming people

TABLE 6.2 Barriers to EV Charging

BARRIER	DESCRIPTION	GROUPS DISADVANTAGED
ABILITY TO INSTALL HOME CHARGING	• More difficult in multifamily buildings. • Split incentives between renters/ landlords (including small businesses that rent their storefront).	• Multifamily building residents • Renters • Low-income people • Racialized people
ABILITY TO USE CHARGING	• Many chargers cannot be used by people without banking, credit cards, smart phone applications, English or tech proficiency, etc. • Lack of accessible design standards for stations and application interfaces.	• Unbanked people • People with disabilities • Non-English speakers
GREATER COST & TIME BURDEN	• At-home charging is cheaper, but multifamily building residents and renters more often have to rely on more expensive public charging. • Private sector is less interested in investing in areas where current EV adoption is low. • The price of public charging will likely increase over time. • There is a greater time burden associated with public charging (home charging is more convenient). • Charging costs represent a greater share of household spending. • Without careful futureproofing, the limited electrical capacity in existing buildings for EV charging can be exhausted by early adopters, making subsequent additions of EV charging for later adopters (who will be lower income on average) much more expensive.	• Multifamily building residents • Renters • Low-income people • Racialized people
LOWER ACCESS TO PROGRAMS	• Managed load programs may be limited to homeowners. • Multifamily building residents or people that rely on on-street parking can be barred from accessing managed load programs.	• Multifamily building residents • People without parking at their home • Renters

Source: Adapted from Keeping it Current: Guidance for Collaborative Deployment of EV Charging in Metro Vancouver (Table 6-3)

6.4 Implementation of EV Charging at Park Board Parking Lots

Currently, only about 20 of the 60 parks within the City of Vancouver have EV charging stalls available. Most of these locations are identified as community parks. At these parking lot locations, there are at most four EV spaces provided comprising up to 13% of the parking spaces in the parking lot. Based on this information, the number of EV parking spaces provided in parks are below the anticipated demand.

To better support future EV charging needs, adding more EV charging stations within Park Board parking lots should be considered. However, park locations and parking lots often pose significant challenges including high costs and infrastructure impacts, demand on staff resources dedicated to core services, and encumbrances on public park space. Consequently, implementation should be carefully evaluated on a case-by-case basis to ensure cost-effectiveness, feasibility, and minimal disruption to existing park access and operations, alongside other considerations.

6.4.1 CONSIDERATIONS FOR IMPLEMENTATION

Cost of Delivery and Infrastructural Impacts

Costs of connecting to sub-ground electrical infrastructure can be significant – parks are typically not serviced with existing utilities like curbside spaces, and parking lots are often at larger distances from existing connection points than private vehicle garages. Investment in trenching, conduit, kiosks, and charging infrastructure places financial strain on delivering EV chargers in these spaces while requiring greater staff oversight to ensure impacts to park access, operations, and tree root health are monitored.

Demand on Staff Resources Dedicated to Core Services

Coordination and implementation of EV in Park Board parking lots places significant demand on staff resources. In navigating the installation of third-party infrastructure to support EV, Park Board staff must negotiate, review, and coordinate delivery with City staff partners and third-parties to meet regulatory requirements and preserve access and operations of parks and recreation assets.

The work plans of Park Board staff are focused on delivering parks and recreation services and amenities. The lift of delivering EV on challenging sites, and to ambitious targets set by external agencies, can compromise their ability to deliver parks and recreation facilities and services, suggesting a balanced approach to supporting EV installation where it makes the most sense, and at a reasonable pace, is preferred. Appropriate resourcing will be necessary to deliver on external EV targets.

Impact on Public Park Space

Public parks, typically open spaces free of urban development, are often seen as 'tabula rasa' for the installation of infrastructure within an urban context of constrained site availability and high cost of property. Park Board staff are compelled by a mandate to provide, preserve, and advocate for parks and recreation services to benefit all people, communities, and the environment.

Installation of infrastructure, even if below-grade, can constrain the ability of the Park Board to meet this mandate, especially when dedicated rights-of-way are required by third parties to ensure ownership and maintenance of their assets. Essentially, infrastructure can remove space dedicated to public park and place it under the control of other groups, which can limit public access to important park spaces and the ability to plan and design park renewal in the future to meet changing needs. Wherever possible, infrastructure should be located outside of park space within existing street right-of-way.

EV Infrastructure can have a further negative impact on the user experience of public park spaces, introducing large elements that can block sightlines, compromising views with high public value, such as destination parks and beaches, or the ability for users to gather visual information for their enjoyment, safety, and well-being in public park spaces. Type 3 fast charging is noted for the size of its required kiosks that provide a shorter charger period – this can result in the infrastructure attracting users to charge their vehicles without visiting the associated park or recreation amenity, while creating the greatest disruption to others' public experience of that amenity.

Parking Supply and Revenue

Allocating the larger parking spaces required for EV charging reduces the number of general parking spaces available, which may impact parking supply and associated revenue if those spaces are not utilized. From a revenue perspective, dedicating spaces to EV charging might result in a loss of income generated from general parking fees if the EV charging stations do not attract sufficient usage to compensate for this loss. The revenue generated from EV charging fees may not fully offset the potential decrease in revenue from fewer general parking spaces, especially if the charging rates are set low to encourage EV adoption or if the utilization rates of charging stations are low during certain periods.

To mitigate these negative revenue impacts, it is important to consider strategies that maximize the utilization of parking spaces. One effective approach is implementing shared use strategies, whereby EV charging spaces are available to all vehicles during off-peak times when the demand for charging is low. This ensures that parking resources remain accessible and are used efficiently, addressing both revenue concerns and equity considerations by not privileging one group of users over others unnecessarily.

As most park users are using facilities for one to two hours, Level 2 chargers should be prioritized to meet their needs while discouraging the use of amenities intended to support public parks and recreation services by users interested only in fast charging private vehicles for individual benefit.

Equity Considerations

As EV adoption continues to grow, it is acknowledged that not all individuals have equal access to EVs. Given that EV ownership currently tends to be more prevalent among higher-income individuals, allocating premium parking spaces for EVs may unintentionally disadvantage those who cannot afford EVs. This impact should be considered in EV infrastructure planning to ensure equitable access to park resources.

By-law Compliance

In May 2022, Vancouver City Council approved changes to the Zoning and Development By-law and Licence By-law to encourage the installation of EV chargers at gas stations and large commercial parking lots through business fees. This by-law requires providers of commercial parking who do not install the specified amount of EV to pay a $10,000 annual business licence fee. Due to concerns from stakeholders, enactment was delayed until January 2026.

In recommending consideration of new paid parking in the Park Board's system, the Parking Strategy implicates significant annual fees for uncompliant lots. The cost of this penalty must be weighed against external challenges and the cost of delivery – the fee may be both less financially burdensome and necessarily practical.

Opportunities to strengthen collaboration with City staff to support EV delivery within the limitations and resources available to Park Board should be pursued as an alternative to financial penalties. At the very least, the by-law suggests that priority sites for new EV infrastructure need to be aligned with those that are currently paid parking or likely to be implemented as paid parking in the future.

6.4.2 METHODOLOGY FOR SELECTION OF EV AT PARKS AND RECREATION SITES

To prioritize sites for EV implementation, the following process is recommended:

1

Review the current supply and demand of EV charging spaces in Park Board facilities, specifically those with paid parking and at destination parks.

2

City staff to provide suggested sites for EV implementation based on supply and demand information that meet goals for distribution, satisfies the by-law requirement, and connects revenue to infrastructure improvements.

3

Park Board staff to review sites and score for each criteria:

- Cost of connecting to infrastructure
- Staff resources required to coordinate
- Impact on public park space
- Revenue considerations
- Equity

4

Review scoring of sites with partners to ensure principles for supporting EV and limiting impacts to Park Board service delivery are aligned. Develop a multi-year implementation plan that includes projections for staff resourcing and third-party coordination.

5

Revisit plan annually to incorporate learnings and adjust to capture emerging opportunities for shared benefit.

6.4.3 APPROACHES TO SETTING EV RATES

The rate structure for EV charging stalls can vary depending on factors such as location, demand, charging speed, and operational costs. When designing a rate structure, it is essential to consider user preferences, market conditions, operational costs, and compliance with regulations. Flexibility in pricing options and transparency in communicating rates to end users ensure a positive charging experience and promote electric vehicle adoption.

Common rate structures include:

Flat Rate

A fixed fee for each charging session, regardless of duration or energy consumed. This straightforward pricing model is easy for users to understand but may not always reflect the actual cost of charging.

Per Hour Pricing

Charges based on the duration of the charging session, typically measured in hours. This is suitable for locations where users may park for extended periods, such as workplaces or airports.

Per Kilowatt-Hour (kWh) Pricing

Charges based on the amount of energy consumed, reflecting the actual cost of electricity used for charging. This is commonly used for public charging stations.

Time-of-Use (TOU) Pricing

Varies charging rates based on the time of day, with higher rates during peak hours and lower rates during off-peak hours. This encourages users to charge during times of lower demand and helps balance grid load.

Tiered Pricing

Offers different rates based on the amount of energy consumed or the duration of the charging session. For example, users may be charged a lower rate for the initial kWh or hours and a higher rate for additional usage.

Demand Charges

Additional charges based on the maximum power demand during the charging session, reflecting infrastructure and grid capacity costs required to support high-power charging.

Session Fee

A flat fee or minimum charge for each charging session, regardless of the amount of energy consumed. This helps cover operational costs and ensures minimum revenue per transaction.

Membership/Subscription Plans

Offers discounted rates, free charging sessions, or other benefits for regular users through membership or subscription programs. This encourages loyalty and repeat usage.

Promotional Pricing

Temporary discounts or free charging sessions to attract new users, promote electric vehicle adoption, and support sustainability initiatives.

Dynamic Pricing

Adjusts charging rates dynamically based on factors such as occupancy levels, demand forecasts, or grid conditions. This allows optimization of revenue and balancing of supply and demand in real-time.

Idle Charging Fees

Charges applied when an EV remains connected to a charging station without actively charging. This may be structured as a flat fee per minute or hour of idle time, encouraging drivers to vacate the space when charging is complete.

7

SHARED MICROMOBILITY FACILITIES

Shared micromobility facilities are important initiatives for diversifying transportation modes to reduce impacts on vehicle parking while encouraging sustainable initiatives.

The City of Vancouver has active contracts with service providers for both bikeshare and share e-scooter network. Access to parks and recreation spaces is an integral element of building a functional system of alternative transportation options.

In determining sites for locating bikeshare and shared e-scooter stations within or adjacent to parks, the following criteria should be applied:

- ☐ Prioritize the location of bikeshare and shared e-scooter stations within street right-of-way adjacent to park space and along City of Vancouver greenways.
- ☐ If street right-of-way location is unavailable, unsafe, and/or of significant distance from amenity or facility, locating stations within parking lots can be explored with consideration of:
  - maintaining available accessible parking spaces and drop-off areas;
  - the ability of prime parking spaces to generate revenue;
  - park operations and maintenance access and requirements;
  - impacts due to operator maintenance or servicing needs; and
  - adjacent park spaces where stations may potentially serve as a safety buffer between pedestrians and vehicles.
- ☐ Use of existing green space for new infrastructure to not be considered unless absolutely necessary.
- ☐ In all cases, minimize impact that new or future infrastructure and utility connections may have on encumbering park spaces by identifying locations for infrastructure, such as electrical kiosks outside of park space and the critical root zones of trees.
- ☐ Explore coordination of new infrastructure installation with other utility upgrades or infrastructure, such as for EV charging stations.
- ☐ Consider the coordinated siting of micromobility stations with bike racks and other end of trip facilities to reduce park impacts and enhance clarity of user experience.
- ☐ Provide agreements for third parties to maintain their infrastructure and adjacent impacted areas as reasonably required.
- ☐ Ensure that signage and wayfinding for shared e-scooter network and bikeshare users is clear, consistent, and does not conflict or restrict with other public park signage or views, especially when incorporating private branding and logos.
- ☐ Update GIS and VanMap inventories with the installation of new infrastructure.

PARK BOARD PARKING STRATEGY

Policy Framework | October 2025