



simon fraser
student society

SIMON FRASER UNIVERSITY

Student Union Building Design Development Architectural Report

August 22, 2014



BUILD SFU Student Union Building physical model

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The following is available through Build SFU.
Please contact Marc Fontaine:

- I. Phase 1 Report - Simon Fraser University Student Union Building Programming and Site Selection
- II. Phase 2 Report - Simon Fraser University Student Union Building Schematic Design Report

EXECUTIVE SUMMARY

This Design Development Report summarizes the design and planning process to date for the new Student Union Building at Simon Fraser University. Working closely with the Simon Fraser Student Society (SFSS) since May 2013, Perkins+Will has prepared this report as a milestone and summary of the building design and features, incorporating student requests and requirements. This report offers an opportunity for student and SFU feedback prior to beginning working drawings.

Planned and designed to enhance student life and community at SFU, the new Student Union Building will provide SFU students with amenities that support non-academic activities, opportunities for community building programming, and a respite from studies. Containing lounge, social, study and club space, the Student Union Building will be operated by the Simon Fraser Student Society.

The design indicators can be summarized as follows.

Benchmark Statement: The Student Union Building has four overarching goals: a building that is student focused, creates an environment that supports community building, incorporates a unique design that differentiates it as a student space on campus, and provides a strong connection to nature. These four goals were the measuring stick for decisions on program and site and serve as the basis of decision making during design.

Space Program: The SUB space program is divided into the following categories: SFSS Administration, Student Activities / Organizations / Clubs, Food, Retail, Lounge and Meeting / Multi-use Space. The SUB contains no SFU administrative or Student Services space. The building is not a “one stop shop”, but is an extension of the campus experience when combined with the MBC and AQ lounge and food services. The overall program gross floor area is approximately 105,000 sf.

Site: The SUB site is located between the Maggie Benston Centre and University Theatre to the west, the AQ to the east and Freedom Square / Convo Mall parkade to the north. The site is currently occupied by a surface parking lot and the Sustainable SFU Learning Gardens. The SUB will physically connect to the Maggie Benston Centre at the food court level, Freedom Square at Convo Mall, and the AQ 3000 level south concourse.

Building Design Concept: The SUB is a five storey building. The lowest floor level is located 2 storeys below Convo Mall, and the highest floor level is 2 storeys above Convo Mall. The building is conceived as a terraced massing consistent with the SFU master plan of ‘stepping down the mountain’. This creates opportunities to maximize daylight inside the building, and provides multi level south facing terraces. Student spaces are placed at the perimeter of the building, and all five storeys are interconnected with a series of floating lounges that provides visual connection between the different floors.

Interior Design Concept: The interior design concept for the SUB is based on the notion of “connectivity” and “home-away-from-home”, creating a space that differs from the academic environment of SFU. Emphasis will be placed on colour, texture, and intuitive wayfinding to create a bespoke indoor environment.

Sustainability: The project will target social, environmental and economic sustainability. The building will target Leadership in Environment and Energy Design (LEED) Gold-NC 2009.

Project Schedule: It is estimated that the duration of design and construction of the Student Union Building is approximately three years;

The building working drawing phase will be complete in early February / March 2015.

The tender and negotiation phase, which follows the working drawings phase, will last approximately six weeks to two months, where potential builders price the cost of constructing the building.

Once the building pricing is confirmed, the construction phase is expected to last approximately two years.

It is anticipated that the SUB will be complete for the 2017 fall term.

Cost: The SUB construction budget is \$35 million CAD.

PROJECT BACKGROUND

In March 2013 Perkins+Will was retained by the Simon Fraser Student Society to provide architectural services for the Build SFU Student Union Building and Stadium. The project includes site selection, planning and programming through design and construction of a new Student Union Building and planning and programming through design and construction of a new 2500 seat stadium at Terry Fox Field.

PHASE I: SITE ANALYSIS AND PROGRAMMING

Site Analysis was conducted from June to August 2013 and included the following activities:

1. Identification of available building sites.
2. Evaluation of available building sites.
3. The university approved three building sites for further study:
 - Transportation Centre
 - Infill site between MBC and AQ, currently occupied by the Sustainable SFU Learning Gardens
 - Old Shell Gas Station site across University Drive West
4. Site tour of comparable facilities:
 - University of Washington Husky Union Building, Seattle Washington.
 - Washington State University Compton Union Building, Pullman Washington.
 - University of Idaho Commons, Moscow Idaho.
5. Development of conceptual approach and massing for each site to support student engagement.
 - The Transportation Centre became Main Street
 - The infill site between MBC and AQ became Crossroads
 - The Old Shell Gas Station became Treehouse

Programming began in September 2013 and included the following activities:

1. Student focus groups
2. Interviews with SFSS staff
3. Electronic student survey
4. Outreach and open houses
5. Brainstorming and visioning

At the end of Phase I, the “Simon Fraser University Student Union Building Programming + Site Selection Report” summarized this process.

The design of the stadium is expected to begin in January 2015.



Site Massing studies for the three sites analyzed in Summer 2013

BENCHMARK STATEMENT

In Fall 2013, Perkins+Will led a brainstorming session to help the SFSS develop a project-specific Benchmark Statement. This statement synthesizes the Build SFU project goals into a concise reminder of the fundamental project drivers.

Establishing a statement early in the project is especially helpful when challenging decisions arise later in the project. It can be referenced for the remainder of the design and construction process. The Build SFU Benchmark Statement contains four key elements:

STUDENT FOCUS

- Be the “Students’ Building” and as such will be the “heart of the student experience”.
- Be an SFSS-operated building where students control the activities and events taking place inside.
- Position the SFSS administration offices in a location where they are visible and accessible to students.
- Be a place that instills unity among students, builds pride in being an SFU student and the Vancouver region.

SENSE OF COMMUNITY

- Promote a sense of community and the place to be inspired, creative and collaborative.
- Be comfortable, inviting, fun, and welcoming.
- Be located in a central location with ample room for a variety of activities.
- Create a “home-away-from-home” for students.
- Provide a sense of “home and hearth”, a place for individuals and communities to congregate and interact.

OUTSTANDING DESIGN

- Be an example of outstanding design with its own distinct identity on the SFU Burnaby campus.
- Be identifiable as the Student Union Building and include a clear “wow factor”.
- Create a focal point or “postcard image” of the campus living room.
- Be open, transparent, and full of natural light.
- Promote interaction and relationships on campus among all the students by being a visual catalogue of the activities taking place inside.
- Be socially, economically and environmentally sustainable.
- Incorporate welcoming, effective and dignified universal access for people of all abilities through all parts of the building.
- Incorporate durable materials that require minimal maintenance.

NATURE

- Celebrate and connect with the natural mountain environment.
- At every opportunity, remind students of their unique location and surroundings.
- Feature views to the exterior.
- Use natural materials.
- Incorporate covered outdoor patios.

“The Student Center is the ‘face’ of campus and a direct reflection of the value and aspirations the university places on its students and its commitment to a quality and rich collegial experience.”

Dan Adams, NC State University, Associate Vice Chancellor for Campus Enterprises

A collaborative and comfortable environment to study, connect, relax and prosper!
- Jacob, 1st yr, Science

A place perhaps even big indoor even con

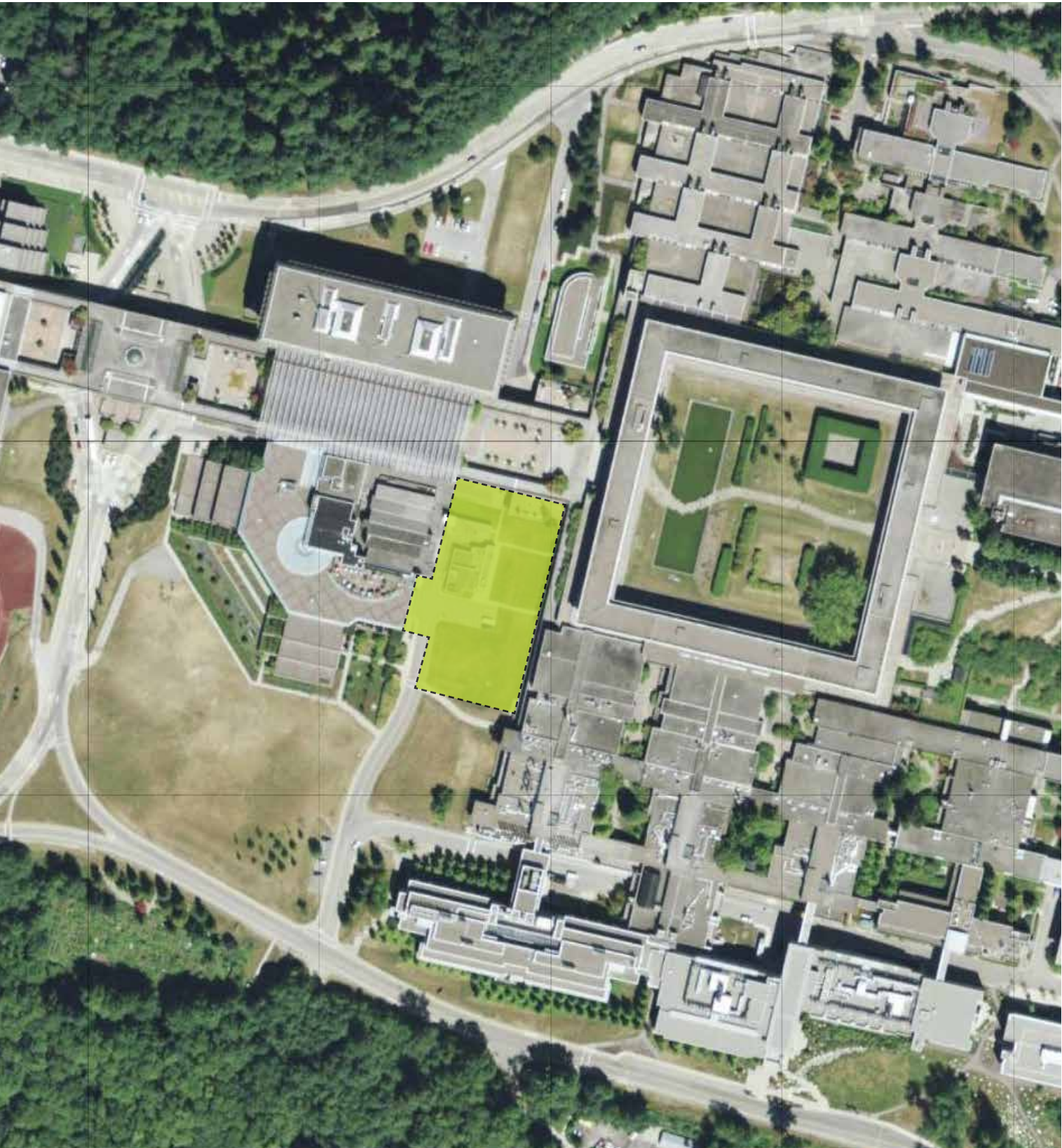
More places to eat / More seating in current places!

- Skylon Davis 4th, Health Science
SFU Wrestling 3rd NCAA D2

Space + Lounge for people to watch sport hang out

Year, Communications

SITE



Site looking south from Freedom Square



Site looking northeast from Science Road

i. Description of Site

The SUB site is located on the south side of Freedom Square, between the Maggie Benston Centre and University Theatre to the west, the Academic Quadrangle to the east. The site is currently occupied by surface parking and the Sustainable SFU Learning Gardens. There are no buildings on the site.

The existing grades vary approximately 5m across the site from east / west, and approximately 4m north / south. On the west side, grades align most closely with level 2000 (09) of the MBC, where the food court is located. A berm on the east side of the site raises the ground level to meet level 10 / 2000 of the AQ to the east.

A service / access lane runs E/W on the north side of the site. This lane handles one way traffic for delivery trucks and/or fire access for the MBC and the AQ. The delivery and service entrance and loading dock for the University Theatre is on the west side of the site. This loading area will be enclosed within the new SUB, and deliveries to the theatre will be through the SUB level 1000 (08).

The theatre emergency exit is also located on the west side of the site. The emergency exit for the theatre will be accommodated in the new SUB.

Vehicular access to the site is from Science Road to the south, which connects to South Campus Road.

Campus Reference Level	SUB Floor Levels	Academic Quadrangle	University Theatre	Maggie Benston Centre (Student Service Building)	Convocation Mall
		AQ	TH	MBC	CML
12	12 / 5000	4000			
11	11 / 4000	3000		4000	
10	10 / 3000	2000	300	3000	300
09	09 / 2000	1000	200	2000	200
08	08 / 1000		100	1000	100
07				100	0

SFU Reference Levels

Every level of every building on campus is placed relative to a campus reference level that ranges from Level 00 (approximately 305 m) to Level 17 (about 370 m). Convo Mall is referenced as Level 10. The SUB main entrance will be located at reference level 10, with the lowest level at reference level 08, and the highest level at reference level 12. The eventual numbering system will match the Maggie Benston Centre

ii. Pedestrian Access

Pedestrian access to the SUB will be from:

- SUB level 2000 (09): Interior access from MBC level 09 / 2000.
- SUB level 3000 (10): Exterior covered access from Freedom Square level 300 and the AQ plaza level 2000.
- SUB level 4000 (11): Exterior covered access from AQ level 3000 and Exterior covered access from the MBC rooftop terrace.
- There will be no connection to the Convo Mall parkade.

iii. Vehicular Access

General parking for students and visitors to the SUB is located in existing parking lots and structures on campus. Four passenger vehicle loading spaces are provided in the loading dock on the north side of the site, and three passenger vehicle loading spaces are provided on the south side of the SUB, accessed via Science Road. One of the passenger vehicle loading spots will be a handicap parking spot. There is no visitor or student parking dedicated to the SUB.

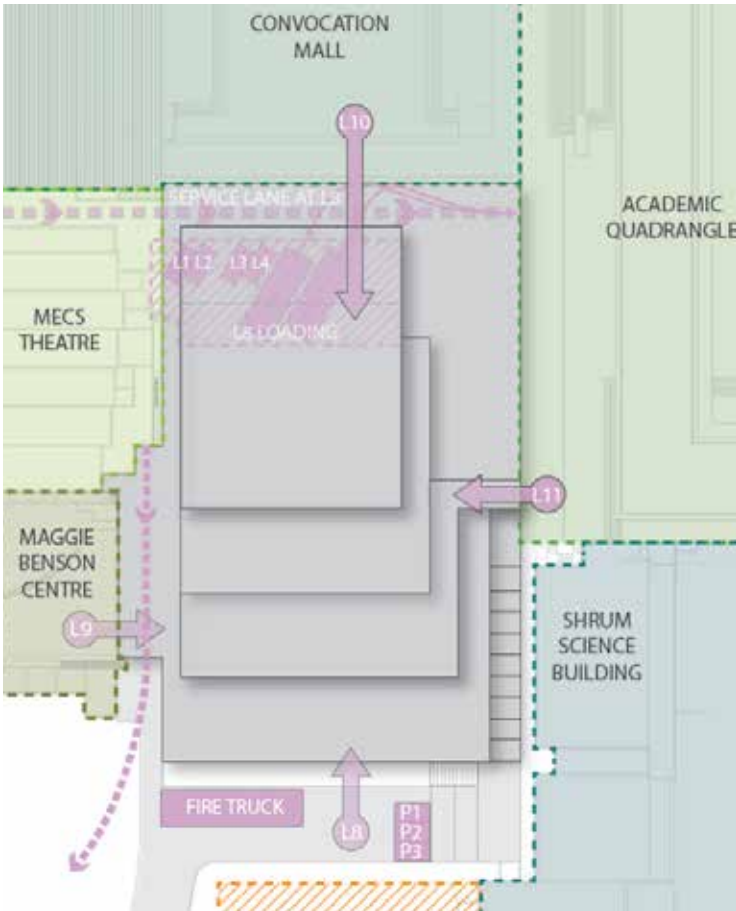


Diagram showing pedestrian and vehicular access to the SUB.

iv. Loading and Service

The loading dock for the new SUB will be located at Level 1000 (08) on the north side of the building. The loading area will accommodate two 28' tractor trailers and four passenger vehicles. A collection area for waste and recycling bins will also be located in the loading dock.

v. Fire Department Access

Fire truck access for the SUB and MECS Theatre is provided on the south side of the SUB, accessed from Science Road. A fire hydrant will be located within 45m of the south entrance.

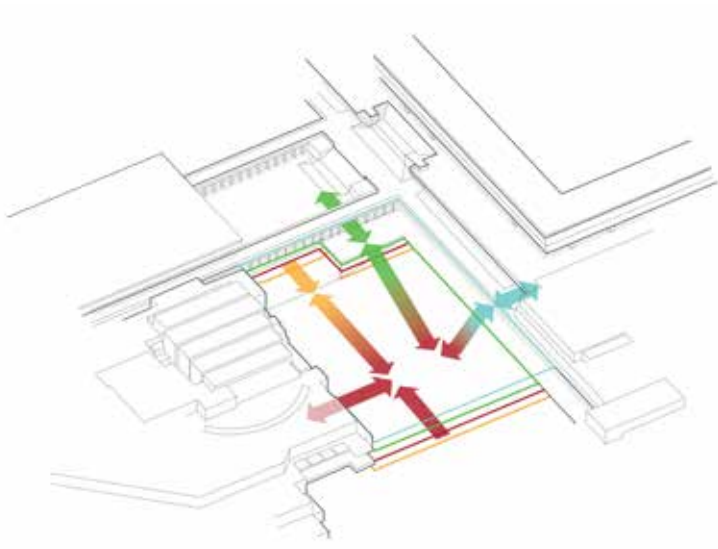
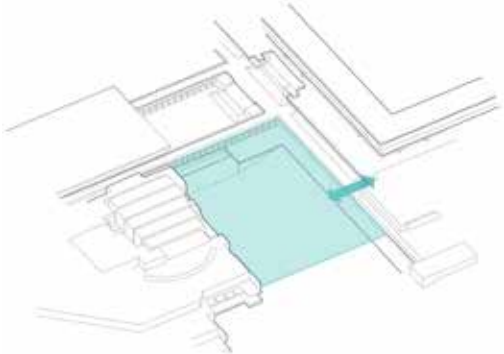


Diagram showing the SUB connections to the existing campus circulation.

vi. Connections to existing campus

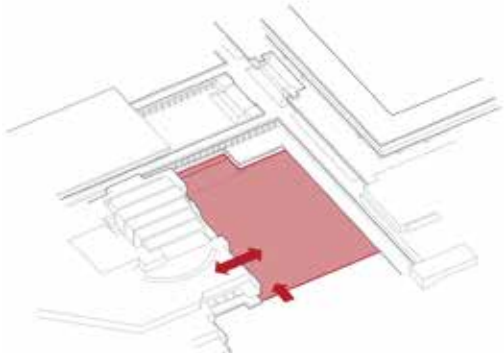
The new SUB will connect to the MBC food court on level 2000 (09), Convo Mall on level 3000 (10), and the AQ south concourse on level 4000 (11). The addition of the SUB to the campus complete a circulation loop on the south side of Convo Mall, and creates a link between student amenities in the MBC, AQ and the SUB.



LEVEL 11 - SCIENCE CORRIDOR



LEVEL 10 - CONVOCATION MALL



LEVEL 09 - MAGGIE BENSTON FOOD COURT



LEVEL 08 - ROAD AND LOADING

vii. Solar Studies

Solar shading studies using a 3-Dimensional model of the campus were completed for the Spring / Fall Equinox and the Summer and Winter Solstices. The solar shading studies demonstrate the existing conditions and the impact of shadows from the new SUB on the Freedom Square, the AQ steps, and the surrounding plaza on the north and east sides.

EQUINOX (MARCH 20 AND SEPTEMBER 22)

The Equinox diagrams indicate there is shadowing of the AQ steps in the morning, and shadowing of the west side of Freedom Square from Convo Mall in the afternoon. There are minimum shadows on Freedom Square at noon.

9:00AM

12:00PM

3:00PM



LEGEND:

- 1. ACADEMIC QUADRANGLE
- 2. CONVO MALL
- 3. FREEDOM SQUARE
- 4. MECS THEATRE
- 5. MAGGIE BENSTON CENTRE
- 6. SUB
- 7. NORTH PLAZA
- 8. EAST PLAZA

EQUINOX (MARCH 20 AND SEPTEMBER 22)

The Equinox diagrams indicates that the SUB has no impact on Freedom Square. The new plaza on the north side of the SUB is shaded by the SUB at 9:00am and 12:00pm, and the north and east plaza is fully shaded by the SUB at 3:00pm.

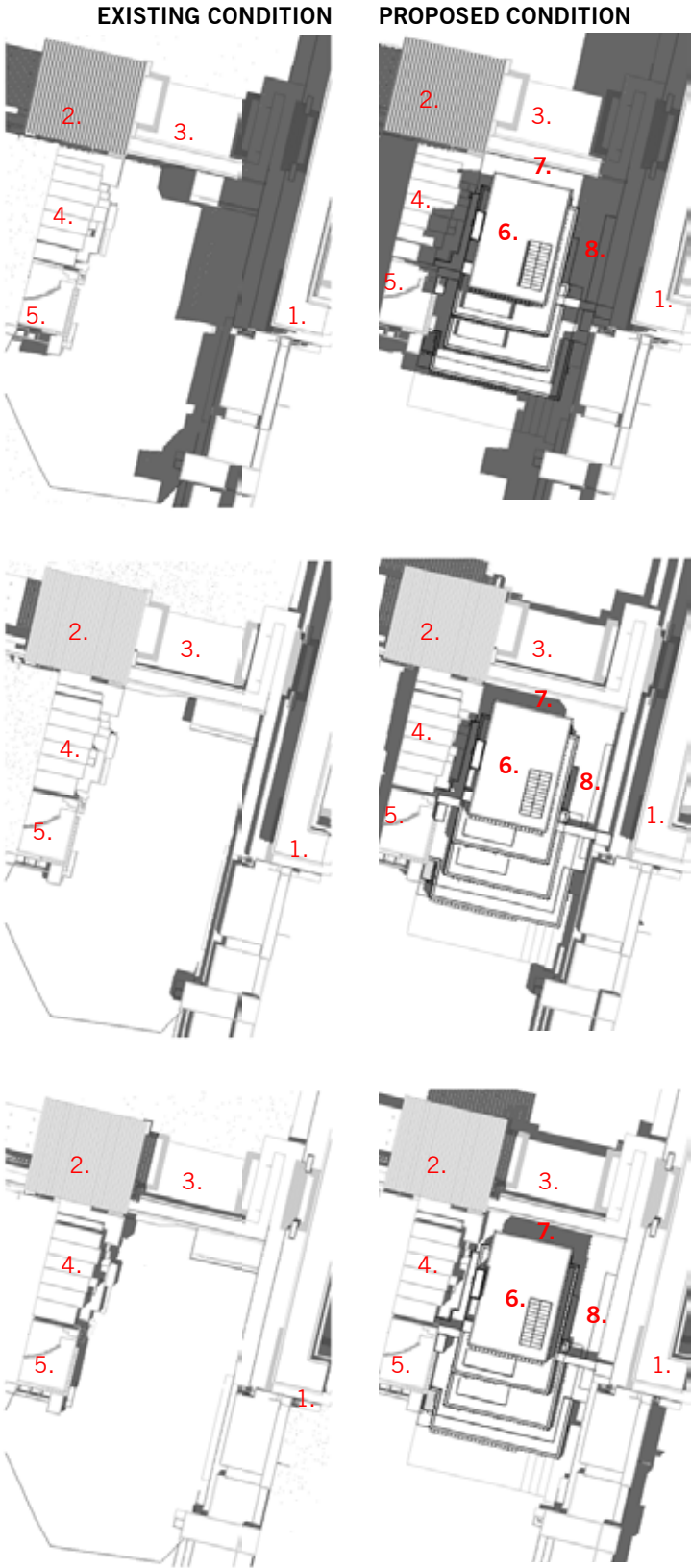
SUMMER SOLSTICE (JUNE 21)

The Summer Solstice diagrams indicate there is full sun on Freedom Square between the hours of 9am and 3pm. There is full sun on the AQ steps between noon and 3pm.

9:00AM

12:00PM

3:00PM



LEGEND:

- 1. ACADEMIC QUADRANGLE
- 2. CONVO MALL
- 3. FREEDOM SQUARE
- 4. MECS THEATRE
- 5. MAGGIE BENSTON CENTRE
- 6. SUB
- 7. NORTH PLAZA
- 8. EAST PLAZA

SUMMER SOLSTICE (JUNE 21)

The Summer Solstice diagrams indicate there is no impact to Freedom Square from the SUB. The SUB shades some portion of the new north plaza at 9am and 12 noon, and shades a portion of both the north and east plazas at 3pm.

WINTER SOLSTICE (DECEMBER 21)

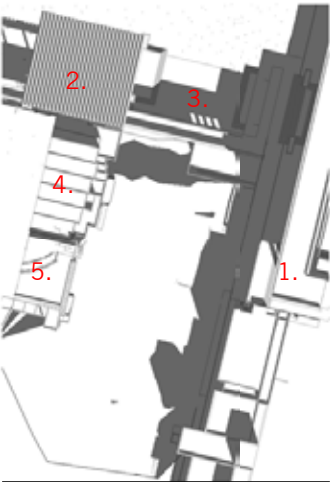
The Winter Solstice diagrams indicate there is full shadow on Freedom Square from the AQ in the morning. At noon, the north half of Freedom Square is in sunlight, and the south half is in shadow from the upper walkway. At 3:00pm, most of Freedom Square is again in shadow but a portion of the AQ steps receives direct sunlight.

EXISTING CONDITION

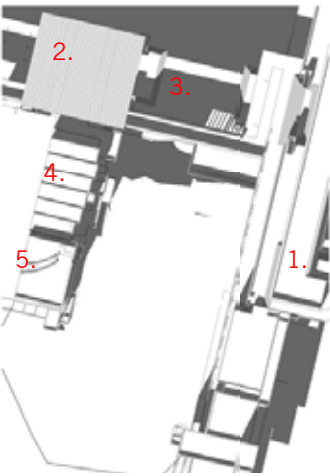
9:00AM



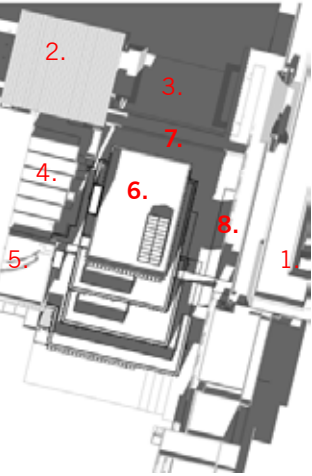
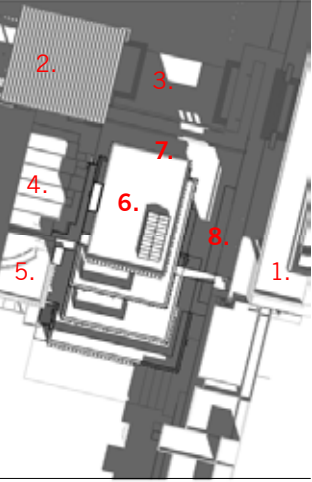
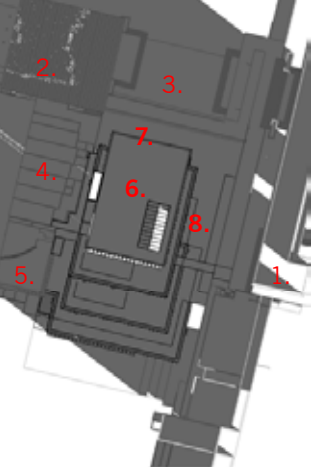
12:00PM



3:00PM



PROPOSED CONDITION



- LEGEND:
- 1. ACADEMIC QUADRANGLE
 - 2. CONVO MALL
 - 3. FREEDOM SQUARE
 - 4. MECS THEATRE
 - 5. MAGGIE BENSTON CENTRE
 - 6. SUB
 - 7. NORTH PLAZA
 - 8. EAST PLAZA

WINTER SOLSTICE (DECEMBER 21)

The Winter Solstice diagrams indicate there is no impact on Freedom Square from the new SUB at 9:00am, as it is already in full shadow from the AQ. At 12:00pm, the SUB shades an additional portion of Freedom square, and at 3:00pm, the SUB fully shades the AQ steps., shown by the area in pink. Darker areas on the diagram indicate overlapping shadows from the SUB and existing buildings.

SPACE PROGRAM

The Student Union Building Space Program was derived from a combination of focus groups with SFU stakeholders and Perkins+Will industry benchmarks.

The program highlights are as follows:

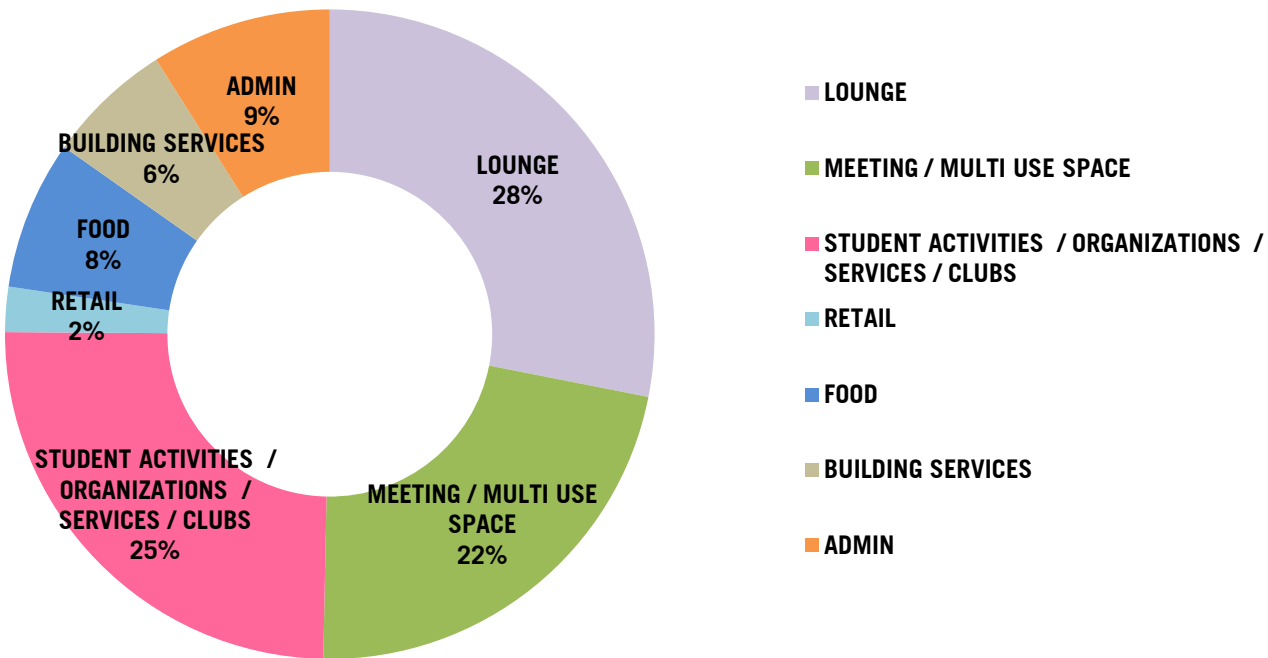
- A scope of approximately 9,765 gross square metres (GSM), or 105,012 gross square feet (GSF) was targeted in the program.
- A building efficiency of approximately 62% was targeted for the recommended building program.
- Student space (lounge, meeting, club and study) accounts for 75% of the overall building area.
- Food service will remain in the Maggie Benston Centre adjacent to the SUB. A new coffee shop is planned for the building and is included in the program.
- The program includes a large multi-purpose room at approximately 400 NSM.

DEFINITIONS:

Gross Square Metres (GSM): the sum of all areas on all floors of a building included within the outside faces of its exterior walls, including but not limited to service rooms, building structure, primary and secondary circulation, interior and exterior walls.

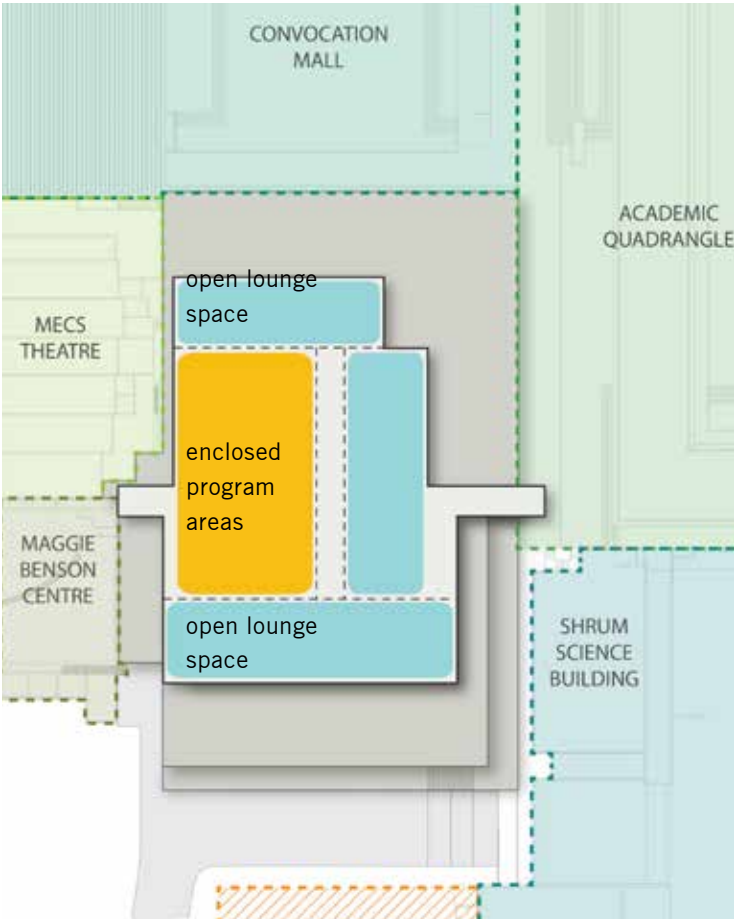
Assignable Square Metres (ASM): The sum of all areas on all floors of a building assigned to, or available for assignment to, an occupant or specific use, including but not limited to offices, food service, lounges, club space and multi-purpose rooms. Net assignable area includes secondary circulation dedicated to uses.

Net Square Metres (NSM): the sum of all areas in a building available or potentially available to occupants, including offices, food service, lounges, club space, multi-purpose rooms, etc. Includes floor area, less interior walls. Does not include secondary circulation dedicated to uses.



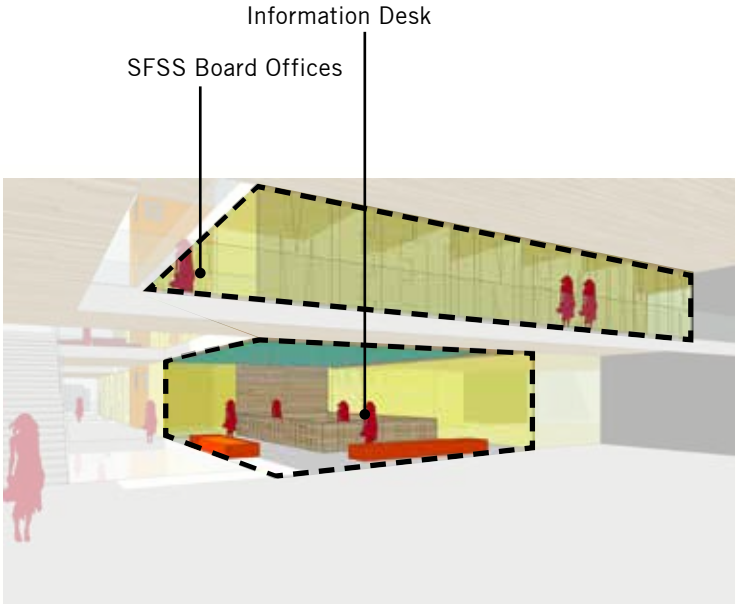
The pie chart above shows the breakdown of the major building components.

BUILDING CONCEPT - STUDENT FOCUS



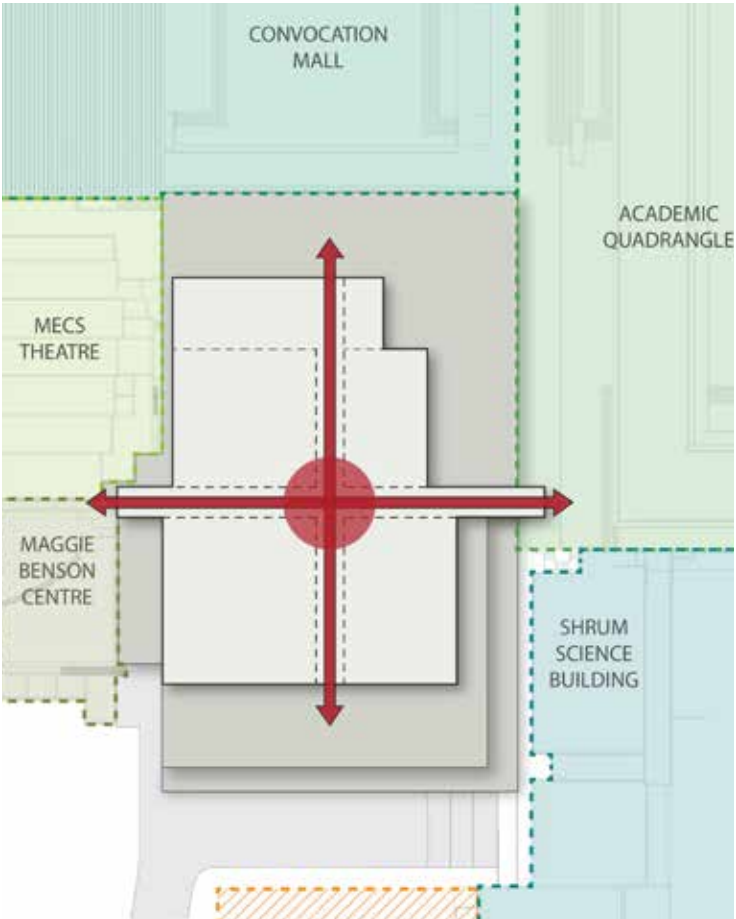
Site plan showing building organization concept.

Building Organization: Giving students access to daylight and views is a priority for the SUB design. To achieve this, open lounge spaces are located along the perimeter of the building on the north, east and south sides. Programs that require walls, such as SFSS admin, meeting rooms, games rooms, workshop and rehearsal spaces are located in the centre of building. The open space in the building is anticipated to be open 24/7.



View from the main entrance off Convo Mall into the building.

SFSS Admin Offices: In order to provide student access to the Simon Fraser Student Society Board of Directors, offices for this group are located on Level 4000 (11) directly above the Club Centre. The Board office entrance is through a student lounge, and has a glass wall facing the lounge, remaining visible to students. A building information desk is located on level 3000 (10) along the primary N/S corridor and is visible from the entrance.



Site plan showing primary circulation.

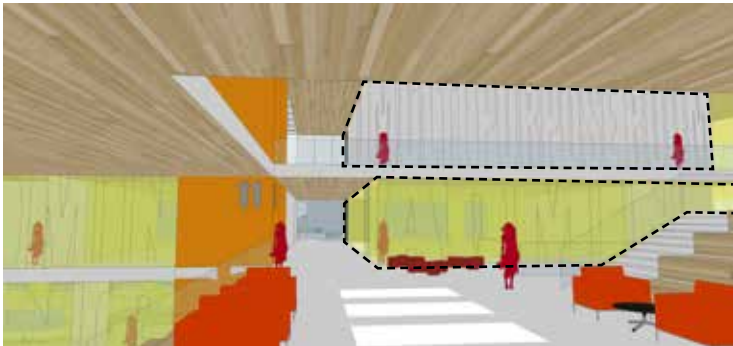
Circulation: Clarity of circulation is important to support wayfinding and creates a positive student experience. To support this, the circulation of the SUB is organized as a crossroads – a primary N/S corridor is bisected by a secondary E/W corridor. Student spaces are organized along these main circulation routes. Entrances along these corridors have glass walls to provide visibility into student spaces. Passenger elevators are located at the crossroads of the two corridors, in the centre of the building, and at the western end of the e/w corridor. Both elevators connect all five levels of the building.

BUILDING CONCEPT - SENSE OF COMMUNITY



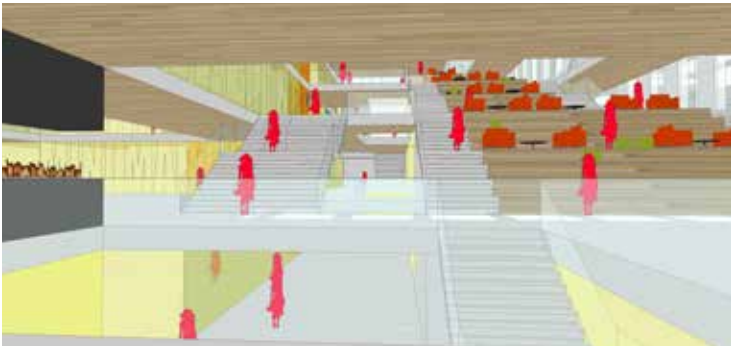
Perspective view of north plaza with Social Stage Lounge to the right..

Outdoor Plaza: Creating welcoming edges to the building supports the goal of a building that is welcoming, inviting and fun. This will be achieved by creating outdoor plazas on the east and north sides of the building, just south of Freedom Square and between the SUB and the AQ. Animating the plaza is a cafe on the NE corner of the SUB, which will include outdoor seating and tables. On the north side of the SUB, large oversize doors will open onto the north plaza, and create an indoor / outdoor connection to the cabaret lounge. On the east side, the outdoor plaza has plenty of sunlight, and is a shared amenity with the AQ student spaces. Both plazas provide opportunities to display 3-dimensional student artwork such as sculptures.



Perspective view from level 11 entrance at AQ pedestrian bridge link.

Visual Catalogue: The building is organized to enhance and permit views into and within the building, providing a visual catalogue of the activities inside. Cutouts at each floor level provide interconnected space with double height ceilings to make multiple floor levels visible at once.



Perspective view of floating lounges adjacent to stair circulation.

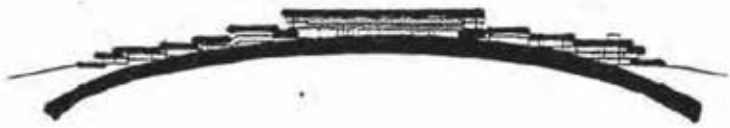
Social Space: Social space for student enjoyment is distributed throughout the building on all levels. Social space includes lounges, games rooms, a dining area, and a café. Along the eastern edge of the building, a series of cascading or floating lounges encourage movement through the building and provide connectivity between all floors. Located adjacent to the main stair, these lounges will accommodate fixed seating as well as flexible furniture.



Energy, Environment and Experiential Learning Building, University of Calgary. Perkins+Will. Photo: Tom Arban

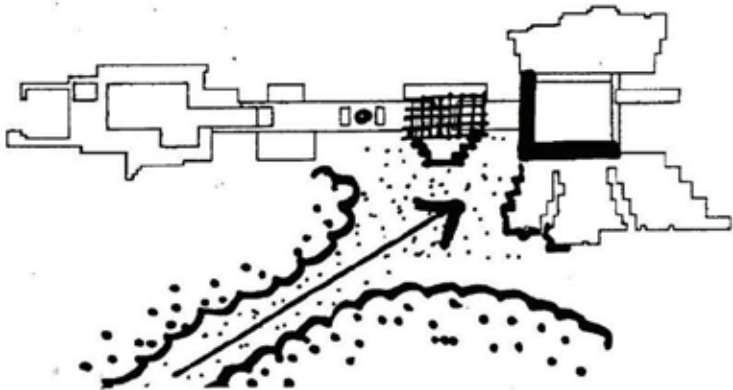
BUILDING CONCEPT - OUTSTANDING DESIGN

Master Plan Concepts established in the 1963 Campus Master Plan



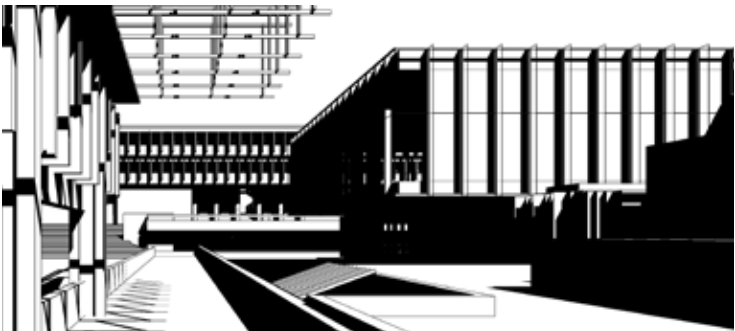
TERRACED MASSING IN RESPONSE TO LATERAL TOPOGRAPHY
“Stepped, terraced building form, responding to the natural shape of the hill-top site, maximizing the lateral views from the mall and other upstope buildings, and ensuring special sensitivity in the rooftop treatment.”

It is essential that the terraced approach be integrated into all future development.



GAGLARDI WAY APPROACH SEQUENCE
“Celebration of the approach sequence and the main vehicular arrival/dropoff points, giving special consideration to the buildings and open spaces that directly contribute to the approach and arrival experience, most notably the meadow which provides a foreground to the theatre, academic quadrangle and science complex”.

Gaglardi Way should be visually reinforced as the primary ceremonial approach to the campus.



Perspective view of SUB from Level 11 walkway looking east. AQ is visible in the background.

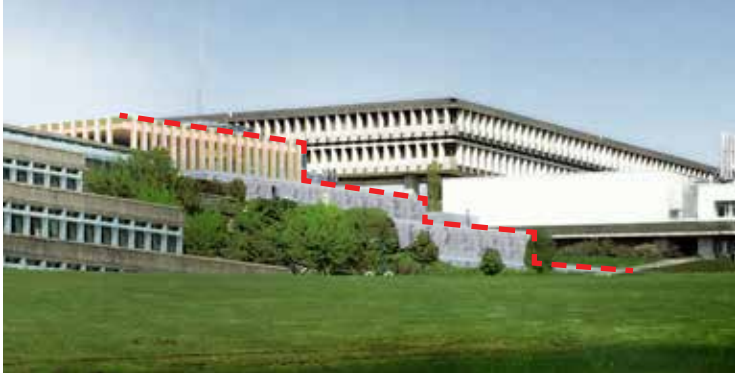


Perspective view of NE corner of the SUB, from the outdoor plaza.

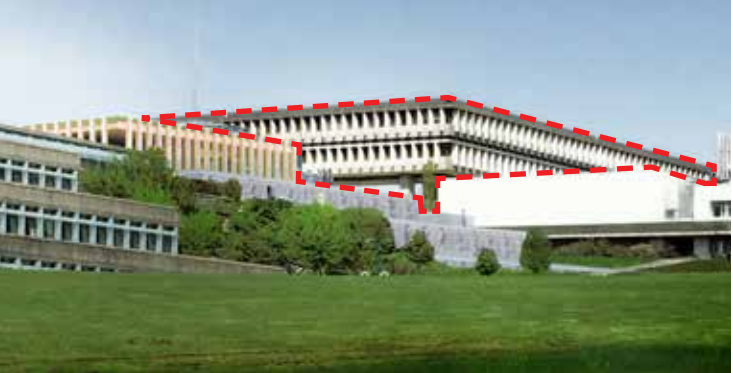
Respecting the architectural legacy of the SFU Burnaby campus, while communicating the identity of the SFSS and students is important in the exterior expression of the building. Drawing on the SFU Master Planning Concepts established in 1963 by Erickson Massey Architects, two concepts are seen as having direct influence on the massing of the SUB: “*Terraced Massing in Response to Lateral Topography*” and “*Gaglardi Way Approach Sequence*”. In support of these concepts, the building form is a stepped massing that responds to the surrounding campus form.

This massing has several benefits:

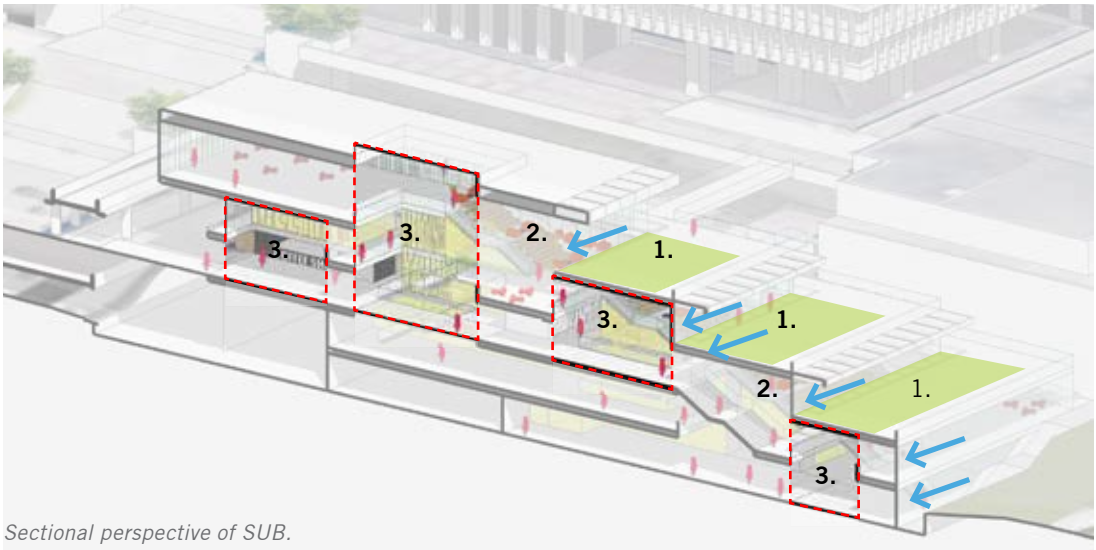
1. The stepped massing provides a series of rooftops at different elevations, all with southern exposure that will provide benefit from direct sunlight and views – enhancing outdoor patios and roof terraces.
2. The stepped massing maximizes daylight into the interior spaces of the building on each floor, especially into the deeper recesses of the building.
3. The stepped massing creates multiple opportunities for double and triple height volumes inside the building, giving relief to the floor to floor heights.



Perspective view of building from Gaglardi Way showing stepped massing.



Perspective view of building from Gaglardi Way highlighting view of AQ.



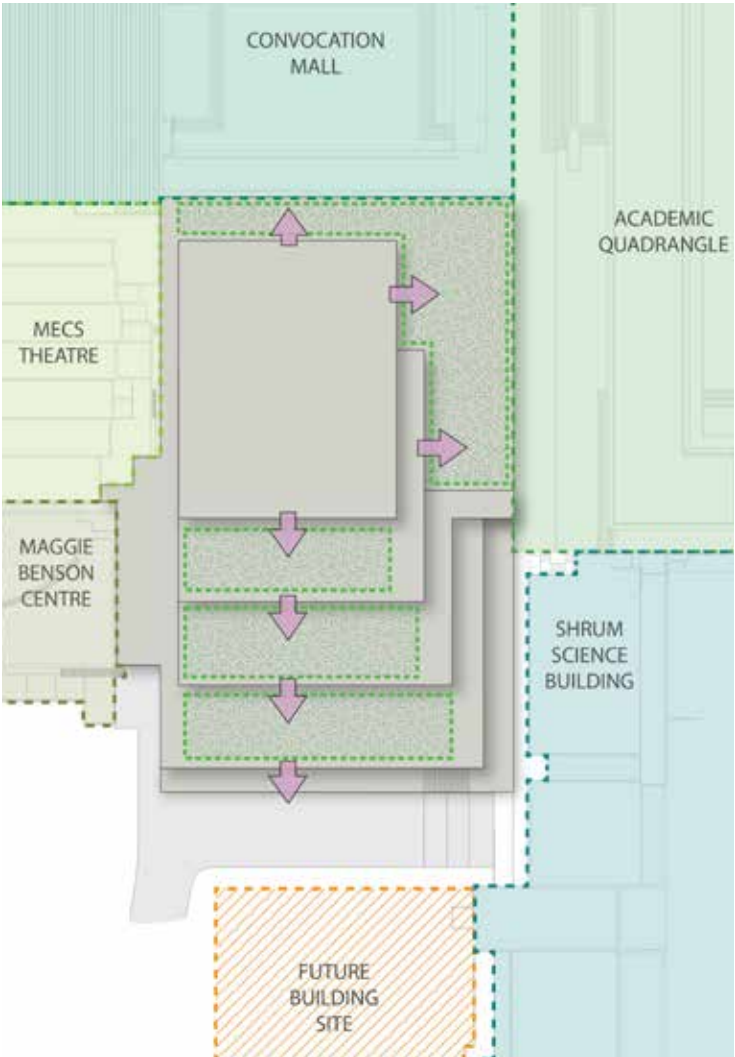
Sectional perspective of SUB.



Drawing on the architectural vocabulary of the campus architecture, the building incorporates vertical glass and metal fins spaced 1.5m apart, replicating yet modernizing the vertical concrete fins on the AQ.

To create distinction on the campus, the top floor is envisioned as a glass and wood box (sitting on a concrete / metal / glass podium), which is highly visible from Freedom Square.

BUILDING CONCEPT - NATURE



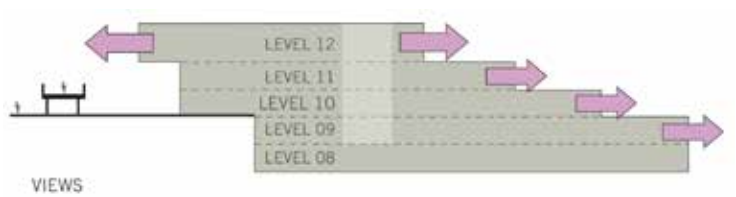
The ability to experience the natural mountain environment is identified as a goal in the benchmark statement for Build SFU. There are several ways that this will be achieved in the SUB:

- Direct access to outdoors and landscape at grade on the south side of the building at level 1000 (08).
- Access to rooftop terraces on levels 3000 (10), 4000 (11) and 5000 (12), south side of the building.
- Views to the north on level 5000 (12).
- Windows on the north, east and south sides of the building to bring daylight in and permit views outside.
- Access to an outdoor plaza on level 3000 (10).



Views: A multi-purpose room and lounge are located on Level 5000 (12) to give students a higher vantage point to view the north shore mountains and south towards Vancouver Island on sunny days. This lounge will also allow short range views towards Convo Mall to enjoy activities taking place. Refer to page 44 for more information on the multi-purpose room.

Roof Decks: Accessible roof areas will be provided on the south side of the building on levels 3000 (10), 4000 (11) and 5000 (12), providing multiple opportunities to enjoy the outdoors with direct solar exposure.



Senior High School Neulengbach
Shibukawa Eder Architects



Interconnected Space and Daylight: Interconnected floors that are organized around an opening or atrium create physical and visual connections between different floors of the building, while permitting daylight to filter through. To achieve this, the level 5000 (12) roof incorporates a skylight. Combined with this, openings in the different floor levels of the SUB allow daylight from the skylight and windows on perimeter walls to penetrate deeper into the building.



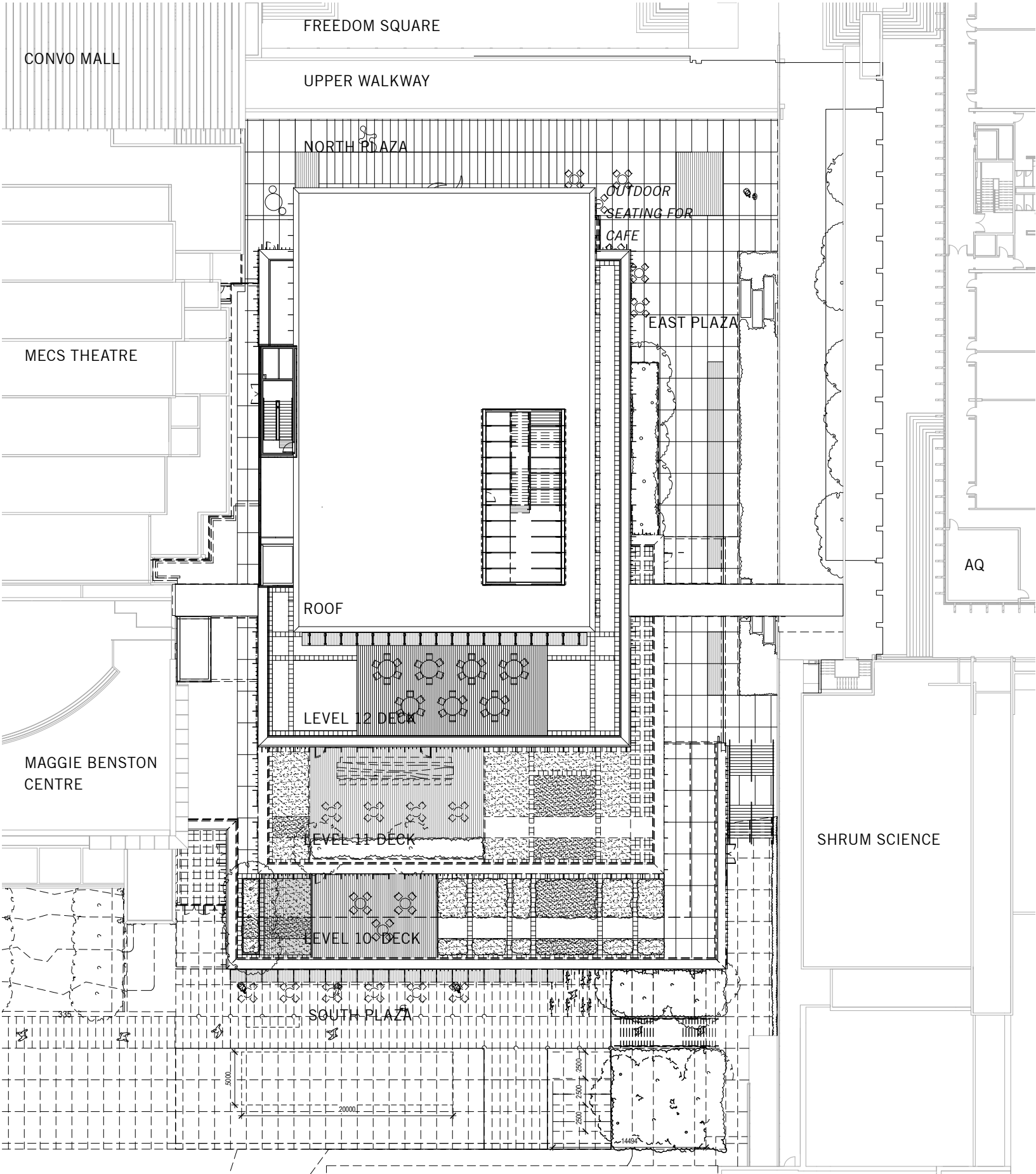
ARCHITECTURAL REPORT



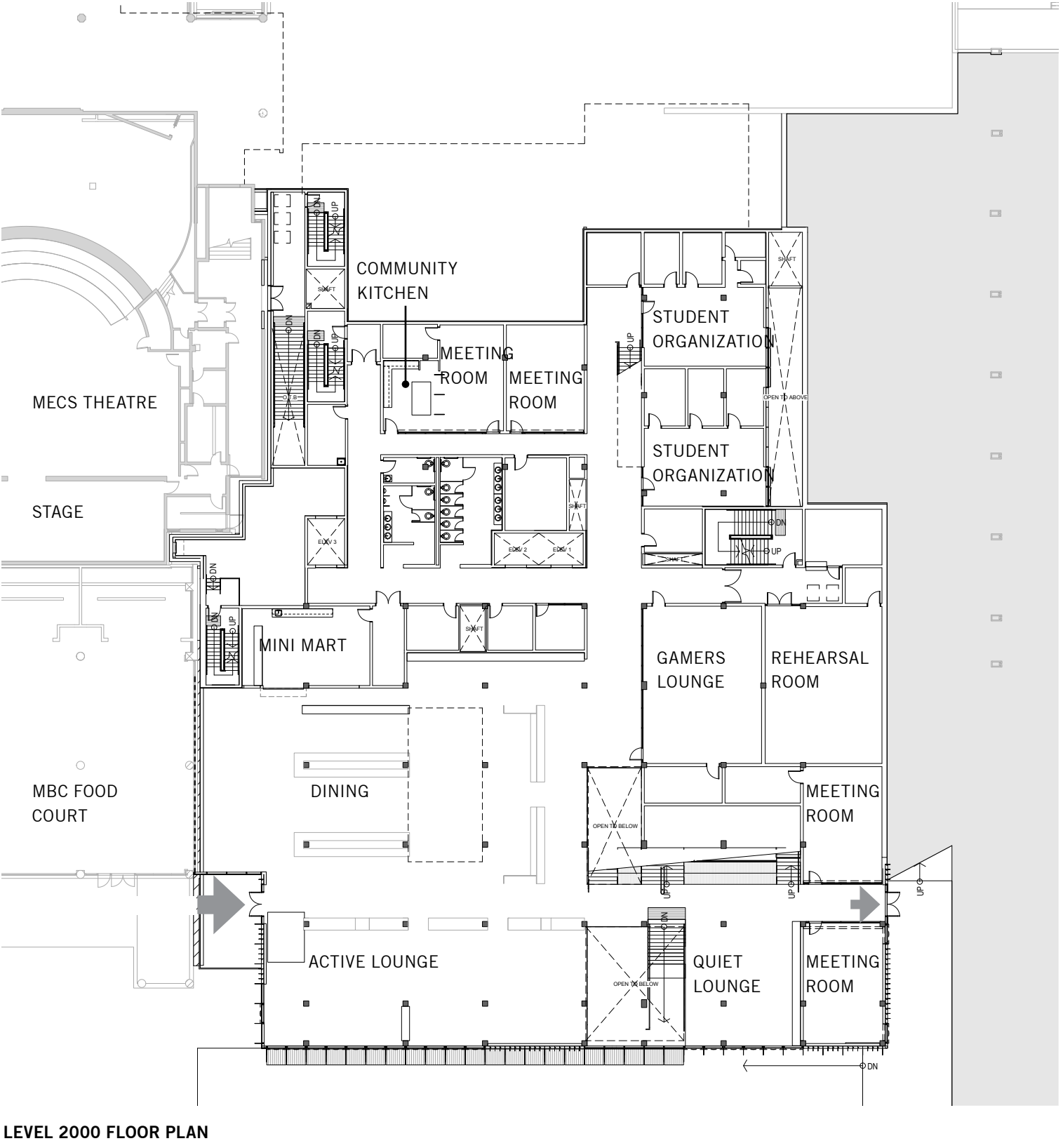
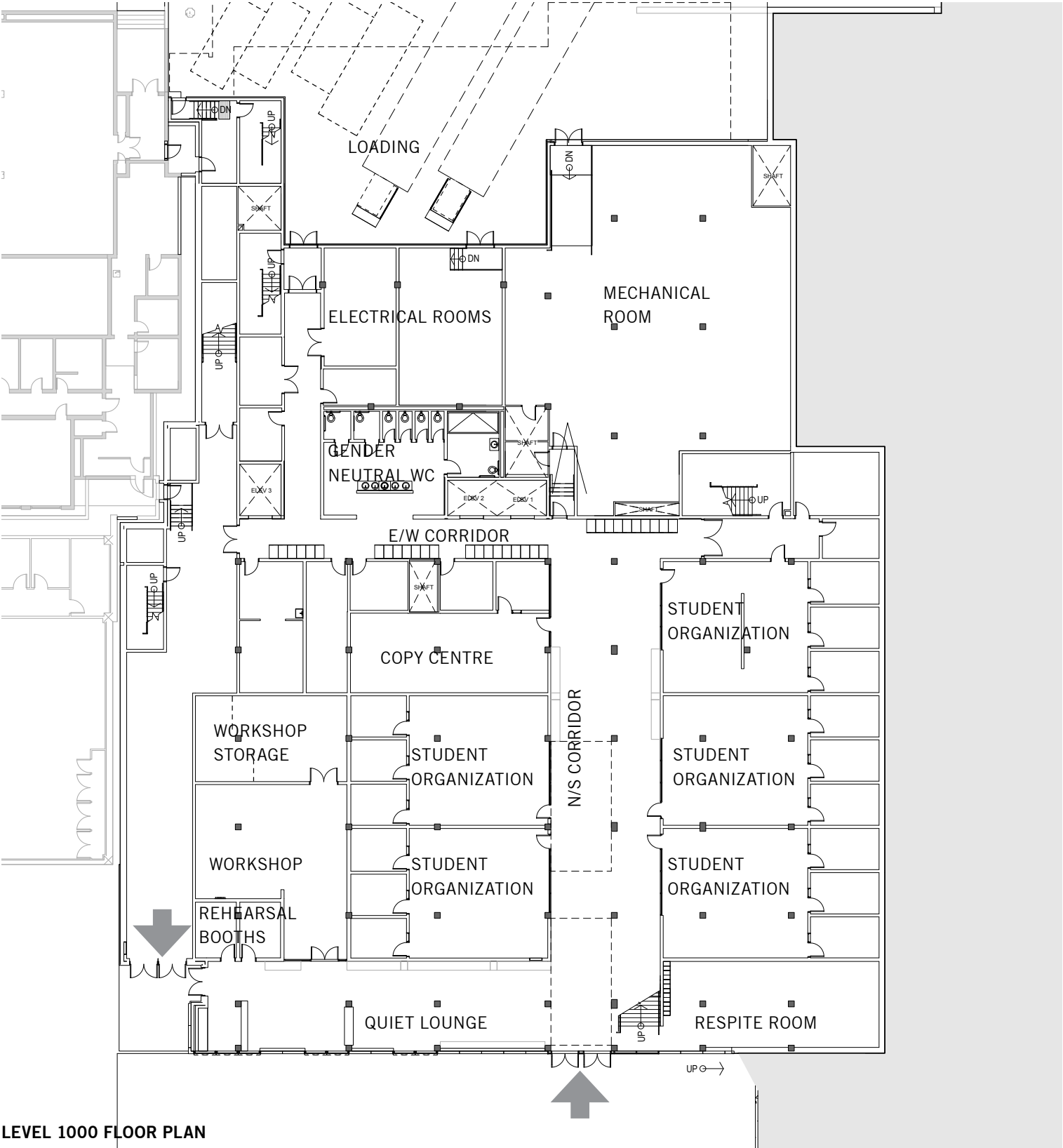
The plans and images presented in this document represent the design of the Student Union Building to the end of Design Development. The intention of the Design Development Report is to indicate the intended design of the building in more detail than previous reports. This includes floor plans showing rooms, doors, solid and glass walls, interior wall, floor and ceiling finishes, security / hardware, systems integration (mechanical, electrical, AV, technology), and additional details showing intention for the building envelope (walls, windows, roofs).

ARCHITECTURAL DESIGN

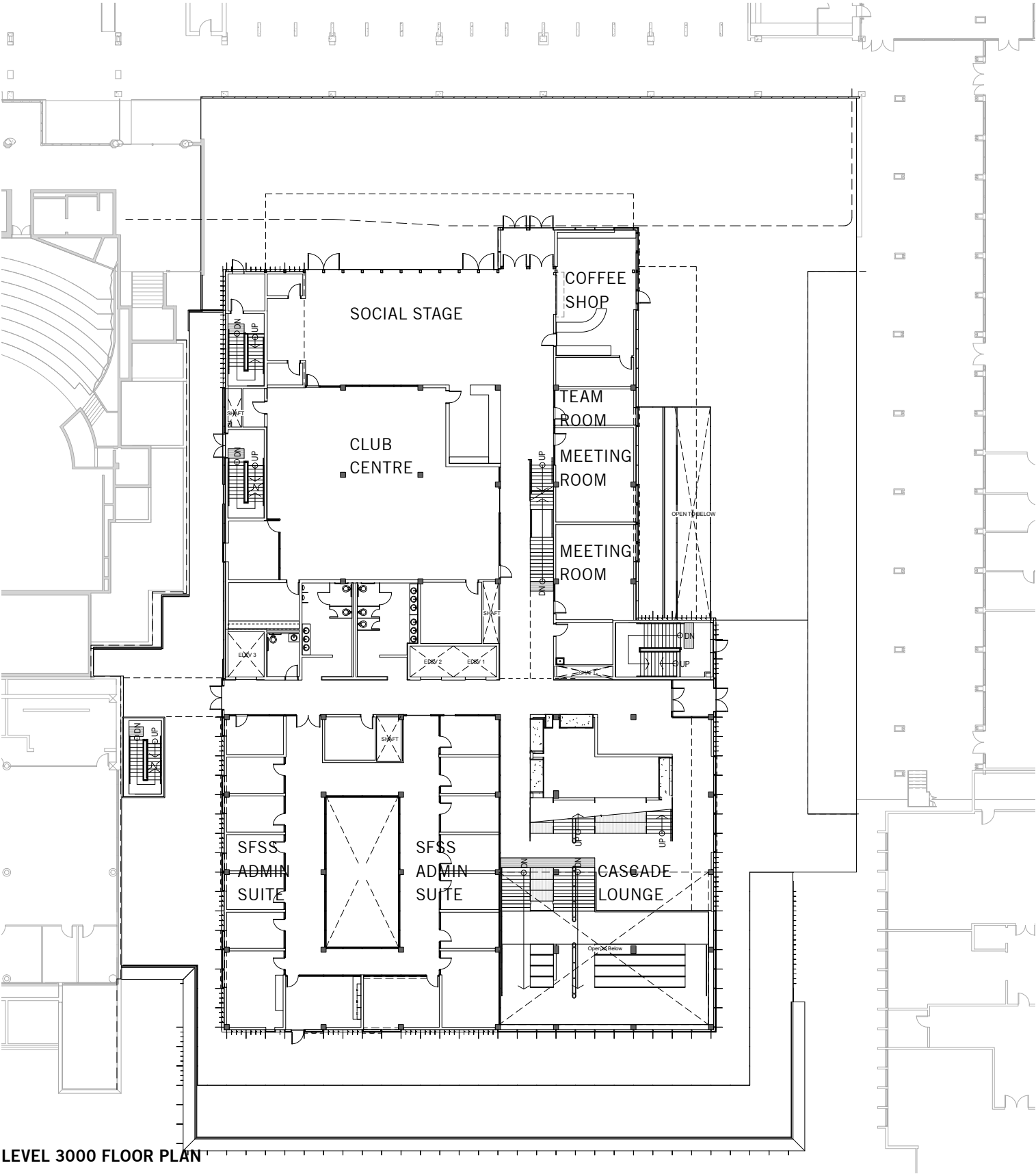
SITE PLAN



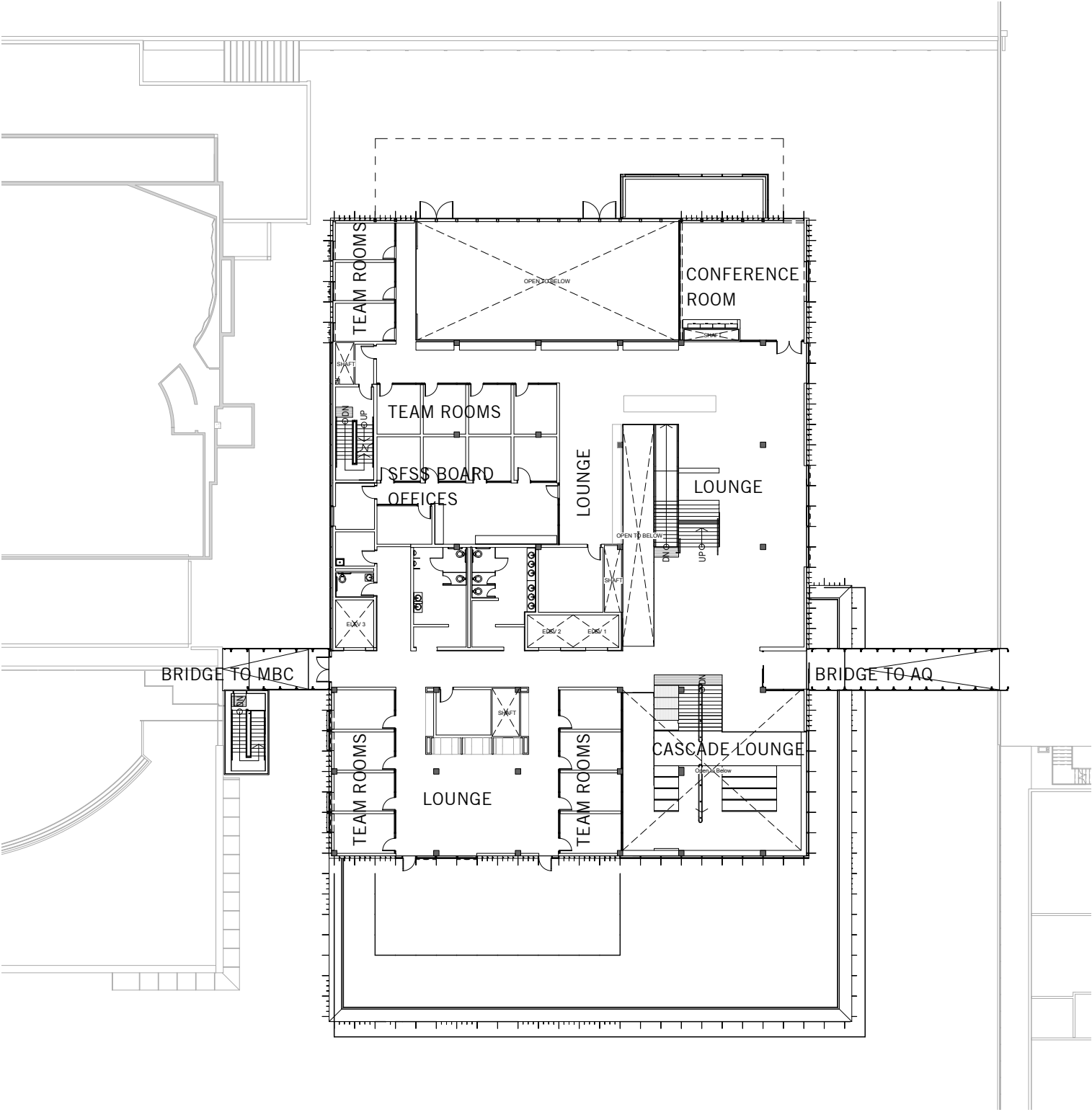
ARCHITECTURAL DESIGN



ARCHITECTURAL DESIGN

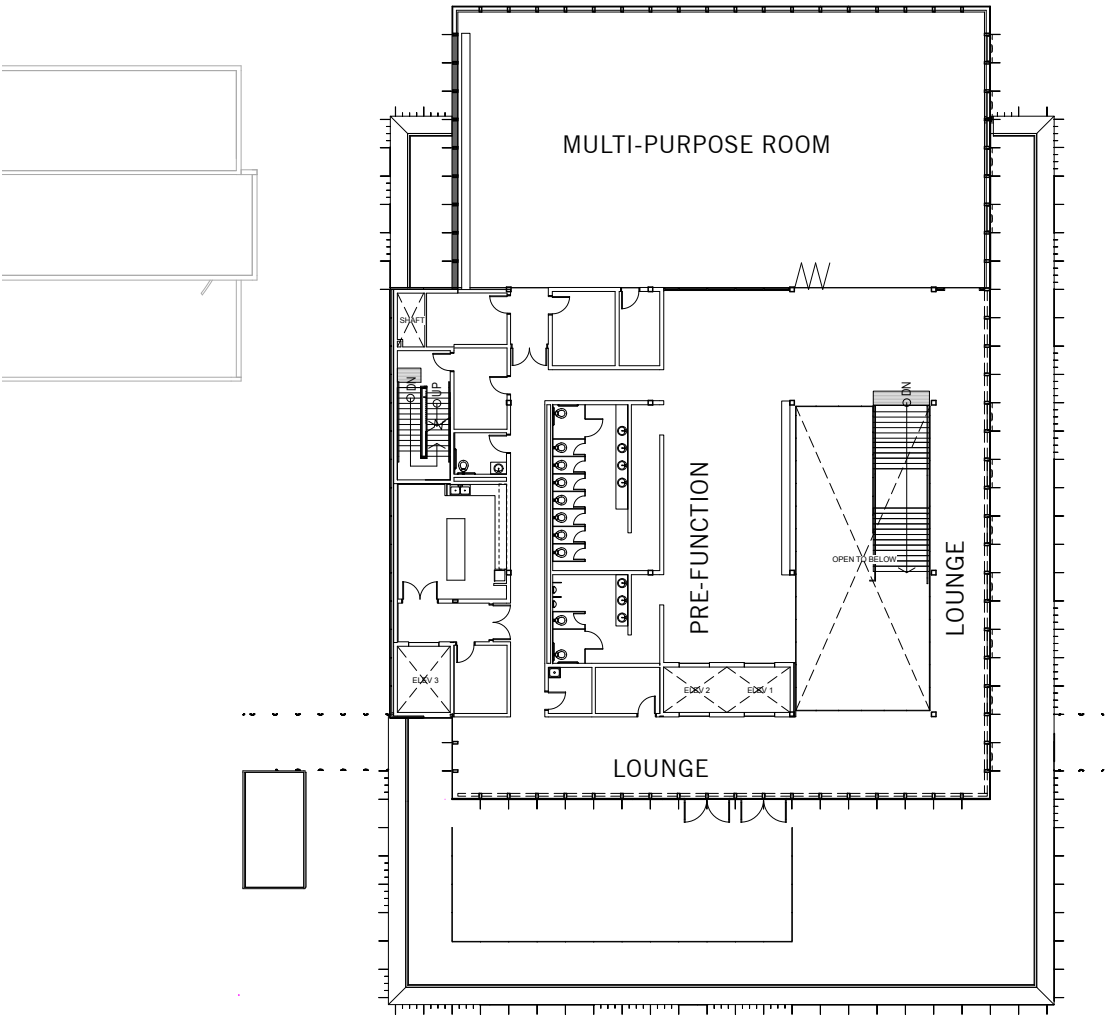


LEVEL 3000 FLOOR PLAN



LEVEL 4000 FLOOR PLAN

ARCHITECTURAL DESIGN

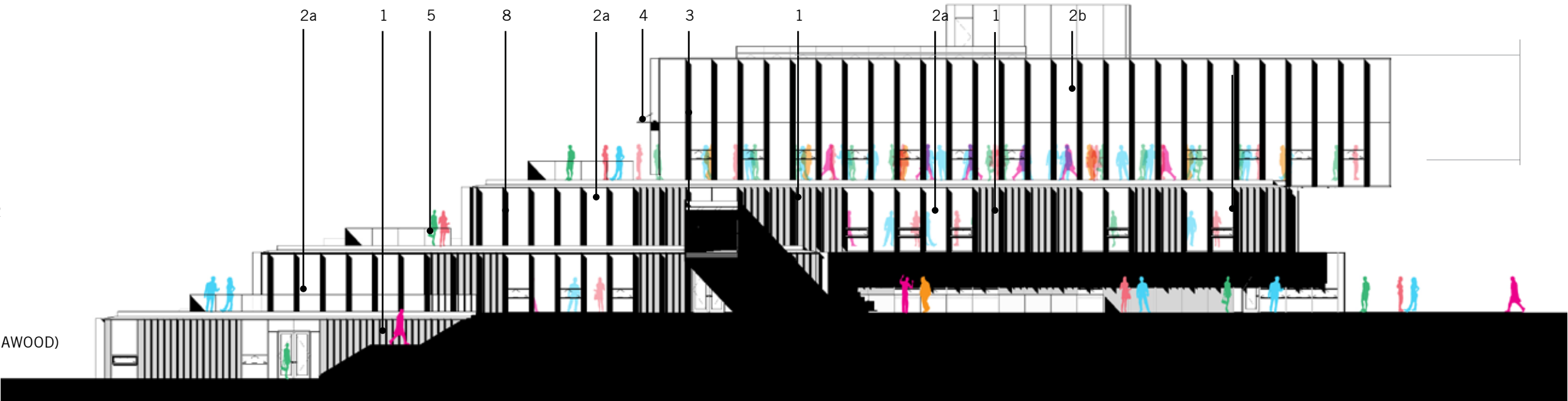


LEVEL 5000 FLOOR PLAN

ARCHITECTURAL DESIGN

LEGEND:

- 1. METAL CLADDING
- 2a. CURTAINWALL GLAZING
- 2b. VENEER CURTAINWALL GLAZING
- 3. GLASS FINS WITH TRANSLUSCENT INTERLAYER
- 4. GLASS CANOPY WITH METAL SUPPORTS
- 5. GLASS GUARDRAIL
- 6. CONCRETE
- 7. SPANDREL GLASS WITH WOOD INTERLAYER (OKAWOOD)
- 8. PERFORATED METAL FIN



EAST ELEVATION

NTS

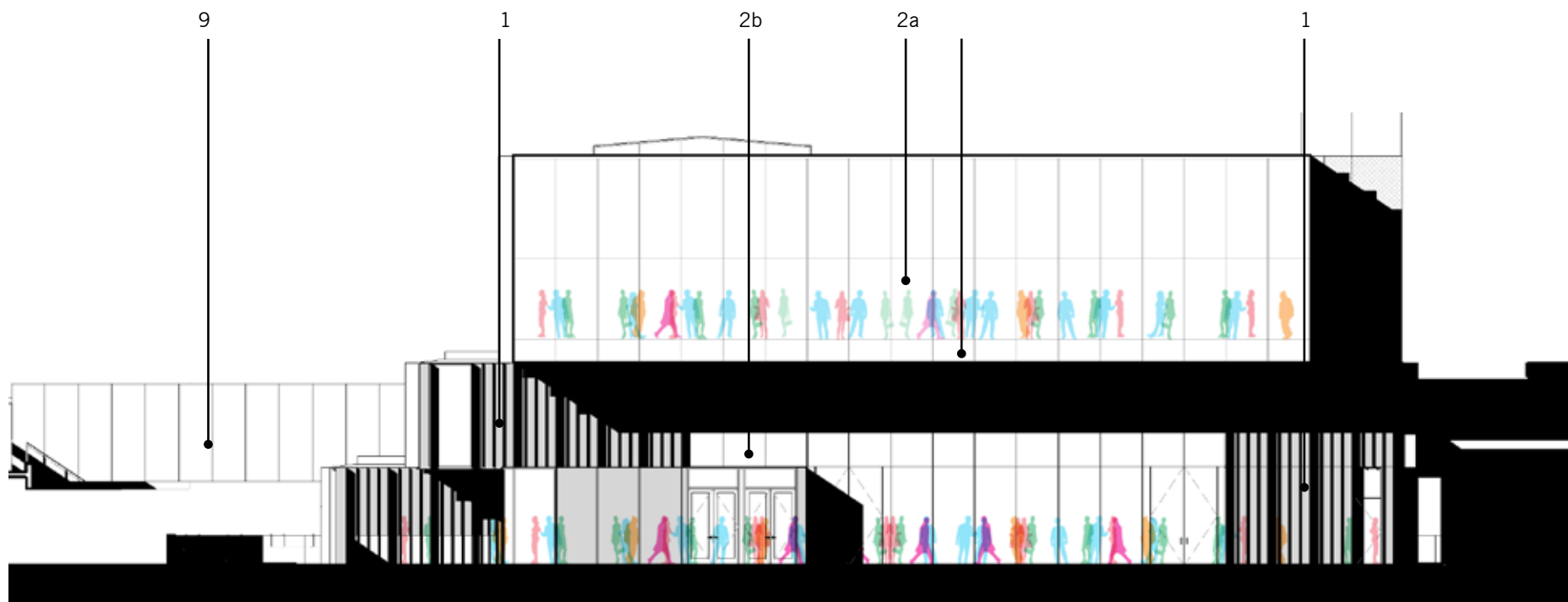


WEST ELEVATION

NTS

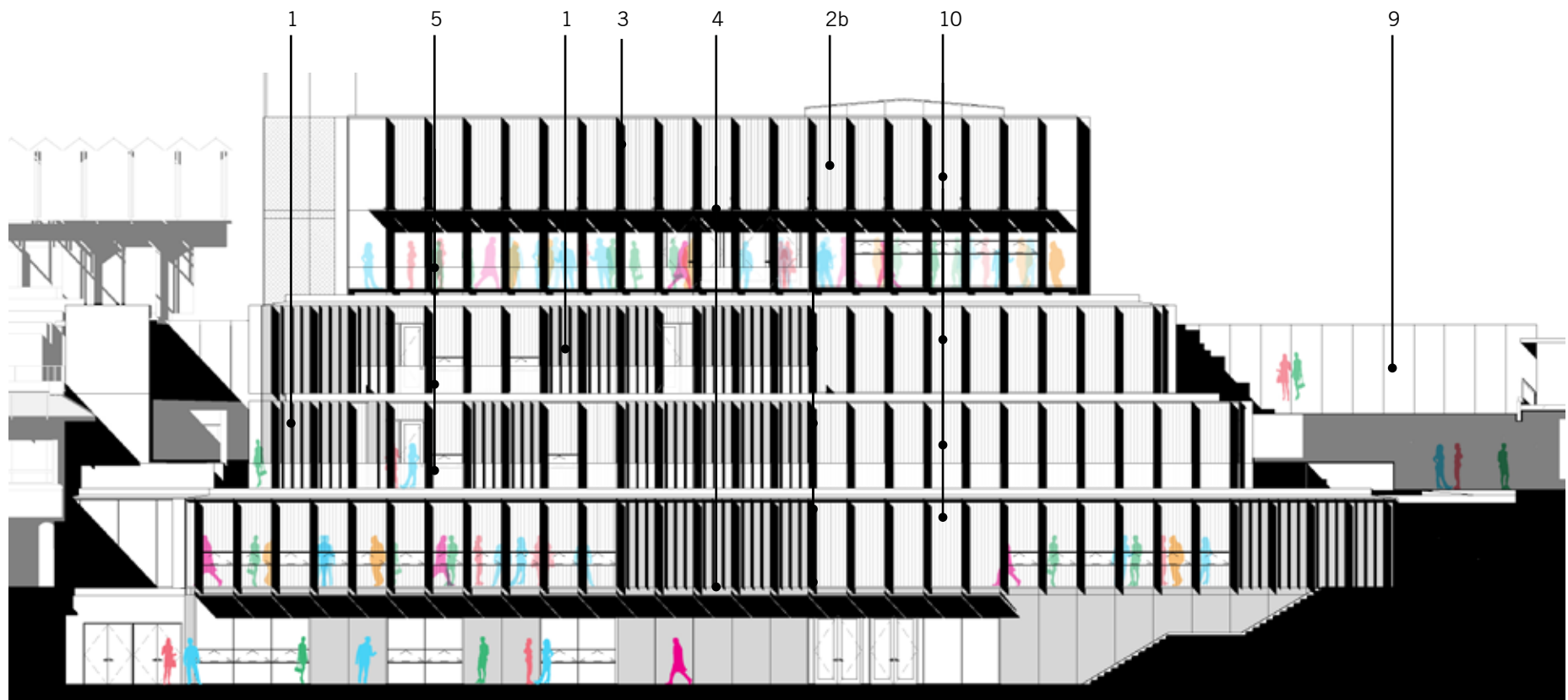
ARCHITECTURAL DESIGN

- LEGEND:
- 1. METAL CLADDING
 - 2. CURTAINWALL GLAZING
 - 3. GLASS FINS WITH TRANSLUSCENT INTERLAYER
 - 4. GLASS CANOPY WITH METAL SUPPORTS
 - 5. GLASS GUARDRAIL
 - 6. CONCRETE
 - 7. SPANDREL GLASS WITH WOOD INTERLAYER (OKAWOOD)
 - 8. PERFORATED METAL FIN
 - 9. GLASS SCREEN
 - 10. GLASS WITH FRIT PATTERN



NORTH ELEVATION

NTS



SOUTH ELEVATION

NTS

ARCHITECTURAL DESIGN

i. Building Materials

The Student Union Building base material palette respects the SFU tradition of honesty in the way materials are presented while differentiating the SUB and providing a wow factor. Materials used in the construction of the SUB must be durable, long lasting and low maintenance. Durable materials that weather well in their appropriate climate and physical context also present a longer lasting positive public face to a building.

The primary structural material of the building will be concrete. Wherever concrete will be exposed, such as interior columns, the finish will be smooth. There will be no exposed concrete on the exterior of the building, except in landscape features and exterior paving.

The exterior of the building will be clad in metal panels (zinc, stainless steel or aluminum, depending on cost) at all solid wall locations, and insulated glass units (IGU's) within a curtainwall framing system at all window locations. A curtainwall system is self-supporting, durable and long lasting, with higher thermal performance than traditional punched windows. Where required, guardrails will be structural laminated glass.

Wood will be used inside the building both in the structure of the Level 12 roof and columns, as well as in interior finishes throughout. Aesthetically pleasing and sustainable, wood evokes comfort and warmth and will be a unifying, inviting material inside the SUB.



Metal: Metal will be used to clad the exterior of the building. This may be in the form of zinc, brushed aluminum or mirrored surfaces in areas such as soffits. Metal used in this way can create a reflective surface that blends and reflects the environment.



Wood: Wood will be used throughout the building both in the structure and interior finishes, and will be the defining material in the building to create a cozy and inviting atmosphere, while also providing differentiation from SFU.



Glass: Glass will be used for windows, as well as vertical fin elements that relate to the SFU architectural language. Glass also provides transparency to make the building open and welcoming. Exterior vertical fins act as shading devices and will have a translucent interlayer to reduce glare inside the building.



Concrete: Concrete will be used for portions of the structure, as well as exterior elements such as stairs and retaining walls. The concrete will be board formed finish in exposed exterior areas.

INTERIOR DESIGN APPROACH



i. Concept

The interior design concept for the Student Union Building is based on the notion of “connectivity” and “home away from home”. Both of these concepts will create a space that differs from academic buildings in expression through colour, texture, furniture selection and spatial identification. The colourful, playful interior is intended to contrast with the metal and glass exterior of the building, similar to the jar of jelly beans – a simple jar holding contents inside.

Keeping budget in mind, the spaces in the building must be hardworking, use durable materials, and be flexible. All spaces must allow students who occupy them to personalize and create their own character.

Perkins+Will hosted an interior design focus group in July 2014, and students were supportive of the conceptual approach.



Connectivity:

Building on the current web based communication tools used by the SFSS and students today (Facebook, Twitter, Instagram), the lines of connectivity are woven through the building through bold graphic signage.

Word association with this concept includes:

EXCITEMENT

COMMUNITY

ADAPTABILITY

BUZZ

COLOUR

BOLD

GRAPHIC

TYPOGRAPHY

IMAGE

ADAPTABILITY



Home away from home:

The Student Union Building Benchmark Statement identifies a goal of creating a “home away from home” for students. The SFU Burnaby Campus is a primarily commuter campus, and the SUB will provide much needed relaxation, socialization and community activities for students before, between and after classes. Interior elements of this theme include a more eclectic approach, which allows for student personalization of space, and can also support intuitive wayfinding by creating themed rooms and floors.

Word association with this concept includes:

INVITING

ECLECTIC

FUN

PLAYFUL

COMFORTABLE

PERSONALIZED

QUIRKY

TEXTURE

VIBRANT

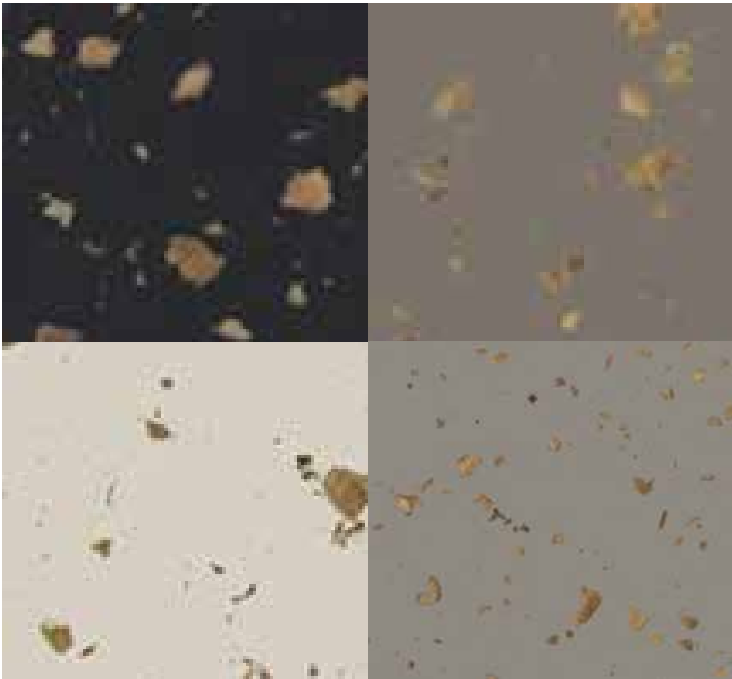
RETREAT



ii. Interior Colour Palette

The colour palette in the SUB is based on SFU’s colours of red, blue, gold and black. Building on this base, the colours in the SUB will be bright, fresh and lively, including colours such as lime, yellow, aqua and orange. Bolder colours will be specified for materials that can be replaced, and a neutral tone for base building elements that must remain contemporary for the life of the building.

INTERIOR DESIGN APPROACH



Example of recycled rubber flooring with crushed cork - increasing the recycled content of the product.

iii. **Materials**

Healthy indoor environments are essential to optimizing the experience of all students, faculty and staff using the SUB. The biggest source of indoor pollutants are interior finishes and eliminating materials that off-gas or contain toxic ingredients (or ingredients suspected of causing harm to human health) is an important factor in providing quality indoor environments that promote student health and wellbeing.

All interior material and product selections will be reviewed against the precautionary principle, with choices made based on the best scientific advice and knowledge available. Where alternatives exist, the SUB will include the healthier product or material.

Optimal indoor air quality for the SUB will be accomplished by:

- Manufacturers of specified materials will be required to provide a Health Product Declaration, which states what their materials are made of.
- When information is available, interior finishes specified in the SUB will be reviewed for their ingredients, and the design team will make every attempt to avoid interior materials that contain Volatile Organic Compounds (VOC's), halogenated flame retardants, phthalates, and / or polyvinyl chloride (PVC), all of which can have negative impact on human and environmental health.



Example of linoleum flooring, a natural material containing no polyvinyl chloride.

- Zero and/or low emitting and non-toxic materials such as paints, carpets, adhesives, sealants, and furniture systems
- Wood containing no added urea-formaldehyde

Depending on the space requirements for servicing and acoustics, interior materials will consist of suspended wood ceilings, suspended acoustic tile, metal and fabric wrapped acoustic baffles, and drywall. The level 5000 ceiling will have an exposed wood structure.

Flooring throughout the building will be resilient (recycled rubber or linoleum) for ease of cleaning and to minimize footfall noises.

Walls will be drywall with paint finish, and in specialty areas will also contain acoustic treatment to manage the building acoustics. Select walls in corridors will be writable surfaces to allow student collaboration and temporary personalization of space.

Ceilings in public areas will be metal and fabric wrapped acoustic baffles, using colour to create variation in the ceilings.



An example of felt acoustic treatment being considered for the SUB.



Wood is a natural material that will be incorporated into the design in built in cabinetry, ceilings and exposed structure.



The SUB interior design will provide opportunities for personalization, such as writable surface shown in the above photo.



An example of acoustic ceiling baffles being considered for the SUB. Ceiling baffles will provide much needed acoustic control in the north / south corridors.

LOUNGES



Example of corridor with writable surface on walls, and seating within circulation space

Many of the spaces in the SUB are social space to build community. As part of this program, the SUB contains student lounges located on all floors of the building. This includes both quiet lounges intended for study and active lounges for socializing.

The conceptual approach to the building locates active lounges along main circulation paths, providing convenient and welcoming access for all students.

Quieter lounges are located on destination floors or are indicated through difference in lighting and colour.

In addition to dedicated lounge areas, a generous N/S corridor that runs through each floor level provides opportunities for soft seating and relaxation, as well as informal collaboration and study space. These areas may have writable wall surfaces in select locations.

Power will be provided through out for students to plug in laptops with data provided through wifi.



Example of wall cutouts with seating to create intimate spaces along corridor walls.



Concept image of an intimate space in a larger lounge, providing personalization of space.



Concept image of an active lounge similar to the cascade lounge in the SUB.

LOUNGES



Concept image of the quiet lounge on Level 1000 (08).

Level 1000 (08): A quieter destination lounge is located on level 1000 (08). This lounge will be furnished with a combination of soft seating and tables and chairs.

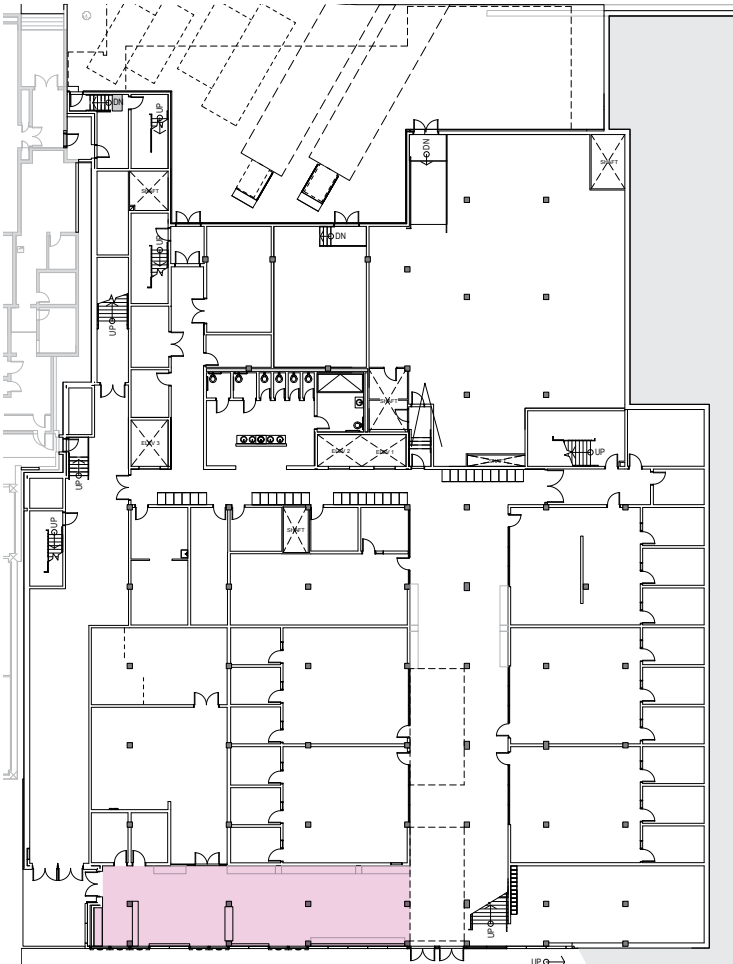
A kitchenette with microwave and sink is located at the west end of the lounge, and a bar counter is adjacent to the kitchenette for students to enjoy their food. A fireplace will be provided in this lounge. The lounge will also have access to the south plaza through the south entrance doors, as well as exterior access on the west side.

Electronic signage will be located on the north wall. Power will be provided throughout the lounge along perimeter walls, and data is through Wifi.

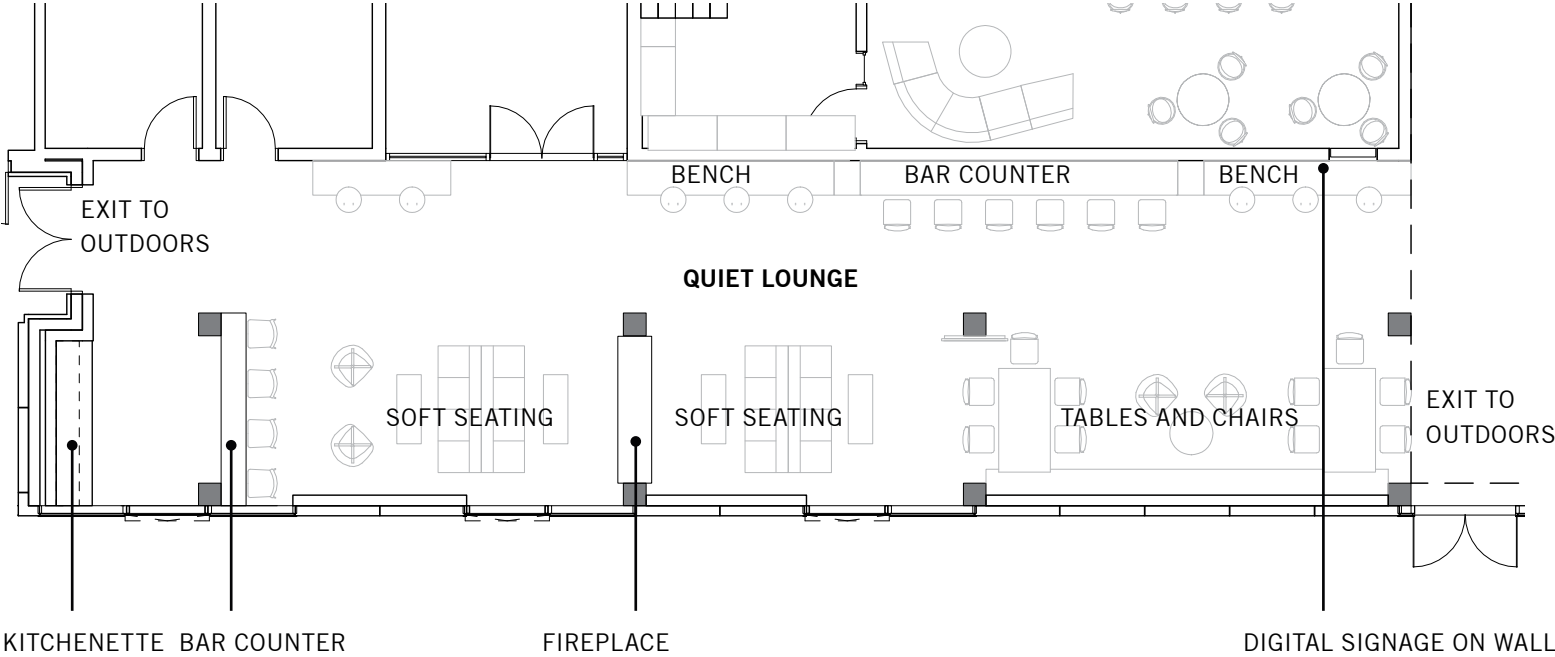
The level 08 lounge is fully accessible from the exterior and from the elevators.

FINISHES:

- 1. Flooring will be recycled rubber.
- 2. Ceilings will have suspended wood ceiling tiles.
- 3. Walls will be painted drywall with some writable surfaces such as whiteboards.



LEVEL 1000 (08) FLOOR PLAN
Highlighting location of Level 08 Lounge



QUIET LOUNGE PLAN

*Note: Furniture shown for scale and suggested layout only.
Furniture selection is not included in the current phase of work.*

LOUNGES



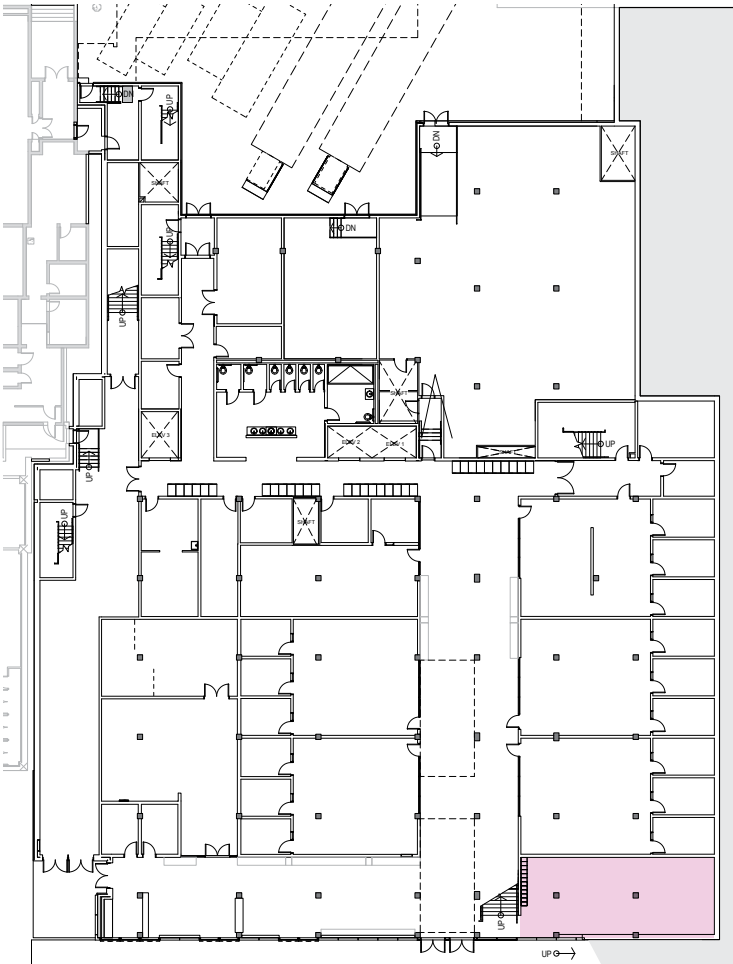
Level 1000 (08): A respite lounge is located on this level. The respite lounge is intended for students to rest and relax, and will contain soft seating such as lounge chairs and modular sofas.

The room will be acoustically treated on the walls and ceilings to provide for a quieter environment.

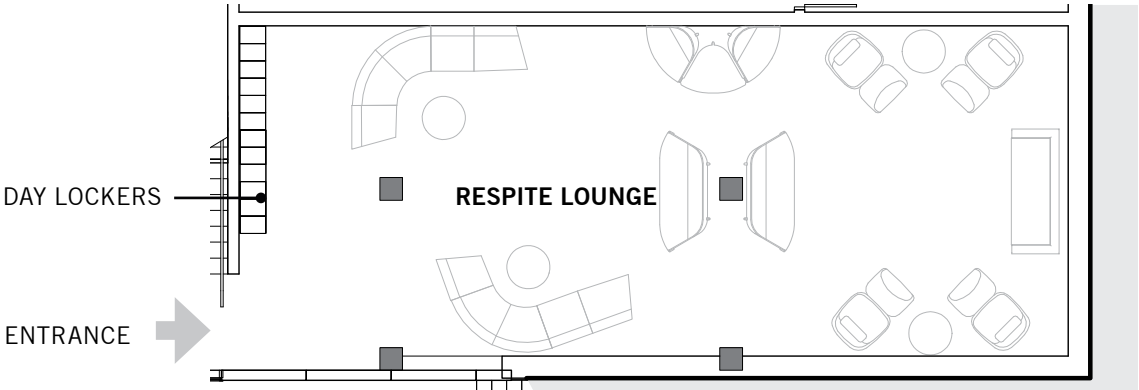
Lockers will be provided for student use while in this space.

FINISHES:

- 1. Flooring will be recycled rubber.
- 2. Ceilings will contain acoustic treatment.
- 3. Walls will be treated with acoustic paneling.



LEVEL 1000 (08) FLOOR PLAN
Highlighting location of respite lounge



RESPITE LOUNGE PLAN

Concept images of the respite room finishes.



*Note: Furniture shown for scale and suggested layout only.
Furniture selection is not included in the current phase of work.*

LOUNGES



Concept image of active lounge.

Level 2000 (09): There are two lounges on this level:

1. An active lounge is located next to the dining / food court. This lounge is planned to be furnished with soft seating, both in smaller and larger groupings as well as tables and chairs.

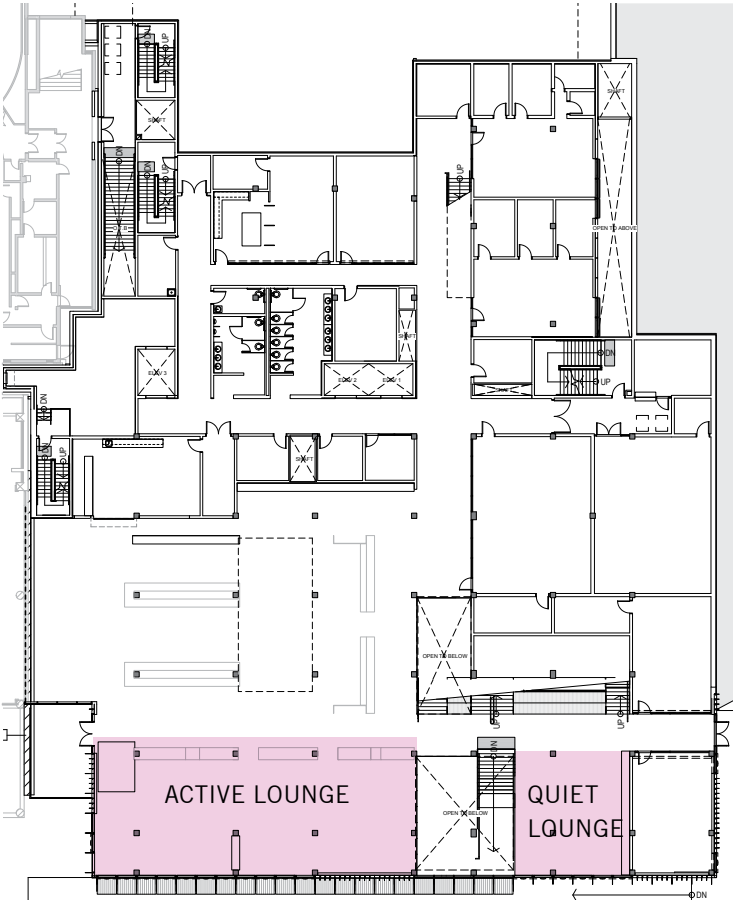
Table games such as billiards and foosball will be located in this lounge, along with TV monitors and electronic signage, which will broadcast programs throughout the day. A gas fireplace will be located in the lounge.

Power will be provided throughout the lounge along perimeter walls and at columns. Data is through wifi.

2. A quiet lounge across the south atrium will be furnished with tables and chairs, and some individual soft seating suitable for quiet study.

Power will be provided throughout the lounge along perimeter walls. Data is through wifi. Electronic signage will also be included in the room.

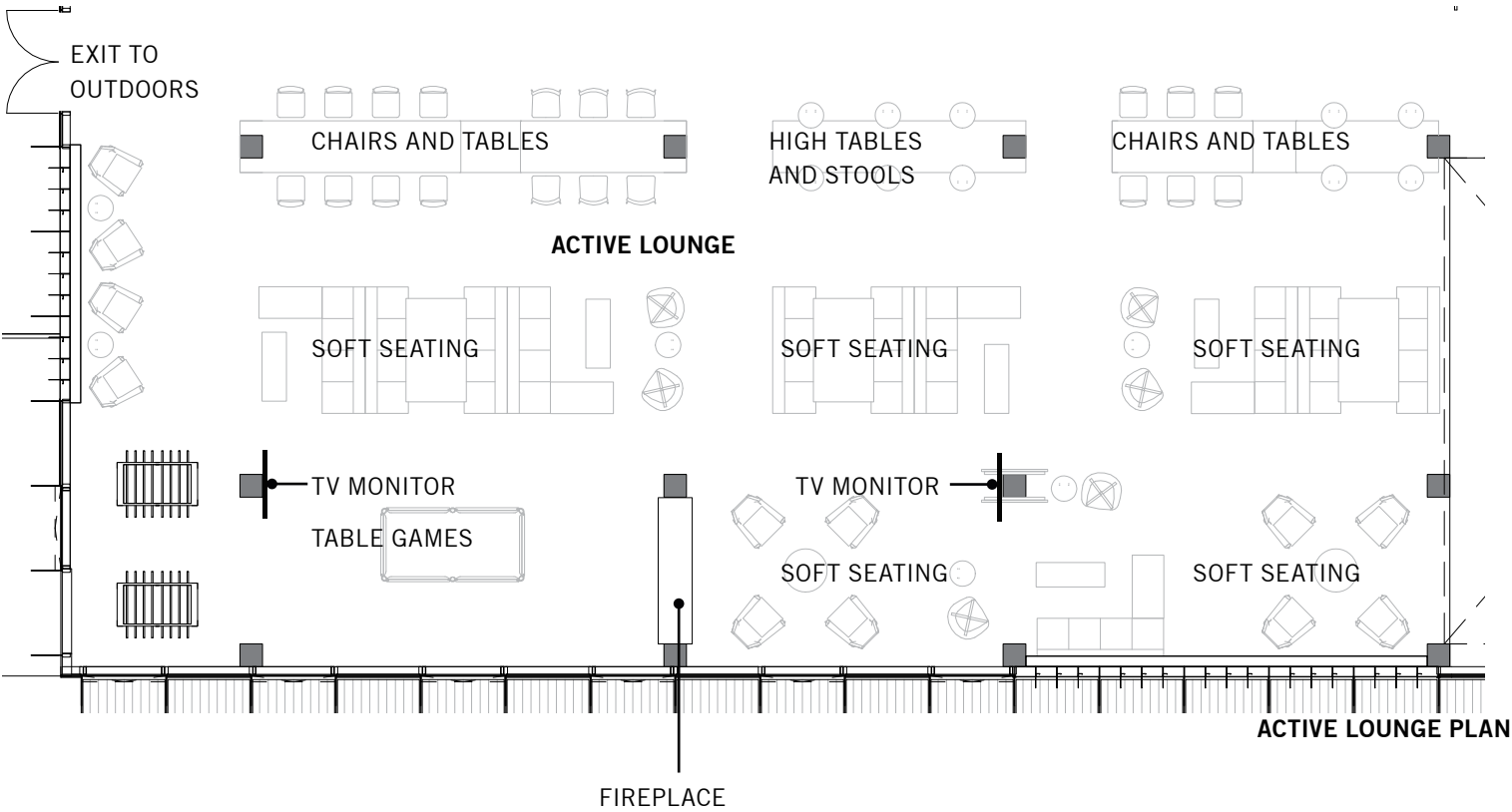
The level 09 lounges are fully accessible from the Maggie Benston Centre and from the SUB elevators.



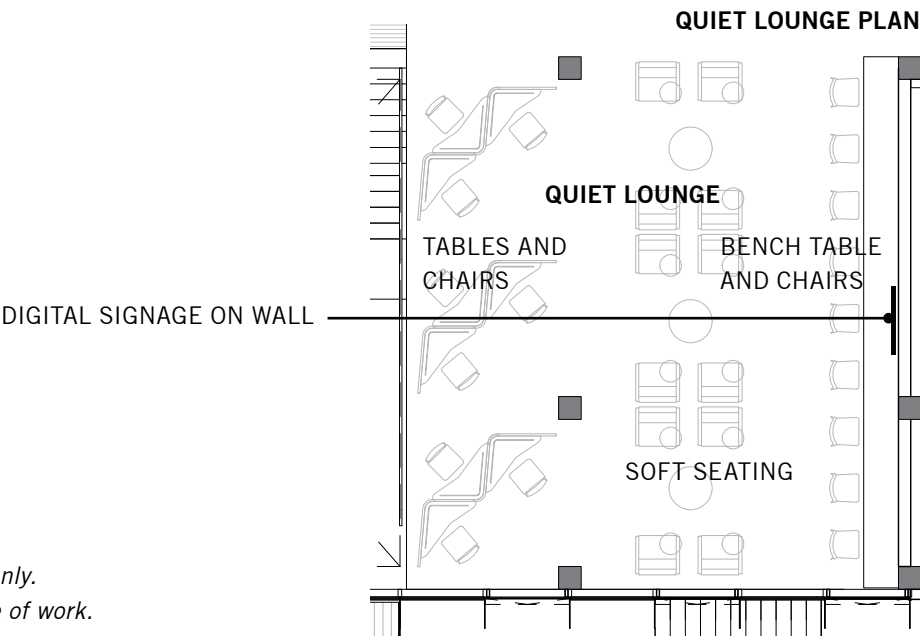
LEVEL 2000 (09) FLOOR PLAN
Highlighting location of Level 09 Lounges

FINISHES:

- 1. Flooring will be recycled rubber.
- 2. Ceilings will have suspended wood ceiling tiles.
- 3. Walls will be painted drywall.



ACTIVE LOUNGE PLAN



*Note: Furniture shown for scale and suggested layout only.
Furniture selection is not included in the current phase of work.*

LOUNGES

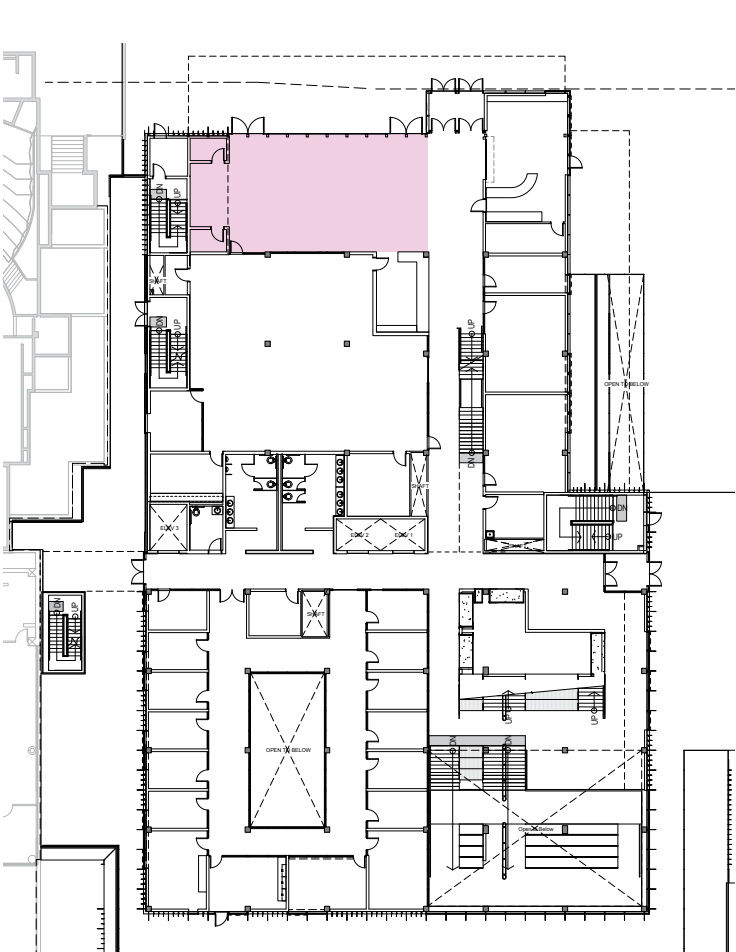
Level 3000 (10): A Social Stage lounge is located on level 10, immediately to the right of the main entrance from Convo Mall / Freedom Square.

The Social Stage lounge includes a stage and DJ booth for organized student events such as karaoke, live music or other SFSS events. When not scheduled, the lounge is the first welcoming space for students to relax and socialize when they come into the building from Convo Mall.

The lounge also provides additional seating for the coffee shop located across the corridor. The north wall of the lounge will have oversize doors that can open to the outside north plaza in nice weather, creating an indoor / outdoor experience, and conceptually expanding the size of the lounge.

The lounge will be furnished with soft seating and tables and chairs, and will include a sound system to support the stage.

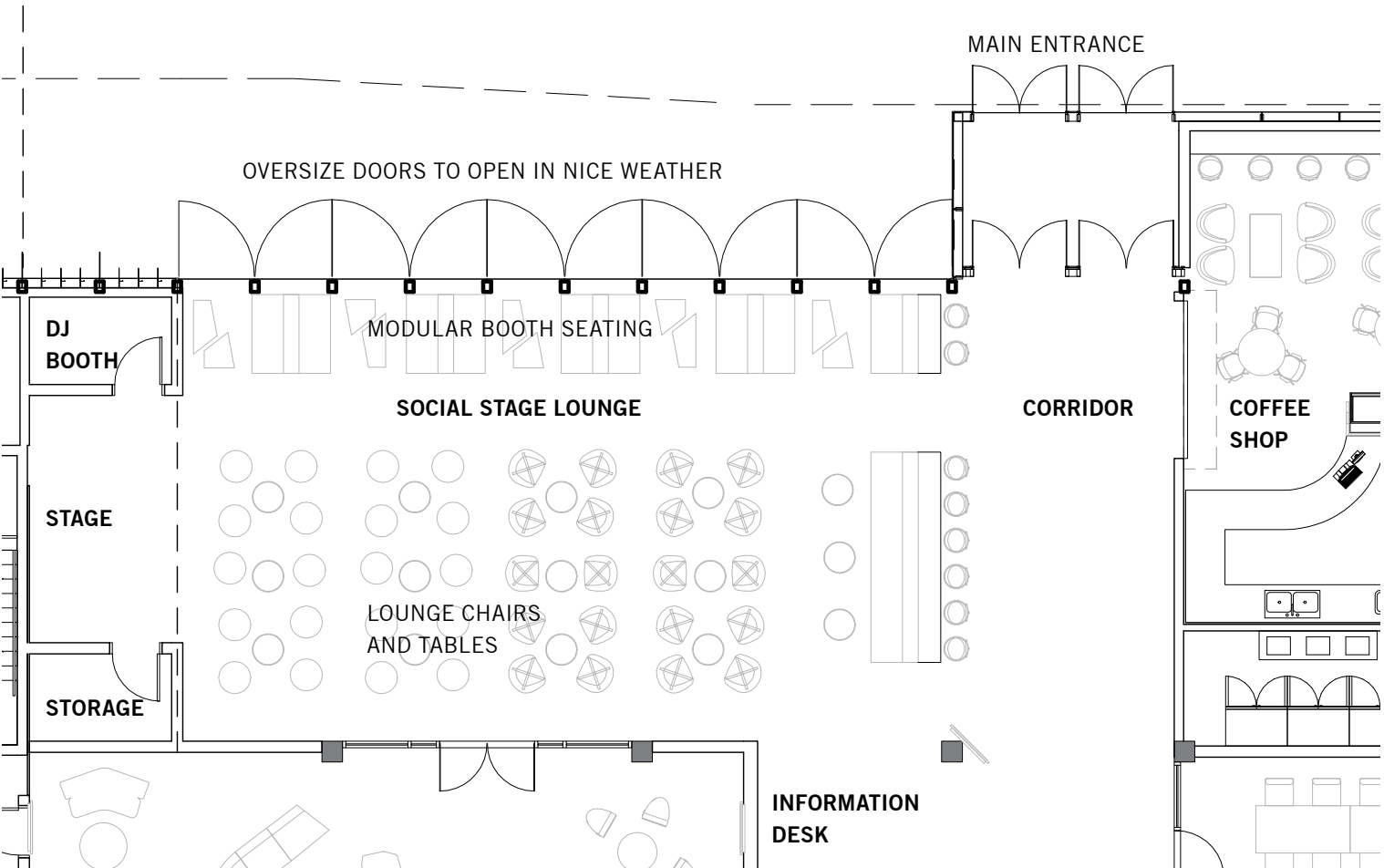
The lounge is fully accessible from the main entrance and from other floors via the elevators.



LEVEL 3000 (10) FLOOR PLAN
Highlighting location of Level 10 Lounge

FINISHES:

- 1. Flooring will be recycled rubber.
- 2. Ceilings will have either wood or highly reflective metal panel with a mirrored finish.
- 3. Walls will be painted drywall with some writable surfaces such as whiteboards.



CABARET LOUNGE PLAN

*Note: Furniture shown for scale and suggested layout only.
Furniture selection is not included in the current phase of work.*

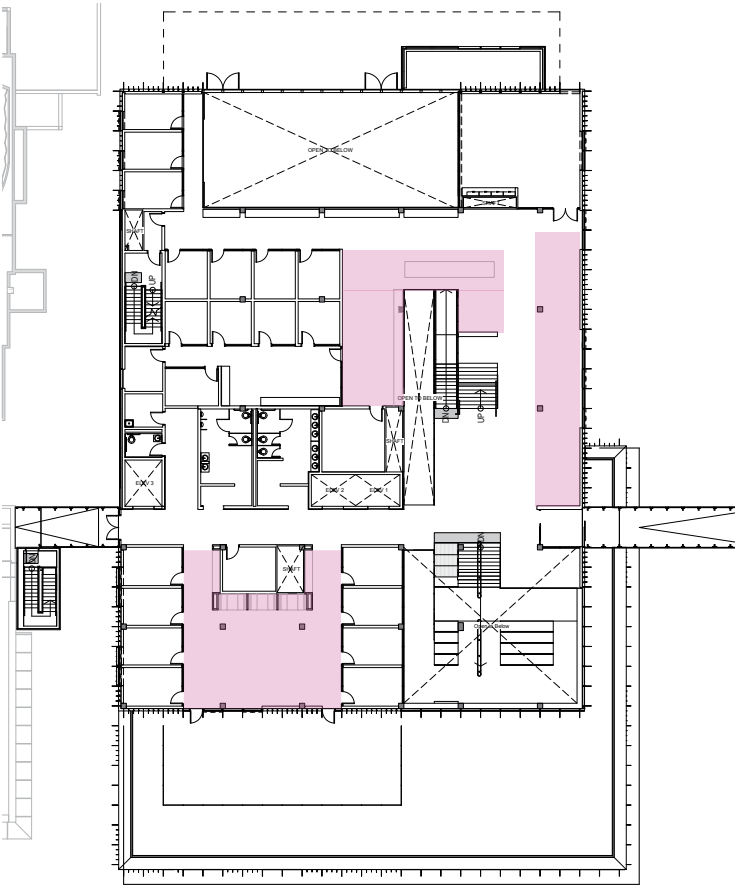
LOUNGES

Level 4000 (11): This floor includes several informal lounges. Two of these lounges are active / noisier lounges due to their location next to the atrium, while the third lounge can be a quieter lounge for students to study during the day.

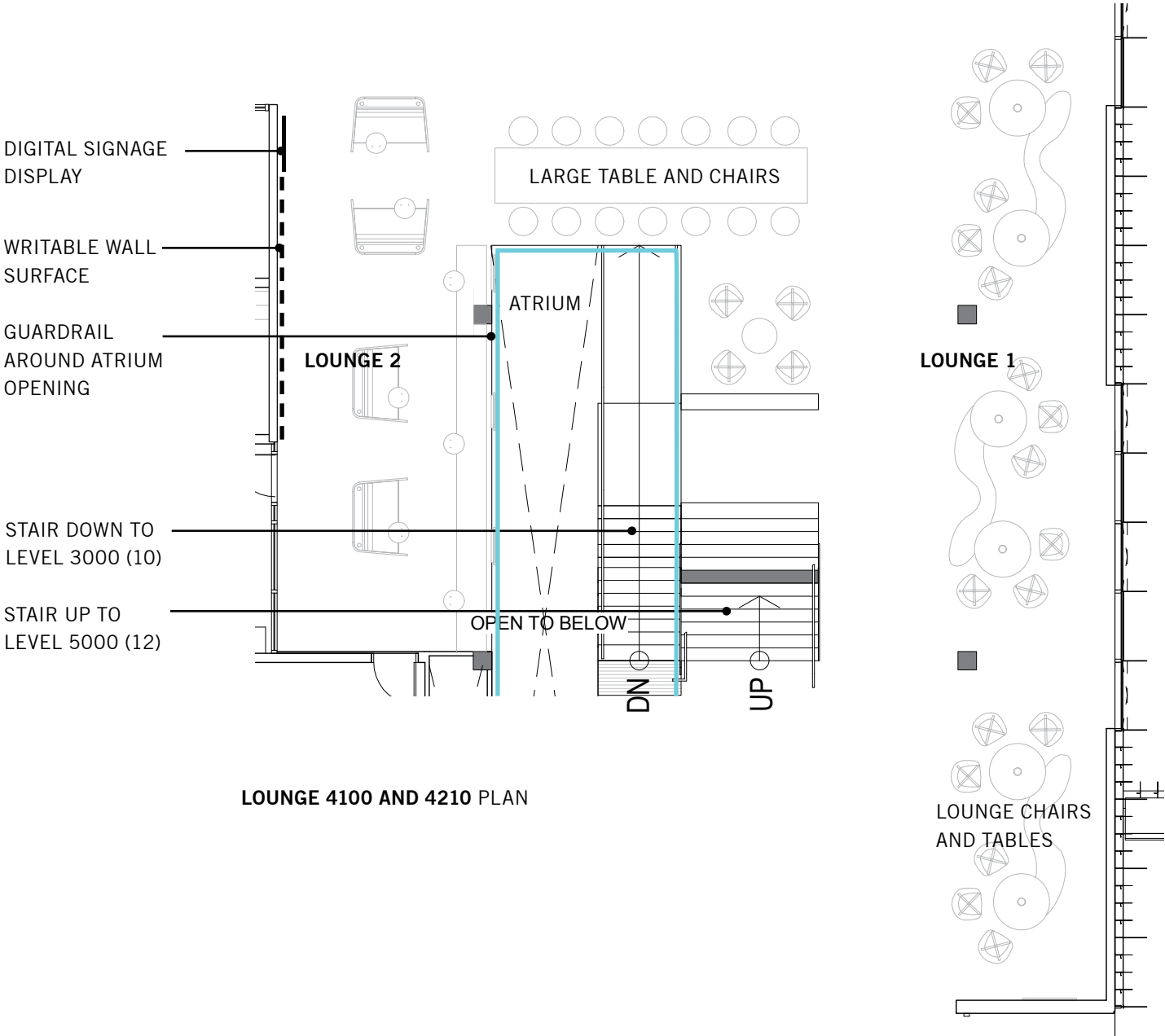
- Lounge 1: Located directly off the entrance from the AQ pedestrian bridge, this lounge is a narrow lounge area with comfortable seating and tables along the east exterior windows. Power will be provided along the perimeter of the building for student use. The lounge is open to the atrium on one side.
- Lounge 2: Located next to the main atrium, this lounge is also a narrow lounge area with comfortable seating and tables. The lounge will have lots of daylight from the skylight above. The lounge is also located beside the SFSS Board Offices. Power will be provided along the perimeter for student use.

FINISHES:

1. Flooring will be recycled rubber.
2. Ceilings will have either wood or reflective metal panel with a mirrored finish.
3. Where walls exist, they will be painted drywall with writable surfaces.



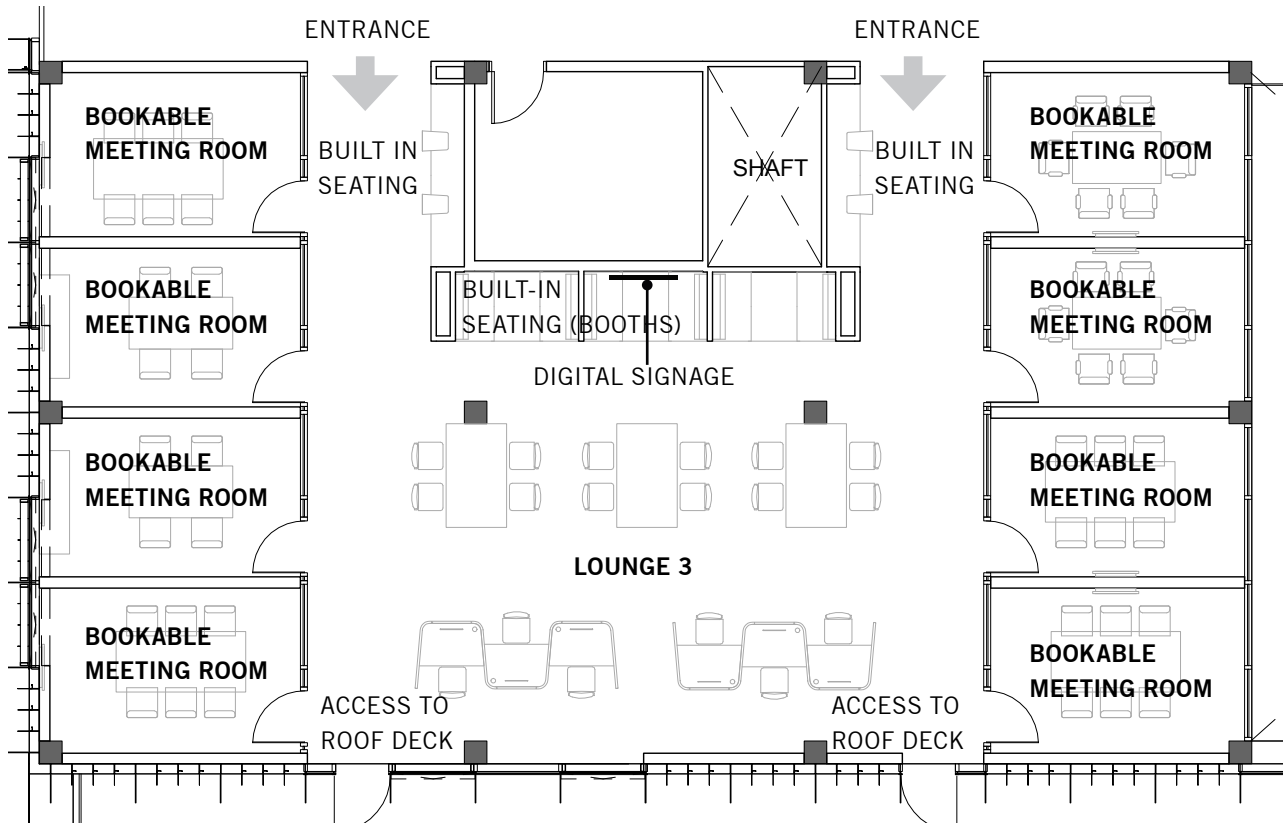
LEVEL 4000 (11) FLOOR PLAN
Highlighting location of Level 11 Lounges



LOUNGE 4100 AND 4210 PLAN

*Note: Furniture shown for scale and suggested layout only.
Furniture selection is not included in the current phase of work.*

LOUNGES



- Lounge 3: Accessed from the E/W corridor, this lounge is a larger, enclosed area with built in seating and tables and chairs.

The lounge is adjacent to 8 small bookable meeting rooms and the roofdeck, and the lounge can be used for both group or individual study.

Power will be provided for student use, and data is available through Wifi. Digital signage will be provided in the lounge.

FINISHES:

1. Flooring will be recycled rubber.
2. Ceilings are acoustic tile.
3. Walls will be painted drywall with some writable surfaces such as whiteboards.



Example of built-in booths / seating

*Note: Furniture shown for scale and suggested layout only.
Furniture selection is not included in the current phase of work.*

LOUNGES

Level 5000 (12): The lounge on this level is located along the south and east sides of the floor area, and is organized into a long narrow band with soft seating beside the perimeter windows.

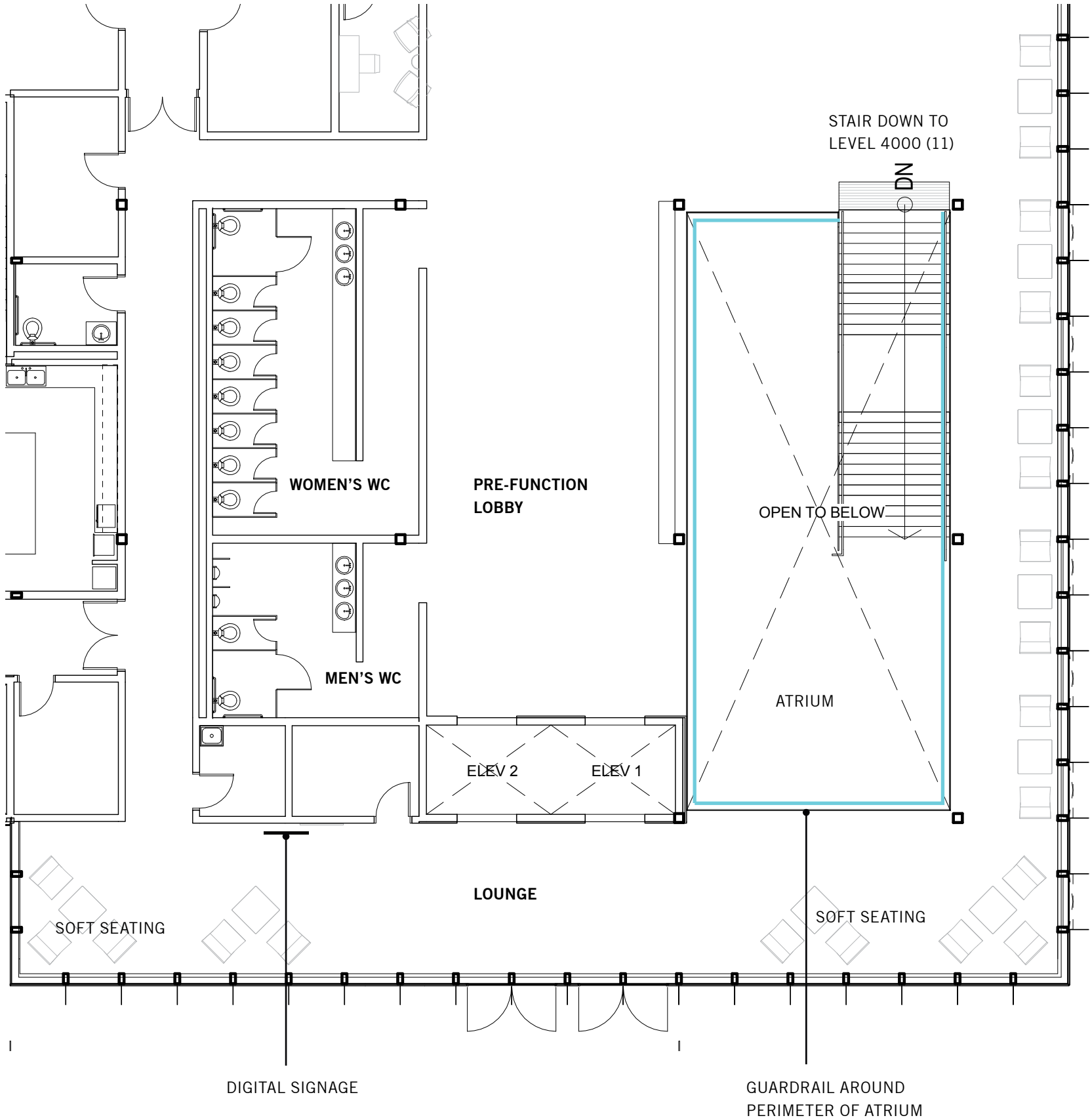
Power and data will be provided along the perimeter, and digital signage is also provided.

The lounge is open to the atrium and has direct elevator access.

FINISHES:

- 1. Flooring will be either recycled rubber or hardwood.
- 2. Ceilings are exposed wood structure and wood battens.
- 3. Walls will be glass along the exterior wall, with painted drywall at the elevator core.

LEVEL 5000 (12) FLOOR PLAN
Highlighting location of Level 12 Lounge



*Note: Furniture shown for scale and suggested layout only.
Furniture selection is not included in the current phase of work.*

LOUNGES



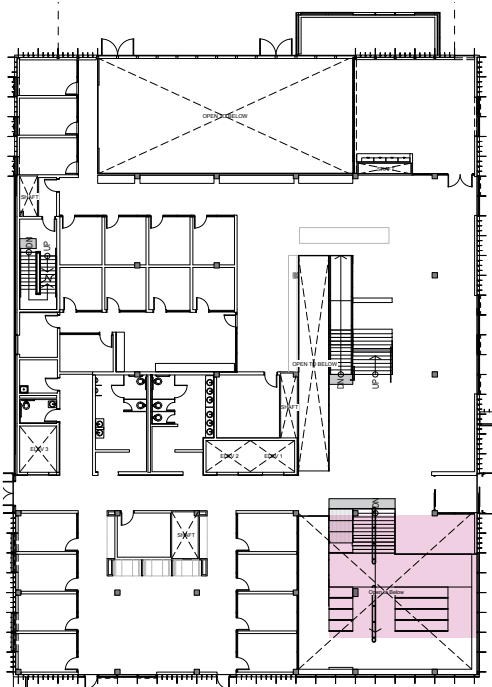
Cascade lounge: The terraced massing of the SUB affords an opportunity to connect all of the building levels with a cascading lounge made up of built-in bleacher type seating. The Cascade Lounge runs through the building beside the atrium, and is similar in design intent to the photo above. These seats will provide ample space for socializing, studying or just taking a break in a convenient spot.

Visible from all parts of the building, the Cascade Lounge connects all floors physically and visually. Larger flat areas at the top and bottom of the seating provide accessible seating zones.

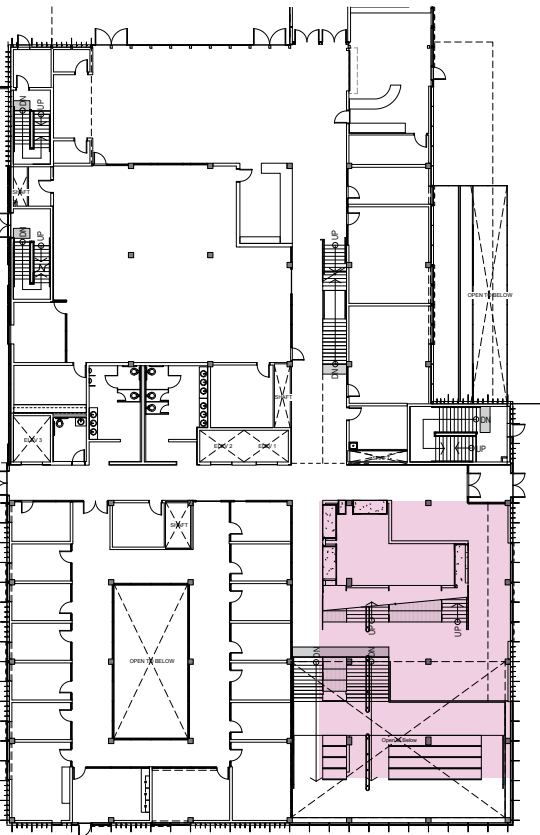
The Cascade Lounge will have solid wood seats for sitting zones and concrete steps for walking zones. Wood will provide a warm and more comfortable surface to sit on, while concrete will provide a more durable finish for high traffic areas.

Guardrails will be provided at the top and bottom of the seats for safety, and furniture will be located at the landings and accessible areas.

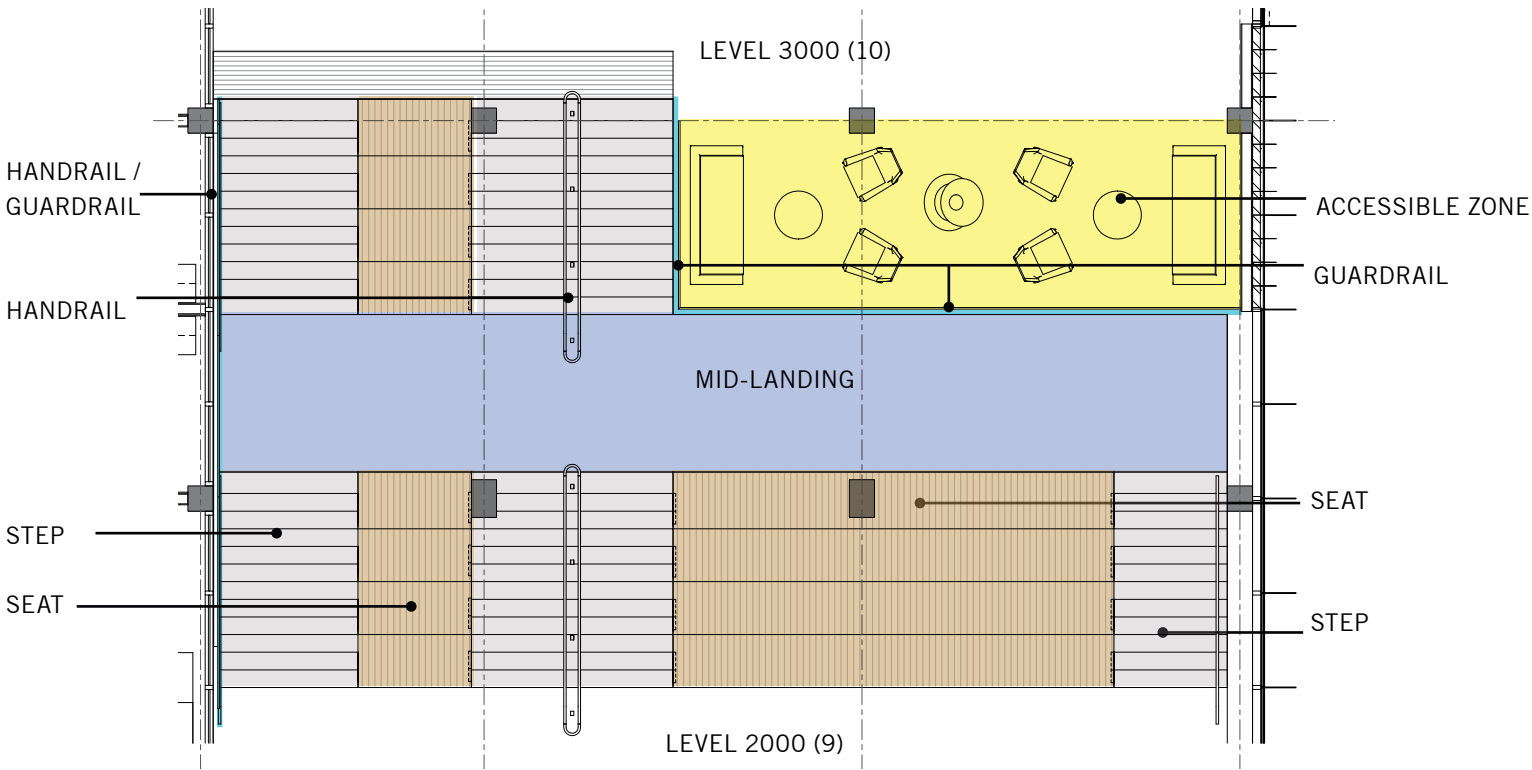
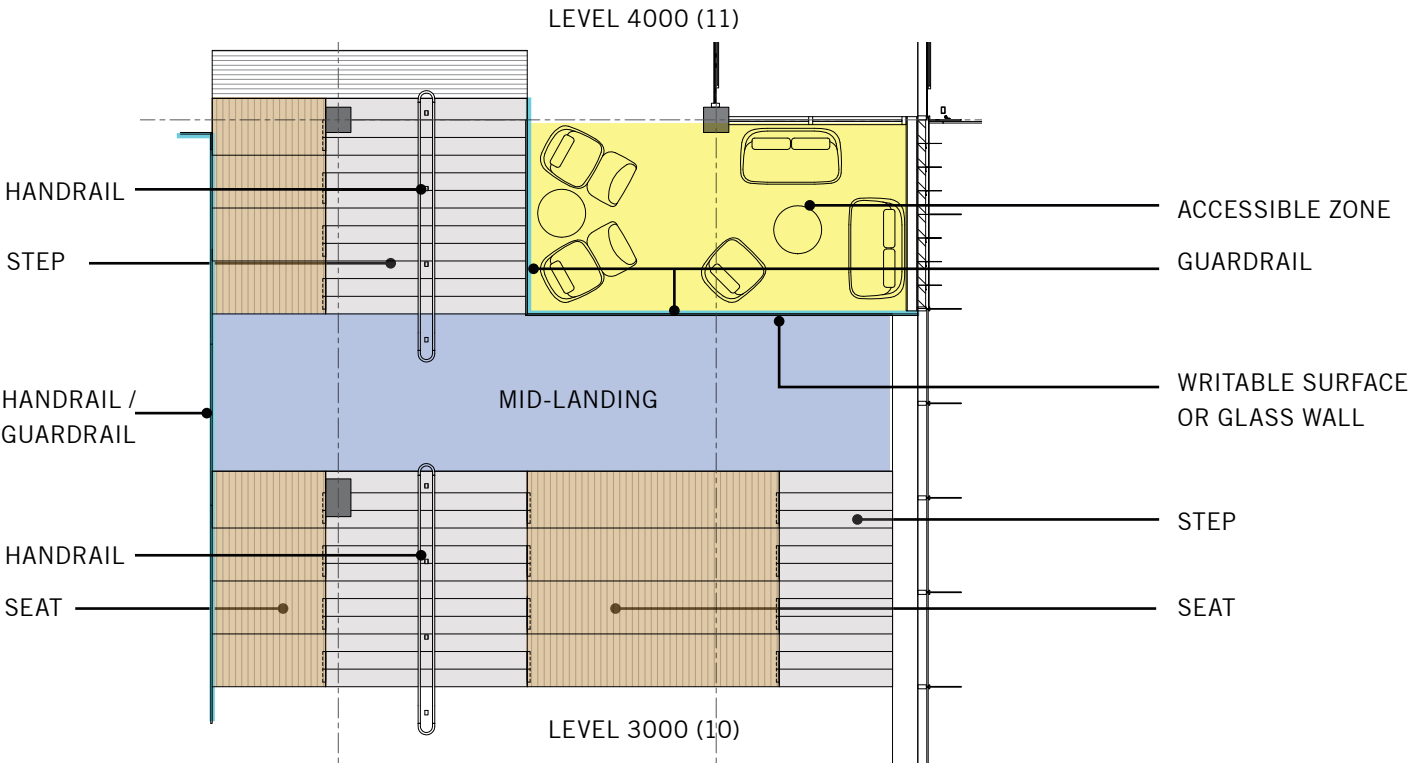
*Note: Furniture shown for scale and suggested layout only.
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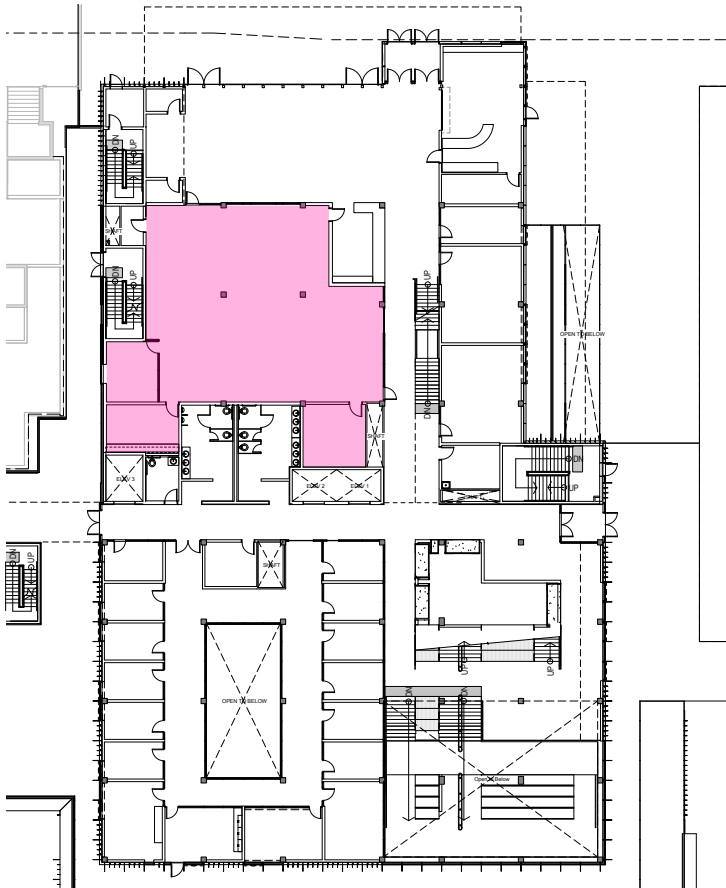
LEVEL 4000 (11) FLOOR PLAN
Highlighting location of Cascade Lounge



LEVEL 3000 (10) FLOOR PLAN
Highlighting location of Cascade Lounge



CLUB CENTRE



LEVEL 3000 (10) FLOOR PLAN
Highlighting location of Club Centre

The Club Centre is located on level 3000 (10), adjacent to the Social Stage lounge, and behind the information desk. A resource room for clubs, DSU's and student organizations, the room will include a staffed information desk, graphic computer stations, soft seating and printers and photocopiers for club use.

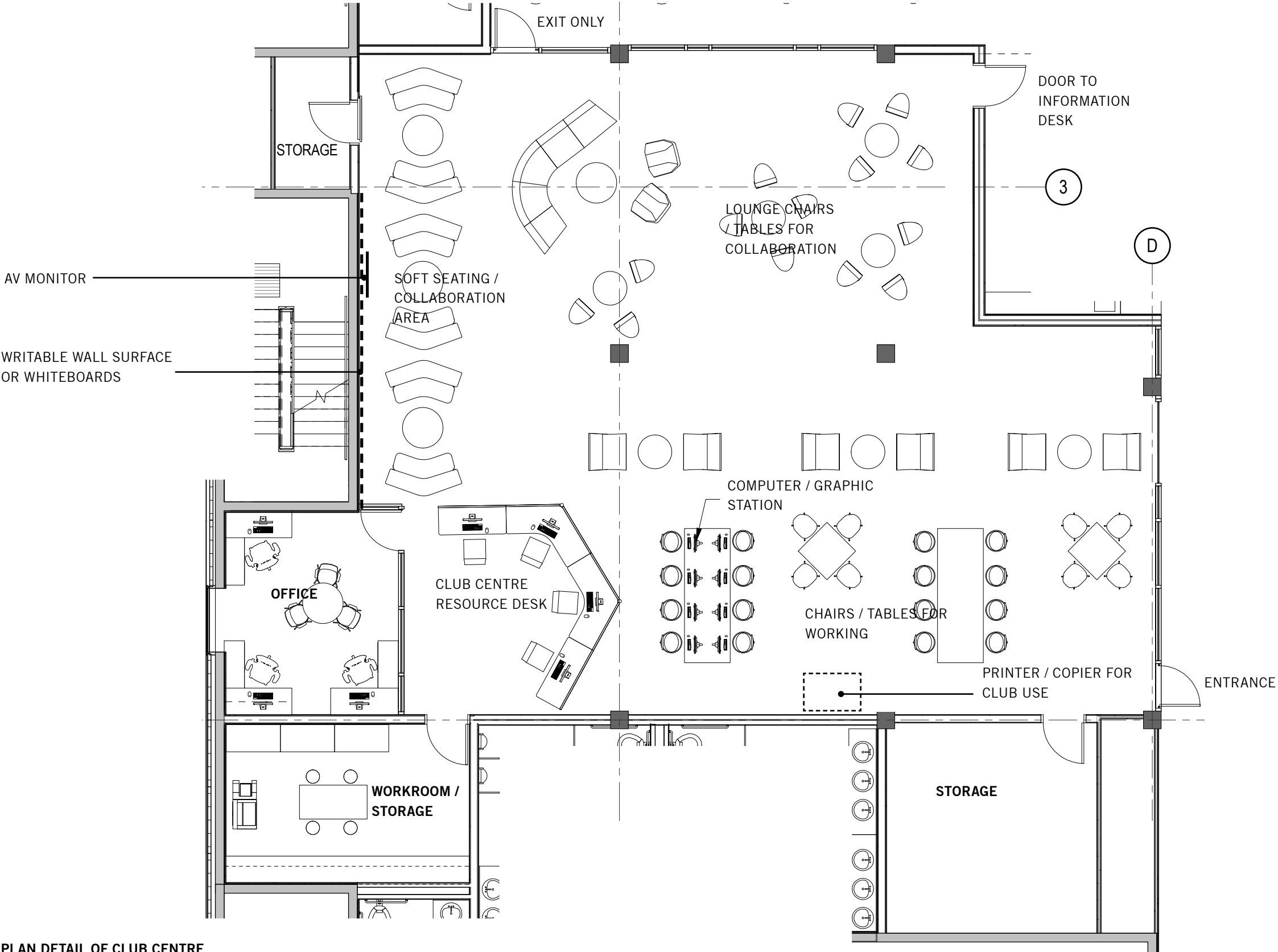
FINISHES:

- 1. Flooring will be recycled rubber flooring.
- 2. Ceilings will be acoustic ceiling tile.
- 3. Walls will be painted drywall with writable surfaces in select areas, and glass in areas next to the corridor.



Concept image of Club Centre.

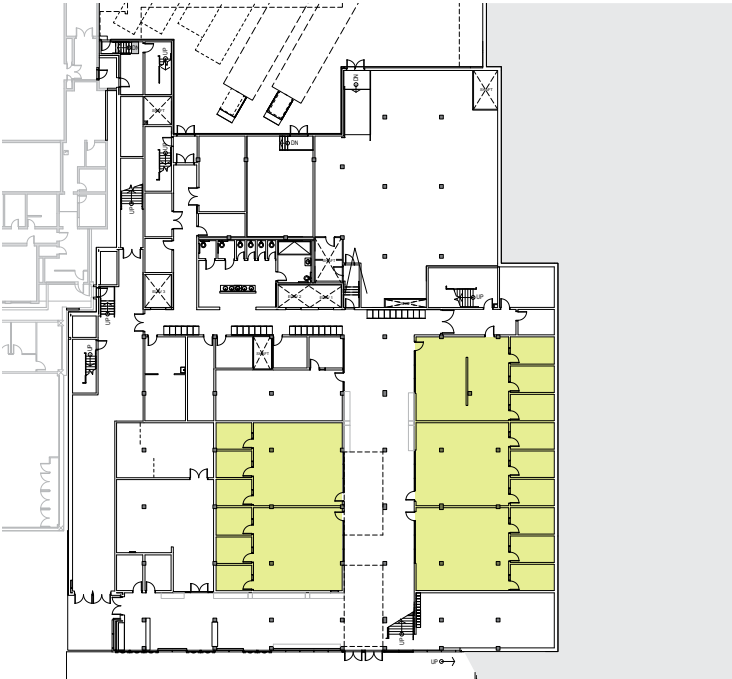
CLUB CENTRE



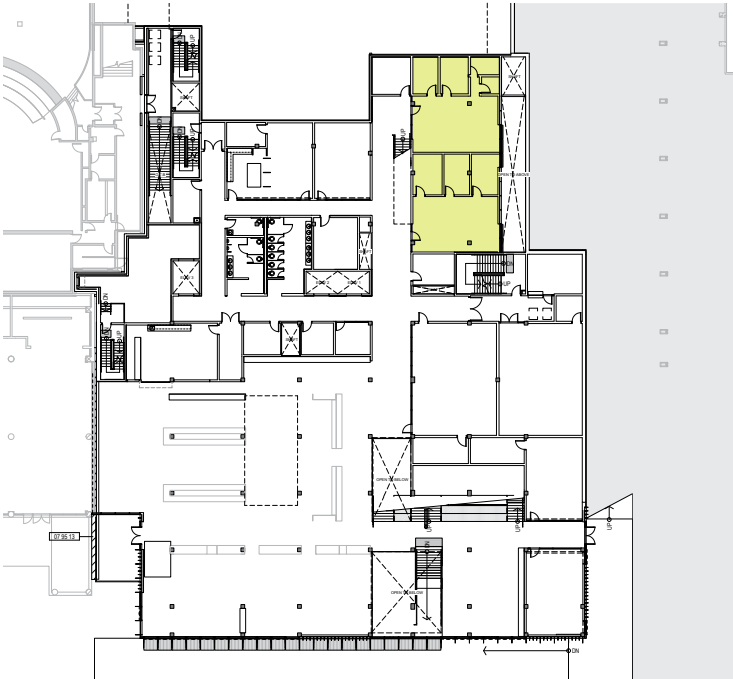
PLAN DETAIL OF CLUB CENTRE

*Note: Furniture shown for scale and suggested layout only.
Furniture selection is not included in the current phase of work.*

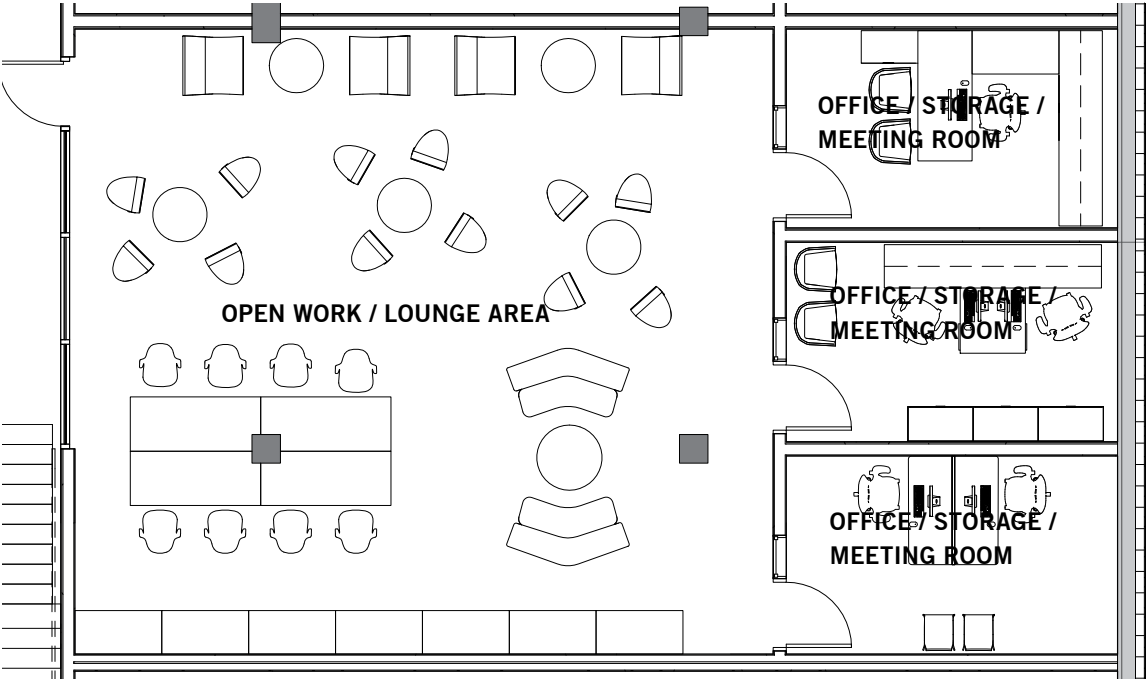
STUDENT ORGANIZATIONS



LEVEL 1000 (08) FLOOR PLAN
Highlighting location of Student Organization Spaces



LEVEL 2000 (09) FLOOR PLAN
Highlighting location of Student Organization Spaces



DETAIL FLOOR PLAN SHOWING TYPICAL STUDENT ORGANIZATION SPACE

There will be seven student organization spaces located in the building; 5 on level 1000 (08), and 2 on level 2000 (09). These spaces vary in size with 3 large, 2 medium and 2 smaller suites. Each student organization suite will be comprised of 4 rooms:

- 3 small rooms: These 3 rooms can be occupied as needed, and each room will have power and data for 2 computer workstations.
- 1 larger open lounge / work area: This area is suitable as a lounge or a shared workspace, and there will be power and data along the side walls for flexibility of use.

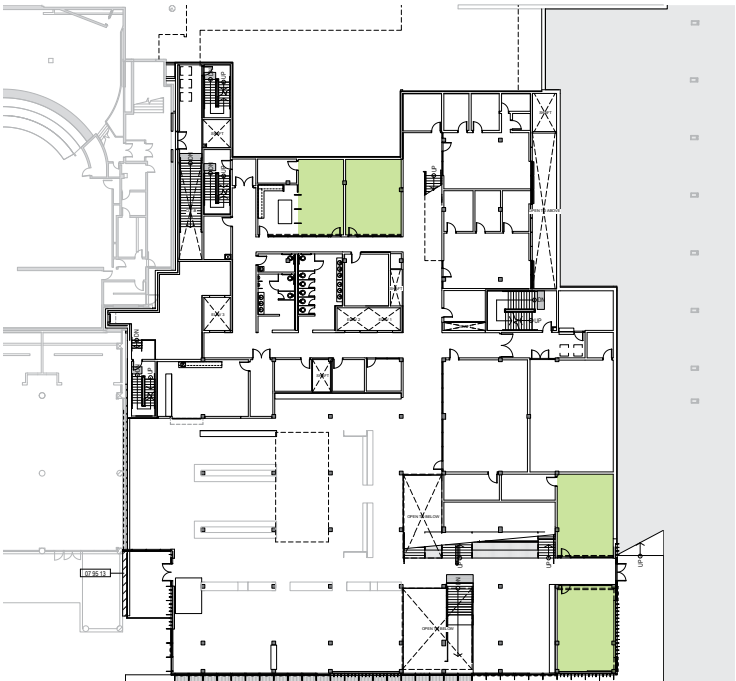
All of the student organizations are accessed off of the main N/S corridor. The wall facing the corridor will be partially glazed (windows) for transparency and visibility, supporting the notion of the visual catalogue.

FINISHES:

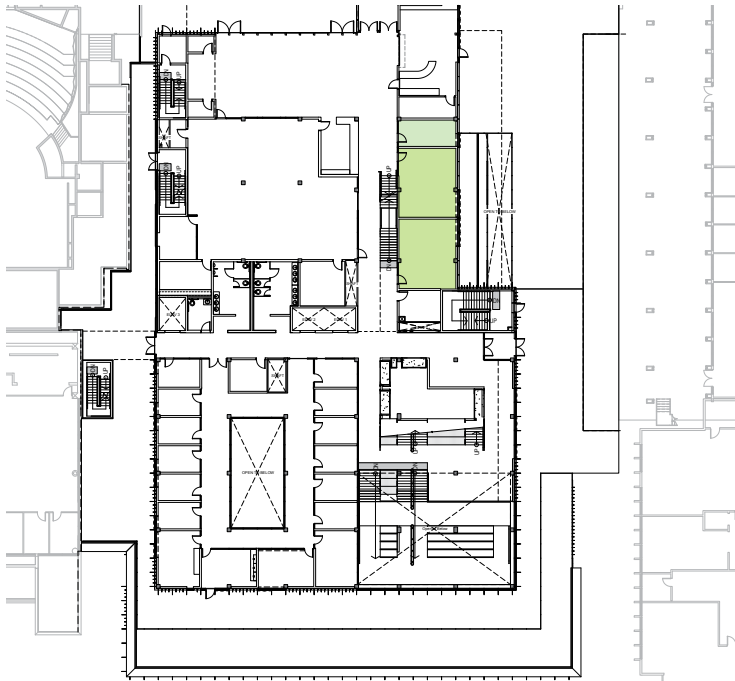
1. Flooring will be recycled rubber flooring.
2. Ceilings will be acoustic ceiling tile.
3. Walls will be painted drywall.

*Note: Furniture shown for scale and suggested layout only.
Furniture selection is not included in the current phase of work.*

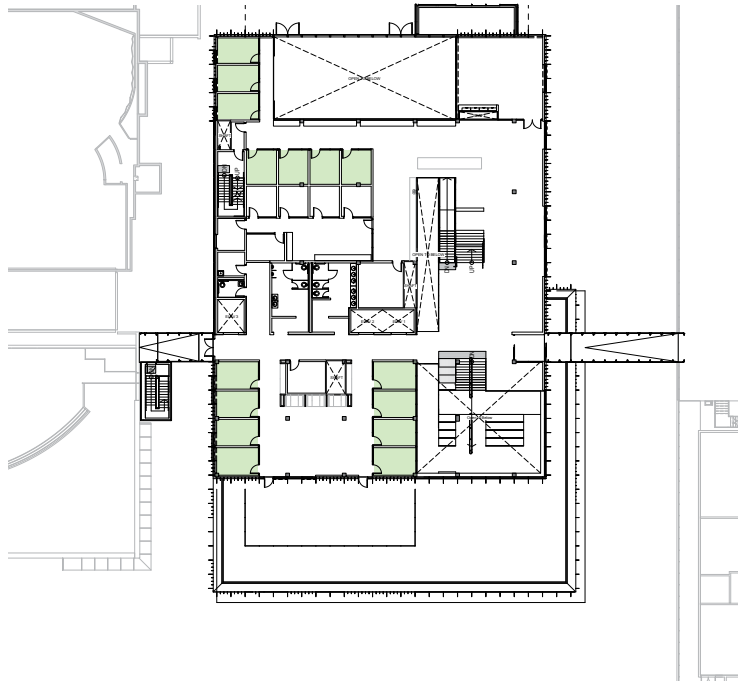
TEAM ROOMS AND MEETING ROOMS



LEVEL 2000 (09) FLOOR PLAN
Highlighting location of large meeting rooms



LEVEL 3000 (10) FLOOR PLAN
Highlighting location of large meeting and small team rooms



LEVEL 4000 (11) FLOOR PLAN
Highlighting location of small team rooms

There are several bookable rooms in the SUB:

- 1 team room on level 3000 (10).
- 15 team rooms on level 4000 (11).
- 4 meeting rooms on level 2000 (09).
- 2 meeting rooms on level 3000 (10).

The team rooms are suitable for four to six students working around a table, while the meeting rooms are sized to accommodate 20 to 25 students, with seating for 16 students around a large table, and seating around the edges. Both types of rooms will have a simple AV system of flat panel display (TV monitor) for presentation mounted on the wall, and a whiteboard or writable wall surface on another wall. There will be power and data near the flat panel display to plug in computers for presentations.

All of the rooms are suitable to be used as multi-purpose rooms (with furniture removed) for physical activities such as yoga, or as meeting rooms for group work. The meeting rooms will have dedicated storage to store furniture if it needs to be moved out of the way.

The corridor side of the rooms will be glass walls for transparency and visibility, in support of the visual catalogue.

Rooms will have blackout roller shades to darken the room for presentations.

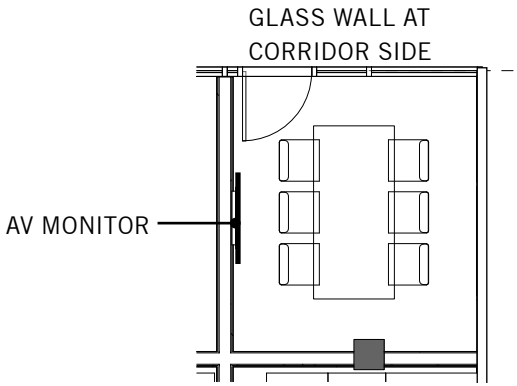
FINISHES:

1. Flooring will be recycled rubber flooring.
2. Ceilings will be acoustic ceiling tile.
3. Walls will be painted drywall and glass.

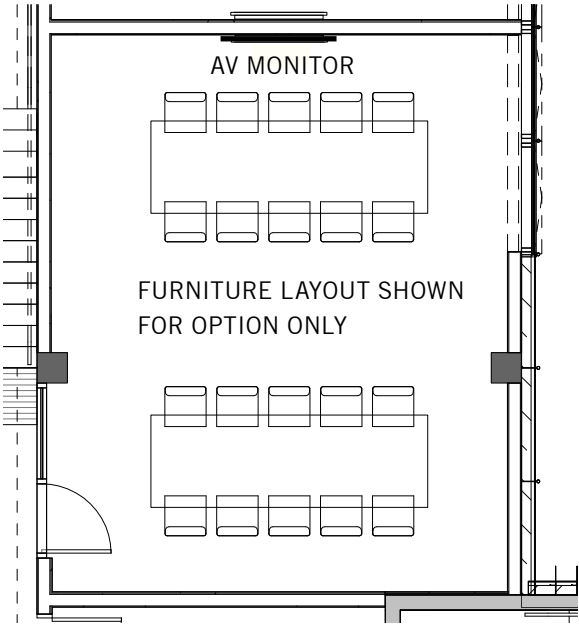
TEAM ROOMS AND MEETING ROOMS



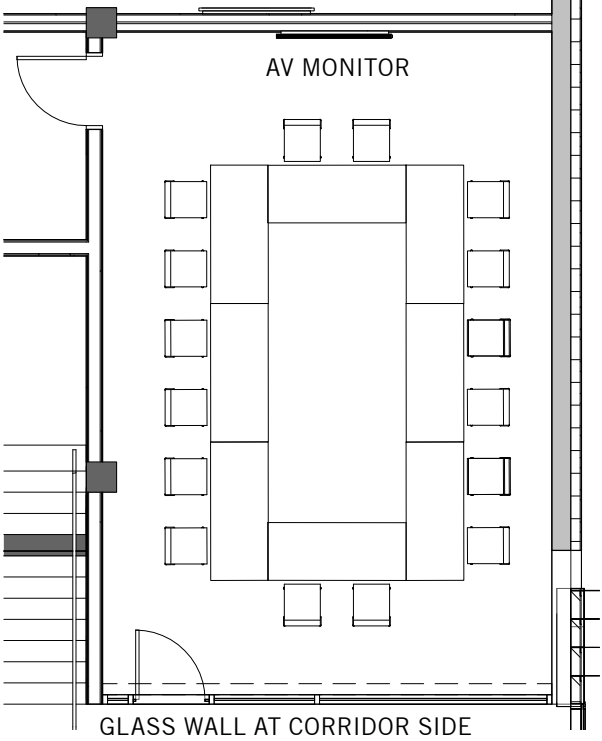
Concept image of team and meeting room.



DETAIL PLAN OF TYPICAL TEAM ROOM ON LEVEL 4000



DETAIL PLAN OF TYPICAL MEETING ROOM ON LEVEL 3000



DETAIL PLAN OF TYPICAL MEETING ROOM ON LEVEL 2000

Note: Furniture shown for scale and layout only. Furniture selection is not included in the current phase of work.

DINING



The dining area in the SUB will be an extension of the MBC food court. Located on level 2000 (09) between the active lounge and a mini-mart, the dining area has direct access to the food vendors in the MBC.

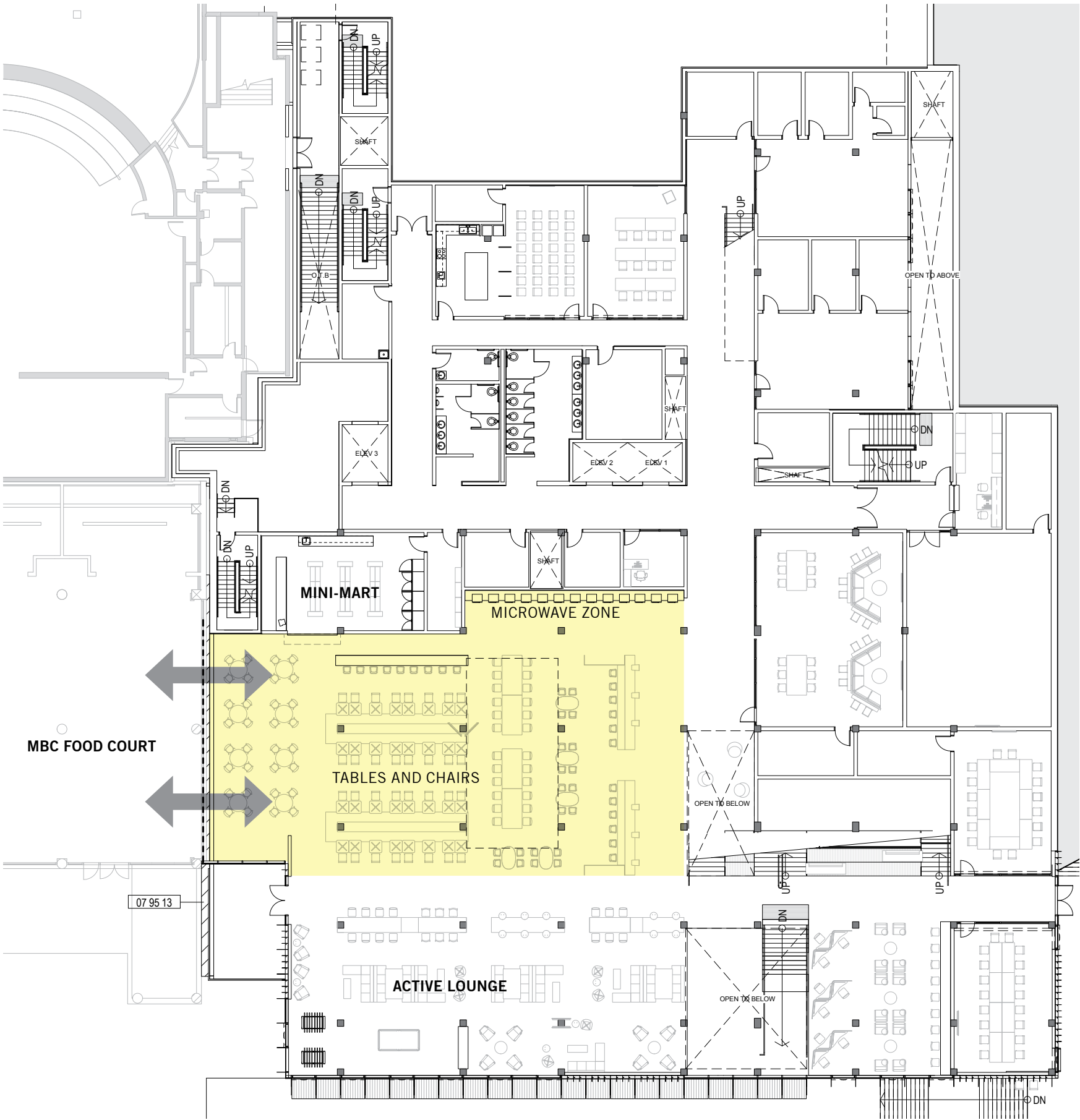
Concept image of dining area.

The space will seat approximately 160 - 200 people, depending on the final furniture selection and arrangement. Furniture in the current layout shows a mixture of shared communal style tables, built in (fixed) and booth seating as well as loose chairs and tables. The dining area will include a microwave area for students to heat their food.

A cutout in the ceiling provides a double height volume over the centre of the dining area.

FINISHES:

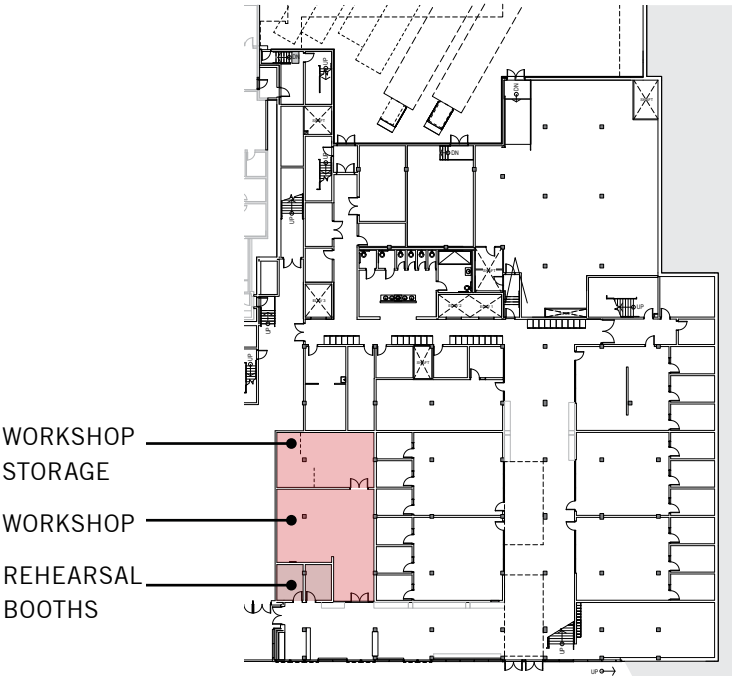
- 1. Flooring will be recycled rubber or linoleum.
- 2. Ceilings will be suspended wood ceilings.
- 3. Walls will be glass and painted drywall along the exterior wall.



Note: Furniture shown for scale and suggested layout only.
Furniture selection is not included in the current phase of work.

LEVEL 2000 (09) FLOOR PLAN
Highlighting location of dining area.

STUDENT AMENITIES



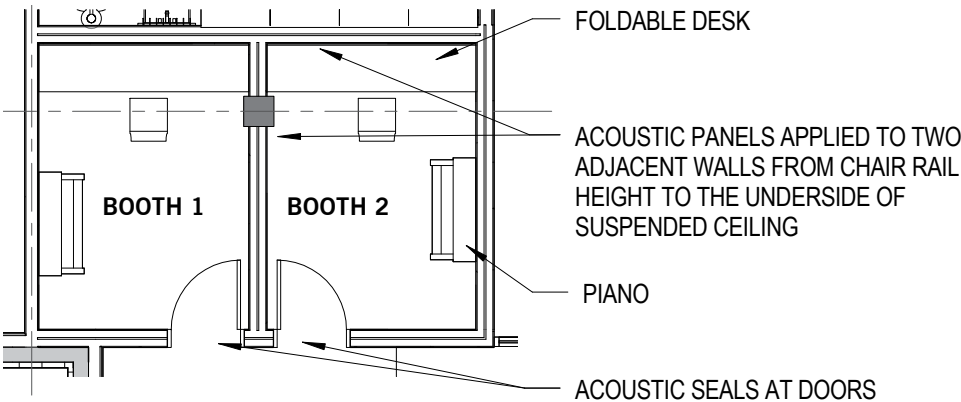
LEVEL 1000 (08) FLOOR PLAN
Highlighting location of Workshop and Rehearsal Booths.

The SUB will provide students with a variety of amenities to enrich their time at SFU. With a goal of creating community, the intent of these spaces is to encourage students to participate and engage while on campus. Amenities include:

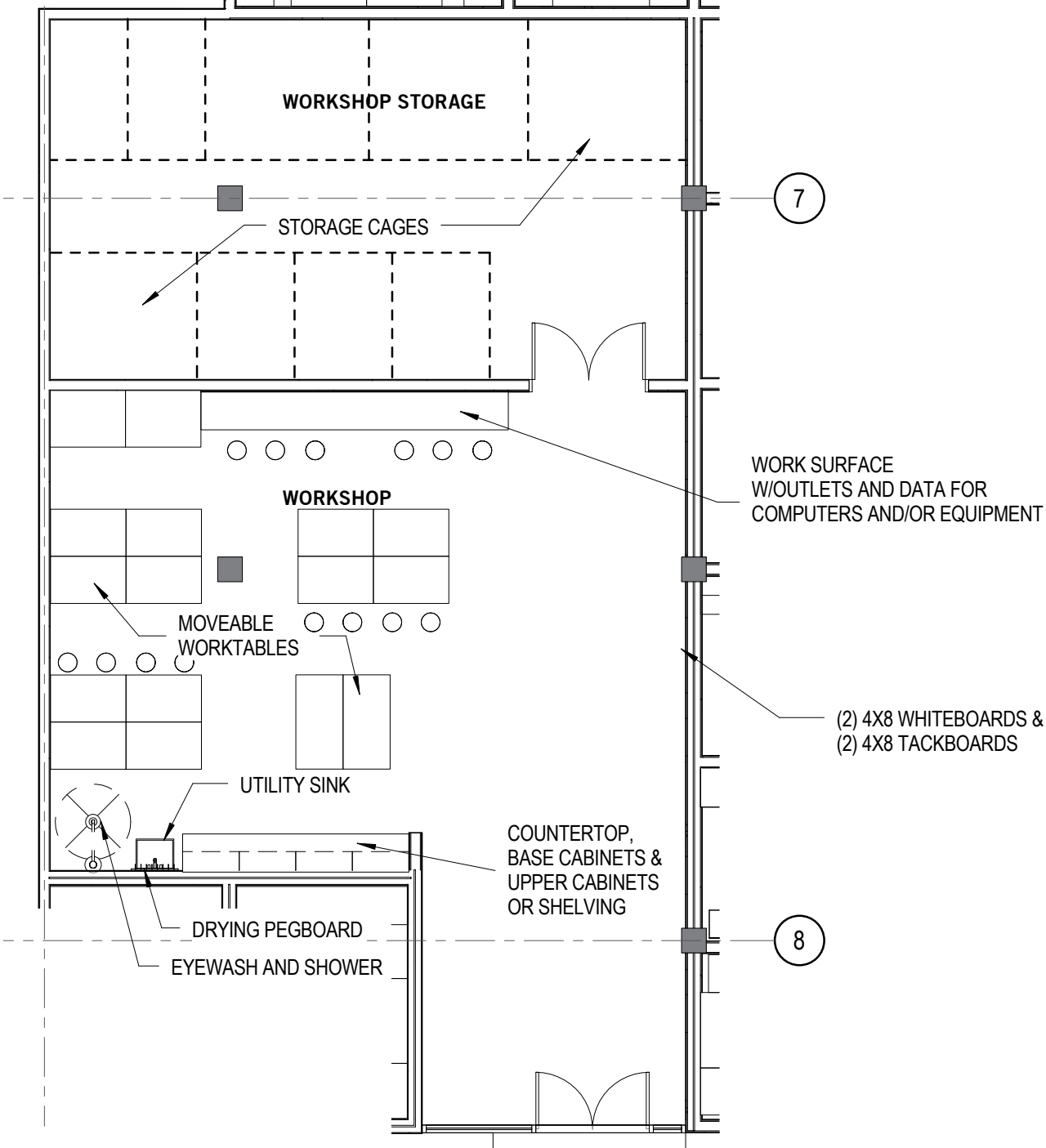
- **Rehearsal Booths:** There are two rehearsal booths in the SUB, located side by side on level 1000 (08). These rooms will be acoustically separated from neighboring rooms. Each music room is the size of a standard office, and will be acoustically treated on the walls and ceiling. The floor in the rehearsal booths will be recycled rubber.
- **Workshop:** A workshop will be located in the building on level 1000 (08). While specific equipment may not be purchased as part of the building fit out, infrastructure such as exhaust, ventilation and power will be provided to allow for flexibility in use. The workshop will be an industrial space with a sealed concrete floor, plywood walls, and an exposed concrete ceiling. The workshop has dedicated storage with lockable cages for ongoing projects.



Example of workshop at SFU Goldcorp



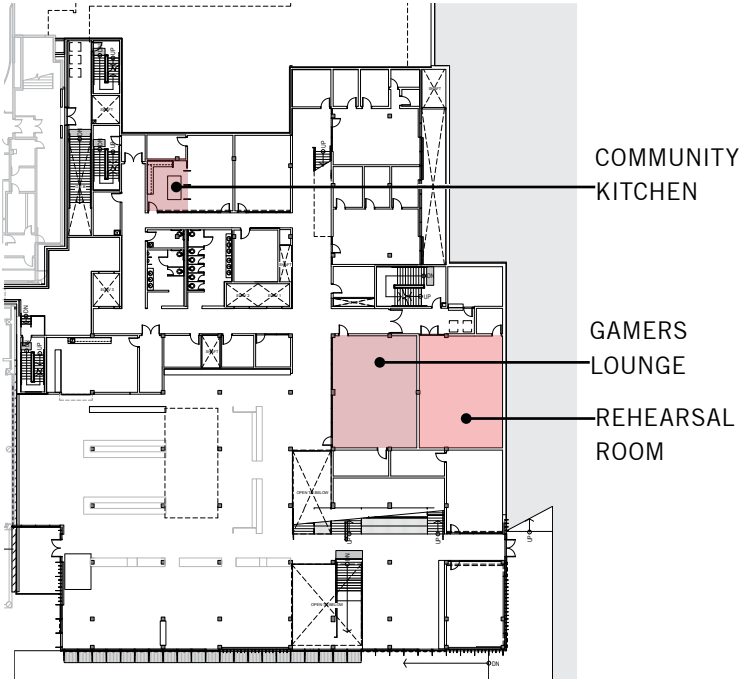
DETAIL PLAN OF REHEARSAL BOOTH



DETAIL PLAN OF WORKSHOP

Note: Furniture and equipment shown for scale and suggested layout only. Furniture selection is not included in the current phase of work.

STUDENT AMENITIES



LEVEL 2000 (09) FLOOR PLAN
Highlighting location of Gamers Lounge, Community Kitchen and Rehearsal Room.

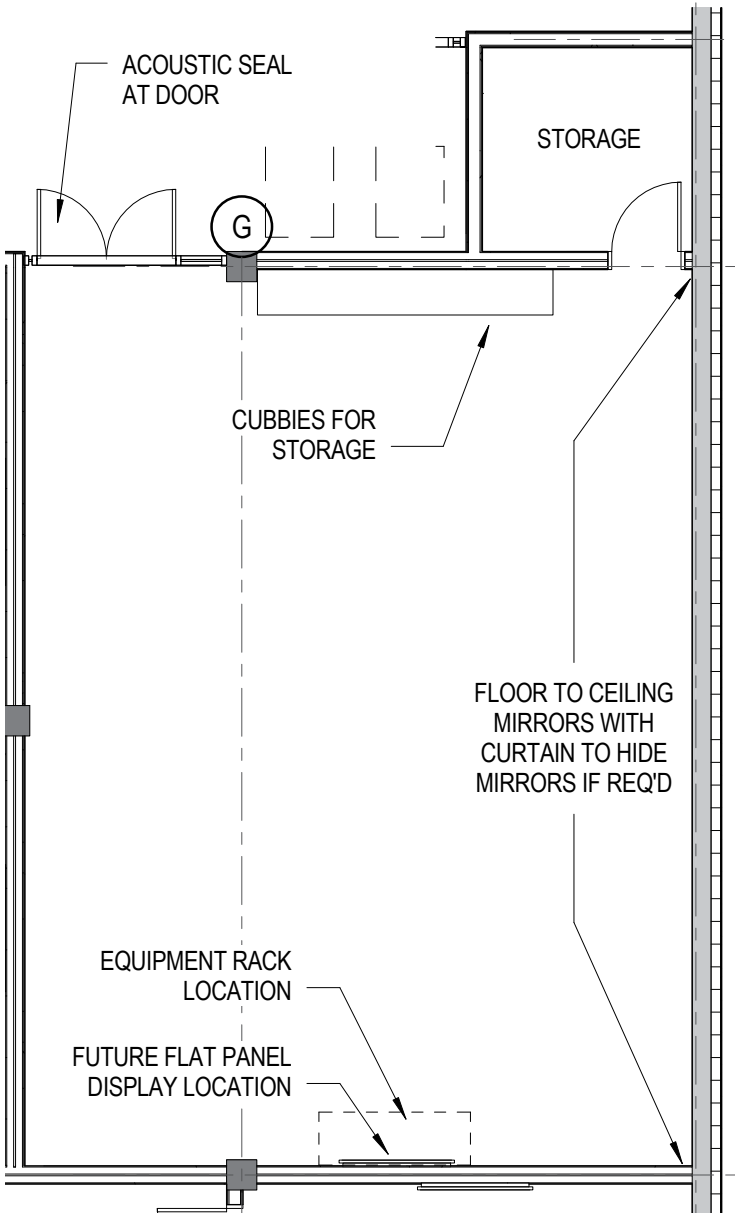
- **Rehearsal Room:** There is one rehearsal room in the SUB on level 2000 (09). The room will be equipped with a speaker system and ipod docking station. One wall will include full height mirrors, and the floor will be hardwood.
- **Gamers Lounge:** There is a gamers lounge for online gaming in the SUB on level 2000 (09). The room will be equipped with digital displays, gaming consoles and power / data for individual gaming.
- **Community Kitchen:** A community kitchen will be located on level 2000 (09). The kitchen will be equipped with residential style equipment including oven and stovetop, full size refrigerator, dishwasher, two sinks and a microwave. A large island will be provided in the centre of the kitchen to support group cooking activities. The community kitchen will be located adjacent to a meeting room so that the room can be expanded for larger group cooking and dining activities.



Concept photo of rehearsal room on level 2000 (09).

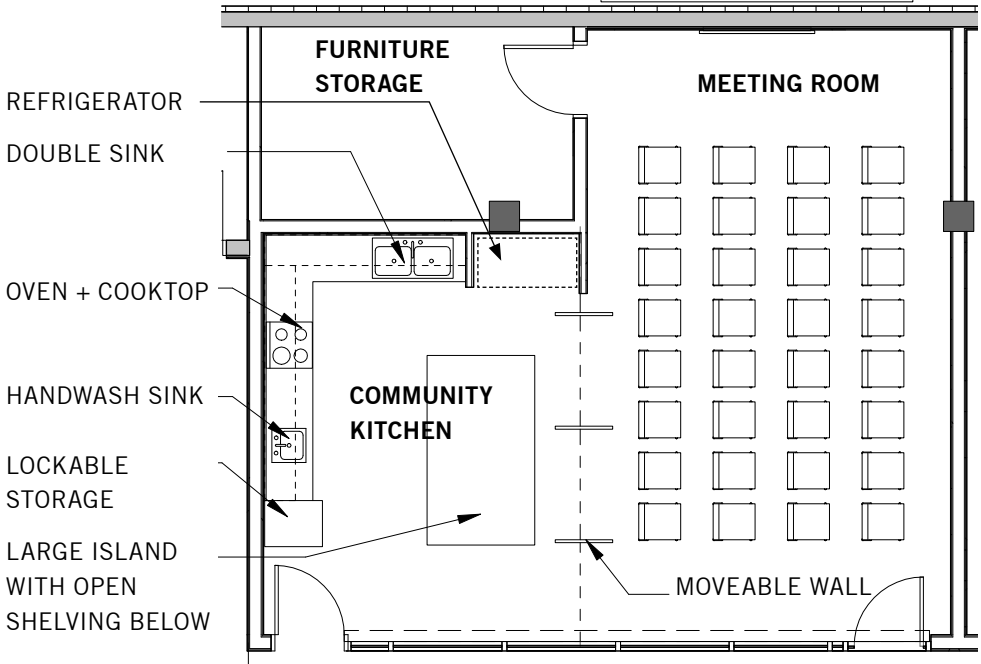


Concept rendering of rehearsal room on level 2000 (09).

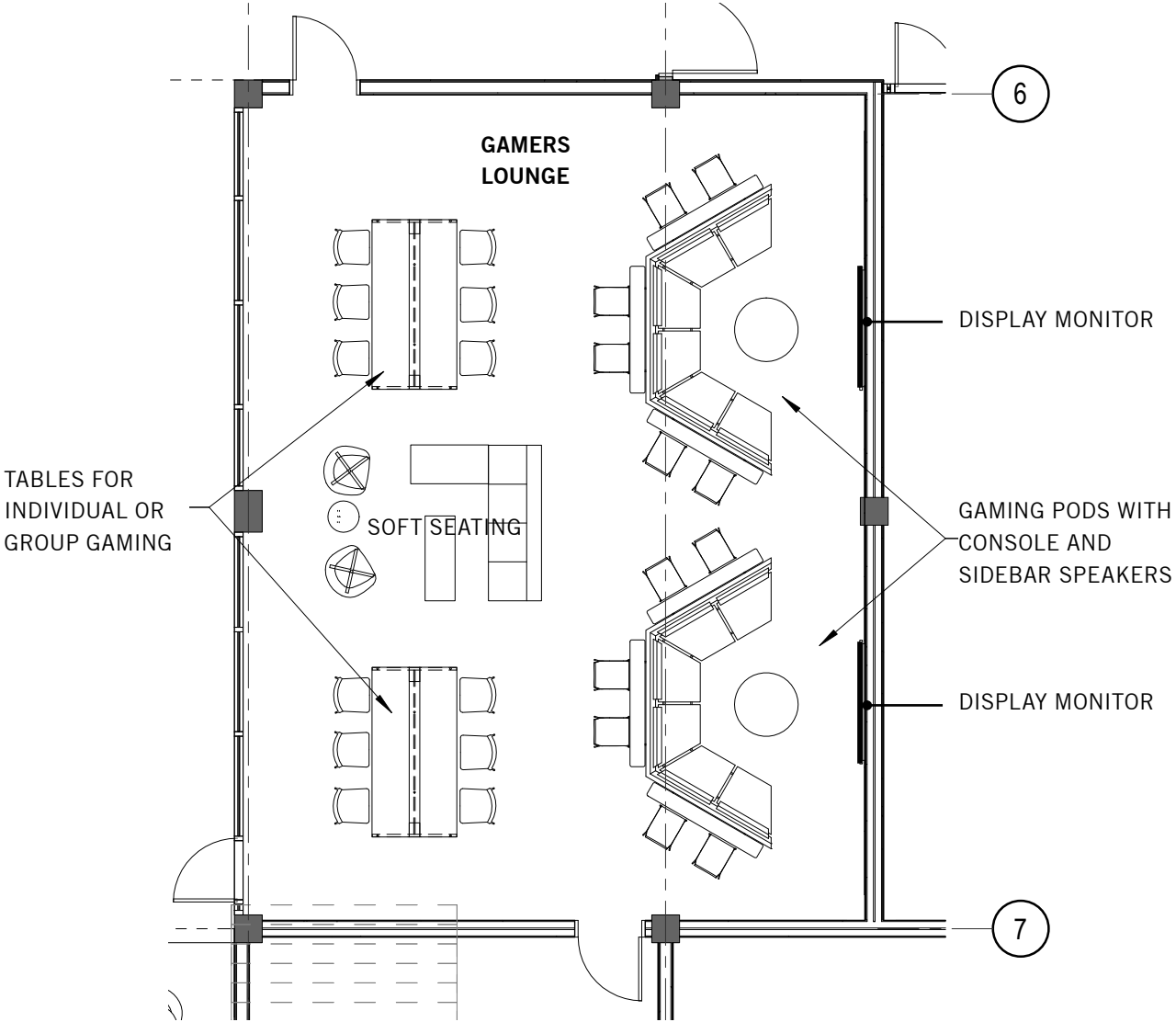


DETAIL PLAN OF REHEARSAL ROOM

*Note: Furniture shown for scale and suggested layout only.
Furniture selection is not included in the current phase of work.*



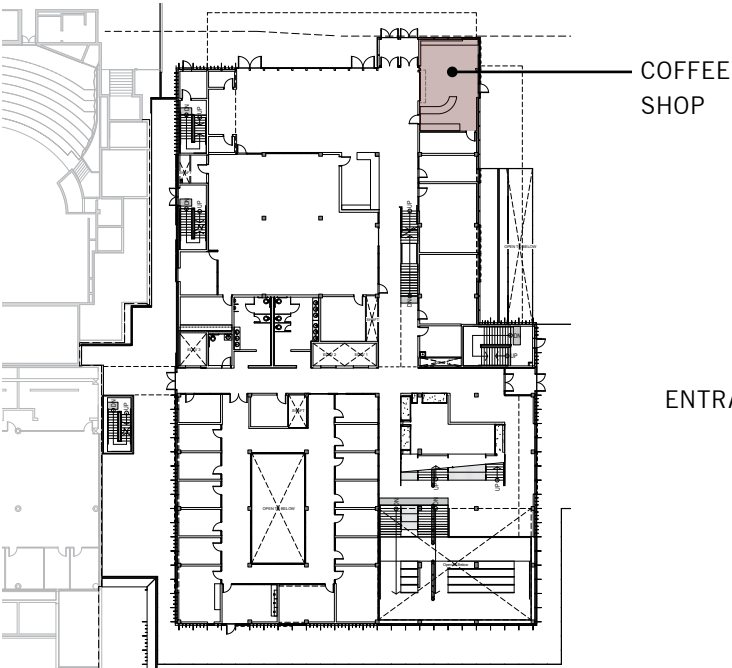
DETAIL PLAN OF COMMUNITY KITCHEN AND ADJACENT MEETING ROOM



DETAIL PLAN OF GAMERS LOUNGE

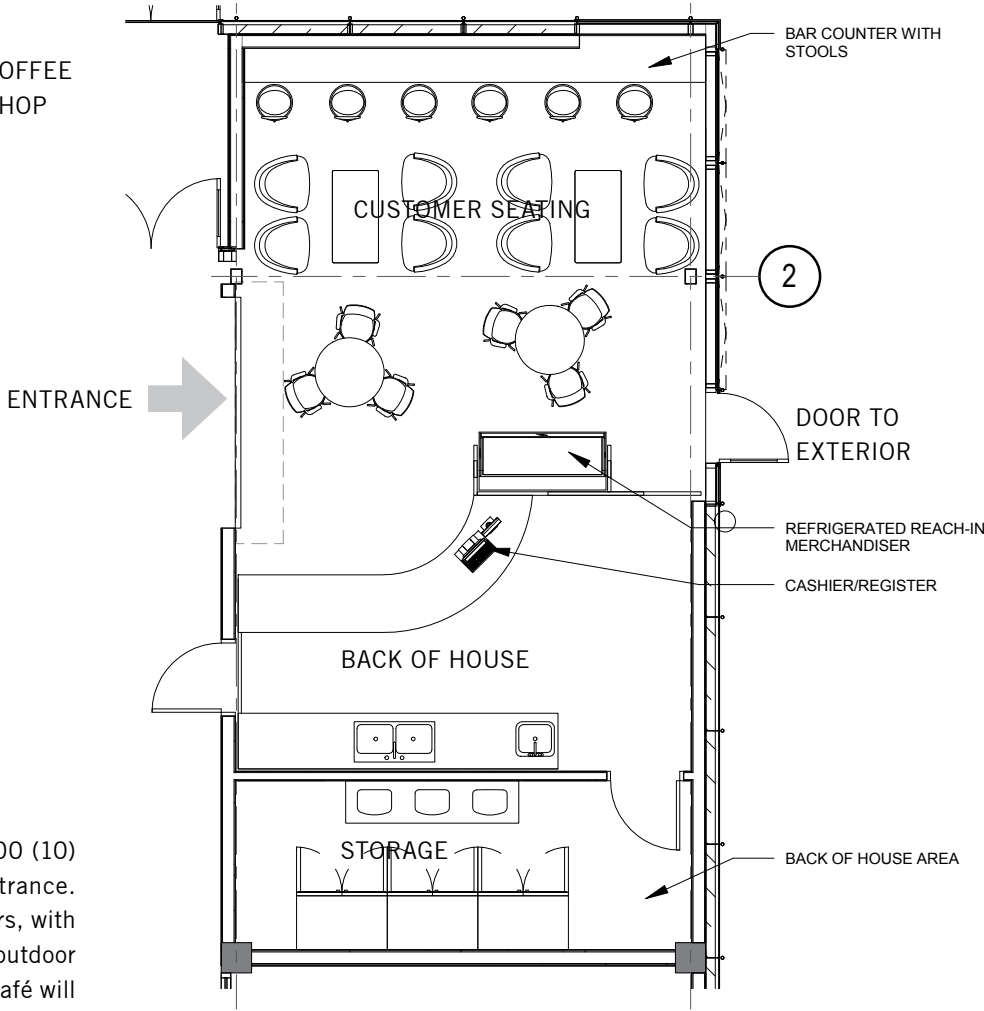
*Note: Furniture shown for scale and suggested layout only.
Furniture selection is not included in the current phase of work.*

STUDENT AMENITIES



LEVEL 3000 (10) FLOOR PLAN
Highlighting location of coffee shop.

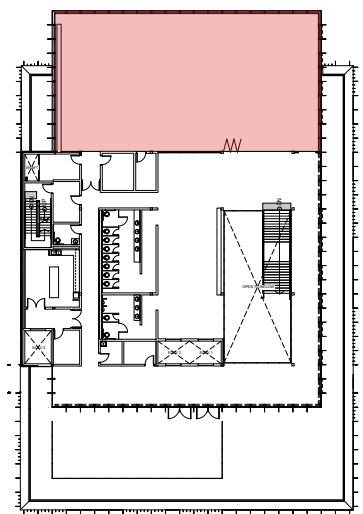
- **Coffee Shop:** A coffee shop will be located on level 3000 (10) at the NE corner of the building, beside the main entrance. The café will have seating for approximately 15 customers, with additional spillout space in the Social Stage lounge and outdoor seating in the plaza. At this time, it is not known if the café will be operated by the SFSS or an outside vendor.



DETAIL PLAN OF COFFEE SHOP

*Note: Furniture shown for scale and suggested layout only.
Furniture selection is not included in the current phase of work.*

STUDENT AMENITIES



LEVEL 5000 (12) FLOOR PLAN
Highlighting location of multi-purpose room.

- **Multi-purpose room:** A multi-purpose room will be located on level 5000 (12) for gatherings of 150 - 350 students. Events that the multi-purpose room can accommodate include lectures, banquets, dances, clubs days or job fairs, among others.

The room will include a temporary stage, which can be removed if not required during an event. The room will be equipped with a projection screen, projector and sound system.

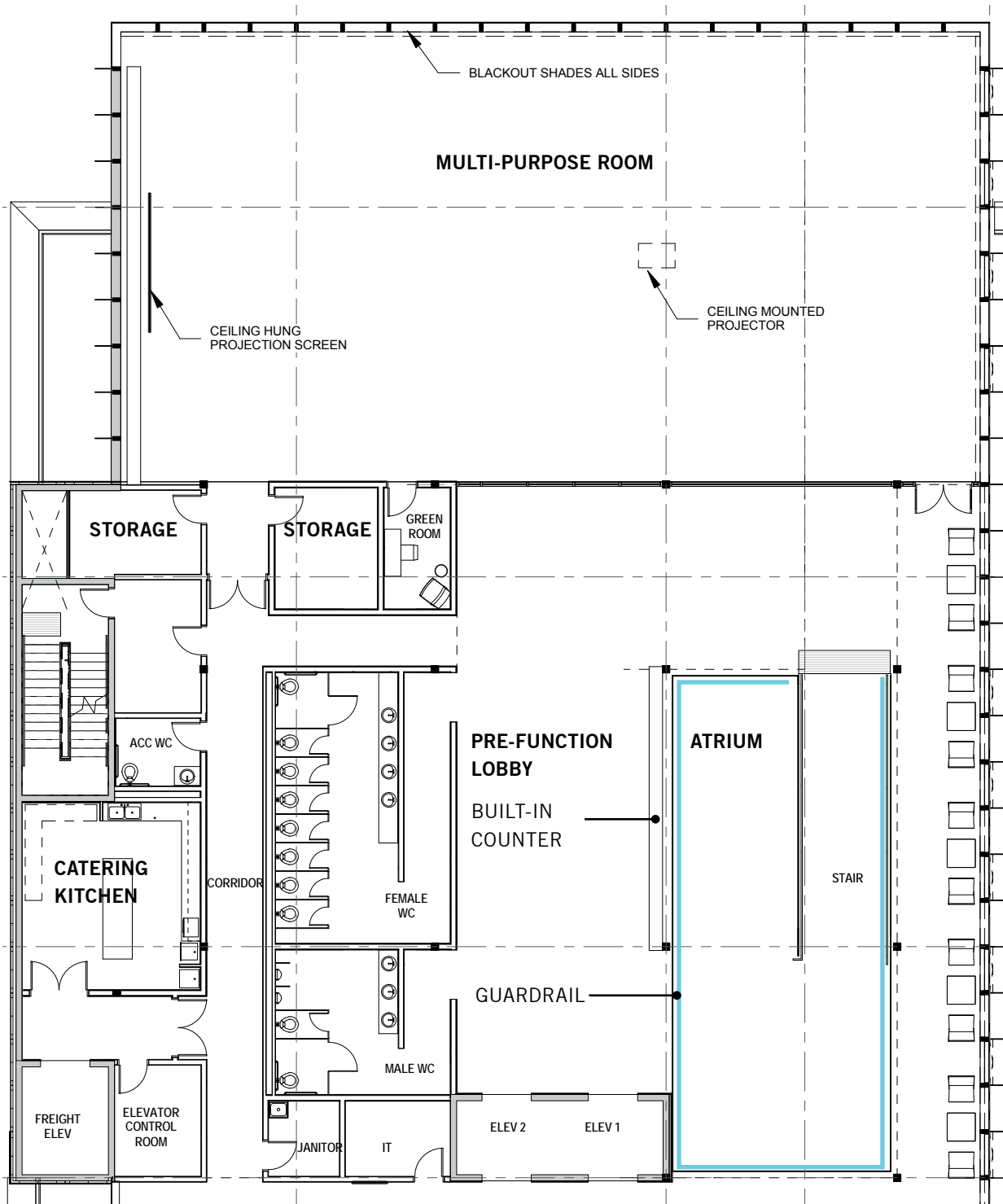
The room is supported by a catering kitchen, a pre-function lobby for gathering before events, a green room for guests and storage for furnishings.



Concept image of multi-purpose room showing a banquet configuration.

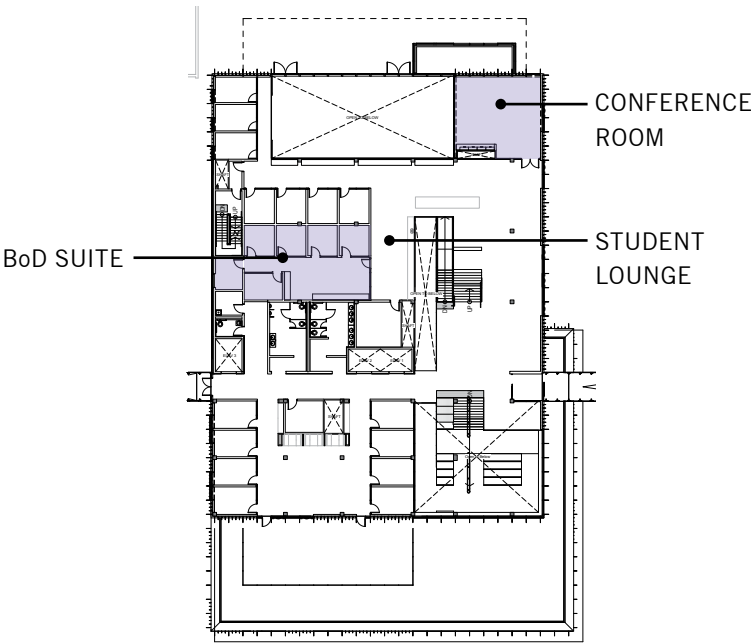
FINISHES:

1. Flooring will be hardwood or recycled rubber flooring.
2. Ceilings will be exposed wood structure with wood infill slats.
3. Walls will be painted drywall at the interior, and full height windows at the exterior.



DETAIL PLAN OF MULTI-PURPOSE ROOM

SFSS BOARD OFFICES



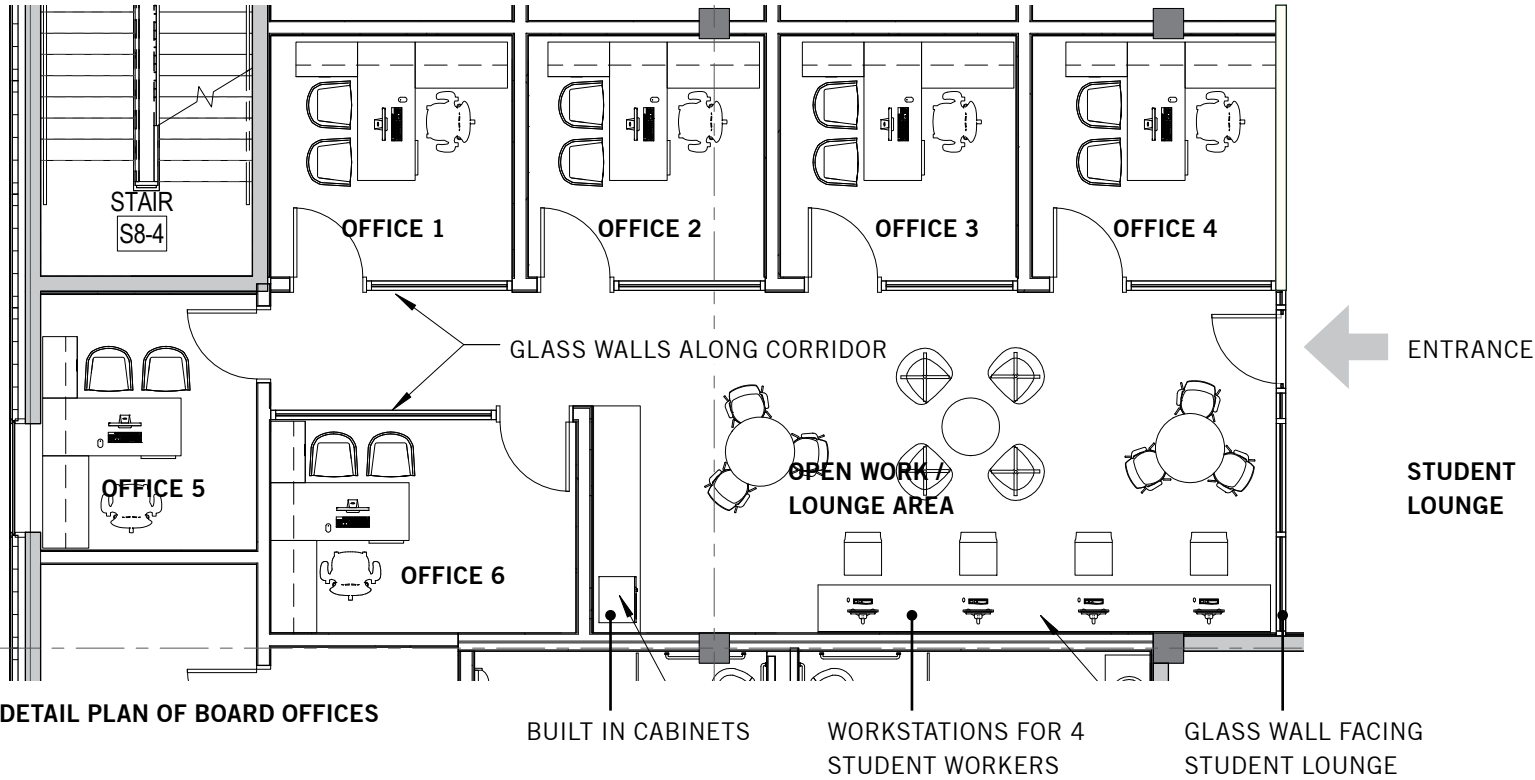
LEVEL 4000 (11) FLOOR PLAN
Highlighting location of SFSS Board Offices and Conference Room

The SFSS Board offices are located on level 4000 (11). The suite is comprised of six offices surrounding an open work / lounge area. The work / lounge area is intended for the SFSS Board members to collaborate and work. The work / lounge area is visible from the student lounge through a glass wall.

Each office will have power and data for a computer; power and data will also be provided in the open work area. Whiteboards or writable wall surfaces will be provided in the open work area as well.

FINISHES:

- 1. Floor finish will be recycled rubber flooring.
- 2. Ceiling finish will be acoustic ceiling tile.
- 3. Wall finish will be painted drywall.



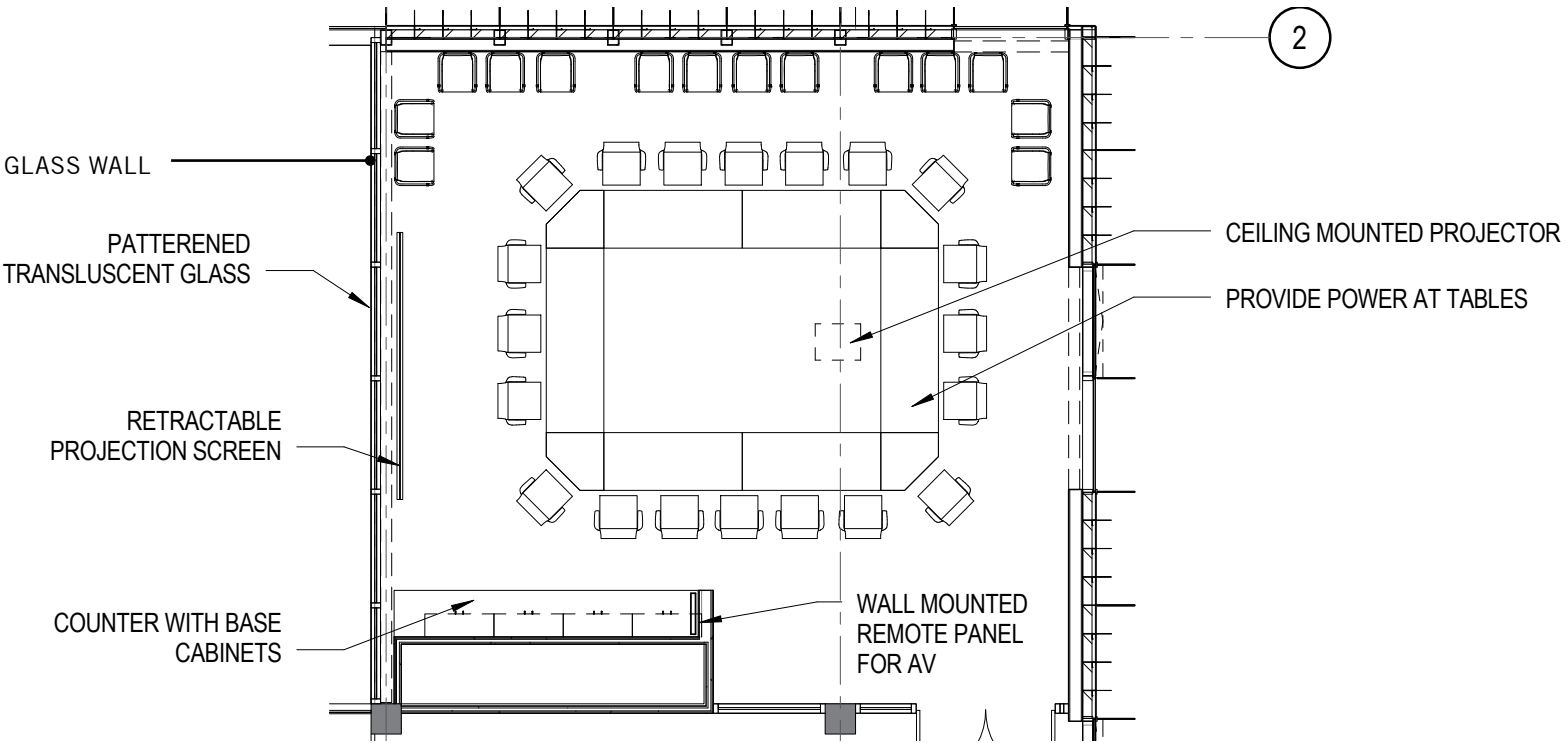
DETAIL PLAN OF BOARD OFFICES

The SFSS Board Office are supported by a Conference Room on the same floor. The Conference Room overlooks the Social Stage Lounge, and the entrance is located off a student lounge. The conference room will accomodate 30 people. A glass wall overlooking the Social Stage allows students to see the Board members working and meeting. There will be no visibility to the projection surfaces from outside the room, and the room will be equipped with blackout blinds for room darkening and privacy.

The Conference Room will have a projection screen and projector. There will also be a whiteboard or other writable surface in the room.

FINISHES:

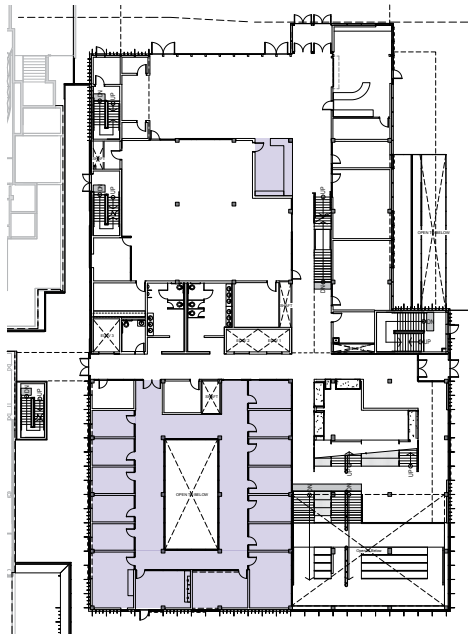
- 1. Floor finish will be recycled rubber flooring.
- 2. Ceiling finish will be acoustic ceiling tile.
- 3. Wall finish will be painted drywall.



DETAIL PLAN OF CONFERENCE ROOM

*Note: Furniture shown for scale and suggested layout only.
Furniture selection is not included in the current phase of work.*

SFSS ADMINISTRATIVE OFFICES

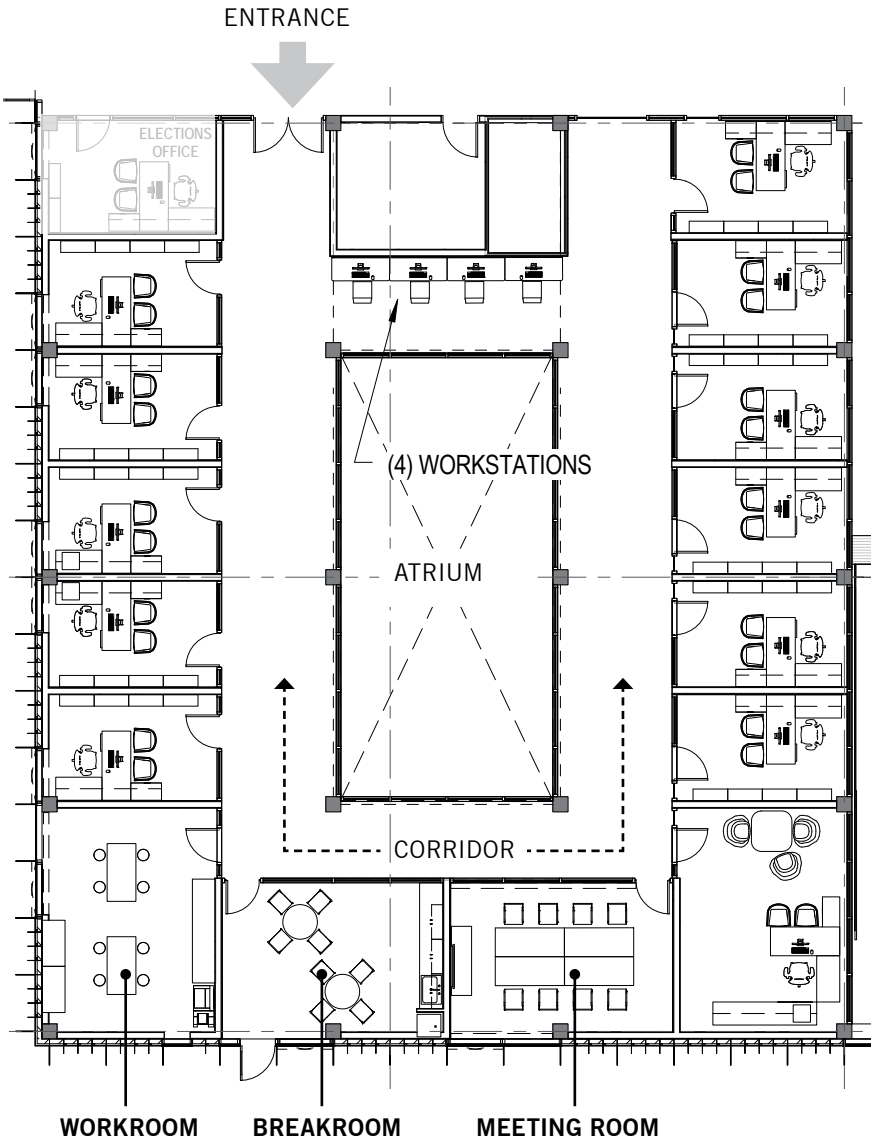


LEVEL 3000 (10) FLOOR PLAN
Highlighting location of SFSS Administrative Offices

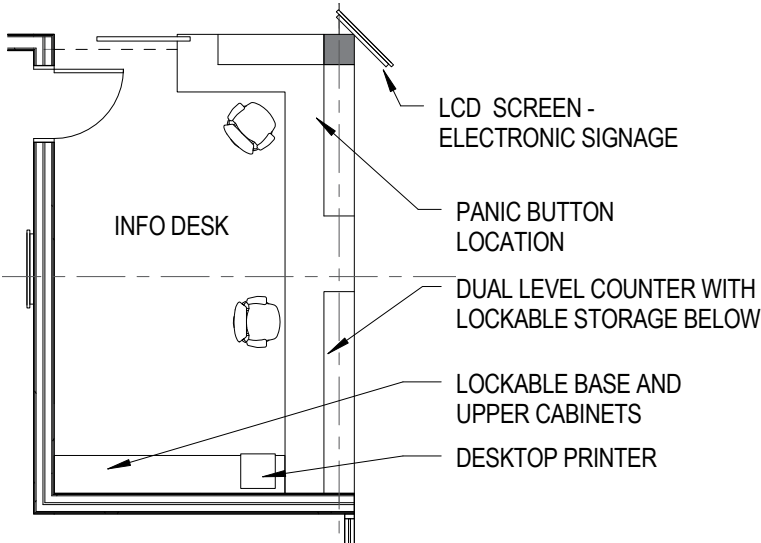
The SFSS Administrative offices are located on level 3000 (10), south of the east / west corridor. The suite is made up of single offices surrounding an internal corridor and a glass double height volume overlooking the dining area. Each office will have power and data suitable for two workstations, in anticipation of future growth.

The suite also contains a breakroom with kitchenette facilities, and a meeting room for 8 to 12 people. A workroom / photocopy room provides paper storage and work surfaces with built in cabinetry.

- FINISHES:**
- 1. Flooring will be recycled rubber flooring.
 - 2. Ceilings will be acoustic ceiling tile.
 - 3. Walls will be painted drywall. Walls along the corridor will have full height glass for daylight and transparency.



DETAIL PLAN OF SFSS ADMINISTRATIVE OFFICES



DETAIL PLAN OF INFORMATION DESK

*Note: Furniture shown for scale and suggested layout only.
Furniture selection is not included in the current phase of work.*

PLACES FOR ART

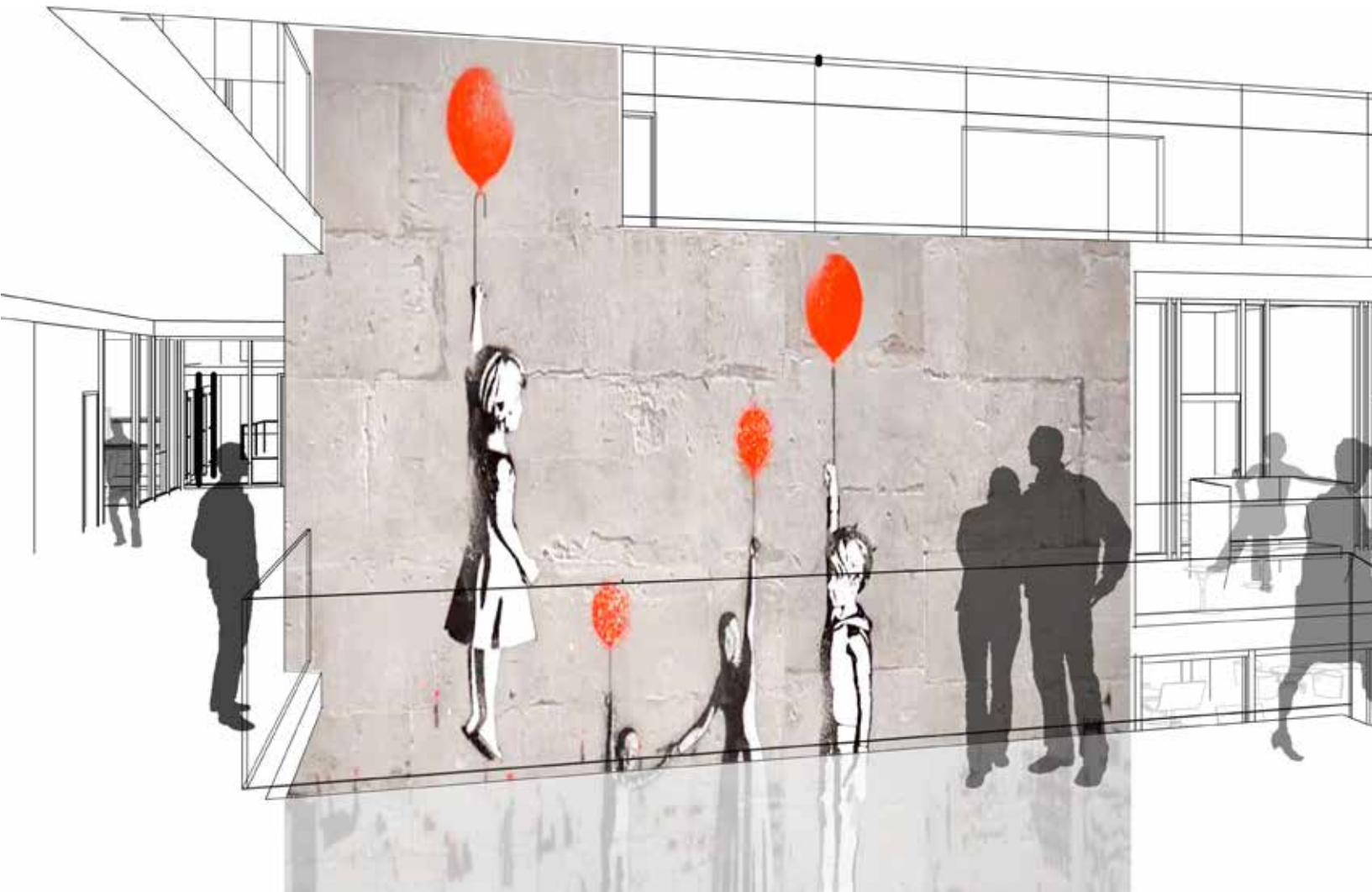
During the initial phases of the programming, students requested that the SUB provide opportunities to display student art, with the goal of personalizing the building.

Perkins+Will met with students in July 2014 to discuss opportunities for artistic expression in the SUB, and where this could happen. While the SUB is not intended to be an art gallery or designed around specific artwork, the building will contain infrastructure in the form of lighting and suspension systems to provide flexibility for different types of art to be installed, either temporary or permanent. In addition, all solid walls within the SUB will be suitable for mounting framed artwork such as photography or painting.

Lighting and suspension specifically intended for artwork will be located in the following areas:

East / West corridor on Level 1000 to Level 4000: The E/W corridors on each floor will include adjustable gallery lighting on tracks for maximum flexibility, permitting the addition or removal of fixtures to illuminate wall mounted art. The walls will also include additional blocking to support heavier artwork such as relief sculptures. Power will be provided on walls for any artwork that requires electricity.

Atrium at main entrance on Level 3000: The double height space at the north end of the building will include infrastructure in the ceiling suitable to suspend 3-dimensional artwork. The suspension points will be capable of supporting 450 kg each. Power will be provided in the ceiling for mobile or dynamic pieces.

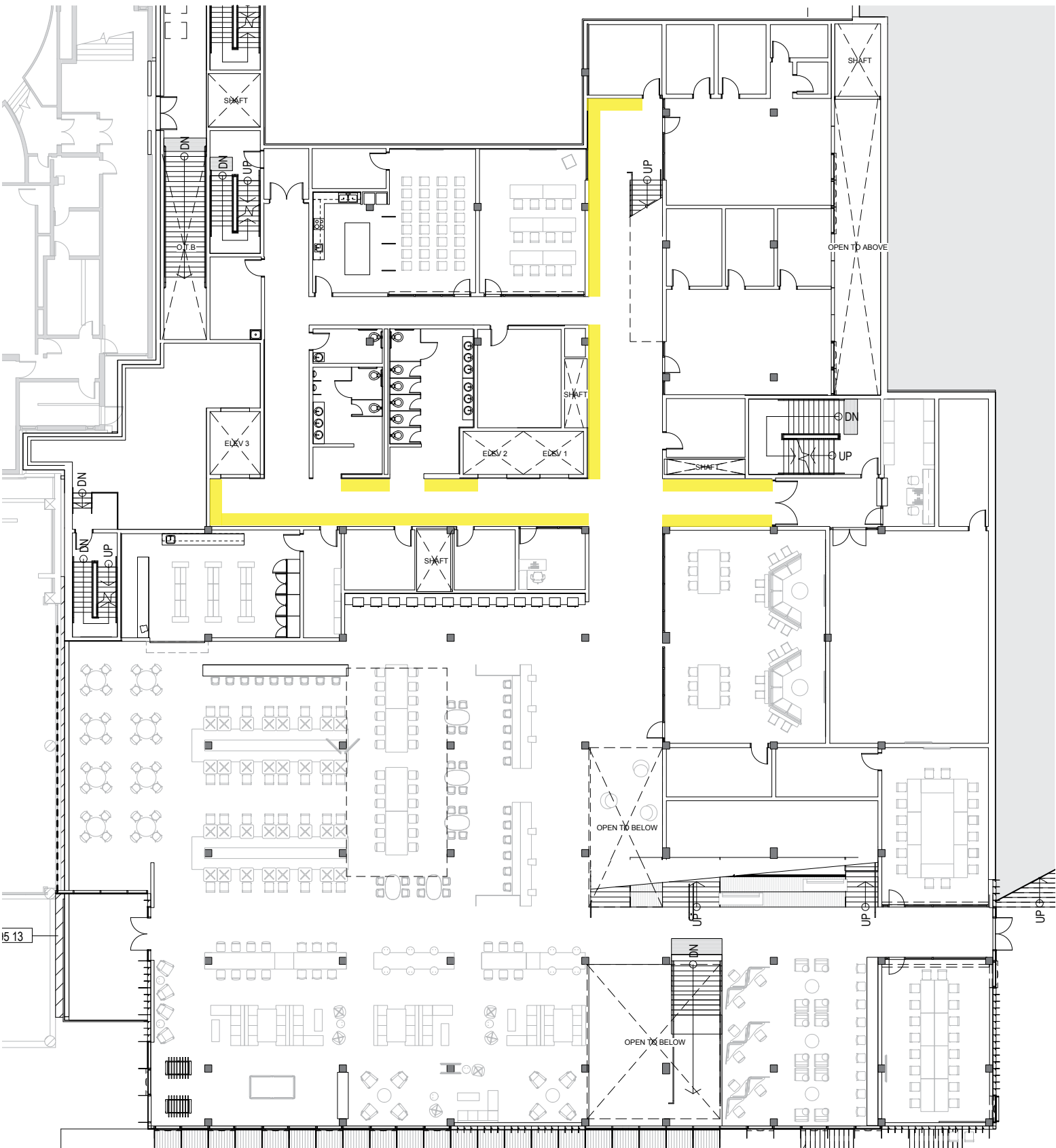


PLACES FOR ART

LEVEL 1000 (08) FLOOR PLAN

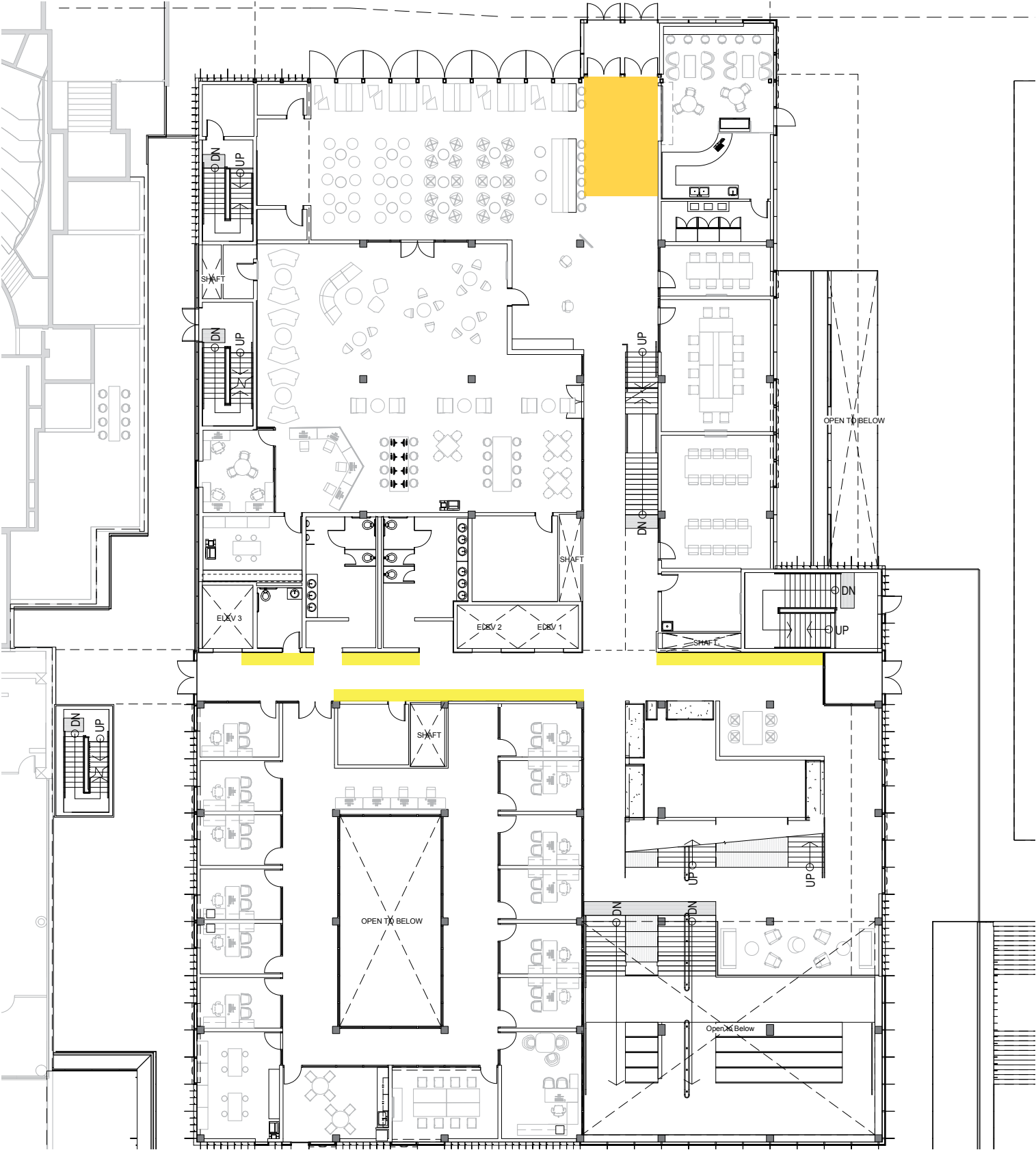


LEVEL 2000 (09) FLOOR PLAN

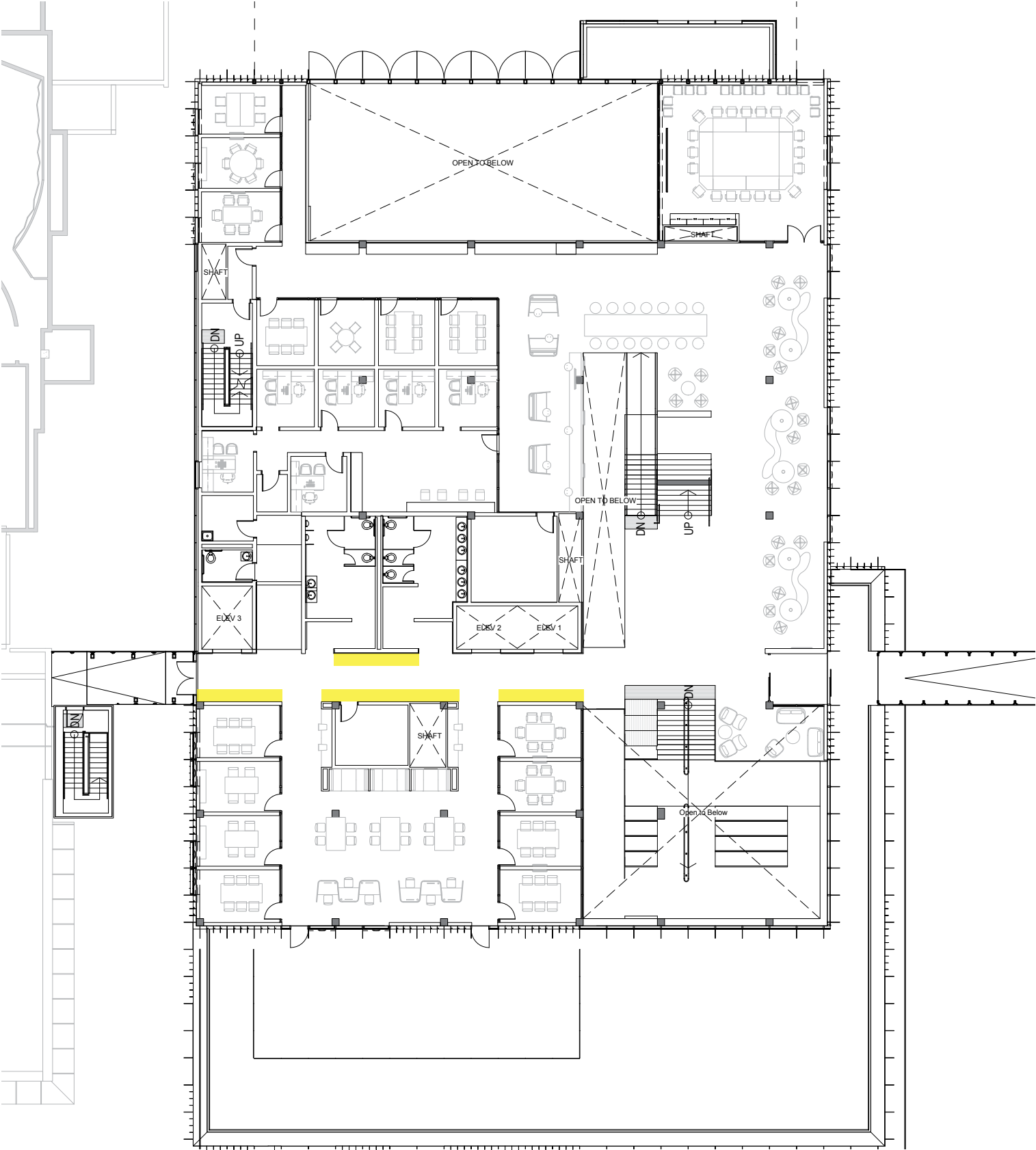


PLACES FOR ART

LEVEL 3000 (10) FLOOR PLAN



LEVEL 4000 (11) FLOOR PLAN



LANDSCAPE CONCEPT

DESIGN PRINCIPLES

EDGES: INDOOR | OUTDOOR

The adjacency between indoor and outdoor space is crucial. Strong connections provide places of prospect and refuge, mediate extremes of climate, and create a social energy at the edge. The success of the roof terraces and plazas at Level 10 result from studying connections through the building edges, blurring the line between indoor and outdoor at every possible opportunity, heightening the experience of green as viewed from inside the building, and leveraging social programming on either side of the building envelope.



CIRCULATION: ACROSS | VERTICAL

As the new neighbour to the Academic Quadrangle and Maggie Bentson Centre, and with an address on Convocation Mall, the Student Centre must insert itself delicately into its context. The plaza at Level 10 is the plane of arrival: to extend the entry in a discreet manner from the building into the larger public realm, the ground plane will need to create a distinct and welcoming experience at both front doors while respecting existing patterns and materials. We see great opportunity to take advantage of vertical connections between terraces, through visual treatments of the building façade or a pattern language.



LANDSCAPE CONCEPT

VIEWS: GRAND | INTIMATE

The roof terraces - visible from the front lobby and from multiple levels in the building - have the potential to orient routes through the building and reward the user with an vista over the terraced meadow rising up from below, the forested south slopes and companion buildings at the edges. While these views offer a great connection to the ‘borrowed landscape’ of Burnaby Mountain, it’s critical to creat moments of intimacy within the outdoor environment that heighten and exaggerate the scalar extremes of the view. The decks offer great opportunities for socialization through materials, furnishings and enclosure to create the intimacy of scale needed.



PROGRAM: EVENT | EVERYDAY

The Student Centre - the ‘Third Place’ between work and home - will invite socialization with students and guests, encourage lingering and interaction and accommodate formal events. The terraces and plazas will allow all these programs to extend outdoors, taking advantage of views and adjacent activity. Our task is to give life to the outdoor environment, making them an extension of the work spaces and social lounges in the building, and potentially the social heart and soul of the Student Centre.



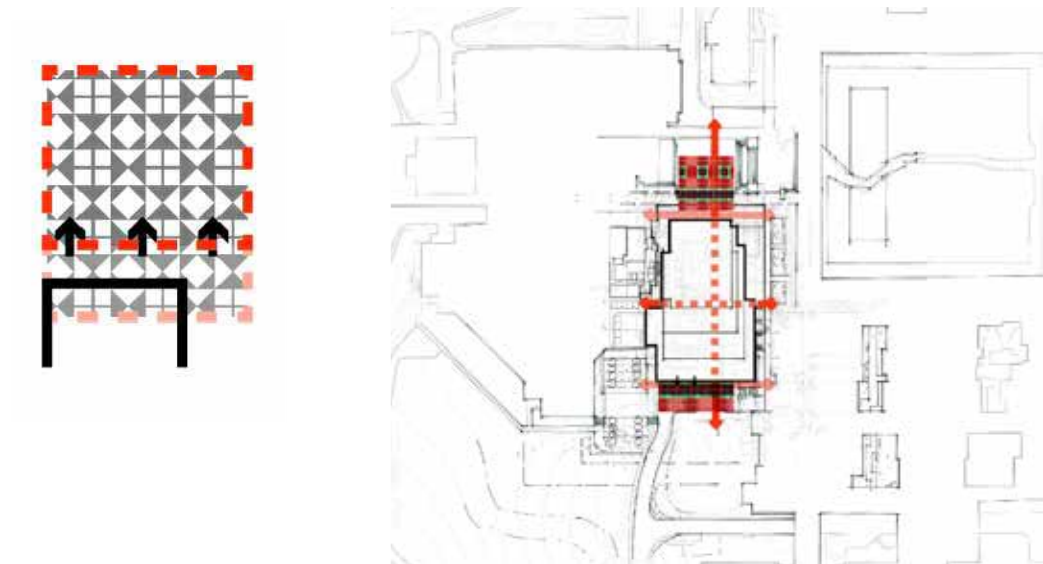
LANDSCAPE CONCEPT

DESIGN RATIONALE

"SLOT"
Canyons and columns, solid, and void slots compose a landscape of linear planting, walkways, courtyards, and water features, framing and placing emphasis on the potential of inbetween spaces.



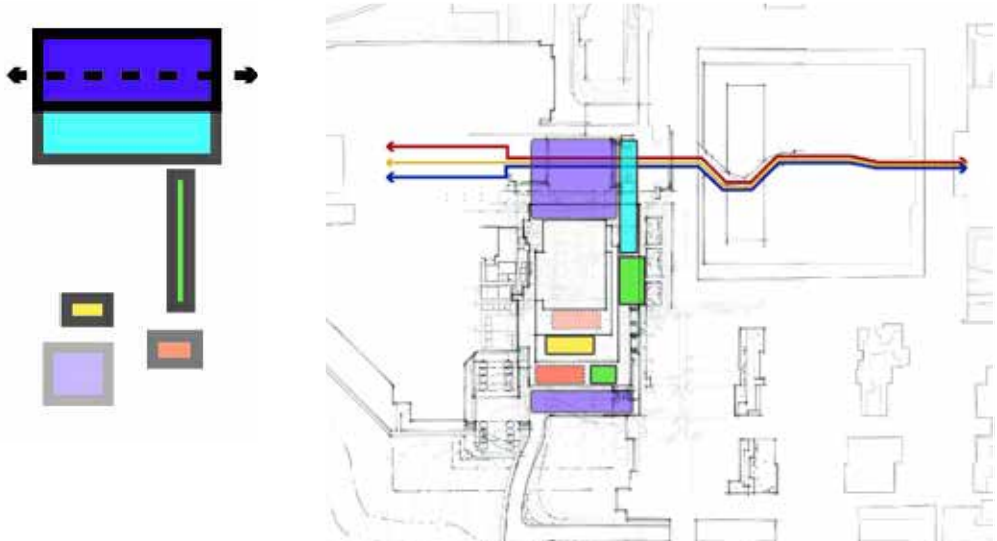
ROLL OUT A WELCOME MAT
The main entrances of the SUB extend outward north, east, south, and west to create key connections and expand the public realm. The east-west connection facilitates movement between buildings while the north and south plaza conditions can frame student life while maintaining functionality.



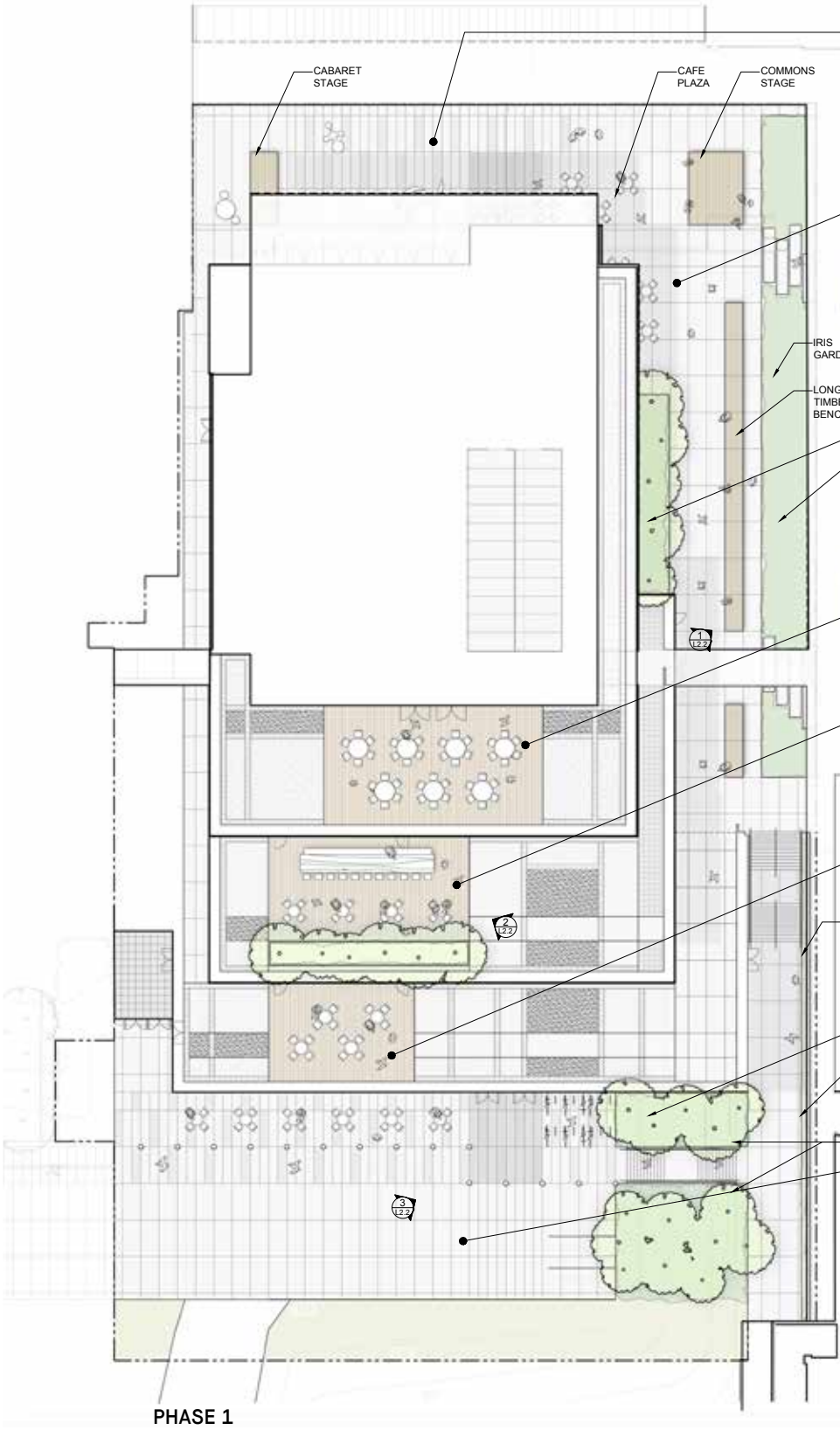
ECHO THE BUILDING
The massing of the SFU's is characterized by a strong horizontality meeting the mountain slope. The extending southwest landscape can terrace to echo the cascading roof decks of the new SUB, creating more opportunities for programming.



MAIN EVENT TO EVERYDAY PROGRAM
The roof terraces and extended plazas play host to a variety of levels of program, from the most formal convocation procession to out of classroom meetings. Landscape spaces reinforce the campus' original design elements of the strong formal spine supported by informal gathering places where real university life happens.



LANDSCAPE CONCEPT



PHASE 1

- TARTAN PLAZA**
Special paving acts as a welcome mat, weaving together the new Student Union Building with the processional living room shared by the Academic Quadrangle and Convocation Mall. The Cabaret Stage foregrounds the adjacent interior Lounge along with space for public art and lighting opportunities.
- SOCIAL SPACES**
The busiest corner of the SUB is activated by a cafe plaza and a Commons Stage which acts as a gathering and meeting place for students everyday, as well as during special events. Together with timber benches, they provide warmth and much needed social spaces surrounded by greenery.
- SLOT PLANTING**
Black locust trees planted in the light well at level 9 create dappled light, mimicking the existing Japanese Maples nearby. They are separated by an Iris Garden, which provides storm water and snow pile storage in the winter months, and blooms green and purple in the spring time.
- EVENTS TERRACE**
Large multi-use space accommodates spilling out of interior activity and plays host to potential banquets and events with a privileged view.
- COMMONS TERRACE**
Most heavily used outdoor social and study space with a large communal wooden harvest table, accessible from the Commons Lounge and bordered by a row of Dogwood trees to protect from wind and provide greenery.
- DAILY TERRACE**
Small deck adjacent to break rooms on level 10 provide setting for everyday activity and meetings.
- VERTICAL GREEN**
A terraced hill, planted with Japanese Snowbells and ground cover, references the language of rice fields and terracing at SFU. Along with a 4m green wall of Virginia Creeper, the Snowbells frame the ascent to levels 9 and 10 with a colourful seasonality.
- ENTRY COURT**
Special paving extends from the building to create a pedestrian zone complete with bollards, bike racks, and outdoor seating. The entry court foregrounds the building with activity, linking two terraced landscapes while accommodating fire truck access, pick-up and drop off, loading, and an accessible entrance to the building.



PHASE 2

- INCREASED ACCESS**
To the Commons Terrace and Daily Terrace at levels 10 & 11.
- ADDITIONAL TREES**
Raised planters provide more wind protection and greenery, visible from the interior and approaching the building.
- FIRE PIT**
More intimate gathering space for warmth next to commons deck.
- PLANTING STRIPS**
Rock ballast is replaced by planters of various heights, with room for urban agriculture plots alternated with more maintained landscape plantings, separated by concrete paver strips.
- EXPANDED DECK**
A wider Daily Terrace accommodates access from the rest of the plaza at level 10.

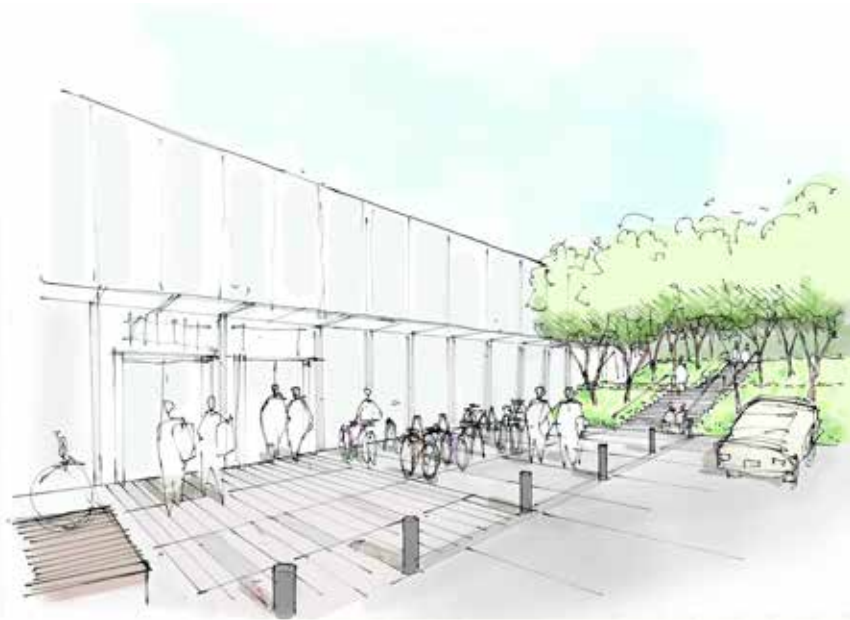
LANDSCAPE CONCEPT



IRIS GARDEN AND TIMBER BENCH - LEVEL 3000 (10)



COMMONS TERRACE - LEVEL 4000 (11) ROOF DECK



SOUTH PLAZA - LEVEL 1000 (08)

SIGNAGE CONCEPT

Signage in the building will work together with the interior design concept to achieve a bold wayfinding experience. Room and directional graphics will form part of the building language to enrich the interiors.





wayfinding



exterior



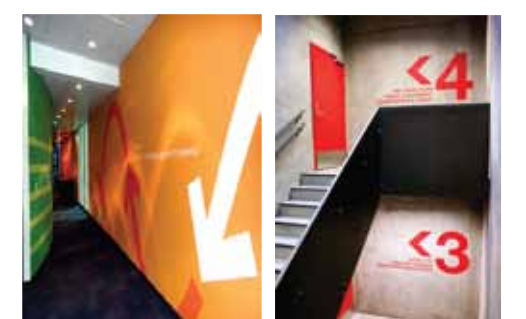
elevators



washrooms



stairs



SIGNAGE & GRAPHICS.2

walls



rooms



wayfinding



murals



features



SIGNAGE & GRAPHICS.3

[illegible]

SUSTAINABILITY - GOALS



The workshop outcomes can be summarized as follows:

1. The SUB will be a place to build community.
2. The SUB will promote physical and mental wellness.
3. The SUB will promote a culture of environmental stewardship:
 - Through design and use of natural materials
 - Metering and instant feedback
 - Water and energy conservation measures
4. The SUB should incorporate green roofs for:
 - Food production
 - Support native habitat
 - Community building
 - Energy efficiency (increased insulation)



5. The SUB will incorporate daylight in all student spaces where possible. The benefits of this are:
 - Student health and wellness
 - Lower energy and operating costs
 - Better indoor light quality
6. The SUB will incorporate sustainably sourced materials:
 - Local materials
 - Recycled materials and furnishings
 - Healthy, non-toxic materials
7. Finally, maintenance and operating costs are important considerations in the design and materials choices for the SUB.



Photos from Sustainability Workshop

SUSTAINABILITY - NARRATIVE OF STRATEGIES



1. Roof gardens: Students expressed a strong desire for the SUB to provide roof gardens for growing food, supporting native habitat, and creating community. Roof gardens in the form of planter boxes will be provided on rooftops of the SUB.

- Social Benefits: Rooftop greenery provides opportunities to engage with nature, encourages students to access rooftops for fresh air, and provides the potential to grow food and create community around small scale agriculture.
- Environmental Benefits: Supports habitat such as bees and insects.
- Economic Benefits: Rooftop planters are more economical than an integrated roof both in capital costs and operating costs because the planters are not connected to the building envelope or roof membrane, reducing capital costs for installation and operating costs for maintenance of the membranes. A smaller planted area is also easier to maintain.

2. Student space at perimeter of building: Student space will be located along the perimeter of the building on the north, east and south sides in the form of lounges and study spaces.

- Social Benefits: Creates a welcoming building that invites students into the SUB, and provides students with access to views and daylight.



3. Transparency into and inside the building: The building perimeter will have full height windows on the north, east and south sides to provide visibility into the building. Rooms located adjacent to major circulation areas will also have glass walls fronting corridors to provide visibility within the building.

- Social Benefits: Transparency creates a visual catalogue so that students can see the activities inside the building. This creates a sense of community and eases wayfinding for students in the SUB.
- Economic Benefits: High levels of transparency allow for increased levels of daylight inside the building, reducing reliance on artificial lighting and electrical use.

4. Community kitchen: A community kitchen will be located inside the building on level 09, adjacent to a 20-25 person meeting room. This adjacency allows larger groups to enjoy the meals that they cook together.

- Social Benefits: A community kitchen has many benefits for students – giving socialization meaning through sharing of cultures and food.

5. Accessible and Inclusive: An Accessibility Consultant is working with the SFSS and Design Team to develop a set of priorities for access and inclusivity.

- Social Benefits: An inclusive and accessible building design allows all students to enjoy the building's programs and it's features.



6. Daylight: Daylight will be incorporated into regularly occupied spaces where possible, and into all lounge and student social areas. The level 12 / 5000 roof incorporates a skylight to bring daylight into a central atrium adjacent to the main circulation spine. Daylight will also penetrate into the lower floor areas through openings in the floor slabs.

- Social Benefits: Daylight dramatically improves the indoor environment for students and staff, including increased productivity and reduced stress levels. Daylight also influences the architectural expression and experience of a space.
- Environmental Benefits: Adequate levels of daylight significantly reduces building energy demands, reducing a reliance on fossil fuels.
- Economic Benefits: Reduced energy consumption results in reduced operating costs over the life of the building, not just in electrical bills, but also in maintenance and replacement of bulbs, which will have longer life spans.

7. A new outdoor plaza between the AQ and the SUB: A new outdoor plaza will be located between the AQ and the SUB. This plaza will be a shared amenity between the SUB and the student space in the AQ, including a newly renovated Indigenous Student Centre. The plaza will be animated by a cafe in the NE corner of the SUB.

- Social Benefits: A shared plaza creates community outside the building, allow activities in the AQ and SUB to spill outdoors.



8. Control solar heat gain through building design: The building will incorporate solid walls on the west face of the building, which is the most difficult facade to control solar heat gain. Vertical solar shading will be incorporate on the east face to reduce morning sun penetration and glare. Fritted, high performance glazing with a high solar heat gain coefficient will be specified for the building.

- Social Benefits: Avoiding solar heat grain inside the building makes for more comfortable indoor environments and avoids space overheating. Horizontal overhangs on the south facade provide a covered roof area for enjoyment in inclement weather.
- Environmental Benefits: A reduced heat gain inside the building reduces the overall energy use in the building, and thus reliance on fossil fuels.
- Economic Benefits: A reduction of energy use in the building reduces mechanical equipment sizes and capital costs, and also reduces operating costs with lower energy bills.

9. Create places for student artwork: Opportunities for student art will be provided in outdoor plazas, as well as interior walls along the main circulation corridors. Some of these areas will have added infrastructure in the form of display lighting at the ceiling.

- Social Benefits: Artwork can have stress reducing effects, provides visual interest on the campus, and builds pride in student work.

SUSTAINABILITY - NARRATIVE OF STRATEGIES



10. Use healthy, non-toxic materials: Materials inside the building will be free of VOC's and other toxins to provide a healthy indoor environment. Effort will be made to specify natural materials throughout. We will avoid building products that contain substances listed by government agencies as having negative health issues, using the precautionary principle to guide our selection of materials .

- Social Benefits: Natural, healthy and non-toxic materials create a healthy indoor environment without airborne toxins.
- Environmental Benefits: The use of natural materials benefits the environment by eliminating toxins in the manufacturing process, as well as reducing non-biodegradable materials in landfills.
- Economic Benefits: Through the use of healthier materials the university can avoid potential and unforeseen replacement, abatement, and/or health care costs that may be linked to using products with substance that have been linked or identified to have a human or environmental health effect.



11. Use durable, local and recycled materials: Like the process of ecological evolution itself, the design must balance the competing requirements of the program, the ability to adapt to change, and the need to use a fixed set of parameters most efficiently. Durable materials will be specified throughout the building.

- Social Benefits: The use of local materials supports the local economy, and durable materials that weather well in their physical context present a longer lasting positive public face to a building.
- Environmental Benefits: As durability of materials increases, so do the environmental merits of the project. Durable materials and components can potentially remain useful in the materials cycle for longer periods of time, reducing the need for new materials and the environmental costs of resource extraction, production processes and waste disposal.
- Economic Benefits: A longer service life means lower operational costs for material replacement and maintenance.



12. High performance building envelope: The building design will incorporate a high performance building envelope. Strategies may include specifying appropriate glazing for each facade, thermally improved exterior walls and avoiding thermal breaks.

- Social Benefits: Better exterior walls eliminate drafts from outside, and create a more comfortable indoor environment for occupants.
- Environmental Benefits: A thermally improved envelope reducing heating and cooling loads in the building, allowing for passive approaches such as natural ventilation and avoiding cooling inside the building. This reduces energy use and use of fossil fuels.
- Economic Benefits: Passive approaches result in smaller mechanical loads and equipment, which translates to lower capital costs and lower long term operating costs of mechanical equipment maintenance.

13. Renewable Energy: While the SUB will not incorporate renewable energy sources such as photovoltaics and solar thermal, the building will incorporate infrastructure to install these in the future. The building will connect to the campus district energy system.

- Social Benefits: The environmental contribution of a reduced energy load in the building can have positive social benefits in students knowing their building is making a positive contribution to the environment.



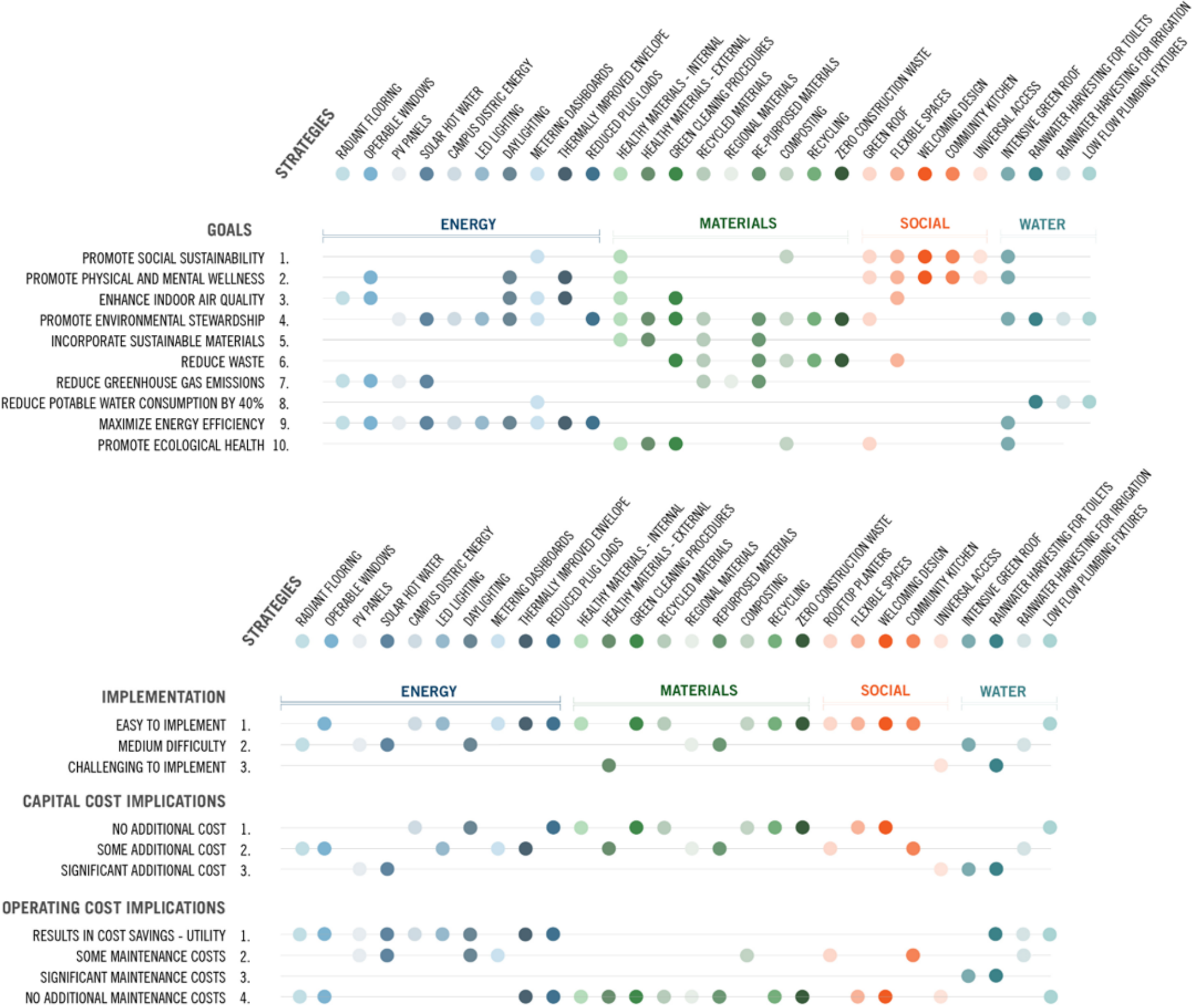
• Environmental Benefits: Renewable energy will have a positive impact on the energy use of the building because some energy would be renewable. This type of addition could contribute to a “Net Zero” building in which the energy used by the building is equal to the energy the building generates.

- Economic Benefits: While the up front (capital) costs of the renewable energy strategies can add some additional cost, the economic benefits are reduced operating costs over the life of the building, especially when combined with energy efficient electrical and mechanical systems. A cost / benefit analysis and research into available funding to support renewable technologies would be required.

14. Measurement and verification: The SUB will incorporate measurement and verification of energy, water and electrical use in the building.

- Environmental Benefits: By displaying the energy and water use in the building, students can see and understand their behaviour can have an impact on the resources in the building. The SUB can be an agent of behavioural change to reduce water, energy and electrical consumption.
- Economic Benefits: Reduced electrical, energy and water consumption leads to lower utility bills.

15. Designed to meet LEED Gold.



The following matrices indicate the results of workshop #1, and the implementation, capital cost and operating cost for each of the strategies identified.

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

The following LEED ‘scorecard’ reflects preliminary expectations for the Student Union Building performance based upon both the design team’s cumulative experience with, and understanding of the requirements of this process. Through the use of an integrated design approach by the design team, and the sustainable strategies that will be implemented into the design, the design team expects the SUB to achieve the LEED ‘Gold’ level of certification.

ACCESS + INCLUSION



Vertical Transportation: Glass elevators provide opportunities to enjoy views of various floor levels.



Wayfinding: clear, legible and well placed signage reduces stress



Intimate study spaces within larger lounge areas: One strategy to create more intimate spaces within the open lounges is to create small study pods as shown in the photo. This allows students to enjoy the benefits of a larger space while feeling like they are in a contained space, which can help reduce stress and anxiety caused by open spaces.

Creating an inclusive, welcoming environment for all students cannot be achieved without providing an accessible building that meets the needs of all users, including students with disabilities. In meeting this goal, the SFSS has retained an accessibility consultant to work with the design team in developing an access and inclusion strategy for the project.

The first priority in developing an access strategy is to determine the appropriate level of access to be provided within the building. This will be achieved through discussion with student representatives and the development of a preliminary document that will make recommendations for appropriate access in each area of the SUB.

This preliminary document will be developed into the SUB Accessible Design Criteria Manual, which will provide project specific, baseline levels of access to be applied project wide, creating consistent and predictable access for students and staff with disabilities. The Accessible Design Criteria Manual will address access to:

- Stairs, Elevators and Walkways
- Public Address/Presentation Systems
- Floor/Surface Treatments
- Meeting Space Requirements
- Signage/Wayfinding Food Service Areas/Lounges/Seating

- Millwork/Seating/Furniture
 - Emergency Systems/Procedures
 - Washrooms
 - Switches/Controls/Outlets
 - Access issues in interior spaces
 - Dance Studio Accessibility
- Recommendations will identify a 'best practice' approach gleaned from the BCBC, CSA guidelines as well as Universal Design standards, focusing on six major disability groups:
- People with mobility impairments
 - People with agility impairments
 - People who are hard of hearing
 - People who are deaf
 - People who have vision impairments
 - People who are blind
 - People who suffer from mental health issues

Access and Inclusion Workshop

An access and inclusion workshop was held in April at the Think Tank. Through discussion with participants, the following was determined to be a priority:

- Simplicity of design.
- Intuitive programming and wayfinding.
- Use of natural materials in the finishing.
- Lighting to delineate areas within the larger spaces.
- Textures and colour as part of the overall wayfinding for the building.
- Redundant, generous vertical circulation such as elevators.
- Mental health issues are very important at SFU. The SUB design will consider mental health as well as physical disabilities.
- Accessible furniture design and placement.
- Acoustic treatments to dampen sound
- Flexibility and ability to customize spaces within the building.

Further access and inclusion details are outlined in the Access and Inclusion Report.



VIEW OF SUB FROM FREEDOM SQUARE



VIEW OF SUB FROM NORTH PLAZA



VIEW OF SUB FROM SOUTH



VIEW OF MULTI-PURPOSE ROOM LEVEL 5000 (12)



VIEW OF CASCADE LOUNGE FROM LEVEL 2000 (09)



ACTIVE LOUNGE ON LEVEL 2000 (09)



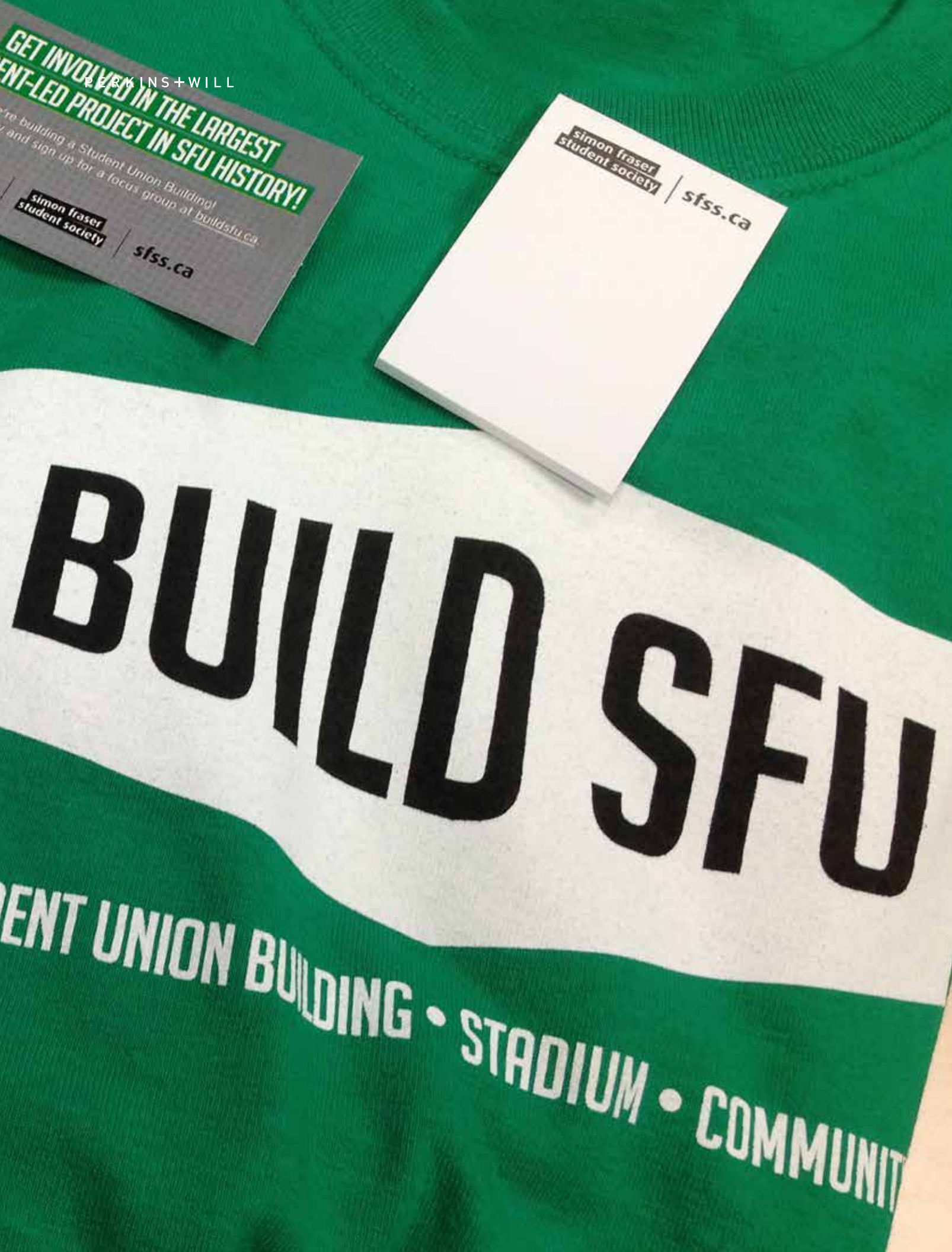
CLUB CENTRE ON LEVEL 3000 (10)



DINING AREA ON LEVEL 2000 (09)



TEAM ROOMS AND MEETING ROOMS



PROJECT SCHEDULE + LOGISTICS

Design Development

Design Development is the time to further advance the design, firm up and validate choices. Location of rooms and walls are finalized, room layouts are developed for coordination of electrical and mechanical servicing, and interior and exterior finishes and fittings are selected. All architectural, mechanical and electrical systems are assessed for their expected performance and impact on all other systems.

Working Drawings

The working drawings phase is when the design is drawn up so that a builder can understand what is going to be built.

Tender

During the Tender phase, bidders submit prices for the construction of the building.

Construction

Once qualified contractors are chosen, the main design plans are realized. During this phase, the construction and design team will work to transform the abstract into reality.

The following schedule has been developed for the project:

May 2014 - August 2014	Design Development	<ul style="list-style-type: none">An area for construction staging (trailers and equipment) will be necessary near the site. Access to the University Theatre loading area will be limited.
September 2014 - February 2015	Working Drawings	
February 2015 - March 2015	Tender	<ul style="list-style-type: none">It is expected that the construction activities will not impact pedestrian routes around the site, except for areas where the building connects to existing structures such as the AQ, MBC and Freedom Square.
April 2015 - April 2017	Construction	
September 2016 - January 2016	Furniture Selection	<ul style="list-style-type: none">The removal and / or relocation of the Sustainable SFU Learning Gardens will be necessary prior to construction start.Noise can be expected during excavation. Rock blasting is not expected.The smoking area will be relocated.
May 2017 - August 2017	Furniture Installation	
September 2017	Students move-in!!!	

PROJECT SCHEDULE + LOGISTICS

	2014												2015				2016	2017			
PHASE	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	JANUARY	FEBRUARY	MARCH	APRIL	→	APRIL	MAY	→	AUGUST	SEPTEMBER
SCHEMATIC DESIGN (SD)																					
DESIGN DEVELOPMENT (DD)																					
CONSTRUCTION DRAWINGS (CD)																					
TENDER																					
CONSTRUCTION																					
FURNITURE SELECTION AND PROCUREMENT																					
FURNITURE INSTALLATION																					
OCCUPANCY (STUDENTS MOVE IN)																					

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