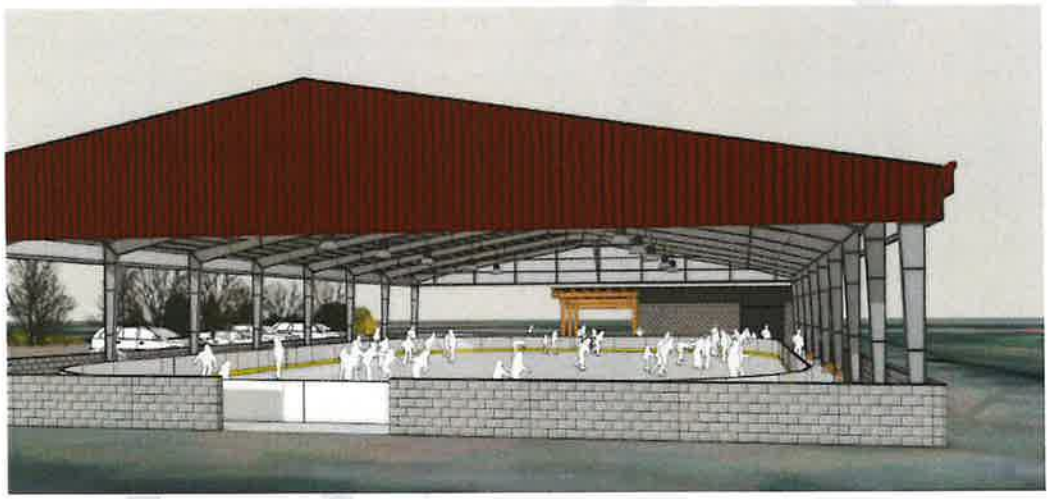

OUTDOOR RINK + WASHROOM BUILDING
Design + Class C Costing Report

Location:
Wrangler Way (Grounds of South Cariboo Recreation Centre)

Prepared for:
District of 100 Mile House

Prepared by:
Bluegreen Architecture Inc.

January 9, 2025

DISTRICT OF
100 Mile House

BLUEGREEN
architecture inc.

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1.1 Executive Summary

The district of 100 Mile House contracted BlueGreen Architecture and their team of consultants to provide a schematic design and Class C costing package for a new outdoor skating rink to be located on the grounds of the South Cariboo Recreation Centre. The design was to provide a covered skating area at the southwest corner of the property and within a current gravel parking area located between the existing baseball and rodeo areas. The roof structure of the rink consists of a pre-engineered steel structure.

The rink is to be situated at the south end of the property next to the existing walking trail. Parking will be available adjacent to the building and a new washroom building will provide the required washrooms. The southern exposure will ensure ample winter sun during the day and suspended high bay lights would be utilized to light the rink in low light or evening operating hours. The sitiing of the new rink at this location is important to avoid the existing low points of the site which are just west of the existing summer washroom building. The skating surface is not refrigerated.

Bluegreen Architecture has enlisted LTA Consultants to provide the cost estimate component of this package which will include an estimate for the entire project including, both hard and soft costs. Bluegreen has met with district staff in order to better understand and document the program requirements and site conditions.

Google image of site indicating proposed rink location

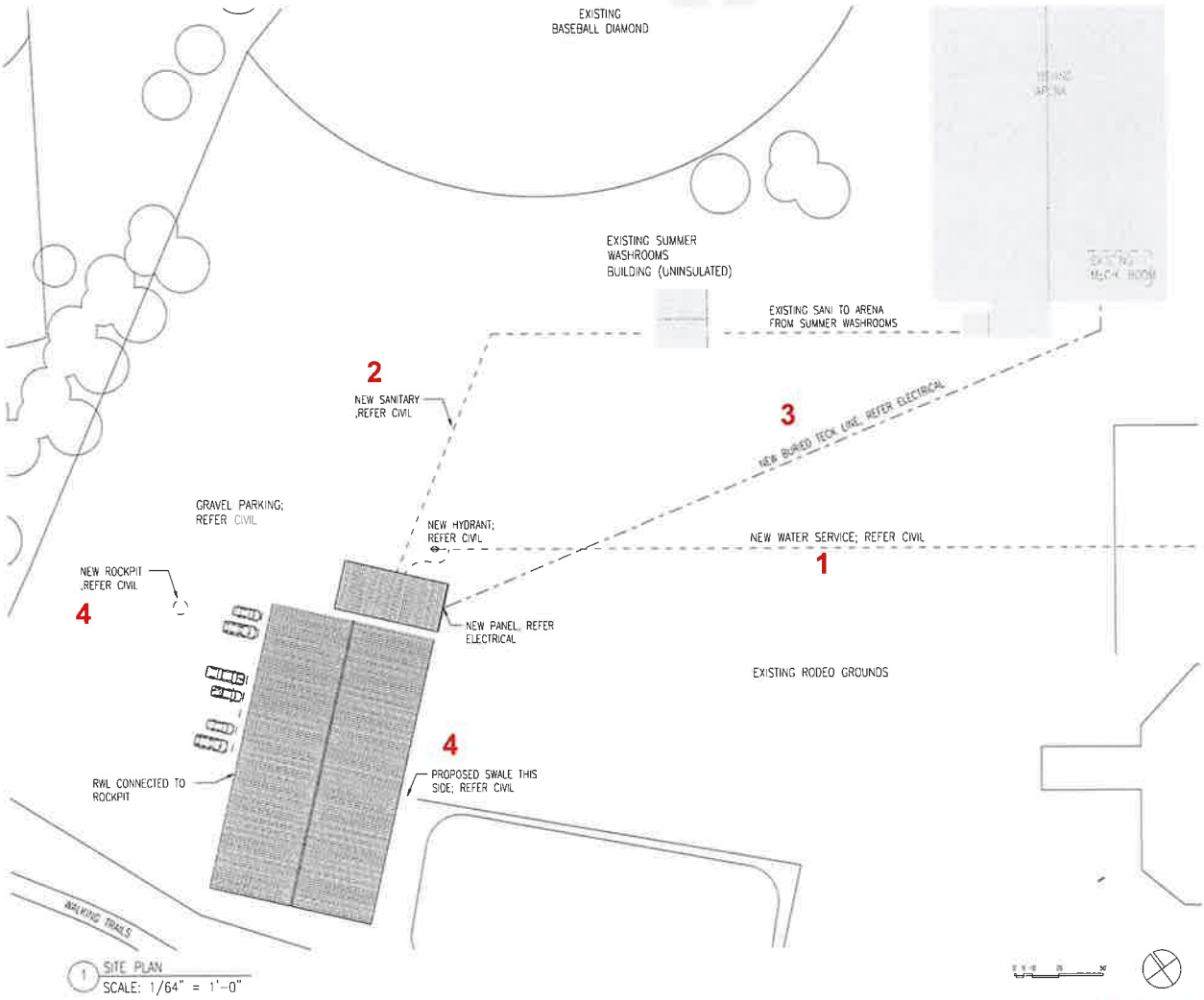
2.1 Project Team

ARCHITECTURAL **BLUEGREEN ARCHITECTURE INC.** JOSHUA LUNN, ARCHITECT AIBC 3004 29TH ST. VERNON, BC V1T 5A7 jlunn@bluegreenarch.com 778-506-4567	
CIVIL **TRUE CONSULTING** CHAD BEAULIEU 452 BORLAND ST, WILLIAMS LAKE, BC V2G 1R7 cbeaulieu@true.bc.ca 250 305 6605	TRUE
STRUCTURAL **RA STRUCTURAL ENGINEERING** MATTHEW DERKACH 452 BORLAND ST, WILLIAMS LAKE, BC V2G 1R7 cbeaulieu@true.bc.ca 250 305 6605	R&A ENGINEERING STRUCTURAL CONSULTING
MECHANICAL **DELTA-T CONSULTANTS LTD.** ERIC SCHREDL #101-1449 ST. PAUL STREET, KELOWNA, BC V1Y 2E5 eric@delta-t.ca 250 860 5550	DELTA-T CONSULTANTS LTD
ELECTRICAL **EXCEED ENGINEERING** JOSHUA LAYE 301 VICTORIA ST, KAMLOOPS, BC V2C 2A3 josh@exceedeng.com 250 819 6282	EXCEED ELECTRICAL ENGINEERING
LTA Consultants Inc. Lyndon Thomas 905-1708 Dolphin Ave, Kelowna, BC V1Y 9S4 250 868 8800 lyndon@ltaconsultants.com	

3.1 Existing Arena and Rodeo Grounds Utilities

To accommodate the new rink and washrooms, existing services are to be extended out from the existing arena. This include water, power and sanitary. A survey and geotechnical testing & report would be completed as part of the next phase of the project by the District.

1. New water service will be run to the rink, tying into the existing main at the east side of the property. This is to provide water for an additional hydrant at the rink and for water to the building and a hose bib for purpose of rink flooding.
2. New sanitary line is to run back to the existing summer washroom building where there is currently a lift station. An upgrade or replacement of the lift station is planned for within this project to accommodate the additional fixtures.
3. New Electrical service will be run for lighting and power for the rink, washrooms and some lighting for the parking area. Baseboard heaters will provide heating for the washrooms and zamboni storage. There is no rink refrigeration planned for as part of this project scope.
4. Water from the new roof would be handled via a rockpit in the parking area along with a swale to the east of the new rink.



4.1 Proposed Design of outdoor rink + washrooms

BC Building Code 2024 Edition

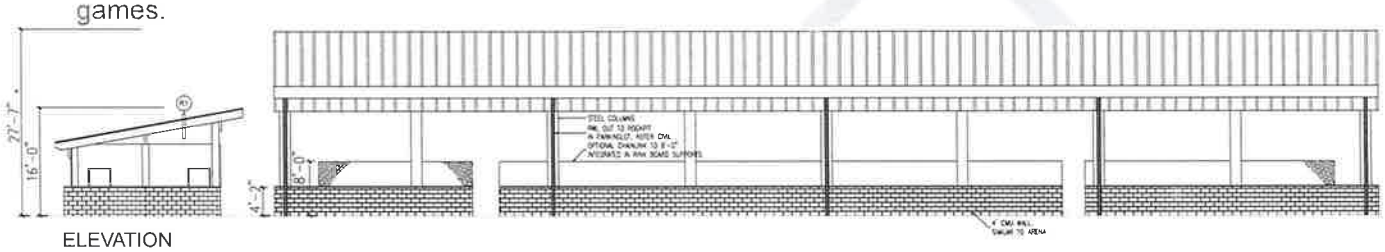
This outdoor rink building is an A3 use, facing (1) street and is to be classified as non-cumbustible construction per classification 3.2.2.30 under the 2024 BC Building Code which allows up to 4,000 m2 as one storey. This classification permits roof assemblies as either having an FRR of 45 min, or be of heavy timber construction. It is proposed the washroom + zamboni storage building have a timber structure.

Washroom Building + Zamboni Storage

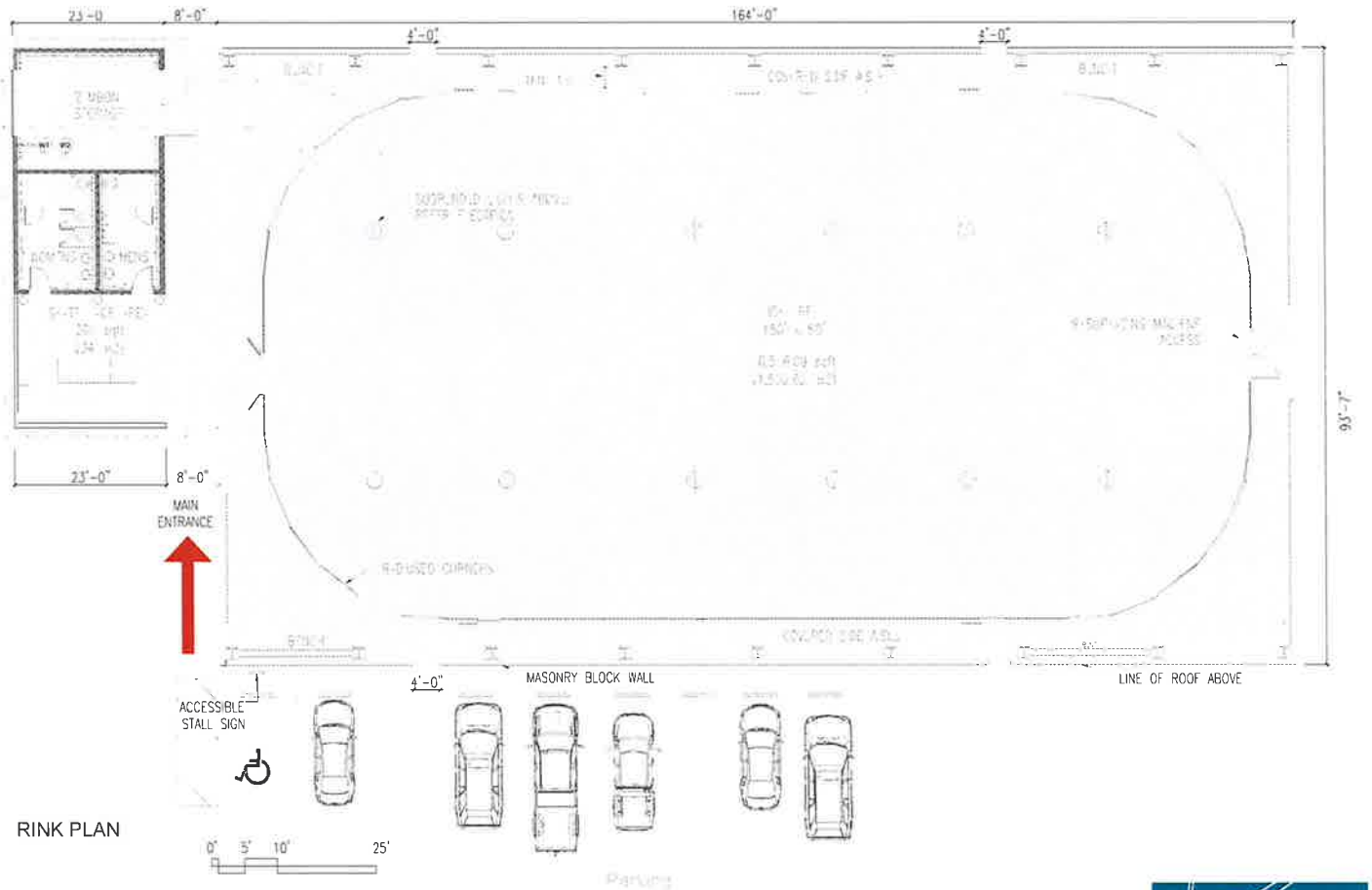
As an assembly building the provisions for washrooms are provided in a new standalone cmu block building. The number of water closets, per the 2024 BC Building Code, could accommodate a total occupant load of 150 persons. There would be a fire separation between the washroooms and the vehicle storage space.

Rink Size

The skating area is to be 150' X 80' with standard rounded corners. In order to ensure adequate coverage of the ice portion, this design proposes clear space around the perimeter. There is no refrigeration planned but there will be a hosebib for re-flooding purposes. The design is not required to accommodate league hockey games.



ELEVATION



RINK PLAN

4.1 Proposed Materials

Drawing inspiration from the existing arena building, the rink is proposed to be a pre-engineered steel structure with open sides. The materials are to follow the existing arena building with metal roofing and siding and a partial height block wall at the perimeterl. The skate change/ boot area is proposed as a large timber structure, also in keeping with the palette of the arena. The pre-engineered steel strucuture is presented in a medium grey with columns sitting on a raised concrete base. For safety at the top of the boards, a chain-link screen could be an affordable option to ensure extra level of safety.

Existing Arena Front Entry

Option for Chainlink fencing on top of rink boards: (48")

View of rink approaching from the walking path side

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5.1 3d Views of Proposed Design

View of rink approached from the arena

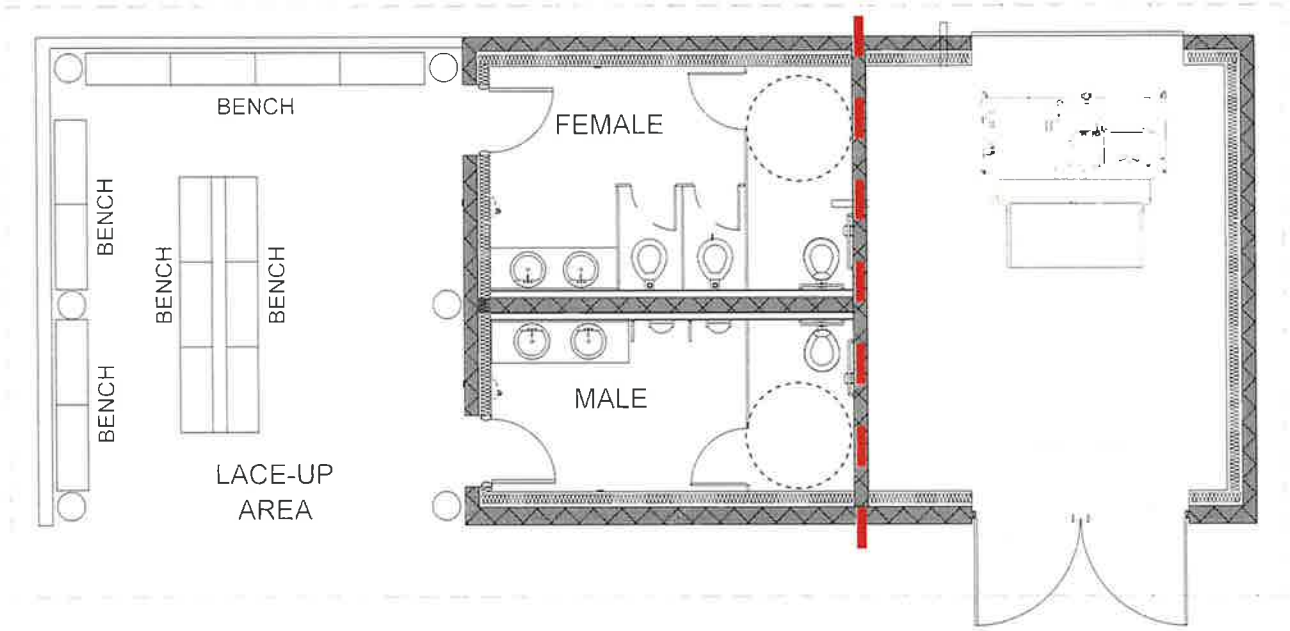
View of skate lacing area and washroom building designed as an independent structure from the rink.

Sectional view inside rink looking north

6.1 Washroom + Storage Garage + Lace Up Area

The lace-up area is proposed as semi-enclosed only with partial height walls to block wind and snow. The Washrooms and optional zamboni storage would be a semi-heated space with mechanical ventilation and baseboard heaters to prevent freezing. Proposed construction is cmu block (insulation on inside) with a non-combustible structure and heavy timber roof supports.

Heating and ventilation and plumbing is to be provided for the washroom & storage garage spaces. The washrooms could also be utilized year-round with skating in winter and rodeo and baseball tournaments in summer. It is assumed that these can be considered semi-heated in order to maintain above freezing temperatures via electric baseboard heaters. Ventilation for the optional zaboni garage would be provided for a gas-run zamboni unless noted otherwise. There would also be a 1.5 hr fire separation between the washrooms and the storage garage.



Enlarged Plan of Washroom and Lace-Up Building with optional Zamboni Garage

LTA Consultants Inc

DISTRICT OF 100 MILE HOUSE – OUTDOOR RINK PROJECT, 175B WRANGLER WAY, 100 MILE HOUSE, BC

CLASS 'C' SCHEMATIC DESIGN ESTIMATE – REVISION 1

January 17th, 2025

LTA Consultants Inc
Professional Quantity Surveyors
& Construction Cost Consultants
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Prepared for:

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Bluegreen Architects
3004 29th Street
Vernon, BC V1T 5A7

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INTRODUCTION

The district of 100 Mile House is planning to construct an exterior ice sheet facility, located in 100 Mile House, BC.

The project comprises the construction of a covered exterior single ice sheet with a washroom building. The washroom building has a total gross floor area of approximately 805ft^2 (75m^2). The building includes a men's washroom, a women's washroom, and a Zamboni storage room.

The outdoor rink structure will be comprised of cast-in-place concrete footings, an ice rink slab, and a typical apron slab. The foundations will support the pre-manufactured structural steel superstructure which includes columns, beams, and purlins. The exterior envelope of the rink superstructure comprises an uninsulated sheet metal roof finish.

The change room substructure comprises cast-in-place concrete footings, foundation walls, and a slab-on-grade. Construction of the change room building will include load bearing masonry walls and structural steel beams and columns to support the wood framed roof structure. The exterior envelope comprises painted masonry walls, aluminum framed windows, and an insulated sheet metal roof finish.

Site development work includes general site clearance, bulk earthworks, gravel-paved parking area and access road, new concrete sidewalks around the building and pole barn structure, minor landscaping, and full site servicing.

LTA Consultants Inc. (LTA) has been retained as part of the Bluegreen Architecture consultant team to prepare a class 'C' schematic design estimate for the project's hard costs and associated soft costs. For further information, please refer to the 'Main Summary of Estimated Project Costs' (Page A1).

We have separately identified the additional estimated construction costs if the project schedule for tender is moved from the summer of 2025 to January 2026. Please refer to separate price number 1 on the 'Main Summary of Estimated Project Costs' (Page A1). *Please note, the baseline estimate assumes a summer 2025 tender.*

DOCUMENTATION & INFORMATION

We have been provided with the following documentation and information for the preparation of this class 'C' schematic design estimate:

- Schematic Design Package, issued for class C, dated December 11th, 2024, prepared by Bluegreen Architecture Inc.
- Civil Drawing 1, issued for Class 'C' Costing, dated December 2024, prepared by True Engineering.
- Electrical Drawings E01 & E02, issued for class 'C' costing, dated January 6th, 2025, prepared by Exceed Electrical Engineering.

- Mechanical Drawings M0.00, M1.01, & M2.01, issued for pricing, dated December 28th, 2024, prepared by Delta-T Consultants Ltd.
- Structural Drawings S101, S102, S201, S202, S301, & S401, issued for class 'C' estimate, dated January 7th, 2025, prepared by R & A Engineering Ltd.

BASIS OF THE ESTIMATE

Budget Estimate

We have met with the architect and reviewed the drawing documentation and information provided to establish the scope and extent of the work.

From the documentation and information provided, we have prepared the enclosed class 'C' schematic design estimate by measuring quantities from the drawings and applying unit rates to the measured work elements. Where no information was available, we have made reasonable assumptions and stated this in the backup to this report.

Project Procurement and Pricing

Pricing for this project is based upon our opinion of the current January 2025 standard construction industry market costs for this size and type of institutional project in 100 Mile House, BC. It has been assumed that the project will be procured on a fixed stipulated 'lump sum' contract basis, from a competitive bidding field of at least five competent General Contractors. It has also been assumed that a competitive bidding field of at least four competent sub-contractors for each trade will tender for the work and that there will be no 'sole source' bids.

This class 'C' schematic design estimate attempts to establish a fair and reasonable price for the proposed work and is not intended to be a prediction of a 'low bid'.

Contingency Reserves

A Design Contingency Allowance of 10% has been included in this estimate. This allowance is a reserve of funds in the construction estimate to cover unforeseen items during the design phase that do not change the project scope. This allowance is ultimately absorbed into the designed and quantified work as more detailed information becomes available and is, therefore, normally reduced to zero at the tender stage.

An Escalation Contingency Allowance of 5% has been included in this estimate. This allowance is a reserve of funds in the construction estimate to cover price increases in construction costs due to changes in market conditions between the date the estimate is prepared and the date the tender is called ***(assumed Summer 2025)***.

A Construction Contingency of 5% is included in this estimate. This allowance is a reserve of funds in the construction estimate to cover unforeseen items during the construction period

which will result in change orders. This contingency is not intended to cover changes in the scope of the work.

Level of Accuracy

This is a class 'C' schematic design estimate with a level of accuracy of +/-20% 18 times out of 20.

Market Conditions

The current Construction Market in British Columbia is very active to the extent that many projects, at the tender stage, are suffering from a lack of interest from General Contractors as well as Sub-trades. A lack of competitive interest will have an effect on the tendered bottom line and will very likely not reflect the estimated value contained in this report.

GST

GST has been ***excluded*** from the estimate.

Excluded Items

The following items are **specifically excluded** from this class 'C' schematic design estimate:

- GST.
- Development Cost Charges.
- Financing Costs.
- Effects on Materials Pricing due to Border Tariffs, Duties, and Trade Embargoes.
- Bonding Costs (if Applicable) relating to Off-Site Servicing Work.
- Separate Price Item #1.
- Future Ice Making Plant and Associated Building.
- Special Foundations and/or Ground Improvement Work.
- Portering and Relocation Costs.
- Loose Furnishings, fittings, and equipment.
- Items listed as Excluded in the detailed Backup.
- Cost Escalation past Allowance Included.

This estimate has been derived using generally accepted principles on method of measurement as per the Canadian Institute of Quantity Surveyors Elemental Cost Analysis.

MAIN COST SUMMARY

MAIN SUMMARY OF ESTIMATED CONSTRUCTION COSTS - REVISION 1

Description		Gross Floor Area / Estimated Value	m^2 1,501.80 / $/m^2$	ft^2 16,165 / $/ft^2$
Net Building Cost		$3,261,233	$2,171.55	$202
Site Development		$636,877	$424.08	$39
ESTIMATED CONSTRUCTION COSTS (Excluding GST)		**$3,898,111**	**$2,595.63**	**$241**
Design Contingency Allowance	10.00%	$389,811	$259.56	$24
Escalation Contingency Allowance (Assumed Summer 2025)	5.00%	$214,396	$142.76	$13
Construction Contingency Allowance	5.00%	$225,116	$149.90	$14
ESTIMATED CONSTRUCTION COSTS (Excluding GST)		**$4,727,434**	**$3,147.85**	**$292**
GST	5.00%	Excluded	$0.00	$0
ESTIMATED CONSTRUCTION COSTS (Excluding GST)		**$4,727,434**	**$3,147.85**	**$292**
SOFT COST				
Design Consultants Fees				
Architects Fees		$171,517	$114.21	$11
Structural Engineers Fees		$43,665	$29.08	$3
Mechanical Engineers Fees		$15,000	$9.99	$1
Electrical Engineers Fees		$15,000	$9.99	$1
Civil Consultants Fees		$17,500	$11.65	$1
Landscaping Consultant Fees		$10,000	$6.66	$1
Geotechnical Engineers Fees		$20,000	$13.32	$1
Miscellaneous Consultants Fees		$38,981	$25.96	$2
Quantity Surveying Fees		$32,159	$21.41	$2
Owners Costs				
Owners Project Management Fees	5.0%	$236,372	$157.39	$15
Development Cost Charges (If Applicable)		Excluded	$0.00	$0
Building Permit Fees (assumed $11 per $1,000)		$49,525	$32.98	$3
Course of Construction Insurance - allowance		$54,028	$35.98	$3
Finance Costs (If Applicable)		Excluded	$0.00	$0
Equipment				
Loose Furniture, Furnishings and Equipment		Excluded	$0.00	$0
ESTIMATED SOFT COSTS (Excluding GST)		**$703,748**	**$468.60**	**$44**
GST	5.00%	Excluded	$0.00	$0
ESTIMATED SOFT COSTS (Excluding GST)		**$703,748**	**$468.60**	**$44**
ESTIMATED PROJECT COSTS (Excluding GST)		**$5,431,181**	**$3,616.45**	**$336**

SEPARATE PRICE - *EXCLUDED FROM BASELINE ESTIMATE*

1) Estimated Construction Cost Increase for a January 2026 Tender — $135,070 (Excl. GST)

SPLIT OUT OF ESTIAMTED CONSTRUCTION COSTS BY FUNCTION

Change Room Building Cost Breakout — $1,262,972 (Excl. GST)
Outdoor Rink Structure Cost Breakout — $3,464,461 (Excl. GST)
Total Estimated Construction Costs — ***$4,727,434 (Excl. GST)***

Note:
The above noted separately priced items include an allowance for General Contractors Overhead and Fee, Design Contingency Allowance, Escalation Contingency Allowance and Construction Contingency Allowance, but exclude GST and all Project Soft Costs.