

## Project Description

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Project Name: UBC Life Building (Old SUB Renewal)

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Development Permit Application

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July 30<sup>th</sup> 2014

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This submission is to support the Development Permit Application for the Life Building (old SUB) at the University of British Columbia Point Grey Campus. The project includes major exterior and interior renovations to the existing building. The project scope includes renewal of the existing Student Union Building and its conversion into the UBC Life Building. The new renovated building will be a home to student support and development services including Vice President Students Office, International Student Centre, Centre for Community Engaged Learning, Centre for Student Involvement and Careers, Access and Diversity, Counselling Services and UBC Security. In addition the building will offer integrated wellness and recreation services including a fitness centre, racquet centre, and athletics retail as well as food services under Student Housing and Hospitality Services (SHHS) and two Collegia for the first year students. The project is designed to engage, reach out, and encourage both individual and group learning in a supportive and inspirational environment. The project strives to meet social, economic, and environmental sustainability goals as defined in the project design brief.

UBC Life Building will house student services currently dispersed throughout the campus and will be home to new related services and programs such as experiential learning rooms and recording studios. The building will provide bike storage, end of trip facilities and will retain some AMS uses in the basement (outside scope of this project) including Norman Theatre.

The Consultant Team will strive to design and deliver an energy efficient project that will be certified to a minimum level of LEED Gold by the Canada Green Building Council (CaGBC), using the LEED Canada Reference Guide for Green Building Design and Construction 2009.

There is a strong desire to redesign the North Entry Plaza to create a more formal and legible entry to the building main floor (currently outside of project scope). There will be a 'West porch' connecting the Life Building to the Nest at main level.

The proposed architectural design reflects the desire for:

- A fully renewed, iconic, and well day lit building
- An Exceptional Engaging Environment to support inclusiveness and variety of student needs
- Long term flexibility for evolving integrated student services
- Current security / life safety systems
- Crime Prevention through Environmental Design (CPTED)
- Enhanced energy efficiency
- Reduced operational and maintenance costs
- Maximization of useable area within the existing building footprint
- A high value, cost effective solution

- Integration within the UBC changing campus fabric including urban design, infrastructure, and transportation of the precinct
- Universal accessibility

The project site boundary is defined by the Green to the North, the Bosque to the West, and the New Aquatic Centre to the East. The South plaza will be defined by the new MacInnes Field.

The building siting has been evolving over years with a few buildings in its vicinity. The building's perception to the South was over years dominated by the adjacent existing Aquatic Centre and the South Plaza treatment with the skylights and the existing exterior staircase to the basement, located directly under the plaza. Currently that side of the building's site is going through even bigger transformation due to its immediate neighbour new SUB just outside its South West façade. The buildings are connected at the basement level. Over next couple of years new Aquatic Centre will be erected east of the building and the old Aquatic Centre will be demolished to give room to the new MacInnes Field. Through the newly created open space new perspective will be given to the building, especially to the South façade.

As mentioned before, the East façade's context will change over the next couple of years when the new Aquatic Centre will find home right across Athletes' Way. The redesigned Fire Department access will be maintained from that side connecting to the Student Union Boulevard to the North.

The northeast corner of the building is reserved for the building's Loading Bay that has been upgraded recently to accommodate for the needs of both the Life Building and the new SUB.

The remainder portion of the North façade serves to provide direct access to the main concourse and to the basement level right below. A current design proposal with a rebuilt accessible ramp to the basement exists as part of the new SUB. The option to redesign the North Plaza approach to the building is a proposed addition to the renewed Life Building design.

The West Façade is the most opaque with the majority dominated by the solid exterior wall of the Norman Theatre. There is a landscaped planter built around the perimeter wall of the Norman Theatre. The West Façade is barely visible from East Mall due to the Bosque located directly west of the building. The southwest corner will be revitalized as part of the New SUB with new ramps to the basement and a porch extension at main level towards the Life Building West Entry. The entry to basement level will be animated due to new AMS bike kitchen and end-of-trip facilities.

Over the years three main entries to the building provided access with the primary South and North entries being the most heavily used. Due to building's central location on the campus the building served as an destination with a large food services component in the basement and main levels and AMS offices and meeting rooms on the second floor. The evolving nature of the immediate precinct has changed with the relocation of the bus loop and the introduction of the new SUB (Nest) building. These circulation changes have increased the isolation of the old SUB building.

Internally, the main level concourse has always allowed for a pass through experience. Due to lack of a visual connection to the other floors and the remote location of the vertical circulation, the programs on the upper floor have been largely isolated from the student body.

## 1 Design Rationale

### 1.1 Design Strategies

The building has been recognized for its bold design statement of the era and is intended to remain as such with a rejuvenated and refreshed skin and the most needed, added sense of lightness and openness through vertical penetrations and visual connectivity.

The main renewal design moves include:

- Removal of the second level exterior balconies
- New horizontal and vertical glass assemblies replacing the existing, including all doors, clerestory glazing and skylights
- New signature entries
- New atrium opening with glass roof
- New convenience stairs along the concourse to promote vertical circulation between the three floors and visual connectedness
- New interiors throughout
- Removal of one concrete wall pier directly to the South and in close proximity to the New SUB to improve visual communication between the two
- Landscape supporting new building use and context
- Proposed North Plaza redesign to give new broadened presence to the North Entries

### 1.2 Daylighting Strategies

#### 1.2.1 Façade Treatment – Glazing

With the removal of the existing “infill” balconies, new two-storey high glass façades will replace the existing tinted glass enclosures. These new glass walls will stand in contrast to exposed concrete piers creating a sense of lightness and transparency into the building. Perimeter building functions at the main level will, as much as possible, be active functions. The glass enclosure will also incorporate sliding/ foldable glazed doors at strategic locations to further increase porosity and connection between the inside and outside.

The design team arrived at the proposed glazing modules after a careful analysis of the patterns and rhythms of the existing structure, copper fascia, and exposed ribbed concrete. The proposed primary glazing grid is an 8-foot module evident in all the architectural elements: from the spacing of the copper fascia standing seams, the width of existing soffit panels, to the standard forms of the exposed ribbed concrete. The proposed window placement allows for two operable units per office, for both 24 and 32 feet structural grids.

#### 1.2.2 Atrium Concourse

The concourse will be developed into an atrium space with the removal of the second floor over the existing concourse. The second floor courtyard will be enclosed with a glazed skylight, half of which will cover the atrium and half which will cover lounge space which will be open to the atrium.

### 1.2.3 Strategic Slab Openings

Slab openings will enable daylight to pass through to levels below. In addition to the main slab openings delineating new atrium additional will be added:

- New convenience stair slab openings adjacent to the atrium will allow additional daylight to all floors including the basement
- Floor slab opening just below clerestory glazing on level two
- Openings for skylights at selected concrete piers
- New slab openings for at grade skylights along East elevation

### 1.2.4 Skylights

Skylights will be provided to all building levels:

- Basement will receive additional daylight through at grade new skylights along East elevation, as stated above
- Existing South Plaza Basement skylights to AMS spaces will be retained and redone as at grade skylights
- New skylights will be provided within selected concrete piers
- Solar Tubes will penetrate the flat portions of the roof to provide additional daylight to corridors and deep floor plan spaces on level two
- New roof skylight over the atrium opening, as described before will be a main source of daylight for the concourse and adjacent uses.

### 1.2.5 Clerestory Windows

Existing roof has clerestory windows to the East allowing daylight to the higher ceiling spaces in the centre of the building where squash courts will be located. Daylight from these Clerestory windows will be directed through a light-well to the main level through an additional slab opening.

## 1.3 Building Entries

### 1.3.1 Building Access + Circulation

The changing nature of the immediate precinct around the UBC Life Building creates new circulation paths and opportunities. The relocation of bus loop, the introduction of the new Aquatic Centre, and the new SUB “Nest” will provide new ways to access, perceive, and engage with the UBC Life Building. It is anticipated that due to the new Bus Loop location southeast of the UBC Life building, the diagonal Southeast to Northwest path through the site will be very active. The North entry will remain one of the primary entries to the building responding to the vehicular traffic to the campus of the Student Union Boulevard.

Due to building’s existing orthogonal nature and rigid structure the main circulation through the building will be based on its current North-South and East-West directions with new diagonal path proposed to capture commuter traffic and possibly redirect to services within the building.

The new proposed slab opening along the main concourse, creating a two level atrium together with the new proposed convenience stairs along the concourse to the east, will be both a focal point as well as visually recognizable vertical circulation elements to provide daylight, openness and clarity.

Horizontal and vertical transparency with universal accessibility and a welcoming quality in mind are the main drivers for the rearranged public spaces in the building.

### 1.3.2 Building Entries

The proposed building entries will be an injection of lightness and fun in contrast to an otherwise heavy and solemn building. The building entries will be highly visible elements from all pathways. Their angular geometry takes cue from nearby diagonal desire paths. These desire paths are prevalent throughout the campus' landscape masterplan.

Based on analysis of the evolving circulation patterns of the precinct, the building entries are separated into a family of three categories: Primary, Secondary, and Tertiary. The scale of each category will be varied in accordance to this hierarchy. Each entry will respond to the specificity of its location while maintaining a consistent and recognizable language throughout.

### 1.3.3 South Building Entry

The South building entry will be the only completely new primary entry introduced in response to the anticipated pathway to capture commuter traffic from the relocated transportation centre and new Aquatic Centre. This new entry will allow pedestrians to travel through a "go slow" zone which terminates in the buildings new atrium and the buildings main vertical circulation.

### 1.3.4 West Building Entry

The West Building Entry will be a secondary entry, allowing for level connection with the new SUB and allowing for access directly from the West portion of the campus. With its skewed arrangement it will respond to the diagonal pathway system developed throughout this precinct.

### 1.3.5 East Building Entries

The East building entries will be tertiary entries to reflect the internal circulation respond to the new traffic paths from the new Aquatic Centre and the relocated Bus Loop. They will be mostly used by the users of Recreation facilities as well as Wellness and Foods.

### 1.3.6 North Building Entry + Plaza

The North Building Entry option introduces a completely new arrangement of circulation both into the main and basement levels of the building. North Entry Canopy is to announce the buildings main level and main public space, to the North plaza (Student Union Court). A series of ramps and stairs up to the main level and to the basement are proposed to pick up traffic from all directions.

### 1.3.7 Connection to the New SUB

The UBC Life Building and the New SUB are connected at the Basement Level. On the Main Level, one concrete pier is proposed to be removed to increase transparency and to facilitate a seamless flow of traffic between the two buildings.

## 1.4 Materials

The exterior material palette will remain as originally designed in 1964 with the new replaced glazing assemblies creating an improved envelope. The vertical roof cladding portion with the standing seam copper is intended to be maintained including being exposed to the interior of the atrium. The removed balconies will afford greater transparency into the building and return the building to its original

elevational parti. The new building entry treatment will read a clearly distinct from the original building with their steel construction and bold colour but in the context of this monumental building, will be welcome relief to what could otherwise be a somber elevation.

#### Glass

Increased transparency of the building will be brought through new clear glass units around the building. Re-glazing the building, which is intended to span over two floors to the underside of the building soffit, will help to activate building edges and improve visual porosity. The newly created atrium replacing the current courtyard will be also topped with a fritted glazed assembly at the roof line, admitting daylight through the centre of the building to the second and main level.

#### Existing Exposed Concrete

The exposed concrete will remain one of the defining elements of this building. Its treatment marks its era of modern architecture and the rusticated expression will create a unique contrast to the new background glazed façade.

#### Existing Roof Copper

The copper cladding is to be retained and preserved. This naturally patinated material speaks to the buildings' age and honest use of material.

#### Wood

Introduction of the wood will be very targeted and restricted to the interior spaces and millwork. As very sustainable and warm material it will be used to provide the sense of comfort and connection with nature.

#### Steel

Architecturally exposed painted steel will be selectively introduced and will be a dominating structural material around the buildings main entries.

## 2 CPTED

UBC Life Project will employ Crime Prevention through Environmental Design (CPTED) principles. There are four principles of CPTED:

- Natural surveillance
- Natural access control
- Territorial reinforcement
- Maintenance and Management

The following strategies will be applied:

## 2.1 Transparency at the Ground Plane

The building already exists and although the ground plane of the development is partially solid, as the concrete piers flanking the building will remain, the envelope outside of the existing concrete piers will be primarily glazed, maximizing visibility both into and out of the building. One concrete pier facing the New SUB building directly to the South will be removed and replaced with the glazed assembly. Programmatic functions at this level will be primary shared common and public retail spaces with an emphasis on the relationship with the neighboring streets and outdoor commons. The building's current location is central to the campus and strategically located on the path to and from the proposed relocated bus loop as well as closely adjacent to a new SUB building as well as a new Aquatic Centre to the east. Project's main circulation is placed through the main concourse of the building and at the perimeter right outside the building. It can be anticipated that the building itself as well as the adjacent buildings and amenities will be regularly accessed throughout the year creating a lot of vibe and movement.

## 2.2 Lighting

All exterior pathways and building overhangs will have appropriate lighting levels. Lighting will be integrated into the architectural language of the project and will assist in creating a safe and secure environment as well as the perception of a vibrant and occupied development on campus. All lighting will meet UBC requirements.

## 2.3 Access Routes through Site

Access routes through the site will be either maintained or added to respond to the newly reorganized precinct. The main routes anticipated will be North South to connect with the New SUB and the North Plaza Green space as well as diagonally East South and North West bringing activity and movement through the complex on the commuter's route from the bus loop. Pedestrian routes will promote openness with appropriate lighting levels and pedestrian scale surface treatment to indicate a transition from the outdoor to indoor spaces. All site furnishings and surface treatments will comply with UBC Design Guidelines.

## 2.4 Program Distribution at Grade

A mix of programs at grade – help desks, wellness services, athletics retail, food services as well as experiential learning provide activity throughout the complex during the day. Less busy, but possibly equally as active services will occupy the basement and the 2<sup>nd</sup> floor.

## 2.5 Visibility of Loading Dock

The existing loading dock location from the Student Union Boulevard is servicing both the Life building and the new SUB. It has been recently redeveloped to meet the requirements for both buildings. It is in constant operation throughout the year, and possibly used from very early morning till late evening hours.

## 2.6 Access Control

Access to the building will be available from all sides 7 days a week and generally 7am -10pm with a few exceptions. Fitness services hours will be outside the main building hours and the access will be provided through a separate East entry via access cards.

24/7 access is currently planned for the Security Help Desk on the main level of the concourse. Security spaces will also be located in the basement in close proximity to the existing loading dock.

Main entries to the building will be visually recognizable, providing options for the users to access the building depending on the particular service location within the building.

## 2.7 Central Point of Service

The main concourse will be day lit, and with the new convenience stairs connecting all three levels of the building, will provide a central point of service for the building users. This provides some level of surveillance of visitors entering the building and will redirect traffic to public uses throughout the building.

## 3 LEED

LEED Canada NC is a measurement system designed for rating new and existing commercial, institutional, and high-rise residential buildings. It is based on accepted energy and environmental principles and strikes a balance between knowledge from established practices and emerging concepts. It is a performance oriented system where credits are earned for satisfying each criterion. It is separated into prerequisites that must be achieved to attain certification and credits that count towards the level of certification. The categories of the rating system are as follow:

- Sustainable Sites
- Water Efficiency
- Energy and Atmosphere
- Materials and Resources
- Indoor Environmental Quality
- Innovation in Design
- Regional Priority

In general these requirements include maintaining practices which lower the impact of the building operations on energy and water systems, and support healthy indoor air quality as well as maximizing the use of durable, healthy and low impact materials. Materials and systems shall be selected to maximize energy efficiency for operation of the Project throughout its service life. Materials shall be selected that efficiently use resources such as energy, water, and component materials, that use less embodied energy to manufacture and that consider energy use over the life-cycle of a material including harvesting, mining, manufacturing, transport, installation, use, operation, recycling, and disposal.

The following scorecard reflects expectations for the UBC Life Building performance based upon the design team's cumulative experience with the LEED program, an understanding of the requirements of



this process and the requirements of the UBC LEED Implementation Guide. Through the use of an integrated design approach by the design team, and the sustainability strategies implemented as described previously in this document, the design team expects UBC Life to earn LEED Gold level of certification under the LEED Canada 2009 Rating System for New Construction and Major Renovations.

#### 4 Program Distribution

The UBC Life Building program distribution is the result of the consultation with the Working Committee and the user groups. The program was presented to the design team together with the Design Brief and has been reevaluated through a series of meetings with the stakeholders.

The main program allocation is partially based on the existing building spatial conditions and specific requirements for some uses. As mentioned in the executive summary the building is intended to house student services previously offered in different buildings throughout the campus. The main programmatic focus is on wellness and everything that can accompany healthy lifestyle including healthy food services and fitness. In addition to above mentioned services, VP Students, Experiential Learning and International and Campus Diversity will have their offices and meeting spaces. Security will occupy three floors with the change rooms and lockers in the basement, help desk at the main level and offices on the second floor.

Basement level is largely assigned to AMS and those spaces are outside of the Life Building scope. The remainder of the basement area will be housing end of trip facilities, Athletics and Security. Existing Loading bay with the garbage and recycling rooms is located in the East North corner and will remain.

Main Level of the Life Building will provide interactive help desk functions as well as main Wellness program, Athletics retail, VP Communications Office and the Ombudsperson Office. Athletics Retail will be accessed from the East façade and outside hours access for Fitness and Racquet Centre will be available from that side as well. Food services and informal learning spaces will be distributed along the South façade with the exhibition area between gridlines J and H. Experiential Learning will animate the central portion of the floor plate, just north of food services.

Washrooms will be evenly distributed between the three floors and will be stack within North and South concrete piers, replacing existing staircases there.

Main circulation will be largely along the main concourse and on the East West axis as an extension to the West façade.

New convenience stair will lead people directly from the main level concourse to the second level where two distinct Collegia, VP Students Offices, International Campus Diversity and Experiential Learning will reside. Informal learning spaces and shared meeting rooms will be grouped around the new atrium with the opening to below and with the glazed skylight above. The new racquet centre will be placed in the middle of the building between Grids C-F and 3-6, taking advantage of the high roof ceiling areas and clerestory glazing.

Mechanical will remain in the Penthouse with added area within high roof space adjacent to the current location. New elevators will be located just north of the existing elevator shafts, and those will be reused for the Mechanical risers.

## Design Policy Compliance

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Vancouver Campus Plan – Part 3

### 1. Conceptual Public Realm Frameworks

UBC Life Project is a renew project for the old Student Union Building that will address new program desires and opportunities within its newly emerging precinct responding to Vancouver Campus Plan guidelines. As an existing building it will draw from the historic building features and background and at the same time it will benefit from the more contemporary requirements for that part of the campus.

#### Site Topography and Prospect/ Landscape Typologies

UBC Life Building resides along East Mall, secondary campus corridor surrounded by the large forested commons to the West and to the North and within informal Modernist garden landscapes of the university. It is located within the pedestrian realm in the heart of the campus and in close proximity to the Nest, the future bus loop and Aquatic Centre. The area will remain predominantly pedestrian and cyclist oriented. New pedestrian paths will be provided in response to the evolving desire routes of traffic, and allowing connections to the existing corridors.

#### Sustainability Framework

The project will incorporate sustainable best practices including social, environmental, and economic goals as set in the Project Design Brief.

### 2. Public Realm Design Guidelines

#### Campus Wide Directions

- As key existing exterior features, the exposed ribbed concrete walls and batten-seam copper roof will be maintained. The portions of balconies between the concrete piers will be removed to allow for new, two-storey curtain wall glazing. The new glazed façade will provide more transparency and visual connection into the building. It will also improve the building envelope performance by eliminating thermal bridging at the existing slab and allowing for increased daylight penetration into the occupied spaces.
- The project's public realm will support the new surrounding buildings and the master planned large commons to all sides. The Life Building's proposed program allocation within the building will also respond to the new context. For example, food services is strategically placed at the south

side of the building to take full advantage of southern exposure as well as adjacency to the public plaza and green space.

- New informal learning areas and food services will be equipped with different types of seating for interior and exterior spaces. Indoor- outdoor seating extension will be proposed for the area directly to the south of the building.
- New welcoming entries will be announced with colour and canopies. They are intended to be recognizable and provide a level of weather protection. Fully glazed partitions and operable (foldable, sliding or overhead) doors to provide porosity will maximize opportunities for the indoor-outdoor interactions.
- The accent colour for the entries is to be warm and welcoming, contrasting with the exposed concrete walls to bring life and energy to existing heavy facades.
- Cycling facilities within the building will promote active lifestyle. In addition to the proposed athletics program, the building is intended to become a wellness destination for all students. Main circulation stairs are strategically located adjacent to the main concourse to encourage students and staff to take the stairs.
- A recently updated loading bay serve the existing SUB and new Nest via a service corridor in the Life building basement. The main service routes will be positioned to minimize their impact on other building activities.
- Universal Access as the main objective for the building will focus on student inclusiveness. New North Entry ramps, direct connection to the adjacent New SUB building, new elevators and gender neutral washrooms are designed to allow for the building to function without any disadvantages to any building users.

#### Design Guidelines within the Modernist Campus

The Life Building is located within the Modernist part of the campus and will respect the guidelines as well as will retain the historic features.

Based on the Modernist Campus specific guidelines it will:

- Respect the campus grid and key public realm features
- Visual access between the interior and exterior will be reinforced with the appropriated program located on the main level to support it
- New building entries will respond both to the campus and building circulation as well as legibility of the building within the campus
- Horizontality of the building expression will be maintained with big roof overhang and the width to height ratio of the facades.
- Big overhangs as well as existing trees to the West and North West will provide adequate shading. New Sub building to the South West will also diminish the requirement for the solar strategies to South West side of the building.
- The building's new function will maintain well suited for East Mall pedestrian and cyclist route.

Student Union Plaza and Pin Oak Bosque / MacInnes Field Student Recreation Commons

The Life Building is adjacent to the proposed redevelopment of the Bosque and Student Union plaza and MacInnes field. The new building functions are appropriate for the area public functions proposed for the precinct.

The new MacInnes field location will provide spill area for the new transportation centre and opportunities for the open public events and large celebrations and festivals just to the south of the Life Building.

### 3. Sustainable Best Practices Guidelines

UBC Life Building is a renewal project and its goal is to adhere to social, economic and environmental goals for the project as well as within set parameters, budget and schedule.

Sustainability goals have been developed by the UBC and discussed with the working committee and UBC representatives during the design process to date, meetings and sustainability charrettes.

The project is targeting LEED Gold certification with the Canada Green Building Council.

The UBC life project will implement multiple strategies to meet set goals and aspirations.

The building exists and some of the typically used strategies especially regarding passive design moves, the envelope and building siting have been decided when the building was designed and built in 1968.

The Life Building renew project design decisions to date weighted sustainable social desires for the building against other goals and all those strategies are intended to reduce the energy consumption and the impact of the future building operation on the environment.

#### Site Strategies:

- Site selection has an impact on many aspects of building operation and since the building exists and will be reusing the majority of its structure and good portion of its exterior envelope it will contribute to resource conservation by reducing construction waste
- Its location will allow for easy access to public transportation and sustainable transportation alternatives located nearby
- The building will benefit from its form, the adjacent new building and existing bosques in terms of eliminating/ minimizing the need for solar shading strategies to its West and South

#### Water Use Strategies:

- Use water-efficient plumbing fixtures and appliances throughout
- Landscape irrigation: reduced by 50%

#### Energy Use Strategies:

- Energy Star equipment in commercial kitchen (food Services)

- Maximizing access to daylight is the main move for the 'fortress like building' with huge potential in terms of reducing the demand for the electric lighting. Main strategies to achieve that are: removal of balconies, new roof skylight in combination with the atrium opening the building to the main floor, solar tubes punctuating the roof, borrowing light from the clerestory windows through additional slab openings
- Heat recovery from kitchen and athletics to supplement building heat
- Replacing existing single glazed facades with double glazed thermally broken curtain walls
- Adding or replacing insulation for the exposed concrete walls above grade, roofs and potentially below grade
- Reducing the amount of thermal bridging within the building envelope by pushing the vertical line of glazing past the main column line and by removing second floor balconies between concrete wall piers.
- Tightening the air infiltration through the envelope enhancements where possible
- Introducing natural ventilation through operable windows along the perimeter of the building
- Efficient lighting system with optimized controls and sensors

#### Indoor Environmental Strategies:

- Introducing acoustically sound partitions where required by use and opening up and blurring the line between spaces where acceptable
- Low emitting materials will be used throughout to optimize the air quality
- Maximizing daylight strategies through additional roof openings and through increased exterior wall transparency

#### Materials:

- Use of materials complementing the existing palette of concrete, glass and copper
- Use of the regionally sourced or manufactured materials with high recycled content and easily recyclable
- Use of low emitting materials to minimize off-gassing with preference to promote authentic and healthy materials
- Use of durable and resilient materials
- Design to rely on modularity of materials to reduce waste
- Construction waste management plan will be implemented

#### Operations Strategies:

- Recycling storage and facilities already exist in the building and recycling program will be applied to the project
- Green Maintenance will be adopted
- Commissioning to all building systems
- Measurement and verification will monitor the building's actual performance post occupancy
- Educational program for the building employees will be introduced

### Universal Access

One of the main design goals for the building based on the Design Brief and as a result of the Social Sustainability Charrette is universal accessibility to be applied to all aspects of design. It is desired that all design decisions will be evaluated through universal accessibility lens.

The main design strives to achieve that:

- Improved visual connectivity and transparency both horizontally and vertically will help to connect without physically relocate
- Two accessible ramps and uninterrupted level connection at the South West corner of the building will be added providing direct access to the main level West Entry as an extension to the new SUB main level. New ramps will lead both to the main and basement levels as part of the North Plaza redesign
- Central, more visible location for the elevators is proposed along the new convenience stairs in the main concourse allowing for easy, informed relocation

## 4. Architectural Material Palette

Design Guidelines with the Modernist Campus

The Modernist Campus according to the Campus Planning Guidelines offers a variety of expressions and given the Life Building is a renew project we are proposing to preserve some of 60' and 70' modern/brutalist look with more contemporary take on the new design portion.

The main design moves will follow the guidelines as set for this part of the campus:

- Form, massing and built to lines of the building will be preserved sitting in the landscape context
- Building height will not change and the horizontality will be preserved with more vertical expression for the glazed facades treatment
- Transparency, visibility and daylighting are the design priorities with:
  - o New Atrium openings
  - o Fully glazed facades (including second floor balcony removal) with clear glass floor to u/s of roof soffits
  - o New skylight over the main atrium
  - o New light tube punctuations at the low slope roofs
  - o New skylights to the east basement
- Clear glass transparency will be supported by the perimeter functions at the main level and the main building entries will be visually announced
- Material selection will stay within the existing building palette and support the Modernist Campus desires:
  - o Light and transparent new glass facades in contrast to existing exposed concrete wall piers

- The new entries responding to the less formal pathways providing colour and more contemporary approach adding interest to historical rigidity and form
- Prefinished metal panels and glass will be primary materials added to the existing palette
- Clear glass or coloured/ patterned version for accents will be used with wood and metals for interiors

### Architectural Expression

The main design approach for the Life Building is to maintain the building outline mostly as is and to preserve its parti as proposed in the drawings with the reductive approach to the existing elevations.

In order to achieve a welcoming and warm reading of the building exterior and to juxtapose the existing building's heavy and unapproachable 'buttress like' look of the exposed concrete piers with the remainder of the façade, the first design move is to remove second floor balconies spanning between piers at all four facades. The balconies are the original design however they do not seem to be a desired element from visibility, building envelope and functional point of view. The balcony removal will open up uninterrupted two storey reading of the facades as well as it will give opportunity to move the glass line outboard to reduce the thermal bridging through the vertical and horizontal structural elements.

This will support the main building design move to improve transparency and give some lightness to the exterior expression. The new proposed glass wall enclosures are proposed to be full height with accentuated verticality added to the reading of the façade. The positioning of the mullions will respect existing copper seams and horizontal datum of the concrete pier reveal. New operable window sill locations will align with the balcony guard height.

### Building Entry Locations

Building Entry locations will respond to the new proposed circulation, based on the existing entries. The North and West facades will retain the entry locations with the new redesigned expressions. The new proposed pathway system will be denoted in the orientation of the South, East and West entries and the North plaza entry will provide redesigned diagonal approach to the main level with ramp/ stairs raising up from both sides acknowledging diagonal traffic from North East and North West. The basement entry will be accompanied with a series of stairs and ramps down.

South façade will be the most transformed with the new entry addressing the bus loop circulation path and one concrete pier removed for increased transparency between the new and the old SUB. Due to very close New SUB proximity to the South of the Life building, the area between the two buildings will be further studied by consultants on site.

West entry and East entries will be a family of secondary and tertiary entries carving into the main volume and providing some level of weather protection from above, similarly to the South Plaza Entry.

### Vertical Circulation

Stairs and wayfinding are critical to address the current circulation legibility within the building.

The existing exit stair locations are to be maintained where strategically located in the North East, East and South East parts of the building. North pier staircase will be replaced with the washrooms and the South pier stair is to be only partially maintained. West side stair will also be kept from the main level to the second floor.

New convenience stair is proposed from the basement level to main level as well as from the main level to the second level, East to gridline G and directly adjacent to the concourse and the new atrium opening between main and second level.

The new staircases will provide opportunity to visually connect to other levels and to have a better understanding of the building volume.

New elevators are proposed to be built adjacent to the existing elevator shaft and in close proximity to the new convenience staircases providing a centralized range of vertical circulation options.

#### Rain Protection

The building's existing huge overhang along its perimeter together with the new entries will provide some level of rain protection just before entering the building. All the entries around the building will provide opportunity to capture pedestrians at any given point allowing for dry circulation through the building.