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Skyline Residence

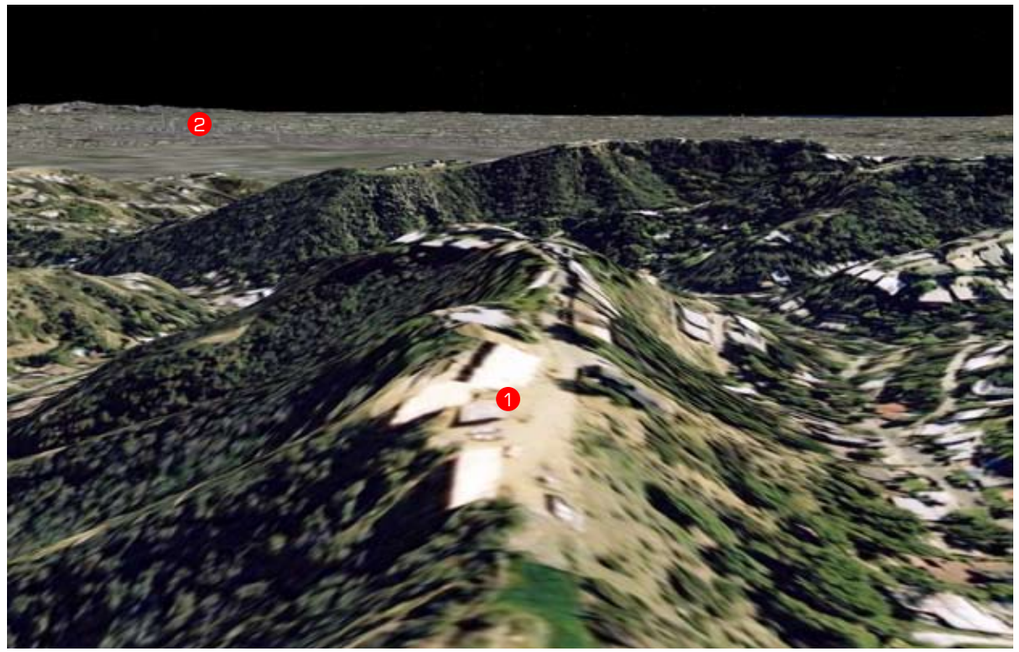
BELZBERG ARCHITECTS

PHOTOGRAPH

Skyline Residence - View from Skyline Drive

SITE CONTEXT

[1] Site
[2] Downtown Los Angeles



Introduction

Perched atop a ridgeline in the Hollywood Hills, the presence of the Skyline Residence represents an honest approach to creating an environmentally sensitive building without sacrificing beauty nor budget. The pre-existing site presented a challenge in terms of constructability, the client presented the challenge of limited allowable expenses, and the architect was resilient to marginalize beauty and originality. The requirements of an architecture to satisfy each of these constraints are found in that which is constant and continuous at a given site.

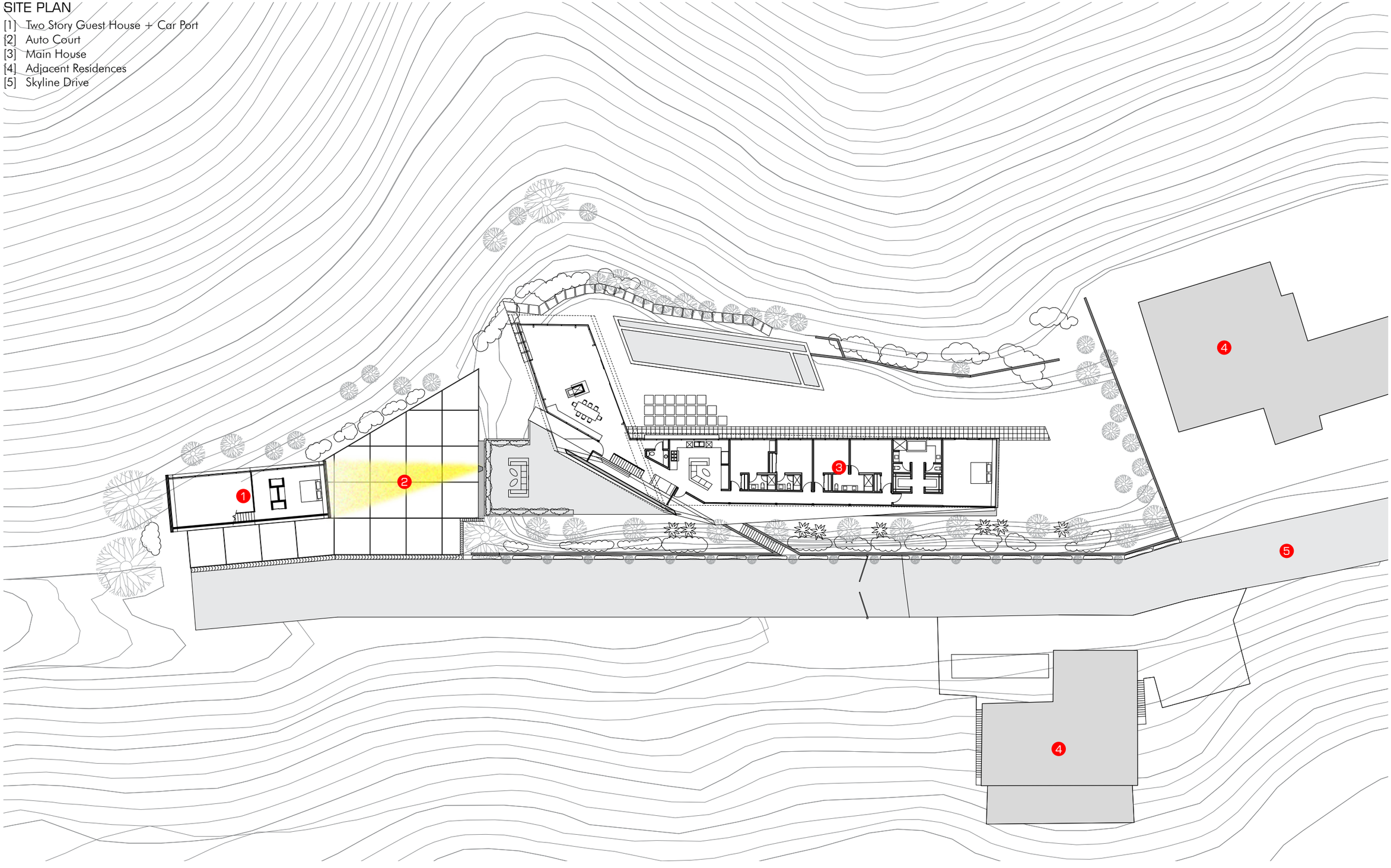
Capitalizing on and working within the physical, visual, and psychological characteristics of a given site fosters value in the relationship between building and site. Beyond incorporating various sustainable strategies out of pure concern for the environment, the budgetary limitations imposed on material choice forced the architect to implement strategies for using resources in close proximity to the site. While the building is not fused with the ground formally, it's relationship to ground, sky and the elements through a comprehensive understanding of locality is symbiotic.

Site Observations

Because the site exists along a ridgeline, the shape of workable land was generally narrow and linear abutted at both sides by steep, brush-covered hillside. The workable area was also compressed by an easement flanking the Southwestern edge. The earth itself is partially composed of granite implying difficulty for excavation. Simultaneously, the root system of the surrounding brush helps to prevent the less solid areas of earth from sliding making the occupation of the hillside a feat which would require ample resources and additional equipment. Beyond the physical constraints, opportunity presented itself by realizing viewing angles in comparison to solar angles. Each had the capacity to compliment each other in order to maximize natural lighting and views without increasing future cooling demands.

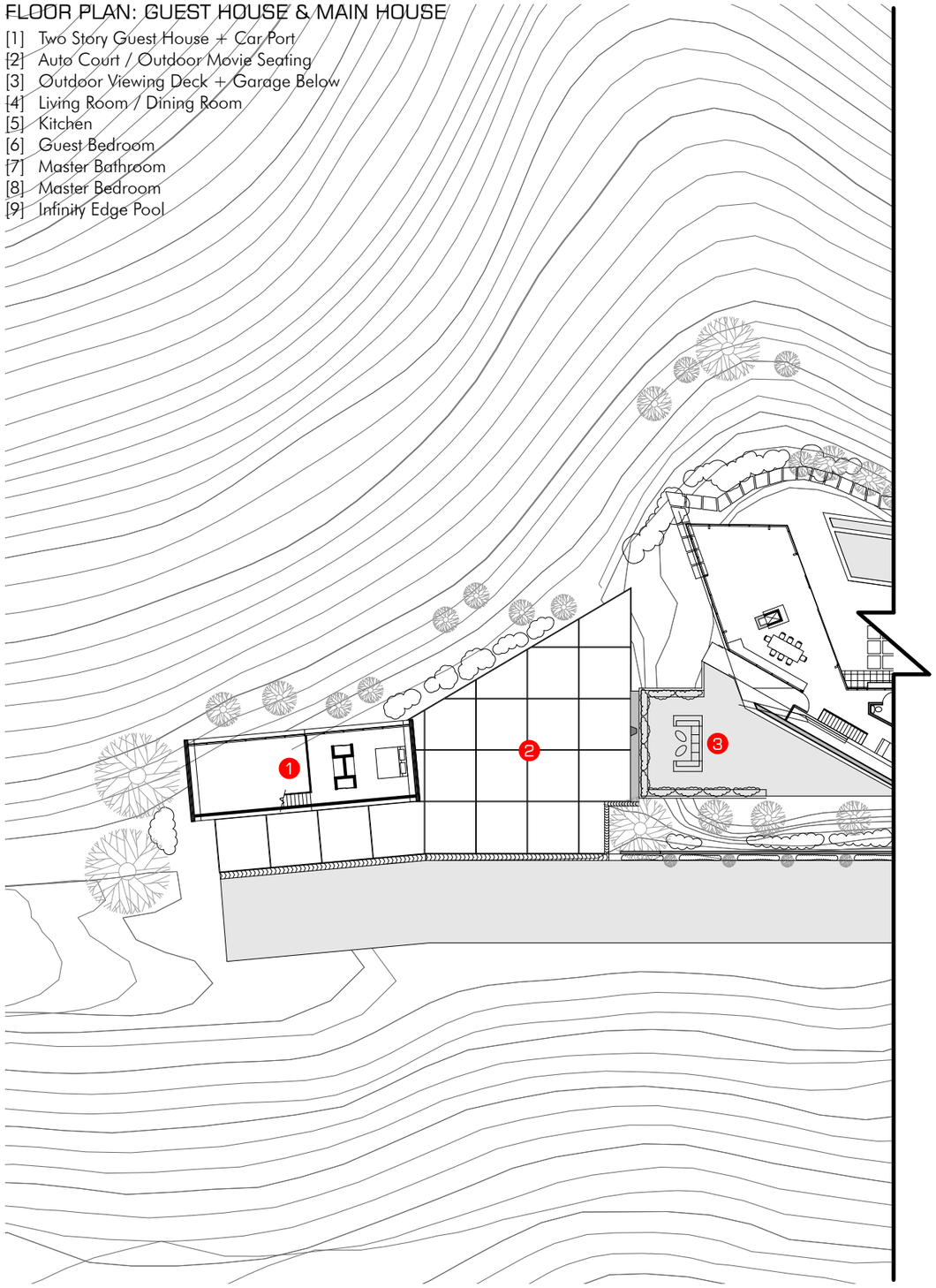
SITE PLAN

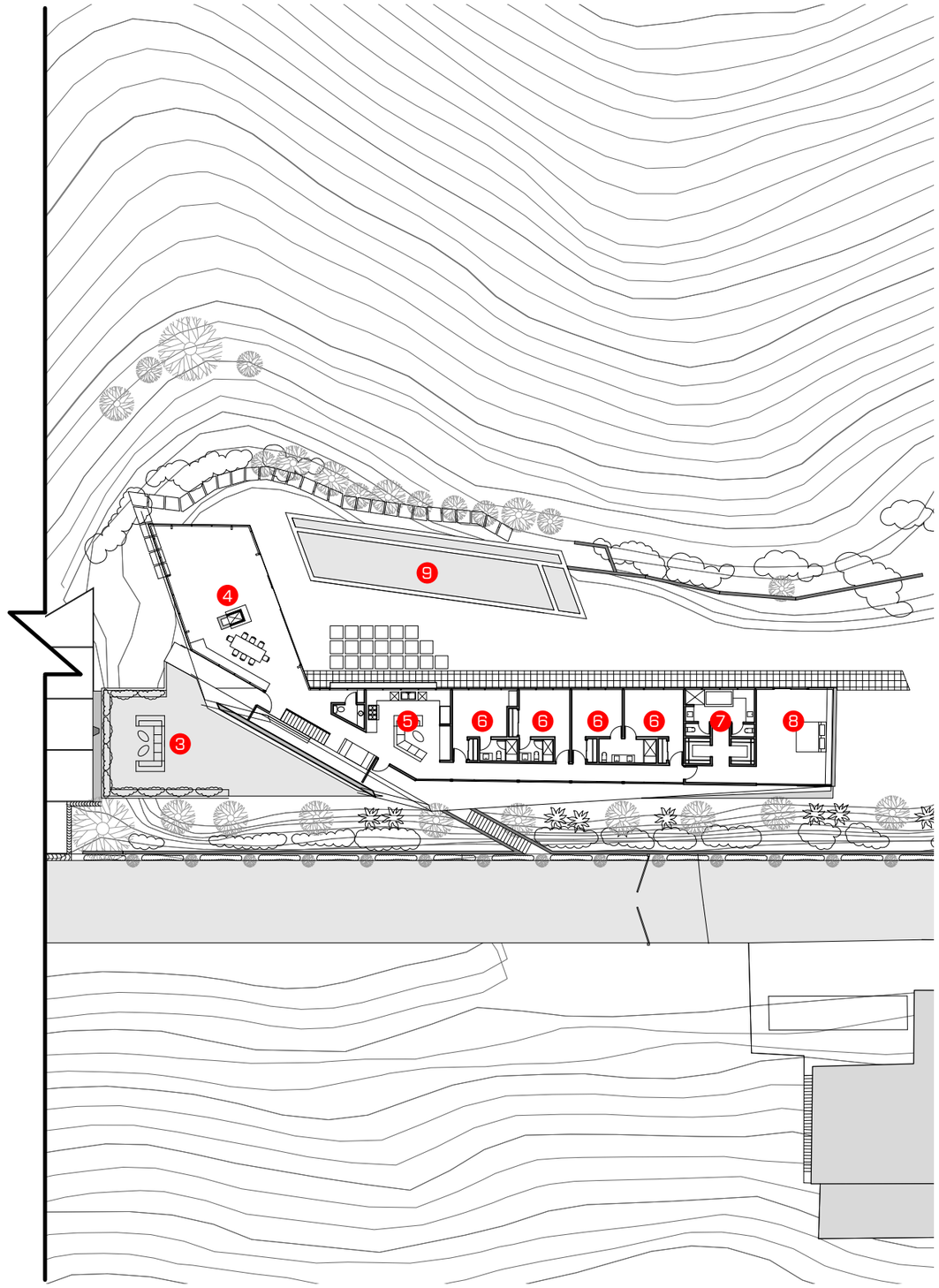
[1] Two Story Guest House + Car Port
[2] Auto Court
[3] Main House
[4] Adjacent Residences
[5] Skyline Drive



FLOOR PLAN: GUEST HOUSE & MAIN HOUSE

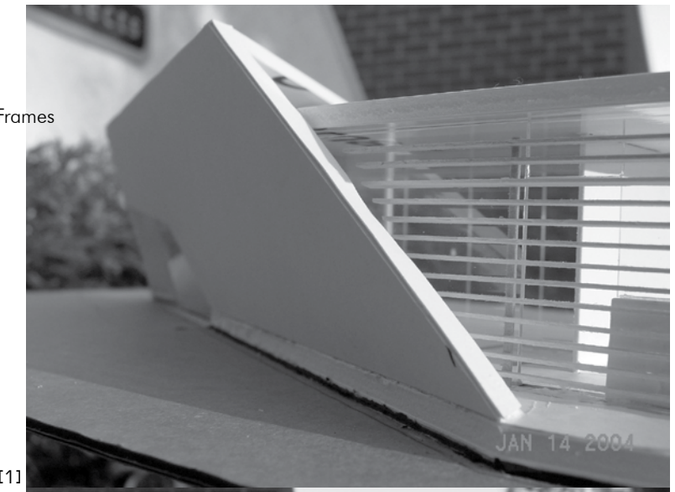
[1] Two Story Guest House + Car Port
[2] Auto Court / Outdoor Movie Seating
[3] Outdoor Viewing Deck + Garage Below
[4] Living Room / Dining Room
[5] Kitchen
[6] Guest Bedroom
[7] Master Bathroom
[8] Master Bedroom
[9] Infinity Edge Pool





SINGLE, FOLDED SURFACE

[1] Study Model
[2] Study Model
[3] Study Model
[4] Folded Sequence & Resultant View Frames
[5] Folded Sequence



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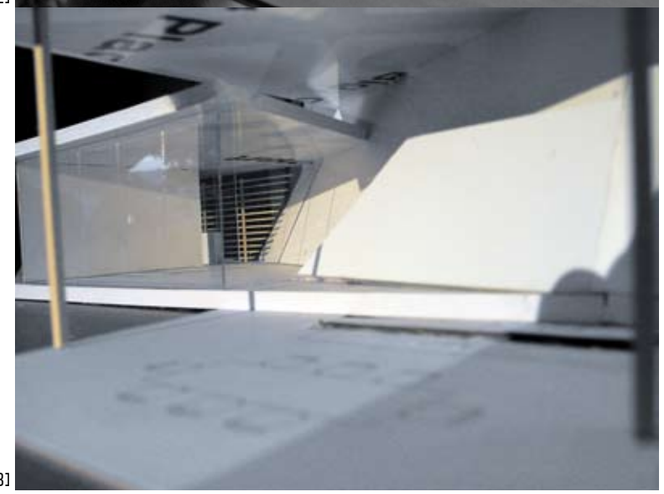

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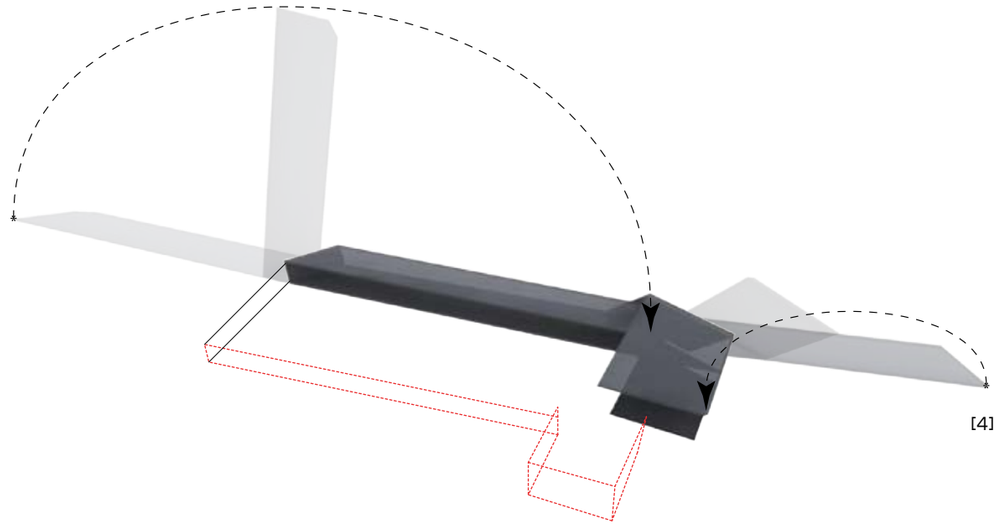

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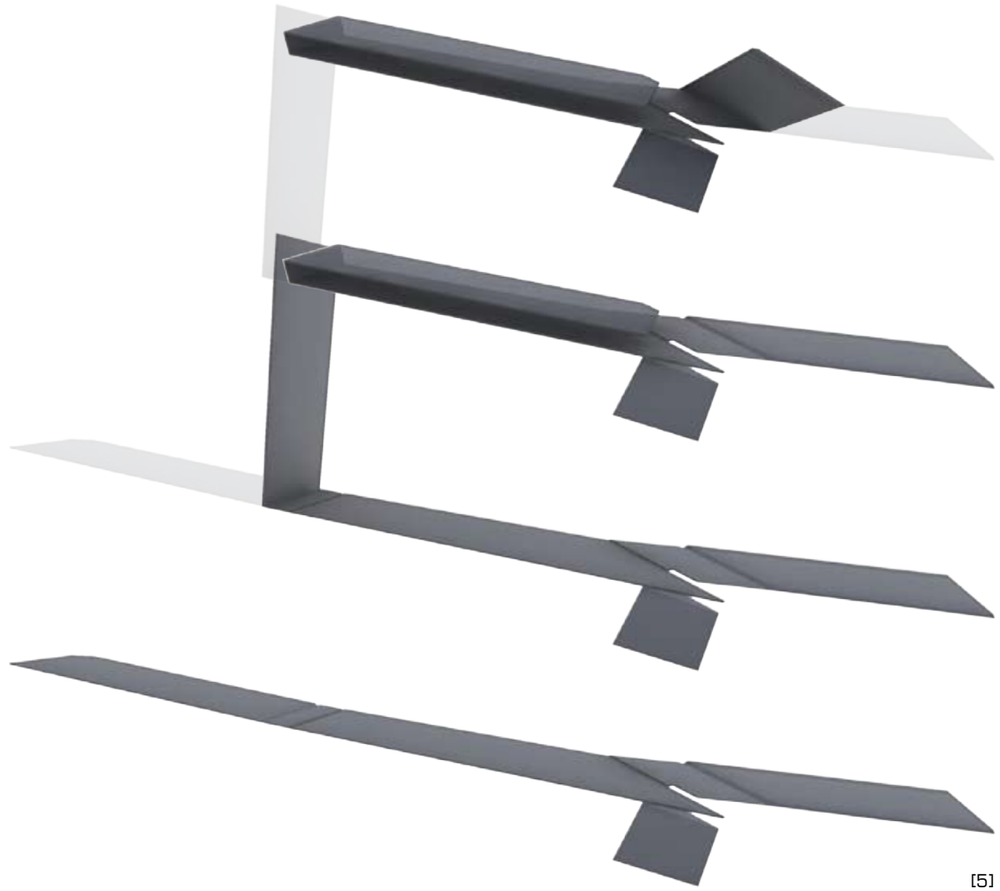


[5]

PHOTOGRAPH
Interior at entry expressing the fold

PHOTOGRAPH
Framed view experienced upon entering the house

Design Strategy; Folding, Framing and An Architectural Pangaea

Both the main house and the guest house are enclosed by a single folded surface with infill glazing and screened walls. The objective of such a strategy is to capitalize on framing extrinsic conditions and using the solid walls of the fold itself to affect the adjacent spaces. Low-e glazing makes up the entirety of the North and Northeast faces of the building and open up the interior to views of downtown Los Angeles, Laurel Canyon and the San Fernando Valley. The building is oriented and planned in a way that each room has at least one fully glazed wall to capitalize on these dramatic views. The absence of one solid wall in each room also reveals the fold as a framing device. On the Southwest facades of each building, the fold maintains itself as a framing device, however in these instances as a screen wall designed to shade the interior from harsh evening sun while providing visual texture to the valley below.

The fold itself represents the only solid exterior surfaces defining the form of the building and defining an edge to adjacent exterior spaces. It is quite common that spaces surrounding a building compliment the building itself however struggle to really become a space in and of itself. The strategy for removing the guest house from the main house and including an auto court in between stems from the idea that complimenting forms which spatially could be perceived as once being united allow the interstitial space between a sense of connection, if only visual. In this design, the faces resulting from a separation in form created areas for videos and films to be viewed. The deck above the garage is now a gathering space for social events and a viewing platform for projections onto the Southern face of the guest house. This interaction between the main house and the guest house utilizes a normally singular and stagnant space in the auto court and activates the solid surface of the fold through an engagement with the surrounding space.

PHOTOGRAPH

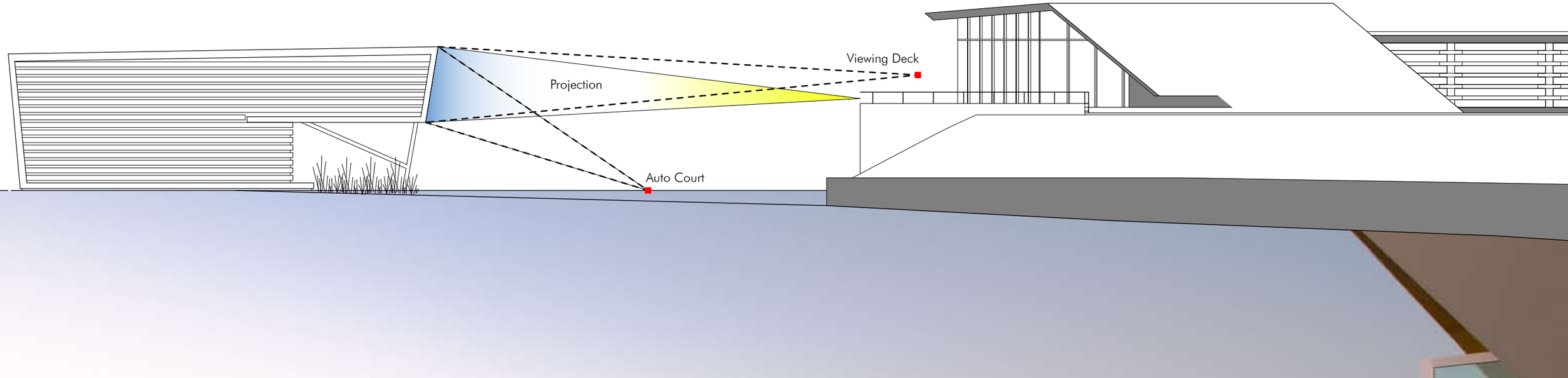
View looking back at entry with stairs to the garage in foreground

PHOTOGRAPH

View looking through the fold with viewing deck beyond

VIEWING DECK & PROJECTION WALL

The garage roof acts as an outdoor gathering space during social events and as a viewing deck for movies and larger-than-life video gaming for more private moments. Not only has this move re-established a connection with the guest house and auto court in a very atypical fashion, it has also prompted neighbors to interact amongst each other and share common experiences.



PHOTOGRAPH
Projection wall at South end of guest house

Sustainable Initiatives That Are Affordable?

From the beginning, incorporating sustainable design strategies was a guiding principle in developing the design. The increasing popularity of 'green' products and the emerging state of newer 'green' technologies are changing the way architects perceive the substance of each design, however, cost is still quite prohibitive, especially for single-family residences. At the same time, some of the most common or basic strategies to incorporate natural solutions are also some of the cheapest. The Skyline Residence was built for $180 per square foot and incorporates a multitude of green tactics for building sensitively and responsibly.

Protection from direct sunlight, optimum viewing angles, and maximum day-lighting were parameters which informed the organization of spaces and the composition of exterior wall treatments. The Southwest facing façade is exposed to low, late evening sunlight. On the interior, a single-loaded corridor was created to act as a heat buffer between the glazing and the bedrooms. In addition to deep shadowing eaves, a custom screen was installed made of Extira, a low formaldehyde emitting composite lumber. While acting primarily as a shading device, the entire elevation composed of these slightly offset pieces of lumber creates a unique visual texture viewable by residence to the West. Contrarily, the Northeast side of the building which is entirely glazed has dramatic views of downtown Los Angeles, Laurel Canyon and the San Fernando Valley from the South to North entirely.

Winds are created through the valleys on either side of the house and move linearly, paralleling the length of the house. Oversized, hinged double-doors open on either side of the living room which not only invite the prevailing winds to flow uninterrupted through the interior space, but also engender feelings of being outside. This feeling is dramatically enhanced through the use of a floating orb fireplace, an infinity edge view, and a concrete materiality which extends beyond the threshold to the pool. In another are of the house, the corridor leading to the bedrooms has openings at either end which facilitate an airflow past each room, and openings from each room to the rear yard draw on the cool, moving air from the corridor through the length of the house.

Due to the severity of slope and the dense granite stone beneath the surface, minimal excavating was used. This technique not only reduced expendable energy in operating machinery, but removed only earth which could be reused in other areas of the project. For instance, the excavated granite was decomposed and re-used to level drain pipes, under concrete slabs, as a drainage field under the pool and as a walking surface for the viewing deck above the garage. This is generally an expensive material for the aforementioned uses, however, the material was free and the unnecessary shipping of sands and other pulverized materials was minimized.

There was also a constant interest in reducing emissions resulting from the transportation and importation of materials, specifically those materials which are commonly used in bulk at construction sites. While choosing furniture, fixtures and equipment is an obvious avenue to reduce energy consumption throughout the life of the house, the hidden elements of construction and structure were considered in this design as well. Re-using the earth eliminated shipments of excavated earth out of the site and reduced the shipments of other decomposed materials into the site. California manufactured low-e glazing, steel, cmu blocks, and indigenous aggregates support this initiative as well. Wood framing and wood flooring leftovers were acquired from a nearby construction project and put to use in this project, and to dress the landscape, low water consumption flora from a residence to be demolished in the area was transplanted to this site as well.

MINIMAL GRADING

[1] Site as it existed before construction
[2] Garage occupying the lower grade
[3] Finished residence occupying the upper grade

[1]

[2]

[3]

LOCAL MATERIALS

[1] Earth
[2] California manufactured steel
[3] California manufactured CMU
[4] California pulverized stone
[5] Waste wood from a nearby project
[6] California manufactured, low-e glazing
[7] Re-used granite and flora transplanted from a nearby demo'd project
[8] Excavated granite for underlayments and gravel bases

[7]

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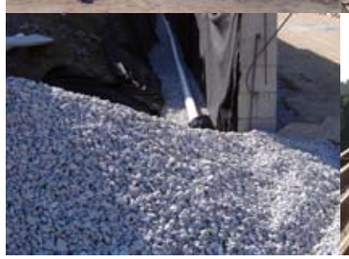

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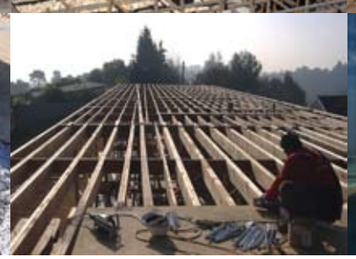

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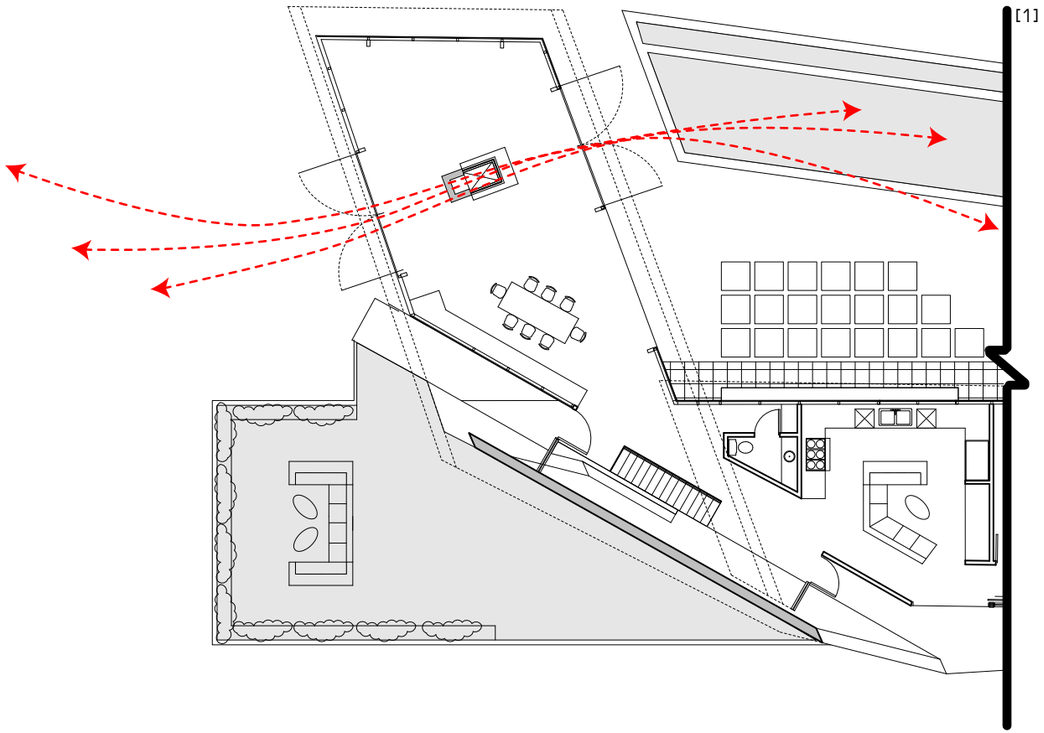
[8]

NATURAL VENTILATION

[1] Living Room / Dining Room ventilation diagram
[2] Photograph: Living Room / Dining Room
[3] Bedrooms and corridor ventilation diagram

[2]



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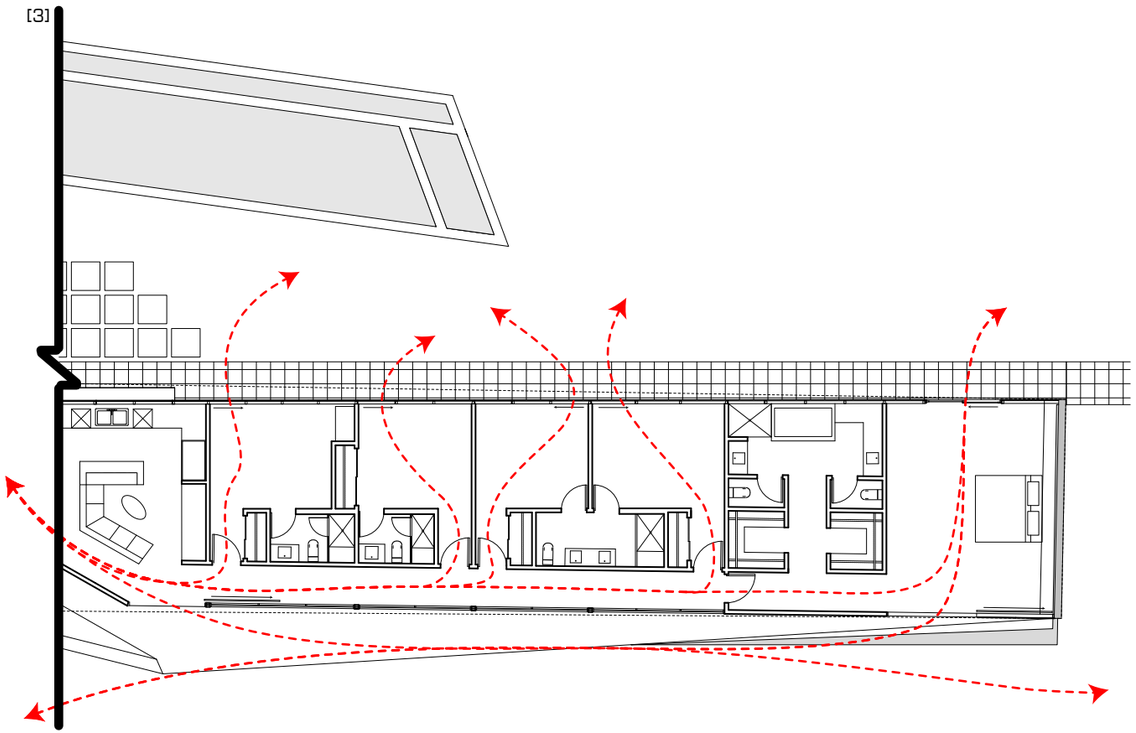

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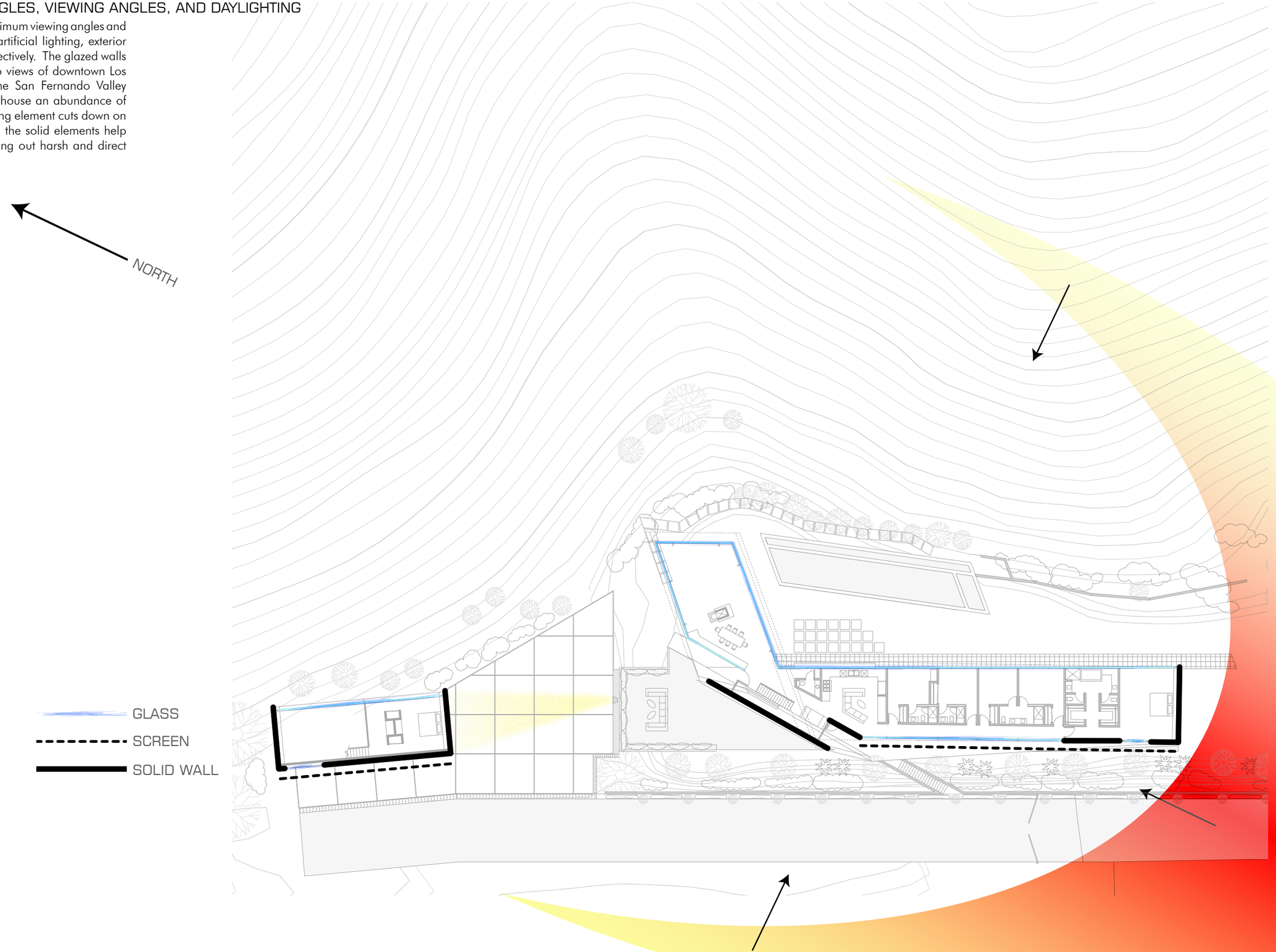
PHOTOGRAPH

View looking out Living Room / Dining Room oversized doors

ORIENTATION; SOLAR ANGLES, VIEWING ANGLES, AND DAYLIGHTING

Based on local solar exposure, optimum viewing angles and a desire to reduce unnecessary artificial lighting, exterior walls were treated differently respectively. The glazed walls open the house up completely to views of downtown Los Angeles, Laurel Canyon, and the San Fernando Valley while offering every room in the house an abundance of North and East light. The screening element cuts down on direct, late evening sunlight, and the solid elements help to define the skyline while blocking out harsh and direct exposure to the sun.



PHOTOGRAPH

Shading elements and their effect on the interior during the late evening

PHOTOGRAPH
Southwest facing screen wall constructed from Extira

PHOTOGRAPH
Guest house elevation

PHOTOGRAPH
View from adjacent ridgeline

PHOTOGRAPH
View from Skyline Drive

PHOTOGRAPH

View of entry from viewing deck exhibiting the use of large eaves

PHOTOGRAPH
View of entry

PHOTOGRAPH
Interior view at entry

PHOTOGRAPH
Dining Room (left)
Corridor to bedrooms (right)

PHOTOGRAPH
Dining Room (foreground)
Kitchen (background)

PHOTOGRAPH
Master bathroom

PHOTOGRAPH
Living Room with Orb fireplace
Folded surface in the background

PHOTOGRAPH
Living Room with Orb fireplace
Pool and rear yard in the background

PHOTOGRAPH

View from rear yard looking toward the living room

Conclusions

In an era of rapidly declining environmental quality, and in a society which is evermore concerned with its responsibility toward the situation, it's become important to remember that very simple things such as understanding site conditions or local climate patterns are efficient methods of reducing architecture's imposition on a landscape. Considering the multiple sets of constraints imposed upon this site, and the severity of such, achieving a residence of this quality for only $180 per square foot should promote a creative shakedown within all designers to surface the possibilities of designing quality and aesthetically pleasing structures which are also sensitive to local and global conditions.

PHOTOGRAPH
View from gate at Skyline Drive

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Architect / Contractor:

Belzberg Architects [www.belzbergarchitects.com]
Principal: Hagy Belzberg
Design Team: Erik Sollom
Manish Desai
Contruction Manager: Bill Bowen
Project Team: Barry Gartin
Brock DeSmit
Carina Bien-Willner
Dan Rentsch
David Cheung
Eric Stimmel
Erin McCook
Ryan Thomas

Client:

Skyline, LLC

Structural Engineer: Dan Echeto

Landscape Architect:

Nicholas Budd Dutton Architects [www.nbdarchitects.com]
Partner: Bill Nicholas

Screen Wall:

Spectrum Oak [www.spectrumoak.com]
Partner and Supervisor: Brent Rudaitis
Partner and Supervisor: Mark Blaustone

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Owner: Elizabeth Paige Smith

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Designers: Chris Arntzen, Brock DeSmit