



EAMES HOUSE: A PRECEDENT STUDY

Lea Santano & Lauren Martin

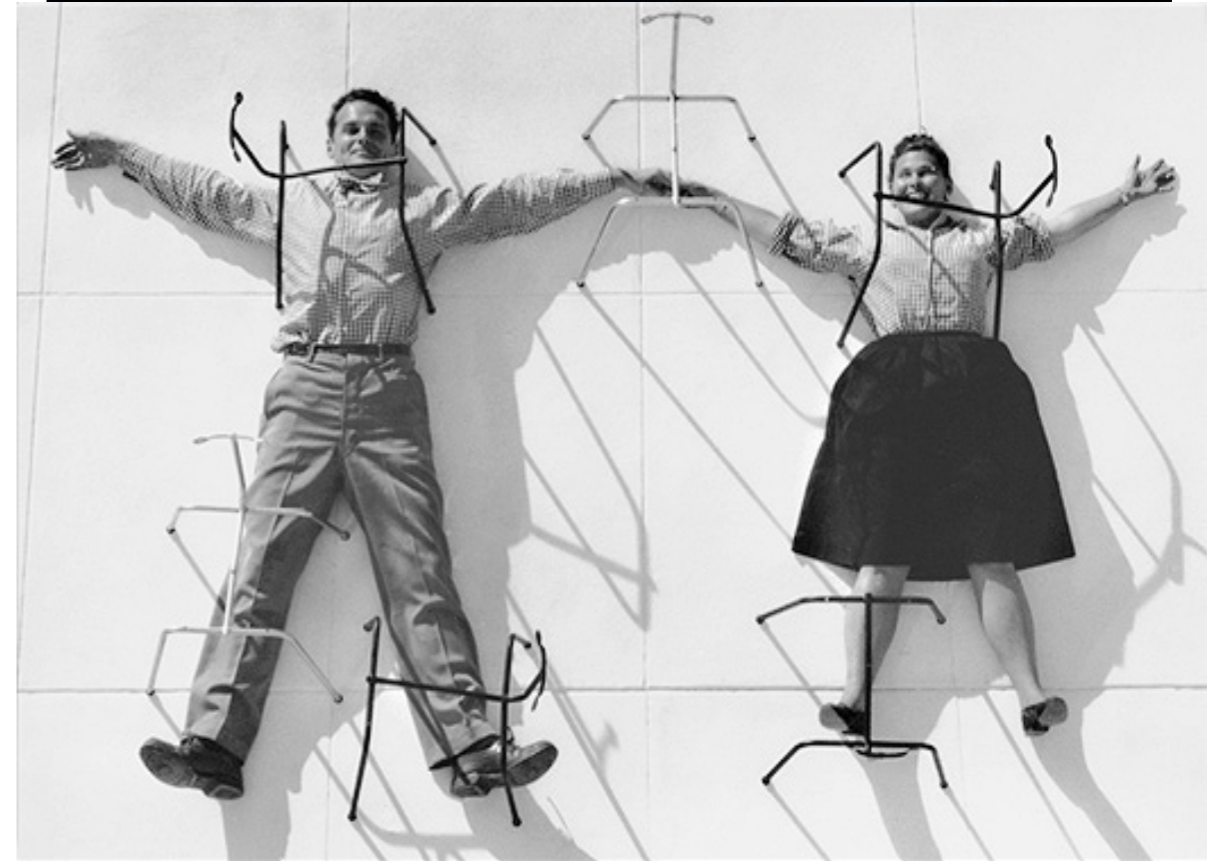
Table Of Contents



General Information

LOCATED in the Pacific Palisades area of Los Angeles, California. The Eames House is composed of a residence and studio overlooking the Pacific Ocean.

THE EAMESES are best known for their groundbreaking contributions to architecture, furniture design, industrial design and manufacturing, and the photographic arts.



THE DESIGN is one of the few architectural works attributed to Charles Eames, and embodies many of the distinguishing characteristics and ideals of postwar Modernism in the United States.

DESIGNED by Charles and Ray Eames, the original design of the house was proposed by Charles and Ray as part of the famous Case Study House program for John Entenza's Arts & Architecture magazine.

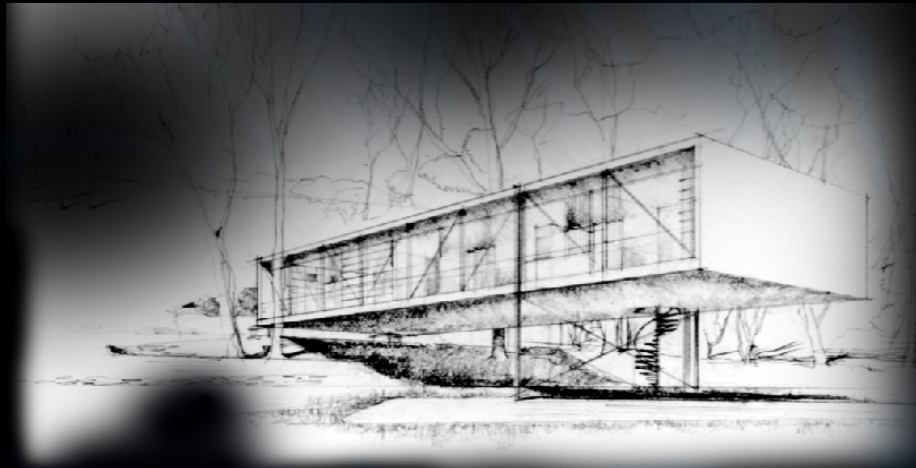
DATES OF SIGNIFIGANCE for the Eames House coincide with the residency of its designers, extending from 1949 until 1988. Other dates include 1978.

THE EAMES HOUSE has been regarded as one of the most significant experiments in American domestic architecture.

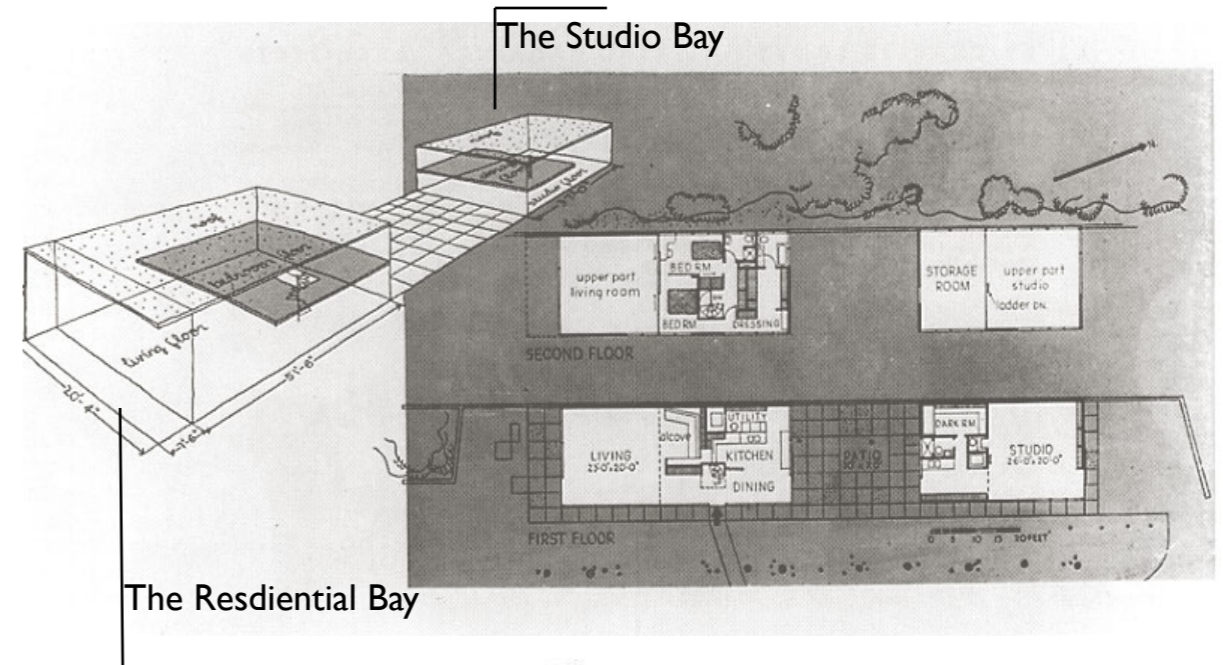
THE IDEA of a Case Study house was to hypothesize a modern household, elaborate its functional requirements, have an esteemed architect develop a design that met those requirements using modern materials and construction processes.

SITE INFORMATION AND SPECIFICS

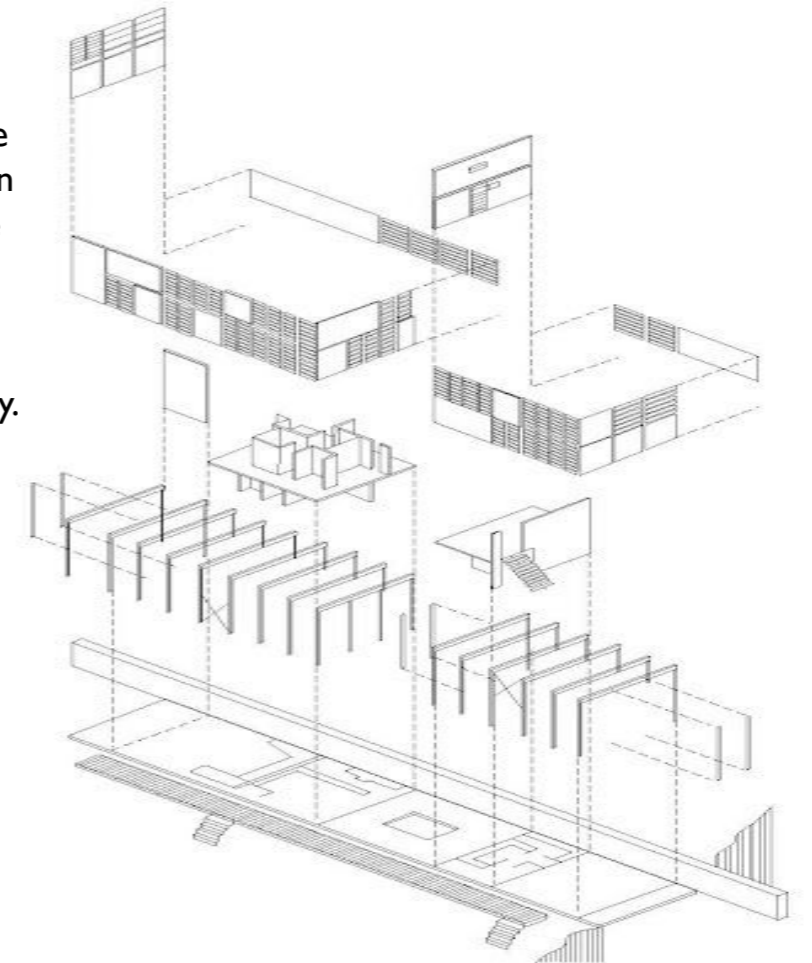
PLANS/AXO/SECTIONS



Above is a picture of the original design of the Eames House. It was later adjusted to fit in with the environment surrounding the property. The Eameses wanted to build something that worked with the site, not just something placed on top of it.



This axonometric drawing breaks down the concept and construction of the Eames House. The prefabricated materials and the steel frames, as well as a break down of both bays of the property.

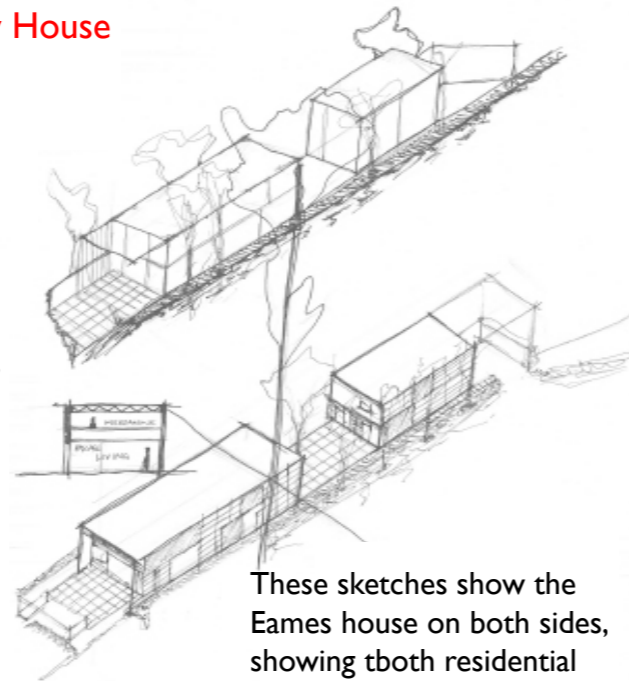


Case Study House #8



The Eames house is ground on a meadow and hill, overlooking the Pacific Ocean.

This is an aerial view of the site and the house on the site.



These sketches show the Eames house on both sides, showing both residential and studio bays of the home. As well as the two outdoor spaces.

Experience

The Eames House is modular in its design, and was made to designed to have an intimate connection with the site around the home.

The most obvious of the aesthetic features of the Eames House is the **Mondrian** inspired exterior, which is shown by the use of a combination of transparent and translucent glass.



There are two outdoor patios, that function as outdoor rooms between the residence and studio, as the other one, is situated beneath the overhang at the southern end of the residence.

There is an open court used as a connection point as well as separates the two structures.

Each bay of the house is in-filled with materials such as, panels of plaster, plywood, asbestos, glass, and a pylon.



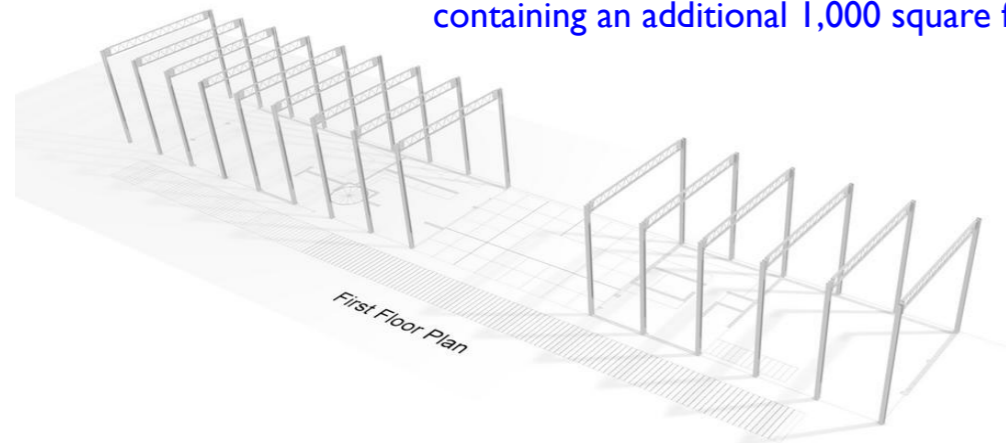
The Interior is extremely open, with one space flowing easily into the next. There are two stories, the lower level provides the utilitarian spaces, and the private spaces are located on the second floor. The second floor./loft overlooks the double-height living space in the southern portion of the residence. There is a spiral staircase, connected with similar materials to that of the exterior. Steel and metal pipes. The interior space carries over the same usage of material. There are two bedrooms and two bathrooms on the second level, with a sky light above the staircase.

The Specifics

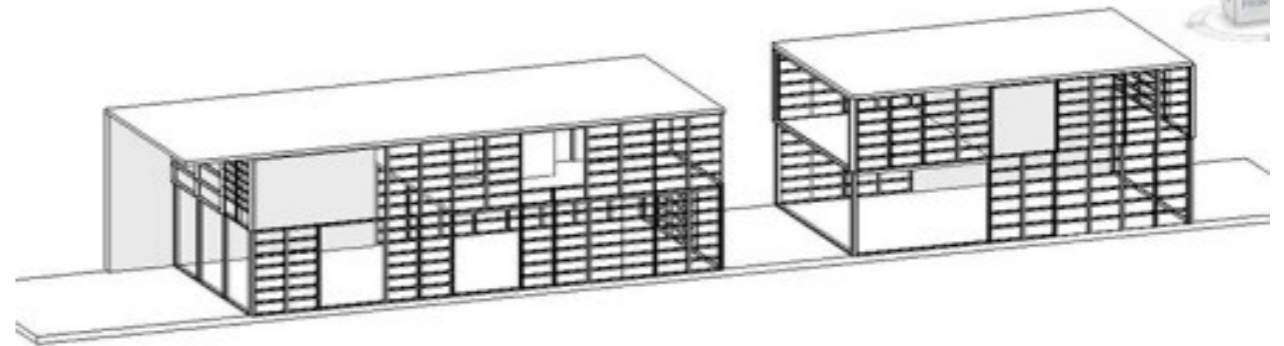
The residence consists of **eight bays**, and the studio is five bays wide. The open court that separates the two structures is the equivalent off our bays in width. The exposed steel frames are painted black, to delineate each bay and the shared structural rhythm of the two components. Diagonal cross-bracing, composed of metal cables visible on the



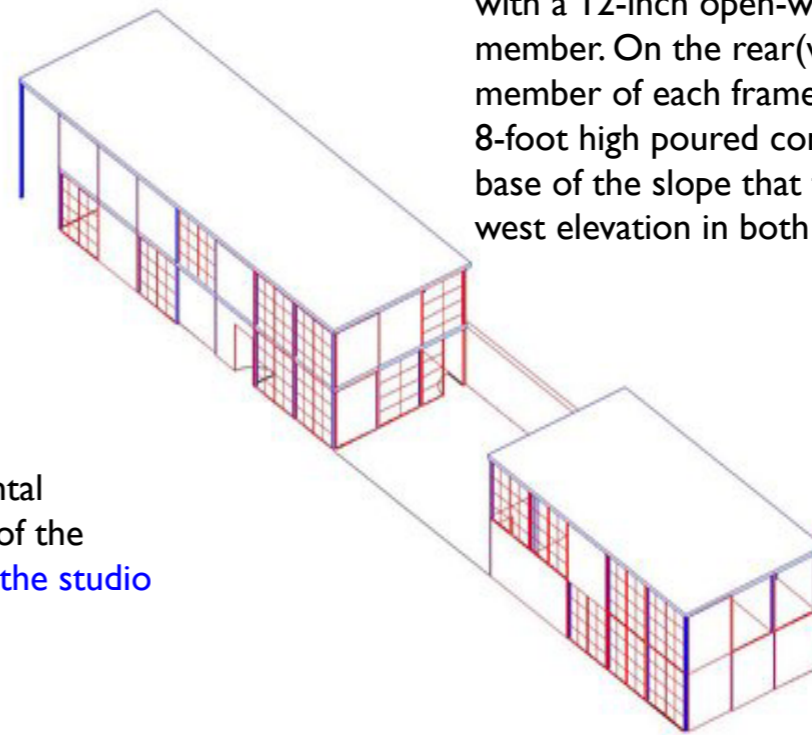
Both volumes are rectangular in plan with horizontal massing, and are situated along the western edge of the property. The residence is 1,500 square feet, with the studio containing an additional 1,000 square feet.



The Eames House is modular in its design, composed of 20' x 7' 4" bays that rise to a height of 17 feet.



Each bay is defined by a steel frame consisting of two rows of 4-inch H-columns set 20 feet apart, with a 12-inch open-web joist forming the top member. On the rear (west) elevation, the vertical member of each frame is partially embedded in an 8-foot high poured concrete retaining wall at the base of the slope that forms the lower part of the west elevation in both components.



The Eames House is composed of **two distinct volumes**, a living component (or residence) and a working component (or studio). The two volumes are arranged in a linear configuration and separated by an open court.

The Program

The house was designed as a **residential space** for Charles and Ray Eames.

Both residential and studio bays are open concept living areas, with continuous open spaces.

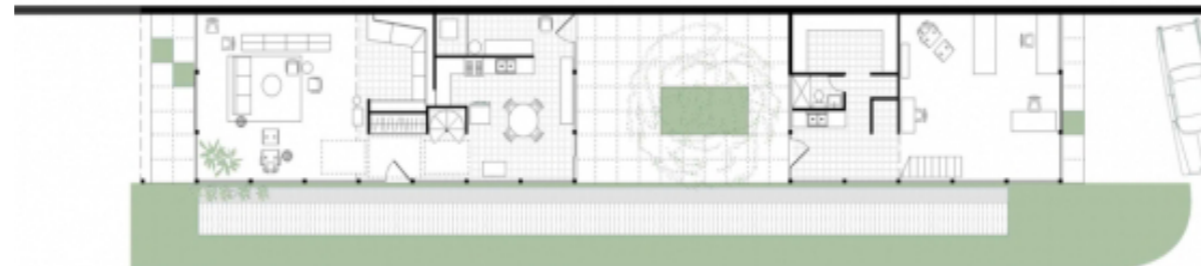
They created and designed this house based on functions for their use. The **two main spaces of the house** are the **residential bay** and the **studio bay**, separated by an outdoor space, that is continued living space.



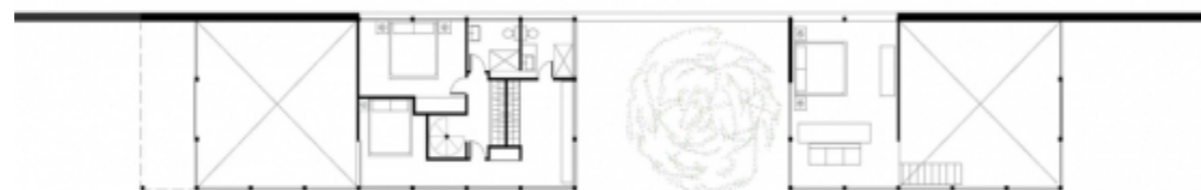
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GROUND LEVEL FLOOR PLAN



UPPER LEVEL FLOOR PLAN



The studio is on the ground floor independent of the volume devoted to housing, but at the same time **interconnected through the roof**.

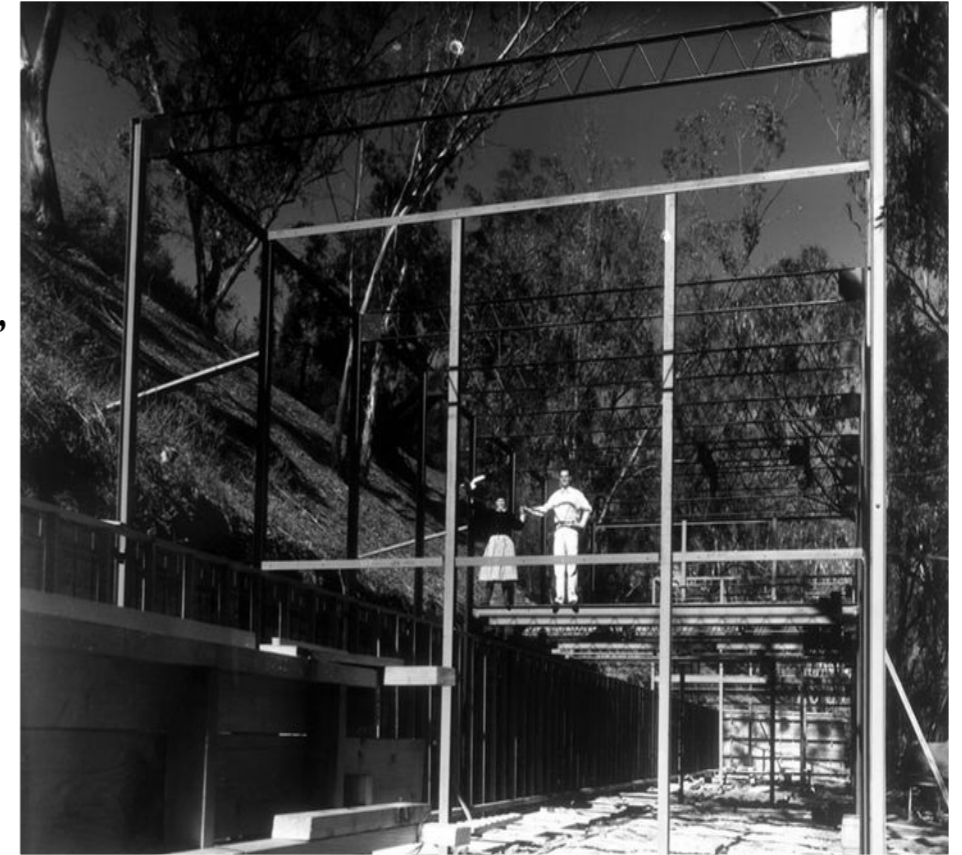
On this floor are you will find the the living room, kitchen, studio and warehouse; while on the upper floors are the bedrooms and bathroom.

The rooms are on a mezzanine that opens into the living room, beneath which is the library.

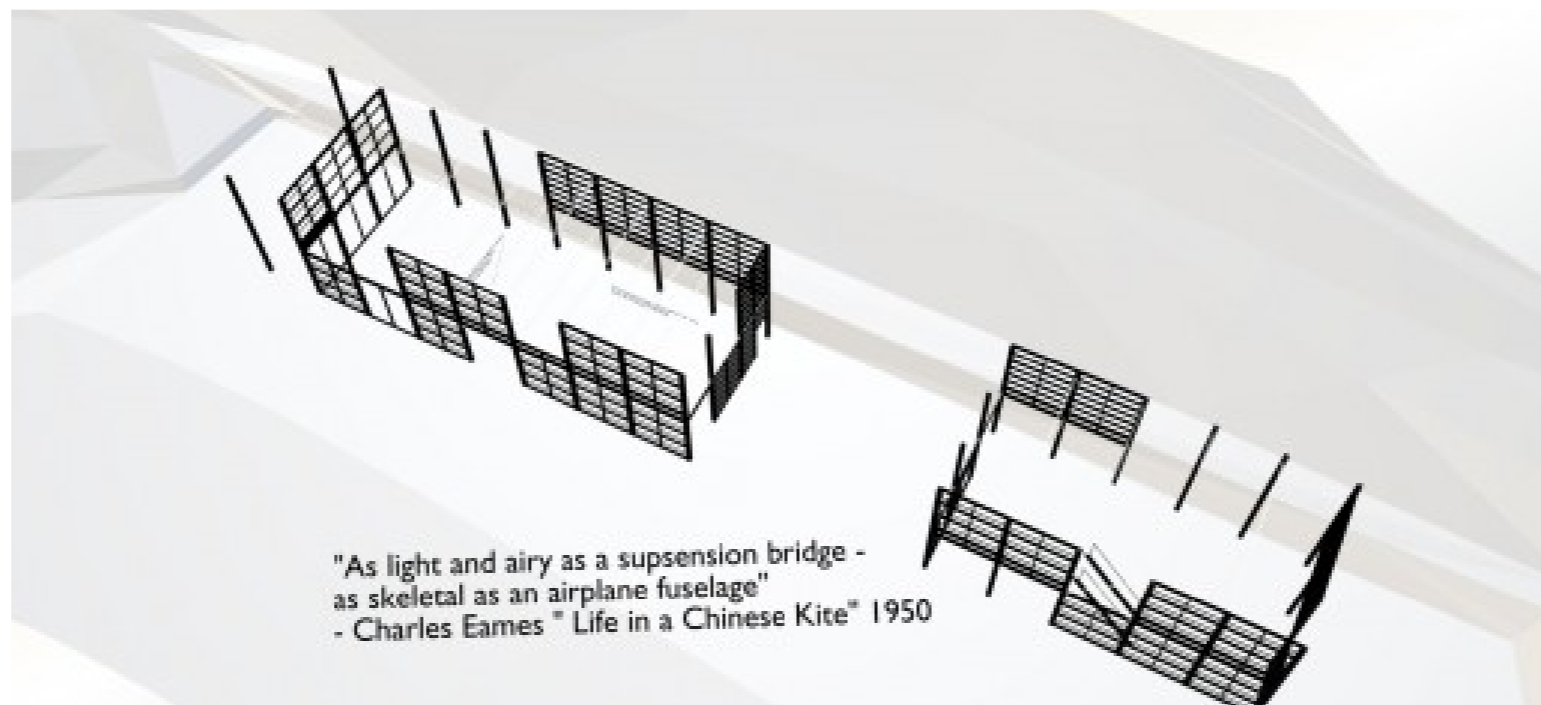
How it's made?

MATERIALS Foundation: Concrete. Walls: Glass, stucco, woods, asbestos, metals, & synthetics. Roof: Asphalt. Other: Metal (steel frame)

STRUCTURAL SYSTEMS "Charles Eames saw the many benefits of a modular system, including symmetry, inherent strength, the absence of waste and the speed of construction." The Eames House is composed of two distinct rectangular volumes. A living component and a working component. The two components are separated by an open court. The living component has eight bays and the working component has four bays. Each bay is 20'x7' 4" and 17' high, the bays are defined by a steel frame with two rows of 4" H-columns set 20' apart. "The exposed steel frames are painted black which visually delineates each bay and the shared structural rhythm of the two components."



"Charles Eames claimed that the frame was raised by five men in 16 hours."



Sustainability



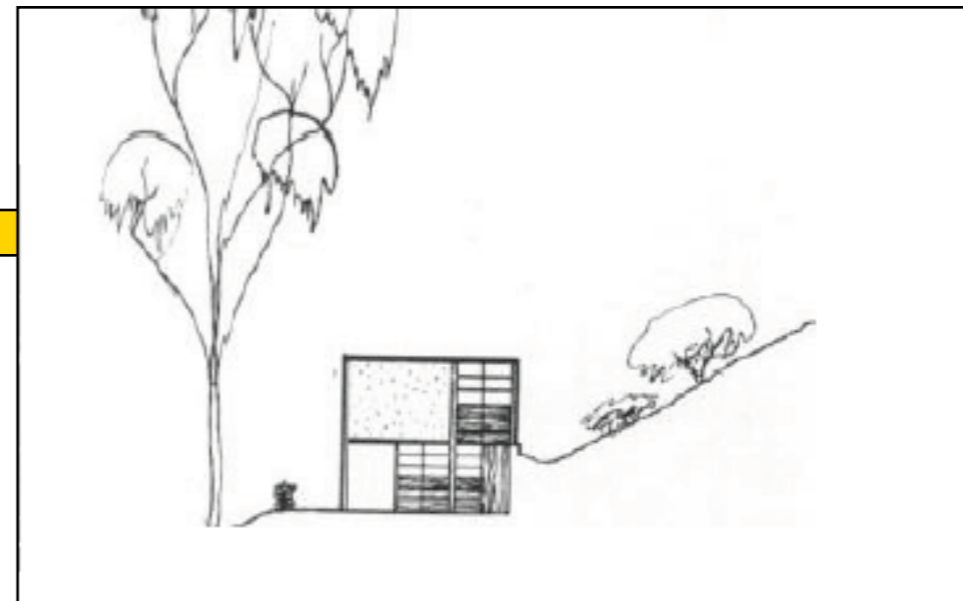
RESPONSE TO SITE Charles and Ray had “fallen in love with the meadow,” in Ray’s words, and felt that the site required a different solution.

Charles and Ray then set themselves a new problem:

How to build a house that would:

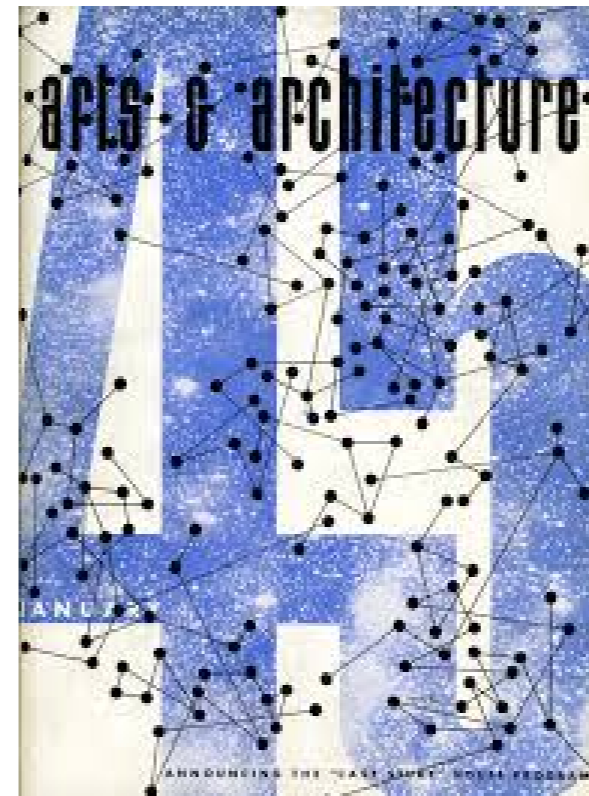
- 1) not destroy the meadow and,
- 2) “maximize volume from minimal materials”.

Using the same off-the-shelf parts, but notably ordering one extra steel beam, Charles and Ray re-configured the House. The new design integrated the House into the landscape, rather than imposing the House on it. These plans were published in the May 1949 of the magazine. It is this design that was built and is seen today.



The Case Study House Program was a product due to concerns about post war housing and architecture. *Arts & Architecture* sponsored a domestic architecture competition in 1943 called “Designs for Postwar Living.”

The Case Study House program was to design the ideal home for a postwar American family. The materials for these homes were to be mass-production techniques, with prefabricated, standardized and off-the-shelf parts. Ideals of Modernism, simplicity of form.



the case study house program

Because most opinion, both profound and light-headed, in terms of post war housing is nothing but speculation in the form of talk and reams of paper, it occurs to us that it might be a good idea to get down to cases and at least make a beginning in the gathering of that mass of material that must eventually result in what we know as “house—post war”.

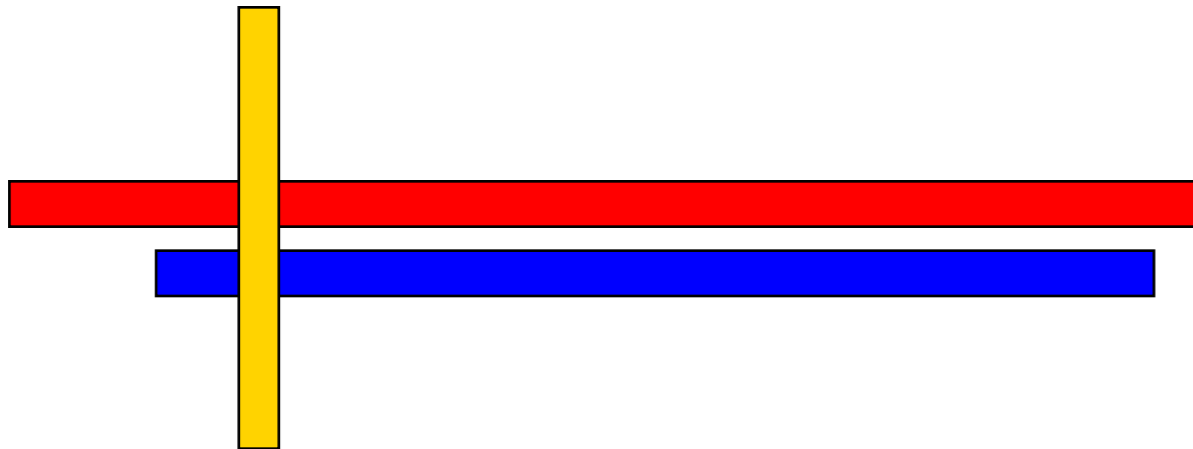
Agreeing that the whole matter is surrounded by conditions over which few of us have any control, certainly we can develop a point of view and do some organized thinking which might come to a practical end. It is with that in mind that we now announce the project we have called THE “CASE STUDY” HOUSE PROGRAM.

The magazine has undertaken to supply an answer insofar as it is possible to correlate the facts and point them in the direction of an end result. We are, within the limits of uncontrollable factors, proposing to begin immediately the study, planning, actual design and construction of eight houses, each to fulfil the specifications of a special living problem in the Southern California area. Eight nationally known architects, chosen not only for their obvious talents, but for their ability to evaluate realistically housing in terms of need, have been commissioned to take a plot of God's green earth and create “good” living conditions for eight American families. They will be free to choose or reject, on a merit basis, the products of national manufacturers offering either old or new materials considered best for the purpose by each architect in his attempt to create contemporary dwelling units. We are quite aware that the meaning of “contemporary” changes by the minute and it is conceivable that each architect might wish to change his idea or a part of his idea when time for actual building arrives. In that case he will, within reason, be permitted to do so. (Incidentally, the eight men have been chosen for, among other things, reasonableness, which they have consistently maintained at a very high level.)

We will try and arrange the over-all plan so that it will make

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- "Case Study House [#8]: A House Designed and Built for the Magazine Arts & Architecture." Arts & Architecture (July 1950): 26-39.



THE EAMES HOUSE CASE STUDY #8

In the latter half of the twentieth century, the husband and wife team of Charles and Ray Eames set a design standard that many feel has yet to be equaled. Their curiosity and creativity touched the design areas of furniture, films, museum exhibitions, graphics, industrial design, photography, toys, and of course, architecture.

