



# MAC

Main and Cordova, Vancouver BC  
Design Rationale 2022.05.13  
on the unceded ancestral territory of  
the xʷməθkʷəy̓əm · Skwxwú7mesh,  
and səlilwətaʔ Nations

MA  
+  
HG

Eskew Dumez Ripple+

## PROJECT INTENT

**How does a building become a good neighbour?**

**Provide social housing that supports wellbeing for people, community, and planet.**

Downtown Eastside urgently needs more affordable homes that are safe and healthy, especially for families. At Main and Cordova (MAC) we have the potential to build 100+ social housing apartments that support wellbeing, integrated with a learning centre, local shops, and non-profit owned theatre space. This 11-storey mixed-use building will be built with mass timber and with a zero carbon building target.

# PROJECT TEAM

Developer:  
**Happy Harvest (Tomo Spaces and Golden Properties)**

Architect Team:  
**MA+HG Architects and EskewDumezRipple**

Heritage Consultants:  
**Donald Luxton & Associates**  
**John Atkin**

Indigenous Consultants:  
**sneweyet**

Community Engagement:  
**Carolyn Camman and Chris Corrigan**

Landscape Architect:  
**Hapa Collaborative**

Code Consultant:  
**GHL Consultants,**  
**(Heritage Class C assessment: LMDG Building Code Consultants)**

Structural Engineer:  
**Timber Engineering**

Mechanical Engineer:  
**Rocky Point Engineering**

Electrical Engineer:  
**Nemetz (S/A) & Associates**

Artist Consultant:  
**Ken Lum**

Planning Consultant:  
**Happy City**

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# LETTER OF INTENT

## Dear City of Vancouver Team:

We are thrilled to present you with our Development Permit Re-submission for Main and Cordova (MAC) on behalf of Happy Harvest. This work represents the culmination of the feedback received from our original submission in September 2021, as well as a robust and groundbreaking Living Heritage Approach that encompasses the value of the intangible heritage the site holds, not only through its physical buildings and uses, but through a understanding of the lived history of the site from the stories of the people who inhabit this community. The principles derived from this study form the basis for the architectural resolution.

The intent of the proposal is to provide the Downtown Eastside/Oppenheimer community with a place of culture, connection and primarily, of home: 118 units of 100% social housing. A diverse mix of units ranging from micro-studios to three bedrooms, with 27% of the units being two bedrooms or larger (family units), supported by a variety of amenity spaces, to further encourage the formation of integrated, resilient and healthy community at varying scales.

A carefully programmed mixed-use building, the proposal also includes a significant music-capable cultural space, New Harvest. Encompassing a landmark space overlooking the corner of Main and Cordova, this space is to be a non-profit-owned and operated space so that they may carry on their own traditions of storytelling through music, film, art and performance, under the guidance of the City of Vancouver's CultureShift. In addition, the inclusion of micro CRUs and small scale commercial units are provided to support the tradition of local neighbourhood-serving retail in the area. Finally, strong educational programming will ensure a place of curiosity and learning. In combination with a poetic landscape design and purposeful artwork, our goal is that all the programmatic elements harmonize into a place that activates, elevates and speaks to the surrounding community as a place of their own.

Primarily mass timber construction, the project was recently awarded a grant under the Province of British Columbia's Mass Timber Demonstration Program. The goal of this architecture is also to create a system for living that is modular, repeatable and economical, targeting carbon neutral construction and operation. The architecture, conceived of as a forest of 'Mother Trees' harkens back to the history of what was once a maple grove nearby on the shore of the Burrard Inlet, and echoes the use of wood structure within the building.

The execution of this work sits at a timely peak of a changing tide; where the global pandemic has magnified the issues that we embrace as the vision for this work and ones that lie at the core of our City's re-building, and healing; that the visible cultural presence of our diverse community is both a reconciliation and a richness; and that the provision of a boldly environmental and socially-focused architecture will nourish our City. The project, in all ways, strives to be a good neighbour.

We thank you again for your optimism, encouragement and invaluable feedback throughout the process.



Marianne Amodio, Architect AIBC  
MA+HG Architects, Inc



Harley Grusko, Architect AIBC  
MA+HG Architects, Inc



Z Smith, FAIA  
Eskew Dumez Ripple Architecture & Design



LETTER OF SUPPORT

Atira Development Society  
Page 2 of 2

We urgently need more quality affordable housing that is safe and healthy for everyone in Downtown Eastside. I hope you and staff can expedite this DP application under the SHORT program. If you have any questions regarding this letter of support, please contact me at 604-331-1420 or email me at [janice\\_abbott@atira.bc.ca](mailto:janice_abbott@atira.bc.ca).

Sincerely,  
Atira Development Society



Janice Abbott  
Director & Chief Executive Officer

Enclosures (1)

cc: Mark Shieh  
Marianne Amodio  
Paul Williams





T 604 681 4437

F 604 688 1799

E [info@atiradevelopment.ca](mailto:info@atiradevelopment.ca)

201, 190 Alexander Street  
Vancouver, BC V6A 1B5

May 10, 2022

VIA ELECTRONIC MAIL

Mr. Jonathan Borsa  
Development, Buildings & Licensing  
City of Vancouver  
[jonathan.borsa@vancouver.ca](mailto:jonathan.borsa@vancouver.ca)

Dear Jonathan,

**Re: Support for Development Permit Application at 305 Main St (DP-2021-00795)**

We are pleased to provide this letter of support for Tomo team's (Happy Harvest Inc.) development permit application to build 118 social housing units at the corner of Main and Cordova Street in Vancouver.

Atira Development Society is the non-profit development arm of Atira Women's Resource Society (AWRS), a community-based, women's anti-violence organization that provides direct service, advocacy, education and awareness about violence against women. Atira Development Society operates a number of housing projects in the Downtown Eastside – Olivia Skye, The Anjok, Tawow, and Aoki-Ross Housing – with six more projects under development. Atira Women's Resource Society operates more than 50 housing programs, five community daycares (and three more in development), and dozens of support programs located across the Lower Mainland.

I have been working with Mark Shieh and his team during the past year on the design of this proposal. Atira and Tomo have signed a letter of intent for Atira to purchase all the residential units in the proposal and operate them as social housing units.

While we continue to work with Staff on the details of this proposal, we understand in principle that social housing means that:

- 1/3 of the social housing units will be rented at shelter rate
- 1/3 of the social housing units will be rented at HILs rate (from BC Housing)
- 1/3 of the social housing units will be rented at LEM rate (from CMHC, E Hastings Zone)

I confirm that the housing unit mix, including the percentage of the family units, as proposed in the DP application (attached with this letter) meets Atira's program needs.

CONTEXT MAP



ZONING MAP

#

Number of Storeys

Bus

Bus Route

#

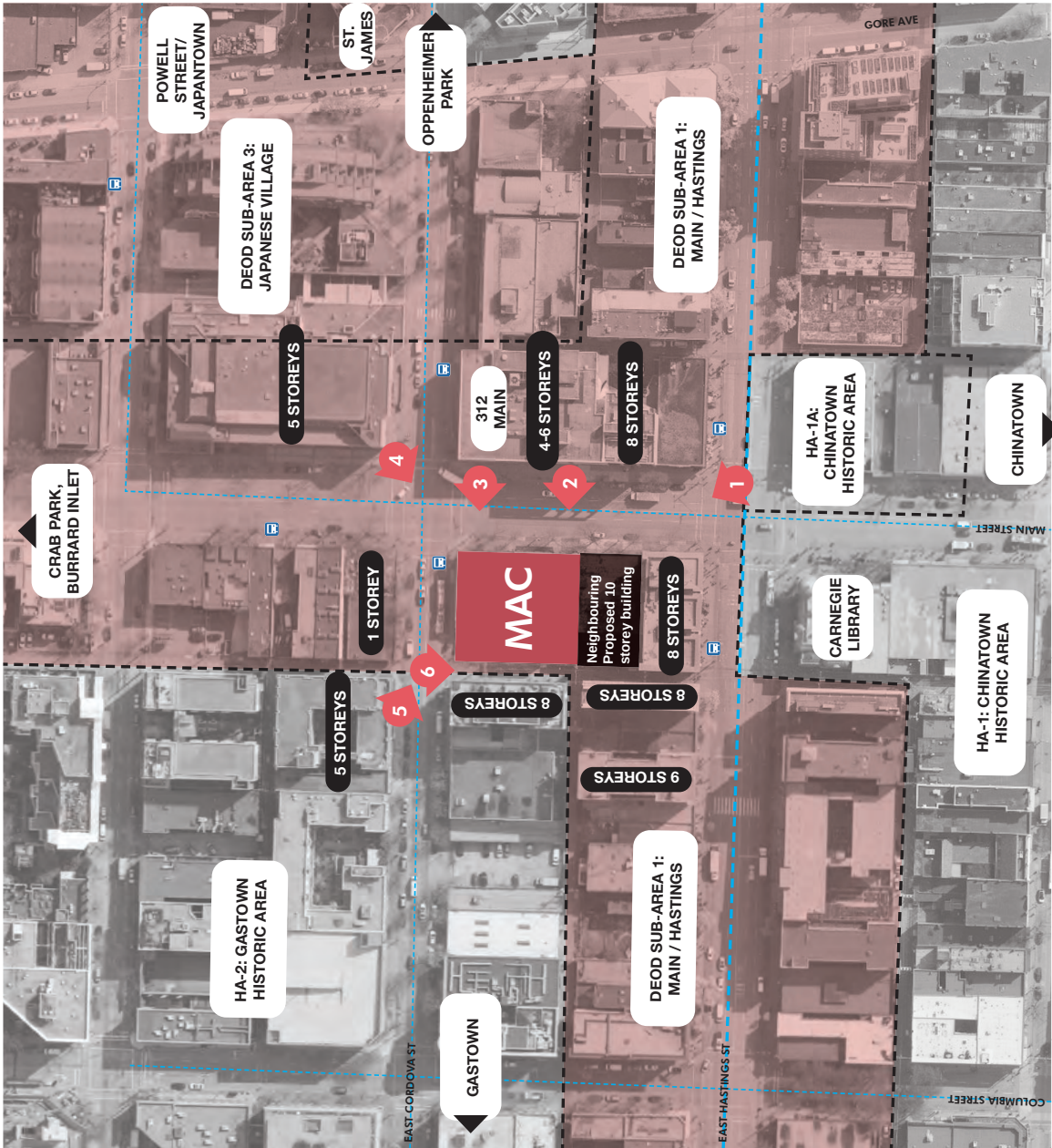
Bus Stop

#

Identifies photos found on next page

DEOD: Downtown Eastside/Oppenheimer

MAC





CONTEXT PHOTOS



1 View looking North along Main St at E Hastings St



2 View looking West on Main St



3 View looking West on Main St near E Cordova St



4 View looking Southwest from corner of Main St and E Cordova St



5 View looking Southeast along E Cordova St



6 View looking South down lane.



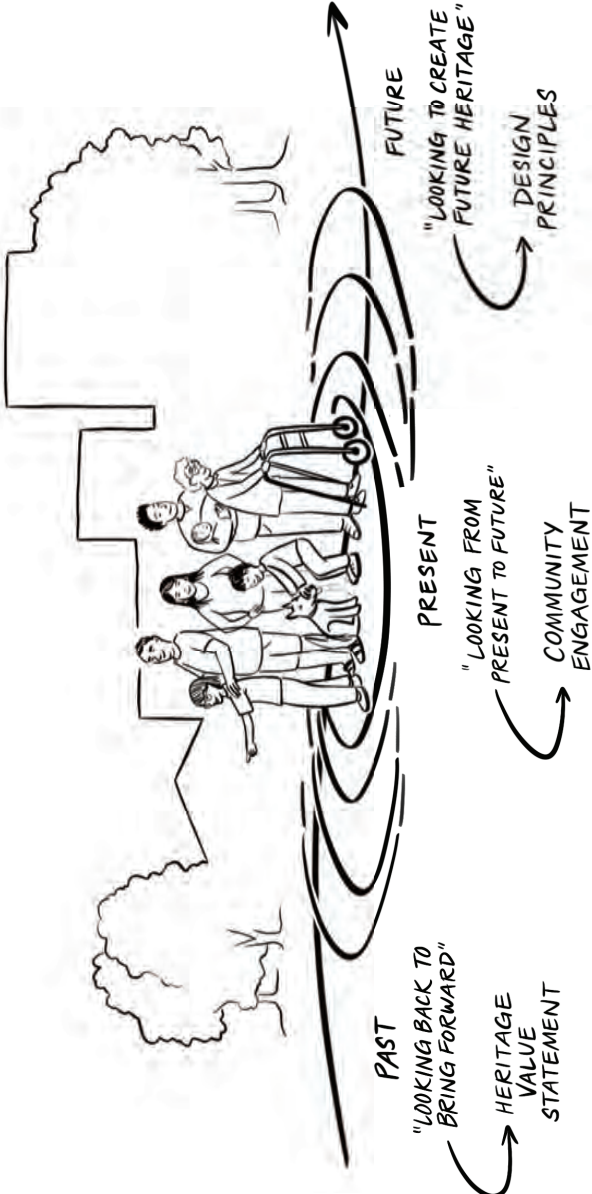
# WHY LIVING HERITAGE?

In response to the loss of the tangible heritage and the emphasis in the City of Vancouver's Heritage Program (2020) on the retention of intangible heritage values, the project team has undertaken a living heritage approach to conservation. This approach honours the intangible values inherited from past generations that continues to shape our community today and inform our decision for the future. Our intent in implementing a living heritage approach is to design a building informed by the past and strengthens the continuity of community connections to place.

The design principles for the architecture are established from the living heritage approach, undertaken in order to define community-identified values of heritage significance that are found in the area that are essential to the community's well-being and ongoing cultural vitality as well as for transfer to future generations.

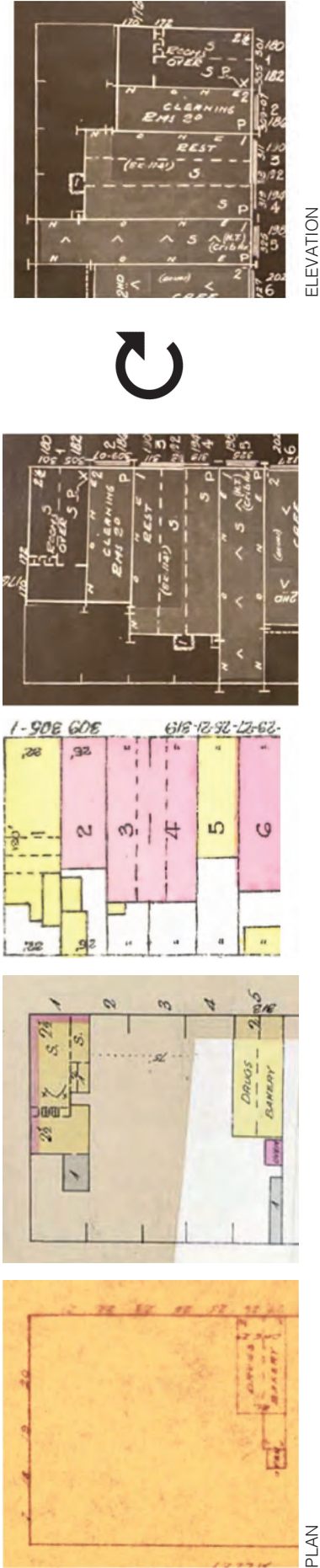
The living heritage approach and the architectural proposal were reviewed at Vancouver Heritage Commission on April 11, 2022 and was strongly supported by this advisory panel.

Please refer to the Living Heritage Approach Report included in this submission for further detail.



- 1 Healthy homes for all
- 2 Create opportunities for exchanges
- 3 Use architecture to daylight stories
- 4 Transitions, not barriers
- 5 Spaces need stewards
- 6 Nature is economical

ARCHITECTURAL ZONING CONCEPT



PLAN

ELEVATION

**1889**

1889 fire insurance plan showing the premises of Dr McAlpine and a bakery

**1897**

Fire insurance plan 1897, updated to 1901 showing the addition of the retail and rooming house at the corner of Cordova Street, built in 1895

**1912**

1912 fire insurance plan shows the addition of a two storey masonry and timber frame block constructed in 1903

**1940**

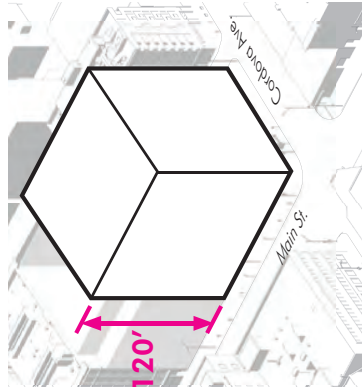
1940 fire plan shows the original building from 1889 on Lot 5 has been replaced with a single storey structure that fills the lot.

Nothing changes on the site until 1974 when lots 3 and 4 are redeveloped with the Golden Harvest theatre.

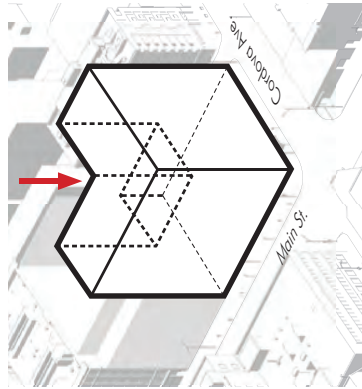
**2022**

Sawtooth site plan and lot lines inspired the height and massing response

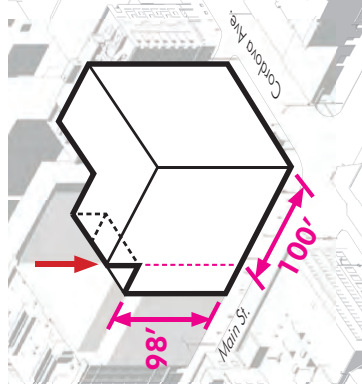
## MASSING CONCEPT



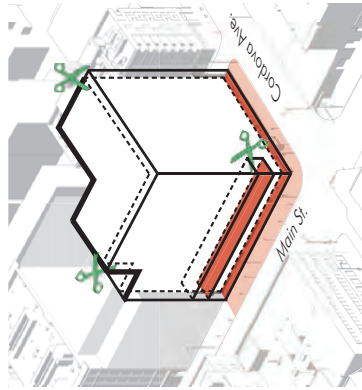
Maximum building mass at height at 120'



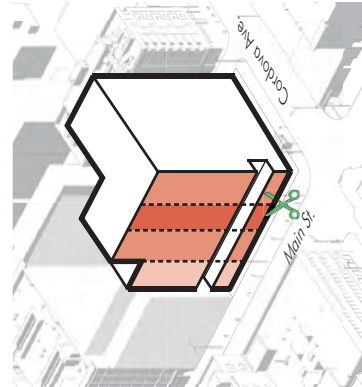
Create an 'L' shape building by fronting mass on Main St. and E. Cordova St. and while providing a Level 3 courtyard facing South West for optimum solar orientation.



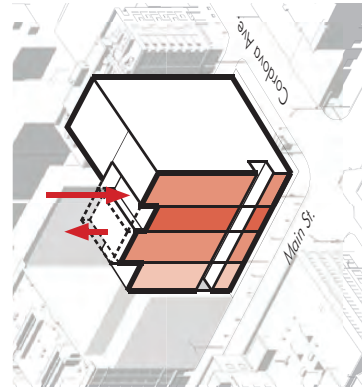
Lower the height of the southern most massing on Main St. to reflect the maximum 98' height after 100' of building length as per the DEOD Main/Hastings 4.6.1



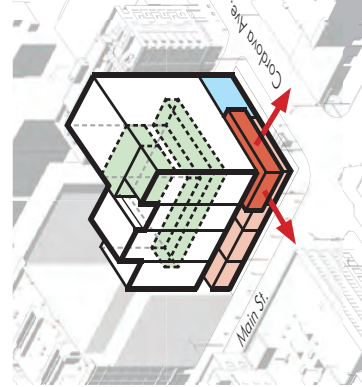
Set back facades to provide additional public urban area and relate to the mass timber grid. Create a 'second level sidewalk' by carving open area on the second floor providing access to upper level shops and services.



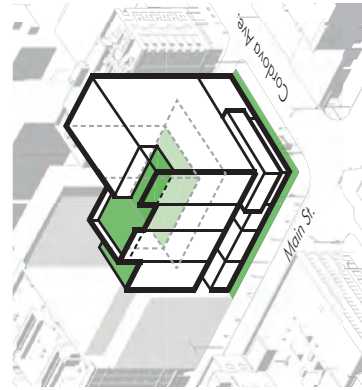
Divide the facade into 'lot lines' that match the existing cadence of buildings and strengthen the architectural character of the existing neighborhood as per the Downtown Eastside Plan 7.5, Urban Design Intent.



'Push and Pull' the tops of the 'buildings' to further the appearance of a family of buildings with variety in height, creating a 'sawtooth' roofline.



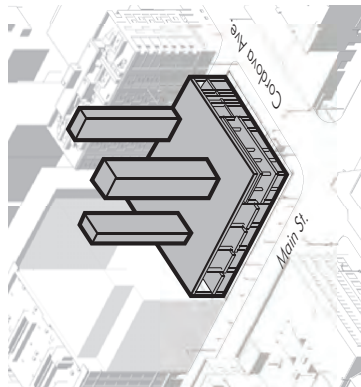
'Project' the new theatre amenity at the corner of Main St. and E. Cordova St. Locate 2 levels of retail / service including a 'Learning Centre' on E. Cordova St. Locate residential amenity spaces on Levels 3 & 11.



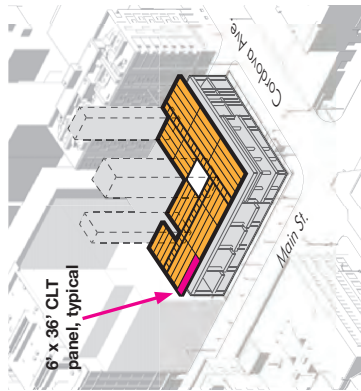
Landscape elements are incorporated into the expanded sidewalk on the ground level, the courtyard on level 3, and rooftop amenity areas on level 11.



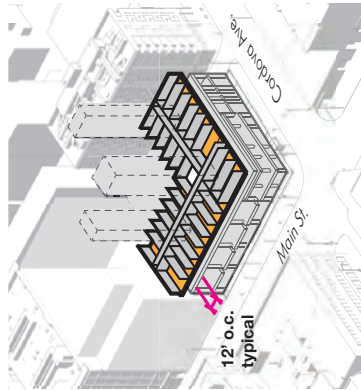
# CONSTRUCTION METHODOLOGY



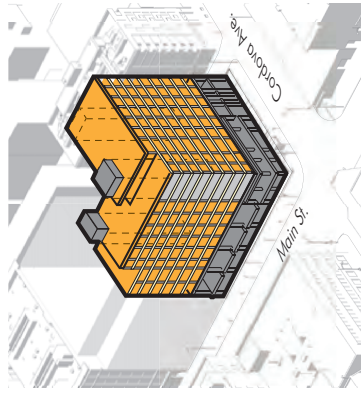
The structural design for MAC optimizes the use of wood in tall buildings, while also integrating the strength, usefulness and commonality of concrete use in Vancouver. The Parking level, Podium levels, and Elevator/Stair cores are constructed of C.I.P. reinforced concrete and significantly contribute to the lateral system and fire separations of a mass timber building.



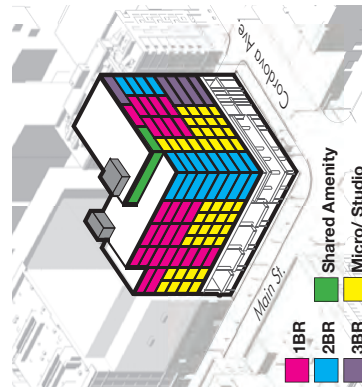
CLT panels are optimized for availability, transport, site logistics and will be provided in 6', or 8' widths and up to 48' in length.



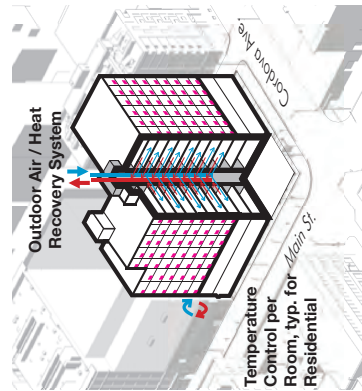
The wood floors are supported entirely on cold formed steel (CFS) walls, 12' on centre. All the interior demising walls are strictly designed to this grid, ensuring modularity and repetition while reducing cost and waste.



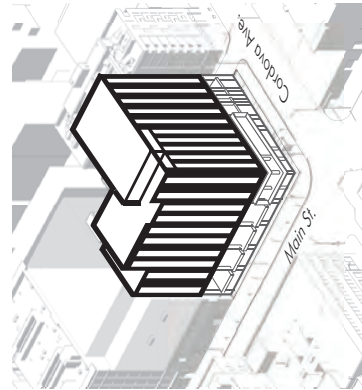
Designed as a hybrid of wood, steel and concrete, each floor and roof is structurally tied to the vertical concrete cores creating a hybrid structural diaphragm, while still allowing for some variety in plan.



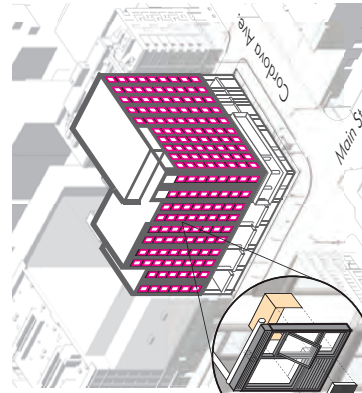
In optimizing for mass timber construction, the building rigorously adheres to the 12'x24' residential grid and efficient L-shape form. The modularity of the units is tied to the structural system in a mutually beneficial way.



Individualized residential unit climate control is provided via air source heat pumps (PTAC) at each residential module. Conversely the active ventilation is provided via a centralized heat recovery system located at the stair cores.



The opaque portion of the exterior envelope is composed as a rainscreen system of a 3" mineral fiber insulation clad in painted breakshape metal panels placed in a vertical orientation and as contiguous as possible.



The windows are configured in a vertical striped window wall format and incorporate all the required unit air venting in spandrel areas, including the PTAC and kitchen fume ducting. A decorative perforated metal panel obscures the penetrations.

SHADOWS



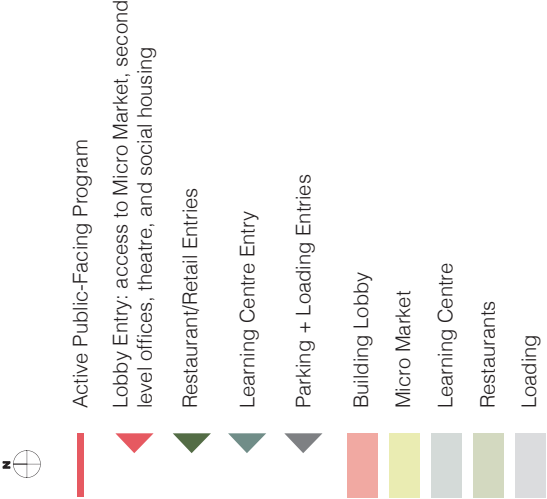
SITE ORGANIZATION PLAN

The proposal for MAC intentionally provides public facing program along the street edges of both Main Street and Cordova street.

Along Main Street commercial retail units provide opportunity for local businesses serving the neighbourhood, following the historic rhythm of the neighbourhood in 25' wide storefronts. The building lobby is also accessed off of Main St. This shared lobby provides access to the Micro Market, Theatre, Second Level Sidewalk, and social housing.

The Learning Centre is accessed off of Cordova St, and provides a place of curiosity and learning.

Loading and below grade parking are accessed from the lane.





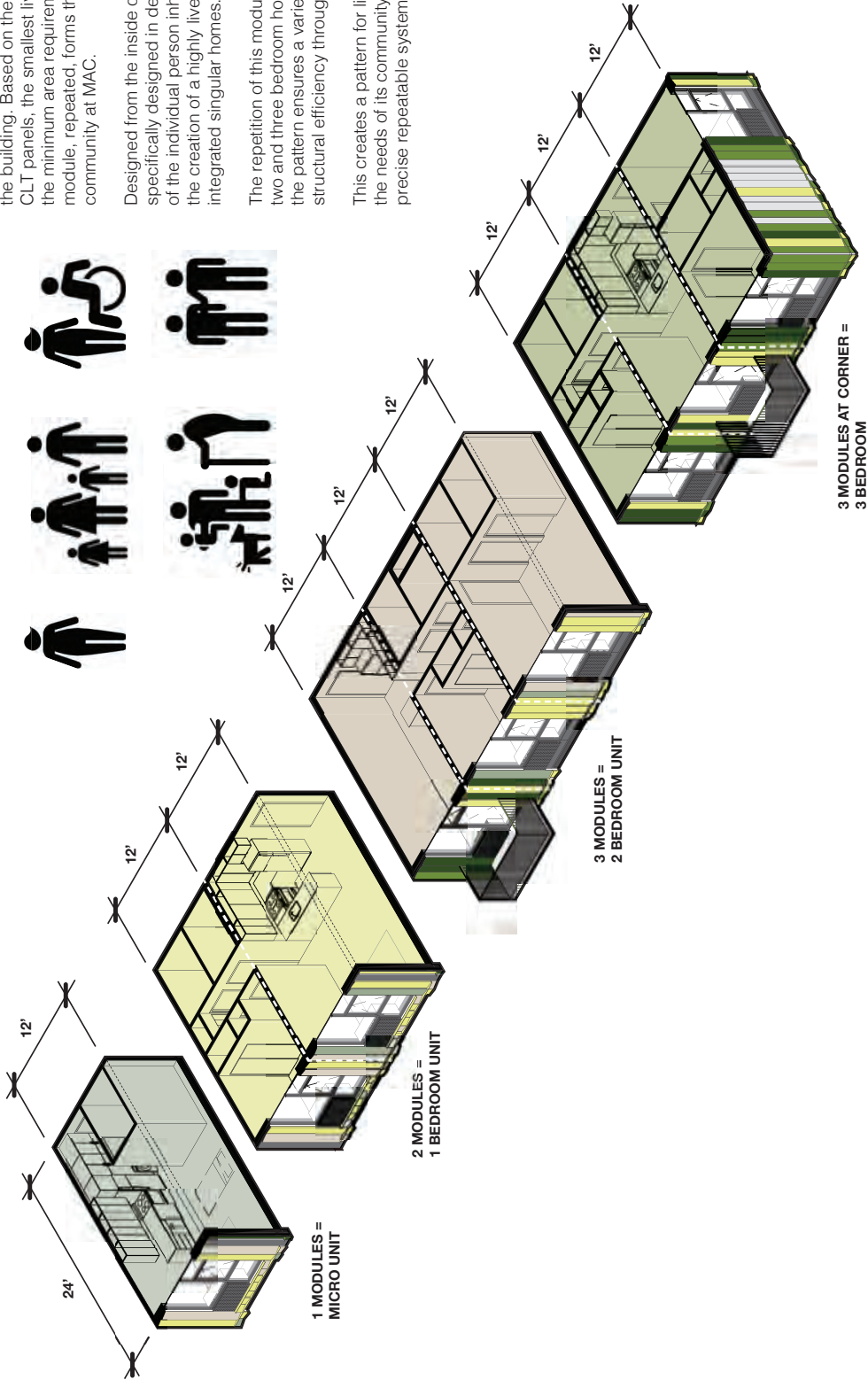
# MODULAR UNIT TYPES FOR DIVERSE HOUSEHOLDS

The micro dwelling unit forms the primary building block of the architectural parti and organizing principle for the design of the building. Based on the strict dimensional requirements of CLT panels, the smallest living module, is 12' x 24', exceeding the minimum area requirements for micro dwelling units. This module, repeated, forms the basis for the entire residential community at MAC.

Designed from the inside out, this primary module is specifically designed in deference to, and consideration of the individual person inhabiting it. Critical to this work is the creation of a highly liveable, spatially voluminous and integrated singular homes.

The repetition of this module creates the micro dwellings, one, two and three bedroom homes on each floor. The regularity of the pattern ensures a variety of housing types, while ensuring structural efficiency throughout the multi-storey building.

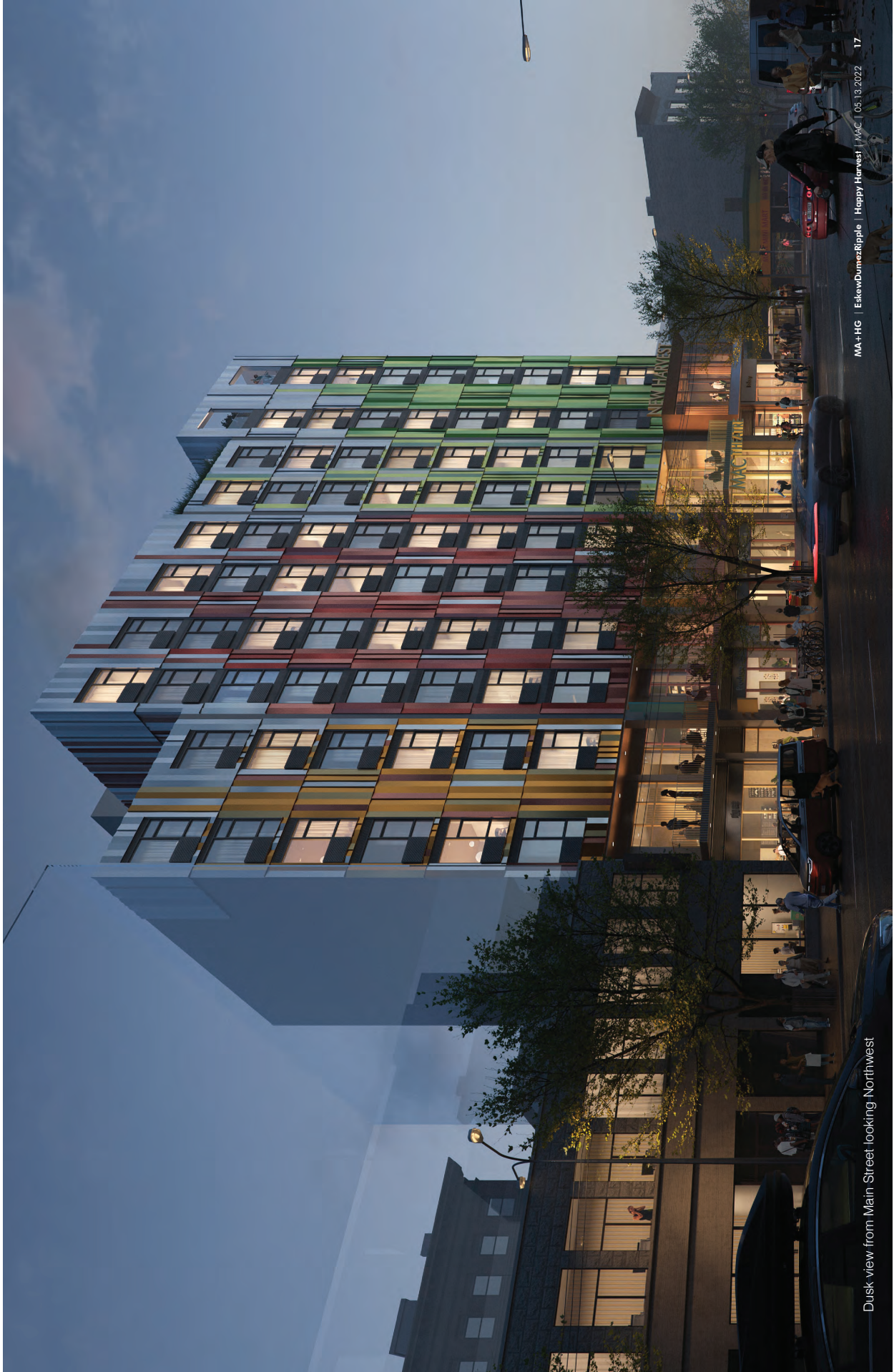
This creates a pattern for living that responds to this site and the needs of its community, while also providing a technically precise repeatable system.





View from corner of Main Street and Cordova Street looking Southwest





Dusk view from Main Street looking Northwest



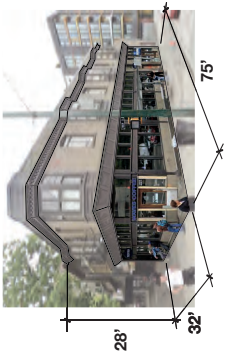


View from Cordova Street looking South

# NEW HARVEST THEATRE AMENITY

New Harvest is a non-profit owned space for diversity-mandated theatre makers and musicians at Main and Cordova. This 1,750 sf space will support emerging and grass-root community arts groups with marginalized voices to tell and amplify their stories in a music-capable space.

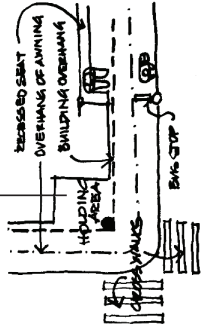
From our living heritage approach, we understand the importance of this Cultural Use use, as well as the importance of this corner as a meeting point. To amplify both, New Harvest is placed at the landmark space overlooking the corner of Main and Cordova, and takes on the proportion, footprint and detailing of the existing heritage building while also making space for the historic signage.



HERITAGE BUILDING PROPORTIONS  
AND CORNICE DETAIL



HERITAGE CAST  
IRON COLUMNS  
TO BE RESTORED



CITY OF VANCOUVER DTES DESIGN  
GUIDELINES 'HOLDING AREA'

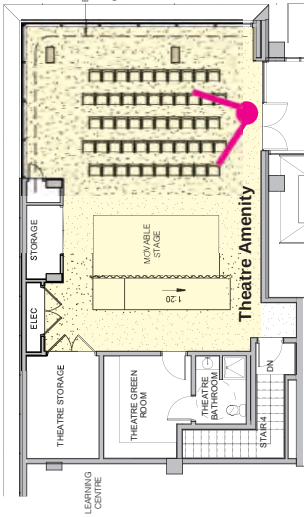


HISTORIC GOLDEN HARVEST SIGN TO  
BE RESTORED

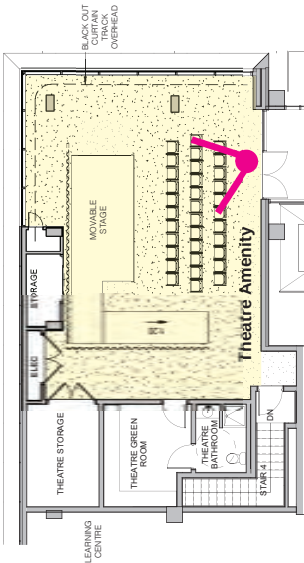


THEATRE AMENITY  
INTERIOR

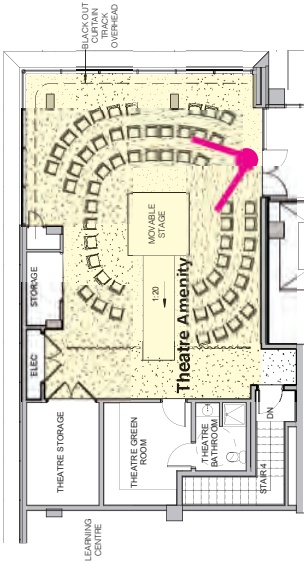
| Theatre Amenity | Example Use Type and Capacity                            |
|-----------------|----------------------------------------------------------|
| 1,783 sf        | Theatre Performance Workshop<br>Spoken Word In the Round |
|                 | 75 (movable chairs)<br>55 (movable chairs)               |



Music Performance  
Stage at Plan West



Theatre Performance Workshop  
Stage at Plan North



Spoken Word In the Round

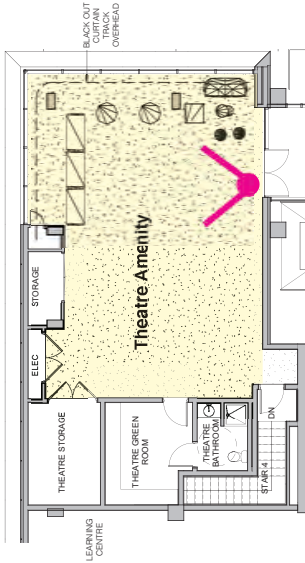
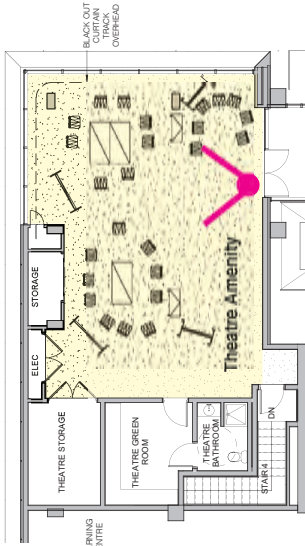
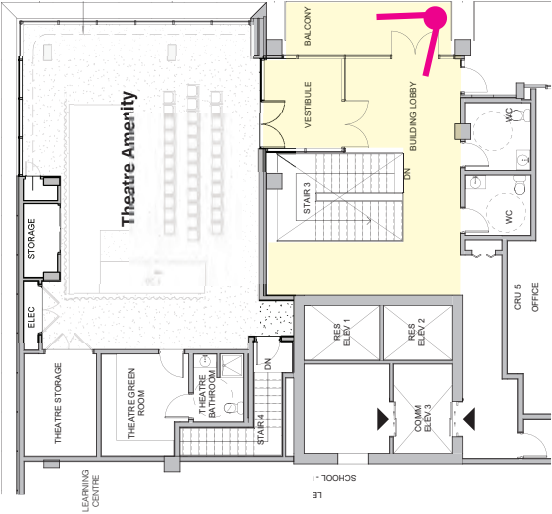


THEATRE AMENITY  
INTERIOR

Theatre Amenity

1,783 sf  
Reception  
Community Workshop

150 (standing)  
40 (with tables and chairs)



Reception



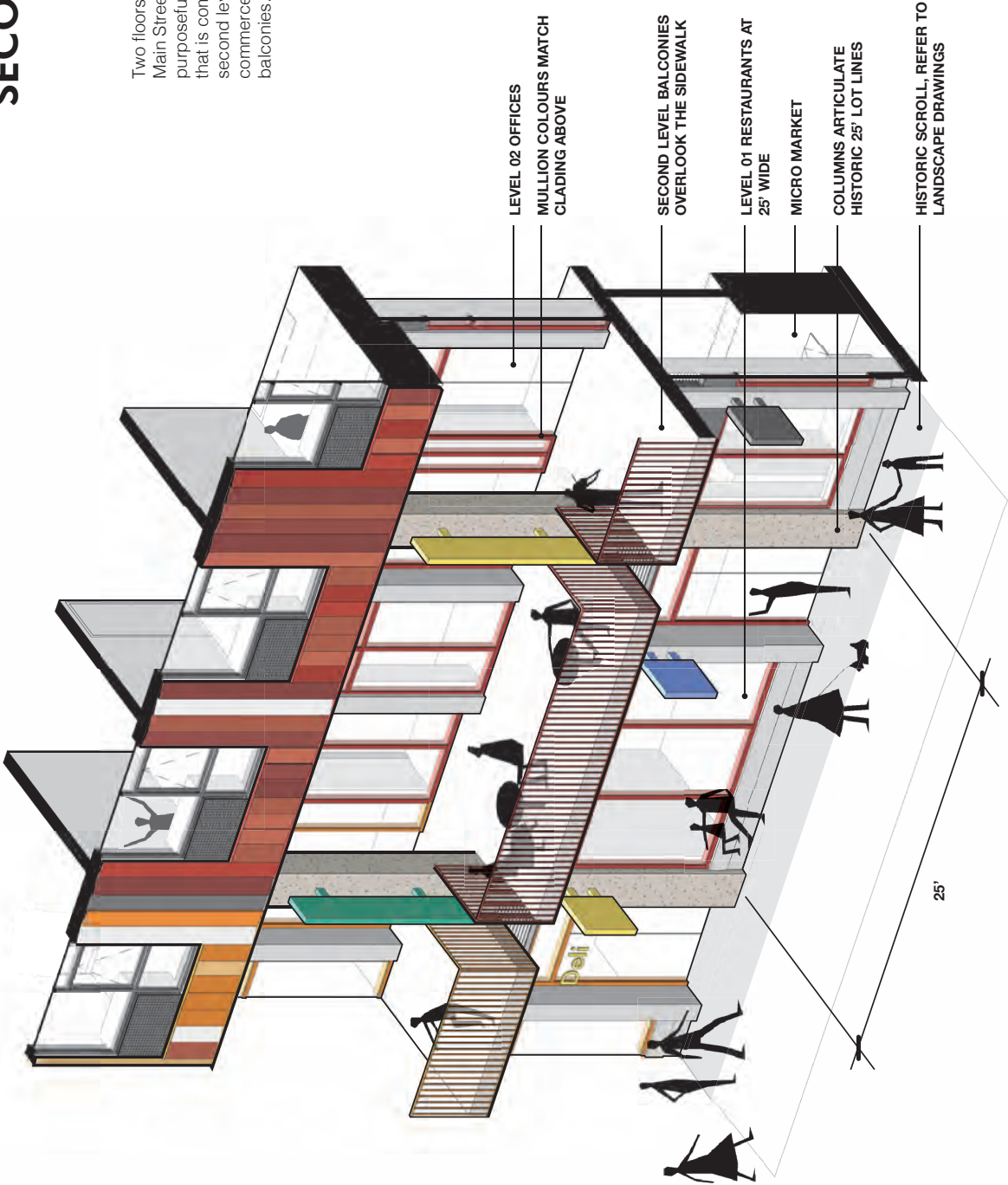
Community Workshop



Lobby and Balcony as Prefunction/ Support space

# SECOND LEVEL SIDEWALK

Two floors of interconnected commercial space overlook Main Street. Micro CRUs and small scale retail units are purposefully provided to support local commerce in a manner that is common and familiar to the local community. The second level sidewalk provides additional opportunity for local commerce, and a dynamic public interface with generous balconies.



# INTERIOR MICRO UNIT

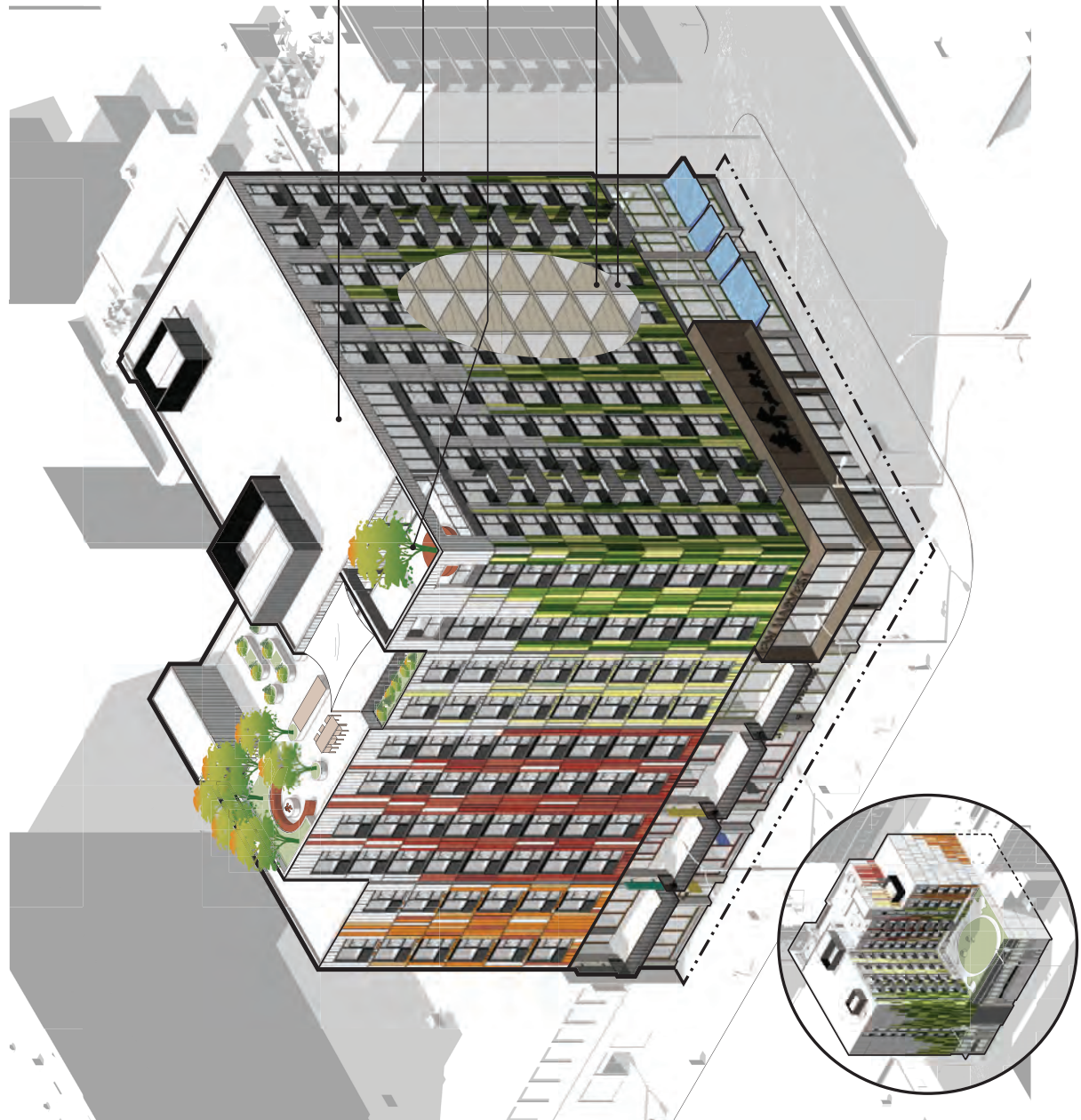
Special attention has been provided to the Micro Units to ensure livability. Micro units are provided with generous glazing (7' wide by 8'-6" tall) and exposed CLT ceilings at 9'-6" clear. Packaged Terminal Air Conditioners (PTAC) are integrated into the window system to ensure occupant comfort through all seasons.

An alternative solution to the encapsulated timber code approach will show a path to allow for 70% exposed CLT ceilings within the residential suites. This approach will allow the wood panels to be exposed on the interior of all suites, amplifying the Mother Trees concept through its intrinsic warmth and beauty of the exposed CLT structure.





# SUSTAINABILITY



## Near-zero carbon operation while providing a healthy, comfortable environment

- Designed to meet or exceed BC Step 3 performance
- Space heating & cooling through in-unit heat pumps fed with low-carbon electricity
- Domestic hot water provided by heat pump water heating
- All-electric appliances; no natural gas hookup. Only combustion is limited to bio-fueled emergency generator
- White, solar-ready roof designed for rainwater collection to support irrigation for rooftop gardens and landscaping
- Centralized heat recovery ventilation system with high-performance filtration
- Efficient building envelope.
- Indoor/Outdoor connections:
  - Green outdoor areas:
    - Rooftop gardens and patios for residents
    - Generous landscaped courtyard (Level 3) supporting gathering and play

## Carbon Neutral Structure

- carbon-sequestering mass timber residential floor slabs
- low-carbon concrete
- high recycled-content steel rebar, load-bearing light gauge steel, and cladding

## Supporting the 15-minute city

- Supporting smart density: 118 homes for individuals, couples, and families (micro units through 3-bedroom)
- Support those who walk, roll, or use bikes first, cars second
- Fully meeting city's bicycle parking goals; auto parking at City minimums providing accessibility.
- Places for people to live, work, learn, and gather for food, music, or cultural events all in one building
- Support for multiple small business from 'micro-retail' to cafes and offices

# CLADDING CONCEPT MOTHER TREES

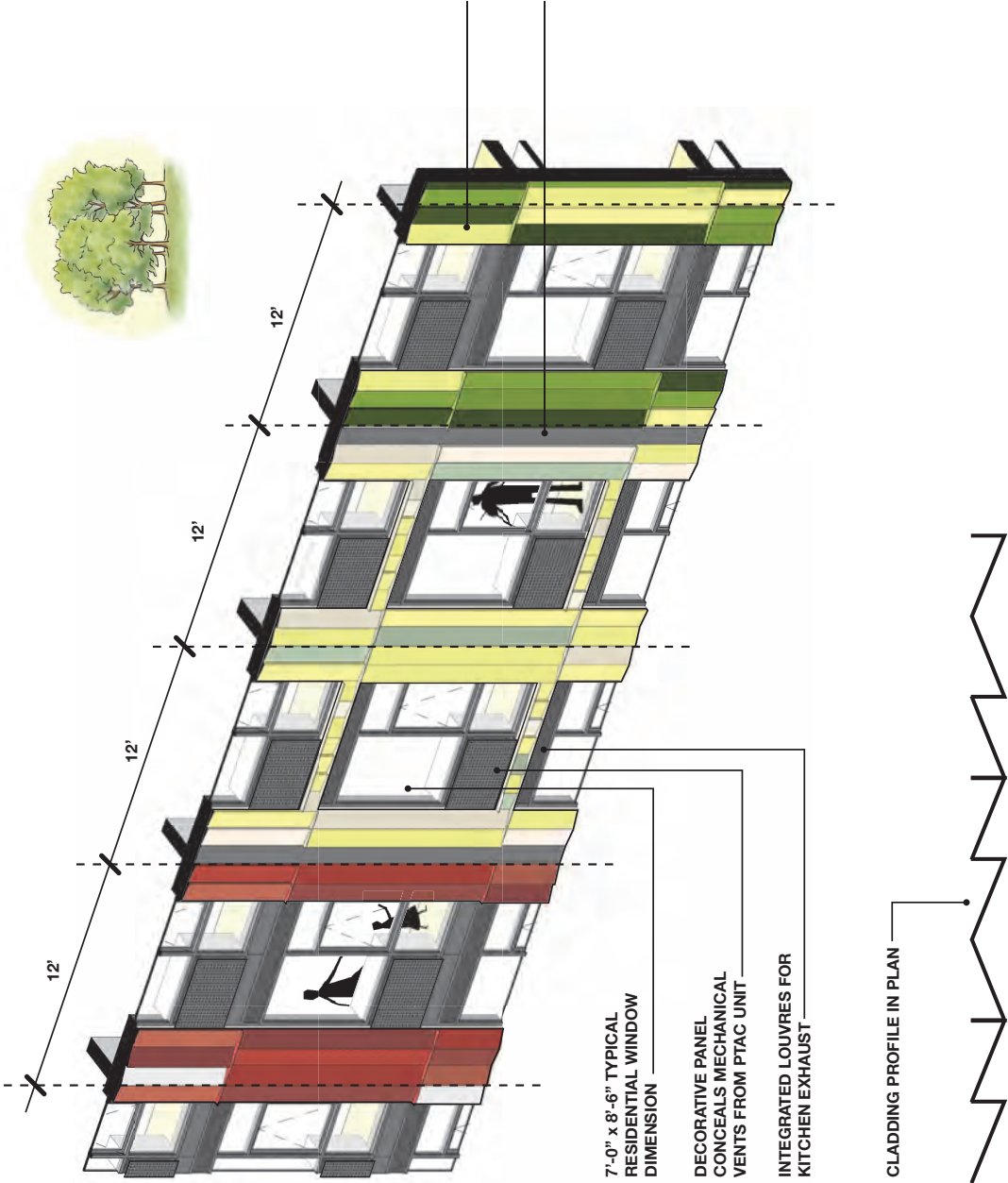
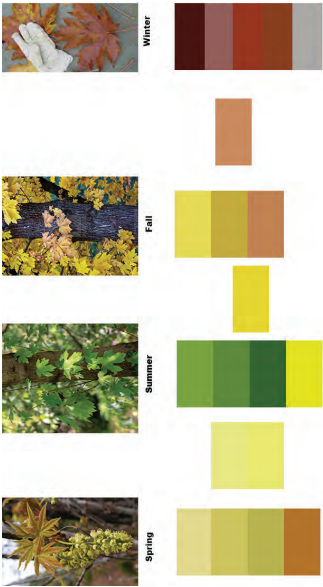
The facade of MAC harkens back to the long history of the site: the natural landscape and historic K'emk'emeláy (in the Squamish Language) and qamqamelep (in hənq'məḥəm), celebrating the site's original, pre-colonial context.

The residential portion of the facade articulates the colours of foliage across seasons, as well as the soft line of a tree canopy meeting the sky. This articulation serves to reduce the visual mass at each corner of the building, especially at the south corner along Main Street. The expression of sky here, in metallic reflective panels, helps to emphasise the tree form while adding softness to the building facade.

FOLDED METAL PANEL MIMICS THE PLAY OF LIGHT AND SHADOW ON LEAVES WHILE PROVIDING FOR FINE GRAIN DETAIL ON THE FACADE

THE USE OF A STRONG REVEAL CAN SERVE TO SEPARATE THE 'BUILDINGS' OF THE FACADE REGARDLESS OF THE USE OF COLOUR

COLOURS ARE USED TO HIGHLIGHT THE SEASONS OF THE MAPLE AND REINFORCE THE OVERARCHING 'MOTHER TREE' CONCEPT



## SUMMARY OF CHANGES SINCE DEVELOPMENT PERMIT SUBMISSION

1. Alteration to 100% Social Housing to allow for relaxation of frontage under 4.5.3. of the DEOD ODP
2. FSR reduction using a blended FSR approach across the site, resulting in approximate 6.51 FSR
3. Architectural Massing reflects 100'-0" maximum frontage as per DEOD ODP.
4. Increase in ceiling heights at floors containing micro units to 9'-6" as per the Micro Dwelling Units guidelines.
5. Resultant Unit Mix Alteration including 27% Family Housing and 118 units.