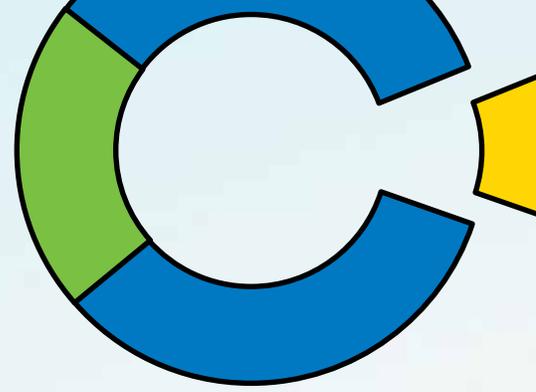


REC·REATE
STRATHCONA GARDENS

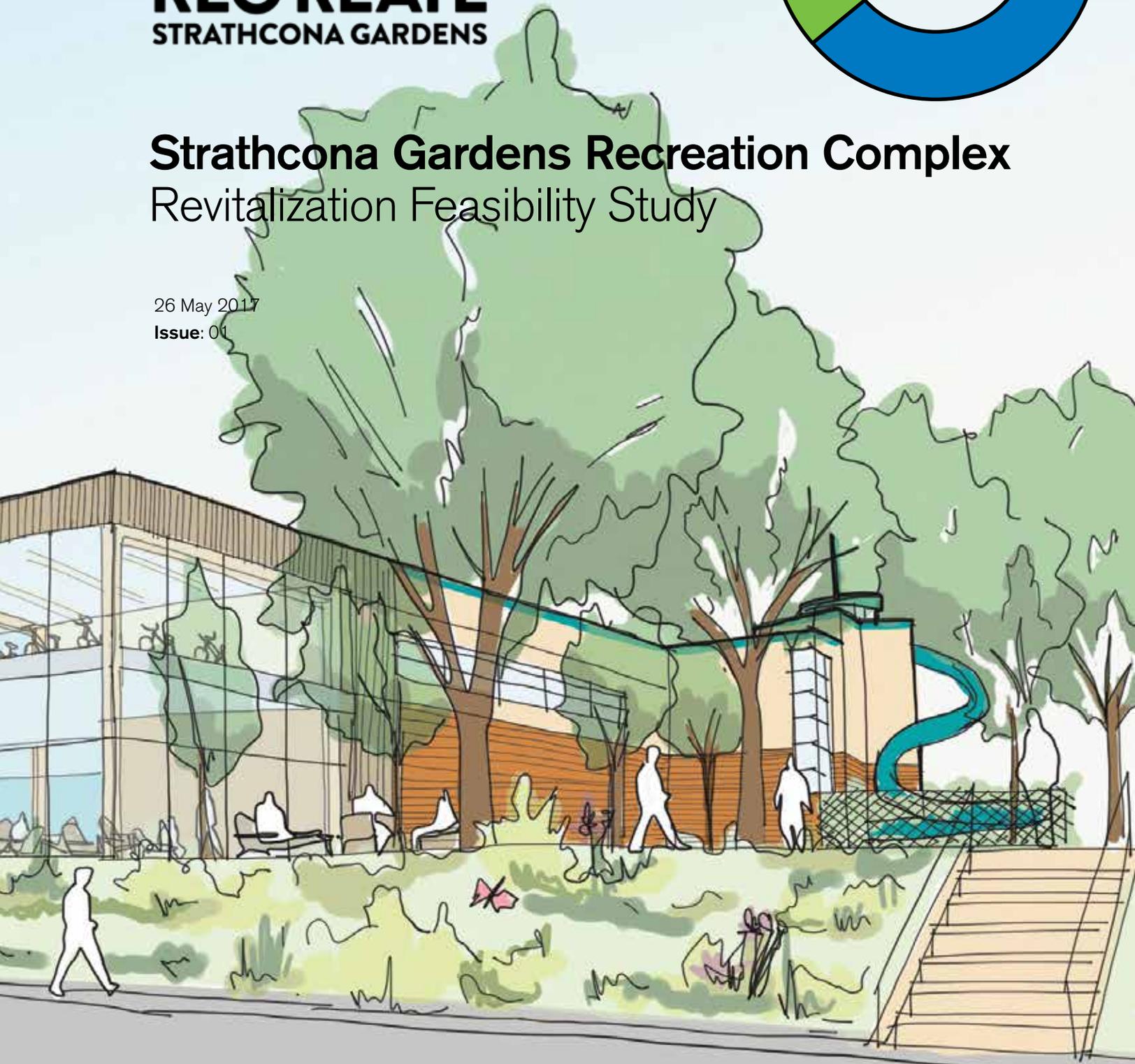


Strathcona Gardens Recreation Complex

Revitalization Feasibility Study

26 May 2017

Issue: 01



HCMA





I think that a fitness-oriented community like ours could benefit from this enhanced facility. I say it will be money well spent.

Community Member

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PROJECT CONSULTANTS

HCMA



1.0 Executive Summary

The Strathcona Gardens Recreation Complex (SGRC) is a well used facility that serves a significant portion of the population of Campbell River Electoral Area D and surrounding regions. The facility was built in various phases over the last 40 years. Despite its prominent role in the community the facility faces significant challenges including:

- Aging and failing infrastructure
- A significant leak to the primary pool tank
- Overcrowding of aquatic spaces
- Inadequate fitness, arena change room and multi-purpose spaces
- Poor Arena environment (seating, acoustics, sight lines)
- Rising operational costs
- Accessibility challenges
- Inability to meet evolving programming needs

In November of 2016 the Strathcona Regional District commissioned HCMA Architecture + Design to complete a Feasibility Study to move forward the planning efforts for the renewal of the Strathcona Gardens Complex. This feasibility study followed an extensive Needs Assessment completed in 2015 by Gabi Haas (GDH Solutions, with assistance by HCMA). This Needs Assessment outlined two potential design options to be considered for further evaluation. For this feasibility study, HCMA was asked to proceed with Option 2 as the preferred option for further evaluation.

This report provides the following key deliverables:

- Confirmation of the needs identified in the Needs Assessment.
- Building program
- Business case for the proposed expansion.
- Class D capital cost estimate
- Feedback from stakeholders and the public
- Updated concept design

This report has been coordinated with the findings from the Condition Assessment completed by Stantec in November 2016. During the course of this study HCMA



▲ Concept Render - View of Exterior

met twice with the Strathcona Gardens Recreation Commission to confirm initial findings and seek feedback on proposed design directions. The design team was also provided invaluable assistance and data by Strathcona Regional District (SRD) project staff and SGRC staff.

The design team included the following members:

- HCMA Architecture + Design (Architectural Design)
- David Hewko Planning (Programming & Business Case)
- GDH Solutions (Needs Confirmation)
- AME Group (Mechanical Engineering)
- AES (Electrical Engineering)
- Herold Engineering (Structural & Civil Engineering)
- Advicas (Quantity Surveyor)

During the course of the study, the following findings emerged, which are expanded on in further detail in the body of the report:

- The pool tank leak and capacity issues should be addressed in the initial expansion phase and not deferred to a future phase as originally assumed.
- Investment in therapy and wellness focused expansion meets the identified needs and has strong community support.
- Wellness focused spaces provide a more positive impact on the net revenue position than other program spaces.
- A renewed facility would increase revenues and allow the facility to better keep up with rising costs, but would not drastically alter the net revenue position (positive or negative).
- The social role of this facility is vital to patrons and should not be underestimated.
- There are significant concerns expressed by staff and members of the public regarding a potential facility shutdown during construction.

It should also be noted that the design team was initially asked to proceed on the assumption that this project would be a renewal (renovation) project. During the course of the study, as the scope increased to meet needs and technical requirements and it became clear that the study would benefit from a high level



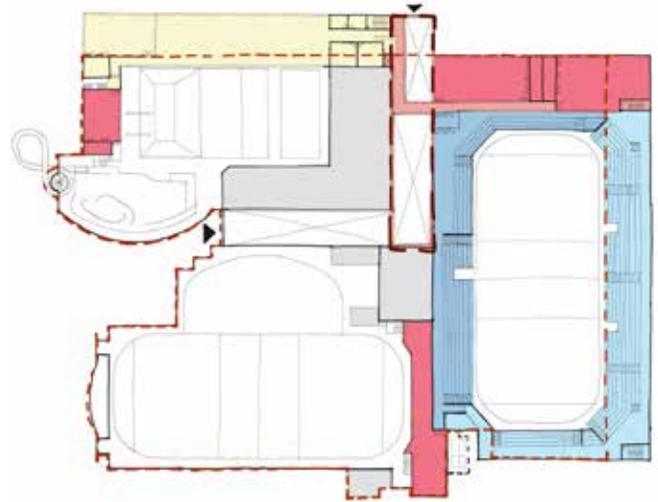
▲ Concept Render - Reception, Lobby & Social Space

cost comparison with a new build scenario. The cost estimate in this report provides that feedback, but would benefit from a more detailed design study that focuses on potential locations for a new build component. Recommendations for this study are detailed at the end of this report.

The updated design also includes an option for a new leisure and hot pool. Though not part of the original concept design scope, the design team was specifically asked by the Recreation Commission to review the addition of this component from a cost and feasibility perspective.



▲ Plan: Main Floor



▲ Plan: Second Floor

LEGEND: MAIN FLOOR

- Aquatics: Addition
- Aquatics: Renovation
- Wellness Centre Addition
- Multipurpose Room (repurposed)
- Offices (repurposed)
- Concession (repurposed)
- Social Space: Renovate & Expand
- Arena Addition: New Changing Rooms & Storage
- Arena Renovation: Washroom conversion
- Existing Building
- Extent of Existing Building
- ▲ Entrance
- New Landscaping

LEGEND: SECOND FLOOR

- Fitness Centre Addition
- Multipurpose Room Renovation
- Circulation
- Extent of Existing Building
- Arena Addition: New Seating
- Arena Renovation: Refurbished Seating
- Roof Below
- New Higher-Level Roof

2.0 Engagement Feedback



▲ Feedback Postcards at Public Engagement Event

A public engagement process took place as part of this study between December 2016 and May 2017 and comprised of a two phased approach. These phases included both public open houses and stakeholder workshops.

We met with the following groups as part of this study:

- General Public and Users
- Sports Associations
- Staff
- Working Committee
- Manager of Programs
- Rehab & Fitness Coordinator
- City of Campbell River Culture and Recreation Manager
- Community Stakeholder Advisory Committee

PHASE 1

Phase 1 consisted of a public Open House event, with feedback also gathered over a few weeks at the complex, as well as stakeholder workshops. All feedback was gathered using postcards that were hung on a “vision

tree” for public display, and some of which are shown on the following pages. Summarized below at high-level and divided by program, is the feedback we heard during Phase 1.

Aquatics:

- Tremendous level of interest in expansion of the pool tank in Phase 1 (rather than future).
- Staff and users indicated that a smaller, dedicated therapy pool would not meet the demand if the main pool tank was not expanded.
- There is continued growth and demand for swimming lessons, swim club use and therapy and rehabilitation use.
- Expansions to the change areas were strongly supported.

Wellness & Fitness Centre

- High level of support for the Wellness & Fitness Centre.
- The area allocated for fitness room should be slightly reduced in order to accommodate more dedicated activities like spin classes etc.
- The design should accommodate service delivery by internal staff or by contractor.

Arena Expansion

- Continued support for upgrades to the Rod Brind'Amour Arena, including improved seating (comfort and number), modern change rooms and a heated viewing area.
- There was continued discussion around accommodating a future BCHL Junior A franchise, which impacts the number of new seats required (1500-3000 seats with a strong preference for at least 2500)

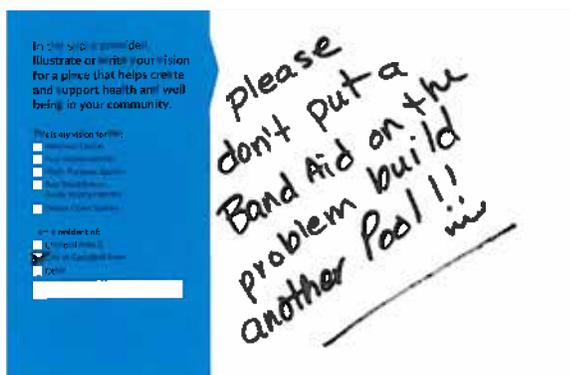
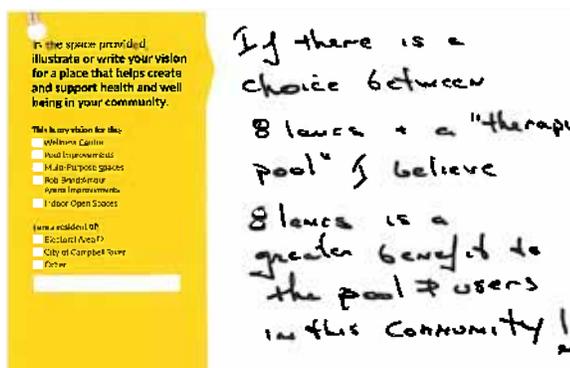
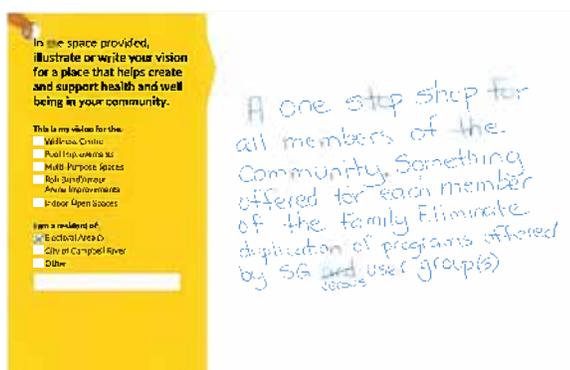
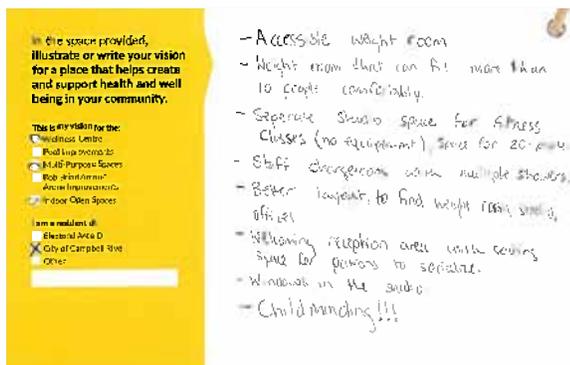
Multipurpose:

- Continued support for a variety of multi-purposes spaces. These should include lifeguard training, party room (wet use for swim club as well), dry-land training for arena uses, meeting rooms, fitness and lounge area for arena spectators
- Primary purpose of the multi-purpose spaces should be to support the growth of pool rehab/fitness and ice programs.
- MP rooms are in addition to existing Storm, figure skating and minor hockey spaces.

Social Space

- Strong support for a central social gathering space, especially for seniors using the Wellness Centre and for parents with kids in programs.
- Administration functions would ideally be located at the ground floor level.
- Concession should be centrally located.

This phase resulted in several changes to the building programming, that were incorporated into the design. These changes are described in the Needs Confirmation section of this report.



▲ Sample Feedback Postcards, Phase 1



- ▲ Feedback Postcards, Public Engagement Event
- ▼ Sample Feedback Postcards, Phase 1

In the space provided, illustrate or write your vision for a place that helps create and support health and well being in your community.

More pool space!

This is my vision for the:

- Wellness Centre
- Pool Improvements
- Multi Purpose Spaces
- Day Use/Amuse
- Areas Improvements
- Indoor Open Spaces

I am a resident of:

- District Area D
- City of Campbell River
- Other

In the space provided, illustrate or write your vision for a place that helps create and support health and well being in your community.

Jan. 2011

- I feel that this existing facility is at its full capacity. It is not feasible nor safe to expand this 40+ structure. **LEAVE AS IS**

- The SERD has to work with the city & build a new stand alone facility. **Note: CR taxpayer are the main users & supporter!**

- The people have experienced the 182 upgrade in 2011. This was to be a 3 mo shutdown to upgrade the change rooms. This turned out to be a complete mess. The 3 mo. shutdown turned out to be 8 mo with the finish product a total SNAFU with a poor design and large over costs. The public were without our only...

This is my vision for the:

- Wellness Centre
- Pool Improvements
- Multi Purpose Spaces
- Day Use/Amuse
- Areas Improvements
- Indoor Open Spaces

I am a resident of:

- District Area D
- City of Campbell River
- Other

In the space provided, illustrate or write your vision for a place that helps create and support health and well being in your community.

Expansion of the existing pool to 8 lanes would be a good "pay off" for the long closure of the pool during the renovations

This is my vision for the:

- Wellness Centre
- Pool Improvements
- Multi Purpose Spaces
- Day Use/Amuse
- Areas Improvements
- Indoor Open Spaces

I am a resident of:

- District Area D
- City of Campbell River
- Other

In the space provided, illustrate or write your vision for a place that helps create and support health and well being in your community.

A community centre that provide a variety of wellness activities (physical + mental) to the community at an affordable cost.

This is my vision for the:

- Wellness Centre
- Pool Improvements
- Multi Purpose Spaces
- Day Use/Amuse
- Areas Improvements
- Indoor Open Spaces

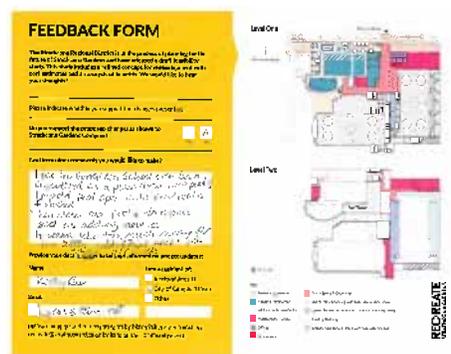
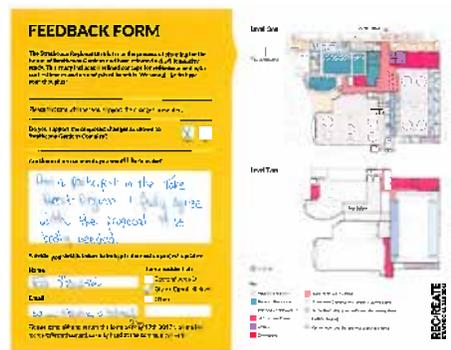
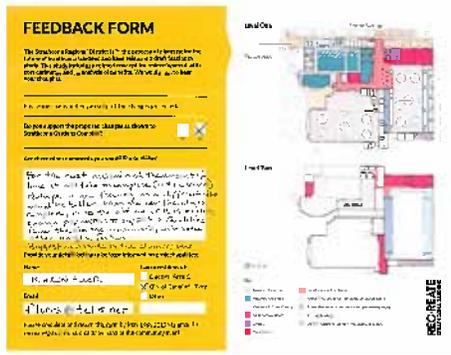
I am a resident of:

- District Area D
- City of Campbell River
- Other

PHASE 2

This phase involved a second engagement with the public to confirm the updated design. The design team met with almost all of the same stakeholders from Phase 1, and received a very high degree of support for the revised design and the following additional comments:

- There was considerable concern raised over closure of the existing facilities during construction, particularly the pool.
- Suggestion that a running and walking track be added into the arena as part of the renovated and new spectator seating.
- Some Community Advisory Group members expressed concern about undergoing another renovation that may only provide shorter term improvements versus just building an entirely new facility.
- There were a number of technical comments that should be addressed as appropriate during later design phases.



▲ Sample Feedback Postcards, Phase 2

3.0 Needs Confirmation

The Needs Assessment conducted by GDH Solutions with HCMA in 2014-2015 resulted in two main options for the expansion of the community centre. The Strathcona Regional District decided to move forward with Option 2, Phase 2 which was the addition of a wellness centre with a therapy pool plus fitness and consultation/treatment spaces; improved pool change rooms plus a wider deck with an option to expand the pool at a later date. Also included in the concept was the expansion of Arena 1 to the south, to accommodate additional seating on the opposite side of the rink, plus new change rooms and amenities in that arena. The Plan also included a number of multi-purpose rooms and improvements to reception/office, lobby area and additional staff offices.

In an effort to ensure that the community's needs are met with the proposed expansion to the facility GDHS and HCMA met with the staff team and undertook a number of community consultations. GDHS also met individually with the Manager of Programs and the Rehabilitation & Fitness Coordinator. In addition a meeting was held with the Recreation and Culture Manager for the City of Campbell River to ensure that the SRD and Campbell River are not duplicating facilities and services.

POOL AREA

The December round of consultations and meetings has shown a tremendous level of interest in expansion of the pool now, rather than in the future. Previous study seemed to indicate that the addition of the therapy with treatment rooms, plus enlarged change rooms and a wider deck would alleviate the congestion in the pool during peak times. Longer opening hours and a shorter pool closure in the Spring and Summer were also seen as partial solutions.

The recent report on the condition of the main pool conducted by Stantec for the SRD indicated that major repairs are required in the near term. This significant finding along with the continuous growth of demand for aquatic therapy and fitness, swimming lessons, swim team use and length swimming appears to support the expansion of the pool in the first phase of the project.

Staff and users feel that an expansion to 8 lanes would alleviate much of the capacity issues.

The need for more space for warm water therapy would not be fully addressed in a 2 lane expansion as the pool temperature cannot be kept warm enough to satisfy therapy needs, while still being comfortable for lane swimming, swim club and other water activities. The proposed therapy pool would serve some of the needs; however the current classes are very large and would need to be adjusted if they were to take place in the therapy pool.

The preferred option would be to separate the 6 or 8 lane 25 metre pool section from the 12 metre, shallower section, creating two independent pools.

There is also a desire for a wider deck/more deck space mainly for the swim club - for swim meets. The swim club, however only currently hosts one or two meets per year. This number would likely increase with improvements to the pool area.

The proposed improvements to the change rooms were supported as very necessary. A large number of participants have special needs requiring more space and amenities in the change rooms.

Staff requested a dedicated classroom area, connected to the pool deck; and saunas and hot tub located close to the dressing room for easier access for persons with mobility issues.

WELLNESS CENTRE

The Wellness Centre was supported. Some of the comments included a request for ground level fitness/exercise space with easy accessibility to change rooms. The size of the therapy pool was also discussed, due to current class sizes. The program format would need to be adjusted based on the new facility. If the existing pool was converted to include a separate “warm water” pool tank, there would likely be no need for the therapy pool. The proposed size of the upper level Fitness and Exercise Room could be reduced to meet other programming needs, such as a dedicated space for spin classes.

ARENAS

There continues to be interest in accommodating a future BCHL franchise. A study conducted by PBK Architects in 2006 for the Comox Strathcona Regional District recommended two options for a regional

spectator arena in Campbell River, one downtown and one on First Nation’s land near the airport. The study also concluded that Strathcona Gardens could not be significantly expanded due to the site configuration and the adjacent RCMP building to accommodate a major arena. Any form of new development “should not compromise the relevance, attractiveness, or significance of this community asset to the residents of the Regional District”.

There is continued support for the Rod Brind’ Amour Arena (Rink 1) upgrades, particularly improved seating (comfort and number) as well as larger, modern change rooms and a heated viewing area.

LEISURE ICE

Some upgrades to the Leisure Ice would facilitate additional uses on that ice surface. The installation of boards was mentioned at the focus group.



▲ Killarney Community Pool, Vancouver, BC

MULTI-PURPOSE ROOMS

Option two indicated a total of eleven (11) multi-purpose rooms. Upon closer analysis and in consideration of the Campbell River recreation facilities and programs, a total of eight (8) could serve the program needs at Strathcona. The main purpose of additional multi-purpose rooms would be to support the growth of the pool rehab/fitness and ice programs at Strathcona Gardens. The program needs include:

- A dedicated classroom for lifeguard and other training (attached to pool deck);
- A room for birthday parties, swim club use etc., linked to the pool deck;
- Two rooms for dry land training for hockey and figure skating participants as well as space for day camp and Pro D Day participants;
- Two meeting rooms;
- A multi-purpose fitness related space, such as spin classes, or yoga
- A lounge area for arena spectators

ADMINISTRATION AND GATHERING SPACES

Staff have noted that the offices need to be in close proximity to the related programs. Pool and arena staff often need to be in visual contact with their areas of responsibility. The reception desk needs good sight lines to the entrances to the facility and to the change room entrances.

A social gathering space continues to be desirable for seniors and therapy clients, as well as for parents waiting for children in pool or ice activities.

SUMMARY

The initial stakeholder and public engagement was intended to validate the needs identified in the original needs assessment. This engagement confirmed the results of the original needs assessment with the following modifications:

- Expanded pool tank (6-8 lanes included in the base option) to address capacity needs.
- Therapy pool size was increased (split off from the main tank).
- Multi-Purpose room count reduced from 11 to 8 to suit more specifically defined needs.

4.0 Program

The final program that resulted from the needs assessment and confirmation includes the addition of the following spaces:

AQUATIC

- Expanded Main Tank (6-8 Lanes)
- New Therapy Pool (220 sq m / 2370 sq ft)
- Renovated & Expanded Change Rooms
- New Sauna and Steam Rooms
- New Pool Admin Spaces (Life-guarding etc.)
- Optional Leisure & Hot Pool Replacement

WELLNESS CENTRE

- New Fitness Room
- New Treatment Rooms

MULTI-PURPOSE ROOMS

- 4 New Multi-Purpose Rooms
- 3 Renovated Multi-Purpose Rooms

ADMIN & GATHERING

- New Administration Offices
- New Reception Area
- Renovated Lobby & Gathering Space
- New Concession

ROB BRIND 'AMOUR' ARENA

- 4 New Team Rooms
- New First Aid & Referee Rooms
- 1640 New Bucket Seats

STRATHCONA GARDENS RECREATION CENTRE - EXISTING AND PROPOSED SPACE PROGRAM

		Existing ASF	Existing ASM	Proposed ASF	Proposed ASM
1.0 Aquatic Centre					
1.1 Program Tank (6 to 8 lanes, 37m to 25m)		5640	524	5180	481
1.1A Therapy Pool				2370	220
1.2 Leisure Pool		2210	205	2700	251
1.3 Hot Pool (relocated)		390	36	450	42
1.4 Waterslide Interior Footprint		340	32	340	32
1.5 Deck Area		6120	569	6400	595
1.6 Sauna		100	9	100	9
1.7 Steam Room		160	15	160	15
1.8 Pool Viewing Area		480	45	480	45
1.9 Lifeguarding Office		330	31	330	31
1.10 Pool Storage		600	56	600	56
Assigned Sub-Total	17%	16370	1521	19110	1775
Pool Mechanical		3880	360	5000	464
Walls and Structure		410	38	410	38
Component Sub-Total	24%	28790	2674	32930	3059
2.0 Change Rooms					
2.1 Universal Change		970	90	1500	139
2.2 Gender Change #1		780	72	650	60
2.3 Gender Change #2		730	68	650	60
2.4 Unknown		205	19	0	0
Assigned Sub-Total	3%	2685	249	2800	260
Walls and Structure		80	7	80	7
Component Sub-Total	2%	2765	257	2880	268
3.0 Ice Arena #1					
3.1 Lobby		1860	173	1860	173
3.2 Ice Surface (b.1971)		16400	1523	16400	1523
3.3 Benches / Trench / Circulation		4490	417	4490	417
3.4 Spectator Seating (cap. 1200 new seats) and Concourse Areas		4410	410	8000	743
3.5 Endzone Viewing Area		630	59	0	0
3.6 Announcer Booth (upper floor)		120	11	120	11
3.7 Booth A (North End)		460	43	460	43
3.8 Booth B (South End)		410	38	410	38
3.9 Ticket Office		50	5	50	5
3.10 Refrees Room		250	23	250	23
3.11 Team Room A converted to Storage		550	51	610	57
3.12 Team Room B converted to Storage		480	45	510	47
3.13 Team Room C converted to Storage		360	33	360	33
3.14 Team Room D converted to Storage		450	42	490	46
3.15 Team Room E converted to Storage		550	51	610	57
3.16 New Team Room A		0	0	600	56
3.17 New Team Room B		0	0	600	56
3.18 New Team Room C		0	0	600	56
3.19 New Team Room D		0	0	600	56
3.20 New Team Room E		0	0	600	56
3.21 Existing Storage		1630	151	0	0
3.22 Existing Storage (Low-Headroom)		1490	138	1490	138

		Existing ASF	Existing ASM	Proposed ASF	Proposed ASM
3.23	Circulation	360	33	360	33
3.24	Circulation	1050	98	1050	98
3.25	NewTeam Rooms Circulation	0	0	1600	149
3.26	Arena Office	130	12	130	12
3.27	Ice Resurfacers / Ice Plant	960	89	960	89
	Assigned Sub-Total	39% ✓	37090 ✓	3445 ✓	43210
	Walls and Structure	540	50	540	50
	Component Sub-Total	32%	37630 ✓	3496	43750

4.0 Ice Arena #2

4.1	Arena #2 Ice Surface (b. 1996)	16400	1523	16400	1523
4.2	Arena #2 Leisure Ice	6600	613	6600	613
4.3	Arena #2 Benches / Trench / Circulation	7140	663	7140	663
4.4	Warm Viewing Area	610	57	610	57
4.5	Arena #2 Skate Shop	560	52	560	52
4.6	Meeting Room	410	38	410	38
4.7	Storage	370	34	370	34
4.8	Team Room A	610	57	610	57
4.9	Team Room B	610	57	610	57
4.10	Team Room C	610	57	610	57
4.11	Team Room D	610	57	610	57
4.12	Team Room E	610	57	610	57
4.13	Storage	145	13	145	13
4.14	Ice Resurfacers / Workshop	830	77	830	77
4.15	Mechanical / Ice Plant	540	50	540	50
	Assigned Sub-Total	38%	36655 ✓	3405	36655
	Walls and Structure	285	26	285	26
	Component Sub-Total	31%	36940 ✓	3431	36940

5.0 Common Areas and Fitness

5.1	Reception / Control / Staff	380	35	380	35
5.2	Admin / Program Offices (9)	870	81	870	81
5.3	Fitness (Aquatic)	1165	108	5000	464
5.4	Fitness (Arena)	1060	98	0	0
5.5	New Multi-Purpose Rooms (7)	-	-	8000	0
5.6	New Wellness Centre	-	-	1200	0
5.7	New Admin. Offices Area (10)	-	-	1100	0
	Assigned Sub-Total	4%	3475	323 ✓	14250
	Major Circulation	5090	473	5090	473
	Public Washrooms	350	33	350	33
	Building Mechanical	4210	66	4400	66
	Walls and Structure	195	18	210	20
	Component Sub-Total	11% ✓	13320 ✓	1237 ✓	24300

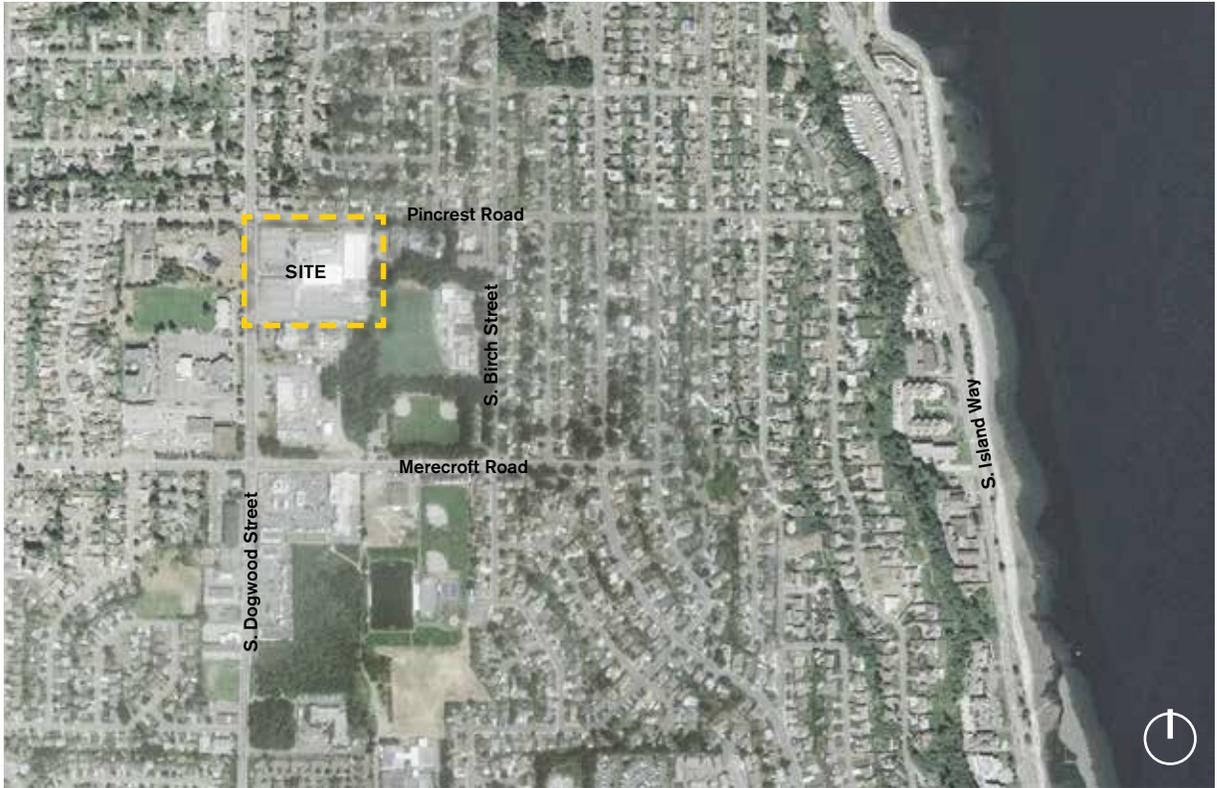
Assigned Area Total	81%	96275 ✓	8943	116025	10778
Gross Building Area Total	NTG 1: 1.25	119445 ✓	11096	140800	13079

Program

5.0 Concept Design

- 5.1 Site Context
- 5.2 The Vision
- 5.3 Site Planning, Layout & Massing
- 5.4 Technical Overview
- 5.5 Sustainability

5.1 Site Context



▲ Site Context

The Strathcona Gardens Recreation Complex site is located in the centre of the wider Campbell River area, south of the main town centre and is bounded by Pincrest road to the north, South Dogwood Street to west and Campbell River Schools International on the east that has it's own driveway outside of the complex's property line. Pinecrest Park is located south-east of the site.

VEHICULAR ACCESS

Vehicular access to the Complex's parking area and drop off is from South Dogwood Street. A large parking area surrounds the complex on the south and east and this is to remain, although the proposed increase in spectator seating capacity will result in additional parking demand - refer to page 34 for further information.

There is also an existing vehicle access driveway to the east of the building, accessed from Pincrest Road. This

would need to be removed in order to allow for the arena addition that houses new changing rooms and spectator seating. Alternative service access will therefore need to be provided via the existing parking area along with coordination with the emergency fire services. This is to be reviewed during schematic design phase along with coordination with the school to ensure that their parking lot can function without exit-only access via this driveway.

PEDESTRIAN ACCESS

The main pedestrian access is on the east side of the building, with a secondary entry located on the north, next to the Rob Brind 'Amour Arena. Bus transit stops are located along both South Dogwood Street and Pinecrest Road.

Although the majority of the site has limited grade change, there is a considerable grade differential along the north edge of the site that forms a landscaped bank. Currently, two sets of landscape steps provides access in front of the Complex's secondary north entrance. Pedestrian access will need to be maintained along this edge and improvements such as a wheelchair accessible ramp should be considered.

ADJACENT CONTEXT

Privacy between the new Wellness and Fitness centre addition and the residential area to the north along Pinecrest road will need to be considered further during design development. We propose that this can be addressed through the use of sensitive glazing locations, semi-translucent screens or louvres and landscaping.

EXISTING BUILDING

The existing building has a number of renovations and additions completed since the arena's original construction in 1971 and the pool in 1978, most notably the addition of the leisure pool and second arena in 1996.

POLICY CONSIDERATIONS

The following local bylaws and policies were considered as part of this study:

- CoCR Wood First Policy: The pool and arena are both excellent candidates for structural and secondary applications of wood (notwithstanding budget). Full compliance is anticipated.
- PA-1 Zoning Bylaw: a legal survey should be carried out to determine if a variance to the setback from



▲ Site Context

the north property line is required.

- Parking Bylaw: a traffic demand study should be carried out in Schematic Design to determine an appropriate parking count.
- Sustainable Campbell River Framework: refer to the Sustainability section of this report for further information.

5.2 The Vision

“The renewed Strathcona Gardens will be a place where fitness, rehabilitation, therapy, competitive and recreational sport form a uniquely holistic approach to wellness that is vital to the social fabric of Campbell River, Electoral Area D and surrounding region. It will be a place that encourages people to gather for events and sports and create opportunities for true community to be forged whether in the water, on the ice or around a cup of coffee.”

This design team vision statement builds upon key values and conversations with stakeholders, the public, staff and the SGRC.

The facility presents a unique opportunity to build on key values embedded in all three sections of the Sustainable Campbell River Framework (environmental, social, economic). Support of these components is described in further detail below.

Furthermore, the facility also supports several of following SRD values:

- “To provide the citizens with a healthy environment and social well being that leads to a vibrant quality of life through responsible economic development and effective delivery of services.”
- “People, fish and wildlife thrive in a healthy environment.”
- “High quality health and social care is available regionally.”
- “Affordable, quality services are delivered in a fiscally responsible way.”

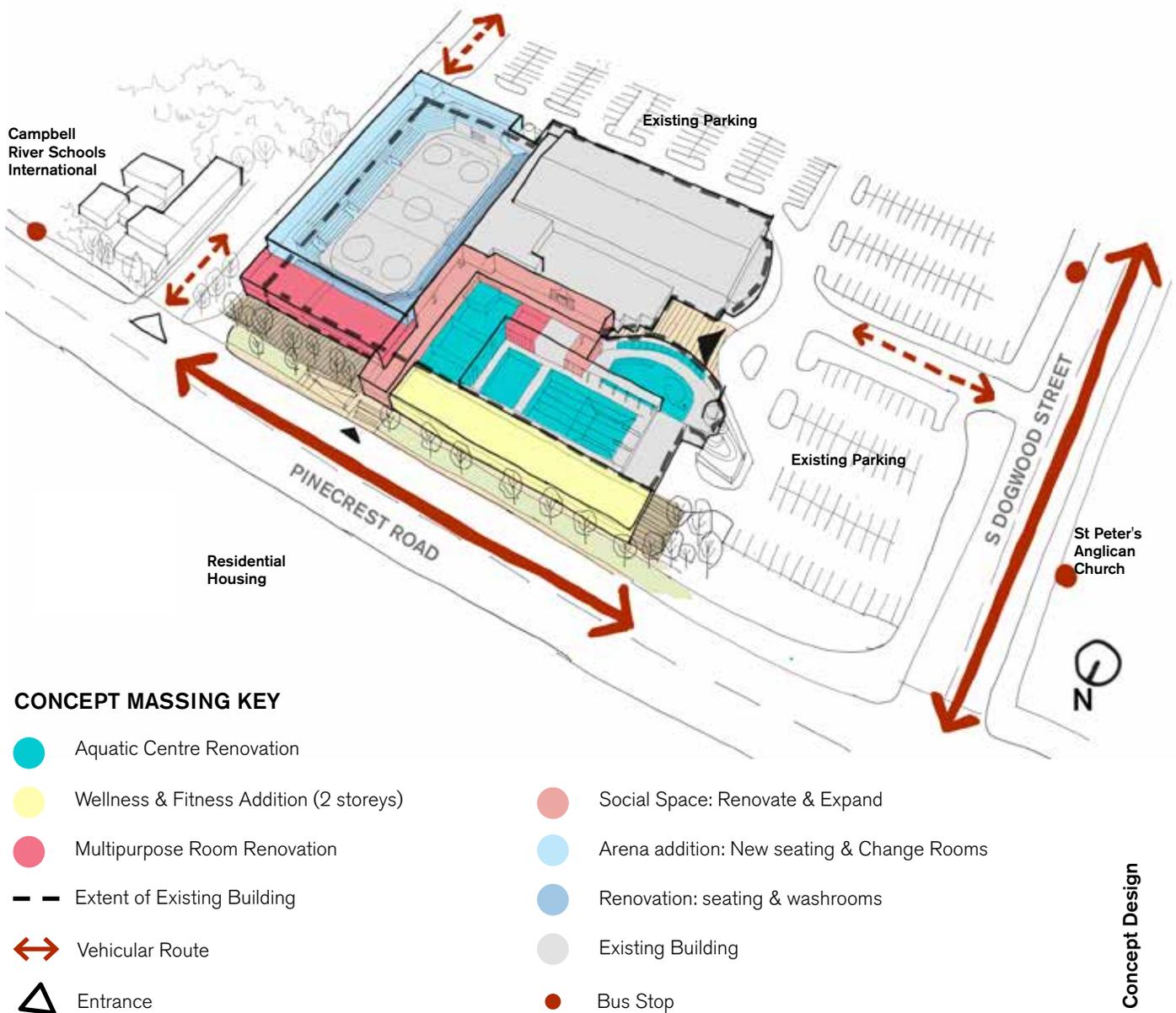
In order to meet this vision, when considering the design for the renewed facility we aimed to address and incorporate the following objectives:

- Create spaces for informal and formal gathering throughout the facility to foster intergenerational, inclusive and accessible spaces.
- Use design solutions that solve technical problems but also positively contribute to the experience of the facility in other ways.
- Connect the activity of the Complex internally and with the outside by enhancing visual connectivity.
- Improve operational flows throughout the facility.
- Create access to natural light wherever possible.
- Use the massing of the addition to create a renewed presence.

5.3 Site Planning, Layout & Massing

Overview

There are numerous site constraints relating to proximity of the property boundary, access and parking demands. There are also technical issues that need to be addressed, including meeting programmatic adjacencies and the need to maintain or enhance spatial relationship. All of these factors, along with consideration of street views and urban design objectives, have impacted where each of the program elements can be placed on the site. Rationale for this is described for each program element in the following section. The aerial diagram shown here illustrates an overview of the new building additions and renovations.



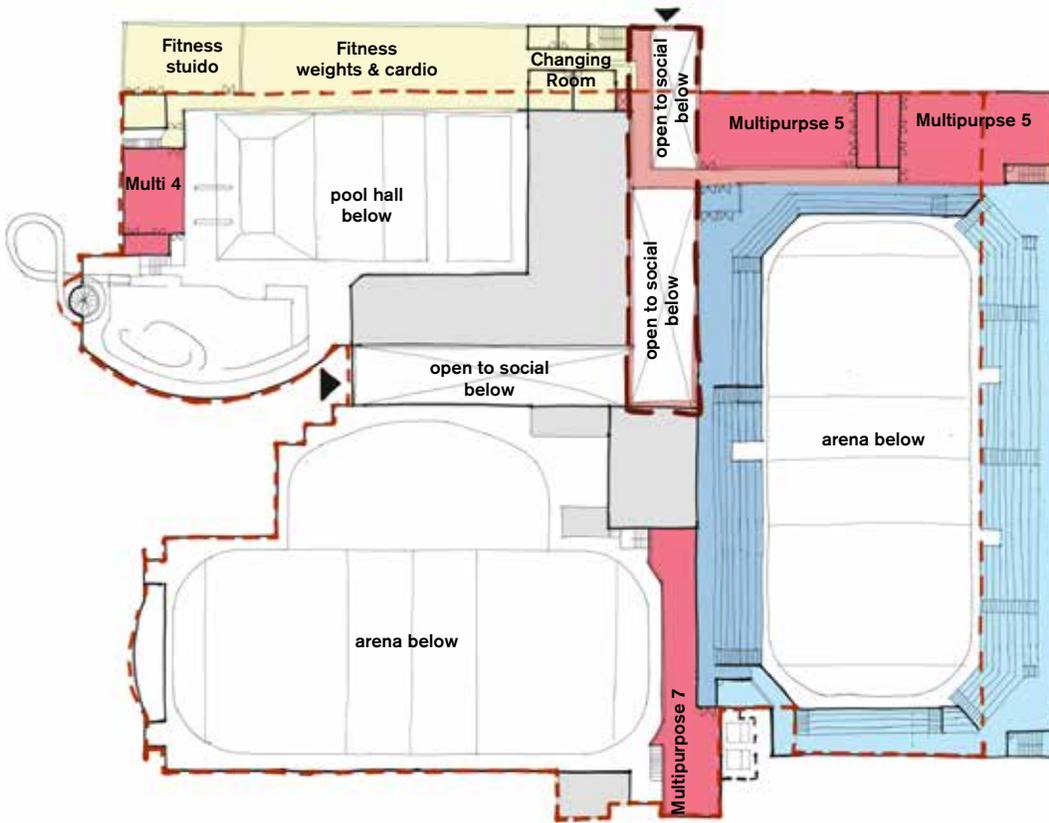


Pinecrest Road



MAIN FLOOR PLAN KEY

- | | |
|---|---|
| ● Aquatics: Addition | ● New Landscaping |
| ● Aquatics: Renovation | ● Social Space: Renovate & Expand |
| ● Wellness Centre Addition | ● Arena Addition: New Changing Rooms & Storage |
| ● Multipurpose Room (repurposed) | ● Arena Renovation: Washroom conversion |
| ● Offices (repurposed) | ● Existing Building |
| ● Concession (repurposed) | — Extent of Existing Building |
| | ▲ Entrance |



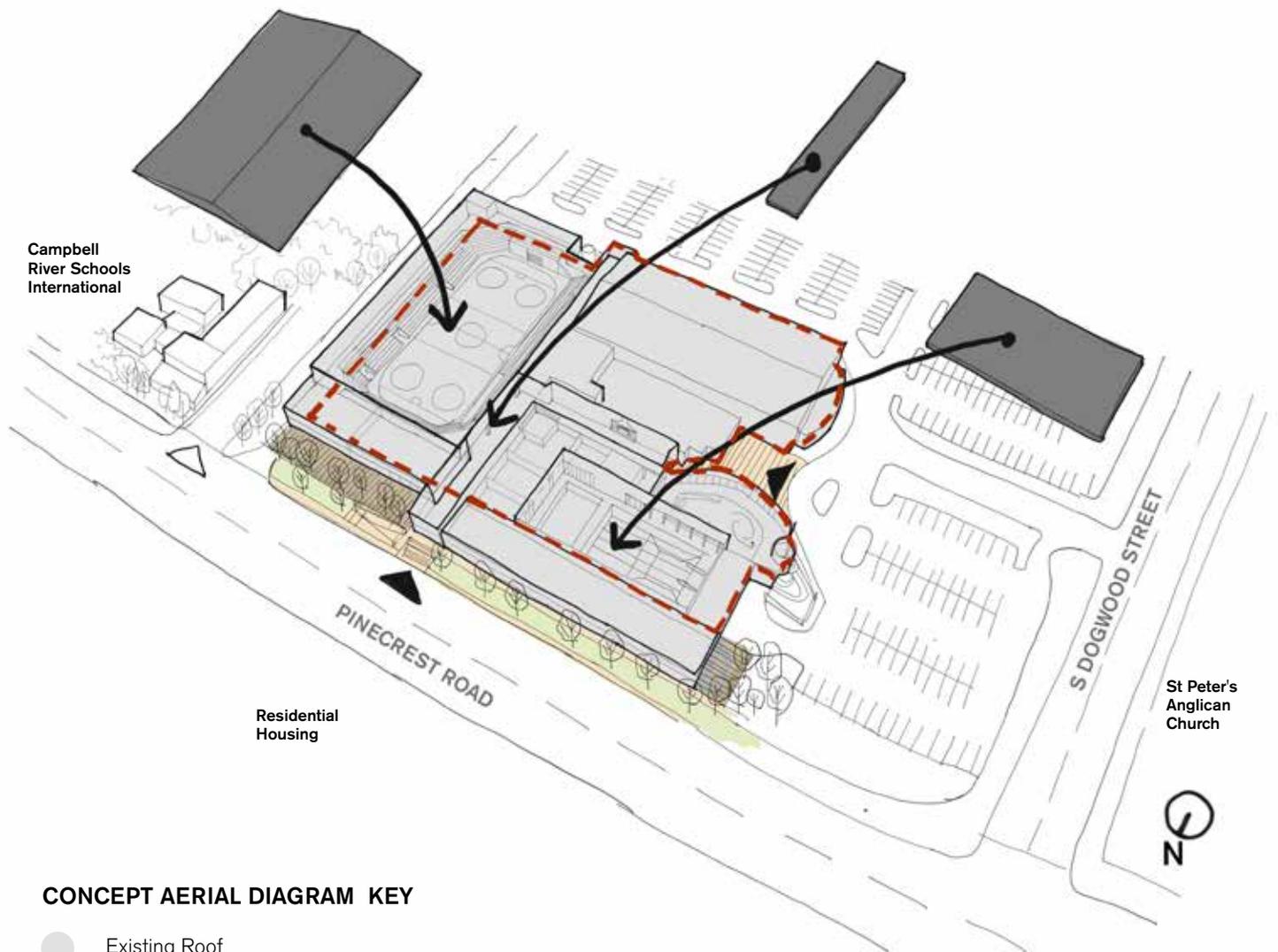
SECOND FLOOR PLAN KEY

- Fitness Centre Addition
- Multipurpose Room Renovation
- Circulation
- Extent of Existing Building
- Arena Addition: New Seating
- Arena Renovation: Refurbished Seating
- Roof Below
- New Higher-Level Roof



ROOF PLAN KEY

- Existing Roof
- New Roof / Build
- - - Extent of Existing Building



Campbell
River Schools
International

Residential
Housing

St Peter's
Anglican
Church

PINECREST ROAD

S DOGWOOD STREET



CONCEPT AERIAL DIAGRAM KEY

- Existing Roof
- New Roof / Build
- Extent of Existing Building

Social Space

A key component of the renewed Strathcona Gardens Community Complex is the renovation and expansion of the main circulation and reception space. This will create a welcoming social heart that enhances user experience and provide opportunities for community connections.

The main reception and associated administration offices would be relocated to the centre of the two circulation axis in order to improve visual connection and oversight over all key building entrances. The circulation space would be renovated and expanded adjacent to the Rob

Brind 'Amour Arena in order to provide a warm viewing and gathering area, along with new concession and seating. New glazing into the arena will improve visual connection between the spaces.

A new roof is proposed over the north-south part of the circulation space in order to create a light and bright double height atrium. At upper level, a bridge will connect the new stair/elevator core and fitness centre with the new multipurpose rooms and spectator seating.



▲ Concept Render - Reception, Lobby & Social Space

PRECEDENT EXAMPLES



- ▲ Hillcrest Centre, Vancouver, BC
- ▼ West Vancouver Community Centre, West Vancouver, BC

- ▼ West Vancouver Community Centre, West Vancouver, BC
- ▼ Timms Community Centre, Langley, BC



Arena Expansion

The proposal for the original Rob Brind 'Amour Arena is to renovate the existing seating area, as well as expand the seating capacity through a new addition. Additional seating will be provided through a new addition to the east and south edges (above home team changing and resurfacers room), and by the partial repurposing of some existing space to the north of the ice sheet. Underneath the new seating on the east edge, there will be four new team changing rooms, a first aid, referee room, and storage. An informal walking track for dry-land training and recreational use would run around the perimeter of the arena behind the spectator seating.

In order to allow for unimpeded sight lines from the new arena seating, a new roof would be required over the entire arena.

Entry into the arena would be via the renovated and expanded social space in order to enhance the connection between uses in the complex, improve operational functionality and provide full accessibility to the seating areas with the new elevator.

The new arena seating capacity would be increased to provide approximately either:

- 2160: Bench Seat Configuration, or
- 1640: Bucket Seat Configuration

This additional seating capacity will result in new parking demands. Based on the additional 1140 to 1515 new seats, and using parking bylaw table 4.21.1 (Zoning 3250, 2006), one additional space is required per five new seats. This will result in the requirement for 228

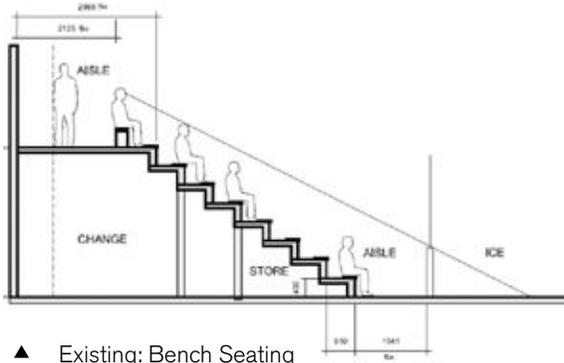
PRECEDENT EXAMPLES



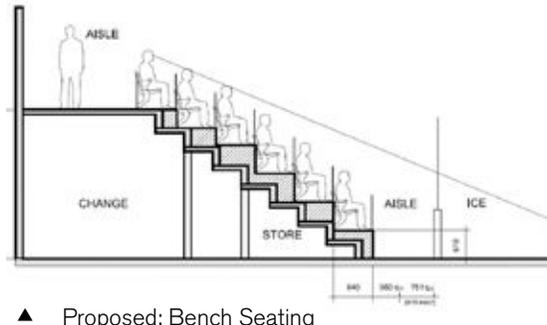
▲ Above & Top Right: Hillcrest Centre, Vancouver, BC

▲ Legends Centre, Oshawa, ON

▲ OPTION 2: Bucket Seating



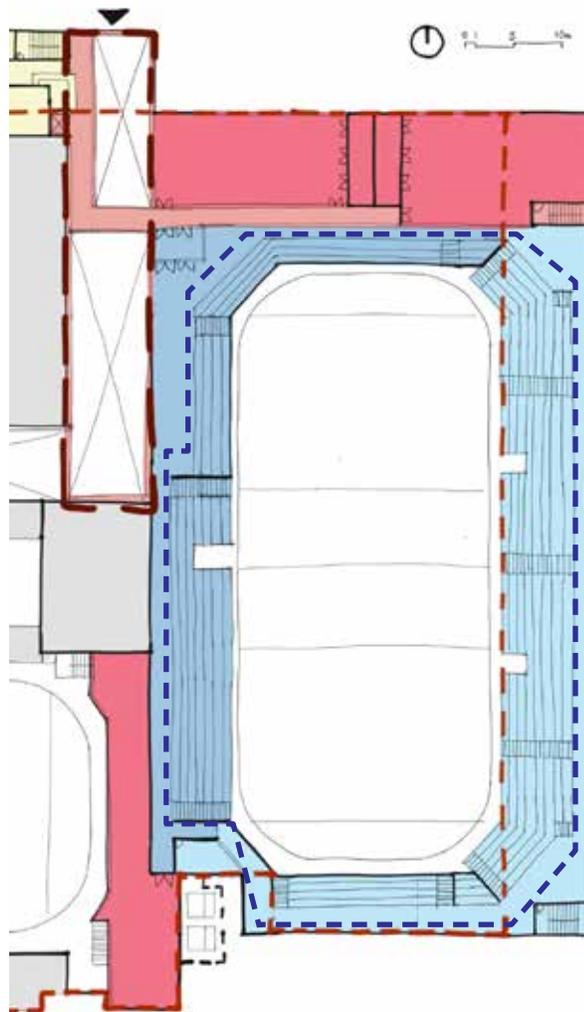
▲ Existing: Bench Seating



▲ Proposed: Bench Seating

to 303 new parking stalls. However in our experience at other similar facilities, a parking demand study may reveal that less are actually required. This should be completed as part of the schematic design phase. For cost allowance we've allowed for 100 additional surface parking on adjacent city owned property. Although the exact location is to be determined during the next stage of work.

Another element of the arena expansion is for the conversion of the current changing rooms into additional washrooms needed to meet the demand from the new spectator seating capacity.



▲ Proposed: Bench Seating

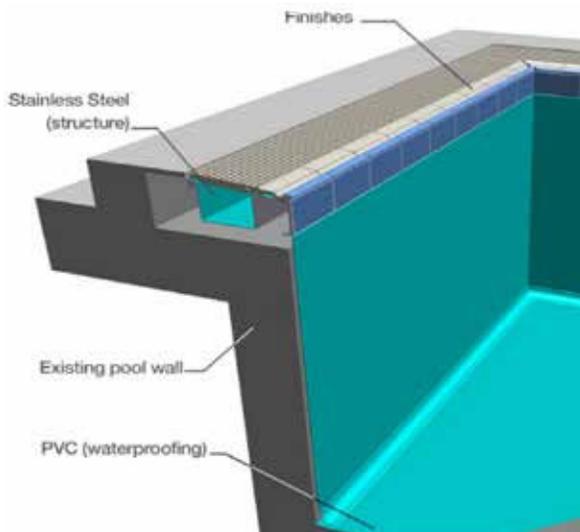
LEGEND

- Renovated Seating
- New Seating (repurposed space within existing building)
- New Seating Addition
- - - Walking / Running Route

Aquatic Expansion and Renovation

The current aquatic facilities are a well used and loved amenity within the area, but they are in need of some significant upgrades in order to address technical issues and increase overall capacity, especially for uses related to rehabilitation and wellness. The current 6 lane 37m requires extensive repairs and this offers the opportunity to split the tanks into a standard 25m pool and a separate warmer water therapy pool. In order to provide adequate length swimming and lessons capacity, we've proposed that the pool be expanded from 6 to 8 lanes.

One option for both the expansion of the tanks and the remediation of the leak could be the use of the Myrtha Renovation System. This prefabricated steel liner system would provide a less invasive, and most likely cheaper alternative, to a full remediation of the existing concrete walls. The capital cost estimate provided is based on this approach and has been reviewed by the manufacturer (National Aquatics for feasibility and cost input).



- ▲ Myrtha Renovation System
- ▼ Ravensong Aquatic Centre, Nanimo, BC

- ▲ Eileen Dailly Leisure Pool & Fitness Centre
Burnaby, BC



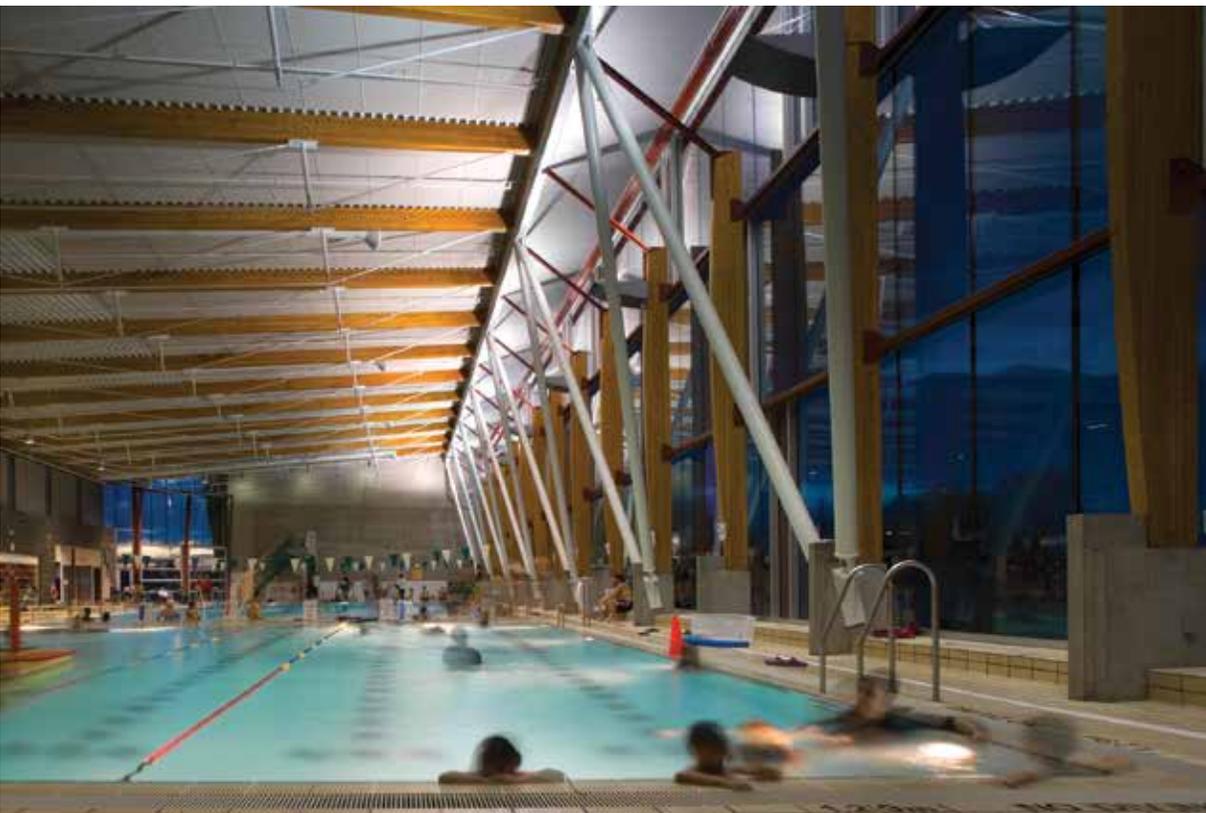
PRECEDENT EXAMPLES



▲ Killarney Community Pool
▼ Vancouver, BC



▲ Legends Centre, Oshawa, ON



Other proposed renovations include doubling the overall size of the changing rooms. They would remain in their current location but expand into the area of the current control, sauna and fitness testing rooms. The new changing rooms would include male and female changing, as well as a large universal changing room. The current pool admin spaces (e.g. lifeguard control room) would be relocated into the new addition along the north edge of the building and would have improved visual connection to both the 25m, therapy and hot pools, as well as sight lines into the leisure pool area.

A lifeguard training room is proposed at level 2 and would be accessible via the pool deck (multipurpose room #4). A new 'wet-use' multipurpose space / party room, is proposed through the conversion of the current weight room and whirlpool area. This is ideally located between the pool and social circulation space and would be highly glazed so as to improve visual connection between the social/circulation space and the pool hall. The existing warm viewing is to be renovated, but kept in it's current location.



- ▲ Hillcrest Centre, Vancouver, BC
- ▲ Ravensong Aquatic Centre, Nanimo, BC

- ▼ Grandview Heights Aquatic Centre, Surrey, BC



PRECEDENT EXAMPLES



▲ West Vancouver Aquatic Centre, West Vancouver, BC



▲ Killarney Community Pool, Vancouver, BC



▲ Grandview Heights Aquatic Centre, Surrey, BC

A new larger sauna, steam room and hot pool with associated deck space and 'fire' pit would be provided within the new addition along the north edge of the building. This forms a wellness focused area that will overlook new landscaping and an outdoor terrace. Large areas of glazing will provide lots of natural daylight, an active street elevation and visual connection between the aquatic centre and street.

There is also the option to upgrade the current leisure pool in its existing location to provide a lazy river, as well as more spray and play features. New glazing along the south edge of the aquatic centre would improve user experience through better natural daylight, as well as activate the main entry plaza on the west side of the complex.

Wellness & Fitness Centre

The proposed new addition along the north edge of the aquatic centre would be used to house a Wellness and Fitness Centre. At level 1 this addition would be partially used for the new sauna, steam room and hot pool, with the other half used for a new Wellness Centre that includes treatment rooms with a dedicated reception and waiting area. These facilities would be able to directly access the pool hall, adjacent to the new warmer water therapy pool.

New fitness spaces would be located at level 2, accessed through a new stair and elevator core. These fitness spaces would include a large weights and cardio room, as well as a dedicated fitness studio for classes. Some dry changing, offices, storage and small reception desk would also be provided so that this facility could be operated independently should demand exceed normal operating hours for the complex.



▲ Concept Render - Exterior View

PRECEDENT EXAMPLES



▲ Poirier Sport & Leisure Complex
▼ Coquitlam, BC



▲ Hillcrest Centre, Vancouver, BC



▲ Hillcrest Centre, Vancouver, BC



▲ Davie Street Heart Clinic, Vancouver, BC

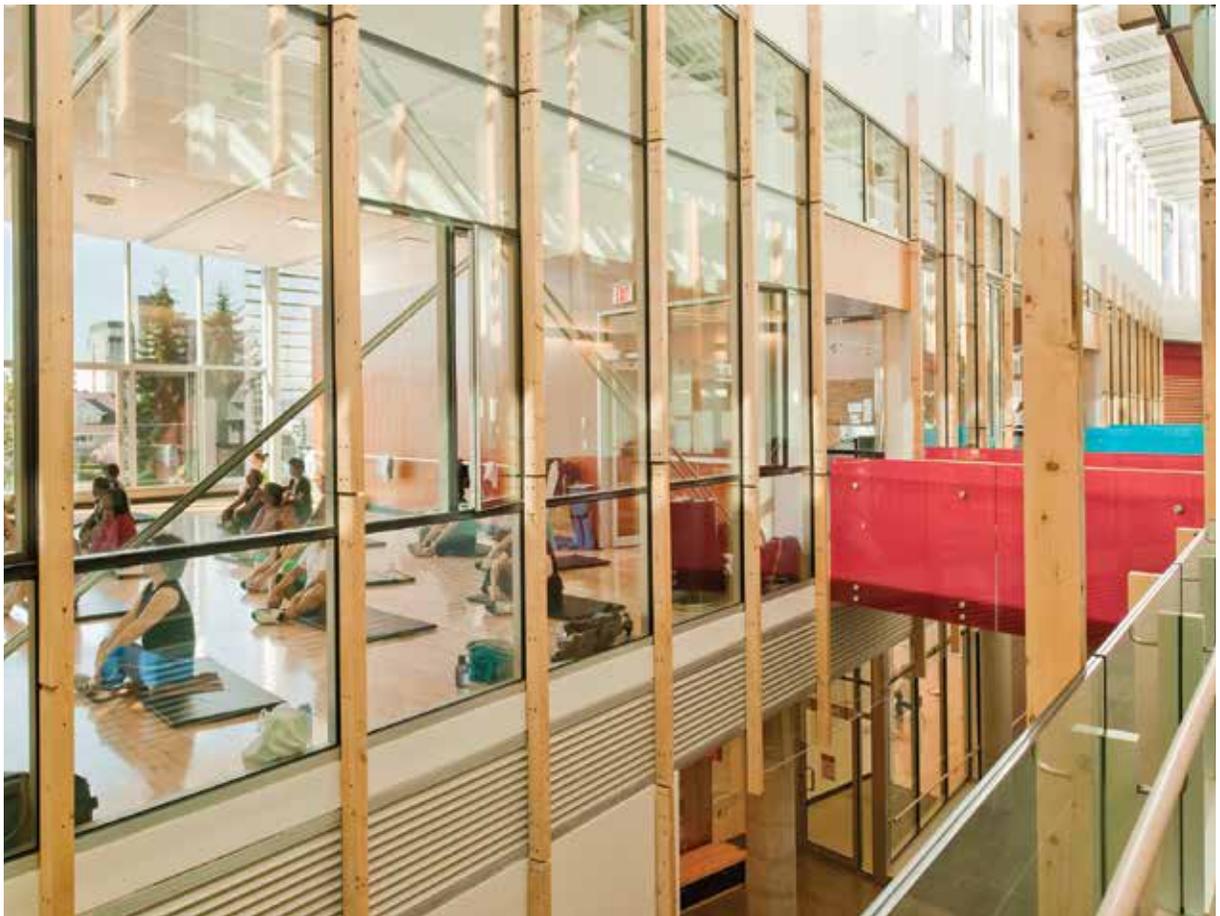
Multipurpose Space

There are a total of four [4] new and three [3] renovated Multipurpose rooms proposed as part of the renewals. These rooms are located throughout the facility and will be used for a variety of programmatic uses. All of the multipurpose rooms will have adequate storage for equipment and furniture in order to facilitate different uses and layouts.

The largest new multipurpose room is located at level 1, north of the existing Rob Brind 'Amour Arena. This space could also be combined with the adjacent medium-sized multipurpose by an acoustic movable wall in order to further increase capacity for large events. Glazed walls

along both sides of these spaces would provide visual connection with the arena for ice-sport events and allow access to a new landscape terrace for community events and parties. A further two new medium-sized multipurpose rooms are located directly above at level 2. Again glazing would visually connect spaces these to both the arena and new landscaping along Pinecrest Road.

Three existing multipurpose spaces would be renovated or repurposed from existing space: the lifeguard training room, the warm viewing/meeting room that overlooks arena 2, and the wet-use party room.



PRECEDENT EXAMPLES



▲ Port Moody Recreation Centre, Port Moody, BC
▼ Legends Centre, Oshawa, ON



▲ Gordon Head Recreation Centre, Saanich, BC
▼ West Vancouver Community Centre



▼ Hillcrest Centre, Vancouver, BC



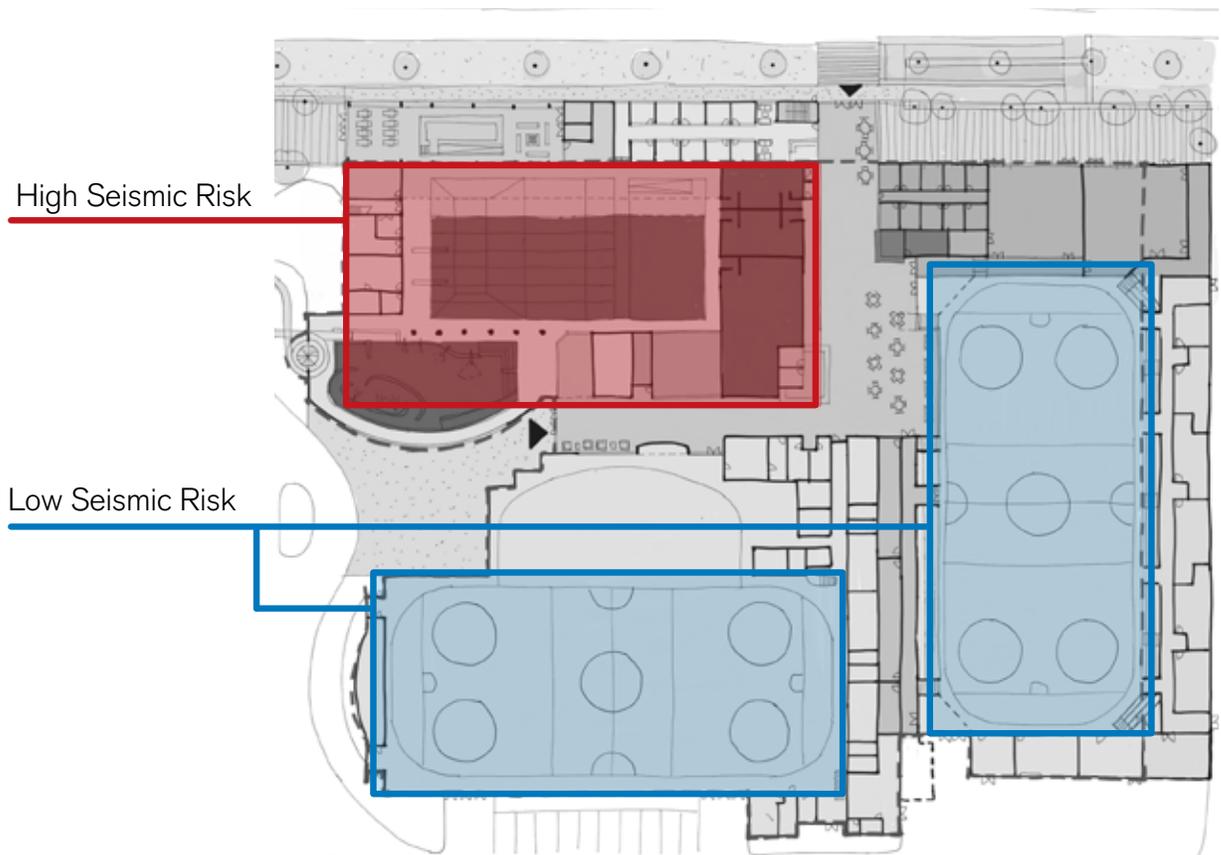
5.4 Technical Overview

STRUCTURAL OVERVIEW

The Structural Engineer has reviewed the proposed design and has advised the following:

- Arenas are pre-engineered structures which are relatively light weight and pose a lesser risk from a seismic perspective.
- The Aquatic Centre is concrete masonry block and poses the highest risk from a seismic perspective.
- The roof structure for the Aquatic Centre provides an opportunity to stabilize the remaining portion of the building by connecting it physically to the expansion.
- The level of seismic restraint required in the remaining portions of the existing building will be determined in conjunction with the municipality.
- Geotechnical testing and further seismic analysis are underway and will be completed in Schematic Design. The results of these tests will be critical in determining the impact (design and cost) on the structural design.

Refer to the full structural engineers report in the Appendix for further information.



▲ Diagram of Seismic Risk

CIVIL OVERVIEW

The civil engineer has reviewed the proposed design at high level and noted the following:

- Detailed utility checks for location, size and type will be required during schematic design phase.
- Based on preliminary desktop review of the city supplied services plan, the proposed additions shouldn't impact the location of existing water or sanitary services, however a site visit revealed a manhole in the northwest corner of the site in the location of the proposed addition. This service will need to be identified and then relocated or incorporated into the mechanical drainage system.
- Sanitary service size will need to be reviewed as part of schematic design in order to confirm the existing services are adequate for the proposals to meet current building codes.
- Storm drainage upgrades may be required to meet local bylaw water quality and stormwater management requirements, although the volume of stormwater flows from the site are not expected to increase by a noticeable amount.
- The underground BC Hydro and telecommunications routes from Dogwood Street will not be affected by the proposed works
- The two aerial telephone services of Pinecrest St, one to the arena and one to the pool, will be affected by the new addition along the north edge.
- The two existing gas services from Pinecrest street in the north-east of the pool building and north-east of the Rob Brind 'Amour Arena will be affected by the new additions and will need to be removed/relocated and reinstated.

Refer to the full civil engineers report in the Appendix for further information.

MECHANICAL OVERVIEW

The primary area of investigation in this study from a mechanical perspective was the impact of modifying the existing pool tank configuration. The AME report included in the appendix includes a summary analysis of the space, systems and cost impacts of various potential configurations. The costs and space requirements for the preferred option (hybrid of options B & C) have been included in the updated floor plans and cost estimate.

Refer to the full mechanical engineers report in the Appendix for further information.

5.5 Sustainability

This project aligns with several of the key indicators in the Sustainable Campbell River Framework which is broken down into three components. Sustainable design strategies that support these three components and could be considered for this project include:

Environmental Health

- Solar Hot Water (roof –mounted)
- Reduce water loss from pool tank
- Low flow fixtures
- Photo-voltaic panels on south facing roof
- Natural Daylighting
- Views to Nature

Economic Vibrancy

- Locally sourced materials (ex. wood)
- Local trades
- Local employment

Social & Cultural Well-being

- Creating places for gathering and social connection
- Supporting active, healthy lifestyles
- Promoting a holistic view of wellness
- Best practice for accessibility and inclusive design

We also note that both the CoCR and the SRD are signatories on BC's climate action plan.



- ▲ Solar Panels, Ravensong Aquatic Centre, Nanimo, BC
- ▶ SCR: Campbell River's Integrated Community Sustainability Plan, *Sustainable Campbell River*

Environmental Health:

- Climate & Energy:** Net Zero Carbon & Adaptive to Climate Change
- Ecosystem Integrity:** Maintain Ecological Functions
- Water Resources:** Responsible Consumption & Management
- Solid Waste Management:** Zero Waste

Economic Vibrancy:

- Local Economy:** Diverse & Robust
- Skilled Workforce:** Diversity of Skills & Learning Community

Social & Cultural Well-being:

- Social Equity & Cohesion:** Open & Inclusive Community
- Food Self-Sufficiency:** Local & Healthy Food
- Identity & Culture:** Recognizable & Rich with Diversity
- Shelter:** Housing for All
- Individual Health:** Healthy & Active Citizens

For each Sustainability Priority, to ensure the City is making the progress it desires, key performance indicators and implementation metrics will be monitored and reported on a regular basis.

6.0 Capital Cost Analysis

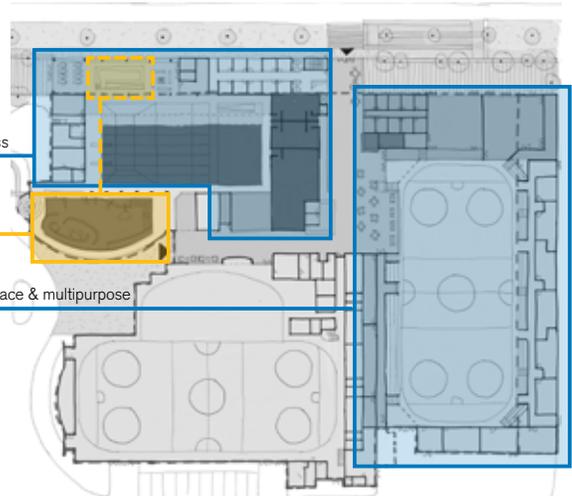
The following diagrams identify the full capital project cost for each of the components. The cost plan also includes the 1-5 year improvements identified in the Condition Assessment report. As requested, we have included costs for a new build option.

The assumptions for this option are that the new project would replace the same program elements like for like, and that it would be built on the same property (as such the acquisition of new land is not included). We note that the cost plan has allowed for a design contingency of 15% and project contingency of 10%, appropriate at this stage of design and given the renovation nature of the project. It should also be noted that this is a Class D estimate that carries an accuracy of +/- 25%.

The full costing analysis report can be found in the appendix.

CAPITAL PROJECT COST - RENOVATION

- \$ 15.4m aquatics, wellness & fitness
- \$ 5.0m leisure & hot pool upgrade
- \$ 17.5m arena expansion, social space & multipurpose
- \$ 1.3m deferred maintenance
- \$ 1.1m site works
- \$ 40.3m TOTAL**



CAPITAL PROJECT COST - NEW BUILD

- \$ 24.5m aquatics, wellness & fitness
- \$ 25.1m arena expansion, social space & multipurpose
- \$ 2.1m site works
- \$ 51.7m TOTAL**



7.0 Business Case

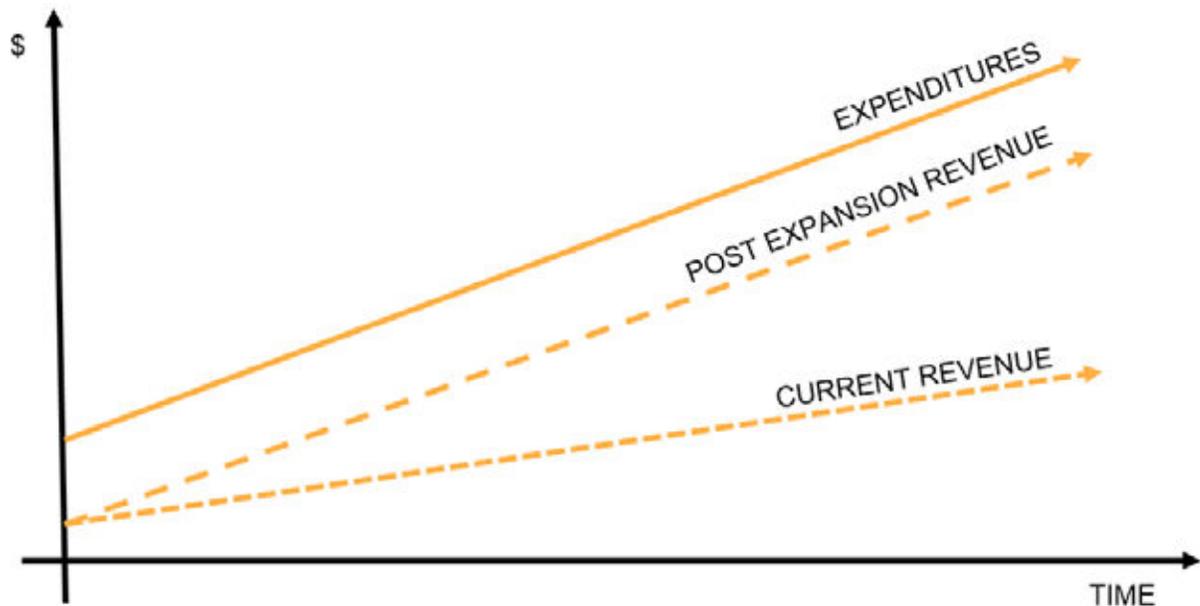
OVERVIEW

The business case completed for the facility suggests that the projected net revenue position post expansion will be similar to the averaged position of the last 3 years, and will have the following high level impacts:

- Revenues increased generally based on expanded offerings and capacity. This most noticeable in the aquatic side where additional capacity will lead to the ability to increase programs and overall capacity. The arena renewal, beyond the expansion of the seating, does not offer a significant increase in programming capacity.
- Expansion of the Wellness and Aquatic portions has the most positive impact on a per sq. ft. basis compared to other program elements.
- No significant impact to net revenue by the addition of the Leisure Pool.

The most significant learning from the business case is that the increased revenue generated by the new capacity will allow the SGRC to keep pace with rising costs (labour, energy etc.) that are currently rising at a faster pace than revenues. This is illustrated in the diagram below.

Please note that this version of the business case includes the new leisure pool, although at this stage this component is still considered to be optional from a capital cost perspective.



▲ Revenue vs. Expenditures

Strathcona Gardens - Business Plan Analysis

The business plan section of this report was prepared for information purposes only and projections are subject to changing variables and conditions. Operating costs are subject to world pricing for energy and labour costs based on negotiated agreements, among other factors. Revenue targets can only be met if hours of operation, programs offered and pricing correspond with the demand generated by the community. Consequently, the analysis and interpretation of the data is only intended for planning purposes only and represent realistic and conservative estimates.

1.1 Space Program Area Analysis

The space list on the following page is an approximate breakdown of current space allocation in the facility prepared for the purposes of analyzing and apportioning operating costs. A multi-use complex has many types of spaces such as pools, locker rooms and ice sheets. Each space type consumes different amounts of resources (i.e. labour, energy) for operation and are capable of generating different levels revenues, or in some cases, almost no revenues (locker rooms, teams rooms, etc.) but are a essential for the functioning of a facility.

Some of the key high-level observations about the financial performance of Strathcona Gardens:

Revenues Earned

	Revenue	% of Rev.	% of Area	Rev./SF
• Swimming Pool	\$529,000	36%	24%	\$24.00 / SF
• Change Rooms	\$25,000	1%	2%	\$10.00 / SF
• Fitness / Rehab	\$169,000	11%	2%	\$67.00 / SF
• Arena #1 (spectator arena)	\$295,000	20%	30%	\$8.00 / SF
• Arena #2 (leisure and NHL ice)	\$295,000	20%	31%	\$8.00 / SF
• Common Areas (incl. concession)	\$175,000	11%	11%	\$16.00 / SF

Operating Cost Distribution (excluding Capital)

	Annual Cost	% of Cost	% of Labour	% of Area	Cost/SF
• Swimming Pool	\$1,300,000	28%	28%	24%	\$45.00 / SF
• Change Rooms	\$140,000	3%	5%	2%	\$51.00 / SF
• Fitness / Rehab	\$280,000	6%	3%	2%	\$55.00 / SF
• Arena #1	\$1,550,000	33%	18%	30%	\$41.00 / SF
• Arena #2	\$1,360,000	29%	16%	31%	\$41.00 / SF
• Common Areas	\$50,000	1%	30%*	11%	\$56.00 / SF

* Including Facility Management and Administration

Operating Subsidy

Overall cost subsidy (shortfall after operating costs less revenues): \$28.15 / SF for entire facility

• Swimming Pool	\$967,000	29%
• Change Rooms	\$105,000	3%
• Fitness / Rehab	None	0% (positive net income)
• Arena #1	\$838,000	25%
• Arena #2	\$770,000	23%
• Common Areas	\$670,000	20%

1.2 Projected Operating Budget and Pro Forma

Sheet 1 – Historical Annual Budgets and Projected Average

Analysis of financial performance was based on previous Strathcona Gardens facility annual financial reports (2013-2015) and was compared with data from six other Vancouver Island aquatic facilities. Some the categories have been shifted or combined to match line items. Strathcona Gardens data was compared with Vancouver Island aquatic facilities including Ravensong, Beban, Cowichan, Westshore, Panorama and SEAPARC and was indexed to 2016 dollars. To protect confidentiality, specific values from other facilities cannot be shown and only blended averages for comparison.

Future operating and cost recovery projections were based on a linear projection of Strathcona Gardens revenues and expenses and accounting for the type of expansion and renovations proposed for the facility. Estimates assume revenue fees and charges will remain the same, though expenditures were escalated to reflect trends in energy pricing, increasing overheads, etc.

The financial analysis has been broken down into Revenues (with sub-headings of income sources and transfers) and Expenditures (with sub-headings of Labour costs, Utilities and Overheads as well as Capital). In terms of comparison with averages, Strathcona Gardens historical income from memberships, drop-ins, programs and rentals is comparable with the other pools on a per-pool lane basis and when adjusting for catchment population size.

In terms of expenditures, historical Labour costs appear to be slightly higher than average but may be ahead of the other pools in accounting for the cost of labour benefits most likely due to retirements. Energy costs are comparable with other facilities on a per-square foot basis, though water costs appear to be higher (possibly due to pool leakage). Overheads are comparable with the average, except for maintenance and repairs indicating some building issues or maintenance is not being deferred. Capital was excluded from comparison as each municipality and regional district has unique circumstances and different ages of facilities.

A positive value net cost recovery suggests surplus operating funds are being held for future required lifecycle maintenance and is better than the average. However, in some pools budgets don't show surpluses and capital for lifecycle is approved separately.

On a per-square foot basis revenues are in line with the average, though per-capita participation rates and utilization of Vancouver Island pools tends to be lower per-capita than their mainland counterparts. Labour, energy and overheads expenditures are within 10% of the average. What renovating and expanding aquatic and fitness offerings at Strathcona Gardens present is the opportunity to exceed the average performance.

Notes and Assumptions in the analysis spreadsheets:

- 1-4) Memberships, aquatic programs, public swim and pool rentals are assume to increase by 70% if two more lanes are added as capacity of current lanes is presumed to be maximized and new lanes would be absorbed by pent-up demand
- 3) Public swim drop-ins would increase significantly up to 140% even if area is only modestly increased, if the offerings are new and attractive (i.e. new water toys, moving water) plus access to more lanes
- 5) Rehabilitation programs would see an almost 30% increase in pool time due to the tank reconfiguration into two tanks and the smaller, warmer body of water allocated for therapeutic use

- 6) Fitness would be more than doubling in size, but the larger critical mass and diversity of equipment offerings should quadruple fitness centre and bring it into line comparable scale facilities
- 7-9) Arena programs and rentals are near maximized for the two ice sheets with limited capacity for expanding, though demand is not substantial enough to justify a third ice sheet. Revenues would increase though as Strathcona Gardens can charge the junior hockey team tenant and special event renters (i.e. concerts) a high rent per seat even if the net number of seats isn't increased
- 18-19) Municipal and government transfers were presumed to remain unchanged even if the facility was enlarged
- 21 and 29) Management and operations compensation is higher than average, but some other jurisdictions staff are pro-rated between multiple facilities
- 25) Lifeguarding compensation should minimally increase proportionally with the increase in water area, however changes to the aquatic facility should stimulate new demand requiring additional lifeguards on duty based on bather load, not area. The two were averaged to create a more conservative number for the Campbell River context
- 24 and 26) Concession and program staff were not broken out as separate line items in the annual statements and are presumed to be imbedded in the administrative and/or support staff category
- 30) Benefits escalated significantly by more than 50% in two years which presumably meant a high level of attrition to retirements
- 31) Electricity rates while increasing, increased at a lower rate than provincial averages. Power is projected to increase at a rate of at least 5% per year for the next decade. Consumption of power and all utilities will increase, but not as significantly as the increase in water area or dryland space
- 32) Fuel and heating costs decreased by 1/3 over the three year period, suggesting an equipment change may have occurred or some systems shifting from oil to electrical
- 33) Water and sewer was slightly higher than average which may reflect local rates or may indicate a loss of water
- 34-47) Costs were in line with averages and no anomalies found, though the maintenance and repairs number was slightly higher caused by many different factors or higher maintenance standards than most
- 48-50) Capital historical averages projected at the same rates as current not knowing the specifics of current long-term amortized debt or other financial obligations
- 51) Net revenue or cost recovery is revenues over expenditures. A positive value means a surplus, a negative value a shortfall (usually a drop in demand or unplanned increases in operating costs).

Generally speaking, increasing the size and offerings of aquatics and fitness at Strathcona Gardens will not significantly increase net surpluses or lessen the dependency on subsidies, owing to the fact that expenses such as energy will be increasing at a faster rate revenue increases (unless fees are increased for inflation).

The real advantage of increasing size and offerings at the facility will create more opportunity for users and generating more demand from the community. If there is room for more programs or larger

enrolments in programs, more residents will be able to participate which is the real end goal of a community recreation facility.

Sheet 2 – Five-Year Projection Pro Forma

The purpose of a five-year projection is to illustrate trends and variables. Typically a new or renewed facility enjoys a ‘honeymoon’ period in the first year after opening/re-opening. This is followed by a modest drop-off in the second year and then by more modest gradual increases year-over-year that reflect population increase or slight increases in participation rates (age profile shifts, unique programs or the calibre of instruction). At the end of five years however, typically the curve is roughly equal to a straight-line projection.

What also has to be accounted for is a loss of business during the renovation closure of a facility, and the gradual re-building of that clientele. This could mean a loss of users to the Comox Valley pool or fitness users leaving for private service providers (i.e. Curves, etc.).

The five-year pro-forma also illustrates the relatively low maintenance costs associated with a new or renewed facility plus the gradual and inevitable escalation of energy costs and other operating expenditures. Some costs such as labour in fact becomes more efficient and economical as increases in the number of staff tends to be lower on a percentage basis than the percentage increase in area.

What the five-year pro forma suggests is that in this case, the real reason for investment in Strathcona Gardens is first and foremost the benefits to users by creating more opportunity for users and, capacity for recreation and wellness programs. Revenues will be increasing but is important to note that costs for the foreseeable future are expected to be increasing at a rate even faster than revenues. This is especially true for energy costs, overheads and staff benefits costs and is systemic problem being faced by recreation facilities everywhere, not uniquely to Strathcona Gardens.

In fact, if Strathcona Gardens continued without change and improvements did not occur, the facility would be expected to experience sizable operating losses and increased subsidies in the coming years as costs outpace the current level of revenues. This is to say recent historical cost recovery performance would not be repeated as costs can be expected to increase significantly.

Beyond the year-five window, projections are more difficult for forecast as variable are unknown and more volatile. What is known however is as a facility ages, maintenance and repair costs will increase in the second and third decades after a facility is renewed.

STRATHCONA GARDENS RECREATION CENTRE - HISTORICAL ANNUAL BUDGETS AND PROJECTED AVERAGE Sheet 1

Revenues	Actual 2013	Actual 2014	Actual 2015	Estimated 2016*	Avg. Post- Expansion	
1 Memberships	\$139,000	\$143,000	\$150,000	\$146,939	\$225,000	153%
2 Aquatic Programs	\$135,000	\$165,000	\$178,000	\$162,585	\$275,000	169%
3 Public Swimming	\$123,000	\$132,000	\$127,000	\$129,932	\$310,000	239%
4 Pool Rentals	\$88,000	\$83,000	\$91,000	\$89,116	\$140,000	157%
5 Rehabilitation Programs	\$107,000	\$118,000	\$165,000	\$132,653	\$170,000	128%
6 Fitness Programs	\$39,000	\$38,000	\$30,000	\$36,395	\$145,000	398%
7 Arena Rentals	\$388,000	\$384,000	\$362,000	\$385,714	\$425,000	110%
8 Ice Programs	\$104,000	\$146,000	\$132,000	\$129,932	\$130,000	
9 Public Skating	\$30,000	\$31,000	\$31,000	\$31,293	\$30,000	
10 Arena Dryfloor Rental	\$17,000	\$26,000	\$20,000	\$21,429	\$25,000	117%
11 Skate Rental/Sharpening	\$18,000	\$20,000	\$19,000	\$19,388	\$20,000	
12 Concession Sales	\$95,000	\$119,000	\$112,000	\$110,884	\$210,000	189%
13 Other Building Rentals	\$21,000	\$23,000	\$21,000	\$22,109	\$85,000	384%
14 Locker Rentals	\$16,000	\$17,000	\$17,000	\$17,007	\$20,000	118%
15 Retail/Vending Machines	\$18,000	\$19,000	\$23,000	\$20,408	\$20,000	
16 Advertising	\$8,000	\$29,000	\$24,000	\$20,748	\$20,000	
17 Miscellaneous	\$35,000	\$29,000	\$20,000	\$28,571	\$30,000	
Earned Income Sub-Total	\$1,381,000	\$1,522,000	\$1,522,000	\$1,505,102	\$2,280,000.00	
18 Municipality	\$2,940,000	\$3,094,000	\$3,175,000	\$3,132,313	\$3,132,313	
19 Gov't Transfers	\$580,000	\$602,000	\$595,000	\$604,422	\$604,422	
20 Surplus Carried	\$408,000	\$248,000	\$402,000	\$359,864	\$359,864	
Subsidies/Surplus Sub-Total	\$3,928,000	\$3,944,000	\$4,172,000	\$4,096,599	\$4,096,599	
Revenues Total	\$5,309,000	\$5,466,000	\$5,694,000	\$5,601,701	\$6,376,599	

*Three-year average plus indexed by 2% per year

Expenditures

21 Management	\$314,000	\$314,000	\$356,000	\$334,694	\$370,000	
22 Support Services	\$250,000	\$305,000	\$351,000	\$308,163	\$340,000	
23 Administrative Staff	\$335,000	\$343,000	\$389,000	\$362,925	\$395,000	
24 Concession Staff		Imbedded in Administrative Staff				
25 Lifeguards	\$870,000	\$975,000	\$995,000	\$965,986	\$1,200,000	124%
26 Program and Teaching Staff		Imbedded in Administrative Staff				
27 Fitness/Rehab Instructors		Imbedded with Lifeguarding Staff			\$75,000	New
28 Ice Programs Staff	\$137,000	\$144,000	\$159,000	\$149,660	\$150,000	
29 Operations Staff	\$632,000	\$690,000	\$830,000	\$731,973	\$750,000	
30 Benefits	\$432,000	\$613,000	\$680,000	\$586,735	\$665,000	
Labour Sub-Total	\$2,970,000	\$3,384,000	\$3,760,000	\$3,440,136	\$3,945,000	
Utilities						
31 Electricity	\$188,000	\$198,000	\$230,000	\$209,524	\$270,000	129%
32 Heat / Fuel	\$235,000	\$219,000	\$157,000	\$207,823	\$230,000	111%
33 Water and Sewer	\$28,000	\$30,000	\$29,000	\$29,592	\$35,000	118%
Utilities Sub-Total	\$451,000	\$447,000	\$416,000	\$446,939	\$535,000	

	Actual 2013	Actual 2014	Actual 2015	Estimated 2016*	Avg. Post- Expansion	
Overheads						
34 Office Supplies	\$14,000	\$14,000	\$16,000	\$14,966	\$15,000	
35 Concession Inventory	\$54,000	\$61,000	\$61,000	\$59,864	\$80,000	134%
36 Insurance	\$43,000	\$55,000	\$55,000	\$52,041	\$55,000	
37 Permits and Licences	\$7,000	\$8,000	\$15,000	\$10,204	\$10,000	
38 Communications/Alarms	\$21,000	\$23,000	\$20,000	\$21,769	\$20,000	
39 Advertising/Marketing	\$51,000	\$73,000	\$66,000	\$64,626	\$65,000	
40 Pool Program Costs	\$31,000	\$35,000	\$36,000	\$34,694	\$40,000	115%
41 Fitness/Rehab Program Costs	\$6,000	\$2,000	\$5,000	\$4,422	\$15,000	339%
42 Ice Program Costs	\$34,000	\$38,000	\$34,000	\$36,054	\$35,000	
43 Pool Chemicals	\$30,000	\$32,000	\$31,000	\$31,633	\$40,000	126%
44 Maintenance and Repairs	\$223,000	\$235,000	\$356,000	\$276,871	\$270,000	98%
45 Custodial Supplies	\$38,000	\$38,000	\$43,000	\$40,476	\$45,000	111%
46 Operations Costs	\$66,000	\$70,000	\$66,000	\$68,707	\$70,000	
47 Miscellaneous	\$118,000	\$143,000	\$180,000	\$150,000	\$150,000	
Overheads Sub-Total	\$736,000	\$827,000	\$984,000	\$866,327	\$910,000	
Capital						
48 Debt Principal and Interest	\$168,000	\$234,000	\$116,000	\$176,190	\$176,190	
49 Direct Transfer to Capital	\$731,000	\$146,000	\$417,000	\$440,136	\$440,136	
50 Flow-Throught Net Capital**	\$0	\$0	\$0	\$0	\$0	
Capital Cost Sub-Total	\$899,000	\$380,000	\$533,000	\$616,327	\$616,327	
Expenditures Total	\$5,056,000	\$5,038,000	\$5,693,000	\$5,369,728	\$6,006,327	
51 NET REVENUE TOTAL	\$253,000	\$428,000	\$1,000	\$231,973	\$370,272	

** External funding and transfers, less capital building improvements and acquisitions

Analysis of Operational Efficiencies and Cost Recoveries on a Per-Square-Foot Basis

52 Income per Square Foot	\$11.51	\$12.68	\$12.68	\$12.54	\$17.54
53 Total Revenue per Square Foot	\$44.24	\$45.55	\$47.45	\$46.68	\$49.05
54 Labour per Square Foot	\$24.75	\$28.20	\$31.33	\$28.67	\$30.35
55 Utilities per Square Foot	\$3.76	\$3.73	\$3.47	\$3.72	\$4.12
56 Overheads per Square Foot	\$6.13	\$6.89	\$8.20	\$7.22	\$7.00
57 Total Expenditures per SF	\$42.13	\$41.98	\$47.44	\$44.75	\$46.20
Net Revenue per Square Foot	\$2.11	\$3.57	\$0.01	\$1.93	\$3.09

STRATHCONA GARDENS RECREATION CENTRE - FIVE-YEAR PROJECTION PRO FORMA Sheet 2

Revenues	Year One	Year Two	Year Three	Year Four	Year Five
1 Memberships	\$180,000	\$200,000	\$185,000	\$225,000	\$225,000
2 Aquatic Programs	\$225,000	\$225,000	\$250,000	\$275,000	\$300,000
3 Public Swimming	\$250,000	\$225,000	\$300,000	\$325,000	\$325,000
4 Pool Rentals	\$105,000	\$115,000	\$125,000	\$135,000	\$145,000
5 Rehabilitation Programs	\$170,000	\$160,000	\$190,000	\$210,000	\$200,000
6 Fitness Programs	\$145,000	\$150,000	\$155,000	\$160,000	\$165,000
7 Arena Rentals	\$390,000	\$390,000	\$390,000	\$390,000	\$390,000
8 Ice Programs	\$130,000	\$130,000	\$130,000	\$130,000	\$130,000
9 Public Skating	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000
10 Arena Dryfloor Rental	\$25,000	\$25,000	\$25,000	\$30,000	\$30,000
11 Skate Rental/Sharpening	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000
12 Concession Sales	\$200,000	\$200,000	\$210,000	\$220,000	\$220,000
13 Other Building Rentals	\$65,000	\$75,000	\$85,000	\$95,000	\$105,000
14 Locker Rentals	\$25,000	\$20,000	\$20,000	\$20,000	\$25,000
15 Retail/Vending Machines	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000
16 Advertising	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000
17 Miscellaneous	\$25,000	\$25,000	\$30,000	\$30,000	\$30,000
Earned Income Sub-Total	\$2,025,000	\$2,030,000	\$2,185,000	\$2,122,449	\$2,380,000.00
18 Municipality	\$3,100,000	\$3,100,000	\$3,100,000	\$3,200,000	\$3,200,000
19 Gov't Transfers	\$600,000	\$600,000	\$605,000	\$605,000	\$605,000
20 Surplus Carried	\$360,000	\$360,000	\$360,000	\$360,000	\$360,000
Subsidies/Surplus Sub-Total	\$4,060,000	\$4,060,000	\$4,065,000	\$4,144,558	\$4,165,000
Revenues Total	\$6,085,000	\$6,090,000	\$6,250,000	\$6,267,007	\$6,545,000
Expenditures					
21 Management	\$355,000	\$365,000	\$370,000	\$375,000	\$380,000
22 Support Services	\$340,000	\$330,000	\$340,000	\$345,000	\$350,000
23 Administrative Staff	\$390,000	\$390,000	\$395,000	\$395,000	\$400,000
24 Concession Staff		Imbedded in Administrative Staff			
25 Lifeguards	\$1,150,000	\$1,050,000	\$1,150,000	\$1,250,000	\$1,350,000
26 Program and Teaching Staff		Imbedded in Administrative Staff			
27 Fitness/Rehab Instructors	\$70,000	\$65,000	\$75,000	\$80,000	\$85,000
28 Ice Programs Staff	\$137,000	\$144,000	\$159,000	\$149,660	\$149,660
29 Operations Staff	\$632,000	\$690,000	\$830,000	\$731,973	\$731,973
30 Benefits	\$670,000	\$670,000	\$665,000	\$600,000	\$600,000
Labour Sub-Total	\$3,744,000	\$3,704,000	\$3,984,000	\$3,926,633	\$4,046,633
Utilities					
31 Electricity	\$255,000	\$265,000	\$270,000	\$275,000	\$280,000
32 Heat / Fuel	\$215,000	\$220,000	\$225,000	\$235,000	\$245,000
33 Water and Sewer	\$30,000	\$30,000	\$35,000	\$40,000	\$40,000
Utilities Sub-Total	\$500,000	\$515,000	\$530,000	\$550,000	\$565,000

	Year One	Year Two	Year Three	Year Four	Year Five
Overheads					
34 Office Supplies	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000
35 Concession Inventory	\$85,000	\$70,000	\$75,000	\$85,000	\$90,000
36 Insurance	\$55,000	\$55,000	\$55,000	\$55,000	\$55,000
37 Permits and Licences	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000
38 Communications/Alarms	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000
39 Advertising/Marketing	\$70,000	\$70,000	\$65,000	\$60,000	\$55,000
40 Pool Program Costs	\$40,000	\$35,000	\$40,000	\$40,000	\$45,000
41 Fitness/Rehab Program Costs	\$15,000	\$10,000	\$15,000	\$15,000	\$20,000
42 Ice Program Costs	\$35,000	\$35,000	\$35,000	\$35,000	\$35,000
43 Pool Chemicals	\$40,000	\$40,000	\$40,000	\$40,000	\$40,000
44 Maintenance and Repairs	\$250,000	\$260,000	\$270,000	\$280,000	\$290,000
45 Custodial Supplies	\$45,000	\$45,000	\$45,000	\$45,000	\$45,000
46 Operations Costs	\$70,000	\$70,000	\$70,000	\$70,000	\$70,000
47 Miscellaneous	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000
Overheads Sub-Total	\$900,000	\$885,000	\$905,000	\$920,000	\$940,000
Capital					
48 Debt Principal and Interest	\$175,000	\$175,000	\$175,000	\$175,000	\$175,000
49 Direct Transfer to Capital	\$440,000	\$440,000	\$440,000	\$440,000	\$440,000
50 Flow-Through Net Capital**	\$0	\$0	\$0	\$0	\$0
Capital Cost Sub-Total	\$615,000	\$615,000	\$615,000	\$615,000	\$615,000
Expenditures Total	\$5,759,000	\$5,719,000	\$6,034,000	\$6,011,633	\$6,166,633
51 NET REVENUE TOTAL	\$326,000	\$371,000	\$216,000	\$255,374	\$378,367

** External funding and transfers, less capital building improvements and acquisitions

Analysis of Operational Efficiencies and Cost Recoveries on a Per-Square-Foot Basis

52 Income per Square Foot	\$15.58	\$15.62	\$16.81	\$16.33	\$18.31
53 Total Revenue per Square Foot	\$46.81	\$46.85	\$48.08	\$48.21	\$50.35
54 Labour per Square Foot	\$28.80	\$28.49	\$30.65	\$30.20	\$31.13
55 Utilities per Square Foot	\$3.85	\$3.96	\$4.08	\$4.23	\$4.35
56 Overheads per Square Foot	\$6.92	\$6.81	\$6.96	\$7.08	\$7.23
57 Total Expenditures per SF	\$44.30	\$43.99	\$46.42	\$46.24	\$47.44
Net Revenue per Square Foot	\$2.72	\$3.09	\$1.80	\$2.13	\$3.15

8.0 Next Steps

This study has provided a higher degree of clarity and confirmation around the programming needs and the design that would be needed to accommodate those needs. Both the programming targets and the revised design received a high level of support from the public, stakeholders and staff and as such can be used with confidence as the basis with which to proceed into a Schematic Design phase.

Perhaps the most significant unanswered question for this project surrounds the rapidly shrinking gap between the costs for the renovation and new build scenarios. This also represented the largest point of concern for stakeholders and the public, who raised significant concern, primarily around the potential closure of aquatic facilities during the renovation. This report offers the following high level considerations on this issue:

RENOVATION OPTION CONSIDERATIONS

- Lower initial costs, but higher ongoing operational & maintenance costs due to aging equipment and building components.
- Higher degree of variability in the cost estimates (more risk at the tender stage) due to unforeseen conditions existing within the building.
- The deferred maintenance items identified in the Condition Assessment Report past 5 years will still need to be addressed and have not been included in the capital cost estimate.
- Construction phasing will require a full shut-down on both aquatics and arena (not necessarily at the same time). Typical construction periods for projects of this nature are 18 to 24 months. There may be the potential to reduce this time by designing for prefabrication of roof and other major components such as the pool tank liner.
- The needs identified during this study can be successfully met with the renovation design.

NEW BUILD CONSIDERATIONS

- Higher initial costs, but lower operational & maintenance costs given that these will be fully replaced by new.
- More certainty in the project planning stage in the cost estimates (less contingencies at the tender

stage).

- Majority of the maintenance items identified in the Condition Assessment will be absorbed in the cost of the new build.
- If the new building components were located in the same location, construction phasing would require a full shut-down on both aquatics and arena (not necessarily at the same time). Again, typical construction periods for projects of this nature are 18 to 24 months. Construction timelines for new buildings tend to be shorter than for renovations given the investigative nature of initial phases and unforeseen conditions, but to what degree would require more detailed review.
- A new build scenario would allow the facility to be built in a way which allows for a higher degree of future programming flexibility.

During the final design presentation to the Recreation Commission, the design team was asked whether a new build scenario could be accommodated on other parts of the same property to avoid a shutdown of either aquatic or arena components. While this additional study is beyond the scope of this report, we do recommend that some additional analysis be completed on the new build option to assist the Commission in arriving at a decision. In broad terms, this study should include:

- Design configuration of a new build scenario if it were to occur on the same location, maximizing operational flows and design considerations.
- Site analysis of new build options in other locations on the same site.
- Cost benefit analysis of relocating components of the project to a different site (i.e. Arenas to remain, aquatic, wellness and fitness to be a new project at a different location).

- The ability of adjacent city owned lands to support any of the above notions and/or expanded parking requirements.
- Input from a contractor or construction manager to determine more precisely what the closure periods would be in either renovation or a new build scenario and how to maximize design opportunities that would minimize this.
- Updated capital cost estimate on the various new build scenarios noted above.

In addition to the above we also recommend that the following studies be completed before or during the Schematic Design phase. Some of these are already in progress.

- **Comprehensive as-built drawings of the facility.** This will help streamline the schematic design process and schedule.
- **Seismic Study.** The latest revision to the BCBC has significantly increased the lateral design loading requirements, which has a large effect on structural retrofit and the project cost. We recommend that

a detailed study be carried out which outlines the potential cost impacts of seismic retrofit and includes a discussion with the local authority having jurisdiction to gain clarity on performance requirements.

- **Geotechnical Testing.** Tests should be completed to determine exact nature of the soils conditions on the site. This will assist the structural engineer in determining the suitability and cost impacts of various foundation designs and may also provide some clarity on the source of the pool leak.
- **Environmental Assessment of the existing building.**
- **Legal survey of the property to provide topographic and property line information for the Schematic Design phase.** Given the proximity of the expansion to the north property line this information should be acquired as soon as possible to ascertain appropriate setbacks etc.
- **Traffic Impact Study (and Parking Demand).** This study could be carried out during Schematic Design if required.

9.0 Appendix

- 9.1 Structural Schematic Design Report
- 9.2 Civil Engineering Schematic Design Report
- 9.3 Mechanical Engineering Schematic Design Report
- 9.4 Feasibility Estimate
- 9.5 Existing Building Plan

9.1 Structural Schematic Design Report

Herold Engineering

STRATHCONA GARDENS CAMPBELL RIVER

Revitalization Project

Structural Schematic Design Report



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May 22, 2017	Project No. 2298-010

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1.0 General

This project is divided into two distinct phases as follows:

- Phase 1 Aquatic and Wellness
 - Option 1 Renovation and Addition
 - Option 2 New Build
- Phase 2 Arena and Multipurpose
 - Option 1 Renovation and Addition
 - Option 2 New Build

At this stage only conceptual layouts are available of the proposed renovation and addition work. New build options have not been developed. Limited existing drawing information is available

Option 1 comments will be limited to the potential impacts of the addition on the existing building and the likely structural systems to be used.

Option 2 has not been commented on as there is insufficient knowledge of scope and budget. Structural systems can vary significantly for buildings of this type depending on size and budget.

2.0 Design Criteria

We are recommending using the proposed structural design criteria of the 2015 National Building Code of Canada (NBC) which will be adopted in the 2016 British Columbia Code (BCBC). Important in the 2015 NBC is higher seismic values for the Campbell River area. The following structural design criteria are proposed for this project:

<i>Snowload 1/50</i>	Ss = 2.8 kPa Sr = 0.4 kPa	
<i>Hourly Wind Pressures</i>	1/10 = 0.40 kPa 1/50 = 0.52 kPa	
<i>Seismic Data</i>	Sa (0.2)	0.595
	Sa (0.5)	0.582
	Sa (1.0)	0.408
	Sa (2.0)	0.265
	Sa (5.0)	0.094
	Sa (10.0)	0.034
	PGA	0.283
	PGV	0.0.487
<i>Geotechnical</i>	Site Class:	TBD
	Design Bearing Pressure:	TBD kPa

Note: WSP is presently working on a geotechnical report for the proposed concept layout.

3.0 Structural Design Concepts

3.1 Phase 1 Aquatic and Wellness Centre

Option 1 Renovation and Addition

Introduction

Only one architectural drawing was available indicating that the pool was designed in 1978. Architectural drawings of a significant addition in 1995 were provided and drawings for a renovation in 2010.

The proposed addition is to the north of the pool and comprises a two storey structure running the length of the pool building. Two lane widths are also to be added to the north side of the existing lap pool which will be reconfigured to include a therapy pool.

The addition at main floor will mainly contain the pool extension, wellness centre, hot pool. At second floor the addition will mainly contain fitness and weight room facilities.

Structural Comments

Foundations

We are currently waiting for the geotechnical report for the area of the addition, however the position of the new structure lies on top of a significant bank that runs parallel to Pinecrest Rd to the north of the facility. Preliminary indications are that the soils in this area may present some technical challenges. We therefore cannot comment on the type and depth of foundation to be used or the site class needed to design the building.

We also note that the steepness of the bank is such that the foundation walls of the northern edge of the addition will be high enough that a basement may be a cost effective solution to mitigate the amount of backfill required to match the internal slab on grade elevation. However a basement will require a suspended concrete slab at the main level to support the hot pool and wellness area.

The pool additions will cross the line of the existing foundation of the north wall. These foundations will therefore need to be removed to allow the expansion. This will significantly effect the structural performance of that elevation and a new foundation line to the north of the pools will be required to carry the structure above.

The north foundation wall of the addition will be closer to the road effecting stair and ramp access, possibly resulting in retaining walls etc.

We also note that WSP is reviewing the existing lap pool for leaks. The cost of the repairs of these leaks should be factored into the project cost, if not attended to prior to the completion of the revitalization report.

Superstructure

As part of the addition construction much of the existing masonry north wall of the pool will be opened up to allow access to the hot pool area. New columns north of the pool expansion will be required to carry the cantilevering gym floor structure above.

Note that the cantilevering floor will need to carry the existing roof system, offsetting the load path and increasing the cost of the floor structure.

The gym floor will be required to be designed for vibration and floor loading for a gym and weight room. Ideally these functions should be on the main floor as there is a premium for locating these functions on suspended floors. It is noted however that space is limited and so the location is considered optimum given the restraints and locations of other functions such as the hot pool.

Initially we propose a braced lightweight steel structure at the second floor and roof, comprising a post and beam steel frame with open web steel joists spanning between. The second floor would comprise concrete filled metal deck and the roof metal deck. The lightweight structure will reduce foundation gravity loads and seismic demand on the structure

The main floor will be slab on grade or a 200mm suspended concrete slab depending on the findings of WSP's geotechnical report.

Seismic Considerations

A seismic assessment of the complex is recommended as part of the project planning process. Some initial comments to consider are:

The north wall of the pool will be reconfigured and will be required to meet the seismic requirements of the current code.

The steel posts supporting the roof joists are tied into the masonry walls and rely on them to resist lateral loads. Removing the walls will require a replacement lateral system such as bracing.

There are masonry walls in several locations. These are likely nominally reinforced due to their age and should be reviewed as part of a seismic assessment.

The pool roof has a wooden diaphragm which is likely inadequate for current seismic loads and may require upgrading.

Considering the extent of changes proposed there may be case for removing the north wall and roof structure completely rather than seismically upgrading the existing building.

The south, east and west walls will also require a seismic review to determine the feasibility of upgrading them versus replacement. This would require further study and is considered outside the scope of this report.

Phase 2 Arena and Multipurpose

Option 1 Renovation and Addition

Introduction

Very little drawing information was provided for this area of the facility. Some layout information is given in the 1995 drawings. The area considered for renovation is Rink 1, a Pre-Engineered building understood to have been built in 1971.

The changing room areas to the north of Rink 1 are to be reconfigured to a more open concept, with the creation of two large multipurpose rooms.

Narrow two storey additions to the east and south of the arena are to be added to increase changing room and storage area. On the second floor these additions will provide spectator seating.

Structural Comments

Foundations

We are awaiting comments from WSP to determine foundation recommendations. It is noted that the additions to the south and east of Rink 1 would ideally be pad/ strip foundations.

Also new pad foundations may be required to support new post and beam framing in the multipurpose areas, as the majority of the interior existing walls are being removed.

Superstructure

The additions are proposed to be in reinforced masonry with open web steel joists providing support to the roof and floor structures. The main floor would be slab on grade with the second floor comprising concrete filled Q decking. The roof would be metal deck spanning between joists.

Note that the addition would need to have seismic/ movement gaps separating them from the Rink 1 building. Also note that the viewing areas may be compromised by the pre-engineered structure such as bracing girts etc. which cannot easily be relocated without significant upgrading.

In the multipurpose area the space is being opened up significantly, so post and beam framing will be used to support the roof structure. No information was available to determine a configuration of this framing.

If this new framing is significant, it may be more cost effective to rebuild this section of the building in order to clearspan the new areas. A more detailed study of the area is required to determine this.

Seismic Considerations

A seismic assessment of the complex is recommended as part of the project planning process. Some initial comments to consider are:

No information on the rink structure was provided. It is a pre-engineered structure built in 1971. Pre-engineered buildings are lightweight and in many cases windload rather than seismic loading governs their design. However a building of this age it is likely not to meet today's code requirements.

Pre-Engineered buildings have a variety of configurations depending on the manufacturer. This makes them difficult to assess seismically due to the amount of information needed to be gathered to model them effectively. In addition they are usually designed very efficiently leaving very little spare capacity for changes to code or reconfiguration.

They are also very flexible structures, so any additions should have the appropriate seismic gap and not impose any additional loading on the pre-engineered building.

9.2 Civil Engineering Schematic Design Report

Herold Engineering

2298-011/02
May 19, 2017

STRATHCONA GARDENS ADDITION CIVIL ENGINEERING SCHEMATIC DESIGN REPORT

1.0 INTRODUCTION

The intent of this Schematic Design Report is to identify existing accesses and services as well as any possible issues related to the proposed addition and its effect on the accesses and services.

The existing pool & arena complex is located at 225 Dogwood Street at the southeast corner of Dogwood Street and Pinecrest Street. The proposed pool addition is on the north side along the pool frontage, and the arena addition is along the east side of the arena. It is known that the pool/arena complex has had previous additions but the limits of existing and renovation work, and the years they were completed, was not known for the preparation of this report.

To complete this report, available record drawing information was reviewed as provided by the City of Campbell River and a BC One Call request. A site visit and perimeter walk around was completed on May 16, 2017. At the time of the site visit, partial underground utility locates had been completed.



2.0 ROADS AND ACCESS

The main vehicle access to the site is off of Dogwood Street and will not be changing as part of the proposed addition. There is a secondary access, possibly a firelane, off of Pinecrest Street on the east side of the property which is also used as an exit-only from the adjacent school district building. The footprint of the proposed addition on the east side of the arena extends over this secondary access.

It should be confirmed that the access is not required as a firelane and that the school district parking lot can function without the exit-only access.

The number of existing parking stalls in comparison to what is required by local bylaws, relating to the proposed building size) was not reviewed as part of this report.



Photo – Secondary access on east side of arena, looking north.
Exit from School District lot is on the right hand side

3.0 WATERMAINS

The site currently has three water services, a 150mm dia. service off of Dogwood Street and a 50mm dia. and a 75mm dia. off of Pinecrest St. There is an existing fire hydrant near the main entrance off of Dogwood Street and one on the Pinecrest St. frontage.

The property service record sheet lists four water services:

WATER	50MM	PVC	15M W/E, DAPL=0.06M (NEW SHUT-OFF TO POOL ON 2" PVC SERVICE)
WATER	150MM	UNKNOWN	60.5M S/N
WATER	75MM	UNKNOWN	61.0M E/W (CAPPED, ON PINECREST)
WATER	50MM	UNKNOWN	36.0M W/E FROM EAST SIDE OF BLDG (ON PINECREST)?

Two service locations were confirmed in the field, the 50mm dia. (size not confirmed) off of Pinecrest (first on the list), and the 150mm dia. off of Dogwood St. (second on the list). All service should be located and traced back to the building prior to detailed design. It should be noted that the 50mm service is in front of the arena, not the pool.

4.0 SANITARY SEWER

There is an existing sanitary service on the Pinecrest St. frontage that appears to leave the building between the pool and the arena. No indication of the sanitary service was visible from the surface. A record drawing from 1978 shows the sanitary service as 200mm dia, but the property service sheet shows it as 100mm dia.

SANITARY	100MM	UNKNOWN	37.9M W/E (TO PINECREST)
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Depending on the final footprint of the addition to the pool, this service is not expected to be impacted by construction, but the service size should be confirmed to be adequate for current building codes. The service should be located and traced back to the building prior to detailed design.

5.0 STORM DRAINAGE

The site is approximately 3.0 ha in size, and the natural and proposed topography of the site result in the low area of the site being along the north side, towards Pinecrest St. The majority of the site is developed with impervious surface, either with the building footprint or the paved access/parking areas.

Site servicing information provided by the City of Campbell River shows a 300mm dia. service to the site from Dogwood St. along the south side of the building that collects building and parking area drainage.

The record drawing information for the site is very limited but the property service record sheet lists four storm services:

STORM DRAIN	150MM	UNKNOWN	4.5M E/W (SEE FILE)
STORM DRAIN	150MM	UNKNOWN	103.0M E/W (SEE FILE)
STORM DRAIN	150MM	UNKNOWN	130.5M E/W (SEE FILE)
STORM DRAIN	150MM	UNKNOWN	0.1M W/E (SEE FILE)

The only services identified in the site visit were 2 – 100 to 150mm dia. services along the north side of the side that ran down the bank in front of the pool.



Photo – Exposed Storm Service at NW corner of site

A manhole was located at the northwest of the site, off of the corner of the pool that may be for a storm service although it should be noted that underground utility locators often mark storm and sanitary sewers with the same green paint. This manhole is within the footprint of the proposed addition and will need to be relocated or incorporated into the mechanical drainage system.



Photo – Possible Storm Service manhole at NW corner of Building

It should be noted that adjacent to this manhole was a monitoring well and a small sinkhole towards the top of the bank.



Photo – Monitoring well and small sinkhole

Storm servicing from the site may need to be upgraded based on local bylaws with respect to water quality and stormwater management requirements. The location of the proposed addition areas are replacement of existing hard surface areas and stormwater flows from the site are not expected to increase by a noticeable amount. Any existing storm piping within the footprint of the proposed addition should be located and confirmed prior to detailed design. If in conflict, it should be relocated or incorporated into the mechanical drainage system.

6.0 PRIVATE UTILITY SERVICING

A BC One Call request was submitted to gather information on the existing site servicing for BC Hydro, Telus, and Fortis BC. There are existing underground hydro and telephone services off of Dogwood Street that extend into the site and enter the building along the south side of the building. The addition will not impact these services. There are two aerial telephone services of Pinecrest St, one to the arena and one to the pool. The service to the pool will need to be removed and reinstated after the addition is complete.

There are two gas services to the site coming off of Pinecrest Street. One meter is located at the northeast corner of the pool building and the other at the northeast corner of the building (the arena). Both of these services will be impacted by the addition areas and will have to be relocated or incorporated into the mechanical design.



Photo – Gas Meter at NE corner of Existing Pool Building



Photo – Gas Meter at NE corner of Existing Arena

7.0 CONCLUSION

There are various services that exist within the footprint of the existing building and the two expansion should have detailed utility locates carried out to confirm service size and type. should be contacted for the relocation of the two gas meters and how to best incorporate th services into the new addition areas. Telus should be contacted for the existing aerial serv

The secondary access on the east side of the site will be abandoned as will the exit-only ac adjacent School District parking lot. Fire Department access distances should be confirme that the lane is not required for emergency vehicle access.

Any detailed design of revised access or underground utilities associated with this project s consistent with current City of Campbell River engineering standards and bylaws and aligne overall project goals of usability and practicality.

Submitted by:

HEROLD ENGINEERING LIMITED

Patrick Ryan, P.Eng.

9.3 Mechanical Engineering Schematic Design Report

AME Consulting Group



MEMO

Date: 1/24/2017

HCMA

400 – 675 West Hastings St.
Vancouver, BC; V6B 1N2

AME File: 009a-061-17

Email:p.fast@hcma.ca

Ph: 1-604-732-6620

Attention: Paul Fast

RE: Strathcona Gardens Feasibility Study – Pool Tanks

Dear Paul:

As requested we have reviewed the 4 options to develop a Therapy pool. We have provided a brief description outlining mechanical system implications for each option. Our review is based on the assumption that the existing filtration plant mechanical equipment are still within the service life expectancy. Our comments and pricing will be based on additional pool mechanical equipment.

1. Option A – A new Therapy pool within the wellness area and expand 2 additional lanes to the existing lap pool. Existing Hot Pool and Leisure Pool to remain the same.
 - A standalone new filtration plant would be required for the therapy pool (approx. 3m x 3m). The new room will house, 2 sand filters, filtration pump, Hydro-therapy pump, chemical controller, UV and either a gas fired pool heater or a new heat exchanger fed from the existing boiler plant.
 - Chemical treatment would either come from 2 new chemical rooms each @ 1.5m x 1.5m to house liquid chlorine and Sodium Bi-sulphate. These rooms would be grade level and accessed from outdoors. Alternately a pipe trench would be installed to interconnect the new filtration plant to the existing chemical storage room. Chemical injection pumps would be installed within the existing room.
 - A small standalone ventilation unit would be required to serve the Therapy pool area. The unit would consist of a dehumidification coil, Fresh air with mixing box, heating coil and supply fan.
 - The existing lap pool would have to be expanded. We assume additional maindrains and inlet fittings would be required to accommodate the increased capacity. The lap pool filtration plant and pump would be undersized. You could replace the existing filter pump with a larger pump or 2 @ 50% capacity for redundancy. Either an additional filter would be required or replace the existing filters with larger sizes. We were unable to verify if space was available to accommodate this increase in capacity. A larger UV filter would be required to accommodate the increased flow rate. The existing Heat exchanger and chemical treatment systems would be reused. We assumed new piping would be required to accommodate the increased flow rate.
 - Estimated Cost for Option A:
 - Hydro-Therapy Filtration Plant \$200 - \$250,000
 - Increase in Ventilation \$50,000
 - Upgrade of Lap Pool Filters. \$200,000
 - Estimated overall cost approximately \$450,000 - \$500,000
2. Option B - Separate the Lap and shallow end pools such that the shallow end becomes a Hydro-Therapy pool.

- New main drains would be provided for the Lap and hydro-therapy pool. The renovac wall panels will house a new gutter system and sidewall inlets. The existing filtration plant would service the new lap pool. New piping would be installed around the pool itself.
 - The existing lap pool filtration plant would be used as the filtration plant for the new 8 lane lap pool. Minor modification would be required to connect the piping within the mechanical room.
 - A new filtration plant would be required for the new therapy pool (approx. 3m x 7m). The mechanical room would house new filtration pump, Hydro-therapy pump, new filters, UV and pool heat exchanger.
 - Depending on the location of the new filtration plant either a new chemical storage rooms or a trench to connect to the existing chemical storage rooms would be required. 2 new chemical rooms each @ 1.5m x 1.5m to house liquid chlorine and Sodium Bi-sulphate. These rooms would be grade level and accessed from outdoors. Alternately a pipe trench would be installed to interconnect the new filtration plant to the existing chemical storage room. Chemical injection pumps would be installed within the existing room.
 - The existing HVAC system would be suffice to accommodate the modifications.
 - Estimated Cost for Option A:
 - New Hydro-Therapy Filtration Plant \$400,000 - \$450,000
 - Estimated overall cost approximately \$400,000 - \$450,000
3. Option C – New Hot pool along north end of pool, expand existing lap pool to 8 lanes, demolish existing hot pool and expand leisure pool.
- The hot pool will consist of a standalone new filtration plant of (approx. 3m x 3m). The new room will house, 2 sand filters, filtration pump, Hydro-therapy pump, chemical controller, UV and either a gas fired pool heater or a new heat exchanger fed from the existing boiler plant.
 - Chemical treatment would either come from 2 new chemical rooms each @ 1.5m x 1.5m to house liquid chlorine and Sodium Bi-sulphate. These rooms would be grade level and accessed from outdoors. Alternately a pipe trench would be installed to interconnect the new filtration plant to the existing chemical storage room. Chemical injection pumps would be installed within the existing room.
 - A small standalone ventilation unit would be required to serve the Hot pool area. The unit would consist of a dehumidification coil, Fresh air with mixing box, heating coil and supply fan.
 - The existing lap pool would have to be expanded. We assume additional maindrains and inlet fittings would be required to accommodate the increased capacity. The lap pool filtration plant and pump would be undersized. You could replace the existing filter pump with a larger pump or 2 @ 50% capacity for redundancy. Either an additional filter would be required or replace the existing filters will larger sizes. We were unable to verify if space was available to accommodate this increase in capacity. A larger UV filter would be required to accommodate the increase flow. The Heat exchanger and chemical treatment systems would be reused. We assumed new piping would be required to accommodate the increased flow rate.
 - Demolition to the existing hot pool would be required. A separate maindrain line and new supply inlet line would be added to pick up the expanded leisure pool. A new leisure pool filtration plant including pumps, filters, UV and heat exchanger would be required. The chemical treatment plant would be reused.
 - Estimated Cost for Option C:
 - Hydro-Therapy Filtration Plant \$200 - \$250,000
 - Increase in Ventilation \$50,000
 - Upgrade of Lap Pool pump, Filters & UV. \$200,000
 - Upgrade or Replacement of Leisure Pool pump, filters and UV. \$200 - \$250,000



MEMO

- Estimated overall cost approximately \$650,000 - \$750,000

We did not include for the cost of the Renovac system as this would be required for all 3 options.

Yours very truly,

The AME Consulting Group Ltd.

Victoria, BC

A handwritten signature in black ink that reads 'Rob Walter'.

Rob Walter, Eng.L., ASCT, LEED AP

Principal

9.3 Feasibility Estimate

Advicas Group Consultants



FEASIBILITY ESTIMATE

STRATHCONA GARDENS RECREATION CENTRE EXPANSION CAMPBELL RIVER, BC

April 28, 2017

**Prepared by
Advicas Group Consultants Inc.**

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INTRODUCTION

This report sets out the estimate of project costs at feasibility stage for the proposed Strathcona Gardens Recreation Centre Expansion in Campbell River, BC.

The report provides estimates for the short term repairs to the existing facility, and options for the future redevelopment, as follows:

- Immediate repairs to the existing.
- Year 1 – 5 service life repairs to the existing facility.
- Leisure Pool – Phase 1 OPTION A – new leisure pool within the pool hall to replace the existing leisure pool and whirlpool.
- Hot Pool – Phase 1 OPTION A – new hot pool expansion located north of the existing lap pool and therapy pool.
- New Work – Phase 1 OPTION A – Renovations providing social space, expansion of existing lap pool and therapy pool, washroom renovations and remodeling, new wellness centre, and second floor fitness centre and multi-purpose room; renovations to include a new replacement roof structure and covering to the existing lap pool/therapy pool area.
- New Work – Phase 2 OPTION A – Renovations providing new washrooms, multi-purpose rooms and offices, new and refurbishment of arena seating, new changing rooms, second floor multi-purpose rooms; renovations to include a new replacement roof structure and covering to the existing arena.
- Additional Work – OPTION A – 100 additional surface parking spaces, paint existing building exterior upon completion of Phases 1 and 2, make good site development on completion of expansion.
- New Work – Phase 1 OPTION B – New building providing all finished facilities as proposed under Phase 1 OPTION A, based on a total Phase 1 building area, including expansion, of 3,685 m².
- New Work – Phase 2 OPTION B – New building providing all finished facilities as proposed under Phase 2 OPTION A, based on a total Phase 2 building area, including expansion, of 6,617 m².
- Additional Work – OPTION B – 100 additional surface parking spaces, make good site development on completion of expansion.

ESTIMATE COSTS

The project costs have been developed in current (April, 2017) dollars. The estimated project costs, incorporating soft costs, is as follows:

	Hard Construction Costs	Soft Costs	Project Costs	Total Project Costs
Immediate repairs	\$365,400	\$146,600	<u>\$512,000</u>	\$512,000
Year 1 - 5 service life repairs	\$586,200	\$234,800	<u>\$821,000</u>	\$821,000
Leisure Pool – Phase 1 OPTION A	\$1,544,000	\$540,000	\$2,084,000	
Hot Pool – Phase 1 OPTION A	\$2,178,100	\$762,900	\$2,941,000	
New Work – Phase 1 OPTION A	\$11,420,200	\$3,997,800	\$15,418,000	
New Work – Phase 2 OPTION A	\$12,961,600	\$4,536,400	\$17,498,000	
Additional Work – OPTION A	\$860,000	\$301,000	<u>\$1,161,000</u>	\$39,102,000
New Work – Phase 1 OPTION B	\$18,212,600	\$6,374,400	\$24,587,000	
New Work – Phase 2 OPTION B	\$18,645,900	\$6,526,100	\$25,172,000	
Additional Work – OPTION B	\$1,500,000	\$525,000	<u>\$2,025,000</u>	\$51,784,000

A breakdown of the capital construction costs is included in Appendix A.

Escalation

The estimate is priced at current market price levels.

It is common knowledge that Vancouver Island was not immune to the major market downturn and saw a major correction in market price levels during the latter part of 2008 and early 2009. A further downward correction occurred in Spring 2010 driven by pressure on pricing levels from mainland contractors pursuing work on the Island.

Since the downturn of 2008/2009 Victoria has seen a slow recovery, culminating in 2015, to a return to the Island historical escalation norm of 3 to 4% per annum. Since early 2016 the Victoria market has undergone a further major change. Construction activity has accelerated with numerous major projects under construction, bringing with it an inherent labour shortage, and an upward pressure on market price levels.

This is a new evolving market condition; industry is reporting increases as high as 10% in some trades. This is partly offset by trades holding to more modest increases, often through competition from offshore trade bids. We recommend the Client make provision for the following increases through to 2018:

- 2017 – 7.0%
- 2018 – 6.0%
- 2019 – 4.0%

BASIS OF THE ESTIMATE

We have assumed that the work will be tendered competitively in the open market.

In all cases the estimates are based upon our assessment of fair value for the work to be carried out. We define fair value as the amount a prudent contractor, taking into account all aspects of the project, would quote for the work. We expect our estimate to be in the middle of the bid range to ensure that funding for the work remains adequate for the duration of the project.

It should be noted that Advicas Group Consultants Inc. does not have control over the cost of labour, materials, or equipment, over the Contractor's methods of determining bid prices, or over competitive market conditions. We define competitive conditions in the project as attracting a minimum of four general contractors' bids with a minimum of two sub-trade tenders within each of the sub-trade categories. Accordingly, Advicas Group Consultants Inc. cannot and does not warrant or represent that bids will not vary from the estimate.

Contingency Reserves

Contingency is an allowance specifically identified within our elemental cost analysis to meet unforeseen circumstances, and represents an assessment of the financial risk relating to this project. As detailed design information becomes available, this risk will diminish and the contingency allowances will accordingly reduce.

Design contingency is introduced into the estimated cost at the earliest estimate stage and is a measurement of the amount and detail of the design information available. As the design develops and systems and material selections are fixed, the amount of the contingency allowance is reduced and is absorbed into the measured elements. On completion of contract documents, at tender stage, the allowance is normally reduced to zero.

Our determination of this risk level and the amount of the contingency allowance is the result of many years of cost planning, on over 4,000 construction projects, and of monitoring the increasing design information that occurs during the design phase. The design contingency is not a discretionary cost element.

The estimate unit rates and allowances incorporate a contingency to provide for unforeseen items arising during the design phase.

A construction contingency allowance has been included within the soft costs allowance. This typically provides for unforeseen items arising during the construction period – such as field conditions, coordination discrepancies – which will result in change orders and extra costs to the contract, other than changes in scope.

No allowance has been made for project contingency. This is a contingency, held by the Client, to be used at his discretion to fund specific Client driven changes to the project scope, conditions, etc.

Taxes

GST is excluded from the estimate.

PST at 7% is included in the estimate.

Exclusions

The following items are excluded from the capital construction cost:

- Storage costs
- Clerk of Works
- Client Project Manager
- Financing costs
- Phasing of the work
- Out of hours working
- Project contingency
- Escalation
- GST

Documentation

The estimate is based on the following:

- HCMA Architecture + Design
– Sketch Plans – level 1, level 2 and roof plan Received April 21, 2017
- Ongoing discussions with HCMA during the preparation of the estimate

APPENDIX A

CAPITAL CONSTRUCTION COST BREAKDOWN – OPTIONS A & B

	QUANTITY	UNIT	RATE	COST
SUMMARY - CAPITAL CONSTRUCTION COSTS				
Immediate Repairs to Existing				\$365,400
Year 1 - 5 Service Life Repairs				\$586,200
Leisure Pool - Phase One OPTION A				\$1,544,000
Hot Pool - Phase One OPTION A				\$2,178,100
New Work - Phase One OPTION A				\$11,420,200
New Work - Phase Two OPTION A				\$12,961,600
Additional Work - OPTION A				\$860,000
New Work - Phase One OPTION B				\$18,212,600
New Work - Phase Two OPTION B				\$18,645,900
Additional Work - OPTION B				\$1,500,000
GST				Excluded
Escalation				Excluded
Immediate Repairs to Existing				\$365,400
Architectural/Structural				
Building structure				
Seismic assessment study, pool water leakage testing and sound test in Filter Room	1	item	\$10,000.00	\$10,000
Pool below slab repairs - Allowance	1	item	\$77,224.85	\$77,225
Mechanical				
Perform hazmat assessment if not already completed				NIC
Conceal and protect all exposed heating water and domestic hot water piping below an 8-foot level within public areas with minimum 1" insulation and all-service jacket in arena change rooms	12	no.	\$225.00	\$2,700
Pipe Natatorium DHW tank T&P safety relief to floor drains Note: Tank has been decommissioned, no work is required				NIC
Ensure all chemical storage areas are adequately ventilated Note: No cost associated with item as Janitor's room in photo is ventilated. Comment made to note proper storage of chemicals is required				NIC
Replace insulation, provide aluminum weatherproof jacket to exposed refrigerant piping service rooftop unit AHU-4 condensing unit	12	m	\$65.00	\$793
Replace insulation, provide aluminum weatherproof jacket to exposed refrigerant piping on mini-split A/C units serving Ariana #1 exercise room (typical of 2)	2	no.	\$480.00	\$960
Reapply rust inhibiting primer and paint to rooftop gas piping (Avg. 2" pipe)	305	m		
Replace exterior rainwater leaders damaged at low level	6	no.	\$150.00	\$900
Replace roof drain grates Note: Part of Maintenance staff work				NIC
Pipe testing Pool & Arena #2 domestic hot, cold and recirc water mains.	1	sum	\$3,000.00	\$3,000
Testing Pool & Arena #2 heating water supply and return mains.	1	sum	\$2,000.00	\$2,000
Pipe testing Rink #1 domestic hot, cold, recirc and tempered water mains.	1	sum	\$3,000.00	\$3,000
Pipe testing Rink #1 heating water supply and return mains	1	sum	\$2,000.00	\$2,000
Electrical				
Emergency Lighting System				
New battery Packs and low voltage emergency lighting	1	sum	\$25,000.00	\$25,000
OR				
New emergency generator complete with dedicated circuits added to supply new (or existing) light fixtures	1	sum	\$50,000.00	\$50,000
Add Emergency lighting to some service areas	1	sum	\$7,500.00	\$7,500
Perform the lighting levels test	1	sum	\$2,500.00	\$2,500

	QUANTITY	UNIT	RATE	COST
Exit sign system				
Replace all existing exit signs with high efficiency LED signs to meet current BCBC & NBCC requirement	1	sum	\$21,000.00	\$21,000
Fire alarm system				
Replace manual and automatic detection devices that appear to be antiquated, corroded or newer the end of their usable service life	1	sum	\$40,000.00	\$40,000
Provide cages for automatic detection devices where subjected to mechanical damage	1	sum	\$4,500.00	\$4,500
Add visual enunciation devices to supplement the existing system	1	sum	\$12,000.00	\$12,000
OR				
Upgrade fire alarm system field devices and wiring for the entire complex to include new/additional addressable field devices (smoke detectors, heat detectors, bells, strobes, pull stations, flow switches, tamper switches, modules) provide cages and wiring	1	sum	\$90,298.00	\$90,298
Pool and Facility Grounding System				
Conduct grounding system test by independent testing agency retained by the District	1	sum	\$10,000.00	\$10,000
Year 1 - 5 Service Life Repairs				\$586,200

Architectural/Structural

Exterior Structure and Finishes:

Main entry canopy rust removal and repainting	1	item	\$750.00	\$750
Rink #2 entry canopy rust removal and repainting	1	item	\$500.00	\$500
Remove rust and repaint guard rails on roof	1	item	\$500.00	\$500
Remove rust and repaint roof ladders	3	no.	\$300.00	\$900
Patch/repair stucco	60	m ²	\$250.00	\$15,000
Re-paint gutters/fascia	1	item	\$15,000.00	\$15,000
Repair metal cladding, roofing and flashings	1	item	\$10,000.00	\$10,000
Minor hardware and weather-stripping to existing exterior doors	20	prs.	\$200.00	\$4,000
Repair concrete curbs	15	m	\$30.00	\$450
Pool Finish (Tiles):				
Repair tiling	65	m ²	\$500.00	\$32,500
Re-grout tiling	250	m ²	\$25.00	\$6,250
Pool Plumbing and Leakage:				
Seal cracks in concrete gutter	1	item	\$2,000.00	\$2,000
Patch construction joints in gutter	1	item	\$5,000.00	\$5,000
Waterslide Area:				
Remove rust and repaint structural steel members of waterslide	1	item	\$2,000.00	\$2,000
Replace joint at waterslide wall penetration with flexible joint to prevent cracking in PVC tube	4	loc.	\$1,000.00	\$4,000
Interior Finishes				
Replace millwork in 2 rooms	6	m	\$800.00	\$4,800
Replace rusted door hardware	20	lvs.	\$500.00	\$10,000
Structural Steel Strong-backs:				
Remove rust at base and repaint string-backs	8	no.	\$125.00	\$1,000
CMU in Chemical Rooms:				
Repair small opening in CMU wall	1	item	\$100.00	\$100
Ice Rink #1:				
Replace vanities	3	m	\$500.00	\$1,500
Replace washroom accessories - public washrooms	2	loc.	\$2,600.00	\$5,200
Replace washroom accessories - single washroom	6	loc.	\$1,200.00	\$7,200
Replace urinal partitions	4	no.	\$400.00	\$1,600
Replace washroom cubicles	6	no.	\$700.00	\$4,200
Replace shower accessories	1	no.	\$400.00	\$400
Ice Rink #2 and Leisure Rink:				
Repair cracks in concrete at steel column locations	8	no.	\$200.00	\$1,600



	QUANTITY	UNIT	RATE	COST
Ongoing Maintenance Allowances:				
Flooring	1	item	\$38,612.42	\$38,612
Ceilings	1	item	\$23,167.45	\$23,167
Wall finishes	1	item	\$38,612.42	\$38,612
Millwork	1	item	\$19,306.21	\$19,306
Roofing	1	item	\$77,224.85	\$77,225
Mechanical				
Remove and replace existing sanitary fixtures in Arena #1	31	no.	\$3,800.00	\$117,800
Electrical				
Replace original 1600A 347/600V 3p 4w - panels, power Co-ordination Study, ARC Flash Study	1	sum	\$125,000.00	\$125,000
Provide GFCI protection where receptacles and equipment are subject to water space within 1.5 meters from a water source	1	sum	\$10,000.00	\$10,000
Leisure Pool - Phase One OPTION A				\$1,544,000
New Work Within Line of Existing Building				
Leisure Pool:				
New replacement glazed exterior wall to leisure pool area	143	m ²	\$1,430.00	\$204,490
New leisure pool to replace existing whirl pool and leisure pool	285	m ²	\$4,700.00	\$1,339,500
Hot Pool - Phase One OPTION A				\$2,178,100
New Expansion				
Hot Pool Area:				
New hot pool deck area	400	m ²	\$3,500.00	\$1,400,000
New hot pool	63	m ²	\$6,500.00	\$409,500
New mechanical room	36	m ²	\$2,600.00	\$93,600
New steam room	15	m ²	\$4,000.00	\$60,000
New sauna	11	m ²	\$4,000.00	\$44,000
New staff washroom, changing room	38	m ²	\$4,500.00	\$171,000
New Work - Phase One OPTION A				\$11,420,200
New Work Within Line of Existing Building				
Social Space Area:				
Refurbish existing pool viewing area	43	m ²	\$1,200.00	\$51,600
Renovate existing offices and multi purpose room for party room 3 and storage room:				
- Party Room 3	80	m ²	\$1,500.00	\$120,000
- Storage	25	m ²	\$1,200.00	\$30,000
Renovations to existing lobby and corridor for new social space and reception:				
- Demolish/dismantle roof covering and structure	357	m ²	\$200.00	\$71,400
- New roof structure and covering	357	m ²	\$750.00	\$267,750
- New system upgrade and finishes	792	m ²	\$1,500.00	\$1,188,000
Pool:				
Demolish/dismantle roof covering and structure	800	m ²	\$200.00	\$160,000
New roof structure, covering, electrical, mechanical	800	m ²	\$1,800.00	\$1,440,000
New pool liner incorporating expansion (x1) to existing pool within footprint of existing building	432	m ²	\$2,500.00	\$1,080,000
Expand existing therapy pool within footprint of existing building	182	m ²	\$3,000.00	\$546,000
Washrooms:				
New universal washrooms/changing rooms to replace existing	193	m ²	\$4,000.00	\$772,000
New womens washrooms/changing rooms to replace existing	74	m ²	\$4,000.00	\$296,000
New mens washrooms/changing rooms to replace existing	20	m ²	\$4,000.00	\$80,000
Interface with New:				
Demolish/cut back existing building line including modifications to existing structure on new wall line	600	m ²	\$500.00	\$300,000
Allowance for refinishing to remaining existing areas	877	m ²	\$500.00	\$438,500

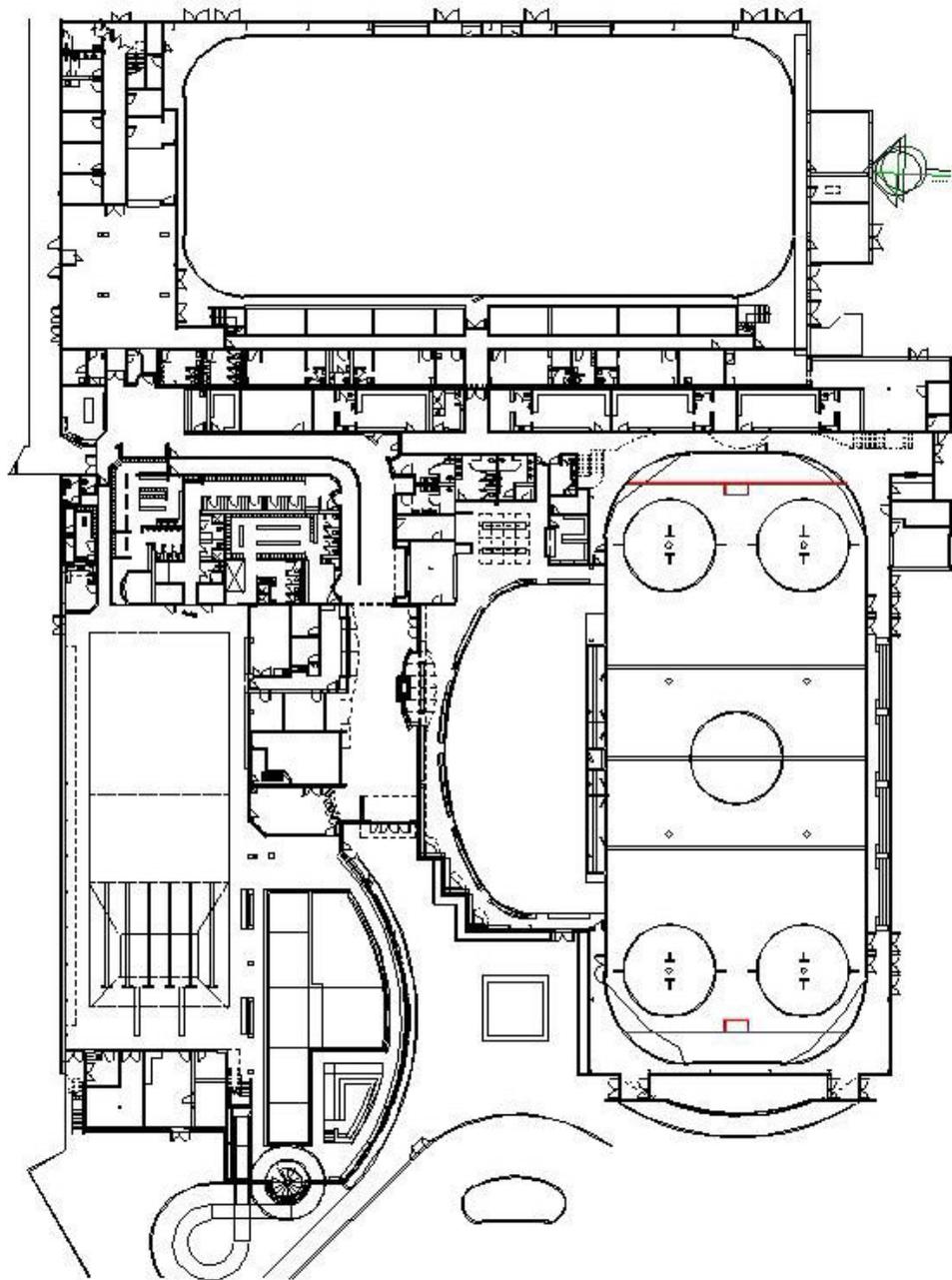
	QUANTITY	UNIT	RATE	COST
New Expansion				
Pool:				
New lane (x1) to existing pool within footprint of existing building	63	m ²	\$2,000.00	\$126,000
Expand existing therapy pool within footprint of existing building	28	m ²	\$2,200.00	\$60,500
Wellness Centre:				
New wellness centre	245	m ²	\$3,000.00	\$735,000
Washrooms:				
New mens washrooms/changing rooms to replace existing	50	m ²	\$4,500.00	\$225,000
Social Space:				
New social space	108	m ²	\$3,000.00	\$324,000
New staircase	1	sum	\$20,000.00	\$20,000
New passenger elevator and shaft	1	sum	\$200,000.00	\$200,000
Second Floor:				
New multi purpose replacing part existing upper pool seating and extending out over existing roof below	83	m ²	\$3,800.00	\$315,400
New storage replacing part existing upper pool seating and extending out over existing roof below	18	m ²	\$3,000.00	\$54,000
New fitness studio	130	m ²	\$3,000.00	\$390,000
New store	20	m ²	\$2,800.00	\$56,000
New fitness weights	560	m ²	\$3,000.00	\$1,680,000
New elevator corridor	55	m ²	\$2,600.00	\$143,000
Sitework:				
New steps and ramp to north entry	1	sum	\$250,000.00	\$250,000
New Work - Phase Two OPTION A				\$12,961,600
New Work Within Line of Existing Building				
Washrooms:				
Refurbish existing changing rooms to washrooms	225	m ²	\$3,600.00	\$810,000
Social Space:				
Refurbish existing team changing/washrooms/multi purpose to new open social space	160	m ²	\$1,500.00	\$240,000
Multi Purpose and Offices:				
Refurbish existing skate change and adjacent rooms to:				
- new offices	70	m ²	\$1,000.00	\$70,000
- new conference	18	m ²	\$1,100.00	\$19,800
- new kitchen	14	m ²	\$2,500.00	\$35,000
- new storage room	20	m ²	\$900.00	\$18,000
- new multi purpose rooms 1 and 2	165	m ²	\$1,500.00	\$247,500
- corridor	60	m ²	\$1,000.00	\$60,000
Seating:				
Refurbish existing seating	480	m ²	\$500.00	\$240,000
Arena:				
Demolish/disassemble existing roof structure to Arena	2,425	m ²	\$200.00	\$485,000
New roof structure to Arena:				
- roof structure including columns	2,425	m ²	\$325.00	\$788,125
- roof covering	2,425	m ²	\$150.00	\$363,750
- exterior cladding	1	sum	\$100,000.00	\$100,000
- mechanical & electrical systems	2,425	m ²	\$250.00	\$606,250
- interface with existing	1	sum	\$100,000.00	\$100,000
New Expansion				
Multi Purpose and Offices:				
New multi purpose rooms and storage	265	m ²	\$3,000.00	\$795,000
New offices	70	m ²	\$2,600.00	\$182,000
Changing Rooms:				
New changing rooms, storage and offices to east side of Arena 1	625	m ²	\$4,000.00	\$2,500,000
Second Floor:				
New multi purpose	350	m ²	\$3,500.00	\$1,225,000
New multi purpose	175	m ²	\$2,600.00	\$455,000
New elevator corridor	810	m ²	\$2,750.00	\$2,227,500
New seating				
Seating/Storage Option:	167	m ²	\$2,500.00	\$417,500
New main floor storage to south expansion	255	m ²	\$2,750.00	\$701,250
New seating to south expansion	254	m ²	\$250.00	\$63,375
Interface with existing building				



	QUANTITY	UNIT	RATE	COST
Sitework: Terrace north of new multi purpose rooms	423	m ²	\$500.00	\$211,500
Additional Work - OPTION A				\$860,000
Surface parking stalls including asphalt, curbs, drainage, lighting	100	no	\$5,000.00	\$500,000
Paint existing building exterior envelope (after completion of Phases 1 and 2)	2,000	m ²	\$30.00	\$60,000
Make good site development on completion of new expansion	1	sum	\$300,000.00	\$300,000
New Work - Phase One OPTION B				\$18,212,600
Total Area of existing within Phase 1: 2,623 m ²				
Total area of new expansion in Phase 1: 1,062 m ²				
Demolition of existing building	2,623	m ²	\$200.00	\$524,600
New aquatic centre with scope as defined under Option A	3,685	m ²	\$4,800.00	\$17,688,000
New Work - Phase Two OPTION B				\$18,645,900
Total Area of existing (including ice surface) within Phase 2: 3,900 m ²				
Total area of new expansion in Phase 2: 2,717 m ²				
Demolition of existing building	3,900	m ²	\$200.00	\$780,000
New ice rink with scope as defined under Option A	6,617	m ²	\$2,700.00	\$17,865,900
Additional Work - OPTION B				\$1,500,000
Surface parking stalls including asphalt, curbs, drainage, lighting	100	no	\$5,000.00	\$500,000
Make good site development on completion of new facility	1	sum	\$1,000,000.00	\$1,000,000

9.5 Existing Building Plan

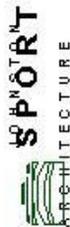
Johnston Sport Architecture



MAIN FLOOR PLAN

PROJECT NO. 8008
 SCALE 1:450
 1986-10-25

STRATHCONA GARDENS



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