

INTERNATIONAL PROPERTY AWARDS  
ARCHITECTURE | SINGLE RESIDENCE

# casa carbó



CASA CARBÓ







# about the company

GAAB Design-Build is an architecture and construction firm based in southern Mexico, with over three decades of experience designing and delivering residential, commercial, recreational, and healthcare spaces.

Our practice is grounded in the belief that architecture must be human-centred—spaces should serve, uplift, and respond to the people who inhabit them.

Our approach merges architectural sensitivity with engineering precision to create timeless, high-performance spaces. Each project is tailored to its context, with a focus on user experience, climate responsiveness, and material integrity.

At GAAB, we believe architecture should not only function—it should feel.

That's why we build spaces that are as human as they are enduring.



a.

## Design Brief & Concept Evolution.

An exploration of the client's brief, conceptual narrative, and the design process—from initial sketches to architectural form.

b.

## Site & Contextual Relationship.

Analysis of the surrounding environment, site constraints, and contextual integration strategies.

c.

## Architecture, Layout & Use of Space.

Floorplans, spatial organisation, key living spaces, and the architectural logic behind flow and function.

d.

## Materiality, Atmosphere & Finish.

A curated look at the tactile and visual language of the project: onyx, marble, metal, and wood in dialogue.

e.

## Sustainability, Energy Conservation & Innovation.

Passive and active strategies for thermal comfort, energy savings, and environmental performance.

f.

## Safety, Automation & Technical Integration.

Smart systems, CCTV, HVAC, lighting control, and power backup infrastructure fully integrated into the house.



**a.** Design Brief and Concept Evolution.

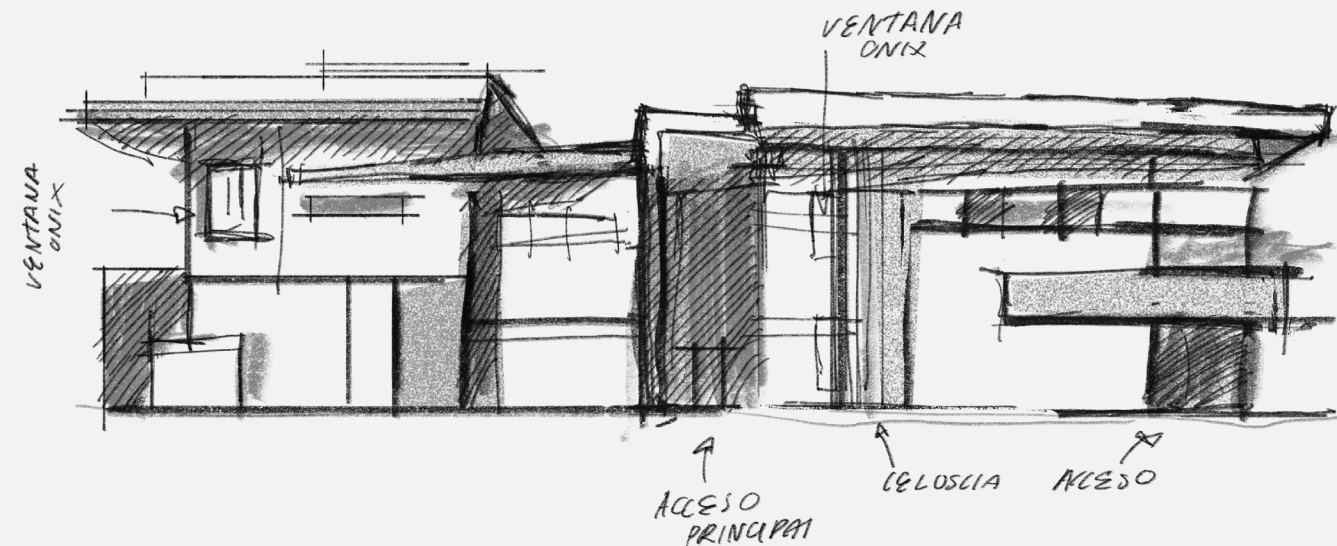


# CASA CARBÓ

Casa Carbó was born from a single image: that of a glowing ember, restrained and radiant.

The client envisioned a home not as a shelter, but as a vessel of living energy — warmth made tangible, atmosphere made architectural.

This house was to resonate with fire, not in violence, but in vibrancy. In a city where sun and rain engage in eternal contrast, the home had to embody both containment and release.



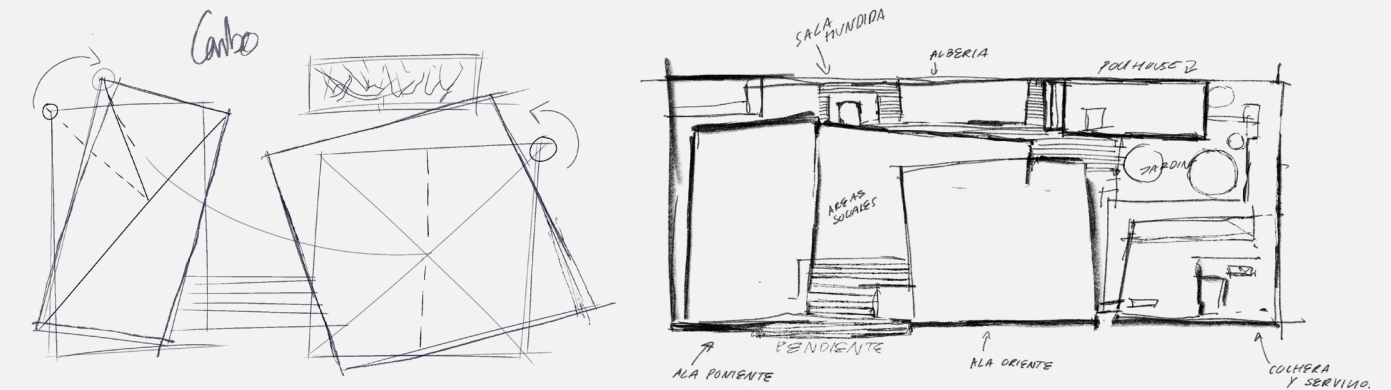
## CLIENT VISION AND CONCEPTUAL NARRATIVE

Casa Carbó was born from the memory of warmth — a luminous ember suspended in time. The client envisioned a dwelling not simply as a container of life, but as an instrument of experience: vibrant, composed, and quietly powerful.

In Villahermosa's tropical climate — where sun and rain exist in constant tension — the architectural response had to be both elemental and refined.

Geometry became restraint, and materiality, expression.

The house is sculpted as a mineral monolith, pierced by bands of backlit onyx that glow at dusk like the last light of a coal fire.



This is a home conceived to breathe. Light is not a passive element here: it is captured, guided, and reflected.

Surfaces do not decorate — they radiate.

Every volume contains contrast: cool marble meets warm walnut, ash-toned stone meets luminous veins. Rather than impose itself, the house reveals itself — softly, deliberately, like flame drawn from stone.

Casa Carbó is not a narrative of excess, but of calibrated intensity.

It does not burn bright — it glows deep.

# PROGRAMME AND FUNCTIONAL REQUIREMENTS

At the heart of Casa Carbó lies a deliberate choreography of spaces — a home where movement, rest, and ritual unfold with quiet clarity.

The design brief centred around the client's desire for a vibrant, yet composed, family residence capable of hosting intimate gatherings as well as grand celebrations.

The ground floor organises itself around a generous social core: an open-plan kitchen, dining room and living area act as the hearth of the home, expanding fluidly into a dual-purpose event space and pool terrace.

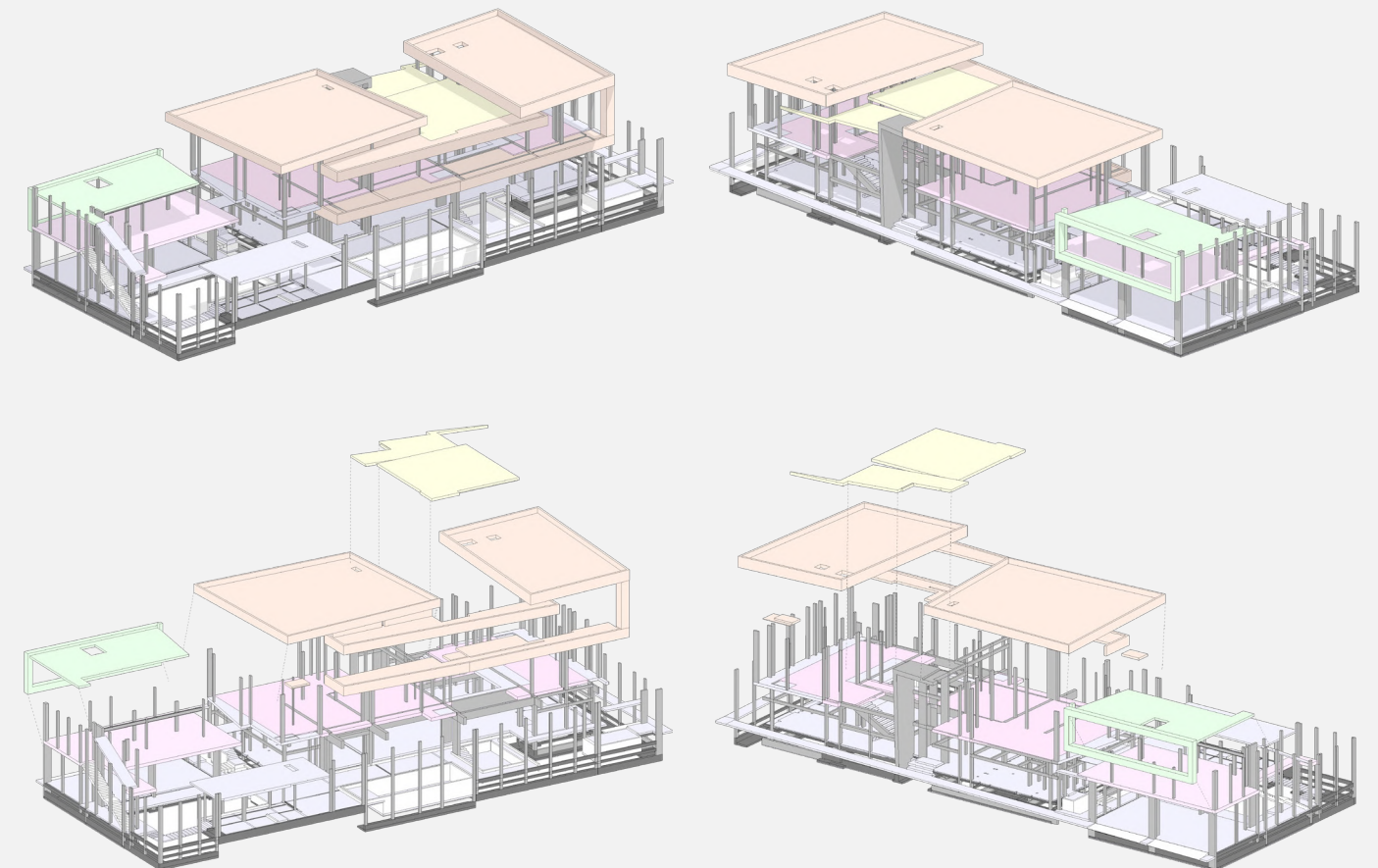
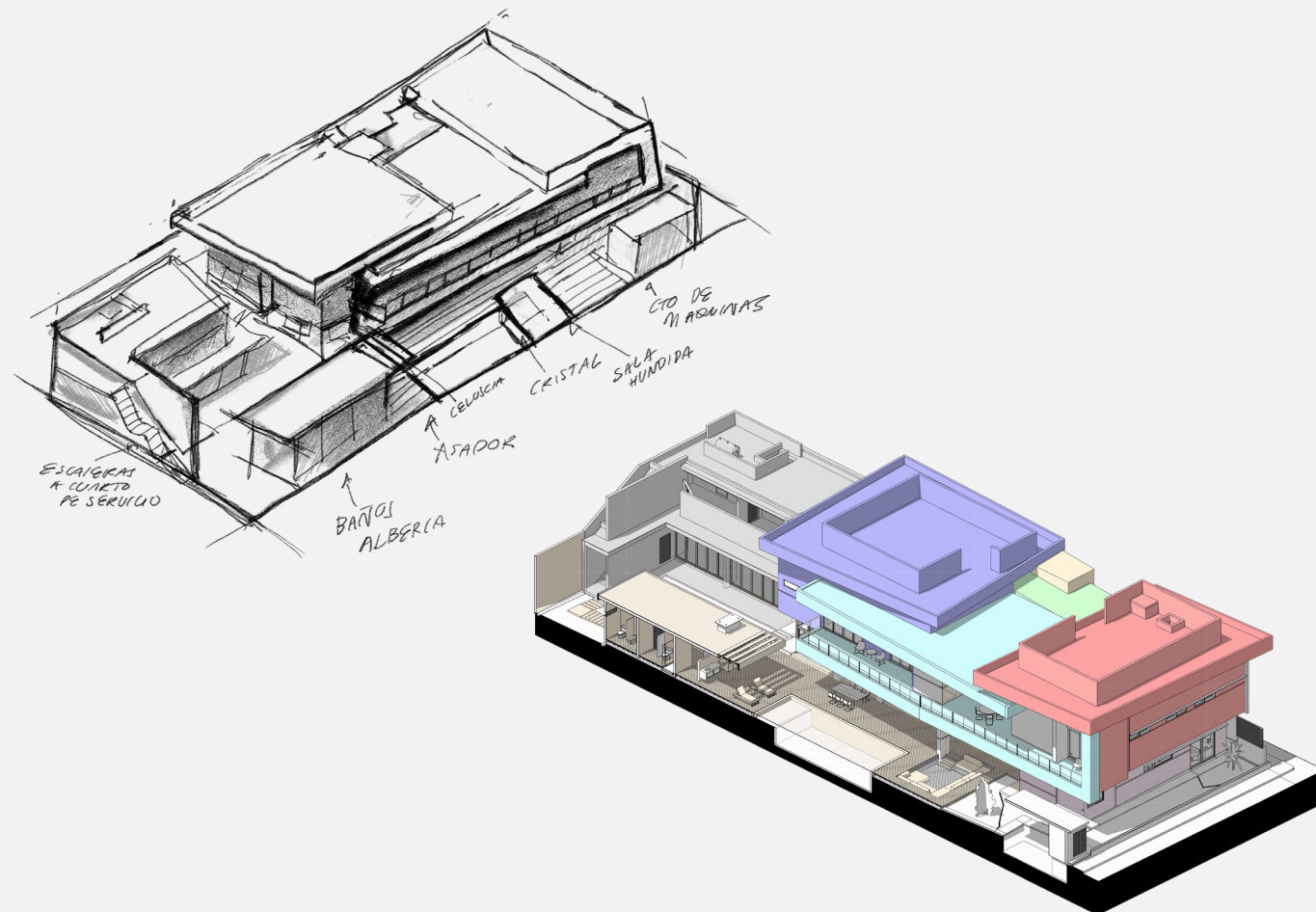
Above, the private realm unfolds with a sense of a calm boutique hotel.

Three bedrooms — including a master suite — share the upper floor with a gym, a family lounge, and auxiliary service spaces. Each room is afforded privacy, natural light, and direct views to the terrace.

Service zones — from staff quarters and laundry to wine cellar and pantry — are seamlessly integrated, ensuring functionality without visual interruption.

Spatial transitions are subtle yet intentional. Thresholds are framed by changing materials or ceiling heights, while framed vistas and filtered light guide movement intuitively.

The result is a dwelling that accommodates both solitude and connection, privacy and openness.





# DESIGN EVOLUTION AND APPROVED PROPOSAL

The design of Casa Carbó evolved through a series of controlled refinements — from early sketches inspired by geometric superpositions to a mineral palette drawn from fire and stone.

Initial concepts focused on a solid base, carved and softened by light. as the design matured, volumes became cleaner, more restrained, yet richer in material resonance.

Every decision — from layout to fenestration — was tested through 3D modelling and daylight simulations to ensure spatial clarity and climatic performance.

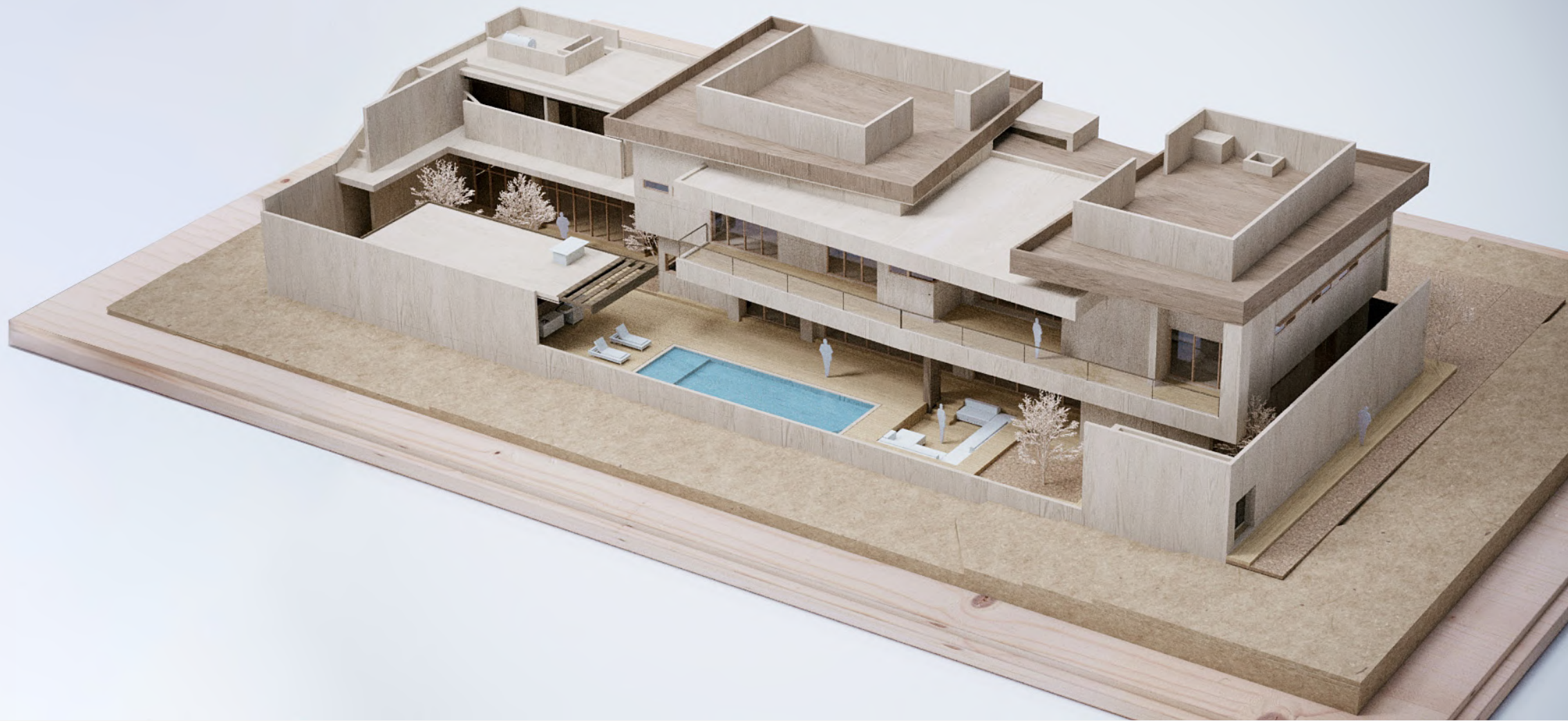
The approved scheme emerged as a balance of restraint and expression: a luminous core encased in calm surfaces.

A private residence that remains visually closed to the exterior, yet design to open itself to its users and their visitors.

The house became not a composition of forms, but a sequence of calibrated experiences.

Light was no longer decorative — it became structural.

Texture was no longer background — it guided movement.

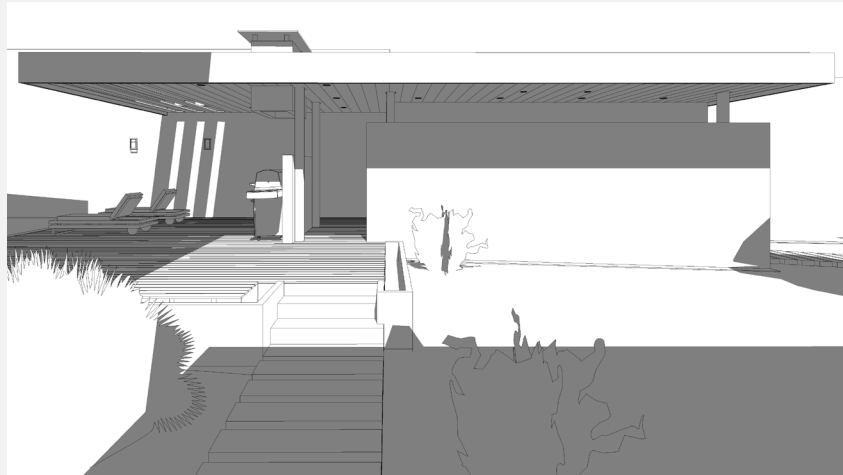
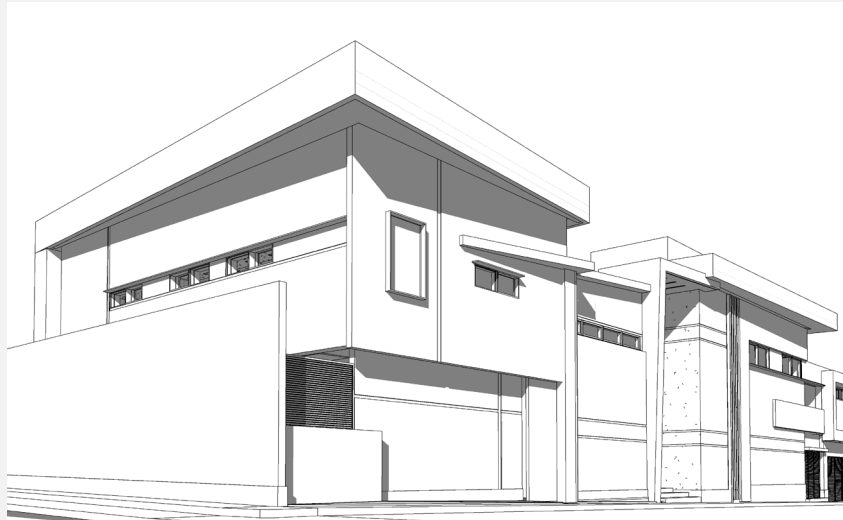
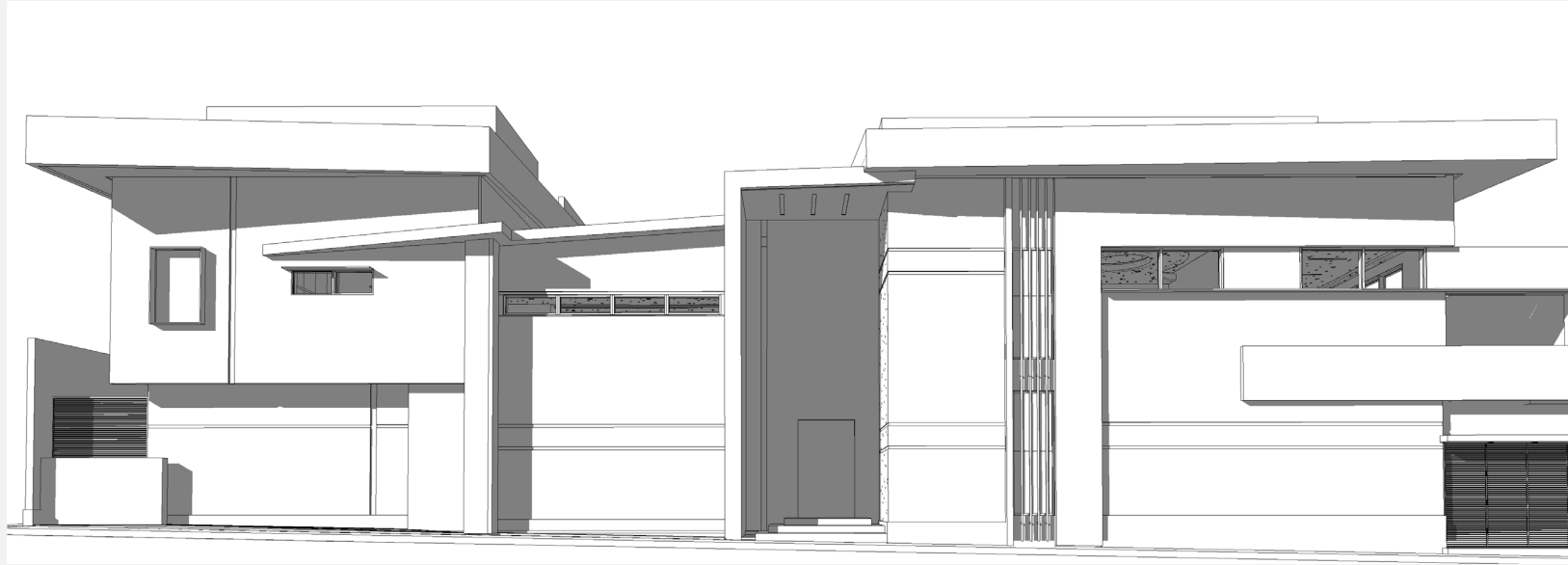




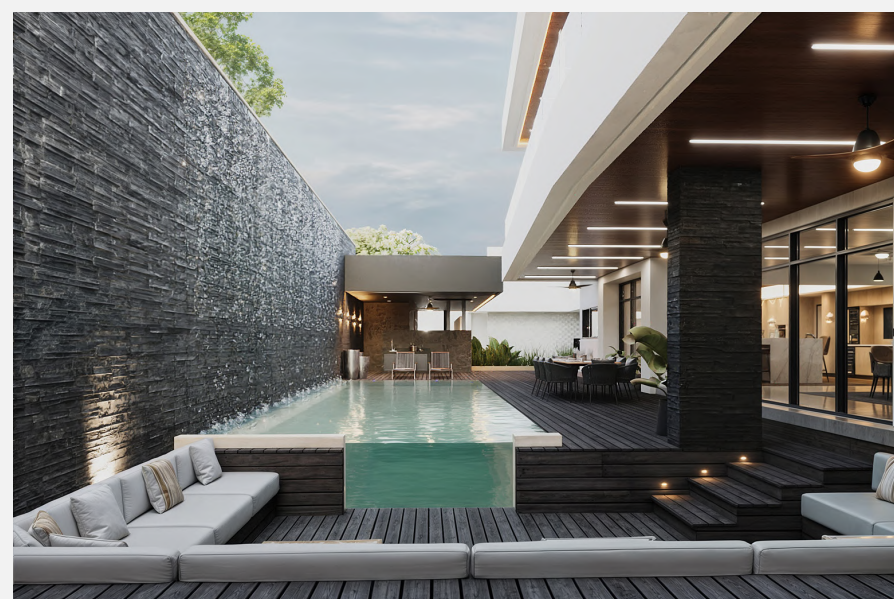
Warmth made tangible, atmosphere made architectural  
- a house made a home.



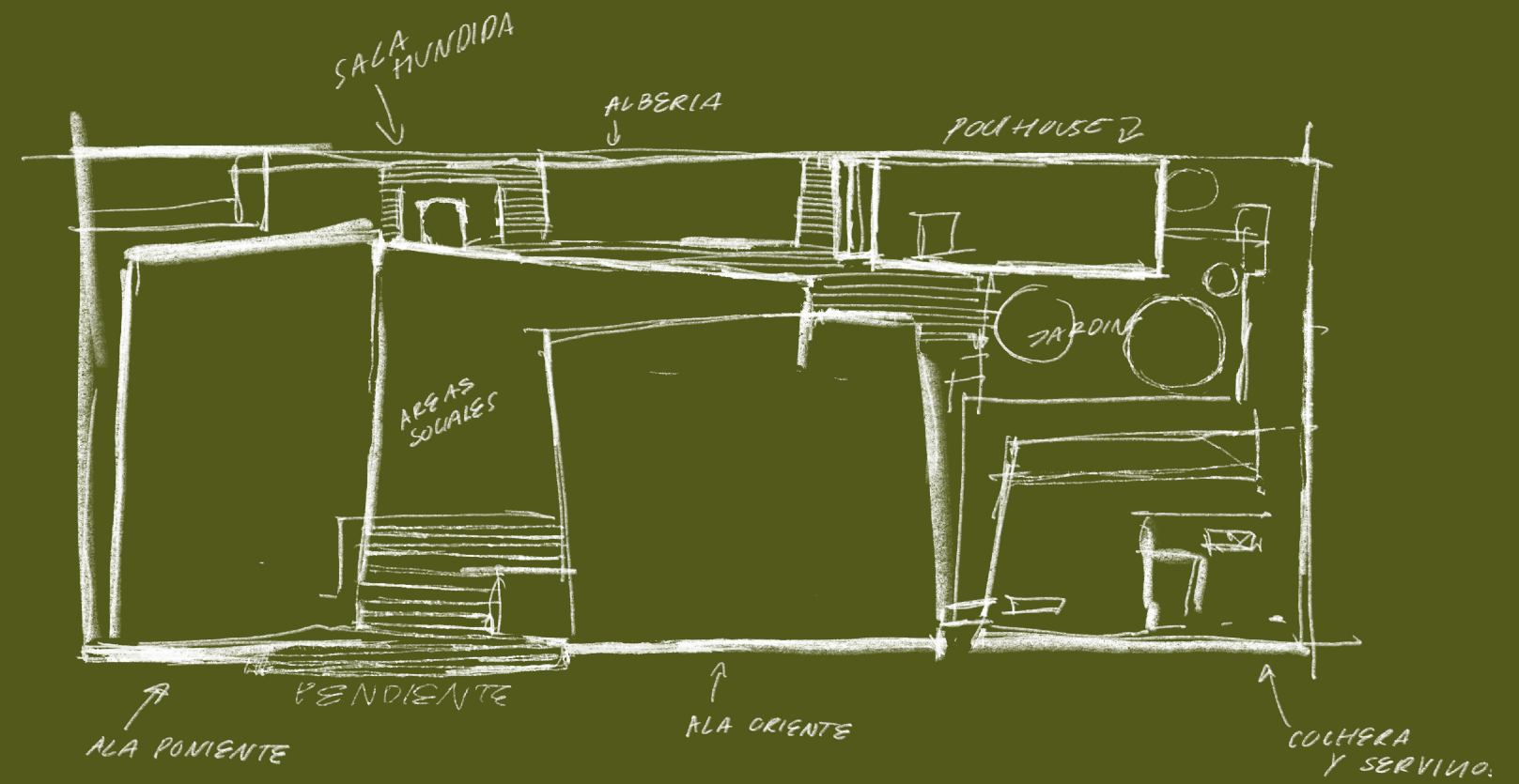














## SITE CONDITIONS AND ENVIRONMENTAL RESPONSE

Set within the tropical city of Villahermosa — a place of generous sun and sudden rains — Casa Carbó was conceived as an instrument of climate rather than shelter from it.

The home is aligned along an east–west axis to minimise direct solar gain while capturing prevailing breezes. Wide overhangs and recessed windows mitigate intense sun and direct rainfall, allowing natural light without thermal burden.

Elevated slightly on a stone base, the house avoids ground humidity and creates visual levity. Landscaping plays a strategic role: dense vegetation buffers heat, filters views, and amplifies the feeling of immersion and disconnection from the outside world.

Rather than resist its environment, Casa Carbó accepts it — redirecting heat, channelling wind, and deflecting rain in a choreography of comfort.

## GEOGRAPHICAL CONTEXT: MEXICO AND TABASCO

Casa Carbó is located in Villahermosa, the capital city of the southeastern Mexican state of Tabasco.

This region is characterised by a warm-humid tropical climate with intense rainfall and solar radiation throughout the year.

Known for its lush vegetation and proximity to important rivers and lagoons, Tabasco is both rich in biodiversity and historically prone to seasonal flooding.

These environmental conditions are critical to any architectural intervention in the area.





## URBAN CONTEXT: VILLAHERMOSA AND THE SOUTHERN PERIPHERY

Villahermosa is a vibrant, growing city, home to both government institutions and the oil industry. The southern sector of the city, where Casa Carbó is situated, has seen recent development of exclusive residential neighbourhoods and integrated urban infrastructure.

Despite Tabasco's vulnerability to flooding, this particular area is located on high ground and has no recorded history of flood events, making it especially desirable for residential construction.

## IMMEDIATE CONTEXT

Casa Carbó is set within a well-connected and amenity-rich area of Villahermosa, offering convenient access to premium retail, reputable schools, healthcare facilities, and recreational landmarks — all within a short radius.

Proximity to major roadways ensures seamless connectivity across the city, while the home itself remains quietly situated within a private residential enclave.



## ENVIRONMENTAL & GEOTECHNICAL CONDITIONS

Flood history & water table: Tabasco averages ~2,550 mm annual rainfall, and Villahermosa experiences frequent floods due to clayey soils, semi-confined aquifers, and flat terrain.

However, Real del Sur lies within the southern 'lomero' belt—higher terrain historically spared from flooding—even during the catastrophic 2007 floods.

Topographic adaptation: A measured east-to-west slope of ~1.4 m across the lot has guided the strategy to elevate the house by half a level. This solution mitigates standing water risk—exacerbated by the region's high water table and flat topography—while turning a potential constraint into a design opportunity.

Soils & settlement: The coastal plain, comprised of alluvial clay soils (Gleysols, Vertisols), alongside ongoing subsidence linked to hydrocarbon extraction, requires careful foundational design to ensure stability.





# ENVIRONMENTAL CONTEXT & PASSIVE STRATEGY

## Solar Exposure:

Tropical location near the equator ensures minimal seasonal angle variation. May–August sees peak solar intensity; shading devices and canopy elements become essential to prevent overheating.

## Temperature & Humidity:

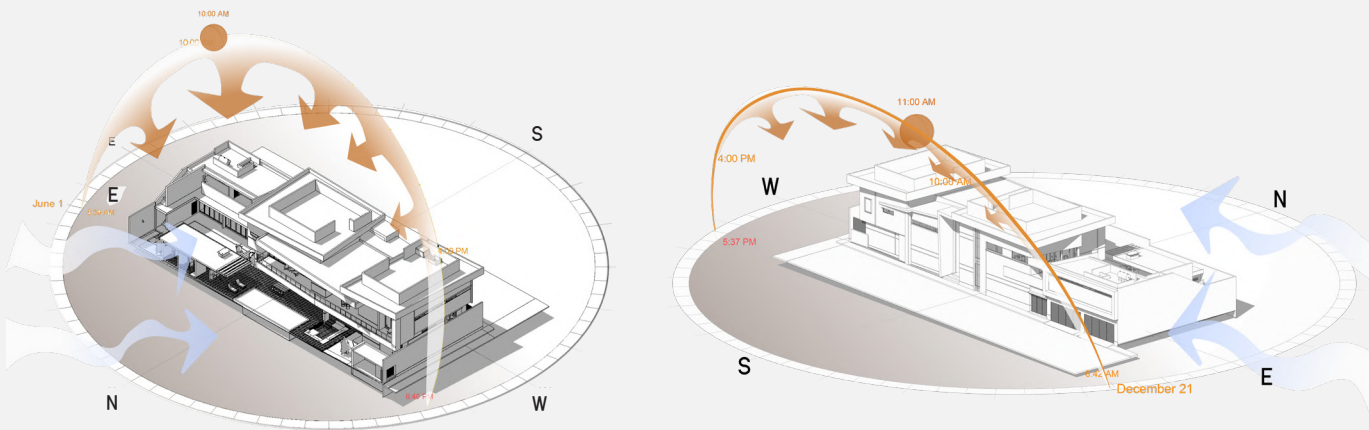
Daily highs range between 29 °C–36 °C, with humidity often >90 % , with maximum temperatures reach over 50° C  
Design responses include thermal mass, cross ventilation, and air-conditioning support.

## Dominant Winds:

The region experiences northerly and easterly winds, especially during cold fronts in November–December .  
The massing is oriented to channel cooling breezes through courtyards and shaded zones, facilitating natural ventilation.

## Precipitation:

With 2,500–2,900 mm/year, though short dry periods in April–May exist .  
Roof canopies, sloping paving, and robust drainage tackle intense rain and protect against the high water table.



"Informed by a careful reading of its climate and terrain, Casa Carbó emerges as a home in dialogue with its environment-resilient, efficient, and naturally attuned to its setting."





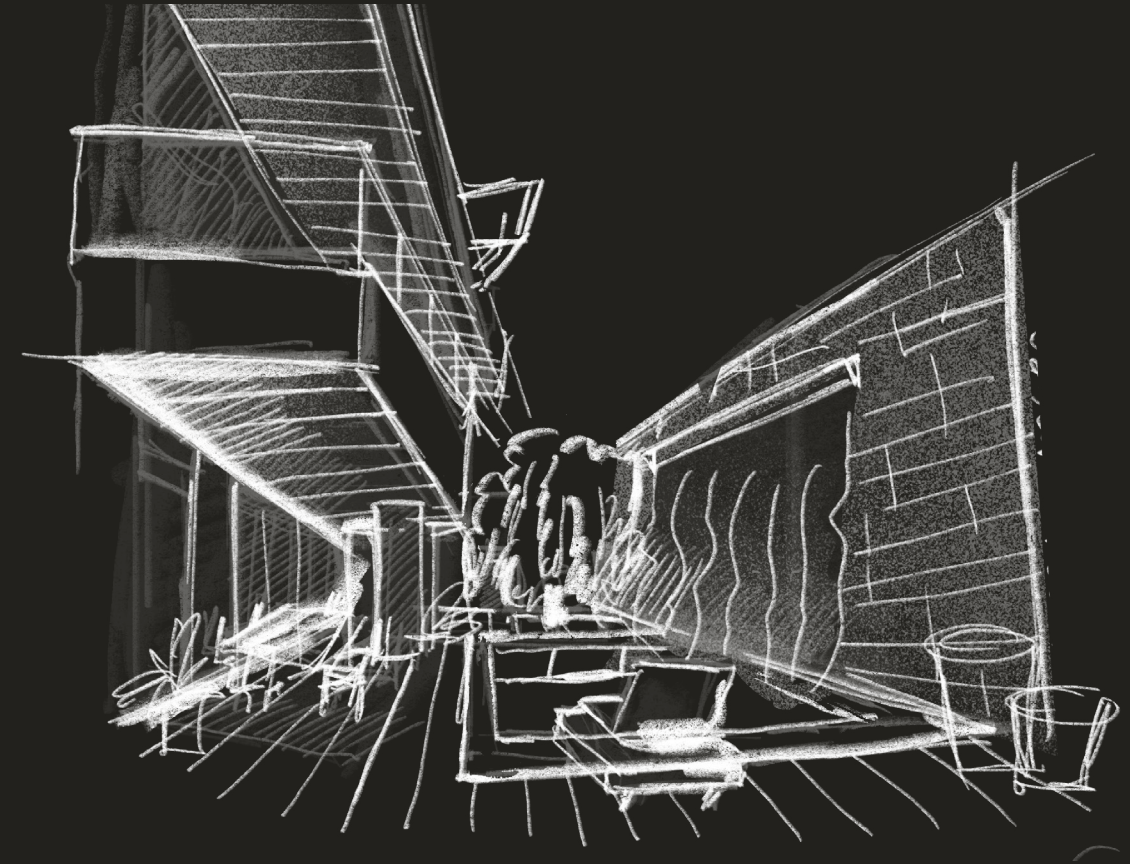












**C.** Architecture, layout & Use of Space.





"Casa Carbò is organised as a sequence of expanding spatial experiences — from narrow, controlled thresholds to generous, light-filled interiors. The architectural layout balances privacy and openness, while choreographing light, movement and materiality."



# GROUND FLOOR LAYOUT

The ground level accommodates the home's public and social programme.

Upon entering through a tall recessed portal framed in walnut-toned panelling, the visitor is met with a double-height volume anchored by backlit onyx and veined marbles. This central space connects seamlessly to the living room, dining area, and kitchen, which features a large island for casual dining and social gatherings.

A multi-purpose hall of 90 m2 serves both as a garage and an event space, integrating folding mechanisms and lighting control to transition between domestic and entertainment modes.

An adjacent study, wine cellar, and guest room complete the ground level, all strategically arranged to frame views toward the pool and private courtyard.



Ground Floor Plan

# UPPER FLOOR LAYOUT

The upper level houses the private realm. The layout includes three bedrooms, each with en-suite bathrooms and walk-in wardrobes.

The primary suite at 110 meters with walk-in closet and bathroom, offers a retreat-like atmosphere with layered lighting, material richness, and controlled natural views.

A family room and gym add functional flexibility, while a utility core discreetly accommodates a site room (IDF) and housekeeping facilities.

Above the annexed garage, the upper floor houses the laundry and staff accommodation, ensuring that service quarters remain efficient, discreet and seamlessly integrated into the home's overall design.



Upper Floor Plan



## VERTICAL CIRCULATION

The sculptural cantilivered staircase flanked by a double slab of dramatic bookmatched marble links the two levels.

Glass railings maintain visual permeability and reflect the home's refined, contemporary aesthetic.

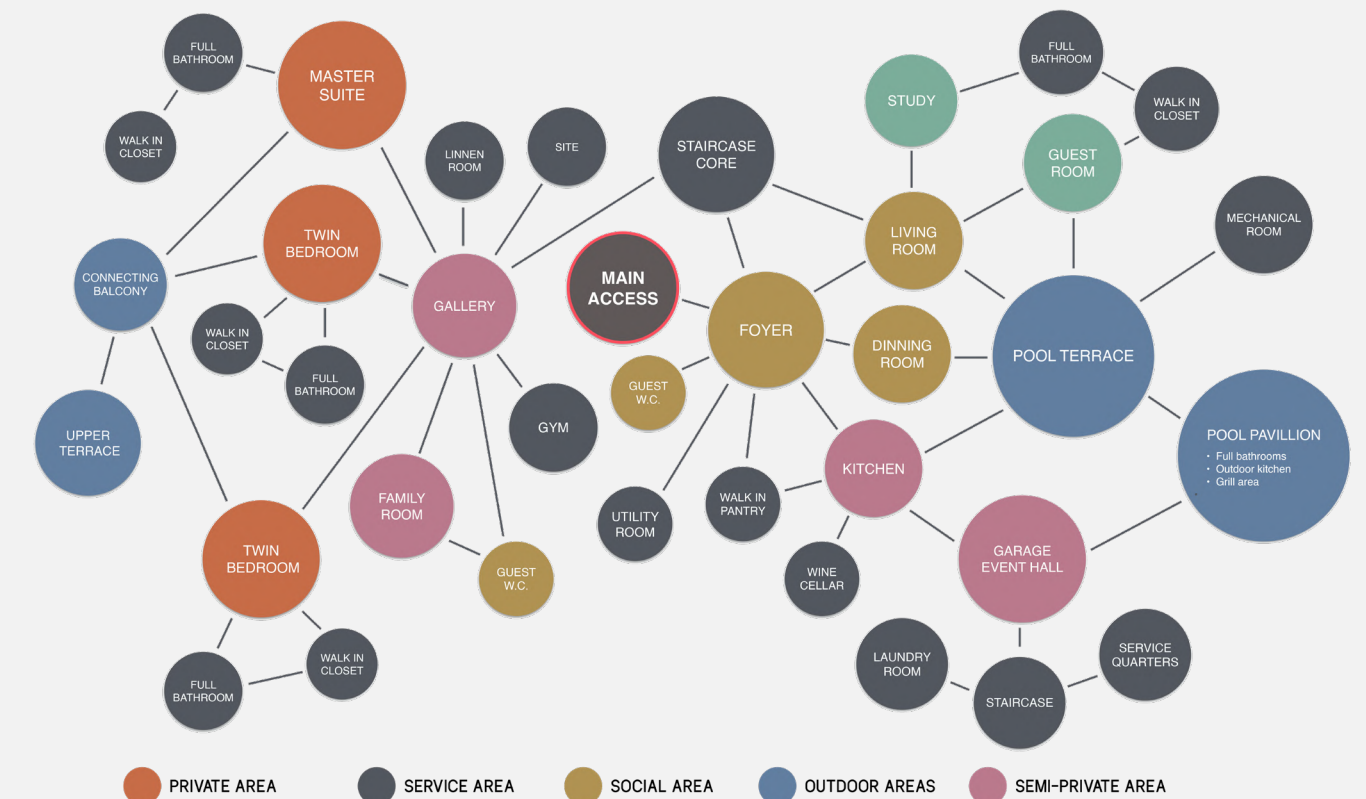


## SPATIAL STRATEGY

Volumes are articulated with double-height voids, horizontal glazing, and a careful interplay of light and shadow.

Interior corridors remain visually open, with long perspectives and mirror reflections extending the perception of space. Throughout, a restrained palette of warm neutrals and dark accents balances drama with softness.

This spatial arrangement, coupled with bespoke material details and integrated lighting makes Casa Carbó not only a home, but an architectural experience where form, comfort, and expression meet in harmony and equilibrium.





"Stillness, Light, and Ember"



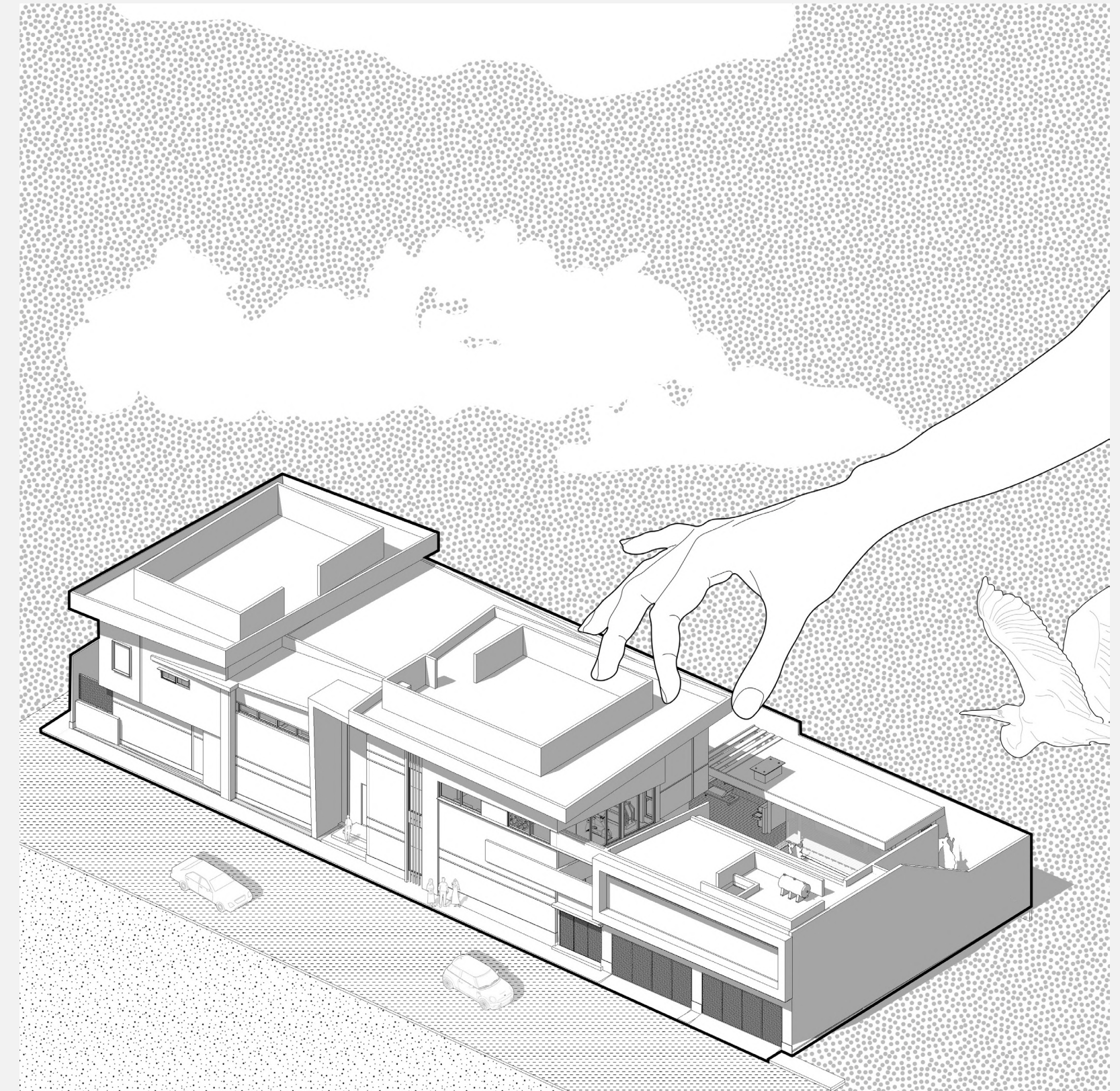
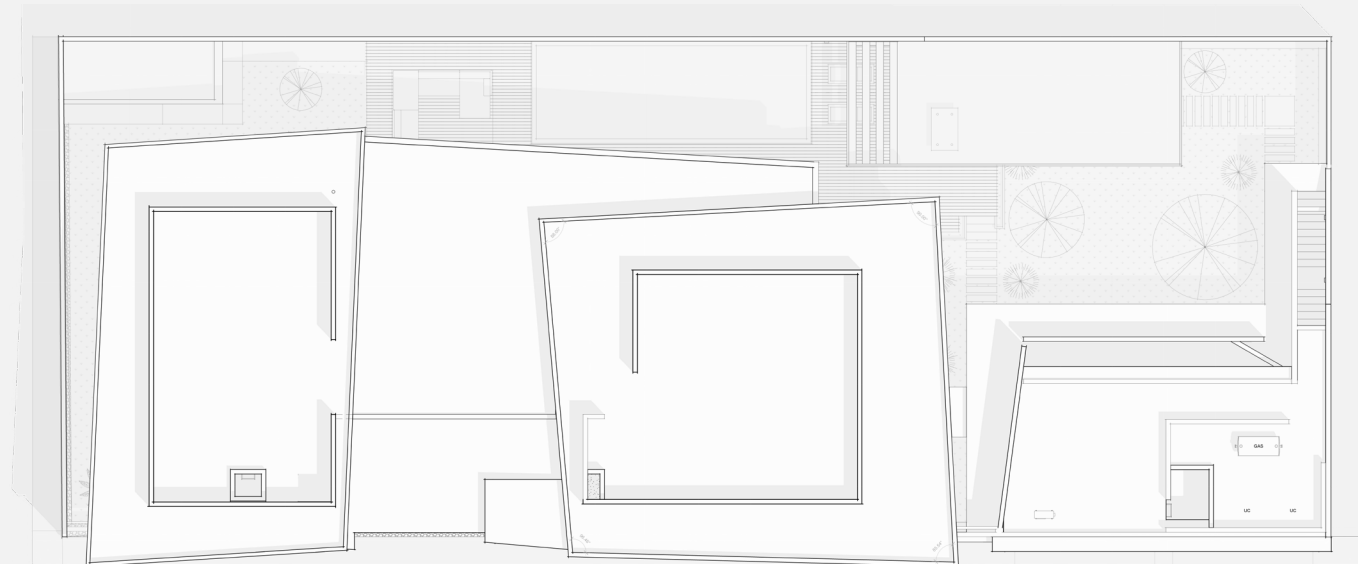
## ARCHITECTURAL FORM AND VOLUMETRIC COMPOSITION

Casa Carbó is articulated through a series of clean, interlocking volumes, carefully modulated to establish a strong yet refined street presence. The massing strategy favours horizontality, reflecting the site's generous footprint and tropical context.

Volumes are offset, both in plan and section, to create visual rhythm, encourage passive shading, and frame outdoor spaces like the internal courtyard and pool terrace.

From the isometric views, it is evident that the project operates on a strict geometric hierarchy, where service and circulation blocks are embedded within solid volumes, while social and leisure spaces open expansively to the garden through glazed facades.

The upper level is set back in strategic planes, creating deep overhangs that shade the facades, shield against heavy rain and reduce visual mass. These setbacks generate generous terraces while allowing the lower volumes to extend outward as protective eaves.





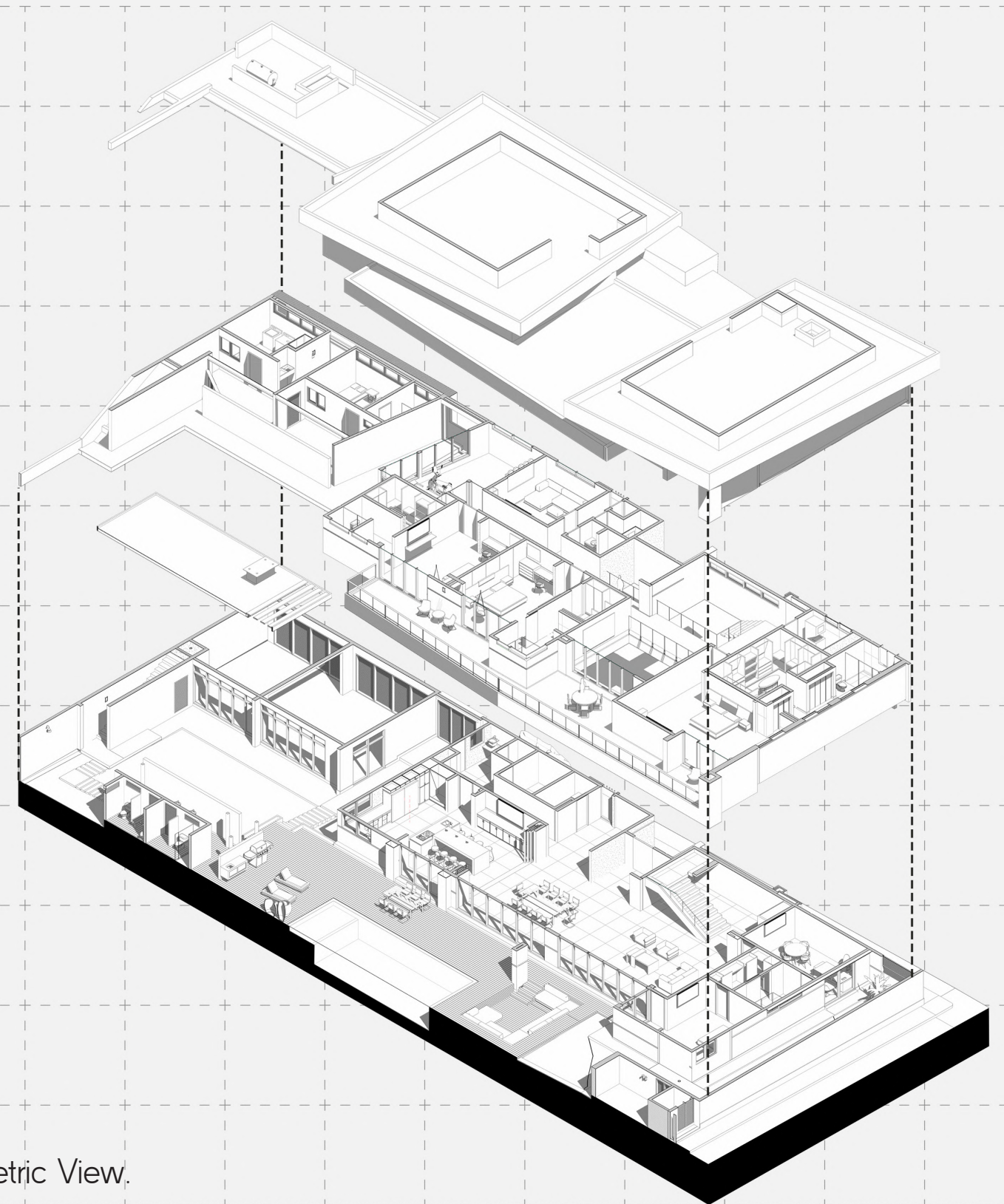
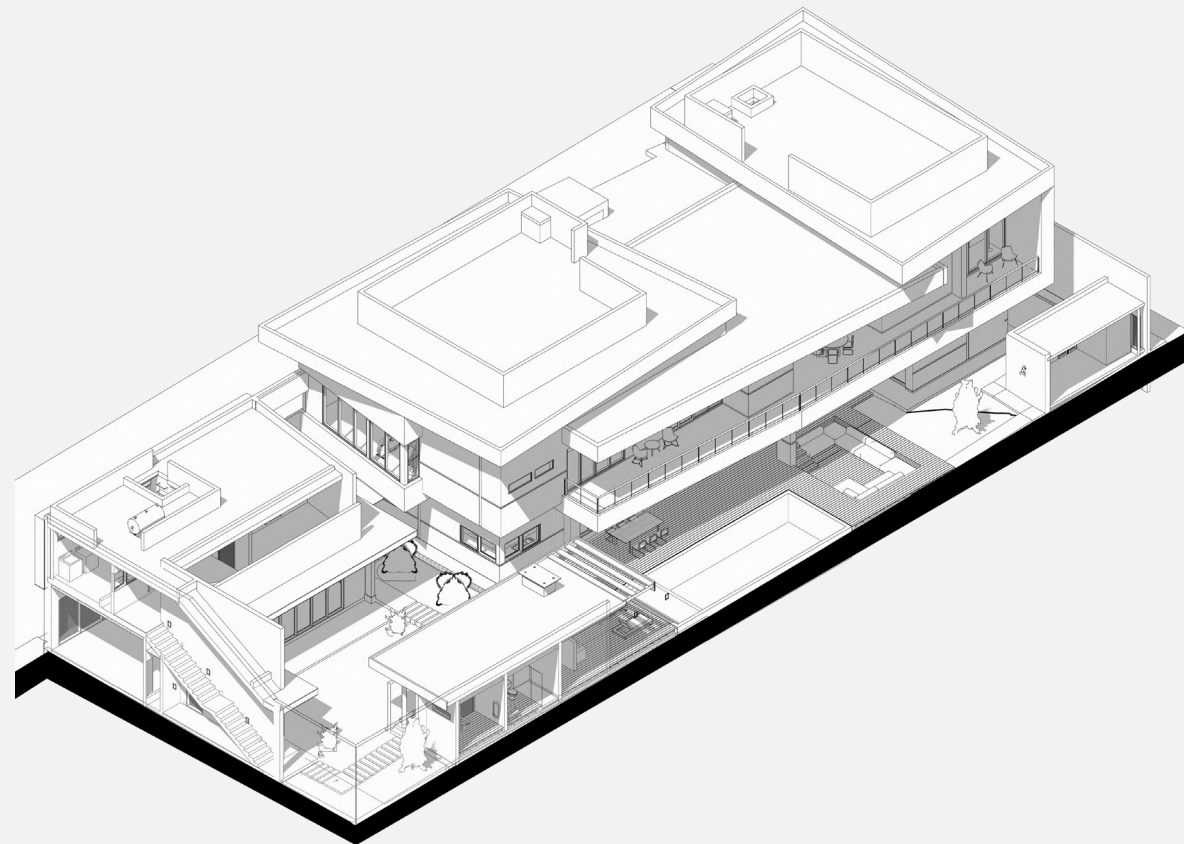
## ISOMETRIC ANALYSIS

The isometric projections highlight how the central patio is truly the compositional and experiential anchor of the house.

All major programs—foyer, living room, dining, kitchen, and bedroom wings—orient around this void, which serves not only as a spatial organiser but also as a climatic buffer.

The roofscape is articulated in levels: mechanical zones are hidden within parapets, while open terraces—some partially covered—become extensions of interior life.

Skylights and sunken patios enrich the lighting strategy and improve cross-ventilation across long spans.



Isometric View.





The rooftop geometries suggest hidden service cores and potential mechanical spaces, seamlessly integrated into the formal composition.



# FACADE LANGUAGE

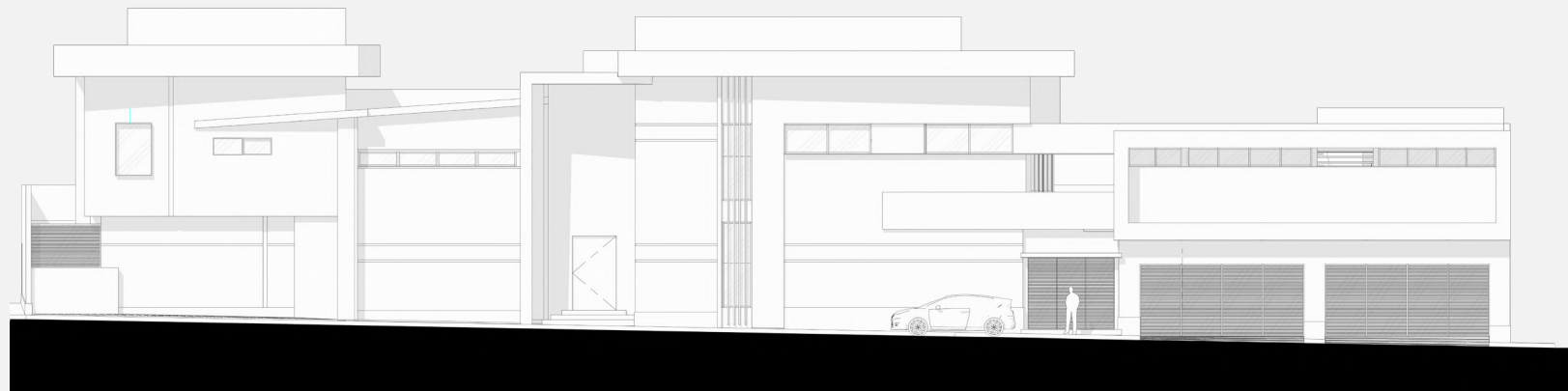
Façades are defined by compositional rigour and contrast. The south and north elevations feature alternating planes of Corev Lisso in soft white and slate grey tones, punctuated by sleek graphite-framed uPVC joinery. Overhangs and cantilevers are treated in darker hues, visually anchoring the lighter masses.

The facade expression is restrained but not minimal—it balances solid and void, opacity and transparency, weight and lightness. Small vertical window slits provide privacy and protection on service sides, while large floor-to-ceiling panels open up towards the central garden, mediating between enclosure and openness.

Natural textures are introduced through charred walnut aluminium slats in the soffits and overhangs, echoing the warmth of the interiors and establishing material continuity.

Coral limestone is used as a base plinth, lending a sense of groundedness while protecting the building from splash and humidity.

South facade.



East facade.



West facade.



North facade.















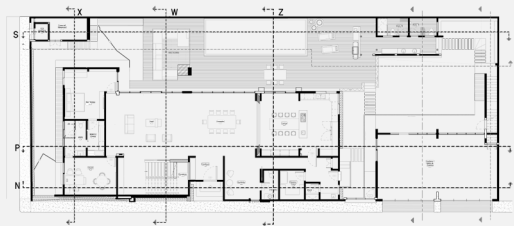






# SECTIONS AND SPATIAL DEPTH

The longitudinal and transversal sections reveal a highly layered spatial experience. Vertical transitions are elegantly integrated into the heart of the scheme—through a central staircase and double-height volumes that serve both functional and symbolic roles.



The atrium is a pivotal gesture, vertically connecting public life on the ground floor with the intimacy of the private quarters above.

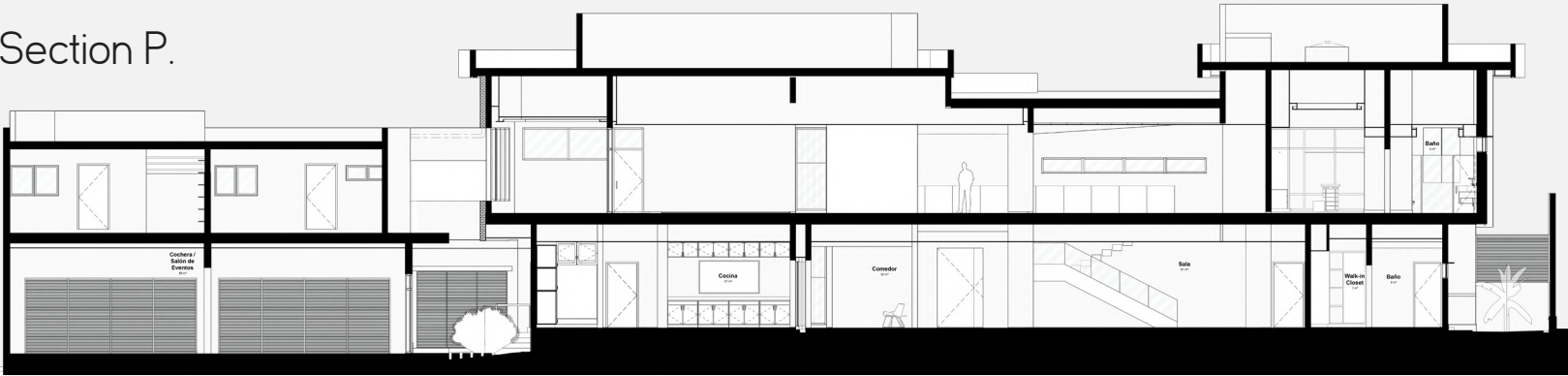
Section N.



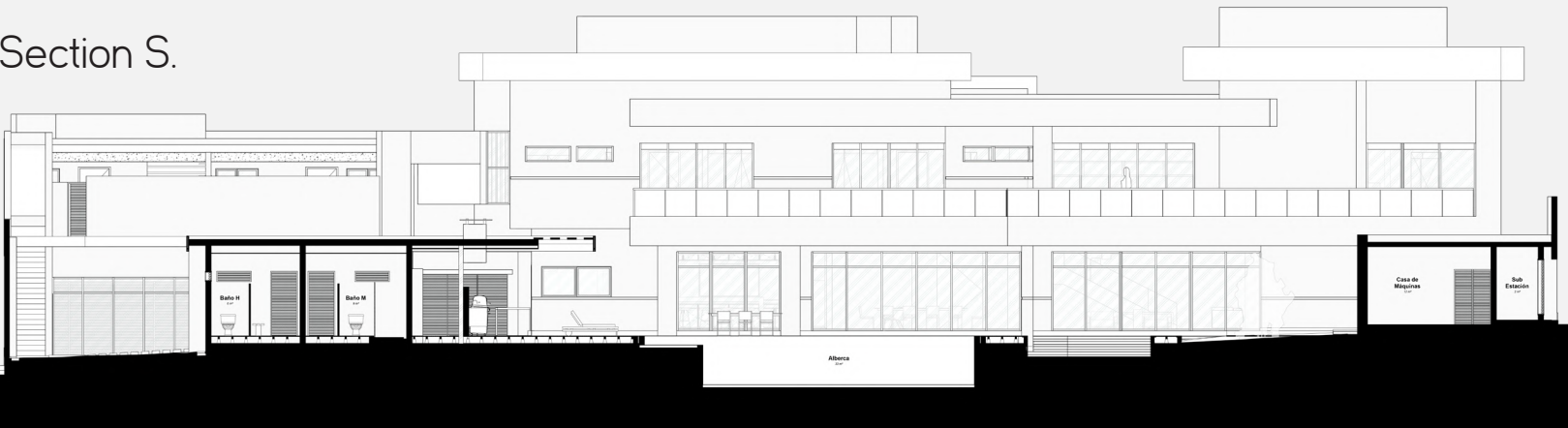
Section Z.



Section P.



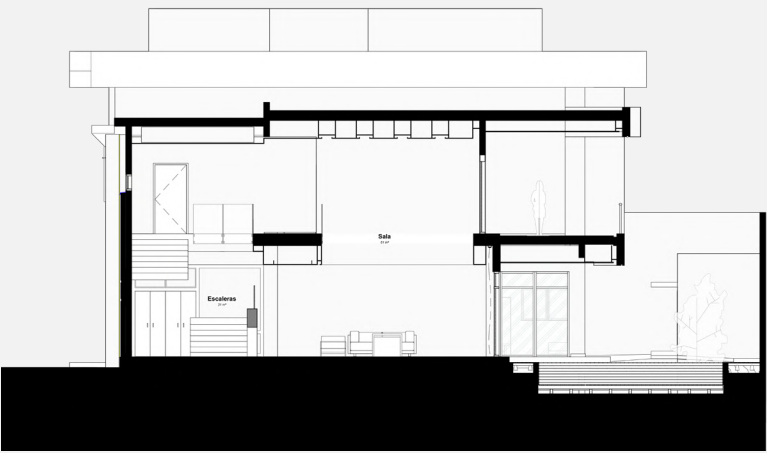
Section S.



Section X.



Section W.







A key principle is the play of compression and release: narrow circulation zones open into expansive lounges and courtyards. Ceiling heights are modulated to emphasise hierarchy—higher in social spaces, more intimate in private or service areas.

This is reinforced by clear glazing, voids and passive systems that introduce natural light deep into the plan.



# ARCHITECTURAL INTENT



At its core, Casa Carbó is an exploration of contrast and containment: light against dark, texture against smoothness, open against closed. The three guiding principles work in harmony.

Context Response — Extended overhangs, shaded passages, and a balanced play of mass and void address the region's sun and rainfall. Spatial Purity — Public, private, and service areas are clearly defined, layered both vertically and horizontally for clarity and flow. Material Dialogue — Onyx, Santo Tomás marble, and textured limestone create a tactile palette that engages light and touch.

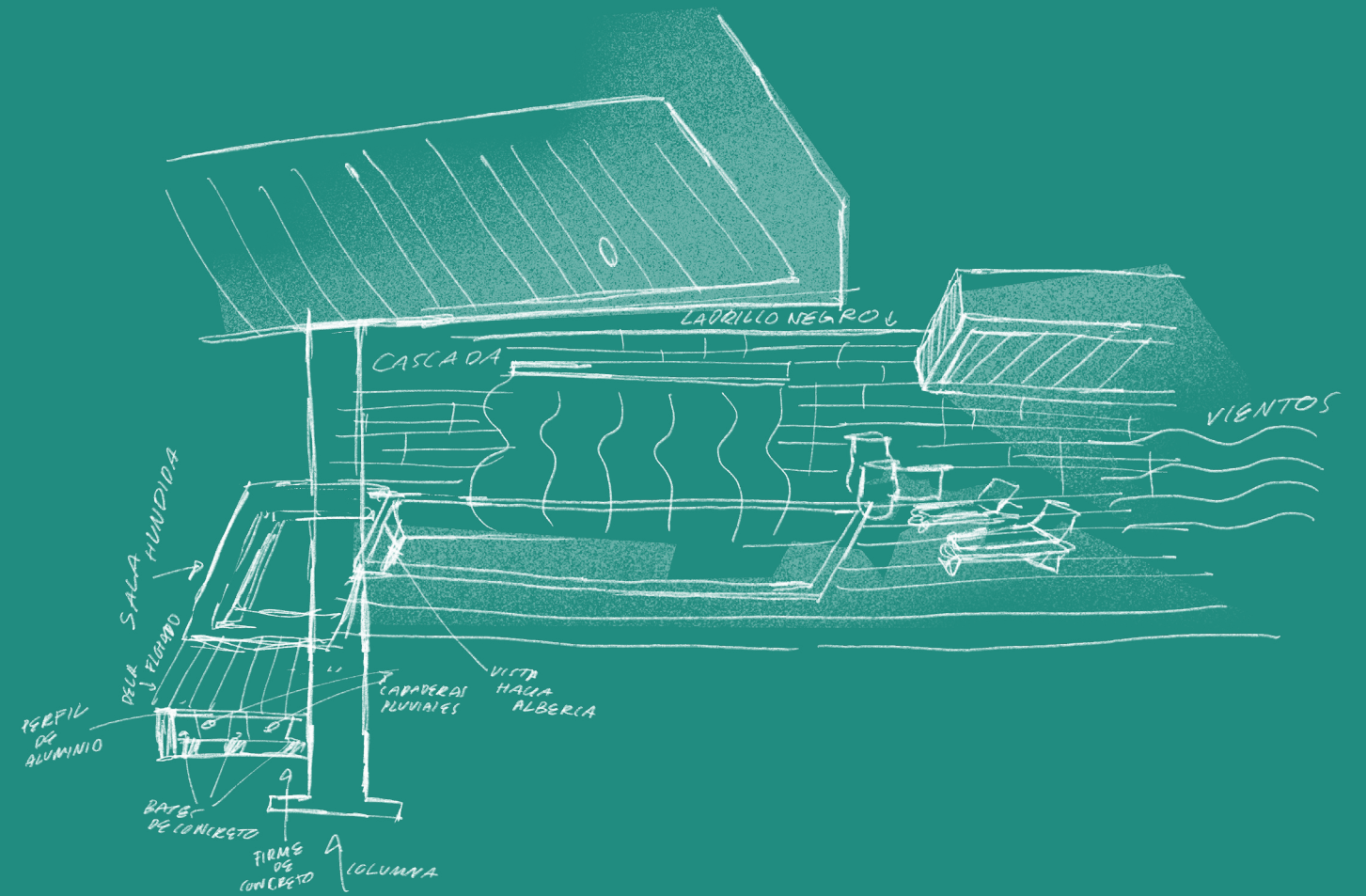
Together, these principles shape a coherent architectural intent: a residence contained in form, yet luminous in expression.











d. Materiality, Atmosphere & Finish.



# MATERIALITY

Casa Carbó is a vessel carved from contrast. Stone, water and fire converge in a material palette that is both exhuberant and composed at the same time.

Ash-toned paving grounds the structure, referencing mineral beds and fire's residue.



Backlit onyx becomes the pulse of the house — glowing softly from its core.

Polished white marble lends a sense of stillness, coolness, pause. Walnut panelling introduces warmth where the light fades. Matte black PVC window frames lend precision and tension.

These materials are not decorative — they speak of atmosphere, weight, and rhythm. Their meeting points are deliberate: smooth against textured, light against dark.

What emerges is not just a residence, but a landscape of sensations — a domestic terrain that glows from within.



## MATERIAL PALLETTE

Casa Carbó's material palette moves from natural to engineered, balancing sensory comfort with resilience.

Natural materials are chosen for their tactile warmth and timeless expression, anchoring the home's private and social interiors.

Composite and processed materials bring precision, durability, and climate-adapted performance to façades, terraces, and service areas.

Together, they create a coherent architectural language that merges comfort, longevity, and refinement.



## COMPOSITE & PROCESSED MATERIALS

COREV LISSO - SOFT WHITE & SLATE GREY

A fine acrylic plaster that enhances the home's geometry.

Soft White surfaces reflect sunlight, keeping interiors cooler, while Slate Grey frames and articulates volumes for depth and contrast.

## OPTICRETOS MURUM - PRECAST CONCRETE CLADDING

Used on the entrance portico and garage wall, MURUM features a sculpted three-dimensional relief.

The crisp white tone and tactile pattern capture shadows throughout the day, adding crafted complexity to the restrained form.



DEKTON AURA BY COSENTINO

Synthetic ultracompact surface, created from a blend of raw materials used in the manufacture of glass, porcelain and quartz surfaces, fused through sinterized particle technology.

Paying homage to classic Calacatta and Carrara marbles, it features a harmonious, bookmatched vein pattern flowing seamlessly across slabs. Non-porous, heat-resistant and highly scratch-resistant, it combines refined elegance with exceptional durability. In Casa Carbó, its use on the kitchen island and worktops forms a seamless, visually striking surface that defines and anchors the space with elegance and performance.





## NATURAL MATERIALS

### *ONYX STONE PANELLING - TRANSLUCENT AMBER VEINS*

A luminous natural stone used at select openings and interior walls.

Backlit panels glow softly after sunset, filtering daylight by day and offering privacy.

The golden veining becomes a sculptural detail, echoing the ember's warm radiance.

### *SANTO TOMÁS MARBLE - PALE EMBER FINISH*

Applied to the interior of the pool, this sandy-peach marble enriches the sensory experience.

It reflects light with subtle warmth, its smooth texture cool to the touch, combining elegance with thermal balance.

### *ROUTED CORAL STONE SKIRTING*

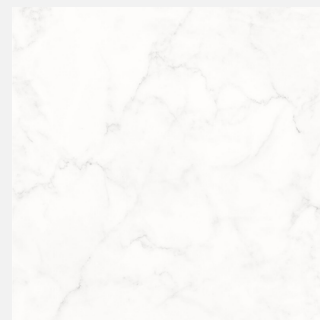
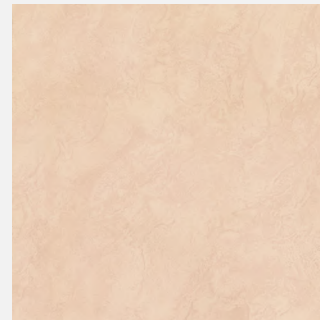
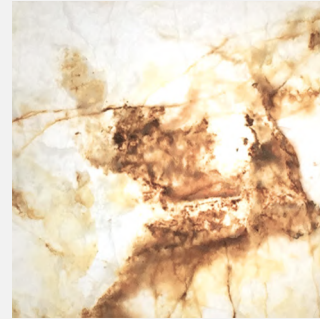
Wrapping the base of the façade, routed coral stone provides a soft sand tone with linear grooves for subtle rhythm.

It grounds the architecture with raw mineral authenticity, blending naturally with the COREV paste.

### *THASSOS PURE WHITE MARBLE*

Quarried in Greece, is prized for its immaculate whiteness and virtually vein-free surface. Its bright, highly reflective finish enhances natural light, bringing a sense of purity and timeless elegance to any space.

Supplied in 1.60 × 1.60 m large-format slabs, each piece was carefully handled and installed absolutely level to meet the client's requirement for a minimal 1 mm joint.



## ENGINEERED & FINISHING MATERIALS

### *KÖMMERLING PVC JOINERY IN GRAPHITE BLACK FINISH*

Premium uPVC frames with an aluminium-effect graphite surface offer thermal efficiency, acoustic comfort, and precise detailing.

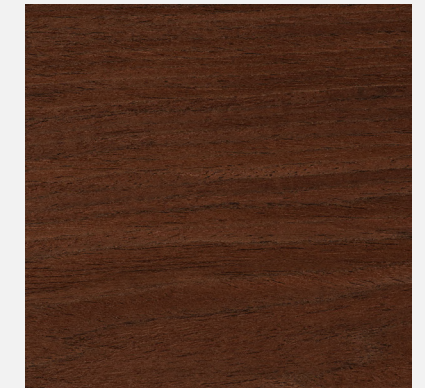
The dark finish pairs seamlessly with the project's palette of onyx, marble, and charred finishes.



### *ALUMINIUM SLAT CEILING - CHARRED WALNUT FINISH*

Powder-coated aluminium slats in a charred walnut tone line the covered terraces.

Durable yet warm in appearance, they evoke the layered tones of slow-burning embers while performing in tropical conditions.



### *Co-extruded WPC Decking - Carbon Finish*

Carbon-toned WPC decking defines outdoor terraces and pool areas.

Slip-resistant, weather-resilient, and inspired by cooled charcoal, it provides a durable, climate-ready surface that connects the exterior to the project's mineral character.













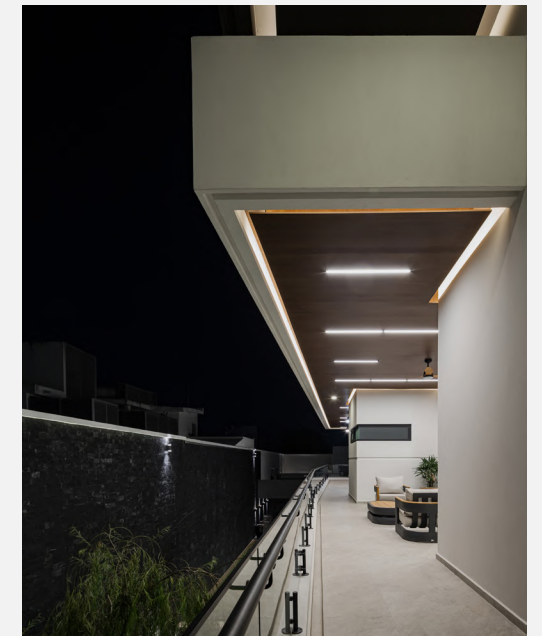
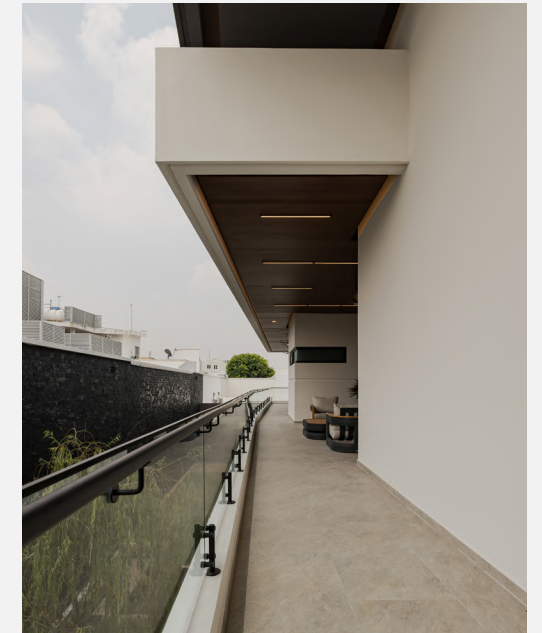
"Casa Carbó lives in balance with its tropical climate – harvesting rain, breathing with the breeze, and powered by resilient energy."



## ATMOSPHERE AND FINISH

The heart of Casa Carbó's atmosphere lies in its deliberate orchestration of comfort, privacy, and sensory immersion.

Elevated boundary walls and generous overhangs define a secluded, retreat-like experience, shielding residents from the city's heat, noise, and visual clutter.



Within this protected envelope, the terraces act as temperate microclimates, where architecture and landscape combine to curate an immersive experience.





The cascading water wall forms the central atmospheric element.

Its constant movement cools the terrace air, subtly reducing temperature while generating a steady, soothing acoustic veil that masks urban noise.

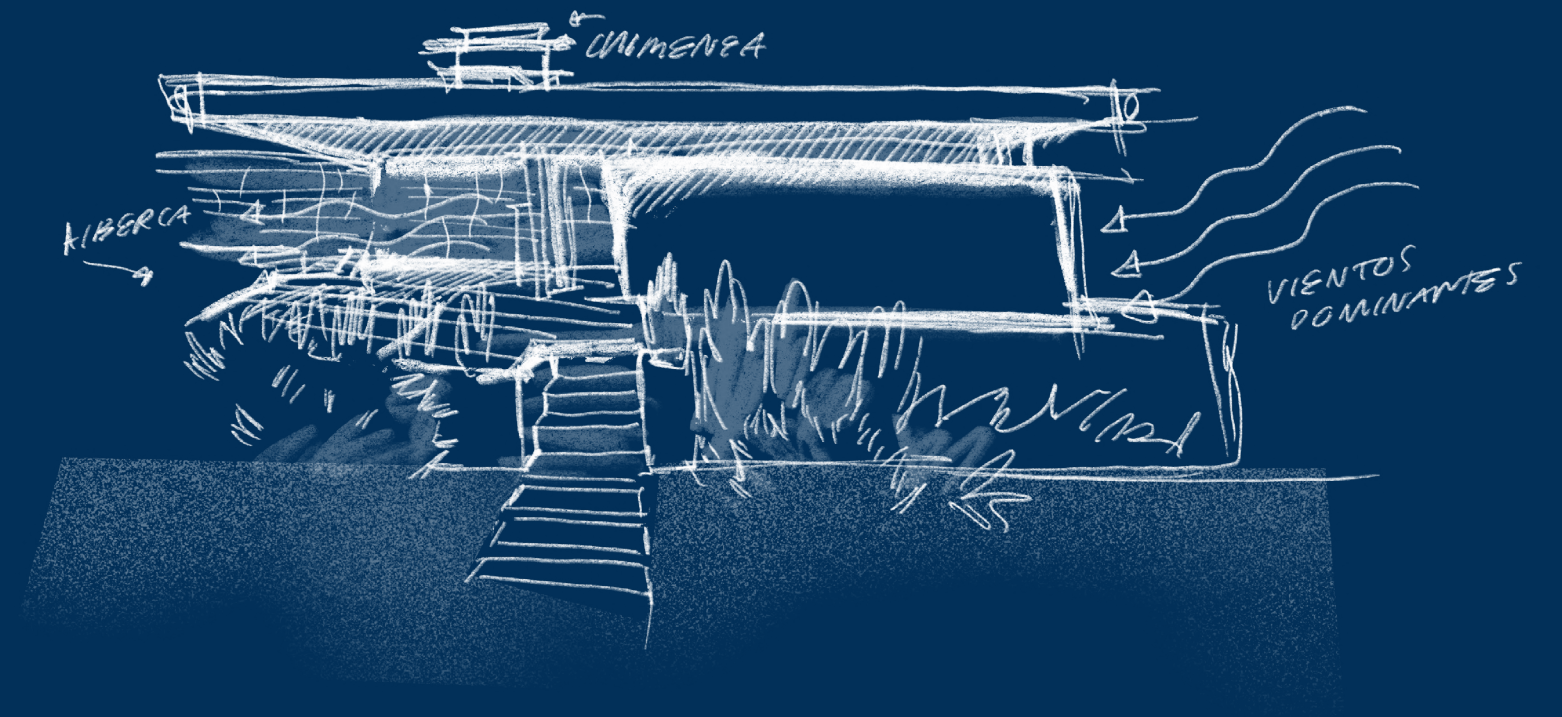
Daylight filters through carefully controlled openings, shifting across textured stone and the smooth planes of polished fine plaster as the day unfolds.



At night, automated lighting programmes transform the ambience: scenes of warm dimmed light for intimate dinners, vibrant illumination for entertaining, or a dramatic pool glow that expands the perception of space.

In every moment, Casa Carbó sustains a measured harmony of openness and privacy — an architecture alive to light, sound, and materiality, creating an enduring sanctuary of comfort and refinement.





e. Sustainability, Energy Conservation & Innovation.





Casa Carbó integrates sustainability and innovation through a balance of passive strategies, automation, and resilient infrastructure. Its architectural layout maximises natural ventilation: all bedrooms open onto terraces through wide sliding glass doors, enabling cross-ventilation and the use of automated ceiling fans to create a comfortable breeze, reducing reliance on air-conditioning.

Retractable insect screens on all openings provide year-round comfort in a tropical climate.

A dedicated rainwater harvesting system, complemented by condensate recovery from the air-conditioning units, supplies irrigation via a separate cistern. This closed-loop approach reduces potable water consumption, while the landscape and terrace microclimates optimise cooling naturally.

Automation enhances efficiency and comfort. Integrated systems manage lighting, blinds, pool settings, and multi-zone audio — the latter concealed within ceilings and paired to television soundbars for seamless entertainment.

Climate control is handled by a VRF air-conditioning system programmed to adapt to occupancy and conditions. Security is reinforced through a fully networked monitoring system.

Given the instability of power supply in the region, the residence includes a dedicated transformer and an emergency generator, ensuring stable current for all systems.

Passive design elements reinforce efficiency: white roofs reflect sunlight to reduce thermal load; high ceilings with deep plenums improve air circulation and thermal buffering; and double walls with insulation in strategic façades shield interiors from direct solar exposure, maintaining cooler indoor conditions.

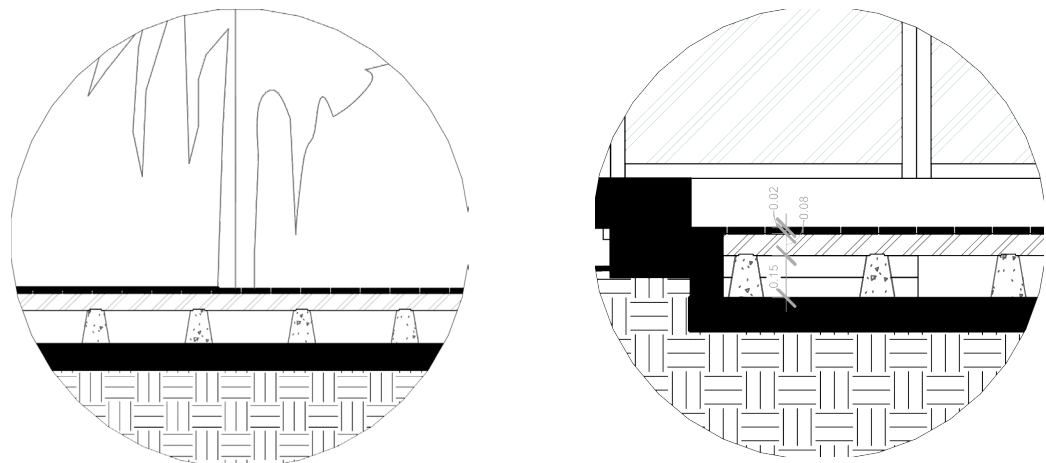
Together, these measures form a comprehensive sustainability and innovation strategy: reducing environmental impact, enhancing energy efficiency, and delivering a home that operates in harmony with its climate while maintaining uncompromised performance.





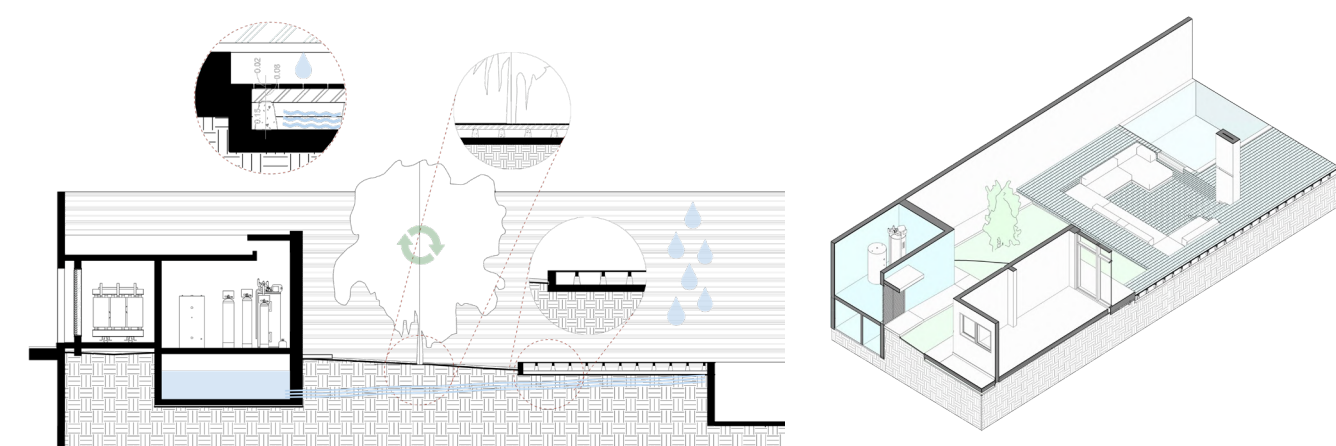
Water management in Casa Carbó is designed as a layered, efficient system integrated seamlessly with the architecture.

Rainwater is collected through the elevated WPC deck, which is supported on concrete feet and steel girders, allowing water to filter below and be channelled into a dedicated cistern. This non-potable water is used for lawn and landscape irrigation.



A second cistern serves the pool, connected to its own heating and cooling system. A third cistern stores potable water for the home, processed through a triple-stage activated carbon filtration system and pressurised by a hydropneumatic pump.

Clean water is then distributed independently to three rooftop storage tanks, enabling gravity-fed supply throughout the house and reducing energy consumption. These tanks are discreetly hidden behind elevated parapets, preserving the purity of the building's silhouette. All three cisterns are located beneath the exterior service room, optimising maintenance and access while maintaining the home's clean spatial composition.





Natural light and ventilation are brought into Casa Carbó's three walk-in wardrobes through high-performance Solatube systems with integrated solar-powered extraction fans.

These daylighting devices capture sunlight through rooftop domes and direct it via reflective tubing into interior spaces, delivering bright, glare-free natural light even in enclosed rooms without windows. The integrated extractor ensures constant air renewal, improving indoor air quality and reducing humidity — a key consideration in Villahermosa's warm, tropical climate — especially in closed spaces such as closets.

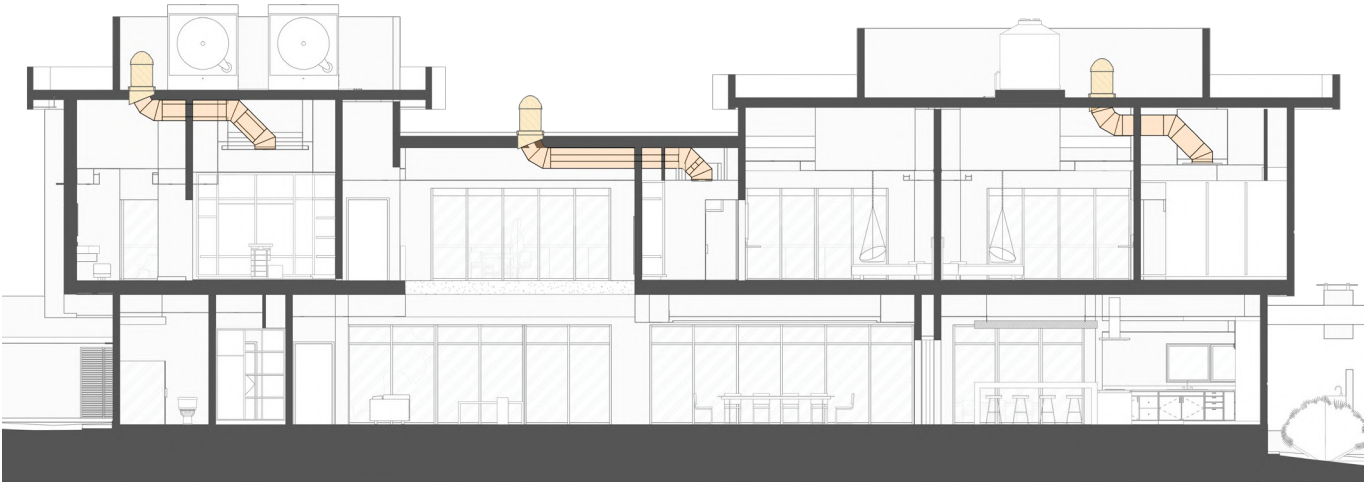
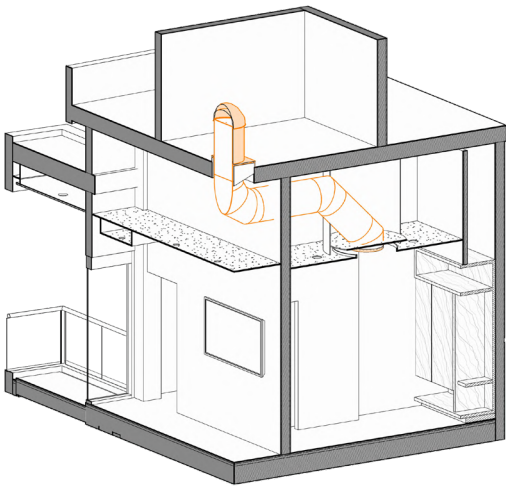
Each unit includes a solar battery, allowing the system to emit a soft, ambient light during the night, extending visibility without relying on the main lighting network. This passive solution reduces dependence on artificial lighting and mechanical ventilation during the day, enhancing energy efficiency while maintaining comfort and freshness.

Architecturally, the detail is clean and discreet — fully integrated into the ceiling composition. — a light that quietly endures at the heart of the space.



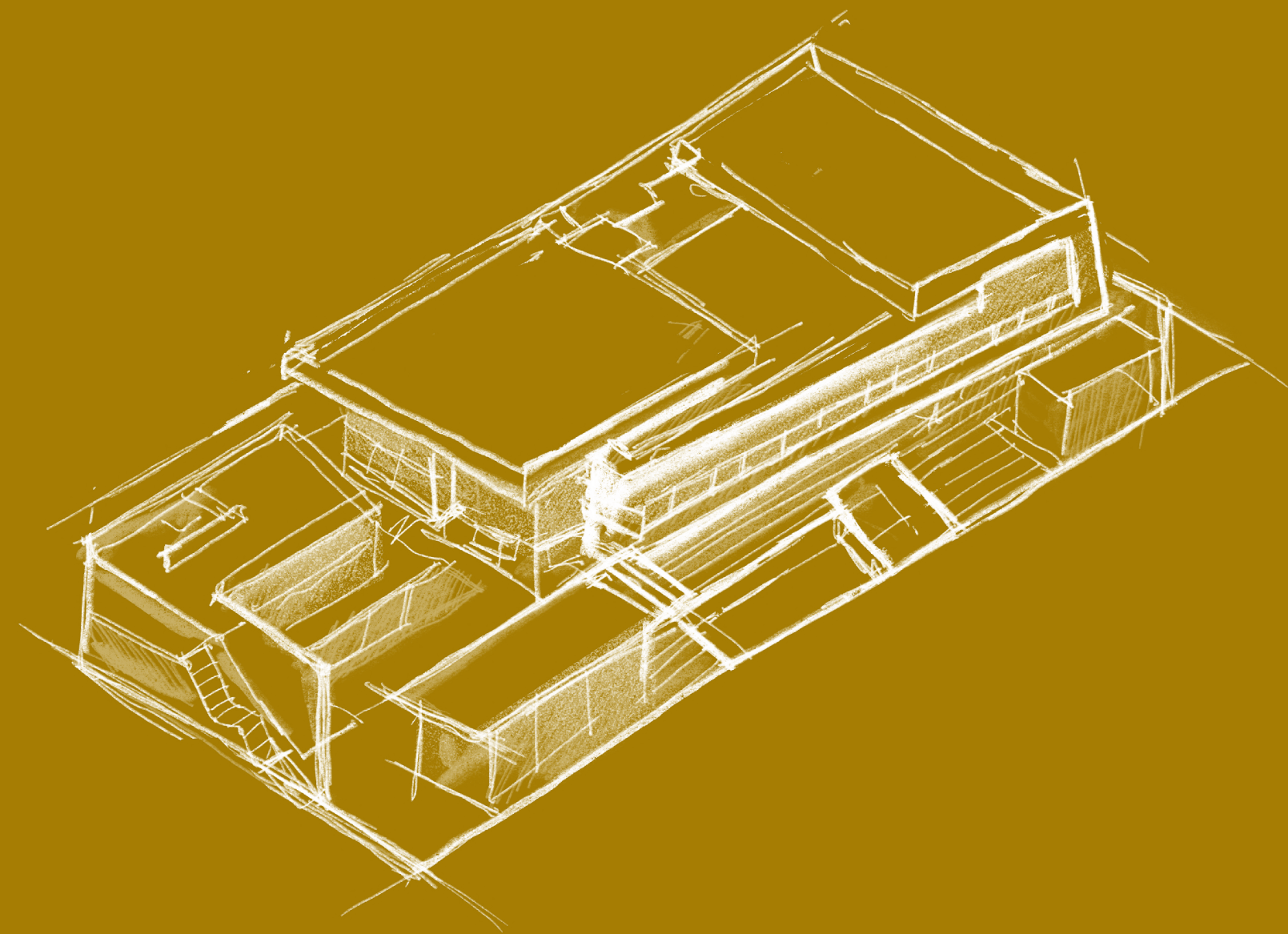
## SOLATUBE DAYLIGHTING SYSTEM

- Natural daylight delivery for enclosed
- Integrated solar-powered extraction fan for air renewal
- Ideal for humid tropical climates like Villahermosa
- Solar battery provides soft night-time illumination
- Improves comfort, reduces humidity and energy use
- Fully concealed within ceiling design for seamless integration





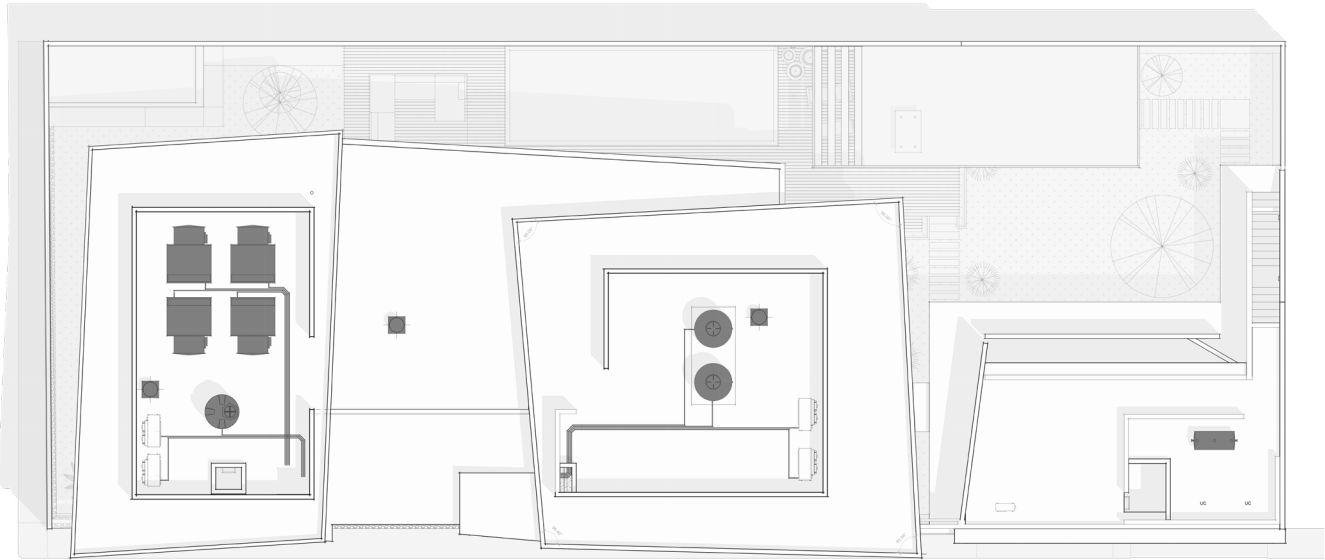
**f** • Safety, Automation & Technical  
Integration.





# TECHNICAL SYSTEMS INTEGRATION

Casa Carbó is equipped with a robust and efficient infrastructure designed to support comfort, automation, and operational resilience — all without visual disruption. All technical systems were carefully coordinated with the architecture to remain entirely hidden from the street and discreet within interior spaces. Every layer of comfort is integrated, not exposed.



The climate system is driven by a VRF air-conditioning network connected to four rooftop cooling towers, enabling flexible and energy-efficient temperature control across the home.

A centralised filtration system, previously detailed in the sustainability section, ensures clean water supply and supports the rainwater/condensate recovery loop.

Lighting and motorised blinds are fully automated through a hardwired control system, ensuring high reliability and synchronisation across scenes and user preferences. Audio distribution and network connectivity are centralised in the main IT cabinet, located in the site's technical room, which also manages CCTV, intercoms, and digital media systems.

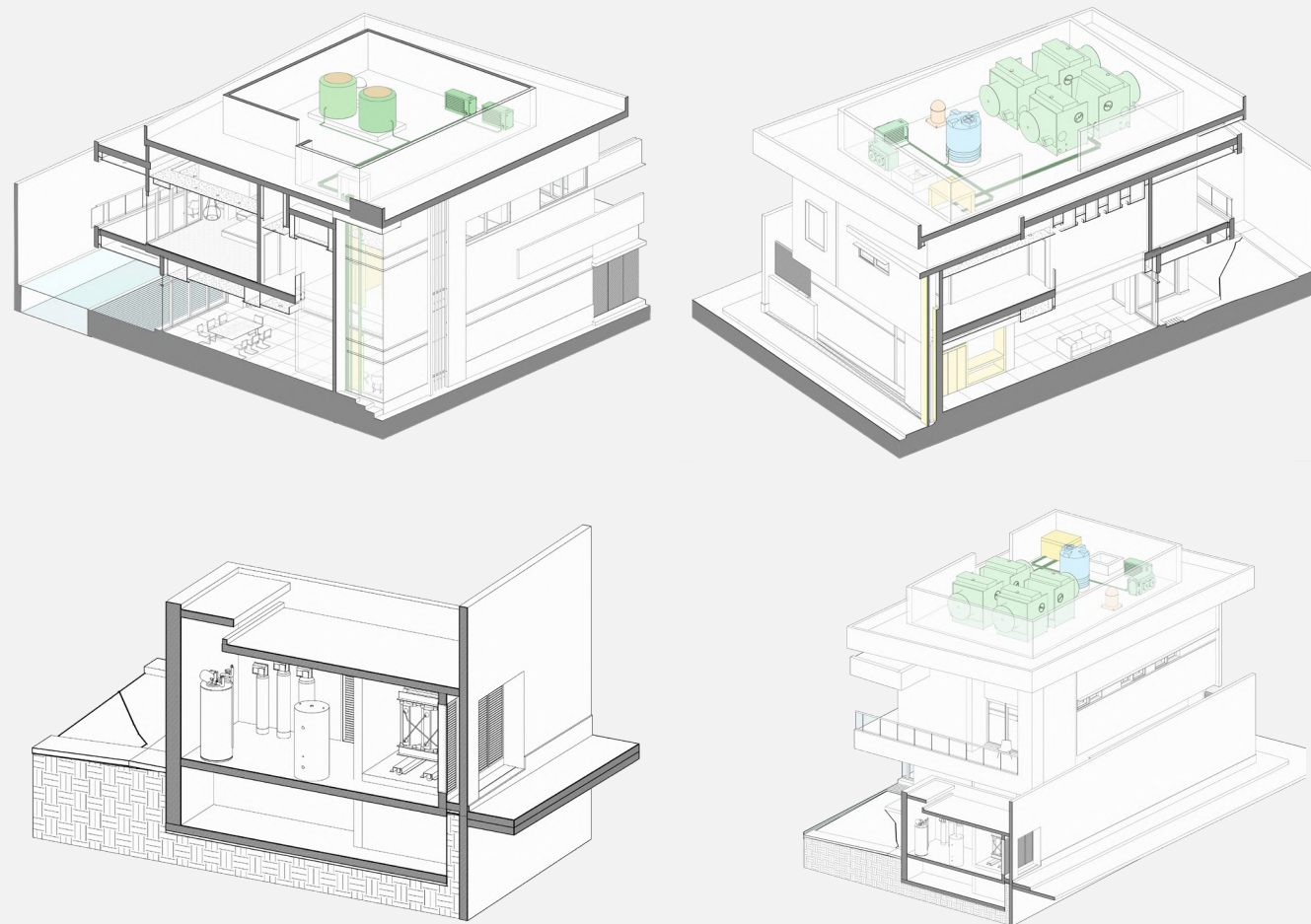




In line with the landscape strategy, a dedicated automated irrigation system is fed by a separate cistern, which collects both rainwater and condensate from the VRF units, significantly reducing potable water usage and improving environmental performance.

Two vertical installation shafts, located on the east and west wings of the house, establish continuous service corridors from rooftop to ground floor. These shafts ensure seamless connection of electrical, hydraulic, and HVAC systems to municipal lines, while remaining fully concealed within the architectural envelope.

A dedicated mechanical room, independent from the cistern volume for safety reasons, houses a standalone transformer and a backup generator to stabilise current and guarantee energy continuity during power fluctuations or outages — a vital consideration in the region.



## SAFETY & AUTOMATION

Security at Casa Carbó is embedded within its architectural language, functioning both discreetly and effectively. A full-coverage CCTV network monitors the perimeter and all access points, with live feeds routed to a dedicated control interface accessible throughout the residence.

The south-facing front façade is designed for both privacy and environmental performance: minimal glazing reduces solar gain while carefully composed openings preserve seclusion, with ground-floor windows shielded by steel reinforcements seamlessly integrated into the architectural composition.

Technical systems are equally resilient. A dedicated IDF room on the upper floor, equipped with its own cooling system and uninterrupted power supply, safeguards all automation, security, and connectivity functions.

The residence's power network is stabilised by a dedicated transformer, mitigating the frequent current fluctuations in the region. An emergency generator ensures that essential systems such as climate control, security, and lighting continue to operate seamlessly during power interruptions.

Together, these measures sustain the home as an urban oasis — a private, secure retreat where comfort and performance remain uninterrupted, in harmony with its character.

In the words of Tadao Ando: 'In a house, you should feel the joy of being protected — like an oasis from the chaos of the outside world.' Casa Carbó embodies this sentiment, offering refuge and stability without compromising elegance.





*"In a house, you should feel the joy of being  
protected – like an oasis from the chaos of the  
outside world."*

- Tadao Ando



















**casa carbó**

Villahermosa, Tabasco. Mx. 2025

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Structural Engineering	Yireh Construction – Ing. Héctor García Mora
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Illustrations	Carlos Silvan
Kitchen Customisation	Küchen
Automation & Domotics	SIAC
Interior Styling	Taller Diarq
Closet Systems Supply	California Closet
Lighting Design & Supply	Dies Iluminación
Window Systems	Eurofenster - Kömmerling Supplier
Landscaping & Garden Supply	Evergreen