THE CORPORATION OF THE DISTRICT OF CENTRAL SAANICH

Regular Council Meeting

AGENDA

Monday, July 14, 2025, 7:00 p.m.

Council Chambers

All Council meetings are being conducted in a hybrid in-person and virtual format.

If you wish to speak or make a submission to Council, you can email municipalhall@csaanich.ca, call 250-652-4444 or deliver via the front reception prior to 12:00 noon on the day of the meeting. Questions to Council will be placed under correspondence for action.

(Please note that all proceedings of Open Council Meetings are live streamed and video recorded on the District's website.)

Pages

1. CALL TO ORDER

2. ACKNOWLEDGEMENT

We respectfully acknowledge that the land on which we gather is the traditional territory of the W̱SÁNEĆ people which includes W̱JOŁEŁP (Tsartlip) and SȾÁUTW̱ (Tsawout) First Nations.

3. APPROVAL OF AGENDA

3.1 Agenda of the July 14, 2025 Regular Council Meeting

Recommendation:

That the agenda of the July 14, 2025 Regular Council meeting be approved as circulated.

4. ADOPTION OF MINUTES

4.1 Minutes from the June 23, 2025 Special (Open) Council Meeting 7

Recommendation:

That the minutes from the June 23, 2025 Special (Open) Council meeting be adopted as circulated.

4.2 Minutes from the June 23, 2025 Public Hearing 9

Recommendation:

That the minutes from the June 23, 2025 Public Hearing be adopted as circulated.

Recommendation:

1. *Reaffirm support for the current process for the Civic Redevelopment Project, as originally established and consistently followed to date, and,*

2. *Direct staff to bring forward the "What We Heard" report from the current phase of engagement as soon as possible to inform Council's selection of a preferred option for the renewal or redevelopment of the Civic Redevelopment Project.*

12. BYLAWS

12.1 Other than Development Application Bylaws

12.1.1 Noise and Zoning Bylaw Amendments for Heat Pumps 252

Report from the June 23, 2025 RCM.

Recommendation:

1. *That Noise Bylaw Amendment Bylaw No. 2225 be given first and second reading.*

2. *That Noise Bylaw Amendment Bylaw No. 2225 be given third reading.*

3. *That Zoning Bylaw Amendment Bylaw No. 2226 be given first and second reading.*

4. *That Zoning Bylaw Amendment Bylaw No. 2226 be given third reading.*

12.2 Development Application Bylaws

12.2.1 1934 Hovey Rd – OCP Amendment, Rezoning and Development Permit 256

Public Hearing held March 5 and 6, 2025. Conditions have now been met, so consideration approval can now occur.

Recommendation:
That OCP Amendment Bylaw No. 2205, 2024 (1934 Hovey Road) be adopted.

Recommendation:
That Zoning Amendment Bylaw No. 2206, 2024 (1934 Hovey Road) be adopted.

Recommendation:
That Housing Agreement Bylaw No. 2207, 2025 (1934 Hovey Rd) be adopted.

Recommendation:
That Housing Agreement Bylaw No. 2228, 2025 (1934 Hovey Rd) be adopted.

Recommendation:
That Development Permit Application 3060-20-10/23 (1934 Hovey Road), be approved.

12.2.2 1445 Benvenuto Ave - Rezoning Application (Restaurant) 296

Public Hearing held April 22, 2024. Registration of covenant has now been completed and consideration of adoption may now occur.

Recommendation:
That Land Use Bylaw Amendment Bylaw No. 2156 (1445 Benvenuto Avenue) be adopted.

12.2.3 1183 Verdier Ave – Affordable Housing Project

Recommendation:
That introduction through to adoption of Housing Agreement Bylaw No. 1587, 2007, be repealed.

13. UNFINISHED BUSINESS

14. NEW BUSINESS (Including Motions and Resolutions)

14.1 August 2025 Regular Council Meeting

Recommendation:
That the August 11, 2025 Regular Council Meeting be cancelled.

15. CORRESPONDENCE (Receive for General Information)

15.1 Corr Hourigan, B re Bylaw Complaint 297
For information.

Staff Note: The District has been investigating the scope of operations since September 2022, including consulting with other enforcement agencies. The investigation remains open and concerns reported continue to be documented and reviewed as part of the file. As an active file, the District cannot disclose specifics at this time. Additional information about this matter can also be sought out by contacting the Ministry of Environment and Agricultural Land Commission directly for status on their respective legislation. The Farm Industry Review Board is also another available agency to provide support and clarification about noise and dust (which may be protected under the Right to Farm Act) resulting from this operation. The District has submitted a "Notice of Complaint" to the Farm Industry Review Board to ascertain whether or not the operations are considered "normal farm practices".

15.2 Corr Dennis-Orr, S re 7840 Lochside Drive - June 21, 2025 305
For information.

15.3 Corr Crowder, B re Speed Reduction Proposal - June 23, 2025 307
For information.

15.4 Leadership Council re Notice of Motion regarding expansion of Keating Business District - June 23, 2025 308
For information.

15.5 Corr Frumento, S re CS Speed Regulation Bylaw - June 24, 2025 310
For information.

15.6 Corr Frumento, S re Support for Speed Regulation Bylaw - June 24, 2025 313
For information.

15.7 Corr Gosselin, J re Community Events and New Requirements - June 25, 2025 315
For information.

15.8 Corr Victoria Regional Pickleball Association re Contributing to Pickleball Court Development - June 26, 2025 318
For information.

15.9 Hebden, H re Fire Smart Chipping Event - July 2, 2025 378
For information.

15.10 CRD re Arts and Culture 2024 Impact Report - July 3, 2025 379
For information.

15.11 Heuman, B re Request for Full Removal of Remaining John Dean Provincial Park Signage - July 5, 2025 381
For information.

15.12 Corr Davison, J re Development Proposal 7840 Lochside Drive - July 7, 2025 382
For information.

16. CLOSED MEETING

16.1 Motion to Close

Recommendation:

That Council convene a closed meeting pursuant to the following subsections of the Community Charter:

90(1) A part of a council meeting may be closed to the public if the subject matter being considered relates to or is one or more of the following:

- *(e) the acquisition, disposition or expropriation of land or improvements, if the council considers that disclosure could reasonably be expected to harm the interests of the municipality.*

Following adoption of the above motion, the meeting will be closed to the public.

17. ADJOURNMENT

THE CORPORATION OF THE DISTRICT OF CENTRAL SAANICH

Minutes of the SPECIAL (OPEN) COUNCIL Meeting

June 23, 2025, 6:00 p.m.
Council Chambers

Present:	Mayor Windsor, Councillor Graham, Councillor Paltiel, Councillor Riddell, Councillor Thompson
Absent:	Councillor Newton, Councillor King
Staff Present:	Christine Culham, Chief Administrative Officer; Emilie Gorman, Director of Corporate Services/Corporate Officer; Kenn Mount, Fire Chief; Kristin Tryon, Director of Financial and Information Technology Services/Chief Financial Officer; Stacey Lee, Deputy Fire Chief; Nadine Dillabaugh, Manager of Human Resources and Organizational Development; Chad McConnell, Supervisor, Network & Client Support Technician; Nareka Jacques, Corporate Services and Executive Assistant

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1. CALL TO ORDER

The meeting was called to order 6:01 p.m.

2. ACKNOWLEDGEMENT

The Mayor respectfully acknowledged that the land on which we gather is the traditional territory of the W̱SÁNEĆ people which includes W̱JOŁEŁP (Tsartlip) and SȾÁUTW̱ (Tsawout) First Nations.

3. APPROVAL OF AGENDA

3.1 Agenda of the June 23, 2025 Special (Open) Council Meeting

MOVED AND SECONDED

That the agenda of the June 23, 2025 Special (Open) Council meeting be approved as circulated.

CARRIED UNANIMOUSLY

8. CLOSED MEETING

8.1 Motion to Close

MOVED AND SECONDED

That Council convene a closed meeting pursuant to the following subsections of the Community Charter:

90(1) A part of a council meeting may be closed to the public if the subject matter being considered relates to or is one or more of the following:

- *(c) labour relations or other employee relation; and*
- *(e) the acquisition, disposition or expropriation of land or improvements, if the council considers that disclosure could reasonably be expected to harm the interests of the municipality.*

CARRIED UNANIMOUSLY

The meeting was closed to the public at 6:02 p.m.

The meeting recessed back to open at 6:33 p.m.

9. ADJOURNMENT

On motion, the meeting adjourned at 6:02 p.m.

Mayor Windsor	Emilie Gorman, Director of Corporate Services/Corporate Officer

THE CORPORATION OF THE DISTRICT OF CENTRAL SAANICH

Minutes of the Public Hearing

June 23, 2025, 6:30 p.m.
Council Chambers

Present:	Mayor Windsor, Councillor Graham, Councillor King, Councillor Paltiel, Councillor Riddell, Councillor Thompson
Absent:	Councillor Newton
Staff Present:	Christine Culham, Chief Administrative Officer; Emilie Gorman, Director of Corporate Services/Corporate Officer; Kristin Tryon, Director of Financial and Information Technology Services/Chief Financial Officer; Kenn Mount, Fire Chief; Dale Puskas, Director of Engineering; Fernando Pimentel, Deputy Director of Strategic Capital Planning; Kerri Clark, Manager of Development Services; Yvan Sylvestre, Manager of Infrastructure; Troy Ziegler, Manager of Finance; Ivo Van der Kamp, Planner; Nareka Jacques, Corporate and Executive Assistant

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1. CALL TO ORDER

The meeting was called to order at 6:36 p.m. The Chair read the rules of procedure for the Public Hearing.

2. INDIVIDUAL BYLAW SUBMISSIONS

2.1 1117 Greig Ave. – Zoning Bylaw Amendment for Farm Camping

Councillor Riddell withdrew from the meeting at 6:36 p.m. due to a potential pecuniary conflict of interest, as this is a close neighbour.

The Manager of Development Services provided an introduction on the report and responded to questions from Council. The applicant responded to questions from Council.

Vince Blankenborg(Wallace Drive): Expressed support for the amendment to the bylaw.

Ryan (Greig Avenue): Spoke in support of the application.

Chris Ball (Greig Avenue): Spoke in opposition to the proposal.

Linda Blake (Greig Avenue): Spoke in opposition to the campsite.

Chris Raper (Mt Newton X Road): Spoke in favour of the application.

Donna Adams (Greig Avenue): Expressed support of the application.

Pamela Ball (Greig Avenue): Spoke in opposition to the application.

3. CLOSING

The Chair declared the Public Hearing closed at 7:09 p.m.

Mayor Windsor	Emilie Gorman, Director of Corporate Services/Corporate Officer

THE CORPORATION OF THE DISTRICT OF CENTRAL SAANICH
Minutes of the REGULAR COUNCIL Meeting

June 23, 2025, 7:00 p.m.
Council Chambers

Present:	Mayor Windsor, Councillor Graham, Councillor King, Councillor Newton, Councillor Paltiel, Councillor Riddell, Councillor Thompson
Absent:	Councillor Newton
Staff Present:	Christine Culham, Chief Administrative Officer; Emilie Gorman, Director of Corporate Services/Corporate Officer; Kenn Mount, Fire Chief; Kristin Tryon, Director of Financial and Information Technology Services/Chief Financial Officer; Dale Puskas, Director of Engineering; Fernando Pimentel, Deputy Director, Strategic Capital Planning; Kerri Clark, Manager of Development Services; Troy Ziegler, Manager of Finance; Yvan Sylvestre, Manager of Infrastructure; Ivo Van der Kamp, Planner; Chad McConnell, Supervisor, Network & Client Support Technician; Nareka Jacques, Corporate Services and Executive Assistant

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1. CALL TO ORDER

The meeting was called to order at 7:11 p.m.

2. ACKNOWLEDGEMENT

The Mayor respectfully acknowledged that the land on which we gather is the traditional territory of the W̱SÁNEĆ people which includes W̱JOŁEŁP (Tsartlip) and SȾÁUTW̱ (Tsawout) First Nations.

3. APPROVAL OF AGENDA

3.1 Agenda of the June 23, 2025 Regular Council Meeting

MOVED AND SECONDED

That the agenda of the June 23, 2025 Regular Council meeting be approved as amended by:

- *adding late correspondence to item #12.1.1*

- *adding a revised report and attachment to item #11.3*

CARRIED UNANIMOUSLY

4. ADOPTION OF MINUTES

4.1 Minutes of the June 4 Special (Open) Council Meeting

MOVED AND SECONDED

That the minutes of the June 4, 2025 Special (Open) Council Meeting be approved as circulated.

CARRIED UNANIMOUSLY

4.2 Minutes of the June 9, 2025 Regular Council Meeting

MOVED AND SECONDED

That the minutes of the June 9, 2025 Regular Council Meeting be approved as circulated.

CARRIED UNANIMOUSLY

7. PUBLIC QUESTIONS

Cyril (Cultra Avenue): Asked a question regarding short-term limit borrowing regulations and whether elector approval is required for any of the three civic redevelopment option.

Brian Smith (Hovey Road): Asked a question regarding line painting on Hovey Road.

Josee Smith (Hovey Road): Asked a question regarding the authority to cancel covenants.

Sharon Glynn (Tsawout Road): Asked a question regarding the civic redevelopment.

The meeting recessed from 7:32 p.m. to 7:37 p.m.

10. REPORTS OF COMMITTEES/MAYOR'S REPORT

10.2 All Other Committees of Council

10.2.1 Minutes from the May 22, 2025 SPAAC Meeting

10.2.1.1 Motion: Changing Place

MOVED AND SECONDED

Saanich Peninsula Accessibility Advisory Committee recommends that the District of Central Saanich, the District of North Saanich, and Town of Sidney register their public washrooms with the 'Go Here' application supported by Crohn's and Colitis Canada and the 'Flush' application.

CARRIED UNANIMOUSLY

10.3 Council Members Reports - External Bodies

Councillor Riddell provided an overview of external/community meetings attended since the last Regular Council meeting.

MOVED AND SECONDED
That the Special Open Council Meeting on June 25, 2025 be postponed to Monday July 28 in advance of the Regular Council Meeting.
CARRIED UNANIMOUSLY

11. STAFF REPORTS

11.1 Noise and Zoning Bylaw Amendments for Heat Pumps

The District Planner provided an introduction on the report and answered questions from Council.

MOVED AND SECONDED
That Noise Bylaw Amendment Bylaw No. 2225 be introduced.
CARRIED UNANIMOUSLY

MOVED AND SECONDED
That notice of First Reading of Noise Bylaw Amendment Bylaw No. 2225 be given.
CARRIED UNANIMOUSLY

MOVED AND SECONDED
That Zoning Bylaw Amendment Bylaw No. 2226 be introduced.
CARRIED UNANIMOUSLY

MOVED AND SECONDED
That notice of First Reading of Zoning Bylaw Amendment Bylaw No. 2226 be given.
CARRIED UNANIMOUSLY

11.2 District of Central Saanich 2024 Annual Report

The Chief Administrative Officer provided a presentation on the report.

For information.

11.3 2024 Statement of Financial Information

The Manager of Finance provided an introduction on the report.

MOVED AND SECONDED

That the 2024 District of Central Saanich Statement of Financial Information be approved.
CARRIED UNANIMOUSLY

11.4 3215 Island View Road Soil Deposit Permit

The Director of Engineering provided a presentation on the report and answered questions from Council.

MOVED AND SECONDED
That the soil deposit application for site grading and partial land levelling at 3215 Island View Road be approved for issuance by the Municipal Engineer upon receipt of the deposit schedule and sedimentation control plan.
CARRIED UNANIMOUSLY

12. BYLAWS

12.1 Other than Development Application Bylaws

12.1.1 Central Saanich Speed Regulation Bylaw No. 2227, 2025 and Introduction Report

The Director of Engineering provided an introduction to the report and responded to questions from Council. The Chief Administrative Officer responded to questions from Council.

MOVED AND SECONDED
That the Central Saanich Speed Reduction Bylaw 2227, 2025 be introduced and read a first time.
Opposed (1): Councillor Graham
CARRIED (5 to 1)

MOVED AND SECONDED
That staff report back with amendments to Appendix A to separate out the two typologies and a proposed phased approach.
Opposed (1): Councillor Riddell
CARRIED (4 to 1)

12.1.2 Loan Authorization Bylaw No. 2218, 2024

The Director of Financial Services and Technology/Chief Financial Officer provided a presentation on the report.

MOVED AND SECONDED

That introduction through to third reading of Bylaw No.2218, Loan Authorization Bylaw 2024, be repealed.
CARRIED UNANIMOUSLY

12.1.3 Loan Authorization Bylaw for Municipal Facility Redevelopment

The Director of Financial Services and Technology/Chief Financial Officer provided a presentation on the report. The Director of Corporate Services/Corporate Officer responded to questions from Council.

MOVED AND SECONDED
That Bylaw No. 2240, Municipal Facility Redevelopment Project Loan Authorization, be introduced and given first and second reading.
Opposed (1): Councillor King
CARRIED (5 to 1)

MOVED AND SECONDED
That Bylaw No. 2240 be given third reading.
Opposed (1): Councillor King
CARRIED (5 to 1)

MOVED AND SECONDED
That Bylaw No. 2240 be referred to the Province of BC (Inspector of Municipalities) for approval.
Opposed (1): Councillor King
CARRIED (5 to 1)

MOVED AND SECONDED
That staff report, either in September or earlier, on what a referendum or additional non-binding engagement process could be done for the redevelopment project, and potentially other topics that could be included.
CARRIED UNANIMOUSLY

12.2 Development Application Bylaws

12.2.1 1117 Greig Ave. – Zoning Bylaw Amendment for Farm Camping

Councillor Riddell withdrew from the meeting at 8:57 p.m. due to a pecuniary conflict of interest, as she lives in close proximity to the subject property.

MOVED AND SECONDED
That Zoning Bylaw Amendment Bylaw No. 2232, 2025 to permit a site-specific use for 8 Temporary Farm Camping tent sites with a total lot area of 4.76% at 1117 Greig Ave. be given Third Reading

Opposed (1): Councillor King
Conflict (1): Councillor Riddell
CARRIED (4 to 1)

MOVED AND SECONDED
That a Section 219 covenant be registered on title that includes a location map of the proposed campsites, the seasonal use dates, the requirement to retain Farm Status and agri-tourism activities, and to include a good neighbour policy.
Opposed (1): Councillor King
Conflict (1): Councillor Riddell
CARRIED (4 to 1)

14. NEW BUSINESS (Including Motions and Resolutions)

14.1 July 2025 Meeting Calendar

Councillor Riddell returned to the meeting at 9:05 p.m.

MOVED AND SECONDED
That the Special Committee of the Whole Meeting on July 14, 2025 be added to the July 2025 Meeting Calendar.
CARRIED UNANIMOUSLY

14.2 Notice of Motion Submitted by Councillor Riddell - Amendment to Council Procedures Bylaw (Electronic Participation Accountability)

MOVED AND SECONDED
That the notice of motion regarding an amendment to Council Procedures Bylaw (Electronic Participation Accountability) submitted by Councillor Riddell at the June 23, 2025 Regular Council Meeting be referred to the July 14, 2025 Special Committee of the Whole Meeting.
CARRIED UNANIMOUSLY

14.3 Notice of Motion Submitted by Councillor Thompson - Clarifying Public Hearing Practices

MOVED AND SECONDED
That the notice of motion regarding clarifying Public Hearing Practices submitted by Councillor Thompson at the June 23, 2025 Regular Council Meeting be referred to the July 14, 2025 Special Committee of the Whole Meeting.
CARRIED UNANIMOUSLY

15. CORRESPONDENCE (Receive for General Information)

15.1 Corr Hourigan, B re Bylaw Complaint

For information.

15.2 Corr 7840 Lochside Drive (All)
For information.

15.3 Saanich Historical Artifacts Society re Heritage Acres License Renewal - May 21, 2025
For information.

15.4 Corr Moroney, P re 2025 Property Tax - June 3, 2025
For information.

15.6 City of Campbell River - Let's Lead Change Together for BC's Resource Dependent Communities - June 5, 2025
For information.

15.5 Corr Parsons, N re Tennis Courts at Centennial Park - June 4, 2025
For information.

15.7 Village of Chase - Funding for Public Education - June 5, 2025
For information.

15.8 Island Health - Updated Local Health Area Profiles - June 6, 2025
For information.

15.10 Corr Ewing, L re Support for Speed Regulation Bylaw - June 12, 2025
For information.

15.9 Corr Witthoeft, F re Taxes - June 6, 2025
For information.

15.11 Corr Fraser, K re Support for Speed Regulation Bylaw - June 12, 2025
For information.

15.13 Corr Stansfield, T re Support for Speed Regulation Bylaw - June 12, 2025
For information.

15.12 Corr McKamey, N re Flooded Home - June 12, 2025
For information.

15.14 Corr VanDyke, P re Virtual Attendance at Council Meetings - June 12, 2025
For information.

15.15 Corr Eric re Couldn't Sleep Last Night - Redevelopment - June 13, 2025
For information.

15.16 Corr Ransom, C re Support for Speed Regulation Bylaw - June 13, 2025
For information.

15.18 District of Coldstream re Modernization of Wastewater Regulations UBCM Resolution - June 17, 2025
For information.

16. ADJOURNMENT

On motion, the meeting adjourned at 9:10 p.m.

Mayor Windsor

Emilie Gorman, Director of Corporate Services/Corporate Officer

The Corporation of the District of Central Saanich

REGULAR COUNCIL REPORT

For the Regular Council meeting on Monday, July 14, 2025

Re: 2024 Corporate Energy and Emission Reporting

PURPOSE

The purpose of this report is to present the latest corporate energy and emissions reporting (2024) and emissions reduction path forward to 2030.

BACKGROUND

The District's Climate Leadership Plan has a goal to reduce greenhouse gas (GHG) emissions by 100% by 2050 at both the community and municipal scales with an interim target of 45% by 2030. The Plan also outlines a second goal for the community's energy source to be 100% renewable energy by 2050.
The Plan identified this possible scenario to reach municipal operations goals:

1. Convert 100% of light duty fleet to electric by 2030 (where technology is available)
2. Convert remaining fleet to natural gas or biodiesel by 2035; and to all renewable fuels by 2050
3. 100% conversion of heating and hot water systems to zero emissions systems (i.e., electric)

On June 18, 2022, an Updated 5-year Fleet Vehicle Capital Plan and Accelerated Electrification Strategy which proposed an increase in EVs from 4 to 15 was endorsed by Council.

On February 27, 2023, Council directed staff to develop a corporate energy and emissions strategy focusing on reducing emissions in fleet and for some key municipal buildings. Two energy and emissions studies were completed for key municipal buildings and fleet in 2024. A separate report has been prepared which includes recommendations from the studies for Council's consideration.

DISCUSSION

<u>2024 Corporate Energy and Emissions Reporting</u>
The District currently operates over 100 vehicles and unlicensed equipment, and owns and manages 31 buildings, which include halls, concession stands, public washrooms, cultural centre and public works yard. The District also manages the community's lighting (e.g., streetlights, traffic lights) and water and wastewater services (e.g., pump stations). The District annually monitors energy consumption and emissions under these four corporate asset classes. Fleet-related fuel consumption and emissions data excludes Police Services[1], as the police service function isn't considered in-scope for provincial Local

[1] Electricity use by the Police services function at the Municipal Hall site is however included with corporate emissions as this service was present in 2007 and is not considerable.

Government Climate Action Program (LGCAP) reporting. Police services-related vehicle fuel consumption is however tracked separately.

The District's total GHG emissions for its latest inventory in 2024 is 249 Tonnes CO_2e. (see Table 1). **Compared to the baseline year (2007), building-related emissions have dropped 83 Tonnes or by 25%, and 17 tonnes (or by 6.4%) from 2023.** This drop in emissions from the baseline year is partly attributed to a decrease in the emissions intensity factor (for electrical generation) in 2021[2].

Table 1. Energy consumption and GHG emissions by asset class for baseline year (2007), 2023, and 2024

Asset class	Energy Type/Unit	Sector Total CO_2e(T)	Consumption	CO_2e (T)	Sector Total CO_2e(T)	Consumption	CO_2e (T)	Sector Total CO_2e(T)		Overall % Change GHGs
		2007	2023			2024				2007 - 2024
Buildings	Elect (kWH)	67	904,116	10	25	919,937	9	18	25	
	Nat Gas (GJ)		302	15		172	9			
	Propane (L)		0	0		0	0			
Outdoor Lighting	Elect (kWh)		423,572	5	5	425,181	4	4		-62.7%
Water & Wastewater	Elect (KWh)		319,853	4	4	332,969	3	3		
Vehicle Fleet	Diesel (L)	265	32,709	83	232	39,908	102	223		-15.7%
	Gasoline (L)		67,799	149		58,224	122			
Total GHGs		332	266			249				-25.1%

Municipal Buildings Asset Class

Building-related emissions represent a small portion of the District's corporate emissions (10%) at 18 tonnes CO_2eT for 2024 and has shown a decrease by 7 tonnes over the last year (see Table 1). Building-related electrical consumption has increased by 15,821 kWh over the last year which seems mostly related to increased electrical use at Fire Hall #1. A drop in natural gas consumption and associated emissions (6 CO_2e T) was noted at the Fire Hall, which could mean that the HVAC system has been better at operating to design (i.e., predominately using electricity).

It should also be noted that the building-related data is not normalized to climate conditions therefore variability in natural gas and electrical consumption (and associated emissions) for air space heating may occur from year to year depending on weather conditions. Given 2024 had slightly more heating degree days than in 2023[3], this would result in greater heating energy requirements in 2024, than in 2023.

Outdoor Lighting Asset Class

Consumption of electricity by outdoor street lighting increased slightly from 2023 (by 1,609 kWh) and had a slight decrease in emissions (1 Tonne) (Table 1).

Water and Wastewater Asset Class

[2]In a hydroelectric-based power system, GHG emissions from electricity generation can vary significantly from year to year. The Province updated the methodology for determining the electricity emission intensity factors in 2021 to more accurately reflect the carbon intensity of electricity consumed in B.C. A slight reduction in emissions intensity was observed from 2023 to 2024 (from 11.3 to 9.9 tCO_2e/GWh).

[3] https://victoria.weatherstats.ca/metrics/hdd.html

Consumption of electricity for this asset class increased between 2023 and 2024 by 13,116 kWh (Table 1), however there was a slight reduction of emissions of 1 Tonne GHGs, likely because of the emission factor decreasing. Factors such as weather conditions can also contribute to annual variation in energy consumed for this asset class

Fleet & Equipment Asset Class

The District's Fleet asset class represents the largest portion of corporate emissions (90%) at 223 T CO_2e. in 2024. Although the fleet has grown slightly over the years, emissions have shown a notable decrease since the baseline year, and by 17 Tonnes over the last year. The drop since 2023, is likely related to the gradual conversion of the District's combustion powered vehicles (and equipment) to electric and to less consumption of gasoline (i.e., down by 11,575 L). Factors such as weather conditions can also contribute to annual variation in fuel consumption. For instance, years having more snow events lead to increased use of road maintenance vehicles.

Police Fleet

In 2024, police services vehicles consumed 31,144 L of gasoline, with an associated emissions of 65 T CO_2e. The District's overall fleet carbon footprint including police services is 288 T CO_2e. Although police services fuel emissions are considered out-of-scope, the District takes steps to reduce emissions from this sector. Several replacement vehicles have recently been downsized or converted to hybrid or all-electric, depending on usage, which should show a reduction of emissions in upcoming years.

Updated 5-year Fleet Vehicle Capital Plan and Accelerated Electrification Strategy

Several replacement vehicles have been downsized or converted to hybrid or all-electric, depending on usage. As per Table 1 below, the District is on track to increasing the number of EVs in its municipal fleet to 15 by the end of 2026, as per goal of the 5-year Fleet Vehicle Capital Plan and Accelerated Electrification Strategy (2022). These replacements will continue to show reduced fossil fuel use and a reduction of emissions in upcoming years.

Table 1. Annual electric vehicles purchased for municipal fleet including Police vehicles.

Year	No. electric vehicles purchased
2019	3
2020	1
2021	1
2022	0
2023	3
2024	4
Total	**12**

Actual and Projected GHG Emissions Reduction Outcomes

Figure 1 below illustrates an actual and projected GHG reduction future outcome from 2007 (baseline year) to 2030. To reach the 45% GHG reduction by 2030 (target) corporate carbon footprint of 183 T CO_2e, the District will have to reduce emissions by a further 66 tonnes.

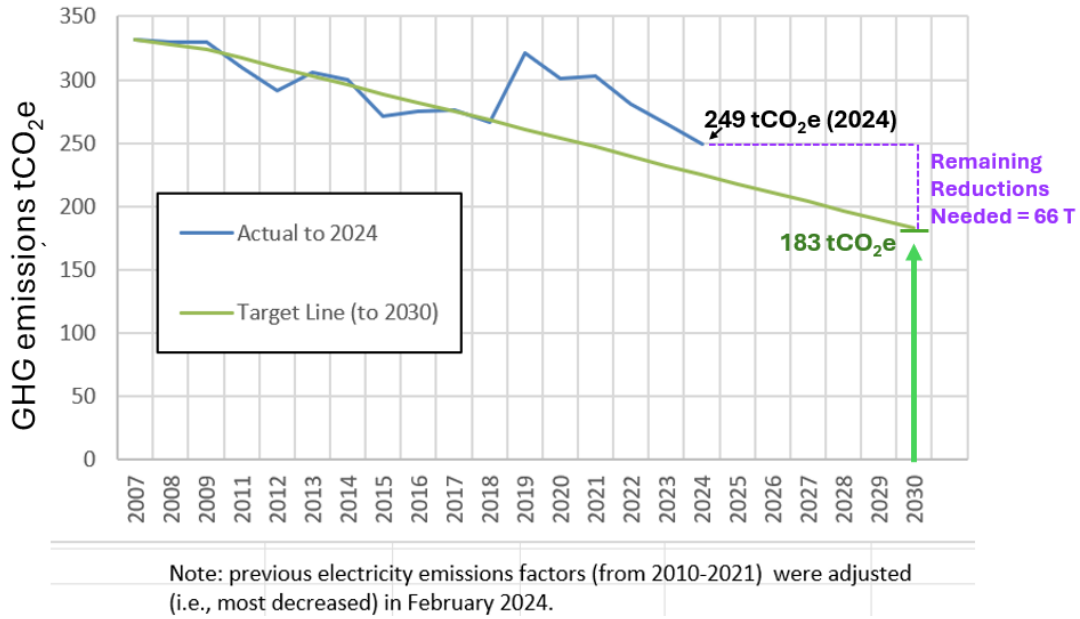

Figure 1. Corporate Carbon Footprint: Actual and Projected emissions reduction, 2007-2030.

Next Steps

The District will continue to monitor progress and convert its light-duty fleet vehicles to electric as per endorsed 5-year electrification plan in order to make progress towards the 2030 emissions target. Staff will review recommendations from the two recent energy and emissions studies (provided in a separate report to Council) and consider these as part of the annual budget and workplan process.

IMPLICATIONS

Strategic

Monitoring emissions annually and developing municipal operations energy and emission measures/strategies supports Council's 2024 – 2027 Strategic Plan priority to "Champion Climate Adaptation, Mitigation, and Preparedness" and continue to demonstrate climate leadership. Updates on progress will be reported in the District's Annual Plan.

Financial/ Resource

Implementing projects to reduce emissions and energy use by municipal assets will reduce fuel and electricity costs to the District.

CONCLUSION

An updated corporate emission inventory and outcome scenario is presented in this report which shows steady progress being made towards the 2030 corporate emissions reduction target. The District's 2024 GHG emissions total 249 tonnes CO2e (see Table 1). Building-related emissions have decreased by 25%) since 2007, and by 6.4% since 2023. This reduction is partly due to a lower emissions intensity factor for electricity generation in 2021. Given the current trend, the 2030 carbon footprint (reduction) target might be reached, but to ensure this, the District will consider the recommendations of two 2024 corporate energy and emissions studies and continue to annually monitor and report emissions.

Report written by:	Jennifer Lukianchuk, Senior Climate Action and Natural Environment Coordinator
Respectfully submitted by:	Jarret Matanowitsch, Director of Planning and Building Services
Concurrence by:	Dale Puskas, Director of Engineering
Concurrence by:	Christine Culham, Chief Administrative Officer

The Corporation of the District of Central Saanich

REGULAR COUNCIL REPORT

For the Regular Council meeting on Monday, July 14, 2025

Re: Corporate Building and Fleet Energy and Emissions Assessments

RECOMMENDATION(S):

1. *Direct staff to refer the Facilities Energy and Emissions Strategy to the Facilities Long-Term Asset Management Plan (FLAMP) and the 5-Year Vehicle Capital Plan and Accelerated Electrification Strategy for alignment and integration; and further, that the outcomes be incorporated into the update to the Asset Management Plan (AMP)(2026) and, reflected in the 5-Year Financial Plan, including both capital and operating considerations.*
2. *Direct staff to explore the Community Energy Association carbon credit program.*

PURPOSE:

The purpose of this report is to present findings from two energy studies – for municipal buildings and fleet –to improve energy efficiency and help the District reach its corporate 2030 interim emissions target and 2050 zero emissions goal.

BACKGROUND:

The District's 2020 Climate Leadership Plan has a goal to reduce greenhouse gas (GHG) emissions by 100% by 2050 at both the community and municipal scales with an interim target of 45% by 2030. The Plan also outlines a second goal for the community's energy source to be 100% renewable energy by 2050.

The Plan identified this possible scenario to reach municipal operations goals:

1. Convert 100% of light duty fleet to electric by 2030 (where technology is available)
2. Convert remaining fleet to natural gas or biodiesel by 2035; and to all renewable fuels by 2050
3. 100% conversion of heating and hot water systems to zero emissions systems (i.e., electric)

The District's municipal buildings, fleet, and equipment contribute significantly to its greenhouse gas (GHG) emissions profile. As part of its commitment to climate leadership and operational sustainability, the District is undertaking a coordinated approach to reduce emissions and improve energy efficiency across its assets.

This includes the development of a Facilities Energy and Emissions Strategy, identified as a 2024 improvement project in the Strategic Implementation Plan (SIP) , as presented to Council on June 13, 2022., with a focus on high-impact areas such as fleet and key municipal buildings.

The initiative responds to both legislative and policy drivers and aligns with Council's Strategic Plan, climate adaptation goals, and long-term asset and financial planning. By integrating this work into the Asset Management Plan (AMP), Facilities Long-Term Asset Management Plan (FLAMP), and 5-Year Financial Plan, the District is advancing a responsible and climate-resilient approach to infrastructure investment and service delivery.

DISCUSSION:

Highlights and key recommendations from building-related and fleet-related energy and emissions assessments are presented in the two separate sections below.

Energy and Emissions Assessment for Key Municipal Buildings

The District retained AME Consulting to undertake an integrated energy audit to assess the energy usage and energy management/retrofit opportunities at four facilities – Municipal Hall, Fire Hall #1, Cultural Centre, and Public Works Yard building. This work was funded by BC Hydro's Integrated Energy Audit program.

The carbon footprint of these four buildings in 2024 amounts to 16 tonnes of CO2e. Both the Municipal Yard and Fire Hall #1 each emit approximately 5.5 tonnes CO2e, annually. The Municipal Hall (which includes Police and Fire Hall #2) and the Cultural Centre each emit 4 T CO2e and 1 T CO2e, respectively. These four facilities represent 89% of the District's corporate building-related emissions and 5% of the District's total corporate emissions.

Highlights of Study

For each building a set of energy conservation measures (ECMs) were identified, which included a reduction of electrical consumption, utility cost saving, emissions reductions, capital cost of project and payback period. An example table of measures/strategies identified for the Fire Hall #1 is shown below in Table 1. The full ECM list for Fire Hall #1 and for the other assessed buildings can be found in Appendices A to D.

Table 1. Sample list of an ECM Opportunities table with costs and savings (for Fire Hall #1).

No.	Description	Natural Gas Savings (GJ)	Electricity Savings (kWh)	Utility Cost Savings ($)	Emissions Savings (tCO2e)	Capital Cost ($)	Payback Period (year)
ECM-1	Re-Configure DHW + Solar Thermal Collector Plant	60	-	$720	3.0	$20,800	25+
ECM-2	Install Electric Resistance Heater to Heat Pump Plant	73	(16,755)	$(751)	3.5	$56,680	N/A
ECM-3	Lower HP Plant CHWST Setpoint	20	(4,183)	$(164)	1.0	$8,450	N/A
ECM-4	Change HP Controls to Reject Heat to Ground As Priority Over DC-1	-	5,875	$572	0.1	$15,600	25+
ECM-5	Cross Connect Geo-Plant to Solar Collectors	18	-	$218	0.9	$8,760	25+

Recommendations from Study

The District is currently exploring options to address its aging municipal facilities that are requiring replacement. The facilities include the Municipal Hall site and the Municipal Public Works Yard.

Municipal Hall, Police and Fire Hall #2

The District is considering rebuild of the current site as part of the options of redevelopment. For the option to renovate the current building, the District will consider the ECMs identified as part of the Integrated Energy Assessment (see Appendix B). For the option of rebuilding the Municipal Hall to a new facility, the District will consider energy components to achieve LEED Silver (not certified) or better. All options will meet the energy Level 2 step code and zero carbon. Fossil fuel heating will only be considered for emergency service purposes.

Municipal Yard

Redevelopment is being considered for the Municipal Yard. Energy components to achieve LEED-Silver (not certified) or better will be considered. Fossil fuels will be used for back-up power only. The District is exploring green fuel options.

Fire Hall #1

Current design of the building was built to LEED Silver (certified) and incorporated energy efficient technology. Solar photovoltaic (PV) was later added to provide additional renewable energy for the building with a hybrid geothermal heat pump. A natural gas heater is currently being used as the fleet shop heat supply.

Cultural Centre

The District's Cultural Centre is located in Brentwood Bay and consists of two primary services: a Greater Victoria Library branch and a Seniors Centre and includes activity rooms. All heating (e.g., electric baseboards) and cooling is powered by renewable energy (i.e., electricity). The roof top HVAC unit provides power for cooling only.

Recommended energy projects (retrofit):

Given the Municipal Hall and the Public works yard are considering redevelopment, and focus would be on achieving LEED to maximize energy efficiency and reduce emissions and to achieve Zero Carbon standard in new municipal buildings, recommendations for improvements to existing facilities will be put on hold until a decision is made on civic redevelopment. The Cultural Centre and Fire Hall #1 are planned to receive condition assessments in 2025, so once those reports are completed, we will assess how to incorporate recommendations from the Integrated Energy Audit assessments.

Energy and Emissions Assessment for Fleet

Reducing fossil fuel (i.e., gasoline and diesel) consumption by the District's fleet represents the greatest opportunity to reduce corporate emissions and fuel costs. Currently, fleet and equipment emits about 288 Tonnes CO2e (Including Police vehicles) annually, which represents about 92% of the total corporate carbon footprint.

Innotech Fleet Strategies consultant team was retained to undertake a comprehensive fleet assessment in order to provide guidance and recommendations on transiting the fleet to EVs (i.e., electrification)

and identifying strategies to meet climate action goals. EV infrastructure (i.e, charging stations) needs and financial considerations (e.g., leveraging carbon credits) were also explored

An Energy and Emissions Fleet Assessment Report was produced (see Appendix E) through the support of BC Hydro's EV Ready Fleet Plan Grant, which contributed to 50% of the cost.

Highlights of Study

The key items for consideration presented in the Report by Innotech Fleet Strategies include:

1. Fleet electrification: EV transition plan (review planned growth of fleet/new service offerings)
2. Alternative or low carbon fuels that may help to meet emission reduction targets;
3. Fleet Management best practices such as behavioural and/or policy-based initiatives;
4. Financial profits/revenue from Low Carbon Fuel Credits;

and are described in more detail below.

1. **EV Transition Plan & review of planned growth**
   A modelling tool was used to analyze the transition of the fleet to electrification over 10 years, including improved vehicle replacement planning, decision making and insights into emission reductions. This analysis accounts for capital costs, maintenance costs, fuel costs, carbon costs, salvage value, technological maturity and operational risk .

2. **Alternative & Low Carbon Fuels**
   Renewable Diesel is a "drop-in" replacement fuel that offers up to an 85% reduction in emissions and provides an effective interim solution during the EV transition. Current market pricing of renewable diesel is generally at par with standard diesel for an R50 blend, with some suppliers offering at par for an R100 blend depending on volumes. The District would discuss pricing directly with suppliers. Consideration of warranties and vehicle conversion would also be taken into account.

3. **Low Carbon Fuel Standard**
   Include some description in here.

4. **Review of Fleet Management & Best Practices**
   In addition to electrification and alternative fuels, other industry best practices have been reviewed. Many of the practices, such as idling reduction and telematics, prove difficult to determine exact emission reduction as they cannot be measured independently; however, some emission reduction potentials have been noted based on feedback from other local governments.

5. **Low Carbon Fuel Credits**
   Carbon credits are a commodity that can be monetized for organizations that convert their fleet to EVs. Carbon credits can be a key part of financing the transition to EVs and associated emission reduction. Organizations that own and operate EV charging stations can collect credits. The credits can be saved, sold on the carbon trading market, or used to offset emissions. As these credits are commodities, the price fluctuates with market values. Average 2023 prices were approximately $475/tonne for credits under the Low Carbon Fuel Standard and $127/tonne for the CFR.

These credits are earned based on the differential emissions between an EV and a comparable internal combustion vehicle; calculated using the integrated grid carbon intensity of 9.2 tCO2e/GWh (2021)10 vs the carbon intensity for a comparable ICE vehicle. These values change on an annual basis, and for 2024, diesel fuel is 79.28 gCO2e/MJ (2024)11.

Recommendations from Study

The path to achieving the 2030 and 2050 emissions reduction targets involves a combination of the following opportunities:

1. **Electrification**: As the primary approach for reducing emissions, the District should implement the 10-year optimized EV transition scenario and detailed EV charging plan, as outline in the study. Electric vehicle and charging technology to be monitored over time.
2. **Low Carbon Fuel Standard** – this provincial requirement will automatically reduce emissions for any fuel supplied to the District.
3. **Renewable Diesel** – to help the District reduce emissions to meet the 2030 emissions target. To be a temporary measure to undertake until medium and heavy-duty vehicles become more mainstream.

The strategy is designed to guide future decisions while allowing for flexibility to adapt to unforeseen changes, such as new operational demands, industry trends, grant opportunities, financial constraints, or technological advancements. By maintaining a balanced approach, the District can continue to work toward its emissions reduction targets while staying responsive to evolving circumstances.

Figure 1 below (or Figure 6 in the Innotech Report) shows the stacked potential of each of implementing the three emissions reduction options, from a 2024/2025 fleet carbon footprint of approximately 288 Tonnes (includes Police vehicles) out to 2035. By combining all three strategies, an emission reduction potential of up to 57% is possible by 2030 (113 T), and up to 90% by 2050 (26 T).

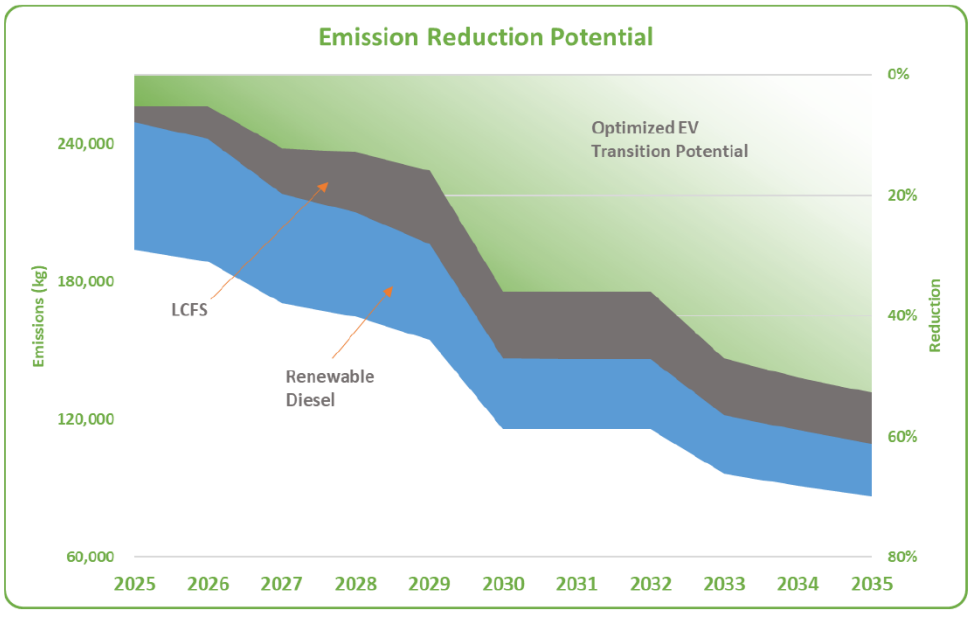

Figure 1. Emissions reduction potential when three strategies are incorporated for fleet.

Carbon Credits and Aggregation Opportunity

The Community Energy Association is currently implementing a program – Carbon Credit Aggregation Service – which allows municipalities to sell carbon credits with their aggregation service. Local governments are able to pool BC Low Carbon Fuel Standard carbon credits with other owners across the province. Aggregating credits from many local governments, community organizations, strata and private owners, creates a large pool of high value credits. CEA can then arrange sales at higher per-credit prices, benefiting clients big and small with the opportunity to earn money from their EV chargers. Participants benefit by having reduced administrative costs, standardized legal agreements, and the potential for higher sale price per credit. If so directed by Council, staff will explore the potential of the District participating in this program.

NEXT STEPS

The District will complete a condition assessment in 2025 on both the Cultural Centre and Fire Hall #1 in order to understand current improvement needs of the buildings and then would align potential energy projects from the study. As the Fleet represents the most significant opportunity to reduce emissions, the District will consider the recommendations of the Innotech report as part of 2026 capital planning. The District will continue to follow industry progression, review changing operational needs and assess the suitability of any EVs for the fleet moving forward. The District will also investigate the purchase of renewable diesel as a temporary measure to reduce the District's fleet carbon footprint and explore requirements to attain carbon credits

It will be important to continue to track emissions annually for buildings and fleet in order to measure success in the implementation of emissions reduction programs monitor progress towards its Climate Leadership Plan targets.

IMPLICATIONS:

Strategic

Under the District's Integrated Planning and Reporting (IPR) Framework, corporate decision-making is guided by a structured hierarchy that ensures alignment from long-term strategy to annual implementation. The Facilities Energy and Emissions Planning initiative exemplifies this integrated approach.

At the highest level, the initiative supports Council's 2024–2027 Strategic Priority to "Champion Climate Adaptation, Mitigation, and Preparedness." As a Strategic Implementation Plan (SIP) action, this planning work directly supports the delivery of Council's climate leadership goals.

The initiative is being developed in alignment with the District's Asset Management Plan (AMP) and will be formally embedded into the Facilities Long-Term Asset Management Plan (FLAMP) and referenced alongside the 5-Year Vehicle Capital Plan and Accelerated Electrification Strategy.

This integrated planning ensures that climate-focused infrastructure investments are incorporated into the 5-Year Financial Plan, capturing both capital and operating impacts over the medium term. It

enables coordinated resource allocation and service delivery while maintaining consistency with asset lifecycle considerations, GHG reduction targets, and long-term financial sustainability.

Financial/ Resource

Staff will review recommendations from the two energy and emissions assessments during the annual planning (financial planning) process.

OPTIONS:

Option 1 (recommended):

1. Direct staff to refer the Facilities Energy and Emissions Strategy to the Facilities Long-Term Asset Management Plan (FLAMP) and the 5-Year Vehicle Capital Plan and Accelerated Electrification Strategy for alignment and integration; and further, that the outcomes be incorporated into the update to the Asset Management Plan (AMP)(2026) and, reflected in the 5-Year Financial Plan, including both capital and operating considerations.
2. Direct staff to explore the Community Energy Association carbon credit program.

Option 2:

Alternative direction as provided by Council.

CONCLUSION:

Highlights from two corporate energy and emissions studies are presented in this report. A number of recommendations have been proposed Recommendations from the studies will be considered annually as part of the budget cycle. Staff will continue to integrate zero/low carbon options as part of upgrades for buildings and fleet in order to make progress towards the Climate Leadership emissions reduction by 2030.

Report written by:	Jennifer Lukianchuk, Senior Climate Action and Natural Environment Coordinator
Respectfully submitted by:	Jarret Matanowitsch, Director of Planning and Building Services
Concurrence by:	Dale Puskas, Director of Engineering
Concurrence by:	Christine Culham, Chief Administrative Officer

ATTACHMENTS:

Appendix A: AME Integrated Energy Audit Report – Fire Hall #1
Appendix B: AME Integrated Energy Audit Report – Municipal Hall
Appendix C: AME Integrated Energy Audit Report – Public Works Yard
Appendix D: AME Integrated Energy Audit Report – Cultural Centre
Appendix E: Energy and Emissions Fleet Assessment – Innotech Fleet Strategies

DISTRICT OF CENTRAL SAANICH – FIRE HALL #1

Project No.: 000b-1476-24
1512 Keating Cross Rd, Saanichton, BC V8M 1W9

Integrated Energy Audit Report

December 6, 2024

PREPARED FOR:
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2024-12-06

PROFESSIONAL'S SEAL & SIGNATURE

TABLE OF CONTENTS

1. EXECUTIVE SUMMARY

The AME group was retained by the District of Central Saanich to investigate opportunities for energy conservation, electrification, installing demand response capacity, and installing behind-the-meter power generation at four of their facilities. This report describes the AME Group's findings for Fire Hall #1; these reports have been developed under CleanBC's Integrated Energy Audit program. This report investigated twelve different opportunities including energy efficiency measures, electrification measures, and one demand response measure. The impact of these measures is summarized in the following table.

No.	Description	Natural Gas Savings (GJ)	Electricity Savings (kWh)	Utility Cost Savings ($)	Emissions Savings (tCO2e)	Capital Cost ($)	Payback Period (year)
ECM-1	Re-Configure DHW + Solar Thermal Collector Plant	60	-	$720	3.0	$20,800	25+
ECM-2	Install Electric Resistance Heater to Heat Pump Plant	73	(16,755)	$(751)	3.5	$56,680	N/A
ECM-3	Lower HP Plant CHWST Setpoint	20	(4,183)	$(164)	1.0	$8,450	N/A
ECM-4	Change HP Controls to Reject Heat to Ground As Priority Over DC-1	-	5,875	$572	0.1	$15,600	25+
ECM-5	Cross Connect Geo-Plant to Solar Collectors	18	-	$218	0.9	$8,760	25+
ECM-6	Fan Coil Recommissioning and Balancing	-	5,728	$558	0.1	$11,700	21.0
ECM-7	Add Low-Temp Hydronic Heaters to Perimeter Spaces	-	5,728	$558	0.1	$128,700	25+
ECM-8	CFL Lighting Conversion to LED	-	84,239	$8,202	1.0	$120,000	14.6
ECM-9	Recommission Radiant Floor Heating Water Pump Speed Control	-	3,179	$310	0.0	$17,450	25+
ECM-10	DHW CO2 Heat Pumps	228	(18,074)	$970	11.2	$88,400	25+
ECM-11	Hyper-Low Hot Water Fixtures	5	-	$64	0.3	$18,850	25+
ECM-12	Wallpack Battery for Demand Response	-	-	$500	-	$150,000	25+

It is recommended that ECM-3, ECM-5, ECM-6, and ECM-8 are considered by the District of Central Saanich for implementation. These measures offer either relatively high emissions savings per unit of capital cost, will allow for improved occupancy thermal comfort, or is expected to have a favorable business case. ECM-2 and ECM-10 may also be considered for long term implementation as more capital cost-intense mechanical upgrades with high emissions savings.

2. INTRODUCTION

The AME group was retained by the District of Central Saanich to investigate opportunities for energy conservation, electrification, installing demand response capacity, and installing behind-the-meter power generation at four of their facilities. This report describes the AME Group's findings for Fire Hall #1; these reports have been developed under CleanBC's Integrated Energy Audit program.

3. BUILDING DESCRIPTION

This section provides a description of the building as a whole, its mechanical systems and primary energy consumers, and its current on-site power generation.

3.1 General Description

The Fire Hall is located along Keating Cross Road, and was awarded with LEED Silver in 2015. It consists of a main lobby, office spaces on the ground floor, training rooms and dormitories on the upper floor, a kitchen, and changerooms for workers. The building has four main garage entrances for fire engines serving Central Saanich. The building has approximately 21,000 square feet of service area.

3.2 Heating & Cooling System

The Fire Hall's heating and cooling plant consists of a hybrid geothermal heat pump plant with a backup natural-gas heater. During heating conditions (i.e. during winter), the heat pump plant sends chilled water to the geo-thermal loop to absorb heat from the ground and sends heating water to the building's terminal unit fan coils and the hydronic radiant floor in the garage. If the heating water supply temperature is not able to be met by the geo-thermal heat pumps, then the back-up gas-fired heater is activated to supplement the heating load. During cooling conditions (i.e. during summer), the heat pump plant sends chilled water to the building's terminal units and circulates heating water to the ground and to a dry cooler DC-1 located on the roof; in this condition, the dry cooler activates to reject heat from the heating water into outdoor air.

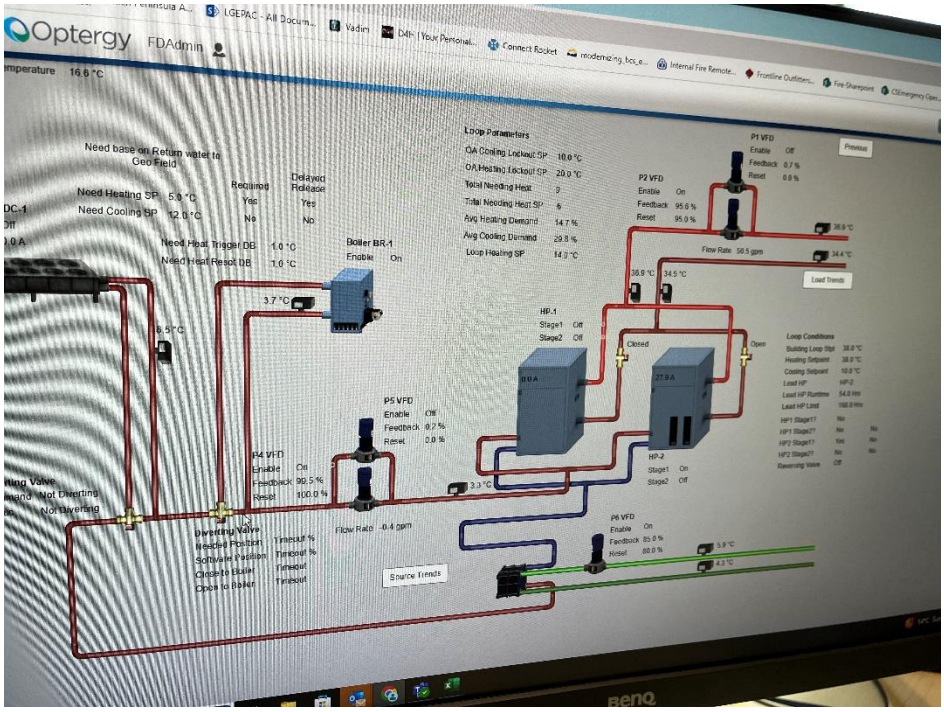

Figure 1: Heating and Cooling System DDC Graphic

Figure 2: Heat Pump (Lower Mechanical Room)

Figure 3: Heating Plant Gas-Fired Boiler (Lower Mechanical Room)

Figure 4: Dry Cooler (Rooftop)

3.3 Ventilation System

The building is ventilated through a central heat recovery ventilator (HRV), which brings in fresh outdoor air, and recovers heat from exhaust air. This system sends fresh air to terminal units throughout the building; the HRV is located on the roof and has a hydronic switchover coil to pre-heat or pre-cool ventilation air.

Figure 5: Heat Recovery Ventilator (Rooftop)

3.4 Domestic Hot Water System

The building's domestic hot water (DHW) system consists of two large storage tanks on the second level, a gas-fired heater, and four large solar thermal collectors located on the roof. A mixture of water and anti-freeze is circulated through the solar thermal collector and through a heat exchanger; the heat exchanger is also connected to the first of the two hot water storage tanks. As the water in the first tank is heated up, the water in the solar collector will increase in temperature, providing more heat from the sun.

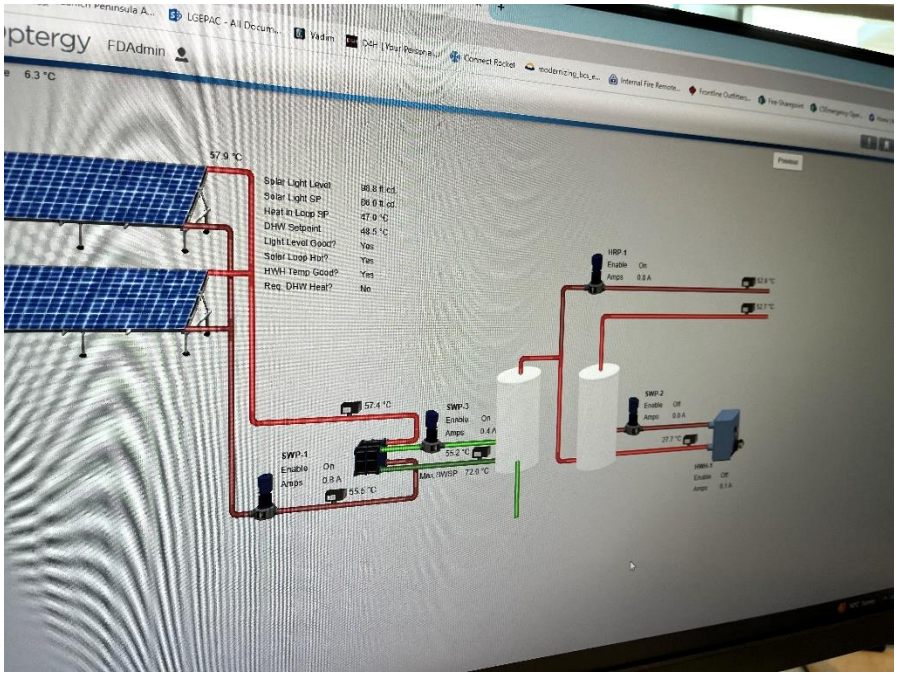

Figure 6: DHW Plant DDC Graphic

Figure 7: DHW Storage Tank Nameplate (Upper Mechanical Room)

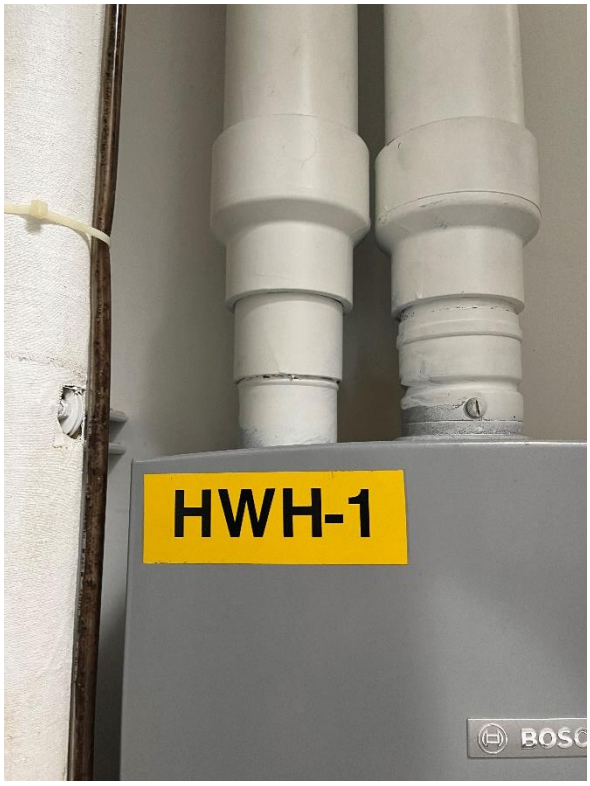

Figure 8: DHW Gas-Fired Water Heater (Upper Mechanical Room)

Figure 9: Solar Thermal Collectors (Rooftop)

Figure 10: Solar Thermal Collector Heat Exchanger (Upper Mechanical Room)

3.5 PV Array

This building is already fitted with a large photovoltaic (PV) panel array of approximately 138kW of nameplate electrical generation capacity; this array is actively generating electricity for the net metering program in BC. As described by a previous report from Hakai Energy Solutions, this system is expected to generate 144,000 kWh per year. Because this system is already in place, additional behind-the-meter generation measures are not considered for this building within this report.

Figure 11: PV Array, 138kW (Rooftop)

4. UTILITY ANALYSIS

This section provides insight to the energy use in this building, with a focus on the proportion of energy use between electricity and natural gas. This is used to provide context for energy savings associated with energy conservation measures (ECMs) explored in later sections of this report.

4.1 Energy Proportion Breakdown

The building's energy use is broken down by source type in the following figure.

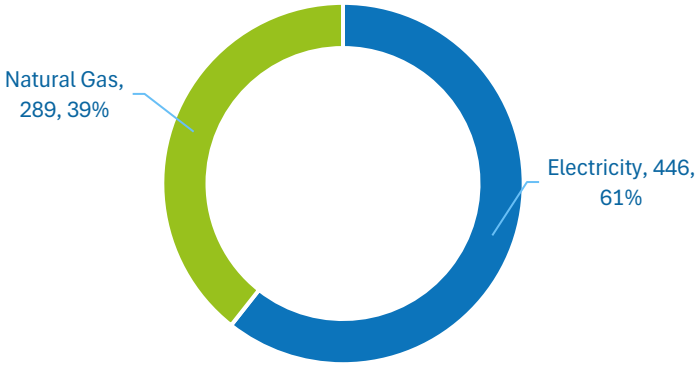

Figure 12: Energy Use Proportion By Source Type (2023)[1]

Despite its high performance rating and design including geothermal heat pump and solar collectors, 39% of the building's utility consumption is represented by natural gas.

The building's utility costs are broken down by source type in the following figure.

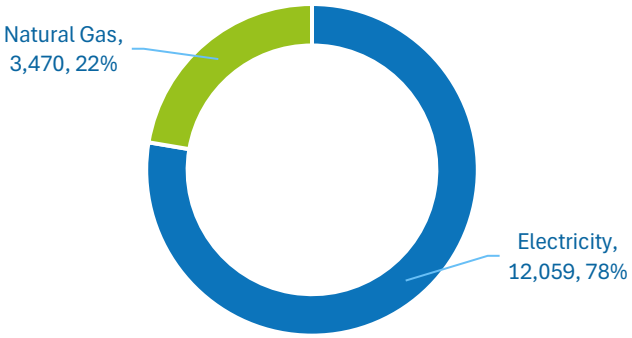

Figure 13: Energy Utility Costs By Source Type (2023)[2]

The utility costs associated with electricity represent 78% of the building's total energy costs; this is reflective of the fact that electricity costs more per unit of energy than natural gas.

The building's energy-related emissions are broken down by source type in the following figure.

[1] Natural gas use quantities shown in gigajoules (GJ).
[2] Utility costs are shown in dollars ($CAD)

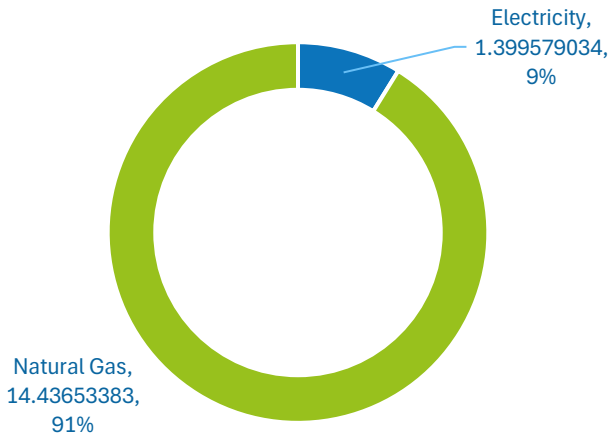

Figure 14: Energy Emissions by Source Type (2023)[3]

Despite only accounting for 39% of the building's total energy use, natural gas accounted for 91% of all energy-related emissions; this is reflective of the fact that electricity is has a much lower emission rate per unit energy than natural gas.

4.2 Load Distribution Curve

A load distribution curve of the property's electricity consumption is shown in the following graph.

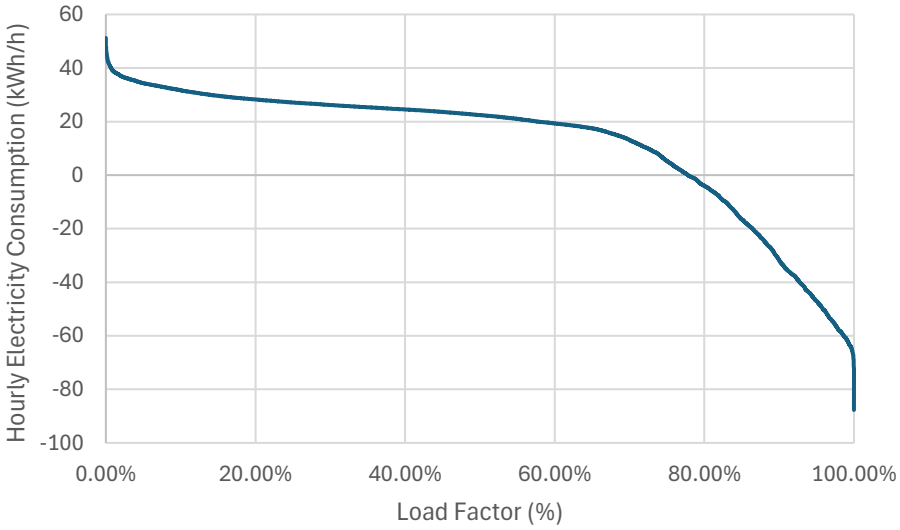

Figure 15: Electricity Load Distribution Curve (Utility Side)

[3] Emission quantities shown in equivalent-tonnes of carbon dioxide (tCO_2e).

This load distribution curve helps to highlight how often the property draws – or provides – rates of energy per hour; key takeaways from the load distribution curve are that the building was a net-energy-producer for approximately 22% of 2023, the highest rate at which power was given back to the grid was 87kW, and that although the highest hourly power consumption from the grid was 51.2kW it spent less than 1% of hours drawing more than 39kW.

4.3 Energy Use Regression Curve

Using utility data from the 2023 calendar year, the AME Group was able to develop a linear regression reflecting the building's electricity and natural gas use using heating-degree days as an independent variable.

The linear regression developed for the building's electricity use is shown in the following figure.

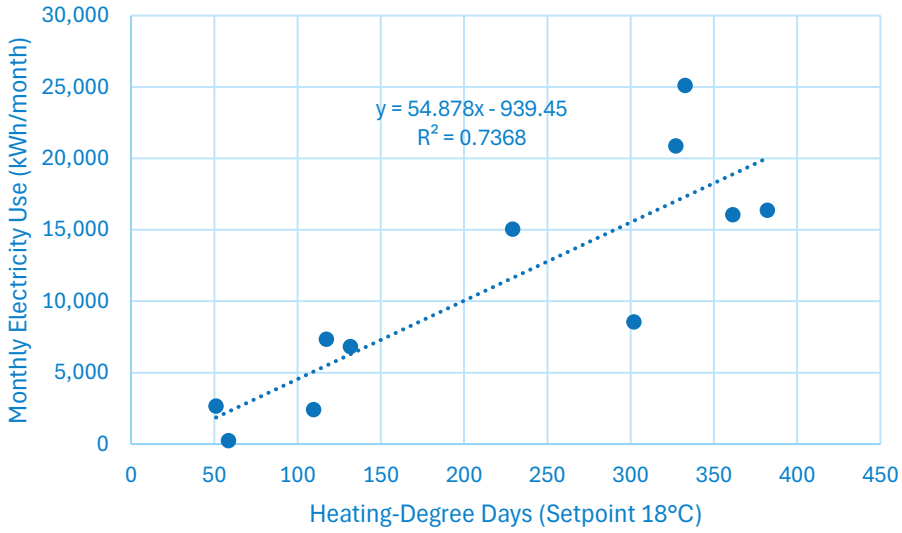

Figure 16: Electricity Linear Regression VS HDD (2023)

The linear correlation between electricity and heating degree days is considered relatively weak, as the threshold for being considered a reliably correlated regression requires an R^2 correlation factor of 0.75 or higher; as shown in the previous graph, the model's correlation factor results in 0.7368. Although this may not be a reliable way to model or predict energy use, it does shown that electricity consumption generally increases when outdoor air temperatures decrease. This reflects the fact that the solar array would be expected to generate less electricity in the winter when days are shorter and weather becomes more cloudy, and reflects the fact that the building's geo-thermal heat pump plant must increase its heating output as temperatures decrease.

The linear regression developed for the building's natural gas use is shown in the following figure.

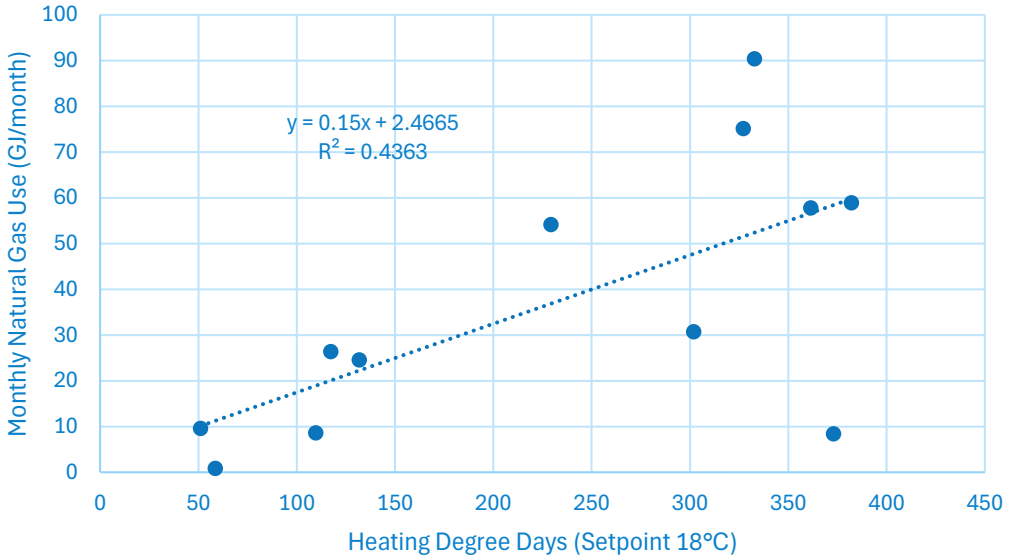

Figure 17: Natural Gas Linear Regression VS HDD (2023)

As shown in the previous figure, the correlation between natural gas and heating degree days is weaker than that of electricity; this is unusual for building's that include a natural gas heating plant, since heating output should be expected increase relatively consistently with outdoor air temperatures. While this regression does show a general increase in natural gas use as outdoor temperatures decrease, the rate of increase is not consistent. This could be explained by the domestic hot water plant relying on its natural gas heater more often than the building's solar thermal collectors.

5. KEY INPUTS AND ASSUMPTIONS

Several common key inputs applied to the building's ECMs are summarized in the following table.

Table 1: Summary of Key Inputs and Assumptions

Description	Quantity	Unit
Blended Cost of Electricity	0.097 (27.04)	$/kWh ($/eGJ)
Blended Cost of Natural Gas	11.99 (0.043)	$/GJ ($/ekWh)
Electricity Emission Factor	11.3	tCO_2e/GWh
Natural Gas Emission Factor	49.87	$kgCO_2e/GJ$

6. ENERGY CONSERVATION MEASURES

This section describes the energy conservation measures (ECMs) investigated as part of this report. These measures are intended to help provide insight to the building's largest energy consumers and to describe opportunities for energy conservation in the building at a high level.

6.1 Base Case

Before exploring the ECMs investigated in this report, the base case considered should be made clear; the base case for these measures is considered to be the continued operation of the building in a business-as-usual fashion, with no major mechanical equipment retrofits considered in the short-term future. Energy consumption from the 2023 calendar year was used as a reference when developing these energy savings, utility cost savings, and emissions savings amounts.

6.2 ECM-1: Reconfigure DHW + Solar Thermal Collector Plant

The first measure considered in this report includes the re-arrangement of the domestic hot water heating plant to maximize heat gains from the solar collector.

.1 Measure Description

This measure would include changing the piping arrangement of the domestic hot water plant to ensure that the solar collectors always receive the lowest possible temperature of water in the system, and that the natural gas heater is able to heat both storage tanks. The solar thermal collectors on the building's roof are a flat plate type, which offer relatively high heat gain from the sun during the day but rely on having lower temperature water supplied to them to achieve that heat gain; generally, the water entering these panels should be kept as low as possible as often as possible to maximize their contribution to domestic hot water heating demand. In addition to this, the domestic hot water plant is slightly limited in its design because the natural gas heater can only ever heat the second hot water storage tank and the solar thermal collectors can only ever heat the first hot water storage tank. This causes two conditions that limit performance of the domestic hot water plant:

A. The solar thermal collector can only ever heat half of the system's stored water

B. The natural gas heater can only ever heat half of the system's stored water

To improve the performance of the DHW system, the solar collector and natural gas heater would both be configured parallel to the hot water storage tanks. The flow rates to the heat exchanger connecting the solar thermal collector to the hot water storage tanks would also be reduced to maximize temperature differences on either side.

.2 Design Considerations

For this measure to be implemented, pipework would be re-organized in the upper mechanical room serving the DHW system, connecting the entering-water line to bot the natural gas heater and the solar thermal collectors to the domestic cold water makeup line. The pumps serving the solar thermal collectors may also need to be replaced at lower flows and pressure drops to maximize temperature differences in the solar thermal heat exchanger's entering and leaving water temperatures.

.3 Savings Summary

Savings associated with this measure are shown in the following table.

Table 2: ECM-1 Annual Savings Summary

No.	Description	Natural Gas Savings (GJ)	Electricity Savings (kWh)	Utility Cost Savings ($)	Emissions Savings (tCO2e)	Capital Cost ($)	Payback Period (year)
ECM-1	Re-Configure DHW + Solar Thermal Collector Plant	60	-	$720	3.0	$20,800	25+

6.3 ECM-2: Install Electric Resistance Heater to Heat Pump Plant

This measure explores the opportunity to supplement the heating plant with additional heating capacity from an electric resistance heater.

.1 Measure Description

This measure would include the connection of an electric resistance hot water heater to the building's main heating system. This heater would be used as an intermediate heat source to the rest of the mechanical system, intended to mitigate a portion of the heating demand that would have otherwise been met with the heating plant's natural gas water heater. This would not necessarily require a high amount of heating capacity because of its role as a partial or supplemental heat source.

.2 Design Considerations

This measure would serve as a fuel switching, or electrification measure for the main heating plant. Because the electric resistance heater would only ever activate to meet heating demand that would have been met by the natural gas heater, this measure would be expected to increase utility costs while also reducing the building's emissions. This measure would thus function as a long-term method for offsetting the building's natural gas usage using electricity in exchange for increased utility costs.

.3 Savings Summary

Savings associated with this measure are shown in the following table.

Table 3: ECM-2 Annual Savings Summary

No.	Description	Natural Gas Savings (GJ)	Electricity Savings (kWh)	Utility Cost Savings ($)	Emissions Savings (tCO2e)	Capital Cost ($)	Payback Period
ECM-2	Install Electric Resistance Heater to Heat Pump Plant	73	(16,755)	$(751)	3.5	$56,680	N/A

6.4 ECM-3: Lower HP Plant CHWST Setpoint

While considered exploratory at this stage, this measure would seek to increase the heating capacity of the geothermal heat pump plant by lowering its chilled water supply temperature (CHWST) during winter seasons.

.1 Measure Description

During the review of trend log data from the geo-thermal heat pump plant, it was noted that during winter chilled water supply temperatures (CHWST) from the heat pumps did not lower below 0-1°C; this is relatively high for geo-thermal system of this type. The amount of heat that the heat pumps are able to draw from its geothermal loop is dictated by the temperature difference between the CHWST and the earth. While ground temperatures in BC are generally expected to remain at 10°C, geothermal systems often require their CHWST to reach temperatures between -4°C to -6°C in order to increase heat drawn from the ground. This measure would require the heat pump plant to go through a recommissioning effort to incorporate a lower CHWST before calling on the natural gas water heater during winter seasons.

.2 Design Considerations

In order for this measure to be carried out, a recommissioning effort with the heat pump manufacturer would be required, where the limits for the heat pumps' CHWST can be explored and tested. No new equipment would be required for this measure.

Although this would be expected to increase the load share from the heat pumps and lower demand on the natural gas water heater, it would also be expected to cause the heat pumps to operate less efficiently since they would be operating at a higher temperature lift (temperature difference between CHWST and heating water supply temperature or HWST). As such, this would be expected to decrease the building's natural gas consumption and increase the building's electricity consumption.

.3 Savings Summary

Savings associated with this measure are shown in the following table.

Table 4: ECM-3 Annual Savings Summary

No.	Description	Natural Gas Savings (GJ)	Electricity Savings (kWh)	Utility Cost Savings ($)	Emissions Savings (tCO2e)	Capital Cost ($)	Payback Period (year)
ECM-3	Lower HP Plant CHWST Setpoint	20	(4,183)	$(164)	1.0	$8,450	N/A

6.5 ECM-4: Change HP Controls to Reject Heat to Ground As Priority Over DC-1

This measure would explore recommissioning the heat pump plant to ensure that the geo-thermal wells are at a high temperature before activating the system's dry cooler.

.1 Measure Description

The geo-thermal system in the building relies on the temperature of the ground to be at least consistent throughout the winter in order to maintain a relatively high heating efficiency in the heat pump plant, but the opportunity exists to recommission the heat pump plant to increase its efficiency by storing heat in the ground as much as possible during summer and shoulder season to help delay the requirement for low CHWST in the winter. This would require the system to reject heat to the ground through the geo-thermal loop as a higher priority than DC-1. This would mean that after periods of high outdoor air temperatures, the system will be able to draw heat out of a significantly warmer geo-thermal loop compared to the temperature of the geo-thermal loop if heat had been rejected through the dry cooler.

.2 Design Considerations

While it can be favorable to store heat in the ground to be used during later periods with heating demand, operation of the dry cooler should still be used to maintain adequately low entering water temperatures to the heat pump plant's condensers; in summary, if the building cannot reject heat fast enough to the ground, then the dry cooler should be activated to provide additional heat rejection capacity.

.3 Savings Summary

Savings associated with this measure are shown in the following table.

Table 5: ECM-4 Annual Savings Summary

No.	Description	Natural Gas Savings (GJ)	Electricity Savings (kWh)	Utility Cost Savings ($)	Emissions Savings (tCO2e)	Capital Cost ($)	Payback Period (year)
ECM-4	Change HP Controls to Reject Heat to Ground As Priority Over DC-1	-	5,875	$572	0.1	$15,600	25+

6.6 ECM-5: Cross Connect Geo-Plant to Solar Collectors

The opportunity exists to use the solar thermal collectors as a heat source for the main heating plant and for the domestic hot water plant.

.1 Measure Description

This measure would add a new heat exchanger to the solar thermal collectors' water loop, which is currently used only for domestic hot water heating, to the geo-thermal heat pumps' heating water water return line with a dedicated circulation pump. Under this new configuration, the solar thermal collectors would heat domestic hot water until temperature requirements in the domestic hot water storage tanks are met, and then would begin to bring heat from the solar thermal collector to the geo-thermal heating line instead of simply turning off. This would mean that the amount of free heat gained from the sun would be increased, but could now used as a heat source to the rest of the heating plant. This solar heat gain would then be circulated to the building's heating terminal units including fan coils and the garage's hydronic radiant floor.

.2 Design Considerations

For this measure to be implemented, an additional heat exchanger and circulation pump would need to be connected in the DHW system mechanical room, with a connection to the building's heating water line. This would require new pipework to be routed from the adjacent hallway to the DHW plant.

.3 Savings Summary

Savings associated with this measure are shown in the following table.

Table 6: ECM-5 Annual Savings Summary

No.	Description	Natural Gas Savings (GJ)	Electricity Savings (kWh)	Utility Cost Savings ($)	Emissions Savings (tCO2e)	Capital Cost ($)	Payback Period (year)
ECM-5	Cross Connect Geo-Plant to Solar Collectors	18	-	$218	0.9	$8,760	25+

6.7 ECM-6: Fan Coil Recommissioning and Balancing

This measure would seek to improve thermal comfort along the building's perimeter spaces by recommissioning and balancing the airflow through fan coils in these spaces.

.1 Measure Description

In discussions with building occupants, they claimed that outer spaces in the building have issues meeting temperature setpoints during winter, leading occupants to bring in electric resistance radiant heaters to their office spaces. This measure would seek to increase the amount of airflow and the supply air temperature provided to these perimeter spaces from their respective fan coil units during winter periods. This would be done as a way to help prevent the need for added electric resistance heaters, which would incur more energy use and utility costs than heat from the central heating plant.

.2 Design Considerations

This measure would rely on there being adequate flow to the furthest spaces served by the main heating plant; it is possible that the amount of airflow available to the perimeter spaces could be found to be at its limit during the system's rebalancing and cannot be increased. Other opportunities for adding heat to the perimeter spaces are described under separate report sections.

.3 Savings Summary

Savings associated with this measure are shown in the following table.

Table 7: ECM-6 Annual Savings Summary

No.	Description	Natural Gas Savings (GJ)	Electricity Savings (kWh)	Utility Cost Savings ($)	Emissions Savings (tCO2e)	Capital Cost ($)	Payback Period (year)
ECM-6	Fan Coil Recommissioning and Balancing	-	5,728	$558	0.1	$11,700	21.0

6.8 ECM-7: Add Low-Temp Hydronic Heaters to Perimeter Spaces

As an alternative to re-balancing the airflow to the perimeter spaces, local hydronic radiant heaters may be installed on an as-needed basis.

.1 Measure Description

Under this measure, any un-met heating demand in the building's perimeter spaces would be met through added, wall-mounted radiant heaters. These would be located in spaces with high temperature control complaints, and would require pipework to be routed to them with a control valve and thermostat to add heat to the space when needed.

.2 Design Considerations

While this would be expected to add more heat to perimeter spaces, it would be expected to be a higher cost measure compared to an air-balancing and recommission effort of the spaces' existing heating terminal units.

.3 Savings Summary

Savings associated with this measure are shown in the following table.

Table 8: ECM-7 Annual Savings Summary

No.	Description	Natural Gas Savings (GJ)	Electricity Savings (kWh)	Utility Cost Savings ($)	Emissions Savings (tCO2e)	Capital Cost ($)	Payback Period (year)
ECM-7	Add Low-Temp Hydronic Heaters to Perimeter Spaces	-	5,728	$558	0.1	$128,700	25+

6.9 ECM-8: CFL Lighting Conversion to LED

This measure reflects a high level of conversion from CFL lighting to LED fixtures, maintaining a consistent lighting intensity. More information will be available under separate cover.

.1 Measure Description

The opportunity exists to retrofit the lighting fixtures in the building to LED from their original fluorescent selections. This would be expected to lower electricity use and building peak demand.

.2 Design Considerations

For more design considerations for this measure, refer to report under separate cover.

.3 Savings Summary

Savings associated with this measure are shown in the following table.

Table 9: ECM-8 Annual Savings Summary

No.	Description	Natural Gas Savings (GJ)	Electricity Savings (kWh)	Utility Cost Savings ($)	Emissions Savings (tCO2e)	Capital Cost ($)	Payback Period (year)
ECM-8	CFL Lighting Conversion to LED	-	84,239	$8,202	1.0	$120,000	14.6

6.10 ECM-9: Recommission Radiant Floor Heating Water Pump Speed Control

The circulation pump currently serving the radiant floor is set to a constant, partial speed. This measure would seek to provide this pump with independent variable speed.

.1 Measure Description

In order to lower the amount of power needed for the garage's hydronic radiant floor loop, the opportunity exists to install a new controller capable of changing the pump's control based on the return temperature from the radiant floor. This would allow the pump to lower its speed under most conditions, requiring significantly less electricity for circulation. The garage is expected to be the largest single consumer of thermal energy from the heat pump plant, making this pump crucial to the plant's overall operation; reducing flow to the radiant floor would be expected to increase its runtime and lower its return temperature, slightly improving the electrical efficiency of the heat pump plant and reducing the pump's power consumption.

.2 Design Considerations

For this measure to be implemented, the current pump must be able to either interface with a new controller based on return water temperature or be replaced with a pump with an integral temperature sensor. No other mechanical changes would be required for this measure.

.3 Savings Summary

Savings associated with this measure are shown in the following table.

Table 10: ECM-9 Annual Savings Summary

No.	Description	Natural Gas Savings (GJ)	Electricity Savings (kWh)	Utility Cost Savings ($)	Emissions Savings (tCO2e)	Capital Cost ($)	Payback Period (year)
ECM-9	Recommission Radiant Floor Heating Water Pump Speed Control	-	3,179	$310	0.0	$17,450	25+

6.11 ECM-10: DHW CO_2 Heat Pumps

This measure explores the use of CO_2 heat pump technology in the building's DHW system.

.1 Measure Description

The domestic hot water plant is expected to be the main consumer of natural gas in the building based on the current configuration of the gas-fired heater and the solar thermal collector. The opportunity exists to install an additional heat source to the domestic hot water plant in the form of a CO_2 heat pump; this would consist of 2-4 small condensing units located on the building's outer roof with a piped connection to the

DHW supply line and DCW makeup water line. This would be intended to operate as the primary heat source for DHW production, and would be expected to run at a low but constant heating output.

CO_2 heat pumps excel at providing a low flow of hot water at a high temperature difference, making them well suited to DHW production. They are relatively expensive, and as such they benefit from being used with a high amount of hot water storage, which the building already has.

.2 Design Considerations

For this measure to be implemented, new condensing units would need to be installed on the outer roof, and pipework would need to be run from the DHW system mechanical room to the new condensing units. For the new CO_2 heat pump to work well with the solar collectors, the solar collectors should be recommissioned to operate at as high of a domestic water temperature difference as possible (ideally from 40F to 140F) to avoid bringing hot water into the new condensing units.

.3 Savings Summary

Savings associated with this measure are shown in the following table.

Table 11: ECM-10 Annual Savings Summary

No.	Description	Natural Gas Savings (GJ)	Electricity Savings (kWh)	Utility Cost Savings ($)	Emissions Savings (tCO2e)	Capital Cost ($)	Payback Period (year)
ECM-10	DHW CO2 Heat Pumps	228	(18,074)	$970	11.2	$88,400	25+

6.12 ECM-11: Hyper-Low Flow Hot Water Fixtures

The opportunity exists to retrofit the building's hand-washing sinks to lower flow. The flow rate of the current fixtures is approximately 1GPM, and may be lowered to 0.5GPM while still offering effective flow for hand washing.

.1 Measure Description

The opportunity exists to replace some of the building's hand wash sinks with lower flow fixtures that still provide adequate flow. Reducing flow in these fixtures would both reduce the amount of water consumed by the building and reduce the amount of natural gas and solar heat gain used per minute of fixture use.

.2 Design Considerations

Although there may be an opportunity to lower the flow rate of the water fixtures in the washrooms to 0.5GPM, it should be noted that lower flow fixtures are sometimes not preferred by building tenants and

may cause tenants to wash their hands for longer periods of time if fixtures at too low of a flow rate are selected. In addition, savings associated with reducing flow are high when reducing from high flow to low flow, and the hand wash sinks in this building, which are estimated to have 1GPM of flow, are not necessarily considered to be high flow (2.0 GPM+).

.3 Savings Summary

Savings associated with this measure are shown in the following table.

Table 12: ECM-11 Annual Savings Summary

No.	Description	Natural Gas Savings (GJ)	Electricity Savings (kWh)	Utility Cost Savings ($)	Emissions Savings (tCO2e)	Capital Cost ($)	Payback Period (year)
ECM-11	Hyper-Low Hot Water Fixtures	5	-	$64	0.3	$18,850	25+

6.13 ECM-12: Wallpack Battery for Demand Response

With new programs from CleanBC refocusing from full electrification to a more holistic review of grid integrity, opportunities for on site power reserves may be explored for the purposes of peak demand period response.

.1 Measure Description

This measure would involve the installation of DC batteries to the upper mezzanine adjacent to the solar controllers, which would be used to help trim the building's electrical demand during BC's typical peak demand period of 4PM-8PM. These batteries would be activated to help supplement the building's power demand during this period, reducing the building's electrical consumption during this time. The battery array would then be charged overnight before being called upon again during the next peak demand period.

.2 Design Considerations

This measure is a relatively new consideration from CleanBC, but may be considered by building owners as a way of integrating on-site storage for other purposes as well, including power supply during power outages. This may couple well with the building's high PV array capacity; for more information regarding this measure, refer to report under separate cover.

.3 Savings Summary

Savings associated with this measure are shown in the following table.

Table 13: ECM-12 Annual Savings Summary

No.	Description	Natural Gas Savings (GJ)	Electricity Savings (kWh)	Utility Cost Savings ($)	Emissions Savings (tCO2e)	Capital Cost ($)	Payback Period (year)
ECM-12	Wallpack Battery for Demand Response	-	-	$500	-	$150,000	25+

7. FINANCIAL MODELLING

This section shows the expected impacts of utility cost savings and cumulative cost savings between 2025 and 2050.

7.1 ECM-1: Re-Configure DHW + Solar Thermal Collector Plant – Financial Performance

The annual cost savings under this measure are shown in the following figure.

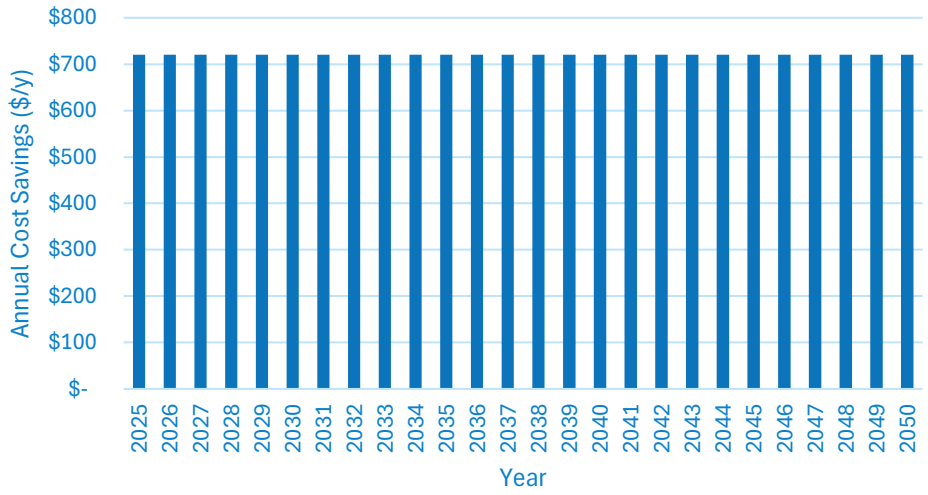

Figure 18: ECM-1 Annual Cost Savings

The assumed cost savings in 2025 versus 2050 is shown in the following table (shown in 2024 dollars).

Table 14: ECM-1 Cost Savings Summary

Description	Utility Cost Savings ($)	Carbon Tax Cost Savings ($)	Combined Cost Savings ($)
2025 Annual Cost Savings	$720	$-	$720
2030 Annual Cost Savings	$720	$-	$720

7.2 ECM-2: Install Electric Resistance Heater to Heat Pump Plant – Financial Performance

The annual cost savings under this measure are shown in the following figure.

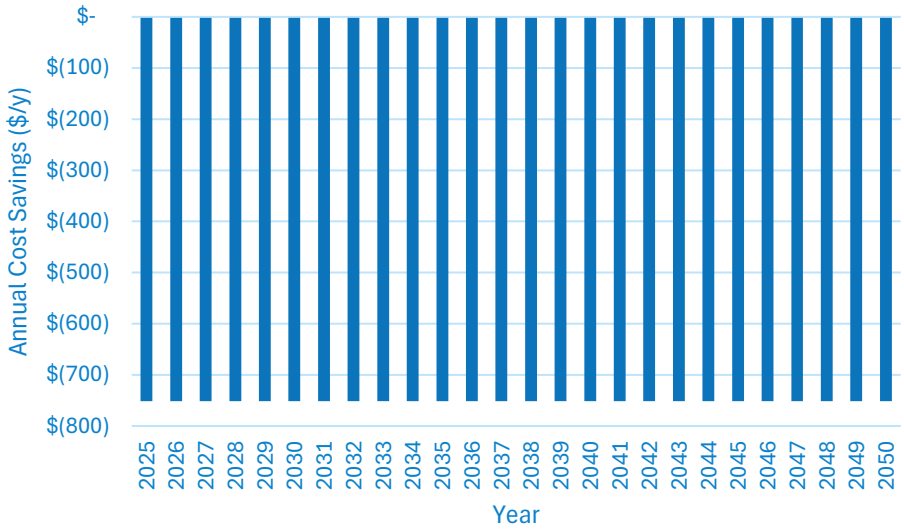

Figure 19: ECM-2 Annual Cost Savings

The assumed cost savings in 2025 versus 2050 is shown in the following table (shown in 2024 dollars).

Table 15: ECM-2 Cost Savings Summary

Description	Utility Cost Savings ($)	Carbon Tax Cost Savings ($)	Combined Cost Savings ($)
2025 Annual Cost Savings	$(751)	$-	$(751)
2030 Annual Cost Savings	$(751)	$-	$(751)

7.3 ECM-3: Lower HP Plant CHWST Setpoint – Financial Performance

The annual cost savings under this measure are shown in the following figure.

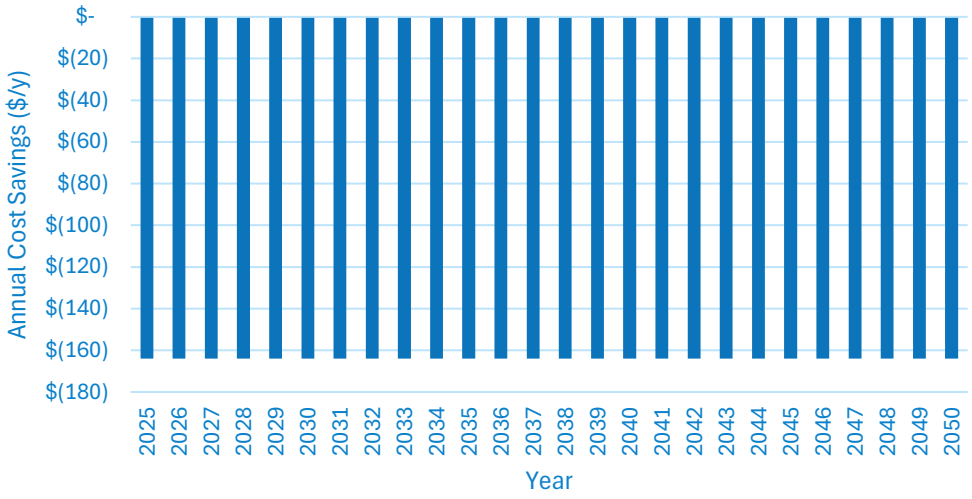

Figure 20: ECM-3 Annual Cost Savings

The assumed cost savings in 2025 versus 2050 is shown in the following table (shown in 2024 dollars).

Table 16: ECM-3 Cost Savings Summary

Description	Utility Cost Savings ($)	Carbon Tax Cost Savings ($)	Combined Cost Savings ($)
2025 Annual Cost Savings	$(164)	$-	$(164)
2030 Annual Cost Savings	$(164)	$-	$(164)

7.4 ECM-4: Change HP Controls to Reject Heat to Ground As Priority Over DC-1 – Financial Performance

The annual cost savings under this measure are shown in the following figure.

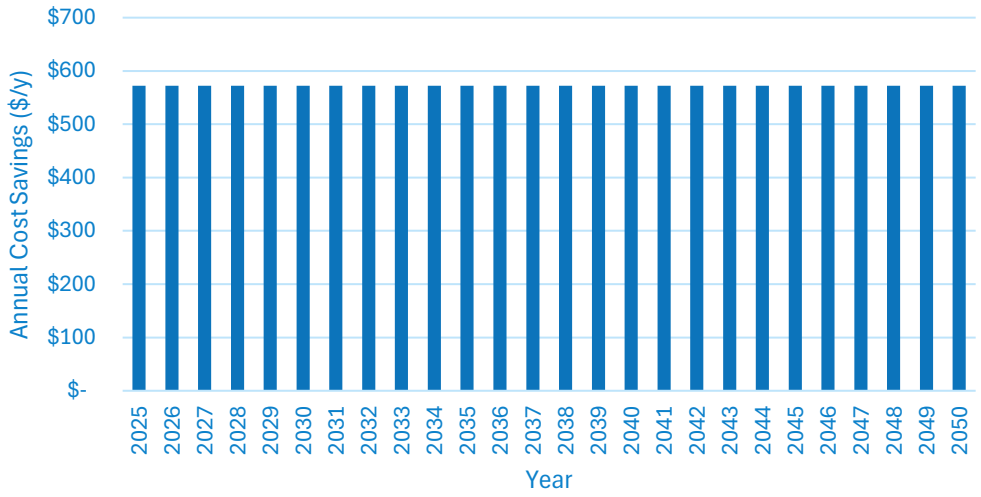

Figure 21: ECM-4 Annual Cost Savings

The assumed cost savings in 2025 versus 2050 is shown in the following table (shown in 2024 dollars).

Table 17: ECM-4 Cost Savings Summary

Description	Utility Cost Savings ($)	Carbon Tax Cost Savings ($)	Combined Cost Savings ($)
2025 Annual Cost Savings	$572	$-	$572
2030 Annual Cost Savings	$572	$-	$572

7.5 ECM-5: Cross Connect Geo-Plant to Solar Collectors – Financial Performance

The annual cost savings under this measure are shown in the following figure.

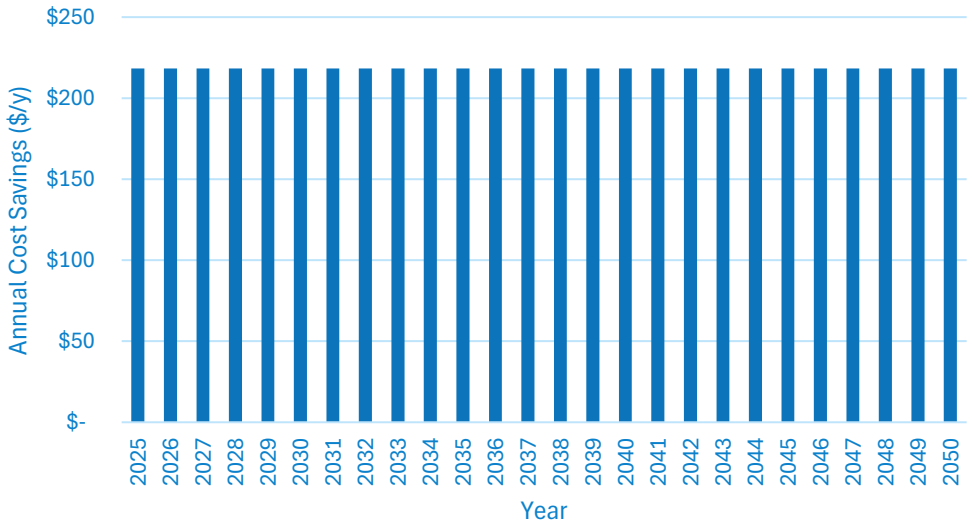

Figure 22: ECM-5 Annual Cost Savings

The assumed cost savings in 2025 versus 2050 is shown in the following table (shown in 2024 dollars).

Table 18: ECM-5 Cost Savings Summary

Description	Utility Cost Savings ($)	Carbon Tax Cost Savings ($)	Combined Cost Savings ($)
2025 Annual Cost Savings	$218	$-	$218
2030 Annual Cost Savings	$218	$-	$218

7.6 ECM-6: Fan Coil Recommissioning and Balancing – Financial Performance

The annual cost savings under this measure are shown in the following figure.

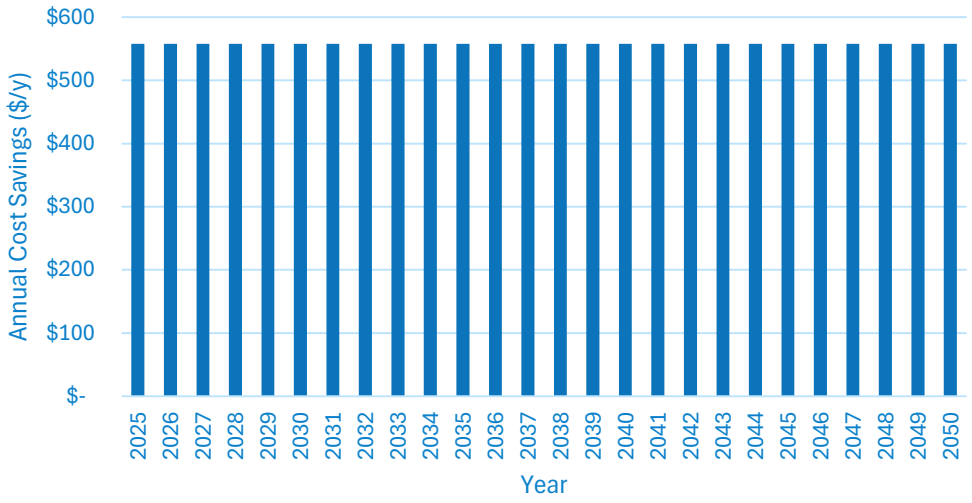

Figure 23: ECM-6 Annual Cost Savings

The assumed cost savings in 2025 versus 2050 is shown in the following table (shown in 2024 dollars).

Table 19: ECM-6 Cost Savings Summary

Description	Utility Cost Savings ($)	Carbon Tax Cost Savings ($)	Combined Cost Savings ($)
2025 Annual Cost Savings	$558	$-	$558
2030 Annual Cost Savings	$558	$-	$558

7.7 ECM-7: Add Low-Temp Hydronic Heaters to Perimeter Spaces – Financial Performance

The annual cost savings under this measure are shown in the following figure.

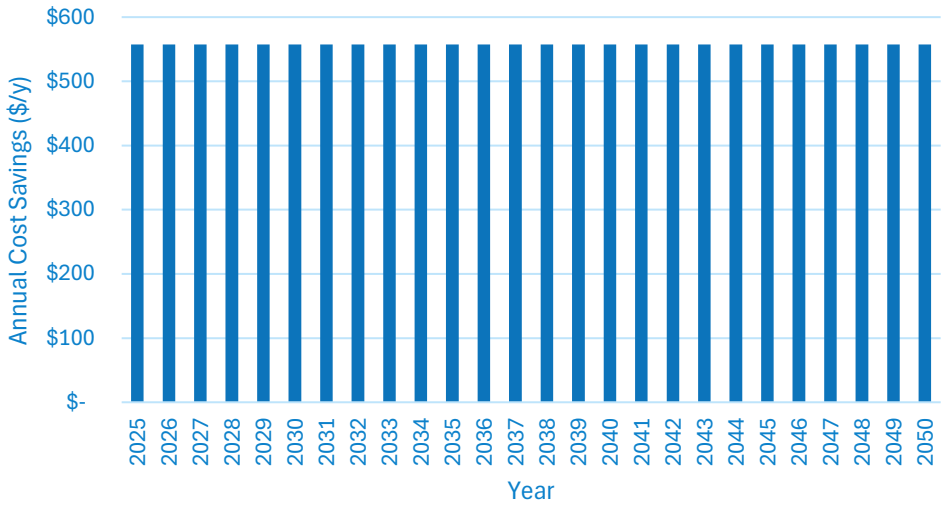

Figure 24: ECM-7 Annual Cost Savings

The assumed cost savings in 2025 versus 2050 is shown in the following table (shown in 2024 dollars).

Table 20: ECM-7 Cost Savings Summary

Description	Utility Cost Savings ($)	Carbon Tax Cost Savings ($)	Combined Cost Savings ($)
2025 Annual Cost Savings	$558	$-	$558
2030 Annual Cost Savings	$558	$-	$558

7.8 ECM-8: CFL Lighting Conversion to LED – Financial Performance

The annual cost savings under this measure are shown in the following figure.

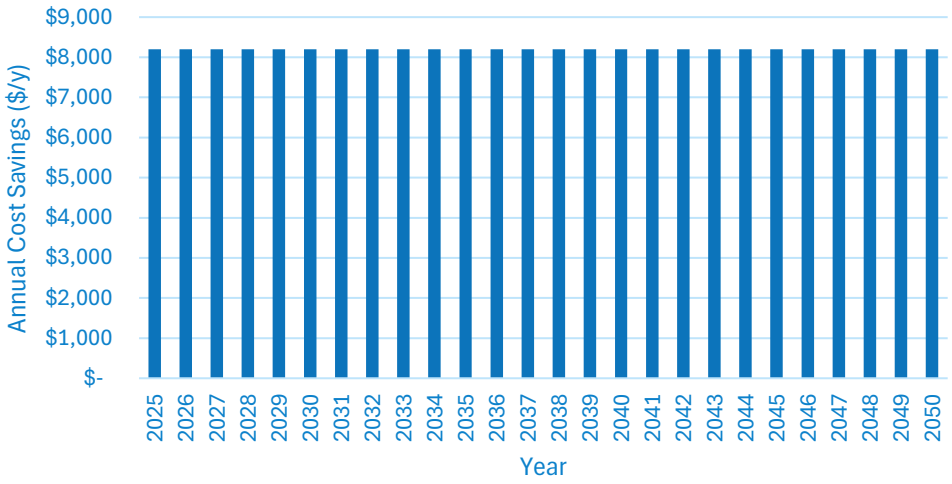

Figure 25: ECM-8 Annual Cost Savings

The assumed cost savings in 2025 versus 2050 is shown in the following table (shown in 2024 dollars).

Table 21: ECM-8 Cost Savings Summary

Description	Utility Cost Savings ($)	Carbon Tax Cost Savings ($)	Combined Cost Savings ($)
2025 Annual Cost Savings	$8,202	$-	$8,202
2030 Annual Cost Savings	$8,202	$-	$8,202

7.9 ECM-9: Recommission Radiant Floor Heating Water Pump Speed Control – Financial Performance

The annual cost savings under this measure are shown in the following figure.

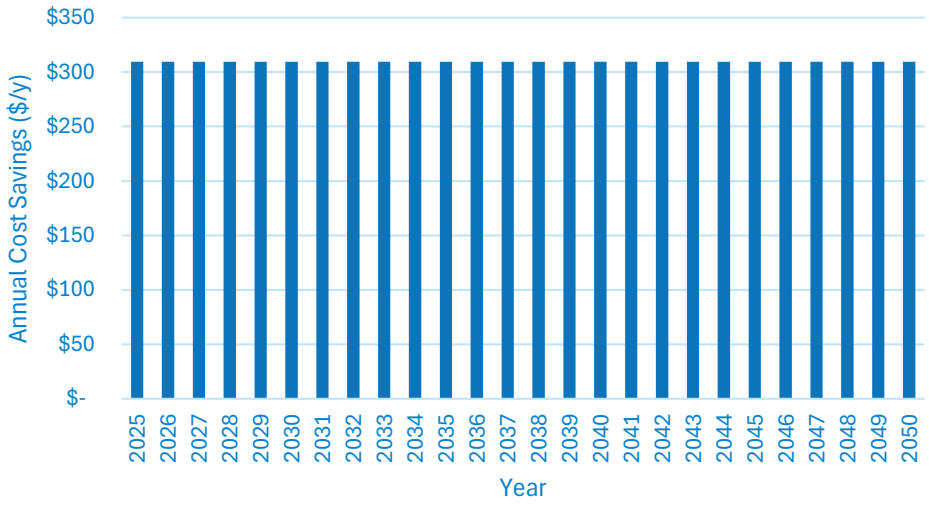

Figure 26: ECM-9 Annual Cost Savings

The assumed cost savings in 2025 versus 2050 is shown in the following table (shown in 2024 dollars).

Table 22: ECM-9 Cost Savings Summary

Description	Utility Cost Savings ($)	Carbon Tax Cost Savings ($)	Combined Cost Savings ($)
2025 Annual Cost Savings	$310	$-	$310
2030 Annual Cost Savings	$310	$-	$310

7.10 ECM-10: DHW CO2 Heat Pumps – Financial Performance

The annual cost savings under this measure are shown in the following figure.

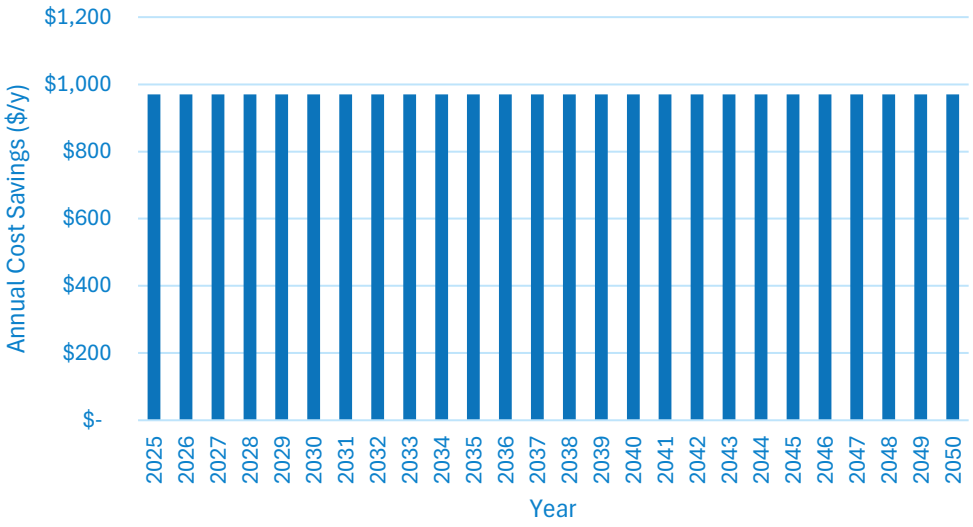

Figure 27: ECM-10 Annual Cost Savings

The assumed cost savings in 2025 versus 2050 is shown in the following table (shown in 2024 dollars).

Table 23: ECM-10 Cost Savings Summary

Description	Utility Cost Savings ($)	Carbon Tax Cost Savings ($)	Combined Cost Savings ($)
2025 Annual Cost Savings	$970	$-	$970
2030 Annual Cost Savings	$970	$-	$970

7.11 ECM-11: Hyper-Low Hot Water Fixtures – Financial Performance

The annual cost savings under this measure are shown in the following figure.

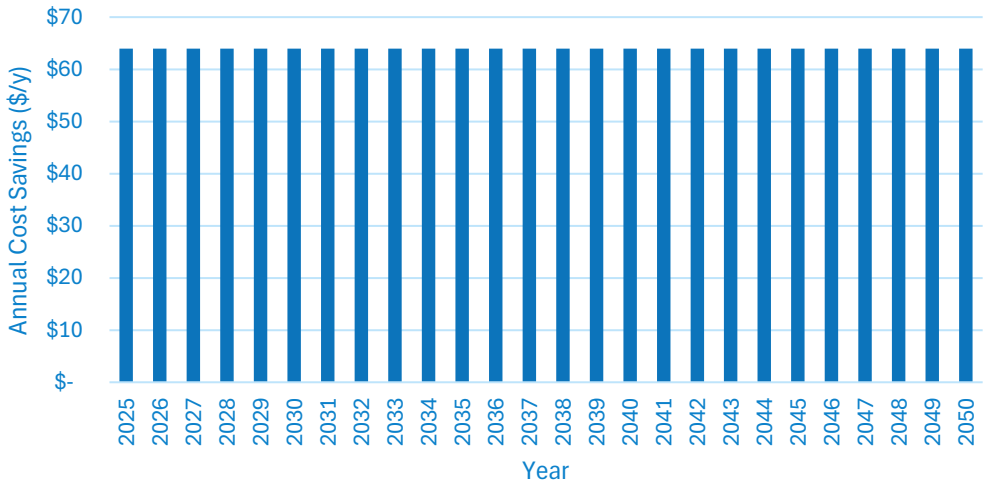

Figure 28: ECM-11 Annual Cost Savings

The assumed cost savings in 2025 versus 2050 is shown in the following table (shown in 2024 dollars).

Table 24: ECM-11 Cost Savings Summary

Description	Utility Cost Savings ($)	Carbon Tax Cost Savings ($)	Combined Cost Savings ($)
2025 Annual Cost Savings	$64	$-	$64
2030 Annual Cost Savings	$64	$-	$64

7.12 ECM-12: Wallpack Battery for Demand Response – Financial Performance

The annual cost savings under this measure are shown in the following figure.

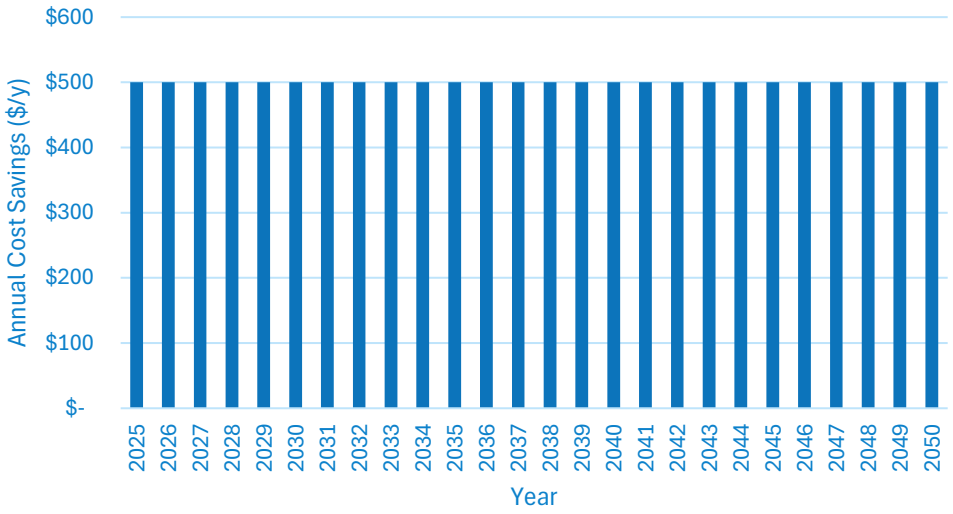

Figure 29: ECM-12 Annual Cost Savings

The assumed cost savings in 2025 versus 2050 is shown in the following table (shown in 2024 dollars).

Table 25: ECM-12 Cost Savings Summary

Description	Utility Cost Savings ($)	Carbon Tax Cost Savings ($)	Combined Cost Savings ($)
2025 Annual Cost Savings	$500	$-	$500
2030 Annual Cost Savings	$500	$-	$500

8. RECOMMENDATIONS AND CONCLUSION

This report investigated twelve different opportunities for energy conservation at the District of Saanich's Firehall #1, including energy efficiency measures, electrification measures, and one demand response measure. The impact of these measures is summarized in the following table.

Table 26: ECM Savings Summary

No.	Description	Natural Gas Savings (GJ)	Electricity Savings (kWh)	Utility Cost Savings ($)	Emissions Savings (tCO2e)	Capital Cost ($)	Payback Period (year)
ECM-1	Re-Configure DHW + Solar Thermal Collector Plant	60	-	$720	3.0	$20,800	25+
ECM-2	Install Electric Resistance Heater to Heat Pump Plant	73	(16,755)	$(751)	3.5	$56,680	N/A
ECM-3	Lower HP Plant CHWST Setpoint	20	(4,183)	$(164)	1.0	$8,450	N/A
ECM-4	Change HP Controls to Reject Heat to Ground As Priority Over DC-1	-	5,875	$572	0.1	$15,600	25+
ECM-5	Cross Connect Geo-Plant to Solar Collectors	18	-	$218	0.9	$8,760	25+
ECM-6	Fan Coil Recommissioning and Balancing	-	5,728	$558	0.1	$11,700	21.0
ECM-7	Add Low-Temp Hydronic Heaters to Perimeter Spaces	-	5,728	$558	0.1	$128,700	25+
ECM-8	CFL Lighting Conversion to LED	-	84,239	$8,202	1.0	$120,000	14.6
ECM-9	Recommission Radiant Floor Heating Water Pump Speed Control	-	3,179	$310	0.0	$17,450	25+
ECM-10	DHW CO2 Heat Pumps	228	(18,074)	$970	11.2	$88,400	25+
ECM-11	Hyper-Low Hot Water Fixtures	5	-	$64	0.3	$18,850	25+
ECM-12	Wallpack Battery for Demand Response	-	-	$500	-	$150,000	25+

It is recommended that ECM-3, ECM-5, ECM-6, and ECM-8 are considered by the District of Central Saanich for implementation. These measures offer either relatively high emissions savings per unit of capital cost, will allow for improved occupancy thermal comfort, or is expected to have a favorable business case. ECM-2 and ECM-10 may also be considered for long term implementation as more capital cost-intense mechanical upgrades with high emissions savings.

END OF REPORT

DISTRICT OF CENTRAL SAANICH – MUNICIPAL HALL

Project No.: 000b-1476-24
1903 Mt Newton Cross Rd, Saanichton, BC V8M 1T2

Integrated Energy Audit Report

November 15, 2024

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TABLE OF CONTENTS

1. EXECUTIVE SUMMARY

The AME group was retained by the District of Central Saanich to investigate opportunities for energy conservation, electrification, installing demand response capacity, and installing behind-the-meter power generation at four of their facilities. This report describes the AME Group's findings for their Municipal Hall; these reports have been developed under CleanBC's Integrated Energy Audit program. This report investigated nine different opportunities for energy conservation including energy efficiency measures, electrification measures, on site generation measures, and one demand response measure. The impact of these measures is summarized in the following table.

Table 1: ECM Savings Summary

No.	Description	Natural Gas Savings (GJ)	Electricity Savings (kWh)	Utility Cost Savings ($)	Emissions Savings (tCO2e)	Capital Cost ($)	Payback Period (year)
ECM-1	Convert Basement to Forced Air Heating	-	58,543	$5,725	0.7	$127,400	22.3
ECM-2	PV Array	-	52,000	$3,800	-	$215,000	25+
ECM-3	Ultra-Low Flow Hot Water Fixtures	-	5,427	$531	0.1	$37,700	25+
ECM-4	DHW CO2 Heat Pumps	-	7,753	$758	0.1	$81,900	25+
ECM-5	Wallpack Battery for Demand Response	-	-	$500	-	$150,000	25+
ECM-6	ASHP Connected to Fire Hall Garage	-	40,511	$3,962	0.5	$35,100	8.9
ECM-7	Solar Thermal Collector (DHW)	-	3,848	$376	0.0	$26,650	25+
ECM-8	FL Lighting Conversion to LED	-	8,000	575	-	$135,000	25+
ECM-9	Conversion to Distributed VRF	-	205,936	$20,139	2.3	$3,217,500	25+

It is recommended that ECM-1 is carried out to improve occupant comfort through improved ventilation. It's also recommended that ECM-6 and ECM-8 are considered for implementation to significantly reduce the amount of electricity needed to meet heating demand. If a more comprehensive retrofitting of the building is being considered, then ECM-9 would be considered as a suitable design alternative to like-for-like replacements of major mechanical equipment.

2. INTRODUCTION

The AME group was retained by the District of Central Saanich to investigate opportunities for energy conservation, electrification, installing demand response capacity, and installing behind-the-meter power generation at four of their facilities. This report describes the AME Group's findings for their Municipal Hall; these reports have been developed under CleanBC's Integrated Energy Audit program.

3. BUILDING DESCRIPTION

This section provides a description of the building as a whole, its mechanical systems and primary energy consumers, and its current on-site power generation.

3.1 General Description

The District of Central Saanich's Municipal Hall is located along Mt Newton Cross Road, and consists of three primary service zones including the Municipal Hall, Police Station, and Fire Hall. The building has approximately 22,700 square feet of conditioned service area.

3.2 Heating & Cooling System

The Municipal Hall consists of three primary zones, with one multizone rooftop unit providing ventilation air and heating to the main floor's administrative zone, one rooftop unit providing ventilation to the council chambers, and the administrative area in the basement. These spaces use perimeter electric resistance baseboard heaters as auxiliary heating. The basement does not have a dedicated mechanical ventilation system. The rooftop units serving the administrative space and council chamber have packaged air conditioning capacity and air-source heat pump. There are several small DX split condensing units that serve as cooling to IT rooms in the basement.

Figure 1: Typical Rooftop Unit (Roof)

The police station is served by rooftop units and several distributed condensing units for cooling. This space is also fitted with baseboard electric heaters.

Figure 2: Typical Condensing Unit Arrangement (Police Station)

The Fire Hall is heated through an electric resistance radiant floor system.

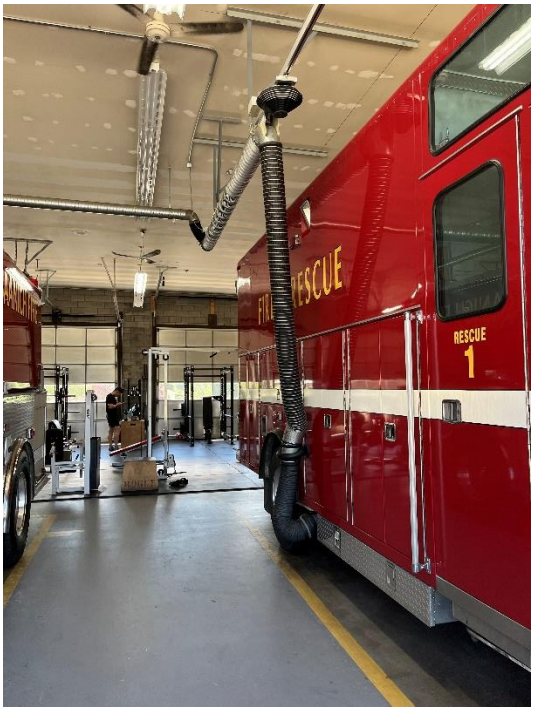

Figure 3: Fire Hall Garage

3.3 Domestic Hot Water System

The building's domestic hot water is distributed through separate electric resistance hot water tanks. Hot water is mainly used by handwash sinks in washrooms.

Figure 4: Typical Domestic Hot Water Tank

A summary of domestic hot water tanks is shown in the following table.

Table 2: DHW System Summary

Location	Heating Capacity	Storage Volume (Gal)
Basement	5,250 W (17,900 BTU/h) (0.36GPH at 100F Temp Rise)	48
Police Station	7,880 W (26,900 BTU/h) (0.54GPH at 100F Temp Rise)	76

4. UTILITY ANALYSIS

This section provides insight to the energy use in this building, with a focus on the proportion of energy use between electricity and natural gas. This is used to provide context for energy savings associated with energy conservation measures (ECMs) explored in later sections of this report.

4.1 Energy Proportion Breakdown

The building uses only electricity, making electricity the sole source of energy-related utility costs and emissions.

4.2 Load Distribution Curve

A load distribution curve of the property's electricity consumption is shown in the following graph.

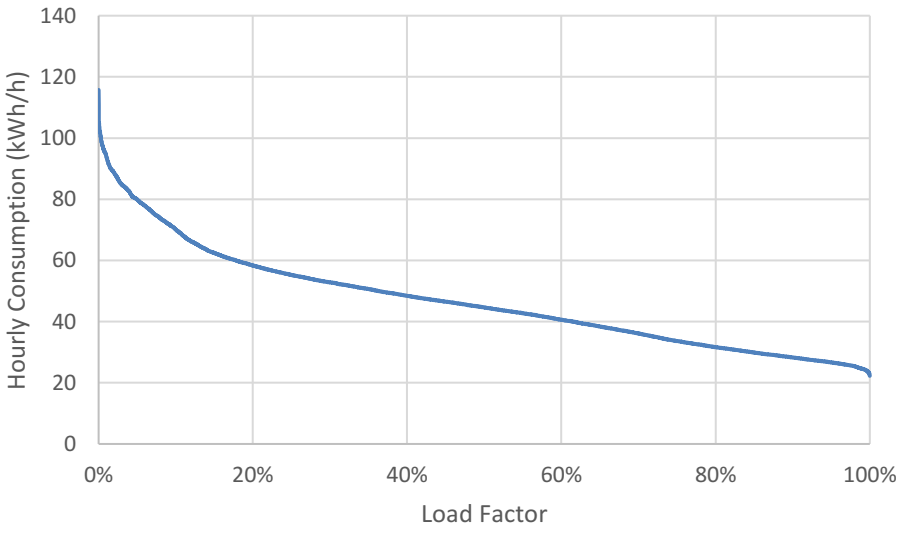

Figure 5: Electricity Load Distribution Curve (Utility Side)

This load distribution curve helps to highlight how often the property draws electrical energy per hour; key takeaways from the load distribution curve are that the building's consumption never dropped below 22kW, and that although the highest hourly power consumption from the grid was 116kW it spent less than 1% of hours drawing more than 95kW.

4.3 Energy Use Regression Curve

Using utility data from the 2023 calendar year, the AME Group was able to develop a linear regression reflecting the building's electricity use using heating-degree days as an independent variable.

The linear regression developed for the building's electricity use is shown in the following figure.

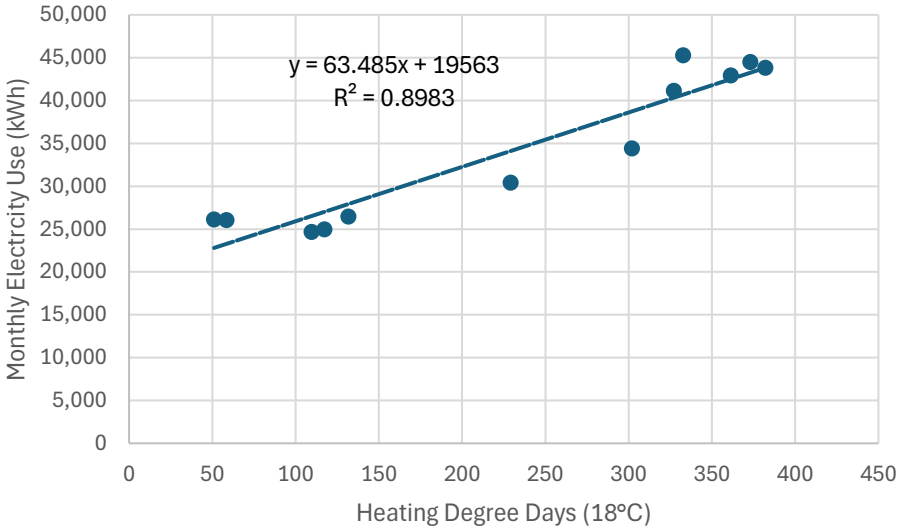

Figure 6: Electricity Linear Regression VS HDD (2023)

The linear correlation between electricity and heating degree days is considered relatively strong, as the threshold for being considered a reliably correlated regression requires an R^2 correlation factor of 0.75 or higher; as shown in the previous graph, the model's correlation factor results in 0.8983. This may be considered a relatively reliable way to predict electricity use using outdoor air temperatures and shows that electricity consumption generally increases when outdoor air temperatures decrease. This reflects the fact that the building mostly uses electric resistance baseboard heaters in the municipal hall and police station, and the fire hall uses an electric resistance radiant floor.

The building's electricity usage and utility costs are summarized in the following table.

Table 3: Electricity Consumption Summary

Description	Quantity
Consumption (2023)	410,959 kWh
Utility Costs	$40,190

5. KEY INPUTS AND ASSUMPTIONS

Several common key inputs applied to the building's ECMs are summarized in the following table.

Table 4: Summary of Key Inputs and Assumptions

Description	Quantity	Unit
Blended Cost of Electricity	0.10 (27.7)	$/kWh ($/eGJ)
Electricity Emission Factor	11.3	tCO_2e/GWh

6. ENERGY CONSERVATION MEASURES

This section describes the energy conservation measures (ECMs) investigated as part of this report. These measures are intended to help provide insight to the building's largest energy consumers and to describe opportunities for energy conservation in the building at a high level.

6.1 Base Case

Before exploring the ECMs investigated in this report, the base case considered should be made clear; the base case for these measures is considered to be the continued operation of the building in a business-as-usual fashion, with no major mechanical equipment retrofits considered in the short-term future. Energy consumption from the 2023 calendar year was used as a reference when developing these energy savings, utility cost savings, and emissions savings amounts.

6.2 ECM-1: Convert Basement to Forced Air Heating

The first measure explores the implementation of a ventilated heating system to serve the basement.

.1 Measure Description

This measure would involve the installation of an additional air handling unit to serve the basement, complete with a heat pump heating coil and backup electric resistance coil. This would allow for the basement to receive fresh air turnover, helping to maintain air quality and to mitigate the risk of long-term contaminants. This would also have the benefit of installing heat pump heating capacity to the basement at the same time; a air-source heat pump would be expected to operate at a high coefficient of performance between 2.0 and 4.0, preventing demand on the current electric resistance baseboard heaters. As such, this measure would be expected to save a significant amount of electrical energy consumption, especially in winter seasons.

.2 Design Considerations

While this measure offers significant benefits to the basement's air quality control and to the building's energy efficiency, this measure would also require a substantial amount of shutdown time in the basement administrative spaces to install ductwork, drywall, add in wall penetrations, and test the new system before being used. This measure would require a new air handler or roof top unit to be installed either on the roof or outdoors at grade, with supply and return air ducts routed to occupied spaces. Because of this extensive scope of work, this measure would not be recommended unless a major renovation of the basement space were to take place and the space would not be occupied during the installation.

.3 Savings Summary

Savings associated with this measure are shown in the following table.

Table 5: ECM-1 Annual Savings Summary

No.	Description	Natural Gas Savings (GJ)	Electricity Savings (kWh)	Utility Cost Savings ($)	Emissions Savings (tCO2e)	Capital Cost ($)	Payback Period (years)
ECM-1	Convert Basement to Forced Air Heating	-	58,543	$5,725	0.7	$127,400	22.3

6.3 ECM-2: PV Array

The opportunity exists to install a photovoltaic (PV) panel array on the roof of this building.

.1 Measure Description

This measure would involve the installation of a PV panel array on the roof with the intention of subscribing to BC Hydro's net-metering program.

.2 Design Considerations

For more design considerations for this measure, refer to report under separate cover.

.3 Savings Summary

Savings associated with this measure are shown in the following table.

Table 6: ECM-2 Annual Savings Summary

No.	Description	Natural Gas Savings (GJ)	Electricity Savings (kWh)	Utility Cost Savings ($)	Emissions Savings (tCO2e)	Capital Cost ($)	Payback Period (years)
ECM-2	PV Array	-	52,000	$3,800	-	$215,000	25+

6.4 ECM-3: Ultra-Low Flow Hot Water Fixtures

The opportunity exists to retrofit the building's hand-washing sinks to lower flow. The flow rate of the current fixtures is approximately 1GPM, and may be lowered to 0.5GPM while still offering effective flow for hand washing.

.1 Measure Description

The opportunity exists to replace some of the building's hand wash sinks with lower flow fixtures that still provide adequate flow. Reducing flow in these fixtures would both reduce the amount of water consumed by the building and reduce the amount of electricity required by the DHW systems per minute of fixture use.

.2 Design Considerations

Although there may be an opportunity to lower the flow rate of the water fixtures in the washrooms to 0.5GPM, it should be noted that lower flow fixtures are sometimes not preferred by building tenants and may cause tenants to wash their hands for longer periods of time if fixtures at too low of a flow rate are selected. In addition, savings associated with reducing flow are high when reducing from high flow to low flow, and the hand wash sinks in this building, which are estimated to have 1GPM of flow, are not necessarily considered to be high flow (2.0 GPM+).

.3 Savings Summary

Savings associated with this measure are shown in the following table.

Table 7: ECM-3 Annual Savings Summary

No.	Description	Natural Gas Savings (GJ)	Electricity Savings (kWh)	Utility Cost Savings ($)	Emissions Savings (tCO2e)	Capital Cost ($)	Payback Period (years)
ECM-3	Ultra-Low Flow Hot Water Fixtures	-	5,427	$531	0.1	$37,700	25+

6.5 ECM-4: DHW CO_2 Heat Pumps

This measure explores the use of CO_2 heat pump technology in the building's DHW systems.

.1 Measure Description

The opportunity exists to install an additional heat source to the domestic hot water tanks in the form of CO_2 heat pumps; this would consist of 1-2 small condensing units located on the building's outer roof or at grade with a piped connection to the DHW supply line and DCW makeup water line. This would be intended to operate as the primary heat source for DHW production and would be expected to run at a low but constant heating output.

CO_2 heat pumps excel at providing a low flow of hot water at a high temperature difference, making them well suited to DHW production. They are relatively expensive, and as such they benefit from being used with a high amount of hot water storage.

.2 Design Considerations

For this measure to be implemented, new condensing units would need to be installed on the outer roof or at grade, and pipework would need to be run from the DHW tanks to the new condensing units. Although it would be possible to install these heat pumps to each domestic hot water tank, this measure may also be considered for a smaller subset of the building's DHW tanks, focusing on those service areas with higher occupancy. Choosing to install heat pumps to a smaller portion of the building's DHW services would reduce energy savings, but would lower this measure's up-front capital cost.

.3 Savings Summary

Savings associated with this measure are shown in the following table.

Table 8: ECM-4 Annual Savings Summary

No.	Description	Natural Gas Savings (GJ)	Electricity Savings (kWh)	Utility Cost Savings ($)	Emissions Savings (tCO2e)	Capital Cost ($)	Payback Period (years)
ECM-4	DHW CO2 Heat Pumps	-	7,753	$758	0.1	$81,900	25+

6.6 ECM-5: Wallpack Battery for Demand Response

With new programs from CleanBC refocusing from full electrification to a more holistic review of grid integrity, opportunities for onsite power reserves may be explored for the purposes of peak demand period response.

.1 Measure Description

This measure would involve the installation of DC batteries, which would be used to help trim the building's electrical demand during BC's typical peak demand period of 4PM-8PM. These batteries would be activated to help supplement the building's power demand during this period, reducing the building's electrical consumption during this time. The battery array would then be charged overnight before being called upon again during the next peak demand period.

.2 Design Considerations

This measure is a relatively new consideration from CleanBC, but may be considered by building owners as a way of integrating on-site storage for other purposes as well, including power supply during power outages. This may couple well with the implementation of a PV array. For more information regarding this measure, refer to report under separate cover.

.3 Savings Summary

Savings associated with this measure are shown in the following table.

Table 9: ECM-5 Annual Savings Summary

No.	Description	Natural Gas Savings (GJ)	Electricity Savings (kWh)	Utility Cost Savings ($)	Emissions Savings (tCO2e)	Capital Cost ($)	Payback Period (years)
ECM-5	Wallpack Battery for Demand Response	-	-	$500	-	$150,000	25+

6.7 ECM-6: ASHP Connected to Fire Hall Garage

This measure would include installing a wall-cassette DX Split with heating and cooling capacity to the Fire Hall.

.1 Measure Description

Although heat for the Fire Hall is provided through an electric resistance radiant floor and this system is expected to evenly heat the garage, the overall efficiency of the radiant floor is similar to an electric baseboard heater. This measure would involve the installation of a wall-mounted cassette connected to a DX Split with heat pump capacity in the fire hall, which would be capable of heating the garage as a first priority before the radiant floor is called upon. This would prioritize the use of the air-source heat pump before activating the radiant floor system. The new heat pump system would be expected to operate at a higher coefficient of performance, thus mitigating a significant proportion of the cost of heating the fire hall garage.

.2 Design Considerations

Savings for this measure are dependent on the size of air-source heat pump installed; since the cost per-unit of heating capacity in an air-source heat pump is relatively high and the rest of the fire hall garage's heating capacity is already electrified, the new ASHP would not need to be fully sized for peak heating demand; savings for this measure are based on having a maximum of 24,000 BTU/h of heating capacity available from the new ASHP. The wall cassette should be located where the garage is the most occupied, and the condensing unit would be mounted on the garage roof.

.3 Savings Summary

Savings associated with this measure are shown in the following table.

Table 10: ECM-6 Annual Savings Summary

No.	Description	Natural Gas Savings (GJ)	Electricity Savings (kWh)	Utility Cost Savings ($)	Emissions Savings (tCO2e)	Capital Cost ($)	Payback Period (years)
ECM-6	ASHP Connected to Fire Hall Garage	-	40,511	$3,962	0.5	$35,100	8.9

6.8 ECM-7: Solar Thermal Collector

The opportunity exists to install a partial solar thermal collector for heating domestic hot water.

.1 Measure Description

This measure would include the installation of a vacuum-tube solar thermal collector on the roof of the municipal hall, with the intention of using it for pre-heating domestic hot water serving the domestic hot water tank in the basement. This system would allow for electric resistance heating demand on this domestic hot water tank to be mitigated directly. This system may be expanded to other domestic hot water plants, or to other hydronic heating applications.

.2 Design Considerations

This solar thermal collector should be selected as a vacuum tube as opposed to a flat plate configuration; a vacuum tube solar collector is expected to be able to heat to a higher temperature and with lower outdoor air temperatures than a flat plate solar collector, making it more applicable for domestic hot water heating. Solar thermal collectors should also always be installed with heat rejection capacity to prepare for any condition where the solar collector has heated the water in the domestic hot water system to it's maximum and the temperature of the water in the solar collector is still rising. This new system would be installed on the roof of the municipal building with piping routed from the roof to the basement mechanical room, and would use a heat exchanger and circulation pump to share heat with potable water. The water loop connected directly to the solar collector would require glycol as freeze protection, preventing circulated water from freezing during winter conditions.

.3 Savings Summary

Savings associated with this measure are shown in the following table.

Table 11: ECM-7 Annual Savings Summary

No.	Description	Natural Gas Savings (GJ)	Electricity Savings (kWh)	Utility Cost Savings ($)	Emissions Savings (tCO2e)	Capital Cost ($)	Payback Period (years)
ECM-7	Solar Thermal Collector (DHW)	-	3,848	$376	0.0	$26,650	25+

6.9 ECM-8: FL Lighting Conversion to LED

This measure reflects a high level of conversion from fluorescent lighting to LED fixtures, maintaining a consistent lighting intensity. More information will be available under separate cover.

.1 Measure Description

The opportunity exists to retrofit the lighting fixtures in the building to LED from their original fluorescent selections. This would be expected to lower electricity use and building peak demand.

.2 Design Considerations

For more design considerations for this measure, refer to report under separate cover.

.3 Savings Summary

Savings associated with this measure are shown in the following table.

Table 12: ECM-8 Annual Savings Summary

No.	Description	Natural Gas Savings (GJ)	Electricity Savings (kWh)	Utility Cost Savings ($)	Emissions Savings (tCO2e)	Capital Cost ($)	Payback Period (years)
ECM-8	FL Lighting Conversion to LED	-	8,000	575	-	$135,000	25+

6.10 ECM-9: Conversion to Distributed VRF

The opportunity may exist to retrofit the mechanical systems of the Municipal Hall more comprehensively, converting the building to a full variable refrigerant flow (VRF) system.

.1 Measure Description

This measure would include retrofitting the mechanical systems serving the municipal hall, police station, and fire hall with a new VRF heat recovery system; in discussions with the District of Central Saanich, a more thorough and comprehensive conversion for the building's mechanical systems could be of interest; where different mechanical systems have been installed to the building throughout its service life, these mechanical systems do not communicate with one another, and do not recover heat from those spaces with cooling demand to other spaces that require heating. If a major renovation of the property is under consideration, a VRF system would include the installation of new condensing units on the roof, distributed refrigerant-based manifolds throughout the building, and refrigerant coils connected to the building's ventilation systems and heating systems. This system allows for heat to be recovered from spaces with cooling demand to other spaces in the building, provides air-source heat pump technology for both heating and cooling to all connected areas, and would combine the building's HVAC systems into one package. This could help streamline maintenance requirements for the building compared to maintaining completely separate mechanical systems, and may help to simplify the building's HVAC control systems by using a single digital platform.

.2 Design Considerations

This measure would clearly require a major shutdown of the building as the new VRF systems was being installed, making this measure's feasibility difficult outside of a building-wide renovation. VRF systems offer high energy efficiency, but also offer a risk by having all mechanical systems combined to one platform; detailed design, coordination with contractor hired to implement this system, and careful system commissioning is critical for long term system operation.

.3 Savings Summary

Savings associated with this measure are shown in the following table.

Table 13: ECM-8 Annual Savings Summary

No.	Description	Natural Gas Savings (GJ)	Electricity Savings (kWh)	Utility Cost Savings ($)	Emissions Savings (tCO2e)	Capital Cost ($)	Payback Period (years)
ECM-9	Conversion to Distributed VRF	-	205,936	$20,139	2.3	$3,217,500	25+

7. FINANCIAL MODELLING

This section shows the expected impacts of utility cost savings and cumulative cost savings between 2025 and 2050.

7.1 ECM-1: Convert Basement to Forced Air Heating – Financial Performance

The annual cost savings under this measure are shown in the following figure.

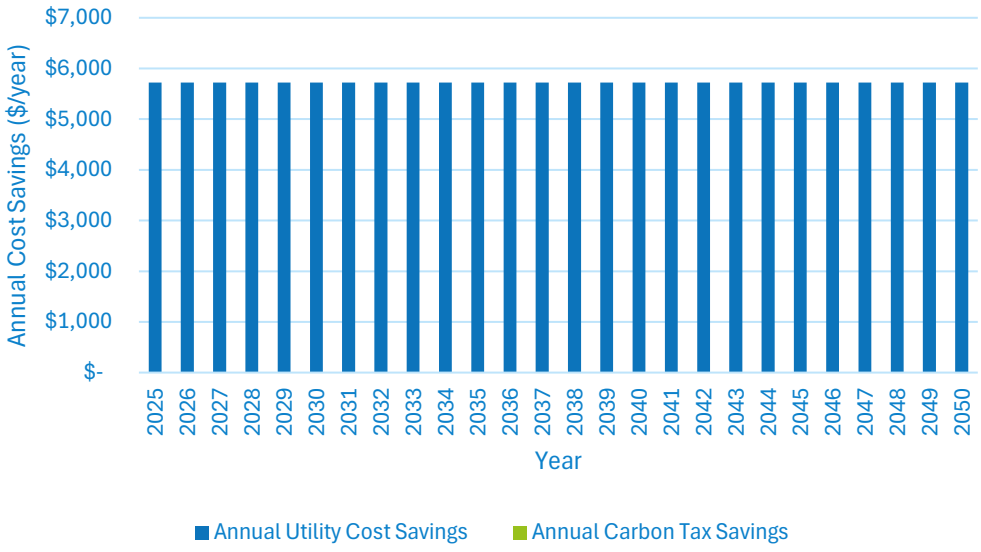

Figure 7: ECM-1 Annual Cost Savings

The assumed cost savings in 2025 versus 2050 is shown in the following table (shown in 2024 dollars).

Table 14: ECM-1 Cost Savings Summary

Description	Utility Cost Savings ($)	Carbon Tax Cost Savings ($)	Combined Cost Savings ($)
2025 Annual Cost Savings	$5,725	$-	$5,725
2030 Annual Cost Savings	$5,725	$-	$5,725

7.2 ECM-2: PV Array – Financial Performance

The annual cost savings under this measure are shown in the following figure.

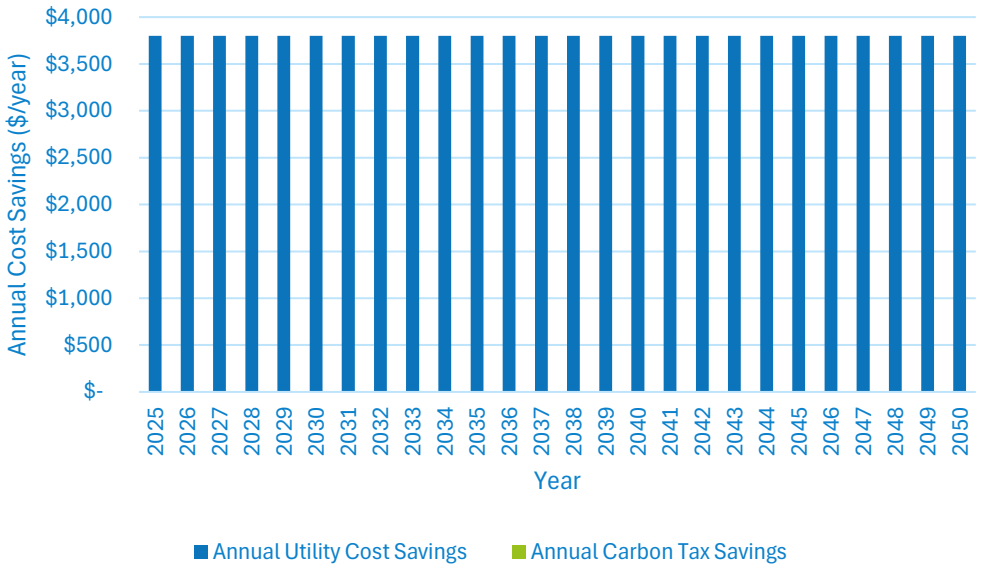

Figure 8: ECM-2 Annual Cost Savings

The assumed cost savings in 2025 versus 2050 is shown in the following table (shown in 2024 dollars).

Table 15: ECM-2 Cost Savings Summary

Description	Utility Cost Savings ($)	Carbon Tax Cost Savings ($)	Combined Cost Savings ($)
2025 Annual Cost Savings	$3,800	$-	$3,800
2030 Annual Cost Savings	$3,800	$-	$3,800

7.3 ECM-3: Ultra-Low Flow Hot Water Fixtures– Financial Performance

The annual cost savings under this measure are shown in the following figure.

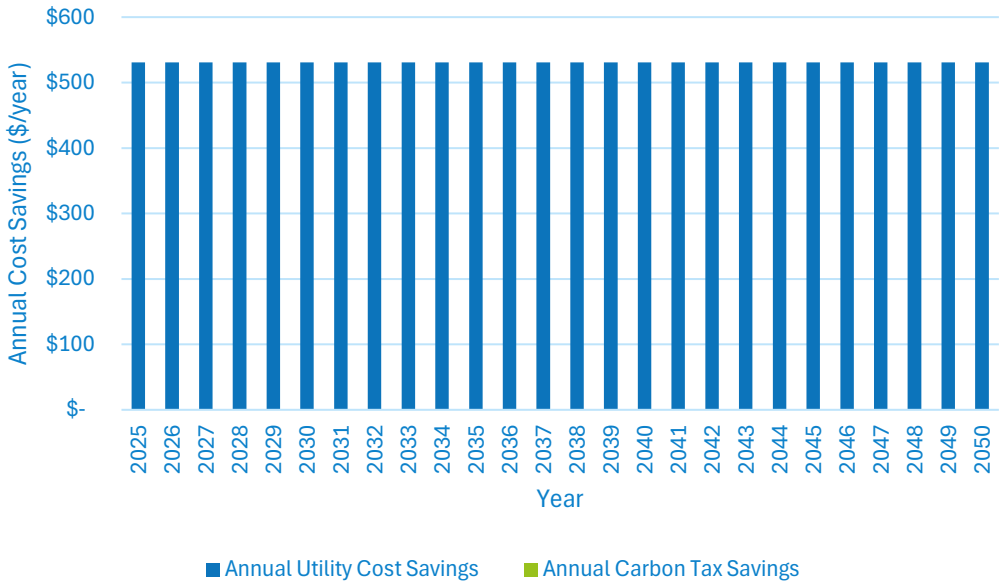

Figure 9: ECM-3 Annual Cost Savings

The assumed cost savings in 2025 versus 2050 is shown in the following table (shown in 2024 dollars).

Table 16: ECM-3 Cost Savings Summary

Description	Utility Cost Savings ($)	Carbon Tax Cost Savings ($)	Combined Cost Savings ($)
2025 Annual Cost Savings	$531	$-	$531
2030 Annual Cost Savings	$531	$-	$531

7.4 ECM-4: DHW CO2 Heat Pumps – Financial Performance

The annual cost savings under this measure are shown in the following figure.

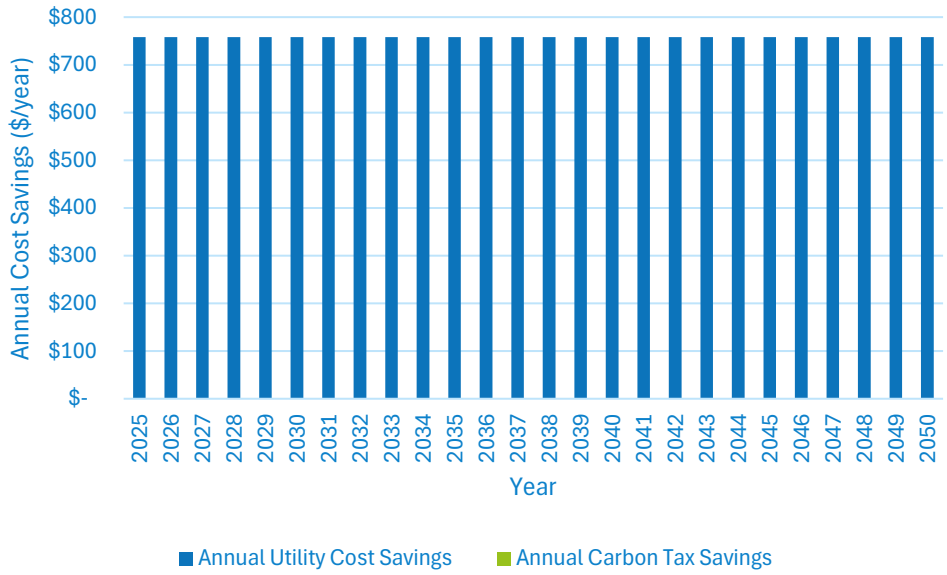

Figure 10: ECM-4 Annual Cost Savings

The assumed cost savings in 2025 versus 2050 is shown in the following table (shown in 2024 dollars).

Table 17: ECM-4 Cost Savings Summary

Description	Utility Cost Savings ($)	Carbon Tax Cost Savings ($)	Combined Cost Savings ($)
2025 Annual Cost Savings	$758	$-	$758
2030 Annual Cost Savings	$758	$-	$758

7.5 ECM-5: Wallpack Battery for Demand Response – Financial Performance

The annual cost savings under this measure are shown in the following figure.

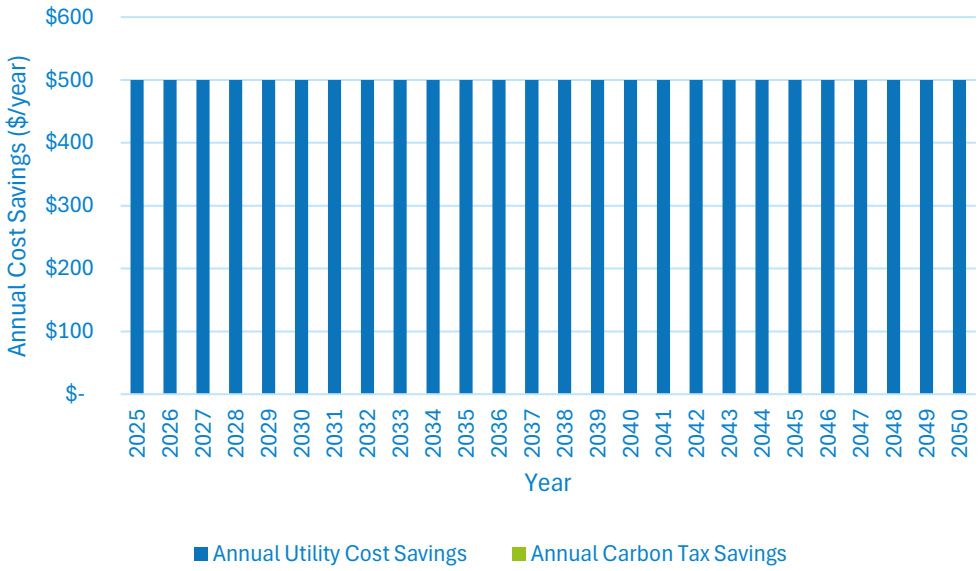

Figure 11: ECM-5 Annual Cost Savings

The assumed cost savings in 2025 versus 2050 is shown in the following table (shown in 2024 dollars).

Table 18: ECM-5 Cost Savings Summary

Description	Utility Cost Savings ($)	Carbon Tax Cost Savings ($)	Combined Cost Savings ($)
2025 Annual Cost Savings	$500	$-	$500
2030 Annual Cost Savings	$500	$-	$500

7.6 ECM-6: ASHP Connected to Fire Hall Garage– Financial Performance

The annual cost savings under this measure are shown in the following figure.

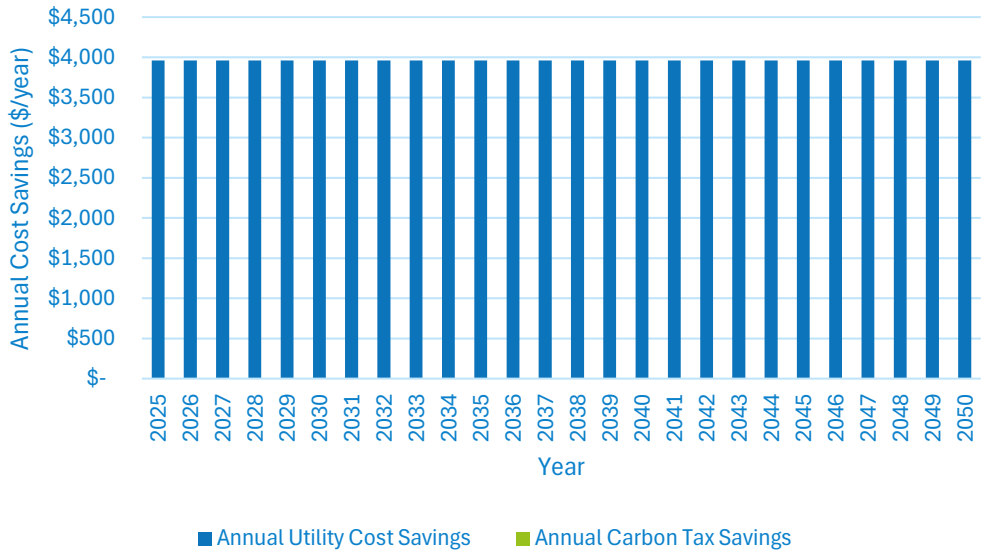

Figure 12: ECM-6 Annual Cost Savings

The assumed cost savings in 2025 versus 2050 is shown in the following table (shown in 2024 dollars).

Table 19: ECM-6 Cost Savings Summary

Description	Utility Cost Savings ($)	Carbon Tax Cost Savings ($)	Combined Cost Savings ($)
2025 Annual Cost Savings	$3,962	$-	$3,962
2030 Annual Cost Savings	$3,962	$-	$3,962

7.7 ECM-7: Solar Thermal Collector (DHW) – Financial Performance

The annual cost savings under this measure are shown in the following figure.

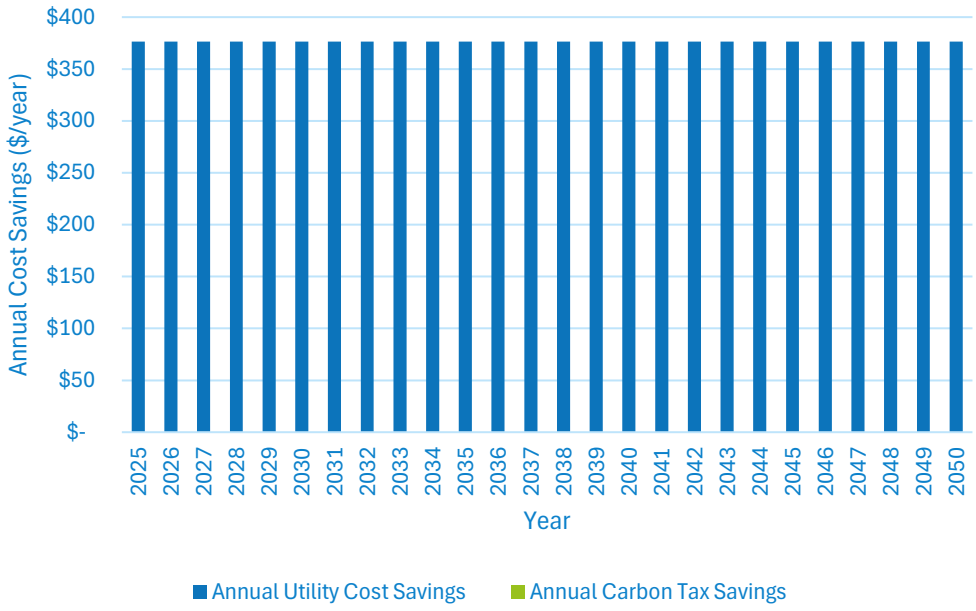

Figure 13: ECM-7 Annual Cost Savings

The assumed cost savings in 2025 versus 2050 is shown in the following table (shown in 2024 dollars).

Table 20: ECM-7 Cost Savings Summary

Description	Utility Cost Savings ($)	Carbon Tax Cost Savings ($)	Combined Cost Savings ($)
2025 Annual Cost Savings	$376	$-	$376
2030 Annual Cost Savings	$376	$-	$376

7.8 ECM-8: FL Lighting Conversion to LED – Financial Performance

The annual cost savings under this measure are shown in the following figure.

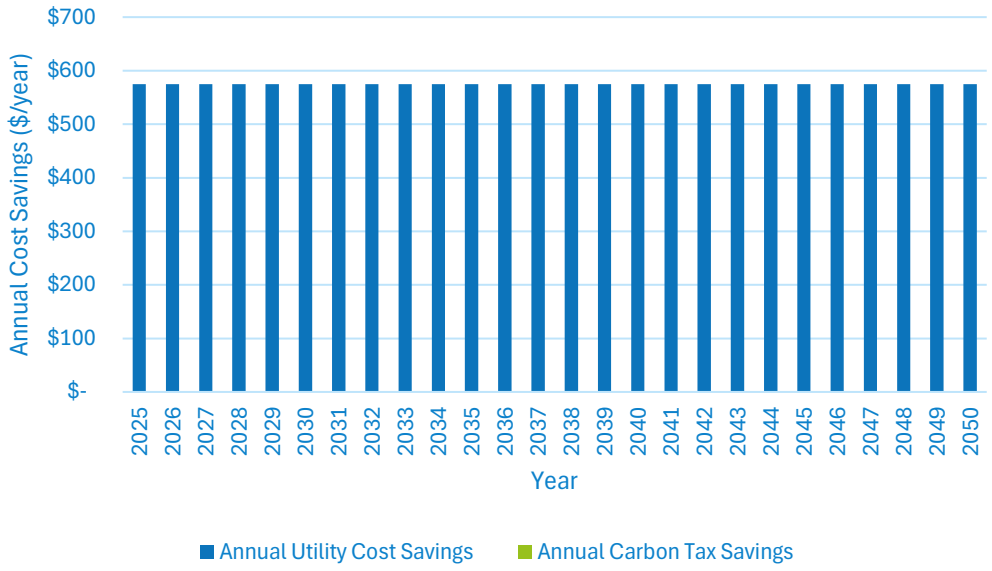

Figure 14: ECM-8 Annual Cost Savings

The assumed cost savings in 2025 versus 2050 is shown in the following table (shown in 2024 dollars).

Table 21: ECM-8 Cost Savings Summary

Description	Utility Cost Savings ($)	Carbon Tax Cost Savings ($)	Combined Cost Savings ($)
2025 Annual Cost Savings	$575	$-	$575
2030 Annual Cost Savings	$575	$-	$575

7.9 ECM-9: Conversion to Distributed VRF – Financial Performance

The annual cost savings under this measure are shown in the following figure.

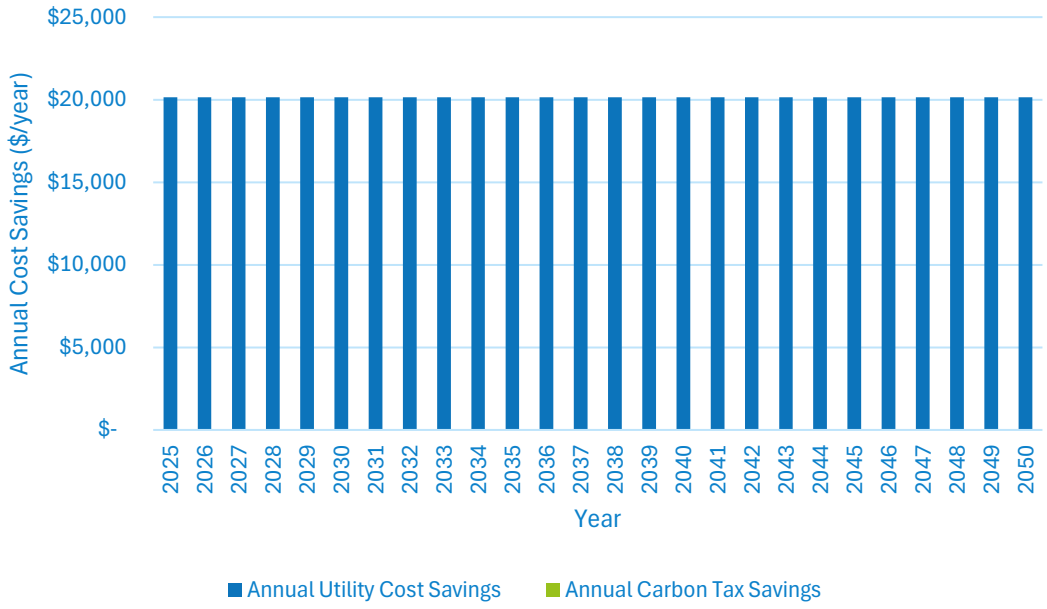

Figure 15: ECM-9 Annual Cost Savings

The assumed cost savings in 2025 versus 2050 is shown in the following table (shown in 2024 dollars).

Table 22: ECM-9 Cost Savings Summary

Description	Utility Cost Savings ($)	Carbon Tax Cost Savings ($)	Combined Cost Savings ($)
2025 Annual Cost Savings	$20,139	$-	$20,139
2030 Annual Cost Savings	$20,139	$-	$20,139

8. RECOMMENDATIONS AND CONCLUSION

This report investigated nine different opportunities for energy conservation at the District of Saanich's Municipal Hall, including energy efficiency measures, electrification measures, on site generation measures, and one demand response measure. The impact of these measures is summarized in the following table.

Table 23: ECM Savings Summary

No.	Description	Natural Gas Savings (GJ)	Electricity Savings (kWh)	Utility Cost Savings ($)	Emissions Savings (tCO2e)	Capital Cost ($)	Payback Period (year)
ECM-1	Convert Basement to Forced Air Heating	-	58,543	$5,725	0.7	$127,400	22.3
ECM-2	PV Array	-	52,000	$3,800	-	$215,000	25+
ECM-3	Ultra-Low Flow Hot Water Fixtures	-	5,427	$531	0.1	$37,700	25+
ECM-4	DHW CO2 Heat Pumps	-	7,753	$758	0.1	$81,900	25+
ECM-5	Wallpack Battery for Demand Response	-	-	$500	-	$150,000	25+
ECM-6	ASHP Connected to Fire Hall Garage	-	40,511	$3,962	0.5	$35,100	8.9
ECM-7	Solar Thermal Collector (DHW)	-	3,848	$376	0.0	$26,650	25+
ECM-8	FL Lighting Conversion to LED	-	8,000	575	-	$135,000	25+
ECM-9	Conversion to Distributed VRF	-	205,936	$20,139	2.3	$3,217,500	25+

It is recommended that ECM-1 is carried out to improve occupant comfort through improved ventilation. It's also recommended that ECM-6 and ECM-8 are considered for implementation to significantly reduce the amount of electricity needed to meet heating demand. If a more comprehensive retrofitting of the building is being considered, then ECM-9 would be considered as a suitable design alternative to like-for-like replacements of major mechanical equipment.

END OF REPORT

DISTRICT OF CENTRAL SAANICH – PUBLIC WORKS

Project No.: 000b-1476-24
1512 Keating Cross Rd, Saanichton, BC V8M 1W9

Integrated Energy Audit Report

December 6, 2024

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PROFESSIONAL'S SEAL & SIGNATURE

TABLE OF CONTENTS

1. EXECUTIVE SUMMARY

The AME group was retained by the District of Central Saanich to investigate opportunities for energy conservation, electrification, installing demand response capacity, and installing behind-the-meter power generation at four of their facilities. This report describes the AME Group's findings for their Public Works property; these reports have been developed under CleanBC's Integrated Energy Audit program. This report investigated seven different opportunities for energy conservation including energy efficiency measures, electrification measures, on site generation measures, and one demand response measure. The impact of these measures is summarized in the following table.

Table 1: ECM Savings Summary Table

No.	Description	Natural Gas Savings (GJ)	Electricity Savings (kWh)	Utility Cost Savings ($)	Emissions Savings (tCO2e)	Capital Cost ($)	Payback Period (year)
ECM-1	Convert Garage Heating Unit to DX Heat Pump Split w/ Gas Fired Back-Up	124	(9,526)	$786	6.1	$56,550	25+
ECM-2	Convert Office and Locker Room Ductless Units to Heat Pump Capacity	-	14,484	$1,410	0.2	$27,300	19.4
ECM-3	DHW CO2 Heat Pumps	-	2,482	$242	0.0	$27,950	25+
ECM-4	Convert Upper Office Area to Forced Air	-	3,623	$353	0.0	$80,600	25+
ECM-5	PV Panel Array	-	20,000	$1,480	-	$100,000	25+
ECM-6	LED Lighting Conversion	-	2,695	$190	0.0	$2,000	10.5
ECM-7	Convert Window Units to HP Ductless Splits	-	3,623	$353	0.0	$21,450	25+

It is recommended that ECM-1 is carried out as the highest priority for decarbonization since the garage heater is the only major consumer of natural gas and can be retrofitted to a hybrid heating system. ECM-2, ECM-3, and ECM-7 may be considered as long term retrofits towards more highly efficient mechanical heating equipment, albeit with mixed financial performances.

2. INTRODUCTION

The AME group was retained by the District of Central Saanich to investigate opportunities for energy conservation, electrification, installing demand response capacity, and installing behind-the-meter power generation at four of their facilities. This report describes the AME Group's findings for their Public Works property; these reports have been developed under CleanBC's Integrated Energy Audit program.

3. BUILDING DESCRIPTION

This section provides a description of the property as a whole, its mechanical systems, and its primary energy consumers.

3.1 General Description

The Public Works site is located along Keating Cross Road, and is used for storing tools, training municipal workers, and acting as a logistical hub for the municipality. It consists of small front office, office spaces on the upper floor, training rooms and changerooms on the ground level, several isolated office spaces, a kitchen on the upper level in the main building. The secondary building is used mainly for storage and as a covered garage for service vehicles, but includes small workshops and some distributed office spaces. Several other structures exist on the property including two small workshops heated by electrical resistance unit heaters, and two outdoor storage buildings. The property includes three level 2 (6-7kW) electric vehicle (EV) chargers along its outdoor parking stalls.

3.2 Heating & Cooling Systems

The main building's heating is primarily provided through electric resistance baseboards, with a small DX spit serving the front office and "window-shaker" condensing units serving the upper office spaces. The main building's garage space is heated through a central gas-fired air handling unit located along its upper ceiling.

Figure 1: Main Building Gas-Fired Air Handling Unit

Figure 2: Front Office Wall-Mounted Cassette

Figure 3: Common Space Wall-Mounted Cassette

Figure 4: Upper Office "Window-Shaker" Condensing Unit

Figure 5: Locker Room Wall-Mounted Cassette

The secondary building has distributed electric resistance unit heaters that are activated by workers on an as-needed basis during winter, and is not fitted with distributed cooling capacity.

Figure 6: Typical Secondary Building Unit Heater

3.3 Ventilation System

Neither the main building or secondary building are fitted with a central ventilation system aside from the air handler serving the garage in the main building. Passive ventilation is understood to be used through opening windows or propping open doors.

3.4 Domestic Hot Water System

The main building's domestic hot water system consists of one electric hot water tank with 48 gallons of storage volume and 5,250 watts of hot water heating capacity. This tank is used mainly to provide hot water to sinks in the kitchen and washrooms.

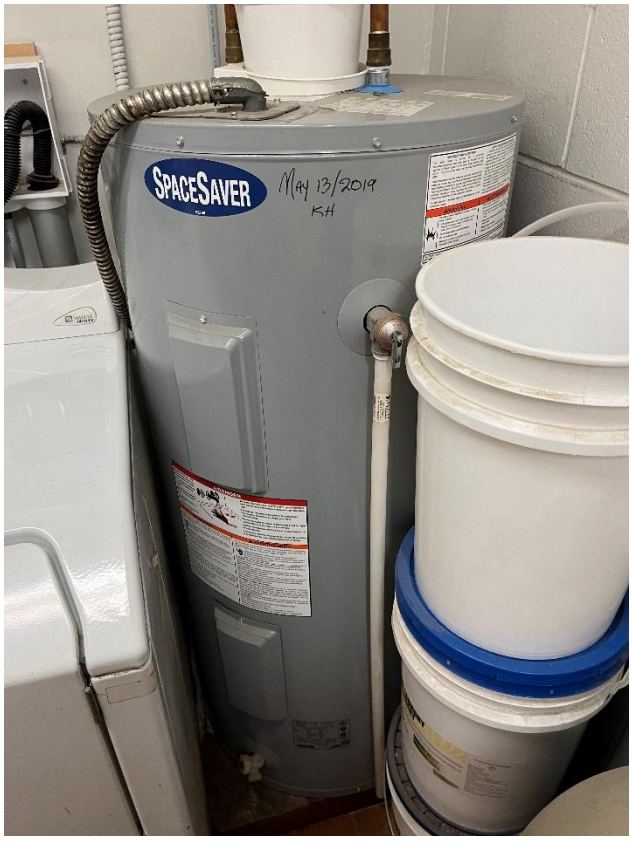

Figure 7: Main Building Domestic Hot Water Tank

4. UTILITY ANALYSIS

This section provides insight to the energy use in this building, with a focus on the proportion of energy use between electricity and natural gas. This is used to provide context for energy savings associated with energy conservation measures (ECMs) explored in later sections of this report.

4.1 Energy Proportion Breakdown

The building's energy use is broken down by source type in the following figure.

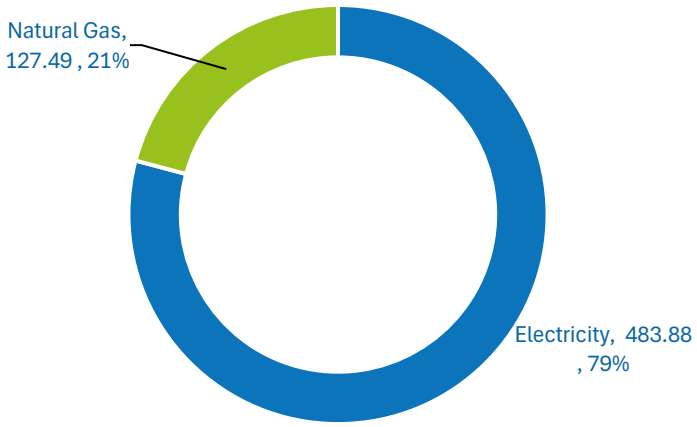

Figure 8: Energy Use Proportion By Source Type (2023)[1]

While the overall proportion of natural gas use may seem small compared to the property's electricity consumption (21% for natural gas and 79% for electricity), it should be noted that the only piece of equipment that uses natural gas on site is the air handling unit serving the garage in the main building; this means that this equipment uses 21% of the site's energy.

The building's utility costs are broken down by source type in the following figure.

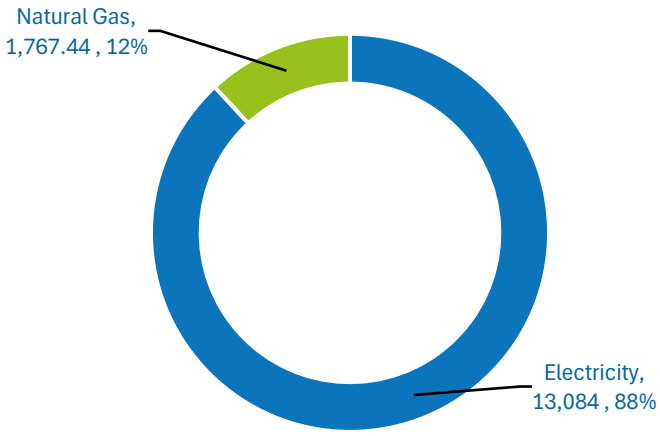

Figure 9: Energy Utility Costs By Source Type (2023)[2]

The utility costs associated with electricity represent 88% of the building's total energy costs; this is reflective of the fact that electricity costs more per unit of energy than natural gas.

[1] Natural gas use quantities shown in gigajoules (GJ).
[2] Utility costs are shown in dollars ($CAD)

The building's energy-related emissions are broken down by source type in the following figure.

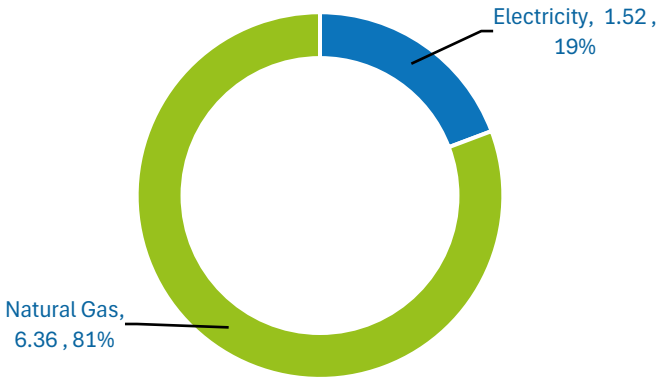

Figure 10: Energy Emissions by Source Type (2023)[3]

Despite only accounting for 21% of the building's total energy use, natural gas accounted for 81% of all energy-related emissions; this is reflective of the fact that electricity is has a much lower emission rate per unit energy than natural gas.

4.2 Load Distribution Curve

A load distribution curve of the property's electricity consumption is shown in the following graph.

[3] Emission quantities shown in equivalent-tonnes of carbon dioxide (tCO_2e).

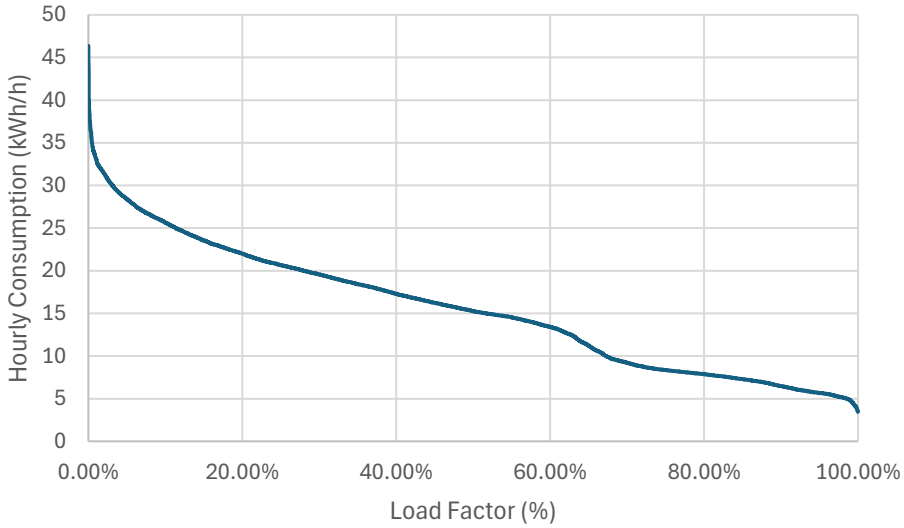

Figure 11: Electricity Load Distribution Curve

This load distribution curve helps to highlight how often the property draws different rates of energy per hour; key takeaways from the load distribution curve are that the building's power consumption never dropped below 3kW and that although the building's highest hourly consumption was 46.4kW, less than 1% of hours were spend with more than 34kW.

4.3 Energy Use Regression Curve

Using utility data from the 2023 calendar year, the AME Group was able to develop a linear regression reflecting the property's electricity and natural gas use using heating-degree days as an independent variable.

The linear regression developed for the building's electricity use is shown in the following figure.

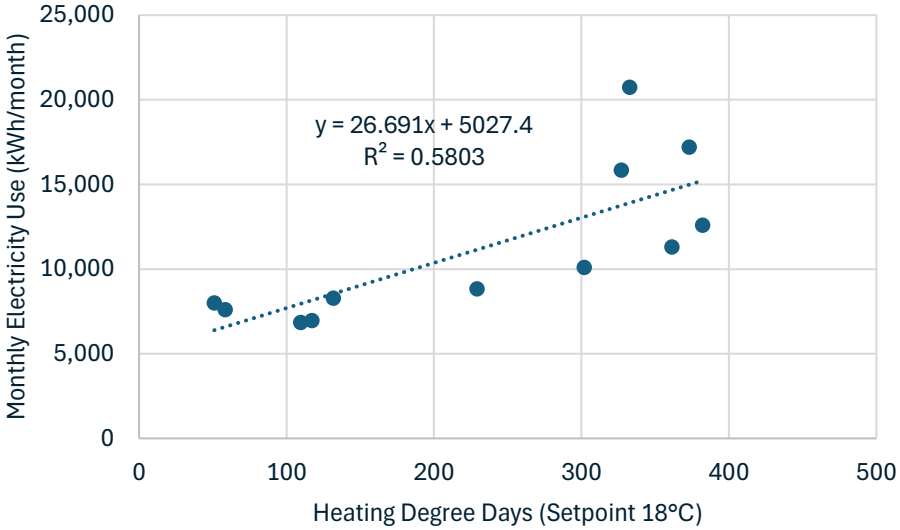

Figure 12: Electricity Linear Regression VS HDD (2023)

The linear correlation between electricity and heating degree days is considered relatively weak, as the threshold for being considered a reliably correlated regression requires an R^2 correlation factor of 0.75 or higher; as shown in the previous graph, the model's correlation factor results in 0.5803. Although this may not be a reliable way to model or predict energy use, it does shown that electricity consumption generally increases when outdoor air temperatures decrease. This reflects the fact that the buildings on site are heated using electric resistance unit heaters and the property has relatively little air conditioning.

The linear regression developed for the building's natural gas use is shown in the following figure.

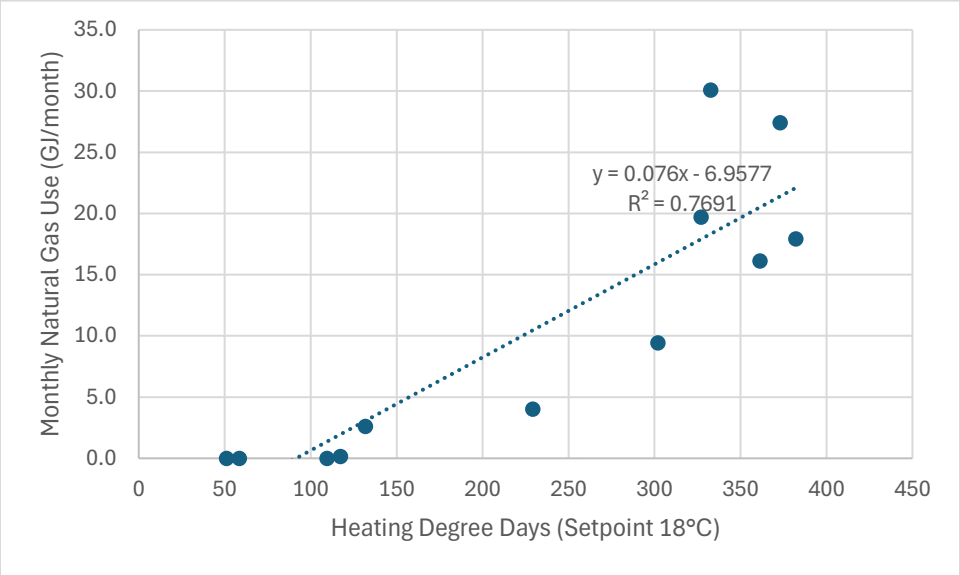

Figure 13: Natural Gas Linear Regression VS HDD (2023)

As shown in the previous figure, the correlation between natural gas and heating degree days is stronger than that of electricity; this could be explained by the fact that the main building's garage air handling unit's heating is only activated to maintain the temperature in the garage during winter seasons and its heating demand is expected to increase as outdoor air temperatures decrease.

5. KEY INPUTS AND ASSUMPTIONS

Several common key inputs applied to the building's ECMs are summarized in the following table.

Table 2: Summary of Key Inputs and Assumptions

Description	Quantity	Unit
Blended Cost of Electricity	0.097 (27.04)	$/kWh ($/eGJ)
Blended Cost of Natural Gas	13.86 (0.050)	$/GJ ($/ekWh)
Electricity Emission Factor	11.3	tCO_2e/GWh
Natural Gas Emission Factor	49.87	$kgCO_2e/GJ$

6. ENERGY CONSERVATION MEASURES

This section describes the energy conservation measures (ECMs) investigated as part of this report. These measures are intended to help provide insight to the building's largest energy consumers and to describe opportunities for energy conservation in the building at a high level.

6.1 Base Case

Before exploring the ECMs investigated in this report, the base case considered should be made clear; the base case for these measures is considered to be the continued operation of the building in a business-as-usual fashion, with no major mechanical equipment retrofits considered in the short-term future. Energy consumption from the 2023 calendar year was used as a reference when developing these energy savings, utility cost savings, and emissions savings amounts.

6.2 ECM-1: Convert Garage Heating Unit to DX Heat Pump Split w/ Gas Fired Back-Up

The first measure considered in this report includes adding heat pump-based heating capacity to the main building's garage.

.1 Measure Description

This measure would include the addition of a 5 ton air-source heat pump (ASHP) to supplement the heating demand of the garage. This would involve installing the ASHP's condensing unit to the opposite side of the wall from the garage on the roof and connecting a refrigerant-based heating coil in the supply air stream of the current air handling unit. This would allow the new ASHP to act as the main heat source for the air handling unit, with the gas-fired heater acting as backup. This measure would also have the added benefit of installing cooling to the garage space, since the ASHP would be able to switch to a cooling mode during summer conditions.

.2 Design Considerations

This measure could be implemented in other ways than that described in the previous section; although the main priority of this measure would be to mitigate gas-fired heating from the air handling unit, the installation of an ASHP could be expanded to other spaces in the building, installed as wall-hung cassettes in the garage, or installed as a shared hydronic loop for other spaces in the building.

.3 Savings Summary

Savings associated with this measure are shown in the following table.

Table 3: ECM-1 Annual Savings Summary

No.	Description	Natural Gas Savings (GJ)	Electricity Savings (kWh)	Utility Cost Savings ($)	Emissions Savings (tCO2e)	Capital Cost ($)	Payback Period (year)
ECM-1	Convert Garage Heating Unit to DX Heat Pump Split w/ Gas Fired Back-Up	124	(9,526)	$786	6.1	$56,550	25+

6.3 ECM-2: Convert Office and Locker Room Ductless Units to Heat Pump Capacity

This measure explores the opportunity to supplement the office and locker rooms with heat pump capacity.

.1 Measure Description

This measure would include the replacement of the current ductless mini-splits serving the upper office and locker room. This would help mitigate heating supplied from baseboard heaters during winter.

.2 Design Considerations

This measure would aim to re-use the power supplies from the current DX cooling units for the new ASHPs, and would aim to use the same refrigerant line routing plan as the current cooling system to minimize capital cost.

.3 Savings Summary

Savings associated with this measure are shown in the following table.

Table 4: ECM-2 Annual Savings Summary

No.	Description	Natural Gas Savings (GJ)	Electricity Savings (kWh)	Utility Cost Savings ($)	Emissions Savings (tCO2e)	Capital Cost ($)	Payback Period (year)
ECM-2	Convert Office and Locker Room Ductless Units to Heat Pump Capacity	-	14,484	$1,410	0.2	$27,300	19.4

6.4 ECM-3: DHW CO2 Heat Pumps

This measure explores the installation of CO_2 Heat Pumps to help provide domestic hot water to the main building.

.1 Measure Description

This measure would include the installation of a CO_2 air source heat pump for DHW production for the main building; this would be selected as 1-2 condensing units which would be located at the roof level, with a piped connection between the DHW supply and DCW makeup line. This would allow the new ASHP to slowly heat the cold water in the existing storage tank, such that the tank could be heated overnight ahead of any hot water use from the morning shift. This hot water tank is expected to have relatively high demand for its size since it serves the main building's handwash sinks.

.2 Design Considerations

Although this opportunity helps to mitigate electricity consumption, some controls recommissioning would be required to ensure that the existing tank does not activate its heating element unless the tank is either about to run out of hot water after a peak demand period, or if the heat pump is unable to provide hot water back to the tank. The new CO_2 ASHP would also need to be selected with a dedicated circulator pump.

.3 Savings Summary

Savings associated with this measure are shown in the following table.

Table 5: ECM-3 Annual Savings Summary

No.	Description	Natural Gas Savings (GJ)	Electricity Savings (kWh)	Utility Cost Savings ($)	Emissions Savings (tCO2e)	Capital Cost ($)	Payback Period (year)
ECM-3	DHW CO2 Heat Pumps	-	2,482	$242	0.0	$27,950	25+

6.5 ECM-4: Convert Upper Office Area to Forced Air

This measure explores the potential methods for retrofitting the upper office to a forced air system.

.1 Measure Description

This measure would include the installation of an HRV to bring in fresh air to the upper office space, along with a forced air duct capable of bringing ventilation air to the common area on the upper floor. This would involve the installation of a rooftop unit (RTU) to the main building with an integral HRV and ASHP. This measure would have the added benefit of added outdoor air turnover and ASHP heating capacity to the space.

.2 Design Considerations

This measure may be implemented in other ways than what was previously described; instead of installing an RTU, a wall-based HRV may be installed along with a separate wall-mounted DX cassette with heating and cooling capacity; an RTU may be simpler to expand to any other spaces, but a wall-based HRV is expected to have a lower capital cost.

.3 Savings Summary

Savings associated with this measure are shown in the following table.

Table 6: ECM-4 Annual Savings Summary

No.	Description	Natural Gas Savings (GJ)	Electricity Savings (kWh)	Utility Cost Savings ($)	Emissions Savings (tCO2e)	Capital Cost ($)	Payback Period (year)
ECM-4	Convert Upper Office Area to Forced Air	-	3,623	$353	0.0	$80,600	25+

6.6 ECM-5: PV Panel Array

For more information on this measure, refer to the report under separate cover.

.1 Savings Summary

Savings associated with this measure are shown in the following table.

Table 7: ECM-5 Annual Savings Summary

No.	Description	Natural Gas Savings (GJ)	Electricity Savings (kWh)	Utility Cost Savings ($)	Emissions Savings (tCO2e)	Capital Cost ($)	Payback Period (year)
ECM-5	PV Panel Array	-	20,000	$1,480	-	$100,000	25+

6.7 ECM-6: LED Lighting Conversion

This measure would seek to replace the fluorescent T5 bulbs currently used in the secondary building's garage spaces.

.1 Measure Description

The opportunity exists to retrofit the lighting fixture in the secondary building's garage spaces from T5 fluorescent to LED. This would be expected to lower electricity use and building peak demand.

.2 Design Considerations

For more design considerations for this measure, refer to the report under separate cover.

.3 Savings Summary

Savings associated with this measure are shown in the following table.

Table 8: ECM-6 Annual Savings Summary

No.	Description	Natural Gas Savings (GJ)	Electricity Savings (kWh)	Utility Cost Savings ($)	Emissions Savings (tCO2e)	Capital Cost ($)	Payback Period (year)
ECM-6	LED Lighting Conversion	-	2,695	$190	0.0	$2,000	10.5

6.8 ECM-7: Convert Window Units to HP Ductless Splits

This measure explores retrofit options for the "window-shaker" condensing units currently used in the upper office area.

.1 Measure Description

Under this measure, the window-mounted condensing units in the upper office would be replaced with wall-hung heat pump cassettes with both heating and cooling capacity. This would be expected to mitigate electricity consumption from the baseboard heaters in this space during winter.

.2 Design Considerations

This new arrangement would require an ASHP to be mounted on the main building's outer roof, with refrigerant routed through the wall to the wall-hung cassette.

.3 Savings Summary

Savings associated with this measure are shown in the following table.

Table 9: ECM-7 Annual Savings Summary

No.	Description	Natural Gas Savings (GJ)	Electricity Savings (kWh)	Utility Cost Savings ($)	Emissions Savings (tCO2e)	Capital Cost ($)	Payback Period (year)
ECM-7	Convert Window Units to HP Ductless Splits	-	3,623	$353	0.0	$21,450	25+

7. FINANCIAL MODELLING

This section shows the expected impacts of utility cost savings and cumulative cost savings between 2025 and 2050.

7.1 ECM-1: Convert Garage Heating Unit to DX Heat Pump Split w/ Gas Fired Back-Up – Financial Performance

The annual cost savings under this measure are shown in the following figure.

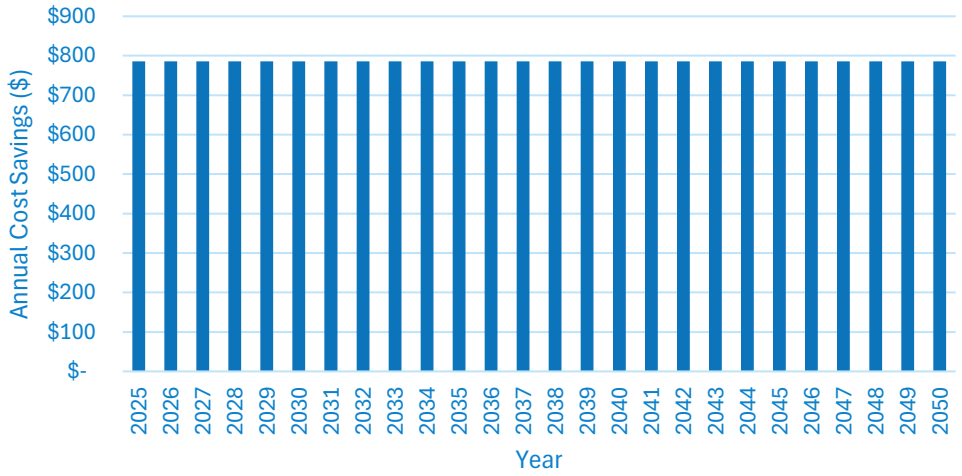

Figure 14: ECM-1 Annual Cost Savings

The assumed cost savings in 2025 versus 2050 is shown in the following table (shown in 2024 dollars).

Table 10: ECM-1 Cost Savings Summary

Description	Utility Cost Savings ($)	Carbon Tax Cost Savings ($)	Combined Cost Savings ($)
2025 Annual Cost Savings	$786	$-	$786
2030 Annual Cost Savings	$786	$-	$786

7.2 ECM-2: Convert Office and Locker Room Ductless Units to Heat Pump Capacity – Financial Performance

The annual cost savings under this measure are shown in the following figure.

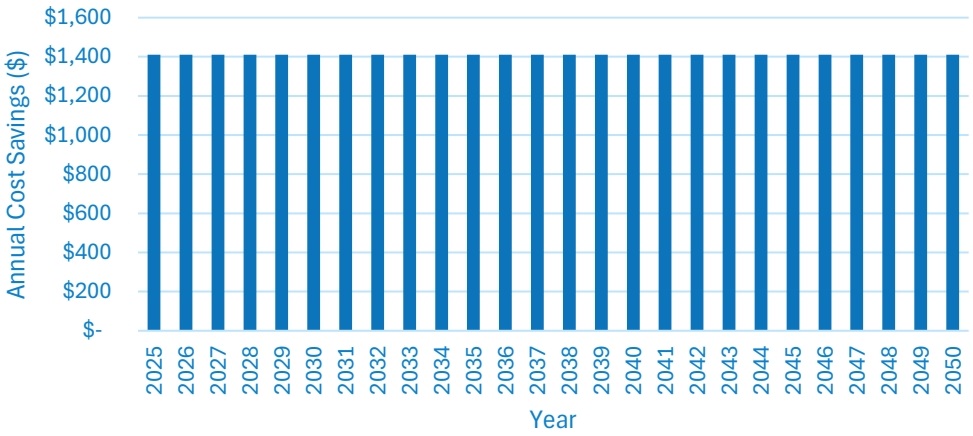

Figure 15: ECM-2 Annual Cost Savings

The assumed cost savings in 2025 versus 2050 is shown in the following table (shown in 2024 dollars).

Table 11: ECM-2 Cost Savings Summary

Description	Utility Cost Savings ($)	Carbon Tax Cost Savings ($)	Combined Cost Savings ($)
2025 Annual Cost Savings	$1,410	$-	$1,410
2030 Annual Cost Savings	$1,410	$-	$1,410

7.3 ECM-3: DHW CO2 Heat Pumps – Financial Performance

The annual cost savings under this measure are shown in the following figure.

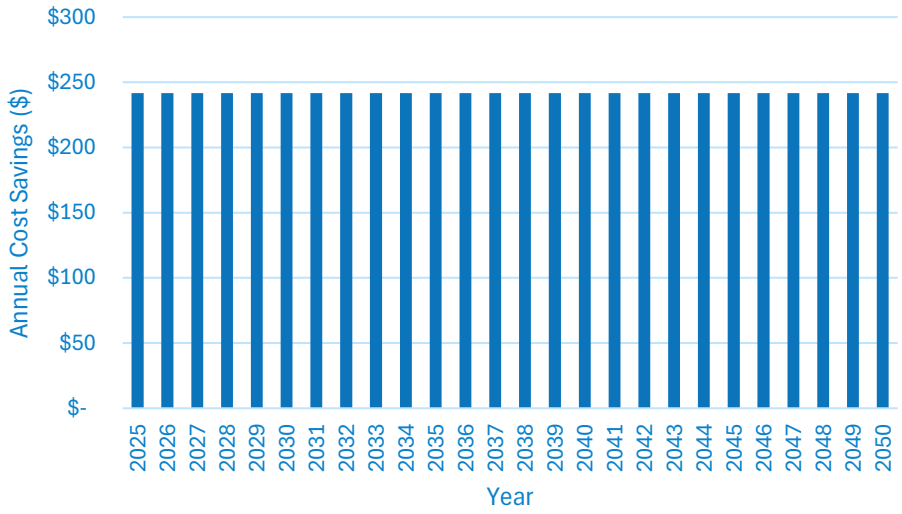

Figure 16: ECM-3 Annual Cost Savings

The assumed cost savings in 2025 versus 2050 is shown in the following table (shown in 2024 dollars).

Table 12: ECM-3 Cost Savings Summary

Description	Utility Cost Savings ($)	Carbon Tax Cost Savings ($)	Combined Cost Savings ($)
2025 Annual Cost Savings	$242	$-	$242
2030 Annual Cost Savings	$242	$-	$242

7.4 ECM-4: Convert Upper Office Area to Forced Air – Financial Performance

The annual cost savings under this measure are shown in the following figure.

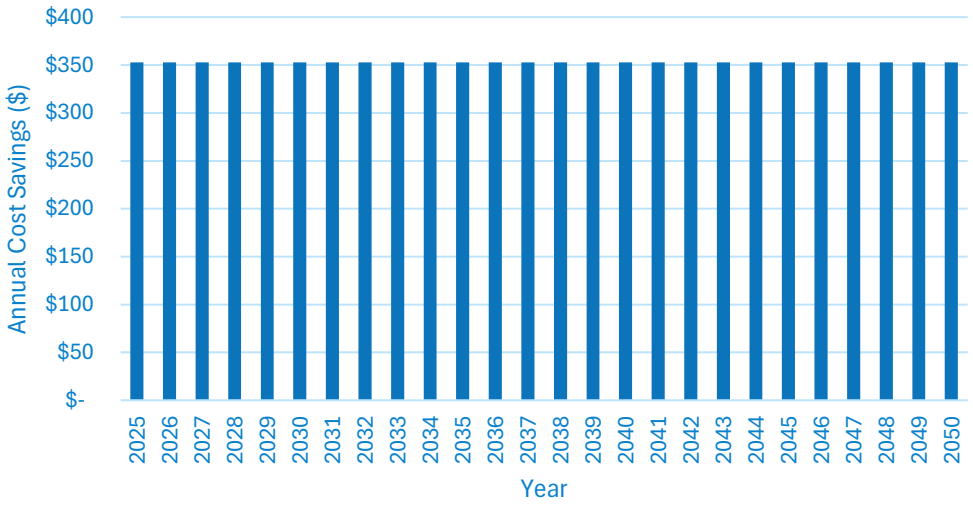

Figure 17: ECM-4 Annual Cost Savings

The assumed cost savings in 2025 versus 2050 is shown in the following table (shown in 2024 dollars).

Table 13: ECM-4 Cost Savings Summary

Description	Utility Cost Savings ($)	Carbon Tax Cost Savings ($)	Combined Cost Savings ($)
2025 Annual Cost Savings	$353	$-	$353
2030 Annual Cost Savings	$353	$-	$353

7.5 ECM-5: PV Panel Array – Financial Performance

The annual cost savings under this measure are shown in the following figure.

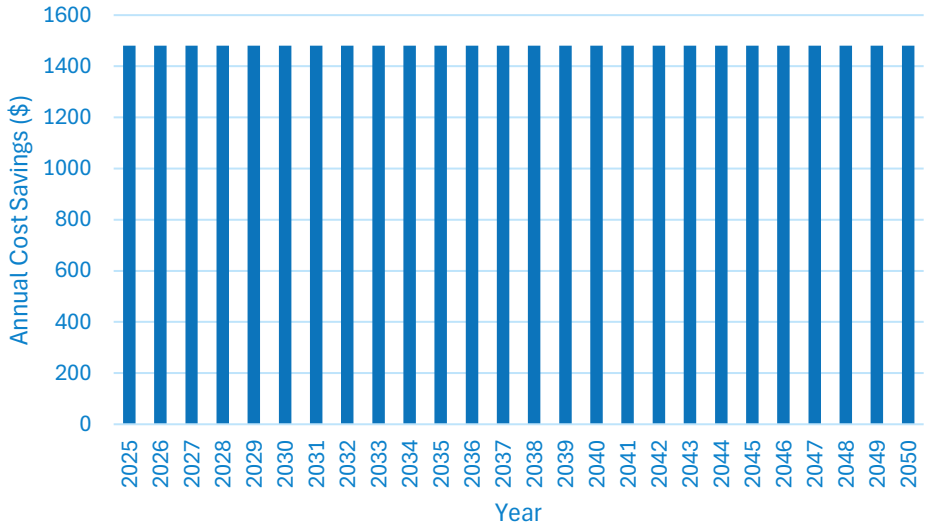

Figure 18: ECM-5 Annual Cost Savings

The assumed cost savings in 2025 versus 2050 is shown in the following table (shown in 2024 dollars).

Table 14: ECM-5 Cost Savings Summary

Description	Utility Cost Savings ($)	Carbon Tax Cost Savings ($)	Combined Cost Savings ($)
2025 Annual Cost Savings	$1,480	$-	$1,480
2030 Annual Cost Savings	$1,480	$-	$1,480

7.6 ECM-6: LED Lighting Conversion – Financial Performance

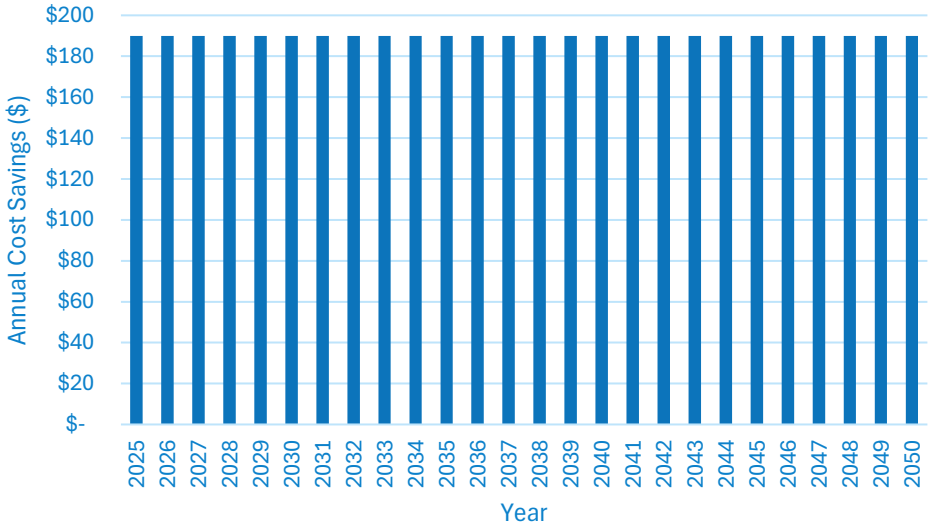

Figure 19: ECM-6 Annual Cost Savings

The assumed cost savings in 2025 versus 2050 is shown in the following table (shown in 2024 dollars).

Table 15: ECM-6 Cost Savings Summary

Description	Utility Cost Savings ($)	Carbon Tax Cost Savings ($)	Combined Cost Savings ($)
2025 Annual Cost Savings	$190	$-	$190
2030 Annual Cost Savings	$190	$-	$190

7.7 ECM-7: Convert Window Units to HP Ductless Splits – Financial Performance

The annual cost savings under this measure are shown in the following figure.

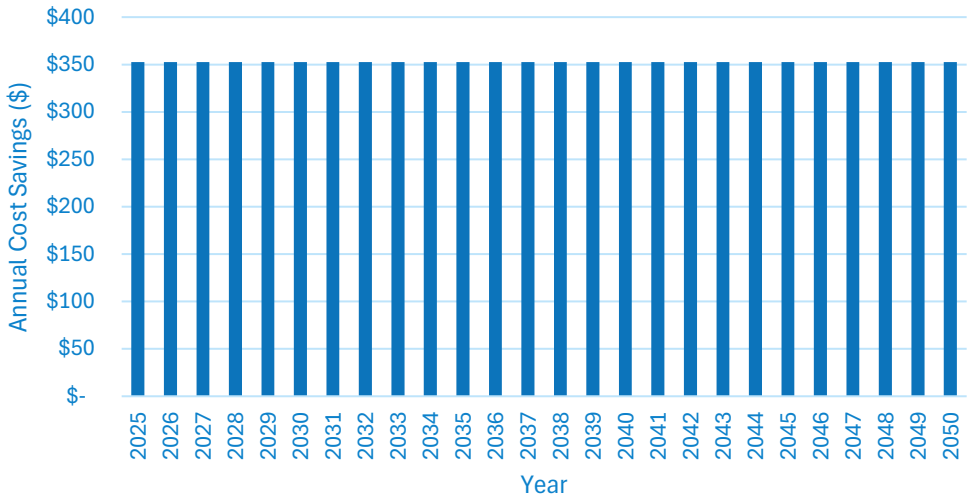

Figure 20: ECM-7 Annual Cost Savings

The assumed cost savings in 2025 versus 2050 is shown in the following table (shown in 2024 dollars).

Table 16: ECM-6 Cost Savings Summary

Description	Utility Cost Savings ($)	Carbon Tax Cost Savings ($)	Combined Cost Savings ($)
2025 Annual Cost Savings	$353	$-	$353
2030 Annual Cost Savings	$353	$-	$353

8. RECOMMENDATIONS AND CONCLUSION

This report investigated seven different opportunities for energy conservation at the District of Saanich's Public Works complex, including energy efficiency measures, electrification measures, on site generation measures, and one demand response measure. The impact of these measures is summarized in the following table.

Table 17: ECM Savings Summary Table

No.	Description	Natural Gas Savings (GJ)	Electricity Savings (kWh)	Utility Cost Savings ($)	Emissions Savings (tCO2e)	Capital Cost ($)	Payback Period (year)
ECM-1	Convert Garage Heating Unit to DX Heat Pump Split w/ Gas Fired Back-Up	124	(9,526)	$786	6.1	$56,550	25+
ECM-2	Convert Office and Locker Room Ductless Units to Heat Pump Capacity	-	14,484	$1,410	0.2	$27,300	19.4
ECM-3	DHW CO2 Heat Pumps	-	2,482	$242	0.0	$27,950	25+
ECM-4	Convert Upper Office Area to Forced Air	-	3,623	$353	0.0	$80,600	25+
ECM-5	PV Panel Array	-	20,000	$1,480	-	$100,000	25+
ECM-6	LED Lighting Conversion	-	2,695	$190	0.0	$2,000	10.5
ECM-7	Convert Window Units to HP Ductless Splits	-	3,623	$353	0.0	$21,450	25+

It is recommended that ECM-1 is carried out as the highest priority for decarbonization since the garage heater is the only major consumer of natural gas and can be retrofitted to a hybrid heating system. ECM-2, ECM-3, and ECM-7 may be considered as long term retrofits towards more highly efficient mechanical heating equipment, albeit with mixed financial performances.

END OF REPORT

DISTRICT OF CENTRAL SAANICH – LIBRARY & CULTURAL CENTRE

Project No.: 000b-1476-24
1209 Clarke Rd, Brentwood Bay, BC V8M 1P8

Integrated Energy Audit Report

December 6, 2024

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TABLE OF CONTENTS

1. EXECUTIVE SUMMARY

The AME group was retained by the District of Central Saanich to investigate opportunities for energy conservation, electrification, installing demand response capacity, and installing behind-the-meter power generation at four of their facilities. This report describes the AME Group's findings for the Library and Cultural Centre; these reports have been developed under CleanBC's Integrated Energy Audit program. This report investigated seven different opportunities including energy efficiency measures, electrification measures, on site generation measures, and one demand response measure. The impact of these measures is summarized in the following table.

Table 1: ECM Savings Summary

No.	Description	Natural Gas Savings (GJ)	Electricity Savings (kWh)	Utility Cost Savings ($)	Emissions Savings (tCO2e)	Capital Cost ($)	Payback Period (year)
ECM-1	Convert North Activity Room RTU To Electric Resistance w/ Heat Pump	-	39,044	$3,867	0.4	$94,250	24.4
ECM-2	DHW CO2 Heat Pumps	-	3,103	$307	0.0	$74,100	25+
ECM-3	Hyper-Low Flow Hot Water Fixtures	-	2,172	$215	0.0	$28,275	25+
ECM-4	PV Panel Array	-	35,000	2,590	-	$158,000	25+
ECM-5	Retrofit Library AHUs/ RTUs to Electric Resistance w/ Heat Pump	-	43,871	$4,345	0.5	$200,200	25+
ECM-6	Retrofit Auditorium AHU with Heat Pump Capacity	-	23,109	$2,289	0.3	$73,450	25+
ECM-7	Wallpack Battery for Demand Response	-	-	$500	-	$150,000	25+

It is recommended that ECM-1, ECM-5, and ECM-6 are considered for implementation as equipment lifecycle replacements for the air handlers and rooftop units serving the building's different spaces. ECM-2 may also be considered for implementation as part of an extension on the building's domestic hot water heating capacity.

2. INTRODUCTION

The AME group was retained by the District of Central Saanich to investigate opportunities for energy conservation, electrification, installing demand response capacity, and installing behind-the-meter power generation at four of their facilities. This report describes the AME Group's findings for the Library and Cultural Centre; these reports have been developed under CleanBC's Integrated Energy Audit program.

3. BUILDING DESCRIPTION

This section provides a description of the building as a whole, its mechanical systems and primary energy consumers, and its current on-site power generation.

3.1 General Description

The District of Central Saanich's Library and Cultural Centre is located in Brentwood Bay along Clarke Road, and consists of two primary service zones including the Library and Seniors Centre.

3.2 Heating & Cooling System

The library is served by three primary HVAC zones, mainly consisting of rooftop units, condensing units, and air handling units. The roof top units installed at this building have cooling capacity but do not have heat pump heating capacity; heating is provided through perimeter electric resistance baseboard heaters.

Figure 1: Typical Rooftop Unit

Figure 2: North Activity Room (Showing Ceiling Terminal Units)

Figure 3: Typical Baseboard Heaters

3.3 Domestic Hot Water System

The building's domestic hot water is distributed through separate electric resistance hot water tanks. Hot water is mainly used by handwash sinks in washrooms.

Figure 4: Typical Domestic Hot Water Tank

A summary of domestic hot water tanks is shown in the following table.

Table 2: DHW System Summary

Location	Heating Capacity	Storage Volume (Gal)
Near North Entrance	5,250 W (17,900 BTU/h) (0.36GPH at 100F Temp Rise)	48
Kitchenette (Tankless)	1,500 W (5,120 BTU/h) (0.10GPH at 100F Temp Rise)	N/A
Kitchen	5,250 W (17,900 BTU/h) (0.36GPH at 100F Temp Rise)	48

4. UTILITY ANALYSIS

This section provides insight to the energy use in this building, with a focus on the proportion of energy use between electricity and natural gas. This is used to provide context for energy savings associated with energy conservation measures (ECMs) explored in later sections of this report.

4.1 Energy Proportion Breakdown

The building uses only electricity, making electricity the sole source of energy-related utility costs and emissions.

4.2 Load Distribution Curve

A load distribution curve of the property's electricity consumption is shown in the following graph.

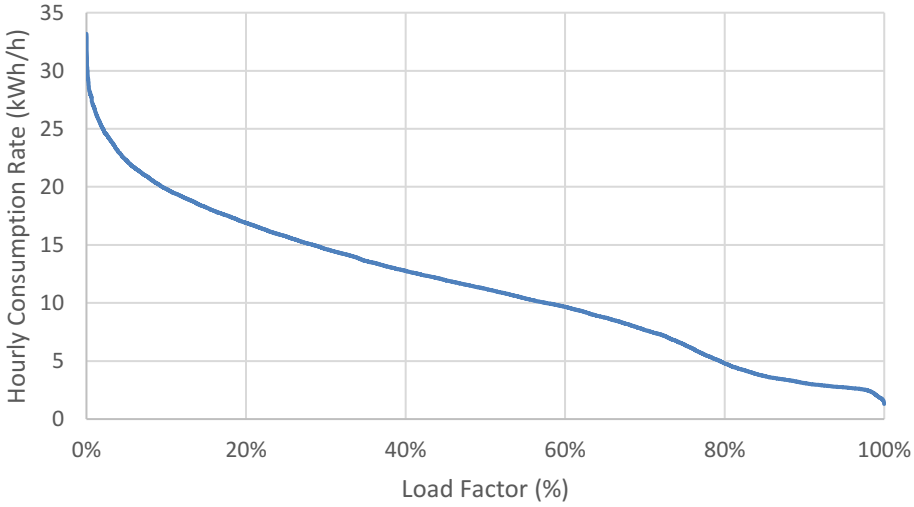

Figure 5: Electricity Load Distribution Curve (Utility Side)

This load distribution curve helps to highlight how often the property draws electrical energy per hour; key takeaways from the load distribution curve are that the building's average hourly consumption never dropped below 1kW, and that although the highest hourly power consumption from the grid was 33kW it spent less than 1% of hours drawing more than 27kW.

4.3 Energy Use Regression Curve

Using utility data from the 2023 calendar year, the AME Group was able to develop a linear regression reflecting the building's electricity use using heating-degree days as an independent variable.

The linear regression developed for the building's electricity use is shown in the following figure.

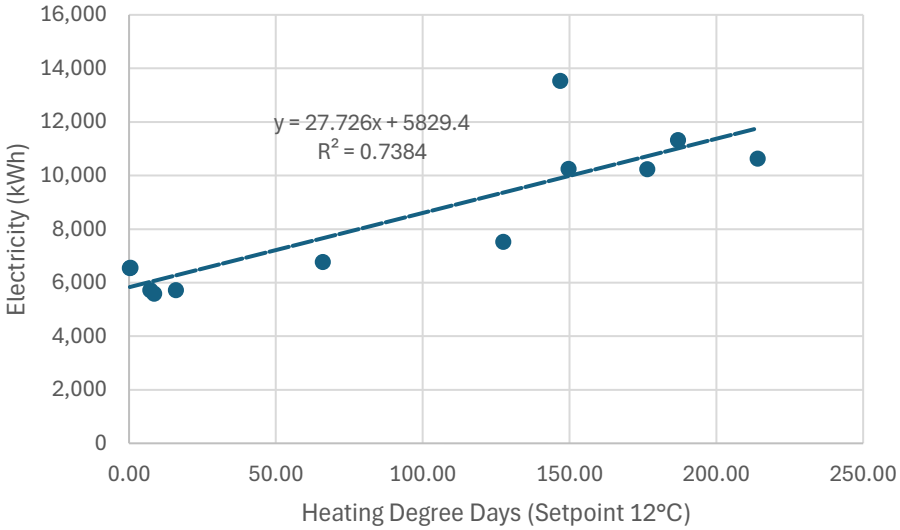

Figure 6: Electricity Linear Regression VS HDD (2023)

The linear correlation between electricity and heating degree days is considered only slightly strong, as the threshold for being considered a reliably correlated regression requires an R^2 correlation factor of 0.75 or higher; as shown in the previous graph, the model's correlation factor results in 0.7384. Although this may not be considered a reliable way to predict electricity use using outdoor air temperatures, it shows that electricity consumption generally increases when outdoor air temperatures decrease. This reflects the fact that the building uses electric resistance baseboard heaters.

The building's electricity usage and utility costs are summarized in the following table.

Table 3: Electricity Consumption Summary

Description	Quantity
Consumption (2023)	100,450 kWh
Utility Costs	$9,948

5. KEY INPUTS AND ASSUMPTIONS

Several common key inputs applied to the building's ECMs are summarized in the following table.

Table 4: Summary of Key Inputs and Assumptions

Description	Quantity	Unit
Blended Cost of Electricity	0.099 (27.5)	$/kWh ($/eGJ)
Electricity Emission Factor	11.3	tCO_2e/GWh

6. ENERGY CONSERVATION MEASURES

This section describes the energy conservation measures (ECMs) investigated as part of this report. These measures are intended to help provide insight to the building's largest energy consumers and to describe opportunities for energy conservation in the building at a high level.

6.1 Base Case

Before exploring the ECMs investigated in this report, the base case considered should be made clear; the base case for these measures is considered to be the continued operation of the building in a business-as-usual fashion, with no major mechanical equipment retrofits considered in the short-term future. Energy consumption from the 2023 calendar year was used as a reference when developing these energy savings, utility cost savings, and emissions savings amounts.

6.2 ECM-1: Convert North Activity Room RTU To Electric Resistance With Heat Pump

The first measure shows the impact of retrofitting the rooftop unit serving the north activity room to an integral heat pump with electric resistance backup.

.1 Measure Description

This measure would include replacing the current rooftop unit serving the north activity room adjacent to the library with a hybrid heat pump packaged unit with electric resistance backup heating capacity. This type of system would be able to heat and cool the activity room first by using the heat pump, and then either using the electric resistance heating element or baseboard heaters already located in the space. Because the heat pump would be able to operate at a higher coefficient of performance (between 2 and 4) than the baseboard heaters or electric resistance heating element (coefficient of performance of 1.0), this would be expected to substantially reduce the amount of electricity needed to meet this space's heating demand.

.2 Design Considerations

The savings associated with this measure depends heavily on the size of the air-source heat pump (ASHP) selected in the new packaged hybrid unit. These units are typically sized against peak cooling capacity since the ASHP would be required to meet the space's cooling demand during summer conditions as well; under this design method, the ASHP would be sized for peak cooling demand, and the unit has access to the same condenser's heating capacity in winter conditions. The unit would be expected to require the existing heating system to activate during peak winter conditions.

This measure would require a short shutdown for the space while the current unit is removed and the new unit is installed on the roof. This measure would not require other changes to ductwork or terminal units.

.3 Savings Summary

Savings associated with this measure are shown in the following table.

Table 5: ECM-1 Annual Savings Summary

No.	Description	Natural Gas Savings (GJ)	Electricity Savings (kWh)	Utility Cost Savings ($)	Emissions Savings (tCO2e)	Capital Cost ($)	Payback Period (year)
ECM-1	Convert North Activity Room RTU To Electric Resistance w/ Heat Pump	-	39,044	$3,867	0.4	$94,250	24.4

6.3 ECM-2: DHW CO_2 Heat Pumps

This measure describes the impact of installing CO_2 heat pumps to provide domestic hot water heating for the building.

.1 Measure Description

The opportunity exists to install an additional heat source to the domestic hot water tanks in the form of CO_2 heat pumps; this would consist of 1-2 small condensing units located on the building's outer roof or at grade with a piped connection to the DHW supply line and DCW makeup water line. This would be intended to operate as the primary heat source for DHW production and would be expected to run at a low but constant heating output.

CO_2 heat pumps excel at providing a low flow of hot water at a high temperature difference, making them well suited to DHW production. They are relatively expensive, and as such they benefit from being used with a high amount of hot water storage.

.2 Design Considerations

For this measure to be implemented, new condensing units would need to be installed on the outer roof or at grade, and pipework would need to be run from the DHW tanks to the new condensing units. Although it would be possible to install these heat pumps to each domestic hot water tank, this measure may also be considered for a smaller subset of the building's DHW tanks, focusing on those service areas with higher occupancy. Choosing to install heat pumps to a smaller portion of the building's DHW services would reduce energy savings, but would lower this measure's up-front capital cost.

.3 Savings Summary

Savings associated with this measure are shown in the following table.

Table 6: ECM-2 Annual Savings Summary

No.	Description	Natural Gas Savings (GJ)	Electricity Savings (kWh)	Utility Cost Savings ($)	Emissions Savings (tCO2e)	Capital Cost ($)	Payback Period (year)
ECM-2	DHW CO2 Heat Pumps	-	3,103	$307	0.0	$74,100	25+

6.4 ECM-3: Hyper-Low Flow Hot Water Fixtures

The opportunity exists to retrofit the building's hand-washing sinks to lower flow. The flow rate of the current fixtures is approximately 1GPM and may be lowered to 0.5GPM while still offering effective flow for hand washing.

.1 Measure Description

The opportunity exists to replace some of the building's hand wash sinks with lower flow fixtures that still provide adequate flow. Reducing flow in these fixtures would both reduce the amount of water consumed by the building and reduce the amount of electricity required by the DHW systems per minute of fixture use.

.2 Design Considerations

Although there may be an opportunity to lower the flow rate of the water fixtures in the washrooms to 0.5GPM, it should be noted that lower flow fixtures are sometimes not preferred by building tenants and may cause tenants to wash their hands for longer periods of time if fixtures at too low of a flow rate are selected. In addition, savings associated with reducing flow are high when reducing from high flow to low flow, and the hand wash sinks in this building, which are estimated to have 1GPM of flow, are not necessarily considered to be high flow (2.0 GPM+).

.3 Savings Summary

Savings associated with this measure are shown in the following table.

Table 7: ECM-3 Annual Savings Summary

No.	Description	Natural Gas Savings (GJ)	Electricity Savings (kWh)	Utility Cost Savings ($)	Emissions Savings (tCO2e)	Capital Cost ($)	Payback Period (year)
ECM-3	Hyper-Low Flow Hot Water Fixtures	-	2,172	$215	0.0	$28,275	25+

6.5 ECM-4: PV Panel Array

The opportunity exists to install a photovoltaic (PV) panel array on the roof of this building.

.1 Measure Description

This measure would involve the installation of a PV panel array on the roof with the intention of subscribing to BC Hydro's net-metering program.

.2 Design Considerations

For more design considerations for this measure, refer to report under separate cover.

.3 Savings Summary

Savings associated with this measure are shown in the following table.

Table 8: ECM-4 Annual Savings Summary

No.	Description	Natural Gas Savings (GJ)	Electricity Savings (kWh)	Utility Cost Savings ($)	Emissions Savings (tCO2e)	Capital Cost ($)	Payback Period (year)
ECM-4	PV Panel Array	-	35,000	2,590	-	$158,000	25+

6.6 ECM-5: Retrofit Library RTUs to Electric Resistance With Heat Pump

This measure explores the impact of retrofitting the RTU serving the library with hybrid ASHP and electric resistance heating capacity.

.1 Measure Description

Similar to ECM-1, this measure would include replacing the current rooftop unit serving the library with a hybrid heat pump packaged unit with electric resistance backup heating capacity. This type of system would be able to heat and cool the activity room first by using the heat pump, and then using the electric resistance heating element. Because the heat pump would be able to operate at a higher coefficient of performance (between 2 and 4) than the baseboard heaters or electric resistance heating element (coefficient of performance of 1.0), this would be expected to substantially reduce the amount of electricity needed to meet this space's heating demand.

.2 Design Considerations

The savings associated with this measure depends heavily on the size of the air-souce heat pump (ASHP) selected in the new packaged hybrid unit. These units are typically sized against peak cooling capacity since the ASHP would be required to meet the space's cooling demand during summer conditions as well; under this design method, the ASHP would be sized for peak cooling demand, and the unit has access to the same condenser's heating capacity in winter conditions. The unit would be expected to require the existing heating system to activate during peak winter conditions.

This measure would require a short shutdown for the space while the current unit is removed and the new unit is installed on the roof. This measure would not require other changes to ductwork or terminal units.

.3 Savings Summary

Savings associated with this measure are shown in the following table.

Table 9: ECM-5 Annual Savings Summary

No.	Description	Natural Gas Savings (GJ)	Electricity Savings (kWh)	Utility Cost Savings ($)	Emissions Savings (tCO2e)	Capital Cost ($)	Payback Period (year)
ECM-5	Retrofit Library AHUs/ RTUs to Electric Resistance w/ Heat Pump	-	43,871	$4,345	0.5	$200,200	25+

6.7 ECM-6: Retrofit Auditorium AHU to Electric Resistance With Heat Pump

This measure explores the impact of retrofitting the RTU serving the auditorium with an ASHP refrigerant coil.

.1 Measure Description

Similar to ECM-1 and ECM-5, this measure would include the installation of a refrigerant based heating and cooling switchover coil in the supply air duct serving the auditorium. This type of system would be able to heat and cool the activity room first by using the heat pump, and then using the electric resistance

heating element. Because the heat pump would be able to operate at a higher coefficient of performance (between 2 and 4) than the baseboard heaters or electric resistance heating element (coefficient of performance of 1.0), this would be expected to substantially reduce the amount of electricity needed to meet this space's heating demand.

.2 Design Considerations

The savings associated with this measure depends heavily on the size of the air-source heat pump (ASHP) selected in the new packaged hybrid unit. These units are typically sized against peak cooling capacity since the ASHP would be required to meet the space's cooling demand during summer conditions as well; under this design method, the ASHP would be sized for peak cooling demand, and the unit has access to the same condenser's heating capacity in winter conditions. The unit would be expected to require the existing heating system to activate during peak winter conditions.

This measure would require a short shutdown for the space while the new refrigerant coil is added to the supply air duct.

.3 Savings Summary

Savings associated with this measure are shown in the following table.

Table 10: ECM-6 Annual Savings Summary

No.	Description	Natural Gas Savings (GJ)	Electricity Savings (kWh)	Utility Cost Savings ($)	Emissions Savings (tCO2e)	Capital Cost ($)	Payback Period (year)
ECM-6	Retrofit Auditorium AHU with Heat Pump Capacity	-	23,109	$2,289	0.3	$73,450	25+

6.8 ECM-7: Wallpack Battery for Demand Response

With new programs from CleanBC refocusing from full electrification to a more holistic review of grid integrity, opportunities for onsite power reserves may be explored for the purposes of peak demand period response.

.1 Measure Description

This measure would involve the installation of DC batteries near the building's north electrical service room, which would be used to help trim the building's electrical demand during BC's typical peak demand period of 4PM-8PM. These batteries would be activated to help supplement the building's power demand during this period, reducing the building's electrical consumption during this time. The battery array would then be charged overnight before being called upon again during the next peak demand period.

.2 Design Considerations

This measure is a relatively new consideration from CleanBC, but may be considered by building owners as a way of integrating on-site storage for other purposes as well, including power supply during power outages. This may couple well with the implementation of a PV array. For more information regarding this measure, refer to report under separate cover.

.3 Savings Summary

Savings associated with this measure are shown in the following table.

Table 11: ECM-5 Annual Savings Summary

No.	Description	Natural Gas Savings (GJ)	Electricity Savings (kWh)	Utility Cost Savings ($)	Emissions Savings (tCO2e)	Capital Cost ($)	Payback Period (year)
ECM-7	Wallpack Battery for Demand Response	-	-	$500	-	$150,000	25+

7. FINANCIAL MODELLING

This section shows the expected impacts of utility cost savings and cumulative cost savings between 2025 and 2050.

7.1 ECM-1: Convert North Activity Room RTU To Electric Resistance w/ Heat Pump– Financial Performance

The annual cost savings under this measure are shown in the following figure.

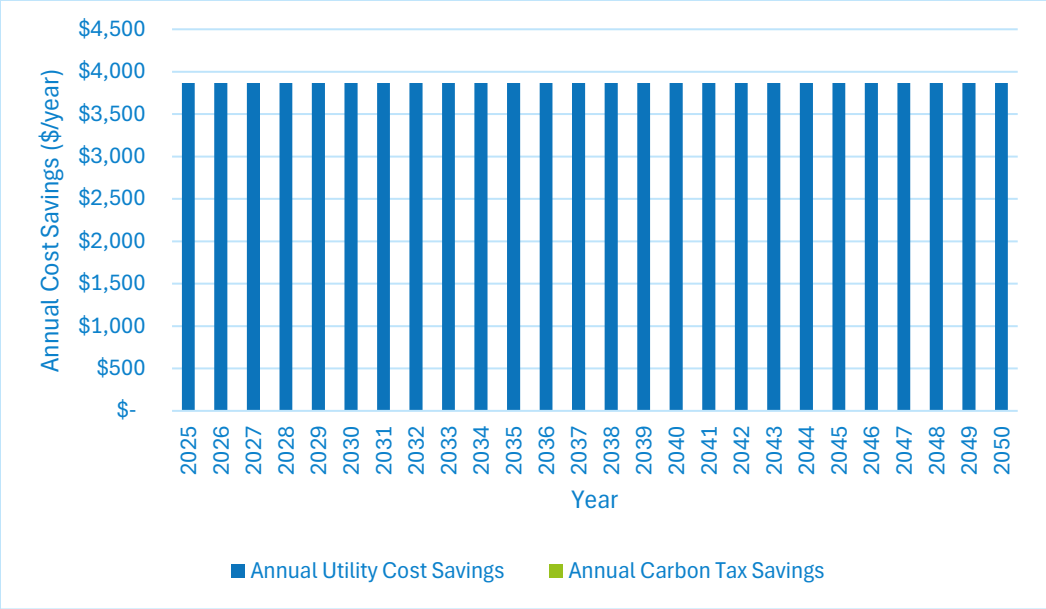

Figure 7: ECM-1 Annual Cost Savings

The assumed cost savings in 2025 versus 2050 is shown in the following table (shown in 2024 dollars).

Table 12: ECM-1 Cost Savings Summary

Description	Utility Cost Savings ($)	Carbon Tax Cost Savings ($)	Combined Cost Savings ($)
2025 Annual Cost Savings	$3,867	$-	$3,867
2030 Annual Cost Savings	$3,867	$-	$3,867

7.2 ECM-2: DHW CO2 Heat Pumps – Financial Performance

The annual cost savings under this measure are shown in the following figure.

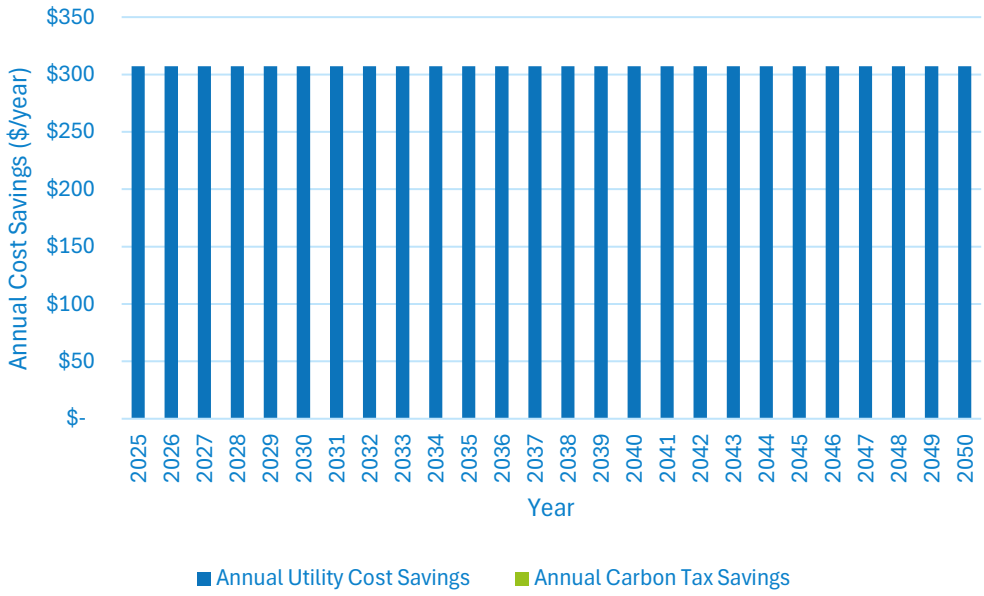

Figure 8: ECM-2 Annual Cost Savings

The assumed cost savings in 2025 versus 2050 is shown in the following table (shown in 2024 dollars).

Table 13: ECM-2 Cost Savings Summary

Description	Utility Cost Savings ($)	Carbon Tax Cost Savings ($)	Combined Cost Savings ($)
2025 Annual Cost Savings	$307	$-	$307
2030 Annual Cost Savings	$307	$-	$307

7.3 ECM-3: Hyper-Low Flow Hot Water Fixtures – Financial Performance

The annual cost savings under this measure are shown in the following figure.

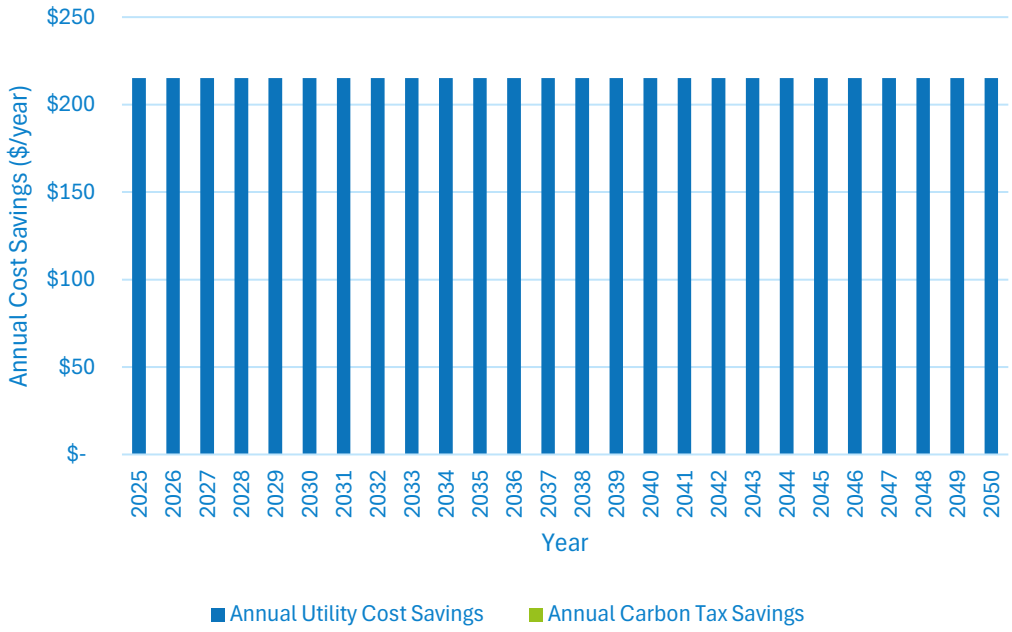

Figure 9: ECM-3 Annual Cost Savings

The assumed cost savings in 2025 versus 2050 is shown in the following table (shown in 2024 dollars).

Table 14: ECM-3 Cost Savings Summary

Description	Utility Cost Savings ($)	Carbon Tax Cost Savings ($)	Combined Cost Savings ($)
2025 Annual Cost Savings	$215	$-	$215
2030 Annual Cost Savings	$215	$-	$215

7.4 ECM-4: PV Panel Array – Financial Performance

The annual cost savings under this measure are shown in the following figure.

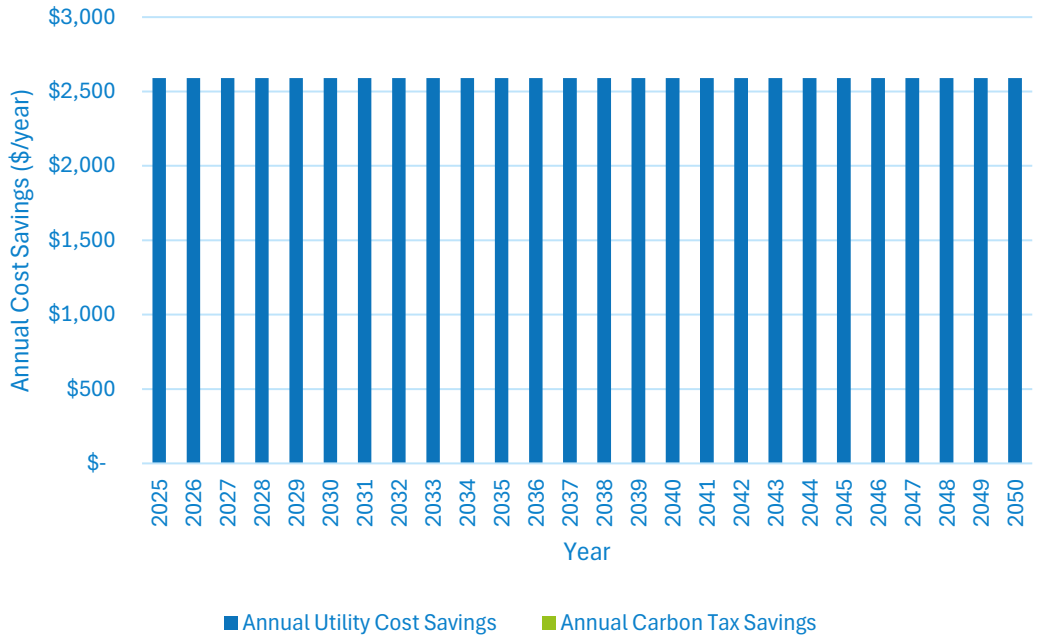

Figure 10: ECM-4 Annual Cost Savings

The assumed cost savings in 2025 versus 2050 is shown in the following table (shown in 2024 dollars).

Table 15: ECM-4 Cost Savings Summary

Description	Utility Cost Savings ($)	Carbon Tax Cost Savings ($)	Combined Cost Savings ($)
2025 Annual Cost Savings	$2,590	$-	$2,590
2030 Annual Cost Savings	$2,590	$-	$2,590

7.5 ECM-5: Retrofit Library AHUs/ RTUs to Electric Resistance w/ Heat Pump – Financial Performance

The annual cost savings under this measure are shown in the following figure.

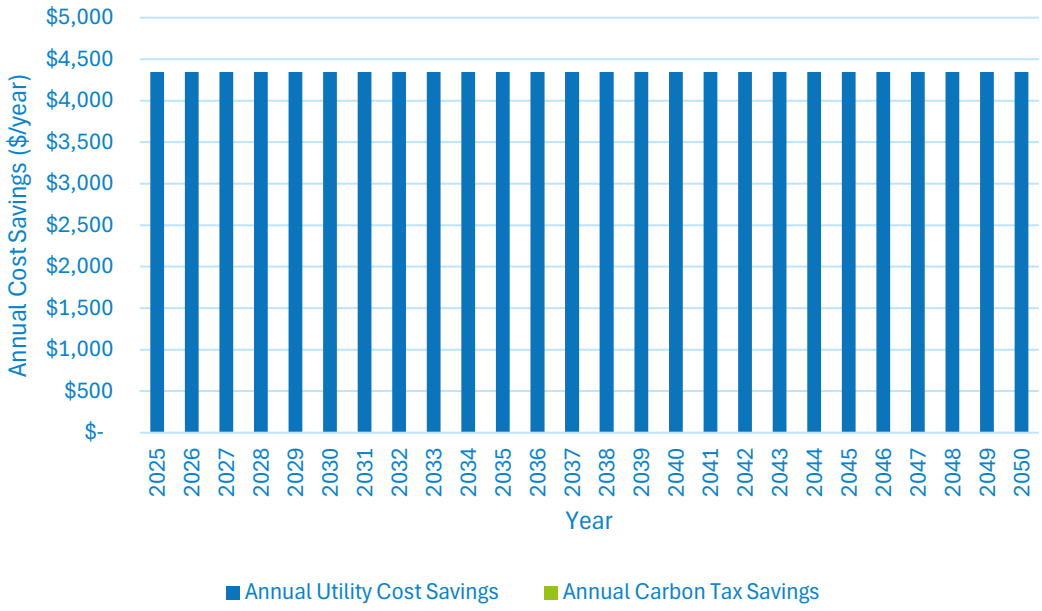

Figure 11: ECM-5 Annual Cost Savings

The assumed cost savings in 2025 versus 2050 is shown in the following table (shown in 2024 dollars).

Table 16: ECM-5 Cost Savings Summary

Description	Utility Cost Savings ($)	Carbon Tax Cost Savings ($)	Combined Cost Savings ($)
2025 Annual Cost Savings	$4,345	$-	$4,345
2030 Annual Cost Savings	$4,345	$-	$4,345

7.6 ECM-6: Retrofit Auditorium AHU with Heat Pump Capacity – Financial Performance

The annual cost savings under this measure are shown in the following figure.

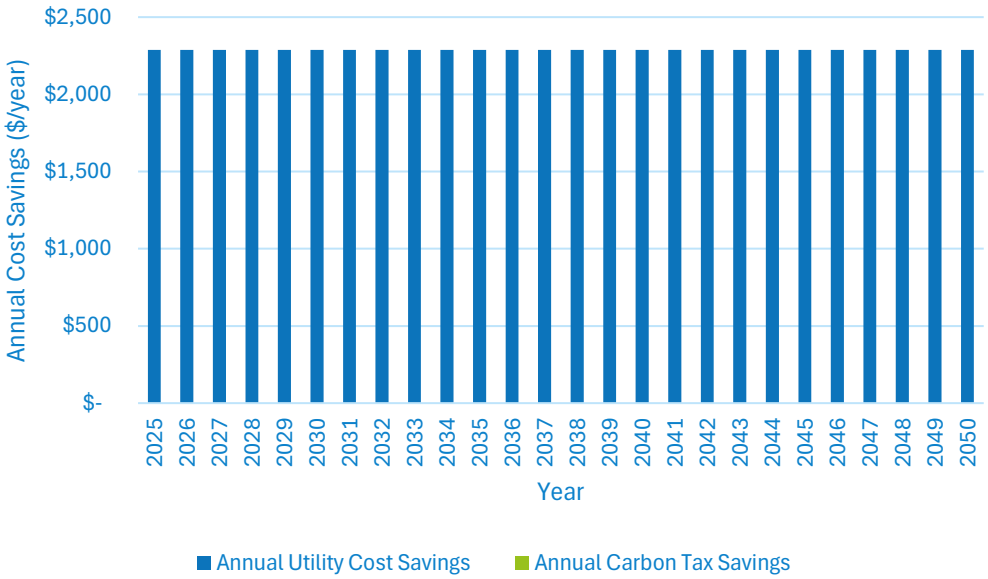

Figure 12: ECM-6 Annual Cost Savings

The assumed cost savings in 2025 versus 2050 is shown in the following table (shown in 2024 dollars).

Table 17: ECM-6 Cost Savings Summary

Description	Utility Cost Savings ($)	Carbon Tax Cost Savings ($)	Combined Cost Savings ($)
2025 Annual Cost Savings	$2,289	$-	$2,289
2030 Annual Cost Savings	$2,289	$-	$2,289

7.7 ECM-7: Wallpack Battery for Demand Response – Financial Performance

The annual cost savings under this measure are shown in the following figure.

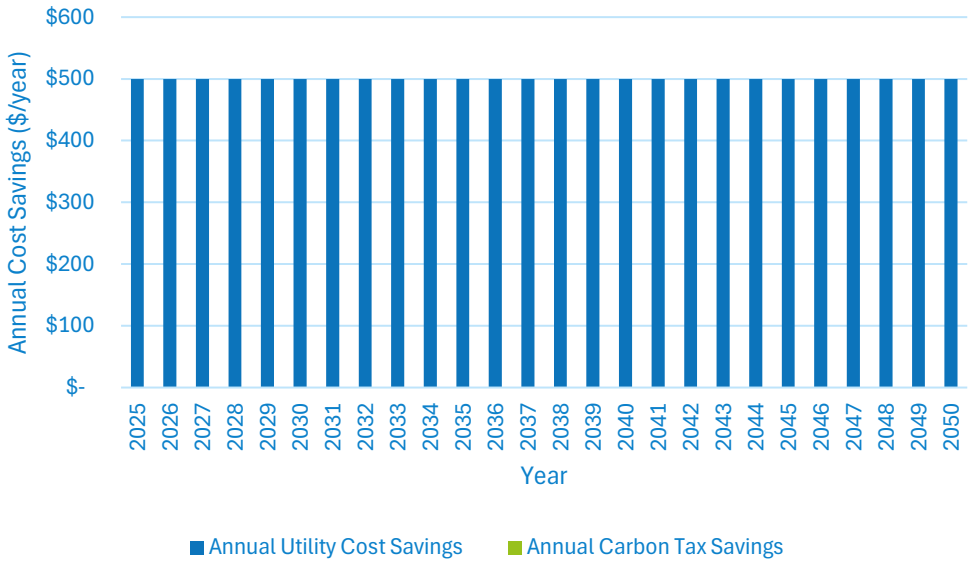

Figure 13: ECM-7 Annual Cost Savings

The assumed cost savings in 2025 versus 2050 is shown in the following table (shown in 2024 dollars).

Table 18: ECM-7 Cost Savings Summary

Description	Utility Cost Savings ($)	Carbon Tax Cost Savings ($)	Combined Cost Savings ($)
2025 Annual Cost Savings	$500	$-	$500
2030 Annual Cost Savings	$500	$-	$500

8. RECOMMENDATIONS AND CONCLUSION

This report investigated seven different opportunities for energy conservation at the District of Saanich's Library and Cultural Centre, including energy efficiency measures, electrification measures, on site generation measures, and one demand response measure. The impact of these measures is summarized in the following table.

Table 19: ECM Savings Summary

No.	Description	Natural Gas Savings (GJ)	Electricity Savings (kWh)	Utility Cost Savings ($)	Emissions Savings (tCO2e)	Capital Cost ($)	Payback Period (year)
ECM-1	Convert North Activity Room RTU To Electric Resistance w/ Heat Pump	-	39,044	$3,867	0.4	$94,250	24.4
ECM-2	DHW CO2 Heat Pumps	-	3,103	$307	0.0	$74,100	25+
ECM-3	Hyper-Low Flow Hot Water Fixtures	-	2,172	$215	0.0	$28,275	25+
ECM-4	PV Panel Array	-	35,000	2,590	-	$158,000	25+
ECM-5	Retrofit Library AHUs/ RTUs to Electric Resistance w/ Heat Pump	-	43,871	$4,345	0.5	$200,200	25+
ECM-6	Retrofit Auditorium AHU with Heat Pump Capacity	-	23,109	$2,289	0.3	$73,450	25+
ECM-7	Wallpack Battery for Demand Response	-	-	$500	-	$150,000	25+

It is recommended that ECM-1, ECM-5, and ECM-6 are considered for implementation as equipment lifecycle replacements for the air handlers and rooftop units serving the building's different spaces. ECM-2 may also be considered for implementation as part of an extension on the building's domestic hot water heating capacity.

END OF REPORT

Energy and Emissions Fleet Assessment

District of Central Saanich

By: Innotech Fleet Strategies Ltd.

March 26, 2025

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EXECUTIVE SUMMARY

In Spring 2024, the District of Central Saanich issued a Request for Offer (RFO) to complete an Energy and Emissions Fleet Assessment. This initiative aims to provide guidance and recommendations to aid the District in assessing its fleet and providing direction to meet climate action goals. These climate goals include emission reduction targets of 45% by 2030 and 100% by 2050.

A comprehensive fleet assessment was conducted, identifying areas of strength and opportunities for improvement. The fleet size and utilization were rated as "good" or “excellent” with other areas of fleet composition, average vehicle age, useful life targets and data tracking recommended for improvement. Data tracking is likely to improve as an analyst has already been hired and tracking fleet data is part of the role, but it’s too early to confirm improvements as part of this project.

To develop an emissions reduction and EV transition strategy, extensive research and analysis was conducted. This included the formulation of EV transition plans for the next 10 years, infrastructure assessments, reviews of alternative fuels, and review of industry best practices. Financial considerations, such as leveraging carbon credits and incentives, were also explored.

The resulting strategy balances technology readiness, financial impacts, operational risks, and emissions reductions. It focuses on three core components:

1. Optimized Transition Scenario for EV adoption
2. Renewable Diesel
3. Incentives and Carbon Credits

This approach positions the District to meet or exceed its emissions reduction targets of a 45% reduction by 2030, but longer range projections only predict a 95% reduction by 2050. A financial analysis for the 2025–2035 period revealed the potential for significant cost savings. The net present value of fleet replacements is projected at $28.9 million under current practices and technologies but drops to $25.7 million with the optimized scenario—yielding potential savings of $3.2 million.

To support implementation, a detailed list of 19 recommended actions has been developed, providing a clear roadmap for the District to work towards emission reduction goals.

CONTENTS

APPENDICES

Appendix A: Fleet Listing and Data

Appendix B: Electrical Capacity Assessment and Detailed Charging Plan

DEFINITIONS AND ACRONYMS

BEV – battery electric vehicles

CFR – Clean Fuel Regulation (Canada)

DCFC – DC Fast Charger

District – The Corporation of the District of Central Saanich

EV – Electric Vehicles

EVSE – Electric Vehicle Supply Equipment (Chargers)

FCEV – Fuel cell electric vehicles

FCM – Federation of Canadian Municipalities

FIMS – Fleet information management system

FUS – Fire Underwriters Survey

GVWR – Gross Vehicle Weight Rating

HEV – Hybrid electric vehicles

ICE – Internal combustion engine

kWh – Kilowatt hours

LCFS – Low Carbon Fuel Standard

MCS – Megawatt Charging Standard

NPV – Net present value

PHEV – Plug-in hybrid electric vehicles

RFO – Request for Offer

SOC – State of charge

TCO – Total Cost of Ownership

ZEV – Zero Emission Vehicle

ZEVR – Zero Emission Vehicle Regulations

1. INTRODUCTION

In Spring 2024, the District issued an RFO for Energy and Emissions Fleet Assessment. The primary aim of this RFO was to invite proposals from reputable consulting firms capable of offering guidance and recommendations to aid the District in assessing its fleet and providing direction to meet climate action goals. Additionally, the consulting firms were expected to develop a plan that meets the BC Hydro EV Ready Fleet Plan Incentive requirements. Through the evaluation process, Innotech Fleet Strategies Ltd. was chosen to complete this work and provide the District with guidance to meet emission reduction targets. The methodology and approach are intended to effectively balance risks and pave the way for a successful strategy and a list of detailed recommendations.

2. BACKGROUND

The District is located in the Capital Regional District on Southern Vancouver Island, British Columbia and consists of a population of approximately 17,000. It includes both coastal and rural areas spread over a small region of 41 square kilometers. The in scope fleet consists of 67 heavy-duty, medium-duty, and light-duty vehicles and operations include typical municipal services, fire and police and exclude PEMO services that are shared with Sidney and North Saanich. The District completed its Climate Leadership Plan in 2020, which includes objectives to transition its fleet to electric or to low emissions vehicles. A target has been set to reduce emissions by 45% by 2030 and 100% by 2050.

The intent of this project is to provide an energy and emissions assessment and recommend a future forecast for the fleet to help the District meet its emissions target. Specifically, there are five core items in scope for this project which include:

1. Develop an EV transition plan meeting the BC Hydro EV Fleet Ready Plan requirements;
2. Review alternative or low carbon fuels that may help to meet emission reduction targets;
3. Review of Fleet Management best practices such as behavioural and/or policy-based initiatives;
4. Review planned growth of the fleet as a result of new service offerings or improved service offerings, or other initiatives not considered “Business as Usual”;
5. Outline potential profits/revenue from Low Carbon Fuel Credits;

2.1 ALIGNMENT WITH FEDERAL AND PROVINCIAL GOVERNMENTS

Aligning with market sentiment and government policies, many fleets are setting aggressive carbon-reduction targets. The Government of Canada has set a mandatory target for all new light-duty cars and passenger trucks sold to be ZEV by 2035, with interim targets of 20% by 2026 and 60% by 2030. In addition, the Canadian government has set a target of 35% for all new medium and heavy-duty vehicles to be ZEV by 2030[1] and will develop ZEV regulations for 100% by 2040. However, some vehicles and operations, such as emergency services, are expected to be exempt.

The Province of British Columbia has developed a similar target, with some key differences, to advance ZEV adoption in the interim. These include a Zero Emission Vehicle Regulations (ZEVR) governing the implementation of light-duty ZEVs with targets of 26% by 2026, 90% by 2030 and 100% by 2035. They are currently working on developing similar regulations for medium and heavy commercial vehicles[2]. These targets have resulted in increased funding for numerous carbon-reduction initiatives across Canada.

[1] "2030 Emissions Reduction Plan – Transportation," Government of Canada, accessed at https://www.canada.ca/content/dam/eccc/documents/pdf/climate-change/erp/factsheet-06-transportation.pdf

[2] "Zero Emissions Vehicle Act," Province of British Columbia, accessed at https://www2.gov.bc.ca/gov/content/industry/electricity-alternative-energy/transportation-energies/clean-transportation-policies-programs/zero-emission-vehicles-act#:~:text=The%20ZEV%20Regulation%20is%20now,B.C.%20to%20meet%20consumer%20demand

2.2 PROJECT APPROACH

The project was divided into three distinct phases, which are shown below in Table 1.

Table 1: Project phases

	Phase 1 Baselining and Needs Identification:	**Phase 2** Emissions Reduction Plan Development	**Phase 3** Project Completion
Key Activities	• Meeting 1 – project kickoff • Collection of Fleet and Facility data • Meeting 2 - Fleet operations discovery • Meeting 3 - Facility operations discovery • Analyze fleet profile and performance	• Complete an electrical infrastructure assessment including site assessment • Develop an EV transition plan • Develop an infrastructure plan and charging plan • Identify opportunities for alternative fuel use to lower emissions. • Identify industry best practices for behavioural and policy initiatives • Meeting 4 – review of findings and draft recommendations	• Completion of final report, findings and recommendations. • Completion of BC Hydro EV Ready Fleet Plan Workbook
Deliverables	• Draft fleet replacement plan including EV transition and emissions profiles	• Draft emissions reduction plan including EV transition, infrastructure, low carbon fuels, industry best practices.	• Final Report and BC Hydro workbook.

This work program was carefully developed to meet the District's requirements and follows a multi-disciplinary approach consisting of three phases. Throughout the process, there is ample opportunity for input and review from District staff which ensures a strategy that is developed with consideration for any unique District needs. This approach is designed to improve alignment and communication and to ensure that the recommendations are realistic and reasonable.

3. OPERATIONAL ASSESSMENT

Numerous workshops were held with District staff to gain insights into the District's fleet and operations. Representatives from various departments, including Public Works, Parks, Finance, Fleet, Facilities, and Climate Action, participated in these workshops. During the sessions, District staff provided an overview of the current fleet, the usage of vehicles, maintenance practices, budgeting processes, fleet replacement practices, EV transition readiness, and current challenges.

In addition to the workshops, various documents and datasets were provided, and site visits were conducted. The fleet-specific documents and data included a list of vehicles with basic descriptions, high-level specifications and configurations, and annual utilization. Other documents included information on facilities and electrical infrastructure, such as BC Hydro consumption data. Site visits were conducted at multiple locations, including Public Works, Fire Hall, and the Municipal Hall, to review electrical infrastructure.

3.1 CURRENT FLEET AND OPERATIONS

The in-scope fleet consists of 67 vehicles largely used for Public Works, Parks, Police and Fire. The vehicles include cars, police cars, pickup trucks, medium-duty work trucks, dump trucks, fire trucks, tractors, mowers and other similar vehicles. A full fleet list can be found in Appendix A: Fleet Listing.

These vehicles are used to support services including underground utilities (water/sewer), roads, parks, police, fire, engineering and general municipal use, which are all common services provided by most municipalities. Embedded within these services are a mix of capital projects and maintenance services. The District focuses on maintenance services which would include tasks such as sewer flushing, road patching, mowing, snow clearing, etc. Most capital projects are contracted out, which is common for municipalities, and the District is in alignment with its peers with this approach.

3.2 COMPARISON TO INDUSTRY PEERS

The District's fleet size and general fleet management practices were compared with several other municipalities in BC and across Canada. This comparison considered the District's geographical size, population, unique topography, and weather-related requirements. Where required, it was normalized to ensure a consistent comparison. The scorecard for this comparison is shown in Table 2 with each category further detailed below.

Table 2: Fleet Assessment Scorecard

Category	Rating	Central Saanich	Industry Peers
Normalized Fleet Size	Good	36	39.5
Fleet Composition	Fair		
Average Age	Fair	11	9
Average Annual Mileage	Excellent	11,700 km	7,800 km
Useful Life Targets	Fair	4-25	5-15
Fleet Data Tracking	Fair		

Normalized fleet size – *This is a comparison to other municipalities with similar populations. The District's normalized fleet size is 36 which is less than the 67 vehicles in scope for this project. The lower normalized fleet size is attributed to the fact that it only considers the subset of vehicles used for comparable services to industry peers, excluding vehicles like Police vehicles, Fire vehicles (which are largely governed by the Fire Underwriter's Survey), and equipment such as backhoes and tractors, which exhibit high variability among peers.*

Fleet composition *– The composition considers the make, model, year, and type of vehicles. A fleet should strive to have as many similar vehicles as possible, while still balancing this with operational needs. For example, and not specific to the District, a fleet with a 2019 Ford F150, 2020 GMC 1500, and 2021 Dodge 1500 does not score well on fleet composition. These vehicles have distinct requirements for parts, repair methods, warranty service, and operator familiarity. The District has a relatively high variability in vehicle makes and models for the same vehicle classes and would benefit from a purchasing strategy that focuses on a single vehicle make/model for a given number of years within a specific vehicle class.*

Average age *– The average age of the fleet is slightly older than comparable municipalities. An older fleet generally results in decreased reliability, increased maintenance costs, higher emissions and outdated productivity and safety features.*

Average annual mileage – *The average annual mileage is excellent and an indicator of healthy and effective utilization. While it's significantly higher than municipal peers, it's not high enough to indicate that additional vehicles are needed or that the overall mileage on vehicles is too high.*

Vehicle useful life targets *– The District provided useful life targets are generally within a few years of industry standard targets, however, there was lack of consistency among vehicles of a*

similar class. Development of a consistent forward looking document such as a fleet policy or tangible capital asset replacement schedule is recommended. It's also noted that the age at which vehicles are actually replaced differs from the useful life target. As a result, the useful life target has a rating of "Good" whereas the average age has a rating of "Fair".

The Fire fleet has a completely different benchmark to follow for useful life targets. The Fire Underwriters Survey (FUS) defines the life for apparatuses throughout Canada and the US and is linked to insurance rates, which provides a strong case for Fire departments to follow the recommended life[3].

***Fleet data tracking** – The fleet data category encompasses the centralization and thoroughness of information relating to the District's vehicles. Basic data typically includes vehicle specifications, mileage, age, capital and upfitting costs, maintenance expenses, fuel consumption, planned replacement dates, and other pertinent details specific to the fleet. This data is crucial for making well-informed decisions regarding vehicle replacement, comparing costs for transitioning to electric vehicles and identifying underperforming assets. Currently, the District has basic information but doesn't appear to be using it for decision-making on when to replace vehicles or to monitor overall fleet management. An Analyst has been hired and will be developing a fleet management dashboard where this info is centralized, compiled and reviewed. This is expected to improve fleet management capabilities and is in alignment with industry best practices.*

The findings from this scorecard and the underlying data analysis provide valuable insights. One of the challenges of conducting a fleet assessment is the limited knowledge of how the vehicles are used operationally and their specific specifications/configurations. Additionally, there were instances where crucial data regarding vehicle utilization was not available. As a result of these constraints, offering specific recommendations for each vehicle is not feasible at this point. It's essential for the District to conduct further thorough research to ensure that any recommendations made will not negatively impact operations or the services provided.

4. RESEARCH AND ANALYSIS

This section delves into the shift toward EVs, providing an overview of the vehicles themselves, the formulation of transition plans, and a roadmap for infrastructure development. Beyond just electrification, other strategies for reducing emissions, including alternative fuels, are also outlined. Finally, financial considerations, such as carbon credits and incentives, are also discussed. All this

[3] "Insurance Grading Recognition of Used or Rebuilt Fire Apparatus," Fire Underwriter's Survey, accessed at https://fireunderwriters.ca/assets/img/FUS-TechnicalBulletin-InsuranceGradingRecognitionofUsedorRebuilt.pdf

information is then synthesized to craft a comprehensive strategy in **Section 5: Strategy and Recommendations**.

4.1 OVERVIEW OF ELECTRIFICATION

As organizations shift towards broader adoption of EVs, the demand is driving more available options in both the plug-in hybrid and full electric market. In Canada, governments at all levels are providing significant incentives and programs to assist individuals and businesses in replacing their fossil fuel-powered vehicles with EVs. While the vehicle technology is not yet advanced enough for all duty cycles and market segments, return-to-base fleets, such as those operated by municipalities, provide the optimal operation and duty cycles for EVs. Light-duty vehicles, such as cars, SUVs and small pickup trucks, are the most advanced with numerous models available from all manufacturers. These vehicles have been demonstrating lower maintenance costs, good performance in mild climates, and longer battery life than expected. Light-duty vehicles have been successfully used in operational business for many years.

Heavy-duty vehicles represent vehicle classes 6-8 and typically consist of dump trucks, garbage trucks, sewer combination trucks, hydro excavators and other large vehicles. These vehicles are lagging behind light-duty vehicles in terms of technological readiness and number of years in the market. Many heavy-duty vehicle manufacturers offer limited vehicle options with limited real-world operating performance and reliability data. Most manufacturers only began commercial production of their heavy electric vehicles in 2021 or 2022. These vehicles are generally well-suited to predictable operational use, such as delivery services. Unpredictable uses, such as municipal operations where vehicles are used 24/7 for snow clearing and emergency infrastructure repairs, and the requirement for complex truck bodies present some real challenges and risks. While this technology is progressing rapidly, organizations need to consider the risks to their service levels before introducing these vehicles into their fleet. However, these risks should not prevent organizations from assessing the suitability of this technology and beginning to develop a plan for implementation and budgets to begin procurement. It's also important to note that procurement of Heavy or Medium Duty vehicles with Municipal specifications can take up to two years from the time a Purchase Order is issued until delivery.

Medium-duty vehicles include Classes 3-5 and typically consist of service trucks and construction vehicles, such as Ford F350-550, Isuzu cabovers, etc. This market segment is lagging behind both light and heavy-duty vehicles in terms of electric options. Limited options are available from manufacturers, however, this is a growing segment with a number of options that have just been released or expected to be available within the next year. Similar to heavy-duty vehicles, this market segment is expected to progress quickly, and businesses should begin assessing the technology and begin planning for implementation.

Charging infrastructure is readily available with numerous level 2 and DCFC (formerly known as level 3) options from many manufacturers on the market. MCS is also an emerging charging technology with several demonstration projects in the United States. MCS is faster than DCFC and generally requires liquid cooling for charging cables. Utility providers are investing heavily in planning and implementing infrastructure upgrades to support charging networks and the transition of businesses to EVs. BC Hydro is offering incentives and encouraging businesses to develop EV fleet strategies so it can better understand future power needs and plan for infrastructure to support anticipated power requirements[4].

The carbon reduction potential for electrification is high, especially in British Columbia, where most electricity generated is clean hydroelectric. Many other provinces and states still use coal and natural gas for electricity generation, which means higher carbon emissions when used as a power source for EVs. Another environmental consideration for battery electric vehicles is battery recycling. Recycling has seen significant technological advancement over the past few years. Companies such as Li-Cycle have developed safe battery recycling technology that can recover up to 95% of the raw materials[5]. The

[4] "Electric Fleets", BC Hydro, accessed at: https://www.bchydro.com/powersmart/electric-vehicles/industry/fleets.html

[5] "Services", Li-Cycle, accessed at: https://li-cycle.com/services/

Province of British Columbia has also added EV batteries to its recycling regulations, which is expected to help increase investment in recycling technology and facilities within British Columbia.

4.2 EV TRANSITION MODELLING

Clean Ops Fleet Analyser is a modelling tool that has been used to analyze EV transition scenarios. This easy-to-understand fleet analysis tool is focused on providing fleets with key information for improved vehicle replacement planning, decision making and insights into emission reductions. This analysis accounts for capital costs, maintenance costs, fuel costs, carbon costs, salvage value, technological maturity and operational risk. Two scenarios are analyzed for the District:

1. **Baseline Scenario**

   This scenario models all fleet replacements using the same vehicle and fuel technology options as the incumbent fleet. This means if there is currently a gasoline vehicle, it will be replaced at the end of its life with another gasoline vehicle, regardless of technology progression or regulatory requirements. This is not a scenario that a fleet would actually follow, however, it provides important metrics when comparing it against the optimized scenario.

2. **Optimized Scenario**

   This scenario uses a combination of incumbent fuel technologies, zero-emission vehicle technologies and a smoothed replacement planning to optimize an organization's capital replacement plan. The vehicle fuel technology that is modelled is based on a total cost of ownership (TCO) analysis and switches to an EV when the TCO is projected to be beneficial for the EV. For each vehicle, it also accounts for the maturity of EV technology and the risk to critical services provided by that vehicle. For example, any vehicles that are identified as used for emergency purposes, such as Fire trucks, snow plows, etc, would be transitioned at a later date than a similar vehicle not used for emergency purposes. This allows for additional technological maturity and reduced risk for critical services. Finally, the optimized scenario also employs a smoothed replacement plan which minimizes annual variances in capital expenditures and the workload associated with developing specifications and purchasing new vehicles.

As more and more fleets focus on emissions reductions, Clean Ops Fleet Analyser includes an emissions analysis for all scenarios. The analysis is based on the latest Province of British Columbia Best Practices Methodology for Quantifying Greenhouse Gas Emissions as well as actual fuel use to determine specific emissions per vehicle. The emissions reductions in this section are just for fleet electrification and alone may not be enough to reach targets. Additional emission reduction strategies are also shown for the final strategy in **Section 5: Strategy and Recommendations**.

Actual data from the incumbent fleet was obtained and used for as accurate of an analysis as possible. Where data is incomplete or appears inaccurate, averages from similar peer fleets is used to create a

realistic transition model. A summary of the transition results is provided below, with a more detailed and legible Excel document also provided to the District. Figure 1 below shows the potential number of vehicles electrified by year. Based on the optimized scenario, 51% of the fleet can be electrified by 2035, with a rough projection of 75% by 2050. In addition to Figure 1 below, the detailed Excel document provided to the District lists the specific year when each vehicle is electrified.

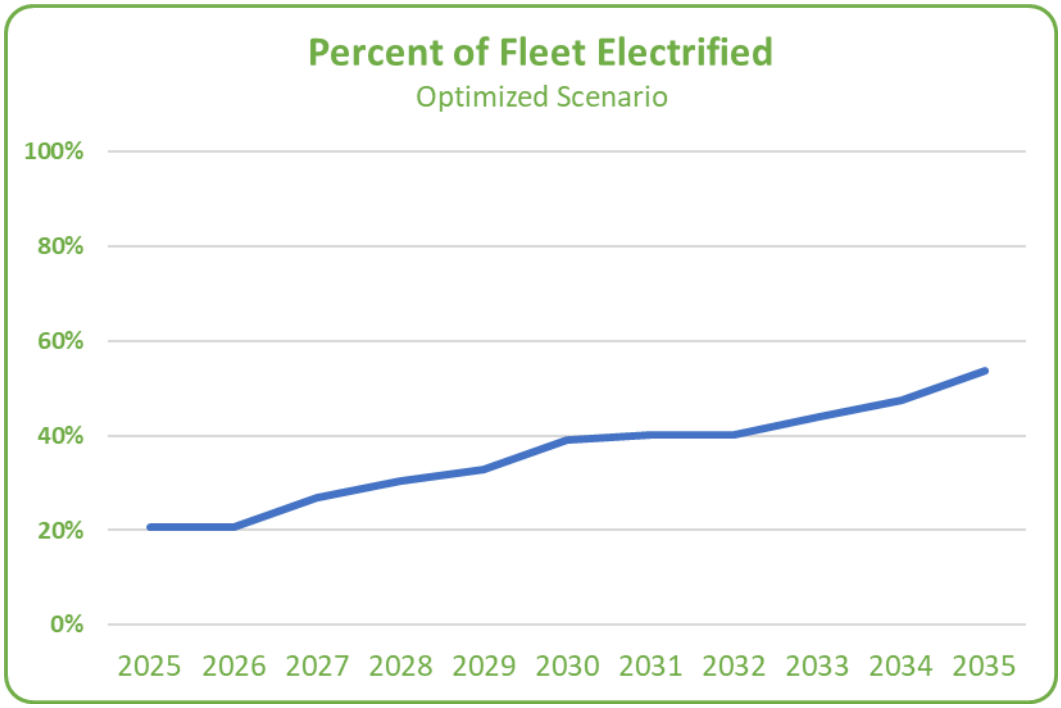


Figure 1: Percent of Fleet Electrified

Emissions reductions from the optimized scenario result in a 35% reduction by 2030 and a rough projection of 85% by 2050 (see Figure 2). Emissions are reduced from that baseline[6] of 265,000 kg in 2024 to 172,000kg in 2030 and 40,000 kg in 2050. Municipalities tend to use a baseline of 2007; however, as emissions and vehicle records related to the fleet are not available for that year, a baseline of 2024 has been used for this analysis. All emissions for this project include the Municipal, Fire (excluding shared PEMO vehicles) and Police fleet. This alone is not enough to meet the target for a 45% reduction by 2030 and 100% reduction by 2050, so other options have to also be considered, as presented in **Section 5: Strategy and Recommendations**.

[6] 2007 Fleet emissions (baseline year for Climate Leadership Plan) was 265,000/265 tonnes, not including Police services.

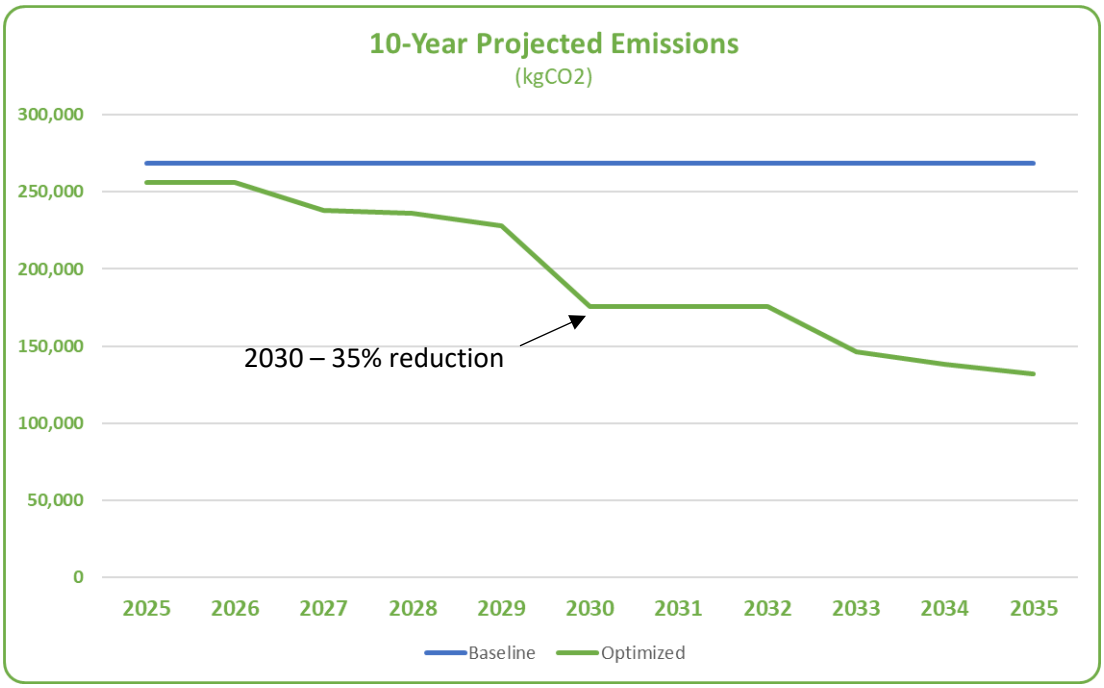


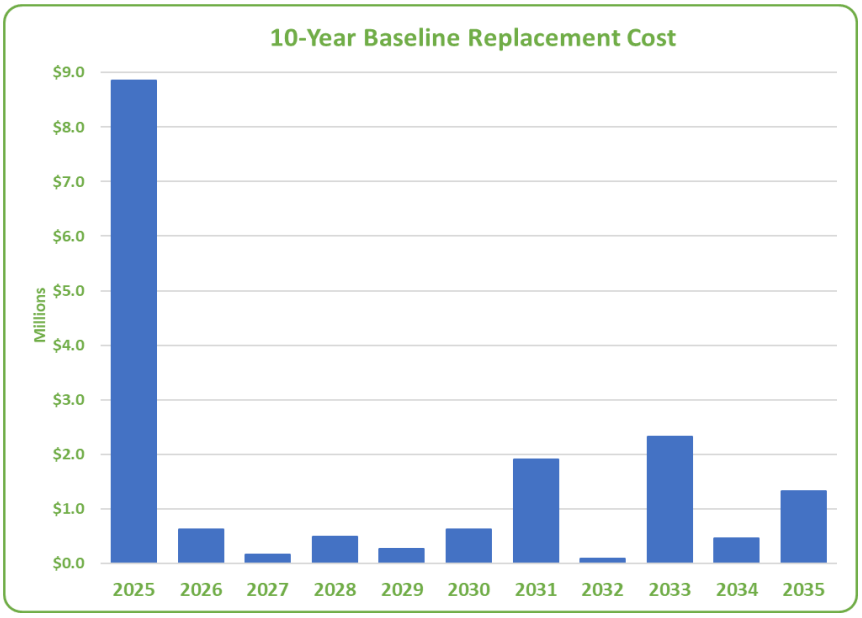
Figure 2: Emissions Profile from Fleet Electrification

A comparison of capital costs over a 10-year period is presented for both the baseline and optimized scenarios. The anticipated lifespan of each vehicle is determined according to industry standards for municipalities, as referenced in **Section 3.2: Comparison to Industry Peers**. The baseline scenario indicates a substantial capital expenditure in 2025, as a considerable portion of the fleet will have surpassed its useful life. It is acknowledged that this level of expense is unlikely to be feasible within the District's budget, particularly given the significant workload associated with vehicle replacements. As a result, the optimized scenario aims to alleviate this burden from both operational and financial perspectives.

Replacements are then modelled with the optimized scenario reducing the initial expenditure and smoothing replacements. Two notable capital expenditure peaks still occur in 2025 and 2029, primarily due to the necessity of replacing Fire Apparatus, which are high-cost vehicles. The replacement schedule for these vehicles is regulated by the Fire Underwriters Survey (FUS), meaning that adjustments to the replacement year could adversely affect the District's insurance rating.

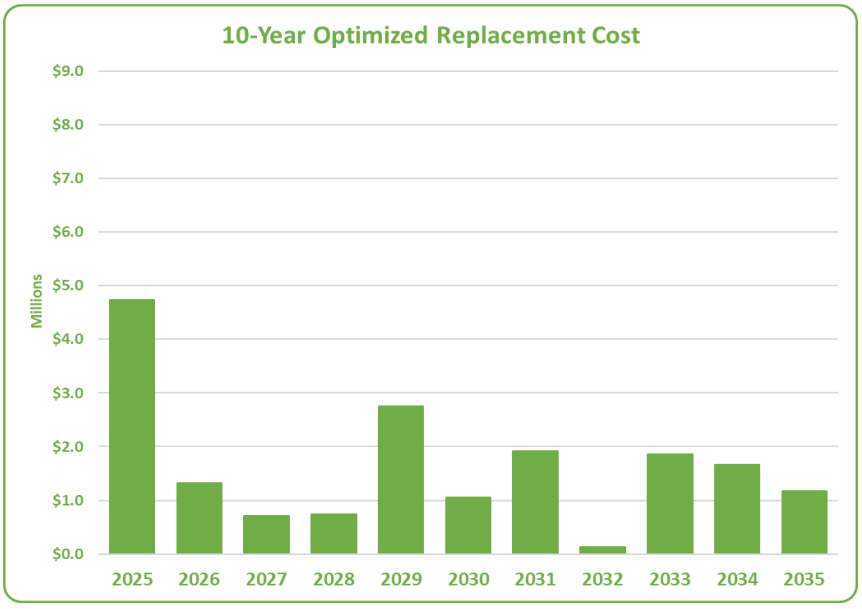
Under the baseline scenario, a capital expenditure of $8.9 million is required in 2025; however, the optimized scenario reflects a reduction to $4.7 million ($3.4 million of which is for two fire apparatus). It is essential to highlight that this capital comparison pertains exclusively to vehicle replacements and excludes the costs associated with electrical and charging infrastructure, which will be discussed in the

subsequent section. Additionally, the net present value (NPV) over the 10-year period has been calculated for each scenario, with the optimized scenario demonstrating a significantly lower NPV of $25.7 million compared to the baseline's NPV of $28.9 million. This NPV calculation encompasses both capital and operating costs (maintenance and fuel), while still omitting considerations for chargers and electrical infrastructure.



10 Year NPV: $28.9M

Figure 3: 10 Year Capital Replacement Costs and NPV – Baseline Scenario



10 Year NPV: $25.7M

Figure 4: 10 Year Capital Replacement Costs and NPV – Optimized Scenario

The 10 year capital cost replacement figures above provide key information to help inform the strategy. The detailed analysis that was used for the capital costs and NPV includes a full TCO review, risk analysis and projected industry technology advancement. This additional information has been provided to the District separately so that it can be used for more detailed budgeting processes and for detailed evaluation at the time of vehicle replacements.

4.3 ELECTRICAL INFRASTRUCTURE ASSESSMENT

There are three locations that were considered for fleet electrification as part of this strategy. These locations are:

1. Public Works/Municipal Yard – 1703 Keating Cross Rd
2. Fire Hall – 1512 Keating Cross Rd
3. Municipal Hall – 1902 Mount Newton X-Road

The existing peak demand load and projected EV demand for the optimized scenario are presented in the table below. Prior to performing any required upgrades, a Demand Load Study performed by a licensed electrician is recommended to confirm results at each of the locations.

Table 3: Summary of Electrical Capacity Assessment at 2035

	Public Works	Fire Hall	Municipal Hall
Electrical Service Capacity[1]	173 kVA	231 kVA	231 kVA
Maximum Electrical Demand[1]	64 kVA	64 kVA	156 kVA
Remaining Capacity[1]	109 kVA	167 kVA	75 kVA
2035 - Projected EV Load; optimized scenario[2]	48 kW	2 kW	142 kW
Upgrades Required[2]	No	No	Yes

1. Data retrieved from BC Hydro provided 1-year historical load information. Data should be confirmed via demand load study. See **Appendix B: Electrical Capacity Assessment and Detailed Charging Plan** for additional details.
2. Assumes charging infrastructure is networked and load sharing enabled.

As part of this assessment, facility redevelopment and upgrades to the current electrical infrastructure were considered. The District has indicated that redeveloping the Public Works yard and Municipal Hall is under review, though no firm schedules or designs are in place.

To ensure a cost-effective and fiscally responsible approach, the recommended solutions emphasize careful load sharing and charger networking. This strategy minimizes the need for electrical infrastructure upgrades at these locations through 2035. By leveraging networking and load-sharing technologies, additional chargers can be installed without upgrading the main service until 2030, preventing unnecessary capital investments before redevelopment plans are finalized.

However, based on the modelling, infrastructure upgrades will be required at Municipal Hall in 2030 to support the transition of five front-line police vehicles to EVs. Due to their short charging windows, these vehicles will require DC fast charging (DCFC), as outlined in the charging plan. Further details on this plan can be found in the next section.

Further details for the preliminary electrical infrastructure assessment and facility location layouts are in **Appendix B: Electrical Capacity Assessment and Detailed Charging Plan.**

4.4 CHARGING PLAN

A charging plan was developed and calls for a 1:1 ratio of charging plug to vehicle. This allows for ease of operations as vehicles are not required to be swapped or have scheduled days when they can use a plug, which can result in vehicles not being charged when needed. All facilities were modelled with charging times as provided by the District, which range from 2 hours for frontline Police vehicles to 12 hour overnight charging for many Public Works vehicles. The installation of chargers and new circuits is aligned with the optimized EV transition scenario and these charge times. This results in the installation of circuits, chargers and civil construction in the year that EVs are expected to be purchased and delivered, therefore optimizing capital spending. Initial civil infrastructure occurs in 2025 for Public Works, 2025 for Municipal Hall and 2034 for the Fire Hall.

The charging plan considers level 2 chargers and DCFC. These are expected to provide sufficient output for vehicle needs, allow for data tracking, networking and power sharing. As the electrical infrastructure at each location has limited in capacity, it's critical that a strict charge management practice be followed. This includes charging all vehicles overnight, ensuring chargers are networked and that power sharing is enabled to manage the total EVSE loads.

The tables below summarize the charging infrastructure installation by year and for each location. These tables assume the use of FLO EVSE as it aligns with what the District already uses. Additional details can be found in **Appendix B: Electrical Capacity Assessment and Detailed Charging Plan**.

Table 4: Public Works - Proposed EVSE at Each Year

Year	# of Level 2 (40A) Circuits	# of Level 2 Connectors	# of DCFC
2025	2	5	
2027	2	4	
2028		2	
2029	1	1	
2031		1	
2033	1	1	1
2034	1	1	
2035		3	

Table 5: Fire Hall - Proposed EVSE at Each Year

Year	# of Level 2 (40A) Circuits	# of Level 2 Connectors	# of DCFC
2034	1	1	

Table 6: Municipal Hall - Proposed EVSE at Each Year

Year	# of Level 2 (40A) Circuits	# of Level 2 Connectors	# of DCFC
2025	2	2	
2027		1	
2028		1	
2029		1	
2030			5

This charging plan is considered a baseline for today's charging technology and the District should monitor the evolution of charging technology. Megawatt Charging Standard (MCS), automated charging, inductive charging or battery swapping are some of the technologies that are emerging and may prove better suited to the District's operations as the technology matures.

4.5 OTHER EMISSIONS REDUCTION STRATEGIES

In addition to fleet electrification, there are other proven strategies for reducing emissions. A few options are noted below with two recommended, low-risk strategies including the use of renewable diesel as well as the adoption of Industry Best Practices.

1. **Biodiesel** is a biofuel that has been used for decades and is typically derived from vegetable oils, animal fats, rapeseed oil, sunflower oil, and palm oil[7] . It is available in various blends, such as B5 (5% biodiesel, 95% standard diesel) and B20 (20% biodiesel, 80% standard diesel), and is already commonly included in the diesel fuel supply throughout British Columbia. Under the BC Low Carbon Fuel Standard, diesel fuel must contain a minimum of 4% renewable content, increasing to 8% on April 1, 2025[8] While the specific renewable content is not defined, biodiesel is commonly used to meet this requirement.

   Despite its benefits, biodiesel has some key limitations. One challenge is fuel quality and engine compatibility. Biodiesel is not refined to the high-quality fuel standards required by engine manufacturers, and most manufacturers only allow up to a 20% blend (B20) before voiding engine warranties. Another concern is its performance in cold weather. Biodiesel has poor low-temperature properties, leading to the formation of solids at the cloud point—a phenomenon known as "gelling," where the fuel becomes too thick to flow properly.

   B20 can reduce emissions by up to 20% compared to standard diesel, though the actual reduction varies depending on the supplier's feedstock and refining process. Additionally, because BC's Low Carbon Fuel Standard already mandates some renewable content in diesel, the incremental emissions benefit from using biodiesel may be lower. It is important to

[7] "Biofuels explained", US Energy Information Administration, accessed at https://www.eia.gov/energyexplained/biofuels/biodiesel-rd-other-basics.php#:~:text=Vegetable%20oils%20(mainly%20soybean%20oil,and%20yellow%20grease%20from%20restaurants.

8 Low Carbon Fuel Standard", Province of British Columbia, accessed at https://www2.gov.bc.ca/gov/content/industry/electricity-alternative-energy/transportation-energies/renewable-low-carbon-fuels/requirements

recognize that biodiesel is still a combustion fuel, meaning tailpipe emissions—similar to those from standard diesel—are still produced, contributing to local air pollution and environmental concerns.

To ensure optimal performance and compliance, discussions with fuel suppliers are recommended to determine the cloud point for various blends, pricing, and emissions reduction potential. Since blends higher than B20 void engine warranties, using a higher concentration is not advised.

2. **Renewable diesel** is also known as Renewable Hydrogenated Diesel (RHD) or R100 in its pure form meets diesel fuel quality standards and is suitable as a direct drop-in replacement for both engines and existing fueling infrastructure. This fuel has been in commercial production since 2007, with the number of refining facilities across the world slowly increasing, and a number of refining facilities now located in North America, including one in the lower mainland of British Columbia. Because it's a drop in replacement, it can be supplied regularly as a diluted percentage, such as R20 (20 percent RHD), or at its full strength. Discussions with the District's existing fuel suppliers are recommended to help inform a suitable blend and supply frequency.

   R100 can provide up to an 85% emission reduction compared with standard diesel. This emissions reduction is calculated based on the BC Best Practices Methodology for Quantifying Greenhouse Gas Emissions and as each supplier has a different feedstock and refining process, there are some variances in the exact emissions reduction for their specific product, so the exact reduction will be dependent on the fuel supplier. It's also important to note that despite the emissions reduction, this fuel still undergoes a combustion process in an engine and tailpipe emissions are still a byproduct. These tailpipe emissions are similar to those of non-renewable diesel and still contribute to local pollution and air quality concerns. For this reason, renewable diesel is recommended as a way to supplement or accelerate carbon emission reduction, but it is not an optimal long-term solution on its own.

3. **Industry Best Practices** – In addition to electrification and alternative fuels, other industry best practices have been reviewed. A number of municipalities across Canada have been contacted, with many having similar practices, and only those relevant and with potential benefit to the District are presented below. Many of the best practices prove difficult to determine exact emission reduction as they cannot be measured independently. However, qualitative emission reduction potentials are provided and based on feedback from peer municipalities that have successfully implemented these.

a. Green Procurement Policy – City of Burlington

The City of Burlington has implemented a Green Procurement Policy as well as Green Procurement Guidelines. The Policy outlines the objectives to ensure the City acquires sustainable products and services and references several standards by which the sustainability of a product or service can be measured. The Guidelines provide information to employees to educate them on what Green Procurement means, why it's important and misleading or false information that respondents may provide as part of their bids.

Impact: *Low*

Cost/Resources: *Low*

Ease of Implementation: *Moderate*

b. Anti-Idle and Telematics – City of Saskatoon

The City of Saskatoon has revised their policy and invested in anti-idle technologies. This is a significant effort in change management, but considering some of the challenges and range reduction of electric vehicles in cold climates, they have deemed this a good investment. They have implemented GPS systems on their fleet and developed an idle report for Operational Managers. This allows Managers to develop awareness with staff, understand their department's idling behaviours and work one-on-one with staff who may not be following the policy.

Impact: *Low*

Cost/Resources: *High*

Ease of Implementation: *Moderate*

c. Fleet Procurement Committee – Metro Vancouver

Metro Vancouver has taken steps to implement a Fleet Procurement Committee. This is a widely popular approach by a number of other municipalities that generally include representatives from Fleet, Sustainability, Operations and Finance. This Committee makes recommendations on individual vehicles, fuel type, specifications, and others when a municipality is either replacing one of its vehicles or purchasing additional vehicles. Historically, Operations and Fleet defined the vehicles to be purchased, and the decisions had a very operational-centric focus. However, this Committee approach ensures that corporate priorities and good business cases are considered as part of the decisions.

Impact: *Moderate*

Cost/Resources: *Low*

Ease of Implementation: *Low*

4.6 FINANCIAL CONSIDERATIONS AND INCENTIVES

The incentives and considerations outlined in this section will be important factors the District should include in annual work plans and budgeting. All of these financial considerations and incentives change periodically and cannot be easily predicted as part of the final strategy. Therefore, they are not included in any financial analysis but are detailed below so the District has the information required to review and apply as applicable.

4.6.1 AVAILABLE INCENTIVES

The transition to EVs generally involves a significant initial investment in infrastructure upgrades and vehicle purchases. Although the expected lower operating costs (including lower fuel costs) can eventually balance out these expenses over a vehicle's lifespan, the heightened need for capital still poses a financial challenge for numerous organizations. Various incentives, grants, and loans are available to assist organizations in every stage of their transition. Below is a list of known financial support options along with brief descriptions. Many of these can be combined and have differing maximums and conditions. These support programs are based on the information available at the time of writing and typically necessitate thorough planning, including the submission and approval of an application, before receiving funding. It is crucial to note that these incentive programs can change with little notice, so organizations should verify their availability and suitability at the time of application.

Table 7: Financial Support and Incentives

	Applicable Financial Support
Passenger Vehicles	• Clean BC Go Electric - this program provides up to $3,000 per EV. https://goelectricbc.gov.bc.ca/rebates-and-programs/for-businesses-and-organizations/passenger-vehicle-rebates-for-fleets/ • Transport Canada iZEV - this program provides up to $5,000 per EV. https://tc.canada.ca/en/road-transportation/innovative-technologies/zero-emission-vehicles/incentives-zero-emission-vehicles-izev. *Note: the iZEV Program is on pause as of January 2025 and expected to resume on April 1, 2025 with a new fiscal budget.*

On-Road Medium & Heavy Duty Vehicles	• Clean BC Go Electric - this program provides up to $100,000 per EV for vehicles typically used by a Municipality. The amount of the rebate is typically based on the size of the vehicles with smaller vehicles only eligible for up to $10,000 while larger vehicles are eligible for up to $100,000. https://www.goelectricotherrebates.ca/rebate • Transport Canada iMHZEV - this program provides up to $100,000 per EV for typical vehicles used for Municipal services. Similar to the Clean BC program, the level amount of the incentive is linked to the size of the vehicle. https://tc.canada.ca/en/road-transportation/innovative-technologies/zero-emission-vehicles/incentives-medium-heavy-duty-zero-emission-vehicles
EV Transition Planning & Feasibility Studies	• BC Hydro EV Fleet Ready Plan - this program covers 50% of the cost up to a maximum of $15,000. https://www.bchydro.com/powersmart/electric-vehicles/industry/fleets/incentives.html#professional-planning • FCM Green Municipal Fleet Electrification - this program covers up to 80% of eligible expenses to a maximum of $200,000. The scope includes feasibility studies for transition to ZEVs including a municipal fleet and/or transit fleet. https://greenmunicipalfund.ca/municipal-fleet-electrification
Electrical Infrastructure Upgrades	• BC Hydro - this program provides up to 50% of the electrical infrastructure upgrade costs for any infrastructure upgrades identified as part of the EV Fleet Ready Plan. https://www.bchydro.com/powersmart/electric-vehicles/industry/fleets/incentives.html#electrical-infrastructure
Fleet Chargers	• Clean BC Go Electric Fleet Charging Program - this program provides up to $100,000 per EV charger. The incentive amount is based on the size of the charger, with smaller level 2 chargers eligible for up to $2,000, while faster chargers are eligible for up to $100,000. https://www2.gov.bc.ca/gov/content/industry/electricity-alternative-energy/transportation-energies/clean-transportation-policies-programs/clean-energy-vehicle-program/go-electric-fleet-support-program • Natural Resources Canada ZEVIP (Zero Emission Vehicle Infrastructure Program) - this program provides up to 50% of the funding for project costs. It has specific application intake timing and requirements, and for small projects, funding may be administered through approved charging station suppliers. https://natural-resources.canada.ca/energy-efficiency/transportation-alternative-fuels/zero-emission-vehicle-infrastructure-program/21876
Capital Cost & Loan Support	• FCM Green Municipal Fleet Electrification - in addition to the feasibility studies, this program also provides support for the capital costs for ZEVs, chargers and facility upgrades. This program includes a grant and loan portion covering up to 80% of project cots. The loan maximum is $10M, with a grant covering up to 20% of the loan amount. https://greenmunicipalfund.ca/municipal-fleet-electrification

4.6.2 CARBON CREDITS

Carbon credits are a commodity that can be monetized for organizations that convert their fleet to EVs. There are two programs applicable to organizations in British Columbia, the provincial Low Carbon Fuel Standard and the federal Clean Fuel Regulation[9]. Organizations that own and operate EVSE can collect credits under both of these programs. The credits can be saved, sold on the carbon trading market, or used to offset emissions. As these credits are commodities, the price fluctuates with market values. Average 2023 prices were approximately $475/tonne for credits under the LCFS and $127/tonne for the CFR. There are currently no restrictions on how the proceeds from credits can be used. Ideally, they would be used to offset EVSE costs, purchase additional electric vehicles, or for a similar carbon reduction initiative, but at this time, it is unregulated. Using carbon credits for EV energy at today's carbon credit pricing results in net revenue on the electricity consumed by the EV.

These credits are earned based on the differential emissions between an EV and a comparable ICE vehicle; calculated using the integrated grid carbon intensity of 9.2 tCO2e/GWh (2021)[10] vs the carbon intensity for a comparable ICE vehicle. These values change on an annual basis, and for 2024, diesel fuel is 79.28 gCO2e/MJ (2024)[11]. Vehicle efficiencies and fuel or electricity use are then required to calculate the difference. One tonne of carbon saved by an EV is considered one credit. Initial estimates indicate that up to $400,000 in carbon credits could be collected by 2035 by the District (see Table 9 in Section 5.2). Typically, an aggregator or energy specialist is used to track the required data and calculate credits. An aggregator can also be used to manage the carbon trading, but an organization can also choose to do this in-house.

The carbon credit industry in British Columbia is still relatively new and expected to evolve over the coming years. For the purposes of this project, carbon credits are not factored into the financial analysis or emissions reductions but are provided for insight and further exploration by the District.

[9] Province of British Columbia, https://www2.gov.bc.ca/gov/content/industry/electricity-alternative-energy/transportation-energies/renewable-low-carbon-fuels

[10] "Electricity emission intensity factors for grid-connected entities", Province of British Columbia, accessed at: https://www2.gov.bc.ca/gov/content/environment/climate-change/industry/reporting/quantify/electricity

[11] "LCFS Requirements", Province of British Columbia, accessed at: https://www2.gov.bc.ca/gov/content/industry/electricity-alternative-energy/transportation-energies/renewable-low-carbon-fuels/requirements

5. STRATEGY AND RECOMMENDATIONS

Using the research and analysis from the previous section, a strategy can now be developed. This section combines all options that have been reviewed to develop a roadmap with a key focus on the strategy, emissions, and recommendations. The core components of the strategy and roadmap are outlined first, followed by additional detail on emissions reduction targets, financial impacts and a detailed list of recommendations.

5.1 CORE STRATEGY AND ROADMAP

Section 4: Research and Analysis outlines a range of best practices for emissions reduction, fleet electrification and fleet management. Together, these practices form the foundation of the recommended strategy, which balances technology readiness, financial impacts, operational risks, and emissions reductions.

The strategy focuses on three core components:

1. **Optimized Transition Scenario**

   This scenario uses a TCO analysis to determine when switching to EVs becomes beneficial. It also accounts for the market readiness of EV technology and assesses the potential risks to service during the transition. This scenario includes detailed plans for implementing EVs, electrical infrastructure, and charging station deployment.

2. **Renewable Diesel**

   This is a drop-in replacement fuel that offers up to an 85% reduction in emissions and provides an effective interim solution during the EV transition.

3. **Incentives and Carbon Credits**

   Leveraging carbon credits and incentives will be a key part of financing the transition to EVs and associated emission reduction.

The District delivers essential services during both routine operations and emergencies, making it essential to ensure vehicles meet operational requirements. The strategy prioritizes technology readiness, with the optimized scenario transitioning vehicles as technology matures and manufacturer development costs stabilize. Financial considerations are also a key factor. Although the analysis excludes incentives due to their dynamic nature, the strategy emphasizes the importance of regularly

researching and reviewing available incentives, as these could accelerate electrification or offset costs, such as those associated with renewable diesel.

The strategy is designed to guide future decisions while allowing for flexibility to adapt to unforeseen changes, such as new operational demands, industry trends, grant opportunities, financial constraints, or technological advancements. By maintaining a balanced approach, the District can continue to work toward its emissions reduction targets while staying responsive to evolving circumstances. To sustain progress, the District should continue its best practices of conducting annual vehicle and operational reviews throughout the strategy's implementation. The fleet industry is undergoing rapid technological change, and by adopting this proactive strategy, the District has positioned itself for success in reducing harmful emissions.

Figure 5 outlines the major tasks and components of the strategy in a chronological format. A comprehensive list of detailed recommendations can be found in **Section 5.4: Recommended Actions**.

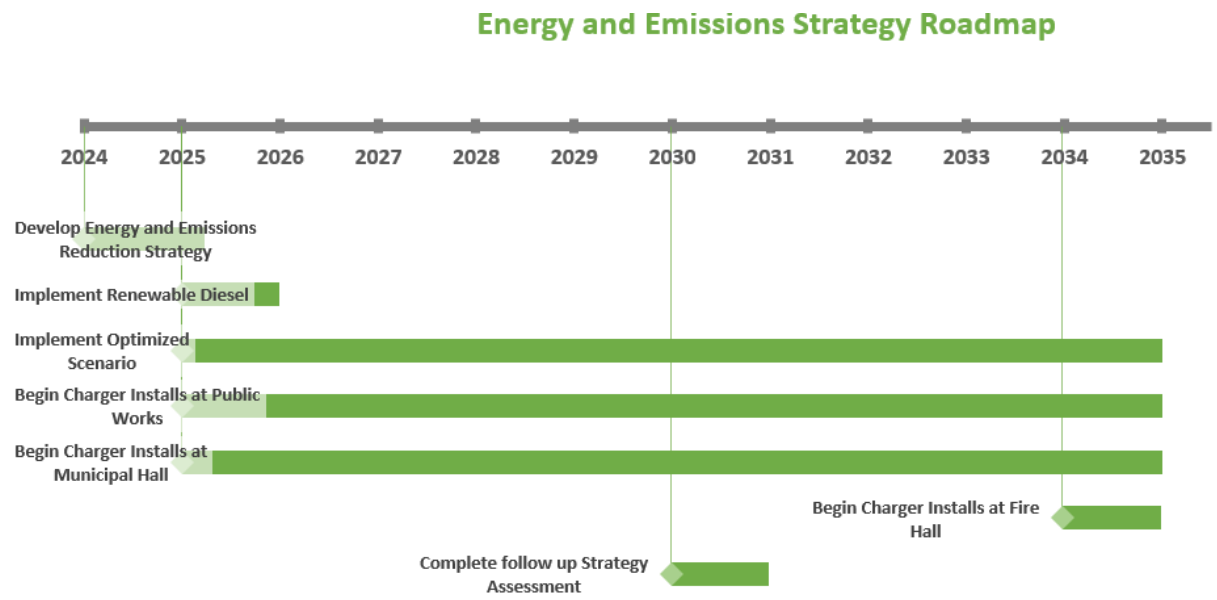


Figure 5: Strategy Roadmap

5.2 CARBON REDUCTION TARGETS

As part of this strategy, the District's ambitious emissions reduction targets are considered, a 45% reduction by 2030 and 100% by 2050. Achieving these goals through fleet electrification alone is not

projected to be economically feasible. Electrification is estimated to reduce emissions by 35% by 2030 and 85% by 2050.

The Province of British Columbia's Low Carbon Fuel Standard (LCFS) incrementally reduces the carbon intensity of diesel and gasoline until 2030. This standard is expected to provide an additional 17% reduction in carbon intensity by 2030. When combined with electrification, these measures are forecasted to result in a 45% emissions reduction by 2030 and 88% by 2050. This meets the 2030 target, but is still expected to fall short of the 2050 target (Figure 6).

Should the District wish to exceed the 2030 target and get closer to the 2050 target, renewable diesel could also be introduced. Full-strength renewable diesel has the potential to reduce emissions by up to 85% today. However, this reduction potential is expected to decrease to approximately 70% by 2030 due to the impact of the LCFS.

The pathway to achieving the 2030 and 2050 emissions reduction targets involves a combination of the following:

- Electrification – Recommended as the primary approach for reducing emissions.
- LCFS – this provincial requirement will automatically reduce emissions for any fuel supplied to the District.
- Renewable Diesel – Necessary to supplement electrification and the LCFS to meet the 2030 emissions reduction target.
- Continued annual tracking – it's important to continue annual tracking of fuel consumption and emissions. This will ensure the District remains on track to meet targets.

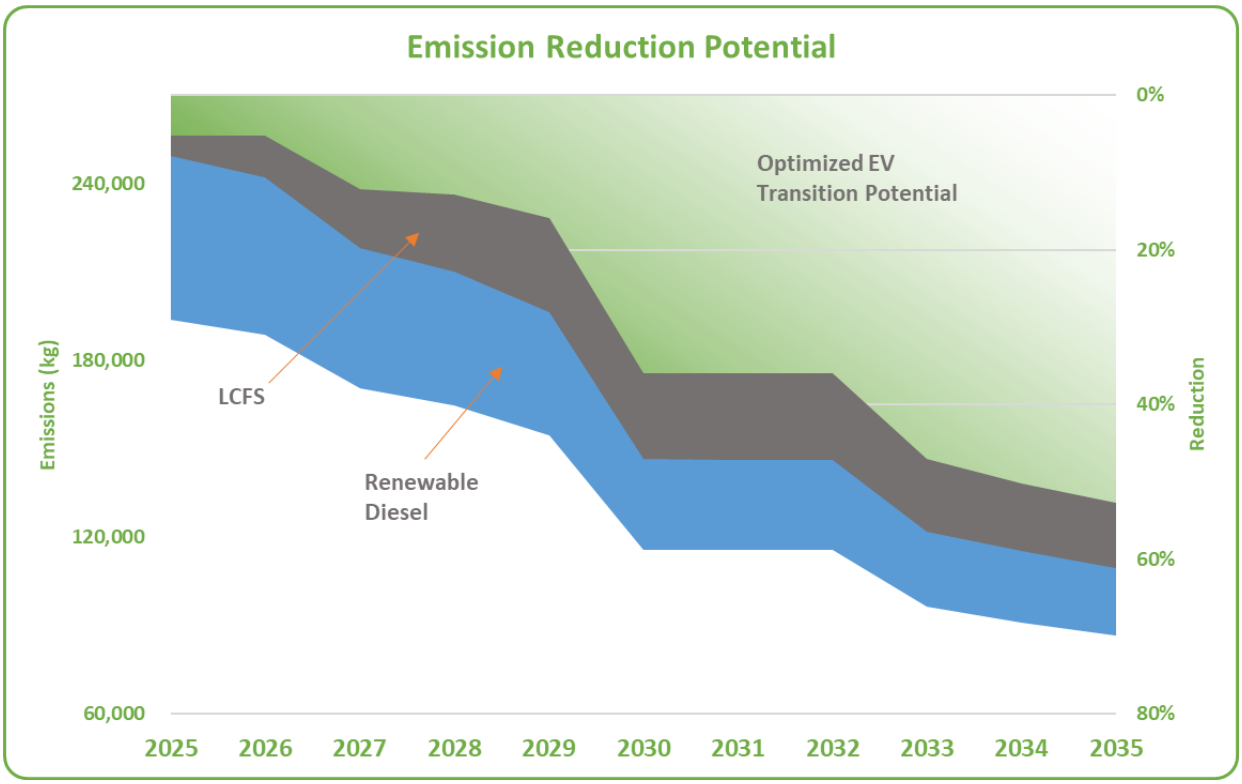


Figure 6: Emissions Reduction Potential

Figure 6 shows the stacked potential of each of these options. By combining all three, an emission reduction potential of up to 57% is possible by 2030 (113,000 kg), and up to 90% by 2050 (26,000 kg). By integrating these measures, the District aims to optimize its emissions reduction strategy while working towards its 2030 and 2050 goals.

5.3 FINANCIAL IMPACTS

The financial impacts of this strategy focus exclusively on electrification, encompassing vehicle purchases, operating costs, electrical infrastructure upgrades, and charging equipment. The analysis compares the baseline scenario with the optimized scenario, highlighting key differences.

In the optimized scenario, vehicles transition to electric only when the TCO is expected to be favorable. This selective approach naturally results in a lower NPV for the vehicles. Capital costs are slightly higher for the optimized scenario, but can also be offset slightly by carbon credits.

Table 8: Estimated Cumulative Costs to 2035

	Incremental Capital		NPV –	Carbon Credit
	Vehicles	Chargers[2]	Vehicles only	Potential[1]
Baseline	0	0	$28.9M	-
Recommended Strategy *-Optimized Scenario -Renewable Diesel -Carbon Credits*	$0.8M	$1.2M	$25.7M	$0.4M

1. Based on a carbon credit value of $600/tonne
2. This cost only includes infrastructure and chargers for public works and municipal hall.

Other elements of the strategy, such as the use of renewable diesel or fleet management best practices, are assumed to have a cost-neutral or negligible financial impact and are therefore excluded from the table. Current market pricing of renewable diesel is generally at par with standard diesel for an R50 blend, with some suppliers offering at par for an R100 blend depending on volumes, customer loyalty and other considerations. The District would need to discuss pricing directly with suppliers. Additionally, incentives have not been factored into the analysis, as they are not guaranteed. By excluding incentives, the analysis reflects a worst-case cash flow scenario, with any incentives received by the District expected to further reduce capital costs.

Detailed financial information for each vehicle, including replacement costs, maintenance, and fuel costs, has been provided separately to the District. This ensures the District has the necessary data for additional analysis or budgeting if required.

5.4 RECOMMENDED ACTIONS

Table 9 below is a more granular list of all recommendations that form this strategy.

Table 9: List of Recommendations

	Description	Rationale
1.	Improve fleet data collection	Fleet data collection allows for improved decision-making on vehicle maintenance needs and vehicle replacement and can reduce downtime and associated impact on other operational groups.

	Description	Rationale
2.	Improve fleet composition	Improved fleet composition results in familiarity of vehicles for operators and technicians, shared parts and streamlined support from external maintenance providers. These benefits typically result in improved efficiency for maintenance and operations. Purchasing strategies such as contracts to purchase a single vehicle make/model for a specific vehicle class and defined period of time should be considered.
3.	Define useful life targets	Develop a fleet policy, standard operating procedure, tangible capital asset replacement schedule or similar document the defines useful life targets by vehicle class. This is in alignment with industry standards and will aid in consistent amortization and replacement planning.
4.	Consider the development of a Green Procurement Policy	Many municipalities have begun implementing sustainability metrics and requirements into purchasing policies. Defining the fleet specific requirements for sustainability should be included in the development of any such policy.
5.	Consider the implementation of a telematics system	Telematics can provide numerous benefits including but not limited to data tracking, improvements for safety and security and even notifications for maintenance scheduling. Telematics systems can be costly, and if implemented, it's important to ensure there are sufficient benefits to justify the cost.
6.	Consider the implementation of a fleet procurement committee.	This committee would ensure that key stakeholders are consulted for the purchase of new and replacement vehicles. These stakeholders typically balance the operational need, costs, vehicle specs, safety, maintenance, alternative methods to provide the service, and sustainability.
7.	Adopt the Optimized Scenario for EV transition	This scenario was developed in conjunction with District staff and is expected to be achievable and realistic while balancing risk to District operations and critical services.
8.	Begin charger installs at Public Works in 2025.	This aligns with EVs being introduced at this site as per the optimized scenario. Beyond this initial install, additional chargers should be installed according to the charging plan.
9.	Begin charger installs at Municipal Hall in 2025.	This aligns with EVs being introduced at this site as per the optimized scenario. Beyond this initial install, additional chargers should be installed according to the charging plan.

	Description	Rationale
10.	Begin charger installs at the Fire Hall in 2034.	This aligns with EVs being introduced at this site as per the optimized scenario. Beyond this initial install, additional chargers should be installed according to the charging plan.
11.	Continue annual review of vehicle replacement plans, including fuel and emissions reporting.	This fleet strategy report does not replace the need to continue with annual updates to fleet replacement plans and the review of suitable replacement vehicles for operational use. Operational use, maintenance costs, fuel use, emissions and organizations needs change on a regular basis and should be reviewed annually and considered in any replacement plan.
12.	Review the ability and cost for the existing fuel provider to supply Renewable Deisel	This fuel is now widely available on Vancouver Island with many other organizations utilizing it with positive results. R50 is generally cost-neutral to regular diesel, with some suppliers potentially providing R100 as cost-neutral. R100 provides up to an 85% reduction in carbon emissions.
13.	Research and apply for incentives.	While incentives are listed as part of this project, they are constantly changing, and eligibility may be organization-specific. The District should review each of them in further detail and engage with the incentive provider.
14.	Regularly update and renew this strategy.	As the District moves forward on its electrification plans, regular review of this strategy should be completed approximately every 5 years to ensure new and emerging technologies are accurately reflected. Future fleet strategy assessments could be significantly smaller in scope than this initial project.
15.	Monitor the development of emerging technology for zero-emission vehicles.	ZEV technologies are advancing, hence it is important to monitor and update plans accordingly to best support operational requirements.
16.	Review the detailed requirements for the collection of carbon credits.	Eligibility for carbon credits requires specific data tracking and validation. Requirements should be reviewed in detail to determine the best approach and method for managing them.
17.	Train maintenance staff	Maintenance staff should be trained on EV maintenance, diagnostics and high-voltage safety.

	Description	Rationale
18.	Procure industry recommended PPE for high-voltage vehicle safety	This is required as part of a complete EV safety and maintenance program.
19.	Develop a safe work practice	A safe work practice should be developed for safely de-energizing an EV when required.

The development of this strategy has been completed in a manner that factors in the District's infrastructure, training, and current adoption of EVs. In order for this to be a successful strategy, the District should implement the recommendations in this report. Every effort was made to anticipate industry trends, available vehicles, technology progression, and estimated costs. However, there is still a need for the District to complete an annual review of vehicle replacements, follow industry progression, review changing operational needs, and assess the suitability of any EVs for their fleet.

5.5 LIMITATIONS

As with any review or assessment, certain limitations may impact the ability to provide precise and accurate information or recommendations. These limitations may stem from data availability, environmental conditions, human error, and other factors. While every effort was made to minimize these limitations, the District should carefully review all recommendations and conduct a more thorough internal assessment before proceeding with implementation. A detailed description of the identified limitations is outlined below:

1. **Available Data**
   The District's fleet data is limited, which is consistent with many similar-sized municipalities. These data gaps and inaccuracies may affect the precision of replacement plans or recommendations.

2. **Fleet Size and Composition**
   The District's fleet is dynamic and constantly changing with new vehicles being purchased and old ones disposed of. As a result, it's difficult to confirm the exact fleet size, composition, and needs due to conflicting fleet size and composition information. Efforts were made to consolidate all data and determine an accurate and reflective fleet composition. Where discrepancies are suspected, the Fleet List should be used as it defines the fleet size and composition that was used for the purposes of this analysis.

3. **Operational Information**
   Efforts were made to gain a detailed understanding of the District's operations, vehicle usage, and challenges through several stakeholder meetings. However, achieving a comprehensive understanding of the District's specific operations often requires years of observation and broader stakeholder engagement. As such, the insights gathered are at a high level, meant to identify key themes and challenges.

4. **Vehicle Specifications and Replacement Costs**
   Replacement costs for vehicles and equipment can vary significantly based on required features. The same make and model may have optional upgrades that add tens or even hundreds of thousands of dollars to the capital cost. Generic specifications for work and municipal vehicles were used to develop budget estimates, which may not fully reflect the District's specific needs for every vehicle. In addition, any tariffs or significant supply chain changes in the industry could have a significant impact on future costs.

5. **Changing Regulations and Industry Evolution**
   The fleet electrification industry is evolving rapidly. Information can become outdated shortly after release, with new EVs regularly entering the market. Financial incentives may change unexpectedly, commodity markets (e.g., carbon credits) can fluctuate, and other factors may shift over time. The information in this report is accurate as of the time of writing and cited where appropriate, but future developments may affect its validity.

6. **Financial Constraints**
   Budget limitations may restrict the District's ability to implement some recommendations. It will be essential to prioritize actions and adopt a phased approach to progress toward these goals over time.

APPENDIX A: FLEET LISTING AND DATA

This document was provided to the District as a separate Excel document.

APPENDIX B: ELECTRICAL CAPACITY ASSESSMENT AND DETAILED CHARGING PLAN

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Technical Memorandum No. 01 v1.0 - FINAL

PROJECT NAME:	**DISTRICT OF CENTRAL SAANICH FLEET ASSESSMENT**		
OWNER:	District of Central Saanich		
PRIME CONSULTANT:	Innotech Fleet Strategies	**DATE:**	March 18, 2025
CONTRACTOR:	N/A	**MEMO NO.:**	01 v1.0
ATTENTION:	**Steven Wiebe P.Eng, PMP**		
SUBJECT:	**Preliminary Assessment**		

1 Introduction

The District of Central Saanich is interested in increasing efficiency and reducing greenhouse gas (GHG) emissions of their fleet operations. The District of Central Saanich retained Innotech Fleet Strategies to provide recommendations that allow the District to understand the industry, set realistic emission reduction targets, balance risk, and provide a roadmap for a cost-effective and successful implementation. Innotech Fleet Strategies retained PBX Engineering Ltd to assist with the following scope of work:

- Gather and review all electrical as-built information for all sites.
- Perform a site survey to verify and confirm existing conditions for all sites.
- Review existing Utility data to perform an electrical capacity assessment for all sites.
- Attend review meeting to discuss findings.
- Assist in the preparation of the EVSE Charging Plan for all sites.
- Prepare the Electrical Infrastructure plan for one (1) site.
- Attend review meeting to discuss findings.
- Provide cost estimates for EVSE, subscriptions, and electrical infrastructure for one (1) site.
- Prepare EV Ready Plan for one (1) site.

The District of Central Saanich is considering electrifying their fleet at the following three (3) locations:

- Municipal Yard
- Fire Hall #1
- Municipal Hall

The purpose of this Technical Memorandum is to:

- Review proposed equipment and determine requirements,
- Summarize the findings from the electrical site assessments,
- Summarize the findings from the electrical capacity assessments, and
- Determine options for providing power to the EVSE infrastructure for one (1) site.

2 Codes and Standards

This Technical Memorandum has been prepared in accordance with all authoritative / legislated codes and standards adopted at the time of design by the Authorities Having Jurisdiction (AHJ), including the following:

- British Columbia Building Code, 2024
- BC Hydro EV Ready Plan Guidelines
- Canadian Electrical Code Part 1 Safety Standard for Electrical Installations: CSA C22.1 – 2021
- Canadian Electric Vehicle Infrastructure Deployment Guidelines – 2014

3 Record Information / Information Provided By Others

The following information has been used as reference information in the preparation of this technical memorandum:

- Municipal Hall, 1-Year Historical Load Consumption Data, 1-Hour Resolution, Jan-Dec 2023, BC Hydro
- Firehall, 1-Year Historical Load Consumption Data, 1-Hour Resolution, Jan-Dec 2023, BC Hydro
- Municipal Yard, 1-Year Historical Load Consumption Data, 1-Hour Resolution, Jan-Dec 2023, BC Hydro

4 Definitions

In this section, industry accepted electric vehicle standards, configurations, and types are defined and explained in detail.

4.1 Abbreviations

A	Amp
AC	Alternating Current
BMS	Battery Management System
BCH	British Columbia Hydro and Power Authority
DC	Direct Current
DCFC	Direct Current Fast Charging
EV	Electric Vehicle
EVSE	Electric Vehicle Supply Equipment
GHG	Greenhouse Gas
kW	Kilowatt
PMT	Padmount Transformer
PH	Phase
V	Volts

4.2 EVSE System Configurations

There are varying configurations for EVSE as developed by electric vehicle manufacturers. As a result, they offer a range of charging options. In general, they conform to the standard system configuration shown below.

The EV battery is located on-board the vehicle. Power is delivered to the vehicle battery through an inlet, which is considered a part of the vehicle. A connector with a cord connects the vehicle and makes an electrical connection for the purposes of charging and exchanging information. The connector makes an electrical connection between the vehicle and the utility (or the power source). The utility is known as the

Energy Portal. The connector, cord, and associated components that make the connection are collectively known as the Electric Vehicle Supply Equipment (EVSE). The interface between the EVSE and Energy Portal can be as simple as a plug and receptacle interface. The charging configurations vary based on type of connector and charging levels.

4.3 Charging Levels

Four (4) levels of charging comprise charging stations for commercial applications or for public use on private or public property. They are as follows:

- AC Level 1 Charging
- AC Level 2 Charging
- DC Fast Charging (DCFC) (formerly Level 3)
- Megawatt Charging System (MCS)

The amount of time needed to charge an EV battery is a function of charge level, battery size, battery age, the EV Battery Management System (BMS), and the on-board charger specifications. The BMS will communicate with the EVSE to identify the circuit rating and adjust the charge to the battery accordingly. On-board battery chargers are only used with AC Level 1 and 2 charging. With DCFC and above, the EVSE connection is direct to the battery.

The battery to be considered for charging times is a 65kWh battery, typical of most consumer electric cars currently on the road (e.g. Chevy Bolt). The on-board charger specifications will determine the amount of charge a battery can receive. For example, the Chevy Bolt can accept up to 7.7kW of charging on an AC Level 2 Charging station. For a level 2 station of greater power output, the Chevy Bolt will still only accept up to 7.7kW. Furthermore, charging speed slows via the BMS as the battery gets closer to full to prevent damage to the battery. It can take about as long to charge the last 10 percent of the battery as the first 90 percent.

4.3.1 AC Level 1 Charging

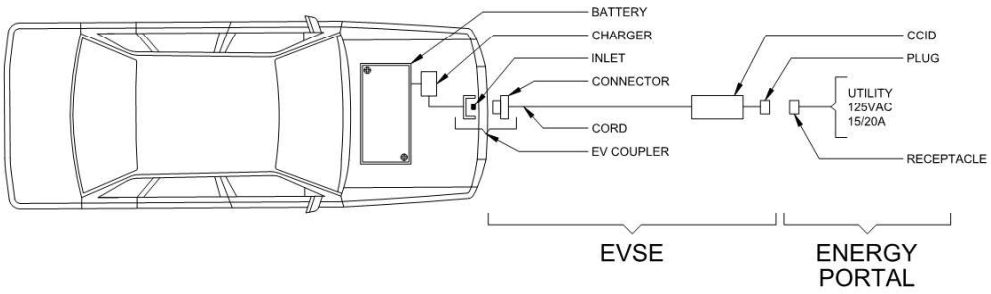

Figure 1 - Standard AC Level 1 Charging Station Configuration

AC Level 1 Charging provides the slowest charging times. Typical charging for this system is up to 1.9 kW, which translates to a current of 16 Amps (20 Amp rated circuit) at common Voltage levels (120VAC). Power is delivered to the on-board vehicle battery through an EVSE connected to facility power via plug-in from a standard 3-prong AC Cord Set (120VAC, 20 Amp). AC Level 1 Charging is more common in residential applications and typically provides charge times of 40 to 50 hours to completely charge a typical EV battery when fully depleted.

4.3.2 AC Level 2 Charging

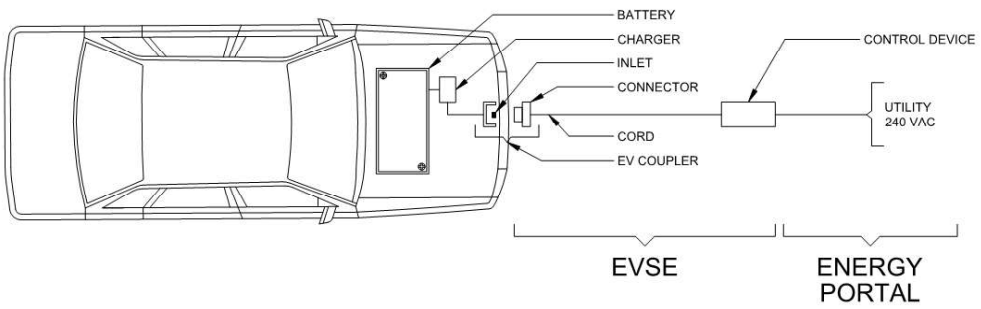

Figure 2 – Standard AC Level 2 Charging Station Configuration

AC Level 2 Charging provides faster charging times than Level 1. Typical charging for this system is between 6.7 kW and up to 19.2 kW, which translates to currents between 32 Amps (40 Amp rated circuit) and up to 80 Amps (100 Amp rated circuit). Charging currents are delivered at higher Voltages (208VAC or 240VAC, Single-Phase). Power is delivered to the on-board vehicle battery through an EVSE that is hard-wired to the facility electrical distribution system. AC Level 2 Charging is more common in commercial applications and typically provide charge times of 4 to 10 hours to completely charge an EV battery when fully depleted.

The order of magnitude total cost for a single-head AC Level 2 Charging Station is $30,000.00. The cost includes civil infrastructure, conduit and wiring, supporting electrical equipment, and the EVSE. Cost savings can be achieved by using multiple-head charging stations and power sharing technology for multiple charging stalls.

4.3.3 DC Fast Charging

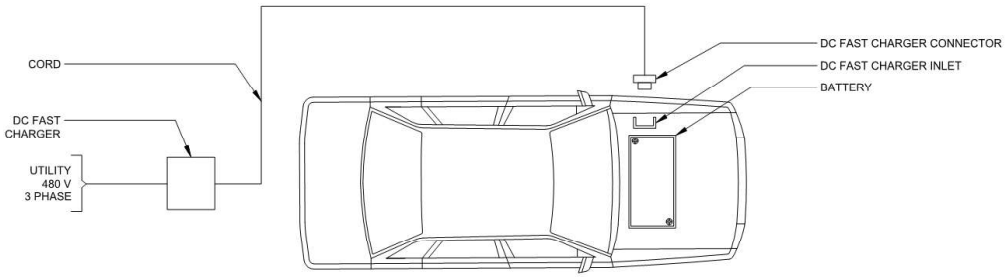

Figure 3 – Standard DC Fast Charging Station Configuration

DC Fast Charging provides the fastest charging times, and the installation required is typically the most expensive of the charging options. Typical charging for this system is between 50 kW and up to 350 kW, which translates to currents between 60 Amps (80 Amp rated circuit) and up to 420 Amps (600 Amp rated circuit) at higher Voltages (480VAC, Three-Phase) than Level 2. The on-board vehicle BMS will communicate with the EVSE to deliver DC power directly to the vehicle battery. The EVSE is hard-wired to the facility electrical distribution system. DC Fast Charging can provide a charge time as quick as 15 minutes for passenger vehicles with high power DC chargers to several hours for heavy-duty trucks with very large battery capacities.

The order of magnitude total cost for a single-head DC Fast Charging Station is $250,000.00. The cost includes civil infrastructure, conduit and wiring, supporting electrical equipment, and the EVSE. Cost savings can be achieved by using multiple charging stations and power sharing technology.

4.3.4 Megawatt Charging System

The Megawatt Charging System is the newest technology in development and is positioning itself to go beyond the current DCFC standard. Charging for this system is up 3,750 kW (3.75 Megawatt) or more. The intent of the design is to deliver the fastest charge times to the very large battery capacities that are found in heavy-duty trucks and buses. The technology is in the early adoption stage and is not expected to be feasible in the near term for the District of Central Saanich.

4.4 Intelligent Charging Stations

EVSE manufacturers provide intelligent charging solutions. Current technologies allow individual charger connectors to communicate with one another to share a common electrical load. This approach is known as Load or Power Sharing. Consider a single Level 2 charging circuit 6.7 kW (32 Amps @ 208VAC) that can be shared with up to 4 connectors. In this scenario, each connector can deliver up to the capacity of the circuit at 6.7 kW. When multiple connectors are used, the power is shared among all connectors up to a total of 6.7 kW. For example, with 4 connectors connected to EVs, each connector would deliver 1.7 kW (8 Amps @ 208VAC). With 2 connectors connected to EVs, each connector would deliver 3.4 kW (16 Amps @ 208VAC). With 4 EVs connected, the charging stations are intelligent in that they shift charge to connected EVs that require charge as other connected EVs become fully charged.

4.5 Networked Charging Stations

Networked EV Charging Stations are connected to the internet via cellular communications. EVSE providers charge an annual fee to manage the network. EVSE connected to the network allow facility owners to collect data such as time and location of charging events, energy provided, GHGs avoided, and any applicable billing and revenue. Facility owners can also track charge time, connection time, average and peak power, and total power per event. Networking provides the ability for EVSE to integrate with building management systems to move EV charging to off-peak times or to throttle down the charging output during times of peak power demand and energy costs. Strategies like these can be employed to increase EVSE installation beyond base electrical capacity and to save facilities from cost-prohibitive utility upgrades.

Networked chargers are typically required for Carbon Credit tracking and reporting as they provide a reliable method for collecting data on energy use per vehicle and, consequently, the associated emission reductions.

4.6 EVSE Product Options

The following section summarizes the EVSE product options. The EVSE manufacturer that is currently deployed by the District of Central Saanich and the only to be considered in this report is FLO. For the purposes of Fleet charging, only AC Level 2 and DC Fast Charging will be considered.

4.6.1 AC Level 2 Charging

FLO provides networked Level 2 charging solutions for property owners, businesses, and municipalities. The charging stations come in standard and power select models. Each model allows for power sharing models.

Technical specifications for the charging stations are summarized in the table below.

Specification	FLO CoRe+	FLO CoRe+ Max
Voltage	208/240VAC, Single-Phase	208/240VAC, Single-Phase
Current	32A (power shared between up to four ports)	80A (power shared between up to two ports)

Specification	FLO CoRe+	FLO CoRe+ Max
Power	Up to 6.66/7.68kW @ 208/240V	Up to 16.6/19.2kW @ 208/240V
Wiring	3-wire	3-wire
Enclosure Rating	Type 4X	Aluminum Type 3R per UL 50E
Connector	SAE J1772 (up to 4)	SAE J1772 (up to 2)
Cable Length	6.4m (optional 7.6m)	6.8m (optional 7.6m)
Networking	Cellular 4G LTE	Cellular 4G LTE
Certification	CSA and UL	CSA and UL
Operating Temperature	-40°C to 50°C	-40°C to 50°C
Installation	Pedestal on concrete or wall mounting	Pedestal on concrete or wall mounting

Table 1 - AC Level 2 Charging Station Specifications

Power Sharing strategies for the FLO CoRe+ are summarized in the following table:

Ports In Use	Amps Output Per Port	kWh Output Per Port (208V)
1	32 Amp	6.66 kWh
2	16 Amp	3.33 kWh
3	10.7 Amp	2.22 kWh
4	8 Amp	1.66 kWh

Table 2 - FLO CoRe+ Power Sharing

Refer to *Appendix A* for *FLO CoRe+ and CoRe+ Max Level 2 Fleet Charging Stations Specifications* for more details.

4.6.2 DC Fast Charging

FLO provides robust, reliable, and networked DC Fast Charging Stations. Technical specifications for the charging stations are summarized in the table below.

Specification	FLO SmartDC	FLO Ultra
Voltage	480VAC, Three-Phase	480VAC, Three-Phase

Specification	FLO SmartDC	FLO Ultra
Current	65A or 130A (100A or 200A Breakers)	Up to 385A (power shared between two ports). (500A Breaker)
Power	50kW or 100kW (54kVA or 108kVA @ 93% PF)	Up to 320kW
Wiring	4-wire	4-wire
Enclosure Rating	Type 3R	Type 3R
Connector	1: SAE Combo and CHAdeMO	2: CCS Type 1 and CHAdeMO
Cable Length	3.7m (optional 6.1m)	(2) 5.4m
Networking	Cellular 4G LTE	Cellular 4G LTE
Certification	CSA and UL	CSA and UL
Operating Temperature	-40°C to 50°C	-40°C to 55°C
Installation	Concrete pedestal	Concrete pedestal

Table 3 -DC Fast Charging Station Specifications

Refer to *Appendix A* for *FLO SmartDC and Ultra DCFC Stations Specifications* for more details.

5 Requirements

The following section summarizes the requirements of the proposed EVSE, industry standards, and the electrical code requirements.

5.1 Canadian Electrical Code Requirements

According to the Canadian Electrical Code (CEC) the following requirements must be met:

- Permanent warning sign installed at the connection of the EVSE to the branch circuit warning against operation of the equipment without sufficient ventilation.
- Separate branch circuit protected by appropriately sized breaker, disconnect, and conductors. Located on the supply side of the point of connection for the EVSE, within sight of and accessible to the EVSE, and capable of being locked in the open position.
- Outdoor charging sites shall be permitted to include curbsides, open parking structures, parking lots and similar locations.
- Requires certification from an accredited test agency such as CSA group (or accepted equivalent).

5.2 Canadian EV Infrastructure Deployment Guidelines

The Canadian EV Infrastructure Deployment Guidelines provide essential information and resources to implement EV charging infrastructure. This information includes location selection and lighting recommendations.

The location selected should be such to avoid tripping hazards and allow vehicles to park forwards or backwards in parking space. If EVSE is mounted in front of vehicle, wheel-stops or bollards may be recommended. See the following Figure 4 for a typical EVSE middle placement pedestal mounting in row parking.

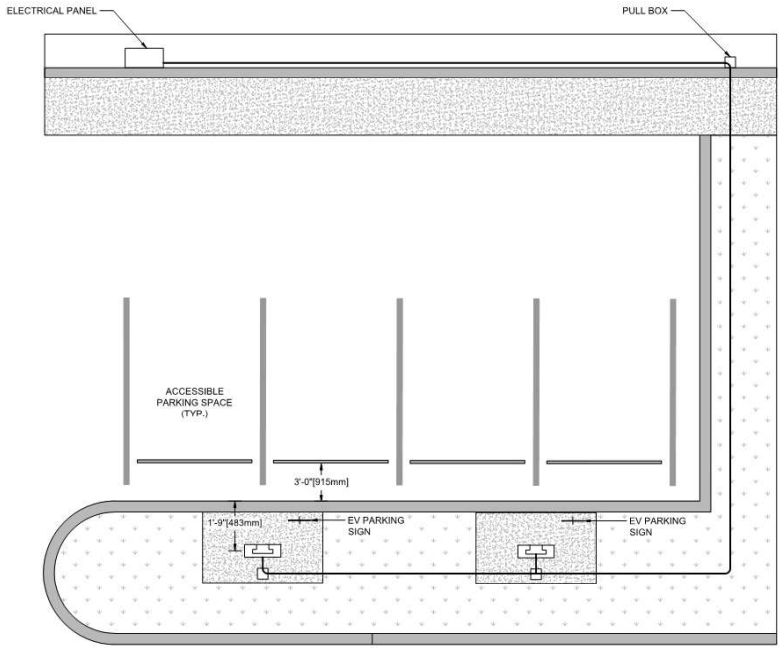

Figure 4 - Typical EVSE Middle Placement Pedestal Mounting in Row Parking

Lighting should be sufficient to read associated signs, instructions, or controls on EVSE and provide visibility around the vehicle for all possible EV inlet locations.

6 Assessment and Findings

The three (3) locations to be considered are the Municipal Yard, Fire Hall #1, and Municipal Hall. The following is a summary of the review of the electrical record information and an electrical capacity assessment of the existing services at the sites.

Refer to *Appendix B: Load Analysis Summary*

6.1 Methodology

6.1.1 Existing Electrical Capacity Analysis

The existing peak demand load was ascertained using 1-Year BC Hydro provided load consumption history. The existing peak demand was determined by taking the maximum value of all the demand load data that was provided. Load consumption history provided by BC Hydro was provided as metering data and captured in 1-day intervals. This is a risk that the peak demand may have occurred within either the 1-day interval and was not captured. A Demand Load Study performed by a licensed electrician is recommended to confirm results at each of the locations prior to performing any work.

Refer to *Appendix C: BC Hydro 1-Year Historical Consumption Summary*

6.1.2 Minimum Required Demand Load

With the total energy requirement information provided by the Innotech analysis, the minimum required demand load was calculated as follows:

$$Min.\ Required\ Demand\ Load\ [kW] = \frac{Annual\ Total\ Energy\ Requirement\left[\frac{kWh}{annum}\right]}{Annual\ EV\ Charging\ Time\left[\frac{h}{annum}\right]}$$

The annual EV charging time was determined in consultations with Innotech about individual facility daily operations. It was calculated as follows:

$$Annual\ EV\ Charging\ Time\left[\frac{h}{annum}\right] = \left(Daily\ EV\ Charging\ Time\left[\frac{h}{day}\right]\right) * \left(\#\ of\ Days\ Charging\ per\ Week\left[\frac{day}{week}\right]\right) * \left(\#\ of\ Weeks\ per\ Annum\left[\frac{week}{annum}\right]\right)$$

The daily EV charging time and number of days charging per week for each facility is tabulated below.

Location	Daily EV Charging Time [h/day]	# of Days Charging per Week [day/week]
Municipal Yard	12 h/day	7 day/week
Fire Hall	12 h/day	7 day/week
Municipal Hall – Emergency	2 h/day	7 day/week
Municipal Hall – Non-emergency	10 h/day	7 day/week

Table 4 - Summary of typical EV charging times per location.

Refer to *Appendix B: Load Analysis Summary.*

6.1.3 Proposed Equipment

The Innotech analysis provided to PBX the number of vehicles to be transitioned to electric annually through 2035. Based on the estimated daily energy use and daily charge time of the EVs, the recommended EVSE type was determined.

Refer to *Appendix A: EVSE Technical Specifications.*

Refer to *Appendix B: Load Analysis Summary.*

6.2 Municipal Yard

6.2.1 Location

The District of Central Saanich Municipal Yard is located at 1703 Keating Cross Rd, Saanichton, BC V8M 1W9 and comprises several buildings on site to serve Public Works operations, including a vehicle service shop, material storage sheds, and an administration building. The Public Works department operates, constructs, and maintains the engineering infrastructure in Central Saanich. There are preliminary discussions to replace the yard.

The site has six (6) existing Level 2 EVSE serving six (6) charging stalls. Refer to the Location Plan in Figure 5.

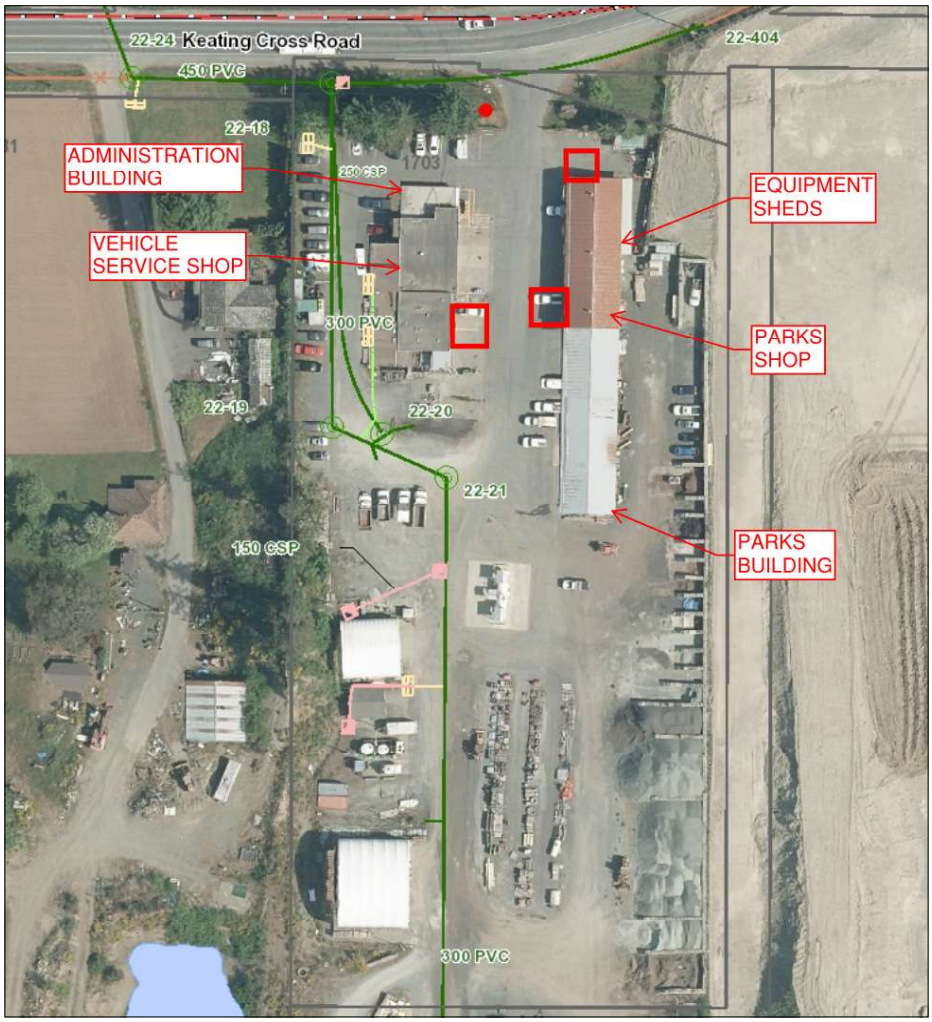

Figure 5 – Municipal Yard Location Plan

6.2.2 Existing Electrical Infrastructure

Refer to *Appendix D: Single Line Diagram*

The existing incoming electrical utility service to the Municipal Yard is 600A (80% Rated), 120/208V, 3-phase, and is supplied overhead from a BC Hydro pole-mounted transformer bank on Keating Cross Rd. The electrical room is located on the second floor of the Vehicle Service Shop. The service feeds a 600A, 120/208V, 3-phase, 4-wire, main switch and splitter. Connected to the splitter are disconnect switches for the panels throughout the site.

The existing Level 2 EVSE are served from Panels 'D', 'Parks Shop', and 'West Shop'.

6.2.3 Electrical Capacity Assessment

Refer to *Appendix B: Load Analysis Summary.*

The existing 600A, 120/208V, 3-phase service base electrical capacity was calculated at $208V * 480A\ (600A\ continuous\ rating\ @\ 80\%) * \sqrt{3}\ (three-phase)/1000 = 173kVA$. The maximum electrical demand load was determined to be 64kVA. The existing service is underloaded at 37% of the base service size and there is a remaining capacity of 109kVA for new loads. The existing service capacity is sufficient to support the potential EVSE loads and a service upgrade will not be required.

Capacity shall be confirmed via Demand Load Study by a qualified Electrical Contractor (CEC C22.1 Rule 8-106).

6.2.4 Proposed Equipment & Load Analysis

Based on the fleet assessment performed by Innotech, the facility will require a total number of EVSE at each year as tabulated below:

Year	# of Level 2 (40A) Circuits	# of Level 2 Connectors	# of DCFC
2025	2	5	
2027	2	4	
2028		2	
2029	1	1	
2031		1	
2033	1	1	1
2034	1	1	
2035		3	

Table 5 – Municipal Yard proposed EVSE at each year.

The existing service capacity is sufficient to support the potential EV loads. Charge management strategies will need to be employed to maintain a total EV load below the existing service capacity. The recommended strategy is circuit sharing with four (4) EV connectors per Level 2 circuit. Some vehicles may require charge above that which is available on a Level 2 circuit with all four (4) EV connected. Operations will need to be adjusted accordingly.

The proposed plan is to provide a 200A, 120/208V, 3-phase, 4-wire panel dedicated to the Level 2 EVSE circuits. The panel would be connected via disconnect on the main service splitter in the electrical room. EVSE circuits will require breakers, conductors, and surface-mount raceways. EVSE will require mechanical protection.

It is also recommended that a new dedicated service to an electrical kiosk be installed to serve the electrical requirements of the DCFC EVSE. The separate service will allow for the EVSE expansion to proceed without impacting building operations. The service entrance, meter base, and EVSE distribution would be contained in the electrical kiosk. The kiosk allows flexibility as it is possible to relocate the structure as needed by future needs.

6.2.5 Opinion of Construction Cost

The total estimated order of magnitude opinion of electrical construction cost for 2025 is **$194,000.00**. The construction will cover the requirements of the EV fleet deployment through 2028. The breakdown of costs is as follows:

Description	Cost
Civil Infrastructure	$ 4,000.00
Conduit & Wiring	$ 39,000.00

Description	Cost
Electrical Equipment	$ 11,000.00
Project Wide	$ 9,000.00
Contingency (25% Const.)	$ 16,000.00
Construction Subtotal	**$ 79,000.00**
EVSE Cost	$ 97,836.97
Engineering	$ 12,000.00
Demand Load Study	$ 5,000.00
Total	**$ 193,202.93**

The estimated order of magnitude opinion of electrical construction cost for subsequent Level 2 connectors is **$10,900.00**.

The estimated order of magnitude opinion of electrical construction cost for subsequent Level 2 circuits is **$8,100.00**.

The estimated order of magnitude opinion of electrical construction cost for an electrical kiosk and single-connector DCFC is **$250,000.00**.

The estimated costs are based on general assumptions and typical conditions. Actual costs may vary significantly due to factors including, but not limited to: site conditions, locations of charge stalls, distance to power supply, permitting, code compliance, and scope of work. This estimate is provided as an order-of-magnitude assessment and is subject to refinement based on detailed design, site assessments, and market conditions at the time of installation.

6.3 Fire Hall #1

6.3.1 Location

The District of Central Saanich Fire Hall #1 is located at 1512 Keating Cross Rd, Saanichton, BC V8M 1W9. It comprises offices, meeting rooms, and an apparatus bay. The electrical service entrance is located in the electrical room on the Southeast corner of the apparatus bay.

The site has two (2) existing Level 2 EVSE serving two (2) charging stalls. Refer to the Location Plan in Figure 6.

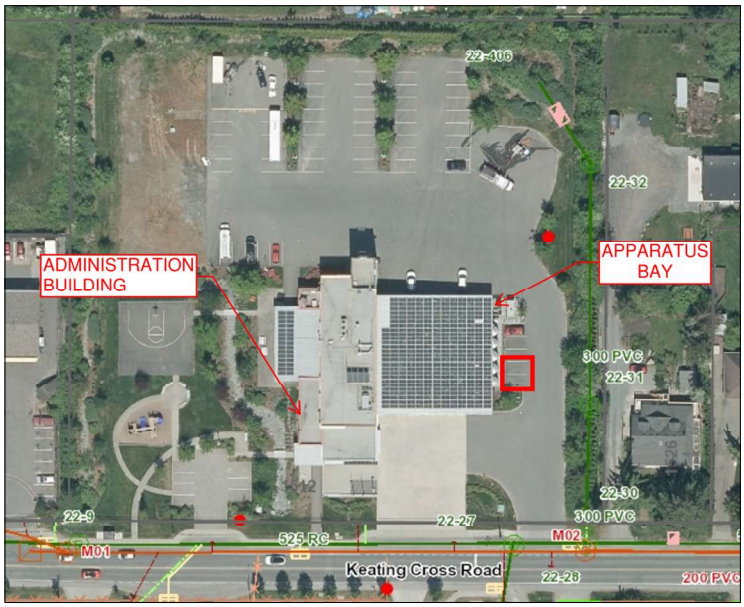

Figure 6 – Fire Hall #1 Location Plan.

6.3.2 Existing Electrical Infrastructure

The existing incoming electrical utility service to the facility is 800A (80% Rated), 120/208V, 3-phase, and is supplied from a BC Hydro PMT on Keating Cross Rd. The service feeds a 800A service entrance rated main breaker in the 1000A, 120/208V, 3-phase, 4-wire, main distribution centre MDC. Refer to the Partial Single Line Diagram in Figure 7.

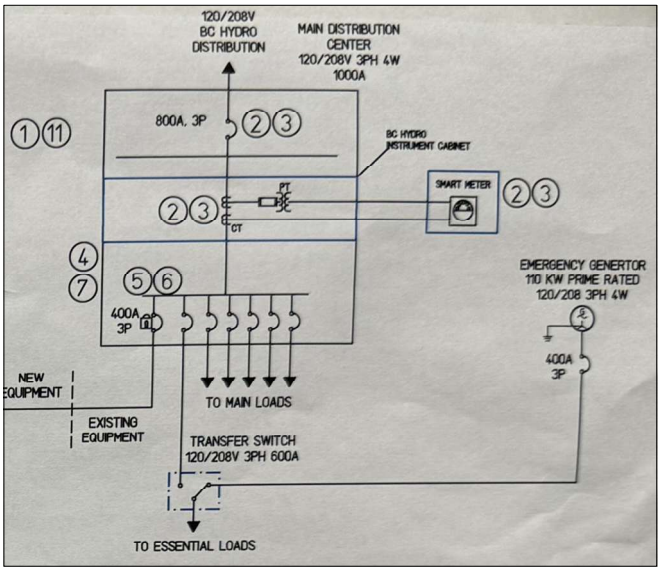

Figure 7 – Fire Hall #1 Service Entrance Partial Single Line Diagram

6.3.3 Electrical Capacity Assessment

Refer to *Appendix B: Load Analysis Summary.*

The existing 800A, 120/208V, 3-phase service base electrical capacity was calculated at $208V * 640A$ $(800 A\ continuous\ rating\ @\ 80\%) * \sqrt{3}\ (three - phase)/1000 = 231kVA$. The maximum electrical demand load was estimated to be 64kVA. The existing service is loaded at 28% of the base service size and there is a remaining capacity of 167kVA for new loads. The existing service capacity is sufficient to support the potential EVSE loads and a service upgrade will not be required. Capacity shall be confirmed via Demand Load Study by a qualified Electrical Contractor (CEC C22.1 Rule 8-106).

6.3.4 Proposed Equipment & Load Analysis

Based on the fleet assessment performed by Innotech, the facility will require a total number of EVSE at each year as tabulated below:

Year	# of Level 2 (40A) Circuits	# of Level 2 Connectors	# of DCFC
2034	1	1	

Table 6 – Fire Hall #1 proposed EVSE.

The existing service capacity is sufficient to support the potential EV loads. Charge management strategies should be employed to maintain the total EV load. The recommended strategy is circuit sharing with two (2) EV connectors per Level 2 circuit.

The proposed plan is to provide a 200A, 120/208V, 3-phase, 4-wire panel dedicated to the Level 2 EVSE circuits. The panel would be connected via breaker on the main distribution centre in the electrical room.

6.4 Municipal Hall

6.4.1 Location

The District of Central Saanich Municipal Hall is located at 1903 Mount Newton X-Road, Central Saanich, BC, V8M 2A9 and serves as the administrative headquarters of Central Saanich. The building is shared with Public Safety services (Police and Fire Departments). There are preliminary discussions to replace the Hall.

The site has six (6) existing Level 2 EVSE serving six (6) charging stalls. In addition, there are two (2) public Level 2 EVSE charging stalls. Refer to Location Plan in Figure 8.

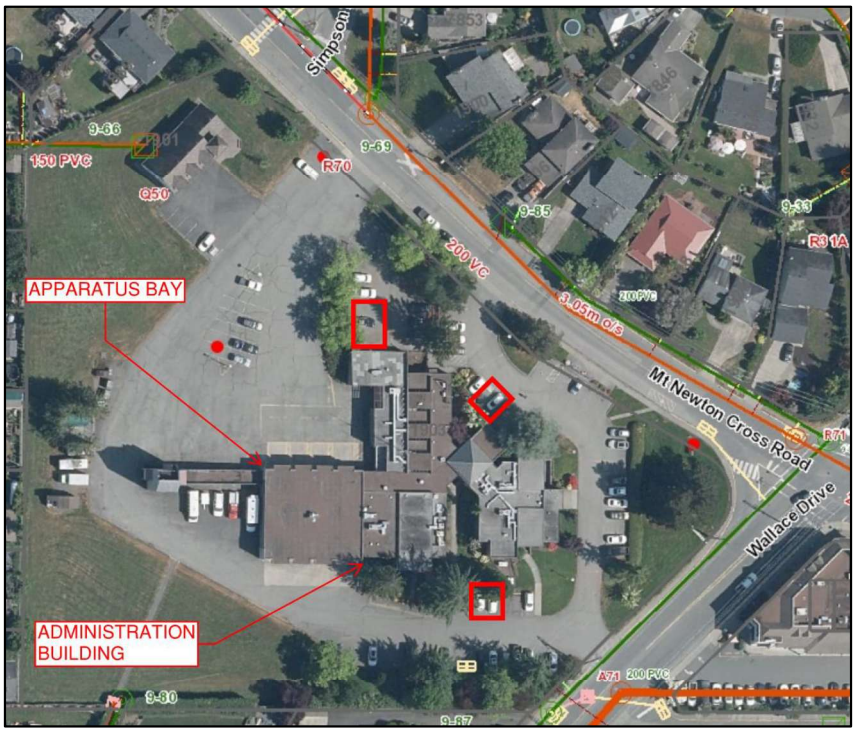

Figure 8 – Municipal Hall Location Plan

6.4.2 Existing Electrical Infrastructure

Refer to *Appendix D: Single Line Diagram*

The existing incoming electrical utility service to the facility is 800A (80% Rated), 120/208V, 3-phase, underground service and is supplied from a BC Hydro pole-mounted transformer bank on Mt Newton Cross Road. The service feeds an 800A, 120/208V, 3-phase, 4-wire main switch and switchgear assembly located in the Main Electrical Room. There also exists a 225A, 120/208V, 3-phase, 4-wire Panel 'EV' dedicated to EVSE.

6.4.3 Electrical Capacity Assessment

Refer to *Appendix B: Load Analysis Summary.*

The existing 800A, 120/208V, 3-phase service base electrical capacity was calculated at $208V * 640A\ (800A\ continuous\ rating\ @\ 80\%) * \sqrt{3}\ (three - phase)/1000 = 231kVA.$ The maximum electrical demand load was estimated to be 156kVA. The existing service is loaded at 68% of the base service size and there is a remaining capacity of 75kVA for new loads. The existing service capacity is not sufficient to support the potential Level 2 and DCFC EVSE loads, and a service upgrade will be required. However, the existing service capacity is sufficient to support the Level 2 EVSE load. Capacity shall be confirmed via Demand Load Study by a qualified Electrical Contractor (CEC C22.1 Rule 8-106).

6.4.4 Proposed Equipment & Load Analysis

Based on the fleet assessment performed by Innotech, the facility will require a total number of EVSE at each year as tabulated below.

Year	# of Level 2 (40A) Circuits	# of Level 2 Connectors	# of DCFC
2025	2	2	
2027		1	
2028		1	
2029		1	
2030			5
2035	1	2	

Table 7 – Municipal Hall proposed EVSE.

The existing electrical capacity is sufficient to support the potential Level 2 EVSE loads. Charge management strategies should be employed to maintain the total EV load. The recommended strategy is circuit sharing with up to four (4) EV connectors per Level 2 circuit. Furthermore, DC Fast Charging connectors will need to be added to meet emergency operation needs.

The proposed plan is to use existing electrical Panel 'EV' to serve the Level 2 EVSE circuits. The panel has physical capacity for additional breakers. The EVSE circuits will require breakers, conductors, and raceways. EVSE will require mechanical protection.

It is also recommended that a new dedicated service to an electrical kiosk be installed to serve the electrical requirements of the DCFC EVSE. The separate service will allow for the EVSE expansion to proceed without impacting building operations.

6.4.5 Opinion of Construction Cost

The total estimated order of magnitude opinion of electrical construction cost for 2025 is **$88,000.00**. The construction will cover the requirements of the EV fleet deployment through 2028. The breakdown of costs is as follows:

Description	Cost
Civil Infrastructure	$ 7,000.00
Conduit & Wiring	$ 11,000.00
Electrical Equipment	$ 1,000.00
Project Wide	$ 9,000.00
Contingency (25% Const.)	$ 7,000.00
Construction Subtotal	**$ 35,000.00**
EVSE Cost	$ 36,000.00
Engineering	$ 12,000.00
Demand Load Study	$ 5,000.00
Total	**$ 88,000.00**

The estimated order of magnitude opinion of electrical construction cost for the subsequent Level 2 connector in 2029 is **$10,870.55**.

The estimated order of magnitude opinion of electrical construction cost for an electrical kiosk and single-connector DCFC is **$250,000.00**. Each additional connector is estimated at **$75,000.00**.

The estimated order of magnitude opinion of electrical construction cost for the subsequent Level 2 circuit and connectors for the Fire Department fleet deployment in 2035 is **$30,100.00**.

The estimated costs are based on general assumptions and typical conditions. Actual costs may vary significantly due to factors including, but not limited to: site conditions, locations of charge stalls, distance to power supply, permitting, code compliance, and scope of work. This estimate is provided as an order-of-magnitude assessment and is subject to refinement based on detailed design, site assessments, and market conditions at the time of installation.

7 Conclusion and Recommendation

We request this document and attachments be reviewed in their entirety.

It is recommended the EVSE infrastructure be provided as noted herein.

It is recommended that the District of Central Saanich review their fleet EV and EVSE infrastructure deployment in 5-years' time as the approach noted herein may need to be adjusted as technologies mature.

8 Closure

This document has been prepared based upon the information referenced herein. It has been prepared in a manner consistent with good engineering judgement. Should new information come to light, PBX Engineering Ltd. requests the opportunity to review this information and our conclusions contained in this report. This document has been prepared for the exclusive use of the District of Central Saanich, and there are no representations made by PBX Engineering Ltd. to any other party. Any use that a third party makes of this document, or any reliance on or decisions made based on it, are the responsibility of such third parties.

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Attachments:

- Appendix A: EVSE Technical Specifications
- Appendix B: Load Analysis Summary
- Appendix C: BC Hydro 1-year Load History Summary
- Appendix D: Single Line Diagram

Appendix A: EVSE Technical Specifications

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Shown with optional cable management system

CoRe+

Smart level 2 charging station for private, public and commercial applications

The CoRe+ charging station is specifically designed for private applications such as workplaces, multi-unit residential buildings, fleets, and is also suitable for public spaces

Choose between the Standard and PowerSharing™ versions of the CoRe+ at acquisition time.

Benefits

- **PowerSharing technology (optional) (U.S. Pat. No. 9,927,778)** Greatly reduce installation cost by sharing the remaining incremental capacity of an existing electrical infrastructure
- **PowerLimiting™ technology (U.S. Pat. No. 10,197,976)** Add multiple charging stations to an existing installation while minimizing the building's peak power demand through:
  - Fixed limit
  - Scheduled limitations
- Rugged and reliable design able to withstand harsh weather

Smart Charging Solution

- **Enhanced charging station owner experience -** Complete remote management capabilities including software and firmware updates
- **Enhanced user experience -** Deliver real-time updates and notifications to drivers
- **Revenue generation** – Implement payment services to generate revenue
- **Access control –** Configure stations to authorize access using the FLO mobile app or RFID card authentication, or allow unrestricted access to the station

Key features

- Type 4X enclosure in cast aluminum casing
- Certified to operate in temperatures ranging from -40 °C to 50 °C / -40 ° F to 122 °F
- Equipped with a charging cable that remains flexible at low temperature
- Wall-mounted and pedestal configuration options. Pedestal configuration helps meet ADA requirements
- Pedestal configuration that helps meet ADA requirements
- Modular design to facilitate servicing and maintenance
- Access provided free of charge or according to a usage fee
- LED status indicator
- Optional cable management system
- Optional cascading kit enables serial daisy-chain connection of multiple charging stations on pedestals and on the same branch circuit

CoRe+™

Overview

The CoRe+ charging station is designed for applications where multiple charging stations may be necessary now or in the future, such as public sites, workplaces, multi-unit residential buildings (condos and apartments), or commercial fleets. The CoRe+ can be equipped with a cable management system keeping the cables safe and suspended.

Future-proof energy management features

PowerSharing

- Allows the addition of charging ports (keeping up with the fast-paced increase demand for EVSE) for limited electrical infrastructure.
- Requires minimal modification to an existing electrical installation. Our technology can power up to 4 times more vehicles than standard installations would allow.

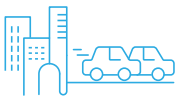
PowerLimiting

- Minimize the incremental power demand on the building's infrastructure (which can significantly increase with uncontrolled EVSEs).
- Limits the power drawn from the grid for an entire site based on a schedule or by communicating directly with a BMS.

Physical features

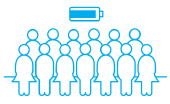
- Rugged charging station able to withstand extreme weather and corrosion
- Thick and sturdy cast aluminum casing
- Universal SAE J1772 connector
- Flexible 6.4 m / 21' (optional 7.62 m / 25') cable that remains malleable even during winter's coldest temperatures
- Mounting pedestal helping to meet ADA requirements

Applications



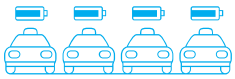
Public sites

For business owners and organizations wanting to provide their customers with first-class charging experience and become a destination of choice, while demonstrating their sustainable development leadership.



Workplace

For companies looking to offer an EV charging service to their employees, and looking for a solution that can evolve at the same rate as the demand for the service while maintaining reasonable installation and operation costs.



Fleet

For fleet managers who wish to grow their EV fleets without expanding their electrical infrastructure while maintaining the operational costs at an affordable level.

Available configurations

CoRe+

Wall-mounted

Single pedestal

Back-to-back pedestal

CoRe+ with cable management system

Wall-mounted

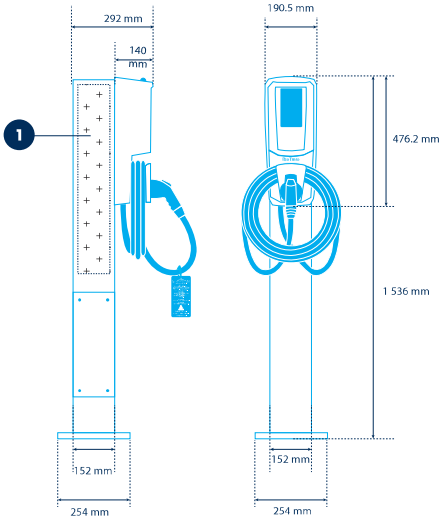
Dual side-to-side

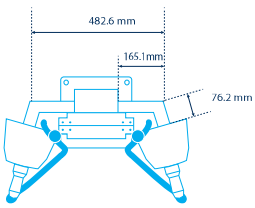
Back-to-back or single pedestal

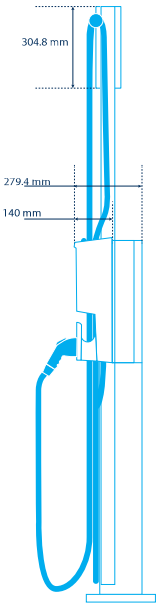
Dimensions and customization

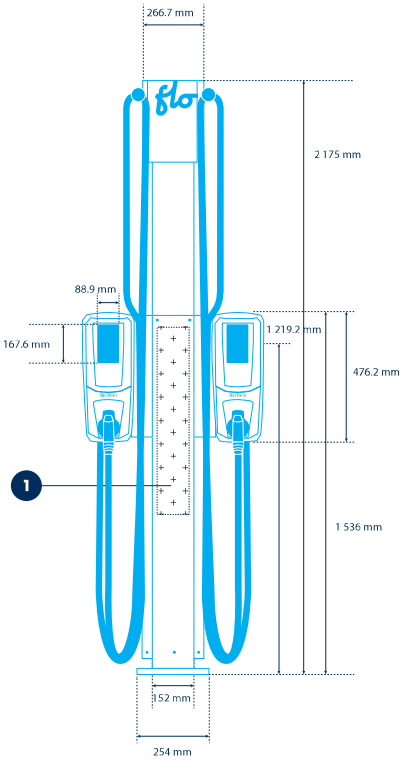
1 Every charging station includes easily customizable branding areas.
The CoRe+ comes in its original colour, which can be modified with your custom signage.

Customizable partner panel area
Dimensions (H x W): 760 mm (30") x 120 mm (4.72")









CoRe+™

Technical specifications

	Standard option	PowerSharing option
Aluminum casing	Type 4X enclosure	
Charging connector	SAE J1772	
Cable	6.4 m (optional 7.62 m) / 21' (optional 25' m)	
Input Power	Standard: 30 A @ 208 VAC or 240 VAC for each charging station	PowerSharing : 32 A @ 208 VAC or 240 VAC per set of 4 charging stations
Charging power	1.2 kW to 7.2 kW (maximum configurable by software)	
Output current	6 A to 30 A (maximum configurable by software)	
Integrated GFCI	20 mA, auto reset (3 attempts at 15-minute intervals)	
Frequency	60 Hz	
Operating and storage temperature	-40°C to +50°C / -40 °F to 122 °F	
Weight	Charging station: 21 lbs / 9.53 kg Pedestal: 32 lbs / 14.5 kg	
Humidity	Up to 95% (non-condensing)	
Card reader	ISO 14443 A/B, ISO 15693, NFC	
Communication interface	ZigBee - IEEE 802.15.4 meshed network	
Networking	Cellular – LTE (gateway is installed separately for optimal performances)	
Certifications	CSA- C22.2 No. 280 / UL 2594, CSA C22.2 No 281.1 and 281.2 / UL 2231-1 and 2231-2 Energy Star	
EMC compliance	USA -FCC 47 CFR part 15 class A CAN - ICES-3 (A)	
Metering Accuracy	Certified according to California Type Evaluation Program (CTEP)	
Model Number	C+V2-EVSE-30-25-LC1-RR1-NSL-FL-NRRV-ST (COCH0001-FL-P07)	C+V2-EVSE-30-25-LC1-RR1-NSL-FL-NRRV-PS (COPS0001-FL-P07)

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Designed and manufactured by AddÉnergie

CoRe+ MAX™

The fastest[1] Level 2 charging station

Designed to evolve as more drivers make the switch to electric vehicles, the CoRe+ MAX is destined to become an integral part of your fleet, commercial, or workplace application.

Easy to use and reliable

- Cable management system (CMS) with unique counterweight system for smooth retraction.
- Built to last with rugged Type 3R aluminum water resistant enclosure and integrated cable holster for neat, safe cable storage.

Versatile and efficient

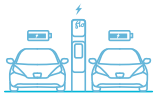
- Save on electricity costs with patented PowerSharing™ and PowerLimiting™ technologies.
- Customizable installation choices suit a variety of parking configurations.

Smart Station, Smarter Investment

- Monitor station health and gain key insights with the cloud-based management dashboard.
- Maximize uptime with proactive station monitoring and remote intervention services.

For Workplace

Offer EV charging services to your employees, with a solution that will evolve with you as more drivers make the switch to electric vehicles.



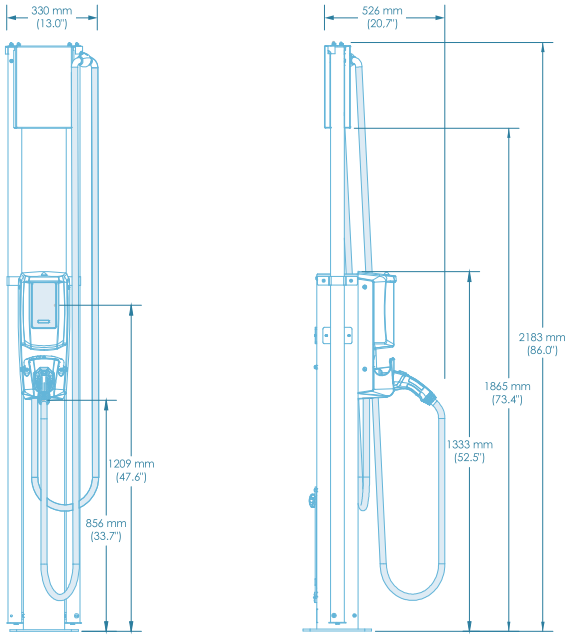
For Fleets

Ideal for fleet managers who wish to grow their light and medium duty EV fleets while maintaining affordable operational costs.

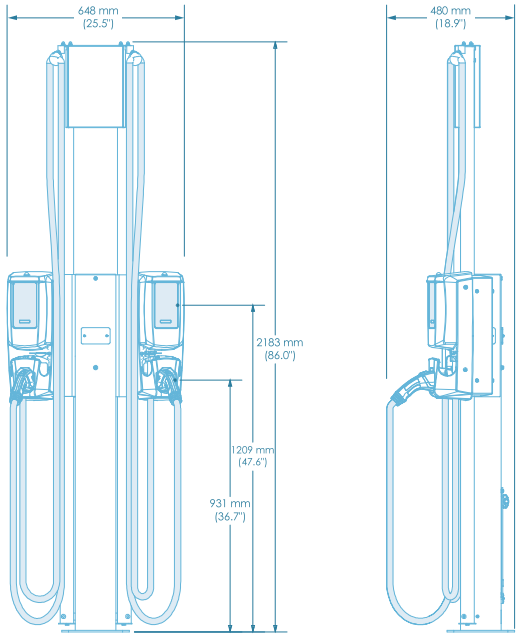
[1] As permitted under the SAE J1772 standard.

Available Configurations

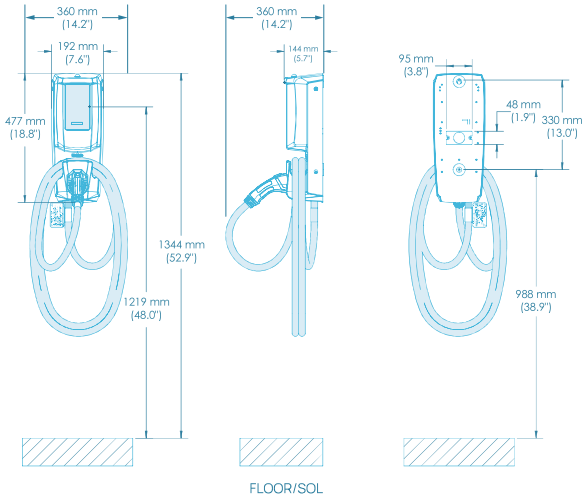
DIMENSIONS



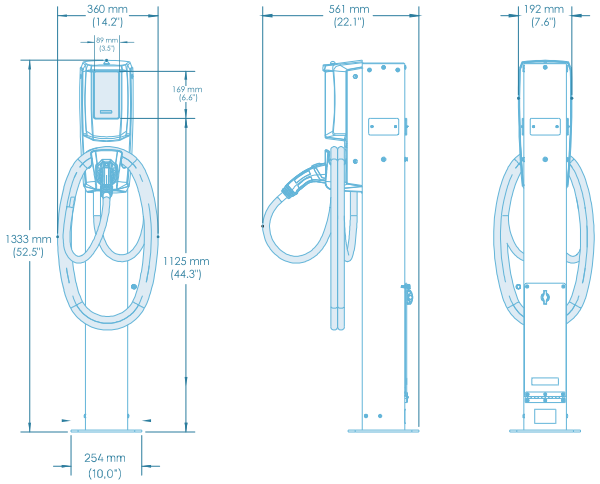
Single CoRe+ MAX on pedestal with CMS



Dual side-by-side CoRe+ MAX on pedestal with CMS



Wall Mount CoRe+ MAX (without CMS)



Single CoRe+ MAX on pedestal (without CMS)

Technical Specifications

HARDWARE

Enclosure	Aluminium Type 3R
Charging connector	SAE J1772
Cable length	7.62 m / 25 ft (without CMS)
Cable Management System (optional)	6.79 m / 19 ft cable - Calibrated suspended weight
Operating and storage temperature	40 °C to 50 °C / -40 °F to 122 °F
Weight	Charging station: 12.1 kg / 27 lbs; Pedestal: 14.5 kg / 32 lbs; CMS (CoRe+ MAX): 10.9 kg / 24 lbs
Humidity	Up to 95% (non-condensing)

ELECTRICAL

Electrical load	208 VAC or 240 VAC for each charging station
Charging power	1.2 kW to 19.2 kW (maximum configurable by software)
Output current	6 A to 80 A (maximum configurable by software and adjustable via a rotary switch)
Integrated GFCI	20 mA, auto reset (3 attempts at 15-minute intervals)
Frequency	60 Hz

INTERFACE

Card reader	ISO 14443 A/B, ISO 15693

CONNECTIVITY

Communication interface	ZigBee - IEEE 802.15.4 meshed network
Networking	Cellular – 4G/LTE (gateway is installed separately)

CERTIFICATION AND COMPLIANCE

Certifications	CSA- C22.2 No. 280 UL 2594, CSA C22.2 No 281.1 and 281.2 UL 2231-1 and 2231-2 UL Listed
EMI Compliance	USA - FCC 47 CFR part 15 class A CAN - ICES-003 (A)
Americans with Disabilities	ADA Compliant

SmartDC™

Multi-Standard DC Fast Charging Station

The SmartDC™ is a robust, reliable, 50 kW or 100 kW multi-standard charging station for commercial and industrial applications designed for indoor and outdoor use. Its sturdy construction ensures longer service life and greater operational reliability, even in harsh environmental conditions.

Equipped with both CHAdeMO and SAE Combo (CCS1) connectors, the SmartDC charging station is designed to offer a fast, reliable charging experience for every electric vehicle capable of DC fast-charging.

The SmartDC comes with a remote management tool that connects with FLO's cloud-based servers, allowing for remote updates and monitoring. With this powerful capability, the SmartDC can be integrated into any modern Electric Vehicle (EV) Charging Network. It is also ready to support ISO-15118 standard (Plug & Charge).

*The 50 kW SmartDC charger is shown here with optional cable management system and optional credit card reader.

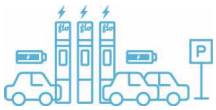
Key features

- Robust type 3R casing, reliable and designed to withstand harsh weather and corrosion
- Modular design to facilitate servicing and maintenance
- Available in two versions: 50 kW and 100 kW maximum output
- Compatible with the CHAdeMO and SAE Combo (CCS1) protocols (Tesla compatible, with adapter)
- RFID card and/or mobile app authentication and payment
- Optional cable management system in the 50 kW version
- Optional credit card reader (US only)
- Flexible billing based on time and/or kWh delivered, when permitted by the local jurisdiction

Benefits

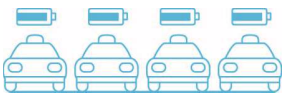
- Reduced Mean Time To Repair (MTTR) and enhanced customer experience with the remote management tool
- Interoperability with networks supporting OCPP1.6J
- Enhanced charging station owner experience with complete remote management capabilities including software and firmware update
- Enhanced user experience with real-time updates and notifications to drivers
- Revenue generation through payments via RFID member cards, credit cards, NFC, and mobile app
- Configurable Access Control
- Reduced lead time thanks to its North American manufacturing

Applications



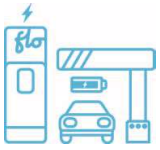
Commercial

For parking lot owners interested in offering their customers a first-class experience by providing EV DC fast-charging services.



Fleet

For EV fleet managers who want to minimize charging time and maximize the usage rate of their fleet.



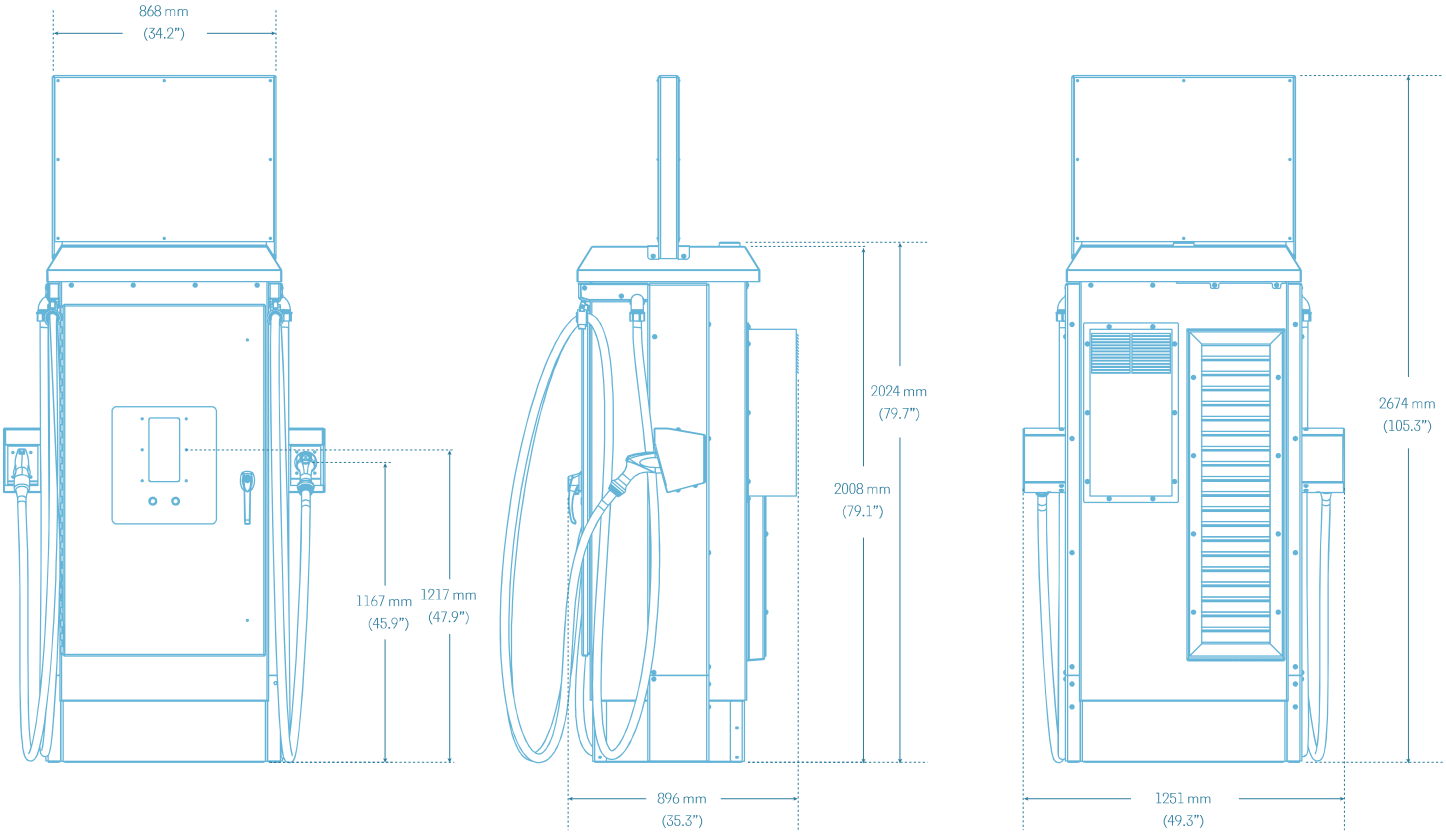
Gas stations

For gas station owners who wish to offer a complementary service that will help retain customers migrating to EVs.

Rest areas

For public administrators responsible for highways that wish to encourage electromobility between cities.

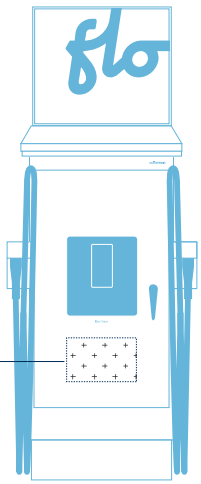
Dimensions and customization



Every charging station includes a customizable branding area. This area allows the display of partner logos or other publicity.

Customizable partner panel area
Dimensions (H x W) : 10.31" x 16.14" (25.5 cm x 40.64 cm)

Contact FLO™ for artwork templates and material specifications.



SmartDC™

Technical specifications

	50 kW	100 kW
Casing	Aluminum Type 3R enclosure – Resistant to harsh weather and vandalism	
Charging connectors	SAE Combo (CCS1) and CHAdeMO	
Cable length	20' (6.1 m) CMS included as an option	12' (3.7 m)
Supply voltage	Nominal three-phase 480 Y/277 VAC (neutral required), 60 Hz nominal (408 to 528 VAC, 55 to 65 Hz)	
Maximum input current	65 A @ 480 VAC	130 A @ 480 VAC
Maximum input power	54 kVA	108 kVA
Power factor	98% or better	
Efficiency (at max. output power)	93% or better	
Output power measurement tolerance	+/-1%	
Output voltage range	50 to 500 VDC	
Output current range	0.5 to 125 ADC	0.5 to 200 ADC
Dimensions (H x W x D)	79.7" x 49.25" x 32.8" (2,024 mm x 1,251 mm x 833 mm) **Height with top sign installed** 105.28" (2,674 mm)	
Weight	560 lbs (255 kg) **With cable management system** 675 lbs (300 kg)	675 lbs (300 kg)
Operating temperature	-40 °F to 122 °F (-40 °C to 50 °C)	
Storage temperature	-40°F to 158°F (-40°C to +70°C)	
Humidity	Up to 95% (non-condensing)	
Credit card reader	Optional. Payment by credit card (tap, insert, swipe) and NFC (Google Pay, Apple Pay)	
RFID card reader	Fitted standard. Supports ISO 14443 A/B, ISO 15693	
Certifications	cULus: UL 2202, UL 2231-1, UL 2231-2, CSA C22.2 No. 107.1 CSA C22.2 No. 281.1, CSA C22.2 No. 281.2 FCC part 15 Class A ICES-3 (A) Energy Star certified (*50 kW certified, 100 kW in progress)	
Networking	Cellular – 4G (LTE), HSPA+	
Model #	DCCH502AN1-FL-P03	DCCH502AO1-FL-P03

ENERGY STAR

Designed and manufactured by
AddÉnergie Technologies Inc.

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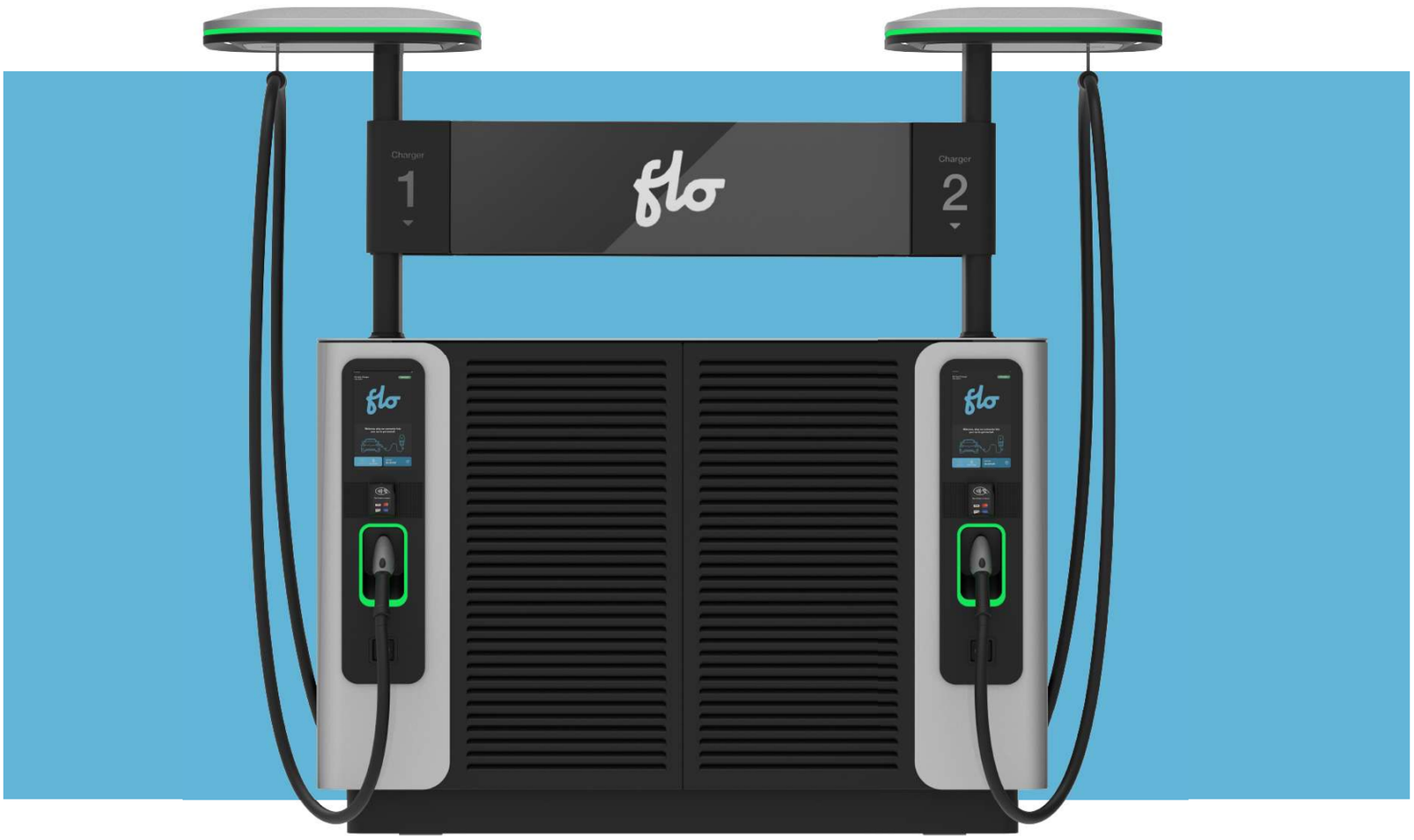
Document ID: FLO__SmartDC_SpecSheet_V.2.0.4_2022-08-22_US_EN

FLO Ultra™

FLO Ultra™ Series

The ultimate fast charging experience.



Smart Design

- Maximize real estate with dual DC fast charger outlets in a single station
- With up to 320 kW, charge up to 80% in as little as 15 minutes*
- Dedicated intuitive user interface for each charging outlet
- With dynamic powersharing, delivers up to 500 kW for one car in a modular configuration*

Brillantly Simple

- Patent-pending, motorized cable management for effortless charging
- Easy to find with highly visible lighting canopy and intuitive state of charge indicators
- Flexible, secure payment options

Built-to-Last

- Rugged, aluminum enclosure to withstand the elements
- Modular design for maximum uptime, easy serviceability, and expandability
- Expand as needs grow with DC input for connecting multiple chargers together

*Results may vary. Dependent on car make and model and number of cars charging simultaneously.

FLO Ultra™

Technical specifications

ELECTRICAL

Output power	Up to 320 kW
AC Input voltage	480 VAC + 10% / - 15 % (60 Hz)
AC Input connection	3-phase: L1, L2, L3, GND
DC output voltage	150 - 1000 VDC
CHAdeMO DC output current	0.5-200 A
CCS DC output current	0.5-500 A

ENVIRONMENT

Operating temperature	-40 °F to 131 °F / -40 °C to 55 °C
Operating Humidity	5% to 95%, non-condensing
Operating Altitude	2000M
Enclosure	Aluminum Type 3R
Impact rating	IK10

INTERFACE and CONTROL

User interface	• (2) 12.1" color LCD touchscreen • English, French, Spanish • Charging station status LED indicators • Vehicle state of charge LED indicators
Authentication / Payment methods	• AutoCharge, Remote Start • Card member RFID ISO14443A/B, IEC15693, HID, MiFare) • Credit & debit card (contactless tap, chip, & swipe) • Mobile and NFC payments
Protocol communication car	• CCS Type 1 (DIN-SPEC 70121, ISO15118-2, ISO15118-20) • CHAdeMO 0.9
CPO Networking (OCPP)	4G LTE / Ethernet

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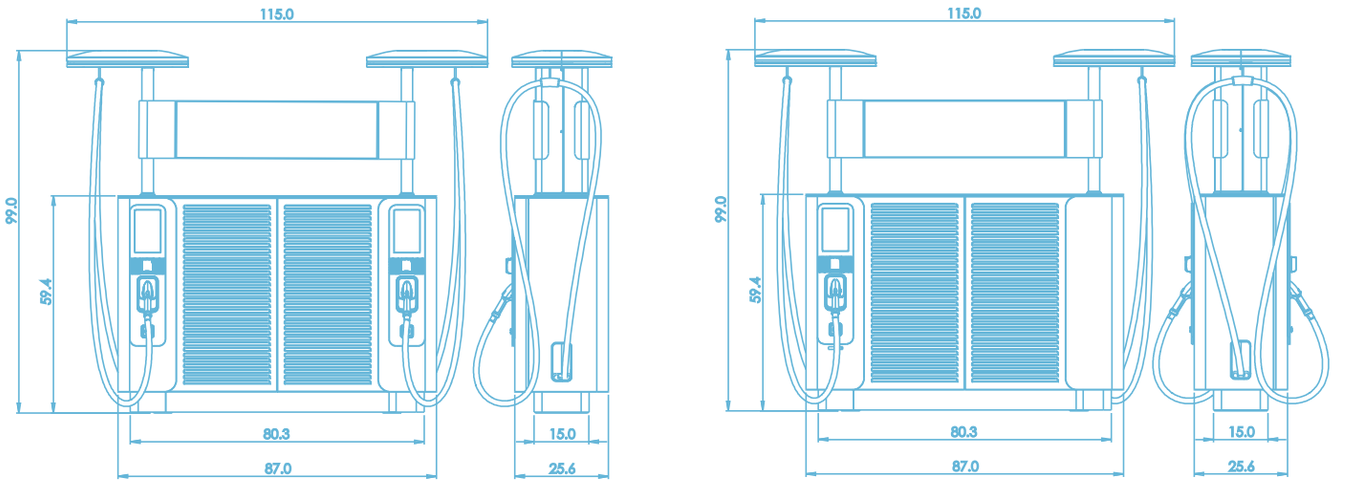
Monitoring	• Incoming AC voltage monitoring • DC energy meter
Certification (Pending)	• UL2202/UL2231-1/UL2231-2 • CSA C22.2 No 107.1/CSA C22.2 No 281.1/CSA C22.2 No 281.2 • NRTL listed ENERGY STAR 1.1 • NIST Handbook 44 S3.40 - Type Evaluation Program
Compliance	• Canadian Electric Code • National Electric Code (NFPA 70) • Americans with disabilities ACT (ADA) • FCC Part 15 Class A • NMB-003 (A) • CSA-IEC 61000-6-2 • Payment Card Industry Data Security Standard • California Prop 65(toxicity)

PHYSICAL

Dimensions (H x W x D)	98-3/4" x 115" x 28-3/4 " – 2508mm x 2920mm x 730mm
Weight (320 kW station)	1500 lbs/680 kg
Cable length	(2) 18ft/5.4m cables

Dimensions and customization



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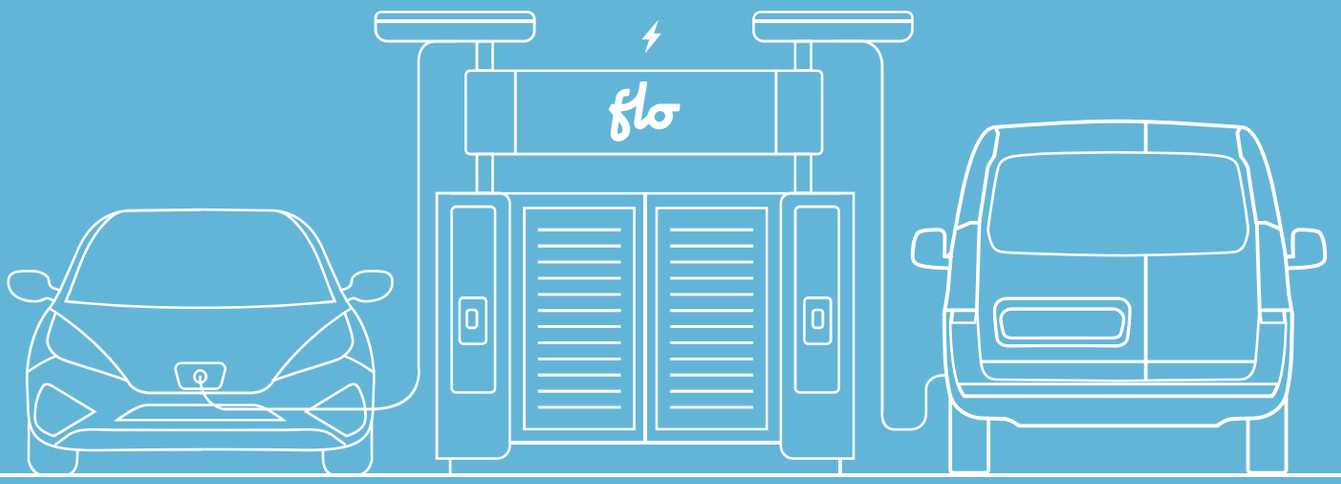
EV Charging Done Right™



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Appendix B: Load Analysis Summary

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ELECTRICAL LOAD ANALYSIS SUMMARY

Equipment Schedule

Description	Connected Load [VA]	Demand Factor [%]	Demand Load [kVA]
DCFC EVSE - FLO SmartDC 50kW (65A, 480V, 3Ø)	54,040	100%	54.04
Level 2 EVSE - FLO Dual CoRe+ (32A, 208V, 1Ø)	6,656	100%	6.66

EV Load Summary

Description	Total Annual Energy [kWh]	Min. Req. Charging Load[1] [kW]	+50% Charging Load Safety Factor [kW]
Total proposed EV load	99,815	31.99	47.99

Existing Electrical Service Capacity Analysis

Electrical service (208V, 3Ø)	600 A
Electrical service 80% rated (208V, 3Ø)	480 A
Electrical service capacity	173 kVA
Maximum electrical demand load[2]	64 kVA
Electrical service load percentage	37%
Remaining Capacity for new loads	109 kVA
Total proposed EV load	48 kW

Therefore, the electrical service has capacity for the total proposed EV load.

# of required Level 2 EVSE	7
Total proposed Level 2 EVSE load	47 kVA
Total # of required Level 2 EVSE connectors	18
# of required DCFC EVSE	1
Total proposed DCFC EVSE load[3]	54 kVA

Notes:

1. The minimum required demand load is determined based on the estimated daily energy usage and time available for charging.
2. Data retrieved from BC Hydro provided 1-year historical load information. Metering data provided at 1-hour intervals. This is a risk that the maximum demand load was not captured (within 1-hour). A safety factor of 25% has been applied. All metering data shall be confirmed via demand load study.
3. Note there are 6x existing Electrical Chargers, these have been removed from the total annual kwH & required charging load.

ELECTRICAL LOAD ANALYSIS SUMMARY

Equipment Schedule

Description	Connected Load [VA]	Demand Factor [%]	Demand Load [kVA]
DCFC EVSE - FLO SmartDC 50kW (65A, 480V, 3Ø)	54,040	100%	54.04
Level 2 EVSE - FLO Dual CoRe+ (32A, 208V, 1Ø)	6,656	100%	6.66

EV Load Summary

Description	Total Annual Energy [kWh]	Min. Req. Charging Load[1] [kW]	+50% Charging Load Safety Factor [kW]
Total proposed EV load	4,618	1.06	1.59

Existing Electrical Service Capacity Analysis

Electrical service (208V, 3Ø)	800 A
Electrical service 80% rated (208V, 3Ø)	640 A
Electrical service capacity	231 kVA
Maximum electrical demand load[2]	64 kVA
Electrical service load percentage	28%
Remaining Capacity for new loads	167 kVA
Total proposed EV load	2 kW

Therefore, the electrical service has capacity for the total proposed EV load.

# of required Level 2 EVSE	1
Total proposed Level 2 EVSE load	7 kVA
Total # of required Level 2 EVSE connectors	1

Notes:

1. The minimum required demand load is determined based on the estimated daily energy usage and time available for charging.
2. Data retrieved from BC Hydro provided 1-year historical load information. Metering data provided at 1-hour intervals. This is a risk that the maximum demand load was not captured (within 1-hour). A safety factor of 25% has been applied. All metering data shall be confirmed via demand load study.

ELECTRICAL LOAD ANALYSIS SUMMARY

Equipment Schedule

Description	Connected Load [VA]	Demand Factor [%]	Demand Load [kVA]
DCFC EVSE - FLO SmartDC 50kW (65A, 480V, 3Ø)	54,040	100%	54.04
Level 2 EVSE - FLO Dual CoRe+ (32A, 208V, 1Ø)	6,656	100%	6.66

EV Load Summary

Description	Total Annual Energy [kWh]	Min. Req. Charging Load[1] [kW]	+50% Charging Load Safety Factor [kW]
Total proposed EV load	76,002	94.83	142.24

Existing Electrical Service Capacity Analysis

Electrical service (208V, 3Ø)	800 A
Electrical service 80% rated (208V, 3Ø)	640 A
Electrical service capacity	231 kVA
Maximum electrical demand load[2]	156 kVA
Electrical service load percentage	68%
Remaining Capacity for new loads	75 kVA
Total proposed EV load	142 kW

Therefore, the electrical service does not have capacity for the total proposed EV load.

# of required Level 2 EVSE	3
Total proposed Level 2 EVSE load	20.0 kVA
Total # of required Level 2 EVSE connectors	7
# of required DCFC EVSE	5
Total proposed DCFC EVSE load[3]	270 kVA

Notes:

1. The minimum required demand load is determined based on the estimated daily energy usage and time available for charging.
2. Data retrieved from BC Hydro provided 1-year historical load information. Metering data provided at 1-hour intervals. This is a risk that the maximum demand load was not captured (within 1-hour). A safety factor of 25% has been applied. All metering data shall be confirmed via demand load study.
3. Note there are 6x existing Electrical Chargers, these have been removed from the total annual kwH & required charging load.

Appendix C: BC Hydro 1-year Load History Summary

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Location	1-Year Net Consumption (kWh)	Max of Demand (kW)	Average of Power Factor (%)	Max of Demand (kVA)	+25% Safety Factor
Municipal Hall	410151	123.8	99.82	124.7	155.8
Fire Hall	104911	51.2	Unknown[1]	Unknown[1]	64.0
Municipal Yard	135900	51.2	100.00	51.2	64.0

Notes:

1. Data was not made avaialble by BC Hydro.

Appendix D: Single Line Diagram

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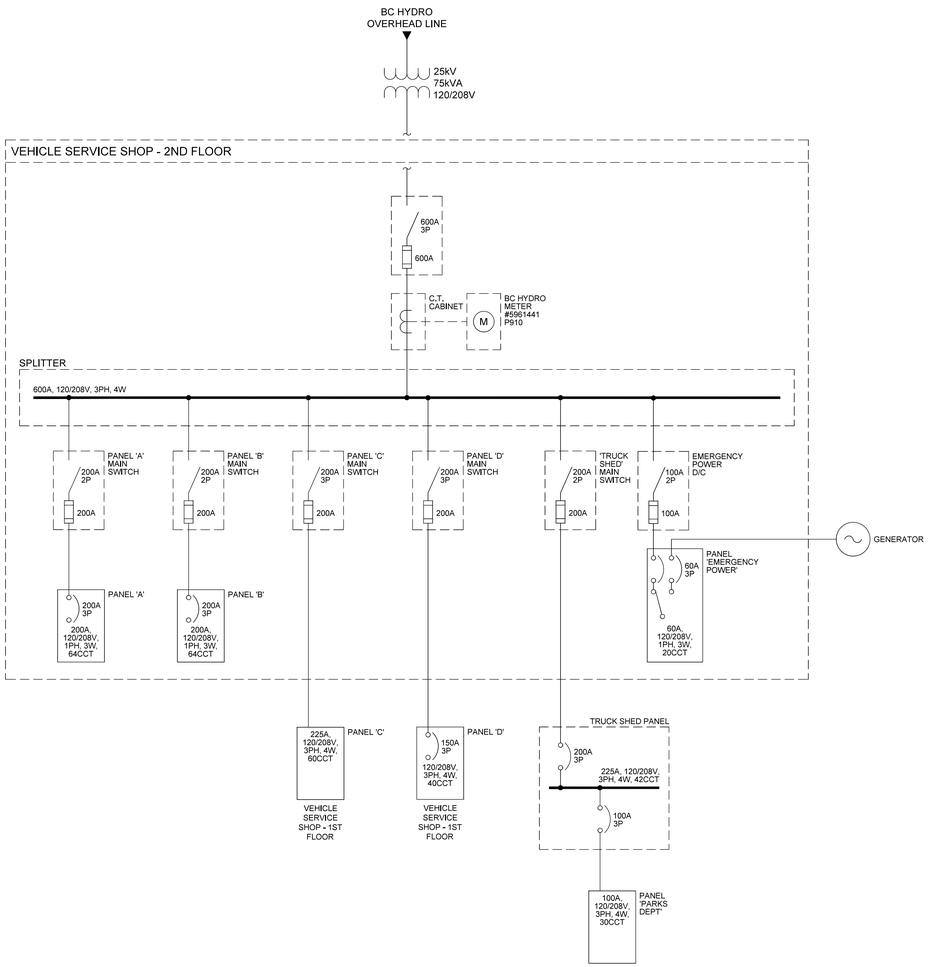
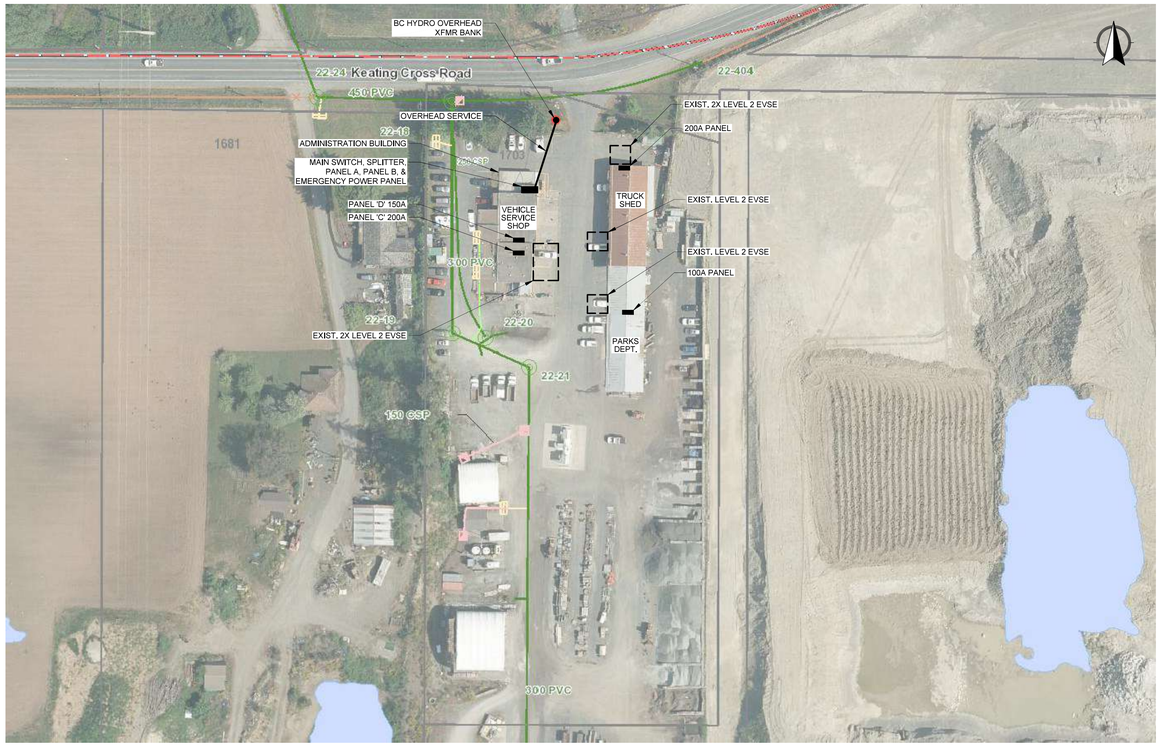


DETAIL 1 - NTS
SINGLE LINE DIAGRAM - EXISTING
MUNICIPAL YARD



DETAIL 2 - NTS
SITE PLAN
MUNICIPAL YARD

LINE TYPE LEGEND	
———	ABOVE GROUND CONDUIT/CABLE
– – –	BELOW GROUND CONDUIT/CABLE
SINGLE LINE DIAGRAM	
M	ELECTRICAL METER
SPD	SURGE PROTECTION DEVICE
	FUSE
	DISCONNECT SWITCH
DMS	DIGITAL METERING SYSTEM
	CURRENT TRANSFORMER
	BREAKER
	DELTA-WYE TRANSFORMER
	GROUNDING

ISSUED FOR CLIENT REVIEW
NOT FOR CONSTRUCTION

PBX ENGINEERING
PBX ENGINEERING Ltd.
Suite 201 - 1221 Broad St.
Victoria BC, V8W 2A4
Tel 250.388.7222

PBX ENGINEERING LTD.
PERMIT TO PRACTICE NUMBER:
1000208

CLIENT
Central Saanich

REV	DATE	ISSUE / REVISION
PA	25/03/18	PRELIMINARY ASSESSMENT

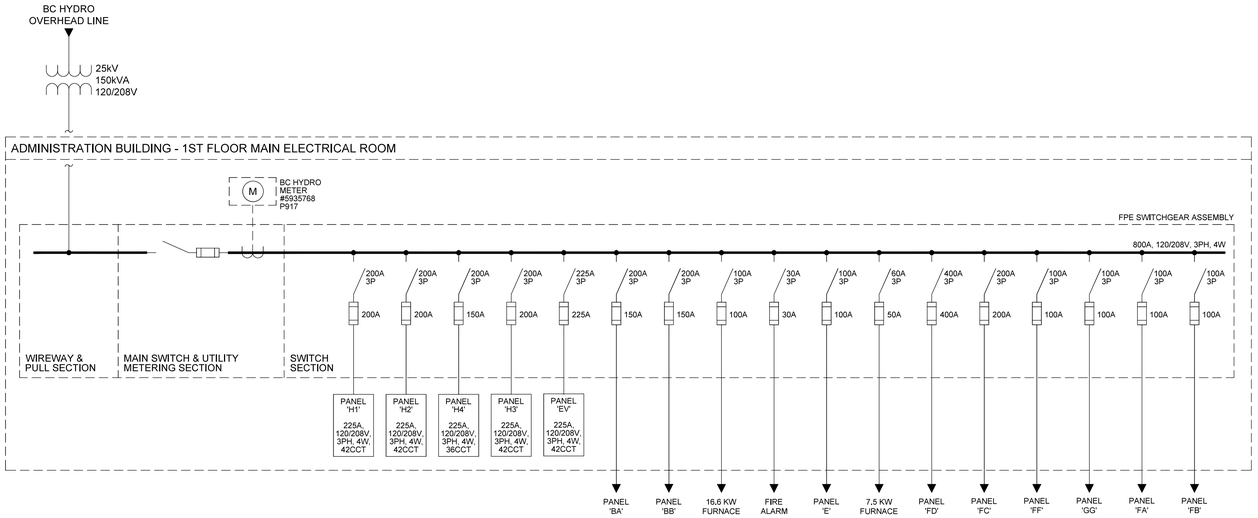
DRAWN BY	DESIGNED BY	APPROVED BY
MA	DGH	RA

PBX PROJ. No.	SCALE
240499	AS SHOWN

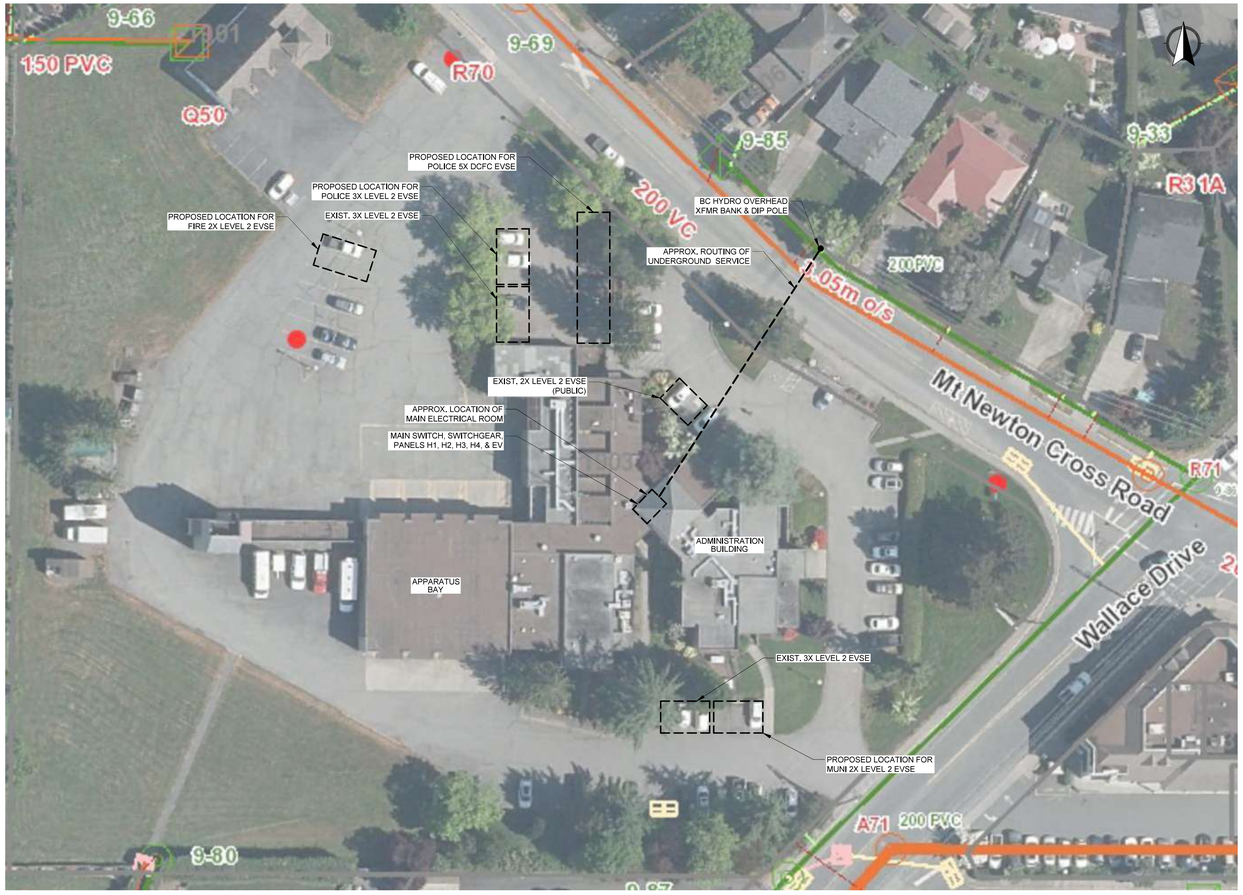
PROJECT
DISTRICT OF CENTRAL SAANICH
FLEET ASSESSMENT

TITLE
MUNICIPAL YARD
SINGLE LINE DIAGRAM
& SITE PLAN

DRAWING NUMBER	REV.
E010	PA



DETAIL 1 - SINGLE LINE DIAGRAM - EXISTING
NTS MUNICIPAL HALL



DETAIL 2 - SITE PLAN
NTS MUNICIPAL HALL

LINE TYPE LEGEND	
———	ABOVE GROUND CONDUIT/CABLE
– – –	BELOW GROUND CONDUIT/CABLE
SINGLE LINE DIAGRAM	
M	ELECTRICAL METER
SPD	SURGE PROTECTION DEVICE
	FUSE
	DISCONNECT SWITCH
DMS	DIGITAL METERING SYSTEM
	CURRENT TRANSFORMER
	BREAKER
	DELTA-WYE TRANSFORMER
	GROUNDING

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REV	DATE	ISSUE / REVISION
PA	25/03/18	PRELIMINARY ASSESSMENT

DRAWN BY	DESIGNED BY	APPROVED BY
MA	DGH	RA

PBX PROJ. No.	SCALE
240499	AS SHOWN

PROJECT
DISTRICT OF CENTRAL SAANICH
FLEET ASSESSMENT

TITLE
MUNICIPAL HALL
SINGLE LINE DIAGRAM
& SITE PLAN

DRAWING NUMBER	REV.
E020	PA

The Corporation of the District of Central Saanich

REGULAR COUNCIL REPORT

For the Regular Council meeting on Monday, July 14, 2025

Re: 1183 Verdier – Letter of Indemnification in lieu of Landscape Security

RECOMMENDATION(S):

That, for the project at 1183 Verdier Avenue, a Letter of Indemnification for landscaping works be accepted in lieu of a landscape security.

PURPOSE:

The Capital Region Housing Corporation (CRHC) has submitted a request for Council to consider a Letter of Indemnification to be provided for landscape works in lieu of the traditional Letter of Credit or cash. This report presents the request, describes the applicable legislation and the process.

BACKGROUND:

The project at 1183 Verdier Avenue went through a development permit and District-initiated rezoning process, both of which received approval on March 10th, 2025. The project involves 110 units of affordable housing, including 22 deep subsidy units. The proponent has applied for a building permit and one of the requirements is for landscape security. The development permit that was issued includes a requirement for landscape security in the amount of 125% of the estimated costs of the landscaping. A preliminary cost estimate that was submitted as part of the development permit application totalled $283,901.89, which results in the total landscape security that is required being $354,877.36.

DISCUSSION:

Section 502 of the *Local Government Act* and Section 19 of the *Community Charter* allow a local government to require security as a condition of a land use permit, such as a development permit. The options provided are an irrevocable letter of credit and cash, or, "*another form of security satisfactory to the council or the person who imposed the requirement for the security*". The proponent for the project at 1183 Verdier is proposing to provide a letter of indemnification for the landscape security under the third category of "*another form of security satisfactory to the council*".

The proponent has provided a sample letter that was used for a project in a different municipality (Appendix A). The letter outlines the terms and provides a rationale for the request that has been made. The purpose is to save on costs associated with providing the security, such as the actual security amount as well as the interest to be paid, to better fund the project.

for the project at 1183 Verdier Avenue, a Letter of Indemnification for landscaping works be accepted in lieu of a landscape security. If endorsed by Council, staff would revise the list of outstanding items required for a building permit by removing the condition for a landscape security and adding a requirement for the letter of indemnification for the landscape works.

IMPLICATIONS:

Strategic

A priority of the District's 2024-2027 Strategic Plan is to *Expand the Supply of Affordable, Attainable, and Rental Housing*, with the goal of "pursuing partnerships with housing providers and government agencies to deliver affordable housing and amenities. A second priority is to *Invest in Infrastructure and Active Transportation*, with the goal of "facilitating increased public amenities by leveraging resources and seeking partnerships, including childcare, recreation, healthcare, and social services." This project will have 110 units of affordable housing with 70% of units rent geared to income, and there are plans to include a daycare in the ground floor commercial space.

Governance

As the proponent is the Capital Region Housing Corporation, a wholly owned subsidiary of the Capital Regional District and the largest non-profit housing provider on Vancouver Island, staff have no concerns regarding the viability of the project. In addition, the terms of the letter of indemnification would mitigate risk for the District should any unforeseen circumstances occur. Council has also indicated support for the project in the past by requesting staff to initiate the rezoning application. Therefore, staff have no concerns and are supportive of the request.

Legal

A motion by Council is required for the proponent to provide the letter of indemnification in lieu of a landscape security. Staff would ensure that the terms of the letter mitigate any risk for the District and will obtain legal input as required.

Financial/ Resource

A letter of indemnity differs from a letter of credit or cash in that the District would not have the money on hand. In case of a claim, the District would need to obtain the money from the indemnifying party. Furthermore, the terms of the letter could differ from a regular security and would have to be reviewed considering the amount that should be covered and what works are covered.

OPTIONS:

Option 1 (recommended):
That, for the project at 1183 Verdier Avenue, a Letter of Indemnification for landscaping works be accepted in lieu of a landscape security.

Option 2:
That Council deny the request to provide a Letter of Indemnification for landscaping works in lieu of a landscape security for the project at 1183 Verdier Avenue.

CONCLUSION:

The Capital Region Housing Corporation has submitted a request for Council to consider a Letter of Indemnification to be provided for landscape works in lieu of the traditional Letter of Credit or cash. The

proponent is a large non-profit housing provider and a subsidiary of the Capital Regional District. Council has indicated support for this project in the past and staff would work with the proponent to set the terms of the letter. Therefore, staff have no concerns and are supportive of the request.

Report written by:	Ivo van der Kamp, Senior Planner
Respectfully submitted by:	Kerri Clark, Manager of Development Services
Concurrence by:	Jarret Matanowitsch, Director of Planning and Building Services
Concurrence by:	Christine Culham, Chief Administrative Officer

ATTACHMENTS:

Appendix A: Sample Letter of Indemnification

1701 – 4555 Kingsway
Burnaby, BC V5H 4V8
T: 604 433 1711
F: 604 439 4726
www.bchousing.org

BC HOUSING

File: [redacted]

Date: June 3, 2021

City of Victoria
1 Centennial Square
Victoria, BC V8W 1P6

Dear [redacted]

Re: Michigan Square Redevelopment (330-336 Michigan Street, Victoria) DPV00122
Letter of Indemnity for Landscape

The Capital Region Housing Corporation (the "**Society**") is the registered owner of property located at 330-336 Michigan Street, Victoria and legally described as: PID 001-225-197 Lot A of Lots 1864, 1871, 1872, 1873, 1874, 1875 and 1876, Victoria City, Plan 42136 (the "**Lands**").

The Society, in partnership with British Columbia Management Commission ("**BCHMC**"), intends to construct not for profit housing on the Lands (the "**Project**") as per Development Permit 00122 issued by the City on October 22, 2020 (the "**Development Permit**"). The Project will deliver 97 units of rental housing for a range of household incomes.

The Society agrees to complete the design and construction of certain on-site landscaping work relating to the Project as set out in the Development Permit (the "**Works**"). To ensure completion of the Works in accordance with the Development Permit, the Society has, amongst other things, agreed to secure the completion of the Works with an irrevocable letter of credit in favour of the City (the "**LOC**").

In lieu of the Society providing the LOC in favour of the City, thereby allowing such saved costs to be used to better fund the Project, BCHMC has requested and the City has agreed, that BCHMC indemnify the City with respect to the installation of the Works in accordance with the Development Permit and the timelines set out therein.

In consideration of the City (i) permitting the construction of the Project, including the Works and (ii) waiving the City's right that the Society provide the LOC, BCHMC hereby agrees to indemnify and save harmless the City against any liabilities, claims, judgments, losses, damages, costs and expenses incurred by the City as a result of the non-completion of the Works in accordance with the Development Permit within the timelines set out therein.

The Society and BCHMC agree that should the Works, or any portion of the Works, not be completed in accordance with the Development Permit within the timelines set out therein, the City may, in its sole discretion, provide written notice to the Society and BCHMC ("**Notice**") ordering that the Society and BCHMC immediately comply with the Development Permit and complete the Works in the timeline specified therein, and to provide the City with an irrevocable letter of credit in accordance with the next paragraph.

Upon provision of the Notice, the Society and BCHMC further agree to provide an irrevocable letter of credit for 150% of the value of the Works that remain to be completed in the approved landscape plans (the "**Outstanding Works**") within the timeline set out in the Notice. The City, the Society and BCHMC agree to act reasonably in determining the scope and value of the Outstanding Works. Despite the preceding sentence, if the City, the Society and BCHMC do not agree on the scope and value of the Outstanding Works, the City may, in its sole discretion, engage a qualified professional at the expense of the Society and BCHMC to determine both the scope and the value of the Outstanding Works.

BCHMC and the Society agree that where the City considers that:

(a) the Outstanding Works has not been satisfied; or

(b) where, as a result of the contravention of a condition in the Development Permit, an unsafe condition or damage to the natural environment has resulted,

the City may undertake and complete the Outstanding Works required to satisfy the landscaping condition in the Development Permit or carry out any construction required to correct the unsafe condition or damage to the environment, at the cost of the Society, and may apply the security in payment of the cost of the Outstanding Works with any excess to be returned to the permit holder. Any expense incurred by the City beyond the value of the security may be recovered in the manner as municipal taxes.

Upon completion of the Works or the Outstanding Works as the case may be, the Society shall provide the City with a British Columbia Society of Landscape Architects (BCSLA) Landscape Schedule L-3 signed and sealed by a registered landscape architect to confirm that the Works have been completed in accordance with the drawings approved by the City.

We trust you will find the foregoing acceptable.

Yours truly,

Director of Regional Development - Vancouver Island
British Columbia Housing Management Commission

By executing this letter agreement, BCHMC commits itself to be bound by the terms set out in this letter agreement.

[redacted]

Authorized Signatory

[redacted]

By executing this letter agreement, the Society commits itself to be bound by the terms set out in this letter agreement.

[redacted]

Authorized Signatory

[redacted]

The Corporation of the District of Central Saanich

REGULAR COUNCIL REPORT

For the Regular Council meeting on Monday, July 14, 2025

Re: Elector Process - Redevelopment

RECOMMENDATIONS:

1. *Reaffirm support for the current process for the Civic Redevelopment Project, as originally established and consistently followed to date, and,*
2. *Direct staff to bring forward the "What We Heard" report from the current phase of engagement as soon as possible to inform Council's selection of a preferred option for the renewal or redevelopment of the Civic Redevelopment Project.*

PURPOSE:

To report to Council on the details of a non-statutory, voluntary and non-binding elector process, now that the Province of BC does not require a formal electoral approval process for the borrowing on the Civic Redevelopment Project (Municipal Hall, Police and Fire Hall 2).

BACKGROUND:

On June 23, 2025, Council gave three readings to the Loan Authorization Bylaw No. 2240 for the Civic Redevelopment Project (Redevelopment Project) and referred the bylaw to the Inspector of Municipalities for approval. An additional motion was made, directing: *That staff report, either in September or earlier, on what referendum or additional non-binding engagement process could be done for the redevelopment project, and potentially other topics that could be included.*

The Redevelopment Project has been in the public realm for many years. Council first considered the project in 2006 as the building was not only meeting legislated seismic requirements for protective services but also nearing the end of its useful life. In 2014, with the development of Fire Hall 1, Council deferred it for 10 years.

Building on a long-standing need, the Redevelopment Project has been informed by the intersection of technical assessment, long-term financial planning, and Council-adopted policies developed through meaningful public engagement.

- The Saanichton Village Design Plan (2020) identified 1903 Mt Newton Cross Road as a Special Plan Area, supporting a pedestrian-oriented, mixed-use village core. That vision was shaped with input from over 935 participants, including 140 individuals who provided in-depth feedback that helped define community priorities.
- These themes were further reinforced through the development of the Official Community Plan (2023)—the District's guiding land use and growth policy—created through a multi-year process

that reached over 26,000 residents and interest holders, with more than 4,000 actively engaged through surveys, events, and discussion forums.
- Principles from the OCP were used as part of the evaluation criteria for the redevelopment, helping ensure alignment with broader community objectives.
- At the same time, the District's Asset Management Plan, launched in 2017 and updated in 2022, confirmed the condition and lifecycle challenges of the Municipal Hall, Fire Station 2, and Police Station, estimating a replacement cost of $42 million over five years (2022–2027). The Asset Management Plan is reviewed annually through the budget process.
- Every four years, Council established a policy to have a statistically significant survey to affirm community priorities prior to their Strategic Planning process..
- The project was then included in the District's Strategic Plans (2021–2026) and advanced through the 2024–2027 Strategic Implementation Plan.

As a result, the proposals before Council reflect a measured, best-practice approach—grounded in technical due diligence, long-range financial and asset planning, adopted land use policy, and broad community input gathered over several years.

Throughout the redevelopment process, Council endorsed three phases of the *Communications & Engagement Plan for Civic Redevelopment* (Communications Plan). This current phase of engagement is intended to affirm that the District is on the right track, providing the community with an opportunity to confirm priorities, weigh options, and help shape the final direction before key decisions are made.

Recent Amendments to British Columbia's Municipal Liabilities Regulation

The Communications Plan consistently communicated that "the District may require elector approval" if the District needed to go over the approval-free borrowing threshold for municipalities of 5% of its annual revenue as per the British Columbia's Municipal Liabilities Regulation (Liabilities Regulation).

In June 2025, the Province made amendments to the Liabilities Regulation that increased the approval-free borrowing threshold for municipalities from 5% to 10% of their annual revenue, allowing them to take on more debt without requiring elector approval. This change aims to reduce delays and administrative burdens for essential infrastructure projects, especially in fast-growing communities. For Central Saanich, it means the Municipal Facility Redevelopment Project can proceed without elector approval, as its projected debt falls within the new limit.

With these changes, Council requested that staff report back on what referendum or additional non-binding engagement process could be done for the redevelopment project, and potentially other topics that could be included.

Referendum vs. Plebiscite

Given that there is no required elector approval on the borrowing for the Redevelopment Project, this report will use the term 'plebiscite' from here on to avoid confusion with the required legislated processes. A 'referendum' is generally used for decisions where local governments are required to obtain elector approval, including borrowing authorization bylaws and boundary extensions. It may also sometimes be used for an opinion poll in conjunction with a local general election (see Appendix A). Referendums and alternative approval processes follow very prescriptive, legislated processes that incur additional costs yet give certainty in the validity of the process.

DISCUSSION:

When making significant government decisions, it is essential to weigh multiple factors should be evaluated through a structured and evidence-informed approach:

- technical analysis,
- legislative,
- policy alignment,
- financial implications, and
- community input.

While all components are important, their relative weight should be proportionate to the level of risk, cost, and long-term impact of the decision. High-value capital projects or decisions such as the Redevelopment Project, with legal and regulatory consequences often place greater emphasis on technical due diligence, financial sustainability, and statutory compliance.

Community input remains a critical component, particularly in shaping values-based outcomes and ensuring decisions reflect public priorities. Balancing these elements requires transparent trade-offs, where Council can understand and evaluate where expert recommendations, financial feasibility, and community preferences align or diverge. This integrated approach supports good governance, mitigates risk, and ensures decisions are durable, defensible, and responsive to the public interest.

Communications Plan

Since October 2023, the District has undertaken a phased public engagement process to support the Redevelopment Project. This initiative aims to replace aging municipal facilities and optimize land use at 1903 Mt Newton Cross Road and the adjacent Hovey Road property. The *Communications Plan* was developed to ensure transparency, foster public input, and build support on the concepts.

Phase 1 (October 2023) introduced the community to the opportunity to redevelop the Mt Newton site, with a focus on aligning redevelopment with long-term community priorities. Engagement activities included public open houses, surveys, and informal events such as “Coffee with Council.” Feedback from this phase indicated strong public interest in modern, functional buildings that support a range of community activities. Residents also expressed the need for more detailed information about the project’s scope and rationale. 300 residents shared feedback and ideas via 4 Open Houses, 1 (statistically significant) phone survey of 100 residents, a business survey, correspondence, and information kiosks

Phase 2 (July to October 2024) built upon the Phase 1 input by seeking more specific feedback on the amenities, services, and design features desired for the Mt Newton. Residents emphasized the importance of community-serving spaces, environmental sustainability, financial transparency, and accessible design. The “What We Heard – Phase 2” report, published in October 2024, confirmed that residents valued continued engagement and expected clarity on costs and long-term value for taxpayers. 1903 Design Principles included 291 survey responses and many conversations via an Open House.

Phase 3, launched in June 2025, marks the first opportunity for the public to review civic building concepts and associated financial models. Through a combination of in-person and virtual open houses, as well as pop-up events across the community, residents are being asked to provide input on the proposed options for a new municipal hall and yard facility. This feedback will inform the development of a final project plan, anticipated for Council consideration in the fall.

To date, there are over 130 responses to the current online survey for the Redevelopment Project for Phase 3 of the Engagement. This survey will remain open into August and residents have been invited to participate via mailed postcards to ~9,500 homes. In addition to four open houses with over 250 attendees in June, staff continue to gather feedback from pop-ups at community events over the summer.

The What We Heard report this fall will give Council a clear summary of support for the Redevelopment Project's three design concepts.

Each phase of engagement has played a critical role in shaping the project's direction, with resident feedback directly influencing the site concept, design preferences, and financial strategy. The District's goal has been to ground the decision-making in in transparency, responsiveness, and long-term planning, with the goal of ensuring that civic facilities are designed to meet the needs of the community today and into the future.

Review of Plebiscite and Additional Non-binding Engagement Process Options

To support Council's decision-making, three additional methods for gathering resident feedback may be considered: a plebiscite, a statistically weighted online survey, and a representative sample phone survey. Each offers distinct benefits and trade-offs in terms of cost, timeline, demographic reach, and statistical reliability, as outlined in Appendix C.

- Plebiscite: A non-binding vote open to all electors, this option brovides broad but less predictable input, costs around $80,000, and adds about three months to the timeline. Responses often skew toward more engaged or older residents.

- Statistically Weighted Online Survey: Costs about $26,000 and takes two months, this option adjusts for age, gender, and region to better reflect the population, but may still carry self-selection bias and overlap with existing efforts.

- Representative Sample Phone Survey: The fastest option at six weeks and $16,000–$19,000, this option ensures demographic balance and can reach underrepresented groups, though it typically yields fewer responses and may face non-response bias.

While not required to meet engagement goals, these tools could be used to validate existing engagement findings, test preferences, or respond to public demand for a vote.

Staff recommend continuing with the current *Communications and Engagement Plan*, which is thorough, aligned with District practices, and already underway. If broader input is desired, a phone survey could be added with minimal schedule impact.

IMPLICATIONS:

Jurisdictional Comparisons

There are few, if any, examples of non-binding referendums done outside of a general local election process. Appendix A highlights some recent examples of elector approval processes, though there is no registry on electoral processes as no Provincial oversight is done. The processes are almost exclusively required for borrowing.

Following a prescribed process, such as elector approval (which, even in the case of non-binding referendums, would be followed) increases the risk of error, misinformation and challenges to decisions. As an example, the City of Nanaimo has had to repeat an AAP process multiple times due to errors and perceived errors in the process. Another local government was also recently challenged in Court by the public related to the AAP process, focused largely on the amount of time it was open for.

In addition, a quick investigation of the regulations in other provinces reveals a different model, with up to 25% borrowing prior to elector approval and differing levels of Provincial oversight and approval.

Communication

Consistent Messaging

The *Communications Plan* has consistently communicated that "the District may require elector approval" if the District needed to go over the approval-free borrowing threshold for municipalities of 5% of its annual revenue as per the British Columbia's Municipal Liabilities Regulation (Liabilities Regulation). The District has not advised the public that a non-binding plebiscite would be held if elector approval was not required based on debt levels.

Equitability of Engagement

Holding a non-binding plebiscite may appear responsive to community concerns, but its voluntary nature, cost, and potential delays—no longer required by legislation—could be seen as catering to a small, vocal group. This approach may unintentionally exclude quieter voices, including those who have already participated through other engagement processes. As the outcome is non-binding, it could also create confusion about its role in decision-making and set expectations for similar processes in future applications. Public engagement is intended to inform policy; applying that policy is Council's responsibility. Delaying a decision may increase the cost of future municipal facility construction.

Future Opportunities for Feedback

If a decision is for the Redevelopment Project is made, the District will hold itself to the same standard as other proposed developments.

For example, if the chosen concept project requires an amendment to the Official Community Plan (OCP) Bylaw, there will be a Public Hearing. This process will provide community members ongoing opportunity to provide their feedback to Council.

Legislative/Policy

The June 2025 amendments to British Columbia's Municipal Liabilities Regulation increased the approval-free borrowing threshold for municipalities from 5% to 10% of their annual revenue, allowing them to take on more debt without requiring elector approval. This change aims to reduce delays and administrative burdens for essential infrastructure projects, especially in fast-growing communities. For Central Saanich, it means the Municipal Facility Redevelopment Project can proceed without a referendum or Alternate Approval Process, as its projected debt falls within the new limit.

A quick investigation of the regulations in other provinces reveals a different model, with up to 25% borrowing prior to elector approval and differing levels of Provincial oversight and approval.

Financial/ Resource

Table 1. Considerations for a Voluntary Plebiscite (Non-Binding Referendum)

Category	Cost Estimates	Notes
Plebiscite Expenses	$80,000	based on 2022 election costs
Cost escalation due to project delays	$550,000	increase in construction costs due to inflation (see Appendix B for Schedule delays) Note: Does not include potential financial impacts from delayed land sales or shifts in land value
Total	**$630,000**	

First Nations

Council has previously directed the direct engagement of both Tsartlip and Tsawout First Nations, to inform them of the project and seek their feedback as residents and neighbours. At this time, staff have reach out and are including attendance at the upcoming WƏTANMY Powwow later in July, as possibly at future Band Council meetings.

Legal/HR

There is no legislative requirements for an elector process with the recent change of the regulation for municipal borrowing. A voluntary plebiscite would follow the same process and oversight of a local municipal election.

Communications

Throughout the redevelopment process, the District has clearly outlined that the District *may* require elector approval as required for borrowing purposes, not the efficacy of the Redevelopment project. Having a plebiscite would be inconsistent with the District's communications to the public thus far. Throughout the three phases of engagement, there has not been significant feedback on the elector approval process or requirement for a referendum or plebiscite.

Official Community Plan

While the specific renewal of the Municipal Hall, Fire Station, and Police facility is not explicitly identified in the Official Community Plan (2023), Concepts A and B strongly align with OCP principles and land use objectives. The OCP emphasizes the creation of complete, walkable communities, the efficient use of public lands and infrastructure, and the enhancement of village centres—particularly Saanichton Village. The Redevelopment Project advances these objectives by supporting the transformation of a key site into a mixed-use, community-serving hub that contributes to local vibrancy, accessibility, and long-term service delivery. By aligning the project with the policy direction and guiding principles established through extensive public engagement, the District is positioned to meet future needs in a manner that is fiscally responsible, environmentally sustainable, and consistent with the community's long-term vision.

OPTIONS:

Option 1 (recommended):

Reaffirm support for the current process for the Civic Redevelopment Project, as originally established and consistently followed to date, and,

Direct staff to bring forward the "What We Heard" report from the current phase of engagement as soon as possible to inform Council's selection of a preferred option for the renewal or redevelopment of the Civic Redevelopment Project.

Option 2:

1. That Council seek community input on the three redevelopment project options through a representative sample phone survey to be completed by the end of September, to assist in the determination of the preferred concept to advance for the Redevelopment Project (Municipal Hall, Police & Fire Hall 2).
2. That the results of the current engagement and the phone survey be brought forward to Council in Fall 2025 to inform the selection of the preferred option.

Option 3:

1. Direct staff to undertake a non-binding plebiscite process to seek input on the public's preferred concept to advance for the Redevelopment Project (Municipal Hall, Police & Fire Hall 2), to be completed prior to the end of 2025.
2. That the question for the plebiscite be as follows:
    a. Which of the following options is your preference?
        i. Option A: Hovey Road (with recreation potential)
        ii. Option B: Mt. Newton Cross Road
        iii. Option C: Mt. Newton Renovation/Expansion
3. That the following be appointed for the process:
    a. Emilie Gorman, Chief Election Officer
    b. Pamela Martin, Deputy Chief Election Officer
4. That given the non-binding nature of the plebiscite, efficiencies of cost be determined in the electoral process.

CONCLUSION:

Given the scale and significance of the Redevelopment Project, it is essential that Council's decision-making be grounded in established best practices—namely, the integration of Council-adopted policy, technical and asset condition evidence, long-term financial planning, and meaningful community input. The District's existing communications and engagement plan for Phase 3 was developed with these principles in mind and is already being implemented to reach a broad and diverse cross-section of residents.

While additional engagement methods such as a plebiscite or specialized surveys may offer some incremental value, they also introduce considerable cost, delay, and potential confusion at a critical stage of the project. Maintaining the current approach ensures continuity, upholds the integrity of the planning process to date, and reflects a balanced, thoughtful strategy that is aligned with the District's values, responsibilities, and long-term community vision. However, if Council wishes to get a broader input, a representative sample phone survey could be implemented with minor adjustments to the project schedule.

Respectfully written and submitted by:	Emilie Gorman, Director of Corporate Services and Corporate Officer
Concurrence by:	Christine Culham, Chief Administrative Officer

ATTACHMENTS:

Appendix A: Previous Elector Approval Processes – BC

Appendix B: Detailed Timeline

Appendix C: Review of Plebiscite and Additional Non-Binding Engagement Process Options

Appendix A: Previous Elector Approval Processes - BC

Municipality and Project	AAP or Referendum?	Required?	Outcome
Victoria Crystal Pool Project (2025)	Referendum	Yes (borrowing); Options also included	Passed
Okanagan Falls Incorporation (2025)	Referendum	Yes	Passed
Public Works Yard – Saanich (2025)	AAP	Yes (borrowing)	TBD
Ravensong Recreation Center – RDN (2025)	Referendum	Yes (borrowing)	Failed
Municipal Hall – Ladysmith (2024)	AAP	Yes (borrowing)	Failed
Public Works Yard – Nanaimo (2024)	AAP	Yes (borrowing)	Failed
Water Reservoirs Nanoose Bay – RDN (2024)	AAP	Yes (borrowing)	Failed
Aquatic Center – Prince George (2024)	AAP	Yes (borrowing)	Passed
Recreation Program – Kelowna (2023)	AAP	Yes (borrowing)	Passed
Cultural Center – Vernon (2022)	AAP	Yes (borrowing)	Passed
Victoria-Saanich Amalgamation Study[1] (2018)	Referendum (yes/no)	No (non-binding)	Passed
Salt Spring Island Incorporation (2017)	Referendum	Yes	Failed
Transportation and Transit – Metro Van (2015)	Plebiscite	Yes (taxation) *Run by Elections BC	Failed

Referendum results held alongside 2022 local general election: CivicInfo - 2022 Referendum Results

[1] "Are you in favour of spending up to $250,000 for establishing a Citizen's Assembly to explore the costs, benefits and disadvantages of the amalgamation between the District of Saanich and the City of Victoria?"

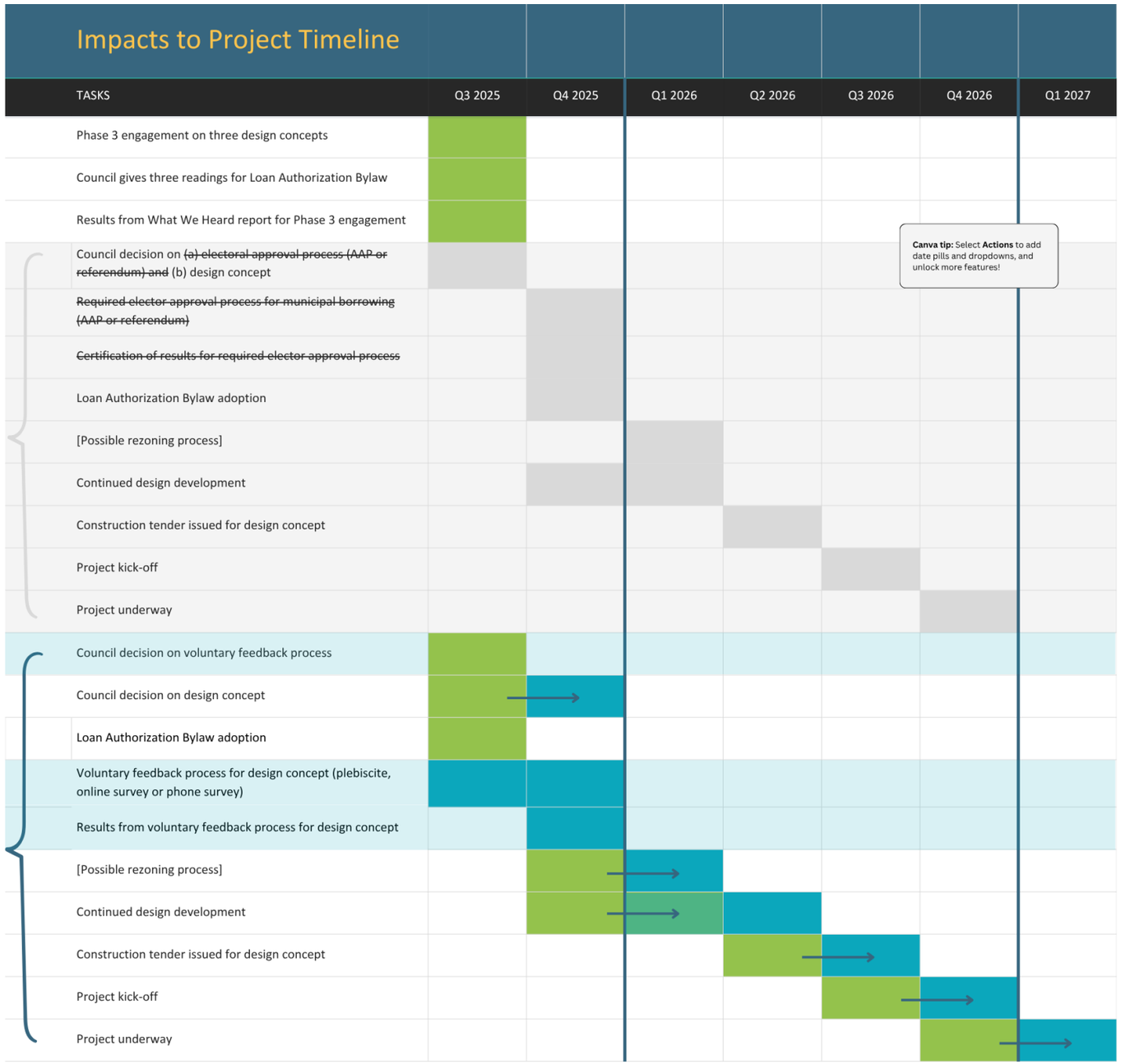
Appendix B – Detailed Timeline

Approach & Timing	Summer 2025	September 2025	Fall 2025	End of 2025	Early 2026	Mid 2026	Fall 2026	End of 2026
Previous Timeline	• Phase 3 Consultation on 3 concepts; • 3 readings for Loan Authorization Bylaw	• Results of WWHR Phase 3; • Council decision on: (a) preferred concept (b) elector approval method; • Continue design development	Required elector approval process for municipal borrowing (AAP or referendum)	• Certification of results of elector approval • Adoption of Loan Authorization Bylaw	Possible rezoning process	Construction Tender issued	**Project Kick Off (August)**	Project underway
Current Timeline		• Results of WWHR Phase 3; • Council decision on concept • Continue design development • Loan Authorization Bylaw Adoption		Possible rezoning process		Construction Tender issued	**Project Kick Off (August)**	
Voluntary Plebiscite		• Results of WWHR Phase 3; • Council decision on voluntary elector input • Loan Authorization Bylaw Adoption	Voluntary plebiscite process (up to 2 advance opportunities, mail ballots and one general voting day)	• Receive results of plebiscite • Selection of preferred concept			Construction Tender issued	**Project Kick Off* (Nov-Dec)**

**$550,000 cost escalation, plus $80,000 for plebiscite*

Previous timeline

Updated timeline
(blue = timeline delay with voluntary plebiscite process)



Project kick-off delay from Aug 2026 to Nov/Dec 2026

Appendix C: Review of Plebiscite and Additional Non-Binding Engagement Process Options

Table 1. Review of Plebiscite and Additional Non-binding Engagement Process Options (appendix)

	Plebiscite (non-binding, voluntary vote)	**Statistically weighted online survey**	**Representative sample phone survey**
Details	Full vote in person or by mail, similar to an election (e.g., choose concept A/B/C)	Opt-in invitation for online input via mailed postcards and survey (e.g., choose or rank concept A/B/C)	Opt-in invitation for phone input via calls to landlines and cell phones (e.g., choose or rank concept A/B/C)
Typical use	Binary decisions (e.g., borrowing, governance)	Complex/multi-topic input	Complex/multi-topic input
Timeline required	Medium/Long – ~ 3 months	Medium – ~ 2 or more months (depending on response rate)	Short/Medium – ~ 6 weeks
Community satisfaction with method	May satisfy some, while others may see it as unnecessary	May satisfy some; provides weighted input; may be seen by some to duplicate efforts of current online survey	May satisfy some; provides a representative sample to compare responses against current online survey
COSTS			
Approximate cost	$80,000 (turnout unknown)	$26,000 (350-550 responses expected)	$16,000 (100 responses included) $19,000 (200 responses included)
Approximate time delay (see costs below)	3-month delay	2-month delay	1.5-month delay
PARTICIPATION			
Who can participate	Electors only. Multiple people per household.	Any resident with Internet access. Multiple people per household (unique codes).	Any resident with a phone. Multiple people per household (randomized sample).
Expected responses	Turnout unknown	350-550 (2% to 3% of population)	100-200 (0.5% to 1% of population)
Representative sample	No	No, but statistically weighted by age, gender and region	Yes, matched to overall population
Accessibility	Accessible voting locations and mail-in options	Flexible format for online accessibility; inclusive options	Helps address barriers (mobility, time, literacy)
Biases	Self-selection (excludes people who are not motivated to engage)	Self-selection (excludes people who are not motivated to engage)	Non-response (excludes people who do not answer their phone)
OUTCOMES			
Depth of input	Clear preference from voters; no comments	Clear preference; comments	Clear preference; comments; opportunity for clarification

Democratic value	Direct vote; self-selection	Direct feedback; self-selection	Direct feedback; randomized selection
Statistical validity	Unknown (depends on voluntary turnout)	Yes	No
Representation expected	Voting typically trends to overrepresented groups (older ages, property owners, less diverse voices)	Weighted, so may overly amplify a small number of younger voices (even with targeted follow-up or extended timeline)	Lowest total number of responses, but greatest opportunity to hear from underrepresented groups
Risk & Analysis	The results may be seen as less impactful by some, with potential for misinterpretation and repeated input from already well-represented voices. May satisfy the small number wishing for a direct vote. More likely to hear from those in opposition.	Some may question the value if results don't reflect their expectations, with concerns about duplication, perceived bias, and input from already-engaged participants.	Results may be seen as more credible by some if they align with existing findings, though concerns about perceived bias and repeated input remain, even with broader representation.

THE CORPORATION OF THE DISTRICT OF CENTRAL SAANICH

BYLAW NO. 2225

A Bylaw to Amend Noise Bylaw

WHEREAS the Council by Bylaw No. 933 adopted the Noise Abatement Bylaw and deems it appropriate to amend the Noise Abatement Bylaw;

NOW THEREFORE the Council of the Corporation of the District of Central Saanich, in open meeting assembled, enacts as follows:

1. TEXT AMENDMENT

Central Saanich Bylaw No. 933 is amended as follows:

a. By adding under 1. DEFINITIONS as (h):

(h) "Point of reception" means
   i. is within the property line of the real property occupied by the recipient of a noise or sound
   ii. is at least 1.2 m above the surface of the ground, and;
   iii. best represents the location at which the noise or sound, emanating from another property, is received and the resulting disturbance experienced

b. By deleting section 5. HEAT PUMPS and replacing with:

No person shall emit or cause, suffer or permit the emission of sound from the operation of a heat pump resulting in a sound level at a point of reception located in a residential area in excess of:

i. 60 decibels between 6:00 a.m. and 9:00 p.m., or
ii. 55 decibels between 9:00 p.m. and 6:00 a.m.

2. CITATION

This Bylaw may be cited for all purposes as the "**Central Saanich Noise Abatement Bylaw Amendment Bylaw No. 2225, 2025**".

READ A FIRST TIME this	day of	**, 2025**
READ A SECOND TIME this	day of	**, 2025**
PUBLIC HEARING HELD this	day of	**, 2025**

READ A THIRD TIME this day of , **2025**

ADOPTED this day of , **2025**

Ryan Windsor
Mayor

Emilie Gorman
Corporate Officer

THE CORPORATION OF THE DISTRICT OF CENTRAL SAANICH

BYLAW NO. 2226

A Bylaw to Amend Zoning Bylaw

WHEREAS the Council by Bylaw No. 2180 adopted the Zoning Bylaw and deems it appropriate to amend the Zoning Bylaw;

NOW THEREFORE the Council of the Corporation of the District of Central Saanich, in open meeting assembled, enacts as follows:

1. TEXT AMENDMENT

Central Saanich Zoning Bylaw No. 2180 is amended as follows:

a. By adding under **PART 1 INTERPRETATION; 1. DEFINITIONS**

"Acoustic screening" means a barrier to restrict or absorb noise transmission from a noise source to a receiver of the noise to result in a lower sound

b. By deleting section (9) under **PART 4 GENERAL REGULATIONS**, **8. YARDS** and replacing with:

(9) heat pumps not integrated into the building exterior shall:
a. not be sited in a front yard,
b. have acoustic screening when sited 3 meters or less from a side or rear property line;

2. CITATION

This Bylaw may be cited for all purposes as the "**Central Saanich Zoning Bylaw Amendment Bylaw No. 2226, 2025**".

READ A FIRST TIME this	day of	**, 2025**
READ A SECOND TIME this	day of	**, 2025**
PUBLIC HEARING HELD this	day of	**, 2025**
READ A THIRD TIME this	day of	, **2025**

ADOPTED this day of , **20__**

Ryan Windsor
Mayor

Emilie Gorman
Corporate Officer

THE CORPORATION OF THE DISTRICT OF CENTRAL SAANICH
Minutes of the REGULAR COUNCIL Meeting

March 10, 2025, 7:00 p.m.
Council Chambers

Present: Mayor Windsor, Councillor Graham, Councillor King, Councillor Newton, Councillor Paltiel, Councillor Riddell, Councillor Thompson

Staff Present: Christine Culham, Chief Administrative Officer; Kenn Mount, Fire Chief; Jarret Matanowitsch, Director of Planning and Building Services; Dale Puskas, Director of Engineering; Fernando Pimentel, Interim Director of Financial and Information Technology Services/Chief Financial Officer; Tony Bousquet, Manager of Information Technology; Kerri Clark, Manager of Development Services; Ivo Van der Kamp, Planner; Pamela Martin, Deputy Corporate Officer, Nareka Jacques, Corporate and Executive Assistant; Davin Contois, Planner

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1. CALL TO ORDER

The meeting was called to order at 7:00 p.m.

2. ACKNOWLEDGEMENT

The Mayor respectfully acknowledged that the land on which we gather is the traditional territory of the W̱SÁNEĆ people which includes W̱JOŁEŁP (Tsartlip) and S*T*ÁUTW̱ (Tsawout) First Nations.

3. APPROVAL OF AGENDA

3.1 Agenda of the March 10, 2025 Regular Council Meeting

MOVED AND SECONDED

That the agenda of the March 10, 2025 Regular Council meeting be approved as amended by:

- *updating the minutes for item #4.1; and*
- *moving item #12.2.1 to take place after #8.1.*

CARRIED UNANIMOUSLY

4. ADOPTION OF MINUTES

4.1 Minutes from the March 5 and 6, 2025 Public Hearing Meeting

MOVED AND SECONDED

That the minutes from the March 5 and 6, 2025 Public Hearing Meeting meeting be adopted as circulated.

CARRIED UNANIMOUSLY

7. PUBLIC QUESTIONS

Pieta van Dyke (Central Saanich Road): Asked a question regarding the installation of a round-about on Central Saanich Road and Mt. Newton Cross Road and asked that the structural integrity of the building located at 1870 Doney Road be considered in addition to the historical designation, during the review of that application.

8. PRESENTATIONS/PETITIONS AND DELEGATIONS

8.1 Rob Irving

Joanna, Colleen, Colleen, and Rob Irving provided a presentation regarding their request for the District to allow Short Term Rentals in Central Saanich.

The Director of Planning and Building Services provided information regarding Short Term Rentals in Central Saanich and responded to questions from Council.

The Chief Administrative Officer responded to questions from Council.

MOVED

That the District initiate a process to inform people who wish to apply for a Temporary Use Commercial Permit to allow for Short-Term Rentals, do to so now with a $300 one time rush fee to move them towards the top of the list, so that they can be processed in a timely manner.

The motion did not proceed as there was not a seconder.

12. BYLAWS

12.2 Development Application Bylaws

12.2.1 1934 Hovey Rd – OCP Amendment, Rezoning and Development Permit

The Director of Planning and Building Services, Chief Administrative Officer, Director of Engineering, and the Planner responded to questions from Council.

The applicants, Dave Sinclair from Legion Manor, Jason Potter from Bunt & Associates, and Chris Quigley from Aryze, responded to questions from Council.

MOVED AND SECONDED

That OCP Amendment Bylaw No. 2205, 2024 (1934 Hovey Road) be given Third Reading.

Opposed (3): Councillor King, Councillor Newton, and Councillor Thompson

CARRIED (4 to 3)

MOVED AND SECONDED
That Zoning Amendment Bylaw No. 2206, 2024 (1934 Hovey Road) be given Third Reading.
CARRIED

Amendment:
MOVED AND SECONDED
That the motion be amended by adding: ***That if possible and compatible, the orientation of the senior's housing be revised, without affecting density and unit count.***
CARRIED UNANIMOUSLY

Amendment:
MOVED AND SECONDED
That the motion be amended by adding: ***That, if possible, alternative access and egress to the Eastern property be considered, instead of through Hovey Road.***
Opposed (1): Councillor Paltiel
CARRIED (6 to 1)

Motion as Amended:

- *That Zoning Amendment Bylaw No. 2206, 2024 (1934 Hovey Road) be given Third Reading.*
- *That, if possible and compatible, the orientation of the senior's housing be revised, without affecting density and unit count; and*
- *That, if possible, alternative access and egress to the Eastern property be considered, instead of through Hovey Road.*

Opposed (3): Councillor King, Councillor Newton, and Councillor Thompson
CARRIED (4 to 3)

MOVED AND SECONDED
That prior to consideration of adoption of the OCP Amendment Bylaw and the Zoning Amendment Bylaw, a housing agreement bylaw for the proposed Legion site has been adopted, which requires that all rental units be rented at affordable rental rates (CMHC, up to 80% of the market rate) and that the District has first right of refusal or right to assign for any property transaction, other than sale of the lot to Legion Manner.
CARRIED UNANIMOUSLY

MOVED AND SECONDED
That prior to consideration of adoption of the OCP Amendment Bylaw and the Zoning Amendment Bylaw, a housing agreement bylaw for the proposed market rental site has been adopted, which requires that all market rental units shall remain rental in

perpetuity, that 10% or more of the units (13 units) be provided as affordable rental units (CMHC, up to 80% of the market rate) in perpetuity, and that the District has first right of refusal or right to assign for any property transaction.
CARRIED UNANIMOUSLY

MOVED AND SECONDED
That prior to consideration of adoption of the OCP Amendment Bylaw or the Zoning Amendment Bylaw, a covenant be registered to secure:

a. *That in collaboration with the Saanich Peninsula Hospital and Healthcare Foundation, the market rental units are offered to hospital staff before being offered to the wider public.*
b. *That the property at 7601 East Saanich Road shall provide 14 parking spaces to be used solely by visitors of the two proposed buildings and that this be secured on title prior to occupancy of either building.*
c. *That TDM measures, including off-site measures, as outlined in the Parking Variance Report by Bunt & Associates (Version 7) dated January 14, 2025, be provided, or alternatively, bonded for, prior to occupancy of any building.*
d. *That the following be provided prior to building permit issuance of any building:*
    - *$100,000 to the Saanich Peninsula Outreach Society*
    - *$50,000 for the Little League turf at Centennial Park*
    - *New sidewalks from Hovey Rd to Centennial Park ($130,000)*
    - *$50,000 to the Tsawout Nation, including first right of refusal for affordable homes*
    - *Right of first refusal for 1 month pre-leasing to the Saanich Peninsula Hospital workforce for units in the west building*
    - *New senior fitness pad at Legion Manor*
    - *$200,000 contribution to the District Active Transportation Fund*

CARRIED UNANIMOUSLY

MOVED AND SECONDED
That Bird Safe Design Guidelines be considered by the applicant, in discussion with staff.
CARRIED UNANIMOUSLY

9. CORRESPONDENCE (Action Required or Recommended)

9.1 AVICC re AGM + Convention - First Nations Chiefs Invitation - March 4, 2025

The Chief Administrative Officer responded to questions from Council.

MOVED AND SECONDED
That an invitation be extended to the Tsartlip and Tsawout Chiefs to attend the 2025 AVICC AGM and Convention.
CARRIED UNANIMOUSLY

11. STAFF REPORTS

11.1 Heritage Inventory Review for 1870 Doney Rd.

Councillor Thompson withdrew from the meeting at 9:07 p.m. due to a pecuniary conflict of interest, as he lives in close proximity.

The Manager of Development Services provided a presentation on the report and responded to questions from Council.

The Director of Planning and Building Services responded to questions from Council.

MOVED AND SECONDED
That Council not proceed with a temporary protection order to conduct a heritage assessment under section 606 of the Local Government Act and agree that a demolition permit may be issued for 1870 Doney Road, and that where possible, the District ask that the applicant demonstrate first where deconstruction or reclamation of the home can be established, ahead of the building permit.
CARRIED UNANIMOUSLY

Councillor Thompson returned to the meeting at 9:20 p.m.

11.2 952 Paconla Place – Development Variance Permit

Councillor Newton withdrew from the meeting at 9:21 p.m.

The Planner provided a presentation on the report.

MOVED AND SECONDED
That Development Variance Permit No. 3090-20-04/24 for the conversion of a garage to an accessory dwelling unit at 952 Paconla Place be scheduled for an Opportunity To Be Heard at a following Council meeting.
CARRIED UNANIMOUSLY

11.3 Mt Newton Pathway Phase 2 – Canada Active Transportation Fund

The Director of Engineering provided a presentation on the report and responded to questions from Council.

MOVED AND SECONDED

1. *That Council approve applying to the Government of Canada's Housing, Infrastructure and Communities Canada, Active Transportation Fund for Phase 2 of the Mt Newton Pathway, from Highway 17 to East Saanich Road.*

2. *That staff report on the potential of doing the entire project on the north side of the highway to East Saanich Road and that an application be made to consider both sides.*

CARRIED UNANIMOUSLY

12. BYLAWS

12.2 Development Application Bylaws

12.2.2 1183 Verdier Ave – Affordable Housing Project (RZ and DP)

MOVED AND SECONDED
That Zoning Amendment Bylaw No. 2194 be adopted.
CARRIED UNANIMOUSLY

MOVED AND SECONDED
That Housing Agreement Bylaw No. 2195 be adopted.
CARRIED UNANIMOUSLY

MOVED AND SECONDED
That Central Saanich Housing Agreement Bylaw No. 1587, 2007 be rescinded.
CARRIED UNANIMOUSLY

MOVED AND SECONDED
That Development Permit 3060-20-10/24 for 1183 Verdier Avenue, which includes a variance for parking, be authorized for issuance.
CARRIED UNANIMOUSLY

MOVED AND SECONDED
That Covenant FB132771, requiring development to be in accordance with the Development Permit No. 3060-20-13/06, be authorized for discharge.
CARRIED UNANIMOUSLY

13. UNFINISHED BUSINESS

13.1 1048 Clarke Road – Development Permit (SSMUH)

Susan Zedel, Advisory Planning Commission Chair expanded on comments and the motion made by the APC on the application.

The Director of Planning and Building Services responded to questions from Council.

MOVED AND SECONDED
That Development Permit No. 3060-20-16/24 for three townhomes at 1048 Clarke Road be authorized for issuance.

MOVED AND SECONDED
That the motion be tabled to allow the Advisory Planning Commission Chair to speak.
CARRIED UNANIMOUSLY

MOVED AND SECONDED
That the motion be lifted from the table.
CARRIED UNANIMOUSLY

On the motion:
That Development Permit No. 3060-20-16/24 for three townhomes at 1048 Clarke Road be authorized for issuance.
CARRIED UNANIMOUSLY

15. CORRESPONDENCE (Receive for General Information)

15.6 Corr Laddish, S re Safety Concerns Regarding Off-Leash Dogs in Centennial Park - February 22, 2025

The Director of Planning and Building Services responded to questions from Council.

MOVED AND SECONDED
That the correspondence dated February 22, 2025 from S. Laddish be forwarded to the Parks and Master Plan update.
CARRIED UNANIMOUSLY

MOVED AND SECONDED
That the correspondence dated February 22, 2025 from S. Laddish be forwarded to CRD Bylaw.
CARRIED UNANIMOUSLY

16. CLOSED MEETING

16.1 Motion to Close

MOVED AND SECONDED
That Council convene a closed meeting pursuant to the following subsections of the Community Charter:
90(1) A part of a council meeting may be closed to the public if the subject matter being considered relates to or is one or more of the following:

- *(e) the acquisition, disposition or expropriation of land or improvements, if the council considers that disclosure could reasonably be expected to harm the interests of the municipality; and*
- *(k) negotiations and related discussions respecting the proposed provision of a municipal service that are at their preliminary stages and that, in the view of the council, could*

reasonably be expected to harm the interests of the municipality if they were held in public.

CARRIED UNANIMOUSLY

The meeting was closed to the public at 9:36 p.m.

The meeting recessed back to open at 9:57 p.m.

17. ADJOURNMENT

On motion, the meeting adjourned at 9:57 p.m.

Mayor Windsor	Emilie Gorman, Director of Corporate Services/Corporate Officer

THE CORPORATION OF THE DISTRICT OF CENTRAL SAANICH

BYLAW NO. 2205

A Bylaw to Amend Official Community Plan Bylaw
(1934 Hovey Road)

WHEREAS the Council of the Corporation of the District of Central Saanich by Bylaw No. 2100 adopted Schedule "A" of the Bylaw as the Official Community Plan Bylaw;

NOW THEREFORE the Council of the Corporation of the District of Central Saanich, in open meeting assembled, enacts as follows:

1. MAP AMENDMENT

Central Saanich Official Community Plan, Bylaw No. 2100, 2023, Schedule "F" (Land Use Plan) is amended by changing the designation of the lands legally described as LOT 1, SECTION 7, RANGE 2 EAST, SOUTH SAANICH DISTRICT, PLAN 16991 – Parcel Identifier 000-100-196 (1934 Hovey Rd); LOT 3 SECTION 7 RANGE 2 EAST SOUTH SAANICH DISTRICT PLAN 16991 – Parcel Identifier 004-110-544 (1950 Hovey Rd); LOT A, SECTION 7, RANGE 2 EAST, SOUTH SAANICH DISTRICT, PLAN 49783 – Parcel Identifier 015-614-387 (1960 Hovey Rd); LOT B, SECTION 7, RANGE 2 EAST, SOUTH SAANICH DISTRICT, PLAN 49783 – Parcel Identifier 015-614-395 (1966 Hovey Rd); and LOT 2, SECTION 7, RANGE 2 EAST, SOUTH SAANICH DISTRICT, PLAN 16991 – Parcel Identifier 004-130-677 (7551 East Saanich Rd), shown shaded on the map attached to this Bylaw as Appendix "A" from Neighbourhood Residential to Multi-unit Residential.

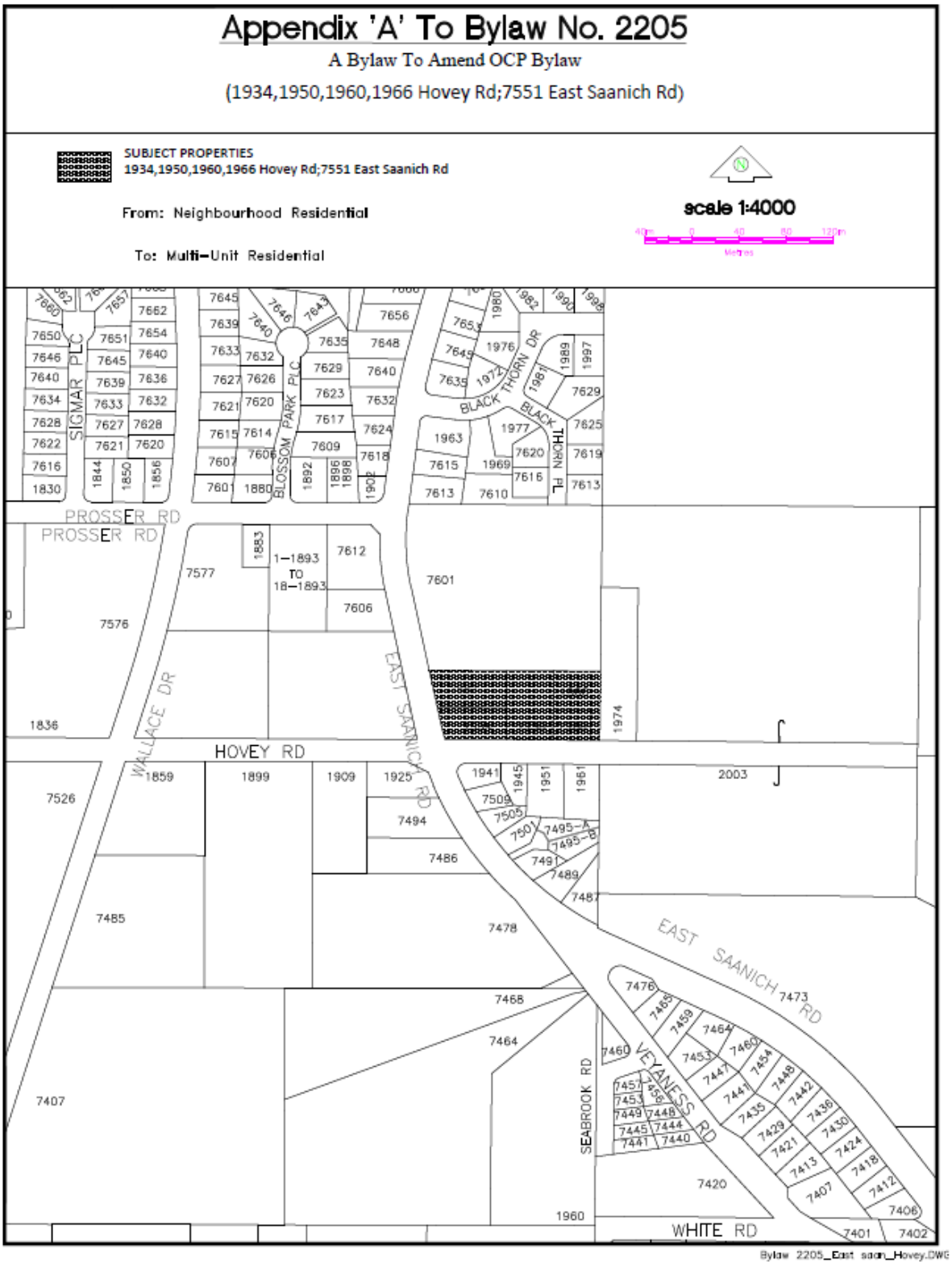
2. CITATION

This Bylaw may be cited for all purposes as the "**Central Saanich Official Community Plan Amendment Bylaw No. 2205, 2024**".

READ A FIRST TIME this	**25th**	day of	**November**	**, 2024**
READ A SECOND TIME this	**25th**	day of	**November**	**, 2024**
PUBLIC HEARING HELD this	**5th and 6th**	day of	**March**	**, 2025**
READ A THIRD TIME this	**10th**	day of	**March**	, **2025**
ADOPTED this		day of		, **2025**

Ryan Windsor
Mayor

Emilie Gorman
Director of Corporate Services/
Corporate Officer


Appendix 'A' To Bylaw No. 2205
A Bylaw To Amend OCP Bylaw
(1934,1950,1960,1966 Hovey Rd;7551 East Saanich Rd)
SUBJECT PROPERTIES
1934,1950,1960,1966 Hovey Rd;7551 East Saanich Rd
From: Neighbourhood Residential
To: Multi-Unit Residential
scale 1:4000
Metres
PROSSER RD
HOVEY RD
WALLACE DR
EAST SAANICH RD
SEABROOK RD
VEYANESS RD
WHITE RD
SIGMAR PLC
BLOSSOM PARK PLC
BLACK THORN DR
BLACK THORN PL
1-1893 TO 18-1893
Bylaw 2205_East saan_Hovey.DWG

THE CORPORATION OF THE DISTRICT OF CENTRAL SAANICH

BYLAW NO. 2206

A Bylaw to Amend Zoning Bylaw
(1934 Hovey Road)

WHEREAS the Council by Bylaw No. 2180, 2024 adopted the Zoning Bylaw and deems it appropriate to amend the Zoning Bylaw;

NOW THEREFORE the Council of the Corporation of the District of Central Saanich, in open meeting assembled, enacts as follows:

1. TEXT AMENDMENT

Appendix A, to the Central Saanich Zoning Bylaw No. 2180, 2024, as amended, is hereby further amended as follows:

By adding to the Residential Attached: RM-5 zone the following as Section 5 (2):
Despite the regulations above, the maximum Floor Area Ratio for proposed Lot 1 (west) on the lands legally described as LOT 1, SECTION 7, RANGE 2 EAST, SOUTH SAANICH DISTRICT, PLAN 16991 (1934 Hovey Rd); LOT 3 SECTION 7 RANGE 2 EAST SOUTH SAANICH DISTRICT PLAN 16991 (1950 Hovey Rd); LOT A, SECTION 7, RANGE 2 EAST, SOUTH SAANICH DISTRICT, PLAN 49783 (1960 Hovey Rd); LOT B, SECTION 7, RANGE 2 EAST, SOUTH SAANICH DISTRICT, PLAN 49783 (1966 Hovey Rd); and LOT 2, SECTION 7, RANGE 2 EAST, SOUTH SAANICH DISTRICT, PLAN 16991 (7551 East Saanich Rd) shall be 1.84.

2. MAP AMENDMENT

Schedule 1 (Zoning Map) of Appendix "A" of Bylaw No. 2180, 2024, cited as "Central Saanich Zoning Bylaw No. 2180, 2024" as amended, is hereby further amended by changing the zoning designation of the land legally described as LOT 1, SECTION 7, RANGE 2 EAST, SOUTH SAANICH DISTRICT, PLAN 16991 – Parcel Identifier 000-100-196 (1934 Hovey Rd); LOT 3 SECTION 7 RANGE 2 EAST SOUTH SAANICH DISTRICT PLAN 16991 – Parcel Identifier 004-110-544 (1950 Hovey Rd); LOT A, SECTION 7, RANGE 2 EAST, SOUTH SAANICH DISTRICT, PLAN 49783 – Parcel Identifier 015-614-387 (1960 Hovey Rd); LOT B, SECTION 7, RANGE 2 EAST, SOUTH SAANICH DISTRICT, PLAN 49783 – Parcel Identifier 015-614-395 (1966 Hovey Rd); and LOT 2, SECTION 7, RANGE 2 EAST, SOUTH SAANICH DISTRICT, PLAN 16991 – Parcel Identifier 004-130-677 (7551 East Saanich Rd), shown shaded on the map attached to this Bylaw as Appendix "A" from the Residential Neighbourhood (R-N) and Residential Corridor (R-C) zone to the Residential Attached: RM-5 zone.

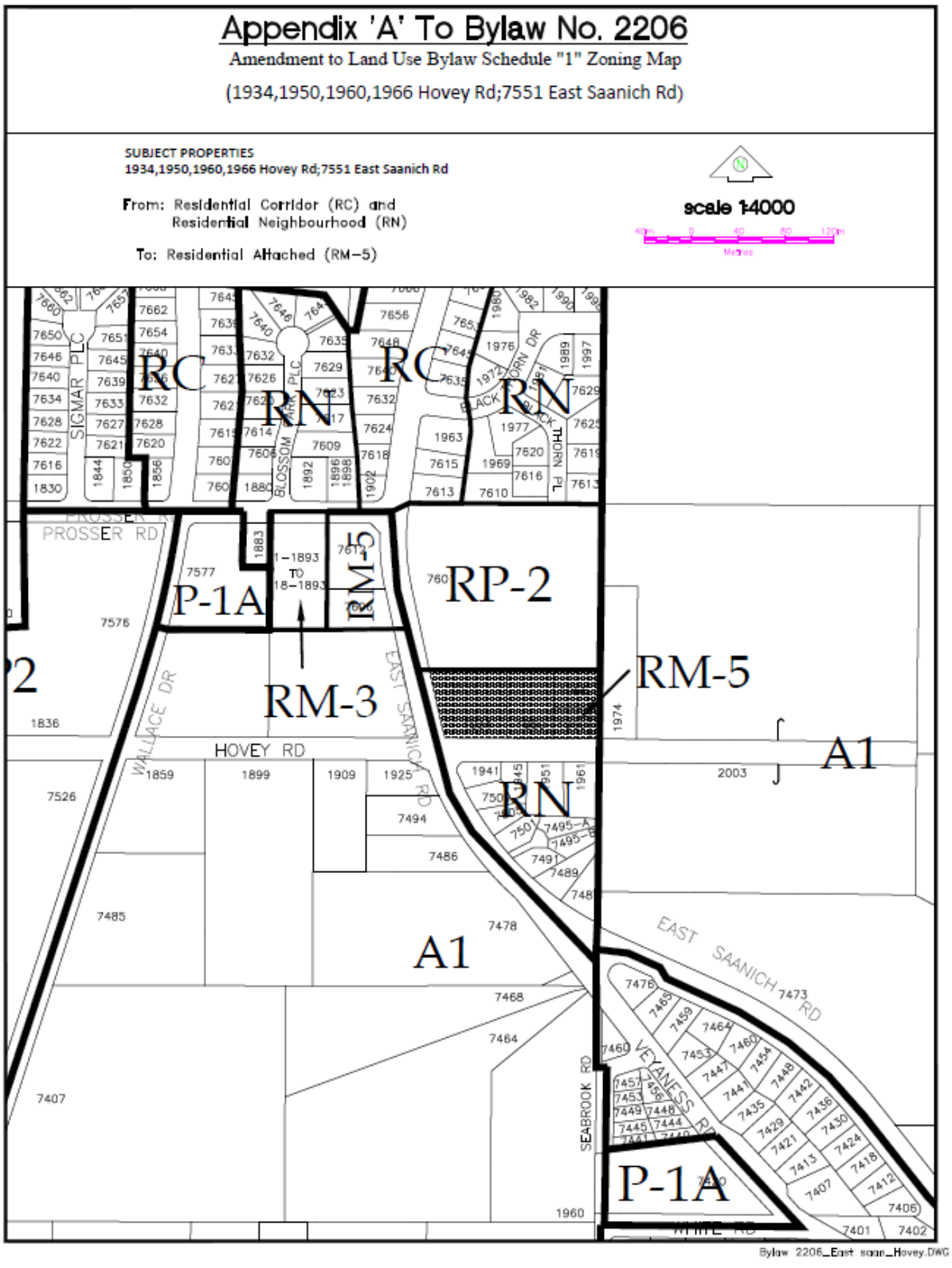
3. CITATION

This Bylaw may be cited for all purposes as the "**Central Saanich Zoning Bylaw Amendment Bylaw No. 2206, 2024**".

READ A FIRST TIME this	**25th**	day of	**November**	**, 2024**
READ A SECOND TIME this	**25th**	day of	**November**	**, 2024**
SECOND READING RESCINDED this	**10th**	day of	**February**	**, 2025**
AMENDED this	**10th**	day of	**February**	**, 2025**
READ A SECOND TIME this	**10th**	day of	**February**	**, 2025**
PUBLIC HEARING HELD this	**5th and 6th**	day of	**March**	**, 2025**
READ A THIRD TIME this	**10th**	day of	**March**	, **2025**
ADOPTED this		day of		, **20__**

Ryan Windsor
Mayor

Emilie Gorman
Director of Corporate Services/
Corporate Officer


Appendix 'A' To Bylaw No. 2206
Amendment to Land Use Bylaw Schedule "1" Zoning Map
(1934,1950,1960,1966 Hovey Rd;7551 East Saanich Rd)
SUBJECT PROPERTIES
1934,1950,1960,1966 Hovey Rd;7551 East Saanich Rd
From: Residential Corridor (RC) and Residential Neighbourhood (RN)
To: Residential Attached (RM-5)
scale 1:4000
RC
RN
RM-5
RP-2
P-1A
RM-3
A1
HOVEY RD
PROSSER RD
EAST SAANICH RD
WALLACE DR
SEABROOK RD
SIGMAR PL
BLOSSOM PARK PL
THORN PL
BLACKTHORN DR
1-1893 TO 18-1893
Bylaw 2206_East saan_Hovey.DWG

THE CORPORATION OF THE DISTRICT OF CENTRAL SAANICH

BYLAW NO. 2207

A Bylaw to Authorize the Corporation of the District of Central Saanich
to Enter into a Housing Agreement
(1934 Hovey Road – Market Rental Housing)

WHEREAS the Municipality may, by Bylaw, under Section 483 of the *Local Government Act* enter into a Housing Agreement which may include terms and conditions agreed to by the Municipality and the Owner regarding the occupancy of the housing units identified in the Agreement;

AND WHEREAS the Municipality is considering rezoning lands described in this Bylaw to enable the Owner to construct and maintain a multi-unit housing development on the Lands for rental housing and the Municipality has deemed it expedient to require the Owner, as a condition of rezoning, to enter into a Housing Agreement with the Municipality pursuant to Section 483 of the *Local Government Act*;

NOW THEREFORE the Council of the Corporation of the District of Central Saanich, in open meeting assembled, enacts as follows:

1. The Municipality is authorized to enter into a Housing Agreement pursuant to Section 483 of the *Local Government Act*, in substantially the form attached to this Bylaw as Schedule "A", with respect to the land located in the Municipality of Central Saanich having civic addresses of 7551 East Saanich Road, and 1934 and 1950 Hovey Road and being more particularly known and described as:

   Parcel Identifier: 000-100-196 Lot 1, Section 7, Range 2 East, South Saanich District, Plan 16991
   Parcel Identifier: 004-130-677 Lot 2, Section 7, Range 2 East, South Saanich District, Plan 16991
   Parcel Identifier: 004-110-544 Lot 3, Section 7, Range 2 East, South Saanich District, Plan 16991
   as shown shaded on the map attached to this bylaw as Appendix "A".

2. The Mayor and the Municipal Clerk of the Municipality are authorized to execute the Housing Agreement on behalf of the Municipality.

CITATION

3. This Bylaw may be cited for all purposes as the "**Housing Agreement Bylaw No. 2207, 2025**".

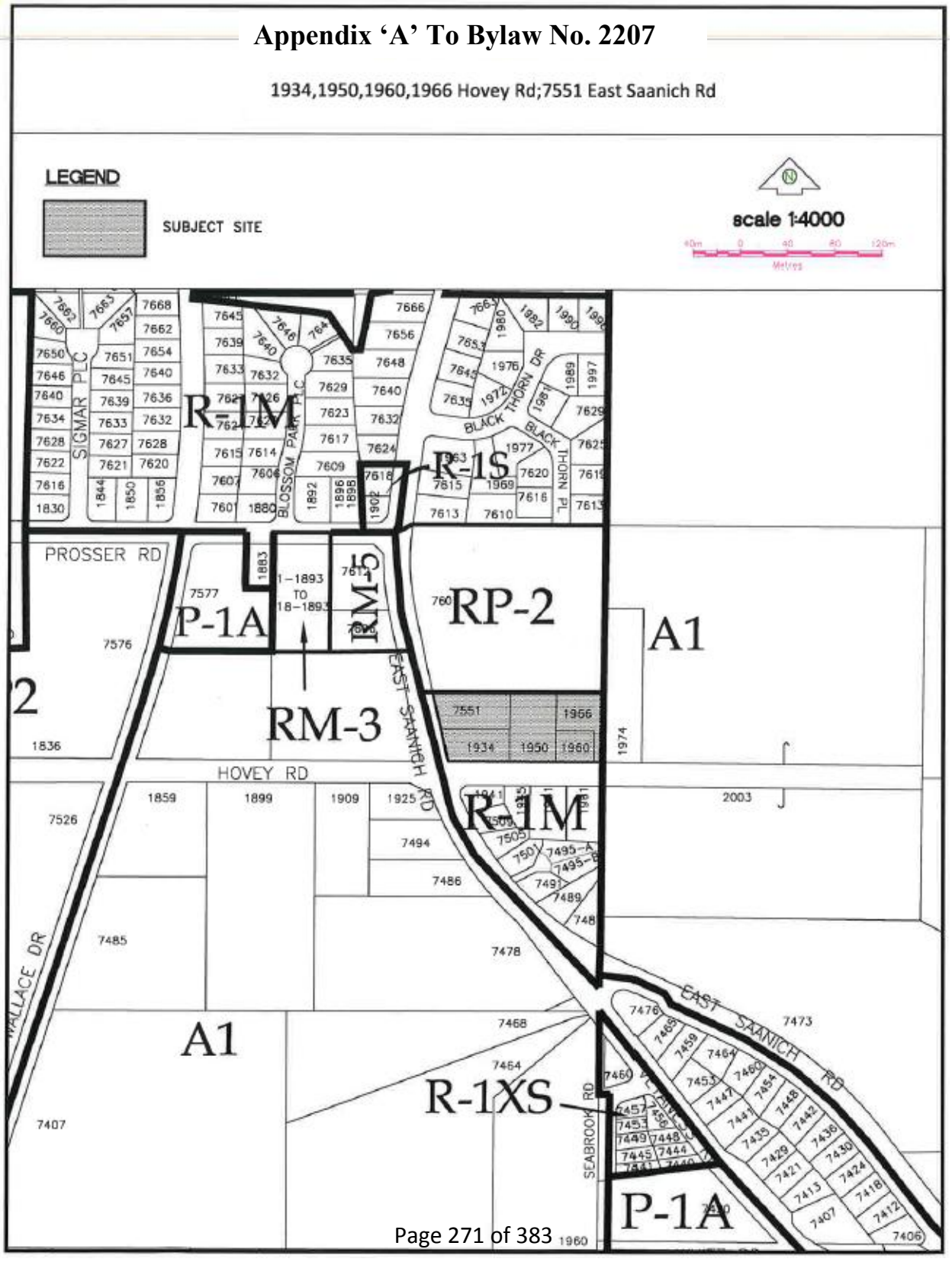
READ A FIRST TIME this	26th	day of	May	**, 2025**
READ A SECOND TIME this	26th	day of	May	**, 2025**
READ A THIRD TIME this	26th	day of	May	, **2025**
ADOPTED this		day of		, **2025**

Ryan Windsor
Mayor

Emilie Gorman
Corporate Officer

Appendix 'A' To Bylaw No. 2207

1934,1950,1960,1966 Hovey Rd;7551 East Saanich Rd



Schedule "A" To Bylaw No. 2207

HOUSING AGREEMENT

(Pursuant to section 483 of the *Local Government*

Act) This Housing Agreement (this "**Agreement**") made the _____ day of

_____,2025

AMONG: **THE CORPORATION OF THE DISTRICT OF CENTRAL SAANICH**
1903 Mount Newton Cross Road, Saanichton,
British Columbia V8M 2A9

(the **"District")**

AND: [redacted]

(collectively, the "**Owner**")

WHEREAS:

A. Capitalized terms used herein will have the respective meanings ascribed to them in section 1.1 of this Agreement, unless the context otherwise clearly requires or they are elsewhere defined herein;

B. Under section 483 of the *Local Government Act* the District may, by bylaw, enter into a housing agreement with an owner regarding the occupancy of the housing units identified in the agreement, including but not limited to terms and conditions referred to in section 483(2) of the *Local Government Act;*

C. The Owner is the registered owner in fee simple of lands in the District of Central Saanich, British Columbia, with a civic address of 7551 E. Saanich Road, 1934 Hovey Road, and 1950 Hovey Road and legally described as:

Parcel Identifier: 000-100-196
Lot 1, Section 7, Range 2 East, South Saanich District, Plan 16991

Parcel Identifier: 004-130-677
Lot 2, Section 7, Range 2 East, South Saanich District, Plan 16991

Parcel Identifier: 004-110-544
Lot 3, Section 7, Range 2 East, South Saanich District, Plan 16991

(collectively, the "**Lands**");

D. The Owner wishes to construct, on the Lands, a new a multiple dwelling residential complex containing approximately 130 dwelling units (the "**Building**"); and

E. The District and the Owner wish to enter into this Agreement, as a housing agreement pursuant to section 483 of the *Local Government Act*, to secure the agreement of the Owner to ensure all residential units shall remain rental in perpetuity, that 10% of the units (currently 13 units) be designated by the Owner and provided as affordable units.

F. The parties acknowledge that the Owner intends to include the Lands in a future subdivision with adjacent parcels having PID: 015-614-387 and PID: 015-614-395 which will create proposed Lot A ("Proposed Lot A") and proposed Lot B ("Proposed Lot B") a tentative plan of such subdivision is attached as Schedule "A".

NOW THIS AGREEMENT WITNESSES that pursuant to section 483 of the *Local Government Act*, and in consideration of the premises and covenants contained in this Agreement, the parties agree each with the other as follows:

1.0 APPLICATION OF THIS AGREEMENT. The parties agree that upon registration of the subdivision as approximately shown in the attached Schedule "A" and upon creation of a title for Proposed Lot A then this agreement shall be applicable to such Lot A title and will be released against the portion of the Lands within Proposed Lot B.

2.0 DEFINITIONS

2.1 In this Agreement:

"**Affordable Rent**" means eighty (80%) percent of the average monthly rent for a dwelling

of comparable size and location as set out in the Canada Mortgage and Housing Corporation Housing Market Outlook for Greater Victoria, set yearly in October;

For clarity, the following provides an overview of the average monthly rent set in October 2024:

Private Apartment Average Rents ($)	
Bachelor	1,366
1 Bedroom	1,528
2 Bedroom	1,993
3 Bedroom+	2,389

"**Affordable Units**" means 10% of the Dwelling Units as Affordable Rent (currently 13 units), designated by the Owner;

"**Business Day**" means Monday to Friday, other than any such day which is a statutory holiday Victoria, British Columbia;

"**CPI**" means the All-items Consumer Price Index for Victoria, British Columbia, published from time to time by Statistics Canada, or its successor in function;

"**Director**" means the District's Director of Sustainable Planning and Development, and includes any person duly acting in his/her place and stead for the purposes of this Agreement.

"**Dwelling Unit**" or "**Dwelling Units**" means any or all, as the context may require, of the self- contained dwelling units on the Lands, and includes every Dwelling Unit that is on the Lands already as of the Effective Date and every Dwelling Unit that is developed on the Lands thereafter;

"**Effective Date**" means the effective date of this Agreement which is the date of the signature of
the last party to sign;

"Immediate Family" includes a person's spouse, child, grandchild, parent, grandparent, sibling, niece and nephew, and includes the Immediate Family of the person's spouse;

"Income Threshold" means eighty (80%) percent of:

(a) the median household income in Central Saanich published from time to time by Statistics Canada which the Owner and the District agree in 2020 was $90,000.00;

(b) in each year that Statistics Canada has not published the median household income in Central Saanich, Income Threshold will be calculated as the median household income in Central Saanich most recently published by Statistics Canada increased by the greater of $1.00 and amount equal to the CPI in the current year divided by the CPI in the year of publication.

"**Non-owner**" means a person other than a Related Person or the Owner;

"**Owner**" includes a person who acquires an interest in the Lands or any part of the Lands and is thereby bound by this Agreement, as referred to in section 5.1;

"**Related Person**" includes, where the registered or beneficial owner of the Lands or Dwelling Unit, as applicable, is:

(a) a corporation (excluding a public corporation or a corporation held by a public corporation, pension fund, or real estate investment trust):

(i) an officer, director, shareholder, or member of such corporation, or of another entity which is a shareholder or member of such corporation; or

(ii) an Immediate Family of a person to whom paragraph (i) applies, or

(b) an individual, an Immediate Family of the registered or beneficial owner; and

"**Tenancy Agreement**" means a tenancy agreement regulated under the *Residential Tenancy Act*.

3.0 DWELLING UNITS TO BE USED AND OCCUPIED ONLY AS RENTAL UNITS

3.1 The Owner covenants and agrees that in perpetuity:

(a) all the Dwelling Units will only be used as rental housing; and

(b) each Dwelling Unit will only be occupied by one or more Non-owners under the terms of a Tenancy Agreement between the Owner and the Non-owner(s) who occupies the Dwelling Unit.

4.0 AFFORDABLE HOUSING

4.1 The Owner covenants and agrees that following the issuance of an occupancy permit of

each Affordable Unit:

(a) 10% of the Dwelling Units (currently 13 units) will be designated by the Owner as Affordable Units and, subject to any limitations set out in the *Residential Tenancy Act*, will only be occupied and used as Affordable Units in perpetuity unless a shorter term is required by the Canada Mortgage and Housing Corporation or any other funding program related to the development of Proposed Lot A, the project no longer qualifies for any such funding program, or a government authority with jurisdiction over the District deems such a requirement to be dispensable, and confirmation of same is provided to the District.

(b) The combined annual household income for the occupants of each of the Affordable Units will not exceed the Income Threshold.

(c) Monthly rent for each Affordable Unit will not exceed the Affordable Rent. If the Canada Mortgage and Housing Corporation ceases to publish the Housing Market Outlook with information for Central Saanich, and such determination is not replaced by a similar publication, then the Affordable Rent with respect to an Affordable Unit will be determined by reference to the last published Affordable Rent and increased annually by an amount equal to the lesser of the maximum annual rent increase permitted under the *Residential Tenancy Act* and the increase in the CPI commencing January 1 following the year the Canada Mortgage and Housing Corporation ceased such publication.

5.0 REPORTING

5.1 The Owner covenants and agrees to provide to the Director, within 30 days of the Director's written request, a report in writing confirming that all Dwelling Units are being rented to Non- owners.

5.2 The Owner hereby authorizes the District to make such lawful inquiries as it considers necessary in order to confirm that the Owner is complying with this Agreement.

5.3 The Owner acknowledges that it is within the District's discretion to consent or not to consent to modifications of this Agreement and that such consent may not be unreasonably withheld.

6.0 NOTICE TO BE REGISTERED IN LAND TITLE OFFICE

6.1 Notice of this Agreement (the "**Notice**") will be registered in the Land Title Office by the District at the cost of the Owner in accordance with section 483 of the *Local Government Act*, and this Agreement is binding on the parties to this Agreement as well as all persons

who acquire an interest in the Lands after registration of the Notice.

7.0 LIABILITY

7.1 The Owner agrees to indemnify and saves harmless the District and each of its elected and appointed officials, employees and agents and their respective administrators, successors and permitted assigns, of and from all claims, demands, actions, damages, costs and liabilities, which all or any of them will or may be liable for or suffer or incur or be put to by reason of or arising out of failure of the Owner to comply with the terms and conditions of this Agreement, or otherwise that would not have arisen "but for" this Agreement.

7.2 The Owner hereby releases and forever discharges the District and each of its elected and appointed officials, employees and agents and their respective administrators, successors and permitted assigns, of and from any and all claims, demands, actions, damages, economic loss, costs and liabilities which the Owner now has or hereafter may have with respect to or by reason of or arising out of the fact that the Lands are encumbered by and affected by this Agreement, or otherwise that would not have arisen "but for" this Agreement.

8.0 PRIORITY AGREEMENT

8.1 SEBASTIAN BROTHERS (FINANCIAL) LTD. as the registered holder of a mortgage and assignment of rents registered against title to the Lands respectively under numbers CB1141422 and CB1141423 (as to PID:004-130-677 only) (collectively, the" Sebastian Brothers Financial Charges"), for and in consideration of the sum of One Dollar ($1.00) paid by the District (the receipt whereof is hereby acknowledged), agrees with the District that upon filing of a Notice with the Land Title Office that the Lands are subject to this Agreement, pursuant to section 483(5) of the *Local Government Act*, this Agreement will be an encumbrance upon the Lands in priority to the Sebastian Brothers Financial Charges in the same manner and to the same effect as if Notice had been filed before the Sebastian Brothers Financial Charges.

9.0 DISCHARGE. The parties agree that in the event that the rezoning bylaw currently being applied for regarding the Lands is not approved then this Housing Agreement will be released from the title to the Lands.

10.0 GENERAL PROVISIONS

10.1 **NOTICE**. Any notice, approval or request required or permitted to be given under this Agreement will be in writing and may be given by delivering such notice, approval, or request to a representative of the party for whom it is intended, either by personal delivery, or by mailing such notice, approval, or request by prepaid registered mail from any post office in

British Columbia:

(a) in the case of the Transferor, addressed to it at:

[redacted]

(b) and in the case of the Transferee, addressed to it at:

THE DISTRICT OF CENTRAL SAANICH
1903 Mount Newton Cross Road
Saanichton, British Columbia V8M 2A9

or at such other address as the parties may from time to time advise by notice in writing. Any such notice, approval or request will be deemed to have been received on the date of delivery of such notice, approval or request, or on the third business day next following the date of such mailing if mailed as aforesaid, provided that if mailed should there be, between mailing and the actual receipt of such notice, approval or request, a mail strike, slowdown or other labour dispute which might affect the delivery of such notice, approval or request, such notice, approval or request will only be effective if actually delivered.

10.2 **TIME.** Time is of the essence of this Agreement.

10.3 **BINDING EFFECT.** This Agreement will enure to the benefit of and be binding upon the parties hereto and their respective heirs, administrators, executors, successors, and permitted assignees. In accordance with section 483(6) of the *Local Government Act*, this Agreement and all obligations hereunder is binding on all who acquire an interest in the Lands, and the Owner only during the Owner's ownership of any interest in the Lands, and with respect only to that portion of the Lands of which the Owner has an interest.

10.4 **WAIVER.** The waiver by a party of any failure on the part of the other party to perform in accordance with any of the terms or conditions of this Agreement is not to be construed as a waiver of any future or continuing failure, whether similar or dissimilar.

10.5 **HEADINGS.** The division of this Agreement into articles and sections and the insertion of headings are for the convenience of reference only and will not affect the construction or interpretation of this Agreement.

10.6 **LANGUAGE.** Words importing the singular number only will include the plural and vice versa, words importing the masculine gender will include the feminine and neuter genders

and vice versa, and words importing persons will include individuals, partnerships, associations, trusts, unincorporated organizations and corporations and vice versa.

10.7 **LEGISLATION**. Reference to any enactment includes any regulations, orders or directives made under the authority of that enactment, and is a reference to that enactment as consolidated, revised, amended, re-enacted or replaced, unless otherwise expressly provided.

10.8 **EQUITABLE REMEDIES.** The Owner acknowledges and agrees that damages would be an inadequate remedy for the District for breach of this Agreement and that the public interest strongly favours specific performance, injunctive relief (mandatory or otherwise), or other equitable relief, as the only adequate remedy for a default under this Agreement.

10.9 **CUMULATIVE REMEDIES.** No remedy under this Agreement is to be deemed exclusive but will, where possible, be cumulative with all other remedies at law or in equity.

10.10 **ENTIRE AGREEMENT.** This Agreement when executed will set forth the entire agreement and understanding of the parties as at the date it is made.

10.11 **FURTHER ASSURANCES.** Each of the parties will do, execute, and deliver, or cause to be done, executed, and delivered all such further acts, documents and things as may be reasonably required from time to time to give effect to this Agreement.

10.12 **AMENDMENT.** This Agreement may be amended from time to time, by consent of the Owner and a bylaw duly passed by the Council of the District and thereafter if it is signed by the District and the Owner.

10.13 **LAW APPLICABLE.** This Agreement is to be construed in accordance with and governed by the laws applicable in the Province of British Columbia.

10.14 **NO DEROGATION FROM STATUTORY AUTHORITY.** Nothing in this Agreement will:

(a) limit, impair, fetter or derogate from the statutory powers of the District all of which powers may be exercised by the District from time to time and at any time to the fullest extent that the District is enabled and no permissive bylaw enacted by the District, or permit, licence or approval, granted, made or issued thereunder, or pursuant to statute, by the District will estop, limit or impair the District from relying upon and enforcing this Agreement; or

(b) relieve the Owner from complying with any enactment, including the District's bylaws, or any obligation of the Owner under any other agreement with the

District.

10.15 **SEVERABILITY.** If any section, term or provision of this Agreement is found to be partially or wholly illegal or unenforceable, then such sections or parts will be considered to be separate and severable from this Agreement and the remaining sections or parts of this Agreement, as the case may be, will be unaffected thereby and will remain and be enforceable to the fullest extent permitted by law as though the illegal or unenforceable parts or sections had never been included in this Agreement.

10.16 **JOINT AND SEVERAL.** The Owner, if more than one, are jointly and severally obligated to perform and observe each of the covenants, warranties and agreements herein contained by the Owner to be observed and performed.

10.17 **COUNTERPARTS.** This Agreement may be executed in counterparts and delivered by emailed PDF file, each of which will have the same effect as if all parties had signed the same document. Each counterpart will be deemed to be an original. All counterparts will be construed together and will constitute one and the same Agreement.

IN WITNESS WHEREOF the parties have executed this Agreement as of the day, month, and year first above written.

SIGNED BY THE OWNER, in the presence of:

_____
Witness (Signature)

_____
Witness (Signature)

_____
Address of Witness

_____
[redacted]

SIGNED BY THE OWNER, in the presence of:

_____
Witness (Signature)

_____
Witness (Signature)

_____
Address of Witness

_____
[redacted]
by its authorized signatory:

_____
Name:

SIGNED BY THE OWNER, in the presence of:

_____
Witness (Signature)

_____
Witness (Signature)

_____
Address of Witness

_____
[redacted]

The Corporate Seal of THE CORPORATION OF THE DISTRICT OF CENTRAL SAANICH was hereunto Affixed in the presence of:

_____
Mayor

_____

Director, Corporate Services)
)
[redacted])
By its authorized signatories:)
)
_____)
Print Name)
)
_____)
Signature)

SCHEDULE A – SUBDIVISION PLAN

THE CORPORATION OF THE DISTRICT OF CENTRAL SAANICH

BYLAW NO. 2228

A Bylaw to Authorize the Corporation of the District of Central Saanich
to Enter into a Housing Agreement
(1934 Hovey Road – Legion Housing)

WHEREAS the Municipality may, by Bylaw, under Section 483 of the *Local Government Act* enter into a Housing Agreement which may include terms and conditions agreed to by the Municipality and the Owner regarding the occupancy of the housing units identified in the Agreement;

AND WHEREAS the Municipality is considering rezoning lands described in this Bylaw to enable the Owner to construct and maintain a multi-unit housing development on the Lands for rental housing and the Municipality has deemed it expedient to require the Owner, as a condition of rezoning, to enter into a Housing Agreement with the Municipality pursuant to Section 483 of the *Local Government Act*;

NOW THEREFORE the Council of the Corporation of the District of Central Saanich, in open meeting assembled, enacts as follows:

1. The Municipality is authorized to enter into a Housing Agreement pursuant to Section 483 of the *Local Government Act*, in substantially the form attached to this Bylaw as Schedule "A", with respect to the land located in the Municipality of Central Saanich having civic addresses of 1950, 1960 and 1966 Hovey Road and being more particularly known and described as:

   Parcel Identifier: 004-110-544 Lot 3, Section 7, Range 2 East, South Saanich District, Plan 16991
   Parcel Identifier: 015-614-387; Lot A, Section 7, Range 2 East, South Saanich District, Plan 49783
   Parcel Identifier: 015-614-395; Lot B, Section 7, Range 2 East, South Saanich District, Plan 49783
   as shown shaded on the map attached to this bylaw as Appendix "A".

2. The Mayor and the Municipal Clerk of the Municipality are authorized to execute the Housing Agreement on behalf of the Municipality.

CITATION

3. This Bylaw may be cited for all purposes as the "**Housing Agreement Bylaw No. 2228, 2025**".

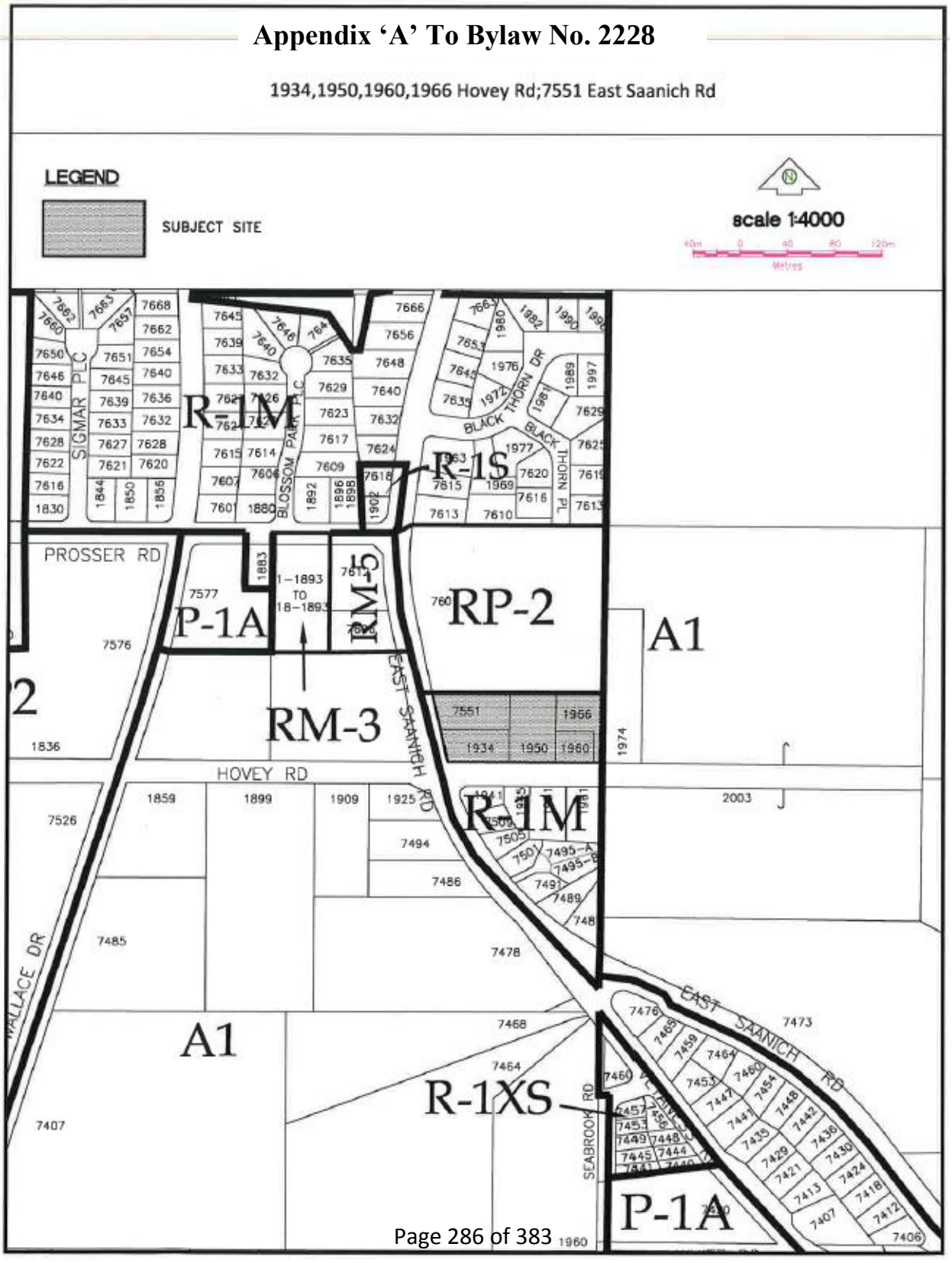
READ A FIRST TIME this	26th	day of	May	**, 2025**
READ A SECOND TIME this	26th	day of	May	**, 2025**
READ A THIRD TIME this	26th	day of	May	, **2025**
ADOPTED this		day of		, **2025**

Ryan Windsor
Mayor

Emilie Gorman
Corporate Officer

Appendix 'A' To Bylaw No. 2228

1934,1950,1960,1966 Hovey Rd;7551 East Saanich Rd



Schedule "A" To Bylaw No. 2228

HOUSING AGREEMENT

(Pursuant to section 483 of the *Local Government Act*)

This agreement ("**Agreement**") dated for reference the ____ day of _____, 2025

AMONG:

THE CORPORATION OF THE DISTRICT OF CENTRAL SAANICH
1903 Mount Newton Cross Road, Saanichton,
British Columbia V8M 2A9

(the **"District")**

AND:

[redacted]

(collectively, the "**Owner**")

WHEREAS:

A. The Owner is registered owner of those Lands situated at Saanichton, B.C. municipally and legally described as:

1950 Hovey Road, Saanichton
PID: 004-110-544; Lot 3, Section 7, Range 2 East, South Saanich District, Plan 16991

1960 Hovey Road, Saanichton
PID: 015-614-387; Lot A, Section 7, Range 2 East, South Saanich District, Plan 49783

1966 Hovey Road, Saanichton
PID: 015-614-395; Lot B, Section 7, Range 2 East, South Saanich District, Plan 49783;

(collectively, the "**Lands**")

B. The Owner has applied to the District for an amendment to the District's Zoning Bylaw to permit the development of a multi-unit affordable rental housing project on the Lands (the "**Development**");

C. Under section 483 of the *Local Government Act* the District may, by bylaw, enter into a housing agreement with an owner regarding the occupancy of the housing units identified in the agreement, including but not limited to terms and conditions referred to in section 483(2) of the *Local Government Act*;

D. Development and construction of the Development will be funded in whole or in part by BC Housing and/or Canada Mortgage and Housing Corporation (CMHC) under applicable funding program(s) which will stipulate affordability levels and rental rates for the Dwelling Units;

E. The Lands form part of a proposed consolidation and subdivision involving two adjacent parcels (the "**Adjacent Parcels**") lying to the west of the Lands. The Adjacent Parcels are legally described as:

PID: 000-100-196; Lot 1, Section 7, Range 2 East, South Saanich District, Plan 16991
PID: 004-130-677; Lot 2, Section 7, Range 2 East, South Saanich District, Plan 16991;

F. The Lands are to be consolidated with the Adjacent Parcels and the resulting consolidated parcel to be subdivided in accordance with the draft plan of subdivision attached hereto as Schedule "A", which will result in new lot A ("**New Lot A**") and new lot B ("**New Lot B**");

G. The Development will be constructed on New Lot B, which is the subject matter of this Housing Agreement.

NOW THIS AGREEMENT WITNESSES that pursuant to section 483 of the *Local Government Act*, and in consideration of the premises and covenants contained in this Agreement, the

parties agree each with the other as follows:

1. APPLICATION OF THIS AGREEMENT.

1.1 The parties agree that upon registration of the subdivision in accordance with Schedule "A" and creation of a title for New Lot A and New Lot B, then this agreement shall be applicable to New Lot B and shall have no application to any part of the Lands that form part of New Lot A.

2. DEFINITIONS

2.1 In this Agreement:

"**Affordable Housing**" means housing that meets the affordability requirements of an applicable funding program administered by BC Housing and/or CMHC, as determined in an Operating Agreement as may be in effect from time to time.

"**Director**" means the District's Director of Sustainable Planning and Development, and includes any person duly acting in his/her place and stead for the purposes of this Agreement.

"**Dwelling Unit**" or "**Dwelling Units**" means any or all, as the context may require, of the self-contained dwelling units within the Development located on New Lot B, and every Dwelling Unit that is developed on New Lot B thereafter;

"Immediate Family" includes a person's spouse, child, grandchild, parent, grandparent, sibling, niece and nephew, and includes the Immediate Family of the person's spouse;

"**Non-owner**" means a person other than a Related Person or the Owner;

"**Operating Agreement**" means an agreement entered into between the Owner and BC Housing and/or CMHC that defines the affordability levels, rental rates, and other operational requirements for the Dwelling Units;

"**Owner**" includes a person who acquires an interest in the Lands or any part of the Lands and is thereby bound by this Agreement, as referred to in section 5.1;

"**Related Person**" includes, where the registered or beneficial owner of the Lands or Dwelling Unit, as applicable, is:

(a) a corporation (excluding a public corporation or a corporation held by a public corporation, pension fund, or real estate investment trust):

(i) an officer, director, shareholder, or member of such corporation, or of another entity which is a shareholder or member of such corporation; or

(ii) an Immediate Family of a person to whom paragraph (i) applies, or

(b) an individual, an Immediate Family of the registered or beneficial owner; and

"**Tenancy Agreement**" means a tenancy agreement regulated under the *Residential Tenancy Act*.

3. USE OF LANDS

3.1 The Owner covenants and agrees that in perpetuity:

(a) all Dwelling Units will only be used as rental housing; and

(b) each Dwelling Unit will only be occupied by one or more Non-owners under the terms of a Tenancy Agreement between the Owner and the Non-owner(s) who occupies the Dwelling Unit.

3.2 The Owner covenants and agrees that the monthly rent for each Dwelling Unit will not exceed the income or affordability standards prescribed by the Operating Agreement in effect from time to time.

4. REPORTING

4.1 Subject to confidentiality restrictions, the Owner covenants and agrees to provide to the Director, within 30 days of the Director's written request, a report in writing confirming that all Dwelling Units are being rented to Non- owners.

4.2 The Owner hereby authorizes the District to make such lawful inquiries as it considers necessary in order to confirm that the Owner is complying with this Agreement.

4.3 The Owner acknowledges that it is within the District's discretion to consent or not to consent to modifications of this Agreement and that such consent may not be unreasonably withheld.

5. DEFAULT AND REMEDIES

5.1 In the event the Owner fails to comply with this Agreement, the District may provide notice of default to the Owner, who shall have thirty (30) days to remedy such default.

5.2 The Owner acknowledges and agrees that damages would be an inadequate remedy for the District for breach of this Agreement and that the public interest strongly favours specific performance, injunctive relief (mandatory or otherwise), or other equitable relief, as the only adequate remedy for a default under this Agreement.

6. NOTICE TO BE REGISTERED IN LAND TITLE OFFICE

6.1 Notice of this Agreement (the "**Notice**") will be registered in the Land Title Office by the District at the cost of the Owner in accordance with section 483 of the *Local Government Act*, and this Agreement is binding on the parties to this Agreement as well as all persons who acquire an interest in the Lands after registration of the Notice.

7. GENERAL PROVISIONS

7.1 **Discharge.** The parties agree that in the event that the rezoning bylaw currently being applied for regarding the Lands is not approved then the Notice of Housing Agreement will be released from the title to the Lands.

7.2 **Indemnity** The Owner shall indemnify and save harmless the District and each of its elected officials, officers, directors, employees and agents from and against all claims, demands, actions, loss, damage, costs and liabilities for which any of them may be liable by reason of any act or omission of the Owner or its officers, directors, employees, agents or contractors or any other person for whom the Owner is at law responsible, that constitutes a breach of this Agreement.

7.3 **Release** The Owner releases and forever discharges the District and each of its elected officials, officers, directors, employees and agents and each of their heirs, executors, administrators, personal representatives, successors and assigns from all claims, demands, damages, actions or causes of action arising out of the performance by the Owner of its obligations under this Agreement.

7.4 **Municipal Powers Unaffected** This Agreement does not limit the discretion, rights, duties or powers of the District under any enactment or the common law, impose on the District any duty or obligation, affect or limit any enactment relating to the use or

subdivision of the Lands, or relieve the Owner from complying with any enactment.

7.5 **Notice** Notice required or permitted to be served under this Agreement is sufficiently served if delivered in person or mailed to the postal address of the Owner or the District, as the case may be, at the address set out above, and in the case of mailed notice shall be deemed to have been received on the third day following mailing.

7.6 **Enuring Effect** This Agreement is binding upon, and enures to the benefit of the parties and their respective successors and permitted assigns, including the owner of any strata lot and any strata corporation formed upon the subdivision of the Lands under the *Strata Property Act*.

7.7 **Severability** If any provision of this Agreement is found to be invalid or unenforceable, it shall be severed from this Agreement and the remainder shall remain in full force and effect.

7.8 **Remedies and Waiver** All remedies of the District under this Agreement are cumulative, and may be exercised in any order or concurrently, any number of times. Waiver of or delay by the District in exercising any remedy shall not prevent the later exercise of any remedy for the same or any similar breach.

7.9 **Sole Agreement** This Agreement represents the entire agreement between the parties respecting the tenure, use and occupancy of the dwelling units on the Lands, and there are no representations, conditions or collateral agreements on the part of the District other than those set out in this Agreement.

7.10 **Further Assurance** The Owner must forthwith do all acts and execute such instruments as may be reasonably necessary in the opinion of the District to give effect to this Agreement.

7.11 **Covenant Runs with the Lands** This Agreement runs with the Lands and is binding on the Owner and all persons who acquire an interest in the Lands.

7.12 **Limitations on Owner Obligations** The Owner is only liable for breaches of this Agreement that occur while the Owner is the registered owner of the Lands.

7.13 **Governing Law** This Agreement shall be interpreted and enforced in accordance with the laws of the Province of British Columbia.

7.14 **No Joint Venture** Nothing in this Agreement will constitute the District as the joint venturer, agent or partner of the Owner or give the Owner any authority to bind the District in any way

8.0 PRIORITY AGREEMENTS

8.1 **THE TORONTO DOMINION BANK**, as the registered holder of a mortgage registered against title to the Lands under number FB53333 (as to PID: 015-614-395 only) (the "**TD Charge**"), for and in consideration of the sum of One Dollar ($1.00) paid by the District (the receipt whereof is hereby acknowledged), agrees with the District that upon filing of a Notice with the Land Title Office that the Lands are subject to this Agreement, pursuant to section 483(5) of the *Local Government Act*, this Agreement will be an encumbrance upon the Lands in priority to the TD Charge in the same manner and to the same effect as if Notice had been filed before the TD Charge.

8.2 **COMPUTERSHARE TRUST COMPANY OF CANADA (INCORPORATION NO. A-52313)**, as the registered holder of a mortgage registered against title to the Lands under number CA906891 (as to PID: 015-614-387 only) (the "**Computershare Charge**"), for and in consideration of the sum of One Dollar ($1.00) paid by the District (the receipt whereof is hereby acknowledged), agrees with the District that upon filing of a Notice with the Land Title Office that the Lands are subject to this Agreement, pursuant to section 483(5) of the *Local Government Act*, this Agreement will be an encumbrance upon the Lands in priority to the Computershare Charge in the same manner and to the same effect as if Notice had been filed before the Computershare Charge.

[Signature Page Follows]

IN WITNESS WHEREOF the parties have executed this Agreement as of the day, month, and year first above written.

SIGNED BY THE OWNER, in the presence of:)
)
_____) _____
Witness (Signature)) [redacted]
)
_____)
Witness (Name))
)
_____)
Address of Witness)

SIGNED BY THE OWNER, in the presence of:)
)
_____) _____
Witness (Signature)) [redacted]
)
_____)
Witness (Name)) _____
) [redacted]
_____)
Address of Witness)
)

SIGNED BY THE OWNER, in the presence of:)
)
_____) _____
Witness (Signature)) [redacted]
)
_____)
Witness (Name))
)
_____)
Address of Witness)

The Corporate Seal of THE CORPORATION)
OF THE DISTRICT OF CENTRAL SAANICH was)
hereunto Affixed in the presence of:)
)
_____)
Mayor)
)
_____)
Director, Corporate Services)

[redacted])
By its authorized signatories:)
)
_____)
Print Name)
)
_____)
Print Name)

[redacted])
By its authorized signatory(ies):)
)
)
_____)
Print Name)
)
_____)
Print Name)

THE CORPORATION OF THE DISTRICT OF CENTRAL SAANICH

BYLAW NO. 2156

A Bylaw to Amend Zoning Bylaw
(1445 Benvenuto Avenue)

WHEREAS the Council by Bylaw No. 2180, 2024 adopted the Zoning Bylaw and deems it appropriate to amend the Zoning Bylaw;

NOW THEREFORE the Council of the Corporation of the District of Central Saanich, in open meeting assembled, enacts as follows:

1. TEXT AMENDMENT

Appendix A, to the Central Saanich Zoning Bylaw No. 2180, 2024, as amended, is hereby further amended as follows:

a. By adding to Part 5 Section 4 Subsection 7 Site Specific Regulations the following as (4):
In addition to the permitted uses in the A-1 zone, on land legally described as Lot 2, Section 14, Range 1 East, South Saanich District, Plan VIP71507, Except Plan VIP72761 (1425 Benvenuto Ave), a restaurant is a permitted use.

2. CITATION

This Bylaw may be cited for all purposes as the "**Central Saanich Zoning Bylaw Amendment Bylaw No. 2156, 2024**".

READ A FIRST TIME this	**26th**	day of	**February**	**, 2024**
READ A SECOND TIME this	**8th**	day of	**April**	**, 2024**
PUBLIC HEARING HELD this	**22nd**	day of	**April**	**, 2024**
READ A THIRD TIME this	**22nd**	day of	**April**	, **2024**
ADOPTED this		day of		, **2024**

Ryan Windsor
Mayor

Emilie Gorman
Director of Corporate Services/
Corporate Officer

Nareka Jacques

From: brett hourigan <[redacted]>
Sent: Friday, June 20, 2025 5:48 PM
To: Kathleen Burton; Municipal Hall; Mayor Ryan Windsor; Lana Popham. Mla
Cc: Lana Popham. Mla
Subject: [redacted]

Hello,

They are hooking up the tanker with a rental semi from [redacted] I've filed a report with the RAPP line. I'm not sure they are getting through? Tanker license is [redacted] I have it memorized!! Hahaha! Looks to me like them have prepared for 1 load as opposed to the normal 3. Could be wrong. Can't miss the tanker it is covered in shit. Please forward to council bylaw and any other government agencies who may be interested. Thank you.

Regards
Brett Hourigan
Donna Sorrie
Dereck Pottinger
Sent from my iPhone

Nareka Jacques

From: brett hourigan <[redacted]>
Sent: Saturday, June 21, 2025 6:53 AM
To: Kathleen Burton; Municipal Hall; Mayor Ryan Windsor; Donna Sorrie; Lana Popham. Mla
Cc: Lana Popham. Mla
Subject: [redacted]

Good morning,

They came and took the tanker away this morning at 5:30am. It was parked next to our home so wasn't hard to notice. They will be returning with liquid waste from Cobble Hill in about 1-2 hours. [redacted] was present yesterday to help hook up the tanker. He is the [redacted] Coincidentally he's from [redacted] He was working here the last time they were forcibly shut down. As always they will dump the liquid waste in a prepared area of Greater Victoria's yard and garden waste, this includes bags as I'm sure you've noticed in videos and photos I've sent. Please forward to council bylaw, bylaw and have put on next agenda. Thank you.

Regards
Brett Hourigan
Donna Sorrie
Dereck Pottinger
Sent from my iPhone

Nareka Jacques

From: brett hourigan <[redacted]>
Sent: Saturday, June 21, 2025 8:24 AM
To: Municipal Hall; Mayor Ryan Windsor; Kathleen Burton; Lana Popham. Mla; Donna Sorrie; Michael ALC:EX Jorgenson; Kyle ENV:EX Lynch
Cc: Lana Popham. Mla
Subject: [redacted]

Good morning,

They have returned with a load of waste and are dumping it on the ground now in the rain. They usually bring in 3 loads at a time on weekends or holidays. I've sent in reports to the poacher/ polluter line as told to by [redacted] Sadly have had no response. The outside of this taker is covered in waste, which would be running off as it drives down the highway in the rain. Maybe CVSE should be contacted? Can't see this being ok. They are now furiously mixing it with the ground garden waste. So both front end loaders are racing around next door. Please forward to council and bylaw. We would like a meet with both Mayor Windsor and Lana Popham please. Thank you.

Regards
Brett Hourigan
Donna Sorrie
Sent from my iPhone

Nareka Jacques

From: brett hourigan [redacted]
Sent: June 22, 2025 12:11 PM
To: Municipal Hall; Lana Popham. Mla; Kathleen Burton; Donna Sorrie; Kyle ENV:EX Lynch; Michael ALC:EX Jorgenson; Mia Frankl; Mayor Ryan Windsor
Cc: Lana Popham. Mla
Subject: [redacted]

They have now dumped the 3rd load. Looks like they are going for a fourth. The noise and smell is crazy. I can hear it over our vacuum. Please forward to council. We would like the air and decibel readings as this far exceeds the legal limit.
Sent from my iPhone

Nareka Jacques

From: brett hourigan <[redacted]
Sent: June 23, 2025 5:45 AM
To: Municipal Hall; Kathleen Burton; Mayor Ryan Windsor; Donna Sorrie; Mia Frankl
Cc: Lana Popham. Mla
Subject: [redacted]

Good morning,

They are running the backhoe and front end loader starting at 5:30. This is only getting worse. This is in direct contradiction to all noise bylaws. Yesterday they ground next to our house all day and trucked in tanker loads of liquid waste. Why is nothing done and why are they exempt? Please explain to us why. Please forward to council and have added to the next agenda.

Regards
Brett Hourigan
Donna Sorrie
Sent from my iPhone

Nareka Jacques

From: brett hourigan <[redacted]>
Sent: June 26, 2025 6:22 AM
To: Municipal Hall; Kathleen Burton; Mayor Ryan Windsor; Donna Sorrie; Mia Frankl; Kyle ENV:EX Lynch; Michael ALC:EX Jorgenson
Cc: Lana Popham. Mla
Subject: [redacted]

Good morning,

They are banging, booming and scraping piles at 6am every morning. We are also getting covered in dust from all the vehicle traffic. We have noticed that along with Ellice recycling, GFL is now dumping here as well. GFL is listed multiple times for infractions on the Ministry of Environments website. Please forward to council. Thank you.

Regards
Brett Hourigan
Donna Sorrie
Dereck Pottinger
Sent from my iPhone

Nareka Jacques

From: brett hourigan <[redacted]
Sent: June 29, 2025 6:53 AM
To: Municipal Hall; Mayor Ryan Windsor; Kathleen Burton; Donna Sorrie; Lana Popham. Mla; Michael ALC:EX Jorgenson; Kyle ENV:EX Lynch; Mia Frankl
Cc: Lana Popham. Mla
Subject: [redacted]

Good morning,

They have started making soil at 6 am. Using the front end loader and the soil screener. I have video of this. It woke us up. It's the same person as always. This also means they will be grinding today. As the pile is huge again. I will forward videos. The following videos are from about 6:30-6:40. Please forward to council and bylaw. Thank you.

Regards
Brett Hourigan
Donna Sorrie
Dereck Pottinger
Sent from my iPhone

Nareka Jacques

From: brett hourigan <[redacted]
Sent: June 29, 2025 1:08 PM
To: Municipal Hall; Kathleen Burton; Mayor Ryan Windsor; Lana Popham. Mla; Donna Sorrie; Kyle ENV:EX Lynch; Michael ALC:EX Jorgenson
Subject: [redacted]

Good afternoon,

They have been moving material since 6 am next door. Now they have started grinding. The dust and wood debris is landing in our yard which is in direct contravention of the Ministry of Environments inspection report. We can smell the ground up cedar and lane and yard waste. Not to mention the paper bass and odd pieces of plastic. This is not a farming activity and even if it was does not need to be done every Sunday. This is also against the municipal bylaw's. So if this is a farm it's in contravention and if it's a business it's in contravention. Please forward to council and have added to the next meeting agenda. Thank you.

Regards
Brett Hourigan
Donna Sorrie
Sent from my iPhone

Nareka Jacques

From: Shelly Dennis-Orr <[redacted]>
Sent: June 21, 2025 11:31 AM
To: Municipal Hall
Subject: Construction at 7840 Lochside Drive

You don't often get email from [redacted] Learn why this is important

Dear Mayor and Council,

I'm writing to ask you to stop approving any more construction at 7840 Lochside Drive.

I am a senior citizen and have been a resident of Central Saanich for the past 20 years. The construction of the Marigold development has impacted my life negatively. I feel that I am not being permitted to enjoy my apartment because of the noise, dirt, and traffic generated by the construction of housing developments.

The worst effect is the increase in traffic. I live in the apartment building on the corner of Lochside Dr and Mount Newton Cross Road that faces Mt Newton Cross Road. When I try to exit my parking lot to turn right onto Mount Newton Cross Road, I sit and wait and wait while the endless stream of traffic goes by. No one stops at the stop sign at Lochside Dr and Mt Newton Cross Rd. I sit there, idling, until some kind soul slows down to let me out. The aforementioned kind souls are few and far between.

The next worst effect of construction is the noise and racket. The noise starts about 4 or 4:30 am with the incessant beeping of construction vehicles and continues all day.

After that, there is a negative effect on my balcony and my living room from the greasy black dirt that coated everything during the construction of the Marigold apartment buildings. It coated everything on my balcony, which faces north. It is difficult to clean up, requiring a strong soap solution. It coated my miniature roses and they all died. It also coated the furniture just inside my balcony door.

Another negative effect is increased density. If I had wanted to live amidst a teaming anthill of people and cars, I would have rented an apartment downtown.

All of this building is making life miserable for people who have lived here for years. I'm asking you to stop the construction madness and allow us to enjoy what's left of the green and peaceful charm of this neighbourhood.

Thank you,

Shelly Dennis-Orr

Nareka Jacques

From: Bronwyn crowder <[redacted]>
Sent: June 23, 2025 5:53 PM
To: Municipal Hall
Subject: Family support for posted speed reduction proposal

You don't often get email from [redacted] Learn why this is important

Good afternoon Central Saanich Council,

As a family member that speaks on behalf of my young children, in addition to an active professional in transportation engineering, I am writing to express my strong support for your consideration to reduce posted speed limits throughout Central Saanich.

Lowering speed limits is one of the most effective measures to improve safety for all road users, especially the most vulnerable—children, seniors, and people walking, biking, or using mobility aids.

In addition to enhancing safety, lower speeds contribute to quieter streets, greater comfort for us residents!

Many municipalities in the area have already adopted similar measures, aligning with best practices in road safety and public health, so lets get on board.

I commend Council for taking steps toward a safer, more inclusive transportation network and urge you to adopt lower residential speed limits as a meaningful, low-cost action with lasting community benefits.

Kindly,

Bronwyn & family

Mayor & Council
District of Central Saanich
1903 Mount Newton Cross Road
Saanichton, BC, V8M 2A9

June 23, 2025

Notice of Motion regarding expanding the Keating Business District (KBD)

ÍY SȻÁĆEL Mayor & Council,

I am writing with regard to the Notice of Motion submitted by Mayor Windsor, introduced at the May 12, 2025 District of Central Saanich Council Meeting, and on the agenda for consideration at the June 25, 2025 Special (Open) Council Meeting. The motion calls for the District to "initiate a process to include the Rural designated lands that are north of the gravel extraction area and immediately contiguous with the Keating Business District, within the Urban Containment Boundary and designate the land use and zoning for the purpose of expanding the Keating Business District."

Both the WSÁNEĆ Leadership Council (WLC) and its partner organization, the WSÁNEĆ Lands Trust Society (WLTS) have raised major concerns with the potential intensification of the use of these rurally-zoned lands. As outlined in letters from WLTS and WLC dated May 23 and May 26, we call on Council to refrain from making any decisions related to the expansion of industrial activity without direct conversations with WLC and WLTS.

Building on that previous communication, I would also like to outline a specific concern with the current drafting of Mayor Windsor's notice. The District's Official Community Plan (OCP), in policy 4.4.28, commits the District to "undertake a study to explore land use options and consider redesignating the Rural designated portion of the properties to the north of the extraction pit to a more intensive use, such as housing, industrial, or commercial." This policy specifically calls for exploration and consideration of options for this area.

As currently drafted, the motion calls for the District to initiate a process to designate the land use and zoning for the purpose of expanding the KBD. This presumes a foregone conclusion that expanding the KBD constitutes the best land use option. In doing so it implies that a decision has already been made about the redesignation, without the exploration and consideration called for in the District's policy.

This causes major concerns as the expansion of the Keating Business District into the lands in question is likely to have a significant impact on the health and wellbeing of our people and territories. As you know, the impacts of Keating Business District on water quality and quantity have impacts throughout the whole watershed which includes places WSÁNEĆ are actively working to restore including ȾIKEL,

further downstream at MÁUWEĆ, and the shellfish beds at the bottom of the watershed.

We are appreciative of the work the District is doing with WLTS to advance our shared goal of restoring the wetlands at ȾIKEL, but we're concerned about the intensification of industrial activity upstream which could compromise the outcomes that we're collaborating on.

We therefore call on you to amend this Notice of Motion so that it provides for a non-biased land use study to inform decisions on any redesignation of these lands and to engage immediately with the WLTS and WLC on any process regarding the future uses of these lands.

HÍ SW̱ KE̱ SIÁM

Gord Elliott
Director of Operations

Nareka Jacques

From: Sarah Frumento <[redacted]
Sent: June 24, 2025 11:52 AM
To: Municipal Hall
Subject: Fwd: Fw: Agenda Item 11.3: Central Saanich Speed Reduction

I now realize that this email I sent in January also must not have gone through.

I'm resending it now so that it can also be included with correspondence at the next meeting and I hope both this email and the one I forwarded earlier can be included on any upcoming meetings where speed reduction and/ir the speed regulation bylaw I is on the agenda.

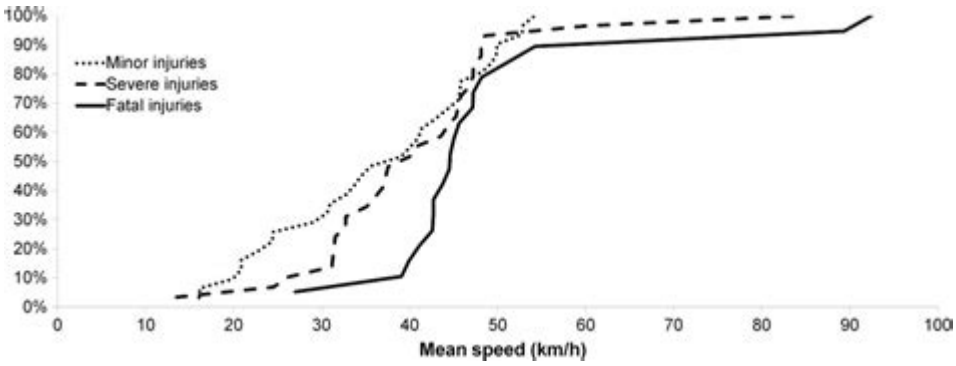
Thank you,
Sarah

---------- Forwarded message ---------
From: **Sarah Frumento** <[redacted]
Date: Tue, Jun 24, 2025 at 11:44 AM
Subject: Fw: Agenda Item 11.3: Central Saanich Speed Reduction
To: Sarah Frumento <[redacted]>

---------- Forwarded message ----------
From: Sarah Frumento <[redacted]
Date: On Mon, Jan 27, 2025 at 10:15 AM
Subject: Fw: Agenda Item 11.3: Central Saanich Speed Reduction
To: Ryan Windsor <ryan.windsor@csaanich.ca>,Gordon Newton <gordon.newton@csaanich.ca>,Chris Graham <chris.graham@csaanich.ca>,Bob Thompson <bob.thompson@csaanich.ca>,Niall Paltiel <Niall.Paltiel@csaanich.ca>,Sarah Riddell <sarah.riddell@csaanich.ca>,Zeb King <zeb.king@csaanich.ca>,Municipal Hall <Municipal.Hall@csaanich.ca>
Cc:
Dear Mayor and Council,

Just a note to say how pleased I am to see that Central Saanich is making progress towards with speed reductions.

As noted in the staff report, there is a significant difference in the chance of survival for vulnerable road users at 30 km/hr versus higher speeds and the chance of severe injuries increases pretty sharply at 30 km/hr.



For this reason, I encourage you to consider 30 km/hr on all roads where there is no separated space for vulnerable road users. For instance on Wallace, where the sharrows are going in between West Saanich and Stellys, people on bikes will be sharing the roads with motorists due to the space constraints - therefore the speed limit should be reduced to a speed at which those vulnerable road users will be least at risk.

Of course, speed limit reductions only go so far. I was happy to see this was also acknowledged in the report and that we cannot put all of the responsibility on CSPS to enforce the reduced speed limits. As such, it will be imperative for Central Saanich Engineering to put in traffic calming measures on roads where the road design (i.e., wide lanes) will encourage motorists to travel at higher speeds because the road will feel like it is meant for those speeds.

It is my opinion that the speed limit should be 30 km/hr through both Brentwood Bay and Saanichton Village, as well as on the section of Wallace that connects them (at least until a suitable alternative route is completed).

As you well know, climate change is here. We need to make it comfortable for more people to walk or ride their bike to the local villages.

I was also glad to see that Engineering is working with Communications in order to have an effective roll-out. Good communication is key. Educate the public about the why, don't just announce it. Explain the evidence (ie., the physics/science) behind these changes and that it is not just an arbitrary decision to reduce speed limits designed to frustrate drivers into driving less, as some people seem to interpret every change.

It's great to see the three Es here (Education, Enforcement, and Engineering). Just remember that Engineering safe roads is the most effective (over Education and Enforcement).

Thank you, I look forward to seeing these changes happen.

Sarah Frumento
Hovey Road

Nareka Jacques

From: Sarah Frumento <[redacted]
Sent: June 24, 2025 12:52 AM
To: Municipal Hall
Cc: Zeb King; Bob Thompson; Chris Graham; Gordon Newton; Niall Paltiel; Mayor Ryan Windsor; Sarah Riddell; CSEngineering
Subject: Fw: Support for Central Saanich Speed Regulation Bylaw 2227

Hello,

I sent the following email on Friday, however, I just had a chance to look and didn't see it included with the revised agenda for the meeting on June 23rd, where the Speed Regulation was on the agenda.

It just hit me that I never received confirmation that my correspondence was received.

So, I'm resending it now, from my old email address in case this one didn't go through for some reason, as I know this is being discussed again on Wednesday and I want to make sure council knows there is support for reduced speed limits from the community.

Thank you,
Sarah Frumento
Hovey Road

------- Forwarded Message -------
From: Sarah Frumento <[redacted]>
Date: On Friday, June 20th, 2025 at 4:08 PM
Subject: Support for Central Saanich Speed Reduction Bylaw 2227
To: Municipal Hall <Municipal.Hall@csaanich.ca>

Dear Mayor, Council, and Staff,

I am in full support of the Central Saanich Speed Reduction Bylaw 2227 and I encourage you to support it, without further delay, as shared at the council meeting on May 26th (including the correction to the map as described during the meeting) in order to have the best chance that this is in place before the upcoming school year.

As noted in the staff report, reducing speed limits is a critical **first** step to improving road safety. It's not woo-woo, it's physics: a person who is hit by a driver travelling above 30 km/hr has a much lower chance of survival. And, on our roads where there is often no separation between active transportation users and motorists (i.e., active transportation users are using the same paved surface as drivers), it is particularly important that motorists are travelling at safe speeds.

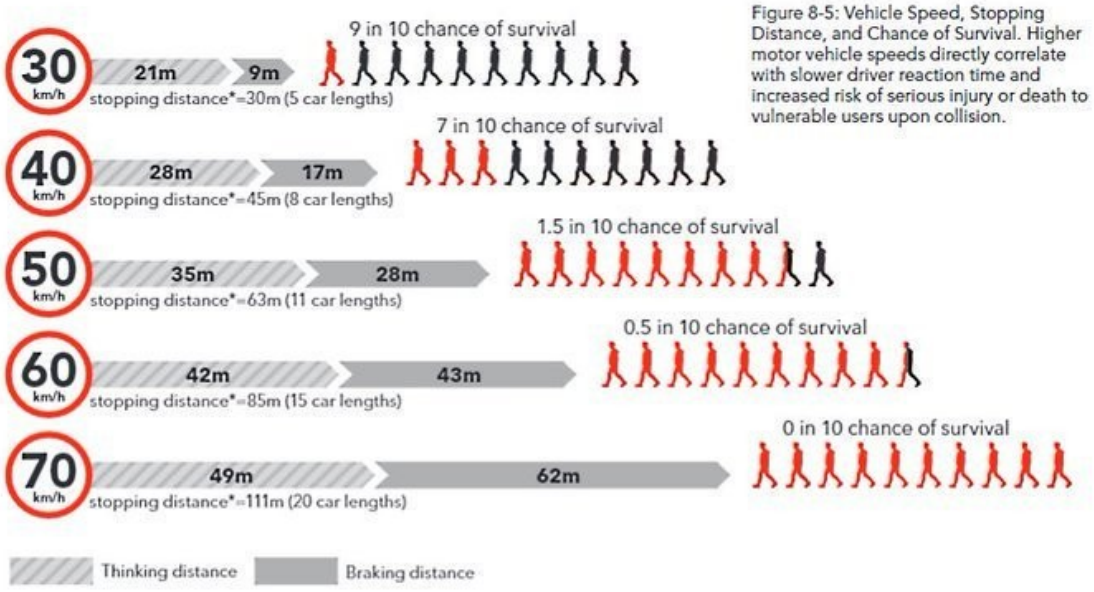


Figure 8-5: Vehicle Speed, Stopping Distance, and Chance of Survival. Higher motor vehicle speeds directly correlate with slower driver reaction time and increased risk of serious injury or death to vulnerable users upon collision.

*Stopping distances during wet conditions. Single car length=5.6m. Based on a 2.5s reaction time, representing 90th percentile of drivers.

source: Adapted from World Health Organization, 2008. Speed management: a road safety manual for decision-makers and practitioners.
Transportation Association of Canada, 2011. Geometric Design Guide for Canadian Roads Part 1. 1.2.5.2 - 1.2.5.4.

As I'm sure you know, changing speed limits alone will not change driver behaviour. Enforcement and education are part of the next step solutions but the most effective next step will be to put traffic calming measures in place. It is well known that people will drive at a speed that 'feels' appropriate based on the road design regardless of whether or not it is truly safe. Enforcement and education will only go so far. Putting traffic calming measures in place must be a priority but reducing speed limits is a great first step and I am pleased to see this Bylaw coming to council.

Please, I encourage you to make your decision based on evidence for what will make our roads, and community, safer and not on opinions.

Thank you,
Sarah Frumento
Hovey Road

Pamela Martin

From: Municipal Hall
Subject: FW: Mayor & Council email form submission from centralsaanich.ca

Hi Jeremy,

Thank you for your message to the Mayor and Council. We hear your concerns and your email will be included on the regular Council meeting agenda for the July 14, 2025 meeting.

We deeply value community events; our goal is to balance community benefits with due diligence. The District's permitting process and regulations have not changed for road races. Similar to other permitting processes, like for building, we require professional reliance sign-off. The District has been increasing emphasis on enforcing existing requirements over the last 2 years, especially where past events have inadequate traffic control personnel on the race day and required Central Saanich Police to step in address unsafe conditions.

This is in response to several important safety and operational concerns. In the past, some event applications were submitted with very short notice—sometimes just a day before the event—and often included outdated or Traffic Management Plans (TMPs) prepared by persons not qualified to generate TMPs. In many cases, volunteer marshals were used to guide race participants. We are trying to ensure that in accordance with the Motor Vehicle Act (MVA) and WorkSafeBC, TMPs include certified traffic control personnel in key areas, who have the authority to direct traffic.

This year, we are being more diligent in requiring:

- Certified TMPs that include proper risk assessments
- Early submission of permit applications, so we can work with organizers to ensure a safe and successful event
- Certified traffic control personnel where required

We believe these steps are necessary due to:

- Increased resident complaints about traffic disruptions
- Disruptions to BC Transit service
- Multiple instances where Central Saanich Police had to step in to manage traffic, taking away from their regular operations
- The need to protect the safety of everyone involved—participants, volunteers and the public

Staff have also been working with our neighbour, Saanich, to align our processes and have concurrence on this matter for improved coordination. As a future improvement, our staff are working with Saanich staff to share permitting for road events.

The tight sense of community is why we love this place, too, and we are committed to supporting organizers in hosting successful community events. Road races are complex and have significant impacts on traffic

and public safety. Our goal is to ensure these events are safe, well-managed and enjoyable for all. Thank you again for voicing your disappointment and concerns.

Dale Puskas, P.Eng.
Director of Engineering
District of Central Saanich
250.544.4211 | CentralSaanich.ca

We gratefully acknowledge that the ancestral lands on which we work are within the traditional territories of the W̱SÁNEĆ peoples: W̱JOŁEŁP (Tsartlip), BOḴEĆEN (Pauquachin), SṮÁUTW̱ (Tsawout), W̱SIḴEM (Tseycum) and MÁLEXEŁ (Malahat) Nations.

From: no-reply@centralsaanich.ca <no-reply@web-response.com>
Sent: June 25, 2025 10:52 PM
To: Municipal Hall <Municipal.Hall@csaanich.ca>
Subject: Mayor & Council email form submission from centralsaanich.ca

Submitted on Wed, 06/25/2025 - 10:52pm

Submitted by: Anonymous

Submitted values are:

Subject
Community events

Full Name
Jeremy Gosselin

Phone Number
[redacted]

Address
47-1287 Verdier Ave
Central Saanich , BC . V8M1H2

Neighbourhood
Brentwood Bay

Email
[redacted]

Message

Dear Mayor and Council,

It is with great disappointment I write to you regarding the recent and sudden TCP requirements that have lead to two major long standing community events to be cancelled.

I live in Central Saanich for the beautiful rural roads, yet a tight sense of community.

Events such as the 38-year Elk lake Tri and staple Victoria Cycling League Seabrook events foster sport, active lifestyles and community and play a vital role to inspire kids and youth.

I understand safety is of utmost importance when it comes racing, but implementing regulations beyond what our neighbours in North Saanich and Saanich suggest to be safe seem rash.

Increasing fees to already expensive community events make these types of events not feasible. It is a major loss to our community to be without local sporting events.

Please reconsider this implementation, and consider alternative requires with volunteers.

Especially considering councils recent push for development, it is more important than ever for council to advocate for community events to be hosted in Central Saanich for it to continue to be the community we love.

Nareka Jacques

From: Municipal Hall
Subject: RE: Contributing to Pickleball Court Development at Centennial Park

---

From: Roger Graves <presidentvrpa@gmail.com>
Date: Thursday, June 26, 2025 at 4:57 PM
To: Mayor Ryan Windsor <Ryan.Windsor@csaanich.ca>, Chris Graham <Chris.Graham@csaanich.ca>, Zeb King <Zeb.King@csaanich.ca>, Gordon Newton <Gordon.Newton@csaanich.ca>, Niall Paltiel <Niall.Paltiel@csaanich.ca>, Sarah Riddell <sarah.riddell@csaanich.ca>, Bob Thompson <Bob.Thompson@csaanich.ca>
Cc: brian Harrigan [redacted] Tessa Graham <vrpavicepresident@gmail.com>, Kyle Motiuk <kyle.motiuk@csaanich.ca>
Subject: Contributing to Pickleball Court Development at Centennial Park

Dear Mayor and Councillors:

As President of the Victoria Regional Pickleball Association (VRPA), I am writing in support of the Council's recent motion to convert Court 1 of the tennis courts in Centennial Park to four pickleball counts. The VRPA worked in concert with Saanich, the City of Victoria, Esquimalt, and Oak Bay to create the Regional Strategy Report for Pickleball which examined demand and supply for courts, court construction, and court booking approaches throughout the region. With almost 1000 members (including dozens of Central Saanich residents), we focus on building capacity for all pickleball players in the Greater Victoria area.

We see your recent motion to increase the number of available courts on the Saanich Peninsula as a wonderful addition to the new courts coming on line in Saanich (Fowler Park, 6 courts), Victoria (Topaz park, 11 courts), and Colwood (Juan de Fuca, 6 courts). Each of these facilities will be open to the public and allow anyone to book courts (they do not have to be members of any club or organization) which we support.

Earlier this year, the Saanich Peninsula Pickleball Association (SPPA) joined with the VRPA to form one, united organization committed to creating play opportunities to all pickleball players on the Saanich Peninsula. As part of that amalgamation, the SPPA provided funds that could be used to support the court conversion costs at Centennial Park. The VRPA, along with the Peninsula Tennis Club and the Peninsula Community Pickleball Club, committed to supporting the conversion of the tennis court. Now that the SPPA is officially part of the VRPA, we at the VRPA would welcome the opportunity to meet with councillors and/or Mr. Motiuk, Manager of Parks, Facilities, and Fleet to contribute to discussions about the court conversion and court bookings procedures for the new courts.

Brian Harrigan, a VRPA Board Member and chair of our Saanich Peninsula Subcommittee, and/or I would embrace the opportunity to meet with councillors and/or Mr. Motiuk and contribute to this great initiative to build the new courts. Brian can be reached at

[redacted] and I can be reached at presidentvrpa@gmail.com or [redacted]

We look forward to working with you.

Roger Graves, President, Victoria Regional Pickleball Association

--
Roger Graves
President

June 26, 2025

Mayor Windsor and Councillors
District of Central Saanich

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We look forward to working with you.

Roger Graves, President, Victoria Regional Pickleball Association

Pickleball Strategy

for Victoria, Saanich, Oak Bay and Esquimalt

February 2024

CITY OF VICTORIA

DISTRICT OF OAK BAY

Saanich

Township of ESQUIMALT

Table of Contents

Executive Summary

The Pickleball Strategy for Victoria, Saanich, Oak Bay and Esquimalt provides guidance on managing the growth of the sport. This work is the outcome of collaboration between the City of Victoria and District of Saanich as major partners as well as the District of Oak Bay, and the Township of Esquimalt as contributing partners.

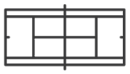
To inform the strategy, the project team undertook a public and stakeholder engagement, a supply and demand analysis, and reviewed examples from other cities. The objectives of the strategy are to meet the demand for pickleball players, to enhance play and resolve noise issues as well as to manage play times for bookings and drop-in which considers tennis and other park users.

The strategy also provides five conceptual paths illustrating different levels of service outcomes. The paths provide options to help future decision-making on building new courts, and decommissioning vs improving existing courts.

The Pickleball Strategy for Victoria, Saanich, Oak Bay and Esquimalt is intended to begin informing approaches in the 2024 season. Some actions are oriented towards the longer term.

A summary of recommendations is as follows:

A set of improvements to better manage play times between individual court booking, standing reservations for groups, and drop-in play.



A set of strategies to help municipalities add more courts to meet demand.

A set of recommended improvements to existing courts to enhance player experience.

A consistent approach to setback distances, and recommendations on what to do for existing courts that do not currently meet these setbacks.

1 Introduction

1.1 Land Acknowledgment

The Strategy acknowledges that the area under consideration is the territory of the Lək'wəŋən People, represented by the Songhees and Esquimalt Nations and the W̱SÁNEĆ peoples represented by the Tsartlip, Pauquachin, Tsawout, Tseycum and Malahat Nations.

1.2 Purpose

The Pickleball Strategy for Victoria, Saanich, Oak Bay and Esquimalt seeks to effectively manage the growth of the sport through the inventory of courts, their design and the allocation of playing times through bookings and drop-in. The inter-municipal approach to the strategy brings together the City of Victoria and District of Saanich as major partners as well as the District of Oak Bay, and the Township of Esquimalt as contributing partners to collaborate on solutions.

Pickleball's growth has been relatively recent and fast, which has made it challenging for municipalities to meet demand. With limited space, there are issues with sharing spaces with other sports (e.g., tennis on outdoor courts; badminton and other programming on indoor courts). There are also concerns about the noise from people living near outdoor courts.

The Pickleball Strategy for Victoria, Saanich, Oak Bay and Esquimalt provides a set of solutions that comprehensively address these challenges through consistency and structure that can evolve in the future. It is intended that the Strategy will be used as a reference resource by municipal staff and help to show how decisions fit within a larger coordinated effort.

Capital Regional District: The scope of this work does not extend to the entire Capital Regional District (CRD), which is the regional government for 13 municipalities and three electoral areas on southern Vancouver Island and the Gulf Islands. It serves approximately 440,000 residents. For greater context, the Strategy notes the number of courts and the population of the CRD excluding the Southern Gulf Islands, Salt Spring Island, and Juan de Fuca.

1.3 Process

The Strategy is composed of the following elements:

- **Research and analysis**: the Strategy draws on best practices for building facilities and allocating play, recent studies and guidelines (e.g., acoustic analyses), and benchmarking inventories from other cities. The Strategy also analyses data provided by the Greater Victoria municipalities including booking data and information on courts. Below is a selected list of some of the documents used as references in the Strategy:
    - » Pickleball and Tennis: A Solution that Meets the Needs of Both Sports. Joint Statement from Pickleball BC and Tennis BC, 2021.
    - » Pickleball Noise Assessment. BC Recreation and Parks Association (BCRPA). February 2023.
    - » Finlayson Artificial Turf Field – Allocation Principles. City of Victoria.
    - » Saanich Guidelines for Distances and Mitigation Measures for Pickleball Courts.
    - » Whistler Pickleball Association. Master Plan for the Sea to Sky.
    - » Standards and Expectations for Pickleball Canada Regional. Championships.
    - » Pickleball Court Standards. USA Pickleball.

- **Engagement**: From June to July 2023, the consultants and municipalities engaged stakeholders, players, adjacent residents to courts, and the general public to better understand issues and preferences. The engagement included an online survey (on a dedicated website), facilitated group discussions, and pop-in site visits (https://regionalpickleballstrategy.com/).

  The process resulted in the following outcomes:

  - 1207 Online Survey Responses
  - 4530 Unique Visitors to the Website
  - 22 Online Stakeholder Session Attendees
  - 1 meeting with Victoria Regional Pickleball Association

  Findings from the engagement are reported on throughout the strategy based on the topic. For a detailed account of the engagement, including responses to each question, refer to the Pickleball Strategy for Victoria, Saanich, Oak Bay and Esquimalt What We Heard Report, 2023.

- **Recommended Strategies & Actions**: The strategy identifies high level strategies to guide future decision-making as well as more specific actions that can be employed in the short to long term. Taken together, these recommendations enable a coordinated effort, where success can be tracked and assessed over time.

1.4 Document Order

The following sections of the Strategy are organized by topic.

- **Section 2: Pickleball in Greater Victoria** provides an overview of the sport, thereby setting the stage for informed recommendations later in the Strategy.
- **Section 3: Court Supply** deals with meeting demand through the number, type and considerations for the distribution of courts throughout the four municipalities.
- **Section 4: Court Design** focuses on features that enhance play (e.g., court layouts, lighting) as well as elements to address noise mitigation.
- **Section 5: Managing Playing Times** is about successfully employing a hybrid system of bookings and drop-in play.
- And lastly, **Section 6: Implementation** organizes the recommendations into an easy-to-reference format for use in budgetary and work planning.

2 Pickleball in Greater Victoria

Mirroring national trends, demand in pickleball has been increasing in Greater Victoria. Municipalities have been seeking to accommodate this demand over the last decade. This section is an assessment of the current state of courts and insight into the players based on engagement feedback.

Figure 1: Pickleball at Oaklands Park. (Image Source: O2)

2.1 Court Overview

There is a mix of indoor and outdoor courts collectively in Victoria, Saanich, Oak Bay and Esquimalt. A common approach has been to use existing tennis courts for outdoor and gymnasiums for indoor courts. The existing inventory is listed in the following table.

- Victoria
- Esquimalt
- Oak Bay
- Saanich

	Courts	Multi-Purpose Gyms
Esquimalt	6 courts	1 location
Oak Bay	5 courts	1 location
Saanich	23 courts	3 locations
Victoria	10 Courts	0 locations

Figure 2: Existing Pickleball Courts in Victoria, Saanich, Oak Bay and Esquimalt.

Court Name	Type	No. of Courts
Indoor		
Cedar Hill Rec Centre	Multi-Purpose Gym	Pop-up, Temporary
Esquimalt Rec Centre	Multi-Purpose Gym	Pop-up, Temporary
Henderson Rec Centre	Multi-Purpose Gym	Pop-up, Temporary
Pearkes Rec Centre	Indoor shared courts	8
Saanich Commonwealth Place	Multi-Purpose Gym	Pop-up, Temporary
Outdoor		
Barnard Park	Shared	2
Beacon Hill Park	Dedicated	3
Carnarvon Park	Dedicated	5
Central Park	Shared	2
Copley West Park	Shared	2
Esquimalt High School	Shared	2
Esquimalt Rec Centre	Dedicated	4
Franklin Green	Dedicated	1
Hampton Park	Shared	2
Majestic Park	Shared	1
McMinn Park	2 Shared/2 dedicated	4
Oaklands Park	Shared	2
Prospect Lake Park	Shared	2
Rosedale Park	Shared	2
Tolmie Park	Dedicated	2

Figure 3: Types of Pickleball Courts in Victoria, Saanich, Oak Bay and Esquimalt

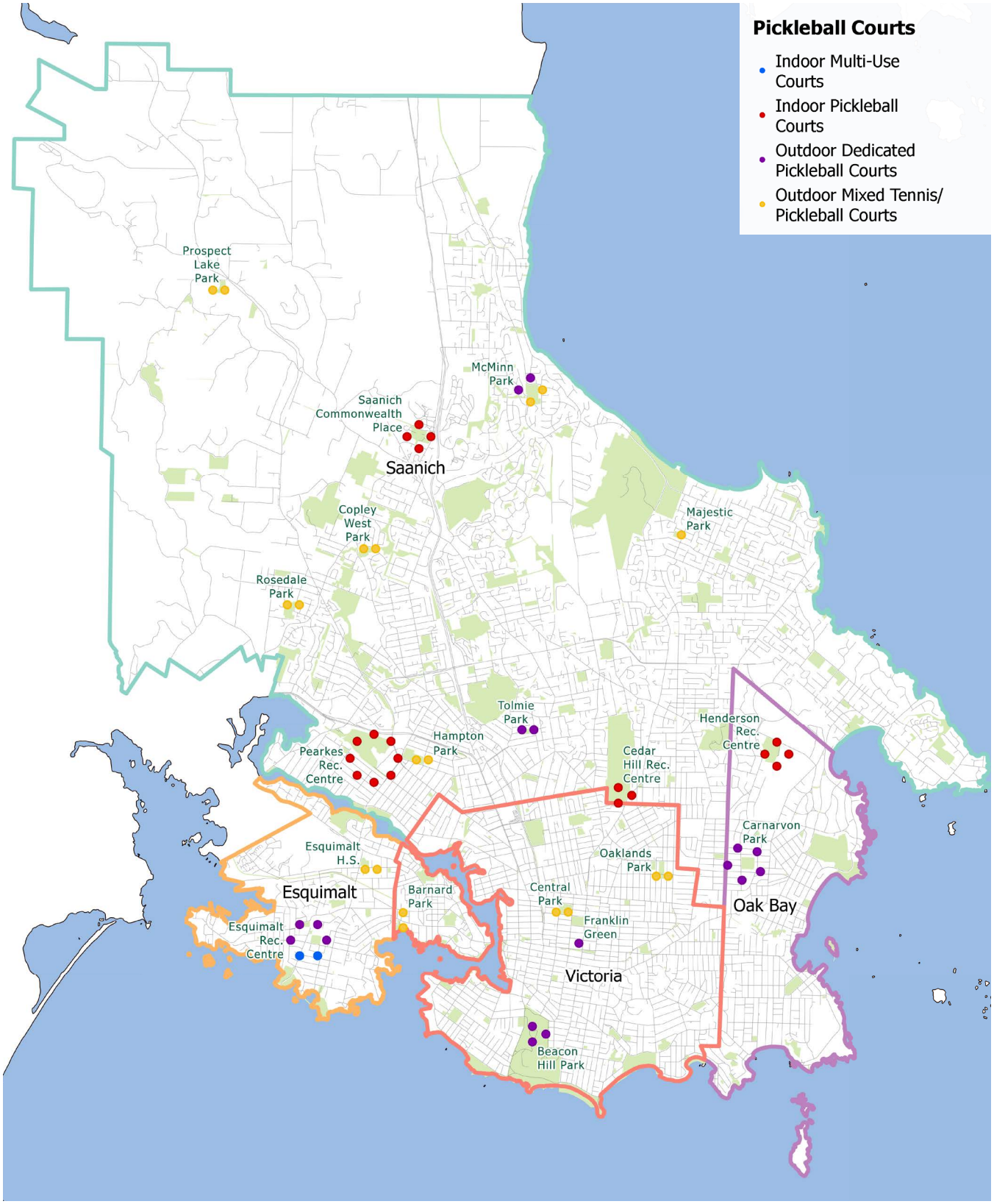


Figure 4: Map of Existing Pickleball Courts in Greater Victoria.

2.2 Pickleball in Surrounding Capital Regional District

As noted, the scope of this pickleball strategy does not include the entire Capital Regional District. It is recognized that residents travel between municipalities within the CRD to access recreation. To provide greater context to the analysis, courts within the surrounding CRD municipalities are identified. The Southern Gulf Islands, Salt Spring Island and Juan de Fuca are not included. The information is provided for comparative insight, but no assessment of demand and recommendations are within scope of the Strategy.

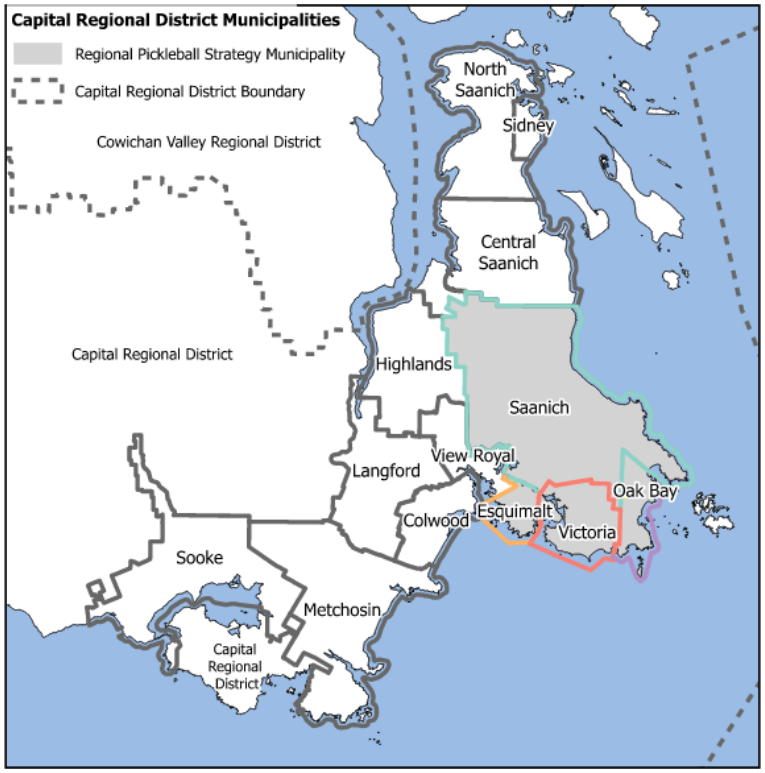


Figure 5: The Capital Regional District excluding the Southern Gulf Islands, Salt Spring Island, and Juan de Fuca.

	Outdoor	Indoor
Sooke	3 dedicated courts & 1 shared court	2 multiple purpose gyms
Metchosin	Share WSPR	Share WSPR
Langford	1 court + Share WSPR	1 court + Share WSPR
Highlands	Share WSPR	Share WSPR
Colwood	Share WSPR	Share WSPR
View Royal	Share WSPR	Share WSPR
Central Saanich	2 courts	Share PAN
North Saanich	4 courts	Share PAN
Sidney	2 shared courts	Share PAN

Jointly Owned Facilities	Outdoor	Indoor
West Shore Parks and Recreation (WSPR)	2 shared courts with plans for 6 dedicated courts	2 multiple purpose courts
Panorama Recreation (PAN)	0	1 multi-purpose gym

Figure 6: Existing Pickleball Courts in Surrounding Capital Regional District.

2.3 Snapshot of Players in Greater Victoria

During the engagement, respondents were asked a series of questions that help compose a picture of players and their playing preferences. This information in turn will help to inform recommendations.

When isolated to only survey respondents who note they play pickleball, the two major demographics are 25-64 year olds and 65 years or older. The majority of both groups played indoor and outside. However, the 25-64 demographic was more likely to prefer playing outside and the 65 years or older was more likely to prefer indoor courts.

It is possible that the demographic breakdown was skewed based on survey reach. Other studies undertaken on the demographics of pickleball suggest that 18 to 24 year olds are a significant share of players.[1]

Aligned with the recent growth of the sport, most players started playing between the last 1 to 3 years.

The surveys also reveal playing habits, including the most common time to play in the mornings. Most players also play weekdays and weekends for sessions lasting between one and two hours.

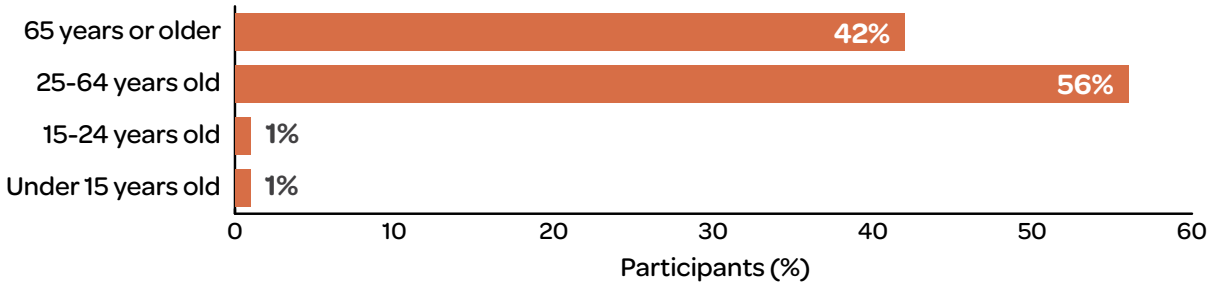


Figure 7: Age of Pickleball Players.

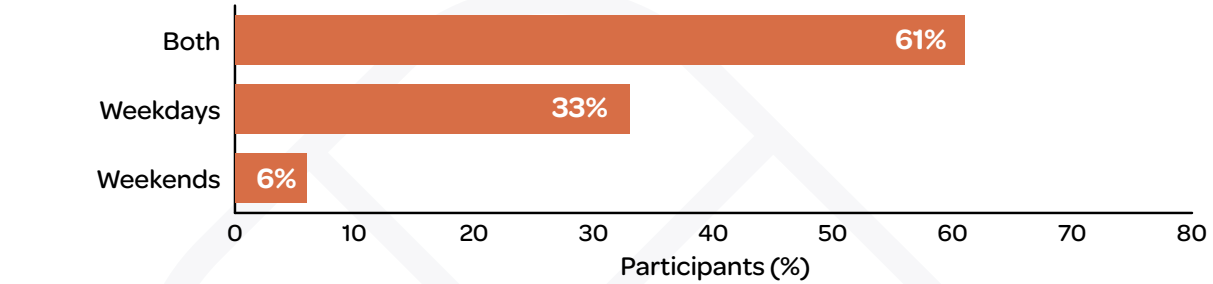


Figure 8: Weekly Preference for Playing.

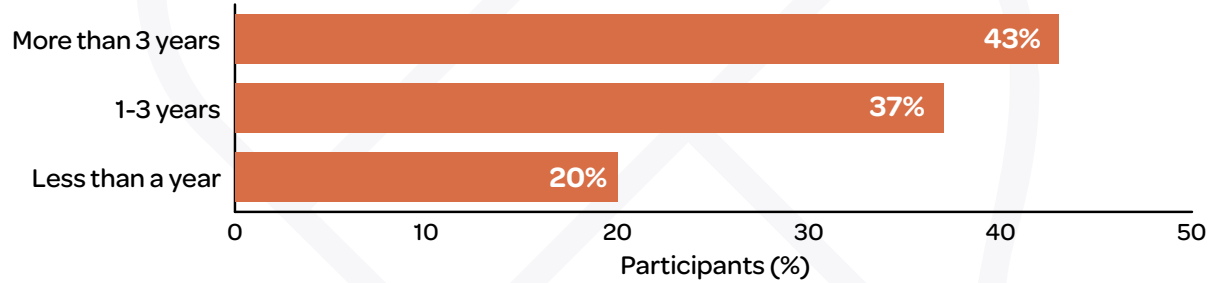


Figure 9: How long people have been playing pickleball.

[1] Accessed: https://www.washingtonpost.com/sports/2022/09/20/pickleball-growth-tennis/

Player Crossover Between Tennis and Pickleball

The survey asked respondents whether they play pickleball or tennis. Nearly 20% of pickleball players said they also play tennis. In the American context, The American Sports and Fitness Industry Association (SFIA) estimates that 33% of pickleball players had also played tennis at least once in the last year. It is useful to consider these two values as representing a low to high end range for estimating current crossover between the two sports.

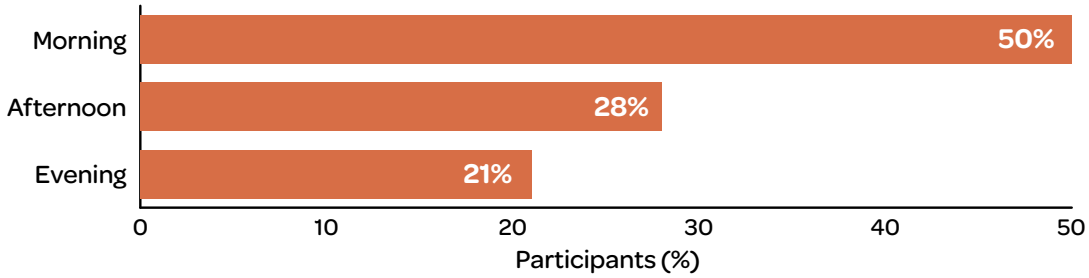


Figure 10: Usual times to play.

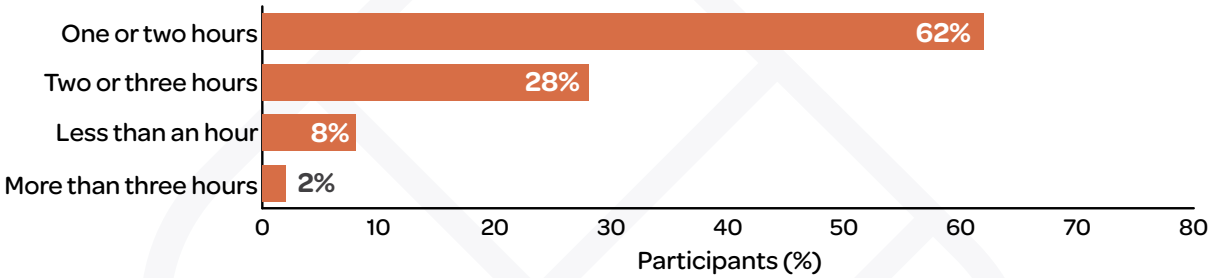


Figure 11: Typical duration of play.

2.4 Challenges

The Pickleball Strategy contends with four main challenges. The challenges represent the core obstacles to effectively managing the sport in the four municipalities. Direction throughout this report is aimed at addressing these challenges.

1. Demand Pressures (busyness/capacity)

There is a perception among players that there are not enough courts and times to play to accommodate the growing demand for the sport. Potential implications include player frustration, undermining participation in the sport, and tension with tennis players on shared courts. Section 3 Court Supply undertakes a supply and demand analysis to better understand the inventory relative to demand.

2. Noise Impacts

Victoria, Saanich, and Oak Bay have received sound complaints from neighbours living adjacent to some pickleball courts. Feedback from the engagement validated noise impacts as an issue among residents. Respondents noted that noise was negatively impacting their ability to relax at home. Section 3 Court Supply and Section 4 Court Design put forward an approach to address noise at courts.

3. Tension with Tennis

With several shared courts between tennis and pickleball, it can be challenging to accommodate both sports. Where courts are busy for one sport, players of the other sport may feel they are losing access to a facility. Shared courts also mean two sets of court lines. Section 3 Court Supply promotes steps that seek to address this tension.

4. Budget and Land Availability

Park systems and recreational indoor spaces enable a wide range of activities with a limited amount of space and investment. Urban intensification accentuates the challenge as these areas often experience higher land values and more residents living near green spaces. Locating hubs within these areas may not always be feasible.

Managing any expansion of pickleball must recognize that there are other interests. An inter-municipal approach is also an opportunity to look more broadly at where courts make the most sense. Section 3 Court Supply and Section 4 Court Design identify strategies to work within these competing interests.

Objectives for the Strategy

Meet demand for pickleball players

Resolve noise issues for adjacent neighbours

Consider tennis users (and other park users)

3 Court Supply

One way to align supply and demand for pickleball is to consider the number of courts available along with their usage. Appropriate alignment will help meet interest in the sport while supporting efficiency in using limited land and the latter's operational requirements. Residents expect to use the park system for a variety of activities beyond pickleball, so this exercise must be pragmatic, well-informed, and creative.

3.1 Supply & Demand Analysis

To determine the relationship between existing supply and demand, the report uses 4 indicators. The findings from these indicators inform a set of recommendations that will seek to address supply to better align with demand.

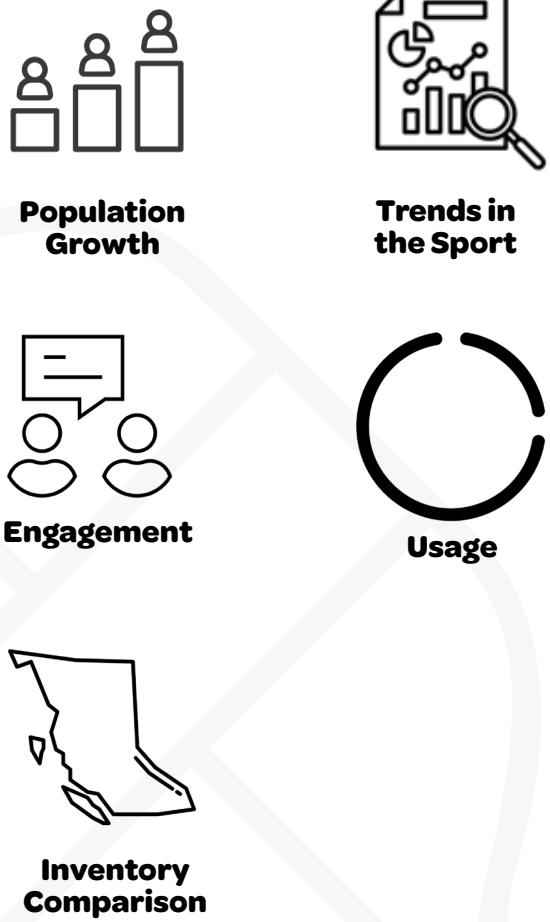
Indicator #1: Urban Growth

Greater Victoria is set to absorb population growth over the next two decades. Victoria will grow by 16%, Saanich will grow by 12%, Esquimalt will grow by 10%, and Oak Bay will shrink by 2.5%. The resulting change in population will equate to 32,274 more people in the four municipalities in 2038.[2] In 2023, the Province of British Columbia established housing targets for these four municipalities under the Housing Supply Act. The targets may increase the growth estimates noted above.

The anticipated population growth may result in increased demand or interest in the sport given the larger pool of people that may be

[2] Accessed: Capital Regional District 2019-2038 Population, Dwelling Units and Employment Projection Report. BC Stats – April 2019. Accessed: https://www.crd.bc.ca/docs/default-source/crd-document-library/bylaws/regionalgrowthstrategy/crd-2019-2038-population-dwelling-units-and-employment-projection-repor.pdf?sfvrsn=92ce43cc_2

The Indicators



interested in the sport. While greater interest is not inherently an issue, it may add pressure to keep pace on supply or strategies to increase the capacity of existing courts.

Indicator #2: Growth in Pickleball

In 2023, media organizations in the United States and Canada published articles on pickleball being the fastest-growing sport in the two countries.[4] Pickleball Canada estimates a jump in players from 350,000 in 2021 to over 1 million in 2023. Part of what makes the growth more pronounced – and what helps in its chance for longevity – is in gaining players from a wider range of demographics. Young adults for instance are the fastest segment of new players.[5]

The Victoria Regional Pickleball Association shared data that also suggests Greater Victoria is experiencing the growth observed across Canada and the United States. In 2016, the VPRA had 33 members. As of 2023, this number of members has climbed to 615. This represents a growth of over 1700% in seven years. Not all players belong to the Victoria Regional Pickleball Association, so it is a true statistic for the growth of the sport. However, membership is a useful indicator to gauge a trendline.

It is difficult to determine with any certainty the future popularity of a sport. Cities are thus challenged to align facilities and programming with constantly shifting expectations and interests in the park system. However, during the engagement, 96% of existing pickleball players noted that they intended to keep playing. While this feedback does not solidify the future projection with any greater certainty, it is suggestive of a current sentiment for a sport beyond a momentary fad.

[4] https://www.cnbc.com/2023/01/05/pickleball-popularity-explodes-with-more-than-36-million-playing.html

[5] https://www.timesfreepress.com/news/2023/jun/01/pickleball-its-not-just-for-adults-young-players/#:~:text=Players%20age%2024%20and%20younger,a%20self%2Ddescribed%20pickleball%20fanatic.

Indicator #3: Inventory Comparison

To support the demand analysis, court inventories from other comparable cities in British Columbia were compiled. This exercise is a chance to flag trends and specialties from cities with similar contexts. As such, the comparison uses a set of cities in British Columbia: Nanaimo, Burnaby, Vernon and the North Shore (West Vancouver, North Vancouver City and the District of North Vancouver).

It is difficult to a create a fair comparison between inventories as cities have different types of courts. In an attempt for consistency, temporary programming at gymnasiums as well as pop-up courts were excluded. Courts that use tennis court nets, as well as courts with no net (with nets in storage boxes; or requiring players to bring them) were included. Dedicated courts were included.

The comparison highlights that relative to population, Victoria has the fewest court locations, while Saanich, Esquimalt and Oak Bay are around the mid-range. As a common entity, the four municipalities are under-but-close to the average of the comparable cities. Vernon has the most courts to its size.

Figure 12: Courts at Tolmie Park. (Image Source: O2)

The North Shore and Nanaimo highlight a stronger focus on providing dedicated outdoor courts. In comparison to all the municipalities within Greater Victoria, Vernon is an example of a city that has started to grow its supply of dedicated indoor courts (the result of a public/ private partnership) as opposed to using multi-purpose gymnasiums.

The inventory comparison supports the pursuit of adding additional courts within Greater Victoria. In particular, the City of Victoria has a lower-than-average supply relative to its size. The comparison also supports focusing more on indoor and outdoor dedicated courts as opposed to additional shared-facilities.

Municipality	Current Population	Courts to Populations	Takeaway
Vernon, BC[1]	40,116	1:1,823	Leads in supply, especially with indoor
Kamloops, BC	90,280	1:2,202	Leads in outdoor dedicated courts
Burnaby, BC[2]	249,197	1:2,769	Few dedicated; major supply of shared courts
Esquimalt, BC	17,553	1:2,922	Relative to its population, supply is high
Oak Bay, BC	17,990	1:3,598	Relative to its population, supply is high
Saanich, BC	124,375	1:5,408	Lower end of dedicated outdoor supply
North Shore, BC	193,870	1:5,875	More dedicated than shared approach
Nanaimo, BC	90,505	1:7,542	Lower end based on comparable cities outside Victoria
Victoria, BC	93,600	1:9,360	Currently on the lower end of supply

[1] Includes outdoor courts that require players to bring their own nets.
[2] Most of these courts are painted lines around tennis courts and require bringing nets.

Combinations of Municipalities	Current Population	Courts to Populations	Takeaway
Victoria, Saanich, Oak Bay and Esquimalt	253,518	1: 5,762	Fewer courts per population compared with the selected municipalities
Average of municipalities in table above excluding four partner municipalities	193,870	1: 3,686	This group represents roughly 2,000 people difference in service level compared to the four partner municipalities
Rest of CRD	134,686[1]	1:8,979	Currently a lower level of supply compared to the four partner municipalities

Figure 13: Number of Courts by Population. Note: the numbers in the table do not include temporary courts in community recreation gymnasiums.

3 The population total is from the CRD 2019-2038 Population, Dwelling Units and Employment Projection Report. It excludes the Southern Gulf Islands, Saltspring Island, and Juan de Fuca.

Indicator #4: Court Usage Insight

There is no formal tracking system to understand exactly how many people use each court. However, a compilation of existing data points helps compose a picture of trends. This picture can then in turn support the supply and demand analysis.

The first data point is from the engagement, which asked survey respondents at which courts they play. This insight provides a preliminary sense of which courts are busy and well-liked by players.

The distribution of reported usage demonstrates a wide variety between courts. Carnarvon Park for instance has roughly 22x the number of respondents to Esquimalt Recreation's outdoor courts. While it should not be assumed that these values translate precisely to actual usage on the courts, the responses nonetheless generally indicate that some courts have concentrated usage while others are relatively quiet.

The findings also align with site visits undertaken by the consultant in the summer of 2023 at six outdoor courts that are on the higher end of visitations. The courts are Carnarvon Park, Oaklands Park, Central Park, McMinn Park, Tolmie Park, and Beacon Hill Park. Each court was in use at the time of visit, with extra players waiting at McMinn

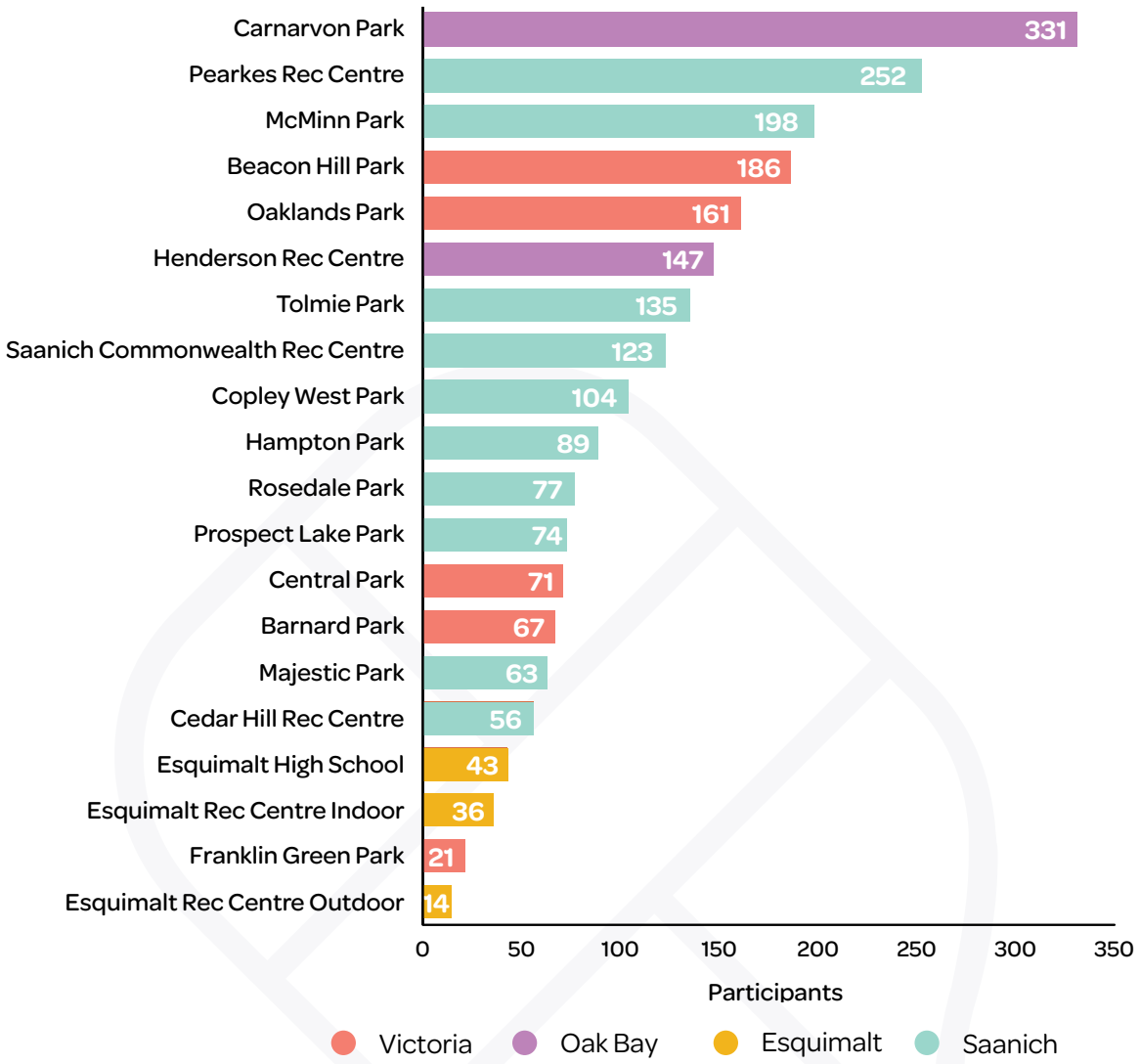


Figure 14: Courts measured by reported usage (e.g., where do you play?).

Park and Central Park. The site visits were not intended to provide a methodological study of use, but are included only as providing supporting anecdotal evidence.

Another data point to help determine usage is with permitting data. In the City of Victoria, pickleball clubs can apply for a block booking that reserves a court on a certain day and time. From 2018 to 2021, the total number of hours of permitted pickleball play grew from 191 to 3,403. In 2022, the hours decreased to 2,956.

While limited to only a few selected courts, the permitted data suggests pickleball use has been increasing over the last 5 years. The reason for the decrease in 2022 is unconfirmed, but the City of Victoria capped any new permits in 2022. Permitting data should continue to be tracked in the future to help the municipalities monitor the sport. The shift from Todd Park to Central Park is also the result of the City decommissioning pickleball usage at the former and shifting club use to the latter.

Overall, the data points for usage suggest pickleball demand is increasing and the usage varies by courts. The potential concentration at certain courts is relevant to the supply and demand analysis as the busier courts will likely face capacity issues. On the other hand, the least visited courts may be underutilized and not contributing significantly to addressing demand.

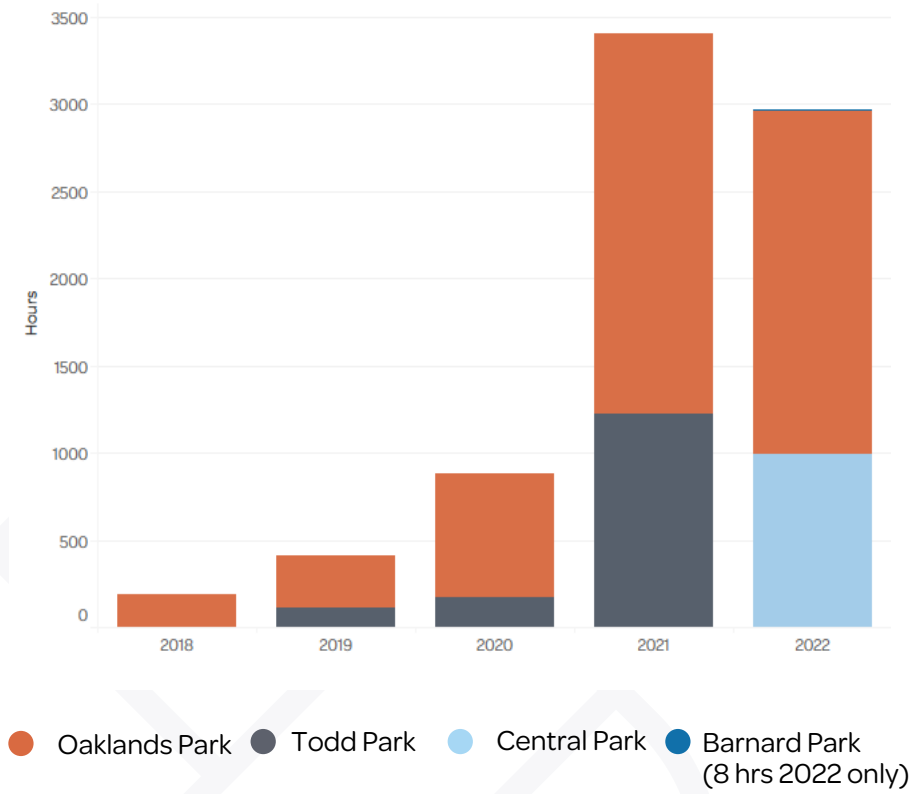


Figure 15: City of Victoria Annual Booked Hours by Court.

Indicator #5: Engagement Feedback on Demand

In addition to the engagement feedback on court usage, the survey and stakeholder interviews provide more insight on the relationship between supply and demand.

During stakeholder interviews with pickleball players and organizers, an emergent theme was demand for courts outstripped current supply in Victoria, Saanich, Oak Bay and Esquimalt. The survey responses further specify where more courts are most needed.

The largest response was to locate new courts in Victoria, followed by Saanich, Oak Bay and Esquimalt in descending order. The focus on Victoria also aligns with the benchmarking findings in Indicator #3 that showed City of Victoria had a smaller inventory of courts relative to its population.

The share of respondents who did not think more courts were needed was comparatively smaller.

Respondents also indicated a preference for dedicated courts over shared facilities with tennis. From responses elsewhere in the survey as well as input from stakeholders, the preference for dedicated courts is driven by the standard of design achieved (e.g., specific nets and line markings) and more compatibility in playing times and availability.

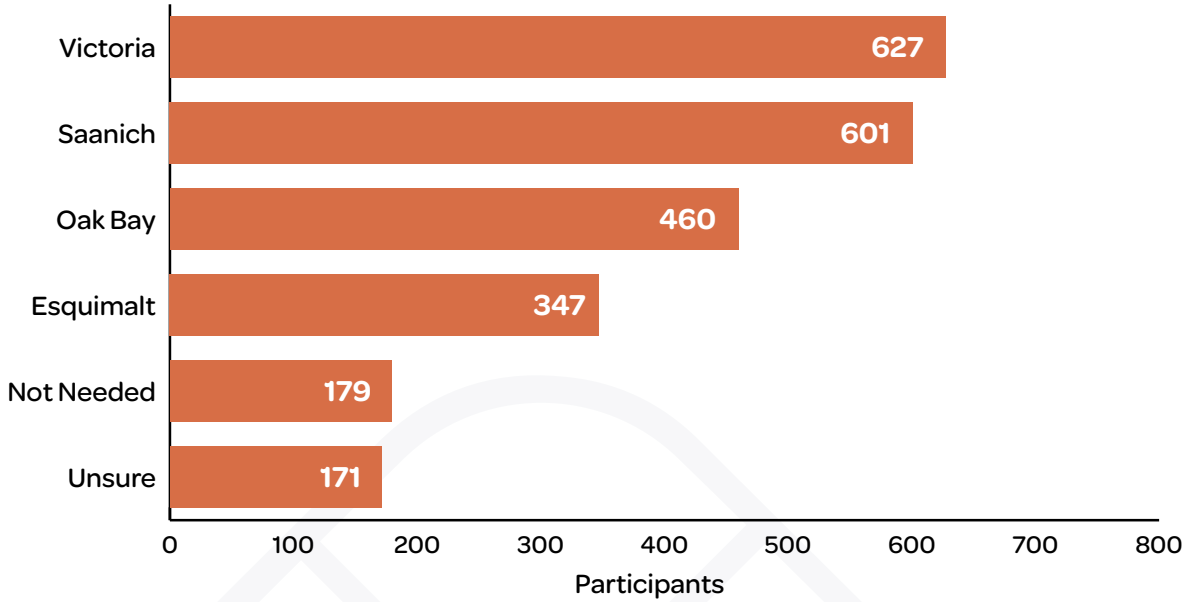


Figure 16: Survey Respondents on where more courts are needed.

The preference also aligns with a joint statement released by BC Tennis and BC Pickleball that promotes dedicated courts for each sport.[3]

There was fairly even demand between indoor and outdoor courts, with a small majority for more indoor courts. The split may be the result of Greater Victoria's seasons, with more indoor space being especially popular over winter and other days of inclement weather. Outdoor courts, on the other hand, appear to be popular during the warmer seasons when players can enjoy the benefits of the outside (e.g., sunshine, fresh air, exposure to surrounding natural features). Some survey respondents also suggested the construction of new covered courts that could potentially achieve the strengths of either court type.

One other aspect of demand from the engagement was a preference for courts to be built in a hub configuration rather than one or two courts broadly distributed throughout the cities. During stakeholder interviews, attendees listed benefits of the hub as enabling tournament play and additional programming, a high standard facility with supportive amenities (e.g., washrooms), and having a strong impact on addressing supply and capacity issues.

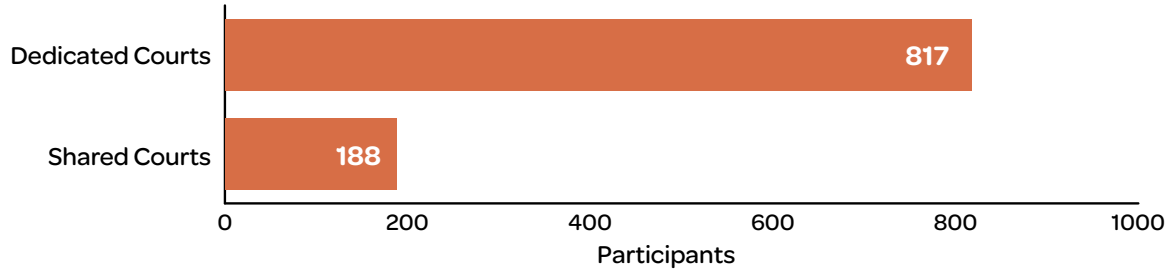


Figure 17: Survey respondents on preference for dedicated vs shared courts.

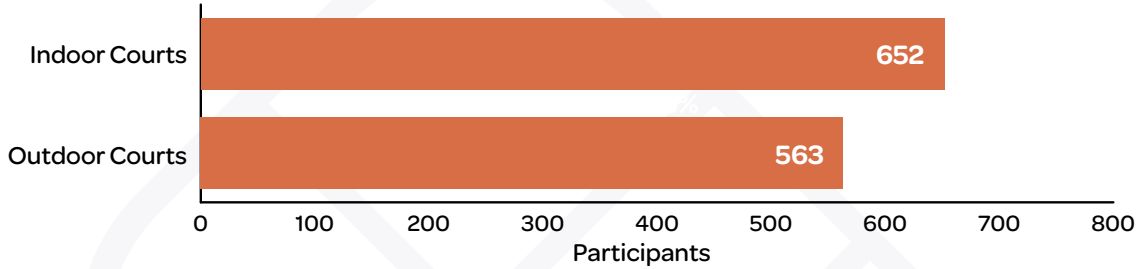


Figure 18: Survey respondents on preference for indoor vs outdoor courts.

[3] http://www.tennisbc.org/wp-content/uploads/2021/11/Joint-Recommendation-v8.1.pdf

Supply Outcome

Based on the analysis, there is unmet demand for pickleball relative the current supply of courts. Exploring strategies to either increase capacity of existing courts or adding additional courts has justification, particularly when looking towards projected population growth.

3.2 Addressing Noise through Supply

Sounds from pickleball courts can negatively impact adjacent residents. During the engagement, noise from pickleball was the most common negative issue from survey respondents living near courts.

Acoustic studies on pickleball generally suggest that the sport can create sound around 70dBA (measured from 30m). The BC Tennis/ BC Pickleball Association's Acoustic Study recommends that impacts on adjacent residences should be at a target of 50dBA. This value is intentionally 5dBA lower than the City of Victoria's Noise Bylaw from Quiet Districts to account for the "impulsive character of pickleball noise." Cities can achieve this target through either one or a combination of sound mitigation strategies.

Setback Distances

The most certain way to achieve sound mitigation is to locate courts at a sufficient distance away from adjacent residences. An acoustic study from the BCRPA provides guidelines that range between 50m and 160m when no other sound mitigation is used. These distances are identified in Figures 19 and 20.

The study notes that the setback recommendation "does not apply to situations where the point of reception overlooks the court." It is therefore suggested that courts adjacent to taller residences are dealt with on a case-by-case basis.

# of Courts	Setback Distance required to meet 50dBA			
	Noise Mitigation		3m Noise Barrier	
	Hard Ground	Soft Ground	Hard Ground	Soft Ground
2 (1x2)	65	50	35	30
4 (2x2)	90	75	50	45
6 (2x3)	105	85	55	50
12 (3x4)	160	115	75	60

Figure 19: Recommended setbacks for courts.

# of Courts	Setback Distance required to meet 50dBA			
	Quiet Equipment, No Barrier		Quiet Equipment, 3m Barrier	
	Hard Ground	Soft Ground	Hard Ground	Soft Ground
2 (1x2)	35	30	20	15
4 (2x2)	50	45	25	20
6 (2x3)	55	50	30	25
12 (3x4)	75	60	40	35

Figure 20: Recommend setbacks for courts inclusive of quieter equipment.

2. Reflective & Absorptive Sound Barriers

These products are curtains that can be installed on perimeter fences (e.g., Acousti-fence). They work by mitigating the sound levels leaving the courts. Absorptive barriers have the potential to provide better acoustical performance and can be more expensive than some reflective products. However, the BCRPA acoustic study notes that the purpose of absorptive barriers is for cases with taller adjacent residences (i.e. mid-rise to tower buildings) to reduce reflected sound.

Anticipated sound impact: at least a 5dBA reduction

3. Berms and Landscaping

Natural features and landscapes can be used to dampen sound. Berms provide sound absorption but may require a substantial amount of land to accommodate slope integrity. Dense plantings can also provide sound mitigation, but in usual cases would require a sizable planting area to make a significant impact.

Anticipated sound impact of a 50m wide tree belt: 3-5 dBA

Figure 21: An example of a sound barrier.

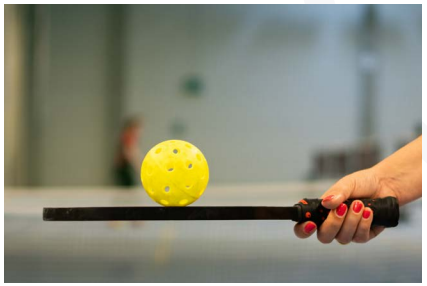


Figure 23: Specially-designed balls and paddles can lower the decibel level of play.

4. Special "quieter" equipment (e.g., paddles and balls)

The market place for quiet equipment is evolving as are approaches to standardize. As an example, In September 2023, USA Pickleball announced a quiet category to establish consistent guidelines and encourage further improvement to products.[1]

A challenge today is some equipment may alter the performance of the sport (e.g., foam balls) and/or may be resisted by players. Likewise, municipalities may be challenged in seeking to enforce their use. Since the market is currently evolving, it is worthwhile to monitor improvements. If in the future, these products become the norm, a reconsideration of their use within the strategy is warranted.

Anticipated sound impact: up to a 5dBA reduction

[1] https://usapickleball.org/news/usa-pickleball-announces-quiet-category-for-pickleball-products/

Figure 22: Using landscaping to dampen sound.

Setback Distances

The existing inventory was assessed based on recommended setbacks.

Victoria Esquimalt Oak Bay Saanich

Court name	Existing setback	Neighbourhood sound concerns	Existing sound mitigation	Critieria from Acoustic Study applied to courts		
				Can it achieve recommended sound acoustics?	Needed setback	
					Barrier	Barrier & Quieter Eqp.
Franklin Green Park	17m	No	No	No	35m	20m
Tolmie Park	17m	Yes	Acoustic Fence	No	30m	15-20m
Majestic Park	26m	No	No	With barriers and quieter eqp.	35m	20m
Oaklands Park	26m	No	No	With barriers and quieter eqp.	35m	20m
Esquimalt Rec Centre	29m	No	Lacrosse Board	With barriers and quieter eqp.	35m	20m
Hampton Park	30m	No	No	With barriers and quieter eqp.	35m	20m
Carnarvon Park	33m	Yes	Lacrosse/Acoustic	With barriers and quieter eqp.	45m	25m
Copley West Park	36m	Unknown	No	With barriers	35m	20m
Esquimalt High School	37m	No	No	With barriers	35m	20m
Barnard Park	38m	Yes	No	Courts are near taller buildings so appropriate setback is currently unknown		
Rosedale Park	43m	No	No	With barriers	35m	20m
Central Park	49m	Unknown	No	Courts are near taller buildings so appropriate setback is currently unknown		
McMinn Park	69m	Yes	Limited barriers	With barriers	50m	25m
Prospect Lake Park	130m	No	No	Yes	N/A	N/A
Beacon Hill Park	188m	No	No	Yes	N/A	N/A

Figure 24: Existing courts and setback distances.

Outcomes on Noise

As shown in Figure 25, sound has not been a concern in some locations, which should factor into decision making. However, there are several courts that currently do not meet the minimum recommended setback from the Acoustic Study. These can be grouped into courts that:

1. Cannot meet the sound target based on products considered in the Acoustic Study.
2. Meet the sound target with acoustic dampening barriers and regulating quieter equipment.
3. Meet the sound target with acoustic dampening barriers.
4. Are near taller buildings and should be treated with special consideration (Barnard Park and Central Park).
5. Already meet the sound target.

The strategy attempts to address sound measure consistently and effectively.

The proposed approach is to treat the five groupings separately. The first group is suggested for conversion to tennis-only or another use as there are few options to address noise as these locations. This action will have implications for the supply and demand of courts, so this aspect will be considered within this section's (Court Supply) recommendations.

The other grouping will be approached through design considerations that are explored in Section 4 Court Design.

3.3 Supply Recommendations

The supply and demand analysis suggests that there is merit in increasing the number of courts within Victoria, Saanich, Oak Bay and Esquimalt. Yet to address sound effectively, it is proposed to decommission some courts out of the inventory.

To support the municipalities in confronting this challenge, the following content is a suite of recommendations aiming to create a sufficient supply of courts to meet demand over the next decade in a way that does not create noise issues for neighbours. The supply also aims at supporting tennis users (and others) in their own desire for access to court space.

The section ends with fives optional paths that municipalities may want to take to achieve their goals for supply.

Figure 25: Sounds barriers at Tolmie Park. (Image Source: O2)

Recommendation #1

Add more courts to existing locations, with a focus on Victoria and Saanich

Rationale

Some courts are already popular, have sufficient setbacks, and potential space to enable expansions. This recommendation follows where players already go.

Engagement feedback also revealed a preference for hubs. This approach allows for more people to drop-in to find a court and be a part of the social aspect of pickleball. It also provides enough capacity to justify more amenities that enhance play, such as practice walls and washrooms (see *Section 4: Designing Courts*).

The hubs approach can also reduce the chance of noise issues as a municipality can achieve the same number of courts with fewer locations. These locations can be focused on areas that have sufficient setbacks.

The number of courts at a Hub can vary, though any location with six or more will see the concentration of activity necessary to be a destination for players. Hubs from other cities range from six to twenty four. A city may also have one hub or several.

The following criteria is intended to help guide the number of courts at a hub:

- The city-wide objective for the number of courts.
- The amount of population within a reasonable distance.
- The number of courts the park site can fit (and consideration of other competing interests on site).
- The types and scale of amenities contemplated for the Hub (e.g., efficiencies and capacity).

Examples

- McMinn Park (Saanich)
- Prospect Lake Park (Saanich)
- Beacon Hill Park (Victoria)
- Copley West Park (Saanich)

Figure 26: Existing pickleball court. Some park locations have spaces that could potentially accommodate additional courts.

Recommendation #2

Build courts at new park locations and consider collaboration across municipalities

Rationale

There is an opportunity to create new court locations that have sufficient setbacks. The approach allows for greater freedom in siting a court, including the distance, layout and compatible adjacent uses.

Since players travel across the four municipalities and the surrounding CRD, new courts should be considered as part of an inter-municipal network. Meeting the demand for new hubs will be difficult in certain areas (ex. denser urban forms), so municipalities within the CRD should consider collaboration as a creative solution for efficient use of space.

Examples

- Topaz Park (Victoria)
- Fowler Park (Saanich)

Recommendation #3

Partner with a private group to develop an indoor dedicated facility

Rationale

There was strong support for playing pickleball indoors, roughly the same as the support for playing outdoors. Currently, Pearkes Recreation Centre in Saanich is the only indoor option that provides pickleball beyond temporary times in multi-purpose gyms.

It is challenging to find space for new activities in existing recreation centres, as they accommodate a range of interests. Yet, cities may also be challenged with funding a new dedicated indoor facility on its own. The recommended approach is to work with an interested private group to deliver and manage the facility. The City's role could range from funding support to owning the land.

Precedents

In 2023, Red Deer Pickleball Club began leasing space for indoor courts at Bower Place Mall within Red Deer. This represents a fully private venture. The Vernon Pickleball Association partnered with the City to deliver the Marshall Fields complex on city land.

Example

This recommendation would need to be pursued on a case-by-case basis where opportunities arise.

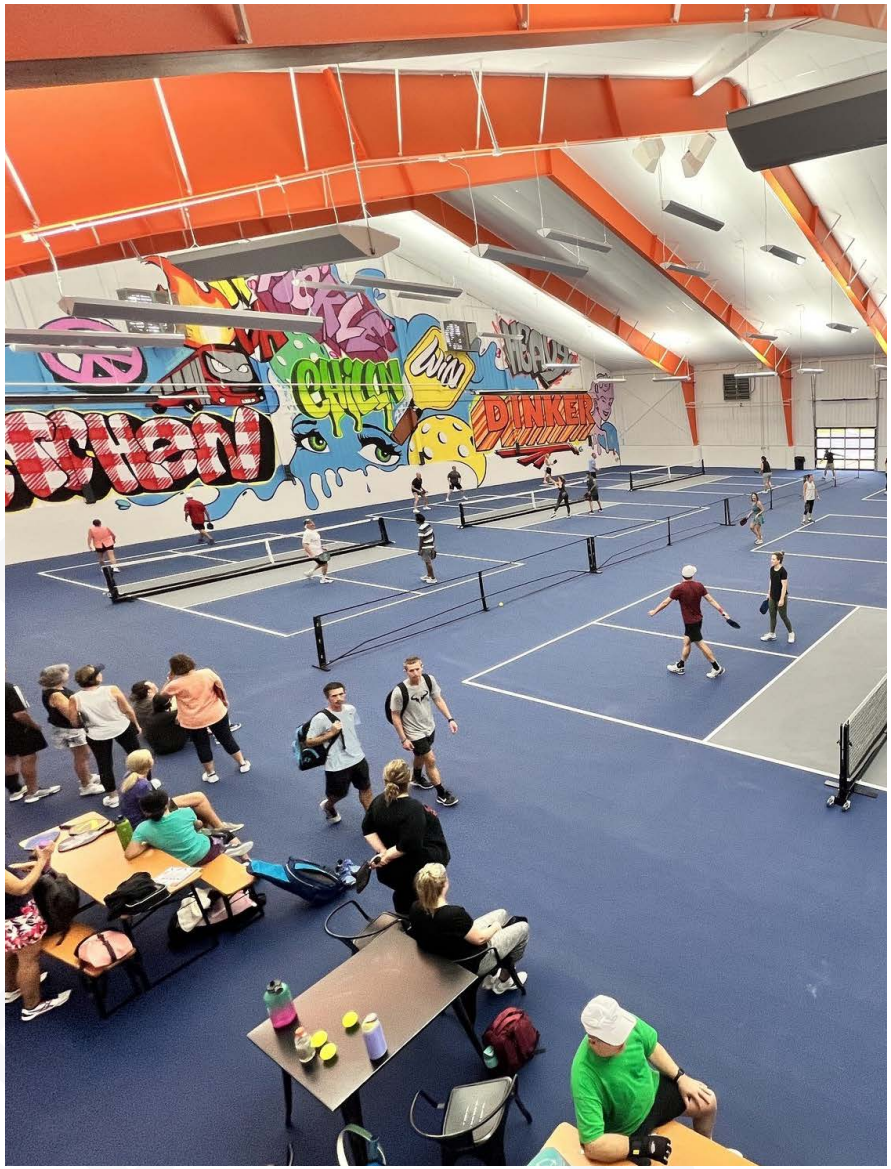


Figure 27: An indoor facility, Pickle and Chill, in Columbus, US. (Image Source: Cleveland Scene, 2023.)

Recommendation #4

Install pop-up or seasonal courts

Rationale

Given the cost and planning time to develop new courts, a nimble, cost-effective option carries benefits for a municipality. Some cities are installing a 'roll-out' surface with pop-up nets in temporary spaces such as plazas or malls.

The pop-up approach allows a city to test out locations, activate underutilized spaces, or coordinate programming with events (e.g., outdoor sport festivals).

The other potential use is in regard to park or recreation spaces not well used in particular seasons such as a skating rink. By adding a pop-up court, the City benefits from efficient use of space.

Examples

- Curling clubs
- Lacrosse boxes
- Plazas
- Events
- Parking Lots
- Conference Centres

Figure 28: Pop-up court in Philadelphia, US. (Image Source: USA TopNewsMedia.com)

Recommendation #5

Convert courts to tennis only or a new use where recommended sounds levels cannot be achieved

Rationale

The BCRPA and Pickleball BC commissioned the Pickleball Noise Assessment, 2023, which establishes recommended setback distances. The objective is to reach 50dBA. As discussed earlier in the section, there are courts that cannot meet the suggested sound levels based on sounds barriers.

While some of these courts meet the setbacks when quieter equipment is implemented, it is recommended that this arrangement be avoided when other solutions are available. See recommendation #6.

Tennis BC and Pickleball BC also released a joint statement requesting that cities focus on dedicated courts for each sport where possible.

The municipalities should only consider removing pickleball if there are sound complaints from adjacent residences.

Examples

- Franklin Green Park
- Tolmie Park
- Hampton Park
- Majestic Park
- Oaklands Park
- Barnard Park (see sound testing recommendation #8)
- Central Park (see sound testing recommendation #8)

Figure 29: A dedicated tennis court.

Figure 30: An example of converting a court to a new use.

Recommendation #7

Undertake a utilization review of tennis courts with setbacks higher than 50m

Rationale

There are a limited number of tennis courts in the four partnering municipalities that have setbacks from residences beyond 50m. These courts have the potential to function well as dedicated pickleball courts instead.

The decision of whether to convert any tennis court should be based on a current review of utilization, which was out of scope of this pickleball strategy.

Since tennis is also a popular sport with a dedicated community of players, any conversion of tennis courts to dedicated pickleball courts may best go alongside a net replacement of tennis courts somewhere else in the area. This approach reduces risk of tennis players losing overall access unless it is determined that demand is no longer as high.

Examples

- Beacon Hill Park
- McMinn Park
- Lambrick Park
- Henderson
- Rosedale Park
- Hyacinth Park

Figure 31: Tennis courts setback.

3.4 Supply Options

To help the municipalities in future decision making, this report outlines five paths in how to address unmet demand: (1) Maintaining the same number of courts, (2) Building new Hubs at Topaz Park and Fowler Park, (3) Keeping up with population growth, (4) a Moderate expansion and (5) Upper tier expansion. The chosen position will depend on each municipality's priorities -- and each municipality may choose different approaches.

To reiterate an observation from the inventory comparison, there was no identified standard for how many courts per population is appropriate. Instead, each path is about achieving a different goal.

The time horizon for these decisions is 2038 and includes population growth.

The Implementation Section at the end of the document provides a concept for how each of these paths could be achieved. This exercise is to support a sense of scale and effort needed, but not a finalized investment package.

Option	Levels of Service in 2038	Courts Needed
Option 1 Maintain same number of courts	1 court : 6,570 people	Maintain 44 courts
Option 2 Build new hubs at Topaz Park and Fowler Park	1 court : 5,900 people	49 courts (assumes 12 decommissioning)
Option 3 Keep up with population growth	1 court: 5,700 people	50 courts
Option 4 Undertake moderate expansion	1 court: 4,500 people	64 courts
Option 5 Upper tier expansion	1 court: 3,500 people	82 courts

Figure 32: Paths for municipalities.

4 Designing Courts

The design of courts impacts the level of play and enhances the overall experience. The report draws on industry standards as well as engagement feedback on detailing the features of courts.

4.1 Condition Considerations for Courts

Indoor courts offer a consistent all-weather space for playing. For Greater Victoria's climate, this space is especially helpful during rain or colder days over the winter.

Outdoor courts are also popular as they provide an opportunity to enjoy warmer weather, sunshine, fresh air, and be immersed in a park environment.

The two types of courts have overlapping considerations when it comes to their design. The following section lists the key elements.

Surfaces: it is common for gymnasiums in recreation centres (where most indoor pickleball is currently played) to have a hardwood surface. While some players may support this surface for pickleball, some respondents noted in the engagement that they found hardwood slippery or reflected too much glare from the lighting.

The current best practice for indoor and outdoor courts is a concrete or asphalt base following by an acrylic surface. Some courts in other cities have used clay and grass.

The engagement also raised the need for positive drainage to avoid puddles, consistent grading for even playing, and high-visibility painted lines.

Ceiling Heights: during the engagement, some respondents noted the importance of sufficient ceiling heights. For general play, a minimum of 18' is recommended, whereas 30' is recommended for tournament play.

Layout and Size: outdoor courts should be oriented north-to-south to avoid timing where a player has the sun directly in their view. For indoor courts, the orientation is not important.

The standard court is 44' (13.41m) x 20' (6.10m). The recommended spacing for out of bounds area differs for the play type. Pickleball Canada recommends a minimum of 60'x30' for the court (or an extra 8' and 5' for spacing) and appears to allow this for tournament play.[1]

Nets and fencing: the engagement also raised players' preference to play on pickleball nets rather than tennis nets. And in the case of Beacon Hill Park, standard and permanent fencing was suggested.

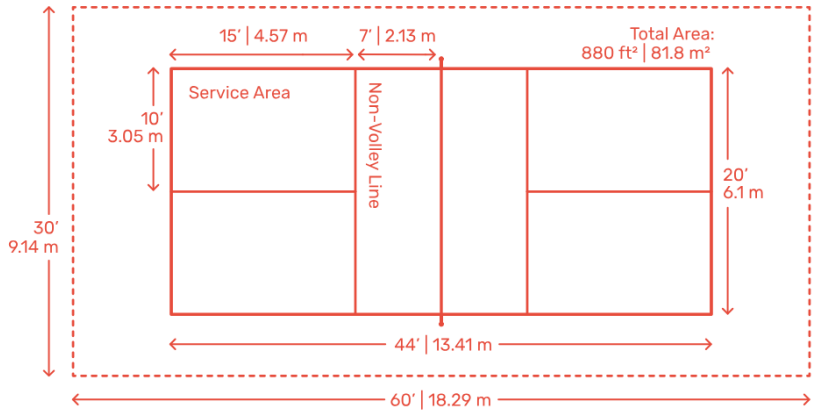


Figure 33: Standard Court Layout. (Image Source: dimensions.com)

[1] https://pickleballcanada.org/wp-content/uploads/2021/02/1-PCO-IFP-2021-Pickleball-Rule-book-Canada.pdf. And see https://pickleballcanada.org/wp-content/uploads/2021/03/STANDARDS-and-EXPECTATIONS.pdf

4.2 Considerations for Court Amenities

Amenities can enhance the experience of playing pickleball. They can offer convenience, enjoyment, and support a higher level of play. During the engagement respondents prioritized amenities. Providing washroom access received the highest share of "High priority" followed by garbage receptacles.

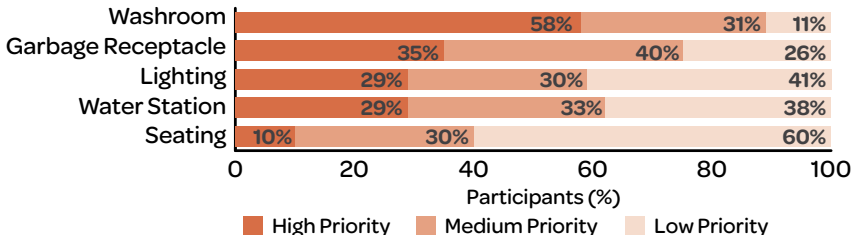


Figure 34: Pickleball amenities prioritized during the engagement

Respondents also raised suggested improvements through wind protection, court dividers, bike racks, and practice walls. A few respondents also suggested that simple cleaning equipment (e.g., broom) should kept at the courts to allow players to remove debris themselves.

Installing all amenities at every court would be costly from a capital and ongoing operations perspective. And for some, such as lighting, not every court has the appropriate context for the feature.

It is important, therefore, for the municipalities to be strategic in where to focus efforts in making investments to amenities. The recommended approach to create two categories of courts: The Neighbourhood Court & the Hub Court. The former can be oriented towards casual play with lower usage while the latter can accommodate higher levels of play and crowds.

The direction to guide amenities between a Neighbourhood Court and a Hub Court is listed below. Amenities listed as "Potential" will need to be assessed on a court-by-court basis. The municipality may for example review whether the court location is appropriate for lighting based on adjacent residents or minimizing effects on wildlife corridors.

Amenity	Neighbourhood Court	Hub Court
Fencing	Yes	Yes
Pickleball Nets	Preferred but tennis nets possible	Yes
Lighting	No	Potential
Washroom Access	Not required	Potential
Garbage Receptacles	Yes	Yes
Water Fountains	Not required	Yes
Bike Racks	Yes	Yes
Cleaning Equipment	Potential	Potential
Practice Walls	Not required	Potential
Court Dividers	Not required	Potential
Wind Protection	Not required	Potential
Sound Mitigation	As needed	As needed

Figure 35: Suggested amenity direction for Neighbourhood Courts vs Hub Courts.

4.3 Design Recommendations

A focus on enhancing the experience at courts not only responds to suggestions raised from the engagement, but also supports using existing facilities to their highest potential. As park and recreation systems try to accommodate a wide range of shifting uses, this approach is particularly valuable.

A set of recommendations seek to address noise issues within the current inventory of courts and to support the creation of hubs.

Some of the decisions for amenities will occur at the court-specific scale, which is too fine a grain for the Strategy. However, the rest of this section identifies recommendations to guide the municipalities' approach.

Figure 36: Pickleball facility. (Image Source: SportFacilities.com and Tyler AdobeStock)

Recommendation #7

Add sound mitigation or adjust court layouts where doing so would make a meaningful impact

Rationale

The BCRPA and Pickleball BC commissioned the Pickleball Noise Assessment, 2023, which establishes recommended setback distances. The objective is to reach 50dBL. As discussed in Section 2 Court Supply, there are several courts that currently do not meet the recommended setback, but could with appropriate measures.

This action should address noise issues while maintaining pickleball play.

For the Carnarvon Park and Esquimalt Recreation Centre (outdoor), the solutions may require more involved effort, such as adjusting court layouts, moving one or all courts, or converting the courts to covered facilities.

Examples

1. Carnarvon Park (Oak Bay)
2. McMinn Park (Saanich)
3. Esquimalt Recreation Outdoor (Esquimalt)
4. Copley West Park (Saanich)
5. Rosedale Park (Saanich)

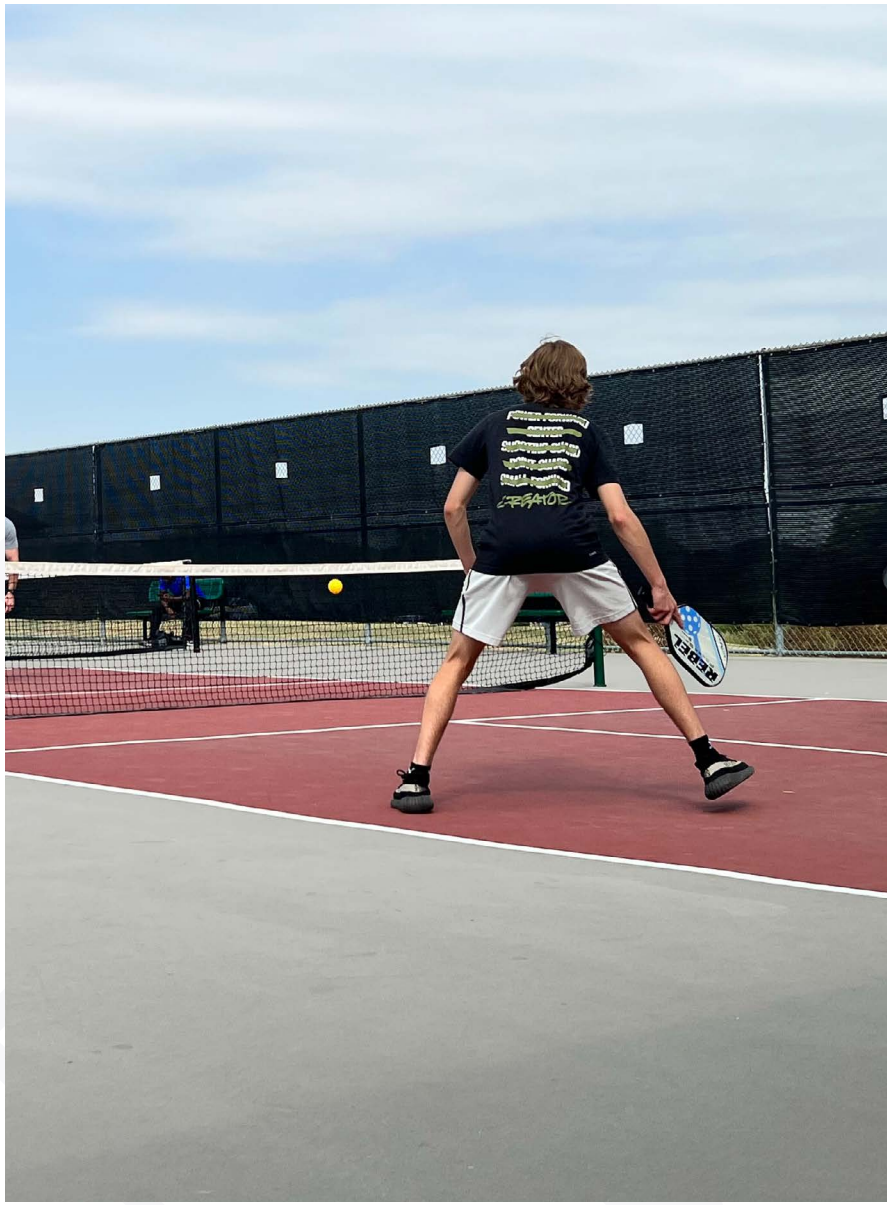


Figure 38: Pickleball court with sound mitigation.

Recommendation #8

Conduct sound testing at courts adjacent to taller buildings

Rationale

The BCRPA and Pickleball BC commissioned the Pickleball Noise Assessment, 2023, which establishes recommended setback distances. The objective is to reach 50dBL. The report notes that the prescribed setbacks do "not apply to situations where the point of reception overlooks the court." Courts next to taller buildings appear to merit special considerations due to sound barriers either not dampening at the needed heights or reflecting sounds towards buildings.

Setbacks adjacent to taller buildings was not identified. Therefore, a follow up investigation is recommended where the selected courts are assessed by a sound measuring tool.

The results of the sounds testing should help inform the future vision for these courts. In the meantime, the courts are recommended to function only as tennis courts.

Examples

1. Barnard Park (Victoria)
2. Central Park (Victoria)

Figure 39: Pickleball courts next to taller residential buildings. (Image Source: The Squamish Chief)

Recommendation #9

Make improvements relating to condition and amenity offerings at hub courts

Rationale

The engagement provided rich feedback on improvements players would like to see at courts. These investments are focused on getting the most out of existing courts, thereby reducing some of the need for new inventories.

The approach also supports efficient investments in enhancements where there is sufficient supply to draw larger numbers of players.

The relevant improvements are on a case-by-case basis and depend on the court location. The recommended features are described earlier in this section.

See Recommendation #1 on assessing the number of courts for creating Hub Court locations.

Examples

1. Carnarvon Park (Oak Bay)
2. Esquimalt Recreation Centre Outdoor (Esquimalt)
3. McMinn Park (Saanich)
4. Beacon Hill Park (Victoria)

Figure 40: Sunset Park in Las Vegas, US.

Precedents

There are many hubs throughout Canada and the United States to draw on insight. Sunset Park in Las Vegas, US offers one way of integrating lighting, washrooms, water fountains, court dividers, and garbage receptacles. Shade structures and landscaping also help to soften and increase comfort in what can be a relatively large amount of hardscaping.

5 Bookings, Allocation and Drop-in

5.1 Current Bookings & Drop-in Approaches

The four municipalities manage playing times in overlapping approaches that incorporate organized clubs, programmed drop-in, as well as spontaneous play. These approaches offer a variety of playing preferences and allow the municipalities levers to manage capacity and demand on courts.

The existing approaches to managing playing times are defined below as these definitions will be used throughout this section. The approaches are applied differently depending on the municipality and by individual court location.

- Block Booking for Clubs: groups apply to municipalities on an annual basis to reserve standing times (e.g., a weekly time slot) on a court.
- City Managed Drop-in: Some of the municipalities host pickleball programming where players sign up in advance. This approach is currently only undertaken at indoor courts.
- Self-regulating Drop-in: This refers to a system that does not require staff or volunteers to schedule or oversee. There are two current approaches in the four municipalities: the paddle-in System and Half Hour Play/One Set turnover.
- Individual Court Booking: Players would be able to reserve one-off time slots throughout the system.

While this mix serves different preferences of play, this section will explore improvements to increase capacity, convenience and consistency on the courts.

Figure 41: Drop-in McMinn Park. (Image Source: O2)

Individual Booking: The City of Victoria currently does not have a system for individuals to book courts. The District of Saanich and Township of Esquimalt permit individuals to book indoor courts throughout the winter season at specified time slots. The Township of Oak Bay allows individuals to book at the outdoor courts at Carnarvon Park.

Drop-in: All outdoor courts throughout Victoria, Saanich, Oak Bay and Esquimalt have a first-come-first/self-regulated drop-in approach. The District of Saanich and the Township of Esquimalt manage organized drop-in time slots at their indoor courts. The District of Oak Bay does not organize managed drop-in programming.

- Victoria
- Esquimalt
- Oak Bay
- Saanich

Court Name	Individual Booking	Reserved Drop-in	Informal Drop-in	Club Block Booking	Municipal Programming
Indoor					
Cedar Hill Rec Cen.	Yes	Yes	No	Yes	Unknown
Esquimalt Rec. Centre	No	Yes	No	No	Yes
Henderson Rec Cen.	Yes	Yes	No	No	Yes
Pearkes Rec. Centre	No	Yes	No	No	Unknown
Saan. Commonwealth Pl.	No	Yes	No	No	Unknown
Outdoor					
Barnard Park	No	No	1st come	Yes	Unknown
Beacon Hill Park	No	No	Paddle in	No	No
Carnarvon Park	Yes	Yes	1st come	Yes	Yes
Central Park	No	No	1st come	Yes	Yes
Copley Park	No	No	1st come	No	Unknown
Esquimalt High School	No	No	1st come	No	No
Esquimalt Rec Cen.	No	Yes	1st come	No	Yes
Franklin Green	No	No	1st come	No	Unknown
Hampton Park	No	No	1st come	No	Unknown
Majestic Park	No	No	1st come	No	Unknown
McMinn Park	No	No	1st come	No	Unknown
Oaklands Park	No	No	1st come	Yes	Unknown
Prospect Lake Park	No	No	1st come	No	Unknown
Rosedale Park	No	No	1st come	No	Unknown
Tolmie Park	No	No	1st come	No	Unknown

Figure 42: Courts and Current Approaches to Manage Playing Times.

Club Block Booking: Every year, the City of Victoria and the District of Oak Bay allow groups of players to apply for standing court reservations. The municipalities try to accommodate each group's preference where possible while balancing other uses for courts (e.g., open drop-in). These groups benefit from weekly, predictable time slots where they do not have to worry about competing for courts.

In 2022, the City of Victoria stopped accepting new applications for block bookings, while still honoring historical permits. This pause allows the City to refine its allocation approach to meet growing demand.

The District of Saanich does not currently allow club booking at outdoor courts. However there are groups that are unofficially reserving outdoor courts without District of Saanich's permits. The situation has created some issues and disagreements between players.

The Township of Esquimalt does not currently offer block bookings for clubs.

5.2 Fees & Booking Platforms

The four municipalities manage booking, programming and fees through digital services. Victoria, Oak Bay and Esquimalt run on Perfect Mind and Saanich runs on Active Network.

Each municipality sets it own fees for bookings and admission to drop-in sessions. These fees are outlined on Figure 44. The table also details existing fees for access. While there is some variation, the approach is to price drop-in fees around half of the fees to book a court. During the engagement, there were some responses noting concern about recent increases in fees at Pearkes Community Centre.

To help with comparisons, fees from other municipalities are listed below. The comparison reveals a relatively wide range between fees.

	Booking Platform	Fee to Book a Court	Fee for Drop-in
Victoria	Perfect Mind	$2.67 per hour for minor organization, $5.34 per hour for Adult/senior organization, $8.01 per hour for Commercial rate, $2.67 per hour for Clubs, $26.59 per day for minor tournaments, $53.18 per day for adult tournaments	N/A
Saanich	Active Network	Indoor only: $20.00 at Cedar Hill Rec Centre, Pearkes and Commonwealth Place Rec Centres	$7.25 at Saanich Commonwealth Place
Oak Bay	Perfect Mind	$15.50 Indoor $10.00 Outdoor. Clubs get 20 weeks for cost 17 weeks	$7.00
Esquimalt	Perfect Mind	N/A	$3.25-6.00
Vernon	Jegysoft	Fees administered by player association	
Nanaimo	Perfect Mind & Courtreserve	Indoor: $44.60 Outdoor: $6.83	$0.00-7.00
North Shore	Perfect Mind	North Vancouver Indoor only: $12:36	$3.15
Kamloops	LoveOurClub App	Indoor: $22.00-40.00 Outdoor: $8.00 per hour	$5.50-8.00
Surrey	City email	Outdoor: $1.54-3.09, Club season: $1,377.56 or $1.63 per hour	$6.00

Figure 43: Current Recreation Booking Systems and Fees.

5.3 Engagement Feedback on Bookings, Drop-in and Club Block Booking

Respondents from the engagement provided feedback on the existing approaches. They also offered suggestions for improvements. For a full overview of respondent feedback, refer to this pickleball strategy's What We Heard Report, 2023.

The Booking System

Feedback on booking systems are likely to include individual court bookings (e.g., Carnarvon Park) and drop-in play that is managed by the municipality (e.g., Pearkes Recreation Centre).

The majority of respondents noted that the systems they used are either "Good" or "Very Good". However this rating would not capture the lack of a booking system for many courts.

Figure 44: Onlookers to a tournament in Victoria. (Image Source: VPRA)

Aspects of the system that are working well

- Ease of some uses on the web page.
- Some ability to see schedule.
- Option to pay online or by phone.
- Being able to book in advance.

Suggested Improvements

- A single consistent system for every municipality.
- Allowing bookings at more courts.
- Being able to see all availabilities across the four municipalities.
- Additional features: "Find a partner", wait lists, cancellations, and view of existing reservations.
- Some respondents think fees are too high. 53% of respondents also noted that they would be unwilling to pay more for a reservation.
- Some issues raised with unofficial booking at outdoor courts in Saanich.

The Drop-in System

Feedback on the drop-in system likely includes self-managed approaches (e.g., paddle-in) as well as City-managed reserved programming at indoor recreation centres. The majority of respondents rated their experience dropping in at a court as either "Very Good" and "Good".

Aspects of the system that are working well

- Simplicity and flexibility.
- Variety of skill levels.
- Fair and quick turnover - support for paddle-in.
- Welcoming, social and friendly.

Suggested Improvements

- Separate times/courts based on skill level.
- Signage with rules and process.
- Extending a system like paddle-in beyond Beacon Hill Park.
- Promote where and when drop-in exists.
- Limit the number of people at busy indoor locations.

Figure 45: Sign at Beacon Hill Park, where all play is through open drop-in through the paddle-in system.

Club Block Bookings

Respondents reveal a mix level of support for club block booking. Some players noted that club bookings provided a predictable and organized way for a group of players to meet. On the other hand, other players thought club bookings made the courts less accessible. Below is a summary of the feedback received.

Aspects of the system that are working well

- Predictable and organized approach.
- Promotes a social environment.
- Meets the needs of people who want to play the same core group, rotating in an out.

Suggested Improvements

- Enhance equity through introducing or refining lottery for court allocation.
- Balancing club bookings with open drop-in.
- To no longer consider historical agreements.
- Better way to confirm who has the court at a particular time.

Figure 46: Signs at a court highlighting club booked times. An app or web interface with a QR code place on the court would be a weather resistant option.

5.4 Recommendations: Tiered Systems

The engagement reveals support for a mixed system of club court booking, drop-in, and individual booking. This mix of systems would effectively serve different preferences for playing and optimize the capacity of courts.

Each municipality can tailor the use of these systems, but some degree of consistency would benefit players through simplicity and predictability. The process is based on a tier system of priorities that allow balancing the use of courts, which also helps to spread out the over-use and under-use that can be seen across the current court system.

The proposed system is outlined in the recommendations on the following pages. It is recommended that the system is prioritized in the sequence below.

- First preference should be given to municipal programs.
- Next preference should be to reserve drop-in time slots.
- Next preference should be for club block bookings. A recommendation later in this section promotes two categories within clubs to support prioritization.
- Individual court booking through the season would be available for remaining time slots.

Manage Club Block Bookings

Reserve Self-Regulated Drop-in & City Drop-in Programming

Enable Individual Court Bookings

Recommendation #10

Enable individuals to book courts

Rationale

The engagement revealed support for individuals having the ability to reserve time slots for courts. As discussed earlier in this section, currently the only locations where individuals can book courts are Carnarvon Park (Oak Bay), Cedar Hill and Pearkes Rec Centres (Saanich), and Henderson Recreation (Oak Bay). These last two locations are in multi-purpose gymnasiums that only have pickleball for limited times.

Allowing individuals to book courts would provide a predictable option for players who do not want to wait at drop-in or for other players to finish playing.

Municipalities would need to adjust their own booking systems to enable this ability. The feature should be convenient and allow for seeing court availabilities across the four municipalities.

To ensure a mix of play, municipalities should reserve sufficient time slots for drop-in, clubs and other programming.

Figure 47: Top left: a City of Victoria poster advertising booking. Bottom left: pickleball players at Carnarvon. Bottom right: an example of someone booking a court using a cellphone.

Recommendation #11

Adopt a joint app/interface showing court availability across partnering municipalities linked to each municipality's existing system

Rationale

Currently, information on court availability is not well known. Particularly at indoor courts, players are able to consult schedules for when drop-in pickleball exists. At other courts, clubs have either posted their reserved time slots on the entrance or organized drop-in socials on social media. The result does not support convenient awareness for players, particularly new players trying to understand where and when they can play.

The other challenge with the status quo is with players disagreeing on who has the court booked or whether the booking is official.

Several respondents in the engagement recommended a single interface that shows court availability across the four municipalities. The interface would be open to the public and could be accessed on any digital device.

Since each municipality has its own booking system, the recommended approach is to use a common interface that draws on basic information from each system, such as whether a court is reserved. The user would then be able to see availabilities and be taken to the municipality's booking system to finalize the booking (through a link).

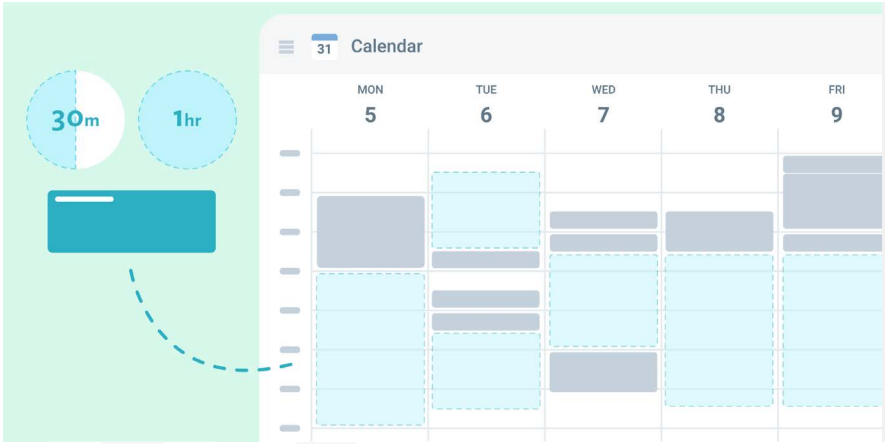


Figure 48: A conceptual calendar view of available time slots.

The most prudent first step would be to see if any of the existing web products currently on the market would be able to deliver this service (see Precedents). If not, a tailor-made solution may be best.

Precedents

An app or web interfacing showing availability across multiple municipalities was not identified. However, there are several services on the market that provide court bookings in an intuitive calendar layout. Some examples include Gametime, Court Reserve, and Pickleball Booker.

Recommendation #12

Initiate a fair system to allocate block booking times for groups

Rationale

Clubs (or collections of players) apply to reserve standing times through the season at certain courts. Given the limited number of courts and demand from clubs, municipalities are challenged to allocate time slots that best utilize capacity.

As discussed earlier, several cities have allocation policies and principles for sports fields and ice rinks. Allocation for courts is not as common, but approaches can be tailored to fit the sport. It is recommended that refinements to the process should be guided by the following:

- Applications for club bookings should distinguish between two categories: Clubs that are formal groups allowing for open membership and Play Groups that are more informal and intend on playing amongst themselves. Clubs should be prioritized above Play Groups. This priority could be accomplished through a lottery among Clubs and a second lottery among Play Groups.
- Historical permits year-to-year may be taken into consideration for Clubs. However, they should not drive allocation for Play Groups. This approach will allow municipalities more flexibility in managing times and group preferences.
- Municipalities should decide on a common or similar date to accept seasonal block bookings.

Precedents

In 2021, the Cowichan Valley Regional District's Kerry Park Recreation published allocation priorities using the following sequence: i) recreation programs ii) local minor/adult user groups and school groups iii) general free play users iv) sport tourism special events and v) out of area organizations.[1]

Figure 49: Club players using Central Park. (Image Source: O2)

[1] https://www.cvrd.ca/DocumentCenter/View/104202/KPRC---Outdoor-Pickleball-Complex---Court-Guidelines-2022-06-23

Recommendation #13

Adopt paddle-in systems

Rationale

The engagement revealed a strong popularity for drop-in play, and particularly for the paddle-in system. In this system, players insert a paddle into a hold adjacent to courts to indicate that they would like to play next. Currently, this system only exists at Beacon Hill Park, but respondents during the engagement supported its adoption elsewhere.

Drop-in play provides a flexible and accessible option for players to spontaneously visit a court. It also supports a simple and efficient turnover at the courts.

The other benefit to a drop-in system is that it supports a more social setting among players. During the engagement, one respondent noted the larger numbers of players they had met through drop-in.

Figure 50: Paddle-in system at Beacon Hill Park.

Recommendation #14

Reserve drop-in time slots oriented to different skill levels

Rationale

A repeated theme from the engagement was that players preferred drop-in that suited their skill levels. With open drop-in, these respondents argued that some beginners may find the experience more intimidating and advanced players may not receive the level of play they are wanting.

To address this suggestion, municipalities can offer their own programming that splits up different skills. For other drop-in time slots, municipalities may simply choose to encourage clubs or other player-led drop-in to consider following this approach.

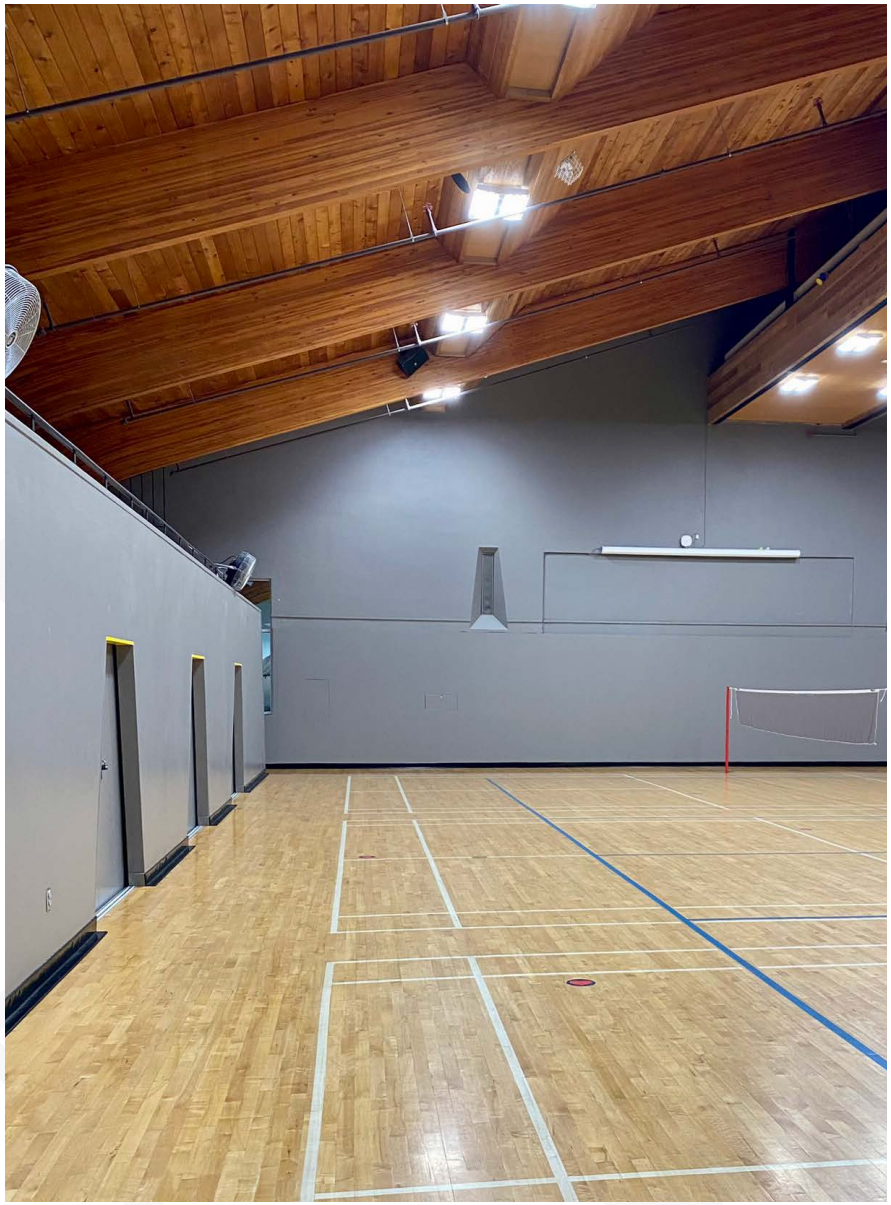


Figure 51: Cedar Hill Recreation. (Image Source: O2)

6 Implementation

6.1 Funding

Most of the recommendations listed below will require funding towards capital or operating needs. Each municipality would need to go through their own budgetary processes.

For recommendations that have a shared impact, municipalities should consider opportunities for collaborative funding between one another. The app/web interface showing court availability is the clearest example of an action relevant to each municipality. The establishment of a new court hub (such as an indoor dedicated facility) also raises the potential for collaboration. Given land constraints and cross-movement of players, municipalities may decide that it is worth cost-sharing for a facility that does not reside in their own jurisdiction.

Recommendation	Time Horizon
Conduct sound testing at courts adjacent to taller buildings	Short term
Convert courts to tennis only or a new use where recommended sound levels cannot be achieved	Short term
Add sound mitigation or adjust court layouts where doing so would make a meaningful impact	Short term
Install pop-up or seasonal courts	Short term
Undertake a utilization review of tennis courts with setbacks higher than 50m	Short term
Adopt paddle-in systems at courts	Short term
Initiate a fair system to allocate block booking times for groups	Short term
Reserve drop-in time slots oriented to different skill levels	Short term
Enable individuals to book courts	Short term
Adopt a joint app/interface showing court availability across partner municipalities linked to each municipality's existing system	Short term
Add more courts to existing locations	Medium term
Build courts at new park locations	Medium term
Make improvements relating to condition and amenity offerings at existing hubs	Medium term
Partner with a private group to develop an indoor dedicated facility	Long term

6.2 Conceptual arrangements to achieve paths

To help provide a sense of how the different recommended strategies could translate into realizing one of the five paths, the tables provide examples.

Path	Description	Service Level Summary
Path 1: Maintain the same net number of courts	This concept is based on only replacing the decommissioning of some courts with additional courts in new locations.	• Level of Service in 2038: 1:6,570 • Number of courts: 44 (12 replace)
Path 2: Only Build Hubs in Topaz Park & Fowler Park	The City of Victoria and the District of Saanich are considering the creation of new hubs at Topaz Park and Fowler Park. This path is based on completing these two hubs while decommissioning some existing courts.	• Level of Service in 2038: 1:5,900 • Number of courts: 49 (12 replace; 5 new)
Path 3: Keep up with Population Growth	This concept is to add inventory in line with future population growth. It also assumes some courts will be decommissioned.	• Level of Service in 2038: 1:5,780 • Number of courts: 50 (12 replace; 6 new)
Path 4: Moderate Expansion	This path is oriented towards reducing the difference between the supply of courts compared with benchmarked municipalities.	• Level of Service in 2038: 1:4,520 • Number of courts: 64 (12 replace; 20 new)
Path 5: Upper Tier Expansion	This path provides a concept for reaching slightly above the comparable average of municipalities reviewed.	• Level of Service in 2038: 1:3,530 • Number of courts: 82 (12 replace; 38 new)

Table 1: Maintain the same net number of courts

This concept is based on only replacing the decommissioning of some courts.

Level of Service in 2038: 1:6,570

Number of courts: 44 (12 replace)

- Victoria
- Esquimalt
- Oak Bay
- Saanich

Disclaimer:

This exercise is intended to support a decision making, however a detailed site assessment on available space and suitability has not been undertaken. As such, recommendations on the table should only be considered as a concept to be assessed further.

	Court Name	Direction	Existing Courts	Future Courts
Decommission				
	Franklin Green	Convert to tennis only or other use	1	0
	Tolmie Park	Convert to tennis only or other use	2	0
	Majestic Park	Convert to tennis only or other use	1	0
	Oaklands Park	Convert to tennis only or other use	2	0
	Hampton Park	Convert to tennis only or other use	2	0
	Barnard Park	Tennis only and undertake acoustic study	2	0
	Central Park	Tennis only and undertake acoustic study	2	0
Maintain				
	Pearkes Indoor Rec	Consider improvements as Hub	8	8
	Esquimalt High School	Improvements as Neighbourhood Court	2	2
	Rosedale Park	Dedicate to pickleball only	2	2
	Esquimalt Rec Outdoor	Consider options to move or cover courts	4	4
	Carnarvon Park	Options to adjust layout or cover courts	5	5
	Copley West Park	Consider improvements	2	2
	McMinn Park	Consider improvements	4	4
	Prospect Lake Park	Consider improvements	2	2
	Beacon Hill Park	Consider improvements	3	3
Build More Courts				
	Topaz Park (NEW)	Build a new 6-court hub	0	6
	Fowler Park (NEW)	Build a new 6-court hub	0	6
		Total	44	44

Table 2: Only Build Hubs in Topaz Park & Fowler Park

The City of Victoria and the District of Saanich are considering the creation of new hubs at Topaz Park and Fowler Park.

This concept looks at how these hubs would impact provisioning outcomes.

Level of Service in 2038: 1:5,900

Number of courts: 49 (12 replace; 5 new)

- Victoria
- Esquimalt
- Oak Bay
- Saanich

Disclaimer:

This exercise is intended to support a decision making, however a detailed site assessment on available space and suitability has not been undertaken. As such, recommendations on the table should only be considered as a concept to be assessed further.

	Court Name	Direction	Existing Courts	Future Courts
Decommission				
	Franklin Green	Convert to tennis only or other use	1	0
	Tolmie Park	Convert to tennis only or other use	2	0
	Majestic Park	Convert to tennis only or other use	1	0
	Oaklands Park	Convert to tennis only or other use	2	0
	Hampton Park	Convert to tennis only or other use	2	0
	Barnard Park	Tennis only and undertake acoustic study	2	0
	Central Park	Tennis only and undertake acoustic study	2	0
Maintain				
	Pearkes Indoor Rec	Consider improvements as Hub	8	8
	Esquimalt High School	Improvements as Neighbourhood Court	2	2
	Rosedale Park	Dedicate to pickleball only	2	2
	Esquimalt Rec Outdoor	Consider options to move or cover courts	4	4
	Carnarvon Park	Options to adjust layout or cover courts	5	5
	Copley West Park	Consider improvements	2	2
	McMinn Park	Consider improvements	4	4
	Prospect Lake Park	Consider improvements	2	2
	Beacon Hill Park	Consider improvements	3	3
Build More Courts				
	Topaz Park (NEW)	Build a new 11-court hub	0	11
	Fowler Park (NEW)	Build a new 6-court hub	0	6
		Total	**44**	**49**

Table 3: Keep up with Population Growth

This concept is to add inventory in line with future population growth.

Level of Service in 2038: 1:5,782

Number of courts: 50 (12 replace; 6 additions)

- Victoria
- Esquimalt
- Oak Bay
- Saanich

Disclaimer:

This exercise is intended to support a decision making, however a detailed site assessment on available space and suitability has not been undertaken. As such, recommendations on the table should only be considered as a concept to be assessed further.

	Court Name	Direction	Existing Courts	Future Courts
Decommission				
	Franklin Green	Convert to tennis only or other use	1	0
	Tolmie Park	Convert to tennis only or other use	2	0
	Majestic Park	Convert to tennis only or other use	1	0
	Oaklands Park	Convert to tennis only or other use	2	0
	Hampton Park	Convert to tennis only or other use	2	0
	Barnard Park	Tennis only and undertake acoustic study	2	0
	Central Park	Tennis only and undertake acoustic study	2	0
Maintain				
	Pearkes Indoor Rec	Consider improvements as Hub	8	8
	Esquimalt High School	Improvements as Neighbourhood Court	2	2
	Rosedale Park	Dedicate to pickleball only	2	2
	Esquimalt Rec Outdoor	Consider options to move or cover courts	4	4
	Carnarvon Park	Options to adjust layout or cover courts	5	5
	Copley West Park	Consider improvements	2	2
	McMinn Park	Consider improvements	4	4
	Prospect Lake Park	Consider improvements	2	2
Add Courts to Existing Locations				
	Beacon Hill Park	Consider improvements & add 1 new court	3	4
Build More Courts				
	Topaz Park (NEW)	Build a new 11-court hub	0	11
	Fowler Park (NEW)	Build a new 6-court hub	0	6
		Total	44	50

Table 4: Moderate Expansion

This path is oriented towards reducing the difference between the supply of courts compared with benchmarked municipalities.

Level of Service in 2038: 1:4,517

Number of courts: 64 (12 replace; 20 new)

- Victoria
- Esquimalt
- Oak Bay
- Saanich

Disclaimer:

This exercise is intended to support a decision making, however a detailed site assessment on available space and suitability has not been undertaken. As such, recommendations on the table should only be considered as a concept to be assessed further.

	Court Name	Direction	Existing Courts	Future Courts
Decommission				
	Franklin Green	Convert to tennis only or other use	1	0
	Tolmie Park	Convert to tennis only or other use	2	0
	Majestic Park	Convert to tennis only or other use	1	0
	Oaklands Park	Convert to tennis only or other use	2	0
	Hampton Park	Convert to tennis only or other use	2	0
	Barnard Park	Tennis only and undertake acoustic study	2	0
	Central Park	Tennis only and undertake acoustic study	2	0
Maintain				
	Pearkes Indoor Rec	Consider improvements as Hub	8	8
	Esquimalt High School	Improvements as Neighbourhood Court	2	2
	Rosedale Park	Dedicate to pickleball only	2	2
	Esquimalt Rec Outdoor	Consider options to move or cover courts	4	4
	Carnarvon Park	Consider adjusting layout or cover courts	5	5
	Copley West Park	Consider improvements	2	2
Add More to Existing Locations				
	Prospect Lake Park	Consider improvements & add 2 courts	2	4
	McMinn Park	Consider improvements & add 6 courts	4	10
	Beacon Hill Park	Consider improvements & add 7 courts	3	10
Build More Courts				
	Topaz Park (NEW)	Build a new 11-court hub	0	11
	Fowler Park (NEW)	Build a new 6-court hub	0	6
		Total	44	64

Table 5: Upper Tier Expansion

This table provides a concept for reaching slightly above the comparable average of municipalities reviewed.

Level of Service in 2038: 1:3,525

Number of courts: 82 (12 replace; 38 additional court)

- Victoria
- Oak Bay
- Esquimalt
- Saanich

Disclaimer:

This exercise is intended to support a decision making, however a detailed site assessment on available space and suitability has not been undertaken. As such, recommendations on the table should only be considered as a concept to be assessed further.

[1] Location is left open for future opportunities. This could be an opportunity for a joint-venture between municipalities or with a private entity.

	Court Name	Direction	Existing Courts	Future Courts
Decommission				
	Franklin Green	Convert to tennis only or other use	1	0
	Tolmie Park	Convert to tennis only or other use	2	0
	Majestic Park	Convert to tennis only or other use	1	0
	Oaklands Park	Convert to tennis only or other use	2	0
	Hampton Park	Convert to tennis only or other use	2	0
	Barnard Park	Tennis only and undertake acoustic study	2	0
	Central Park	Tennis only and undertake acoustic study	2	0
Maintain				
	Pearkes Indoor Rec	Consider improvements as Hub	8	8
	Esquimalt High School	Consider improvements as Neighbourhood Court	2	2
	Rosedale Park	Dedicate to pickleball only	2	2
	Esquimalt Rec Outdoor	Consider options to move or cover courts	4	4
	Carnarvon Park	Consider options to adjust layout or cover courts	5	5
Add More to Existing Locations				
	Copley West Park	Add 2 new courts (if possible on far side of field)	2	4
	McMinn Park	Add 6 new courts	4	10
	Prospect Lake Park	Add 4 new courts	2	6
	Beacon Hill Park	Add 7 new courts	3	10
Build More Courts				
	Topaz Park (NEW)	Build a new 11-court hub	0	11
	Fowler Park (NEW)	Build a new 6-court hub	0	6
	Indoor Facility Hub (NEW)[1]	Build a new 14-court hub	0	14
		Total	44	82

Pamela Martin

From: Heather Hebden <[redacted]
Sent: July 2, 2025 3:06 PM
To: Municipal Hall
Subject: Fire smart chipping event

Categories: Council Correspondence, Council Portal

You don't often get email from [redacted] Learn why this is important

Dear mayor and councillors,

Kudos and many thanks to the council for initiating this past weekend's chipping event. It gave us, and our neighbours, the opportunity to reduce some overgrown shrubs growing close to our houses, and easily dispose of them. The residents living on our small cul de sac took the liberty of stacking our joint branches within the circle at the end of the street, which was greatly appreciated by the chipping crew. We hope the council will consider making this an annual event.

Our property backs onto Amwell park, and over the 24 years that we have lived here the trees therein have not only become considerable larger, they have also multiplied due to the rooting, and growing, of sapplings. Instead of a lightly treed park behind our house we now have many mature Douglas firs that are over 50 feet tall, with the aforementioned rapidly growing saplings growing in between.

We are concerned not only about possible wildfire, but also high winds that may cause the trees, or several mature branches, to fall on our home. Would the council consider, in the interest of fire protection, culling some of the saplings within this park?

With king regards,

Heather Hebden.
989 Barkway Terrace
Brentwood Bay

Pamela Martin

From: artsdevelopment <artsdevelopment@crd.bc.ca>
Sent: July 3, 2025 4:38 PM
To: Municipal Hall
Subject: To Mayor and Council: CRD Arts & Culture - the 2024 Impact Report
Attachments: 2024-ImpactReport-LettertoCentralSaanich.pdf

Good afternoon – please find attached a letter from Chris Gilpin, Manager of the Arts & Culture Support Service at the CRD.

We are pleased to share our newly produced 2024 Impact Report with you HERE, highlighting the economic, social, and artistic benefits of our sub-regional Arts Service.

If you would like to receive any hard copies of the Impact Report, please let me know how many, and I would be happy to send them to you.

Thank you,

Erin Sterling (she/they)
Administrative Assistant | Arts & Culture
T: 250.360.3215
Facebook | Instagram | LinkedIn | www.crd.ca

Capital Regional District
625 Fisgard Street
Victoria, BC V8W 1R7

Respectfully acknowledging the First Nations in whose Territories the CRD operates. I am grateful for the opportunity to live and work here and am committed to ongoing learning and reconciliation.

Making a difference...together

Arts & Culture Support Service
625 Fisgard Street
Victoria, BC, V9A 3C3

T: 250.360.3215
F: 250.360.3130
www.crd.bc.ca/arts

July 3, 2025

Mayor Windsor and Councillors Graham, King, Newton, Paltiel, Riddell, and Thompson,
District of Central Saanich

Dear Mayor and Council:

RE: Capital Regional District Arts & Culture Support Service

As Manager of the Arts and Culture Support Service (Arts Service) at the Capital Regional District, I am writing to share the *CRD Arts & Culture 2024 Impact Report*, which highlights the value and impact of arts activities in our participating jurisdictions. As a sub-regional service, the Arts Service provides support through grant programs to non-profit organizations, who in turn develop programming that creates artistic, social, and economic benefits for the region.

In this report, you will read how the Arts Service invested over $2.7 million dollars in local arts non-profit organizations and artist-led partnerships in 2024. Through 101 awarded grants, over 9,500 arts events and activities took place in the region, entertaining over 1.1 million people in 2024. This year's report also emphasizes the significant role the arts play in fostering a sense of community and connection in the region, and provides updates on the progress of the Arts & Culture Support Service's 2024 – 2027 Strategic Plan.

The current member jurisdictions of the Arts Service are Saanich, Victoria, Oak Bay, Esquimalt, View Royal, Sooke, Metchosin, Highlands, and Southern Gulf Islands. Each participating jurisdiction selects a representative to serve on the Arts Commission, which oversees the administration, policies, and operations of the Arts Service. According to its bylaw, the Arts Service can only support organizations and arts activities that occur within member jurisdictions. We encourage you to join us in supporting and celebrating the arts in your community and across the region. If you would like to attend a meeting of the Arts Commission as a guest, please contact Erin Sterling at artsdevelopment@crd.bc.ca for more information.

Non-participating jurisdictions are welcome to join the Arts Service at any time. For more information on the benefits and estimated contribution levels of joining the Arts Service, or to request an informational presentation to your council, please contact me at 250.360.3205 or cgilpin@crd.bc.ca.

Sincerely,

Chris Gilpin
Manager, CRD Arts and Culture

Pamela Martin

From: billandsheena <[redacted]
Sent: July 5, 2025 1:41 PM
To: mayor-council@csaanich.ca; [redacted]
Cc: Municipal Hall
Subject: Request for Full Removal of Remaining "John Dean Provincial Park" Signage

Dear Mayor and Council,

I am writing to acknowledge and express support for the renaming of John Dean Provincial Park to ŁÁU, WELNEW, a significant step in recognizing and respecting WSÁNEĆ history, language, and sovereignty.

Now that this change has been officially made some years ago, I would like to ask:
When will all remaining signage referring to "John Dean Provincial Park" be fully removed or replaced?

The continued presence of outdated signage not only undermines the integrity of the name change but also risks sending a mixed message about the District's commitment to truth and reconciliation.

Clear and timely removal of the colonial name will help ensure that ŁÁU, WELNEW is honored as the rightful name, and that visitors understand and respect its cultural significance to the WSÁNEĆ people.

Thank you for your attention to this matter, and I look forward to your response. Should it be the case that this process is still ongoing, could you please provide an expected date of completion?

Sincerely,

Bill Heuman
7220 Seamount Close
Saanichton

Would you like help finding the best email address to send this to or adding references to reconciliation policies or public commitments?

Sent from my Galaxy

Pamela Martin

From: James Davison <[redacted]>
Sent: July 7, 2025 4:52 PM
To: Municipal Hall; Mayor Ryan Windsor; Gordon Newton; Zeb King; Sarah Riddell; Chris Graham; Bob Thompson
Subject: Re: Development Proposal 7840 Lockside Drive

Please, I urge you all to read the following:

https://www.theguardian.com/commentisfree/2025/jul/07/europe-financial-sector-house-prices-politics?CMP=share_btn_url

On Thu, 5 Jun 2025 at 16:13, James Davison <davisonjames@telus.net> wrote:

> Dear Mayor and Council,
>
> I am writing to express my strong opposition to the proposed 6-storey development on Marigold Land area. While I support responsible growth, this project represents overdevelopment in an area that is already overburdened by recently approved and ongoing construction.
>
> Traffic congestion in the area is already severe. Between Highway 17 and Lochside Drive—a mere 250-step stretch—there are 17 separate vehicle entry and exit points. This has led to dangerous congestion and, at times, complete gridlock. The addition of a 6-storey development will only intensify this problem.
>
> Off-street parking is another major concern. Developers are charging excessively high parking fees, which drives tenants to park on surrounding streets. The result is overflowing street parking and increased frustration and risk for residents, pedestrians, and cyclists alike.
>
> Recent development of separated cycling infrastructure and green crossings—though valuable in principle—has further complicated traffic patterns and increased safety risks in an area already suffering from infrastructure overload.
>
> I also understand that expansion is underway on the adjacent reserve lands. Combined with the Marigold developments, this raises serious concerns about cumulative impact—not just in terms of traffic, but also on green space and local amenities.
>
> Saanichton park and nearby parks are already overwhelmed. The municipality's recent efforts to add dog signage and "fly-tipping" problems highlights the strain our green spaces are under. There is simply not enough green space to accommodate the rapid density increase.
>
> This development is out of scale with the community and out of step with the real-world impacts being felt on the ground. I urge Council to deny this proposal and prioritize planning that genuinely reflects the area's capacity and the quality of life of existing residents.

Sincerely

James & Linda Davison

2600 Ferguson Road (Unit 3)

Saanichton