CASE STUDY 2.0
REBUILDING LOS ANGELES

OPPENHEIM ARCHITECTURE | CREST REAL ESTATE | PLUS DEVELOPMENT

PRACTICE SUMMARY

Gregory Phillips Architects is a design-led team who have been creating distinctive and iconic bespoke homes for over 30 years. We specialise in creating modern family homes alongside a select team of partnering contractors, suppliers, consultants and fabricators.

The architects at the practice have all worked extensively within private residential design and understand what makes a house a home.

We provide the highest quality of living spaces tailored to our client's requirements, while exploring all the opportunities that a modern house can provide.

Each project is a story that reflects the dialogue and ideas shared by us and our clients and we strive to create spaces that are practical and comfortable, yet uncompromisingly modern. Houses that are iconic, but also functional homes with an underlying simplicity and understated luxury.

The practice focuses solely on family houses and therefore we are well acustomed to the needs and requirements of the modern family.

We aim to blend a functional and practical home with the qualities and benefits of modern construction, technology and materials.

PROJECT NARRATIVE

The project is conceived as an extension of the case study house ethos of the mid 20th century, within a context of the modern world.

The original Case Study houses emphasised practical, modern and adaptable construction techniques with an adaptable design framework that would allow them to be shaped by their occupants.

The house is divided into two distinct elements - at the front, a box containing all the bedrooms on the first floor and services spaces on the ground floor, which forms the core of the house.

With its simple form, this can be configured as a three or four bedroom house depending on preferences with minimal changes.

At the rear, a pavilion structure houses the everyday living, dining and kitchen spaces. This modular pavilion layout equally can be adapted to be smaller if required, affording more garden to the property and lower capital construction cost.

The form references the mid century Neutra case study houses with their single storey profile, extensive glazing, connection to outside, flexible layout and expressive structure.

The configuration allows the creation of two distinct living and dining areas outside the study/ kitchen and outside the living room, with ample space for a pool in between.

Overhangs create protection from overheating and increase defensible space, while also softening the transition between inside and outside.

The house innovatively proposes to use a combination of traditional, seismically resistant timber construction, which is protected by an aluminium ‘shell’ to reflect heat and provide protection from fire.

The ground slab is then constructed using helical screw piles and a concrete raft slab providing a house that still maintains a light touch on the site with minimal groundworks but a better resistance to fire than traditonal raised deck timber slab construction.

These techniques minimise time on site, maximise flexibility and create an appropriate solution for construction in this region which echoes the spirit of the original Case Study houses.

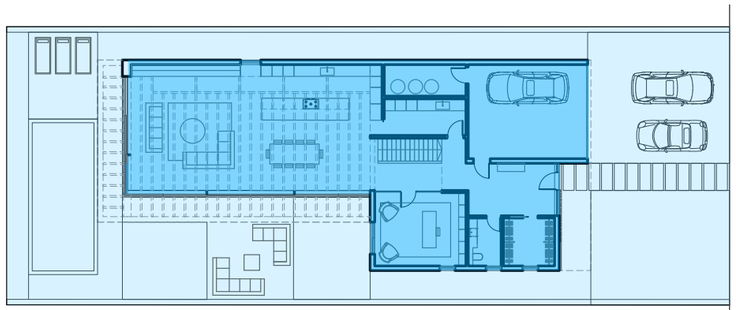
PARCEL INFO & DIAGRAMS

SITE PLAN 1037 ILLIFF STREET

BUILDING AREAS

FLOOR AREA RATIO: 0.63	4095 SQ FT
PROPOSED GROUND FLOOR	2465 SQ FT
PROPOSED FIRST FLOOR	1501 SQ FT
TOTAL	3966 SQ FT
LOT COVERAGE	38% (EXCLUDING COVERED AREAS)

FLOOR AREA SUMMARY

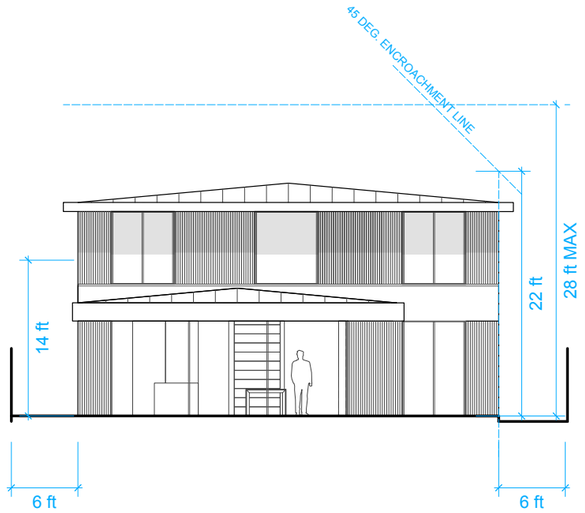


LOT AREA:	6500 SQ FT
BUILDING FOOTPRINT:	2432 SQ FT
LOT COVERAGE	38% (EXCLUDING COVERED AREAS)

PROJECT DATA

LOCATION :	1037 N ILLIFF STREET
APN:	4423011017
SITE AREA:	6500 SQ FT
SITE DESIGNATION:	R1V1
SET BACK REQUIREMENTS	
FRONT:	25 FT
REAR:	15 FT
SIDE:	5 FT + 1 FT FOR EVERY 10 FT OVER 18FT
OTHER REQUIREMENTS	ALLOW FOR 2 NO. COVERED PARKING SPACES.

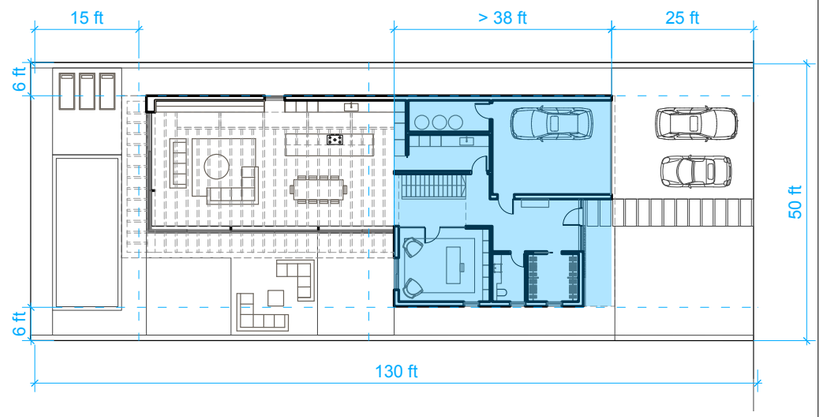
BUILDING HEIGHT DIAGRAM



ENCROACHMENT PLAN:	45 DEGREES
MAXIMUM HEIGHT (SIDE ELEVATION):	22 FT
MAXIMUM OVERALL HEIGHT:	28 FT
SIDE:	5 FT + 1 FT FOR EVERY 10 FT OVER 18FT
BUILDING LENGTH OVER 14 FT HIGH:	38 FT (THEREFORE NO ADDITIONAL SETBACK REQUIRED)

NOTE: BUILDING HEIGHT CAN BE SUBSTANTIALLY INCREASED IF REQUIRED AND BUDGET ALLOWS.

BUILDING ENVELOPE AND SETBACK DIAGRAM



SITE DIMENSIONS:	130 FT DEEP X 50 FT WIDE
FRONT SET BACK:	25 FT
REAR SET BACK:	15 FT
SIDE SET BACK:	6FT BASED ON 5+1 FT WITH A MAXIMUM DEPTH OF 38FT
OVERHANGS:	NOT INCLUDED IF LESS THAN 5 FT.
DEFENSIBLE ZONE:	VEGETATON TO BE MAINTAINED 5 FT FROM THE BUILDING.
2 STOREY ELEMENT:	NOT EXCEEDING 38 FT TO MINIMISE WIDTH OF SIDE SET BACK.
SINGLE STOREY ELEMENT:	NOT EXCEEDING 14 FT IN HEIGHT.

DESIGN FEATURES

FIRE RESISTANCE

Exterior materials are chosen for their fire resistance. The house utilises a mineral self coloured render, stone or porcelain on an inert carrier board which is held away from the structural frame with fire resistant metal cleats. Roofs are made of non combustible standing seam metal.

ROOFING

Sloped standing seam roof was chosen over tiles as it has fewer joints and therefore less opportunity for debri to accumulate. Reflective finishes are used to reduce heat build up. The slope allows integration of a sprinkler system which can run water across the roof to provide a cooling and extinguish embers blown onto the roof surface. Gutters are all external to allow protection through overflows and overhangs incorporated wherever possible to protect facades. Gutters will also be protected from debri by mesh leaf guards offering additional protection.

BUILDING SIDING

The building siding will include various options but is proposed to be constructed with heat resistant ceramic cladding or profiled aluminium cladding which is both heat reflective and fire resistant. More traditional timber siding could be used but is avoided to maximise fire resistance.

WINDOWS & DOORS

Large glazed areas are protected by overhangs to prevent direct exposure to flames. The overhangs also give the option to integrate fire resistant rollers/ shutters for added protection. Aluminium doors are chosen over steel or timber for their non combustibility/ higher melting point and handles will be in a heat resistant material so these can be operated even when hot.

DEFENSIBLE SPACE INTEGRATION

No vegetation is to be located within 5 feet of the property. Maintenance measures will be included to prevent the build up of leaf litter or brushwood. Boundaries willl be enclosed with non flammable metal fencing and boundary planting is to be slow growing climbers which as they are not self supporting will not exceed the eaves level in height preventing ‘seeding’ of embers. No trees or large shrubs are to be located in front of the property in order to facilitate fire fighting access.

VENTS

Heat resistant vents are to be used for bathroom fans and for the roof. These can also have a fire resistant ‘Trap’ to prevent these coming into contact with combustible materials. The ground floor - an area prone to embers through void vents will be built utilising not combustible methods consisting of steel helical foundations and a metal and concrete deck slab.

EMBER-RESITANT FEATURES

Ember resistant features such as protected gutters, projecting eaves and sloped standing seam cladding prevent the build up of embers which can cause fire.

SUSTAINABILITY

The project will aim for 75% of materials to be recyclable. The use of renewable timber for the frame, reusable helical pile foundations and recycable metal roofing and render carrier boards. Overhangs and shutters are incorporated and reflective finishes used to reduce solar gain and minimise the need for additional cooling alongside passive ventilation measures.

DESIGN QUALITIES

The design offers efficiency and flexibility in the layout and can be adapted around the same principles. It creates a connection with the outside, and modern flexible open plan living while also maintaining privacy between the front and back of the house.

CONSTRUCTION METHODOLOGY

It is proposed to utilise screw pile foundations with a concrete metal deck slab for both fire resistance and high quality seismic resistant construction. The upper levels are created using modular timber construction. The front of the house is built in casette panels and the rear in a timber beam and post configuration, allowing the size of the single storey element to be customised. Standing seam metal roofing allows for heat reflection and a protective ‘shell’.

EFFICENCY

The building utilises quick to construct, low impact foundations. A concrete slab offers fire resistance and a constant temperature compared to a suspended timber floor. Relfective roof coverings and overhangs reduce passive solar gain and there will be the option of utilising a heat pump for underfloor cooling as more sustainable alternative to air conditioning. The plan layout minimises circulation and maximises usable space and connection to the garden.

STYLE FEATURES

The large expanse of glazing at the rear allows for a building which is able to fill the site but also integrate with the landscape. The large open plan space with exposed structure echoes the modular qualities of previous Case Study houses in the area such as the Eames house.

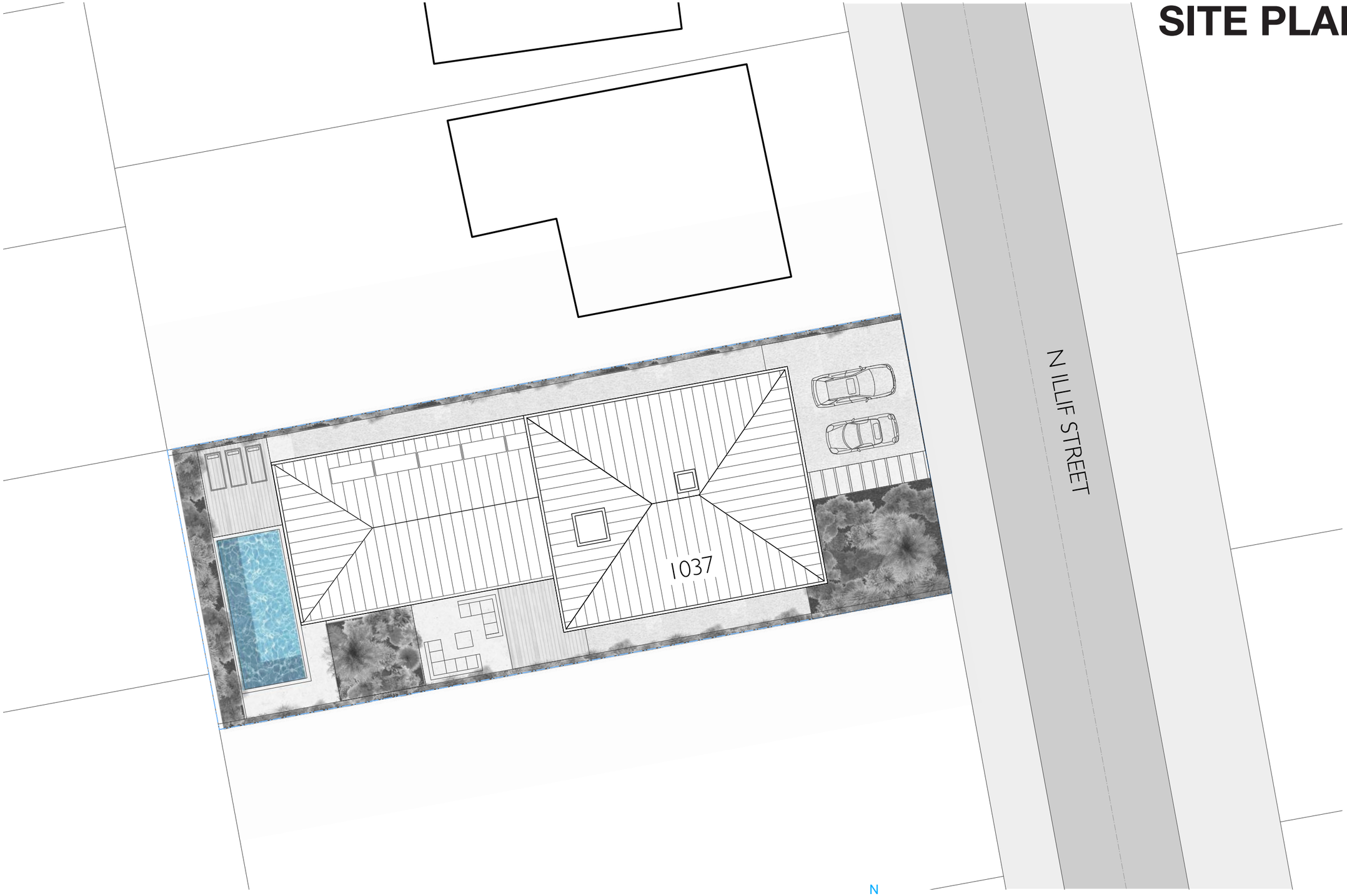
ADDITIONAL SPECIAL FEATURES

Solar panels are easily fixed to the standing seam metal roof, the buildings shallow reflective roof maximises the opportunity for heat deflection as well as cooling through roof level sprinkler systems which can utilise the pool water in an emergency situation.

CUSTOMIZATION POTENTIAL

The flexible living dining kitchen space with a modular post and beam construction allows this area to be reduced or extended at a later date. The study can be used as a kitchen or dining room meaning that the building can be significantly changed in size and scope without changing the fundamental design. A variety of finishes can be used as cladding and options have been developed with a three or four bed variant. A house becomes a home when it is tailored to the needs of the individual and the intention was to create a universal simplicity while allowing maximum opportunity for customisation in both finishes and layout. The height can also be increased by up to two feet if budget allows.

SITE PLAN

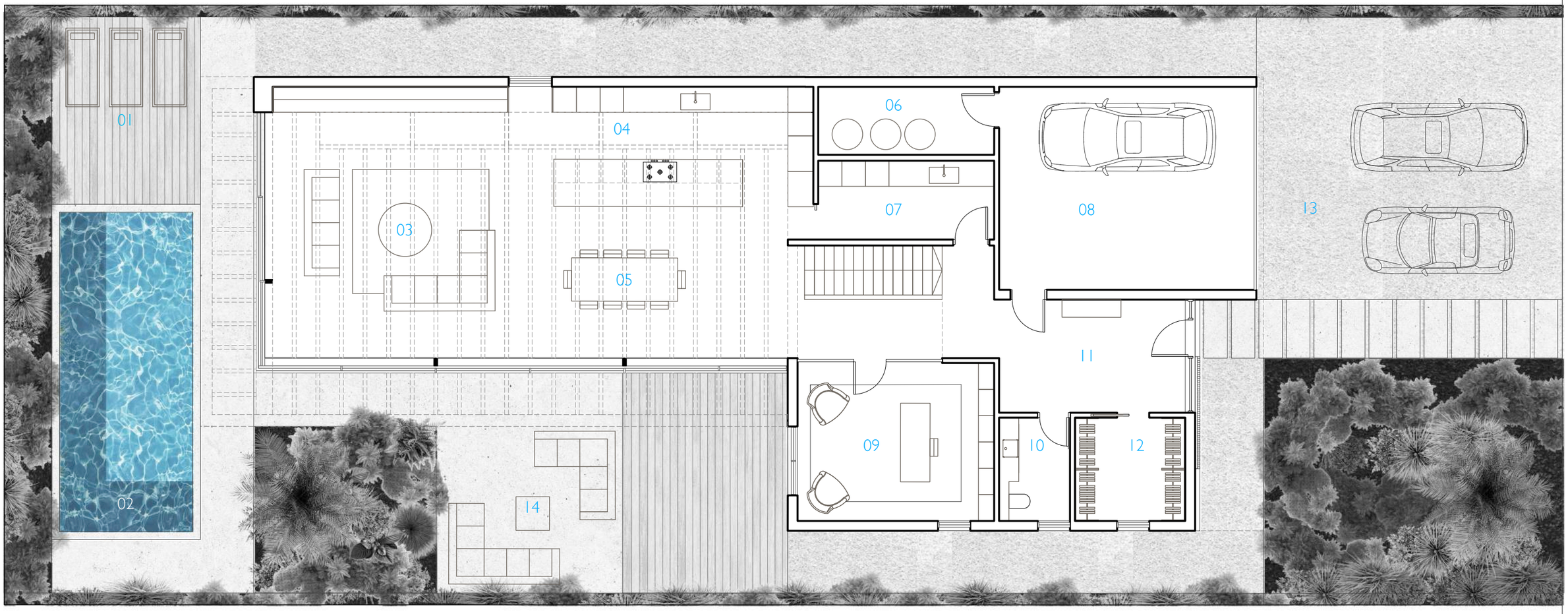


Site plan

GROUND FLOOR PLAN

0 1 2 3 4 5 10 ft

01	Pool terrace	08	2 car garage
02	Optional swimming pool	09	Study
03	Living room	10	Powder room
04	Kitchen	11	Entrance hall
05	Dining room	12	Cloak room
06	Plant room	13	Driveway
07	Utility room	14	Dining/ living terrace



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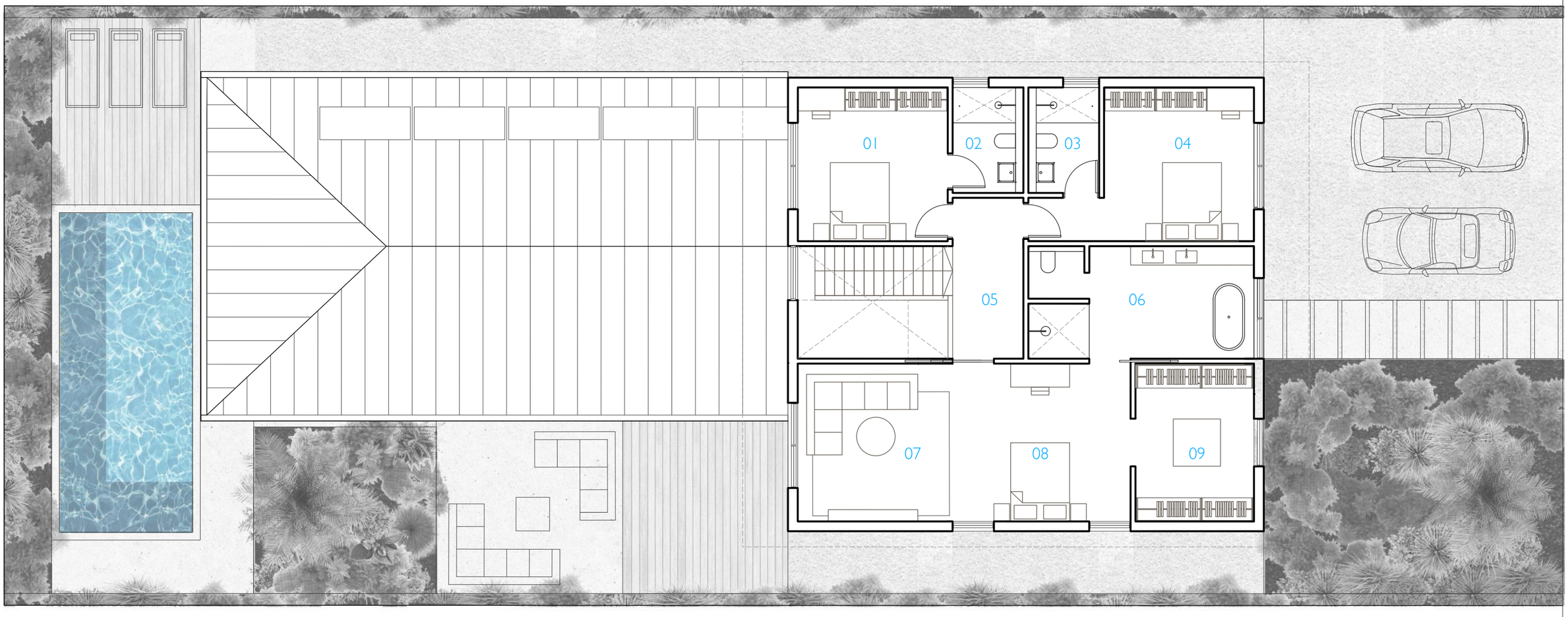
Ground floor

FIRST FLOOR PLAN - 3 BED

0 1 2 3 4 5 10 ft

01	Bedroom 02
02	Bedroom 02 en suite
03	Bedroom 03 en suite
04	Bedroom 03
05	Hallway
06	Master bedroom en suite
07	Master bedroom living space
08	Master bedroom
09	Master dressing room



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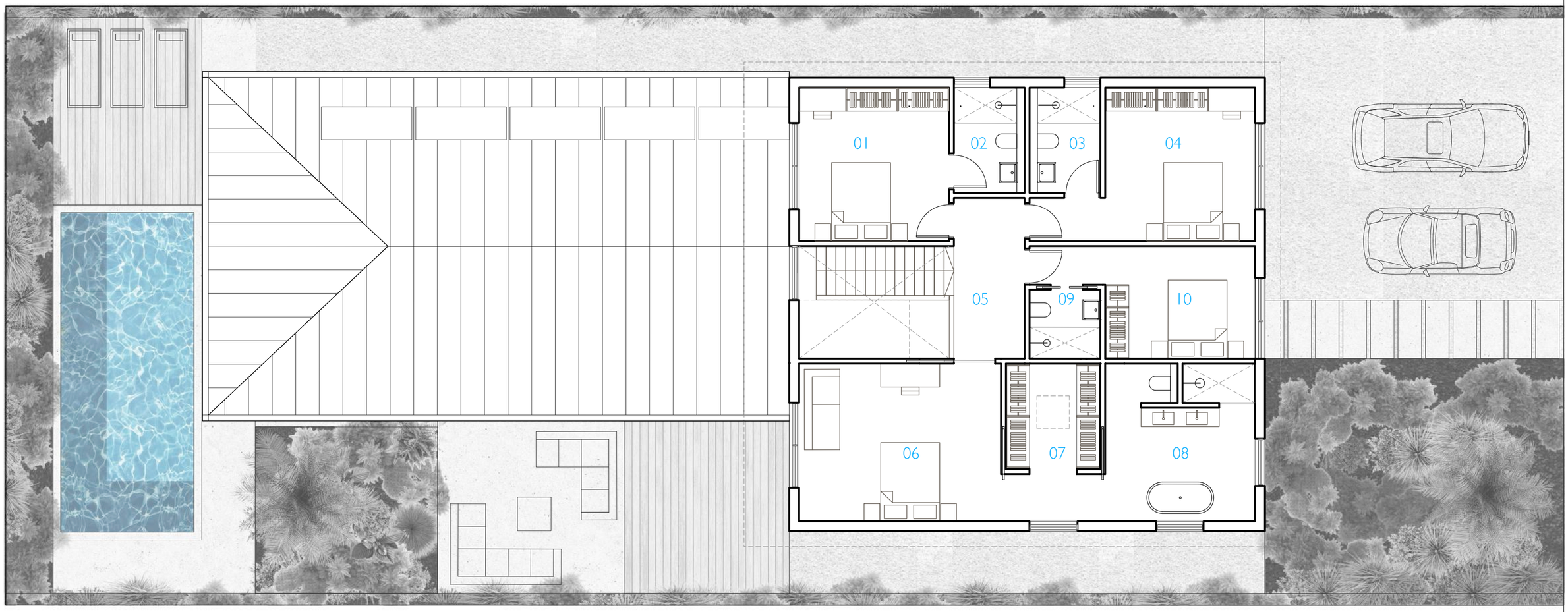
First floor

FIRST FLOOR PLAN - 4 BED

0 1 2 3 4 5 10 ft

01 Bedroom 02
02 Bedroom 02 en suite
03 Bedroom 03 en suite
04 Bedroom 03
05 Hallway
06 Master bedroom
07 Master dressing room
08 Master bedroom en suite
09 Bedroom 04 en suite
10 Bedroom 04



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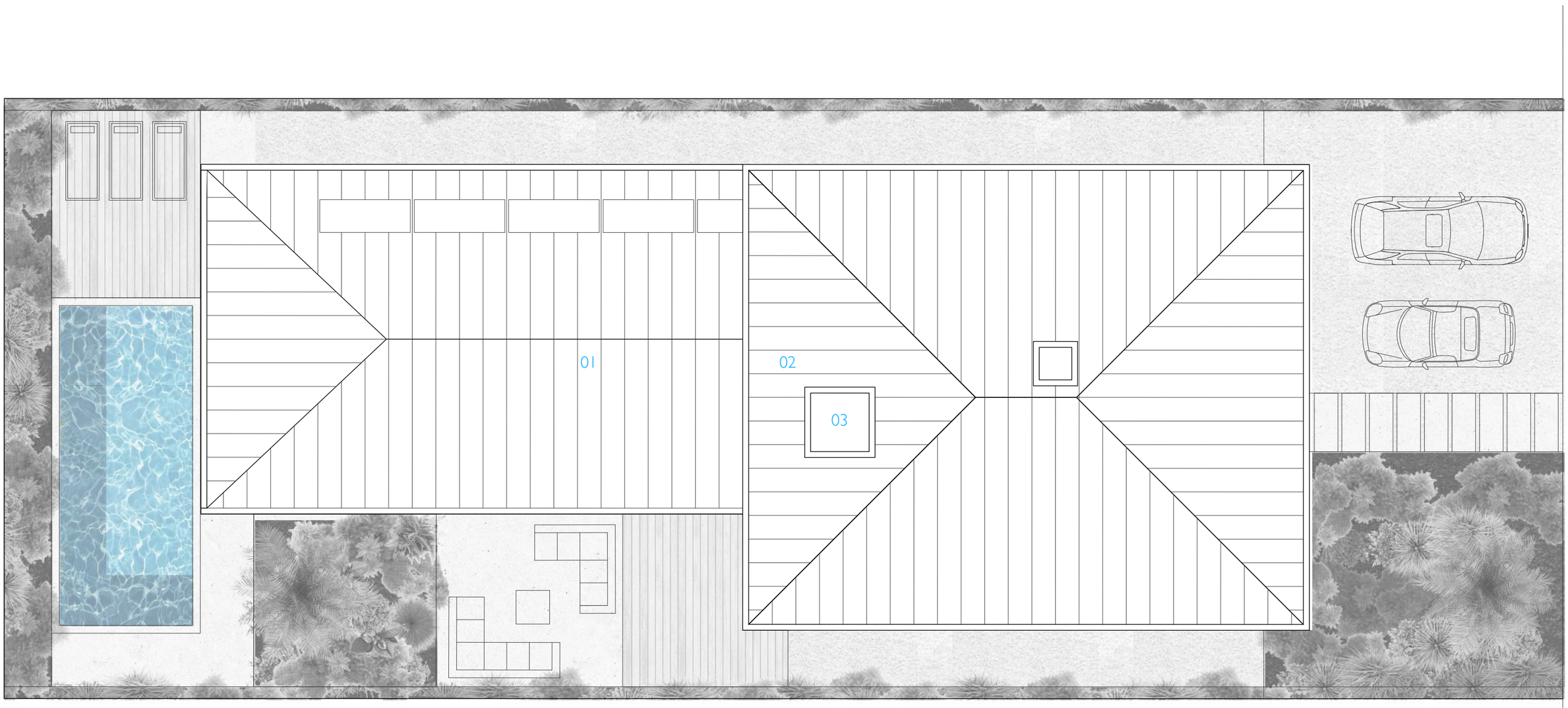
First floor

ROOF PLAN

0 1 2 3 4 5 10 ft

01 Sloping roof with sprinkler system
02 Skylight
03 Hallway skylight



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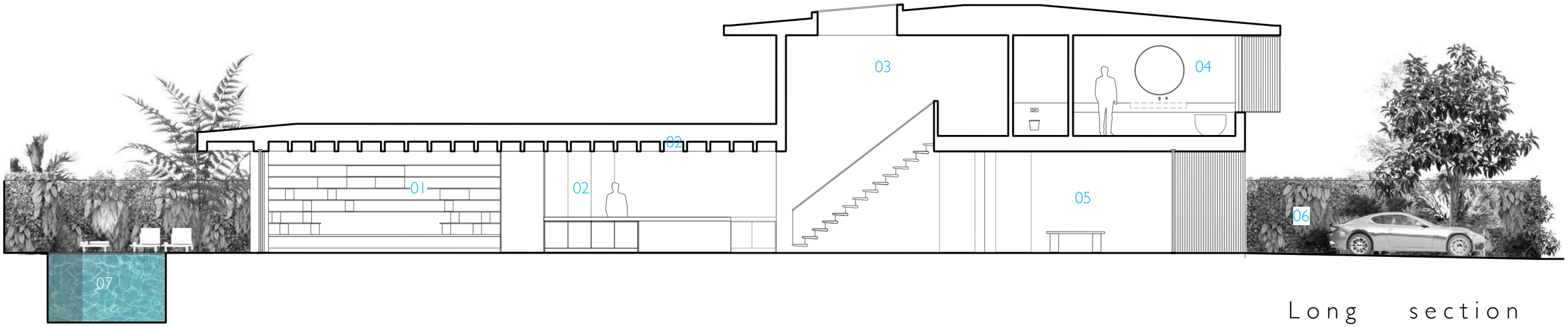
Roof plan

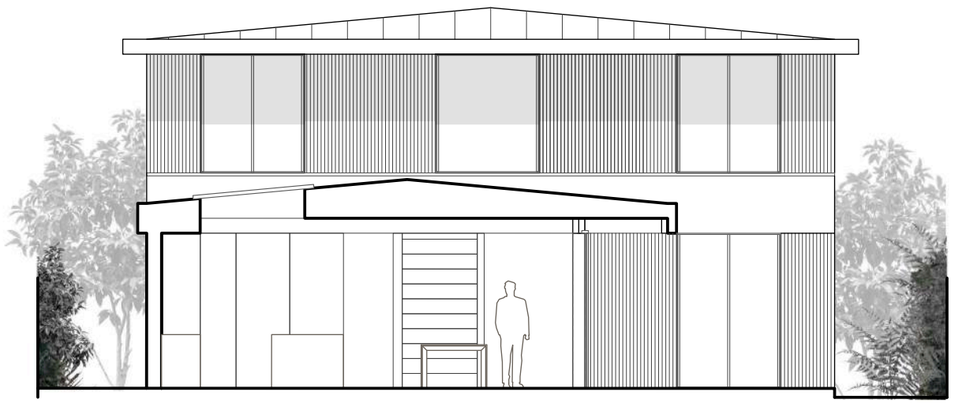
SECTIONS

0 1 2 3 4 5 10 ft

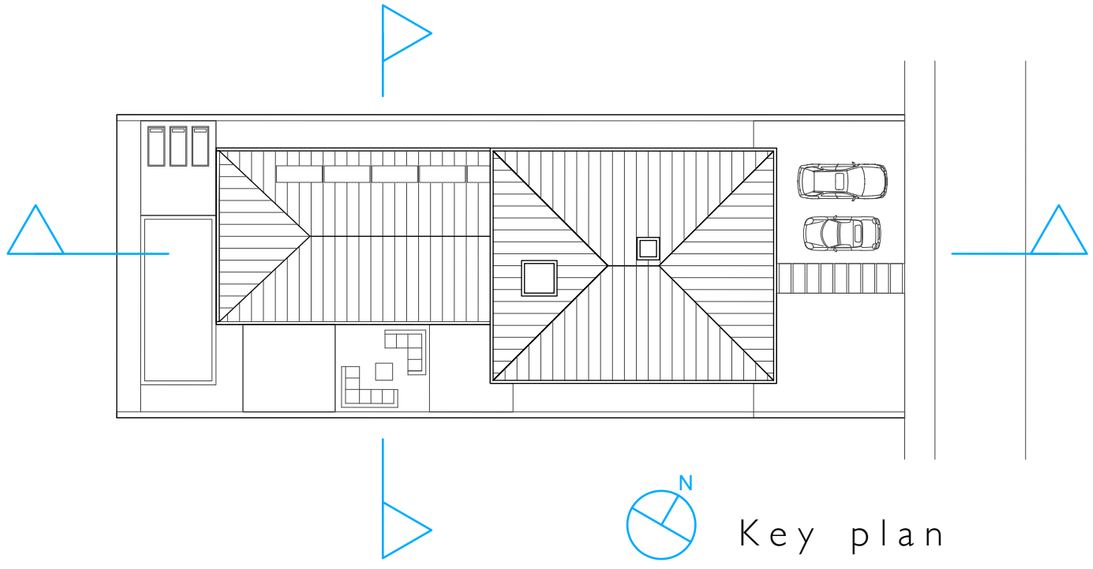
01 Living room
02 Kitchen
03 Stairwell
04 Master en suite
05 Entrance hall
06 Driveway
07 Swimming pool



Long section



Cross section

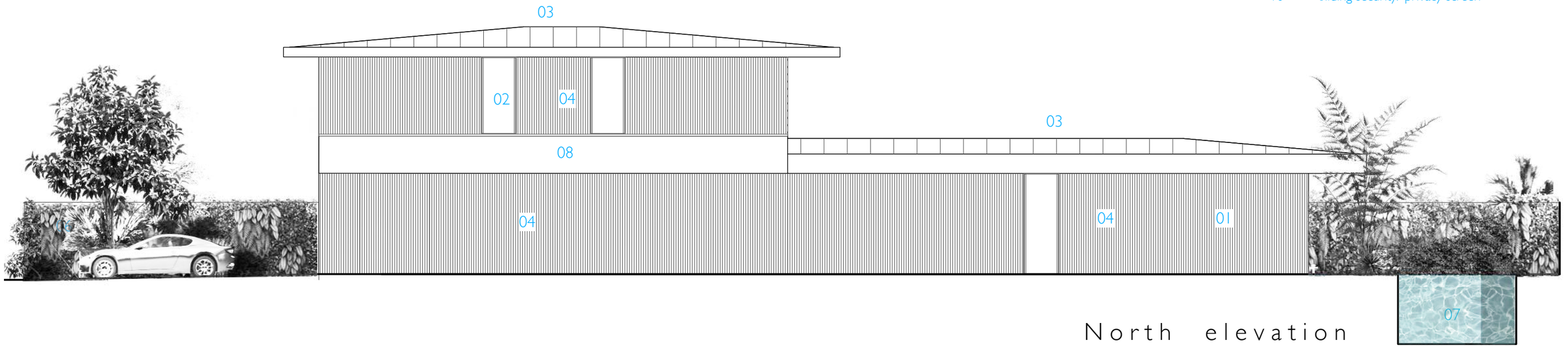


Key plan

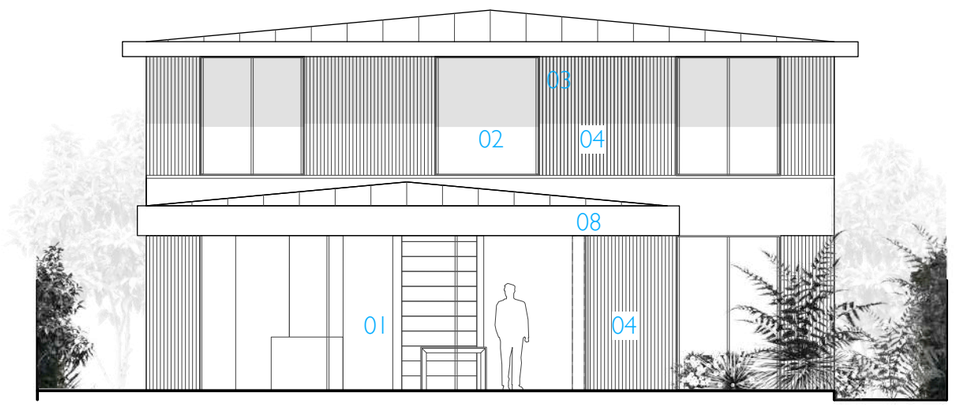
ELEVATIONS

0 1 2 3 4 5 10 ft

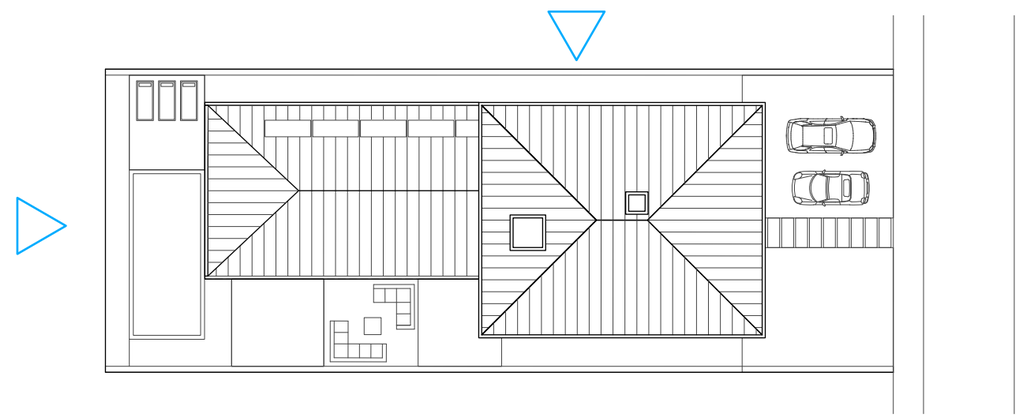
01 Modular living spaces with sliding glazing
02 Modular bedroom block
03 Low pitched roof with sprinker system.
04 Profiled aluminium cladding
05 Aluminium shutters
06 Driveway
07 Swimming pool
08 Heat resistant ceramic cladding
09 Front door
10 Sliding security/ privacy screen



North elevation



Rear elevation



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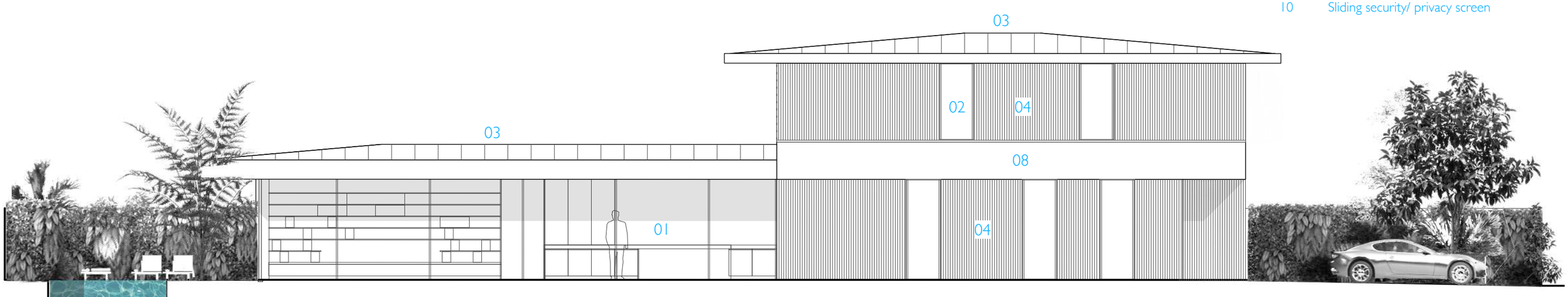
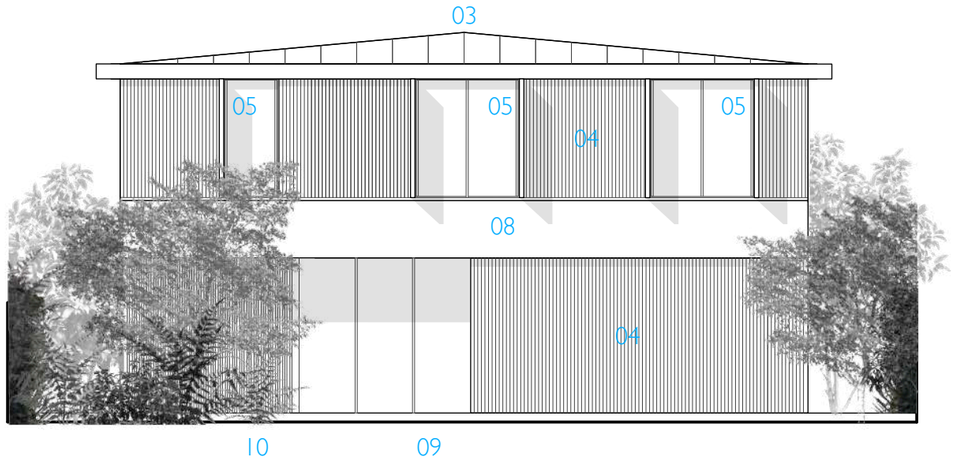
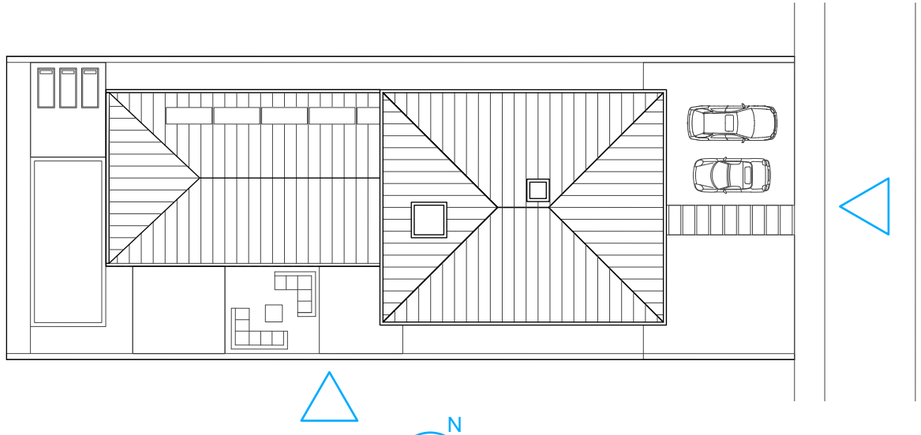


South elevation



Front Elevation



Key plan

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