

UBC ANSO Building Renewal

Development Permit Application

September 20, 2024



Document History

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Notice

This document and its contents have been prepared solely for information and use solely in relation to the proposed redevelopment of the UBC ANSO building.

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Section 1.0

Project Description

1.1 Project Overview

The Anthropology and Sociology Building (ANSO) is a 6,368 GSM (68,551 SF) complex of four connected buildings of concrete construction, ranging from 1-3 storeys: Anne Wesbrook Hall (1949), Isabel MacInnes Hall (1949), Mary Murrin Hall (1956), and the Anthropology and Sociology Building (1974). The Anthropology and Sociology Building, designed by Arthur Erickson, is of historic design value. The three original wings were designed by prolific Vancouver architects Thompson, Berwick and Pratt for use as women's residences. Adjoined by the central Erickson wing in the 1970's, the complex was transferred to the Anthropology department in 1976; the department became the Anthropology and Sociology department in the 1980's, and was divided into two separate departments in the early 2000's. The whole building complex is now collectively known as the Anthropology and Sociology Building.

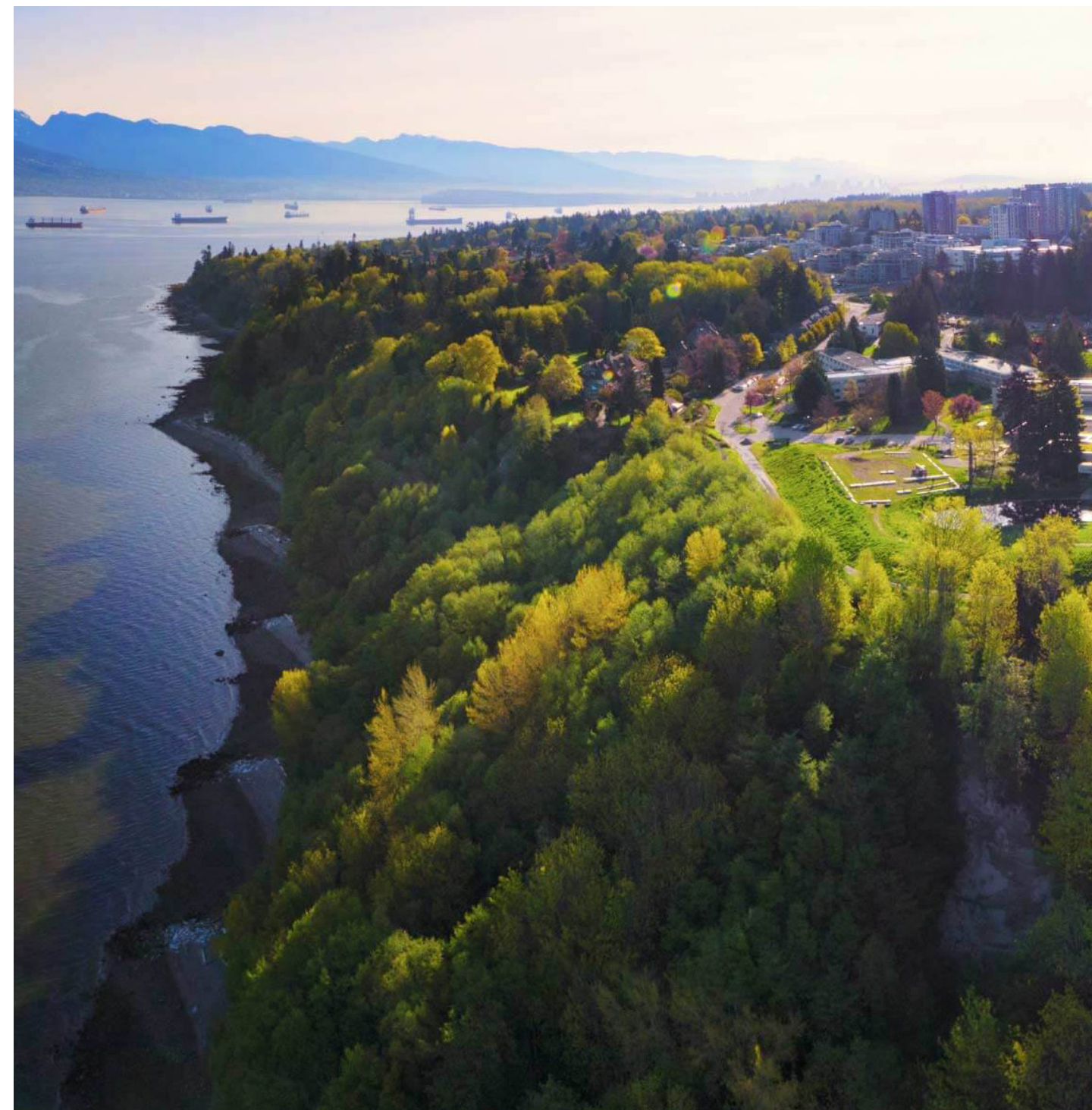
The complex accommodates faculty and administrative office space, dry and wet labs for research, meeting rooms, study spaces, and other support spaces for both departments, in addition to four non-tiered General Teaching Spaces (GTS).

The envelope and infrastructure of all buildings are end-of-life, and system reliability and occupant comfort are constant challenges. Innovative teaching and research activities are constrained by building layouts that are based on the buildings' former function as residences, and building systems that served academic activities fifty years ago are today inadequate.

The former residences are all seismically vulnerable at a Tier III level and are considered suitable for conventional upgrade. The wing designed by Arthur Erickson Architects is the most vulnerable (Seismic Vulnerability Risk Tier V) and must be upgraded to mitigate a substantial risk. It is expected that the project will balance seismic design

and renewal measures with attention to key character defining elements in the Arthur Erickson Architects wing, which is a central organizing element to the existing complex.

The ANSO complex is a Routine Capital Comprehensive Renewal Project, due to the combination of its seismic vulnerability and Facility Condition Index (FCI) of 0.48 (poor condition) across many building aspects. The entire complex will be vacated to allow for a full renovation and upgrade of systems and finishes, as well as interior reconfiguration to support modern research and teaching pedagogy for the respective departments. This full building renewal provides an opportunity to improve the envelope and energy performance of the building complex and bring the full building performance in line with UBC's current expectations.



View of UBC Campus looking east

1.2 Design Brief and Project Objectives

The project objectives are based on UBC's Capital Renewal Program. Key objectives are:

- The building will be seismically upgraded to be in line with UBC Seismic Building Real Estate Framework and REDI Guidelines, targeting a silver rating.
- A complete renewal of the building envelope to improve thermal comfort and energy performance.
- Code, Fire and Life Safety upgrades in line with current building code requirements.
- Replacement of outdated mechanical equipment & electrical systems in line with current UBC technical standards and building-specific performance goals.
- Replacement of interior finishes and interior reconfiguration to support the updated functional program needs.
- Enhanced accessibility that incorporates best practices put forward by the Rick Hansen Foundation, as well as improved facilities for gender equity.

Furthermore, the building renewal and site work should prioritize tree retention wherever feasible, reinstating the soft and hard landscape impacted by the Building Renewal work in a way that is sensitive to the site's ecology, maximizes biodiversity, aligns with the site assessment, and reflects strategies to increase Musqueam presence in the landscape.

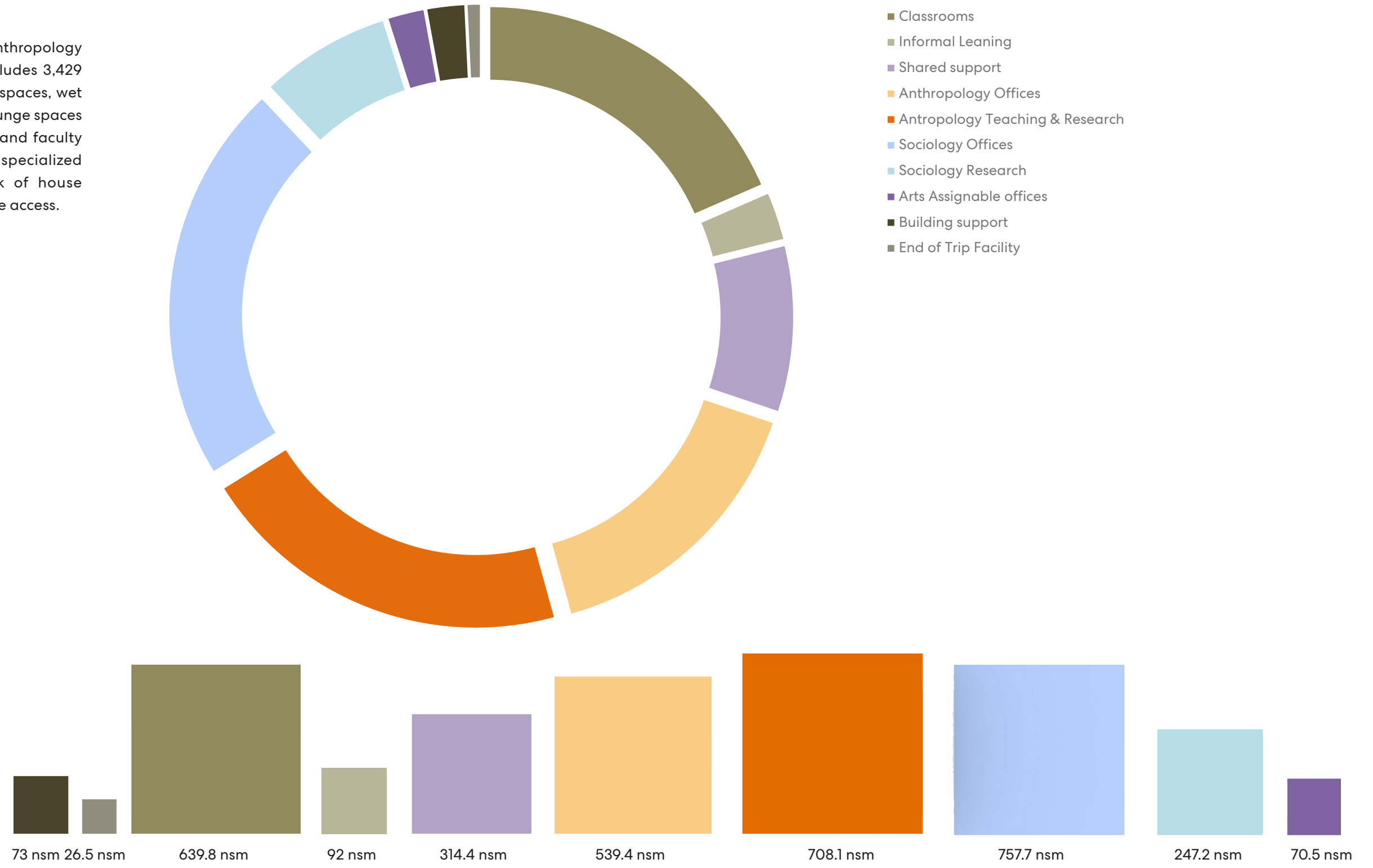
The project is targeting CaGBC LEED Gold and Zero Carbon Building Certification.

1.3 Building Program

1.3.1 Program Summary

Serving the needs of the Departments of Anthropology and Sociology, the functional program includes 3,429 nsm of modern, new learning and research spaces, wet and dry laboratories, faculty and student lounge spaces and informal study space, administrative and faculty offices in line with UBC space standards, specialized storage areas, support space and back of house upgrades for future service and maintenance access.

The total gross building area is 6,681 gsm.



Summary of Building Program by Space Type

1.4 Project Vision

1.4.1 Defining Community

Community was identified as a core theme for the ANSO renewal. The concept of community for the project can be described through different lenses:

Social Connection

Sociology is the study of social life and human behavior. Anthropology is the study of social history and human culture.

People are at the heart of the research, teaching, and learning that are happening in this place. Fostering connections between people is at the heart of the ANSO building renewal project.

Expression of Identity

ANSO is currently an accumulation of four different buildings, built at different times and for different purposes. The building houses two distinct schools that share common bonds and unique identities.

The renewal offers an opportunity to reimagine a holistic and unifying image for the building, and to craft distinct and recognizable individual identities for each of the faculties that co-operatively share this space.

Cultural Belonging

Objects of ancestral significance are referred to as “cultural belongings” in recognition of their humanity and the personal connections they held. They are heirlooms which offer important cultural lessons for future generations.

The ANSO renewal will breathe new life into a building and site that are imbued with a deep sense of history—it will write a new chapter of bringing people together. Beyond the physical, the phrase “cultural belonging” also evokes the spirit of social connection and being a part of something larger than oneself: a community.



Musqueam bone medallion



Detail from Musqueam house post



Musqueam carved bird pendant

1.4.2 Project Vision Statement

The project vision was distilled into a statement that is meant to serve as a summary of the aspirations for the project. Within the overarching vision, three key principles have been described which will help guide design decisions and prioritization for the duration of the project.

A Place of Belonging

The ANSO renewal will prioritize the human and natural **environment**, in a way that instills a cohesive and recognizable sense of collective **identity**, to enrich the sharing of knowledge through a strong and inclusive academic **community**.

Community

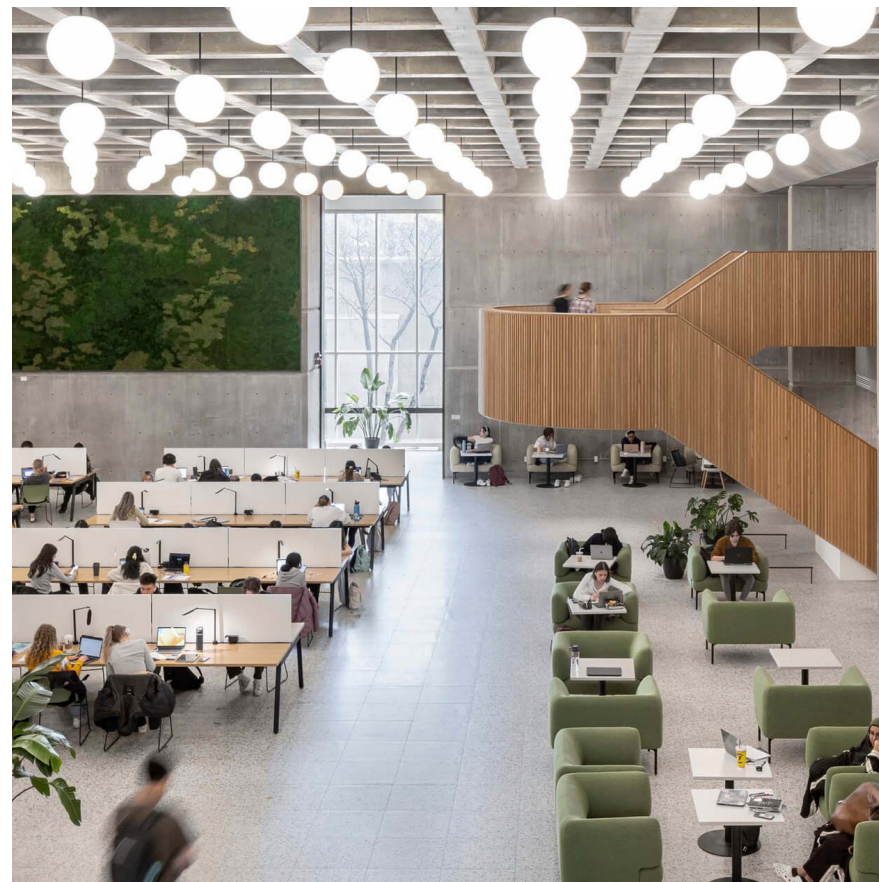
- Honour Indigenous Culture
- Inclusive for Everyone
- Promote Collaboration

Identity

- Unified Expression
- Sense of Welcome
- Intuitive Circulation

Environment

- Integrated with Context
- Health-Giving
- Regenerative Future



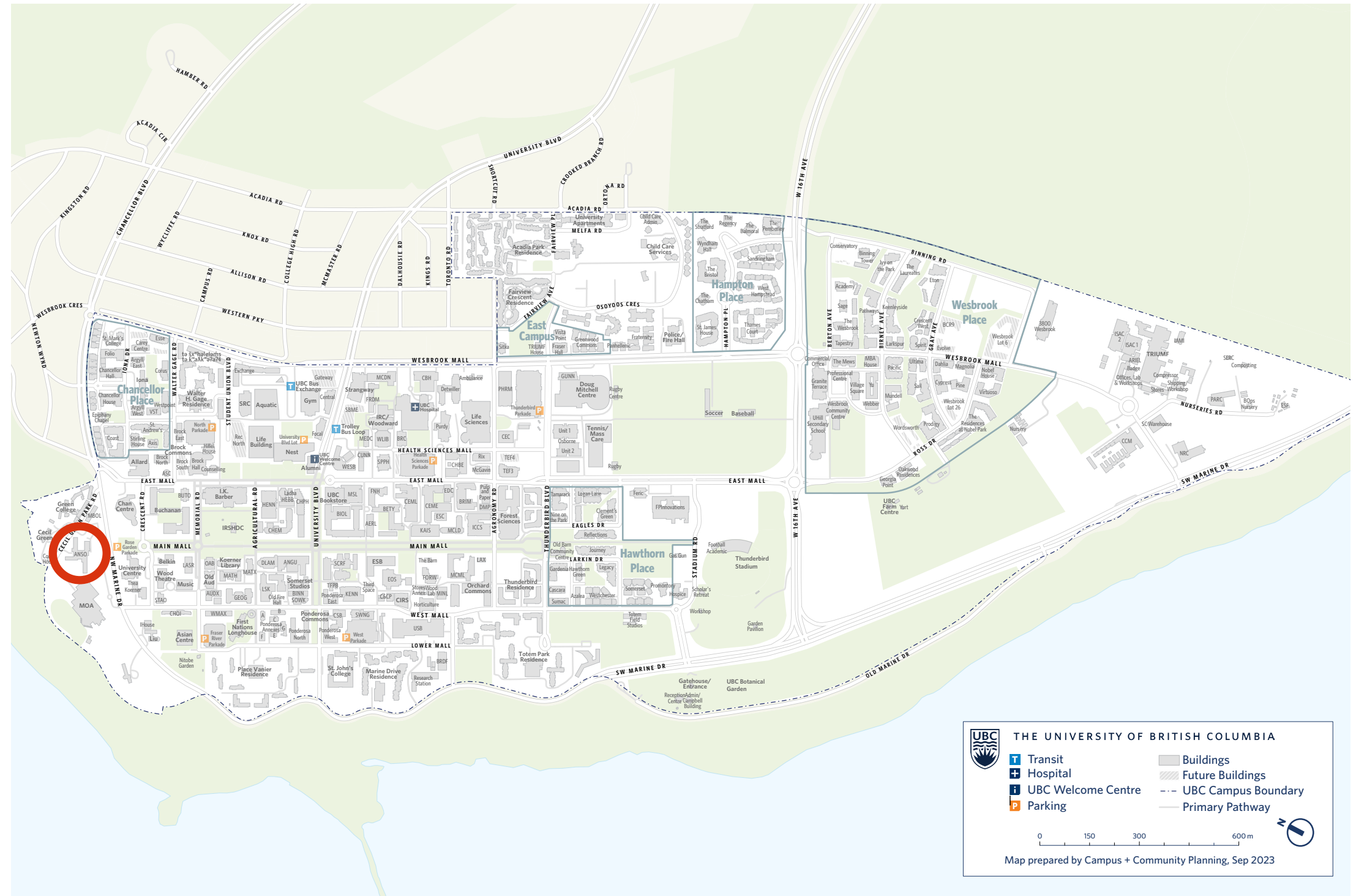
1.5 Campus Context

1.5.1 Campus Plan

The University of British Columbia's Vancouver campus occupies 400 hectares on the western edge of Point Grey. Surrounded by Burrard Inlet to the north, Georgia Strait to the west and south, and Pacific Spirit Regional Park to the east, the campus is closely connected to the natural environment. Growth and development of the university is guided by the UBC Vancouver Campus Plan, which aims to provide a sustainable campus, support world-class teaching and learning, nurture a more vibrant community, rediscover sense of place, and ensure a well-connected and accessible campus.

While the University is comprised of numerous distinct character districts, landscape unifies the campus through a high-quality public realm and open space network. A variety of spaces at different scales knit the campus fabric around and through buildings.

The ANSO building is situated at the far northern edge of campus, across Marine Drive and aligned with Main Mall, the university's primary pedestrian axis.



UBC Vancouver Campus map (image source from planning.ubc.ca)

1.6 Site Context

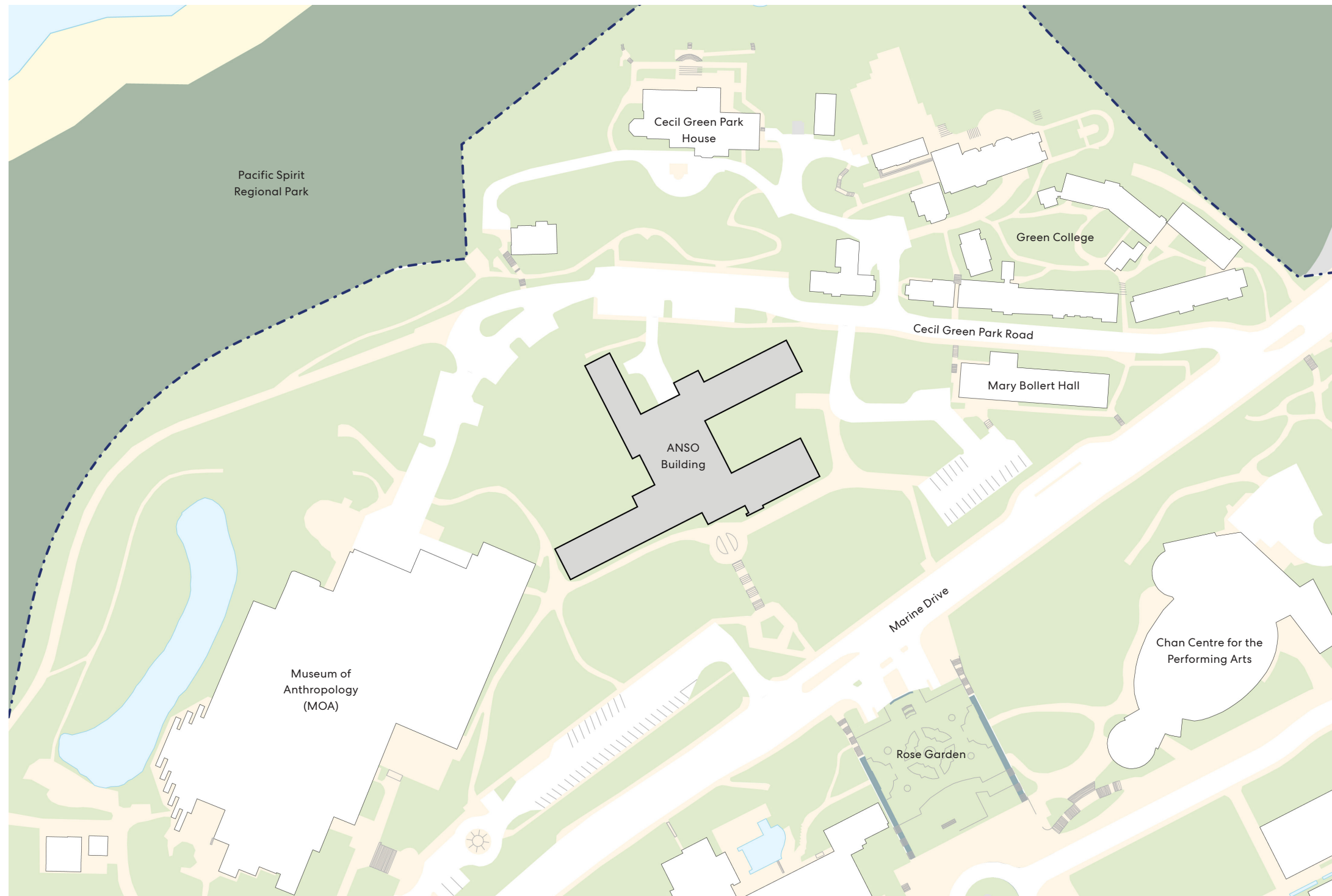
1.6.1 North Campus Precinct

The landscape and location of North Campus make it a distinctive area in UBC. Away from Main Campus, the 13.8-hectare (34 acre) area is a refuge from the pace of activity at the campus core. The vegetation and views contribute to the sense of arrival into a place to explore and linger.

Variety and contrast characterize the buildings and landscape of North Campus. The architectural styles are diverse and the buildings are dispersed, which reinforces their individuality and functions. Unstructured pedestrian trails of varying surfaces lead from one environment to the next.

The planned landscape associated with buildings is juxtaposed with uncultivated groves of vegetation, particularly, where North Campus borders the steep cliffs and treed lands of Pacific Spirit Regional Park. The landscape includes both large open green spaces—mostly lawn—and wooded areas of evergreens, bitter cherry, maple, and alder. The views north to the Georgia Strait and mountains heighten the sense of proximity to nature.

Physical features of North Campus that are highly valued by users include the mix of formal gardens, natural landscapes, and passive recreational spaces to take in views. The area contains buildings and functions that are important to the university as reception sites, conference venues, and public amenities, such as Norman Mackenzie House, Cecil Green Park House, Green College, and the Museum of Anthropology. The existing land uses have educational, heritage, and ecological values that are an asset to the neighbourhood.



Context map of the surroundings of the ANSO Building



1.6.2 Landscape and Public Realm

Green spaces adjacent to the ANSO site include mature trees and extensive lawned areas between buildings, the Main Mall greenway just to the south across Marine Drive, and the expansive second-growth forest of Pacific Spirit Regional Park which lies just to the north across Cecil Green Drive.

The North Campus Neighbourhood Plan states that programmed green space should respect natural patterns and show consideration for neighbouring uses. The natural integrity of Pacific Spirit Regional Park is a highly valued part of the community. Design should demonstrate stewardship for the environment and encourage community interaction.

The landscape areas immediately surrounding the ANSO building provide significant opportunity for views, outdoor teaching and informal activity. Several planters with shrubbery are adjacent to different parts of the building. A gravel pathway located to the south of the Wesbrook wing leads to the MOA. On the south side of the Erickson wing is a paved road, which is level with the rooftop patio of the Erickson wing. The rooftop terrace above the Arthur Erickson wing, just east of the building's primary entrance, includes garden planters that are tended to by university faculty and students. The courtyard surrounded by the Erickson and MacInnes wings is bordered by a paved road to the east. This courtyard is at grade with Level 1, providing opportunity for outdoor activity. There is a significant monument tree—a western red cedar—located on the west side of the building, visible from the Wesbrook, Erickson, and Murrin wings.

The scope of work for the renewal project includes restoration of disturbed landscape and possible pruning of existing trees.

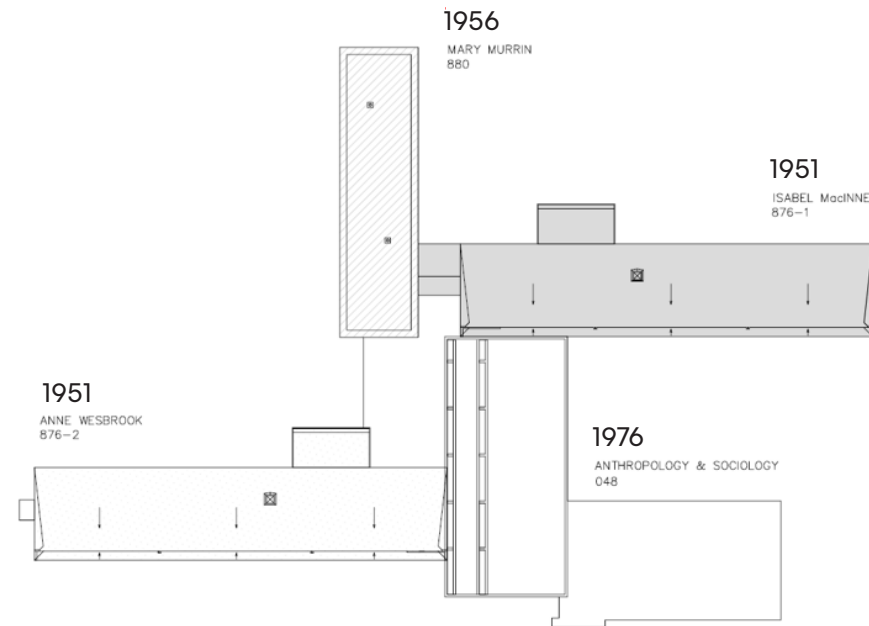


Landscape and surroundings of the ANSO building

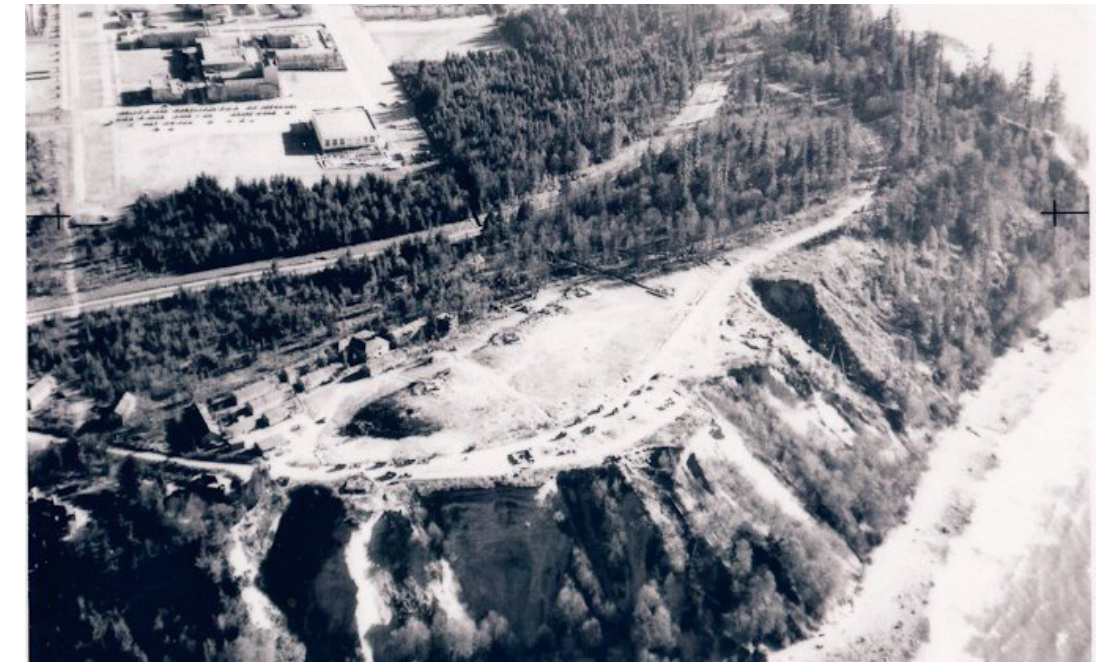
1.6.3 Built Form

The ANSO building site was established as an army base in 1939 at the outset of World War II. After the war, the land was reappropriated for student housing serving the university. The original wings of the ANSO building were built as women’s residence halls in the early 1950’s and named after women who served important roles in the early history of the university. In the mid-1970’s the residences were repurposed as part of a renovation and addition to house the combined departments of Anthropology and Sociology.

The Erickson wing is characterized by large expanses of glazing between structural bays, exposed concrete both interior and exterior, and a horizontal expression with deep overhangs. The Erickson wing ties all of the buildings into one complex, with an overall pinwheel shaped building footprint—resulting in significant envelope area.



ANSO Building wings



Historic aerial view of the site looking South-West



Historic aerial renderings of the original women's residences



Historic photograph of the site

1.6.4 Exterior Building Photos

Anne Wesbrook (West) Wing

- Plaster façade
- Punched windows
- Secondary access
- 2 levels

Arthur Erickson (Central and South) Wing

- Concrete and wood façade
- Exposed structure
- Primary access
- 2 levels



1. Access to Anne Wesbrook



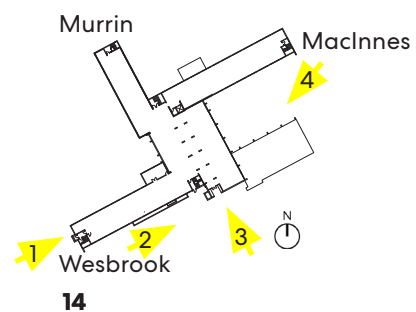
2. South-West Façade - Anne Wesbrook



3. Main Entrance – Arthur Erickson



4. North-East Courtyard – Arthur Erickson



Isabel MacInnes (East) Wing

- Plaster façade
- Punched windows
- Ramp access
- Partially 3 levels

Mary Murrin (North) Wing

- Plaster façade
- Punched windows
- Rear access
- 3 levels



1. Ramp access to Isabel MacInnes



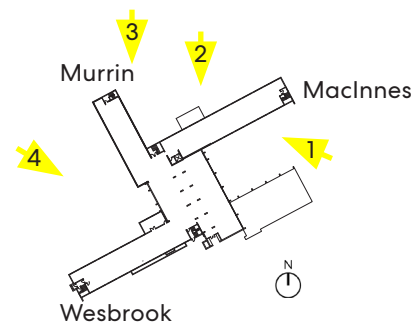
2. North Façade – Isabel MacInnes



3. North Façade – Mary Murrin



4. Mary Murrin and Anne Wesbrook Corner

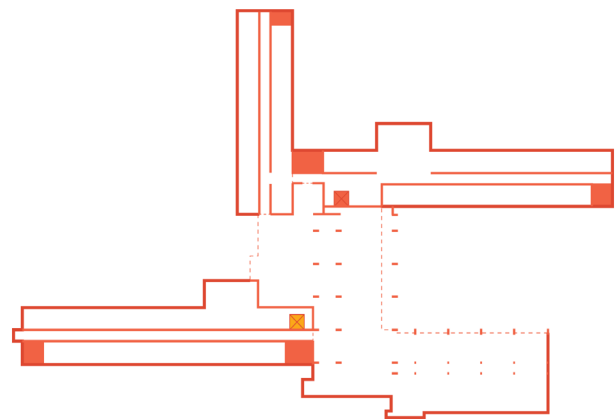


Section 2.0

Design Rationale

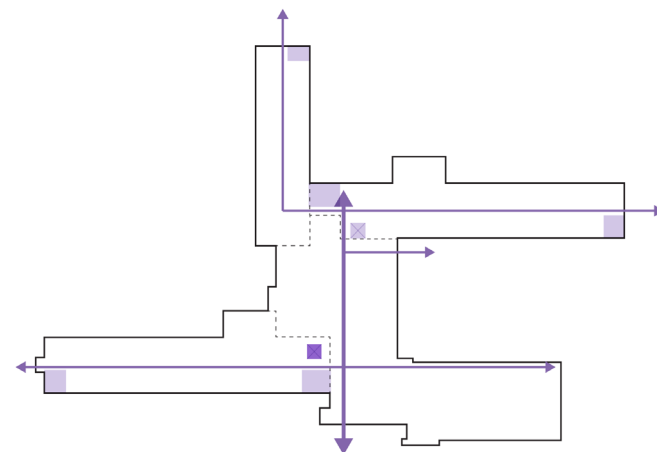
2.1 Design Principles

The following guiding principles are fundamental to the design proposal for the project:



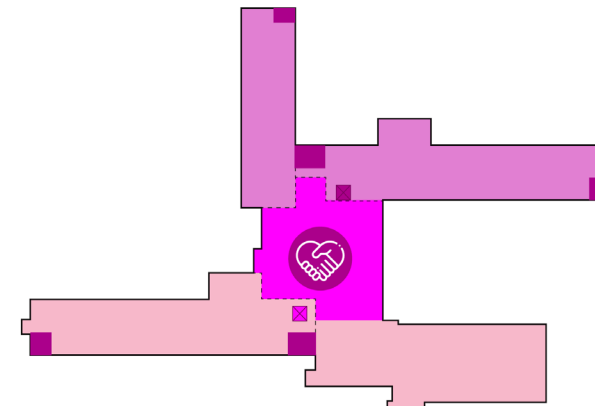
Respect the Structure

Leverage the structural grid for planning and design interventions. Driven by the structure, smaller and larger spaces programing find their location intuitively.



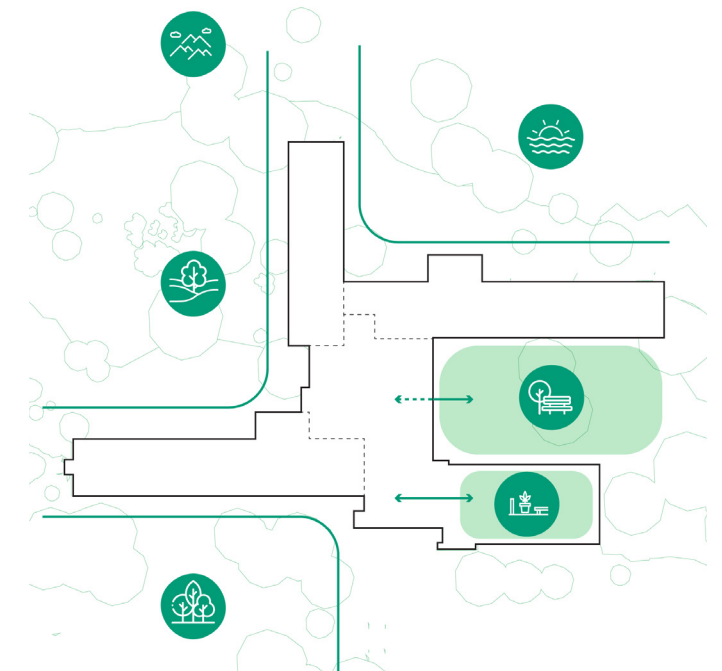
Clarify Wayfinding

Simplify circulation, identify key decision points, and improve sight lines to make wayfinding intuitive and clear.



Define Identity

Define the identity of the building as a whole while respecting individual academic department identities.



Connect to Landscape

Strengthen physical and visual connections to the surrounding landscape and views.

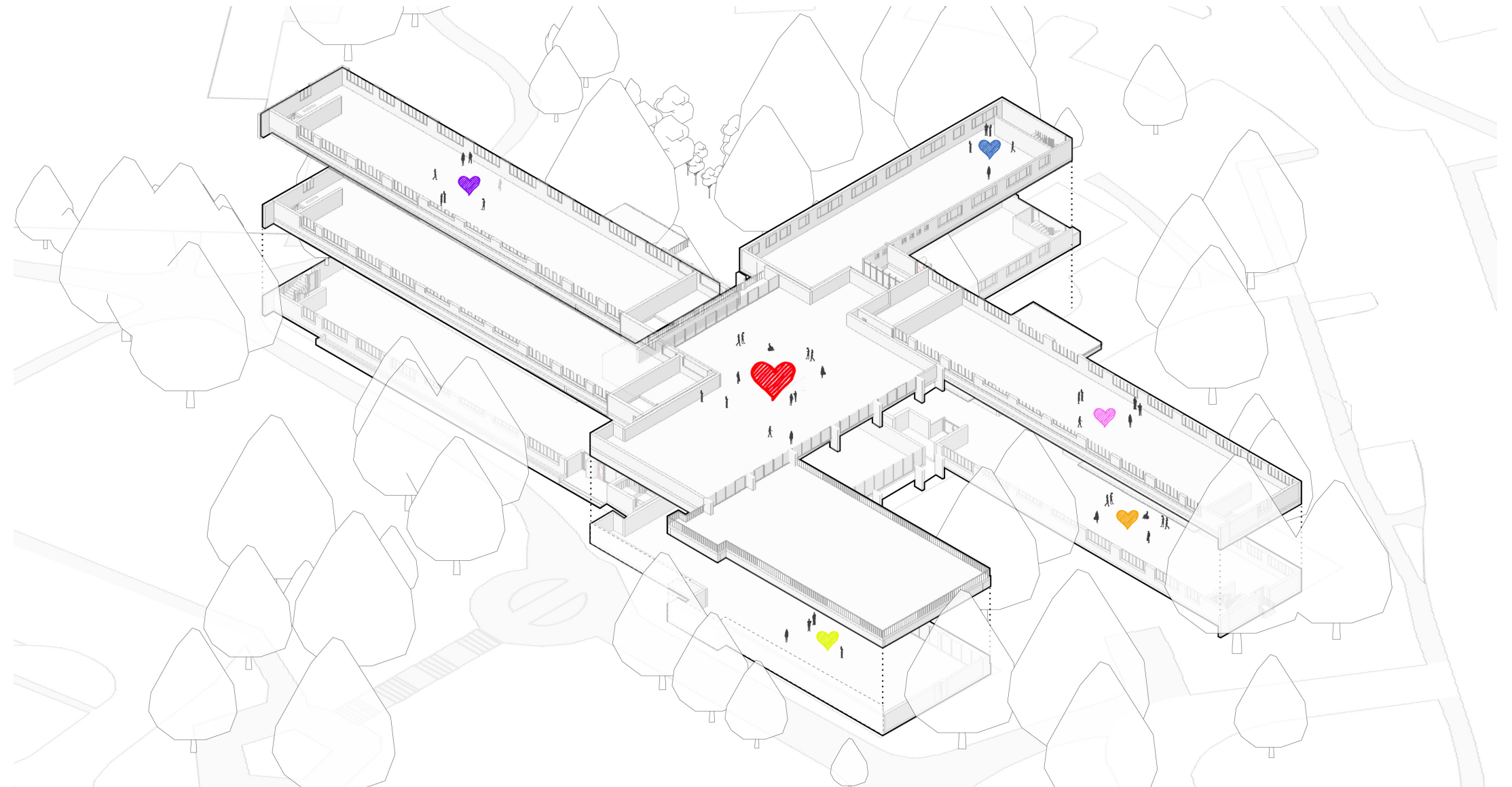
2.2 Building Elements

2.2.1 Creating a Community Heart

Driven by a desire for a sense of community and a building heart, the conceptual approach to building organization is focused on creating meaningful places that strengthen social and academic connections between the people that study, learn, teach, research, socialize, work, and celebrate in the ANSO building. These meaningful places are located to benefit everyone with ample daylight, connection to the outdoors, and inviting amenities.

It is envisioned that these building “hearts” can exist throughout the building at different scales, each with a character that draws on the outdoor view, the community it serves, and its location within the building.

The centralized heart benefits from the energy of students that are learning in the adjacent classrooms, giving a sense of place to the entire ANSO community, while smaller distributed gathering spaces afford opportunities for community-based social spaces for each wing and academic department.



Distributed Community Concept

2.2.2 Central Heart

The main entrance to the ANSO building sits along a strong north-south axis that extends from the site approach from the campus and Marine Drive to the south into the heart of the Erickson wing.

The existing central space is compressed, with an 8'-0" ceiling extending from the main entrance into the main interior corridor which serves adjacent classrooms and social gathering spaces. The axis terminates abruptly at a concrete wall where the Erickson extension meets the MacInnes (east) wing.

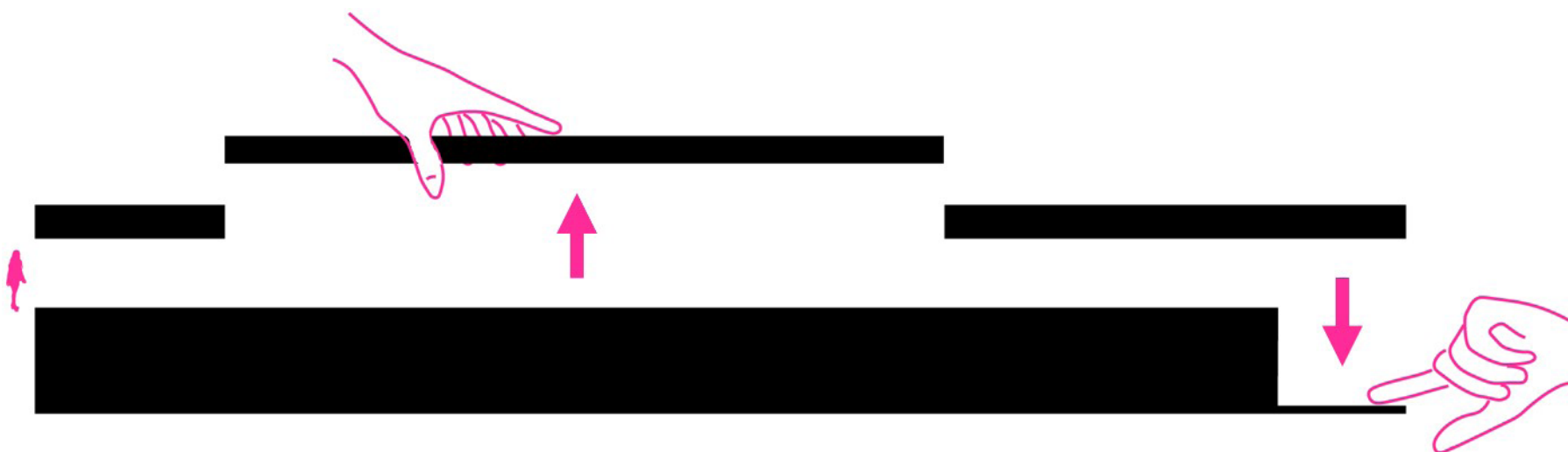
The design concept proposes a re-interpretation of the Central Heart in conjunction with critical seismic upgrades that are required to link the Erickson wings on either side of the main axis.

The main central space which serves adjacent large classroom spaces is lifted to create a sense of compression and then expansion upon entering the building and bringing a connection to daylight and the outdoors into the primary space within the building.

The concrete wall which currently interrupts the main axis through the building is removed to allow another moment of compression and expansion, connecting the main circulation spine to the academic wing and views to the surrounding landscape beyond.



Concept Diagram describing existing Central Heart

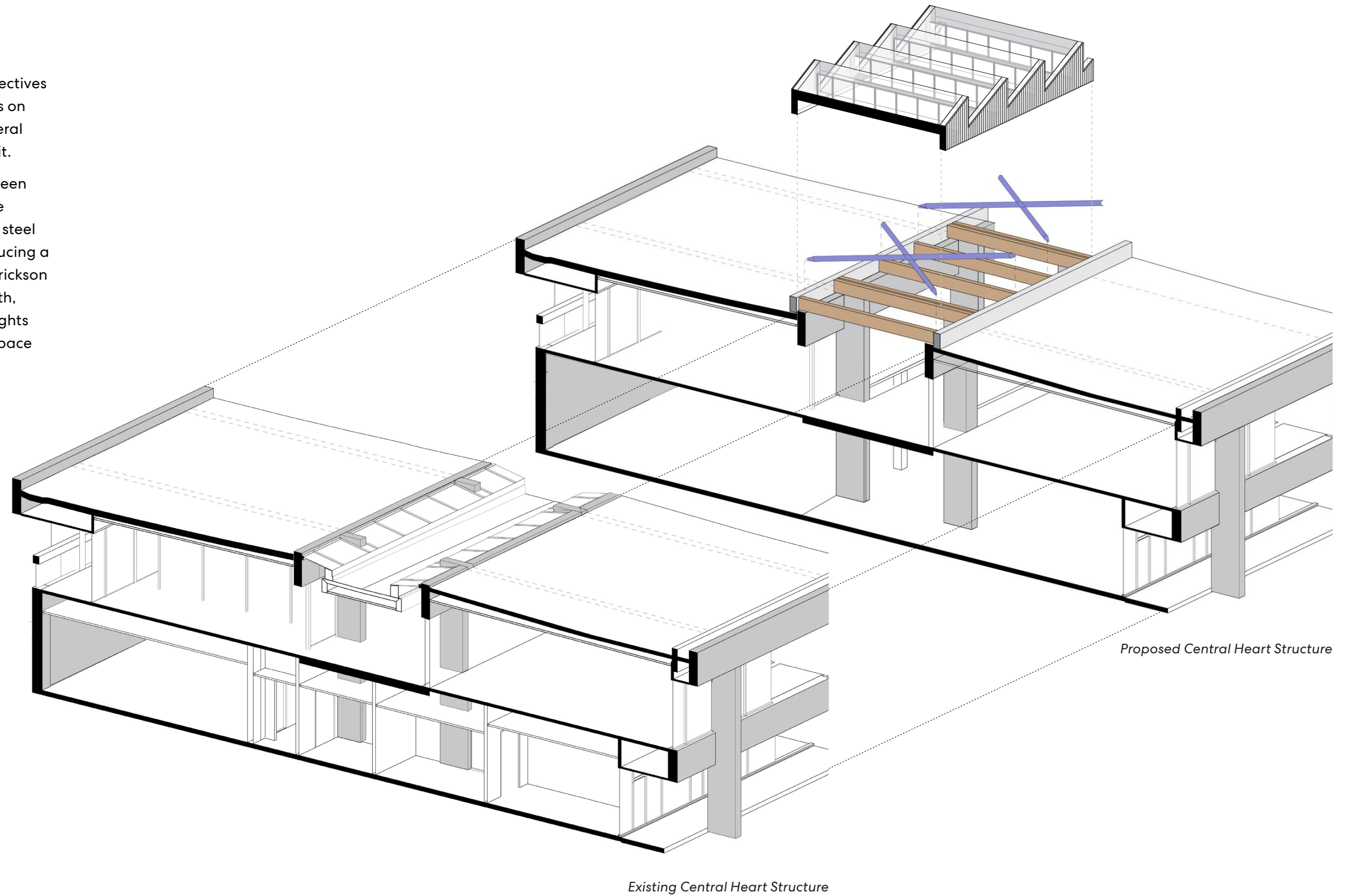


Concept Diagram for ANSO Central Heart

2.2.3 Structural Infill

Structural upgrades are fundamental to the objectives of the ANSO renewal project. The Erickson wings on either side of the central spine currently lack lateral support and are in critical need of seismic retrofit.

A new infill structure is proposed spanning between the existing concrete frames on either side of the Central Heart. Glulam timber beams and steel cross-bracing tie together the two wings, introducing a structural rhythm in harmony with the existing Erickson design while adding contrasting material warmth, improved daylighting, and increased ceiling heights to transform the space from a “corridor” into a space for gathering.



2.2.4 Distinguish Building Entries

Main Entrance: The main entrance to the ANSO building sits along a strong north-south axis that extends from the main campus, across Marine Drive and into the heart and main circulation spine of the Central wing.

The current experience of approaching the ANSO building is a paved walkway that enters into a concrete portal and a solid wood door with glass sidelights.

To make the experience welcoming for visitors, the design of the main entrance is guided by three principles:

- Connection to landscape by bringing the outside in and the inside out.
- Strong framing to give the main entrance a presence from the Marine Drive pathway.
- A sense of progression, or unfolding of space as one moves through the landscape into the building.

The primary approach to achieve this, is to emphasize transparency to the landscape by removing the infill wall to the west of the main entrance, to bring daylight and visual connection to the landscape. Lush new ground cover will replace the existing mechanical grate and tired landscape.

The main entrance will incorporate a new glazed vestibule. A glazed door will provide transparency and visual connection to the interior, and signal for building users arrival at the main entrance.

Walking through the entrance, the low wood clad ceiling will provide a compression that is in contrast to the light filled main circulation corridor beyond.

The wood clad infill wall to the east of the main entrance will be replaced, providing an opportunity for building identity.

Secondary Entrances: Secondary entrances at the north, east, and west wings are currently a mixture of concrete or fabric canopies, solid or glazed doors, and inaccessible pathways.

The design principles for the secondary entrances are:

- Create a sense of arrival by highlighting the entries through use of distinguished materials.
- Distinguish each building entrance through the use of distinct and identifiable landscape features.
- Make all entrances inclusive through the introduction of new ramps or sloped walkways at each entry.

Building on the idea of repair, the renewal will focus on a simple, modest design that retains a dialogue with the primary entrance by using wood as an accent material to identify points of entry.



Concept Diagram for ANSO Main Entrance



Concept Diagram for ANSO Secondary Entrances

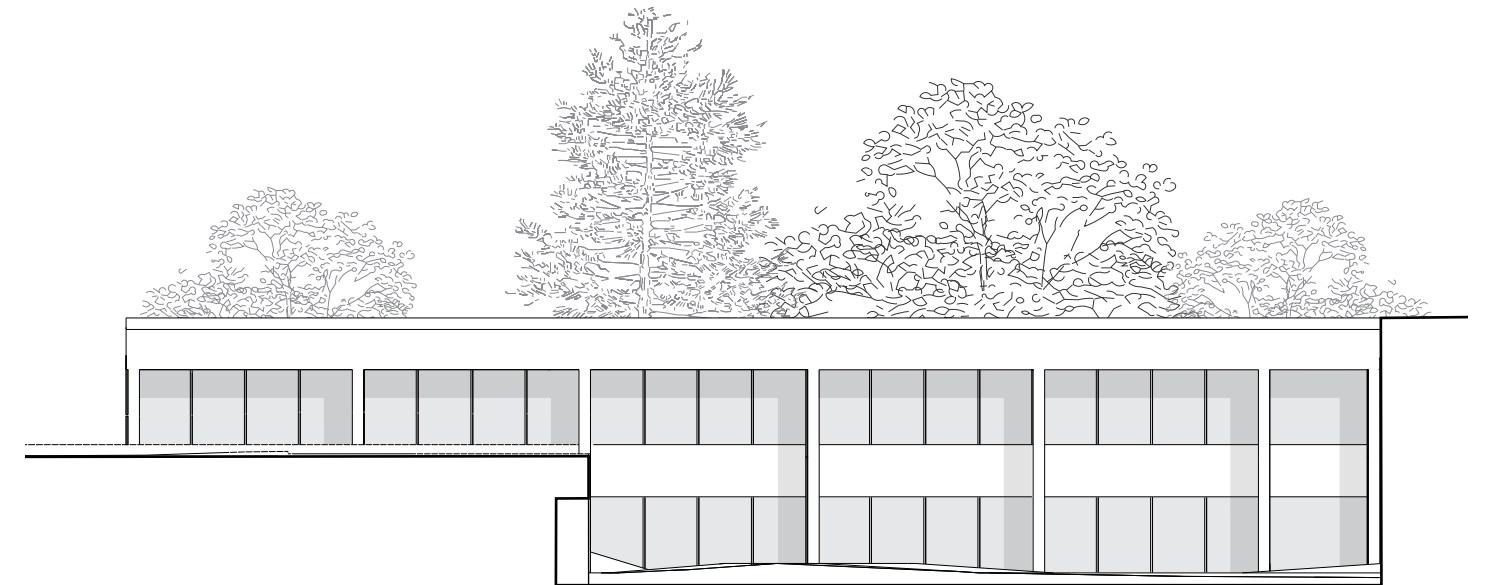
2.3 Facade Design

2.3.1 Existing Facade Expression

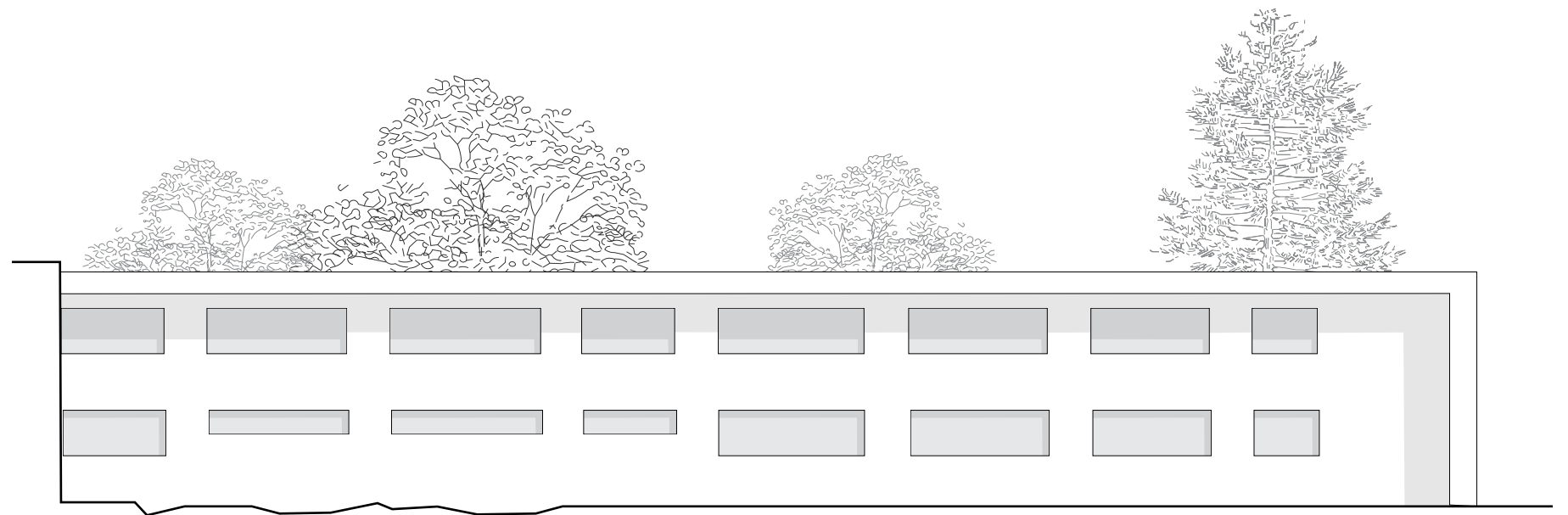
Given the historical evolution of the existing ANSO building over three decades, there are two distinct facade and massing expressions currently present.

The Erickson wings are composed of an exposed, expressed concrete structure, with floor to ceiling glass or wood infill within each frame. The existing exterior concrete is proposed to be rehabilitated and left exposed and featured as a part of the project renewal.

The 1940's and 1950's wings formerly used as residential halls are built of structural concrete exterior walls with face-sealed exterior plaster finish. As part of the building renewal and envelope upgrades, the existing finishes will be stripped down to existing structure and replaced with a panelized rainscreen cladding system.

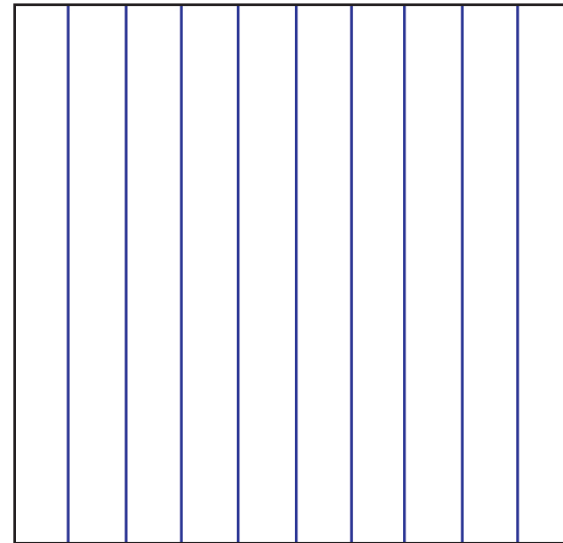


Existing Erickson Wing facade expression



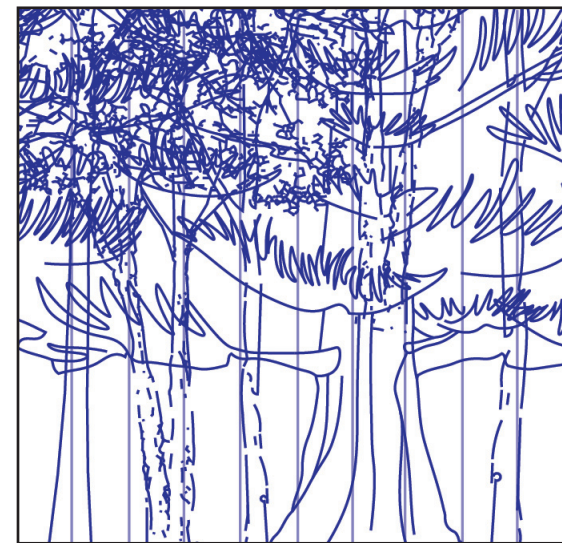
Existing Office Wing facade expression

2.3.2 Facade Design Rationale



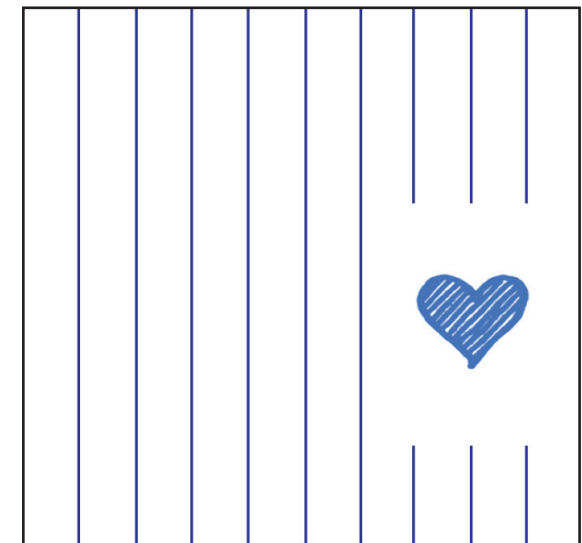
Express the Grid

Establish a modular organizing grid that respects the existing structural expression of the Erickson design, rationalizes window placement within the office wings, and aligns with a common planning module for interior spaces.



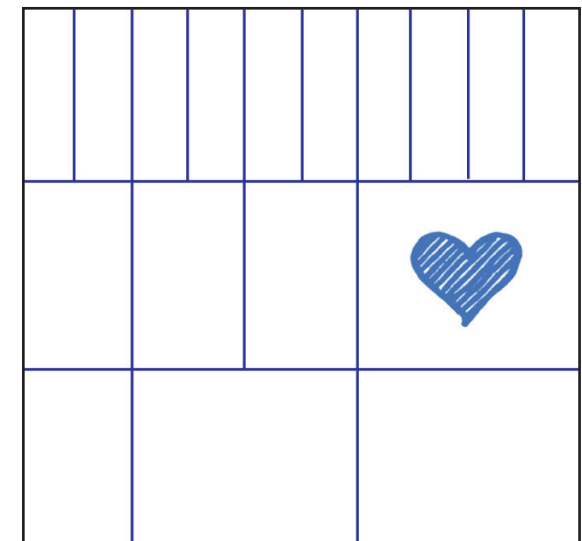
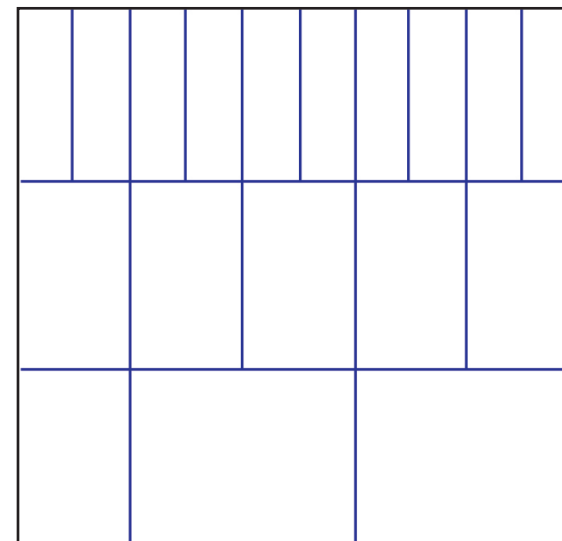
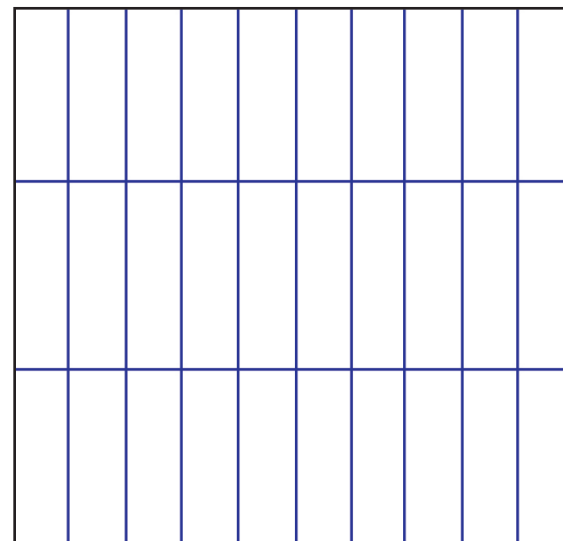
Dialogue with the Landscape

Introduce a unifying cladding expression that is synchronistic with the surrounding landscape character of the site while respecting, and celebrating, the structural expression and visual transparency of the existing Erickson wings.



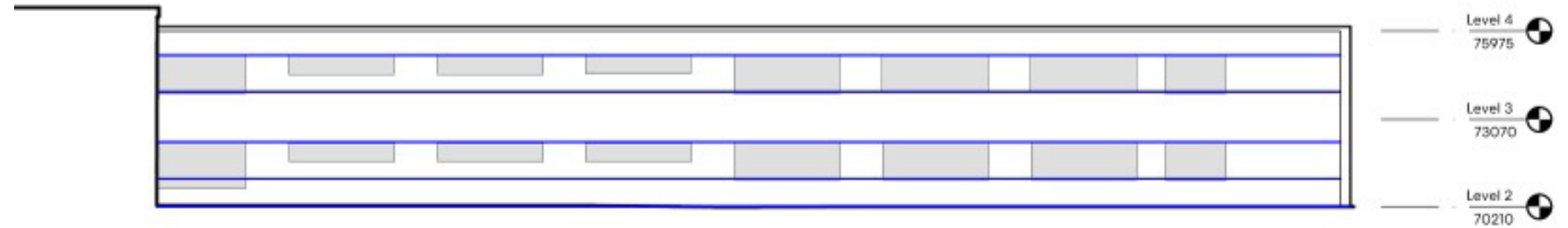
Celebrate Community

Express moments for bringing together community within the building through connections to view, landscape, and articulation within the facade. Create distinction at primary and secondary building entrances at each wing.

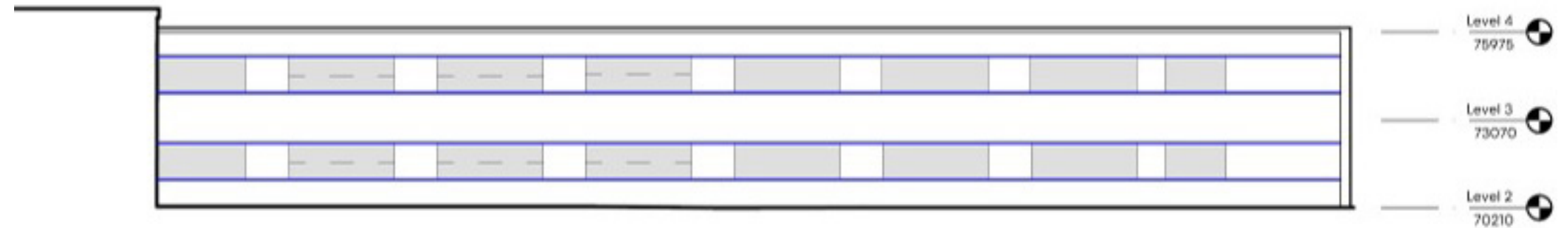


2.3.3 Cladding Design Logic

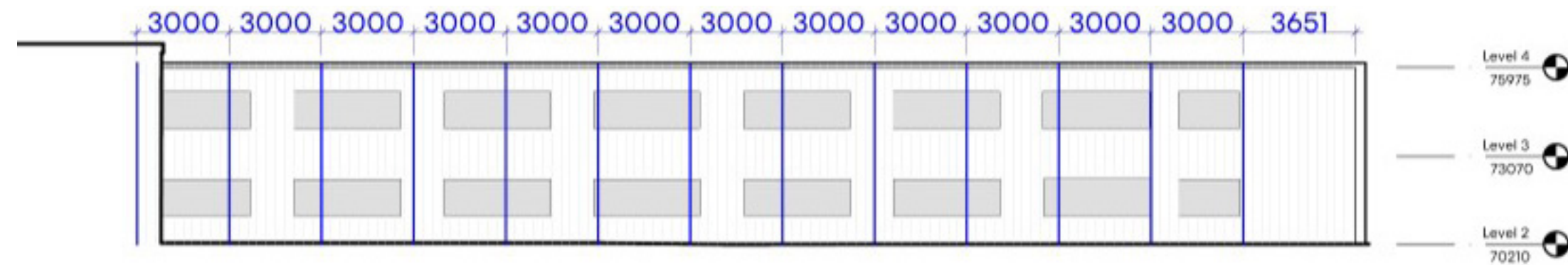
Align grid with head and sill of existing window openings.



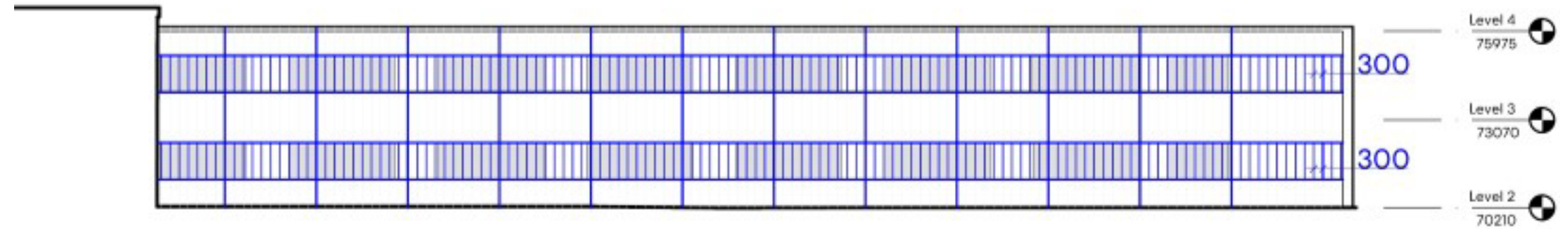
Enlarge existing windows to create equal access to views and daylight across each façade.



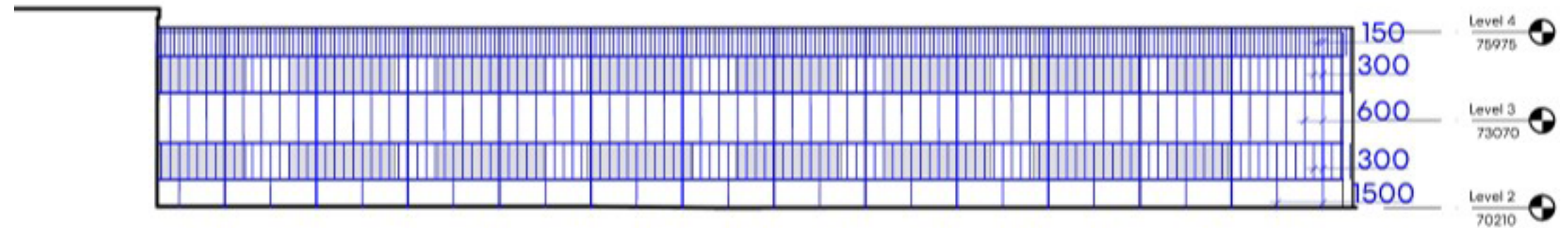
Express the 3 meter program module (aligned with individual office sizes) across the façade.



Apply 300mm module across horizontal window bands to rationalize window sizing and jamb locations.

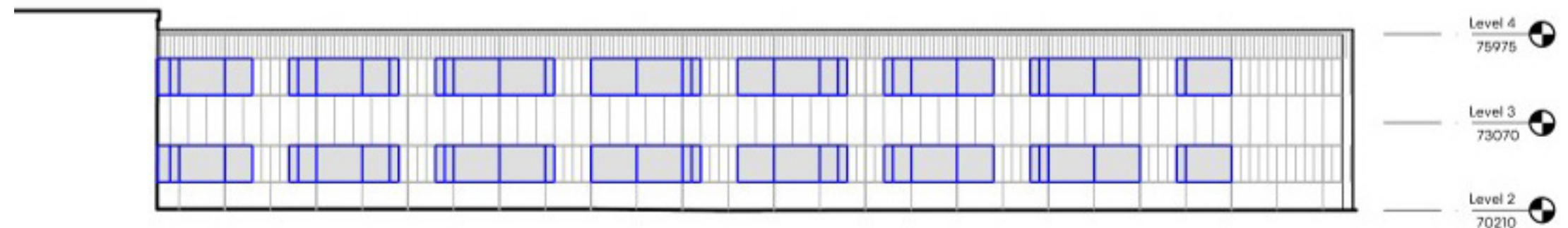


Apply varying “nested” modules across solid horizontal bands to create a visual effect of “branching” or “weaving” across the facade.



Rationalize window mullion placement to respond to interior program:

- At least one 1500mm (5'-0") wide window at each office module.
- Minimum 1800mm (60%) vision glass per office module.
- One operable vent at each office module.



2.4 Building Materials

2.4.1 Forest Edge District

The Vancouver campus was originally created as a clearing in the forest. Today, much of UBC's sense of place and natural west coast beauty is associated with the campus edges and adjoining iconic forest setting.

The material palette objective is to complement the natural west coast forest setting by using simple materials possessing natural, unpainted finishes with warm earth tone colours.

- a. Warm Colours — All materials, with the exception of aluminum, concrete and galvanized metal, to be warm brown earth tones to reference the forest setting and to convey an inviting and hospitable character.
- b. Primary Cladding Materials — Primary cladding materials or 'fields' for façades are to be selected from the following:
 - institutional scale applications of soft wood
 - clear anodized aluminum or galvanized metal panels
 - terra cotta panels
 - galvanized metal panels
 - stone
 - colour dyed concrete
- c. Required Secondary Materials — To help build cohesion across the campus architecture, all projects to use each of the following as accent materials somewhere on the building exterior:
 - soft wood
 - aluminum (or zinc) metal
 - natural coloured concrete
- d. Additional Secondary Materials — The following are additional accent materials supported in this district:
 - composite panels (e.g. stone aggregate or Hardi Panel)

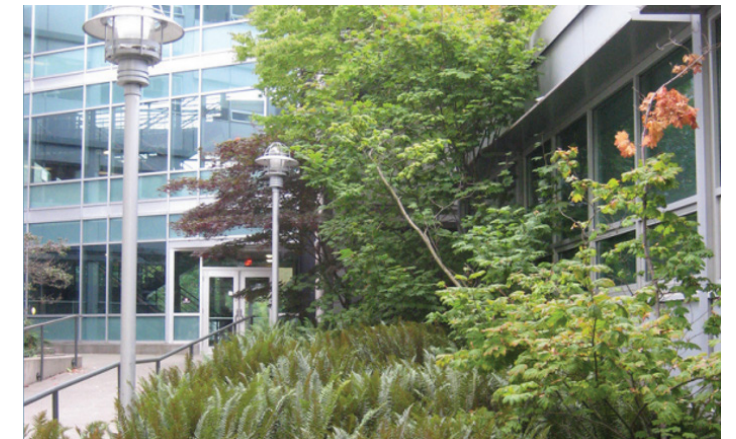


Forest Edge architectural character examples

2.4.2 Forest Edge District Landscape

The landscape design objectives in this district are to protect existing trees where possible through careful building and infrastructure placement, and to reinforce the forested character with new infill planting.

- a. Curving Roads — While buildings are to be arranged at right angles to the campus grid, roads and paths are encouraged to curve and meander with an informal character, soft shoulders that merge into the forest, and gravel or asphalt surfaces.
- b. Organic Plaza Shapes — Plazas and hard surfaced landscape features are to avoid rigid square and circular geometries. Asymmetrical and organic shapes are encouraged.
- c. Coniferous Landscape Trees — Most new landscape trees (i.e. not street trees) in this district are to be coniferous in order to build on the character of the natural forest and to enhance stormwater management. Species are to include: Western Red Cedar, Douglas Fir, Western Hemlock, Red Alder, Big Leaf Maple, Pacific Dogwood, Vine Maple, Garry Oak, and Arbutus.
- d. Informal Arrangements — To integrate with the character of the forest setting, landscape trees are to be planted in informal and naturalized arrangements.
- e. Supplementary Plant Species — In addition to the requirement to incorporate mass plantings of Rhododendrons and Taxus hedging in every landscape plan, use of the following species among others is encouraged.
- f. Native Understory — Any other understory plants proposed are to be native or native-like and require very low maintenance.



Forest Edge planting character examples

2.4.3 Exterior Cladding

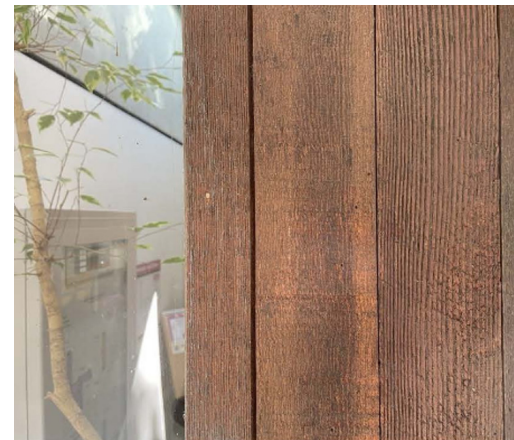
Materials that are reflective of the landscape context and region are proposed for the building skin. Exterior cladding materials, colours, and finishes are proposed to reflect the UBC Campus Design Guidelines palette for the Forest Edge District.

The Erickson wing will remain exposed concrete, with targeted replacement of the infill cedar siding.

The north, west and east wings will be clad in metal panel with a dark, monochromatic, muted grey color tone to provide a quiet backdrop and contrast to the Erickson wings, wood accents at building entrances, the interior palette, and surrounding landscape. Panel sizes, texture, and expression will be refined in conjunction with ongoing budget analysis.

Existing building materials

Wood (cedar)



Concrete



Plaster



Proposed material palette



2.4.4 Facade Design

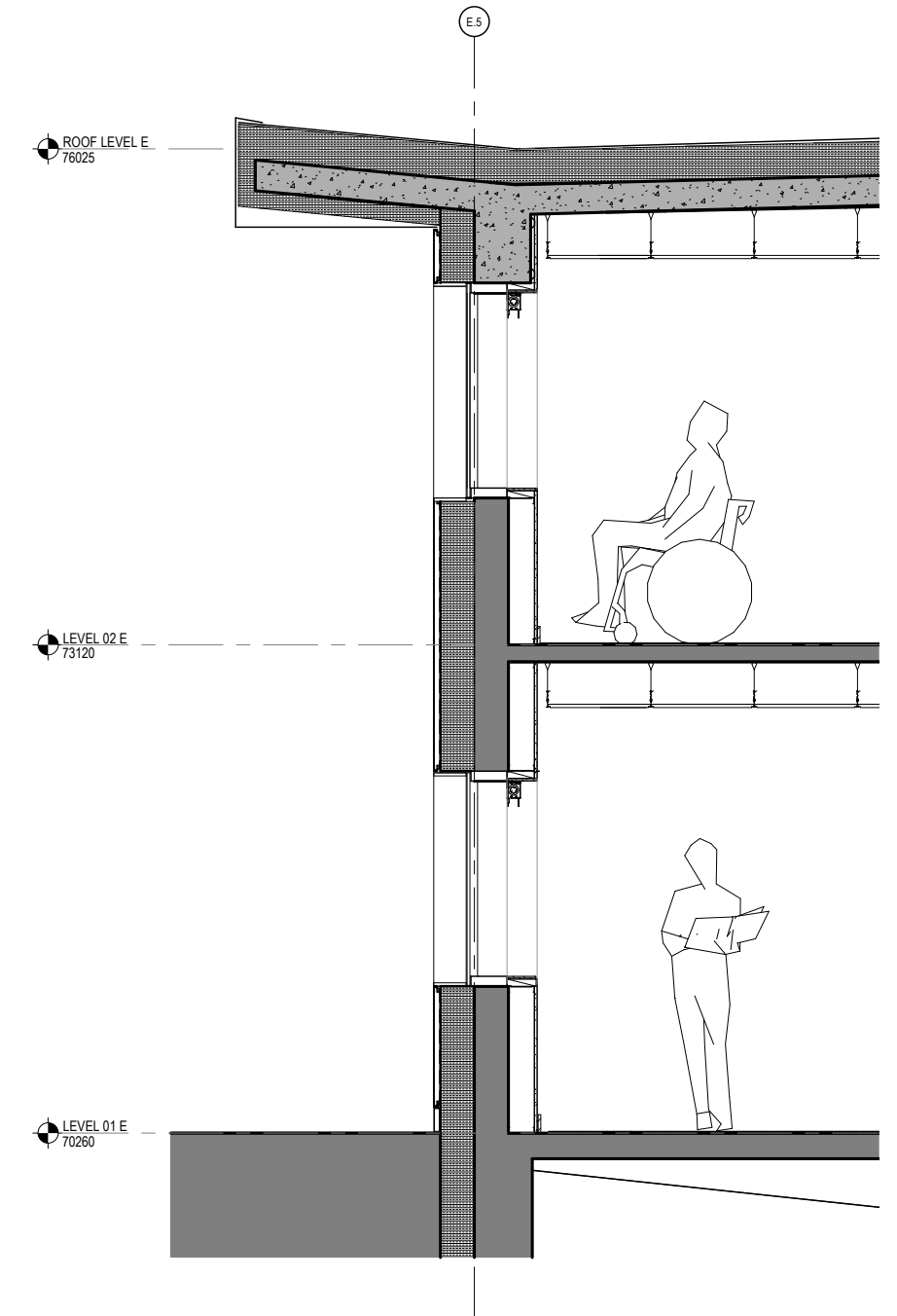
The new envelope at the West, North and East buildings will be a rainscreen assembly attached to the exterior of existing concrete walls. Up to 8 inches of insulation has been added along with an aluminum panel cladding which will continue to be refined in conjunction with an overall cost analysis.

As exterior walls are structural, and in order to maintain a favorable window-to-wall ratio (WWR) for energy performance, the approach is to maintain existing window opening, with select locations for strategically introducing or expanding openings in the existing concrete. The glazing system will continue to be further refined to respond to cost analysis and to optimize performance between solid and glazed portions of the envelope.

To allow access to daylight for all regularly occupied spaces, clerestory skylights have been introduced at key locations in the building. On the rooftop of level 01 of the south building, clerestory windows have been added to bring daylight to the labs located below. In the central corridor, a redesign of the existing skylight has been integrated with lateral bracing to achieve seismic upgrades while bringing daylight to the central heart of the building and reinforcing intuitive wayfinding.

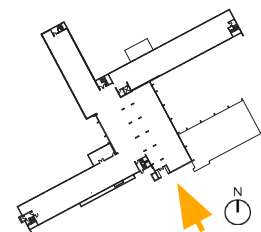
The target envelope performance for costing is as follows:

- Walls: R40 or R30
- Roof: R45 or R35
- Skylight Roof: R28
- Glazing: Double glazed or Triple glazed windows U-0.15

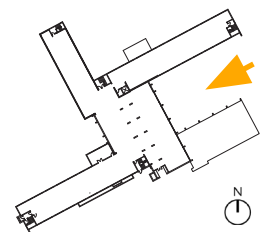


Typical Facade Module

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View of proposed ANSO main entrance looking north



View of proposed ANSO building landscape courtyard looking west

Section 3.0

Design Policy Compliance

3.1 Design Guidelines Compliance

As stated in the UBC Vancouver Campus Plan – Part 3, the objectives of the plan are to “rediscover and accentuate UBC’s unique sense of place and the natural west coast beauty on the Vancouver Campus, to improve the cohesiveness of buildings and landscapes, and to ensure the campus reflects the quality and stature of a globally significant University.”

The ANSO project is a Routine Capital Comprehensive Renewal of the Murrin, Wesbrook, MacInnes, and Erickson wings that make up the full ANSO complex. Due to the combination of its seismic vulnerability and Facility Condition Index, the entire complex will be fully renovated, with a comprehensive envelope replacement, upgrades of HVAC, plumbing and electrical systems, seismic upgrades, code compliance, interior and exterior finishes, as well as plan reconfiguration to support modern research and teaching pedagogy for the respective departments. The building renewal provides an opportunity to bring the full building energy performance in line with UBC’s current expectations.

The building is located in the North Campus Area, on the north side of Marine Drive across from the Rose Garden. North Campus is a ‘Special Plan Area’ primarily for institutional use. Natural vegetation and views to the mountains and water beyond contribute to a strong sense of place and refuge from the more active campus core. North Campus is home to the renowned Museum of Anthropology as well as Cecil Green Park and Coach House.

3.1.1 Sustainable Design

In support of the University's sustainability goals and commitments, the ANSO renewal is targeting a minimum of LEED v4 BD+C Gold certification and is seeking to meet the CaGBC Zero Carbon Building v3 Certification, which includes passive design strategies such as high-performance envelope, high efficiency mechanical systems, and reduced embodied carbon through reuse of the existing structure.

The LEED scorecard shows 61 points attempted and 23 points to be confirmed. While 61 points will reach the Gold threshold, additional points will be confirmed to secure a larger buffer. This is largely dependant on the energy plant option selected.

Realizing the Zero Carbon Building Design standard requires optimization of the building's operational performance along with limiting the embodied emissions associated with envelope, and other assemblies. To achieve certification in both programs and contribute to the goals of UBC as a sustainability leader, the key strategies for the ANSO Renewal include:

Energy: ANSO will be designed to meet a blended target based on UBC's standards of a minimum EUI of 106 kWh/m²/yr and a TEDI of 23 kWh/m²/year and achieve a minimum 10 LEED energy points.

The schematic design modelling included three main options for the central heating and cooling plant (with some slight variations), and several options for the mechanical and enclosure designs, for a total of 6 models. A summary of the options modelled is provided in the energy modelling report. The models show a number of paths to meet the TEDI and TEUI targets established.

Kane Consulting was hired by UBC to provide enhanced commissioning services. Kane have completed a review of the project Basis of Design and helped UBC develop the Owner's Project Requirements (OPR).

Carbon: ANSO aspires to meet the CaGBC Zero Carbon Building standard and reduce embodied carbon emissions by at least 10% for structural and enclosure systems. The GHGI target is 2.9kgCO₂e/m². The most significant strategy to reduce carbon is the reuse and revitalization of the structure and envelope.

A Life Cycle Assessment (LCA) completed in SD predicts a Global Warming Potential (GWP) 244 kg CO₂/m². This represents a 51% reduction in embodied carbon from the City of Vancouver's baseline of 500 kgCO₂/m².

In comparison, the energy modelling completed for the LEED Gold Scheme shows the operational carbon emissions of ANSO range from 5 to 1.3 kgCO₂e/m²/yr or 300 to 78 kgCO₂e/m² over a 60 year life, depending on the plant option chosen.

Social Sustainability: ANSO will demonstrate a conviction to support community and offers an accessible, welcoming environment for all through the following strategies:

- Addition of new elevator to make all building storeys accessible and replace stairs between building wings on the same level with ramps to provide universal access.
- Open space and access to views and nature will be planned at the ground floor and for occupants at upper levels. Opportunities to integrate community gardening and potential rainwater use will be considered.
- Occupant and visitor safety will be at the forefront with improved wayfinding throughout the building, and selection of landscape materials that reflect CPTED principles.
- The exterior courtyard will be leveraged as a key exterior social space, with active programming surrounding the courtyard to encourage use, emphasizing views into the courtyard from surrounding rooms, and providing access to the courtyard from multiple spaces.

Health and Well Being: ANSO will support the physical and mental health and wellbeing of all building occupants.

- Incorporate daylight from above into level 1 wet labs located away from exterior windows.
- Deliver high quality ventilation, including operable windows in all offices and classrooms.

- Consider acoustic comfort and integrate best practices in the design.
- Select healthy, low emitting, transparent, and locally sourced materials wherever possible to meet the LEED requirements and UBC's technical design guidelines.
- An exposed mass timber structure, wood finishes, and connections to the landscape will support health and wellbeing through biophilia.

Seismic: The building will be upgraded to align with UBC Seismic Building Real Estate Framework and meet a REDi Silver rating.

Water: ANSO will strive to reduce potable water consumption by 20%, being mindful of operational lessons learned.

Water use modeling completed in SD predicts a water use reduction of 27%.

Landscape: ANSO will respect the natural setting of the surrounding site and the forested setting by celebrating vegetation and significant trees while promoting views to the immediate and long range landscape.

The landscape design will incorporate low maintenance, drought tolerant and resilient planting.

3.1.2 Universal Accessibility

Universal access to the ANSO building is very challenging for visitors. Arrival from the south is challenged by the steep grades dropping away from Marine Drive. Those requiring an accessible route frequently use the north building entrance next to the surface parking lot at the end of Cecil Green Park Road.

Providing dignified, welcoming, and effective access for people of all abilities into and through the site is one of the main objectives of universal access at UBC. The ANSO building serves not only the University population, but also community members that participate in research, which places additional emphasis on a building that is universally accessible.

- Following best practices of the Rick Hansen Foundation Accessibility guidelines in the reconfiguration of spaces, selection of finishes and movement through the building.
- Currently, only two entrances to the building are considered accessible. Through the renewal, all entrances to the building will be accessible with sloped walkways or ramps to all key building entrances.
- The existing elevator will be upgraded, and a new elevator added to the west wing to make all levels of the building accessible.
- Partial stairs between floor levels will be replaced with ramps to avoid separating accessible routes from the main circulation.
- Universal, non-gendered washrooms will be provided on all floors.
- New exterior pathways will be accessible.

3.1.3 Architecture

Variety and contrast characterize the buildings and landscape of the North Campus district. The architectural styles are diverse and the buildings are dispersed, which reinforces their individuality and functions. The North Campus Area Plan design guidelines suggests that building style “evoke a sense of permanence, durability, high quality and should incorporate elements of style which complement the west coast setting and climate”. Furthermore, “Buildings shall be designed to address the potential technical and physical issues particular to west coast climatic conditions, in order to ensure durable structures”, with finishes and materials that are of durable quality to suit the west coast climate.

Given the historical evolution of the existing ANSO building over three decades, there are two distinct design expressions currently present:

- The 1940’s and 1950’s wings formerly used as residential halls are built of structural concrete exterior walls with face-sealed exterior plaster finish. As part of the building renewal and envelope upgrades, the existing finishes will be stripped down to existing structure and replaced with a rainscreen cladding system.
- The Erickson wings are composed of an expressed concrete structure, with floor to ceiling glass or wood infill within each frame. The existing exterior concrete is proposed to be rehabilitated and left exposed and featured as a part of the project renewal.

The ANSO building is located within the Forest Edge Character District. Since the building is existing, the building form, siting and road grid references are not applicable, however the material palette and expression of the building shall complement the natural west coast forest setting by using simple materials possessing

natural finishes with neutral tone colours. The Forest Edge Character District stipulates primary cladding materials to be metals, terra cotta, stone or colour dyed concrete with secondary materials of wood, zinc or natural concrete.

The design brief for the project notes that particular focus should be on the Arthur Erickson Architects designed central organizing element, providing solutions that are faithful to the original building’s character defining elements, with particular attention to building interiors and natural daylighting. These elements may include but are not limited to:

- Simply expressed material palette including expression of structural elements and exposed finishes;
- Extensive use of natural materials in interior finishes;
- A clear connection between the complex entry and organizing central spaces;
- Attention to views through the complex and natural daylighting, including views to courtyard spaces;
- Inventive use of overhead natural daylight [currently expressed in skylight form].

Façade expression

In response to the existing conditions, the design brief and the design guidelines, the approach the façade relies on rationalized, simple approach. Based on analysis of the elevations and the layout of the program, a 300mm grid was developed that aligns with both the older residential wings and the Erickson wings. As the main organizing element, the following principles were established for the building facade:

- Express the Grid: Establish a modular organizing grid that respects the existing structural expression of the Erickson design, rationalizes window placement within the office wings, and aligns with a common planning module for interior spaces.
- Dialogue with Nature: Introduce a unifying cladding expression that is synchronistic with the surrounding landscape character of the site while respecting, and celebrating, the structural expression and visual transparency of the existing Erickson wings.
- Celebrate Community: Express moments for bringing together community within the building through connections to view, landscape, and articulation within the facade. Create distinction at primary and secondary building entrances at each wing.

Materials Palette

Building on the established campus vocabulary and the surrounding landscape, the materiality approach to the building considers cost and durability in its execution.

- **Wesbrook, Murrin and MacInnes wings:** Proposed cladding materials are metal, precast concrete and cedar. The predominant approach for the metal cladding is a consistent colour across the façade, with texture and expression achieved through panel joints and widths. The colour was selected to allow the building to recede in its natural environment and bring the landscape and the adjoining Erickson wings to the forefront as the main focal point. The secondary cladding material is precast concrete, located along the lower portions of the buildings closer to grade, to evoke a sense of the buildings’ connection to the land. Recessed entrances will be replaced with glazed entries and wood will be incorporated on the underside of projecting canopies to bring warmth and visual distinction to building entries.
- **The Erickson wings:** The Erickson wings are proposed to remain exposed concrete, which will be cleaned and repaired as part of the building upgrades. The localized wood infill wall panels will be replaced with new materials. The main entrance, currently concealed behind a solid wood door, will be replaced with a fully-glazed vestibule and entry with wood soffit above to create a greater sense of welcome and visual connection into the building.

View Corridors

Elevated on the Point Grey peninsula, UBC enjoys views over the Strait of Georgia and coastal mountains. The north end of Main Mall, including Flagpole Plaza and the Rose Garden, comprise a series of terraces that open up to increasingly more panoramic views as a viewer moves northward. These views are important for connecting the campus with its dramatic natural context.

Building heights in the North Campus area are limited to 3 storeys to avoid intruding into the elevated view to the mountains and north shore. New buildings and significant renovation projects shall include upper level public lounges that provide access to views above the tree line.

Located north of the main campus, the ANSO building sits within the type 2 protected view corridor. The building varies from one to four storeys, but due to the sloped site and mature trees located around the building, the building does not project into the view corridor and primarily appears as a one and two storey building when viewed from the Flagpole plaza.

Building Entries

Entrances around the ANSO building are currently a combination of solid and glass / aluminum doors, varying styles of weather canopies, and a combination of stairs and ramps accessing each entry point. As part of the renewal project, all building entries will be replaced and made accessible. The following strategies will be applied:

- All entries with exterior stairs will be replaced with sloped walkways or ramps.
- All entries will incorporate weather protection with solid canopies.
- The main entrance will be replaced with a glazed entrance vestibule and door, both intended to create transparency and openness at the main entry, and provide those approaching the main entrance with a visual connection to the interior circulation spaces beyond.
- Secondary entrances will be distinguished through use of planting suitable to the orientation (North, East, and West).
- Entrance canopies will be replaced, including the introduction of wood soffits to create a warm and inviting experience.
- Directional signage will be provided at each entrance.

Stairs

While all exit stairways within the complex will be retained, daylight and views to the exterior will be emphasized with new lighting and exterior glazing that takes advantage of the varying landscapes and public realm surrounding the building. Landscape features will support these views, with unique plantings at each stair location.

3.1.4 Open Space

Physical features of North Campus that are highly valued by users include the mix of formal gardens, natural landscapes, and passive recreational spaces to enjoy views. Existing land uses have educational, heritage, and ecological value that are an asset to the neighbourhood.

The planned landscape associated with buildings is juxtaposed with uncultivated groves of vegetation, particularly where the North Campus meets the steep cliffs and treed lands of Pacific Spirit Regional Park. The landscape includes both large open green spaces—mostly lawn—and wooded areas of evergreens, bitter cherry, maple, and alder. The views north to Georgia Strait and the north shore mountains heighten the sense of proximity to, and immersion within, nature.

Given the limitations of the Capital Renewal budget, a limited landscape intervention is planned, primarily to restore areas of the site that are disturbed from construction. Respect for the forested setting is a priority by celebrating vegetation and significant trees while promoting views to the immediate and long range landscape. New plantings will be low maintenance, drought tolerant and resilient.

- **Strengthen Dialogue Between Interior and Exterior:** The building connects to the landscape through an indigenous planting palette that relates the building to its natural context. Users can engage with the landscape through outdoor programmable spaces such as the courtyard and rooftop terrace that feature direct visual and physical connections to the adjacent interior program of the building.

- **Refine Thresholds:** The design seamlessly transitions users from exterior to interior. New paving provides clear, direct access to doors with planting used as a way to frame entrances and create a forest walk experience for users. A visitor entering the main entrance on the south is guided towards the front door with shrubs that trail into the building, bridging the interior and exterior spaces.
- **Create Usable Social Spaces:** Exterior spaces are activated for gatherings and outdoor learning opportunities. The design allows for movable furnishings that offer flexibility in the use of open spaces around the building. Unique, more stationary furnishings include a pollinator garden and the reinstatement of community agriculture planters to support an ongoing tradition of active cultivation by the building community.

Walkways

Various scenic pathways connect the building to its surrounding context. Given the significant site slope towards the front entry, it is important to consider how these routes can be better enhanced for accessibility and wayfinding.

All new walkways will be a minimum of 1.8m wide. The primary entrance walkway will be replaced where damaged, with matching materials. The circular entrance feature will be replaced with planting, to create a focal point and place for pause and connection with the natural setting at the main entrance.

Tree Protection

The ANSO site benefits from a variety of mature, significant trees. Existing large caliper trees provide shade and add a distinct character to the landscape. While some significant trees in close proximity to the building will be impacted by the building renewal, the design aims to retain as many of these trees as possible to further help provide cooling and integrate the building into the landscape.

Outdoor programming

Each of the building wings frame pockets of outdoor space that have the potential to become active spaces for building occupants. These spaces could be further enhanced to accommodate activities ranging from informal learning to faculty-wide events.

- The rooftop terrace provides ample room for various programs with an open area of 50m² that can accommodate gatherings of up to 50 people. Opportunity for community agriculture, which is connected to anthropology programming and instruction, will be provided. Doors provide direct access from adjacent teaching space to allow for indoor / outdoor programming of the terrace.
- The central courtyard that is surrounded by the MacInnes and Erickson wings creates an intimate open area whilst being enclosed by much needed secure long-term bike storage. The introduction of new paving creates direct routes that allow for easy access to the central wing from the large outdoor space. Doors have been placed around the courtyard linking community program spaces with the opportunity to engage directly with the landscape space.

Planting

The west, north, and east wings are complimented with a specific recognizable tree to mark the entrances, allowing each point of entry to be framed and distinguishable from the other entrances. The planting palette is similar to the adjacent Museum of Anthropology to reinforce a sense of continuity across the precinct.

3.1.5 Site Infrastructure

The surrounding site has a variety of paving materials from gravel paths to concrete and asphalt surfaces. Existing paving will not be replaced unless disturbed from construction. All new surface paving will comply with the Vancouver Campus Plan.

Lighting

Due to the capital renewal budget limitations, enhanced site lighting will be limited to entrances and along key pedestrian routes only. All new site lighting will comply with the Vancouver Campus Plan.

Service and Parking

Service and delivery vehicles arrive at the ANSO building along Cecil Green Park Road, using either the paved loading access along the north side of the building, or servicing waste pick-up along the east edge of the site.

Service access to the building will remain on the north side of the complex, accessed from Cecil Green Park Road. Waste and recycling will be consolidated and relocated to the north loading area.

There is no new parking provided, but three surface parking lots are located in close proximity to the ANSO building: the parking lot at MoA, parking lot east of the building and street parking along Cecil Green park road. The Rose Garden parkade is also located across Marine Drive.

The dedicated fire truck access route will remain to the south of the building at the main entrance.

Bike Parking and EOT Facilities

New class A and B bicycle parking will be provided to comply with LEED requirements and UBC Campus Plan. All bicycle parking enclosure design will comply with the Vancouver Campus Plan for secure bicycle parking.

Showers and change rooms will be provided on Level 0 in the ANSO building.

Exterior Screening

Secure bicycle storage, waste, and mechanical / electrical equipment locations on the site will be concealed using screening Type 1 wood board on post and beam frame to comply with the Forest Edge District.

Exterior mechanical screening that is integrated with the building will be custom-designed and integrated into the building architecture.

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