

FORM FOLLOWS FIRE

PROPOSAL FOR A FIRE-RESILIENT CONCEPT HOME
IN ALTADENA
LOS ANGELES, CA

CASE STUDY 2.0

CONCEPT

WHAT SURVIVED ?



- MASONRY
- WATER
- VEGETATION

PACIFIC PALISADES, CA - JANUARY 21, 2025

An aerial view of homes destroyed by the Palisades Fire. Surviving materials predominantly comprise masonry (walls, chimneys), pools, and some vegetation (especially old growth). (Photo by Mario Tama)

FORM FOLLOWS FIRE

Proposal for a Fire-Resilient Concept Home
in Altadena, Los Angeles, CA

California wildfires in 2025 were some of the most destructive in the state's history, claiming thousands of structures, tens of thousands of acres, and a great many lives. In the wake remains a labyrinth of grief for vanished homes, ravaged ecosystems, and neighborhoods rendered unrecognizable. The scope and danger of the fallout on public health is as yet incalculable, as is the psychic damage to residents who watched the physicality of their lives, including shared memories of community and place, evaporate.

These unprecedented fires make plain the utter fragility of our ecological and social systems, highlighting the existential threat that persists if we fail to confront the reality of our climate trajectory. Without rebuilding initiatives that make good-faith, informed attempts to integrate rather than retrofit fire-risk solutions, we leave future generations more vulnerable to catastrophe. We are challenged to develop new designs that consider and anticipate these threats before they recur. Faced with the task of rebuilding, the absence of intention is an avoidable mistake.

Form Follows Fire is a proposal for a re-dreamed LA home that makes fire-resilient design a visible and expressive part of its architecture. It is a functional, buildable case study on how the circumstances of climate threats can

catalyze new forms of beauty and comfort, and embody environmental integration. The fundamental aim is to transform fire resilience into architecture that elevates standards of living.

At its core, FFF is a palette of fire-resistant, passive, and sustainable systems, both shaping the home's performance under climate pressure and enriching residents' experience of daily life:

- Concrete block walls provide fire shielding and thermal mass, invoking a sense of durability and permanence.
- An emergency water sprinkler system draws from the pool, which doubles as a reservoir independent of strained utility supplies, defending the property during service outages.
- Water gardens are positioned in front of glazed openings, slowing the advance of flammable debris and embers during fire events, passively cooling the home in the summer, or remaining empty during drought conditions.
- The landscape is composed of wild native gardens separated by a network of decomposed granite pathways, creating a defensible archipelago of coastal scrub ecologies that slows fire spread. Set back from the house, coastal live oaks are established that can be enjoyed for many generations.
- Integrated solar power, rainwater harvesting, sun

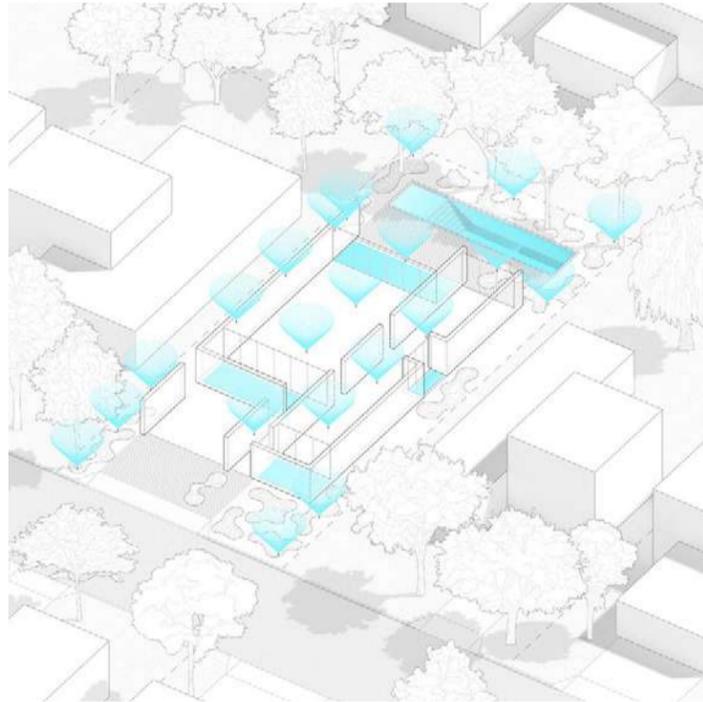
shading, and natural ventilation make the house not only survivable, but a life-sustaining environment.

The design approach pays homage to the original Case Study Program and LA's modernist lineage. This novel typology considers fire protection and ecological viability as intrinsic design features. It was developed in collaboration with LA firefighters who battled and experienced the behavior of the fires firsthand, as well as firesafe landscape specialists from Theodore Payne Foundation. It represents an effort to honor LA's most celebrated architecture while integrating firesafe principles, which we hope leads to something new that is rooted in and representative of our cultural heritage and present-day climate reality.

The following is a proposal for Altadena as part of the Case Study 2.0 program. Additionally, we have put forth a concept for a typical Pacific Palisades parcel. Instead of a fixed design concept, each of these proposals represents a flexible design system that can adapt to a variety of lot types and be fine-tuned to meet the specific needs of those looking to rebuild.

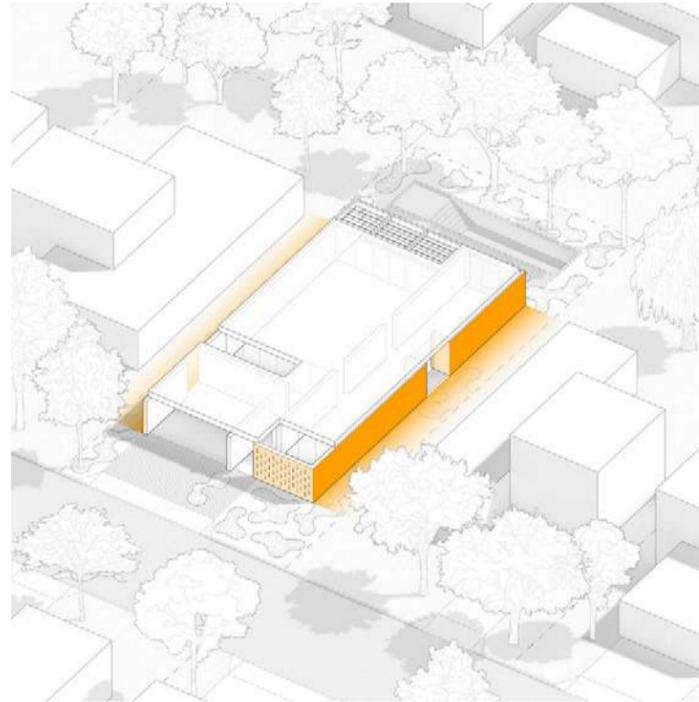
The design team is comprised of LA-based collaborators: interiors by **WOE**, site-specific stone and water sculptures by **Lily Clark**, and fire consulting by **Eric Shiroishi** FFPM LACoFD.

CONCEPT DIAGRAMS



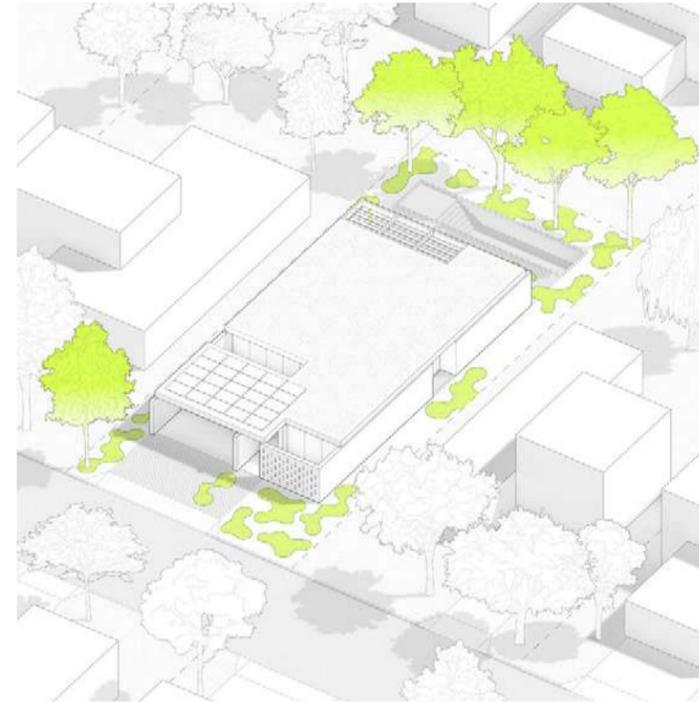
WATER DEFENSE

During extreme fire events, when water becomes an invaluable resource, sprinklers located on the roof and landscape draw water from the swimming pool. Water gardens are positioned in front of glazed openings to protect against flammable ground debris and embers. During times of drought, homeowners may opt to drain the pools to conserve water or refill them strategically to build up reserves.



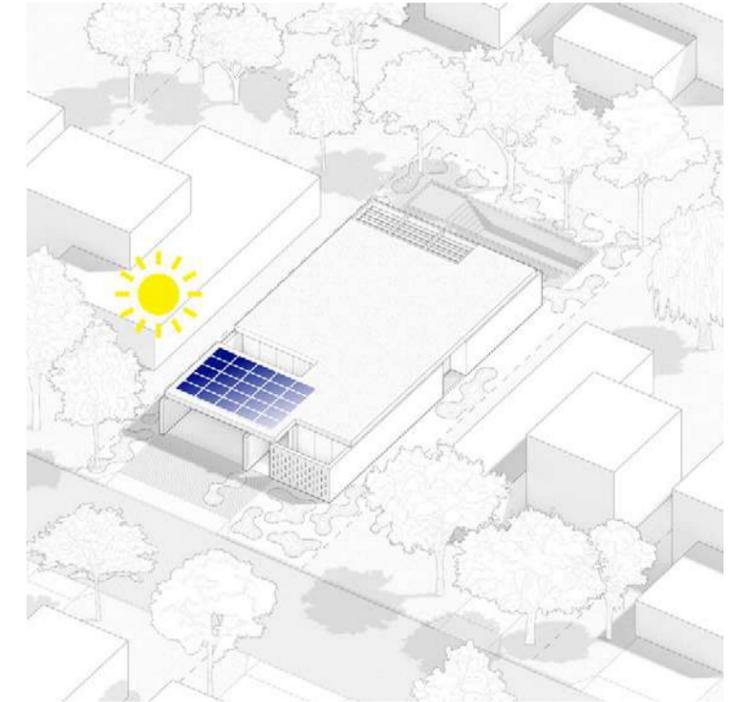
FIRE WALLS

Non-combustible concrete block walls are oriented to protect against the primary fire spread through adjacent neighboring houses. Within this protected core, larger glazed openings frame views and connections to front and rear landscapes.



FIRESAFE LANDSCAPE

Wild native gardens separated by a network of decomposed granite pathways slow fire spread and create a defensible archipelago of coastal scrub ecologies. Set back from the house, coastal live oaks are established that can be enjoyed for many generations.



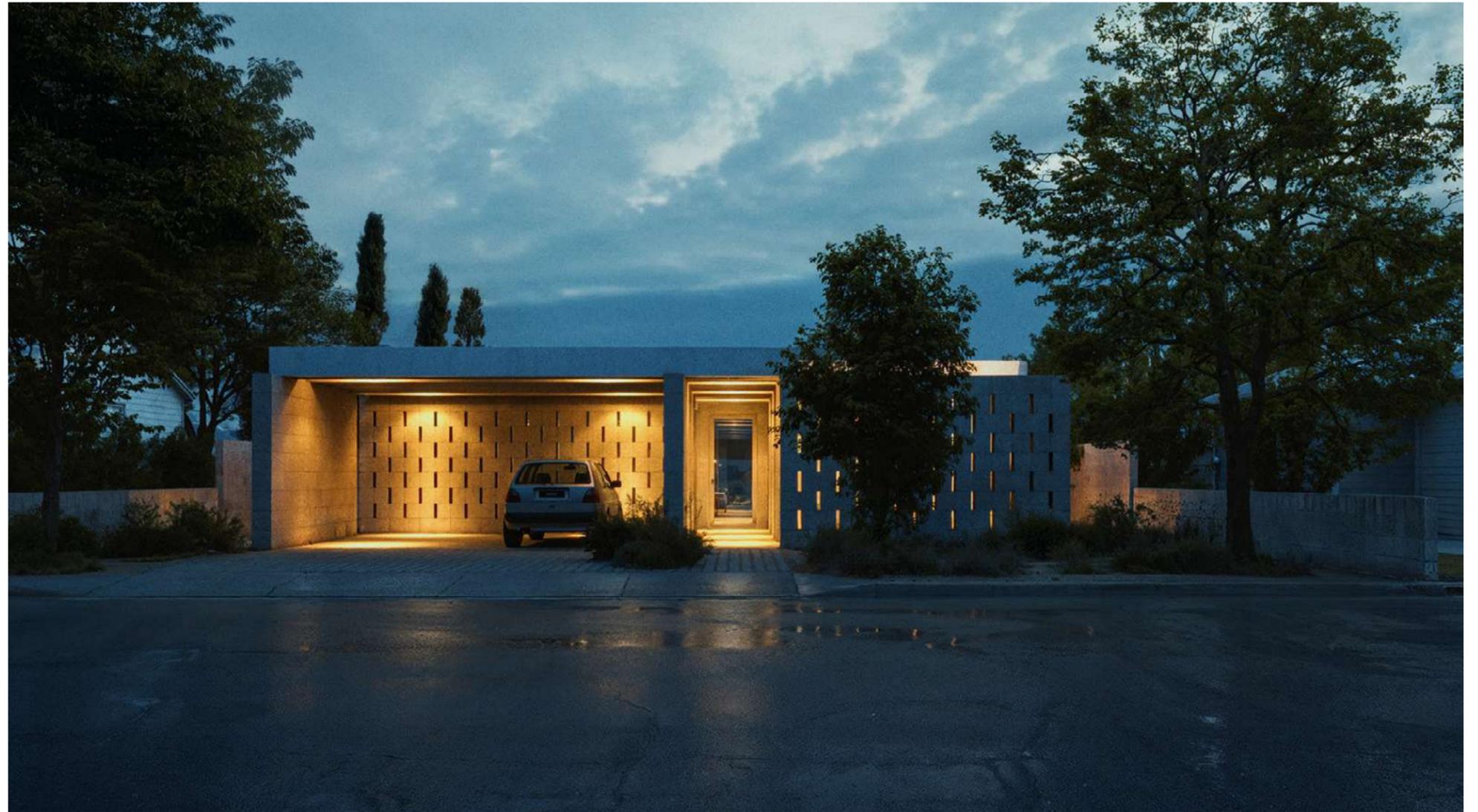
ENERGY

A 10kW solar array generates electricity, which can be stored on site to reduce peak utility demand and provide backup power to the sprinkler system in the event of a power outage.

IMAGES



FORM FOLLOWS FIRE / ALTADENA



MAX MORIYAMA







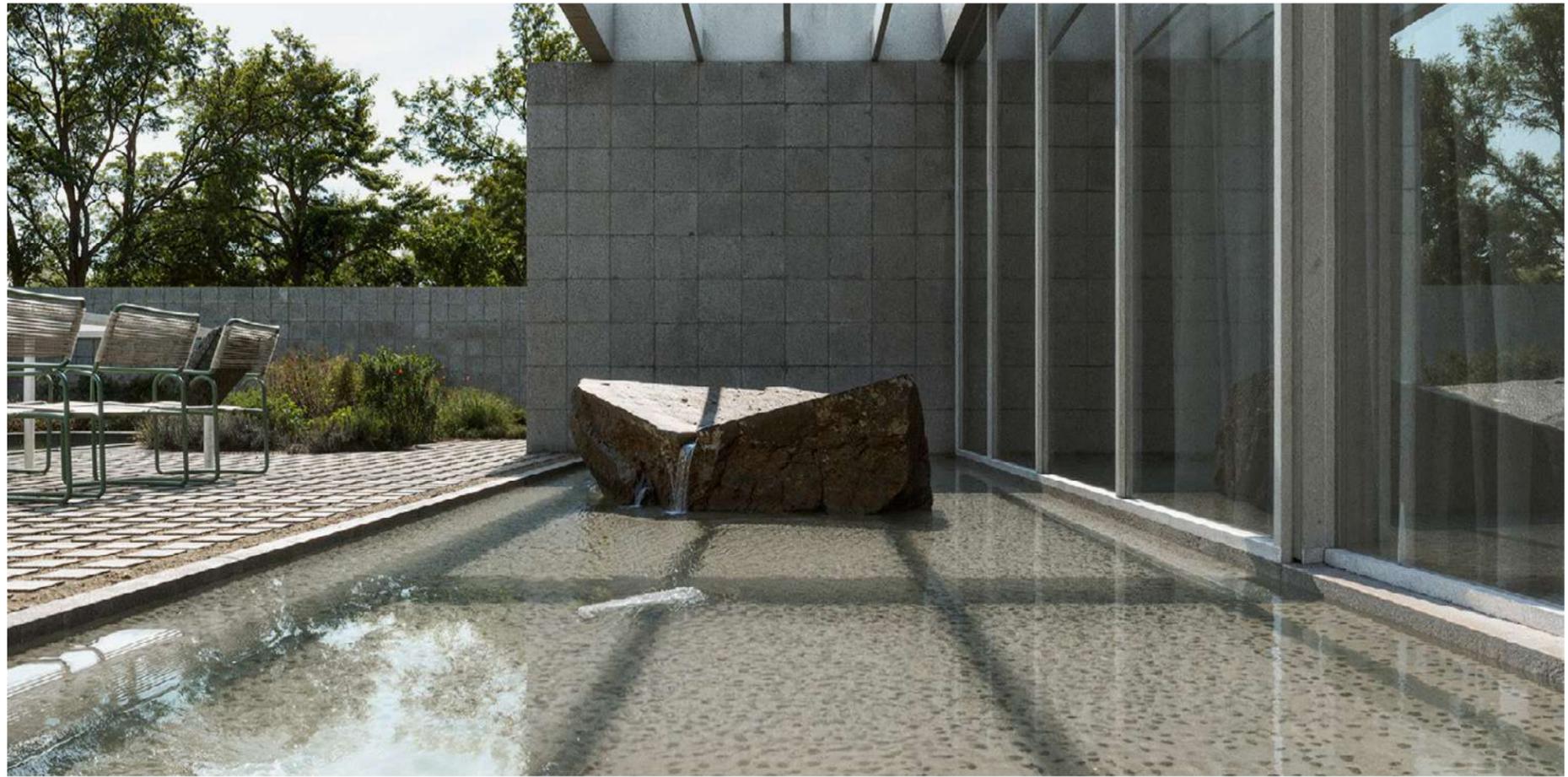








IMAGE OVERVIEW



001
Carport



002
Street view



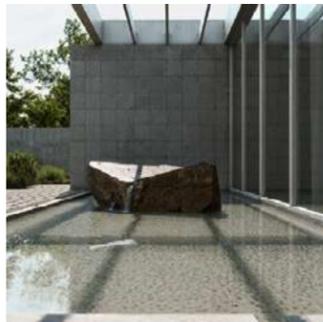
003
Living room



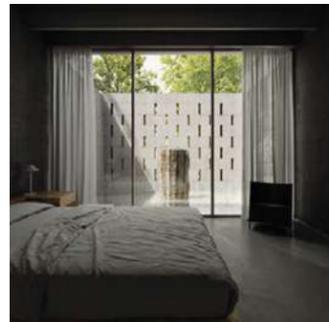
004
Dining



005
Kitchen



006
Rear water garden
Sculpture by Lily Clark



007
Bedroom water garden
Sculpture by Lily Clark



008
View from pool



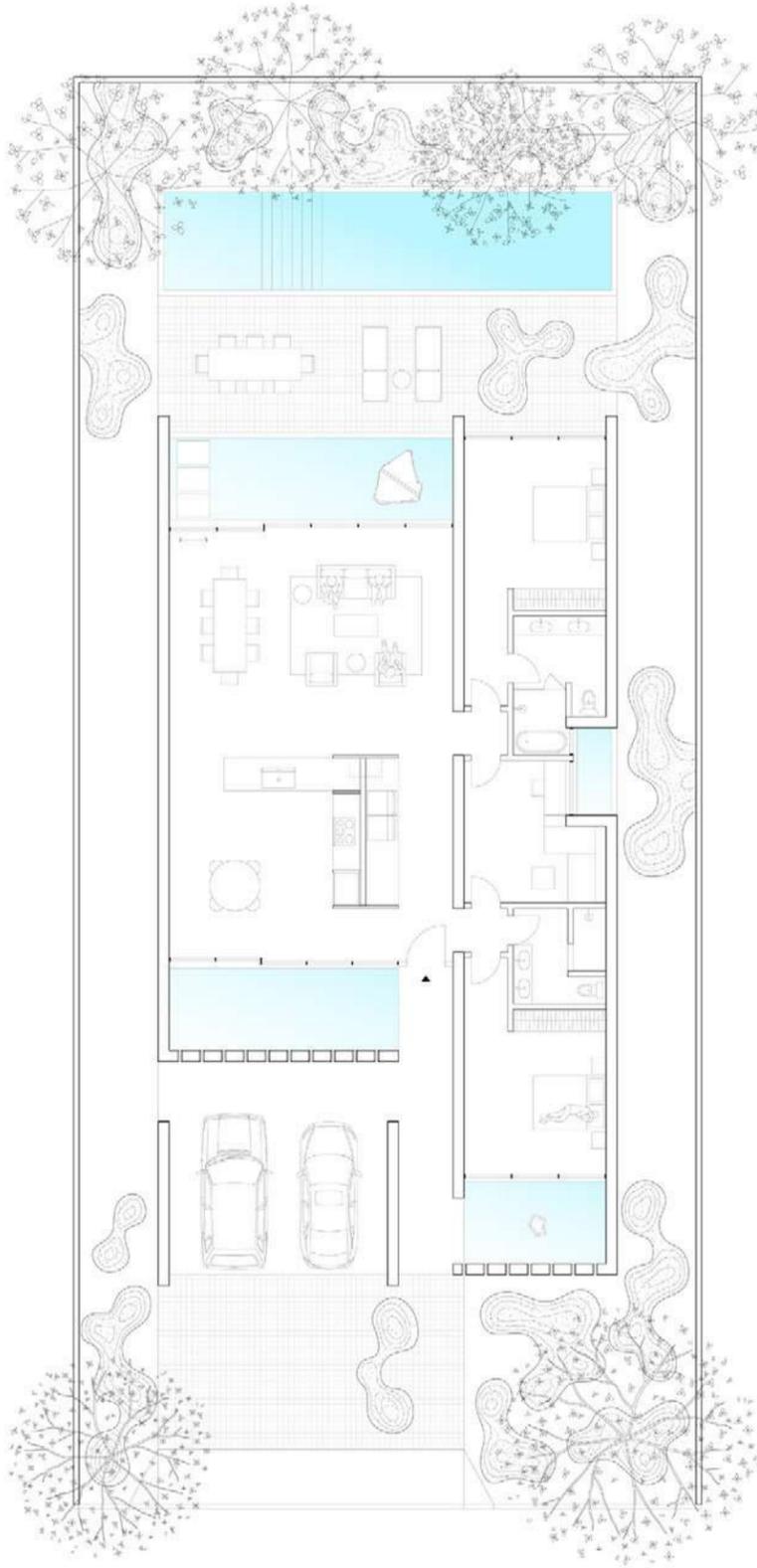
009
View from rear landscape



010
View from pool II

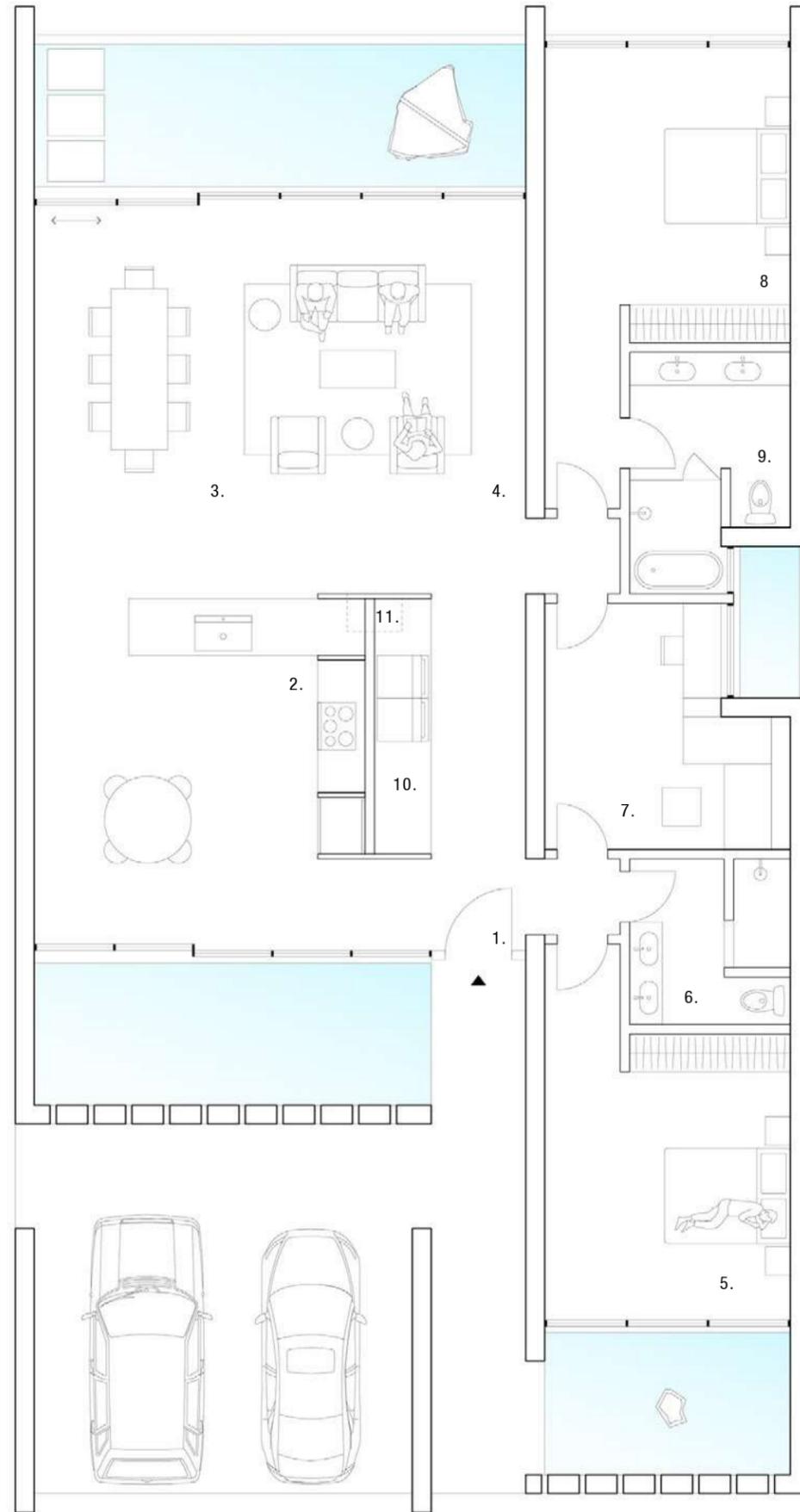
DRAWINGS

SITE PLAN
SCALE: 1:200



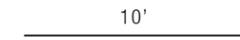
PLAN

SCALE: 1:100



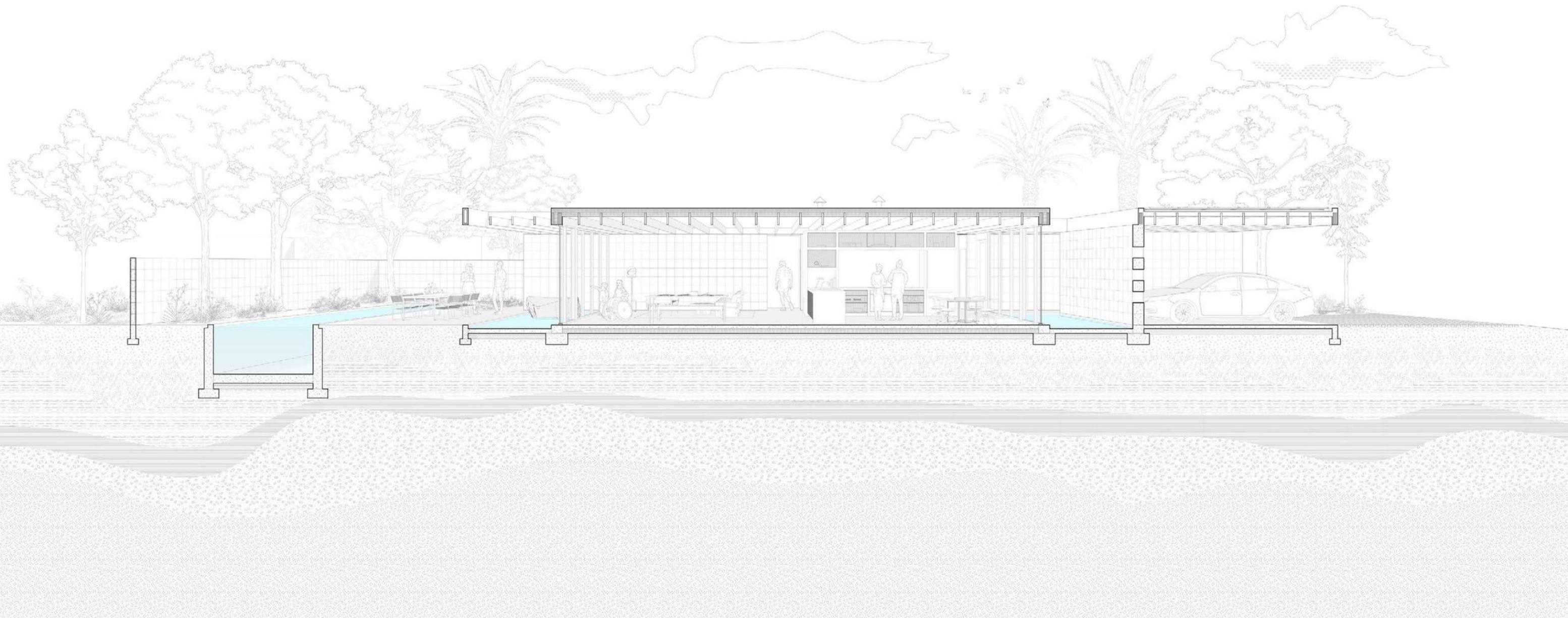
- 1. ENTRY
- 2. KITCHEN
- 3. DINING
- 4. LIVING
- 5. BEDROOM
- 6. GUEST BATH
- 7. OFFICE
- 8. MASTER BEDROOM
- 9. MASTER BATH
- 10. LAUNDRY/STORAGE
- 11. FIREPLACE

GROSS AREA: 2,000 SF

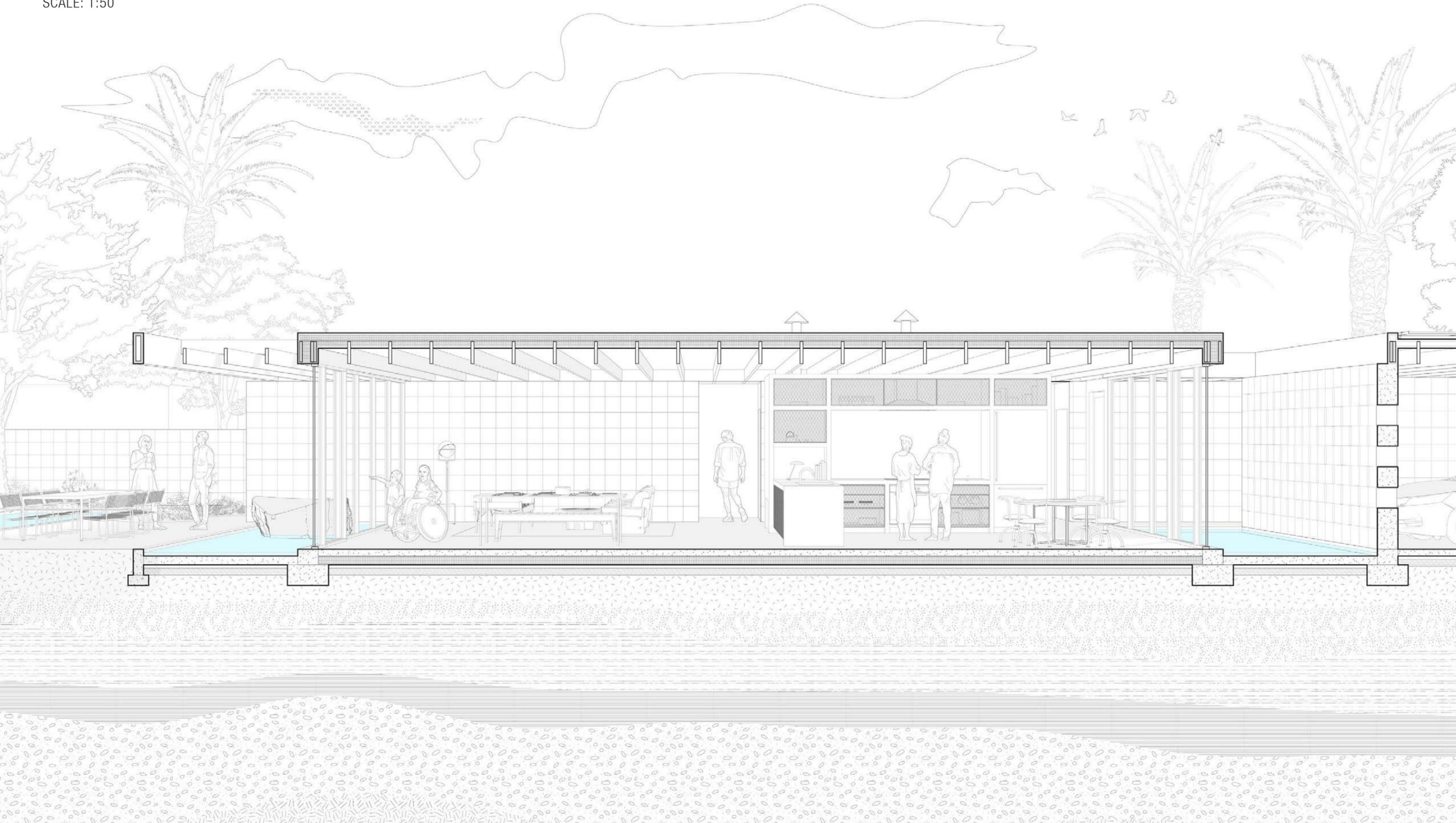


SITE SECTION

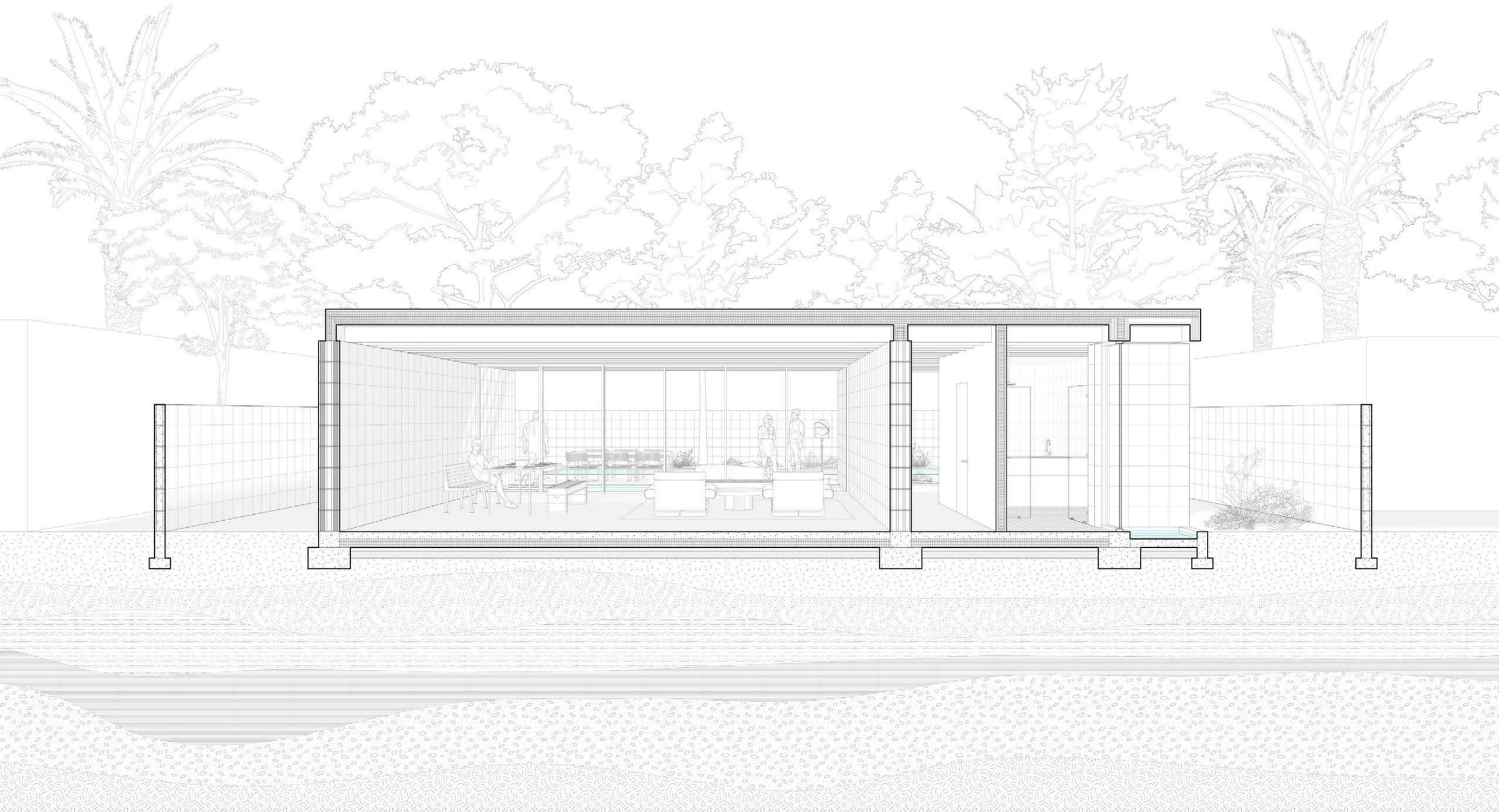
SCALE: 1:100



SECTION 1
SCALE: 1:50



SECTION 2
SCALE: 1:50



INFO

DESIGN TEAM

MAX MORIYAMA

Max Moriyama is a Los Angeles-based designer focused on residential, hospitality, landscape, and industrial design. As a paraplegic, his work is committed to accessible design and advocacy for the disabled community.

WEB:
www.maxmoriyama.com
CONTACT:
info@maxmoriyama.com

INTERIORS: W O E

Width Over Ears is the creative project of Nicole Choy and Justin Coates. W O E designs for the demands, choreographies and architecture of interior space. Their work and its processes honor histories and materials as much as desire and intuition. The resulting projects are intimate responses to the vitals: site, context and client.

WEB:
www.w-o-e.com
CONTACT:
office@w-o-e.com

FEATURED ARTIST: LILY CLARK

Lily Clark is a Los Angeles based artist working across a variety of materials, including stone, ceramic, and metal to shape and contain water. Through close observation and successive experimentation, she seeks to illuminate the fundamentals of fluid dynamics.

WEB:
www.lily-clark.com
CONTACT:
contact@lily-clark.com

DESIGN TEAM

BUILDING SCIENCE:
TOSHI WORKS

Toshi Works is an international practice that operates as a critical link between conceptual ambition and the realities of construction, specializing in designing for demanding climates and remote landscapes. They seek to bridge human to nature within a values-driven framework emphasizing beauty and harmony of materials.

WEB:
www.toshi.works
CONTACT:
toshi@toshi.works

FIRE CONSULTANT:
ERIC SHIROISHI

Eric Shiroishi is a Firefighter and Paramedic with 15 years of experience, working for LA County for 11 years. He holds certifications in wildland firefighting and wildland-urban interface from Cal Fire Wildland, Palomar, and LA County Fire Academies. He has firsthand experience fighting a number of brush fires, including the 2018 Woolsey Fire and the 2025 Eaton Fire.

WEB:
www.fire.lacounty.gov
CONTACT:
eric.shiroishi@fire.lacounty.gov