City of Richmond

Report to Committee

To:	General Purposes Committee	**Date:**	October 31, 2017
From:	Serena Lusk Interim Director, Parks and Recreation	**File:**	06-2345-20-MINO1/Vol 01
Re:	**Minoru Place Activity Centre Reuse Options**		

Staff Recommendation

1. That the recommended option, Option 1: Community Education and Arts Space, be approved as the preferred reuse of the Minoru Place Activity Centre as detailed in the staff report titled "Minoru Place Activity Centre Reuse Options," dated October 31, 2017, from the Interim Director, Parks and Recreation; and

2. That the recommended option, Option 1: Community Education and Arts Space, be considered as part of the Minoru Park Vision Plan, as detailed in the staff report titled "Minoru Place Activity Centre Reuse Options," dated October 13, 2017, from the Interim Director, Parks and Recreation.

Serena .

Interim Director, Parks and Recreation
(604-233-3344)

Att. 3

REPORT CONCURRENCE		
ROUTED TO:	**CONCURRENCE**	**CONCURRENCE OF GENERAL MANAGER**
Finance Department	☑	
Project Development	☑	
Community Safety	☑	
Transportation Planning	☑	
Development Applications	☑	
REVIEWED BY STAFF REPORT / AGENDA REVIEW SUBCOMMITTEE	**INITIALS:** CJ	**APPROVED BY CAO**

Staff Report

Origin

At the December 21, 2016, Parks, Recreation and Cultural Services Committee meeting, Council made the following referral:

> *That staff prepare options for the future use of the Minoru Place Activity centre located at 7660 Minoru Gate, and report back in 2017 as described in the staff report titled "Minoru Park Vision Plan Phase One: Facilities Planning," dated December 1, 2016, from the Senior Manager, Parks.*

At the April 25, 2017, Parks, Recreation and Cultural Services Committee meeting, a delegation from the Richmond Adult Ballet spoke on their space needs. The Committee made the following referral motions:

1. *That the presentation from Richmond Adult Ballet be received for information; and*

2. *That staff consider programming space for Richmond Adult Ballet in the Minoru Place Activity Centre and report back.*

At the May 1, 2017, General Purposes Committee meeting, Council approved the following recommendations:

1. *That upon completion and opening of the new Minoru Centre for Active Living, the existing Minoru Aquatic Centre located 7560 Minoru Gate in Minoru Park be decommissioned and demolished, and that the project be submitted for consideration in the 2018 capital budget; and*

2. *That any future use of the existing Minoru Aquatic Centre and/or the Minoru Place Activity Centre sites located at 7560 Minoru Gate and 7660 Minoru Gate respectively be considered as part of the Minoru Park Vision Plan and be subject to Council approval.*

This report supports Council's 2014-2018 Term Goal #2 A Vibrant, Active and Connected City:

> *2.3. Outstanding places, programs and services that support active living, wellness and a sense of belonging.*
>
> *2.4. Vibrant arts, culture and heritage opportunities.*

This report supports Council's 2014-2018 Term Goal #7 Strong Financial Stewardship:

> *7.2. Well-informed and sustainable financial decision making.*

The purpose of this report is to review City and community stakeholder space needs and to recommend an appropriate reuse for the Minoru Place Activity Centre.

Analysis

The City has completed or is in the process of completing a number of planning initiatives to address the shifting and growing needs for community facilities (Attachment 1 – Community Facility Planning Initiatives). The City Centre Area Plan provides strategic guidance for the location of numerous future facilities and Council has established a set of priority projects for the next 10 years. More detailed planning is currently underway to address immediate and long-term needs for arts and culture, affordable housing and social services in the City. At the same time, the Minoru Park Vision Plan is being developed to recommend short and medium term improvements to the park and to guide future decision-making. Each of these initiatives informs the evaluation of a future use for the Minoru Place Activity Centre once the current programs relocate to the Minoru Centre for Active Living.

The recommendation for reuse of the existing building also takes into consideration the current building condition, the cost to upgrade and adapt it for reuse, and the suitability of any particular use to that location and that building. The options evaluated in this report are City facility needs that have been previously identified and those identified by community stakeholders.

City Facility Needs

The following table describes City facility needs previously identified by staff, that are a priority in the city centre but do not have designated locations:

Facility Type	Proposed Size	Proposed Location	Desired Proximities
Richmond Museum	50,000 sq. ft.	Arts District (City Centre).	Near transit; Suits co-location with other facilities i.e. visual and performing arts centre; Main Library.
Visual and Performing Arts Centre	45,000 sq. ft.	Arts District (City Centre).	Near transit; Suits co-location with other facilities i.e. Museum; Main Library.
City Centre Main Library	75,000 sq. ft.	City Centre.	Near transit; Suits co-location with other facilities i.e., a community centre or visual and performing arts centre.
Community Arts Program and Education Space	20,000 sq. ft.	Cultural Precinct in Minoru Park or Arts District (City Centre)	Suits co-location with other facilities i.e., Cultural Centre, community recreation space, or visual and performing arts centre.
Gateway Theatre Expansion	50,000 sq. ft.	Gateway Theatre	At the existing location.

Facility Type	Proposed Size	Proposed Location	Desired Proximities
Affordable Housing	Varies (Storeys is 110,000 sq. ft.)	City-wide	Near transit, child care, schools, community centres.
Community Police Station	4,500 sq. ft.	City Centre.	Replacement of existing City Centre Community Police Station; standalone building with visible storefront, sufficient parking, public and secured entrances and access to arterial roads.

Several of the uses above have specific requirements related to their programs and operations that would be best served by a purpose built facility. The main library, museum, visual and performing arts centre all promote public assembly on a large scale and require large volume spaces. They also have significant environmental control, storage and workspace needs. None of these requirements can be met by the Minoru Place Activity Centre building and are not being evaluated as potential options.

Affordable housing is also an unsuitable use for the existing building and is not being evaluated.

Community Space Needs

A series of consultation sessions were held with 13 community stakeholder groups and four staff groups in June 2017. The purpose of the sessions was to review the current functions and space uses and to solicit views on unmet space needs (Attachment 2 – Minoru Place Activity Centre Consultation Summary).

The following is a short summary of the space needs identified by category.

Arts and Culture Organizations

- Arts education spaces – dance, pottery, to supplement those activities at the Arts Centre;
- Exhibition space for local artists;
- Space for the Gateway Academy;
- Artist studio spaces; and
- Performance space.

Sport and Recreation Groups

- Saw the potential to use the building for programs at peak times on a rental basis;
- Identified need for rental space by other community groups, i.e. Vancouver Coastal Health; and
- Sports Council identified the need for additional storage space.

Social and Health Services Providers

- Desire for service hubs in the city centre with complementary services in one location. A youth services hub was one of the needs identified;
- Services for a variety of clientele; e.g., different age groups and service needs (including vulnerable or at-risk clients);
- Identified the need for office space, counseling areas and meeting/class rooms;
- Can share lobby/reception space; and
- Many stated a requirement for separation between uses including secured (lockable) spaces.

Minoru Place Activity Centre Building Assessment

A detailed building analysis report has been completed to assess the building for its potential to be repurposed. A team was retained to complete an assessment of the structural, mechanical, electrical, roof, building envelope and code compliance. Cost estimates to upgrade the building and renovate it for the recommended use have been prepared. The full Minoru Place Activity Centre Building Analysis Report is included as Attachment 3.

The following is a summary of the building assessment findings:

Maintenance/Replacement Costs

If the building were to continue to be occupied for up to 10 years, maintenance or replacement of the major building systems would be required. This includes architectural (e.g., windows, roofing), mechanical (e.g., HVAC, plumbing) and electrical (e.g., lighting, fire alarm) systems.

Building Design

The size of the building and some existing building features were designed specifically for the activity centre programs. The building has a large expanse of glazing on the east side that captures natural light and makes the activities within the building visible from the surrounding park. The 3,541 square foot activity room/gym has a hard wood sprung floor and a stage. The kitchen is a commercial kitchen added in 1989 with an adjacent cafeteria space.

Given the condition of the building and its particular design, it is recommended that rather than committing to a substantial capital investment to upgrade the building for long-term use, the City invest only in the upgrades required to extend its use for up to 10 years and select an interim use that will not require extensive changes to the building. This approach presents the opportunity to address immediate space needs while planning for future facilities that will be more programmatically and operationally optimal.

Minoru Place Activity Centre Reuse Options

The options for reuse that were generated through the review of the City's corporate facility needs and the community stakeholder consultation, have been evaluated against several factors to determine their suitability for interim use of the Minoru Place Activity Centre.

The options generated by the community stakeholder consultation that have been evaluated were those that indicated the need for specific types of space and a sustained need for space. For example, the sports and recreation consultation indicated that there was a need for only occasional meeting and/or office rental space.

The evaluation factors are:

- Building Size – Is the building's 16,700 square foot floor area adequate for the use?
- Building Configuration – Do the interior layout, flooring and building systems generally suit the required functions in order to minimize the capital and operating expenditures? Does the proposed use benefit from the unique features of the building?
- Location – Does the location suit the uses and the intended users?
- Compatibility – Is the proposed use compatible with the established and proposed future uses in the Arts and Culture precinct of Minoru Park? Does it have any synergies with other established uses that would benefit the intended users or the users of other services in the area?
- Operational Efficiency – Can the operations of the use be coordinated with the operations of the other nearby facilities (Culture Centre and Library) or will the use operate independently?
- Parking – Will the use generate the need for additional parking stalls?

The tables below further detail the evaluation factors and comments for each reuse option.

Option 1: Community Arts Program and Education Space – Recommended	
Factor	Evaluation Comments
Building Size	15% smaller than desired size previously identified to meet long term needs.
Building Configuration	Generally suitable with some reconfiguration of internal partitions required. Gym space with sprung floor particularly suitable for dance programs. No requirement for kitchen/cafeteria facilities.
Location	Yes.
Compatibility	Yes.
Operational Efficiency	Yes.
Parking Requirement	Yes – 44 additional stalls.

Option 2: Space for Gateway Academy	
Factor	Evaluation Comments
Building Size	Would require less than 10% of the space.
Building Configuration	Gym space with sprung floor particularly suitable for musical theatre programs. No requirement for kitchen/cafeteria facilities.
Location	Yes.
Compatibility	Yes, there could be some sharing of space if Option 1 is chosen.
Operational Efficiency	Somewhat. Gateway Theatre operations are in the park albeit the northern end.
Parking Requirement	Yes – 44 additional stalls.

Option 3: Community Police Station	
Factor	Evaluation Comments
Building Size	Would require just 20% of the space, could share with other uses.
Building Configuration	Generally suitable with some reconfiguration of internal partitions required. Would not use the unique building features.
Location	Yes.
Compatibility	No – internally focussed uses that would not benefit from or contribute to this location.
Operational Efficiency	No – independent.
Parking Requirement	Yes – 5 additional stalls.

Option 4: Social and Health Services Office and Meeting Space	
Factor	Evaluation Comments
Building Size	Yes.
Building Configuration	Somewhat suitable – Reconfiguration and addition of internal partitions required, potential requirement for an additional building entry. Would not use the unique building features.
Location	Yes.
Compatibility	No – internally focussed uses that would not benefit from or contribute to this location.
Operational Efficiency	No – independent.
Parking Requirement	Yes – 47 additional stalls.

Recommendation

Option 1: Community Arts Program and Education Space

It is recommended that Council endorse Option 1: Community Arts Program and Education Space as the interim reuse of the Minoru Place Activity Centre. With minimal upgrades to the building systems and aesthetics, the Arts Centre could expand its programs, meet community need, reduce waitlist numbers and better accommodate resident art groups. With minimal upgrades the building is expected to remain functional for the next five to 10 years.

Based on preliminary assessment, this proposed reuse is estimated to generate the need for an additional 44 parking spaces based on the City's parking bylaw using the Indoor Recreation Classification. The following is a breakdown of the parking required:

- 2 stalls per 100m² gross area - 1,555/100 = 15.5 x 2 = 32 stalls
- Staff allowance of 16 x .75 stalls = 12 stalls
- Total parking = 44 stalls

This represents new parking demand in Minoru Park since it will service expanded services not presently accounted for in the parking counts for the park. This additional parking could be accommodated by enlarging the existing parking lot south of the existing aquatic centre and/or implementing strategies for better managing the use of the existing parking in Minoru Park, which will be developed through the Minoru Park Vision Plan.

This option is the closest fit with the configuration of the existing building and it is also the best fit within the context of that part of Minoru Park. It will mean that the building will continue to be open and available to the public, will generate more public use of the surrounding park and could augment any cultural event use of the plaza (e.g., the Children's Festival). In addition, there are strong synergies between the programs and operations at the Cultural Centre and the proposed Community Arts Program and Education space.

It is also recommended that planning start immediately for a new facility in this area that complements the City Centre location, as well as Minoru Park Master Plan, currently underway. A capital request for advanced planning of a replacement facility will be submitted for the 2018 budget cycle.

Financial Considerations

The cost to complete the necessary upgrades to the existing aged building systems is $1.1M which could be phased in over a 10 year period as needed. These costs are required in order to keep the building functioning for any use.

The cost to adapt it for the recommended Option 1: Community Arts and Education Space is estimated to be an additional $2.6M. The Operational Budget Impact is estimated at $500,000 for building operations and administrative costs. Program costs for instructors and supplies are expected to be offset by revenue.

In comparison, the capital cost of a full building upgrade for long term use is estimated at $7.6M and a new, purpose-designed building of a similar size is estimated to be $12.2M.

The Operational Budget Impact would be similar for the full building upgrade or for a new purpose-designed building.

Advanced planning costs for a new a facility has been estimated at $350,000. A capital request will be submitted for Council consideration in the Five Year Capital Plan.

Financial Impact

Upon Council approval of the recommended option, a capital submission for $440,000 will be provided for consideration in the 2018 Capital Budget process for detailed design with a second capital submission in 2019 for $3.26 M for implementation for a total of $3.7M to complete the work required for the reuse of Minoru Place Activity Centre.

A separate capital submission for $350,000 will also be submitted in 2019 for advanced planning for a new facility.

The Operating Budget Impact is estimated at $500,000. This would have a tax impact of approximately 0.25 per cent, anticipated to start in late 2019.

Conclusion

The building assessment for the Minoru Place Activity Centre concludes that while the building has been kept in good repair, the major building systems are reaching the end of their life cycles. The option proposed in this report, to minimize the capital investment in adapting the building for reuse versus fully renewing and renovating the building, is based on a review of space needs, the building's context and the costs to improve the building.

Of the immediate and long-term space needs identified, only some are suitable for the Minoru Place Activity Centre and in that publicly oriented location. The recommended option, Option 1: Community Arts Program and Education Space addresses a number of immediate space needs and will allow the City to plan for more suitable, purpose-built facilities to meet long term needs.

Jane Fernyhough
Director, Arts, Culture & Heritage Services
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Jamie Esko
Manager, Parks Planning, Design & Construction
(604-233-3341)

Att. 1: Community Facility Planning Initiatives
2: Minoru Place Activity Centre Consultation Summary
3: Minoru Place Activity Centre Building Analysis Report

Major Facilities Planning

1. Approved Major Facilities Projects
   Council approved funding for advanced planning and design for five priority projects from 2016 to 2026. This included the Lawn Bowling Clubhouse which is the only one of the five projects to be located in Minoru Park. It is anticipated to remain in the northern area of the park in proximity to the lawn bowling fields.

2. Civic Facilities in the City Centre Area Plan (CCAP)
   a. Community-level facilities are encouraged in high amenity, village-centre locations with easy pedestrian and cycling access and convenient parking. Facilities may include:
      i. Four (4) community centres distributed to serve the City Centre's north, south, east, and west quadrants and neighbouring communities. Of these, construction of the south community centre is complete and the north community centre has been approved through rezoning as part of a future Capstan Village development. The CCAP does not anticipate the two (2) remaining community centres will be required until sometime after 2030.
      ii. A combination of branch libraries and lending services located in proximity to each village centre.
      iii. Key city facilities are encouraged where they will contribute towards the establishment of prominent, high-amenity hubs, such as the "Sport Excellence and Wellness Hub" emerging around the Richmond Olympic Oval. Facilities may include:
   b. Bridgeport & Aberdeen Villages "***Cultural Hubs***": A riverfront museum and visual and performing arts centre designed to contribute towards a vibrant arts and entertainment district.
   c. Lansdowne Village "***Centre of the Centre***": A new main library, together with major public event and open space, designed to support the area around Lansdowne Station as the heart of Richmond's downtown.
   d. Brighouse Village "***Civic Precinct***": A high amenity civic promenade linking No. 3 Road with Minoru Park via the City Hall and Richmond School District lands, both of which are designated for high-rise, high density, mixed use development.

   Minoru Park has not been specifically identified as a location for further civic facilities in the CCAP. The City Hall and Richmond School District lands have also not been specifically identified but the development potential of these properties will allow for the addition or expansion of major civic facilities in the future.

Related Studies and Planning Activities

There are a number of strategies and planning activities that are underway: the Arts Strategy Update, Cultural Facility Needs Assessment, Affordable Housing Strategy update and Social Development Strategy. These strategies and planning activities will provide greater clarity on facility types and their specific requirements to assist with future space allocation and long term planning for facility development.

Community Facility Planning Initiatives

1. Arts and Culture
   In 2017 Council approved funding for an Arts Strategy Update and a Cultural Facilities Needs Assessment. The Cultural Facilities Needs Assessment will determine the best types and balance of facilities and programming to support and meet the needs of the community as well as provide an analysis of the current use of facilities and spaces for artistic activities in Richmond. The Cultural Facilities Needs Assessment will provide a vital tool for the City, particularly given the high rate of property development in the City Centre and related opportunities for developer-funded amenity spaces. Expected completion date for these studies is June 2018.

2. Affordable Housing
   Housing affordability remains a critical issue in Richmond. In 2016, the vacancy rate of all housing types in Richmond was 0.9%, which is much lower than a healthy rate of 3% and places pressure on rental rates. The City recognizes that a diverse range of housing choices is an essential part of a well-planned and liveable community. The updated Affordable Housing Strategy will continue to secure a balance of built low-end market rental units (80 – 100 annual target) and cash-in lieu developer contributions ($1.5 million annual target), which will help position the City to capitalize on partnership opportunities for the development of affordable housing (e.g. Storeys project).

   Through the Affordable Housing Strategy update consultation, it was also learned that there continues to be a strong interest for projects to be in close proximity to transit and other community amenities including, child care, schools and community centres, with a focus on the priority groups in need, including; families, low-moderate income earners, persons with disabilities, seniors and vulnerable populations.

3. Social Development
   Strengthening Richmond's social infrastructure is identified as a strategic direction in Richmond's 2013 – 20122 Social Development Strategy, "Building our Social Future." Recommended actions include preparing an enhanced policy framework for securing community amenities (e.g. space for City services, space for lease to community agencies) through the rezoning process; establishing a clear, consistent City policy framework for assisting community agencies to secure program and office space; and implementing the City Centre Area Plan Policy of exploring opportunities to establish multi-use, multi-agency community service hubs in appropriate locations in the City Centre, as well as other space throughout Richmond. Also recommended is developing a database of space needs, currently underway under the auspices of Richmond Community Services Advisory Committee member agencies.

Minoru Park Vision Plan Context

The approach to planning for the future of the southeast corner of Minoru Park is informed by the Council approved Vision & Guiding Principles. The concept development that is currently underway is being organized around a framework of three distinct but interrelated districts within the park: the Lakes District, the Active Living District and the Arts and Culture District. These are based on the existing major uses and the objective is to build on and augment them.

Community Facility Planning Initiatives

The Arts and Culture District, in the southeast corner of the park, is envisioned to become an exciting and colourful hub of community cultural events and art displays. It will be a place where community talent is showcased and local residents are inspired to get creative and participate in artful expression. It will continue to host events such as the Children's Art Festival and will celebrate and amplify the function of the Cultural Centre. The design of the surrounding spaces and infrastructure will allow for the expansion of the range and frequency of programs and events (e.g., a dedicated, covered performance/event space).

The Minoru Park Vision Plan will also address a number issues and considerations, some of which affect the whole park and some that are particularly relevant to the Arts and Culture District:

- Additional neighbourhood park services are required to address the needs of the rapidly redeveloping neighbourhoods served by Minoru Park. The population within a 400 metre radius of the park is approximately 20,000 and is expected to double by 2041;
- Improvements to pedestrian and cyclist access to and through the park are required to address substandard and unsafe conditions. This includes the creation of a strong east-west link between the new Minoru Centre for Active Living and the Cultural Centre;
- Protect the park's heritage and significant trees;
- Develop a public art program that celebrates and strengthens the park's identity and character; and,
- Reduce the negative impacts of surface parking and avoid the generation of additional parking demand.

The Vision Plan will provide short, medium and long term directions for these and the many other considerations and ideas discussed through the staff, stakeholder and community engagement process completed in June of 2017.

ATTACHMENT 2

City of Richmond

Minoru Place Activity Centre

Consultation Summary

August, 2017

David Hewko
Planning + Program Management

5520374

1.0 Process Overview

The consultant, David Hewko Planning + Program Management, met individually with thirteen external stakeholder groups and four staff groups to ascertain the potential compatibility in a re-purposed Minoru Place Activity Centre. In addition, the consultant reviewed and summarized the comments from one written submission.

Staff groups included: arts and culture, community social development, recreation and, parks and events. The staff groups identified both potentially their own needs or uses as well as offering perspective and insights into what the external stakeholders needs might be.

External stakeholder groups included: Gateway Theatre, Richmond Public Library, City Centre and Thompson Community Associations, Richmond Art Gallery, Richmond Arts Coalition, Vancouver Coastal Health, Caring Place, Richmond Sport Council as well as other groups. Some of the external groups are umbrella organizations such as Caring Place or Richmond Arts Coalition and advocated for broader constituencies. The written submission was provided by the Richmond Chinese Community Society. One key stakeholder group, Richmond Museum Society did not respond to numerous invitations and input was not available.

Most needs expressed by individual groups either exceeded the area of the entire building or only required a small portion. Most groups however were amenable to the idea of sharing space with other groups if their functions and clientele were compatible. This extended to include security and safety, compatibility in terms of standard operating schedule and acoustic separation, as well as the potential for rentals of unused surplus time to other outside users.

As expected, the cumulative needs identified far exceeded available space. Currently in Richmond, there is a severe shortage of affordable B-class and C-class office space and many social agency tenants in particular face eminent eviction for building demolition and redevelopment. The Richmond Community Foundation is currently in the process of updating a 2014-15 study that identified that as many as 18 agencies were either growing and needing more space or, their current tenancy was precarious.

The following is a list of groups that were consulted, the dates the meetings occurred as well as the number of representatives in attendance. City document number 5405516 (v5) includes the names of all individuals invited.

Externals Stakeholder #1:	Gateway Theatre (2 attendees)	June 19
Externals Stakeholder #2:	Richmond Public Library (2 attendees)	June 19
Externals Stakeholder #3:	Richmond Centre for Disability	June 19
Externals Stakeholder #4:	Thompson Community Centre and City Centre Community Associations (5 attendees) June 19	
Externals Stakeholder #5:	Richmond Sports Council (1 attendee)	June 19
Externals Stakeholder #6:	Vancouver Coastal Health (2 attendees)	June 20

Externals Stakeholder #7:	Richmond Caring Place Society (3 attendees)	June 20
Externals Stakeholder #8:	Richmond Art Gallery Association (5 attendees)	June 21
Externals Stakeholder #9:	Friends of the Library (5 attendees)	June 21
Externals Stakeholder #10:	Richmond Arts Coalition (2 attendees)	June 20
Externals Stakeholder #11:	Richmond Fitness and Wellness Board (2)	June 22
Externals Stakeholder #12:	Richmond Community Services Advisory Committee (8 attendees)	June 22
Externals Stakeholder #13:	Richmond Arts Centre Resident Art Groups (20 attendees)	June 22
Staff Session #1:	Arts and Culture (5 attendees)	June 7
Staff Session #2: June 7	Recreation, Sport and Oval (5 attendees)	
Staff Session #3:	Community Social Development (4)	June 8
Staff Session #4:	Parks and Events (2 attendees)	June 8

In addition, one written submission had been received by the City of Richmond as was reviewed:

External Stakeholder #14:	Richmond Chinese Community Society (written submission)

Each session was about one hour in duration and the participants were asked the same questions in the left hand column. In some cases, some of the questions were not relevant or applicable and other topics were raised.

2.0 Summaries of Consultation Meetings

1) Name of organization(s)	**External Stakeholder Session #1** **Gateway Theatre**
2) Current location, approximate size (area) and current rent	Minoru Park; 540 seat proscenium theatre, 100-seat studio, support space
3) Current number of members/users and future growth potential	Academy and summer camps have potential to grow and have outgrown the theatre
4) Describe members/clientele (age, residency, etc.)	All ages; academy (more than 300 kids) and summer camps 6-18 years old
5) Schedule of use (season/weekly/daily) and peak times	Academy schedule (3pm-on) conflicts with traditional rehearsal schedule (10-6pm)
6) Special requirements for above (grade-access only, security, etc.)	Theatre specialized, but academy could be anywhere
7) Types of programs, services and activities offered now	Academy classes in speech, acting, improv, musical theatre, etc.
8) Types of programs and services would like to offer but cannot now	Their pressure is in support space, not performance space; if academy was decanted there would be more time for available rentals
9) What types of spaces do you use (gym, stage, multi-purpose, kitchen, meeting, office, storage, other)	Theatre dressing rooms, offices, storage, set construction shop, wardrobe/prop shop. Note: existing stage design considered functionally obsolete
10) Which above need to be dedicated and which can be shared-use spaces	All are specialized, but auditorium is rented out for outside assembly functions
11) Advantages or challenges associated with sharing space; describe compatible uses	Schedule conflicts; acoustic separation
12) What special events (annual, seasonal, etc.) are held and what are requirements	Regular season of plays, special events and rentals (recitals, etc.)
13) Do you need to control access (paid admission, security, etc.)	Yes

14) How do members/ clientele get to current location (drive, transit, walk)	Theatre-goers drive, academy students some walk or transit; location is isolated at far end of park
15) Number of staff, types of staff	Not discussed
16) Would this be a satellite location, a hub or a single-location and what could be operational challenges	Academy could be in a satellite location like the Minoru Place Activity Centre (no direct interaction required or stage access)
17) Would this be a change of use according to the BC Building Code or zoning bylaws	Academy would still be an assembly function, A1 from A2 could require further fire separation from others
18) How extensive would renovations be for functional adaptive use required, not including lifecycle	Multi-purpose spaces; lighting and acoustic separation; adjacency to storage
19) How compatible would this use be with Minoru Park vision and guiding principles	Would fit within the arts and culture precinct vision
20) Timing, phasing, logistical challenges anticipated	Could move over at any time

1) Name of organization(s)	**External Stakeholder Sessions #2 and #9** **Richmond Public Library and Friends of the Library**
2) Current location, approximate size (area) and current rent	47,000 sf now in the cultural centre; branch libraries 8-15,000 sf; Friends of the Library have small storage space now need about 700 sf (book sale storage) at a low cost and not necessarily in Minoru Place Activity Centre.
3) Current number of members/users and future growth potential	Library demand expected to grow with population; Richmond Public Library is repositioning itself to meet future needs
4) Describe members/clientele (age, residency, etc.)	All ages and abilities; multi-cultural
5) Schedule of use (season/weekly/daily) and peak times	Peak times after school weekdays; busy all seasons; Friends of the Library annual book sale and volunteer appreciation events
6) Special requirements for above (grade-access only, security, etc.)	One level ideal, but current 2-level situation works
7) Types of programs, services and activities offered now	45,000 volumes; literacy and learning programs running in multiple rooms
8) Types of programs and services would like to offer but cannot now	Would increase 'people space' with more room, plus enhance technology and multi-media offerings
9) What types of spaces do you use (gym, stage, multi-purpose, kitchen, meeting, office, storage, other)	Use own program rooms but also requires access to lecture hall (300, but smaller too) 3-4 times per year; Friends of the Library rents Thompson gym now for annual book sale and for volunteer appreciation events
10) Which above need to be dedicated and which can be shared-use spaces	Library would be interested in occasionally booking gym in Minoru Place Activity Centre
11) Advantages or challenges associated with sharing space; describe compatible uses	Schedule conflicts if booking gym instead of hall in cultural centre; space needs would make it sole occupant if it moved in
12) What special events (annual, seasonal, etc.) are held and what are requirements	3-4 large lectures per year (see 9)
13) Do you need to control access (paid admission, security, etc.)	Materials checkout, patron security

14) How do members/ clientele get to current location (drive, transit, walk)	Drive, transit and walk
15) Number of staff, types of staff	Not discussed
16) Would this be a satellite location, a hub or a single-location and what could be operational challenges	Could be footprint for a new main library; could be branch library if main relocates; could be a children/youth annex
17) Would this be a change of use according to the BC Building Code or zoning bylaws	Unchanged A2 assembly function
18) How extensive would renovations be for functional adaptive use required, not including lifecycle	If adapted as a children's/youth annex or long-term as a branch renovations would be extensive
19) How compatible would this use be with Minoru Park vision and guiding principles	Would fit within the arts and culture precinct vision
20) Timing, phasing, logistical challenges anticipated	Long-term, would consider location for branch library if main branch relocated

1) Name of organization(s)	**External Stakeholder Session #4** **City Centre and Thompson Community Associations**
2) Current location, approximate size (area) and current rent	City Centre 28,000 sf opened in 2015 plus Lang Centre, also using space in local area schools (gyms); Thompson area not available; new community centre in north downtown in planning stages
3) Current number of members/users and future growth potential	Unknown but both see need for childcare (especially pre-schools), youth space and table tennis and Garrett Wellness as well
4) Describe members/clientele (age, residency, etc.)	All ages and abilities; especially emerging needs with new immigrant single-parent households. Having to cut wellness programs to accommodate growing need for youth services
5) Schedule of use (season/weekly/daily) and peak times	Peak times 4-9 pm and weekends, but very busy during daytimes as well
6) Special requirements for above (grade-access only, security, etc.)	Public building with some access and admission controls
7) Types of programs, services and activities offered now	Recreational, educational, health and wellness, some social services referrals
8) Types of programs and services would like to offer but cannot now	Both centres experience peak period demand challenges and would consider renting space; emerging need for older adult daycare and Supreme Court ruling removing daycare from schools creating new demands
9) What types of spaces do you use (gym, stage, multi-purpose, kitchen, meeting, office, storage, other)	Gymnasium, classroom, movement studios, 'wet' studio space (i.e. arts and crafts, birthday parties), office space, storage, kitchen. Noted city-wide shortage of gymnasiums
10) Which above need to be dedicated and which can be shared-use spaces	All spaces could be shared with other users as their primary locations elsewhere would remain
11) Advantages or challenges associated with sharing space; describe compatible uses	Peak period demand times, supply will never meet demand so choices have to be made
12) What special events (annual, seasonal, etc.) are held and what are requirements	None that would impact Minoru Place Activity Centre, except for occasional gym bookings

13) Do you need to control access (paid admission, security, etc.)	Spaces controlled by program instructors; 'chemistry' and compatibility of the co-users would be very important
14) How do members/ clientele get to current location (drive, transit, walk)	Primarily transit and walk, some drive
15) Number of staff, types of staff	Program instructors would travel to this location if programs were delivered here (as with schools where programs are delivered now)
16) Would this be a satellite location, a hub or a single-location and what could be operational challenges	Satellite locations for both. Could also rent space at new Minoru Centre for Active Living if available and affordable
17) Would this be a change of use according to the BC Building Code or zoning bylaws	Unchanged A2 assembly function
18) How extensive would renovations be for functional adaptive use required, not including lifecycle	Given the entities at best would be occasional renters of space, no dedicated renovations would be required, though multi-purpose spaces with sinks and storage space would be favoured
19) How compatible would this use be with Minoru Park vision and guiding principles	As a secondary user, they would fit with vision and mandate.
20) Timing, phasing, logistical challenges anticipated	The community centres despite their expertise in running multi-purpose facilities would not be interested in operating this facility, even as a satellite

1) Name of organization(s)	**External Stakeholder Session #5** **Richmond Sport Council**
2) Current location, approximate size (area) and current rent	In Minoru park, sport groups will have access to the new Minoru Centre for Active Living: team rooms, event room and bookable multi-purpose spaces as needed. Comment from attendee: demolished 'Pavilion Building' functions have not been adequately accommodated in replacement
3) Current number of members/users and future growth potential	All sport groups are experiencing growth
4) Describe members/clientele (age, residency, etc.)	All ages and abilities, multi-cultural; traditional sports and, new (to west) and emerging sports
5) Schedule of use (season/weekly/daily) and peak times	Year-round
6) Special requirements for above (grade-access only, security, etc.)	Grade access, except for event room at Minoru Centre for Active Living which needed to be elevated
7) Types of programs, services and activities offered now	Each sport runs its own programs; all need on-site storage to do so
8) Types of programs and services would like to offer but cannot now	The demolished Pavilion was a 'community building' largely left alone by the City and if replaced at the Minoru Activity Centre should be left in the hands of users, except for operations and maintenance
9) What types of spaces do you use (gym, stage, multi-purpose, kitchen, meeting, office, storage, other)	Meeting space, activity spaces (dryland training), storage
10) Which above need to be dedicated and which can be shared-use spaces	All spaces would be shared-use except dedicated storage
11) Advantages or challenges associated with sharing space; describe compatible uses	Conflicting demands
12) What special events (annual, seasonal, etc.) are held and what are requirements	Meets, tournaments and events all year-round

13) Do you need to control access (paid admission, security, etc.)	Not discussed
14) How do members/ clientele get to current location (drive, transit, walk)	Most drive, youth use transit
15) Number of staff, types of staff	Coaches
16) Would this be a satellite location, a hub or a single-location and what could be operational challenges	Not discussed
17) Would this be a change of use according to the BC Building Code or zoning bylaws	Unchanged A2 assembly function
18) How extensive would renovations be for functional adaptive use required, not including lifecycle	Nothing above normal renovation, but large occupant load for assemblies in gym would trigger higher water-closet count and more exiting doors
19) How compatible would this use be with Minoru Park vision and guiding principles	Would fit with the sport aspect of the Minoru vision, but has nothing to do with arts and culture
20) Timing, phasing, logistical challenges anticipated	Not applicable

1) Name of organization(s)	**External Stakeholder Session #6** **Coastal Health**
2) Current location, approximate size (area) and current rent	Mental Health and Addiction Services in multiple current locations; Richmond Home Health also attended but had no comments. Application for youth hub 'Foundry' location that would have gone in Lansdowne mall would have been about 3,000-3,500 sf
3) Current number of members/users and future growth potential	Unknown. Close proximity to high school would increase demand (the high school can't find space or would establish it's own satellite)
4) Describe members/clientele (age, residency, etc.)	Youth, vulnerable street youth. No pattern to volume or demand.
5) Schedule of use (season/weekly/daily) and peak times	Daytime, some evening
6) Special requirements for above (grade-access only, security, etc.)	Separate entrance at grade
7) Types of programs, services and activities offered now	Clinical, counseling, advocacy, support
8) Types of programs and services would like to offer but cannot now	'Foundry' is a provincial branded concept for youth hub and has support of all service provider partners and funders, Grandville Youth Clinic was one of the first in Metro Vancouver region
9) What types of spaces do you use (gym, stage, multi-purpose, kitchen, meeting, office, storage, other)	Offices, clinical, lounge, bathroom, storage. Food possible. Overnight accommodations not envisioned.
10) Which above need to be dedicated and which can be shared-use spaces	Dedicated suite, but could be adjacent to gym with separate locking doors for shared use
11) Advantages or challenges associated with sharing space; describe compatible uses	Other uses would need to be separated: i.e. two separate front doors. Could share gym controlled by other tenant
12) What special events (annual, seasonal, etc.) are held and what are requirements	Not applicable
13) Do you need to control access (paid admission, security, etc.)	Need 'storefront' or grade level access, discrete and safe

14) How do members/ clientele get to current location (drive, transit, walk)	Walk, bicycle or transit
15) Number of staff, types of staff	Core staff and visiting clinicians and physicians
16) Would this be a satellite location, a hub or a single-location and what could be operational challenges	This would be part of a network of youth hubs in the Lower Mainland
17) Would this be a change of use according to the BC Building Code or zoning bylaws	Change of use from A2 assembly occupancy to B2 treatment occupancy. 2-hour rated separate between tenancies would be required unless all B2
18) How extensive would renovations be for functional adaptive use required, not including lifecycle	Open to conversation about them doing the tenant-improvements (building occupied without lifecycle capital improvements and assumes 10 year life)
19) How compatible would this use be with Minoru Park vision and guiding principles	Not compatible with park or arts and culture, but compatible with Caring Place located across the street
20) Timing, phasing, logistical challenges anticipated	Need is immediate and urgent and would assume space as is. This would be a 'no-cost up-front' solution for the City and recognizing that it would only be a 10-year solution for the Youth Hub

1) Name of organization(s)	**External Stakeholder Session #7** **Caring Place**
2) Current location, approximate size (area) and current rent	The existing Caring Place model regarded as a success and emulated by other municipalities. The current facility was built in 1994, is 34,000 sf and currently has 14 agencies as tenants. Unfunded plans for expansion including doubling of space. Current facility no debt and is tax exempted keeping rents low. Offering to manage and operate the facility tenanted by NFP social service agencies
3) Current number of members/users and future growth potential	14 tenant organizations, 4-6 staff per entity, plus CP staff
4) Describe members/clientele (age, residency, etc.)	All ages, ethnicities, genders
5) Schedule of use (season/weekly/daily) and peak times	Primarily daytime weekday, but classroom and meeting spaces booked evenings, weekends, etc. (staff person on site)
6) Special requirements for above (grade-access only, security, etc.)	Single entrance, each tenant suite has separate entrance off common corridors; security and personal safety issues
7) Types of programs, services and activities offered now	Clinical, counseling, advocacy, support
8) Types of programs and services would like to offer but cannot now	Extension of what is found currently in Caring Place. Some current tenants need more space and they have a wait list of NFP agencies wanting to get in
9) What types of spaces do you use (gym, stage, multi-purpose, kitchen, meeting, office, storage, other)	Admin office, meeting rooms, classroom, tenant suites (each with possible open office, enclosed offices, files, seating lounge, interview or clinical rooms)
10) Which above need to be dedicated and which can be shared-use spaces	Tenant spaces dedicated, plus bookable meeting rooms and a classroom
11) Advantages or challenges associated with sharing space; describe compatible uses	Caring Place would expect to fill the entire building with NFP agency tenants
12) What special events (annual, seasonal, etc.) are held and what are requirements	Not applicable

13) Do you need to control access (paid admission, security, etc.)	Operates like a mini-mall, with each organization having a storefront and separate lockable access off common corridors
14) How do members/ clientele get to current location (drive, transit, walk)	Drive, transit and a modest few walk or bike
15) Number of staff, types of staff	Minimal front and back-of-house staff (1F/T, 2 P/T); each agency staffing and volunteers varies in size
16) Would this be a satellite location, a hub or a single-location and what could be operational challenges	Satellite to current Caring Place multi-tenant facility occupied by not-for-profit agencies and service providers. There could be operational challenges with two separate locations
17) Would this be a change of use according to the BC Building Code or zoning bylaws	Change of use from A2 assembly occupancy to B2 treatment occupancy. 2-hour rated separate between tenancies would be required unless all B2
18) How extensive would renovations be for functional adaptive use required, not including lifecycle	Caring Place would only be interested in operating a fully-renovated facility, but would be responsible for operating costs and routine maintenance. Rent structure wouldn't account for capital replacement amortization
19) How compatible would this use be with Minoru Park vision and guiding principles	Not compatible with park or arts and culture, but Caring Place is across the street so precedent there
20) Timing, phasing, logistical challenges anticipated	Caring Place would see some operational inefficiencies (added costs) to overcome managing two separate facilities. Need continues to grow so can be responsive when space is available. Many agencies have demolition clauses in their rental agreements and exist month-to-month. Nb.: Richmond Caring Place commissioned an Expansion Business Plan in 2012 that defined needs (25,000 sf assignable, space, 35,000 sf gross; cost $15 million in 2012 dollars)

1) Name of organization(s)	**External Stakeholder Session #8** **Richmond Art Gallery Society**
2) Current location, approximate size (area) and current rent	Currently located in the Cultural Centre on the ground floor. Estimated from key plan to be 7-8,000 sf in main footprint (common areas and additional support spaces not counted). Operated by NFP society model with paid staff. Rent not discussed.
3) Current number of members/users and future growth potential	Currently have three large gallery exhibition spaces, a program room, 2 offices, a meeting room and a storage vault (too small)
4) Describe members/clientele (age, residency, etc.)	Features world-class abstract artist touring exhibitions patrons are from all of Metro region but primarily Richmond
5) Schedule of use (season/weekly/daily) and peak times	Weekday and weekend, limited hours of operation. Also offer daytime summer camps for children and school tours
6) Special requirements for above (grade-access only, security, etc.)	Environmentally controlled and secured. Alarmed. Vault also specialized and is currently shared with museum (a new storage facility could be off-site)
7) Types of programs, services and activities offered now	Art gallery, education, lectures, corporate events
8) Types of programs and services would like to offer but cannot now	More programs, especially for children. Could occasionally rent multi-purpose rooms in Activity Centre for classes. Could see MPAC being used for local artists, something they do not represent
9) What types of spaces do you use (gym, stage, multi-purpose, kitchen, meeting, office, storage, other)	See #3. Would not be interested in relocating to Minoru Place Activity Centre but could backfill space in Richmond Cultural Centre if someone else leaves. Could occasionally rent classroom space or gym in Minoru Place Activity Centre instead of performance hall in the Cultural Centre
10) Which above need to be dedicated and which can be shared-use spaces	Currently share with Media Lab (part of Arts Centre) and Museum, but has to be similar types of occupancy. No interaction with Archive.
11) Advantages or challenges associated with sharing space; describe compatible uses	Art Gallery should be a separate free-standing building with specialized gallery exhibit spaces or if co-located should be like Anvil Centre in New West
12) What special events are held and what are requirements	Annual series of screenings and artist talks. Seating for up to 300

13) Do you need to control access (paid admission, security, etc.)	Yes
14) How do members/ clientele get to current location (drive, transit, walk)	Drive, transit, walk
15) Number of staff, types of staff	Not discussed, but paid staff is limited (1 full-time)
16) Would this be a satellite location, a hub or a single-location and what could be operational challenges	Main location
17) Would this be a change of use according to the BC Building Code or zoning bylaws	No change in use
18) How extensive would renovations be for functional adaptive use required, not including lifecycle	Renovations to Minoru Place Activity Centre would be cost prohibitive for building that still functionally would not work. Only a dedicated, larger contemporary building could induce them to relocate
19) How compatible would this use be with Minoru Park vision and guiding principles	Compatible with Arts and Culture precinct envisioned for master plan. Arts hub should grow and be reinforced
20) Timing, phasing, logistical challenges anticipated	No timetable discussed

1) Name of organization(s)	**External Stakeholder Session #10** **Richmond Arts Coalition**
2) Current location, approximate size (area) and current rent	Richmond Arts Coalition is about advocacy and promotion of local artists of all types, and bridging cultural gaps. Envisioned as an 'Artist Career Development Centre' and networking hub. The Arts Coalition would consider assuming the building 'as-is' and with minimum tenant improvements would populate spaces with visual and performance artists in studios and rentable rooms (operated as a new not-for-profit entity). Capitalizing renovations of Minoru Place Activity Centre would make rents unaffordable for artists, instead goal should be 'social return on investment'.
3) Current number of members/users and future growth potential	Unspecified
4) Describe members/clientele (age, residency, etc.)	All local artists, all ages; would also include services and support for artists such as career training and business management
5) Schedule of use (season/weekly/daily) and peak times	Days, evenings, weekends year-round
6) Special requirements for above (grade-access only, security, etc.)	Studio areas locking. One main entrance, with possible separate event entrance for 'black-box' theatre/gym
7) Types of programs, services and activities offered now	No space now; artists are fragmented and distributed throughout the community
8) Types of programs and services would like to offer but cannot now	Artists' workspace, place to sell art, performance space
9) What types of spaces do you use (gym, stage, multi-purpose, kitchen, meeting, office, storage, other)	Artist's gallery-gift shop, exhibition spaces, rentable artist workspaces, music rehearsal and recording spaces, storage, offices. Gym would be converted into a small 'black-box' theatre for multi-use by performers
10) Which above need to be dedicated and which can be shared-use spaces	Workspace studios would be enclosed and rented, all other spaces would be shared and rentable

11) Advantages or challenges associated with sharing space; describe compatible uses	No perceived disadvantages foreseen if Minoru Place Activity Centre had to be shared
12) What special events (annual, seasonal, etc.) are held and what are requirements	Not discussed
13) Do you need to control access (paid admission, security, etc.)	One main entrance with passive security
14) How do members/ clientele get to current location (drive, transit, walk)	Unknown, no business model in place
15) Number of staff, types of staff	Would be volunteer governed, managed and operated, possibly as a cooperative
16) Would this be a satellite location, a hub or a single-location and what could be operational challenges	No location currently. Artists are dispersed in the community
17) Would this be a change of use according to the BC Building Code or zoning bylaws	Change in use from A2 to A1 and A2 may trigger upgrades
18) How extensive would renovations be for functional adaptive use required, not including lifecycle	Arts Coalition suggests it could assume the space 'as-is' and use the building for the remaining ten or so years of remaining service life. Minimal improvements would be made / routine maintenance but couldn't afford lifecycle upkeep
19) How compatible would this use be with Minoru Park vision and guiding principles	Compatible with arts and culture precinct in park
20) Timing, phasing, logistical challenges anticipated	This would also be a 'no-cost up-front' solution for the City and recognizing that it would only be a 10-year solution for local artists

1) Name of organization(s)	**External Stakeholder Session #11** **Richmond Fitness and Wellness Board**
2) Current location, approximate size (area) and current rent –	Richmond Fitness and Wellness is an advocacy group and does not deliver programs nor operate or occupy a building now. They typically partner with groups on projects (i.e. Garrett Centre, Vancouver Coastal Health, Library) looking for gaps in services and where they might be able to facilitate a solution. They would not be interested in managing or operating a shared-use or multi-tenant Minoru Place Activity Centre but would participate in governance as a board seat.
3) Current number of members/users and future growth potential	Not-for-profit society board does advocacy work, event coordination and payroll for City pools
4) Describe members/clientele (age, residency, etc.)	All ages and abilities
5) Schedule of use (season/weekly/daily) and peak times	Year-round
6) Special requirements for above (grade-access only, security, etc.)	None
7) Types of programs, services and activities offered now	Planned events such as Walk Richmond, and Heart Wellness and Diabetes Wellness at Garrett Centre
8) Types of programs and services would like to offer but cannot now	Opportunity for growth exists
9) What types of spaces do you use (gym, stage, multi-purpose, kitchen, meeting, office, storage, other)	For their own purposes, they need an office 'home-base' / storage space for promotional literature
10) Which above need to be dedicated and which can be shared-use spaces	Lockable office in a shared building
11) Advantages or challenges associated with sharing space; describe compatible uses	None foreseen
12) What special events (annual, seasonal, etc.) are held and what are requirements	Walk Richmond

13) Do you need to control access (paid admission, security, etc.)	No
14) How do members/ clientele get to current location (drive, transit, walk)	No current location
15) Number of staff, types of staff	Volunteer board members
16) Would this be a satellite location, a hub or a single-location and what could be operational challenges	Office location would be their main and only location
17) Would this be a change of use according to the BC Building Code or zoning bylaws	Office would be interpreted as a D occupancy that may require a 1-hour fire separation between it and A2 uses
18) How extensive would renovations be for functional adaptive use required, not including lifecycle	If the building was sub-divided into all offices, partitions would be added but structural walls would be left intact. Mechanical systems would be more spatial and zonal
19) How compatible would this use be with Minoru Park vision and guiding principles	Office use less compatible in the arts and culture precinct even if all community service organizations
20) Timing, phasing, logistical challenges anticipated	No timetable discussed

1) Name of organization(s)	**External Stakeholder Session #12 and #3 Richmond Community Services Advisory Committee**
2) Current location, approximate size (area) and current rent	Service groups are dispersed throughout the community in leased space with multiple groups facing eminent eviction due to redevelopment clauses. Market rents also thought to be unaffordable. Capacity issues were also cited. While many uses and partners were put forward, the consensus at the meeting was the most urgent was a Youth Hub with Addiction Services (especially given proximity to high school) about 5,000 sf needed. Richmond Non-Profit Space Review (sponsored by Richmond Community Foundation) will be able to quantify city-wide space needs but January 2017 report advocated creating 'community service hubs'
3) Current number of members/users and future growth potential	Previous Richmond Community Foundation audit identified 18 agencies city-wide serving 13,000 residents using 150,000 sf (8,400 sf per location); Richmond Centre for Community Living 1,100 clients; Adult daycare has 4 locations with 75 clients per location; Richmond Centre for Disabilities claims hundreds of members; schools are downloading programs to the community due to budget constraints
4) Describe members/clientele (age, residency, etc.)	Youth are from all circumstances; adult daycare clientele are frail elderly; Richmond Centre for Disability clientele are disabled all ages including youth; etc.
5) Schedule of use (season/weekly/daily) and peak times	Predominantly weekdays daytime, but also evenings; youth hub would be busiest after school and evenings
6) Special requirements for above (grade-access only, security, etc.)	Grade-level access of Minoru Place Activity Centre would be ideal
7) Types of programs, services and activities offered now	Counseling, advocacy, medical support and referrals, training and rehabilitation, education, etc.; most facilities have some sort of lounge area to create a safe and welcoming environment for clientele
8) Types of programs and services would like to offer but cannot now	Richmond Community Foundation report indicated most agencies demands are increasing faster than population growth and that space constraints and funding limit how much new demand can be met

9) What types of spaces do you use (gym, stage, multi-purpose, kitchen, meeting, office, storage, other)	Richmond Community Foundation indicated average agency space is about 8,400 sf including offices, counseling/interview rooms, lounge/waiting area, open work areas, activity rooms, storage and some cases a kitchen. Example, Richmond Centre for Disability has 4,500 sf including offices, activity rooms, counseling rooms and support spaces
10) Which above need to be dedicated and which can be shared-use spaces	Each group needs dedicated office/ counseling areas for client privacy, but meeting rooms and classrooms can be shared spaces
11) Advantages or challenges associated with sharing space; describe compatible uses	Only issue discussed was clientele type, such as mixing ages groups or higher risk populations with general population
12) What special events (annual, seasonal, etc.) are held and what are requirements	Not discussed
13) Do you need to control access (paid admission, security, etc.)	Each tenant space should be lockable, building should have a central reception point at entrance
14) How do members/ clientele get to current location (drive, transit, walk)	Most use transit, some walk
15) Number of staff, types of staff	Varies by organization
16) Would this be a satellite location, a hub or a single-location and what could be operational challenges	With many services the autonomous social agencies form a de facto network. A single hub location for youth would create an identifiable address for a broader spectrum of services
17) Would this be a change of use according to the BC Building Code or zoning bylaws	Change of use from A2 assembly occupancy to B2 treatment occupancy. 2-hour rated separate between tenancies would be required unless all B2
18) How extensive would renovations be for functional adaptive use required, not including lifecycle	Given the urgency of the need, the service provider would be open to the tenant doing minimal improvements (building occupied without lifecycle capital improvements and assumes 10 year life)
19) How compatible would this use be with Minoru Park vision and guiding principles	Not compatible with park or arts and culture, but similar function Caring Place is across the street so precedent there
20) Timing, phasing, logistical challenges anticipated	Would assume space as is. This would be a 'no-cost up-front' solution for the City and recognizing that it would only be a 10-year stop-gap solution for youth in need

1) Name of organization(s)	**External Stakeholder Session #13** **Richmond Arts Centre Resident Arts Groups (RAC, RAGA and Dance)**
2) Current location, approximate size (area) and current rent	Occupants of Richmond Cultural Centre second floor spaces. Opinion among attendees was should the Dance organization be relocated to the Minoru Place Activity Centre all space problems for remaining users would be solved. Dance would be amenable to the move if 3-4 studio spaces were available plus desired support space.
3) Current number of members/users and future growth potential	Multiple activities and user groups including drawing and painting, pottery, weaving, dance (currently 2 studios)
4) Describe members/clientele (age, residency, etc.)	Predominantly older adult; except for dance that is 400 female children and youth and an adult program as well
5) Schedule of use (season/weekly/daily) and peak times	Studios daytimes, less evening and weekend use; dance after school weekdays and all day weekends
6) Special requirements for above (grade-access only, security, etc.)	Currently located on 2nd level; access not an issue providing elevators function
7) Types of programs, services and activities offered now	Each user group schedules activities in 'their' space as demand dictates; City has to program around residual pockets of time (limiting access and usefulness of space); spaces centrally booked by City
8) Types of programs and services would like to offer but cannot now	Each group claims needing more space, but cannot demonstrate need (i.e. drawing schedules 4 hours per week). Solution would be to schedule more times, not make spaces larger)
9) What types of spaces do you use (gym, stage, multi-purpose, kitchen, meeting, office, storage, other)	'Wet' studio space with sink and washable spaces; two dance studios with sprung floors. Dance needs more and larger change rooms. Would like a gallery to display artists' works and an offices
10) Which above need to be dedicated and which can be shared-use spaces	Most arts and crafts spaces cannot be made multi-purpose. Only dance studios can be opened to other uses (but they tend to be booked at all times)
11) Advantages or challenges associated with sharing space; describe compatible uses	Prime time demand exceeds supply

12) What special events (annual, seasonal, etc.) are held and what are requirements	Seasonal and end-of-term recitals. Currently use Cultural Centre performance hall. Need larger space like gym in Minoru Place Activity Centre if flooring improved
13) Do you need to control access (paid admission, security, etc.)	For dance, access controls for safety of young patrons
14) How do members/ clientele get to current location (drive, transit, walk)	Dance: driven or transit; art studios drive and a few walk
15) Number of staff, types of staff	No staff
16) Would this be a satellite location, a hub or a single-location and what could be operational challenges	Minoru Place Activity Centre would be a primary location for one or the other, but functions cannot be duplicated in two locations
17) Would this be a change of use according to the BC Building Code or zoning bylaws	Would continue as an A2 occupancy
18) How extensive would renovations be for functional adaptive use required, not including lifecycle	Dance studios would require acoustic separation, sprung floors and mirror wall in each; arts studios would require sinks, washable surfaces and independent ventilation
19) How compatible would this use be with Minoru Park vision and guiding principles	Very compatible
20) Timing, phasing, logistical challenges anticipated	Dance need is more urgent with wait-listing and turning participants away; arts programs numbers thought to be stable so no eminent action required

1) Name of organization(s)	**Staff Session #1** **Arts and Culture Staff**
2) Current location, approximate size (area) and current rent	Cultural Centre all functions 'bursting at the seams'. Arts Centre has only pottery studio in Richmond, plus dance studios, 2 fabric arts studios and other arts studios. Dance is growing, booking 3-9pm everyday plus weekends as well as more than ½ of available daytime.
3) Current number of members/users and future growth potential	Multi-purpose rooms booked by 10 different groups, leftover dance studio times booked for yoga. In general, need more program spaces, more offices and more storage
4) Describe members/clientele (age, residency, etc.)	Dance younger demographic and some adults; all other programs mostly older adults
5) Schedule of use (season/weekly/daily) and peak times	Studios daytimes, less evening and weekend use; dance after school weekdays and all day weekends
6) Special requirements for above (grade-access only, security, etc.)	No issues identified with location
7) Types of programs, services and activities offered now	Each user group schedules activities in 'their' space as demand dictates; City has to program around residual pockets of time (limiting access and usefulness of space); spaces centrally booked by City
8) Types of programs and services would like to offer but cannot now	City is constrained and unable to offer more programming because residual pockets of time are unattractive or un-salable
9) What types of spaces do you use (gym, stage, multi-purpose, kitchen, meeting, office, storage, other)	Multi-purpose space is most useful, with sink and built-in storage. A gymnasium like what's in Minoru Place Activity Centre would be very useful for more assembly-type functions
10) Which above need to be dedicated and which can be shared-use spaces	In the Minoru Place Activity Centre no spaces should be dedicated to any one group though certain functions such as pottery limit the utility of a space
11) Advantages or challenges associated with sharing space; describe compatible uses	Every group has peak period demands for space, can't provide enough even in another building
12) What special events (annual, seasonal, etc.) are held and what are requirements	Could see events like dance and music recitals, Christmas fairs, craft shows, volunteer appreciation banquets and rentals in a larger space like the gym

13) Do you need to control access (paid admission, security, etc.)	Facility should be controlled by single reception point; bookings could be done centrally from Cultural Centre
14) How do members/ clientele get to current location (drive, transit, walk)	Dance: driven or transit; art studios drive and a few walk
15) Number of staff, types of staff	Likely 1.5 F/T equivalent (one person for all operating hours)
16) Would this be a satellite location, a hub or a single-location and what could be operational challenges	Satellite to Cultural Centre; added staffing
17) Would this be a change of use according to the BC Building Code or zoning bylaws	No, A2 occupancy intact
18) How extensive would renovations be for functional adaptive use required, not including lifecycle	Renovations could be extensive to create modern and functional studio spaces and dance studios
19) How compatible would this use be with Minoru Park vision and guiding principles	Very compatible
20) Timing, phasing, logistical challenges anticipated	Moving City programs out of Cultural Centre and into Minoru Place Activity Centre that staff control would allow City programming to grow as well as create capacity for other users in the existing facility

1) Name of organization(s)	**Session #2** **Recreation Staff and Oval**
2) Current location, approximate size (area) and current rent	See a city-wide need for more affordable space for all kinds of groups and activities to use. Partners such as Coastal Health, book club (city-centre) and Family Place all need more space/time. Coastal Health currently leases Garrett Wellness Centre from the City (once was an elementary school). Minoru Place Activity Centre would do little for Recreation other than possibly more users over thereby creating more time in other existing facilities. Only recreation need foreseen would be table tennis (daytime mostly) and dryland training for field sports (evenings and off-season). These are a 'nice-to-have' but not critical.
3) Current number of members/users and future growth potential	Health programs such as heart wellness and post-partum have small budgets and cannot afford high rents. City Centre has a de facto youth centre called a 'casual room' (pass $12 / year) allowing visits of 2-hours at a time for youth to study, hangout, group study, participate in arts or music (popularity and demand is increasing); table tennis players at the Oval pay $45/month membership
4) Describe members/clientele (age, residency, etc.)	All ages and abilities, including New Canadians
5) Schedule of use (season/weekly/daily) and peak times	A bookable building similar to a community centre or a mini-conference centre would be heavily booked by all types of groups
6) Special requirements for above (grade-access only, security, etc.)	Not discussed
7) Types of programs, services and activities offered now	The City aims to provide 1 sf / resident in space, a standard the City currently meets; sports groups want office space/storage but don't want to pay; do not want to be in competition with community centres for users or revenues
8) Types of programs and services would like to offer but cannot now	From a recreation perspective the type of space available in Minoru Place Activity Centre is not an urgent priority but if available they might book spaces
9) What types of spaces do you use (gym, stage, multi-purpose, kitchen, meeting, office, storage)	Gyms, multi-purpose rooms, meeting rooms, storage and possibly office spaces

10) Which above need to be dedicated and which can be shared-use spaces	All could be shared except offices
11) Advantages or challenges associated with sharing space; describe compatible uses	Compatibility of user groups (i.e. ages, gender, etc.)
12) What special events (annual, seasonal, etc.) are held and what are requirements	Sport events in park might book event rooms or banquet space, but likely most of these needs will be satisfied in the new Minoru Centre for Active Living
13) Do you need to control access (paid admission, security, etc.)	Controlled in space by instructor/program staff
14) How do members/ clientele get to current location (drive, transit, walk)	Drive, transit, bike, walk
15) Number of staff, types of staff	Not discussed. No interest in operating the facility
16) Would this be a satellite location, a hub or a single-location and what could be operational challenges	Satellite location; operational challenges would be staffing costs
17) Would this be a change of use according to the BC Building Code or zoning bylaws	No, still A2 occupancy
18) How extensive would renovations be for functional adaptive use required, not including lifecycle	Assumed renovated to level were spaces would be usable (i.e. sprung floor in studios). Change rooms might be needed
19) How compatible would this use be with Minoru Park vision and guiding principles	Conceptually, recreation and arts are compatible with the cultural precinct
20) Timing, phasing, logistical challenges anticipated	Not discussed. Presumed not to be available for a year after the new Minoru Centre for Active Living opens

1) Name of organization(s)	**Session #3** **Community Social Development Staff**
2) Current location, approximate size (area) and current rent	See a need for a youth-dedicated space with a destination for youth (activities, hang-out) as well as a hub for social services. The City does not operate these types of facilities but there are many partners that could. Also, city has a need for an inner-city drop-in centre for homeless and at-risk populations with services and amenities (kitchen, showers, washer/dryer, counseling and health care) though this location while strategically appropriate may not be compatible with surrounding uses and should not be co-located with youth. Generally, many groups also need office and meeting space (Richmond Community Services Advisory Committee represents over 30 organizations
3) Current number of members/users and future growth potential	Upwards of 15,000 or 10% of the population use some of the community partner services. This will only be increasing as the city continues to grow and the city-centre area in particular
4) Describe members/clientele (age, residency, etc.)	Richmond residents, all ages, abilities, ethnicities
5) Schedule of use (season/weekly/daily) and peak times	Year-round, day and night
6) Special requirements for above (grade-access only, security, etc.)	Grade access for youth or a drop-in centre. An older or older-appearing building is less intimidating
7) Types of programs, services and activities offered now	See #2 above
8) Types of programs and services would like to offer but cannot now	Many partners are in a situation of duress as rents and evictions are increasing and organizations are struggling to find a replacement home, let alone grow
9) What types of spaces do you use (gym, stage, multi-purpose, kitchen, meeting, office, storage, other)	Office and meeting spaces primarily
10) Which above need to be dedicated and which can be shared-use spaces	Each agency would need its own locking space. A youth hub would have a series of locking offices for health professionals

11) Advantages or challenges associated with sharing space; describe compatible uses	Cross-over with other services – most clients have more than one challenge
12) What special events (annual, seasonal, etc.) are held and what are requirements	Not applicable
13) Do you need to control access (paid admission, security, etc.)	Building should be securable (i.e. emergency lockdown)
14) How do members/ clientele get to current location (drive, transit, walk)	Transit, walk
15) Number of staff, types of staff	Specifics not discussed
16) Would this be a satellite location, a hub or a single-location and what could be operational challenges	A hub for clients but satellites for partners; funding fluctuates year-to-year for most service providers
17) Would this be a change of use according to the BC Building Code or zoning bylaws	Change of use from A2 assembly occupancy to B2 treatment occupancy. 2-hour rated separate between tenancies would be required unless all B2
18) How extensive would renovations be for functional adaptive use required, not including lifecycle	Youth Hub may be able to assume space 'as-is' in order to accelerate access and keep rental cost down. This recognizes that this space is only a bridge solution that could last a decade
19) How compatible would this use be with Minoru Park vision and guiding principles	Does not fit the vision, but in the short-term addresses an urgent need
20) Timing, phasing, logistical challenges anticipated	Use would be for the short-term only, but allows the City a decade for planning to determine what ultimately should be on the site

1) Name of organization(s)	**Staff Session #4** **Parks and Events Staff**
2) Current location, approximate size (area) and current rent	New Minoru Center for Active Living will fill most needs in the precinct. Spaces were planned in the complex that can be used by sports, special events and summer camps. Groups book and use the plaza now (i.e. Children's Festival) so new use of Minoru Place Activity Centre should consider the public nature of the plaza. Minoru Place Activity Centre would have limited use for outdoor special events, but multi-purpose spaces, gym and washrooms might be of some use
3) Current number of members/users and future growth potential	Not discussed
4) Describe members/clientele (age, residency, etc.)	Special events and the park itself attract all residents
5) Schedule of use (season/weekly/daily) and peak times	Year-round, days evenings weekends especially
6) Special requirements for above (grade-access only, security, etc.)	Grade would be most useful
7) Types of programs, services and activities offered now	Refer City website
8) Types of programs and services would like to offer but cannot now	Three new plaza areas and being planned as part of new Richmond Centre for Active Living and Minoru Park master planning. Community groups always looking for rentable meeting spaces
9) What types of spaces do you use (gym, stage, multi-purpose, kitchen, meeting, office, storage, other)	As event support space possibly the gym, multi-purpose, meeting, washrooms
10) Which above need to be dedicated and which can be shared-use spaces	No dedicated space needed
11) Advantages or challenges associated with sharing space; describe compatible uses	Will it be available when needed; how far in advance can it be booked and who determines what requests are granted or refused
12) What special events are held and what are requirements	Refer to City website for complete listings

13) Do you need to control access (paid admission, security, etc.)	Not in the Minoru Place Activity Centre building
14) How do members/ clientele get to current location (drive, transit, walk)	All forms of transportation
15) Number of staff, types of staff	Event volunteers, City staff coordinators and maintenance people
16) Would this be a satellite location, a hub or a single-location and what could be operational challenges	No applicable
17) Would this be a change of use according to the BC Building Code or zoning bylaws	If kept as an A2 occupancy, could be used for events
18) How extensive would renovations be for functional adaptive use required, not including lifecycle	Not discussed
19) How compatible would this use be with Minoru Park vision and guiding principles	Would be beneficial but not in the center of the park
20) Timing, phasing, logistical challenges anticipated	Not discussed

1) Name of organization(s)	**External Stakeholder #14 (written submission) Richmond Chinese Community Society**
2) Current location, approximate size (area) and current rent	Submission to the City dated April 2017, requesting about 6-7,000 sf assignable space or about 7,500 to 9,000 sf gross area. Current location is 4,600 sf rentable area at a cost of $36,000 per year (about $8/sf). Used for indoor recreation (dance, tai chi, etc.), social functions, office functions
3) Current number of members/users and future growth potential	Not indicated, but stated 'up to 50 normal attendance (weekday)
4) Describe members/clientele (age, residency, etc.)	Majority are city-centre residents
5) Schedule of use (season/weekly/daily) and peak times	Year-round
6) Special requirements for above (grade-access only, security, etc.)	Grade and fully handicapped accessible
7) Types of programs, services and activities offered now	Physical activity and social
8) Types of programs and services would like to offer but cannot now	Limited by current size, seeking 50% larger
9) What types of spaces do you use (gym, stage, multi-purpose, kitchen, meeting, office, storage, other)	Two multi-purpose rooms, a board room, office space, reception area, storage and a kitchen
10) Which above need to be dedicated and which can be shared-use spaces	No indication of willingness to open it to outside users
11) Advantages or challenges associated with sharing space; describe compatible uses	Not discussed in letter
12) What special events (annual, seasonal, etc.) are held and what are requirements	Seasonal fairs and events attended by up to 150 now
13) Do you need to control access (paid admission, security, etc.)	Yes

14) How do members/ clientele get to current location (drive, transit, walk)	50% drive, 25% walk
15) Number of staff, types of staff	Not indicated in letter
16) Would this be a satellite location, a hub or a single-location and what could be operational challenges	Main location
17) Would this be a change of use according to the BC Building Code or zoning bylaws	Would continue to be a A2 occupancy
18) How extensive would renovations be for functional adaptive use required, not including lifecycle	Moderate, existing large room sizes seem to meet their program needs
19) How compatible would this use be with Minoru Park vision and guiding principles	Moderately compatible
20) Timing, phasing, logistical challenges anticipated	Letter seemed to indicate a desire to move in sooner than later

ATTACHMENT 3

DGBK

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FOR THE ATTENTION OF:

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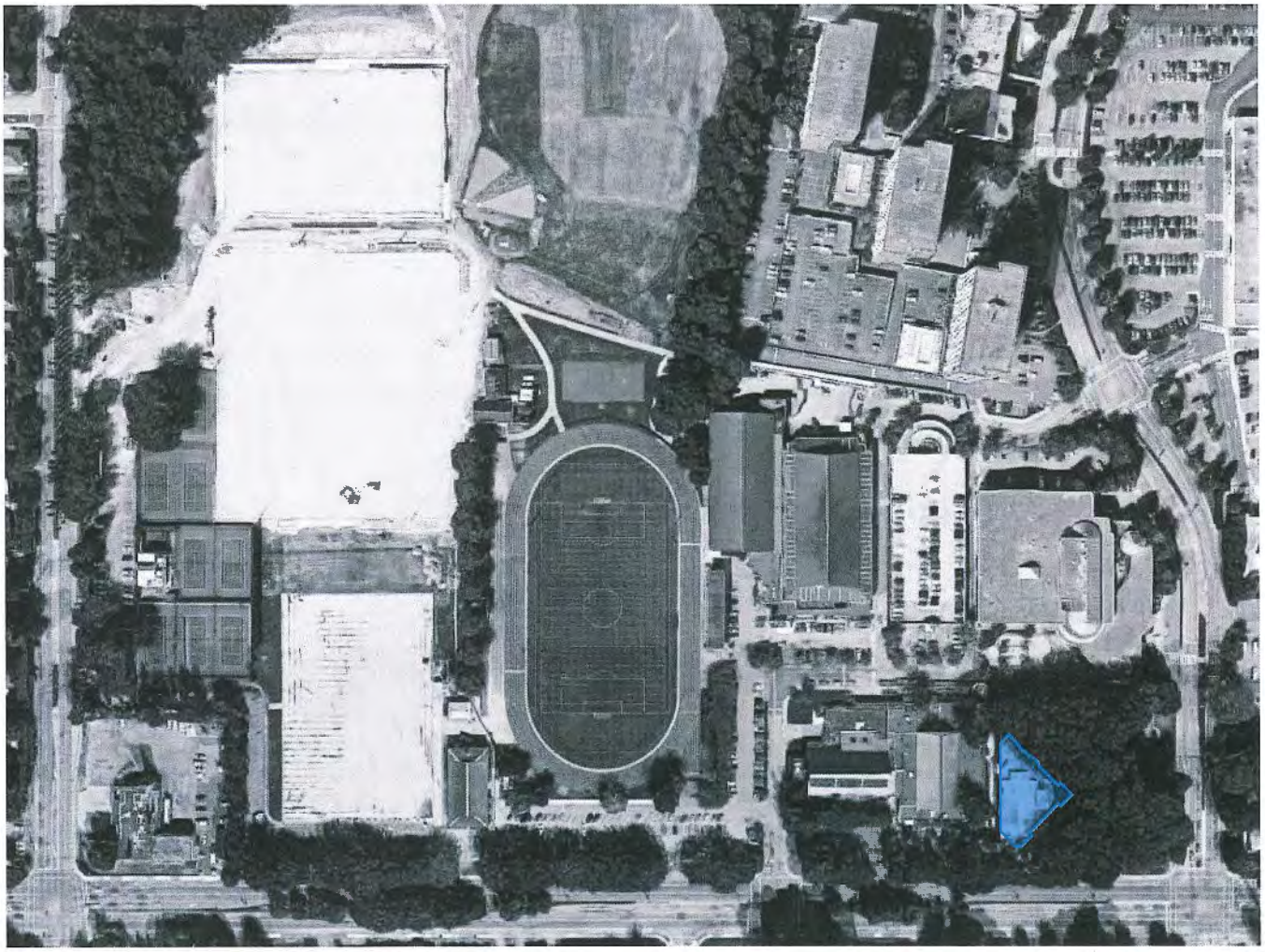
MINORU PLACE ACTIVITY CENTRE BUILDING ANALYSIS REPORT

7660 Minoru Gate
Richmond, BC, V6Y 1R9

September 5, 2017



CONTENTS

PART 1: INTRODUCTION

PART 1: INTRODUCTION

1.1 EXECUTIVE SUMMARY

The purpose of this report is to provide a building and cost analysis for the potential of repurposing of the Minoru Place Activity Centre located at the southeast corner of the cultural precinct of Minoru Park. With the imminent departure of the prime tenant to the new purpose built Minoru Centre for Active Living, this study is to investigate the potential for adapting the existing building in order to fill a critical need for addtional City programming. From previous reviews and discussions, it has been determined that Arts programming currently represents the greatest spatial and programming need. The addition of space represented by the vacated Minoru Place Activity Centre, would allow the City to better meet the demand for programs such as dance, pottery, media arts, perfroming arts, and for a community gallery.

Given the age of the facility, the scope of work includes a condition analysis, to report on the current state of the buildng and systems, and to understand the extent of upgrades required to extend the life of the building for the short term, or bring the facility to current standards for long term continued use.

The City of Richmond has requested a study and preliminary comparitive cost analysis to review the following options.

Option A – SHORT TERM FACILITY REUSE
Minimal interior and exterior improvements for conversion to an Arts Centre.

Option B – LONG TERM FACILITY REUSE
Full upgrade of the interior and exterior building with conversion to an Art Centre.

Option C – FACILITY REPLACEMENT
Based on the same size facility and use as an Arts Centre.

BUILDING ASSESSMENT

The building assessment has concluded that the building structure is in reasonable shape and the design for floor loads would support a variety of new uses, however the building is deficient with respect to seismic design, based on current building codes. For a long term building reuse option, this would be rectified by the addition of bracing, shear walls, and / or exterior buttresses to provide lateral support. With a short term solution of repurposing the building, seismic upgrading and the associated cost is not included in the Option.

The mechanical and electrical systems for the building are mostly original and are in need of replacement, if it was decided to extend the life of the building beyond 5 - 10 additional years. This would include the AHU, roof top units, boilers, hot water tank, lighting, DDC, fire alarm system, low voltage system, and PA system. Though some of the mechanical unit replacement could be phased, it would be sensible to replace most of the electrical items during a major renovation of the building.

With respect to the short term reuse option, some of the existing equipment and systems may be relied upon without replacement though it must be understood that the potential of failure and subsequent replacement would be continuing liability. A program of regular assessment should be considered with the approach of retaining the existing equipment and systems. The following list describes the assessment of the major systems of the building based on a short term reuse option.

Mechanical

> Domestic Hot water system DHWT - This will likely last the next 5-10 years. Piping is aging but unless the operator has more information no major signs of leaking pipes is evident. Plumbing fixtures are original and can be replaced if necessary but likely can last 5-10 more years.
> HVAC - The built-up indoor air handling units can likely last 5-10 more years. The rooftop A/C units should be replaced now. Pumps should be replaced.
> Boilers - These are older modular type but can likely last 5-10 more years. Leaking heating water piping is evident and repairs will likely be required and continue to increase in the next 5-10 years.

1.1 EXECUTIVE SUMMARY CONT'D

> Controls - Pneumatic controls do the bare minimum and do not provide good controllability of the system, however it can likely limp along for the next 5-10 years.
> Fire Protection - From the report it would seem that the Fire Protection and DHW tank is ok Fire protection is adequate. DHWT is in good shape.

ELECTRICAL

> Fire Alarm and devices - Fire Alarm system is operational and we think it is reasonable that it will continue to operate for 5-10 years provided its maintenance plan is conducted annually. As for devices such as light-switches and receptacles, there are different version and types throughout the building and the majority are in good condition. It is reasonable to assume that they will last 5-10 years.
> Exit lighting - The exit signs are not to current code and we recommend that they are upgraded.
> Emergency lighting - Emergency lighting system is operational and we think it is reasonable that it will continue to operate for 5-10 years provided its maintenance plan is conducted annually.
> PA - The PA system is outdated and the client would have challenges securing support for the system. We don't think the system would last for 5-10 years.
> DDC System - Not sure if this is for the Mechanical system DDC or if it is for the IT network headend. The average life for switches and small IT equipment is 7-10 years and the existing equipment seem to be approximately 5 years old. We don't think the system will last 5-10 years.
> Security - Security systems such as cameras are not current and likely at end of life and we recommend upgrading.

The building envelope has performed reasonably well but is deteriorating. The recommendation for continued long term use, is to replace the cladding, windows and roofing with new assemblies before failure occurs. These new assemblies will serve to reduce energy costs by decreasing the heating and cooling loads. If a short term use of the building is desired, minor repairs and painting is suggested.

ARTS CENTRE USE

We believe that the Arts Centre is very well suited since the program planning will work well with the building and space, would provide the ability to extend existing programing in need, can expand their physical space, and will potentially free up area within the Cultural Centre building for other purposes.

PARKING

ARTS CENTRE: PARKINNG REQUIREMENTS
If categorized as Indoor Recreation: 2 stalls per 100m² gross area - 1,555/100 = 15.5 x 2 = 32 stalls
Plus - Staff allowance of 16 x .75 stalls = 12 stalls
Total parking = 44 stalls
Based on the requirement from the City to add 28 new stalls to the parking in this area, the total requirement would be 72 stalls. Given the existing 60 stalls dedicated to senior parking, there would be an overall shortfall of 12 stalls.

We have estimated the number of parking stalls required for each use based on the Parking Bylaw, and have found that the parking can be accommodated within the seniors parking area south of the existing Aquatic Centre. Given that acceptance of the parking requirements is at the discretion of the planning department, these calculations would need to be verified.

COST

The Cost Report identifies the total project costs for each of the options including construction, contingencies, professional fees, connection fees and permits, owners management and overhead. The breakdown of the cost options is as follows,

Option A – SHORT TERM FACILITY REUSE	$3,652,900
Option B – LONG TERM FACILITY REUSE	$7,868,800
Option C – FACILITY REPLACEMENT	$12,566,700

END OF EXECUTIVE SUMMARY

1.2 SCOPE OF REPORT

1.3 INVOLVEMENT

In April of 2017, The City of Richmond engaged the services of DGBK Architects to complete a study of the existing Minoru Place Activity Centre. The purpose of this report is to provide a building analysis and costing of the potential for repurposing of the Minoru Place Activity Centre located at the southeast corner of the cultural precinct of Minoru Park.

With the imminent departure of the prime tenant to the new purpose built Minoru Centre for Active Living, the purpose of this study is to investigate the potential for adapting the existing building to fill a critical need for addtional City programming. Given the age of the facility, the scope of work includes a condition analysis, in order to report on the current state of the buildng and systems, and to understand the extent of upgrades required to extend the life of the building for the short term, or bring the facility to current standards for long term continued use.

From previous reviews and discussions, it has been determined that Arts programming currently represents the greatest spatial and programming need. The addition of space represented by the vacated Minoru Place Activity Centre, would allow the City to better meet the demand for programs such as dance, pottery, media arts, perfroming arts, and for a community gallery.

The City of Richmond has requested a study and preliminary comparitive cost analysis to review the following options.

Option A – SHORT TERM FACILITY REUSE
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Option C – FACILITY REPLACEMENT
Based on the same size facility and use as an Arts Centre.

In addition to the above noted scope, we felt it was important to include comments relative to the building site and context, and its relationship to the other components of the cultural precinct. Included in our study, is a brief review of how the continued use might address this relationship, and discussion of how to encourage connection and integration as part of this repurposing. This review notionally addresses the Cultural Centre, adjacent plaza, and surrounding landscape.

EXCLUSIONS & LIMITATIONS

The scope of this Study did not include a full condition assessment of all building components, material testing, or destructive investigations.

Based on the terms of reference for this study, DGBK did not conduct in depth interviews with City of Richmond departmental, or facilities staff. The planning for costing reflects a concept plan developed by City of Richmond Community Services. Should the decision be made to proceed with any of the specific uses included in this report, DGBK would recommend a Functional Program be developed in conjunction with staff and stakeholder consultation.

OWNER / CLIENT

The City of Richmond
Jon Thibodeau, PMP, Capital Buildings Project Development - Engineering & Public Works

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DOCUMENTS PROVIDED

The following background documents were provided to the consultants upon engagement:

- Annotiated Concept Planning diagram provided by Community Services.
- Richmond Cultural Centre Annex: Facility Analysis, Urban Arts Architecture & Urban Design, 2015 (55 pages PDF format) Note: report includes VFA Asset Detail Report.
- Asbestos and hazardous materials survey report, Pacific Environmental, 2009 (3 pages PDF format).
- Architectural record drawings for Minoru Gate Seniors Activity Centre, Howard Yano Architects, 1985 (13 pages, PDF format).
- Structural record drawings for Minoru Gate Seniors Activity Centre, Pomeroy Engineering Ltd., 1985 (3 pages, PDF format).
- Mechanical record drawings for Minoru Gate Seniors Activity Centre, Pomeroy Engineering Ltd., 1985 (5 pages, PDF format).
- Electrical record drawings Minoru Gate Seniors Activity Centre, L.P. Gander & Associates Ltd., 1985 (5 pages, PDF format).
- Architectural record drawings for Minoru Gate Seniors Activity Centre: Kitchen / Cafeteria Renovation/Addition, Henry Hawthorn Architect, 1989 (5 pages, PDF format).
- Structural record drawings for Minoru Gate Seniors Activity Centre: Kitchen / Cafeteria Renovation/ Addition, Pomeroy Engineering Ltd., 1989 (3 pages, PDF format).

1.4 EXISTING FACILITY OVERVIEW

MINORU PLACE ACTIVITY CENTRE

The Minoru Place Activity Centre (MPAC)is located at 7660 Minoru Gate in Richmond, B.C. set at the South East corner of Minoru Park and across from the existing Minoru Cultural Centre and the existing Aquatic Centre, and within a grove of trees designated a heritage asset. The 1,555m² (16,738 ft²) single story purpose built facility was constructed in 1986. In 1989 an addition and renovation was undertaken to add a commercial kitchen and cafeteria space. The building is classified as a Group A, Division 2, Assembly Occupancy. The facility was constructed to meet the then current 1988 British Columbia Building Code and applicable City of Richmond By-Laws.

FUNCTIONAL ORGANIZATION

MPAC features a triangular plan with the main entry obliquely facing the plaza and Minoru Cultural Centre to the north and a secondary entrance serving the dedicated parking to the northwest. The facility consists of an administrative component comprising offices, reception and meeting room, a large open lounge area, a billiards room, several multi-purpose rooms, a wood working shop, a dividable activity room with stage and dressing areas, a commercial kitchen with cafeteria and washrooms.

BUILDING APPEARANCE

The exterior of the facility is weathered and showing its age and is in moderate to poor condition. The facility still offers spacious, bright, naturally day lit interior spaces, the spatial organization is easily readable, and the facility is well used.

STRUCTURE

Minoru Place is primarily a heavy timber wood frame building with some structural steel columns in the high ceiling activity/stage area. The structure sits on a raft slab with timber pilings. A series of plywood clad sheer walls occur throughout the complex. The building was constructed to allow for the addition of a second level, an elevator shaft and pit having been incorporated into the original design.

BUILDING EXTERIOR

The exterior walls are cavity insulated wood stud framed walls clad in painted cedar siding. The windows, skylights and exterior doors are double glazed aluminium storefront. The flat roof is a built-up membrane and the sloped roofs are either glazing in aluminium frames or prefinished metal.

BUILDING INTERIOR

The interior partitions are wood stud and dry wall. Doors are wood set in pressed steel frames; the interior also features a generous amount of interior glazing. Floor finishes are generally carpet, except for resilient flooring in the kitchen /cafeteria area, wood floor in the activity space and ceramic tile in the washrooms. Ceilings are a mixture of acoustic tiles and exposed wood decking.

BUILDING SERVICES

Electrical Services are located on the main floor within a designated room. Mechanical services are divided between the boiler room on the main level and HVAC in the second level penthouse.

CURRENT FUNCTION AND FUTURE

Currently MPAC offers space for Richmond's population of seniors (those aged 55 plus) to engage in a number of educational, cultural, social and health related activities and programs. The facility features a full-service cafeteria, billiards room, wood working shop, multi-purpose rooms for programs and events and a well-used lounge for reading and socializing. It also offers a variety of daytime out trips by bus, boat and train to special attractions, events and restaurants.

Minoru Place Activity Centre will be vacated once the City of Richmond completes the new Minoru Centre for Active Living, which will address current and future community needs for seniors activities recreation, sport and other activities.

1.4 EXISTING FACILITY OVERVIEW CONT'D

SITE

Minoru Park within the Brighouse, City Centre Area of Richmond is comprised of a mix of cultural and recreational uses that includes the Minoru Place Activity Centre, The Richmond Cultural Centre (which includes the Richmond Art Gallery, Richmond Museum and Library), Aquatic Centre, Minoru Arenas, Minoru chapel, the park proper, and a variety of sports fields. Currently under construction is Fire Hall No. 1 and Minoru Centre for Active Living, which will house the new Seniors Centre and Aquatic Centre. Minoru Place is located at 7660 Minoru Gate in Richmond, B.C. set at the South East corner of Minoru Park and across from the existing Minoru Cultural Centre and the existing Aquatic Centre. This facility is set within a grove of trees planted in 1925 and designated a heritage asset and as such is given special consideration for preservation. MPAC forms the South end of a cultural precinct, however due to its orientation does not have a clear physical and visual link to the precinct's plaza.

ZONING

The Minoru Place Activity Centre is located in the City of Richmond's Area Plan: 10 City Centre – Brighouse Village. The building is situated in Minoru Park, which is zoned School and Institutional Use (SI). Applicable permitted uses are as follows: childcare, education, library and exhibit, government services, park and indoor/outdoor recreation.

OCCUPANT LOAD

Referring to the attached Fire Protection and Life Safety Building Code Assessment the building occupancy load can be determined in two ways:

1. Based on floor area ratios and room use designations for an Assembly Occupancy. This yields an occupancy of 924 persons divided equally between males and females
2. Based on current washroom fixture counts of (5) male washroom fixtures, (6) female washroom fixtures and (1) unisex fixture in staff washroom for an occupancy load of 450 person divided into 350 males and 150 females. This method would require signage indicating maximum allowable occupant load for building.

PARKING AND LOADING BYLAW

Minoru Place Activity Centre is located within Parking Zone 2. The parking requirements are from Section 7 of Zoning Bylaw 8500 for common land uses throughout the City.
A few things to note:

- (7.9) Minoru Park benefits from lower City Centre zone 2 parking rate requirements
- (7.2) New uses in new or existing buildings are required to provide parking in compliance with the current bylaw. Existing uses in existing buildings are not required to change their existing parking when the bylaw changes over time
- (7.4.3) Shared parking can be considered if appropriate
- (7.4.4) Up to a 10% parking reduction with transportation demand management measures may be considered if appropriate
- (7.7.1) Per Zoning Bylaw clause 7.7.1, for a property containing two or more uses, the total parking requirements should be the sum of the requirements for each individual use. In cases where the proposed use is unique, or the Bylaw parking requirements are not reflective of the actual parking demand. The parking rates are determined by the Director of Transportation for any uses not listed

PARKING FOR NEW USE

The MPAC currently utilizes 60 stalls dedicated to seniors southwest of the building providing close access to the building. Our calculations for the facility parking needs account for use of these 60 stalls once the new Minoru facility is operational.

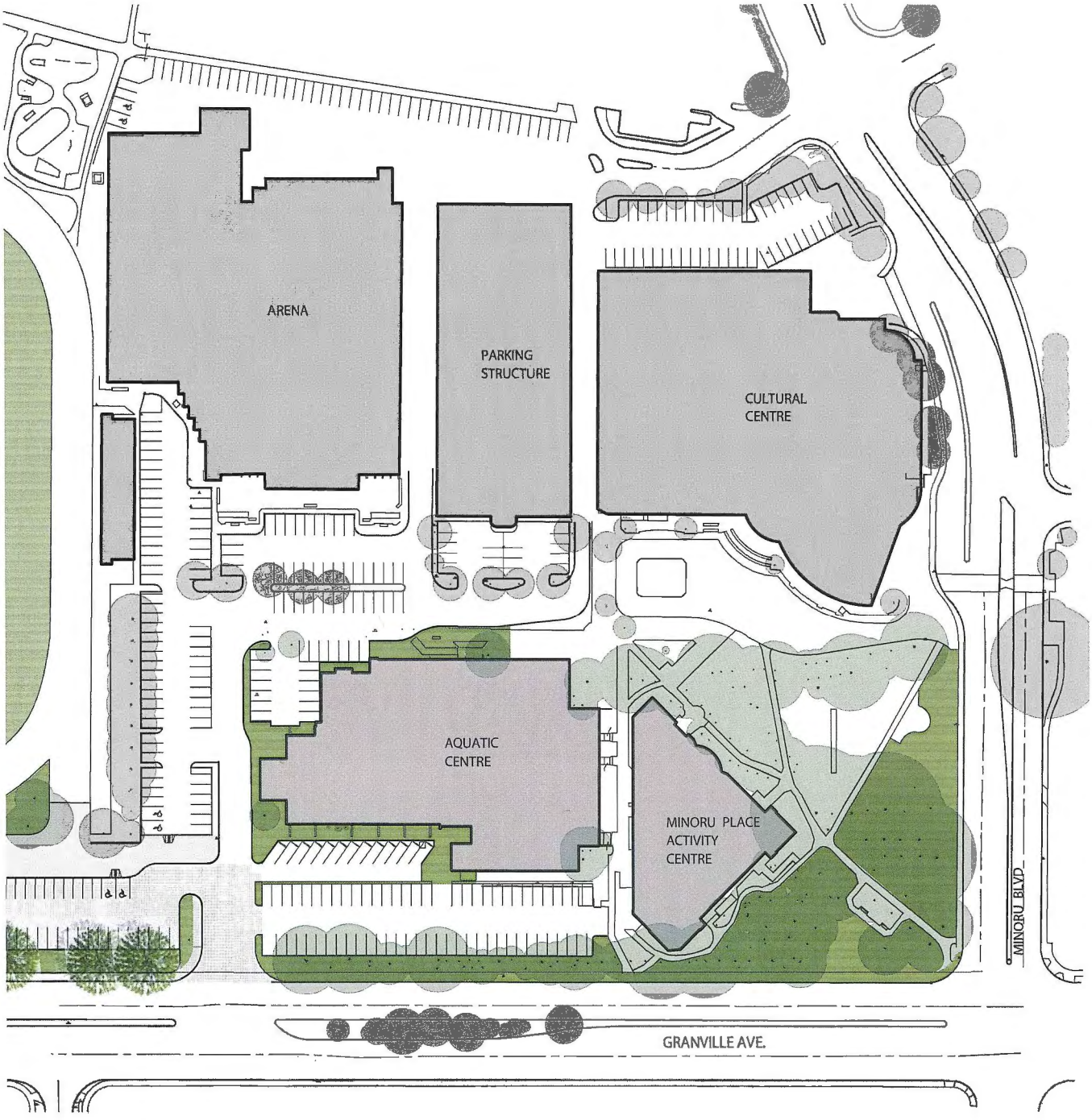
We understand that there will be a requirement by the City to provide 28 stalls additional parking stalls to this area to account for an overall parking deficiency in the precinct.

1.4 EXISTING FACILITY OVERVIEW CONT'D

PARKING FOR NEW USE CONT'D

ARTS CENTRE: PARKINNG REQUIREMENTS
If categorized as Indoor Recreation: 2 stalls per 100m² gross area - 1,555/100 = 15.5 x 2 = 32 stalls
Plus - Staff allowance of 16 x .75 stalls = 12 stalls
Total parking = 44 stalls

This would mean there is no impact to satisfy the needs of the facility though there would be a shortfall of 12 stalls in order to accommodate the additional 28 parking stalls to be added. Given the decsion to demolish the existing Aquatic Centre once the new facility is operational, it is presumed that there would be space to accommodate this additional parking.



NORTH

1 / A2 EXISTING SITE PLAN

SCALE: NTS

0 25 75 m

TOTAL PARKING
60 Stall existing

TOTAL COST
$4,504,500
(excluding seismic upgrades to building)

1 / A2 EXISTING MAIN FLOOR PLAN
SCALE 1:300

1.5 ASSESSMENT SUMMARIES

The consultant team reviewed available existing building documents, and carried out an on-site reivew of the building to evaluate the general condition of the facility. Additionally, the team reviewed the building systems and construction to provide input on the potential repurposing of the building, considering the use identified by the City of Richmond.

The full assessment reports by the structural, mechanical, electrical, building code, building envelope, and landscape consultants, are provided within the appendix of this document. Listed below are the fundamental recommendations from each disciplines with respect to general upgrades for the facility to bring it to a current working condition and building code compliance.

ARCHITECTURAL

The building interior has been well maintained, is in very good condition and is a comfortable space filled with natrual light. Upgrading of floor finishes, millwork and painting would provide a more contemporary look for the building.

STRUCTURAL

1. The main floor is suitable for 4.8 kPa live load, which is suitable for assembly occupancies.
2. The existing building is seismically deficient and any renovations should consider incorporating a seismic upgrade. A seismic upgrade to a life safety performance objective would include:
    - > Plywood shear walls throughout the building. Distribution of the shear walls is important to limit wall-overturning forces on the raft slab and pile foundations.
    - > Connection of the plywood roof diaphragm to the existing and new plywood sheathed interior shear walls.
    - > Upgrade existing plywood shear walls with nailing and anchor bolts.
    - > Add steel perimeter chords and drag struts to connect the roof to the shear walls.
    - > Add additional brace bays and replace the existing steel brace bay on the west elevation of the Activity Room.
    - > Seismic upgrade using external buttress walls may be an effective approach that would require less internal shear walls thus opening up interior planning options.
3. The second floor and supporting columns and foundations are suitable for a future second floor addition. A future second floor addition however would increase the seismic retrofit requirements.
4. The structure is generally post and beam construction. Partition walls that are not used as shear walls can readily be relocated or removed.
5. The main floor is a pile supported structural raft slab, which cannot be readily cut to relocate under slab services. Relocation of under slab services should be avoided.

MECHANICAL

The Minoru Place Activity Centre mechanical system, equipment and components are still original to the building, dating back to the 1985 construction date. While it is possible to reuse much of the existing HVAC and plumbing systems in a repurposed building of similar occupancy, most components have outlived their expected lifespan and will continue to require more and more servicing and /or replacement in the near future. Consideration should to be given to replacing the 5 boiler modules, HVAC system, domestic hot water tank, and DDC controls.

ELECTRICAL

The Minoru Senior Centre electrical systems are original to the 1985 building. Overall, the electrical service and distribution is in good order and has the capacity to accommodate the current or similar uses. Further investigation at a detailed design level would be required if a proposed repurposing of the building would increase the loads on the existing system.

The fire alarm system would need to be upgraded for a major renovation. The lighting and switching are original to the building and have reached the end of their expected lifespan, and should be replaced with new energy efficient fixtures. The low voltage systems requires upgrading or replacement. All exit signage will need to be replaced to be code compliant. The PA system needs to be replaced and consideration should be given to installing a security system since none exists at this time.

1.5 ASSESSMENT SUMMARIES CONT'D

With respect to the short term reuse option, some of the existing equipment and systems may be relied upon without replacement but it must be understood that failure and subsequent replacement would be continuing liability. A program of period assessment should be considered with the approach of retaining the existing equipment and systems. The following describes the assessment of the major systems of the building for a short term reuse option.

Mechanical

- Domestic Hot water system DHWT - This will likely last the next 5-10 years. Piping is aging but unless the operator has more information no major signs of leaking pipes is evident. Plumbing fixtures are original and can be replaced if necessary but likely can last 5-10 more years.
- HVAC - The built-up indoor air handling units can likely last 5-10 more years. The rooftop A/C units should be replaced now. Pumps should be replaced.
- Boilers - These are older modular type but can likely last 5-10 more years. Leaking heating water piping is evident and repairs will likely be required and continue to increase in the next 5-10 years.
- Controls - Pneumatic controls do the bare minimum and do not provide good controllability of the system, however it can likely limp along for the next 5-10 years.
- Fire Protection - From the report it would seem that the Fire Protection and DHW tank is ok Fire protection is adequate. DHWT is in good shape.

ELECTRICAL

- Fire Alarm and devices - Fire Alarm system is operational and we think it is reasonable that it will continue to operate for 5-10 years provided its maintenance plan is conducted annually. As for devices such as light-switches and receptacles, there are different version and types throughout the building and the majority are in good condition. It is reasonable to assume that they will last 5-10 years.
- Exit lighting - The exit signs are not to current code and we recommend that they are upgraded.
- Emergency lighting - Emergency lighting system is operational and we think it is reasonable that it will continue to operate for 5-10 years provided its maintenance plan is conducted annually.
- PA - The PA system is outdated and the client would have challenges securing support for the system. We don't think the system would last for 5-10 years.
- DDC System - Not sure if this is for the Mechanical system DDC or if it is for the IT network headend. The average life for switches and small IT equipment is 7-10 years and the existing equipment seem to be approximately 5 years old. We don't think the system will last 5-10 years.
- Security - Security systems such as cameras are not current and likely at end of life and we recommend upgrading.

BUILDING ENVELOPE

For a long term reuse of the building, the Minoru Place Senior Centre will require a complete building envelope upgrade if the building's functional lifespan is to be extended whether through continued occupation or repurposing. The major upgrades would include,

1. Remove the existing cladding and re-clad with a rainscreen wall assembly with improved detailing, including, but not limited to, improved air barrier continuity and waterproofing the base of walls.
2. Lower the finished grade, so there is an elevation difference between the finished grade and top of slab-on-grade. Waterproof the slab-on-grade where it extends beyond the building footprint.
3. Replace the windows with new windows of improved rain, air, and thermal resistance.
4. Replace the glazed doors with new doors of improved rain, air, and thermal resistance. Also replace the pressed steel and wood doors with new pressed steel doors to allow for improved detailing.
5. Perform skylight water penetration testing to better confirm the performance of the skylights and the necessary repairs. Alternatively, consider replacing the skylight assemblies.
6. Where existing cladding is being re-clad with a rainscreen wall assembly, improve the waterproof detailing at metal flashings.

1.5 ASSESSMENT SUMMARIES CONT'D

7. The roof requires some remediation and repair, however since any repurposing of the building would require code related seismic upgrades to the roof structure, the opportunity should be taken to install a new roofing system.

BUILDING CODE

The MPAC is in reasonably good condition and well suited to an Arts Centre use. Life Safety and Building Code compliance concerns are minimal and can be addressed at the next renovation phase.

The two primary issues are;

> a dead end corridor which needs an extension to an exterior door and confirmation of Fire truck access within this Minoru campus of Cultural Buildings (with Richmond Fire Department).

> A review of the allowable occupant load determined that the building type and exiting is 923 occupants, however based on the number of water closets provided in the building, the allowable occupant load would be 450.

Any renovation should also address issues such as upgrades for full Accessibility for disabled persons. Although mostly compliant at this stage, there are some minor improvements, which would bring the facility into full compliance.

SITE

In any repurposing, it is essential to ensure the protection of the heritage grove of trees located to the North and East of the Minoru Senior Centre. This grove dating back to 1925 is considered a significant city heritage asset. Care will need to be taken during any renovation or rehabilitation of Minoru Place to protect them. This stand of trees is considered in overall good health; however, some consideration will need to be given to the long-term management of this asset. It is understood that any vegetation within one to two meters of the building would need to be removed in with a full building upgrade; option B.

PART 2: FACILITY OPTIONS

PART 2: FACILITY OPTIONS

2.1 INTRODUCTION

As peviously noted, this study is to evaluate the potential for repurposing the MPAC to an arts centre. Working with a preliminary sketch from Community Services, we have conducted a review of the existing building and documented the changes required to accomplish the departments planning goals. As we understand it, the sketch reflects the departments intent for providing optimal programmatic use with a minimum of renovation and associated cost. The cost analysis for both Options A, B, and D reflect the planning seen in an arts centre revisions plan. In addition to this criteria the planning has been developed based on, but not limited to, the following criteria.

- *Existing building planning and spatial organization*
- *Quality of space and suitability for new use including views and daylight*
- *Size of facility, size of rooms, ceiling heights, etc.*
- *Occupant load, exiting, and other building code considerations*
- *Number of washrooms required for upgrade*
- *Accessibility within the building*
- *Extent of physical changes required for use*
- *Appropriateness for building and location*
- *Proximity to other facilities in the Cultural Precinct*
- *Relationship to the context*
- *Accessibility for transit, parking, loading*
- *Parking requirements*
- *Security and control*
- *Consideration of need for each program*
- *Surrounding site and ability to improve visibility within the precinct*
- *Benefit to the City of Richmond and to the Public*

BUILDING OPTIONS

Option A – SHORT TERM FACILITY REUSE
This option is based on changing the existing building use to that of an Arts Centre. The plan provided describes the intent for the various spaces and the minimal improvements necessary to provide for the function of these spaces. To be clear, the plan provided to DGBK does not reflect any functional space programming nor meetings with City department or groups to develope the buiding revisions in a detailed way. The intent of this option is to provide a short term solution (5-10 years) with the minimum expense to maintain the building and alter it for this use.
PROJECT COST - $3,652,900

Option B – LONG TERM FACILITY REUSE
This option reflects a full upgrade of the interior and exterior of building based on the condition assessment by the consultants, and recommendations for maintaining the current building for the long term. The cost for the interior renovation includes seismic and building service improvements and conversion to an Art Centre to suit the plan used for option A.
PROJECT COST - $7,868,800

Option C – FACILITY REPLACEMENT
In order to understand the magnitude cost options and value of the existing building, option D compares the cost of providing a new building of the same size, dedicated as the Arts Centre.
PROJECT COST - $12,566,700

NORTH

1
A3

ARTS CENTRE PLAN
SCALE 1:300

2.2 PLANNING: ARTS CENTRE

We understand that repurposing the building as an arts centre would fulfill an expressed need for expansion of the Visual and Performing Arts program currently provided at the Cultural Centre including Dance, Performing Arts, Media Arts, Community Gallery, and Pottery.

It is a fact that most of these programs are consistently oversubscribed and many children, youth and adults are turned away as a result. Reuse of the existing Minoru Place Activity Centre would assist the City in meeting the current and future demand, and provide an opportunity to expand the range of services offered. Given the buildings' extensive exterior glazing, visibility of the activities inside would increase animation of the precinct and strengthen synergies with Cultural Centre. In addition to dedicated spaces, allowing for multi-purpose spaces would provide flexibility for special events, as well as potential use by local groups and clubs in the community. The planning makes use of the existing office for facility administration, removes the kitchen to provide a larger pottery studio, retains the large central space for dance, encloses the stage to accommodate a green room and change rooms, and provides a community gallery space. The lounge space would be retained and, with the addtiion of a raised platform, the space would allow for the programming of small performances.

OPTION A – SCOPE OF WORK (the scope of work is based on the existinng MPAC plan and reflects the planning to be used for options A, B, and D.

ARCHITECTURAL

The changes and upgrades suggested for this change of use option include:

EXTERIOR - (Ref. LDR Envelope Report)

1. Strip, repair and repaint wood siding.
2. Lower the finished grade, so that there is an elevation difference between the finished grade and top of slab on grade.
3. Remove and/or adjust vegetation that are in close proximity to the exterior walls.
4. Review and correct deficiencies in the 2-ply SBS membrane.
5. Adequately secure all metal flashings
6. Remove and replace failed sealant.
7. Ensure al equipment and fans are well secured to the roof, replace all corroding fasteners, and seal all penetrations.
8. Replace roof hatch hardware and provide a new gasket.
9. Replace any failed window sealed units.
10. Replace canvas canopy at east entry.
11. New glass canopy for north entry.

INTERIOR – (Ref. Arts Centre Plan)

General notes,

- Replace ceiling tiles with new throughout spaces.
- Existing carpet to remain except where change of flooring is noted. Infill matched carpet where necessary at removal of millwork.

1. General Office Area 103
   Provide partitions for additional meeting room
   - New door
   - Adjust lighting to suit
   - Paint walls
   - New ceiling tiles throughout
2. Office 106
   Remove millwork and sink to convert to office
   - Infill carpet
   - Repair wall and paint room
   - New ceiling tiles throughout
   - Provide walls around counter adjacent to entry vestibule and provide additional lighting.

2.2 PLANNING: ART CENTRE

3. Flex Lobby
   - Remove millwork and fireplace
   - Remove display cabinet
   - Construct a new raised area for performances (one riser high)
   - Provide power in stage and lighting above for minor performances
4. Community Art Gallery 120
   - Remove existing millwork (pool queue holders, display cabinets)
   - Upgrade lighting for gallery use
   - Change flooring to large format porcelain tile
   - Paint walls, mechanical ducting and ceiling
   - Remove millwork on west wall
   - Remove glazing facing the interior corridor and replace with solid wall
   - Remove existing doors and replace with frameless glass doors
   - Provide new solid gypsum board wall 3' in front of exterior glazing to create a window gallery space
5. Visual Arts 125
   - Replace ceiling tiles.
6. Multi-purpose 127
   - Remove folding partition and replace with full height gypsum board partition between rooms 127 and 130 c/w with acoustic separation;
   - Replace ceiling tiles.
7. Media Arts 130
   - Replace ceiling tiles.
8. Workshop 132
   - No work
9. Pottery Studio 134
   - Remove commercial kitchen
   - Including all equipment, counters, storage rooms, shelving, and safety flooring;
   - Maintain Office 137 provide new flooring, ceiling tiles and paint;
   - Remove walls associated with Kitchen, except existing office.
   - Provide new Kiln Room with 2 hr rated gypsum board partitions, sprinklers and fire rated metal doors;
   - Provide new power for 2 electric pottery kilns;
   - Provide ventilation for room.
   - Provide ceiling mounted cord reels for potters wheels (20);
   - Upgrade ceiling tiles;
   - Provide metal storage shelving for pottery supplies and finished work 20' long x24" deep;
   - Provide new resilient flooring throughout demolished Kitchen area;
   - Extend lighting from open area to demolished Kitchen area;
   - Provide new card reader to exterior doors;
   - Provide new double doors from corridor 133 into Pottery Studio with swing into 134; Hardware to allow free exit from corridor into 134 but lockable from 134 to 133.
10. Performing Arts Room 116
    - Remove doors and rolling shutter between 116 and 117 and fill in wall with gypsum board partition;
    - Remove folding partition between 116 and 115 and replace with full height gypsum board partition with - acoustic separation;
    - Paint room for black box theatre use;
    - Provide black out curtains on exterior wall to cover glazing;
    - Provide new exit light to compensate for curtains;
    - Upgrade lighting for light theatrical use.

2.2 PLANNING: ART CENTRE

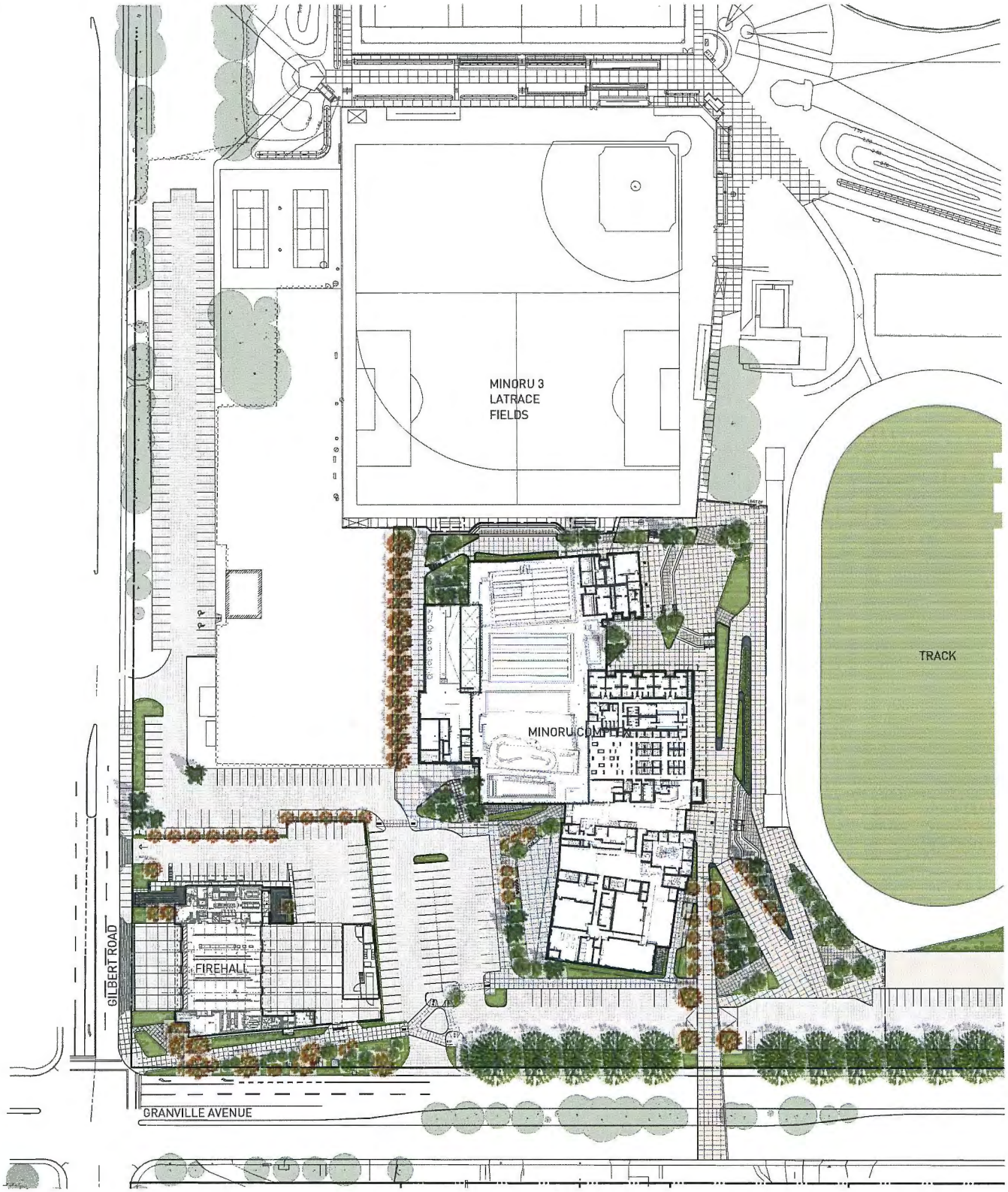
11. Dance Studio 115
    - Remove folding partition between 115 and 114 and replace with full height fixed gypsum board partition with acoustic separation.
12. Dance Studio 114
    - Remove stage curtains and replace with full height fixed gypsum board partition with acoustic separation. Include window to view from 113 to 114.
13. Green Room 113
    - Upgrade upper stage area for use as lounge space.
14. Dressing Rooms 111 & 112
    - Install new millwork counters, mirrors, and hanging rods for costumes.
15. Corridor 119
    - Provide new glazed double doors in corridor with closers and signage to deter access beyond.
16. Corridor 108
    - Provide door between corridor and Coats 110 with access control from front desk.

ADVANTAGES

1. Synergies with existing Art Gallery, arts programming, and functions in Cultural Centre.
2. Expansion of arts programming courses.
3. Provision of a much-needed Community Art Gallery.
4. Location is well suited to the other cultural facilities.
5. Unique facility within the City of Richmond.
6. Retention of gymnasium space allowing for expansion of popular programs such as dance.
7. Relatively little interior replanning.
8. Minimal building system upgrades.
9. Existing space is well suited to many programming activities.
10. Proximity to social and recreational activities within Minoru Park.

DISADVANTAGES

1. Difficulty in providing new washroom facilities (structural constraints).
2. Poor connections and visibility of facility within Cultural Precinct.


MINORU 3
LATRACE
FIELDS
TRACK
MINORU COMPLEX
FIREHALL
GILBERT ROAD
GRANVILLE AVENUE


ARENA
PARKING STRUCTURE
CULTURAL CENTRE
AQUATIC CENTRE
MINORU PLACE ACTIVITY CENTRE
MINORU BLVD
0
25
75 m

2.3 SITE & CONTEXT

When designing any new building, the site and context are integral components of the design and planning response. With respect to the repurposing of the Minoru Place Activity Centre, consideration of site and context are not only important for the facility, but critical to the area, given its location within the cultural precinct at Minoru and relationship to the other major facilities that make up this public asset.

Minoru Park, within the Brighouse area of Richmond, is comprised of a mix of cultural and recreational uses that includes the Minoru Place Activity Centre, The Richmond Cultural Centre (which includes the Richmond Art Gallery, Richmond Museum and Library), Aquatic Centre, Minoru Arenas, Minoru chapel, the park proper, and a variety of sports fields. Currently under construction is Fire Hall No. 1 and Minoru Centre for Active Living, which will house the new Seniors Centre and Aquatic Centre.

We have studied the area around the Minoru Place Activity Centre and have documented observations that admittedly go beyond the scope of this study though regardless, we feel compelled to put forward to add to the conversation that we know has already been initiated within the City regarding the masterplan for Minoru park and the important facilities within.

Any repurposing of Minoru Place Activity Centre, will need to address a number of issues regarding the facilities visibility and relationship to the park as a whole, to the new Minoru Centre for Active Living to the East and most importantly to the Cultural Centre to the North, across the plaza.

VISIBILITY

With respect to the existing planning, the building is well situated, and the location and shape of the building well considered. It provides visibility to the Cultural Centre and into the plaza from the Minoru Boulevard, and from of the corner of Granville Avenue and Minoru Boulevard. From the corner of this street, access runs at a 45 degree angle to enter into the plaza and to the entry of the Minoru Place Activity Centre building. The high canopy of the heritage tree grove allow this unobstructed view however, the bushes and covered walkways become visual barriers both from the street and from the facility to the plaza.

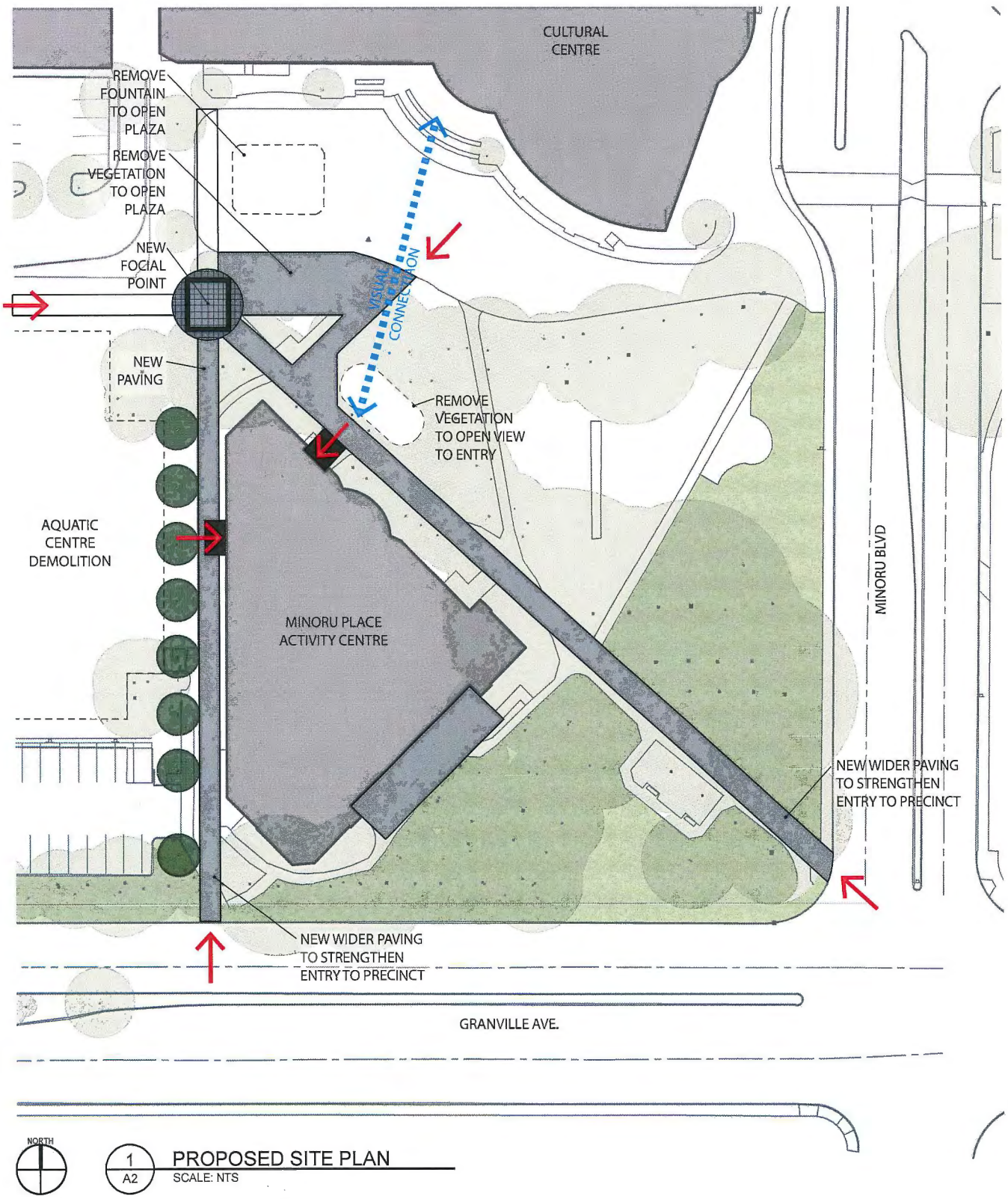
ENTRY

From within the central plaza, views of the Minoru Place Activity Centre entry are obstructed by the bushes, creating a disconnect and deminishing the opportunity to capitalize on the activity of the plaza and interaction between the Cultural Centre and Minoru Place Activity Centre. We recommend correcting this by removing this landscape to reinforce the visual and physical relationship that would highlight the new use.

We would recommend that this connection could be highlighted and strenghtened as a more significant entry into the precinct and to the Minoru Place Activity Centre from the corner. This could be accomplished with a wider walkway, use of paving stones, lighting poles or bollards. We note that the access paths for the new Minoru Centre for Active Living are clear and directive. Echoing some of those same design elements and materials should be considered as a way to provide cohesion overall and a relationship to the major components of the precinct.

ARRIVAL

The current arrival point into the plaza from the west visually and physically blocks the plaza. We would recommend removal of the central fountain to provide a more flexible and functional plaza space as well as some of the shrubs and bushes around that obscure views to the Minoru Place Activity Centre and entry point into the plaza from the south west corner.



1 / A2 PROPOSED SITE PLAN
SCALE: NTS

2.3 SITE & CONTEXT CONT'D

SITE IMAGES

View of west walkway indicating need to update and highlight the building entry.

View of plaza showing open space limited by the central fountain.

2.3 SITE & CONTEXT CONT'D

SITE IMAGES

View from plaza to MPAC showing lack of visibility to building entry and indirect pathway.

View from west side of MPAC showing visibility obscured by bushes and covered walkway.

PART 3: CONCLUSION

PART 3: CONCLUSION

3.1 FACILITY ASSESSMENT

EXISTING BUILDING UPGRADES

As outlined in the body of the Report, the existing Minoru Place Activity Centre, continues to be a well used facility and, given its age, has stood up remarkably well over the past 31 years. The building appears to have been well maintained, and although the interior space is in very good condition, the exterior is understandably beginning to deteriorate due to years of exposure. Given the age of materials, detailing and construction technology of the day, and type of construction, the upgrades suggested by the building envelope consultant are consistent with expectations. Since there are no indications that the envelope has been compromised to the point of internal damage, the building framing has been protected. If the building is to be retained for new use, we would recommend that the envelope be fully addressed, i.e., replacement of cladding, glazing, and roofing, to provide a consistent and effective building shell.

The building frame is in very good condition, meets current structural design loads, and would still suit the addition of a second floor, as was planned for at the time of design. The building structure is seismically deficient but rated as low-medium risk. Continued use of the building should consider a program to upgrade the building's bracing during any planned renovations. The extent of implementation is typically a factor of the magnitude of renovation and should be based on a discussion between the City and Authority Having Jurisdiction.

One structural issue of note, is the construction of the building slab and foundation. Since the building is a raft slab on piles, the entire ground floor slab acts as a diaphragm to stiffen the building. Since the continuity of this diaphragm is integral to the structure, any modifications made by cutting the slab for new services, would need to be done with careful attention to repair the slab afterwards. Given this, the addition of washrooms would be more costly than with a typical structure.

The consultants have noted the building mechanical and electrical systems are largely original to the building and have reached the end of their expected life. For the mechanical systems, this would include the boilers, AHU unit, condenser, roof top units, domestic hot water tank, and DDC. The electrical equipment would include lighting, emergency lighting, exit lights, fire alarm, PA, and incoming fibre. It was also noted that the building does not have a security intrusion system nor any functioning surveillance. These should be provided with any of the building upgrades or replacement facility.

While replacement of electrical components would make sense with any internal renovations, some of the mechanical roof top unit upgrades might be phased over time.

Given that the building is still in use today, without any of the upgrades recommended in the condition assessment, the cost for implementation of all the work can be thought of as the ultimate refurbishment of the building. As such, the list of ugrades could be prioritized and /or the work scaled down to as little as deemed necessary at this time. Special consideration is needed regarding the seismic risk identified in the structural report.

The decision for retention of the building must weight the factors of upgrade or replacement costs, OBI's, and potential revenue, with value of the community asset, expansion of City programming, and speed of providing these services.

SHORT TERM UPGRADES

The building is well suited to an Arts Centre and although the cost of upgrades are approximately $4M, the benefit of the Short Term Reuse, Option A, is that the City would have a functioning facility in place while planning for a replacement within the next 5 - 10 years.

PART : COST REPORT

Minoru Centre for Active Living Planning Options
Class D Estimate (Order of Magnitude)
SUMMARY OF THREE (3) OPTIONS

September 1, 2017

PROJECT COST ESTIMATE

SUMMARY OF THREE (3) OPTIONS	Option A: Minimal Interior & Exterior Improvements + Conversion to Arts Centre	Option B: Full Upgrade of Interior & Exterior + Conversion to Arts Centre	Option C: New Build Replacement Dedicated as an Arts Centre
A. LAND COST	Excluded	Excluded	Excluded
B. CONSTRUCTION	$1,530,000	$4,141,000	$7,306,000
C. CONTINGENCIES	$584,500	$1,582,000	$2,332,100
D. PROFESSIONAL FEES	$253,600	$686,700	$1,060,300
E. CONNECTION FEES & PERMITS	$180,000	$190,000	$415,000
F. OWNERS MANAGEMENT & OVERHEAD	$79,200	$214,500	$361,500
G. SOFT COST CONTINGENCY (5% of Items D to F)	$25,600	$54,600	$91,800
SUB-TOTAL (Excluding FF&E)	$2,652,900	$6,868,800	$11,566,700
H. FURNISHINGS, FITTINGS & EQUIPMENT (Allowance of B + C)	$1,000,000	$1,000,000	$1,000,000
SUB-TOTAL (Including FF&E)	$3,652,900	$7,868,800	$12,566,700
I. GST (Excluded)	Excluded	Excluded	Excluded
J. TOTAL PROJECT COST (Excluding Finance Charges & GST)	$3,652,900	$7,868,800	$12,566,700

Concept Scope:

SUMMARY OF THREE (3) OPTIONS

- To assess and analyze the viability of repurposing the existing Minoru Seniors Centre for other uses.
- To produce high level range of costs to bring the existing facility to current code requirements resulting from change of use, and bring the facility up to a "good condition" standard. To also produce high level range of costs to complete a Tenant Improvement to deliver the desired function.

Basis of Estimate:

- Scope of work defined in DGBK "Minoru Arts Centre List of Work 17.08.22", "MPAC", & "Scope of work images_reduced"
- Scope of work defined in "01 Minoru Assessment Reports - All"

Exclusions:

- Unforeseen existing building conditions
- A specialist HazMat consultant should be engaged to provide an assessment report and costing
- Accelerated schedule, phasing or restricted working hours
- Decanting and moving (if any)
- Items identified as "Excluded"

Minoru Centre for Active Living Planning Options
Class D Estimate (Order of Magnitude)
Option A: Minimal Interior & Exterior Improvements + Conversion to Arts Centre
September 1, 2017

PROJECT COST ESTIMATE

Option A: Minimal Interior & Exterior Improvements + Conversion to Arts Centre			TOTAL
A. LAND COST			**Excluded**
1 Land			Excluded
2 Legal Fees			Excluded
B. CONSTRUCTION	**Area**	**$/SF**	**$1,530,000**
Upgrade Existing Building to Current Standards (Base Build)			
1 Structural; structural upgrades and seismic upgrading excluded	16,738 SF	Excluded	Excluded
2 Architectural; mandatory code upgrades (change of use), no seismic upgrades (Base Build)	16,738 SF	$29/ft²	485,000
3 Mechanical; mandatory code upgrades (change of use), no seismic upgrades (Base Build)	16,738 SF	$4/ft²	67,000
4 Electrical; mandatory code upgrades (change of use), no seismic upgrades (Base Build)	16,738 SF	$5/ft²	84,000
5 Allowance for select demolition of existing interiors to suit base build; re-purpose	16,738 SF	$5/ft²	84,000
6 Allowance for HazMat removal (HazMat report not received)	16,738 SF	$4/ft²	67,000
Total Upgrade Existing Building to Current Standards (Base Build)	16,738 SF	$47/ft²	$787,000
Tenant Improvement (T.I.'s) to Convert Base Build to Art Space			
7 Tenant Improvements to convert Base Build to Art Studio Space (Basic)	16,738 SF	$25/ft²	418,000
Total T.I.'s to Convert Base Build to Finished Art Space	16,738 SF	$25/ft²	$418,000
8 Allowance for On Site Utility Upgrades	Allow		125,000
9 Allowance for on Site Works / Site Development / Green Spaces / Landscaping / Parking	Allow		200,000
10 Off Site Works / Infrastructure	ls		Excluded
C. CONTINGENCIES			**$584,500**
1 Design Contingency (Design & Program Changes)	15.00%		229,500
2 Escalation Contingency (Assumed 3 years to Mid-Point of Construction)	9.25%		162,800
3 Post Tender Change Order Contingency	10.00%		192,200
D. PROFESSIONAL FEES	12.00%		**$253,600**
1 Architectural	6.50%		137,400
2 Structural	1.25%		26,400
3 Mechanical	1.50%		31,700
4 Electrical	1.00%		21,100
5 Quantity Surveying	0.30%		6,300
6 Other Consultants and Disbursements (Civil, Geotech, LEED, Envelope etc)	1.45%		30,700
E. CONNECTION FEES & PERMITS			**$180,000**
1 Development Cost Charges	ls		Not Required
2 Building Permits	ls		30,000
3 Allowance for Utility Connection Fees (Hydro, Terasen, Telus etc)	ls		150,000
F. OWNERS MANAGEMENT & OVERHEAD			**$79,200**
1 Owners Project Management Fee	1.50%		31,700
2 Owners Planning and Administrative Cost	1.00%		21,100
3 Project Insurance	1.00%		21,100
4 Project Commissioning, Move-In	0.25%		5,300
G. SOFT COST CONTINGENCY (5% of Items D to F)	5%		**$25,600**
SUB-TOTAL (Excluding FF&E)			$2,652,900
H. FURNISHINGS, FITTINGS & EQUIPMENT (Allowance)			**$1,000,000**
SUB-TOTAL (Including FF&E)			$3,652,900
I. GST (Excluded)	0%		**Excluded**
J. TOTAL PROJECT COST (Excluding Finance Charges & GST)			**$3,652,900**

Concept Scope:
Option A: Minimal Interior & Exterior Improvements + Conversion to Arts Centre
- To assess and analyze the viability of repurposing the existing Minoru Seniors Centre for other uses.
- To produce high level range of costs to bring the existing facility to current code requirements resulting from change of use, and bring the facility up to a "good condition" standard. To also produce high level range of costs to complete a Tenant Improvement to deliver the desired function.

Basis of Estimate:
- Scope of work defined in DGBK "Minoru Arts Centre List of Work 17.08.22", "MPAC", & "Scope of work images_reduced"
- Scope of work defined in "01 Minoru Assessment Reports - All"

Exclusions:
- Unforeseen existing building conditions
- A specialist HazMat consultant should be engaged to provide an assessment report and costing
- Accelerated schedule, phasing or restricted working hours
- Decanting and moving (if any)
- Items identified as "Excluded"

Minoru Centre for Active Living Planning Options
Class D Estimate (Order of Magnitude)
Option B: Full Upgrade of Interior & Exterior + Conversion to Arts Centre

September 1, 2017

PROJECT COST ESTIMATE

Option B: Full Upgrade of Interior & Exterior + Conversion to Arts Centre			TOTAL
A. LAND COST			Excluded
1 Land			Excluded
2 Legal Fees			Excluded
B. CONSTRUCTION	Area	$/SF	$4,141,000
Upgrade Existing Building to Current Standards (Base Build)			
1 Structural; mandatory code upgrades (change of use), including seismic (Base Build)	16,738 SF	$90/ft²	1,506,000
2 Architectural; mandatory code upgrades (change of use), including seismic (Base Build)	16,738 SF	$65/ft²	1,088,000
3 Mechanical; mandatory code upgrades (change of use), including seismic (Base Build)	16,738 SF	$8/ft²	134,000
4 Electrical; mandatory code upgrades (change of use), including seismic (Base Build)	16,738 SF	$6/ft²	100,000
5 Allowance for select demolition of existing interiors to suit base build; re-purpose	16,738 SF	$5/ft²	84,000
6 Allowance for HazMat removal (HazMat report not received)	16,738 SF	$4/ft²	67,000
Total Upgrade Existing Building to Current Standards (Base Build)	16,738 SF	$178/ft²	$2,979,000
Tenant Improvement (T.I.'s) to Convert Base Build to Art Space			
7 Tenant Improvements to convert Base Build to Art Studio Space (Basic)	16,738 SF	$50/ft²	837,000
Total T.I.'s to Convert Base Build to Finished Art Space	16,738 SF	$50/ft²	$837,000
8 Allowance for On Site Utility Upgrades	Allow		125,000
9 Allowance for on Site Works / Site Development / Green Spaces / Landscaping / Parking	Allow		200,000
10 Off Site Works / Infrastructure	ls		Excluded
C. CONTINGENCIES			$1,582,000
1 Design Contingency (Design & Program Changes)	15.00%		621,200
2 Escalation Contingency (Assumed 3 years to Mid-Point of Construction)	9.25%		440,500
3 Post Tender Change Order Contingency	10.00%		520,300
D. PROFESSIONAL FEES	12.00%		$686,700
1 Architectural	6.50%		372,000
2 Structural	1.25%		71,500
3 Mechanical	1.50%		85,800
4 Electrical	1.00%		57,200
5 Quantity Surveying	0.30%		17,200
6 Other Consultants and Disbursements (Civil, Geotech, LEED, Envelope etc)	1.45%		83,000
E. CONNECTION FEES & PERMITS			$190,000
1 Development Cost Charges	ls		Not Required
2 Building Permits	ls		40,000
3 Allowance for Utility Connection Fees (Hydro, Terasen, Telus etc)	ls		150,000
F. OWNERS MANAGEMENT & OVERHEAD			$214,500
1 Owners Project Management Fee	1.50%		85,800
2 Owners Planning and Administrative Cost	1.00%		57,200
3 Project Insurance	1.00%		57,200
4 Project Commissioning, Move-In	0.25%		14,300
G. SOFT COST CONTINGENCY (5% of Items D to F)	5%		$54,600
SUB-TOTAL (Excluding FF&E)			$6,868,800
H. FURNISHINGS, FITTINGS & EQUIPMENT (Allowance)			$1,000,000
SUB-TOTAL (Including FF&E)			$7,868,800
I. GST (Excluded)	0%		Excluded
J. TOTAL PROJECT COST (Excluding Finance Charges & GST)			$7,868,800

Concept Scope:

Option B: Full Upgrade of Interior & Exterior + Conversion to Arts Centre

- To assess and analyze the viability of repurposing the existing Minoru Seniors Centre for other uses.
- To produce high level range of costs to bring the existing facility to current code requirements resulting from change of use, and bring the facility up to a "good condition" standard. To also produce high level range of costs to complete a Tenant Improvement to deliver the desired function.

Basis of Estimate:

- Scope of work defined in DGBK "Minoru Arts Centre List of Work 17.08.22", "MPAC", & "Scope of work images_reduced"
- Scope of work defined in "01 Minoru Assessment Reports - All"

Exclusions:

- Unforeseen existing building conditions
- A specialist HazMat consultant should be engaged to provide an assessment report and costing
- Accelerated schedule, phasing or restricted working hours
- Decanting and moving (if any)
- Items identified as "Excluded"

Minoru Centre for Active Living Planning Options
Class D Estimate (Order of Magnitude)
Option C: New Build Replacement Dedicated as an Arts Centre
September 1, 2017

PROJECT COST ESTIMATE

Option C: New Build Replacement Dedicated as an Arts Centre			TOTAL
A. LAND COST			Excluded
1 Land			Excluded
2 Legal Fees			Excluded
B. CONSTRUCTION	Area	$/SF	$7,306,000
New Build Replacement (same size)			
1 New Build Arts Centre; including raft slab/piling, site preparation, site development etc	16,738 SF	$429/ft²	7,181,000
2 Allowance for On Site Utility Upgrades	Allow		125,000
3 Off Site Works / Infrastructure	ls		Excluded
C. CONTINGENCIES			$2,332,100
1 Design Contingency (Design & Program Changes)	15.00%		1,095,900
2 Escalation Contingency (Assumed 3 years to Mid-Point of Construction)	9.25%		777,200
3 Post Tender Change Order Contingency	5.00%		459,000
D. PROFESSIONAL FEES	11.00%		$1,060,300
1 Architectural	5.50%		530,100
2 Structural	1.25%		120,500
3 Mechanical	1.50%		144,600
4 Electrical	1.00%		96,400
5 Quantity Surveying	0.30%		28,900
6 Other Consultants and Disbursements (Civil, Geotech, LEED, Envelope etc)	1.45%		139,800
E. CONNECTION FEES & PERMITS			$415,000
1 Development Cost Charges	ls		225,000
2 Building Permits	ls		40,000
3 Allowance for Utility Connection Fees (Hydro, Terasen, Telus etc)	ls		150,000
F. OWNERS MANAGEMENT & OVERHEAD			$361,500
1 Owners Project Management Fee	1.50%		144,600
2 Owners Planning and Administrative Cost	1.00%		96,400
3 Project Insurance	1.00%		96,400
4 Project Commissioning, Move-In	0.25%		24,100
G. SOFT COST CONTINGENCY (5% of Items D to F)	5%		$91,800
SUB-TOTAL (Excluding FF&E)			$11,566,700
H. FURNISHINGS, FITTINGS & EQUIPMENT (Allowance)			$1,000,000
SUB-TOTAL (Including FF&E)			$12,566,700
I. GST (Excluded)	0%		Excluded
J. TOTAL PROJECT COST (Excluding Finance Charges & GST)			$12,566,700

Concept Scope:

Option C: New Build Replacement Dedicated as an Arts Centre

- To assess and analyze the viability of repurposing the existing Minoru Seniors Centre for other uses.
- To produce high level range of costs to bring the existing facility to current code requirements resulting from change of use, and bring the facility up to a "good condition" standard. To also produce high level range of costs to complete a Tenant Improvement to deliver the desired function.

Basis of Estimate:

- Scope of work defined in DGBK "Minoru Arts Centre List of Work 17.08.22", "MPAC", & "Scope of work images_reduced"
- Scope of work defined in "01 Minoru Assessment Reports - All"

Exclusions:

- Unforeseen existing building conditions
- A specialist HazMat consultant should be engaged to provide an assessment report and costing
- Accelerated schedule, phasing or restricted working hours
- Decanting and moving (if any)
- Items identified as "Excluded"

SEPTEMBER 1, 2017

MINORU SENIORS CENTRE

STRUCTURAL ASSESSMENT REPORT

BUSH, BOHLMAN & PARTNERS LLP

Submission by: Clint Low P. Eng., Struct. Eng., MIStructE, FEC
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Submission to: Peter Sickert
DGBK Architects
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Vancouver BC V6G 2Z6

MINORU SENIORS CENTRE STRUCTURAL ASSESSMENT REPORT

➢ BACKGROUND

The existing building located in the Minoru Civic Centre complex on Granville Street in Richmond was constructed in 1985 and is a triangular shaped single storey structure. A cafeteria addition was added to the building in 1989.

The building construction is a pile supported raft slab on grade floor with a tongue and groove timber plank decking on glulam timber frame flat roof supported by timber and steel posts. The building is clad with wood siding. The roof is torch on SBS with built up slopes to drains. Generally the building timber structure is exposed to view on the interior. The building structure appears well maintained and in good condition.

➢ EXISTING BUILDING STRUCTURE

The following description of the building structural systems is based on structural information noted on the original building structural drawings dated July 1985, the addition drawings dated November 1989, and observations during a site visit on April 18, 2017:

- Building foundations consist of timber piles supporting a structural raft slab on grade with thickenings over the piles. Pile capacity is not noted on the original drawings. Pile capacity for the addition is noted as 175 kN (40 Kips). Piles do not appear to be anchored to the raft slab for uplift forces.
- The main floor is generally a 150mm thick structural concrete slab on grade supported by the pile foundations. The slab is thickened to 200mm below the activity room stage, in the shops area, and at the cafeteria addition. The slab was placed over 6 mil poly sheet as a vapour barrier over 150mm of sand base. The slab is thickened locally over the piles to act as pile caps. There is a 600mm deep perimeter grade beam supporting the exterior wall and providing frost protection.
- The main roof is flat consisting of 13mm thick plywood over 38mm tongue and groove plank decking spanning about 1500mm between glulam joists. The glulam joists are generally 130mm wide x 380mm deep and span about 6m between lines of glulam girder beams that are supported by round glulam posts. The glulam girders are generally 175mm wide x 532mm deep. Posts are 250mm diameter turned glulam. Posts sit on steel bases and have fabricated steel saddles supporting the glulam girder beams.
- The roof steps up 1260mm over the Activity room to achieve a higher ceiling height. Here the roof structure consists of 225mm wide x 1100mm deep glulam beams spaced at 2.8m centres that clear span 17m across the Activity room. The glulams support 13mm plywood on 64mm deep tongue and groove plank decking. The depth of the glulams varies from 912 at the Activity roof edges to 1100mm at mid-span to create roof slopes.
- There is a small mechanical penthouse sitting on the main roof just east of the Activity room that is constructed from plywood over 38 x 286mm wood joists supported on wood stud bearing walls.
- The original building structural drawings indicate that the main roof was designed as a future second floor.

- Exterior stud walls are 38 x 140mm wood studs at 400 centres sheathed with 13mm plywood. Walls are anchored to the foundation with 5/8" diameter bolts at 2'-6" centres.
- Lateral wind and seismic loads are resisted by a series of plywood shear walls and a steel brace bay in the west exterior wall of the Activity room.
- There are several roof skylights that are framed from aluminum mullion sections.
- There is a wheelchair access ramp and storage shed on concrete pad added to the south side of the building.

➢ SITE OBSERVATIONS AND CONDITION ASSESSMENT

A site visit was carried out on April 18, 2017 to review the condition of the building and confirm details shown on the original structural drawings. The site visit was a visual observation only. No detailed investigative testing, inspection, or measurement has been carried out.

Generally the building is in good condition and appears to have been well maintained. Site observations were:

1. The building structure is generally as noted on the design drawings.
2. There are no visible signs of settlement or structural distress.
3. Timber framing exposed on the interior is in good condition. One split was observed in a beam in the Multi-purpose room that is likely due to drying shrinkage.
4. The floor slab is generally covered in carpet but it generally appears level.
5. The roof is in fair condition and appears to drain well.
6. There is a variety of rooftop mechanical equipment. Some of the equipment anchorage appears inadequate.
7. Building wood siding is in need of cleaning and painting. No rot or signs of water ingress was observed.
8. There appears to have been some settlement of adjacent grade relative to the pile supported building. Several door thresholds have a 30mm differential settlement step.
9. The kitchen walk-in cooler/freezer is flush with the surrounding floor however there is no indication on the original drawings of a slab recess to allow insulation below the freezer. There was no sign of freezing issues with the surrounding floor.
10. The steel brace bay connections at the Activity room west wall will not meet capacity design requirements of current codes.
11. The perimeter edge of the raft slab is exposed. This creates a cold bridge to interior floor space.
12. Staff stated that they are not aware of any issues with the building structure performance.

➢ STRUCTURAL ANALYSIS

The roof design has been checked for current snow loads and the main roof has been checked for use as a future floor. A high level seismic assessment has been carried out. The analysis confirms the following:

Main Roof design: The roof is capable of supporting the current Richmond design snow loads including snow drift and is capable of supporting a future second floor loading with a live load of 2.4 kPa (50 psf) which would be suitable for office type occupancy.

Activity Room Roof design: The Activity Room roof is capable of supporting current design snow loads and snow drift loads that would result from a future second floor addition.

Columns and foundations: Building columns and pile foundations are capable of supporting a future second floor addition having a 2.4 kPa live load.

Main Floor: The main floor structural pile supported slab appears to be designed for a 4.8 kPa (100 psf) live load. This is suitable for assembly, office, or retail type occupancies.

Seismic: The building structure has some seismic deficiencies particularly related to plywood shear wall anchorage, weak steel brace connections, and inadequate foundations for overturning and uplift forces. The building structure is rated low-medium risk. The underlying soils are soft and may be subject to liquefaction under strong ground shaking. Horizontal ground movement due to liquefaction may break timber piles and piles may plunge through a liquefied soil. Under those conditions, the raft slab is an important element that will provide bearing support to float the building on the surface crust soil and tie the building together. However, large differential settlement can be expected post-earthquake which will likely make the building unusable. A geotechnical consultant would be able to quantify liquefaction risks and mitigation options.

➢ RENOVATION CONSIDERATIONS

1. The main floor is suitable for 4.8 kPa live load which is suitable for assembly occupancies.
2. The existing building is seismically deficient and any renovations should consider incorporating a seismic upgrade. A seismic upgrade to a life safety performance objective will include:
   - Add plywood shear walls throughout the building. Distribution of the shear walls is important to limit wall overturning forces on the raft slab and pile foundations.
   - Connection of the plywood roof diaphragm to the existing and new plywood sheathed interior shear walls.
   - Upgrade existing plywood shear walls with nailing and anchor bolts.
   - Add steel perimeter chords and drag struts to connect the roof to the shear walls.
   - Add additional brace bays and replace the existing steel brace bay on the west elevation of the Activity Room.

   Seismic upgrade using external buttress walls may be an effective approach that would require less internal shear walls thus opening up interior planning options.
3. The second floor and supporting columns and foundations is suitable for a future floor addition. A future floor addition would increase the seismic retrofit requirements.
4. The structure is generally post and beam construction. Partition walls that are not used as shear walls can readily be relocated or removed.
5. The main floor is a pile supported structural raft slab which cannot be readily cut to relocate under slab services. Relocation of under slab services should be avoided.

APPENDIX 1 - PICTURES

Picture 1 - Exposed Timber Roof Framing

Picture 2 - Glulam Beams Clearspan Activity Room

Picture 3 - Roof in Fair Condition – Drains Well. There are several Rooftop Units.

Picture 3 - Mechanical Penthouse with adjacent roof step over Activity Room

Picture 4 - Aluminum Framed Skylights

Picture 5 - Building Exterior in Fair Condition – requires cleaning and painting

Picture 5 - Ground settlement at several door thresholds. Edge of raft slab exposed creating a cold bridge.

Picture 6 - Storage building added at south elevation

Minoru Senior Centre

Mechanical Assessment Report

Prepared for:

DGBK Architects

950-1500 West Georgia Street,

Vancouver, BC, V6G 2Z6

Prepared by:

Rocky Point Engineering Ltd.

#102 – 211 E. Georgia Street

Vancouver, BC V6A 1Z6

ROCKY POINT
ENGINEERING LTD.

Project # 17211-V

May 5, 2017

Table of Contents Page No.

1.0 Purpose of the Report

The intent of this report is to review the existing buildings plumbing, mechanical and fire protection systems and comment on their suitability and impact for future renovation. The report will provide an evaluation of the current condition of the mechanical systems and proposed options for upgrading systems with possible repurposing of the Senior Centre.

2.0 Existing Conditions

2.1 Mechanical Systems

The current mechanical systems consist of a Hydro Therm boiler model with five modules which serves air handling unit coils, reheat coils, perimeter baseboard radiation and the domestic hot water tank. Each modules capacity is 300,000 BTUH input for a total capacity of 1,500,000 BTUH or 1,500 MBH. The building is currently ventilated by two indoor heating only air handling units zoned roughly east and west. There are two split air condition unit serving the office with remote condensing unit located on the roof.

Figure 1 – Existing Boilers

Figure 2 – Existing indoor AHU

Figure 3 – Existing outdoor Split Condensing

Figure 4 – Existing rooftop unit

2.2 Plumbing Systems

The incoming combined fire/cold water main is currently a 150Ø pipe terminating in the water entry room at the north of the building. The water entry room contains the fire station and the domestic water station c/w water meter and PRV assemblies. A 65Ø cold water main feeds the 60 US Gallon indirect hot water tank with an immersion heater capacity of 250 BTUH input located in the Boiler Room. There are 25Ø domestic hot water (DHW) and 12Ø domestic hot water recirculation (DHWR) pipes from the Boiler Room which distributes to various fixtures through the ceiling of the main floor.

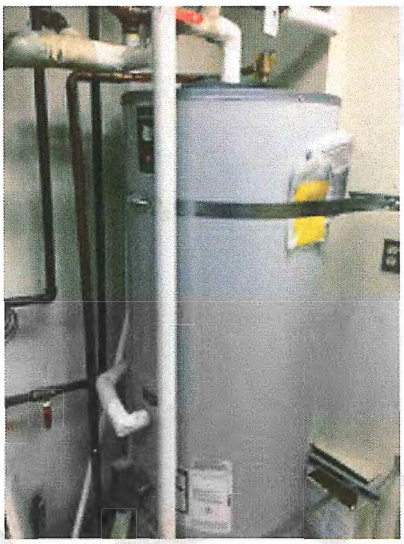

Figure 5 – Existing indirect DHW heater/tank

A 100Ø sanitary main leaves the building and connects to the municipal sewer north of the building.

A 150Ø storm main leaves the building and connects to the municipal storm east of the building.

The building does not have any perimeter drain tiles.

A gas meter located outside the building provides gas service to the boilers. The 25Ø gas main feeds the boiler along with the fireplace.

2.3 Fire Suppression System

The building is fully sprinklered. A fire department Siamese connection is located on the north wall of the building.

2.4 Control System

The existing control system consists of pneumatic electric controls in each room to control the baseboard heaters along with night setback thermostat located in the space.

3.0 Condition Assessment

3.1 HVAC Systems

The HVAC system at Minoru is aged and are original to the building. Over the years, several rooftop units were added along with several split AC units were provided to the main air handling system to provide cooling. All of the equipment have out-lived its expected lifespan. Full replacement of the HVAC system is recommended.

The existing modular boiler plant has out-lived its expected lifespan as well. The boiler efficiencies are likely less that its designed efficiency of 80%. It is recommended the boilers be replaced with high-efficiency condensing type boilers that are over 95% efficient.

There is evident of water staining on the insulation of the heating water piping.

The various zone pumps appear to have been replaced over time.

3.2 Plumbing System

The existing central plumbing distribution piping is original to the building. The domestic hot water heater and tank appears to have been replaced within the last 5 years and is in reasonable condition. It is recommended to replace the domestic water tank with a separate high efficiency hot water heater and storage tank to suit the new building use. This separates the domestic water generation from the boiler water allowing the boiler to shut down during the summer months.

The plumbing fixtures are original to the building. Any new work would require the fixtures be replaced with new fixtures.

3.3 Fire Protection System

The existing fire protection system is in good shape. Any renovations can reuse the existing sprinkler system with modifications as required.

3.4 Control System

All new DDC controls with new room thermostats, occupancy sensors, etc. is recommended for the building. The existing control valves will be replaced with new DDC controlled valves and be tied into the new thermostat and sensors. The DDC system will be specified to meet City of Richmond controls standards.

4.0 Building Reuse

4.1 Recommendation

The mechanical systems at Minoru Senior Centre are original to the building. Many of the existing equipment is also original to the building. While it is possible to reuse much of the existing HVAC, plumbing system for a repurposed building that has a similar occupancy, they have outlived their expected lifespan and would like continue to require more and more servicing and or replacement over the life of the repurposed building.

Smith + Andersen
339 - 6450 Roberts Street Burnaby British Columbia
604 294 6414 | 604 294 6405 smithandandersen.com

ELECTRICAL INVESTIGATION REPORT

FOR
RICHMOND CULTURAL CENTRE ANNEX
7660 MINORU GATE,
RICHMOND, BC

OUR PROJECT NUMBER:
17188.001.E

DATE:
2017-04-28 (ISSUE FOR OWNERS REVIEW) – REV 0

LIMITS OF LIABILITY ASSOCIATED WITH THIS DOCUMENT

1. HAZARDOUS MATERIALS

1.1. It is understood that hazardous materials may be present (e.g. asbestos, mould, PCB's, etc.) within the existing building. The identification of and abatement recommendations with respect to hazardous materials is outside the scope of services provided by Smith + Andersen.

2. THIRD PARTY USE

2.1. Any use that a third party makes of this document, or reliance on or decisions to be based on it, are the responsibility of such third party. Smith + Andersen accepts no responsibility for damages, if any, suffered by any third party as a result of decisions made or actions based upon this document.

3. GENERAL LIMITS

3.1. The review of existing installations was general in nature and limited to casual, visual observation without removal of ceilings, chases, destructive testing or dismantling. The review was not exhaustive and was performed to acquire a general understanding of the condition of existing systems. Very limited existing drawings were made available for the review of existing systems.

3.2. This document has been prepared solely for the use of the **CLIENT** and its design team associated with the **PROJECT**. The material contained in this document reflects Smith + Andersen's best judgement in light of the information available at the time of preparation. There is no warranty expressed or implied. Professional judgement was exercised in gathering and assessing information. The recommendations presented are the product of professional care and competence and cannot be construed as an absolute guarantee.

3.3. Where equipment sizing is provided it should be considered order-of-magnitude only as the project details that may affect systems have not been established or finalized.

1. INTRDDUCTIDN

1.1. The investigated area is in a multi-use building (Administration, Circulation and Open Lounge, Program Rooms, Stage and Back of House, Food Services and Washrooms and Services).

1.2. The floor area investigated is approximately 16,738 square feet, single-story facility, shown on Figure 1.

1.2.1. The scope of the investigation is to determine the feasibility of improving the existing services to suit the current needs in an environmentally sustainable way. The scope of electrical review is determining the ability to provide adequate electrical service, telecommunication service and life and safety measurements.

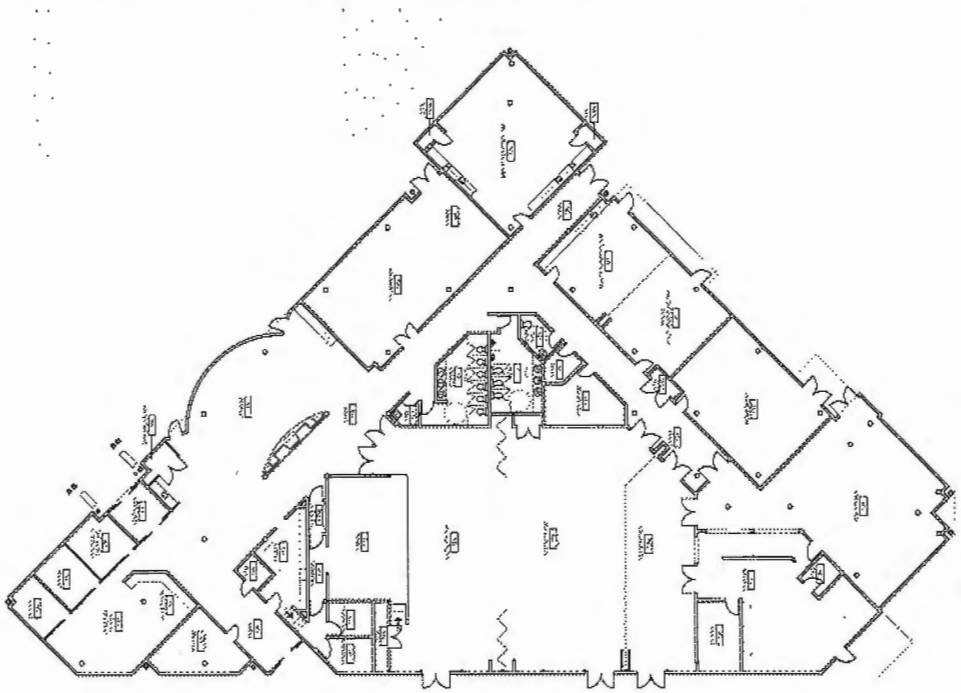

Figure 1 – Key Plan

2. INCDMING SERVICES AND PDWER DISTRIBUTIDN

2.1. The building has a 3-phase, 4-wire, 800A service (120/208V) terminating on a main switchboard located in the main electrical room. The main switchboard and the service panel are shown in Figure 2 and Figure 3, respectively.

2.2. It's not foreseen that an upgrade to the electrical service will be required, since the

distribution equipment located throughout the building and on the roof (panel boards and disconnect switches) is in good condition.

Figure 2 – Building Main Switchboard 800A

Figure 3 – Service panels

3. FIRE ALARM

3.1. The building has a conventional four zone fire alarm system with an annunciator at the main entrance. Bells, manual pull stations, sprinklers and smoke detectors are currently installed.

3.2. The fire alarm system is expected to require modifications and replacements to fire alarm devices to suit site conditions and compliance with code standards:

.1 The fire alarm panel (Mircom Series 200), the annunciator and the manual pull stations shall be upgraded to code.

4. LIGHTING

4.1. In general, lighting and emergency lighting should be replaced, as some are from old models and have passed their life-expectancy.

4.2. Exit lights shall be replaced and upgraded to meet code standards.

4.3. All switching should be replaced.

5. LOW VOLTAGE SYSTEMS

5.1. A twisted pair telecommunications service is provided to the building. All structural cables are CAT 5E.

5.2. Incoming patching of fiber service shall be redone.

5.3. APC Surge Protector needs to be replaced.

5.4. Two 24 port switches are in good shape.

5.5. There is an intrusion panel and an earthquake recorder in the electrical room.

5.6. PA system needs to be updated and replaced.

6. SECURITY SYSTEM

6.1. No security system in place. It is expected that the tenant is responsible for their own security system.

FIRE PROTECTION AND LIFE SAFETY
BUILDING CODE ASSESSMENT

MINORU PLACE ACTIVITY CENTRE
7660 MINORU GATE, RICHMOND, BC

1.0 BUILDING CODE SUMMARY

This Building Code Assessment Report summarizes the fire protection and life safety building code concepts of the 2012 British Columbia Building Code (BCBC) as applicable to the overall condition of the existing Minoru Place Activity Centre (The Project) located at 7660 Minoru Gate, Richmond, BC, including all recent renovations, alterations, and additions.

The Project was originally constructed as a Senior's Centre in 1985. A single storey cafeteria addition was added in 1989. The building is a single story of wood frame construction on top of a raft slab of cast in place concrete.
Only one renovation was done since 1985.

The Project is provided with a fire alarm system and is also protected by an automatic sprinkler system.
The Project Building is located within a cultural precinct of civic buildings on civic land in Richmond, BC. Fire Department response is via internal laneways accessed off Minoru Boulevard and Granville Street.

This report is intended to identify features of the existing building that do not comply with Part 3 of the BCBC and assess whether and to what extent these differences may affect proposed uses for the building. This report should be read in conjunction with reports provided by the architectural, mechanical, electrical, and structural consultants.

This report is based on a review of existing architectural drawings in conjunction with a site review of the building conducted by our office on Friday, April 23, 2017. It is noted that some of the service rooms were not available for review at the time of our site visit.

2.0 INTRODUCTION

2.1 Project and Building Description

The existing original building was constructed in 1985 and has undergone one addition in that time. The building is one level with a building area (footprint) of approximately 1555 m². The building is constructed of combustible wood construction with a fire alarm system and full sprinklers.

2.1.1

2.1.2 Building Characteristics Summary

Building area:	1,555 m² (approximately)
Building height:	1 storey above grade(1)
Occupancy:	Assembly (Group A, Division 2)
High building:	No
Construction:	Combustible
Sprinklered:	Yes
Standpipe system:	No
Fire alarm system:	Yes

2.2 Objectives of Building Code Assessment

The objectives of this report are:

- to outline the relevant and significant applicable requirements of Division B, Part 3 of the BCBC to the existing building and
- to assess the Project and the general existing conditions of the building relative to the BCBC to determine whether and to what extent existing features that do not comply and should be upgraded.

2.3 Applicable Building Code

The applicable building code for the Project is the 2012 BCBC. All references refer to Division B, Part 3 of the BCBC unless otherwise noted.

2.4 Approach to Building Code Compliance

As outlined in Appendix Note A-1.1.1.2., "Application to Existing Buildings," it is not intended that the BCBC be used to enforce the retrospective application of new requirements to existing buildings. Although the BCBC does not give specific guidelines to determine which conditions are required to be upgraded, Appendix Note A-1.1.1.2. implies that the experienced judgment of both the designer and the Authorities Having Jurisdiction should be used to determine if the cost of the upgrading is justified in relation to the improved safety for each respective deficiency. Accordingly, in developing an upgrading program, consideration has to be given to the difficulty of upgrading certain deficiencies due to the existing construction.

Renovations and additions to the existing building (all new construction) are required to be designed and constructed to comply with the current applicable building code requirements. However, provided the level of life safety and building performance that already exists in the building will not be decreased, existing conditions may be retained as otherwise permitted by Article 1.1.1.2.

2.5 Limitation of Liability

This report was prepared by DGBK Architects. The material provided in this report is based on DGBK's best judgment in light of the information available to DGBK at the time of preparation. Any use of this report by third parties, or any reliance on or decisions to be made based on it are the responsibility of the third parties. DGBK accepts no responsibility for damages, if any, suffered by any third party as a result of decisions made or actions based on this report.

3.0 BUILDING CODE CONCEPTS

This assessment is based on the potential to rehabilitate the Project or occupy existing building with similar occupancy type..

3.1 Fire Department Provisions

3.1.1 Fire Department Response Point and Access Route

- **Applicable Building Code Requirements**

In accordance with Sentence 3.2.5.4.(1), the building is required to be provided with access routes for Fire Department vehicles to the principal entrance. These access routes are required to be designed in accordance with Article 3.2.5.6. (a minimum 6 m clear width, 12 m turning radius, etc.).

In accordance with Sentence 3.2.5.5.(1), the Fire Department principal entrance is required to be located no less than 3 m, nor more than 15 m from the closest portion of the Fire Department access route.

In accordance with Clauses 3.2.5.5.(2)(a) and (c), the Fire Department access route is required to be designed such that a Fire Department pumper vehicle can be located adjacent to the required hydrant(s) referred to in Article 3.2.5.15. with an unobstructed path of travel of not more than 45 m for firefighters from the vehicle to the building.

Fire Department exterior access to above-grade storeys via openings in a building's facade are required to be provided by at least one unobstructed window or access panel for each 15 m of wall in each wall required to face a street.

- **Assessment of Existing Conditions**

It is assumed that Fire Department response is directed to the Minoru Place Activity Centre via the internal service road within Minoru Park that runs between the existing Cultural Centre and the Senior's centre. This appears to be a wide paved pedestrian pathway that allows only service vehicles and fire trucks.

Access from the nearest portion of the Fire Department access route is available from Minoru Blvd. as well as Granville Street with Granville being closer. The laneway provides access to a drive aisle providing access to surface parking and loading facilities for the adjacent civic buildings that surround the Project Building within Minoru Park.

Fire Department access to the Project is an existing condition of the site. It is recommended the fire safety plan for the Project Building be reviewed with the Richmond Fire Department (RFD) to ensure clear response and direction to the Project is provided and maintained.

3.2 Project Construction and Structural Fire Protection Requirements

Subsection 3.2.2. specifies construction and structural fire protection requirements to prevent fire spread and collapse caused by the effects of fire.

- **Applicable Building Code Requirements**

In accordance with Article 3.2.2.27, a building containing a Group A, Division 2 major occupancy is permitted to be constructed of combustible or non-combustible construction to a maximum area of 2,400 m² for a one-storey building which is sprinklered and has no basement.

- **Assessment of Existing Conditions**

The existing building is constructed of combustible wood frame construction and wood roof decking. The building area is 1,555 m² and, therefore, would meet the maximum building area permitted for a sprinklered building. However, the building is served by a drive aisle, but is remote from the nearest street as defined by the BCBC. It is our assumption that this was in compliance with the applicable building code at the time of construction.

The existing structure appears to be of combustible construction and was deemed to comply with the applicable requirements of the NBC/BCBC when constructed. The building contains a concrete slab on grade raft floor. Stair access is provided within the electrical room to roof top mechanical equipment.

3.3 Other Construction Requirements

The following sections outline other required fire separations within the building and Project area.

3.3.1 Exits

- **Applicable Building Code Requirements**

In accordance with Sentence 3.4.2.1.(1), every floor area intended for occupancy is required to be provided with access to two exits.

In accordance with Sentence 3.4.4.1.(1), exit corridors are required to be separated from the remainder of the building by a fire separation having a ¾-hour fire-resistance rating.

- **Assessment of Existing Conditions**

The existing corridors within the building are egress corridors and are not required to be rated from the spaces they serve. The egress corridors are considered to be corridors used by the public and not Public Corridors (building is single suite).
The travel distance to an exit is compliant with 3.4.2.5 (45m) in this sprinklered building.
The ground floor is provided with three exterior doors serving the internal egress corridors. There are also multiple exit doors leading directly to the exterior from the assembly rooms within the facility.
Existing exit capacity is sufficient for the assembly uses provided and intended from the existing rooms.
One corridor is a dead-end corridor and needs to be rectified as it is presently non-compliant according to 3.3.1.9.7 (longer than 6m) and would not have been compliant when it was closed off as part of the 1989 cafeteria addition.
This dead end corridor is a serious condition, which would not allow safe exiting from the building in an emergency.
The boiler room exist directly onto the internal egress corridor with door swinging in as required.

We note that due to the high occupant load of the building and the possible immobility of seniors, it is our opinion that dead-end corridor presents a significant life safety issue for the building.

3.3.2 Service Room Containing Fuel-Fired Appliance

- **Applicable Building Code Requirements**

In accordance with Sentence 3.6.2.1.(1), a service room containing a fuel-fired appliance is required to be separated from the remainder of the building by a 1 hour fire separation. The boiler room falls under this description.

In accordance with Table 3.1.8.4, a door for the service room requires a ¾-hour fire-protection rating. In accordance with Article 3.1.8.7., duct penetrations or transfer openings require fire damper protection with a ¾-hour fire-protection rating.

- **Assessment of Existing Conditions and Recommendation**

Further investigation needs to be done to determine whether the constructed assembly is a 1.0 hr assembly.

It is noted that the Boiler Room door is on a closer however the door and closer need to be investigated for ¾ hr rating.

3.3.3 Emergency Power

- **Applicable Building Code Requirements**

See Electrical Portion of this report.

3.4 Firestopping for Service Penetrations

- **Applicable Building Code Requirements**

In accordance with Sentence 3.1.9.1.(1), service penetrations of required fire separations are required to be sealed with a listed firestop system that provides an F-rating not less than the fire-protection rating required for closures when tested in accordance with ULC-S115, "Fire Tests of Firestop Systems."

- **Assessment of Existing Conditions and Recommendation**

Firestopping of any service penetrations was not investigated as material composition of firestop material could not be ascertained without laboratory testing. Firestopping primarily required in Boiler Room walls and penetrations to roof top enclosure
Any penetrations through fire separations identified in the report are required to be firestopped.

3.5 Exiting and Egress

3.5.1 Minimum Number of Exits and Travel Distance

- **Applicable Building Code Requirements**

In accordance with Sentence 3.4.2.1., every floor area throughout the Project is required to be served by a minimum of two exits.

In accordance with Clauses 3.4.2.5.(1)(c) and (f), a maximum travel distance of a 45 m is permitted where the floor area is protected by an automatic sprinkler system.

In accordance with Sentence 3.3.1.13.(3), doors in a means of egress are required to be operable with a single motion.

- **Assessment of Existing Conditions**

Travel distance to an exit appears to conform to the required 45 m for a sprinklered building on the ground floor.
Fire Safety Plans were provided at several locations identifying exit/egress locations.

The travel distance to an exit is compliant with 3.4.2.5 (45m) in this sprinklered building.
The ground floor is provided with three exterior doors serving the internal egress corridors. There are also multiple exit doors leading directly to the exterior from the assembly rooms within the facility.
Existing exit capacity is sufficient for the assembly uses provided and intended from the existing rooms.
One corridor is a dead-end corridor and needs to be rectified as it is presently non-compliant according to 3.3.1.9.7 (longer than 6m) and would not have been compliant when it was closed off as part of the 1989 cafeteria addition.

This dead end corridor is a serious condition, which would not allow safe exiting from the building in an emergency.
The boiler room exist directly onto the internal egress corridor with door swinging in as required as per 3.6.2.6.1.

We note that due to the high occupant load of the building and the possible immobility of seniors, it is our opinion that dead-end corridor presents a significant life safety issue for the building. A number of doors to the offices/service rooms are provided with separate dead bolts and door handles. Panic hardware is provided at the three exits from the ground floor as well as exits from assembly rooms to exterior.

3.5.2 Headroom Clearance

- **Applicable Building Code Requirements**

In accordance with Article 3.4.3.4., doorways are required to have a clear height of 2030 mm and the remainder of the building is required to have a clear height of not less than 2050 mm.

- **Assessment of Existing Conditions**

The headroom clearance in all areas of the building is in compliance. The service space above the Boiler room is not intended for general occupancy and some of the low headroom conditions around equipment is consistent with service rooms and other industrial occupancies where it is not reasonable to maintain headroom around equipment.

3.5.3 Lighting Levels in Means of Egress

- **Applicable Building Code Requirements**

In accordance with Article 3.2.7.1., exits are required to be equipped to provide illumination to an average level of not less than 50 lx (minimum value of 10 lx) at floor or tread level and at angles and intersections at changes of level where there are stairs or ramps.

- **Assessment of Existing Conditions**

Refer to electrical assessment report.

3.5.4 Emergency Lighting

- **Applicable Building Code Requirements**

In accordance with Sentence 3.2.7.3.(1), emergency lighting to an average illumination level of not less than 10 lx at floor or tread level is required within the principal routes providing access to exit within an open floor area and service rooms. The minimum value of illumination in these areas is not permitted to be less than 1 lx.

In accordance with Article 3.2.7.4., the emergency power for the emergency lighting is required upon failure of the regular power to automatically assume the electrical load for minimum 30-minute duration.

- **Assessment of Existing Conditions**

Refer to electrical assessment report.

3.5.5 Exit Signs

- **Applicable Building Code Requirements**

In accordance with Article 3.4.5.1., exit signs are required based on the building type and occupant load. That exceeds 150 persons.

- **Assessment of Existing Conditions and Recommendation**

Exit signage is observed at the ends of the corridors and over the exterior exit doors from assembly occupancy rooms.
The exit signs are not the currently required green pictogram type however the existing red EXIT text signs are acceptable until a major renovation is being considered. As described in exiting section a single dead end corridor exists. This is non-compliant and needs to exit to the exterior and be supplied with an additional exit sign when rectified.

3.6 Fire Alarm and Detection System

3.6.1 Fire Alarm System

- **Applicable Building Code Requirements**

In accordance with Sentence 3.2.4.1.(1), the Project Building is required to be provided with a fire alarm system.

- **Assessment of Existing Conditions and Proposed Design**

The Project appears to be provided with a stand-alone fire alarm system. The system monitors general building alarms, which are triggered by sprinkler flow switches and pull stations. An annunciator panel is located at the Fire Department Response Point at the main building entry. Pull stations were observed through the building. It was not confirmed if the fire alarm system was remotely monitored.

Refer to the electrical assessment report for further information.

3.6.2 Audible Signal Devices

- **Applicable Building Code Requirements**

In accordance with Article 3.2.4.19., audible signal devices are required to:

- be installed so that the alarm signal is clearly audible throughout the floor area in which they are installed,
- emit a three-pulse temporal sound pattern as defined in Clause 4.2 of International Standard ISO 8201, "Acoustics-Audible emergency evacuation signal," and
- provide a sound pressure level of not more than 110 dBA and not less than 10 dBA above the ambient noise level without being less than 65 dBA.

- **Assessment of Existing Conditions and Proposed Design**

Refer to electrical assessment report.

3.6.3 Emergency Power for Fire Alarm System

- **Applicable Building Code Requirements**

In accordance with Article 3.2.7.8., the required emergency power supply for the fire alarm system is required to be capable of providing supervisory power for not less than 24 hours and immediately following that period, emergency power under full load for not less than 30 minutes.

- **Assessment of Existing Conditions**

Refer to the electrical assessment report.

3.7 Portable Fire Extinguishers

- **Applicable Building Code Requirements**

In accordance with Sentence 3.2.5.16.(1) and NFPA 10, handheld fire extinguishers are required to be conspicuously mounted throughout the floor area such that all areas of the Project are within a 23.3 m travel distance to an extinguisher.

- **Assessment of Existing Conditions**

Fire extinguishers were observed at the floor level throughout the building. A review of existing fire extinguishers should be part of the regular maintenance of the building.

3.8 Health Requirements

Applicable Building Code requirements

In accordance with section 3.7.2.2 the Project building is required to have a sufficient number of male and female water closets to meet table 3.7.2.2a specifically related to Assembly type occupancies. The existing occupant count is 923 occupants based on floor area ratios and room name designations. The occupant genders are expected to be equal numbers of males and females and would therefore determine that the following number of water closets be required:

Male water closets: 8 Water closets (462 males) or 6 water closets and 2 urinals

Female water closets: 14 water closets (462 females)

In addition, a single Toilet Room is required.

Assessment of existing conditions

The Project Building currently has the following number of fixtures:

Male Water closets: 5

Female Water closets : 6

Staff Washroom – 1

Based on the Floor area ratio of Occupant Load calculation the building is presently deficient in Washroom facilities. While this is not a life safety concern it is nevertheless non-compliant with the current BCBC.

Another approach could have been utilized at the time of Building Permit application in 1985, namely making application with the programmed number of planned users for the space which would then determine the acceptable number of washroom fixtures. There was no evidence of signage posted in the Project Building describing the maximum number of occupants allowed in the facility. The existing fixture count would allow for a total of 450 occupants – 300 male and 150 female.
The singLe staff washroom is not adequately sized for a Toilet Room.

3.9 Section 3.8 – Building Requirements for Persons with Disabilities

- **Applicable Building Code Requirements**

Consistent with 3.8.2.1 access shall be provided to areas of the project building according to its present occupancy and use. Primarily A2 assembly spaces, the project building should provide access to each type of public facility in the building. The public washrooms in the building shall be designed for accessibility.
A toilet room should be provided in addition to the accessible multi stall public men's and women's washrooms.

- **Assessment of Existing Conditions**

The Minoru Place Activity Centre presently provides access to all public room spaces and has full access to at least one main entrance. HC parking is provided as part of the full parking complement to the Richmond cultural enclave, which contains this project building. As a one storey building on grade there are no barriers to access for persons with disabilities to the building public spaces. There is also be full access to administrative occupancies of the building. Handicapped Accessible public washrooms are provided with accessible toilet stalls.
The Building Code requirement for a toilet room came into existence after the construction of the Minoru Place Activity Centre and one does not presently exist within the building. A staff washroom in the proximity of the HC accessible public washrooms in the building is of insufficient size to be a universal toilet room.
There exists some minor non-compliancies related to this section 3.8 and they can easily be rectified at time of renovation. These are :

1. Accessible counter height at administration desk
2. Mirrors in washrooms to have tilted section
3. Faucets to have lever handles

General Condition/Additional Items

Consistent with an assembly occupancy, various floor areas have become used for storage throughout the building. A review of the floor area is recommended to ensure adequate egress width is provided for quick access to exit in emergency conditions. Various table and chair arrangements are possible within this high use Assembly Occupancy and staff should be trained to ensure adequate egress routes are provided between furniture and temporary installations.

4.0 CONCLUSION

This assessment report has outlined the general existing conditions of the existing life safety systems at the Minoru Place Activity Centre. This report is based on a visual review of the complex in conjunction with a review of available drawings. No testing of life safety systems was conducted in conjunction with the preparation of this report nor was any destructive testing done to any materials or assemblies.

Prepared by: **DGBK Architects**

Building Enclosure Condition Assessment

Minoru Place Seniors' Centre
7660 Minoru Gate, Richmond, BC

Presented to:

DGBK Architects
Suite 950–1500 West Georgia Street
Vancouver, BC V6G 2Z6

Attention: Mr. Peter Sickert

LDR ENGINEERING GROUP
480 – 6400 Roberts Street, Burnaby

May 19, 2017
Project No. 17-081

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APPENDICES

1.0 INTRODUCTION

1.1 TERMS OF REFERENCE AND SCOPE OF SERVICES

LDR Engineering Group (LDR) was retained by DGBK Architects to conduct a building enclosure condition assessment (BECAs) at Minoru Place Seniors' Centre, 7660 Minoru Gate, Richmond, BC. The assessment was performed in general conformance with our proposal dated March 16, 2017, and authorized March 30, 2017.

1.2 PROFESSIONAL LIMITATIONS

LDR's building enclosure condition assessment focused on assessing the current building enclosure performance of the complex. The review does not include observations of all locations throughout the complex. LDR reviewed a representative sample of typical details. The selection of details for review was based on LDR's previous experience with similar construction. LDR does not claim to have uncovered all the deficiencies or defects during this review. Some of the deficiencies noted in this report could also exist in other areas. Other deficiencies may not have been reported, and consequently not observed by LDR.

The information presented in this report is a review of the current condition at the site, within the terms of reference and limitations outlined in our proposal. We have been asked to make opinions based solely on the sampling of existing components. Consequently, further investigation or additional testing may change our current opinions.

No investigative method can completely eliminate the possibility of obtaining partially imprecise or incomplete information—it can only reduce the possibility to an acceptable level. Professional judgment was exercised in gathering and analyzing the information obtained and in the formulation of the conclusions. Like all professional persons rendering advice, we do not act as absolute insurers of the conclusions we reach, but we commit ourselves to care and competence in reaching these conclusions.

LDR has prepared this report solely for the use of the client. This report should be read in its entirety. LDR accepts no responsibility for damages suffered by third parties as a result of decisions or actions based on this report. LDR has not reviewed life-safety, structural components, environmental, and indoor air quality issues in our investigation. Our scope of services does not include for review of potential health concerns related to the presence of mould.

Please also refer also to our Standard Interpretation of LDR Report in Appendix A. These instructions form an integral part of this report and must be included with any copies of this report.

1.3 BUILDING DESCRIPTION

The site plan (from Howard Yano Architects, dated 1985) and aerial view (from Google Maps) of the complex are shown in Figure 1 and Figure 2 ,respectively. A project north is used to refer to each elevation, as shown in Figure 1 and Figure 2.

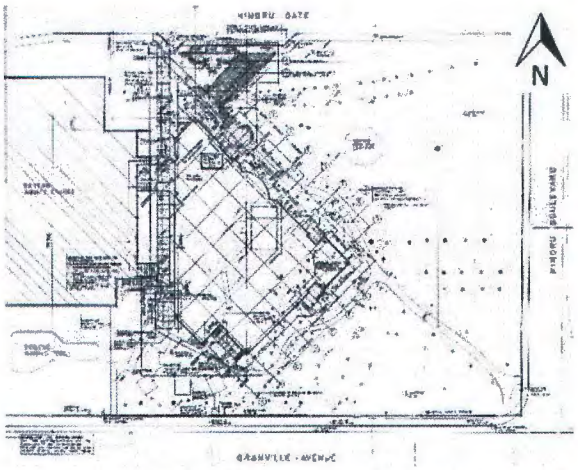


Figure 1 – Site Plan (from Howard Yano Architects).

Figure 2 – Aerial View (from Google Maps).

Various building elevations are shown from Figure 3 to Figure 7.

Figure 3 – Partial View of North-east Elevation.

Figure 4 – Partial View of West Elevation.

Figure 5 – Partial View of South-west Elevation.

Figure 6 – Partial View of North-west Elevation.

Figure 7– Partial View of South-east Elevation.

1.4 DOCUMENTS REVIEWED

Documentation (related to the building enclosure) provided by DGBK Architects for our reference is listed in Table 1 below.

Table 1 – Documentation Provided

Description	Author	Date
Architectural Drawings	Howard Yano Architects	July 1985
Architectural Drawings	Henry Hawthorn Architect	December 1989
Richmond Cultural Centre Annex – Facility Analysis	Urban Arts Architecture and Urban Design	September 2015

The original building is a single-storey wood-framed constructed circa 1986. Based on the provided documentation, an addition was constructed at the south-west corner approximately four years after original construction.

2.0 OBSERVATIONS, DISCUSSION, AND RECOMMENDATIONS

This section includes a description of relevant building enclosure items, observations, deficiencies, and recommendations. Deficiencies are not intended to be a complete list, but are a representative sample that should serve to illustrate the severity and extent of problems. They reflect a focused review of issues, which in our experience, are known for failure.

Deficiencies were assessed based on:

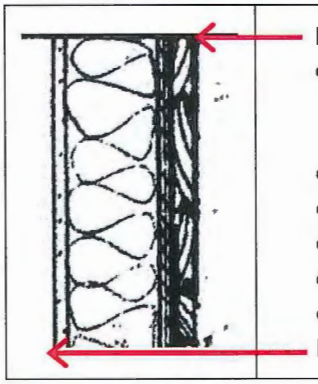
- Items that have resulted in, or have potential to result in water ingress.
- Items that may reduce serviceability and/or add to maintenance.
- Deviations from reasonable levels of workmanship.

Fieldwork was conducted on April 7, 2017. At the time of our investigations it was raining or overcast, and the temperature was approximately 12°C. We accessed both the interior, roof, and exterior of the building. Our investigation included a visual review of the key building envelope assemblies, as well as a moisture content survey of the cladding. No exploratory openings or probe holes were made.

2.1 EXTERIOR WALLS (FIELD OF WALL)

The exterior walls are primarily clad in painted horizontal cedar siding (Figure 8). The wall assembly, from exterior to interior is indicated on Architectural Drawing A8 (Figure 9) and through visual observation to be:

The exterior wall assembly, based on architectural drawings, and visual observation is:



Exterior
- painted horizontal cedar siding (replaced with cementitious horizontal siding at some locations at the roof level), and furred-out stucco cladding at the base of walls
- building paper
- plywood sheathing
- 2x4 wood framing filled with R 12 batt (fibreglass) insulation
- polyethylene vapour barrier
- gypsum wall board

Interior

Figure 8 – Painted horizontal cedar siding

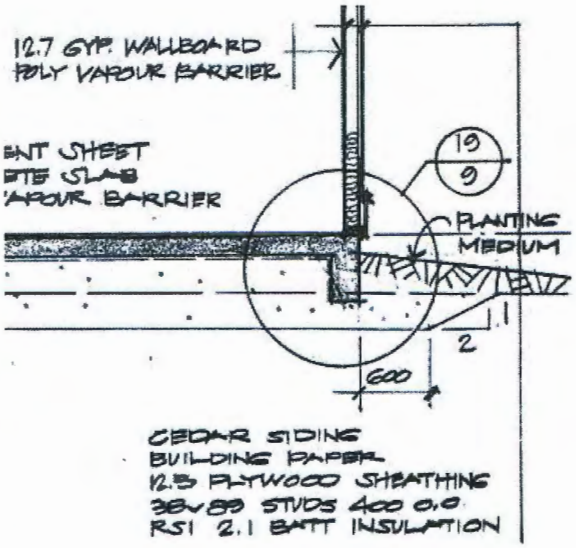


Figure 9 – Exterior wall assembly with horizontal cedar siding (from Howard Yano Architects).

The wall assembly design, from a rain resistance point of view, is known as a "concealed barrier". In this design, the building paper behind the cladding is considered to be the primary moisture barrier as some incidental moisture is expected to leak past the siding. However, the majority of the water is meant to be deflected by the exterior surface of the siding and the design does not incorporate an intentional drainage path to the exterior.

Water ingress past the moisture barrier may enter the building, causing obvious inconvenience to occupants. Additionally, many of the materials inboard of the building paper are intolerant of water. Interior finishes may be damaged, and continued wetting of wood components in the wall can cause fungal growth and the wood to decay. The fungal growth may be unhealthy to occupants, and the wood decay may advance to the point where the structural capacity of the wood is decreased significantly.

This type of wall design was common for multi-unit residential buildings in the Lower Mainland at the time Minoru Place Seniors' Centre was constructed. Over the past few decades, the performance of such construction in weather-exposed conditions (e.g. minimal overhangs, few surrounding buildings or other cover, increased height, exposed east and south elevations, proximity to the ocean, elevation of the site) in the Lower Mainland has been very poor. Consequently, the City of Vancouver Building By-Law has not allowed this type of construction since 1996. The 2012 British Columbia Building Code highly recommends the use of rainscreen walls, but does allow the design professional to use judgment depending on the climate of the region.

Observations and Discussion

1. The wood framed exterior walls bear on the concrete slab on grade. This is shown on the architectural drawings and was verified on site (Figure 10 and Figure 11). The architectural drawings indicate an elevation difference between the finished grade and top of slab on grade; however, at many locations the finished grade is near the top of the slab. The current building code indicates foundation walls shall be not less than 150mm above the finished grade. We observed that water ingress was occurring at the base of wall at multiple locations (Figure 12).

Figure 10 – Typical base of wall finished grade near the top of the slab on grade.

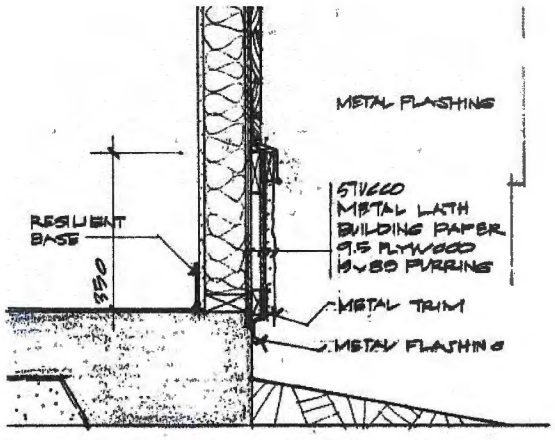


Figure 11 – Typical base of wall (from Howard Yano Architects).

Figure 12 – Typical water ingress at the base of wall.

2. We observed microbial growth and other signs of water ingress in the sprinkler room. We suspect the source of the water ingress is poor detailing at the glass canopy to wall interface next to the main entrance on the north-east elevation.

Figure 13 – Suspect detailing at the glass canopy to wall interface next to the main entrance on the north-east elevation.

Figure 14 – Signs of water ingress in the sprinkler room, below the glass canopy to wall interface on the north-east elevation.

3. The metal base plate at exterior columns appears to be only shop painted. This is less durable than galvanization.

Figure 15 – Typical base of exterior column.

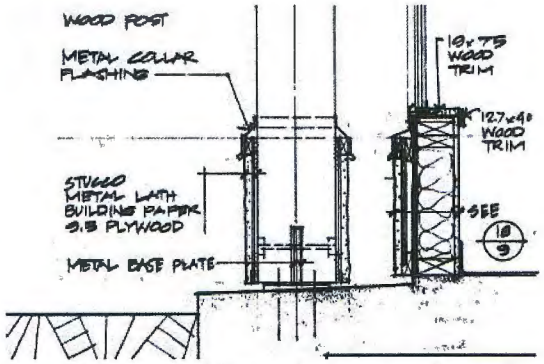


Figure 16 – Typical base of exterior column (from Howard Yano Architects).

4. At some locations, such as the exterior columns, the top of the slab on grade is exposed and there is no waterproofing membrane at the wall upturns (Figure 15 and Figure 16).
5. The paint finish on the horizontal cedar siding and metal flashing is delaminating and damaged in many areas.

Figure 17 – Delaminating paint on metal flashing.

Figure 18 – Delaminating paint finish on the horizontal cedar siding.

6. The horizontal cedar and cementitious horizontal siding are stained at various locations. In addition, at many locations the horizontal cedar siding is deteriorated and/or has elevated moisture content.

Figure 19 – Stained horizontal cedar siding.

Figure 20 – Stained cementitious horizontal siding at the roof.

Figure 21 – Deteriorated horizontal cedar siding above window head flashing.

Figure 22 – Deteriorated horizontal cedar siding.

Figure 23 – Elevated moisture content and deterioration of horizontal cedar siding.

7. The joints at the cementitious horizontal siding are sealed, at some of the locations the sealant has failed.

Figure 24 – Failed sealant at joint in the cementitious horizontal siding.

8. At the base of the wall, the stucco stop is corroding at various locations.

Figure 25 – Corroding stucco stop at the base of wall.

9. The soft landscaping (vegetation) is in close proximity to the building on most elevations. Vegetation holds moisture against the walls and reduces drying capacity, resulting in increased staining and deterioration at these locations.

Figure 26 – Vegetation in close proximity to the exterior wall and staining on the cladding.

Figure 27 – Vegetation in close proximity to the exterior walls.

10. From the interior, we observed that the vapour barrier is not continuous at various locations, and it is unclear if there is a defined air barrier.

Figure 28 – Discontinuous vapour barrier.

Recommendations

1	Remove the existing cladding and re-clad with a rainscreen wall assembly with improved detailing, including, but not limited to, improved air barrier continuity and waterproofing the base of walls.
2	Lower the finished grade, so there is an elevation difference between the finished grade and top of slab-on-grade. Waterproof the slab-on-grade where it extends beyond the building footprint.
3	Remove and/or adjust vegetation that are in close proximity to exterior walls.

2.2 EXTERIOR WALL PENETRATIONS

Penetrations through the exterior walls are critical from a water resistance perspective. Since they are more complicated to address in design and construction than the field of the wall, they are often prone to water ingress. The most common penetrations are windows and doors. In addition, there are other penetrations such as vents and exterior lights.

2.2.1 WINDOWS

Observations and Discussion

1. The windows at Minoru Place appear to be the original aluminum framed, double glazed windows. There are two types of windows: aluminum-framed windows with rolled-in glazing stops, and aluminum-framed storefront windows.

Figure 29 – Aluminum-framed windows with rolled-in glazing stops.

Figure 30 – Aluminum-framed storefront window.

2. The operable vents are a casement style. Many of the operable vents were difficult to open, close, and/or lock, and require adjustments. Some windows were missing or had broken handles or hardware.

Figure 31 – Casement opening vent.

Figure 32 – Broken window hardware.

3. The mitred corners of aluminum frames are mechanically fastened together and caulked with small joint sealant. Mitred corners are generally difficult to seal during the manufacturing process. In addition, it is hard to maintain the sealant during the service life of the window; therefore, water ingress through the mitred corners is a common problem contributing to wood decay below the bottom corners of the windows. At some locations, remedial sealant has been installed overtop of the mitred locations; however, this sealant does not extend into the mitred corners within the glazing pocket. We observed failed/de-bonded sealant (both original and remedial) at the mitered corners at various locations. Based on discussions with the occupants, the weep holes have recently been cleaned due to water build up in the condensation tracks. If water build up occurs within the condensation track, and the sealant has failed at the mitred corners, this may result in water ingress into the wall assembly below.

4. Some of the insulating glazing units (IGUs) were found to be failing. Many of the IGUs are original, but we found various units that have been replaced. Both the replaced and original IGUs were found to be failing.

Figure 33 – Failed IGU.

Figure 34 – Failed IGUs

5. The sealant around windows appear to be failing.

Figure 35 – Failed sealant around window.

6. Some of the gaskets have shrunk.

Figure 36 – Shrunken gasket at a window.

Recommendations

4	Replace the windows with new windows of improved rain, air, and thermal resistance. These will likely be thermally broken aluminum or fibreglass framed windows with low-e coated, argon filled, IGUs. At all locations, the replacement of windows/doors is to include improved detailing (e.g. new sealants, and rain screen design with sub-sill waterproofing membrane).

2.2.2 DOORS

Observations and Discussion

1. The doors at Minoru Place are glazed swing and automatic sliding doors which are located within the storefront assemblies. There are also hinged pressed steel doors at various locations.

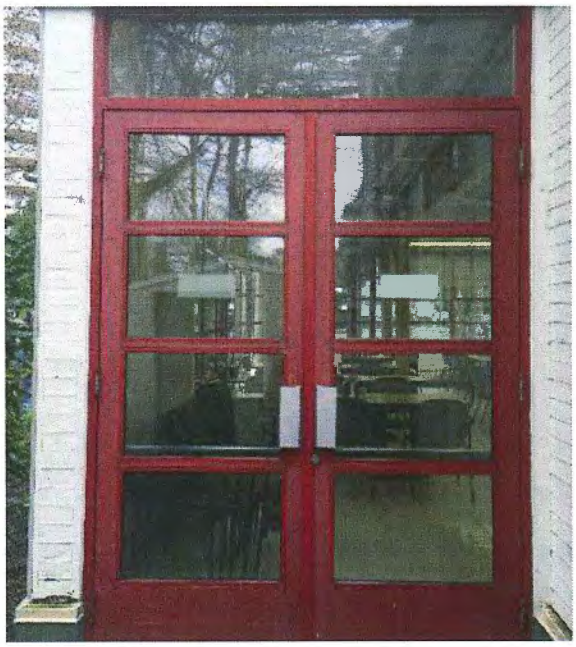


Figure 37 – Glazed swing door.

Figure 38 – Pressed steel door.

Figure 39 – Glazed automatic sliding door.

2. One of the doors to the rooftop mechanical room is constructed of wood. These doors are not meant to be fully exposed, and as such the wood door slab is deteriorating.

Figure 40 – Wood door slab at the mechanical room.

3. Poor detailing at the interface between door and cladding at some locations resulted in water ingress. We observed water ingress at the mechanical room door head.

Figure 41 – Water ingress at mechanical room door head.

4. Many of the doors do not have overhang (i.e. completely exposed) and these doors have low water penetration resistance.

Figure 42 – Exposed pressed steel door.

Figure 43 – Exposed doors at the storefront system.

5. Some doors do not have a metal threshold, and some metal threshold fasteners are corroding.

Figure 44 – Corroding fasteners at door threshold (typical).

6. The detailing at the sill of the doors is suspect, and water at some of the doors was noted.

Figure 45 – Water ingress at door sill.

7. Many of the doors do not incorporate gasketing, or the gasketing is damaged.

Figure 46 – No gasket around the door and daylight is visible through the door slabs.

Figure 47 – No gasket around the door.

Recommendations

5	Replace the glazed doors with new doors of improved rain, air, and thermal resistance. These will likely be thermally broken aluminum framed with low-e coated, argon filled, IGUs. Also replace the pressed steel and wood doors with new pressed steel doors to allow for improved detailing. For pressed steel doors not under cover, canopies or large metal head flashings can be considered. At all locations, the replacement of doors is to include improved detailing (e.g. new sealants and rain screen design with sub-sill waterproofing membrane).

2.2.3 SKYLIGHTS

Observation and Discussion

1. The skylights (i.e. located over occupied space) at Minoru Place are pressure-plate aluminum glass skylights (Figure 48). Glass canopies (i.e. located over exterior space) are T-bar aluminum glass canopies (Figure 49).

Figure 48 – Pressure-plate aluminum glass skylight.

Figure 49 – T-bar aluminum-framed glass canopy.

2. Some of the fasteners at skylights appear to be corroding.

Figure 50 – Corroding fasteners at skylight (typical).

3. There is moisture staining adjacent to and below the skylight at the multipurpose room at north-east side of the building.

Figure 51 – Signs of water ingress at skylight.

Figure 52 – Signs of water ingress at skylight.

4. The detailing is a suspect at the interface between the glass canopy to wall interface, at all locations.

Figure 53 – Poor detailing at glass canopy to wall interface and deterioration of horizontal cedar siding.

Recommendations

6	Perform skylight water penetration testing to better confirm the performance of the skylights and the necessary repairs. Alternatively, consider replacing the skylight assemblies.
7	In conjunction with the wall rehabilitation, remove and replace glass canopies with a new assembly with improved performance and detailing.

2.2.4 MISCELLANEOUS PENETRATIONS

Observation and Discussion

At most locations, there is no sealant around wall penetrations, such as scupper drain and hose bib.

Figure 54 – Wall penetration (typical).

Figure 55 – Wall penetration (typical).

Recommendations

8	Install new sealant at transitions between dissimilar materials and penetrations (e.g. windows, doors, vents, lights, hose bib, scupper drains).

2.2.5 METAL FLASHING

Metal flashing is a common element used to waterproof around wall penetrations and over changes in the wall planes, and therefore is included in this section as well.

1. Metal flashings seams at Minoru Place were not adequately detailed or sealed. Rather than having s-lock seams, the metal flashing is only overlapped.

Figure 56 – Metal flashing seam unsealed and only, overlapped.

2. Metal flashings do not incorporate end dams.

Figure 57 – Metal flashing at the door head does not incorporate an end dam. Water runoff can cause deterioration of the siding.

3. At many locations, the metal flashing is back sloped towards the building.

Figure 58 – Back sloped metal flashing at a window head.

Recommendations

9	Where existing cladding is being re-clad with a rainscreen wall assembly, improve the waterproof detailing at metal flashings through the use of proper waterproofing membranes, adequate slope, appropriate metal flashing connections, sealant at joints and interfaces, and end dams/ saddles at terminations.

2.3 ROOF

Observation and Discussion

1. The original main roof was a built-up low-sloped roofing according to the architectural drawings, and has been replaced with torch-applied roofing membrane. Steep sloped roofing was originally cedar shingle according to architectural drawings, but these have been replaced with standing seam metal roofs (Figure 59 to Figure 62).

Figure 59 – Low-sloped roof.

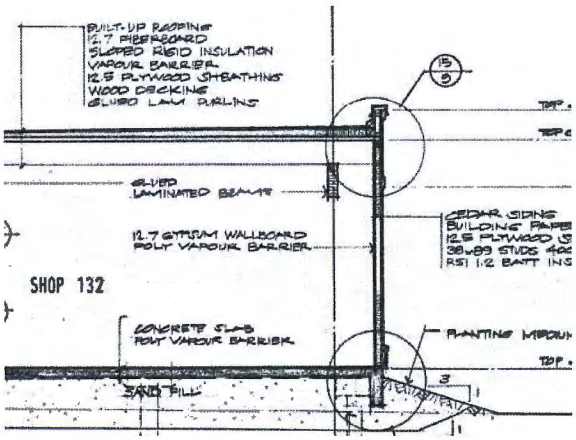


Figure 60 – typical roof assembly (from Howard Yano Architects).

Figure 61 – Standing seam metal sloped roof.

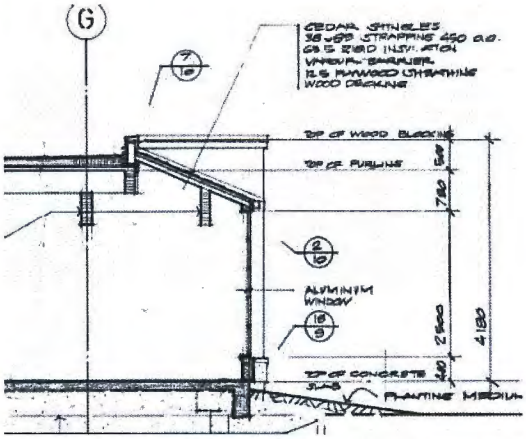


Figure 62 – Original cedar shingle roof (from Howard Yano Architects).

2. We could not confirm the age of the roofs. It appears that the roof is not all the same age, and there are possible two dates of installation. Based on our review, it is likely the remaining service of the roofs is between 5 and 10 years. We recommend the roofing should be reviewed again within the next 5 years.

3. We observed fish mouths and excessive bleed out in the torch-applied roofing membrane. At some locations, the roofing membrane is not well adhered, has failed seams, being cut/damaged by the metal flashing, or has exposed edges (Figure 63 to Figure 69).

Figure 63 – Fish mouth in the roofing membrane.

Figure 64 – Roofing membrane bleed out.

Figure 65 – Roofing membrane not well adhered.

Figure 66 – Failed roofing membrane seams.

Figure 67 – Metal flashing cutting into the roofing membrane.

Figure 68 – The roofing membrane not extending into door rough opening and has exposed edge.

Figure 69 – Exposed edge of roofing membrane.

4. Ponding water at various locations on the roof, including at scupper drains.

Figure 70 – Ponding water within the field of roof where pavers are obstructing drainage.

Figure 71 – Ponding water adjacent to scupper drain.

5. We observed debris and/or moss growth. At some locations, the debris and/or moss growth is restricting drainage.

Figure 72 –Debris between roof pavers and obstructed drainage.

Figure 73 – Moss growth on the roofing membrane (typical).

6. At some locations, the metal flashing on the parapet is not well-secured and the attachment of roof parapet metal flashing is questionable.

Figure 74 – Roof parapet metal flashing not well-secured.

7. At various locations, the paint on the metal flashing is delaminating.

Figure 75 – Delaminating paint at metal flashing.

8. At various saddle interfaces, there is exposed self-adhered membrane which is deteriorating due to UV degradation. Detailing at saddle interfaces are suspect.

Figure 76 – Suspect saddle interface and exposed self-adhered membrane.

9. At some locations, the extraction fans are not well secured, and/or have unsealed fasteners.

Figure 77 – Extraction fan not well secured

Figure 78 – Unsealed fasteners at extraction fan.

10. On top of the mechanical room, roof vents are in close proximity to roof edge. This makes effective roofing membrane detailing more difficult.

Figure 79 – Roof vent in close proximity to the roof parapet.

11. The roof access hatch has corroded hinges and hardware, and seal is damaged and is no longer effectively secured in place.

Figure 80 – Roof access hatch.

12. The roof penetrations rely on a single line of defence (i.e. sealant or a storm collar). Where possible, it is recommended to incorporate two lines of defence.

Figure 81 – Roof access vent relies on single sealant.

13. The fasteners securing electrical cables are corroding.

Figure 82 – Corroded fasteners at electrical cables.

Recommendations

10	Review and correct deficiencies in the 2-ply SBS membrane.
11	Adequately secure all metal flashings.
12	Remove and replace failed sealant.
13	Improve detailing at roof penetrations, ensuring all incorporate two lines of defence.
14	Ensure all equipment and fans are well secured to the roof, replace all corroding fasteners, and seal all penetrations.
15	Replace roof hatch hardware and provide a new gasket.
16	As part of regular maintenance, remove debris and ensure the drains are cleaned, ponding water is removed/minimized, and the drainage is not restricted.
17	During the wall and door rehabilitation, improve the transition detailing to the roofs.
18	During our review, we did not have access to the metal roofs. However, based on our experience, we recommend that the sloped metal roofing be replaced at the same time as the exterior wall rehabilitation, with improved detailing.

3.0 TESTING

3.1 Wood Moisture Content Survey

A survey of the moisture content of the horizontal cedar siding was conducted on April 7, 2017. The main purpose of a moisture content survey was to determine if there is a systemic problem of elevated moisture content and/or decay of the horizontal cedar siding. Note that since our review did not include a destructive testing, we only measured the moisture content of the siding, not the sheathing behind the siding, which would have required us to drill holes through the siding. The moisture content survey was still informative in that the moisture content within the wood was measured (not at the painted wood surface), so elevated readings do give an indication of whether the wood is being saturated and not drying easily.

Methodology

The moisture meters used were a Delmhorst BD-2100 (serial # 45296).

Note that each reading is only a measure of the moisture content of the horizontal cedar siding at a discrete location, at the time the reading is taken. The moisture content can vary dramatically just a few feet away, as water ingress is generally concentrated at certain locations. We typically take moisture readings at locations where, based on our experience, water is prone to enter behind the cladding, where evidence suggests that water may have penetrated the cladding (i.e. staining, moss growth), and/or where occupants report a problem. Included are readings taken at random locations to establish a baseline.

Interpretation

The moisture content readings have been colour- and shape-coded according to the following criteria:

- *Green (circle) - Wood moisture content reading 19.0% and lower*
  Moisture contents in this range for wood are not elevated. The wood in this case has typically reached moisture equilibrium with its surroundings. Wood is generally considered immune to fungal growth in this moisture content range.
- *Yellow (pentagon) - Wood moisture content reading from 19.1% to 27.9%, inclusive*
  At locations with moisture contents in this range, it is probable that water may be entering behind the cladding. Some decay fungi remain active at these moisture levels. These are areas of concern.
- *Red (square) - Wood moisture content reading 28.0% and above*
  At locations with moisture contents in this range, it is likely that water is entering behind the cladding. These are areas of greatest concern, as decay fungi can germinate and propagate.

Moisture content readings are recorded to the first decimal place, as they appear on the moisture meter. Despite poor accuracy, readings over 30.0% are still recorded because they provide a relative idea of moisture content. At moisture content readings greater than 40.0%, the moisture meter will indicate a reading of 40.0%. Such readings are recorded in our drawings as +40.0%.

Results

All moisture content readings are indicated in Appendix C and on building elevations in Appendix B. The following table is a summary of the survey results.

Table 2 – Moisture Content Survey Results (% of total in brackets)

Green	Yellow	Red	Total
5 (26%)	10 (53%)	4 (21%)	19

Of the 19 moisture content readings we took, 14 (74% of readings) were at elevated levels.

4.0 SUMMARY OF RECOMMENDATIONS

The following is a summary of the recommendations made in in Section 2.0 of this report.

Table 3 – Recommendations

Minoru Place Seniors' Centre	
1	Remove the existing cladding and re-clad with a rainscreen wall assembly with improved detailing, including, but not limited to, improved air barrier continuity and waterproofing the base of walls.
2	Lower the finished grade, so there is an elevation difference between the finished grade and top of slab-on-grade. Waterproof the slab-on-grade where it extends beyond the building footprint.
3	Remove and/or adjust vegetation that are in close proximity to exterior walls.
4	Replace the windows with new windows of improved rain, air, and thermal resistance. These will likely be thermally broken aluminum or fibreglass framed windows with low-e coated, argon filled, IGUs. At all locations, the replacement of windows/doors is to include improved detailing (e.g. new sealants, and rain screen design with sub-sill waterproofing membrane).
5	Replace the glazed doors with new doors of improved rain, air, and thermal resistance. These will likely be thermally broken aluminum framed with low-e coated, argon filled, IGUs. Also replace the pressed steel and wood doors with new pressed steel doors to allow for improved detailing. For pressed steel doors not under cover, canopies or large metal head flashings can be considered. At all locations, the replacement of doors is to include improved detailing (e.g. new sealants and rain screen design with sub-sill waterproofing membrane).
6	Perform skylight water penetration testing to better confirm the performance of the skylights and the necessary repairs. Alternatively, consider replacing the skylight assemblies.
7	In conjunction with the wall rehabilitation, remove and replace glass canopies with a new assembly with improved performance and detailing.
8	Install new sealant at transitions between dissimilar materials and penetrations (e.g. windows, doors, vents, lights, hose bib, scupper drains).
9	Where existing cladding is being re-clad with a rainscreen wall assembly, improve the waterproof detailing at metal flashings through the use of proper waterproofing membranes, adequate slope, appropriate metal flashing connections, sealant at joints and interfaces, and end dams/ saddles at terminations.
10	Review and correct deficiencies in the 2-ply SBS membrane.
11	Adequately secure all metal flashings.
12	Remove and replace failed sealant.
13	Improve detailing at roof penetrations, ensuring all incorporate two lines of defence.
14	Ensure all equipment and fans are well secured to the roof, replace all corroding fasteners, and seal all penetrations.
15	Replace roof hatch hardware and provide a new gasket.

Minoru Place Seniors' Centre	
16	As part of regular maintenance, remove debris and ensure the drains are cleaned, ponding water is removed/minimized, and the drainage is not restricted.
17	During the wall and door rehabilitation, improve the transition detailing to the roofs.
18	During our review, we did not have access to the metal roofs. However, based on our experience, we recommend that the sloped metal roofing be replaced at the same time as the exterior wall rehabilitation, with improved detailing.

5.0 CLOSURE

This report was prepared for the exclusive use of our client and their appointed agents, and cannot be used for any other purpose without written consent of LDR Engineering Group.

We appreciate this opportunity to be of service to you. If you have any questions regarding the contents of this report, or if we can assist you further on this project, please contact the undersigned.

Yours truly,

LDR Engineering Group

Prepared by:

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Building Science Consultant

Reviewed by:

PROFESSIONAL ENGINEER
PROVINCE OF BRITISH COLUMBIA
C. D. BLACK
35783
May 19 2017

Christopher Black, M.A.Sc., P.Eng.
Senior Building Science Consultant

APPENDIX A — STANDARD INTERPRETATION OF LDR REPORT

Standard Interpretation of LDR Report

1.0 STANDARD OF CARE

This Report has been prepared in accordance with generally accepted engineering consulting practices in this area. No other warranty, expressed or implied, is made.

2.0 COMPLETE REPORT

All documents, records, data and files, whether electronic or otherwise, generated as part of this assignment are a part of the Report which is of a summary nature and is not intended to stand alone without reference to the instructions given to us by the Client, communications between us and the Client, and to any other reports, writings, proposals or documents prepared by us for the Client relative to the specific site described herein, all of which constitute the Report. In order to properly understand the suggestions, recommendations and opinions expressed herein, reference must be made to the whole of the report. We cannot be responsible for use by any party of portions of the report without reference to the whole report.

3.0 BASIS OF THE REPORT

The Report has been prepared for the specific objectives and purpose that were described to us by the Client. The applicability and reliability of any of the findings, recommendations, suggestions, or opinions expressed in the document are only valid to the extent that there has been no material alteration to or variation from any of the said descriptions provided to us unless we are specifically requested by the Client to review and revise the Report in light of such alteration or variation.

4.0 USE OF THE REPORT

The information and opinions expressed in the Report, or any document forming the Report, are for the sole benefit of the Client. No other party may use or rely upon the report or any portion thereof without our written consent. The contents of the Report remain our copyright property and we authorise only the Client and Approved Users to make copies of the Report only in such quantities as are reasonably necessary for the use of the Report by those parties. Any use which a third party makes of the Report, or any portion of the Report, is the sole responsibility of such third parties. We accept no responsibility for damages suffered by any third party resulting from unauthorised use of the Report.

5.0 INTERPRETATION OF THE REPORT

a. Nature and Exactness of Descriptions: Classification and identification of building enclosure assessment and engineering estimates have been based on investigations performed in accordance with the standards set out in Paragraph 1. Classification and identification of these factors are judgmental in nature and even comprehensive sampling and testing programs, implemented with the appropriate equipment by experienced personnel, may fail to locate some conditions. All investigations, or building enclosure descriptions, utilizing the standards of Paragraph 1 will involve an inherent risk that some conditions will not be detected and all documents or records summarising such investigations will be based on assumptions of what exists between the actual points sampled. Actual conditions may vary significantly between the points investigated and all persons making use of such documents or records should be aware of, and accept, this risk. Some conditions are subject to change over time and those making use of the Report should be aware of this possibility and understand that the Report only presents the conditions at the sampled points at the time of sampling. Where special concerns exist, or the Client has special considerations or requirements, the Client should disclose them so that additional or special investigations may be undertaken which would not otherwise be within the scope of investigations made for the purposes of the Report.

b. Reliance on Provided Information: The evaluation and conclusions contained in the Report have been prepared on the basis of conditions in evidence at the time of site inspections and on the basis of information provided to us. We have relied in good faith upon representations, information and instructions provided by the Client and others concerning the site. Accordingly, we cannot accept responsibility for any deficiency, misstatement or inaccuracy contained in the report as a result of misstatements, omissions, misrepresentations or fraudulent acts of persons providing information.

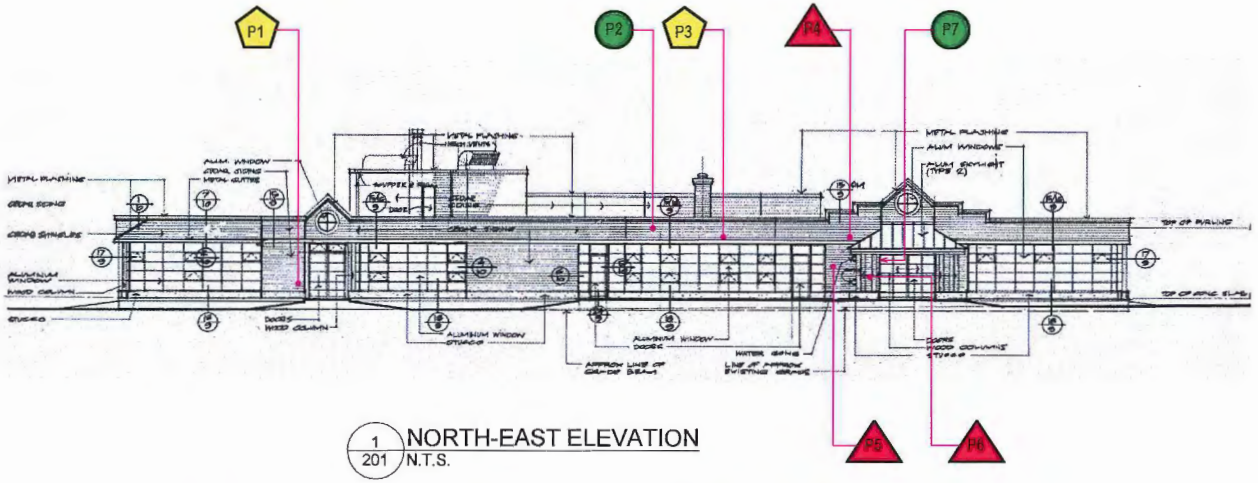
c. To avoid misunderstandings, LDR Engineering Group (LDR) should be retained to work with the other design professionals to explain relevant engineering findings and to review their plans, drawings, and specifications relative to engineering issues pertaining to consulting services provided by LDR. Further, LDR should be retained to provide field reviews during the construction, consistent with building codes guidelines and generally accepted practices. Where applicable, the field services recommended for the project are the minimum necessary to ascertain that the Contractor's work is being carried out in general conformity with LDR's recommendations. Any reduction from the level of services normally recommended will result in LDR providing qualified opinions regarding adequacy of the work.

6.0 ALTERNATE REPORT FORMAT

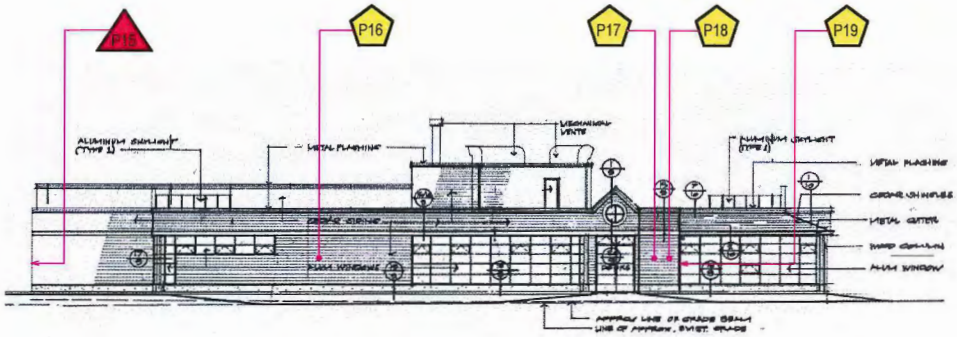
When LDR submits both electronic file and hard copies of reports, drawings and other documents and deliverables, the Client agrees that only the signed and sealed hard copy versions shall be considered final and legally binding.

The Client recognizes and agrees that electronic files submitted by LDR have been prepared and submitted using specific software and hardware systems. LDR makes no representation about the compatibility of these files with the Client's current or future software and hardware systems.

APPENDIX B — ELEVATIONS INDICATING RESULTS AND LOCATIONS OF MOISTURE CONTENT SURVEY



1/201 NORTH-EAST ELEVATION
N.T.S.



2/201 SOUTH-EAST ELEVATION
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LEGEND: MOISTURE PROBE READINGS

- "ARROW" LEADER DENOTES LOCATION OF MOISTURE PROBE READING ON WALL PERPENDICULAR TO PAGE.
- "DOT" LEADER DENOTES LOCATION OF MOISTURE PROBE READING ON WALL AS SHOWN.
- GREEN CIRCLE INDICATES A MOISTURE CONTENT READING 19.0% AND LOWER.
- YELLOW PENTAGON INDICATES A MOISTURE CONTENT READING FROM 19.1% TO 27.9% INCLUSIVE.
- RED TRIANGLE INDICATES A MOISTURE CONTENT READING OF 28.0% OR GREATER AND/OR LOCATION WITH SIGNIFICANT DECAY/DETERIORATION.

LDR ENGINEERING GROUP
480– 6400 Roberts Street Burnaby, BC V5G 4C9

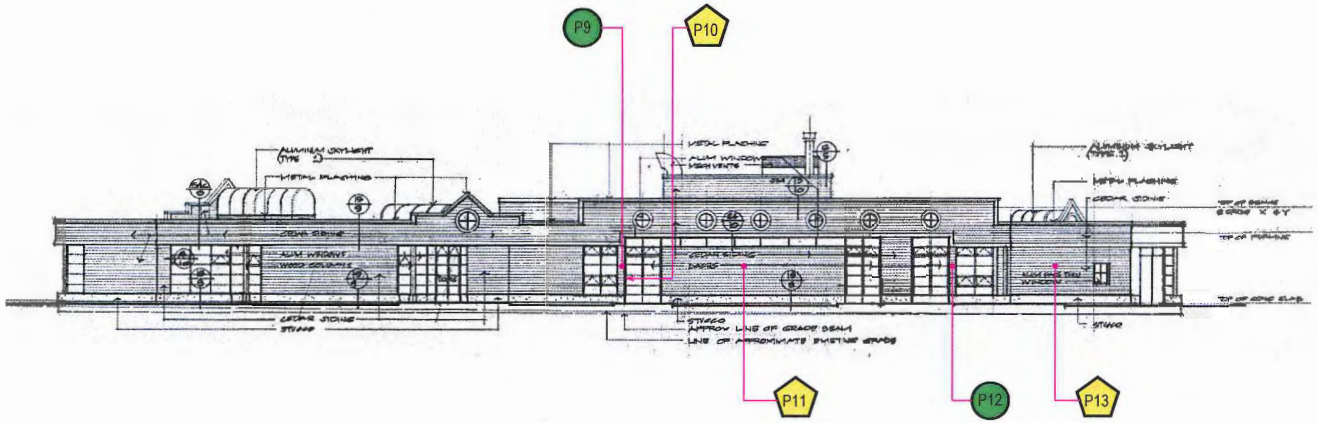
DATE: May 19, 2017

PROJECT: MOISTURE CONTENT SURVEY
MINORU PLACE SENIORS' CENTRE
RICHMOND, BC

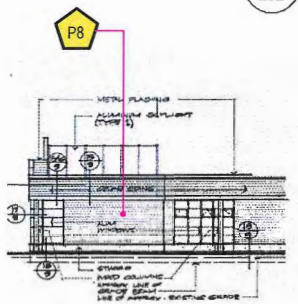
PROJECT NO.	DFTR.	DSGN.	CHK.
17-081			

TITLE: HORIZONTAL CEDAR SIDING MOISTURE CONTENT RESULTS

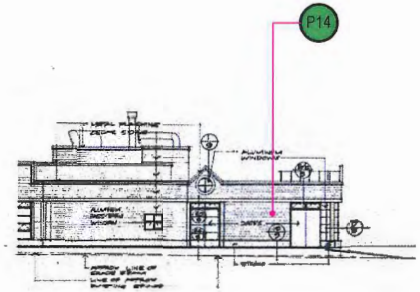
SCALE:	DWG NO.
NOT TO SCALE	201



1/202 WEST ELEVATION
N.T.S.



2/202 NORTH-WEST ELEVATION
N.T.S.



3/202 SOUTH-WEST ELEVATION
N.T.S.

LEGEND: MOISTURE PROBE READINGS

- "ARROW" LEADER DENOTES LOCATION OF MOISTURE PROBE READING ON WALL PERPENDICULAR TO PAGE.
- "DOT" LEADER DENOTES LOCATION OF MOISTURE PROBE READING ON WALL AS SHOWN.
- GREEN CIRCLE INDICATES A MOISTURE CONTENT READING 19.0% AND LOWER.
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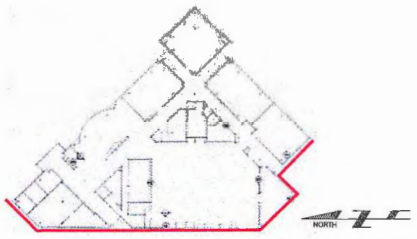

LDR ENGINEERING GROUP
480– 6400 Roberts Street Burnaby, BC V5G 4C9

DATE: May 19, 2017

PROJECT: MOISTURE CONTENT SURVEY
MINORU PLACE SENIORS' CENTRE
RICHMOND, BC

PROJECT NO.	DFTR.	DSGN.	CHK.
17-081			

TITLE: HORIZONTAL CEDAR SIDING MOISTURE CONTENT RESULTS

SCALE:	DWG NO.
NOT TO SCALE	202

APPENDIX C — MOISTURE CONTENT SURVEY

LDR ENGINEERING GROUP

CEDAR SIDING MOISTURE CONTENT SURVEY RESULTS

Project Name Minoru Place Senior Centre
Project Address 7660 Minoru Gate
Richmond, BC

May 19, 2017
Project No. 17-081

Probe No.	MC Colour Code	Elevation	Moisture Content of Wood %	Temperature Corrected Moisture Content %	Cladding Type	NOTES
P1		Northeast	22.5%	24.0%	Cedar Siding	
P2		Northeast	13.0%	14.0%	Cedar Siding	8" above window
P3		Northeast	26.0%	27.7%	Cedar Siding	Above flashing
P4		Northeast	38.0%	40.3%	Cedar Siding	At glass canopy to wall interface
P5		Northeast	34.7%	36.9%	Cedar Siding	
P6		Northeast	38.8%	41.2%	Cedar Siding	In close proximity to door jamb
P7		Northeast	12.2%	13.2%	Cedar Siding	At inside corner (protected by glass canopy)
P8		Northwest	21.9%	23.4%	Cedar Siding	Staining on horizontal cedar siding
P9		West	9.4%	10.2%	Cedar Siding	
P10		West	22.0%	23.5%	Cedar Siding	At trim
P11		West	22.0%	23.5%	Cedar Siding	
P12		West	8.2%	9.0%	Cedar Siding	Protected by small overhang
P13		West	22.1%	23.6%	Cedar Siding	Staining on horizontal cedar siding
P14		Southeast	11.4%	12.3%	Cedar Siding	
P15		Southeast	40.0%	42.4%	Cedar Siding	In close proximity to door jamb
P16		Southeast	18.8%	20.1%	Cedar Siding	
P17		Southeast	20.3%	21.7%	Cedar Siding	
P18		Southeast	17.8%	19.1%	Cedar Siding	
P19		Southeast	19.0%	20.3%	Cedar Siding	

Total	19.00	
Red	4.00	21%
Yellow	10.00	53%
Green	5.00	26%

GP - 179

Tree Stand Assessment

Minoru Place Seniors Centre, Richmond BC

May 1, 2017

Services provided by:

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Introduction

Judith Cowan was retained by DGBK Architects to conduct an assessment of the tree stand located in close proximity to the Minoru Place Seniors Centre at 7660 Minoru Gate, in Richmond BC.

Objective:

To determine the value of the tree stand in relation to future Minoru Plaza redevelopment and to consider the consequences of tree removal.

The purpose of the assessment is to provide information to DGBK Architects on the health and value of the tree stand for consideration as part of the interior renovation planning services they are conducting for the current and long-term use of the Minoru Place Seniors Centre. DGBK has requested tree stand valuation information because poor visibility and wayfinding issues to and from the Seniors Centre, and connectivity with the Cultural Centre Plaza have been highlighted as issues requiring improvement. Although not part of the interior planning work for the Minoru Place Seniors Centre per se, DGBK's feasibility studies have considered the interface between the building interior and exterior spaces, and the shared interface and the circulation routes which connect them (Figure 1). The exterior spaces are comprised of a passive park and Cultural Centre complex which includes the Art Gallery and Library. To this end, DGBK would like to determine the flexibility of realigning or creating new pedestrian circulation routes or expanding the surface area of the plaza, and the likelihood and extent to which the existing stand of trees would require removal or be impacted from construction.

In order to properly weigh risks and tradeoffs for future planning scenarios, a proper valuation of the tree stand in both ecological and social terms was conducted to be used as a device to inform decision-making processes for both DGBK and the City of Richmond.

Figure 1: Minoru Place Seniors Centre is situated at the edge of the existing tree stand in Minoru Park (front entry).

Figure 2: Proximity of individual tree specimens to the entrance and circulation routes leading to the Seniors Centre.

Methodology:

One site visit was conducted on April 23, 2017 by Judith Cowan, ISA Certified Arborist using the ISA's Limited Visual Assessment procedure which is suitable for assessing populations of trees near specified targets (the Minoru Place Seniors Centre) in order to identify obvious defects or specified conditions.[1] Photographs of site and trees were taken and all tree and stand attributes (height, dbh [diameter at breast height], and species) were ocular estimates only. The scope of the assessment did not include tree tagging because the specimens under review comprise part of the City of Richmond's Significant Tree Inventory and have already been tagged with unique identifiers (Figure 5).[2]

Site and Stand Description:

- The tree stand, Cultural Centre Complex and Minoru Place Seniors Centre are located within Minoru Park which is a 45 acre open space in the centre of Richmond. The park has a classic design and contains a wide range of public amenities including the Cultural Centre Complex, sports fields and facilities, water features and display gardens.
- The tree stand lies to the south and east of the Cultural Centre Complex and associated buildings. Of all the buildings, the Minoru Place Seniors Centre is located closest to the tree stand and has some individual trees within 10m of the building footprint.

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[1] From *Tree Risk Assessment: Levels of Assessment,* pages 12-20, ISA's Arborist News publication. Accessed on April 27, 2017: http://www.isa-arbor.com/myaccount/myeducation/resources/2012-april-ceuarb.pdf

[2] For more detailed information on the City of Richmond's Significant Tree Inventory contact the City at 604 276-4000.

- The site's elevation is approximately 1.0m above sea level, and no aspect or slope is discernable due to the flat topography. Minoru Park, and Richmond in general, are in the Coastal Douglas Fir, moist and mild subzone (CDFmm) of the Biogeoclimatic Ecosystem Classification (BEC) system. The CDFmm lies in the rainshadow of the Vancouver Island Coast Mountains resulting in warm, dry summers and mild, wet winters and represents the mildest climate in Canada.
- Stand Attributes:
    - Deciduous non-native (ornamental) hardwood species: Chestnut (*Aesculus*), Elm (*Ulmus*), Black locust (*Robinia)* and Oak (*Quercus*). Understorey vegetation is composed primarily of maintained lawn, shrub beds and foundation plantings near buildings.
    - Average tree height: 30-35m height
    - Crown-base height (the lowest portion of the canopy supporting live foliage):20m height
    - Diametre-at-breast height range (dbh) estimated at ~1.3m height: 30-70cm.
    - Age class: 60 – 80 years (planting of some specimens dates from 1925)
    - Population - ~100 trees
    - The stand as a whole can be described as having an even-age structure, and composed of taller trees (the 'dominants') and slightly smaller trees (the 'co-dominants').
- Defects observed on some trees included (Figure 3 and Figure 4):
    - Mechanical damage at the tree base from lawn mowing equipment (Figure 3 - left),
    - Small cavities between 0-2m height (Figure 3 - centre),
    - Buried root flares from excessive soil placement which may limit air exchange to the root system if the depth of soil is greater than 50mm, and can be an entry point for decay fungi (Figure 3 - right),
    - Longitudinal 1m long seams on lower trunks which may be indicative of decay columns. Pronounced reaction wood over the wound shows that the injuries are not recent (Figure 4),
    - Large branch stubs from previous pruning. Although not specifically a defect, these can become entry points for decay fungi.

Although decay fungi may be present with any type of scarring, wounding or mechanical injury, no decay fungi was noted.

Figure 3: Tree defects (L-R): mechanical injury from mowing equipment, basal cavity, and buried root flare.

Figure 4: Vertical scarring and pronounced wound wood formation could indicate possible internal decay.

Figure 5: The Tree stand forms part of the City's Significant Tree Inventory.

Discussion

The population of trees can be described as an even-aged stand (*i.e.* trees were planted at roughly the same time), and composed of large crowned specimens with broad horizontal and decurrent branching patterns typical for these species. This even-aged forest structure has produced a tree form which is

narrow and elongated as individuals stretch to compete for limited sunlight resources. In general, the canopy of live foliage occurs only in the upper 1/3 of the tree. The average tree spacing is between 2-5m, and this has prevented the development of their natural form and branching habit. Ideal spacing for ornamental shade trees of these species is approximately 20m when considering their mature size at approximately 80 years of age.

Tree density has also influenced tree form on the outer edges of the stand which exhibit imbalanced crowns and a phototropic lean as they try to capture maximum sunlight for photosynthesis (Figure 6). Additionally, routine maintenance pruning has lifted the base of trees crowns through the removal of lower branches likely due for multiple objectives including dead limb removal, improvement of sight lines, safety and clearance to service vehicles.

Figure 6: The phototropic lean exhibited by trees at the stand edge.

Even-aged stands can function as a single unit, and those individual trees within the stand, especially in the centre, have not been exposed to the wind forces nor the sunlight experienced by the edge trees. These are considerations when contemplating the removal of individual specimens for purposes such as enlarging the plaza, reconfiguring pathway alignments to the Minoru Place Seniors Centre, or to accommodate building / park amenity construction projects because they could create tree instability hazards and result in tree part or whole tree failures.

The trees directly surrounding the Minoru Place Seniors Centre occur at the edge of the tree stand under review (Figure 2), and they mark the transition point between parkland space and the buildings comprising the Library and Cultural Centre complex. Therefore targeted removal of individual trees is possible if planned in coordination with other master planning timelines. Prior to any tree removal

decision, an updated tree assessment is recommended using the ISA's more detailed *Basic Level Tree Risk Assessment* (TRAQ) methodology which visually assesses the condition of tree roots, trunks, crowns and branches to determine the risk of part or whole tree failure using a probability and consequence matrix.

Conclusion

Overall, the tree stand is in normal health and no significant defects indicating imminent tree failure were observed on the day of the assessment. The stand is a young forest beginning to mature and individual trees have adapted to the close proximity of neighbouring trees and are now dependent upon each other for stability. To maintain the viability and long-term health of the stand, it is recommended over the course of the next 10 years to selectively thin suppressed co-dominant trees at a rate of no more than two trees per year in order to create canopy gaps, and allow time for the remaining trees to adapt to increased levels of sunlight and wind loads. This will reduce the stand density by 20%.

Before this plan is adopted, a revised tree inventory should be undertaken along with a public communication strategy explaining that individual tree removal is routine maintenance to promote the stand's overall health and longevity. Individual tree removal is not mutually exclusive of plaza expansion, or park or building renovation initiatives as long as the two objectives are planned in concert with one another.

Limitations

This Tree Stand assessment is based on site observations noted on the date specified only. The consulting Arborist has endeavored to use her skill, education, and knowledge to provide accurate representation. Every effort has been made to ensure that the opinions expressed are an accurate assessment of the condition of the site and background information provided by DGBK Architects (the 'Client').

Assumptions and conclusions drawn in this report are based on the professional experience of Judith Cowan, ISA Certified Arborist (PN-7314a) and Qualified Tree Risk Assessor (the 'Consultant'). The opinions expressed are also based on documentary research of written information accessed on the City of Richmond's website www.richmond.ca .

The Consultant cannot accept responsibility for any issues or events that have arisen since the date of the inspection and the date the report was written. The Consultant accepts that the report represents professional judgement and that the Consultant's responsibilities are limited to the content of this report.

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