

# The Alcove

Squamish Multiplex Design Competition  
Category 1 Second Storey Dwellings

The Alcove proposal consists of a triplex that offers a nice façade to the street, contributing to a positive community impact. The upper levels step back to create exterior balconies, allowing for increased sunlight and opening up views over buildings.

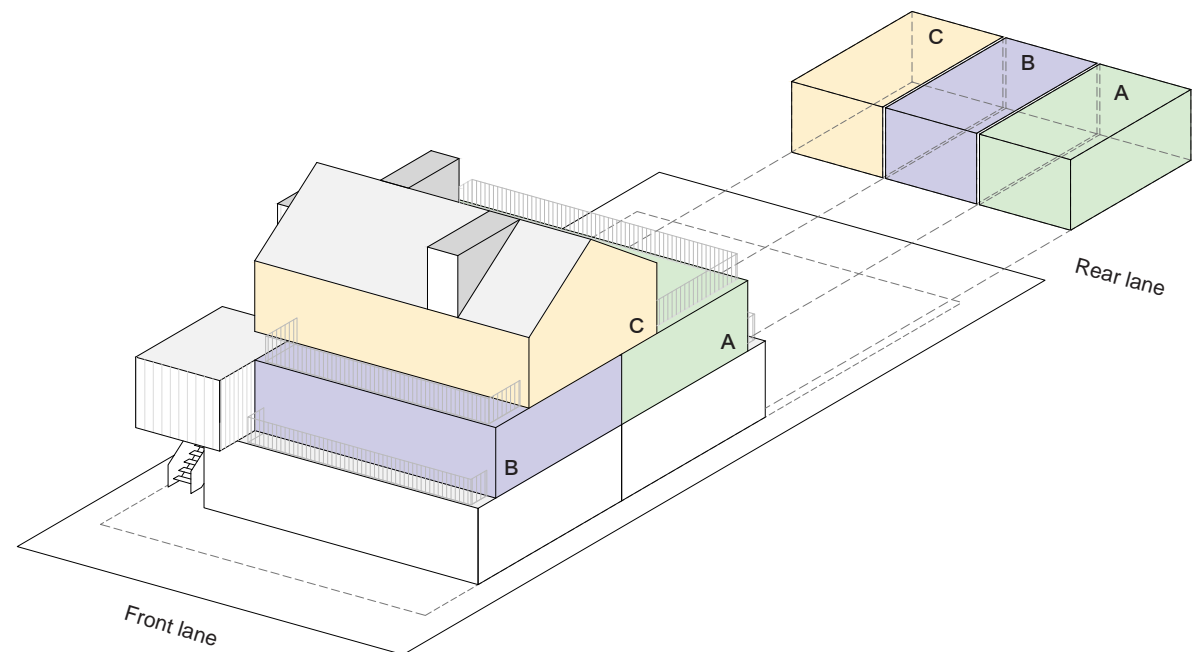
All of the units have independent access directly from the street by connected exterior spaces. Additionally, an attached elevator provides adapted access to all levels.

## Innovation & Creativity

The plan organization achieves an efficient 3 story volume that both responds to the scale of the neighbourhood and visually integrates into the surrounding context.

The highlighted approach of this design is to keep an adequate footprint size, leaving as much non-occupied lot area as possible, while fitting parking and storage space on the ground floor. The project also pays special attention to maintaining private access to the units by including independent stairs that connect exterior spaces to reach the main door units. The second floor unit enjoys independent access directly from the ground floor, so they don't share landings with first floor units. This enhances the autonomy of the second floor unit, which makes the difference between the feeling of living in an apartment building, with shared landings, or in a multiplex middle-scale house.

Stepped back exterior balconies are related to every unit giving them private exterior areas to enjoy. A common exterior area on the rooftop is added at the triplex option.



Front Lane View

## Aesthetics

The Alcove design proposes a concrete ground floor story with metallic elements such as garage doors and stairs, matching the same grey pallet colour. The materiality for the units above use fire-resistant hard board panels in light-toned wood and the second story staircase gets highlighted in a warmer wood colour.

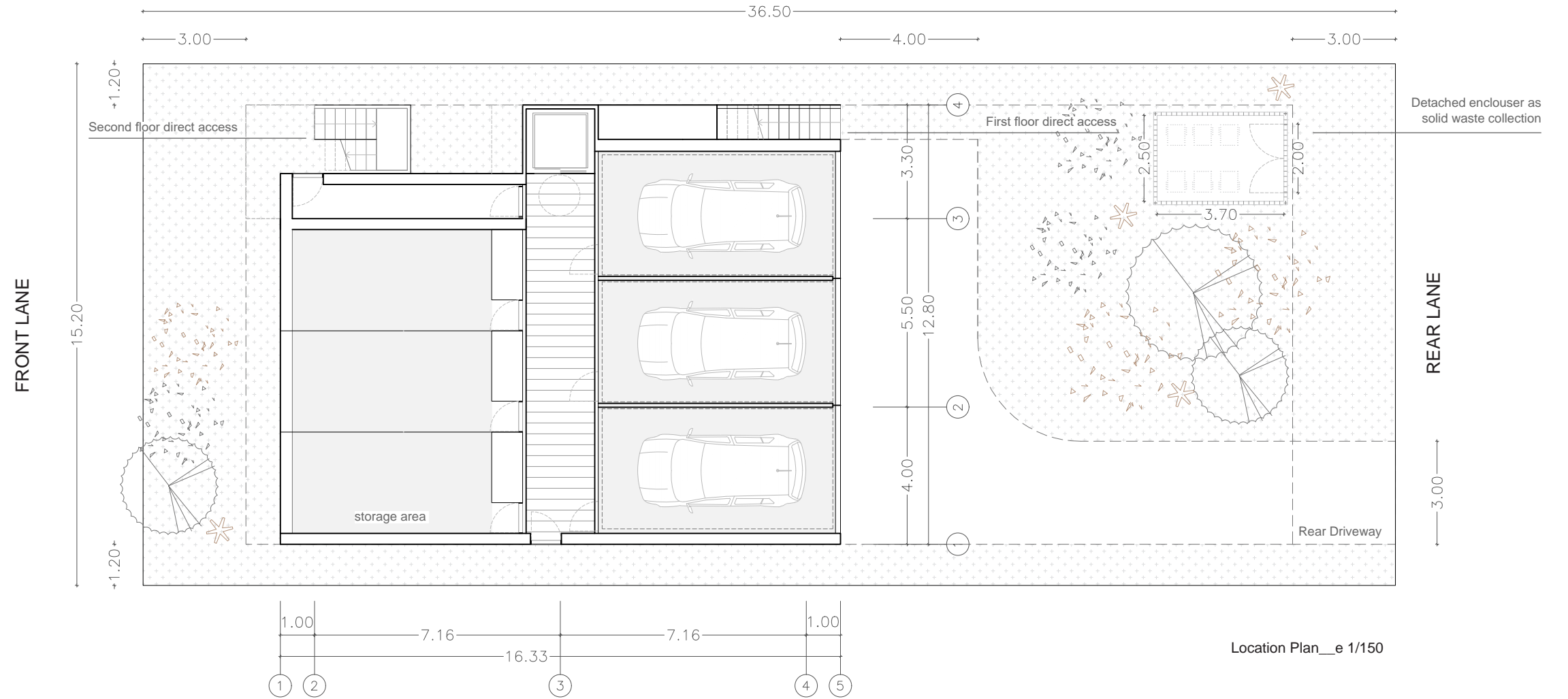
This staircase, along with the multiple entrances and balconies, maximizes the design potential to turn interstitial spaces between neighbours into domestic architecture that can help organize access to units, while interacting with the street level on a more urban scale.

The roof has been designed to allow for taller interior spaces and ceiling windows, giving extra natural light to the inside as well as an elevated accent to the whole façade composition.

## Accessibility & Universal Design

The overall units are accessible to accommodate various individuals and their personal living requirements, recognizing the limitations related to the flood construction levels. To that purpose, an elevator has been integrated to the stair system in a way that can be attached as an independent item to also give cost flexibility to the proposal. All indoor unit corridors and interior doors have been maximized for width, while the floors are designed to be one flat surface throughout the entire living space till the exterior balconies. Bathrooms have integrated backing on all walls to facilitate the installation of grab bars as needed.

Lot size	554.80 m2
Max. Height	10.40 m
Flood construction level	3m above finished grade
Setbacks	Front and Rear 3 m Side 1.2 m
Site coverage	49.3%
- Construction footprint	187.80 m2
- Driveway	74.50 m2
- Detached waste collection room	10.50 m2
Permeable area	281.28 m2





Front Lane Elevation\_\_e 1/150

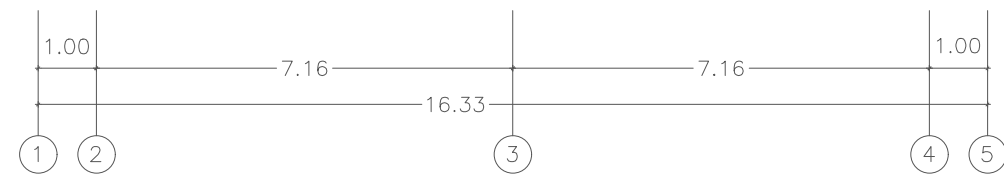
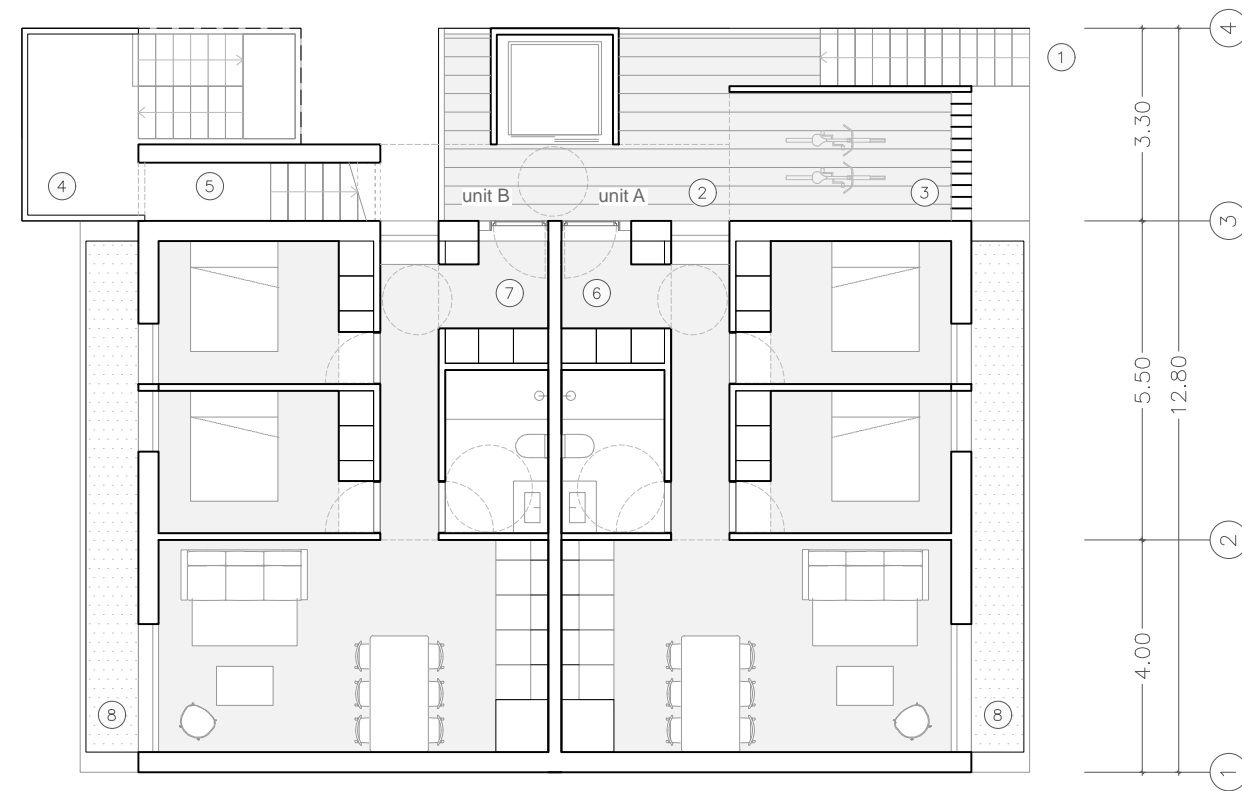


Rare Lane Elevation\_\_e 1/150

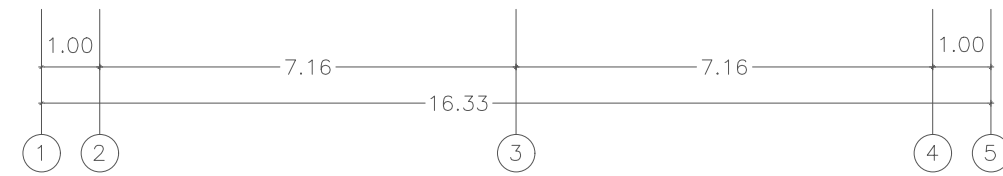
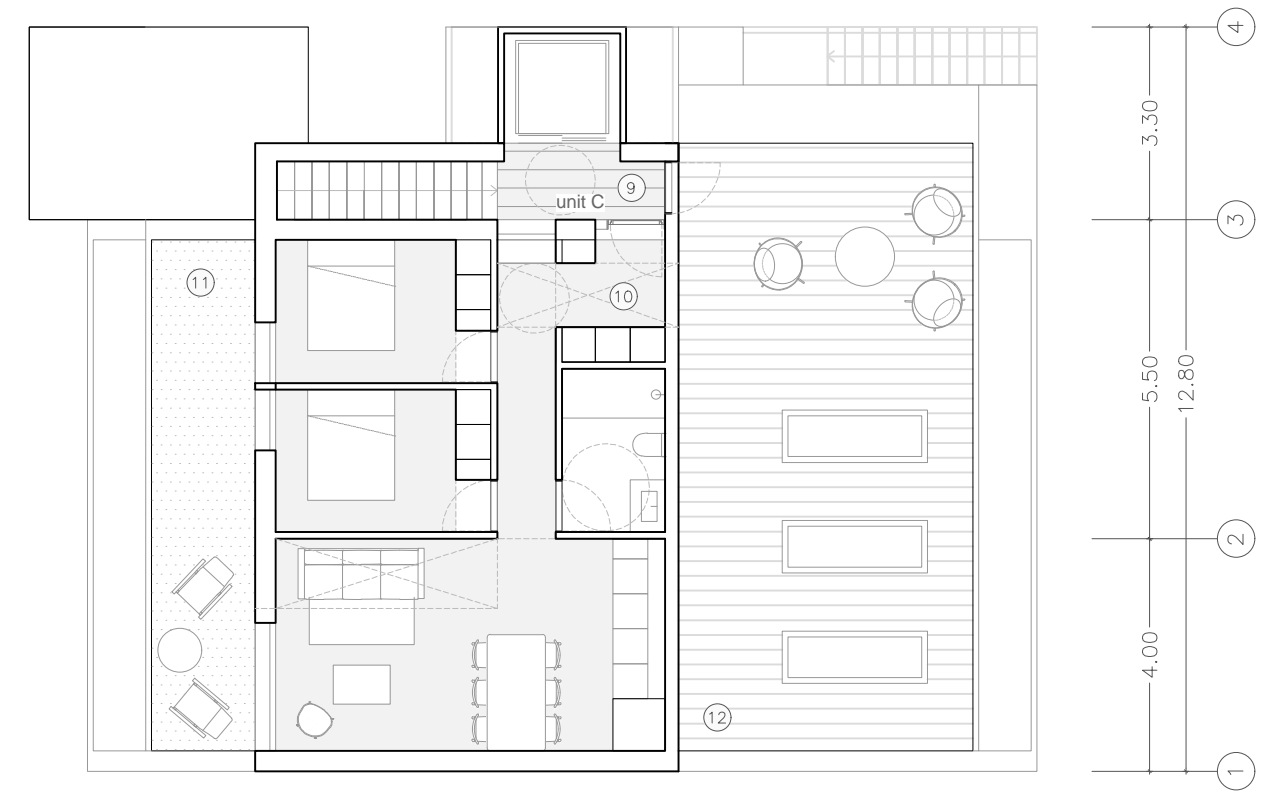


Front Lane View

	NET AREA	m2
1. Exterior stair from backyard to first floor	1.	3.60
2. First floor access to units A and B, exterior and covered area	2.	13.80
3. Coverd common area	3.	8.40
4. Exterior covered stair from front lane	4.	12.20
5. Interior stair connecting directly to second floor	5.	6.00
6. Unit A, interior	6.	64.96
7. Unit B, interior	7.	64.96
8. Private exterior balcony, first floor	8.	7.90 (each)
9. Interior second floor access to unit C and common deck	9.	3.40
10. Unit C, interior	10.	64.96
11. Private exterior balcony, second floor	11.	15.70
12. Common deck area	12.	52.90



First Floor Plan\_\_e 1/130



Second Floor Plan\_\_e 1/130

## Affordability & Cost-Effectiveness

The proposal is based on resilient design principles focused on affordability. All units have the same floor plan. Living area and bedrooms enjoy natural light while kitchen and bathrooms are efficiently located at the party walls, vertically aligned, to allow for an easy mechanical installation that will improve install cost and maintenance.

The floor, wall and roof assemblies have been specifically designed for prefab construction by a local Squamish company. By choosing a prefabricated structure, the client will save time on the overall build schedule and allow for faster final occupancy. Prefab construction also reduces the amount of typical waste found onsite as all materials are accurately 3D modeled prior to being ordered and cut to final dimension. The neighbors will also appreciate the condensed construction schedule with the reduction of onsite noise.

Construction estimated costs will be between the following range, based on Altus Group 2024 Canadian cost Guide. All design, pre-construction and finished build cost has been added:

Cost range to be \$557.45/ft<sup>2</sup> to \$1,250/ft<sup>2</sup>

We have picked the \$557.45/ft<sup>2</sup> cost range to give an example: \$6000/ per finished m<sup>2</sup>

Cost per each unit: 67.95 m<sup>2</sup> x \$6000 = \$407.700

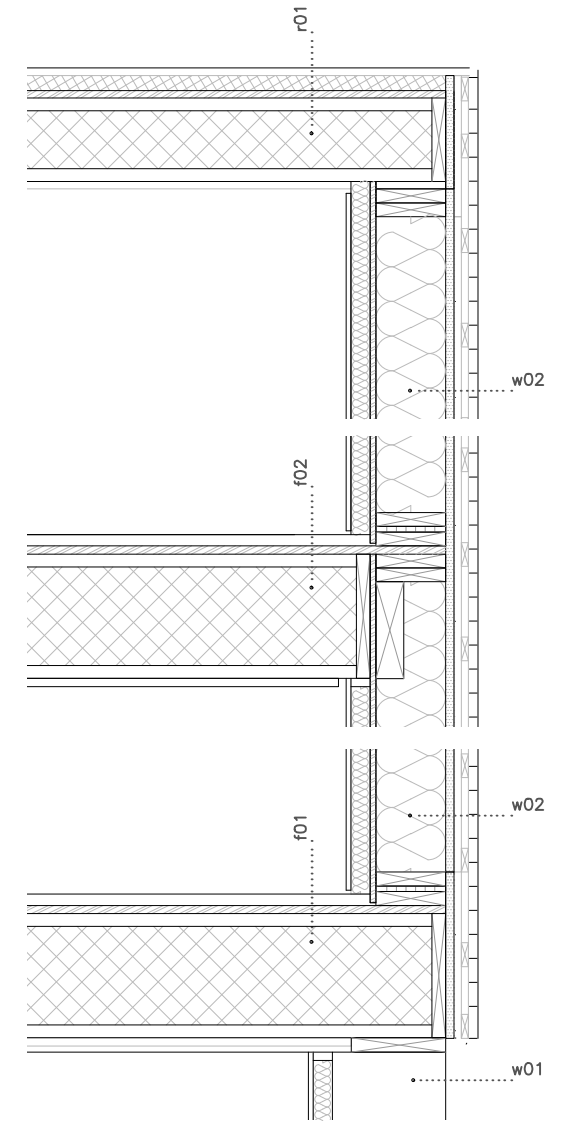
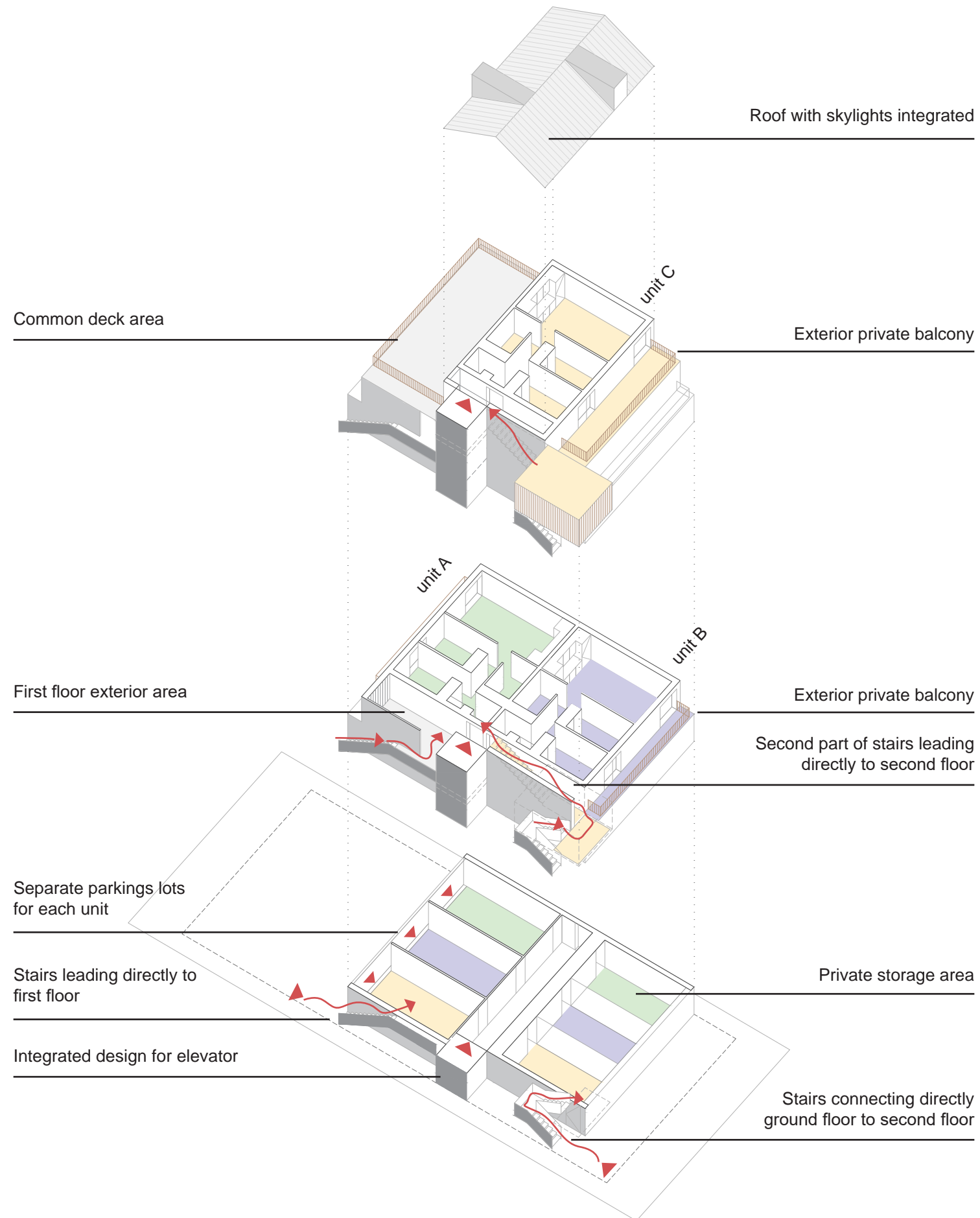
## Sustainability & Resilience

With the use of locally sourced lumber within the structural framing package and by reducing the use of petroleum-based products within the wall assembly, wall assembly will allow for both a healthy home and a more environmentally friendly construction practice. The exterior wall sheathing has been specified as wood fiber board which offers additional insulative value and is a low embodied carbon product when compared to more traditional exterior sheathing options.

The wall & roof assemblies specified within the design will easily achieve **Step Code 5**, the highest energy rating under British Columbia's step code with the use of electric appliances and an air sourced electric heat pump.

The design intention for exterior finishes is use fire-resistant hard board panels as thermal treated light cedar wood and zinc roofing, which require minimum maintenance. All exterior and interior materials used are design under low maintenance and high resistance criteria.

Thick exterior walls will bring greater energy efficiency and roof area is shaped to control and collect rainwater.



Panels Assembly Detail Grid Line 1\_\_e 1/20

**w01.** concrete walls with interior insulated service cavity / **w02.** 2x8 insulated prefab panels with interior service cavity. Balloon frame with ledger connection / **f01.** and **r01.** TJI joist insulated panel with gypsum ceiling

The fire-resistance rating of walls and floor acting as fire separations between dwelling units will be more than 1h (as per Classification C requirements). Garage walls and ceiling fire-resistance will be 2h (as per Classification F3 requirements).

Party walls between dwellings are two 2x6 walls, independent, sealed and insulated. Non combustible insulation within prefab panels without any air gap, will allow for a minimum flame-spread rating. An interior service cavity finished by gypsum drywall will reinforce the thermal barrier against fire spread.

Fire suppression system will include sprinklers, smoke alarm system and CO<sub>2</sub> detectors.

1. Interior and private parking lots for each unit
2. Private storage and bike parking space
3. Access from front lane to parking lots / storage and elevator area
4. Accessible elevator, easily integrated to the stair system with minimum intervention
5. Common interior corridor
6. Gabled roof
7. Integrated roof skylights

**NET AREA**

1.	24.90 m2
2.	19.80 m2
3.	6.20 m2
4.	2.30 m2
5.	20.97m2

**GROS AREA**

Unit A.....	67.95 m2
Unit B.....	67.95 m2
Unit C.....	69.00 m2

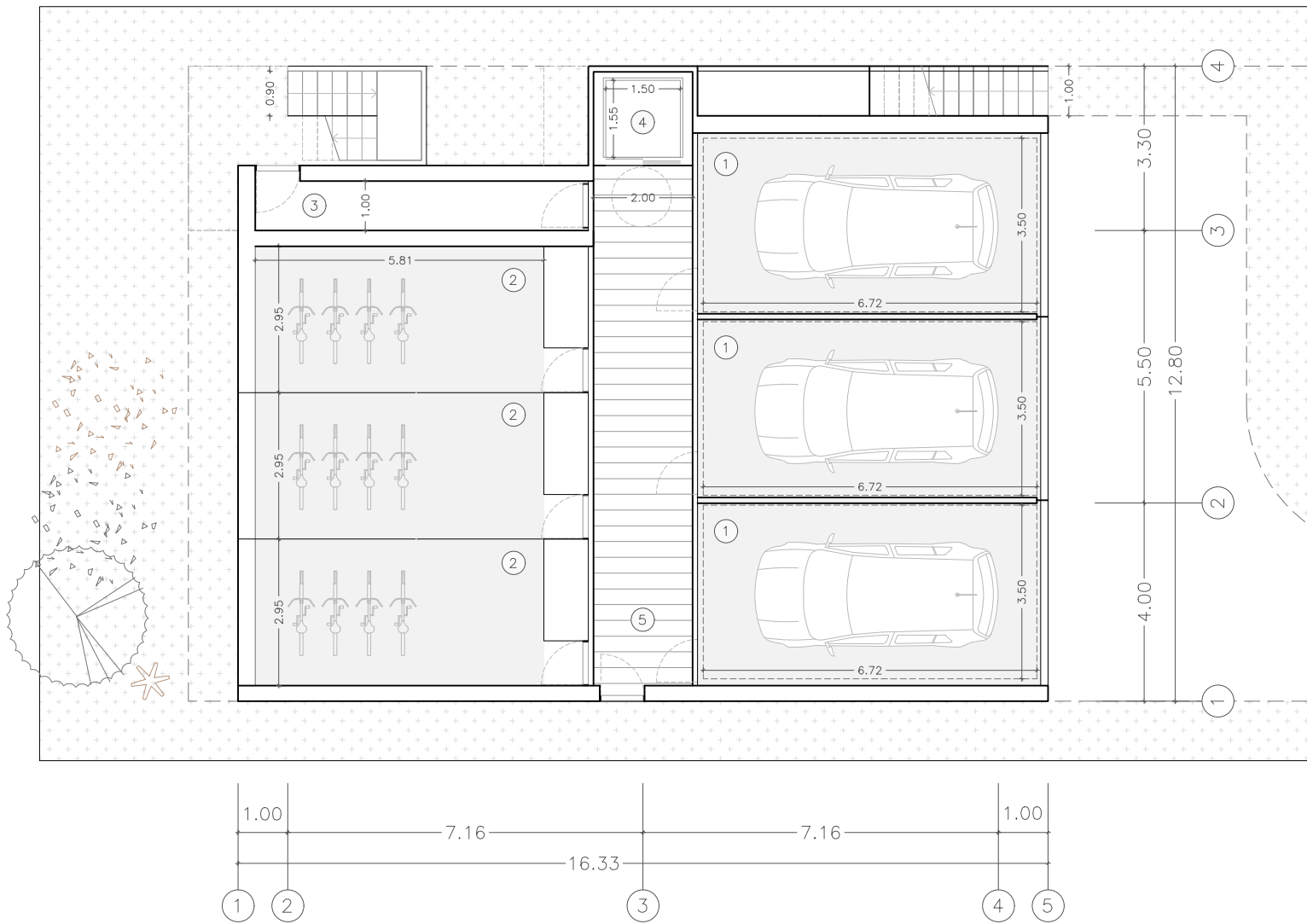
UNITS GROSS FLOOR AREA ..... 204.90 m2

Parking .....	84.50 m2
Storage .....	68.45 m2
Interior common areas .	34.75 m2
Stairsways .....	23.90 m2

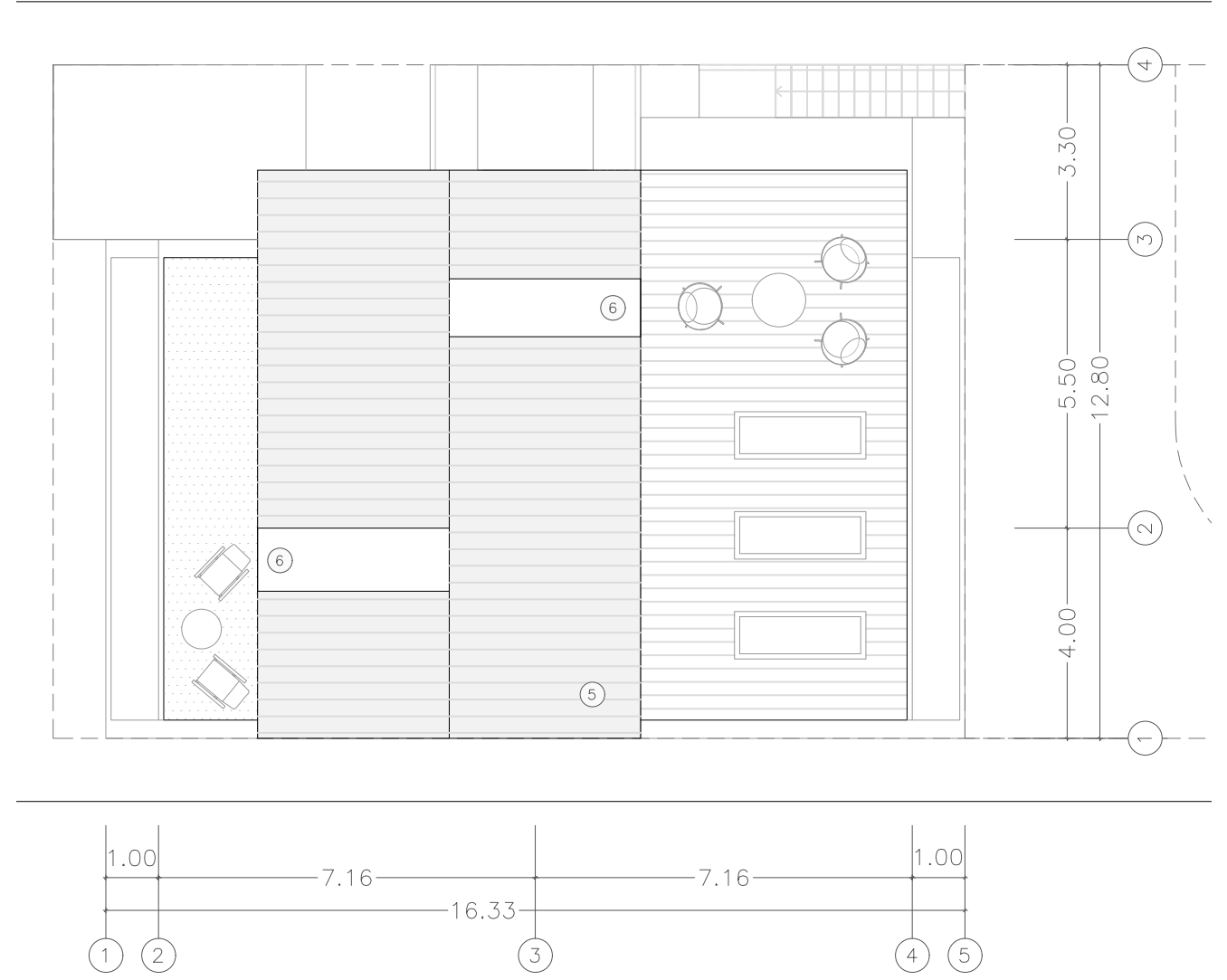
TOTAL GROSS FLOOR AREA ..... 416.50 m2

FLOOR AREA RATIO ..... 0.37\*

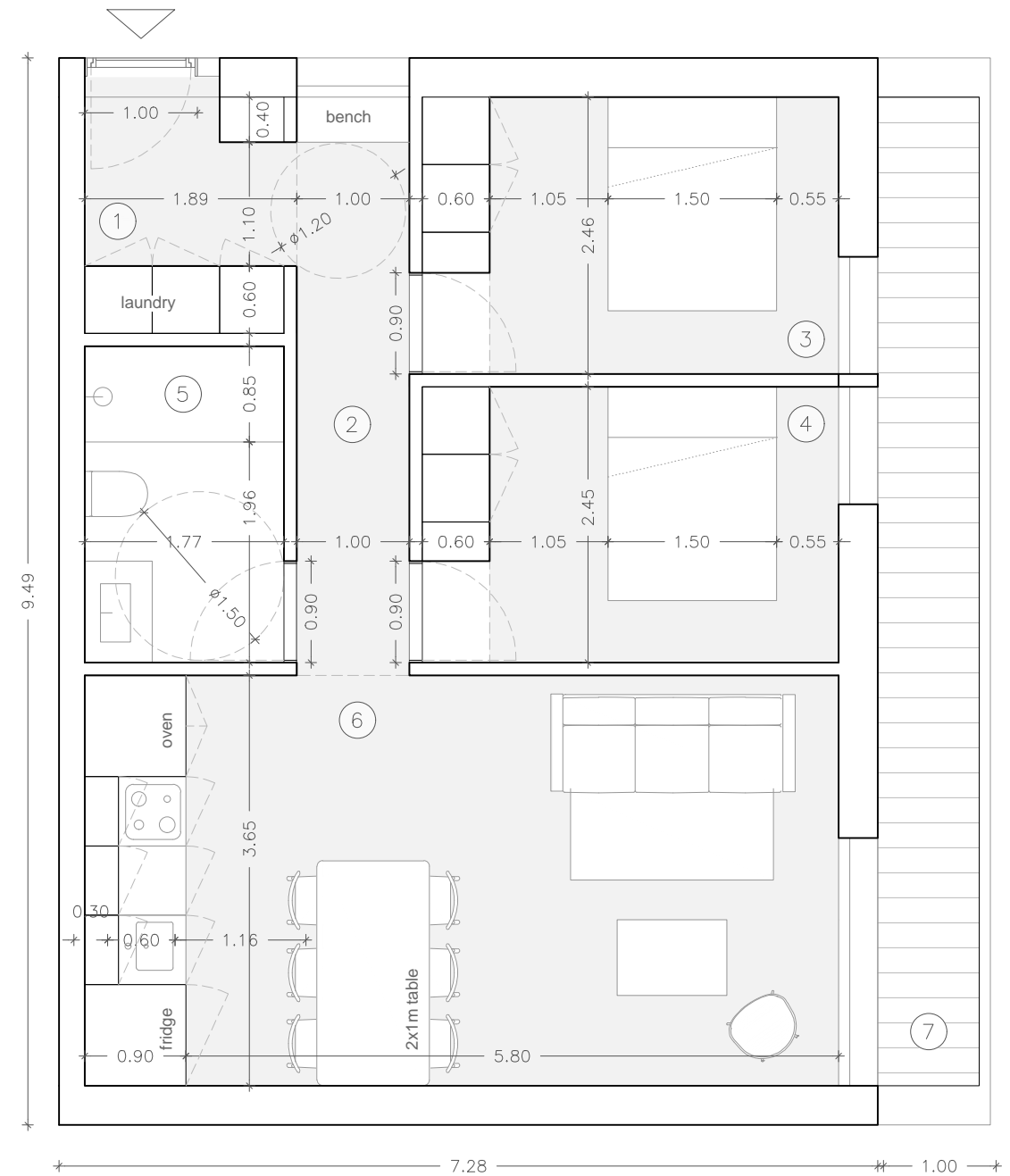
\* there is no maximum Floor Area Ratio established, as per 6A.5 Density at Section 6A for Residential 1 (R-1)



Ground Floor Plan\_\_e 1/130



Roof Floor Plan\_\_e 1/130



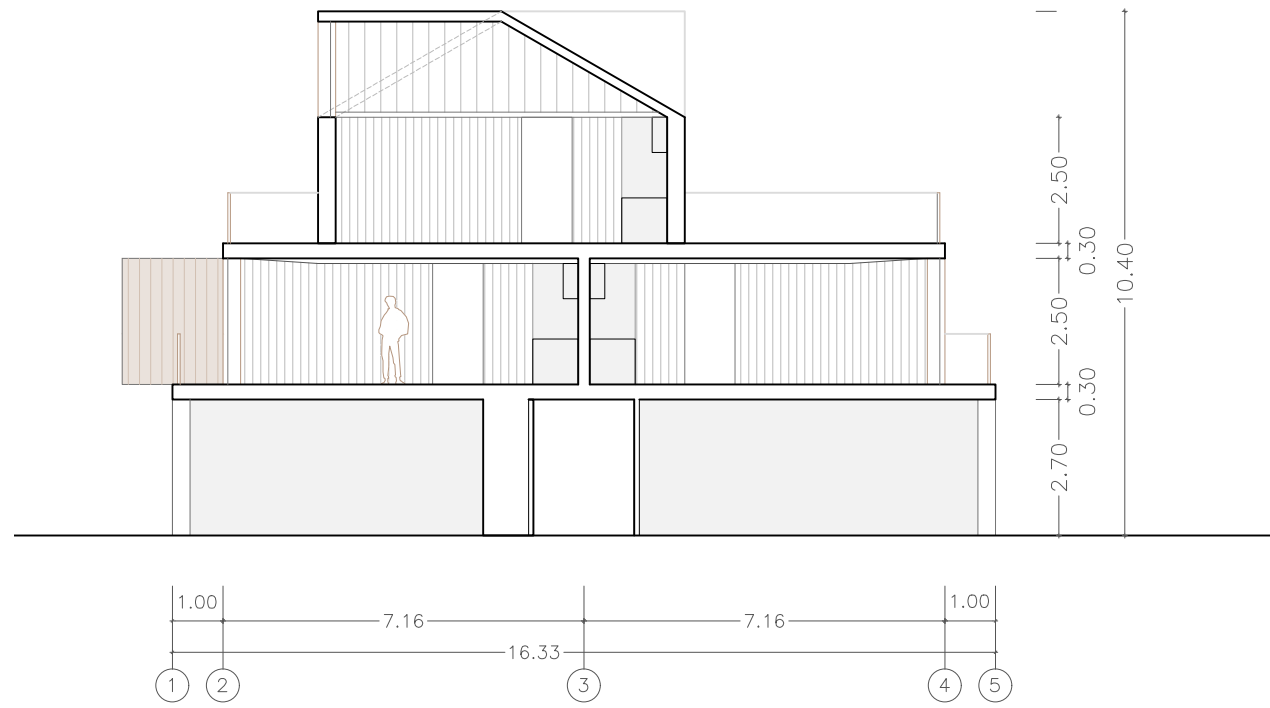
Detail Floor Plan\_\_e 1/60

**UNIT A**

1. Entry .....	4.30m <sup>2</sup>
2. Corridor .....	5.10m <sup>2</sup>
3. Bathroom.....	4.95m <sup>2</sup>
4. Bedroom 1.....	9.10m <sup>2</sup>
5. Bedroom 2 .....	9.06m <sup>2</sup>
6. Kitchen and Living area ...	24.45m <sup>2</sup>
7. Balcony .....	8m <sup>2</sup> *

<b>TOTAL NET AREA .....</b>	<b>64.96m<sup>2</sup></b>
<b>TOTAL GROS AREA .....</b>	<b>67.95m<sup>2</sup></b>

\* it is required a minimum of a 10% of the gross floor area of the dwelling unit to be provided as private usable open space, as per 6A.8 point at Section 6A for Residential 1 (R-1)



Transversal Seccion\_e 1/150



Transversal Seccion\_e 1/150



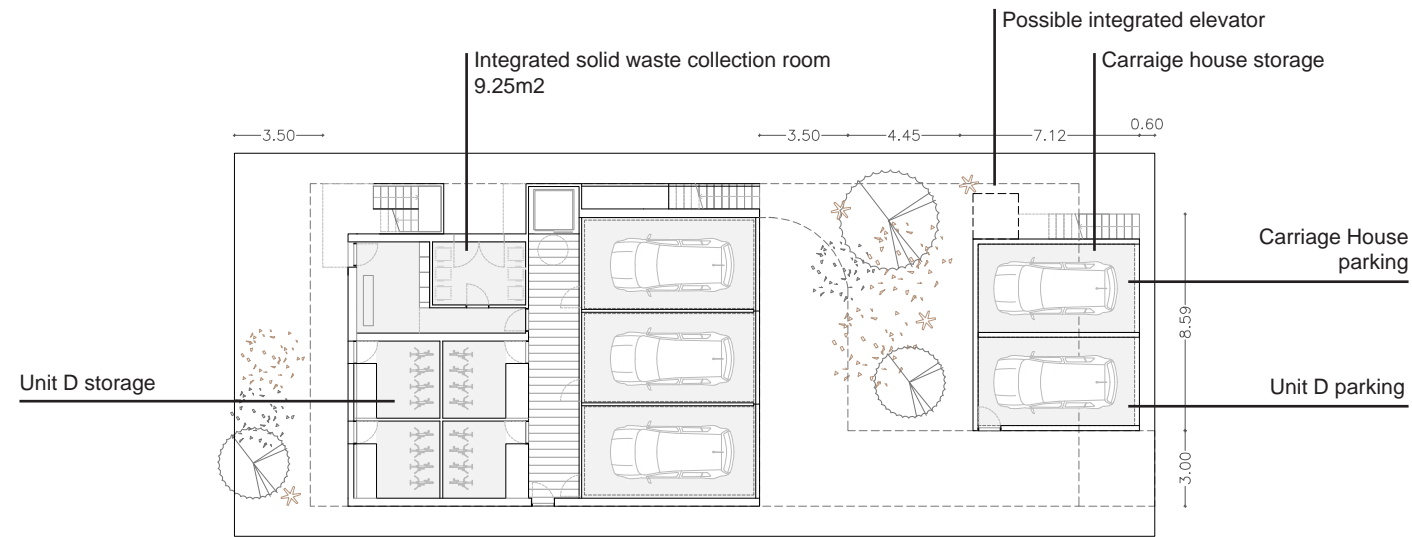
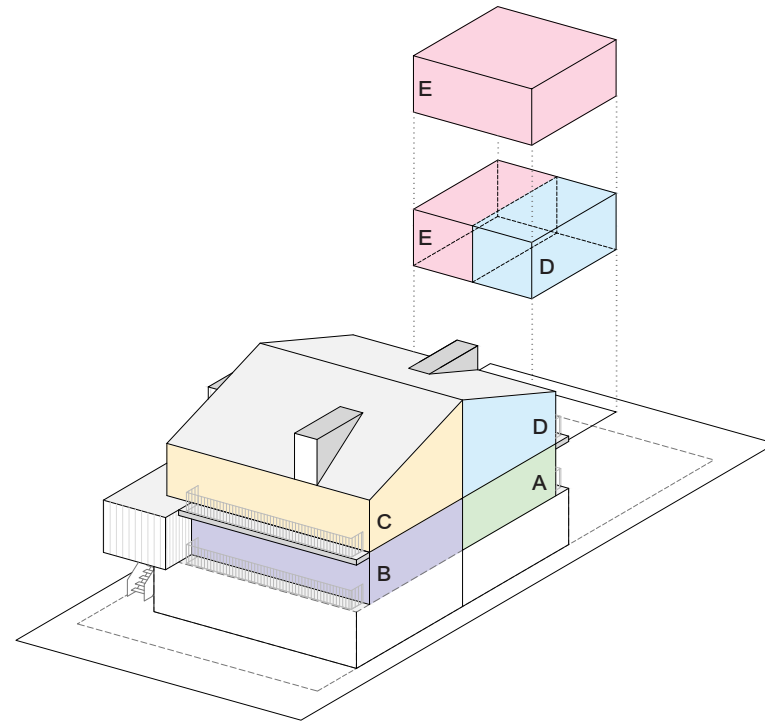


The triplex proposal has been designed to be adaptable to a foruplex or to a fourplex plus an ADU carriage house. This last configuration is the maximum density this proposal can possibly allow.

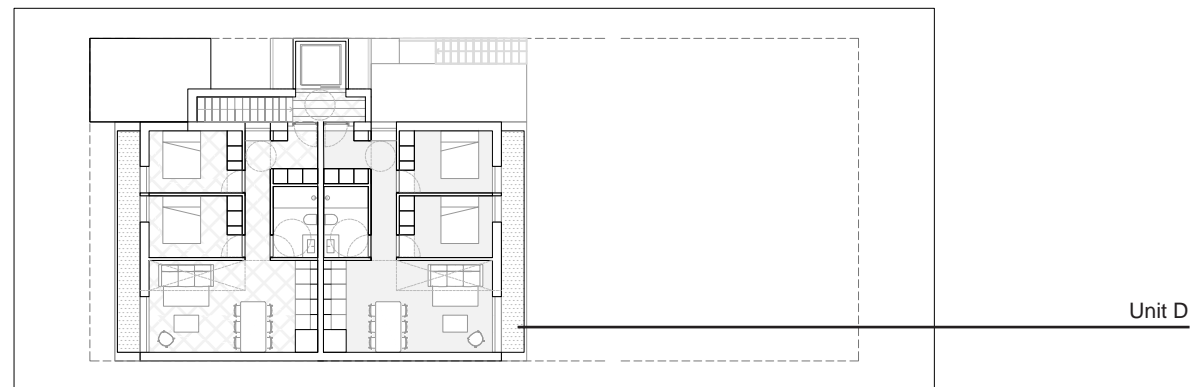
In this proposal, ground and second floor will be as per drawings bellow. First floor and stairs will remain the same.

Site coverage	49.6%	(*1)
- Construction footprint	187.80 m2	
- Carriage House footprint	50.20 m2	
- Driveway	74.50/2 m2	(*2)
Permeable area	275.18m2	
Vehicle parking spaces	5	
Bike parking spaces	multiple	(storage area)

(\*1) Lot coverage shall not exceed 50% of the lot area as per 6A.4 (c) at Section 6A of Residential 1 (R-1)  
 (\*2) Driveway coverage can be reduced by using semi permeable finish



Ground Floor Plan\_\_e 1/300



Second Floor Plan\_\_e 1/300



Rear Lane View