Topic C - Proportion and Construction

group 4

Villa Stein de Monzie Le Corbusier
Josephine Baker House Adolf Loos

Floris Coolen, Tim Maier, Percijn Vlaming

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I. Essay

Proportion

Proportion

_History in architecture

The dictionary defines proportion as: 1350–1400; ME proporcio(u)n < L prōportiōn- (s. of prōportiō) symmetry, analogy or balance: comparative relation between things or magnitudes as to size, quantity, number, etc.; proper relation between things or parts: to have tastes way out of proportion to one's financial means; a portion or part in its relation to the whole: Mathematics. a relation of four quantities such that the first divided by the second is equal to the third divided by the fourth; the equality of ratios.
Within this definition the architectural aspect of proportion is clarified, but the essence of the architectural meaning of proportion can only be understood with a historical view of proportion. In the history of architecture there are three systems of proportions. The first system is used by the Greek, based on the square. The second system was used in the Renaissance by Andrea Palladio and Leon Battista Alberti, based on the musical ratios. The last system was introduced by Le Corbusier`s Modulor and it is was derived from the Golden Section.
Marcus Vitruvius Pollio (±85 -25 BC), was a Roman architect and engineer, probably born in Formiae (now Formie), Italy. Vitrivius was an artillery engineer in the service of the first Roman emperor, Augustus. He is mostly known for his writings in his Ten books of Architecture, 'De Architectura'. The writings were famous because Vitruvius describes in his book how a structure must exhibit the three qualities of firmitas, utilitas and venustas (durable, useful and beautiful). Vitruvius refers architecture to an imitation of nature and houses should be constructed with natural materials, so that these materials will give them shelter against the elements. This type of building was influenced by the ancient Greek, who invented the architectural orders: Doric, Ionic and Corinthian. This invention gave Vitruvius a sense of proportion, culminating in his understanding of the proportions of the greatest work of art: the human body.

"Without symmetry and proportion there can be no principles in the design of any temple; that is, if there is no precise relation between its members, as in the case of those of a well shaped man." (_Vitrivius)

In the Renaissance period several important architects studied and tried to refine the system of proportions that was introduced by the ancient Greeks. The Italian architect Leo Battista Alberti (1404-1472) studied the 'De Architectura', by Vitruvius, and Alberti designed a system that was based on the Pythagorean divisions of the octave. His work became the first architectural treatise of the Renaissance. It covered a wide range of subjects, from history to town planning, and engineering to the philosophy of beauty. De "re aedificatoria", was not fully published until 1485, after which it became a major reference for many architects. Another Italian architect in the Renaissance, Andrea Palladio (1508 – 1580), was also influenced by the Roman and Greek architecture. The architectural work of Palladio, known as the Palladian Style, adhered to the classical Roman principles that Palladian rediscovered, implemented in his works and underlines in the publication of his treatise "Quattro Libri dell'Architettura" (The Four Books of Architecture).
Le Corbusier (Charles-Édouard Jeanneret-Gris), 6 October 1887 in La Chaux-de-Fonds - Switzerland , August 27 1965 Roquebrune-Cap-Martin Nice-France, was a Swiss-French architect, designer, urbanist, writer and painter. Le Corbusier developed the Modulor (±1948) in a continuation of the long tradition of Vitruvius, Leonardo da Vinci`s Vitruvian Man, the work of Alberti and others that did research about the mathematical proportions in the human body. Le Corbusier placed systems of harmony and proportion at the centre point of his design philosophy, and his faith in the mathematical order of the universe was closely bound to the golden section and the Fibonacci series, which he described as "rhythms apparent to the eye and clear in their relations with one another. Le Corbusier describes it as: "rhythms apparent to the eye and clear in their relations with one another". The design of the house Villa Stein-de-Monize in Garches in 1927 by Le Corbusier is a good example of implementation of the Modulor system. The villa's rectangular ground plan, elevation, and inner structure closely approximate golden rectangles.

"Art is poetry: the emotion of the senses , the joy of the mind as it measures and appreciates, the recognition of an axial principle which touches the depth of our being. Art is thus pure creation of the spirit which shows us, at certain heights, the summit of the creation to which man is capable of attaining. And man is capable of great happiness when he feels that he is creating" (_Le Corbusier|Precisions)

_Le Corbusier

_Proportion

The regulated line and its geometrical function gives the mind a perception of order. It is an event of a visual nature: an event of implying judgments of quantities, of relationships: the appreciation of proportions. These proportions provoke sensations; they create a satisfaction of a spiritual order that leads to a search of ingenious relationships and harmonic relationships. It is the first manifestation in architecture of a man creating his unique universe, creating it in the image of nature, subscribing to the laws of nature, to the laws that determine the nature, the universe. A sovereign determinism makes it accessible the natural creation for our eyes. It is recognizable and provides the certainty of something that is balanced and reasonably made, of something that is modulated.

The choice of the use of a regulating line determines the fundamental impressions of the architecture; the choice is one the vital moments of inspiration and was already used by the primitive man, who created a module of regulating lines, with the use of human scale to make his task easier. The Greeks, the Egyptians, the famous artist Michelangelo and many others used regulating lines for measurements and correctness in their buildings. They obtained the satisfaction of their artistic sense and their mathematical thought.

The primitive man chooses a clearing as its surroundings, he cuts down the trees, levels the land and connects the river to his land or that of the members of his tribe. The men of the tribe decide for their religious conviction to shelter their God. The shelter is a solid hut that is constructed by the stakes of the hut that are placed in a square, a hexagon, an octagon. The construction is protected with a strong palisade and the men drive stakes where the ropes of the high posts of the barrier will be secured. The opening of the shelter is created by an opening in the palisade which is placed on the axis of the door of the sanctuary. This plan and the diagram of the plan show strong similarities with the plan of a house, it is a plan of a temple. The lines are described by measurements that are identifiable by the builder. The builder established order by measurements: the builder used his pace, his foot, his forearm etc. The builder designed a module that regulates the condition of the whole. The worker designs a system that is harmony with him, it is based on the geometry of the human scale. The module introduces rhythms, the distance between objects, rhythms that are clear in their relationships and sensible for the human eye. The rhythms are the root of human activity and they are organically inevitable. “This is the same inevitability that inscribes the golden section in children, in the elderly, in the savages and in the educated. A module measures and unifies, a regulating line constructs and satisfies. ”The Greek implemented order and proportion in their temples. The façade of the Arsenal in Peiraeus was determined by several simple divisions. The base is designed in proportion to the height, this also determines the position and dimensions of the door in coordination with the proportions of the façade.

The well known Achaemenid domes are one of the most delicate applications of geometry. Following the establishment of the basic understanding of the dome and through the given statics of the existing building principles of that period of time a regulating line was introduced. The regulating line was used to rectify, correct, perfect and combine all distinctive components with a single unifying principle. This principle is determined by a 3-4-5 triangle, which develops from the portal to the summit of the vault.

The Capitol in Rome is a design by the architect Michelangelo Buonarroti in 1536–1546. The design is conceived in its site and Michelangelo determined the mass from the surrounding volume and space. The mass collects from its environment, it concentrates and unifies itself. With the regulated line, Michelangelo developed a module where the angle between the lines helped him to implement his intentions, to repeat the same principle that determines the large divisions of the pavilions, slope of the stairways, the position of the windows etc.

In this last example Le Corbusier implements the regulated line in a design of housing. In this house the main block of the facades, the front as well as the back, are prescribed by the same angle. This angle also determines a diagonal whose many parallels and perpendiculars provide accurate measurements for the secondary elements, doors, windows etc.

“These forms, elementary or subtle, tractable or brutal, work physiologically upon our senses (sphere, cube, cylinder, horizontal, vertical etc) ad excite them. Being moved, we are able to get beyond the cruder sensations: certain relationships are thus born which work upon our perceptions and put us into state of satisfaction, in which man can employ fully his gifts of memory, of analysis, of reasoning and of creation” (_Le Corbusier|Toward an Architecture)

_Themes

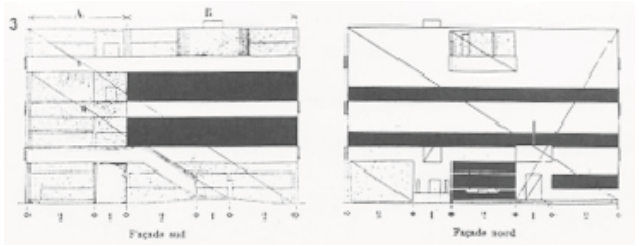
In the 1920s a new Architectural language was emerging that got to be known as ‘International Style’. The style revolted on the prevailing tendency of creating the building as a block and decorating the external enclosure with ornaments. The new movement stripped the building from its ornaments and focused more on three-dimensional exploration of the volumetric intricacies within the architectural space. This new style aspired to represent what was thought to be the machine age. It used the new construction techniques based on concrete, steel, and industrial glazing to build its hovering planes and interaction of the solid concrete and steel with the lighter glass. Le Corbusier strongly believed in this new trend. He was a purist totally dedicated to the new theoretical principles that he believed defined this new Architecture. He imagined houses built like cars in a standardized production process. He admired the ocean liners for their ‘tenacity and discipline’. The first attempt of Le Corbusier to deal with the problem of mass housing in that time was Maisons ‘Citrohan’, designed in 1920-22, referring to carmaker Citroën. The house was a white cube with industrial size windows. Le Corbusier introduced reinforced concrete round columns, the columns to enable the car to go under the house, provide a garage space, and eliminate the bearing walls and large spans.

This Maison ‘Citrohan’ introduces his ‘Les 5 Points d’ une architecture nouvelle’ (five points of architecture) in the publication of the book “Vers une Architecture” in 1926 and these are (1) the columns elevating the mass off the ground, (2) the free plan, achieved through the separation of the load-bearing columns from the walls subdividing the space, (3) the free facade, the corollary of the free plan in the vertical plane, (4) the long horizontal sliding window and (5) the roof garden, restoring, supposedly, the area of ground covered by the house. Le Corbusier introduces a new language, Le Corbusier writes about the underlying structure of primitive shapes. Le Corbusier concludes that the primary geometric forms should be used to embody the Architecture of the age of the machine. “Architecture is the masterly, correct and magnificent play of volumes brought together in light. Our eyes are made to see forms in light: Light and shade reveal these forms: cubes, cones, spheres, and cylinders or pyramids are the great primary forms which light reveal to advantage. The image of these is distinct and tangible within us and without ambiguity, It is the reason that these are beautiful forms.” He establishes the relationship between the plan and its surroundings. “The plan proceeds from within to without; the exterior is the result of the interior, the elements of Architecture are light and shade, wall and space.’ Through this fusion, Architecture focuses on space and volumes and their interaction rather than the two-dimensional cosmetic treatment of the ‘Façade”.

After the publication it was the design and location of the Villa Savoye (1929 – 1931) that provided Le Corbusier the tools to express his concepts during that time. Le Corbusier conceived the approach towards the house to be best experienced by a car passenger. Past the entrance gate, the visitor’s vision is blocked by trees. The house reveals itself all at once as a grand white box, hovering on columns. This is a powerful expression of an elevated primitive shape with openings that reveal glimpses of the interior. As the car is drawn closer to the house and into it, the passenger realizes he is experiencing a temporal progression through an ingenious link of spaces that allow a gradual exploration of the project. What Le Corbusier called a ‘Promenade Architecturale’. Our perception of the space and the elements surrounding it changes progressively depending on their location in space and time within the project. The First Floor constitutes the living quarters of the house. The different spaces are organized in a U shape around an open terrace enclosed by walls with a series of uniform openings. The terrace brings light to the interior of the house all day long. The layout of the plan is simple: this house was used by the Savoye family on the week-end. The ramp continues to a solarium, a roof garden. The wall of the solarium has a window cut in the middle of it that frames the outside view.

At the culmination of the ‘promenade’, Le Corbusier wanted to reverse the perception. From the outside, the building is first viewed framed by the landscape and now the landscape is framed by the building. The idea was to unite the building and its surrounding landscape and make greenery a vital part of the architectural language. The form of the solarium with its curves is striking. This interaction of primitive shapes, when seen in plan, reminds us of earlier paintings by the Architect. Seen from the outside it looks more like the funnel of an ocean liner. Maybe Le Corbusier wanted a different perception for his shapes. A house by Le Corbusier goes well beyond ‘machine à habiter’ (machine to live in). As seen in Villa Savoye, Le Corbusier has put the human experience at the core of the house. Le Corbusier brought nature inside the house with the first floor terrace and the roof garden. The forms, cylindrical columns and primitive shapes are intellectual abstractions of the Classical orders. Within this language of new architecture Le Corbusier referred to the Greek architecture, which used mathematics, such as proportion and order, in architecture and in art. The implementation of mathematics in art and architecture goes back to the ancient Egyptians. It seems almost certain that the Egyptians ascribed magical properties to the golden section and used it, when designing their great pyramids. Through research and certain studies on the Acropolis, including the Panthenon, one concludes that many of its proportions approximate the golden ratio. This indicates that architects during this period of time were aware of the golden ratio and consciously employed it in their designs. The Parthenon’s facade as well as elements of its facade and elsewhere are said to be circumscribed by golden rectangles. Alternatively, the architects in that time could also have used their own sense of good proportion, such as Vitruvius and Da Vinci describe with their Vitruvian Man, which could have led to approximately the golden ratio. Le Corbusier`s view on the mathematical order is based on human measurements, Fibonacci numbers and the double unit. So as described before the Villa Stein-de-Monize in Garches in 1927 by Le Corbusier is a good example of implementation of the system based on proportions, which Le Corbusier later describes as ‘Le Modulor’. “Look at the diagram defining the proportions of the townhouse at Garches. The invention of proportions, the choice of solids and voids, the determination of height in relationship to the width imposed by the site, result in a poetic creation: such is the project sprung from one does not know what profound stock of acquired knowledge, of experience, and of powerful personal creativity”.

The spaces, the voids and the openings draw our attention to the house. A visitor tries to read the house while approaching the house, it evokes a certain movement of the mind. The composition and the flatness of the surface of the façade dominates our spirits and provokes an alternative emotion when the windows are opened. Le Corbusier introduces a certain rhythm to read and understand the tempo of architecture. “Here is the result of this reading and of the corrections due to it: a setting in order (arithmetical or geometrical) based on the “Golden Section, “ on the play of perpendicular diagonals, on arithmetical relationships, 1, 2, 4, between the horizontals, etc. Thus this façade is made harmonious in all its parts. Precision has created something definitive, clear and true, unchangeable, permanent, which is architectural instant. “ (_Le Corbusier|Precisions)



_Theory

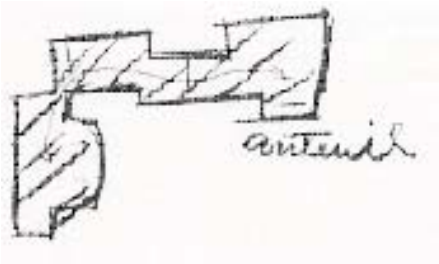
In the book Precisions Le Corbusier refers the architectural composition to our eyes. The mind is an individual phenomenon and links the composition to an event of a visual nature, an event where judgments and relationships are implied. These events provoke certain sensations, the appreciation of proportions. Le Corbusier compares these sensations with the melody of music. Every song as a personal expression for everyone, it is individual poetry.

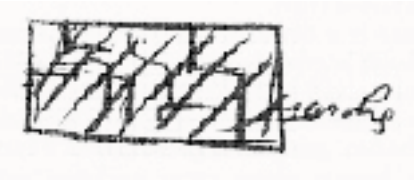
In the book Precisions Le Corbusier also analyses the general intention regarding the tendency of his work. Le Corbusier distinguishes four types of plans where similar methods of classification, of dimensioning, of circulation, of composition, of proportion are expressed with each having characteristic intellectual preoccupations.

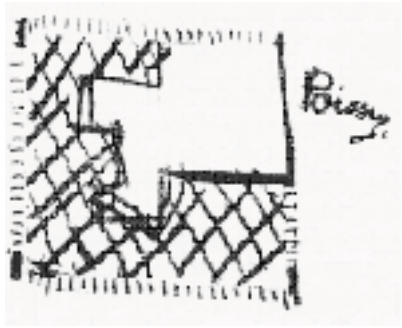
The First type is “Auteuil”. It shows that each organ is rising up to its neighbor. The interior of the building takes it ease and pushes the exterior in different directions. This principle leads to a pyramidal composition. The second type is the “Villa Stein-de-Monzie in Garches”, also known as “Les terrasses” and “Villa Garces”. Le Corbusier had very close connections with the affluent Parisian classes. And in 1926 Le Corbusier was commissioned to design the House by an American married couple Michael, brother of the writer Gertrude Stein, and Sarah Stein. Michael and Sarah became aware of the work of the young Le Corbusier because their interests overlapped in numerous ways. The Steins visited a lot of galleries and exhibitions where the work from Le Corbusier was presented, they knew the view of Le Corbusier that was presented in the famous magazine the”L`Esprit Nouveau (and Vers une Architecture), a journal published in 1925 by Le Corbusier. The house was designed in 1926, Le Corbusier defined a suburban way of life to create an elegant environment where the Steins could found something to believe in. This was also mentioned by Tim Benton, the interior provides constant struggle between the functions of the house defined by the relationships of the contractors. Le Corbusier expresses in his analysis that the Villa Stein-de-Monzie shows an understanding of the compression of organs within a rigid packaging, it is absolute pure. The intuition of the interior is secondary to the space and its functional elements.

The Third type is “Tunis”. The building furnishes, it has a visible framework, a simple packaging, it is clear and transparent. The model allows the creation of useful volumes of rooms that are different in form and quantity to each floor. The fourth type is the “Villa Savoye” in Poissy in France. This type attains, on the outside, the pure form of the Villa Stein-de-Monzie. The house is raised above the ground, perforated all around, without any interruption, by a long horizontal window. When visitors enter the site, they approach under the box, going through the columns. When entering the house, a ramp leads easily, hardly noticed, up to the first floor, where the life of the inhabitants goes on.

“When going up the visitors experience a happening that is explained with the section of the house. There is air circulation everywhere, there is light at every point, the visitors ask themselves what is happening, understanding with difficulty the reason for what they see and feel…….(_Le Corbusier|Precisions)







II. Villa Stein de Monzie

7 Rue du Professeur Victor Pauchet 92420 Vaucresson, Paris, France - Le Corbusier

01. Project description

01.1 General informations

_project name	Villa Stein-de-Monzie
_location	Garches (FR)
_construction year	1927
_total area	1150 m2
_total volume	4230 m3
_architect	Le Corbusier

Recognized worldwide, Le Corbusier designed spacious homes in middle class neighborhoods on the outskirts of Paris, though not all came to be built. The most striking is the house “Les Terrasses”, built in Garches on land that now belongs to the commune Vaucresson.

Sarah and Michael Stein were well known collectors and connoisseurs of modern painting and sculptures. Their outdoor House would be the center of contemporary art in Paris, informal galleries were friends could come to look at the pictures and listen to the Steins talk about art. The couple always lived in the centre of Paris but wanted to move to the suburbs of Paris, by which they could enjoy the nice landscape but could easy go to Paris for their work and art business.

Because Le Corbusier was well known for his concepts and his name was rising as an architect, he also had very close connections with the affluent Parisian classes.

The Steins commissioned Le Corbusier in 1926 to design their house. The house is set far back on its site, and approached via a long, straight driveway that ends at the door of an ample garage, the house`s pristine white walls and crisp ribbon windows give it the appearance of a modern-day Palladian villa set in a landscape of dark trees. The flatness of the façade and its unified form heighten the sense of imposing monumentality.

Le Corbususier defined a suburban way of life to create an elegant environment where the Steins could find something to believe in. Le Corbusier translated the unconventional balance of power, among the adults who entered the projects as equals, and interpreted it in his design.

The house was designed for Michael Stein, brother of the writer Gertrude Stein, and his wife Sara, and later was also home to Gabrielle Monzie, divorced from the radical socialist Anatole Monzie and faithful supporter of Le Corbusier. She was a close friend of the couple and Michael Steins protege.

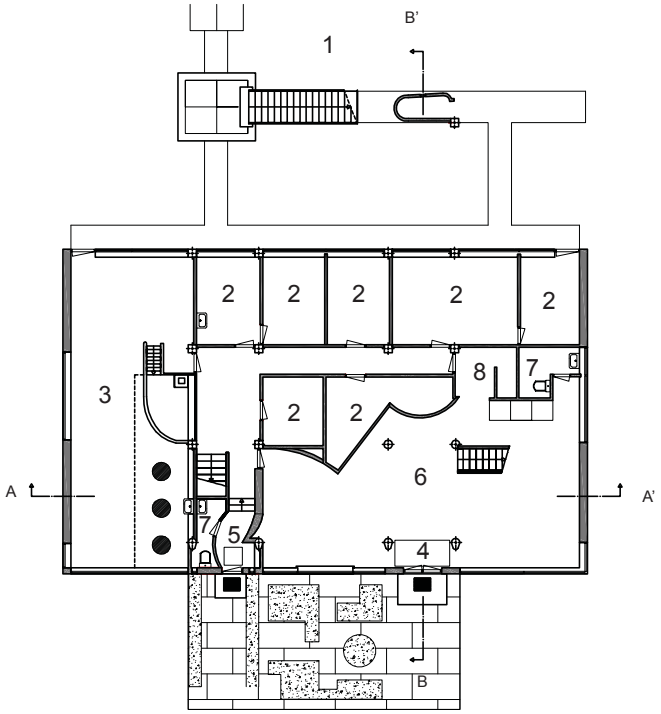
The luxury of these spaces disturbed critics worried about the social dimension of modern architecture.

from left to right: early frontview;early backview; early view terraces

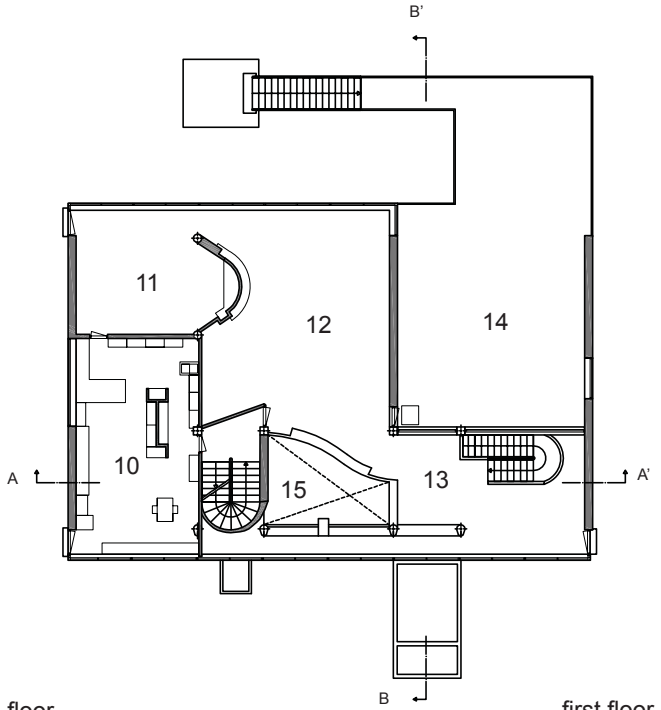
01.2 Floor plans, elevations, sectiones and isonometries

01. Garden
02. Domestic room
03. Garage
04. Main entrance
05. Secondary entrance
06. Entrance hall
06. Servants room
07. Toilet
07. Staircase
08. Wardrobe
10. Combined kitchen
11. Dining room
12. Living room
13. Reception room
14. Terrace
15. Vide

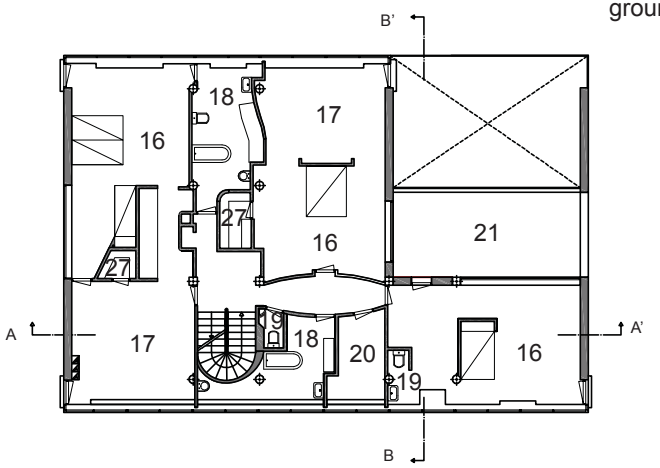
16. Bedroom
17. Living room
18. Bathroom
19. Toilet
20. Storage room
21. Terrace
22. Guest room
23. Staff room
24. Solarium
25. Roof terrace
26. Balcony
27. Closet



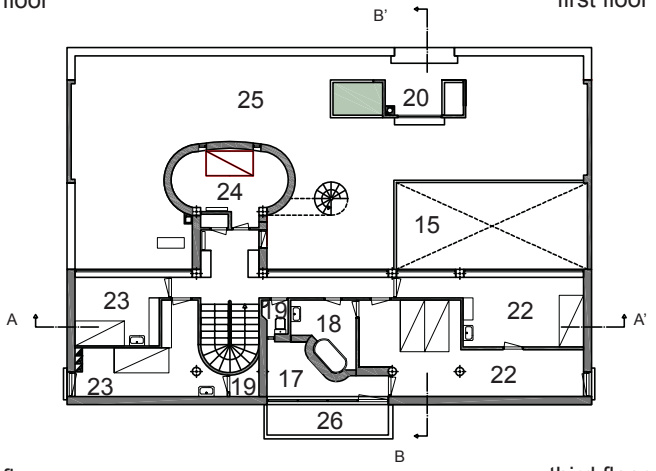
ground floor



first floor



second floor



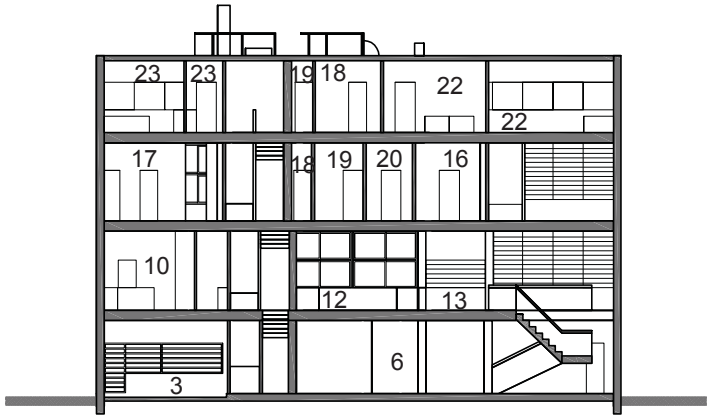
third floor

scale 1:300

01. Project Description

01.2 Floor plans, elevations, sections and isonometries

01. Garden
02. Domestic room
03. Garage
04. Main entrance
05. Secondary entrance
06. Entrance hall
06. Servants room
07. Toilet
07. Staircase
08. Wardrobe
10. Combined kitchen
11. Dining room
12. Living room
13. Reception room
14. Terrace
15. Vide



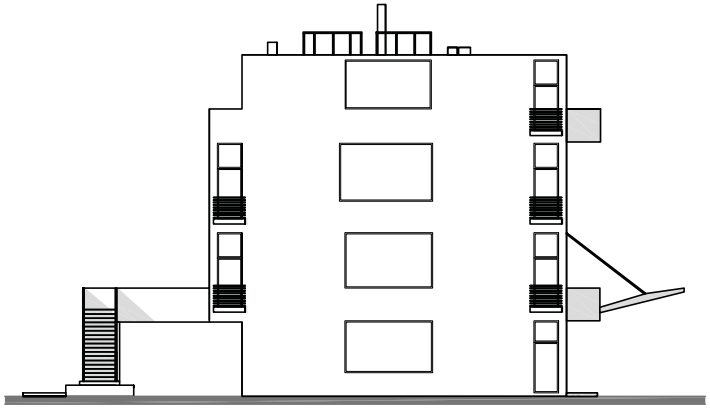
section A-A'

16. Bedroom
17. Living room
18. Bathroom
19. Toilet
20. Storage room
21. Terrace
22. Guest room
23. Staff room
24. Solarium
25. Roof terrace
26. Balcony
27. Closet

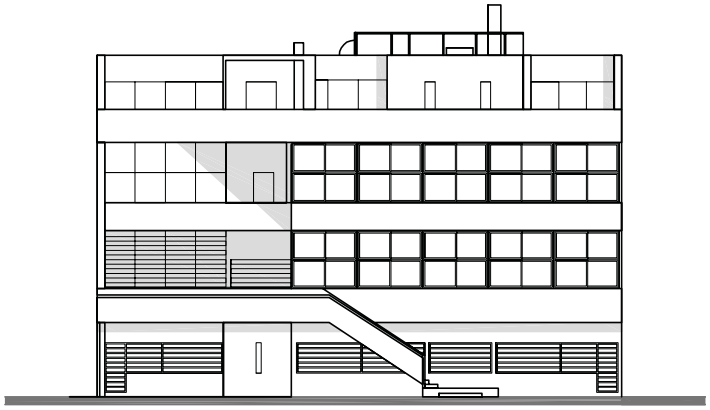
section B-B'

scale 1:200

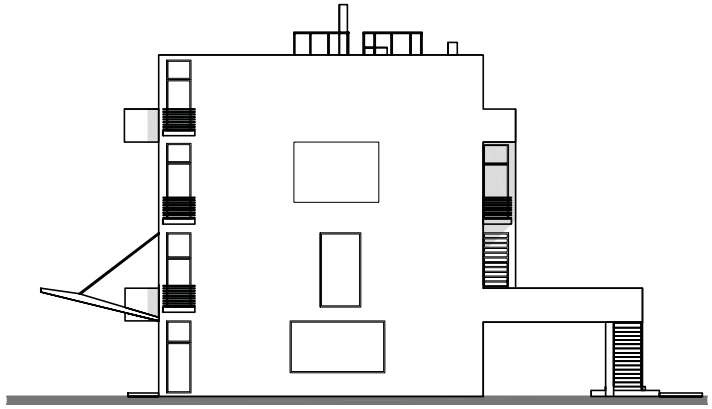
elevation- front



elevation - left



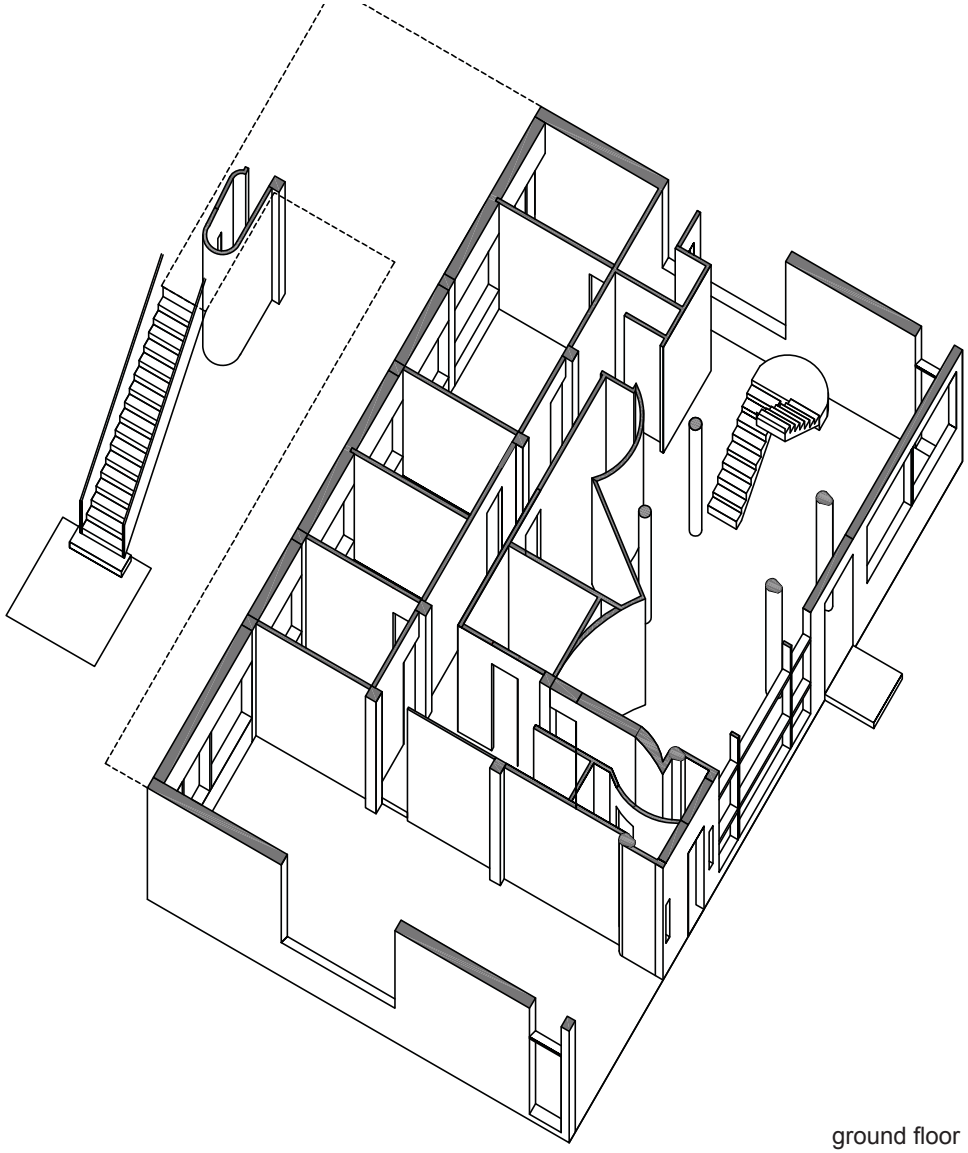
elevation - back



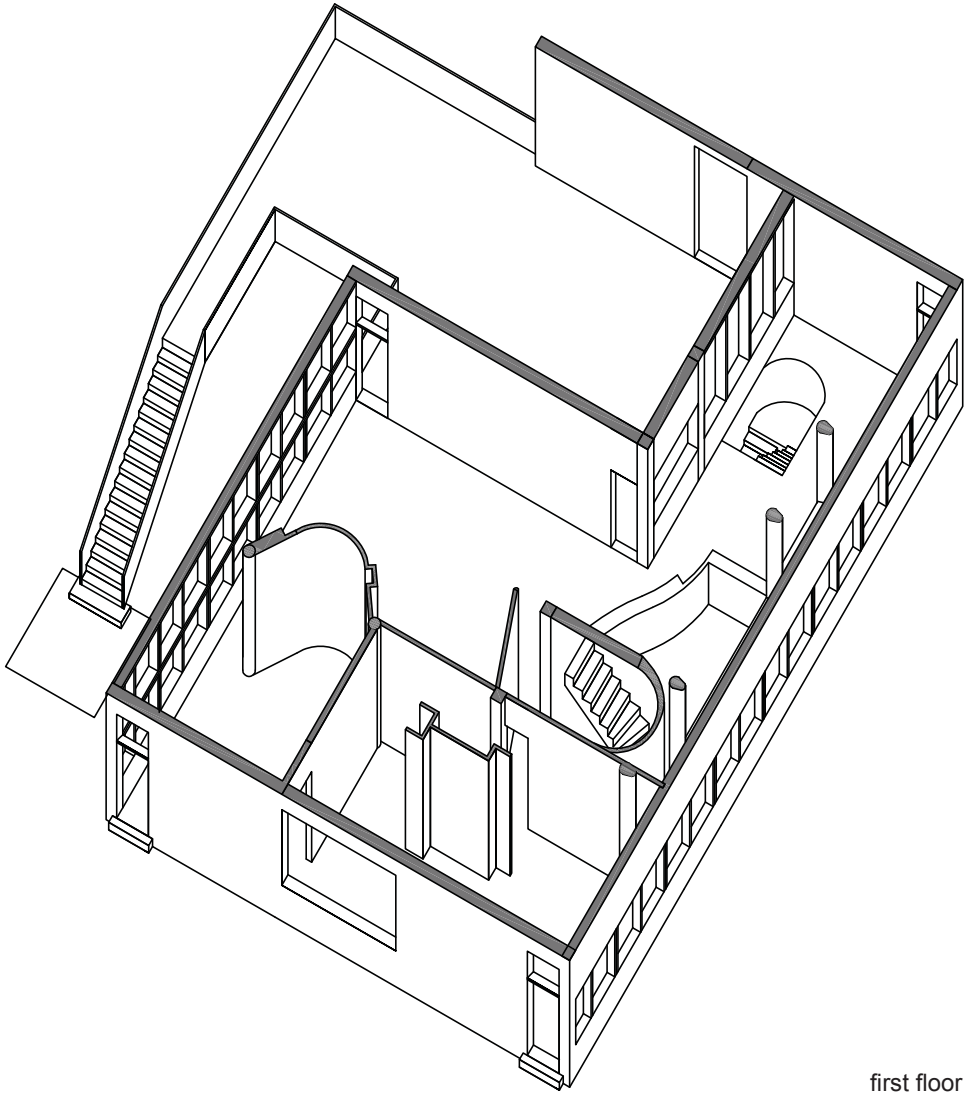
elevation - right

scale 1:300

01.2 Floor plans, elevations, sections and isonometries

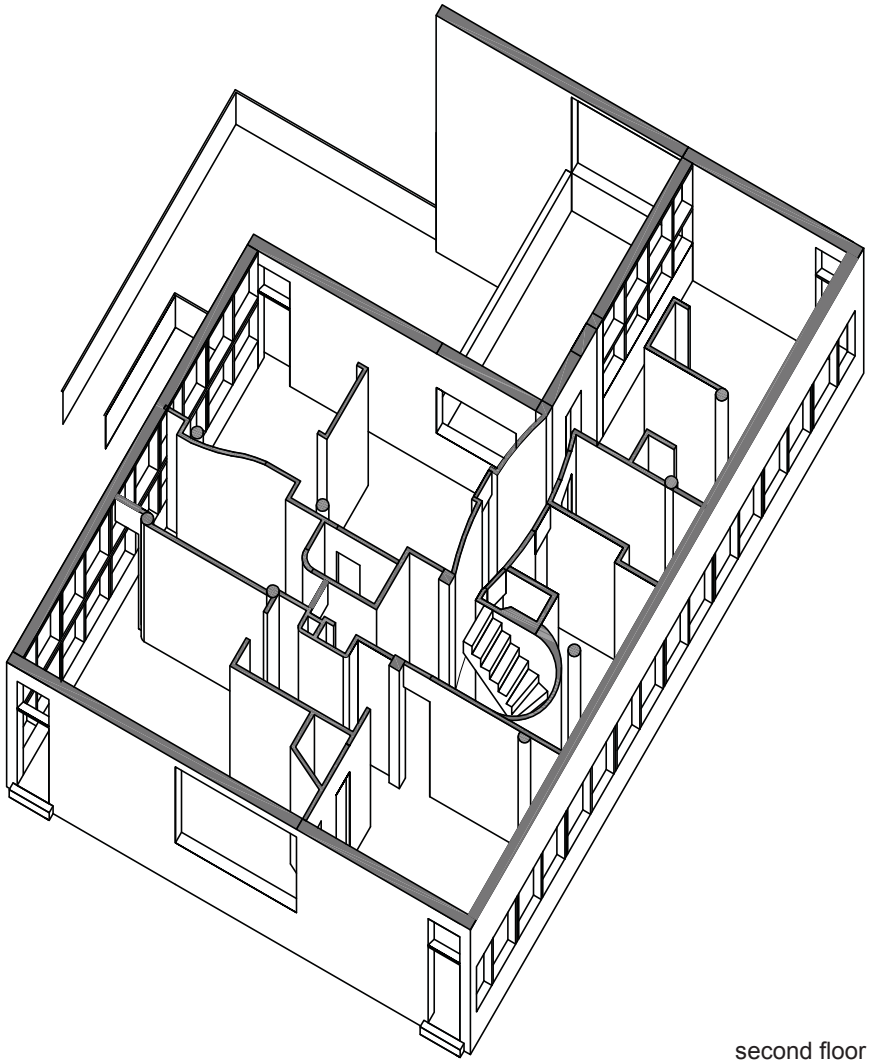


ground floor

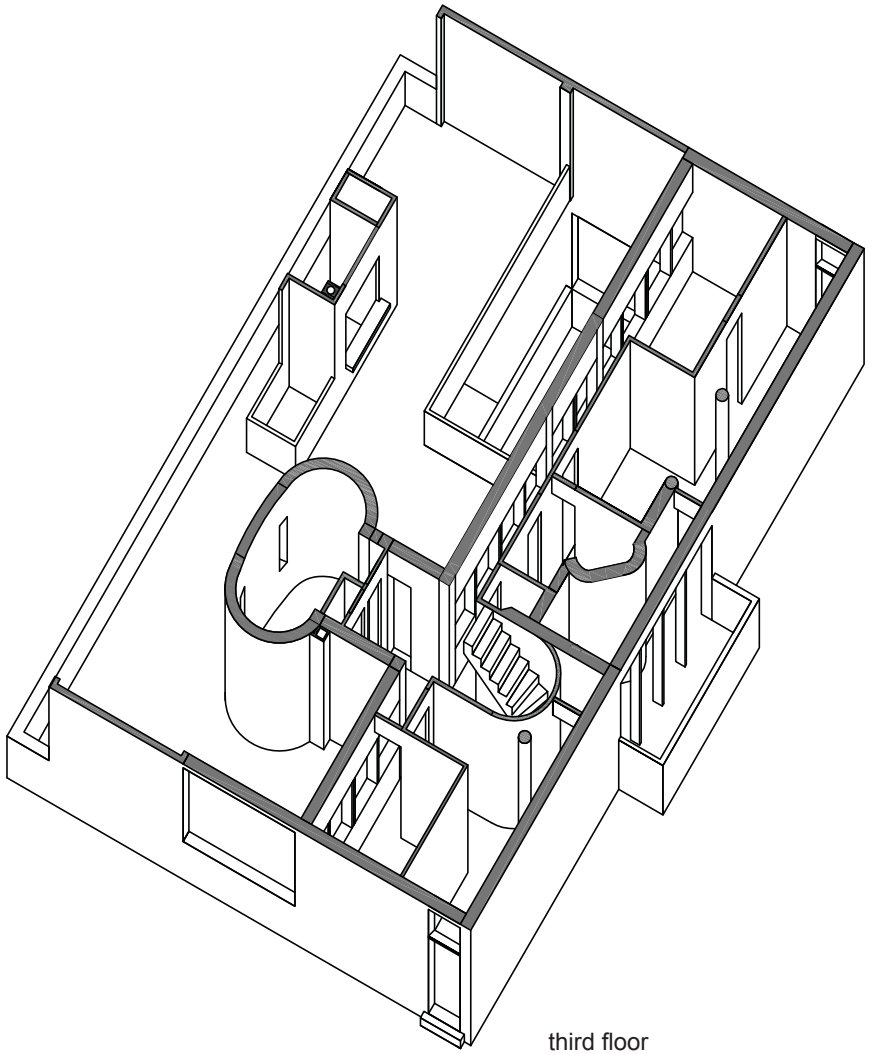


first floor

scale 1:200



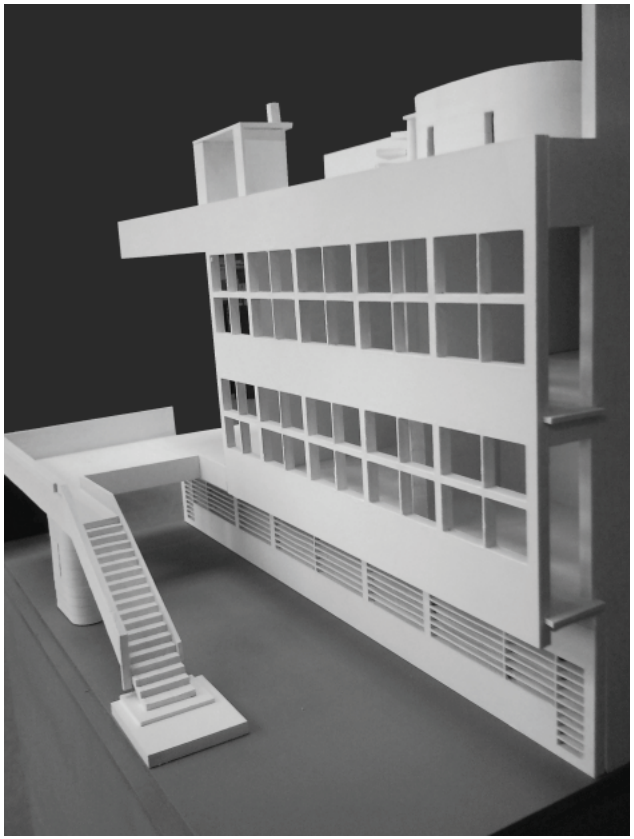
second floor

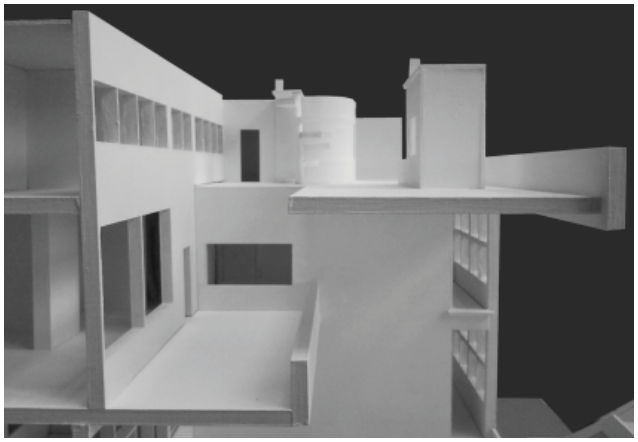


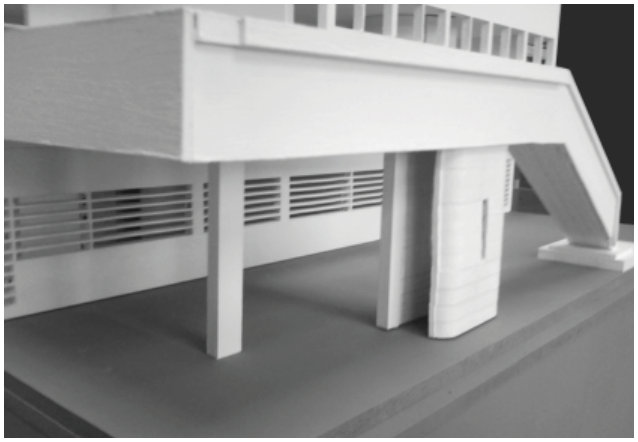
third floor

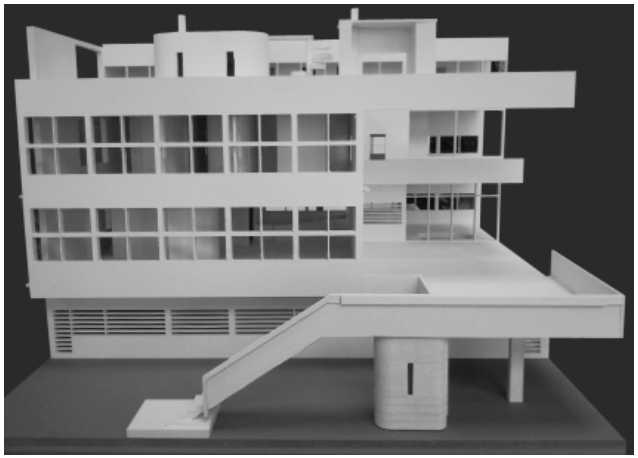
scale 1:200

01.3 Model

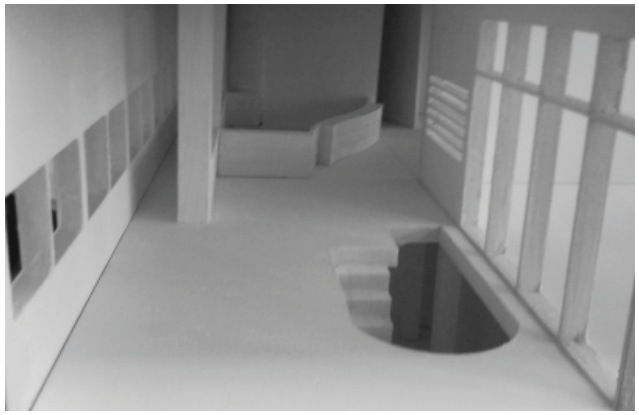


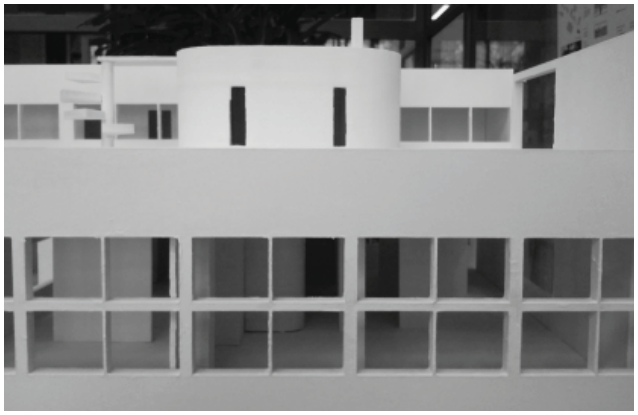


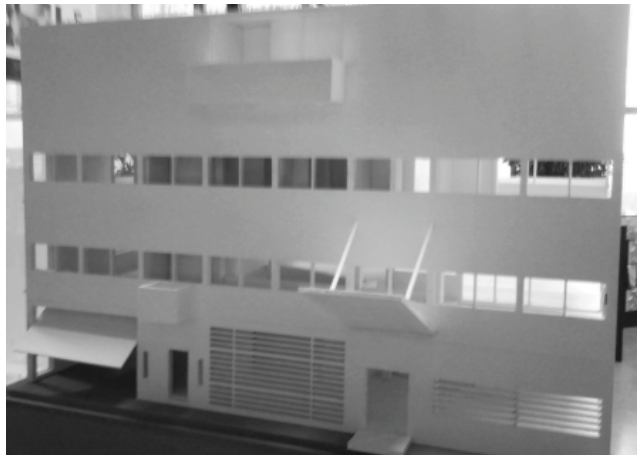


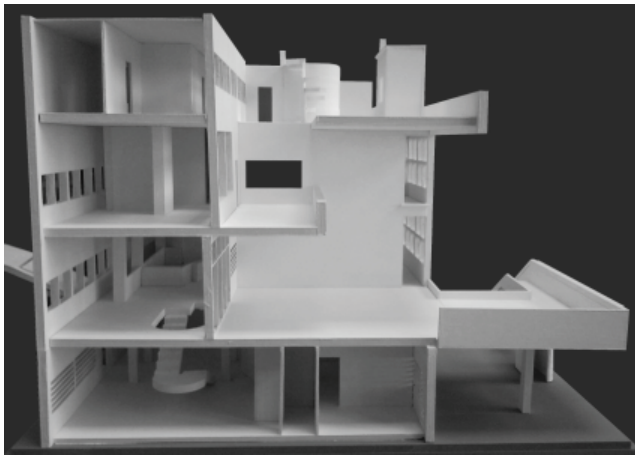


01.3 Model









02. Context

02.1 Location

Villa Stein is located in the suburbs of Paris in France. The exact location is Rue du Professeur Victor Pauchet 92420 Vaucresson or also called Garches in Paris.

The family Stein always lived in the centre of Paris. When they got older they wanted to move out of the city centre for a more quite and relaxing environment but wanted still be able to get to the centre of Paris without having to travel a lot to go shopping, for work or for their art collection.

Villa Stein was originally located at the edge of a very big parc Etang de Saint-Cucufa. This was a forest like parc full of trees, some ponds and characterized as an very natural environment.

Through the years the area surrounding Villa Stein got more crouded with other residential houses and villa's. However the natural character of the area remained because of the green and trees in the surrounding area.

On the other side of the road, opposite of Villa Stein came a golf course. Villa Stein got enclosed with other buildings surrounding it on the other three sides.

One of the great things of villa Stein is that standing on the plot you hardly notice the surrounding houses because of the size of the plot and the density of the trees and vegetation. This way despite the change in the surrounding environment and more dense buildings it remains an outdoor villa in a very natural environment.

Villa Stein
buildings
green

scale 1:2000

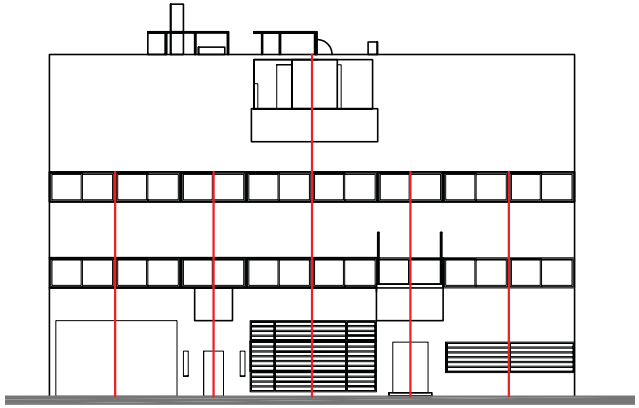
03. Exterior

03.1 Facade composition

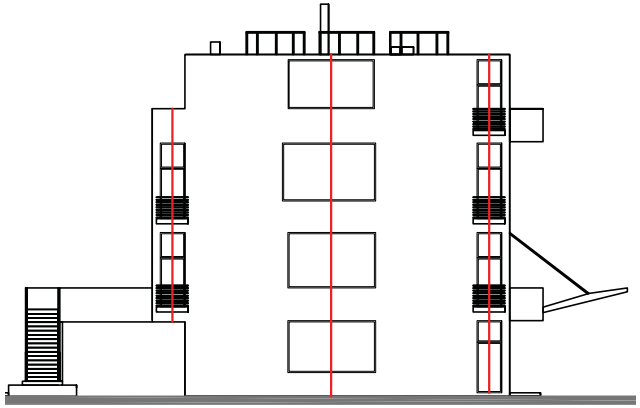
The facade of Villa Stein isn't symmetric at first sight. It looks like various parts and elements are placed randomly. The opposite is true. Le Corbusier used the five points in the design and his concept about proportion.

The facade accomodates symmetrical parts in vertical direction. The front facade can be seen as symmetrical in a way. The windows are symmetrical, just like the bottom window and the balcony. On the left you got a big element, the garage. On the right you got a similar big dominant element, another window. The same is for the fake balcony and the shed above the two entrances. All of these 'symmetrical elements' differ in shape but make one symmetrical facade.

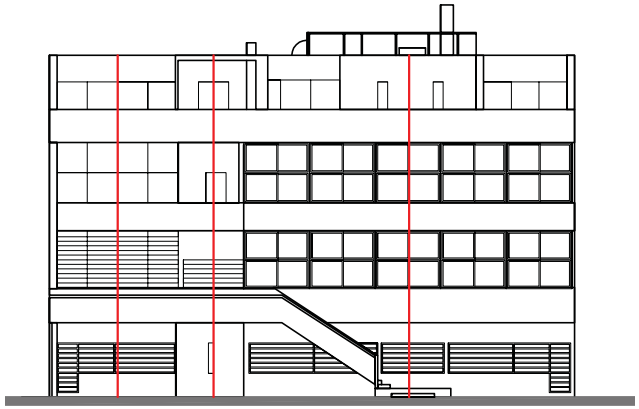
The other facades contain also elements of symmetry but less powerfull as the front facade.



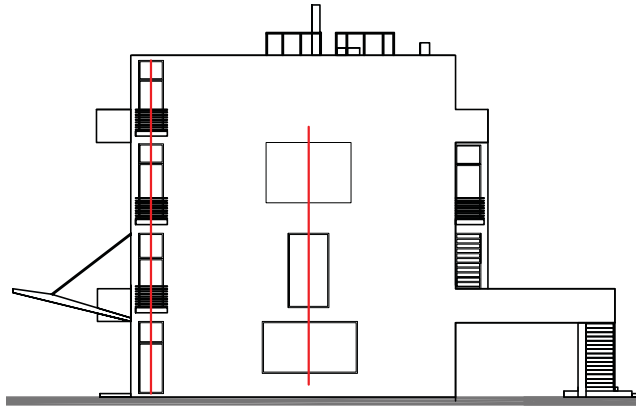
symmetry - elevation front



symmetry - elevation left



symmetry - elevation back



symmetry - elevation right

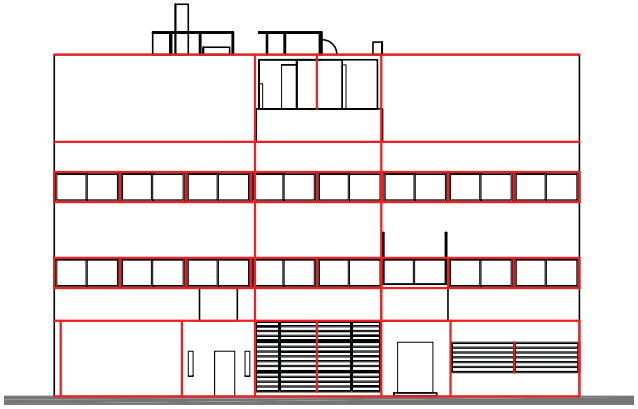
scale 1:300

03. Exterior

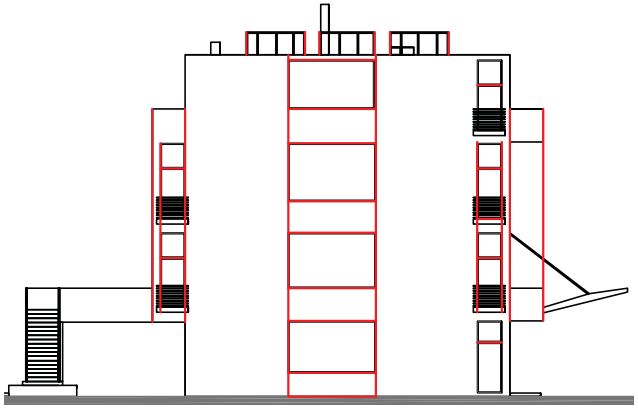
03.1 Facade composition

The facade of the entrance is very flat and the design follows a method that defines the extent and location of the windows, based on the regular Aureus number. This causes a certain rythm which is sometimes broken and causes variation when some element playfully interacts with the facade.

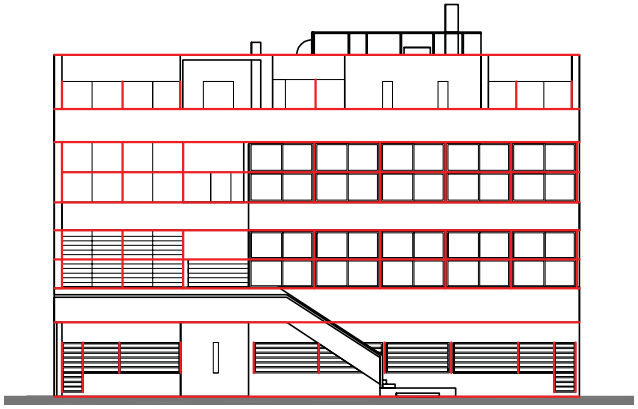
Volumetrically, Stein's house is broken into an parallelepiped rear facade. This transparent garden facade shows the complexity of the inner volumes. Besides the complexity the facade of the back side shows the outer staircase and walks that connect the terraces and the garden.



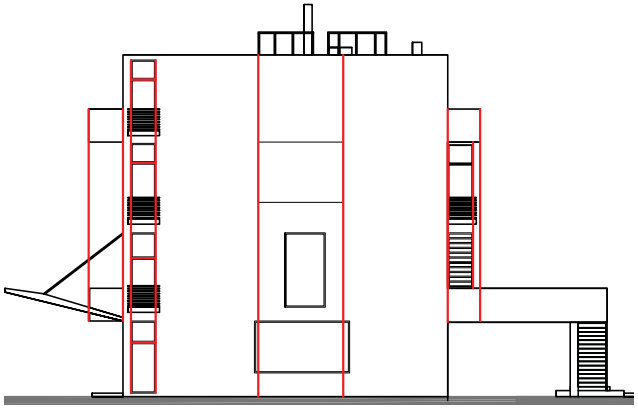
rythm - elevation front



rythm - elevation left



rythm - elevation back



rythm - elevation right

scale 1:300

03. Exterior

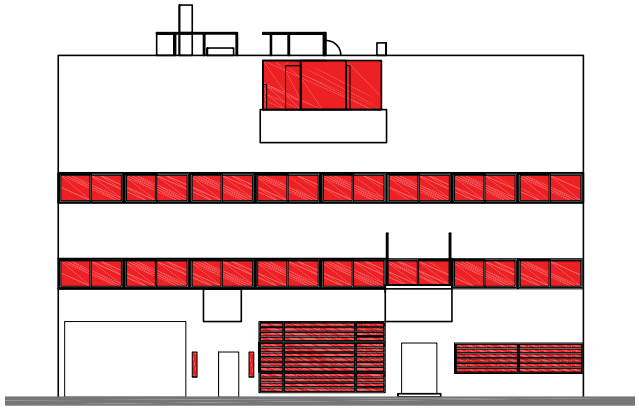
03.1 Facade composition

When you look at the facade composition in terms of the transparancy you directly notice the characteristic windows which can be found in almost all Le Corbusier's houses. In the front facade you got the long row of window frames with the same size and with. At the ground floor you'll find the windows with the iron frame and the small long glass elements which give a closed and intimite character at the ground floor.

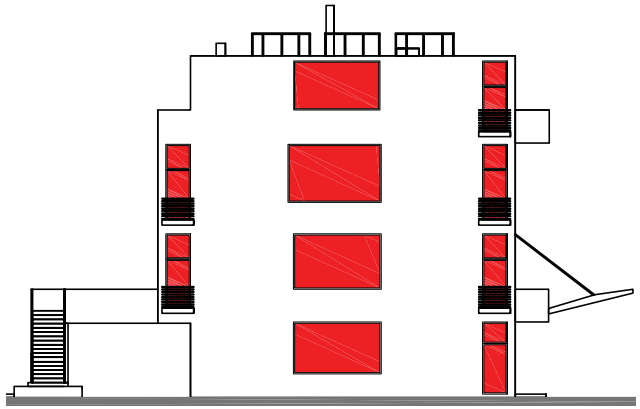
Especially at the back of the Villa appears the house to be very transparant with the big double size windows. You also find the big transparant terraces at the back side of the house which gives the house an open character. The windows emphasize this transparancy.

In the left and right side of the house are very big windows present. These give the house an even more open character.

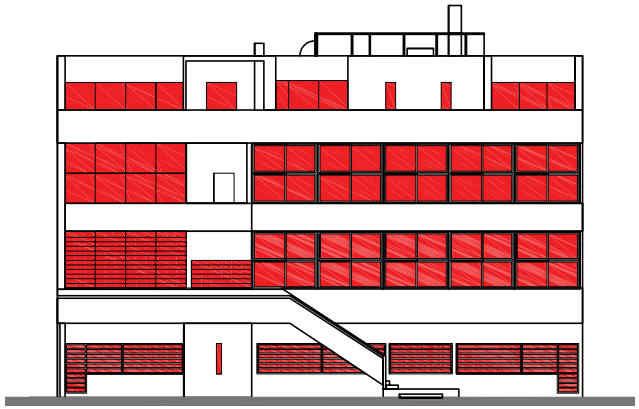
The house is this transparant because of the hobby of the Stein couple. They like to collect and show their art at the house. Therefore Le Corbusier designed a very open and transparant house to make the spaces very light and open.



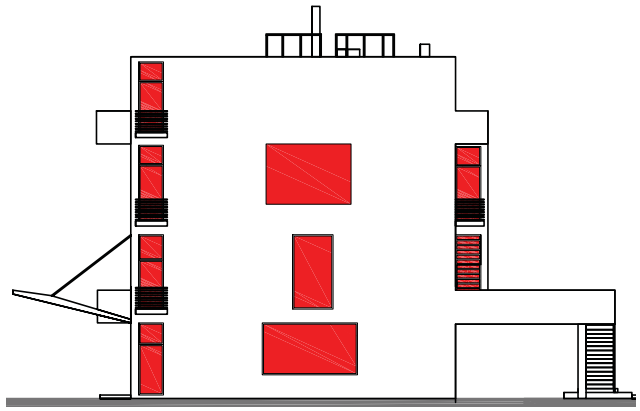
transparent - elevation front



transparent - elevation left



transparant - elevation back



transparent - right

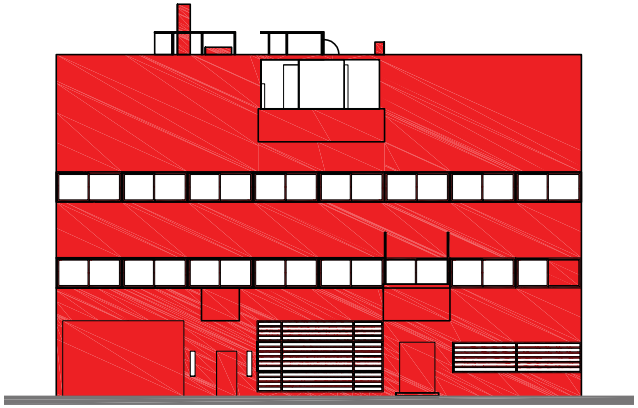
scale 1:300

03. Exterior

03.1 Facade composition

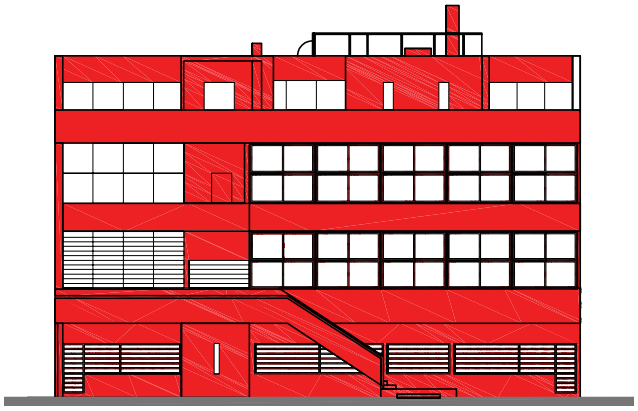
Because of the size of the Villa, the house needs a lot of windows to bring light into the spaces and rooms. This follows the function and needs of the Stein couple. The windows follow the principle of the golden section which Le Corbusier used in his designs.

The cubical feeling is broken only with oval shapes, inspired by the chimneys of the big transatlantic luxury ships. However, there is still a classic principle in both shapes: the proportions of the facade are purely Palladian. The vertical arrangement of the space is quite clear and logical.

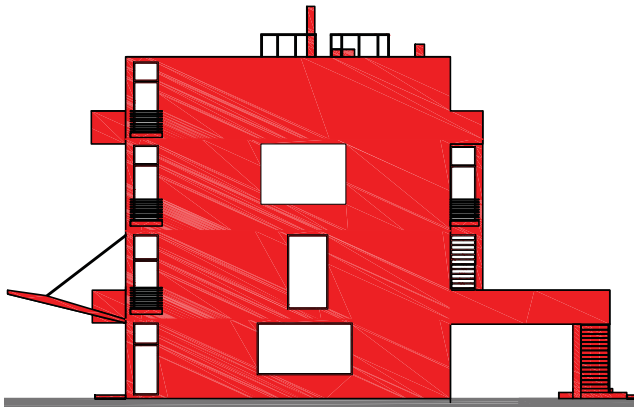


not transparent - elevation front

not transparent - elevation left



not transparent - elevation back



not transparent - elevation right

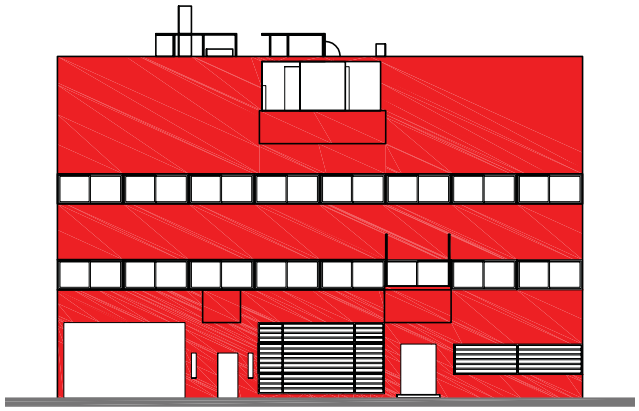
scale 1:300

03.2 Facade materials

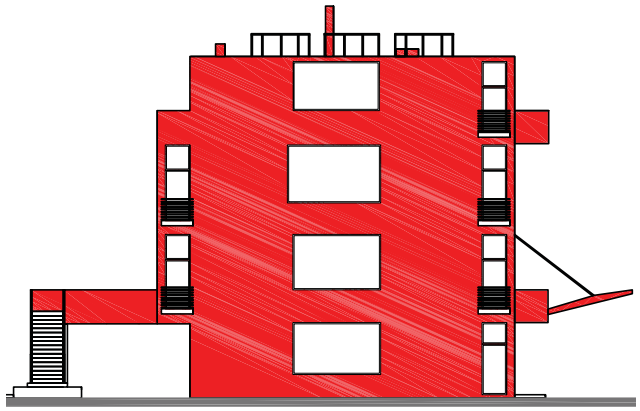
One of the elements that give villa Stein such a strong character and make the villa as one unity is the material usage of the facade.

The key material is the white plaster in the facades and balconies. The white plaster is typical for Le Corbusier and he is known for using plaster and it can therefore be found in nearly all of his designs and buildings.

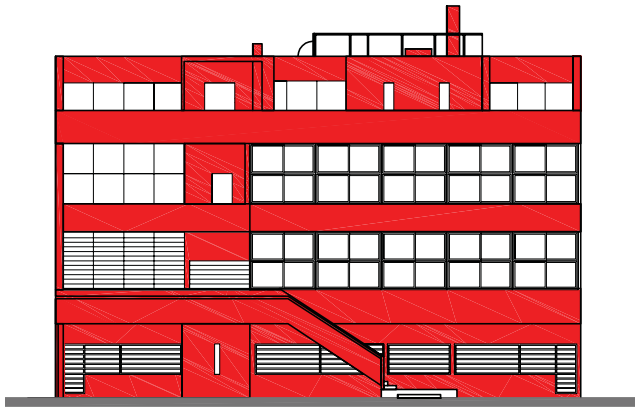
By using white plaster the house strongly refers as one unity and one solid element even though there are a lot of elements and different parts in the house like the big balconies, the terraces and for example the solarium on the roof top.



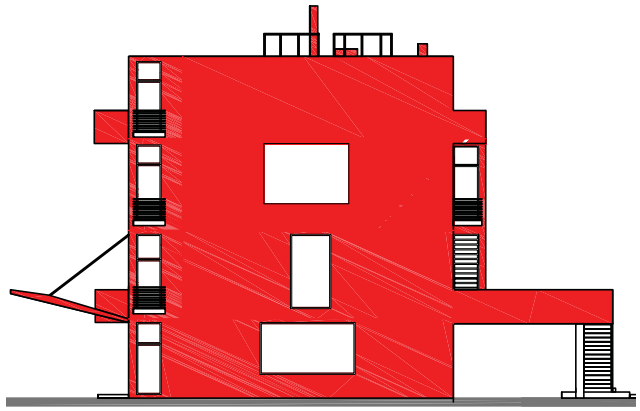
white plaster - elevation front



white plaster - elevation left



white plaster - elevation back



white plaster - elevation right

scale 1:300

03. Exterior

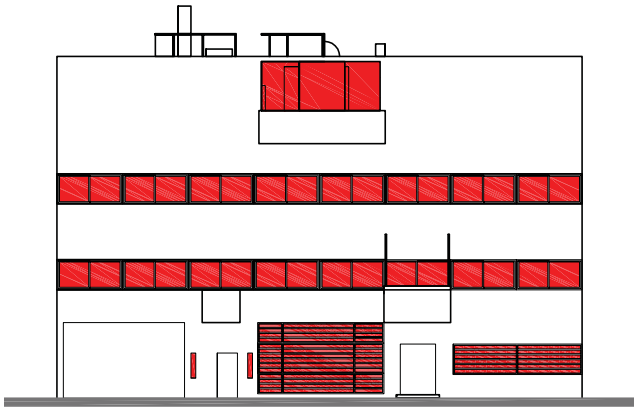
03.2 Facade materials

Besides the white plaster is the glass highly present in the facades. The glass contributes to the transparancy of the house and proportions.

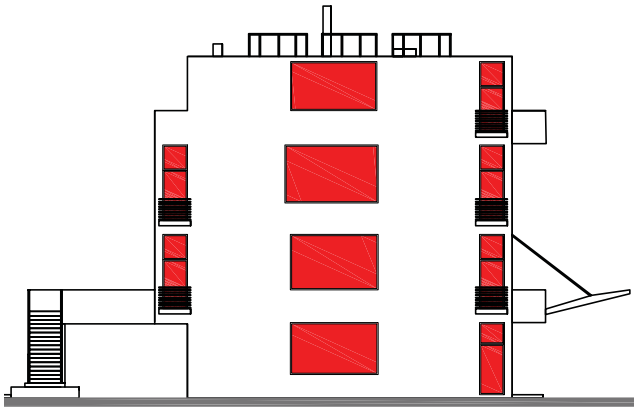
Basically there are three different dimensions of glass present in the house. You got the more private parts of the house which have windows, only small thin lines like bars. This emphasizes the function and less importancy more private character of these rooms.

The second sort of window are the repeating rectangular windows of the first and second floor. These windows are a lot bigger and more transparant. These rooms are more important and need more light because of their functions.

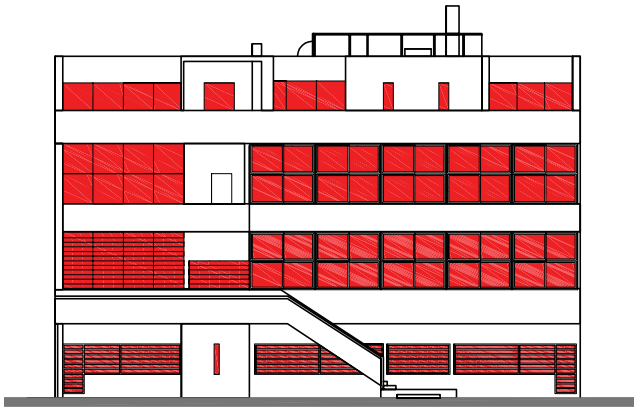
The third group are the huge windows in the side facades. These windows are huge glass elements which give the villa even more light and bring the nature and surrounding trees inside the villa.



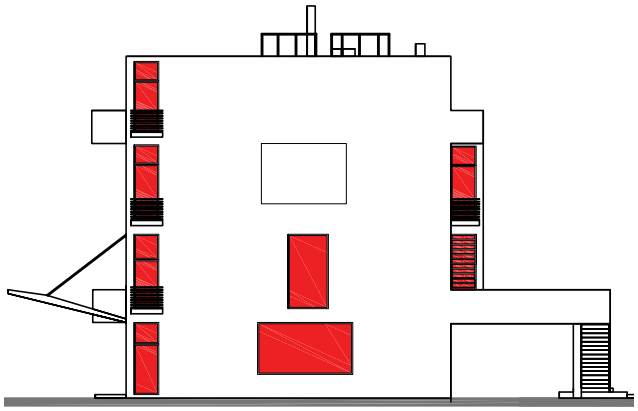
glass - elevation front



glass - elevation left



glass - elevation back



glass - elevation right

scale 1:300

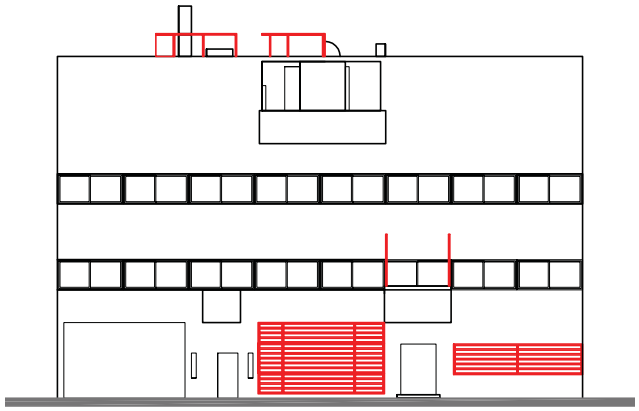
03. Exterior

03.2 Facade materials

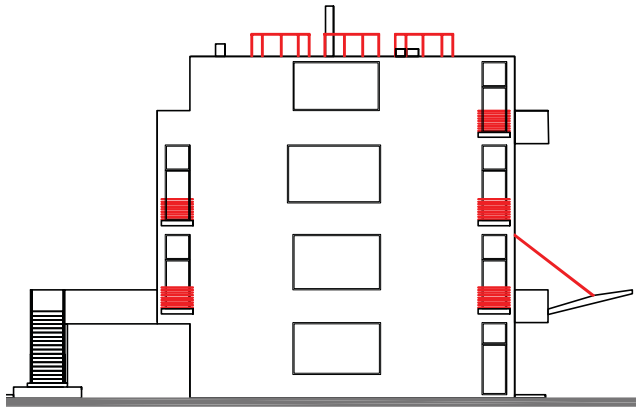
The third facade material present and dominant in the house are the dark steel elements. Especially the bars in the windows on the ground floor are very present in the facade and are in contradiction with the white plaster. The dark steel bars in the window give these parts a very closed and private character even though they are quite transparant because of the glass. This way light can enter these rooms without losing their function, privacy and the hierarchy of these rooms.

Besides the bars in the windows, the dark steel can be found in the guard-rails at the doors on every floor. These 'balconies' give the house a more open character from the inside and contribute to the proportion in the facade even though they can't really be used as a balcony.

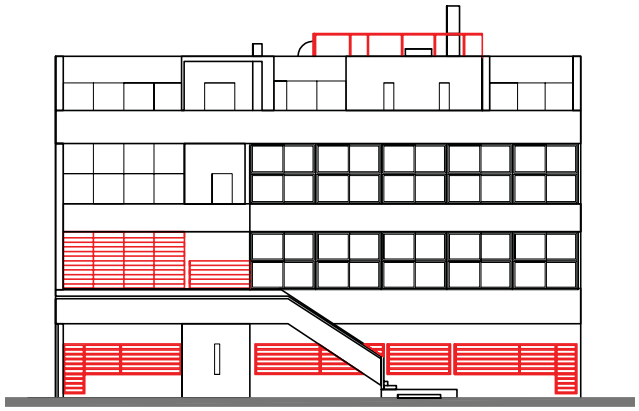
Every hand-rail in the villa and other steel elements are all made out of the dark steel which gives the house together with the glass and white plaster an uniform character.



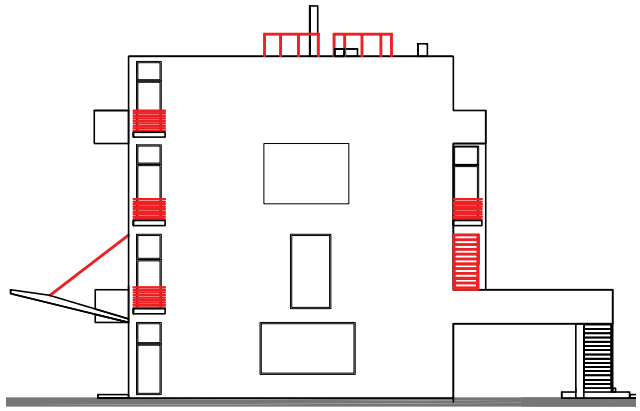
dark steel - elevation front



dark steel - elevation left



dark steel - elevation back



dark steel - elevation right

scale 1:300

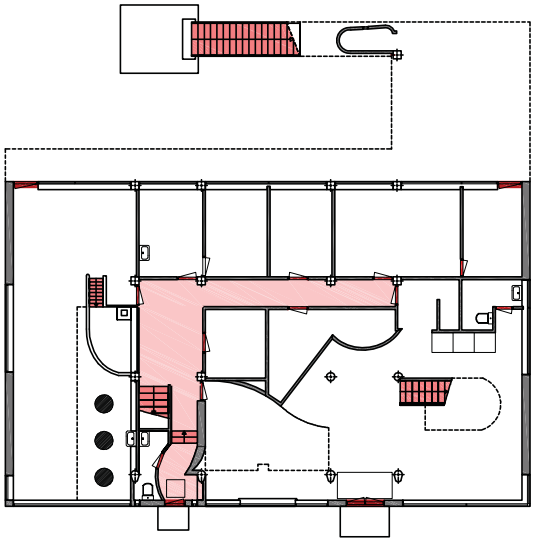
04. Interior

04.1 Threshold

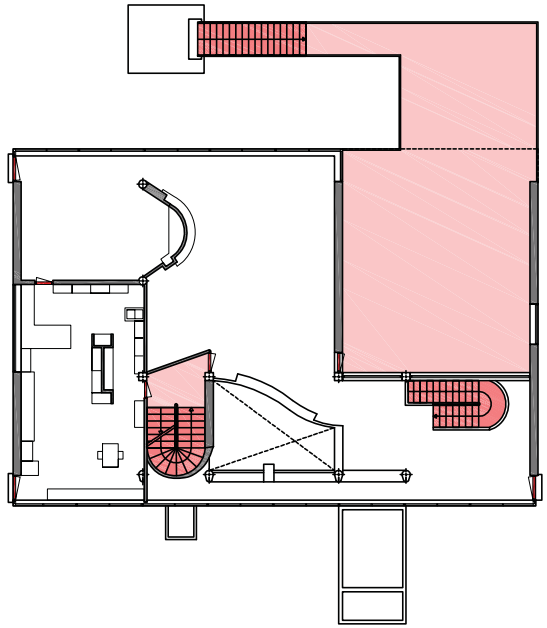
The entrance of Villa Stein can be seen as a smooth threshold because of the long lawn leading from the street to the house, this makes the main entrances more private and a less hard transition.

Behind the servents entrance lays an smooth treshold space because of the corridor behind the entrance. To move the living part of the house you have to pass a hard treshold space. Two staircases lead the servants, owners and guests to the first floor and living area.

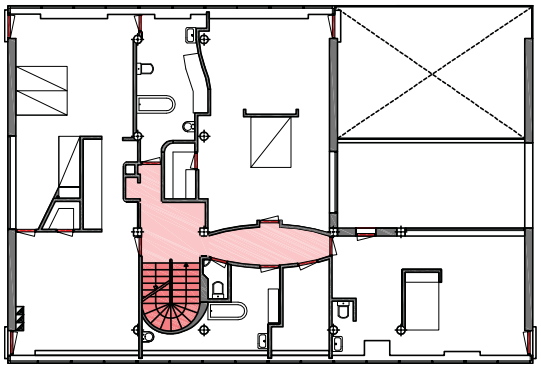
After the first floor every floor can be reached by the staircase followed by a corridor or hall. The staircases are hard threshold spaces and the corridors smooth thresholds.



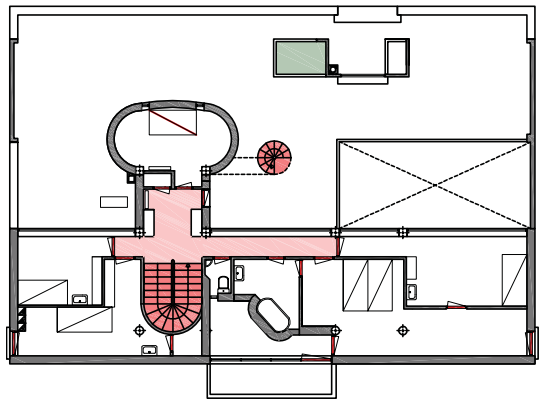
ground floor



first floor



second floor



third floor

- Threshold hard
- Threshols smooth
- Threshold space hard
- Threshold space smooth

scale 1:300

04. Interior

04.2 Routing

When you look at the house without knowing it's front or back or location you automatically would suggest that the main entrance is along the stairs and big balcony. However this is the entrance to the deep and big garden.

The front entrance for guests and private use is on the other side and is emphasized by the big element above the door. There is a seperate entrance for servants on the left next to the garage for private use, emphasized by the small fake balcony above.

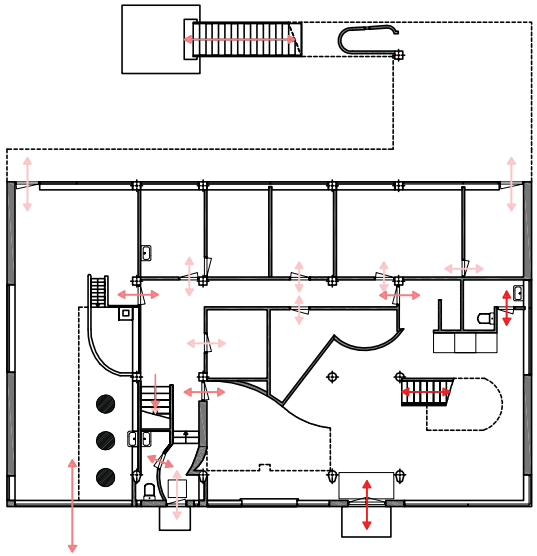
Servants and on the other hand the owners and the guests are lead seperately to the first floor. This way guests and the owners don't have to cross and don't see the domestic rooms.

The guests enter in a entrance hall with light coming from the vide. A big round staircase leads the guests to the reception room. Further is the combined kitchen and big living room located on the first floor for the private and social use.

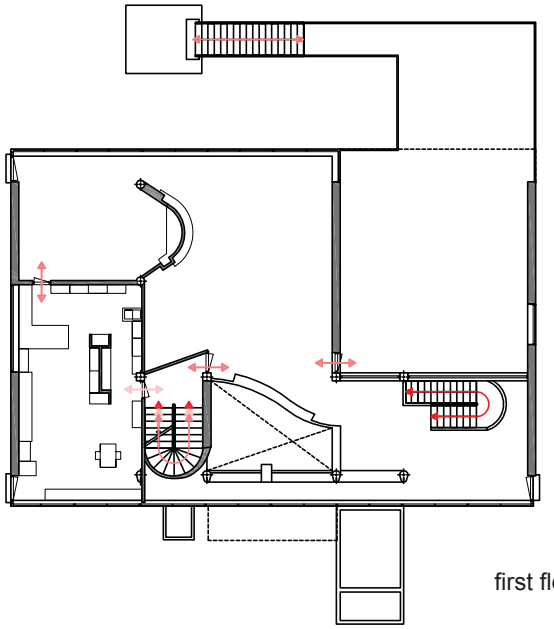
The second floor is completely organised for private use. The guests only pass by on the staircase and in possibly in the hallway.

The third floor is for the guests and is also called the shipdeck because of the look out tower and the big roof terrace. Besides the guest rooms are some servant rooms located on the third floor.

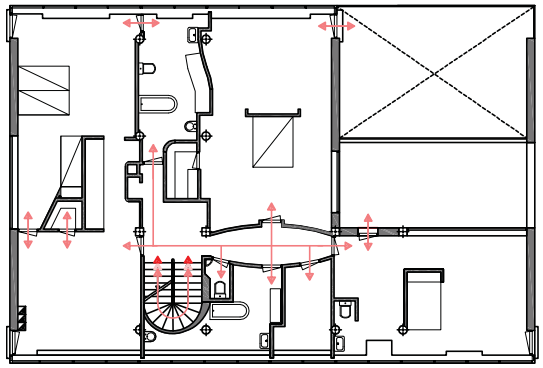
servants route
guest route
private route



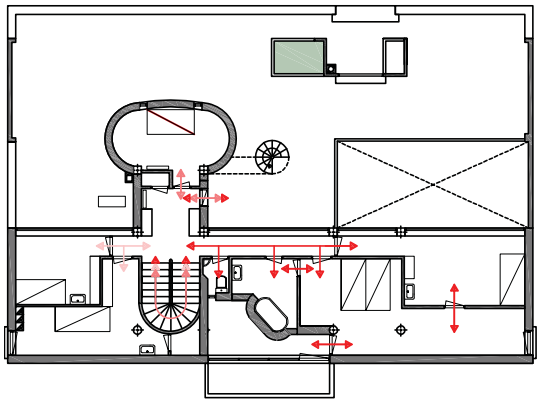
ground floor



first floor



second floor



third floor

scale 1:300

04.3 Construction

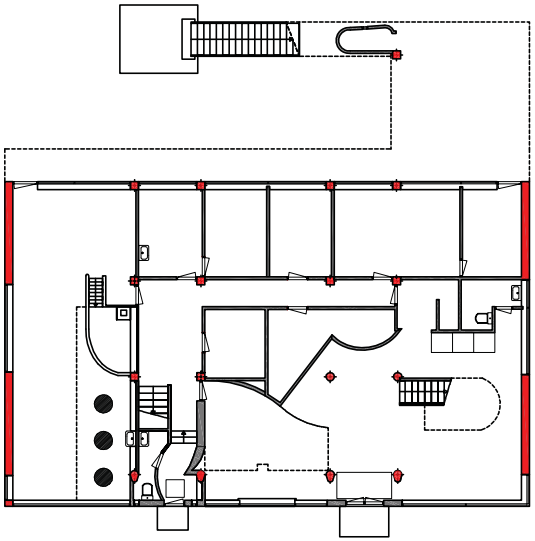
Le Corbusier was one of the first architects to use columns also called the ‘pilotes’ to create free spaces on concrete floors instead of load-bearing walls in his very famous five points of Modern Architecture.

He did the same for Villa Stein however the outside walls tent to help the stability of the construction together with the concrete floors.

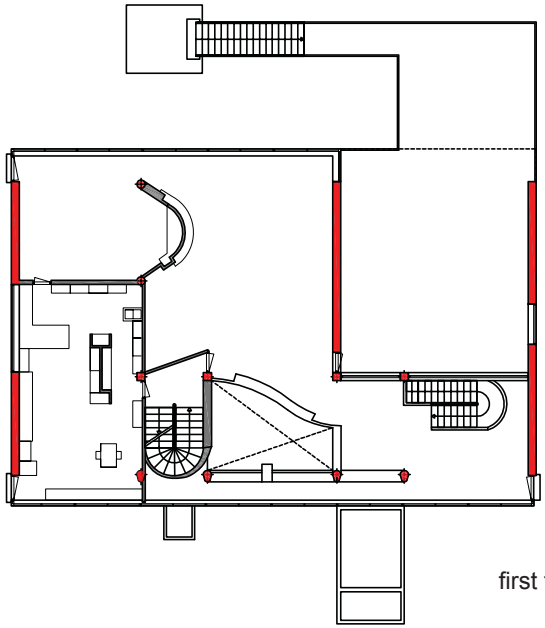
Le Corbusier used three sorts of different columns.

The square columns are used in the construction when the columns are placed between the smaller non-weight bearing inner walls.

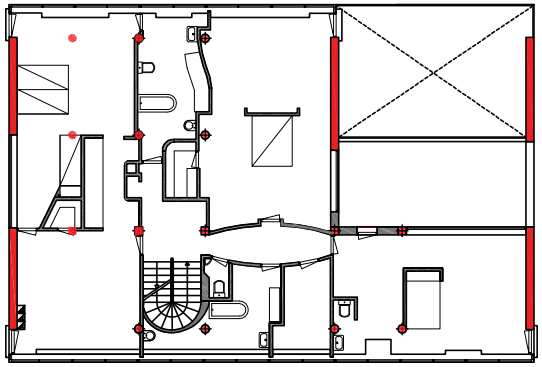
The round and egg-shaped columns are used in the free space or whenever there’s a column in the middle of the room.



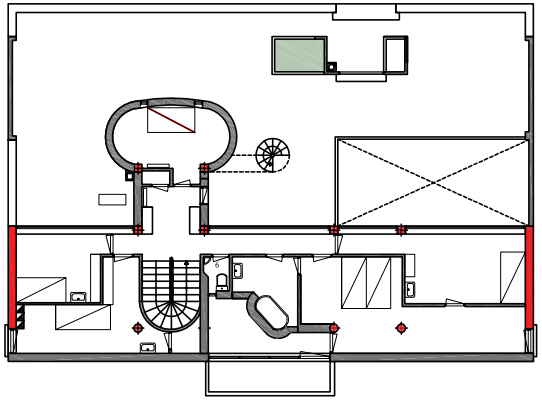
ground floor



first floor



second floor



third floor

constructive

scale 1:300

04. Interior

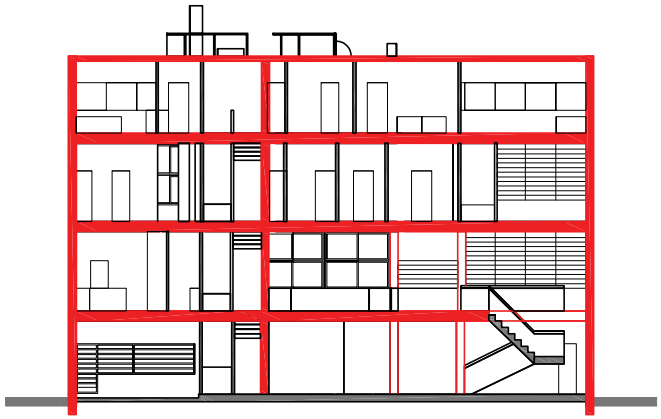
04.3 Construction

In the two different sections it is visible how the columns connect to the concrete floors.

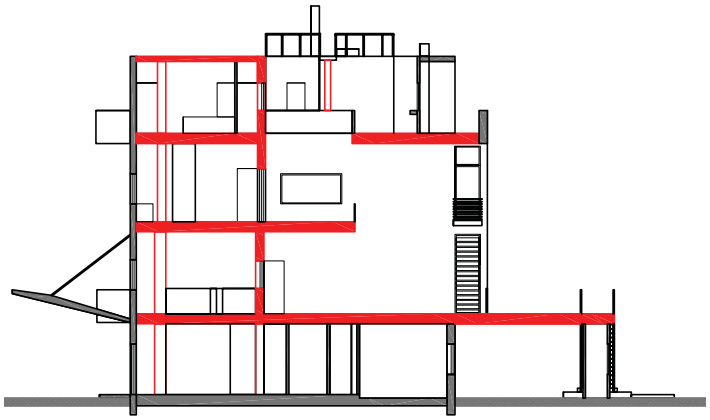
Le Corbusier uses the columns to gain the, in that time new concept of free space to make big open spaces which give the huge house a very light and transparant character. This also benefits the exhibition of art and use of the house as a house to meet and invite friends and show and talk about their passion: art.

The couple moved to the suburbs as an escape of the noise, and rush of the city. They felt trapped and Villa Stein is the opposite of that with it's open and transparant aspects like the terraces and big windows that bring the nature literally inside the house. This transparancy wouldn't have been possible without the use of the 'pilotes'.

Even though Le corbusier uses the concept of the 'pilotes', he still organises some functions on every floor in an old fashioned way. This is the result of the functional aspects and the needs of the couple.



section A - A'



section B - B'

constructive

scale 1:300

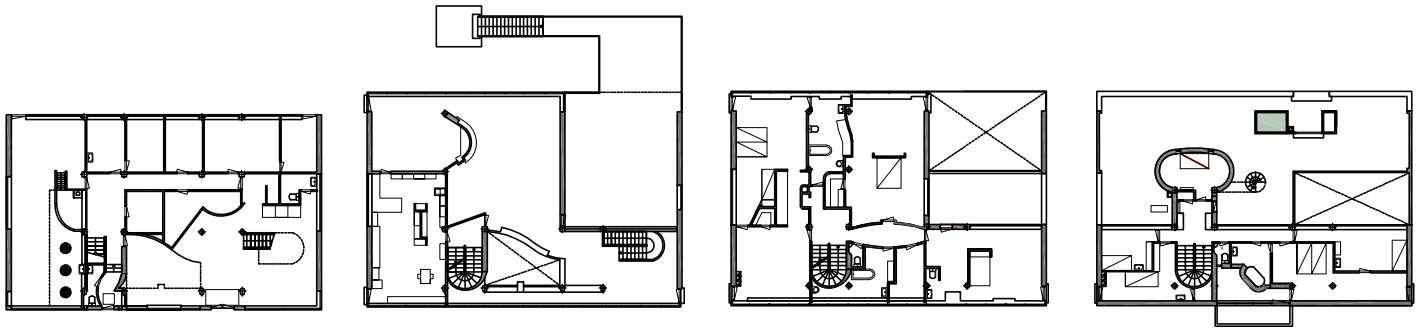
04.4 Use of the spaces

villa Stein has a lot of different spaces. Maybe more unusual because of the extraordinary organisation. Villa Stein differs from the typical family house because of the fact that two families are living in one house.

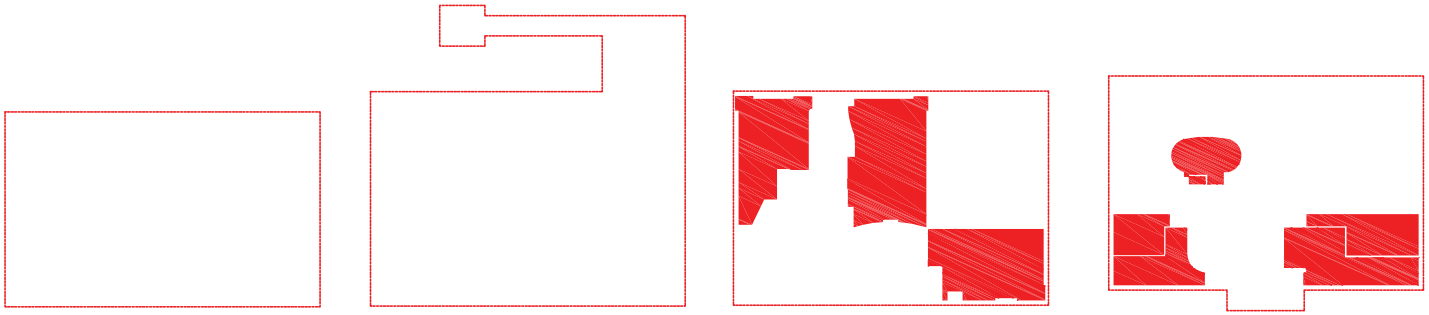
One part is meant for the Stein couple and another part is used by Gabrielle de Monzie. Besides the two private parts the house accommodates different spaces for both of them and spaces for servents and guests. Le Corbusier had to design a house which meets the needs of both families and had to take in count all of those things.

All of the private spaces for the two families are located on the second floor and the guest rooms and staff rooms are found on the third floor.

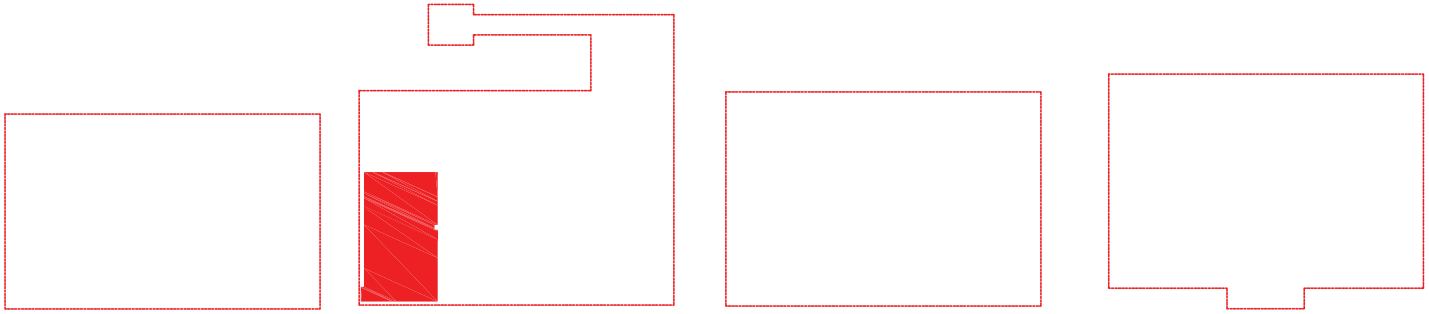
The combined space for cooking is found on the first floor of the house and is for both families.



ground floor | first floor | second floor | third floor



sleeping



cooking

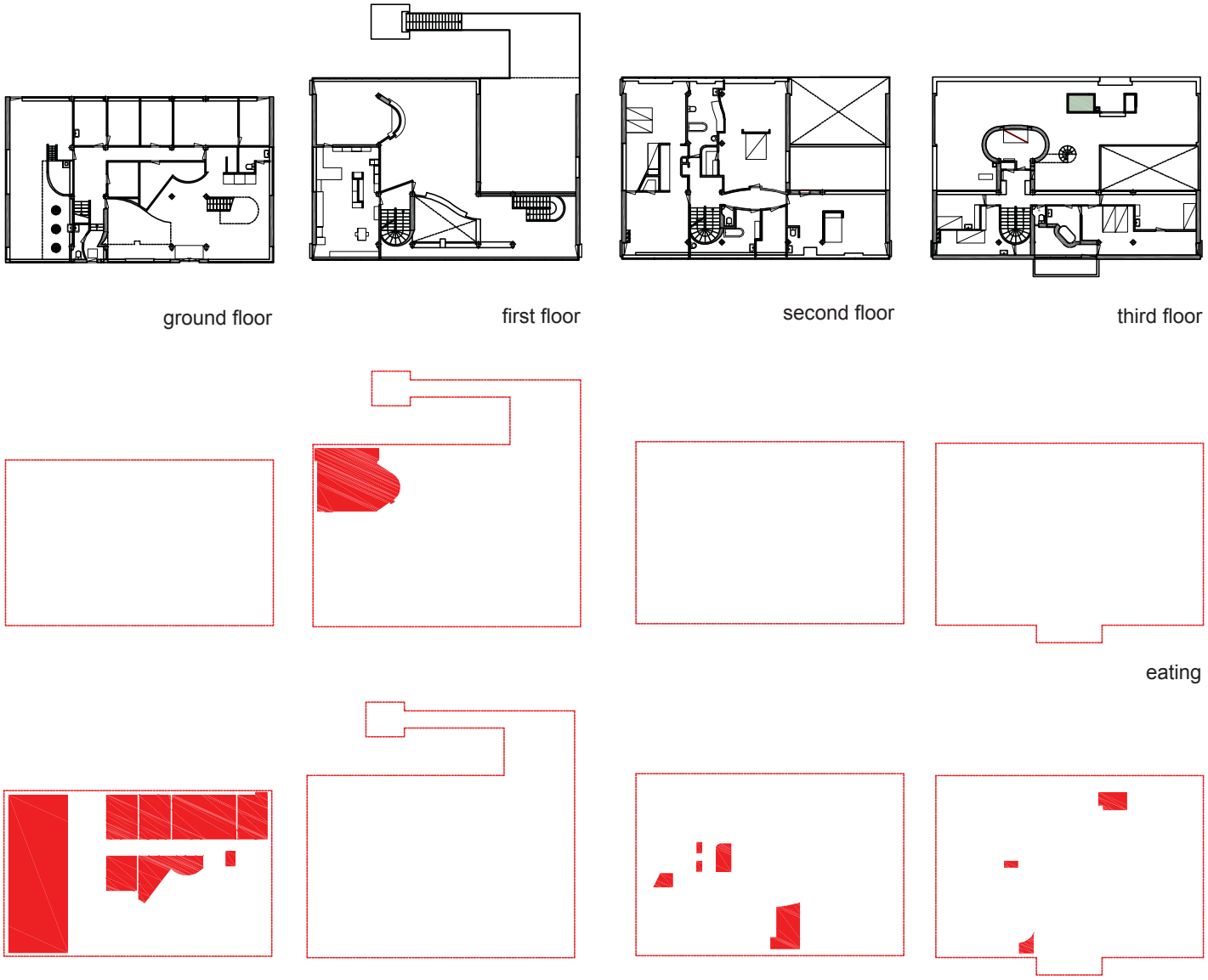
scale 1:500

04. Interior

04.4 Use of the spaces

The space for eating is located directly besides the combined kitchen and is also found on the first floor. All of the ‘public’ or ‘combined’ functions for the two families are found on the first floor.

The space for storage is mainly focussed on the ground floor. Le Corbusier tends to place the functions which are less desirable to see on the ground floor and the representative functions on the upper floors.



scale 1:500

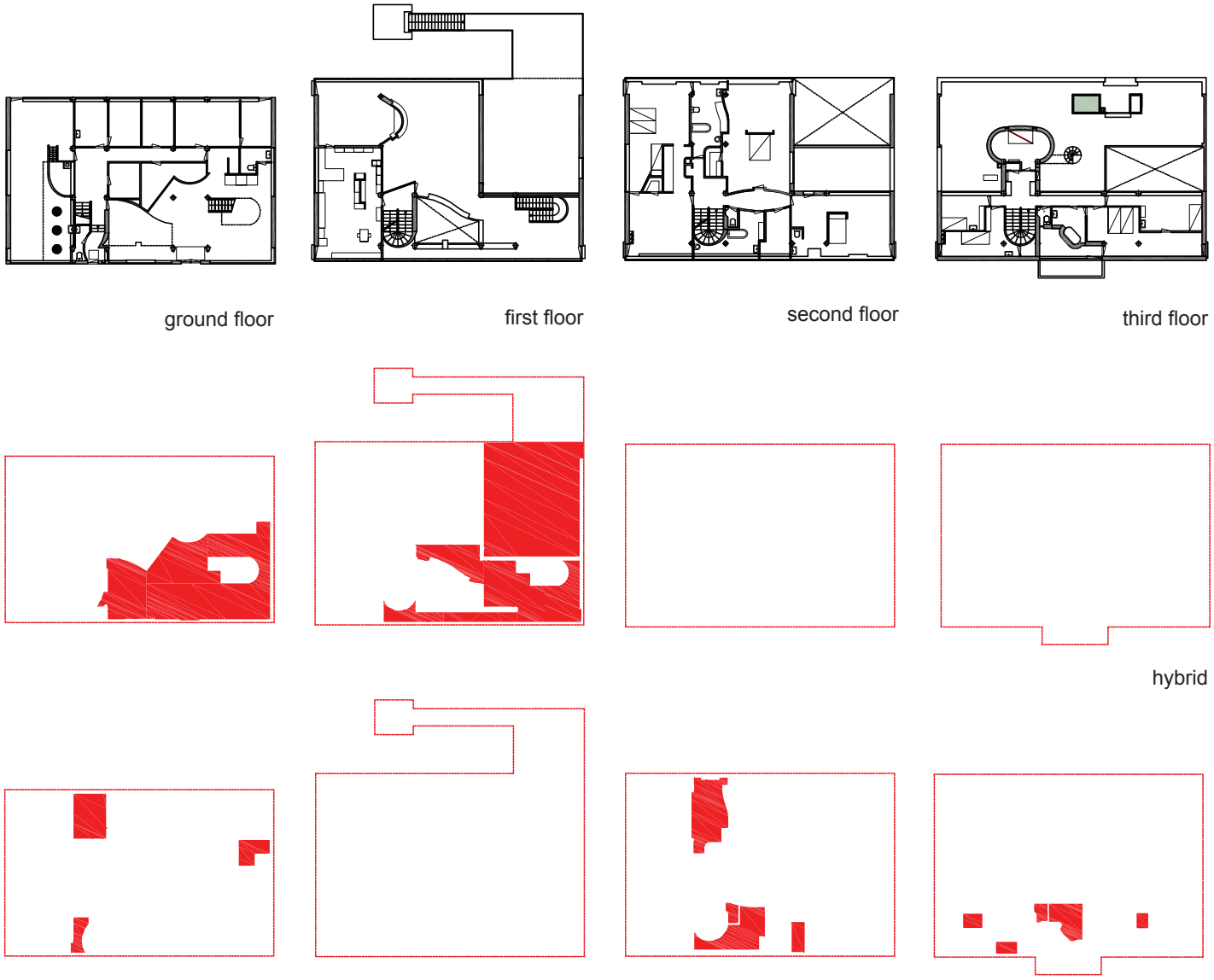
04. Interior

04.4 Use of the spaces

The owners or guests have to pass the ground floor to go to these representative floors by a big staircase which contains the view ans spaces to stay and live.

In the house the hybrid spaces are located on the ground and first floor. These are common spaces which are meant as an entrance, lobby or reception room.

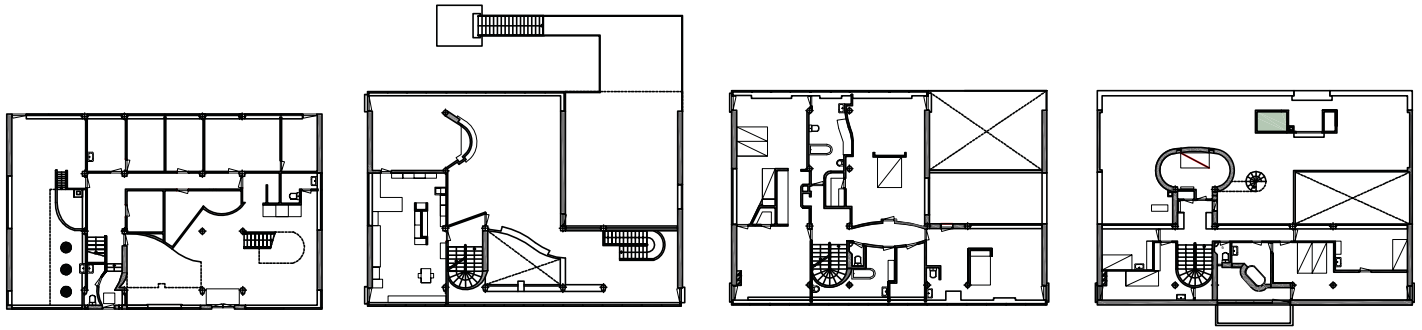
Washing spaces can be found on all floors except for the first and most representative floor. There are some washing facilities on the ground floor and bigger washing spaces on the second private and third floor.



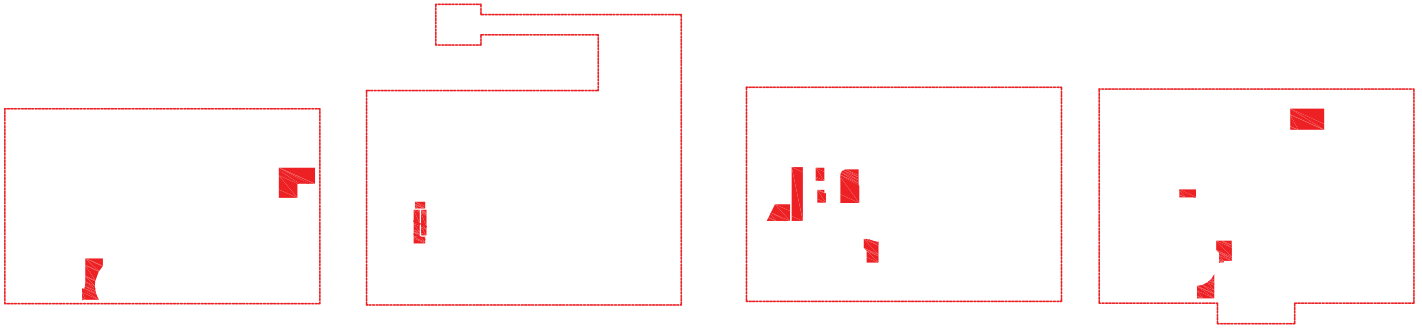
scale 1:500

04.5 Room types

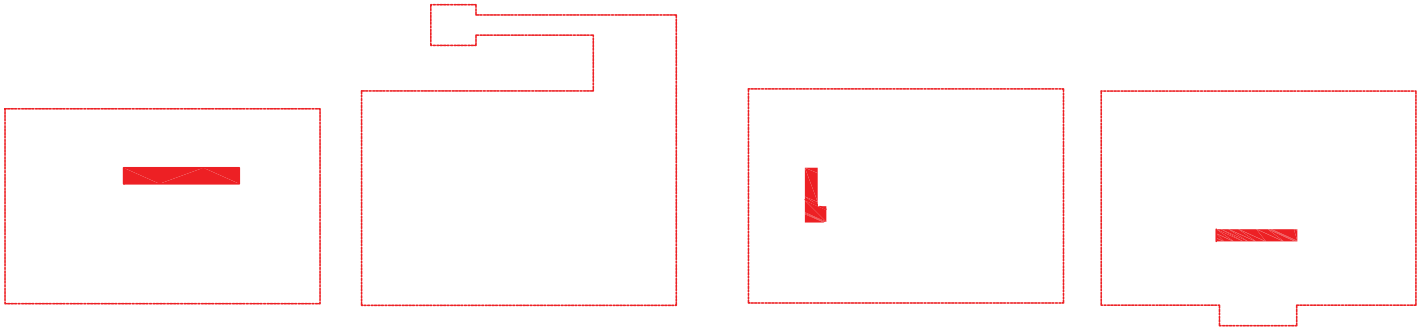
Most present according the room types are the rooms. In the different floors are a few closets present. Even though there are a lot of rooms there are only a few corridors in the building which can be found mainly near to the staircase and connect seperated rooms which are opposite of near each other.



ground floor | first floor | second floor | third floor



closet

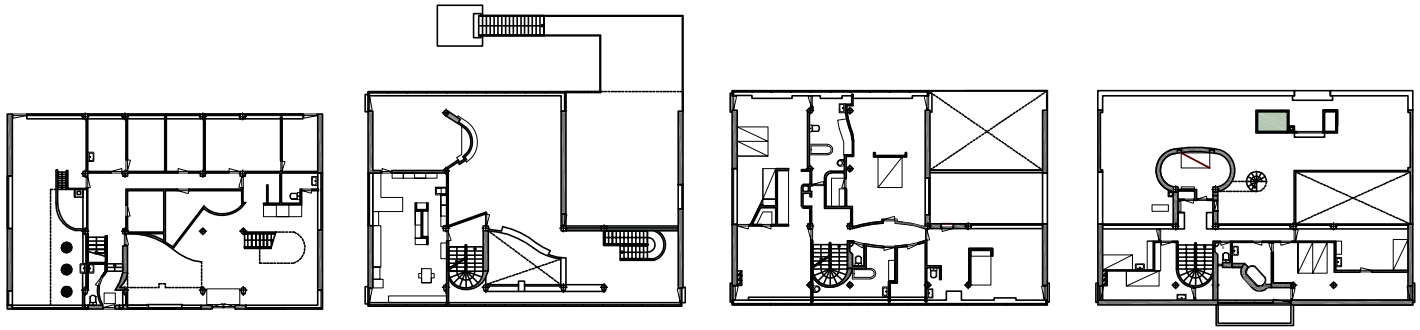


corridor

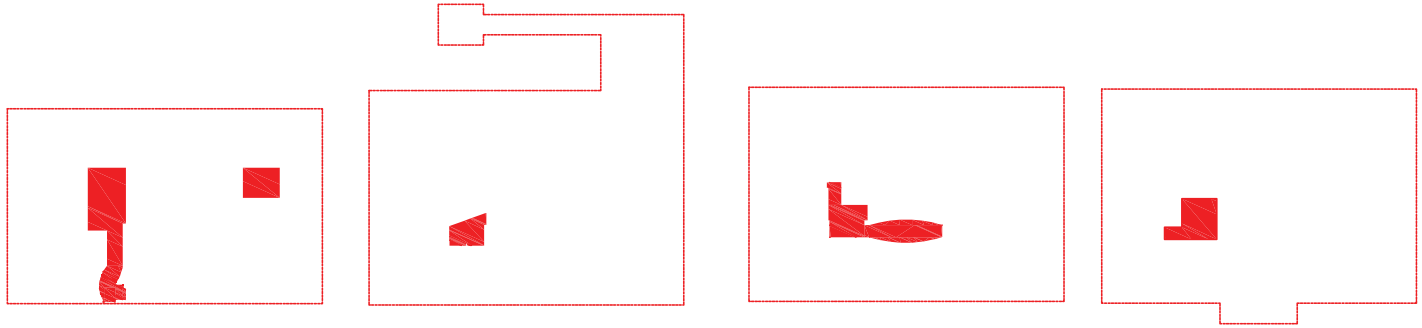
scale 1:500

04.5 Room types

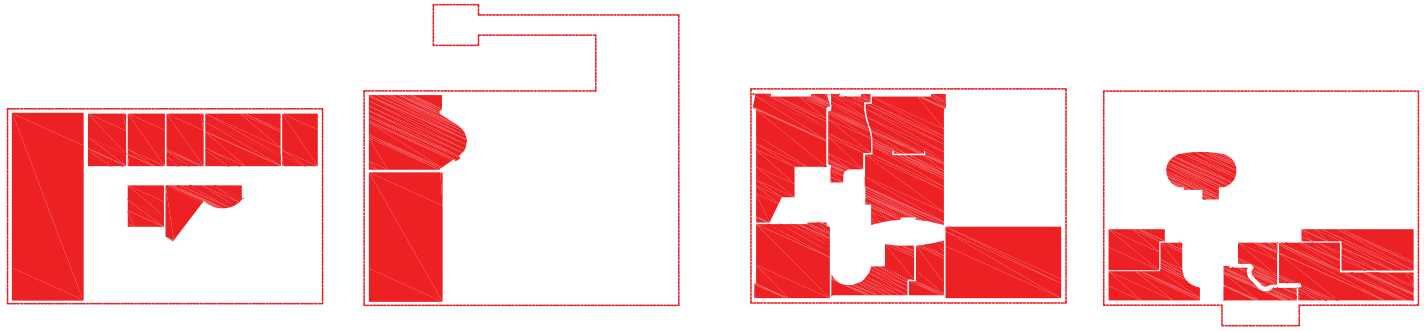
As mentioned on the previous page most present are the rooms. Between these rooms are some distinctions according to the use and organisation. These rooms are connected between the different floors with staircases and the corresponding hall-ways.



ground floor | first floor | second floor | third floor



hall



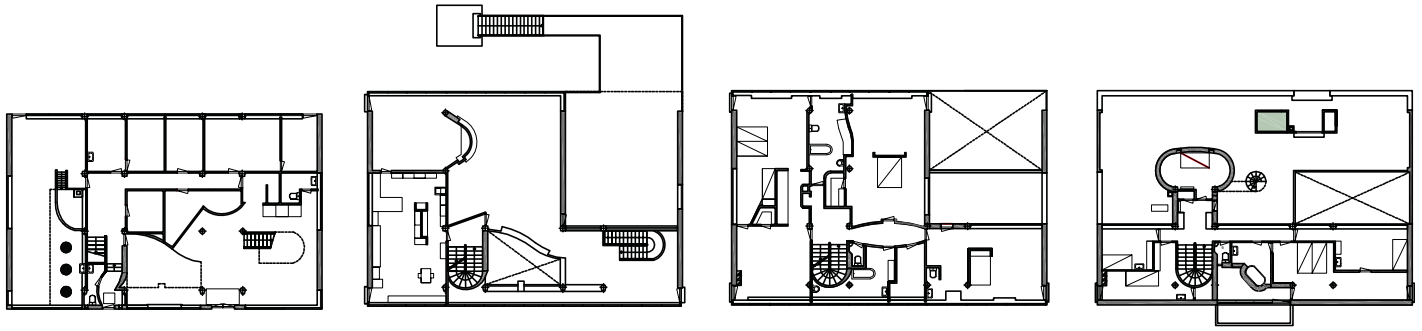
room

scale 1:300

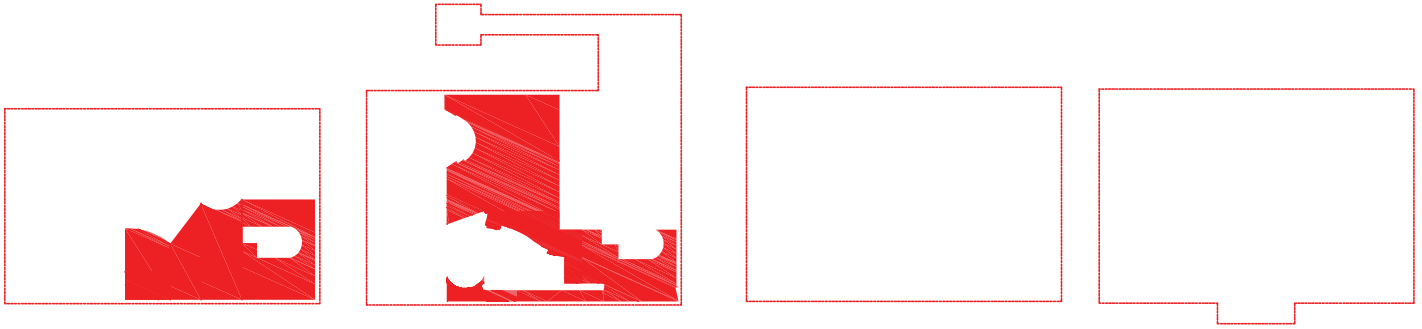
04. Interior

04.5 Room types

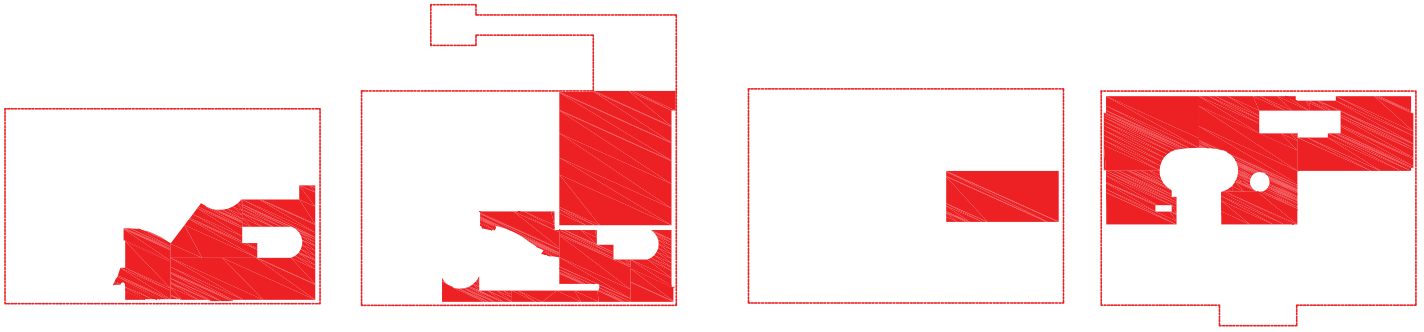
On the ground and first floor you find two chambers. These ‘rooms’ are bigger, more open and have another function then the common rooms. They are used as an entrance hall or reception room for visitors and guests of Villa Stein. These chambers fit nicely in the design of the house and espacially in the use of the couple Stein for receiving guests to show their art collection. These chambers can also be seen as hybrid types because they are also used as a theatric representative entrance hall.



ground floor | first floor | second floor | third floor



chamber

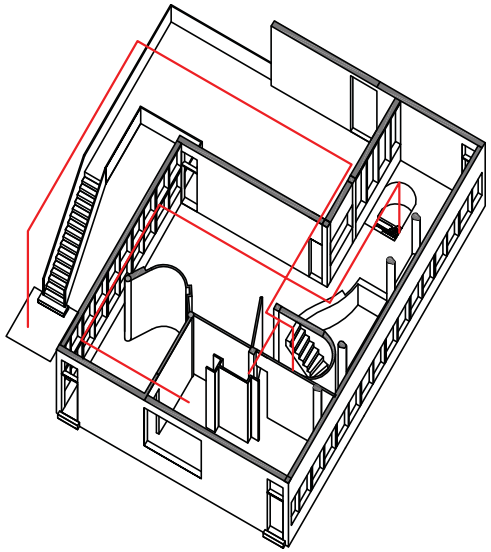


hybrid

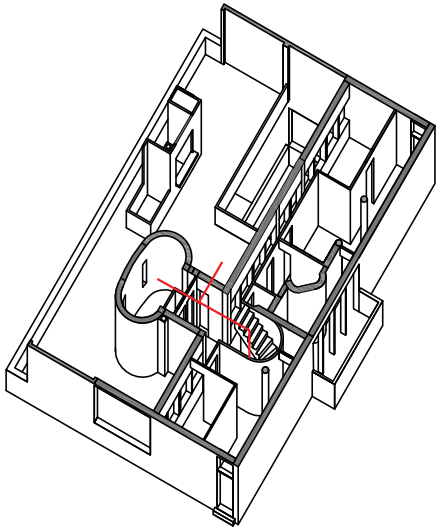
scale 1:500

04.6 Sequence of spaces

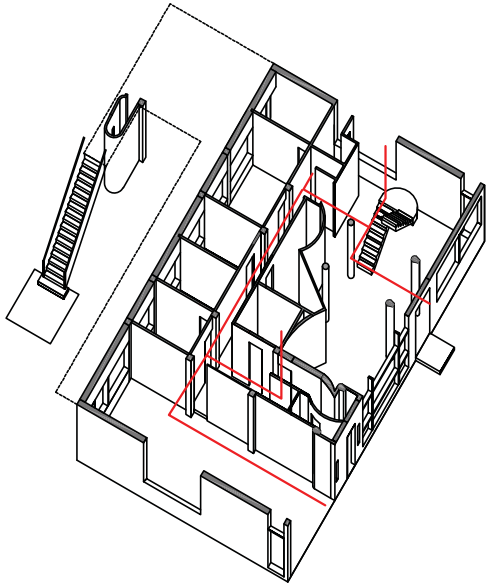
Villa Stein has a typical but also quite simple routing regarding the sequence of spaces and routing through the house. The villa can basically be characterized in three groups the private sequence of spaces and the guests sequence of spaces and for the employees. we first have a look at the private group. On the next page you'll find the guest sequence of spaces and after that the sequence dealing with the employees.



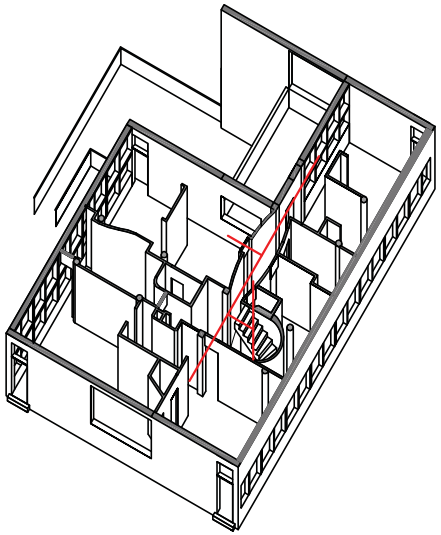
private - first floor



private - third floor

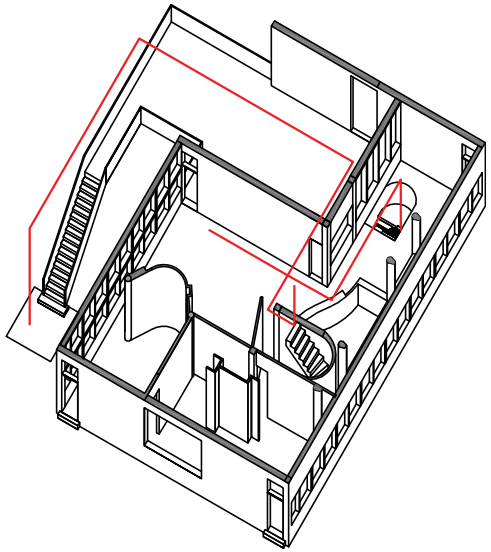


private - ground floor

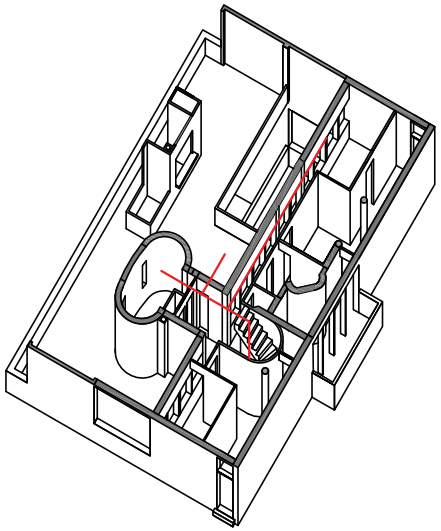


private - second floor

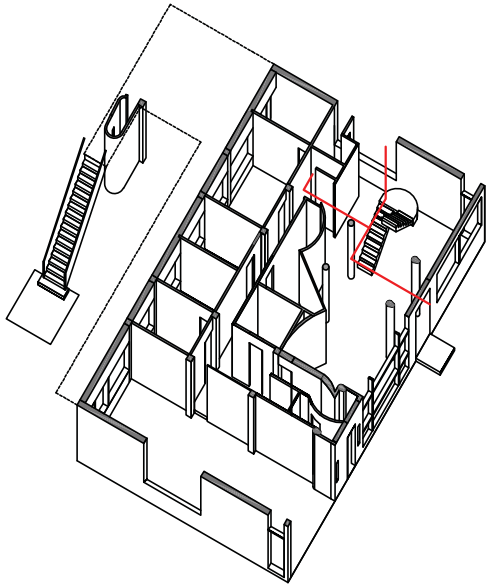
scale 1:400



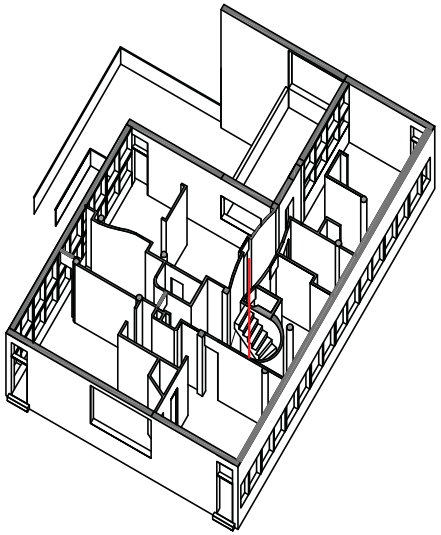
guest - first floor



guest - third floor



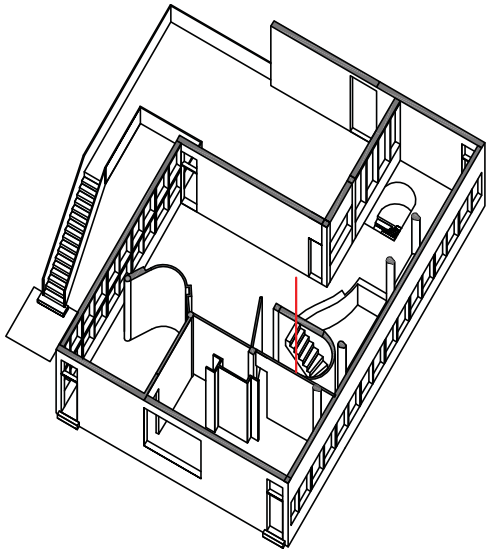
guest - ground floor



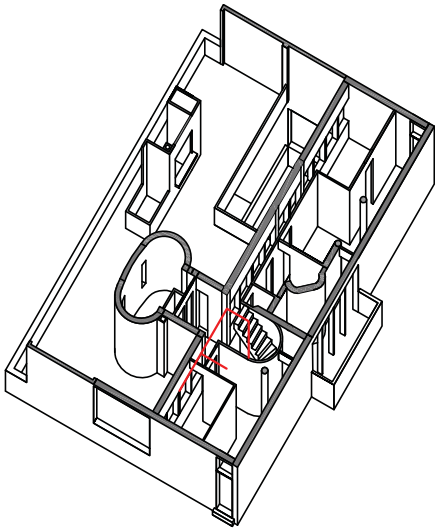
guest - second floor

scale 1:400

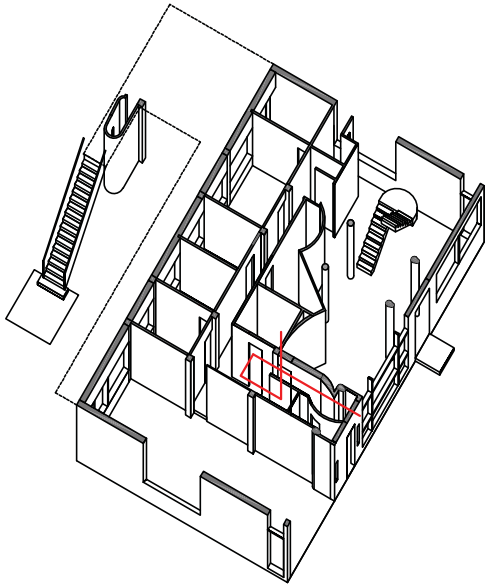
04.6 Sequence of spaces



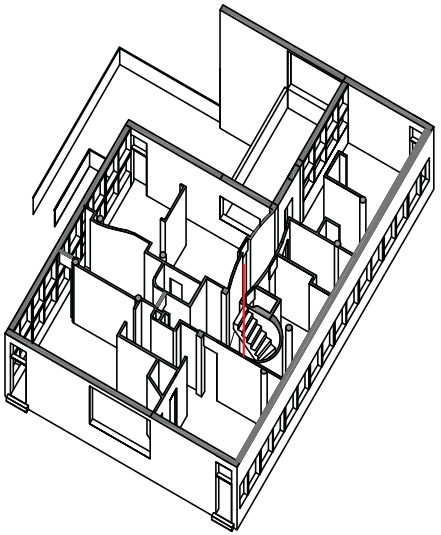
employee - first floor



employee - third floor



employee - ground floor



employee - second floor

scale 1:400

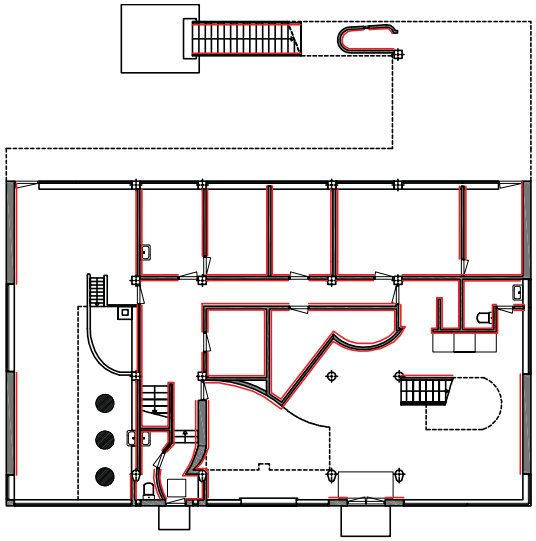
04.7 Materials

The most dominant material in the interior of Villa Stein are the white plaster walls. These correspond to the exterior materialisation which also contains white plaster walls.

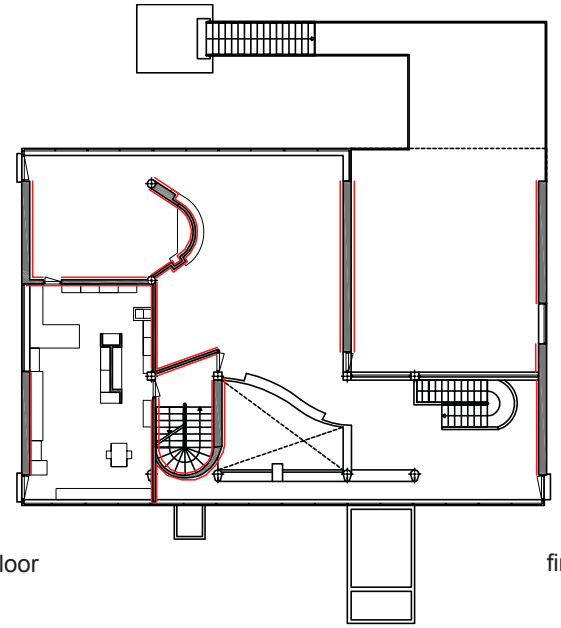
This is typical for Le Corbusier. Le Corbusier is a fan of using white plaster and this can be found in a lot of houses designed by him.

Exceptions in the interior are the bathrooms and toilets which have tiles instead of white plaster.

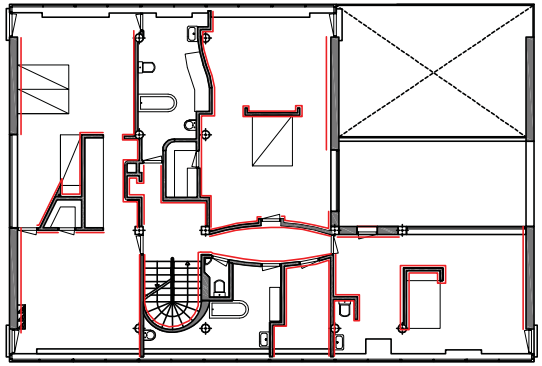
The white plaster gives the interior a very light and open character. It makes the interior also flat and very smooth. This is perfect for the exhibition of art and having guests over to discuss and show the art.



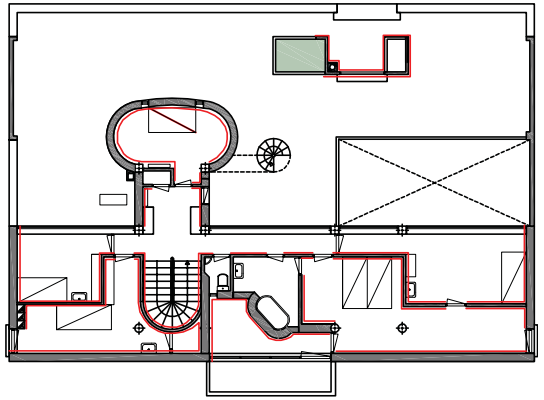
ground floor



first floor



second floor



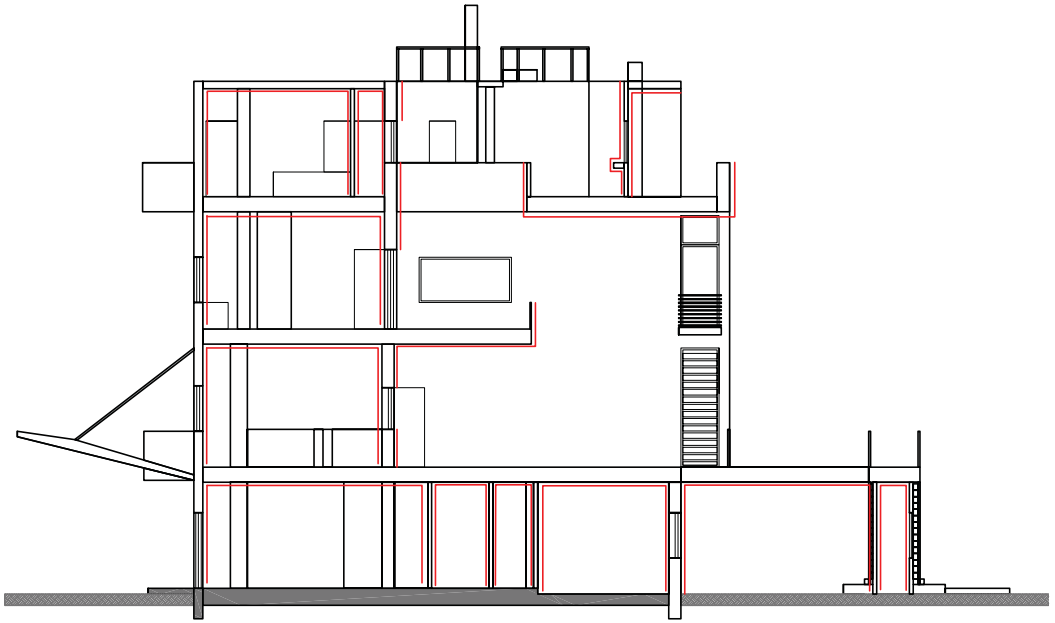
third floor

White plaster

scale 1:300

04.7 Materials

section A - A’



section B - B’

white plaster

scale 1:200

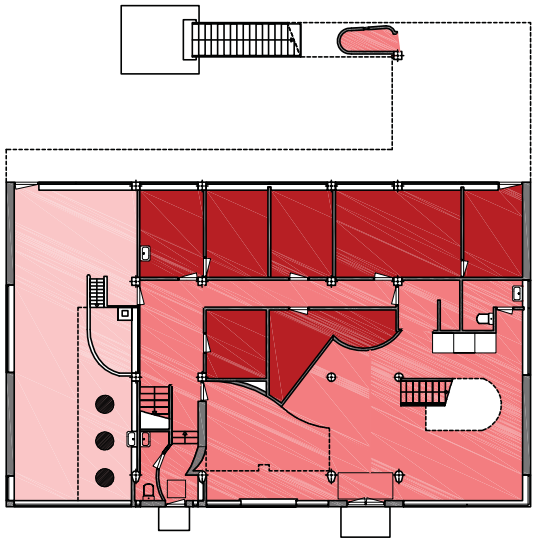
04.8 Social hierarchy

The social hierachy of Villa Stein is a characteristic and a distinct element. The house contains several rooms meant for staff. These are mainly located on the ground floor and a small area on the third floor.

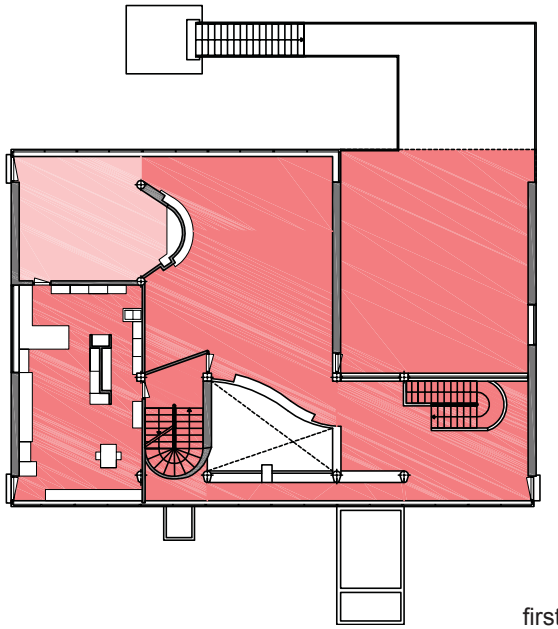
The second floor is completely organised as a private area. This floor is meant for the owners of the house, the Stein couple and Gabrielle de Monzie. Also a private part of the house is found on the third floor. These guest rooms were initially bedrooms for guests but when Gabrielle de Monzie adopted a child, she moved to the top floor. So this can be seen as originaly a guests area but also a private area.

A big part of the ground floor and on the first floor is hybrid area, just like the roof terrace.

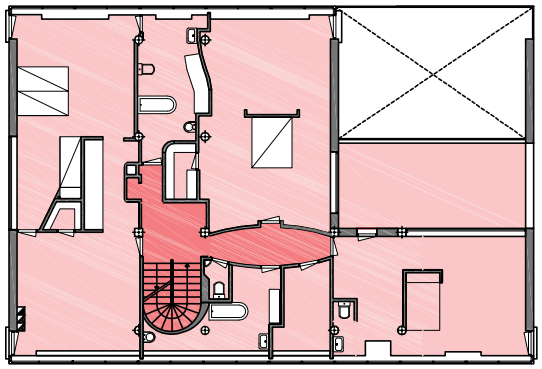
The entrance hall is hybrid area, people go through this space to go to the first floor. Same thing for the reception room on the first floor. The combined kitchen,living room and roof terrace can be seen both for guests, private or staff so therefore also hybrid.



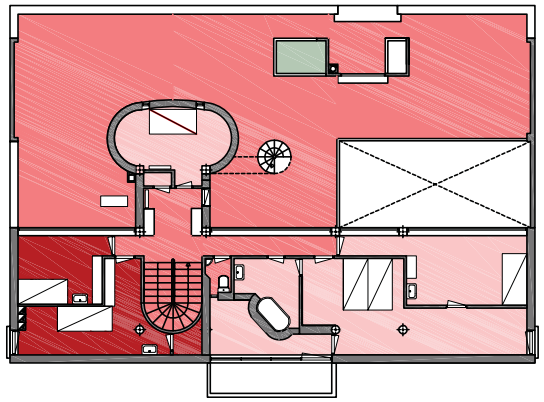
ground floor



first floor



second floor



third floor

private

staff

guests

hybrid

scale 1:300

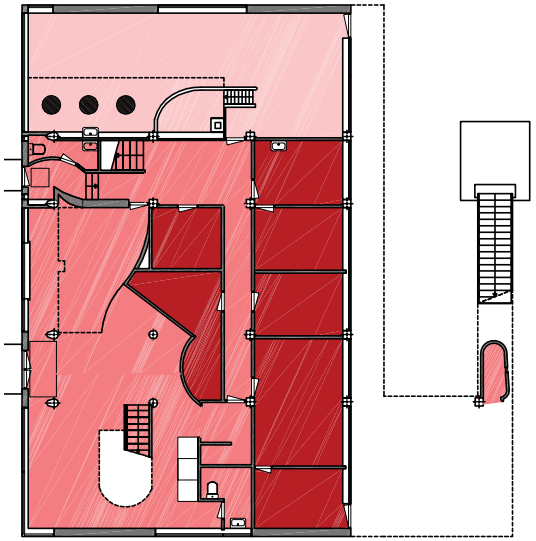
04.9 Hierarchy of the spaces

The different rooms on the ground floor with the domestic functions are served spaces. The big entrance hall on the ground floor that leads to the reception room is serving space. The staircases and the corridor and hall are also hybride spaces.

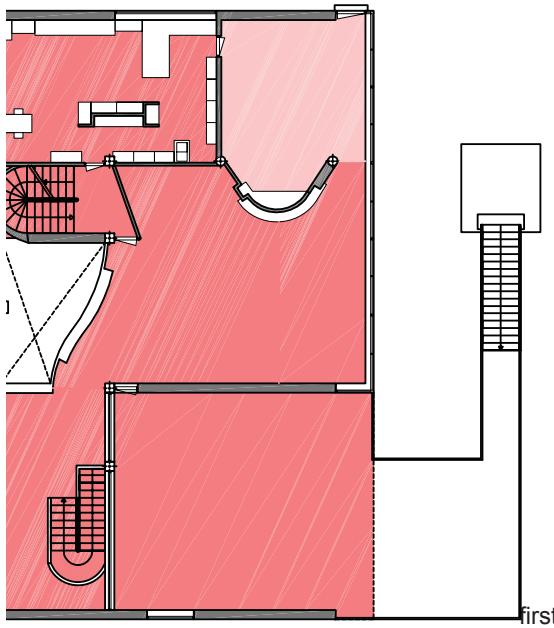
The first floor is mainly serving space. The only exceptions are the big balcony and staircase to the garden and the staircase leading to the other floors. These are hybride spaces.

On the private second floor the bedrooms and living rooms are serving spaces. The badrooms are served spaces and the corridor and staircase are hybride space.

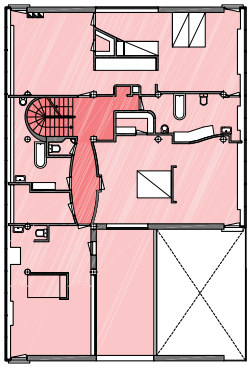
The third floor is also mainly serving space. These are the roof terrace, guest rooms and staff rooms. Only the bathroom are served space and corridor and staircase are hybride spaces.



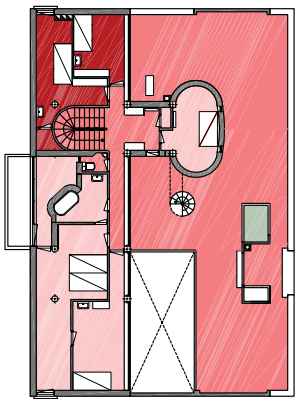
ground floor



first floor



second floor



third floor

served

serving

hybride

scale 1:300

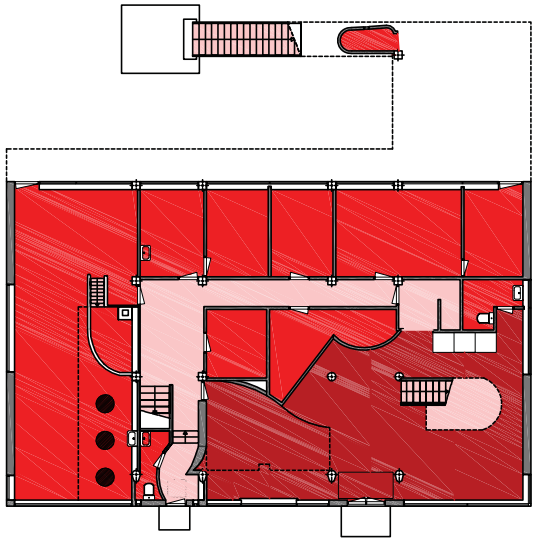
04.10 Areas

There are four different areas present in Villa Stein.

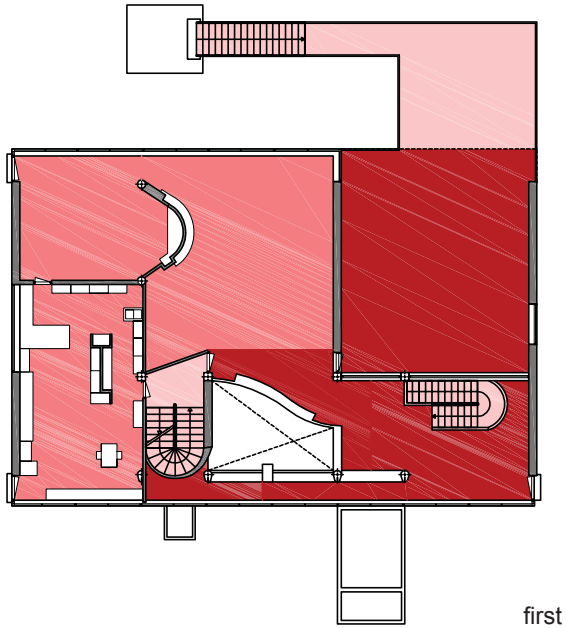
The functional area is concentrated on the ground floor of the villa. There you can find all of the functional areas like domestic rooms and garage. Besides these functional rooms lay the transition which is only for movement from one area to another.

The entrance hall on the ground floor, reception room and balcony can be seen as hybrid rooms because they have more then one function and can be characterized as more then one particular area.

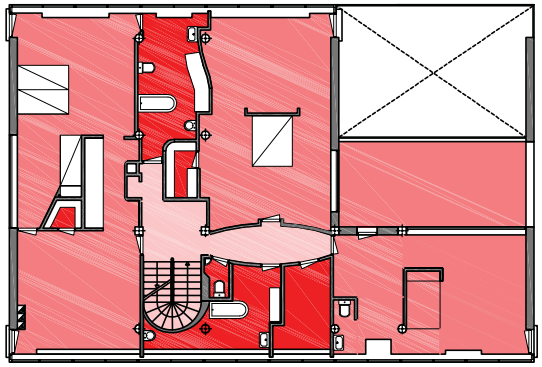
On the first, second and third floor are the stationary areas which can be reached by the stairs and hallways. These can be seen as transition areas as well. The stationary areas are the main areas of the house, with the main functions, like the bedroom, living room etc.



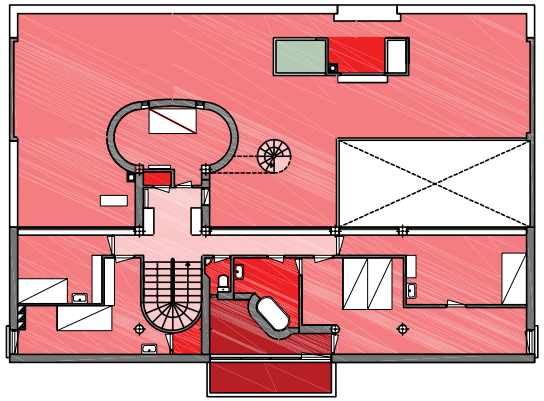
ground floor



first floor



second floor



third floor

transition area

stationary area

functional area

hybrid area

scale 1:300

05. Conclusion

_Analysis

The first figure shows the start of the predefined outline of the building. The area proportions are determined by the Golden Section. The axis of the square and its inner line form important traces for the individual plan. The strongly broken diagonal links the corner points of the Golden Section rectangle.

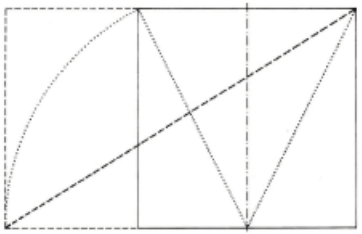
In the second figure there can be seen that the initial square is reflected over the vertical axis, thus producing symmetrical zones within the overall area with the aid of its own axis and inner line. The central area where the squares overlap represents the crucial field for the position of the support structure. In the third figure it can be seen that the initial square now forms two secondary axes. Each of them represents the middle of one of the entrance zones.

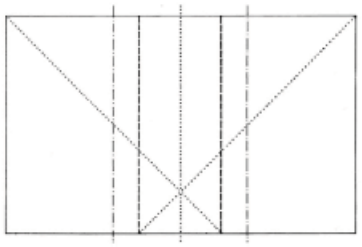
The overlapping lines of the squares are reflected across these axes, thus establishing the narrow zones of the access area and of the columns. In the fourth figure it can be seen how the columns are placed.

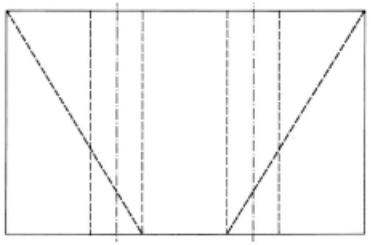
The zones ensuing from the geometrical principle can be divided into regular strip A-B-A-B-A. The columns are arranged within the narrow B strips, in a way that the outer lines of each of them lies on the trace. The walls are added on the outside along the short sides an it becomes clear that Le Corbusier defines these outer space tracks as dynamic zones, distinctly articulated in the architecture. Such as the window strip that runs around the corner and the pier elements in the interior. If there is a closer look at the plan of the ground floor there can be seen that the same square that defined the entrance zones in the outer area can be brought in here to determine the outline of the extended exterior terrace on the back. If the outer line of the building is extended upwards, the border with the attached flight of steps can be determined geometrically.

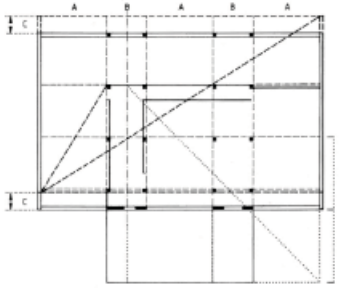
This places a staircase platform at the end and it becomes clear that the orthogonal figures on the first floor, the kitchen and the outside terrace, are unambiguously defined by the Golden Section and the square.

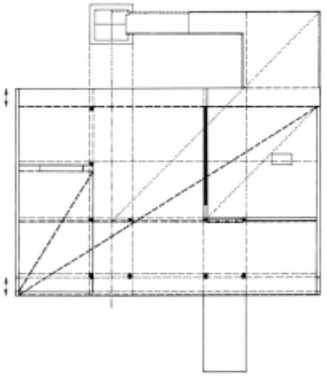
The Golden Section and the square are preset figures within the dynamic spatial structure of the living level. Symbolically encoded within them is the contrasting pair, Irrationality and rationality, that constantly inform the work of Le Corbusier.











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Other (Sketches)

08] Le Corbusier - source: [02] - p10-p11; right side

Illustrations

A] Photographer unknown - source: [05] - p13; left side

B] Photographer unknown - source: [05] - p13; middle

C] Photographer - unknown - source: [05] - p13; right side

III. Essay

Proportion - Josephine Baker House

Proportion

_Adolf Loos

_Proportion

The architects Le Corbusier and Adolf Loos were the leading figures in the modern architecture. Their view on rational architecture and the shared rationalist discipline in the manipulation of architectural form connects them, the connections is the best described as ‘Classicism’. “Both architects would seem to have been obsessed with the idea of comprehending the various fundamental postulates of a ‘rational’ architecture in a detached, creative synthesis that was, at the same time, both audacious and Classicist”. The architect Adolf Loos, December 1870 in Brno - Morovia, - 23 August 1933 Vienna – Austria, was a Czech/Austrian Architect. The influence of Loos on the modern movement derived mostly on a few interior designs and on a number of houses, but Loos became more famous for his controversial ideas, which he published in many essays, than for his buildings.

To understand Loos`s view on modernity there should be a closer look at the life of Loos and the definition of modernity. During the studies of Loos in architecture, Loos particularly became interested in the works of the classicist Schinkel and, above all, the works of Vitruvius. Loos also became interested in innovative efficiency of U.S. industrial buildings, clothing, and household furnishings. The primary definition - the one embraced by Loos - defines modern as that related to the present period in history. A modern style was the ‘correct’ style for the present, no matter the moment in history; a modern man, by extension, was one who acts appropriately. According to Loos, the most modern of men – “he who occupies the lowest rung on the social ladder but commands the highest respect - was the craftsman. The craftsman, with his deep respect for tradition and his finely calibrated adjustments to a slowly evolving culture - not the artist and definitely not the architect - was uniquely qualified to lead”.

The beginning of the foundation of international reputation of Adolf Loos started in 1897, after publishing a series of polemic articles, in the pages of The Neue Freie Presse of Vienna. In the writings of Loos there wasn`t an immediately connection between architecture, instead Loos addresses in his writings a wide range of social skills, which Adolf Loos identified as the motivating factors behind the struggle for a transformation of everyday life. The writings were mainly focused on the overflow in decoration in both traditional Viennese design and in the more recent products of the Vienna Secession and the Wiener Werkstatte. In 1898 Loos published an essay that marked the beginning of a long theoretical opposition to the then popular ‘Art Noveau’ movement. The theories of Loos resulted in a short essay, “Ornament And Crime,” published in 1908. In this essay, Loos describes the suppression of decoration that inevitable is for the regulation of passions. Loos referred to the opposite, excessive ornamentation, as criminal - not for abstract moral reasons, but because of the economics of labor and wasted materials in modern industrial civilization. The ornament in architecture had no longer an important manifestation in culture, it was a sign of spiritual strength, and it was a crime to force craftsmen or builders to waste their time on ornamentation.

In 1898, Loos published another important essay entitled “Principles of Building”, in which he wrote about the masking of the true nature and beauty of materials by the implementation of the improper ornament.

“Even if all materials are equal of value to the artist, they are not equally suited to all his purposes. The requisite durability, the necessary construction often demands materials that are not in harmony with the true purpose of the building” (Raumplan vs. Plan Lible_Principle of Cladding). Loos wrote also that the true vocabulary of architecture lies in the materials themselves, and that a building should remain “dumb” on the outside.

“The architect’s general task is to provide a warm and liveable space. Carpets are warm and liveable. He decides for this reason to spread out one carpet on the floor and to hang up four to form the four walls. But you cannot build a house out of carpets. Both the carpet on the floor and the tapestry on the wall require a structural frame to hold them in the correct place. To invent this frame is the architect’s second task”. (Adolf Loos |Raumplan versus Plan Libre)

This article was followed by an essay entitled “Architecture”. In this essay, Loos states the important contradictions between the interior and the exterior; the monument and the house. Within this article, the difference that separates both the architects Le Corbusier and Adolf Loos van be seen. Loos suggested that the house`s primary function is to serve everyone and this is in contradiction to a work of art, which does not need to please everyone. Loos also states, that

there is one exception, where construction is both art and architecture, like the monument and the tombstone. The realm of architecture, that has a specific purpose, has to be excluded from the realm of art. This is in contradiction with Le Corbusier`s vision of art, which states that architecture is and remains a domain of art. The second difference in opinion is formulated in Le Corbusier`s faith in industry, such as the production of utilitarian household goods etc.

_Themes

Adolf Loos was not only a famous architect, but also a recognized philosopher on what he saw as a corrupted Viennese society. As described above, Loos established a defined difference between art and architecture. In an attempt to understand the view of Loos, we must first define the essence of what art and architecture mean. There must be an understanding of the purpose of both: what do we label as art or architecture, and what goal does the artist have in mind, as opposed to an architect?

The field of Art encourages the viewer`s emotions. It attempts to disturb the eye and to provoke the feelings of the viewer; it tries to cause an emotional response. Architecture instead, is an enclosure of space attempting to comfortably accommodate a structural need, in the most efficiently functional manner possible. For this reason there should be an evident separation between art and architecture for numerous reasons; art is responsible to nobody, and fulfills neither function nor requirement. Architecture accommodates the client`s requirements and it should be functional and emotionally comforting, and therefore architecture can`t be art. This is stated by the reflection of Panayotis Tournikiotis to Loos' views:

"He defined art as the personal affair of the artist-oriented to the future, distracting man from his daily comforts: art is by its essence revolutionary." The consideration that there could be exceptions to the exclusion of architecture from the artistic realm in the beliefs of Loos is best understood in the following quote by Loos: "The house has to please everyone, contrary to the work of art which does not. The work is a private matter for the artist. The house is not. The work of art is brought into the world without there being a need for it. The house satisfies a requirement. The work of art is responsible to none; the house is responsible to everyone. The work of art wants to draw people out of their state of comfort. The house has to serve comfort. The work of art is revolutionary; the house is conservative. The work of art shows people new directions and thinks of the future. The house thinks of the present. Man loves everything that satisfies his comfort. He hates everything that wants to draw him out of his acquired and secured position and that disturbs him. Thus he loves the house and hates art. Does it follow that the house has nothing in common with art and is architecture not to be included in the arts? That is so. Only a very small part of architecture belongs to art: the tomb and the monument. Everything else that fulfils a function is to be excluded from the domain of art." (_Adolf Loos | Panayotis Tournikiotis)

When Le Corbusier refers to Greek architecture, tombs and monuments are qualified as both art and architecture. They are constructed in order to evoke emotions through respective external appearances and its functional purpose, existing only on the visual plane.

After understanding the defined difference and the purpose of art and architecture there raises an important question, how Loos implements his view on the structures created in this latter arena to satisfy architectural requirements without lapsing into the useless but provocative field of art. Paul Frankl first compiled the four recognizable elements of composition in 1914 in his essay "Die Entwicklungsphasen der neuren Baukunst," which describes the Loos`s perfect architectural structure: 1)Visible Surface, conveys the building's image, and concerns elements of the visible realm, such as light, color, or its facades, which clad the structure's interior and exterior walls like membranes. 2) Material Structure, the skeletal structure of the building, which might be comprised of beams, columns, brick, steel, stone, and so on; occasionally the technical underpinnings of the material structure, usually concealed, are revealed as well. 3)Space-Volume, the form circumscribed by the material structure on both the outside and inside of buildings; the placement of the elements of the material structure which allocates space within the defined volume. 4)Finality, the emotional or functional component of the building, and involves its social or psychological purpose.

With these four architectural and compositional elements Loos emphasizes the importance of art or architecture through the notions perception or conception, in accordance with the desired artistic sentiment or architectural objective.

The focus remains on the perception of the completed building, since the purpose is to evoke specific emotions. How we perceive art is more important than the manner by which the work of art was realized; the visual supercedes the process of creation. Therefore, the order of the above themes follows its numerical order: we search for an appropriate visible surface, interpret the appropriate material structure, define the required space-volume to evoke the appropriate emotions, and then identify the finality required. Because the requirement for functionality occasions the use of architecture over art, the target is found in the conception of the structure, rather than our attained perception from the result. Art is created to serve a purpose so we act from conception upwards, applying the four elements in reverse order: we look for the finality, the functional component required of the building, progress to the space-volume best suited to the task, select the material structure, and finally establish what would best convey the building's image via an appropriate visible surface. This results in a conception where there is a consideration given to perception, creating a duality between public and private, the monument against the house, and the exterior in contrast to the building's interior. The monument is not a house because the former is a sign, on the side of perception, whereas the latter requires the architect to familiarize himself with the needs and habits of the occupants, developing space according to lifestyles, and conceive the proper accommodation from finality down to visible surface.

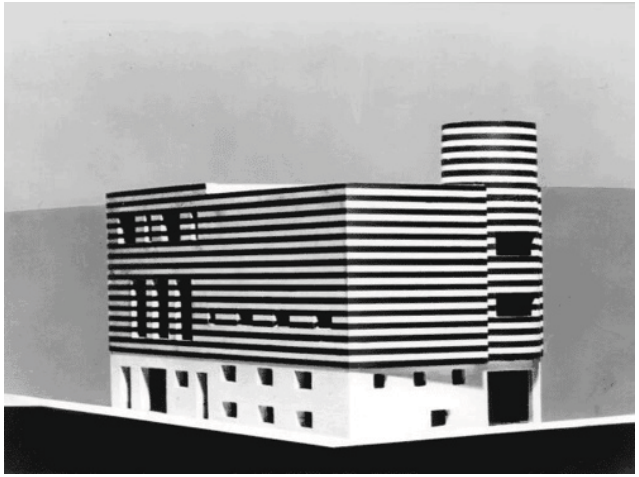
"Architecture arouses sentiments in man. The architect's task therefore, is to make those sentiments more precise. The room has to be comfortable; the house has to look habitable. The law courts must appear as a threatening gesture toward secret vice. The bank must declare: here your money is secure and well looked after by honest people. The architect can only achieve this if he establishes a relationship with those buildings which have hitherto created this sentiment in man." (_Adolf Loos | Panayotis Tournikiotis)

The language of the architecture of Adolf Loos cannot be described as a consistent process to reinvent a new kind of language, it was rather a concatenation of reflecting his view and exploring it into practice. Finally this led to his well known creation of plastic forms, were these forms one moment are near to those of other icons of modern architecture and the next moment far from them. While the foremost architects were covering their houses in glass, blurring the boundaries between inside and outside, Loos was placing increasingly opaque and expressionless walls between the home and the city. Both of these methods shared the resemblance where the design system was rooted in the interior and eventually manifested itself on the exterior. The other architects created transparency through openings in the exterior were the light envelopes and generate a centrifugal flow, Loos' only exterior expressions of the existence of a complex, were created by asymmetric openings. Adolf Loos conceived centripetal architectures where the true essence is discovered by penetrating the depths of the interior. Loos suggested that inhabitants should have their own choices what to do with the interior of their houses without being subjected the aesthetic pressures of society. Adolf Loos protects the inhabitants of his houses with opaque, expressionless, abstract envelopes: the outer walls. Consequently, the outer walls in Loos' architecture fulfill two functions: firstly, to protect the inhabitants from the exterior and, secondly, to provide a background for each person's expression of subjective bad taste in the interior. In other words, they are physical and psychological barriers. For Loos, the house is a temple of habitation, a sacred place that must be protected from intruders and peeping eyes so that a free life, unfettered by others, can be lived inside it. A Loos himself made this quite clear when he said:
"The building should be dumb on the outside and reveal its wealth only on the inside".
These contradictions, between the exterior standing by itself and the colorful interiors, are the best explained with two of his most famous works, the Moller house in Vienna and the Müller house in Prague. In the Moller house the façades are radically at odds with each other, incomprehensible unless analysed in terms of the poetics of otherness. For the same reason, the white, colorless expanses of the façade contrast with the colorful interiors with their great wealth of materials. The façades are given a more or less abstract character depending on the degree of public visibility. In the Müller house, both the schizophrenia of the wall - white outside and colored inside - and the volumes of the interior reach a peak of complexity and refinement. The four sides are all equally abstract because all of them are visible from the street, from different angles. Continuing the coherency of his design, he moves the abstract barriers of the house onto all its faces

and pours all the psychological and emotional content into the spatial articulation and coverings of the interiors, thus reinforcing the separation between the public exterior (profane) and the private interior (sacred). In these designs Loos gives the building a markedly emotive character in order to express the individual's entry into a private, intimate world. To achieve this, he takes us on a carefully studied route along a veritable architectural promenade from the street to the depths of the house; in other words, he gives the circulation areas great psychological value, manipulating them so that we perceive the interior of the house gradually, in a controlled way. Each interior space has its own proportions, related to its character and the use to which it is to be put: he creates cells with different but interconnected heights, achieving a certain autonomy while maintaining their visual and functional relations. As a result, there is no uniform ceiling height and the small differences in floor level are linked by steps between functionally complementary zones. This spatial articulation, known as Raumplan, is found almost exclusively on the main floor of the house. Loos excavates the interior of a pure prism as though it were a cave, giving psychological and functional qualities to each room: the form, proportions and finish of each space are designed to convey a particular state of mind. The rooms in the houses are connected spatially, they fulfill different social functions. Materials are selected carefully upon their color and their texture, this reinforces the private nature of the rooms.

"[...] the artist, the architect, first feels the effect he wishes to achieve then, with the eye of the spirit, the spaces he wishes to create. The effect that he wishes to have on the spectator, whether pure fear or horror as in prison, the fear of God as in church, respect for the power of the State as in the palace; pity as at a tombstone, a feeling of comfort as at home or gaiety as in a tavern, is produced by the materials and the form"

Unlike Le Corbusier, designed Loos projects were client-and-site-specific. However, within the architectural definition of proportion the style of Loos reveals several repeated elements. There are also structural similarities between certain projects, despite their apparent differences, indicating a principle of repetition. Essentially, the houses designed by Loos are regular volumes in which each element, each space, and each configuration respond to the rules of composition. The dominant volume is a massive rectangular box, that sometimes approaches the ideal proportions of a cube. Loos worked with a volumetric palate of simple forms: cubes, rectangular boxes, and cylinders. In smaller buildings Loos designed more from the interior to the exterior, to determine the internal organization of the volumes. In some of these volumes the main block is set back at certain points, which allows the creation of terraces (Moissi House). In the 'Scheu House', which was the result of a series of geometric exercises, Loos' critical relationship with tradition is represented; an active memory of the past combined with techniques of new construction methods. In other houses Loos designed certain extrusions above the main entrance of the house, gave it more intimacy. The exteriors of the houses were smooth, white, and without ornamentation. Loos also objected to acute angles, and if impossible to avoid because of the existing site and the context, the offending angle was lost once the composition rose above the ground floor. This was the case in the Josephine Baker House. The house was designed in 1928 by Adolf Loos but was never realized. The house would have been located at the corner of Avenue Bugeaud (16e arr.). The site of the Josephine Baker House fell at the 80-degree intersection of the two streets. Although Loos had acknowledged the acute angle at street level, on the second floor Loos returned to a 90-degree angle and smoothed the wall into a hald cylinder to preserve the continuity of the urban fabric. In Loos` houses there is a pursuit of geometrical harmonic proportion, axial symmetry, classical purity and simplicity of form.



IV. Josephine Baker House

Rue du Professeur Victor Pauchet 92420 Vaucresson, Paris, France - Adolf Loos

01. Project description

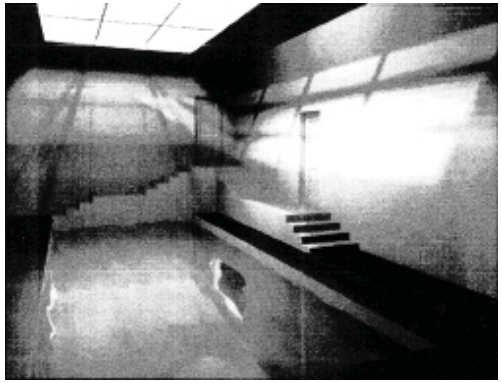
01.1 General informations

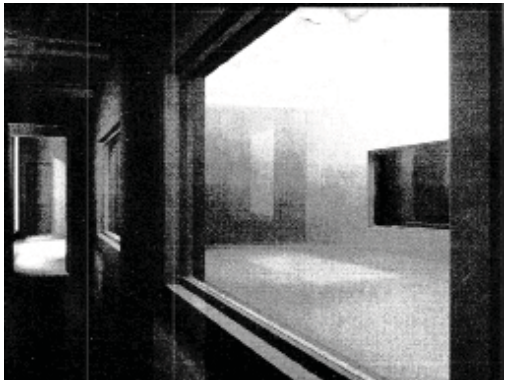
_project name	House for Josephine Baker
_location	Paris (FR)
_construction year	1928 (never realized)
_total area	1050 m2
_total volume	3850 m3
_architect	Adolf Loos

There are many anecdotes of how the Josephine Baker House by Adolf Loos came into being. Loos' story tells of how he met the young African-American dancer in 1926 in Paris, how she taught him to dance and even called him his best student and perhaps even the best Charleston-dancer in Paris. Once she came to him with a bad temper; *"Imagine Loos, she was sulking, I want to make a big rebuilding of my house and I don't like the plans of the architects. I could not contain myself. What, you don't come to me straight away? Don't you know I can make the best design in the world for you? Astonished Josephine looks at me with her children's eyes and asks slowly: Are you an architect then? - she had no idea who I was - . I made a design for Josephine... I regard it as one of my best."*

In her autobiography, Josephine Baker never even mentions meeting Loos. She does mention another arcitect, Le Corbusier, who she met a couple of times. Le Corbusier even made some drawings of her.

Because of Loos' love for dancing and dancers it is quite possible that Loos saw Josephine Baker and instantly fell in love with her and her exotism. So it is believable that he didn't make the house for Josephine Baker, but for himself. As a visitor he could always see her, in the pool through the looking glass or in one of the large open salons. The lack of private space shows that this house is more a continuous revue than a livable house for the inhabitants.

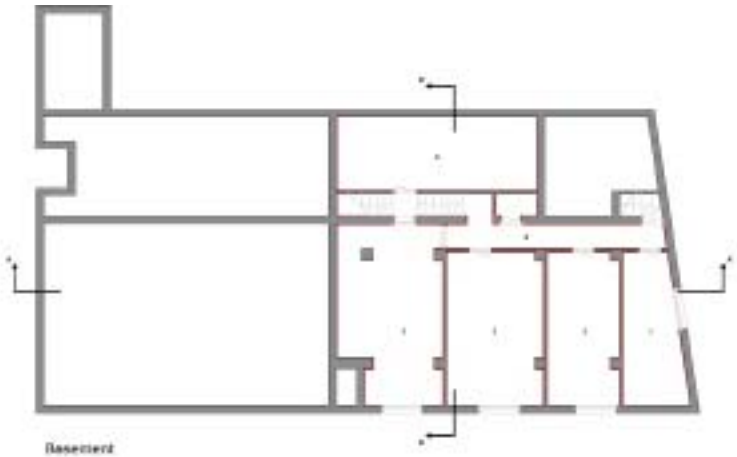


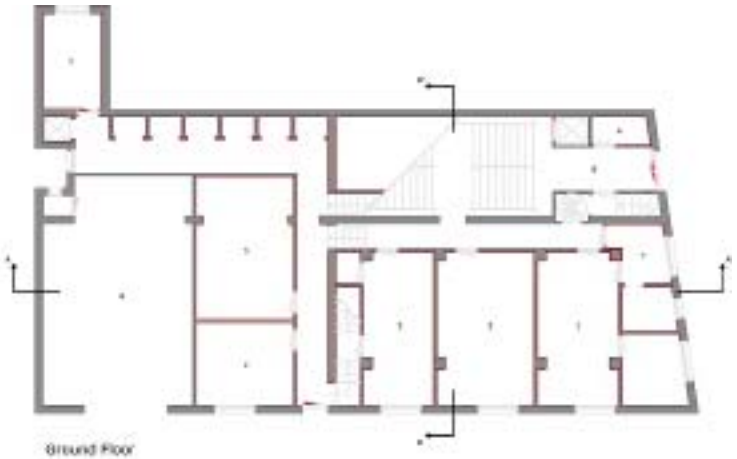


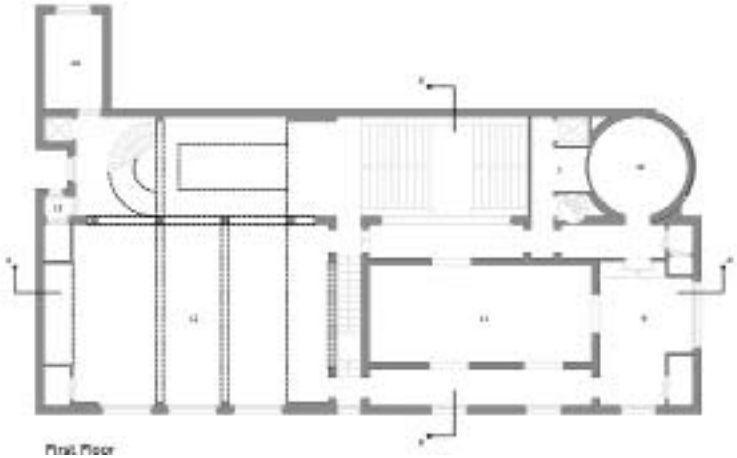
from left to right: entrance, pool area and the corridorview to the pool

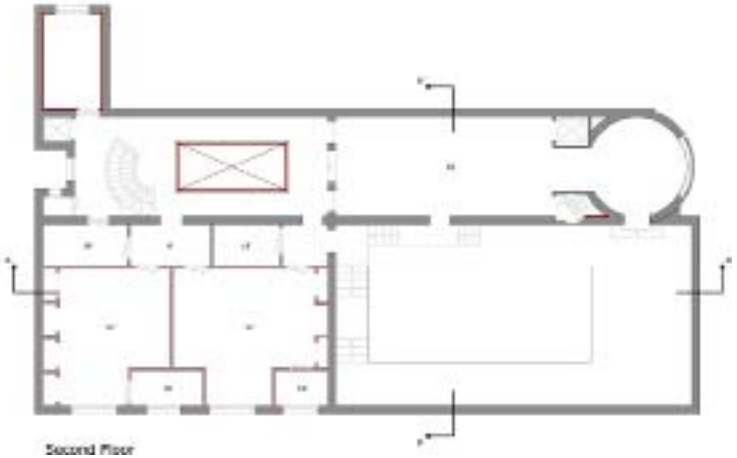
01.2 Floor plans, elevations, sectiones and isonometries

01. Kitchen
02. Servants room
03. Wasjing room
04. Concierge
05. Basement
06. Entrance
07. Office
08. Garage
09. Small Salon
10. Café
11. Water
12. Salon
13. Toilet
14. Storage
15. Dining room
16. Pool
17. Bedroom
18. Bathroom
19. Closet









scale 1:300

01. Project Description

01.2 Floor plans, elevations, sections and is

01. Kitchen
02. Servants room
03. Wasjing room
04. Concierge
05. Basement
06. Entrance
07. Office
08. Garage
09. Small Salon
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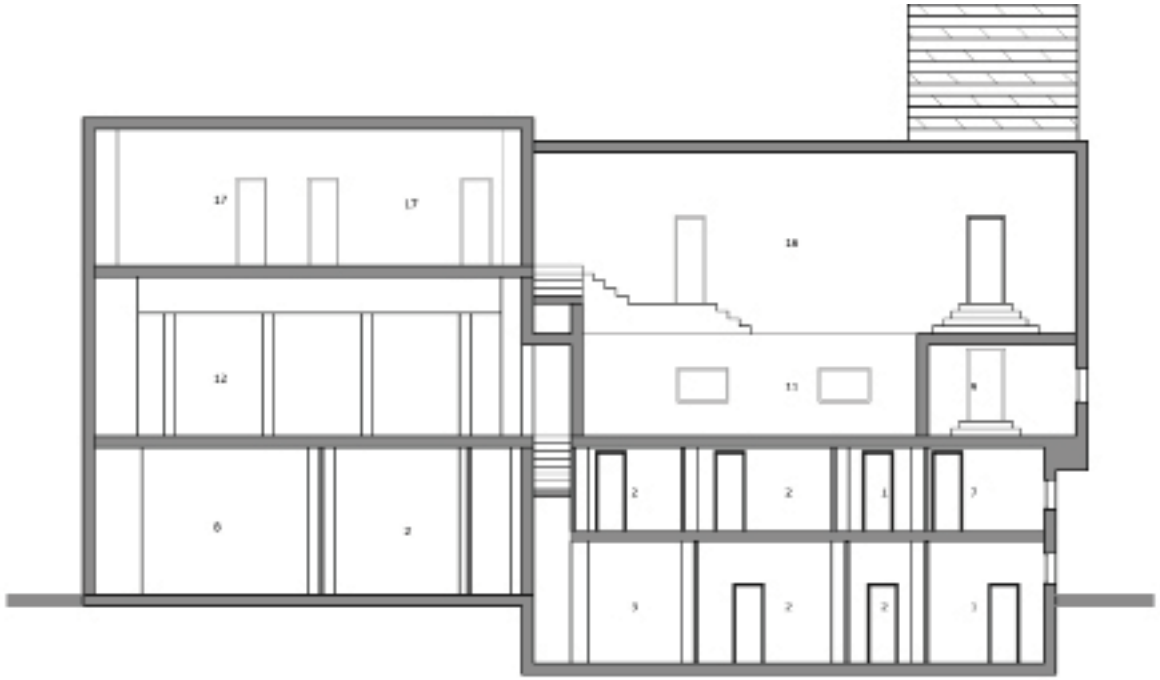
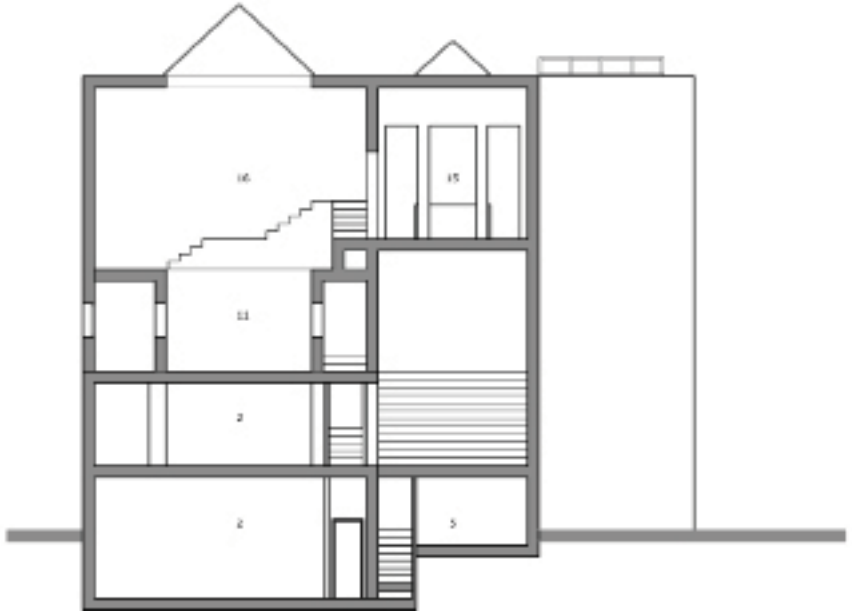
18. Bathroom
19. Closet



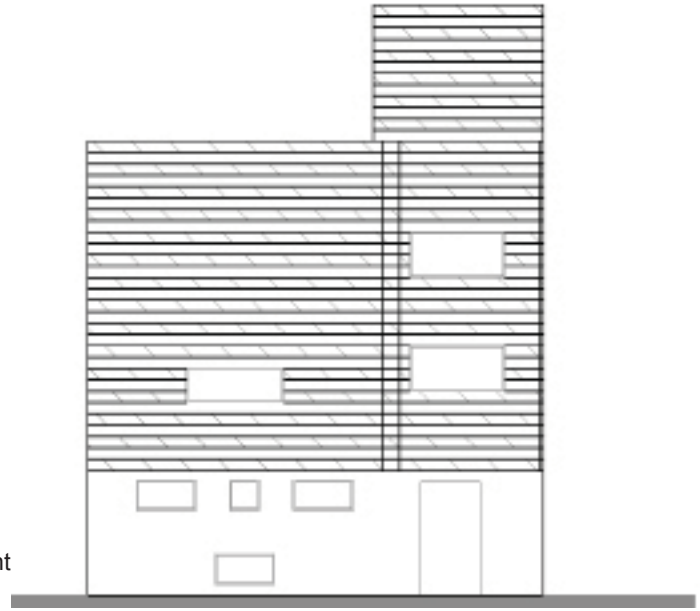
Section A-A'



Section B-B'

scale 1:200

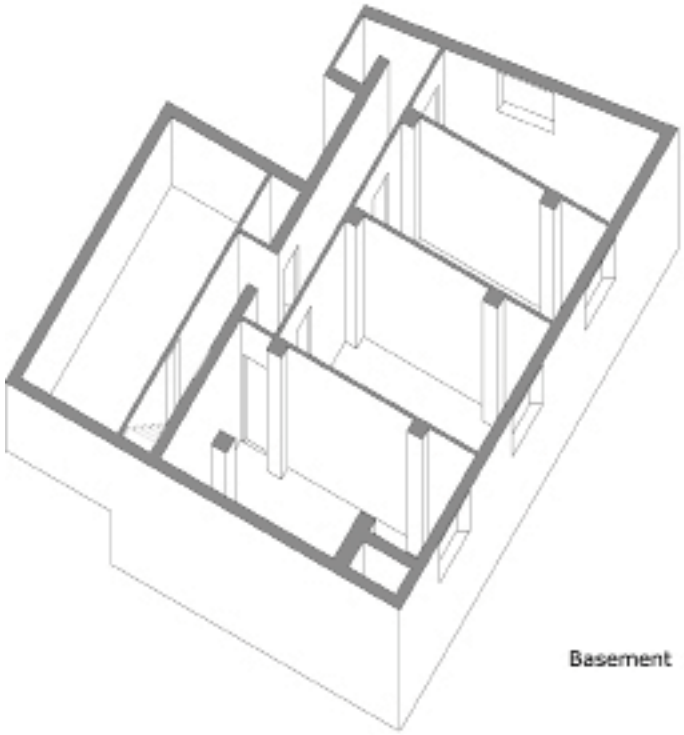
elevation - left



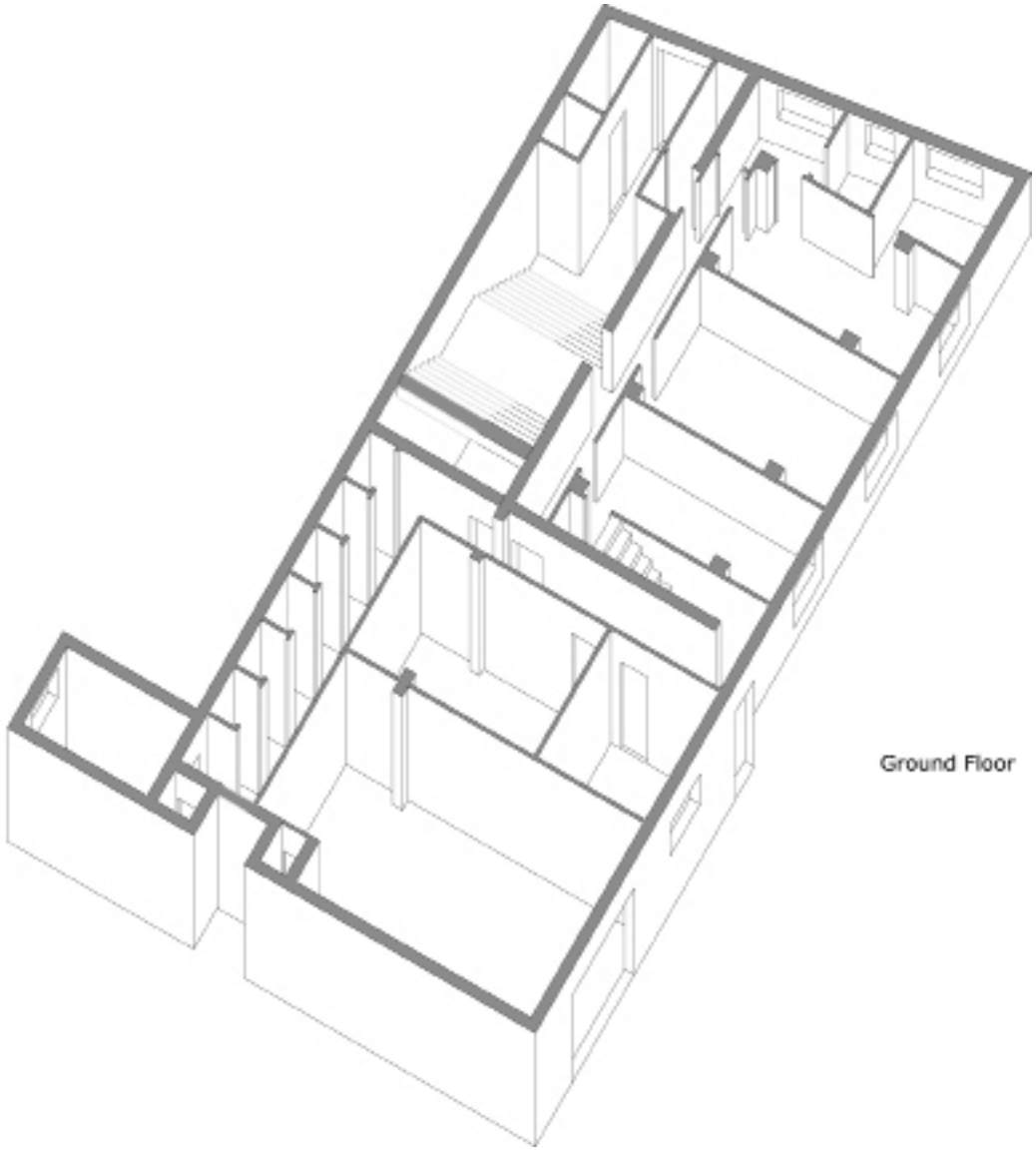
elevation- front

scale 1:200

01.2 Floor plans, elevations, sections and isonometries



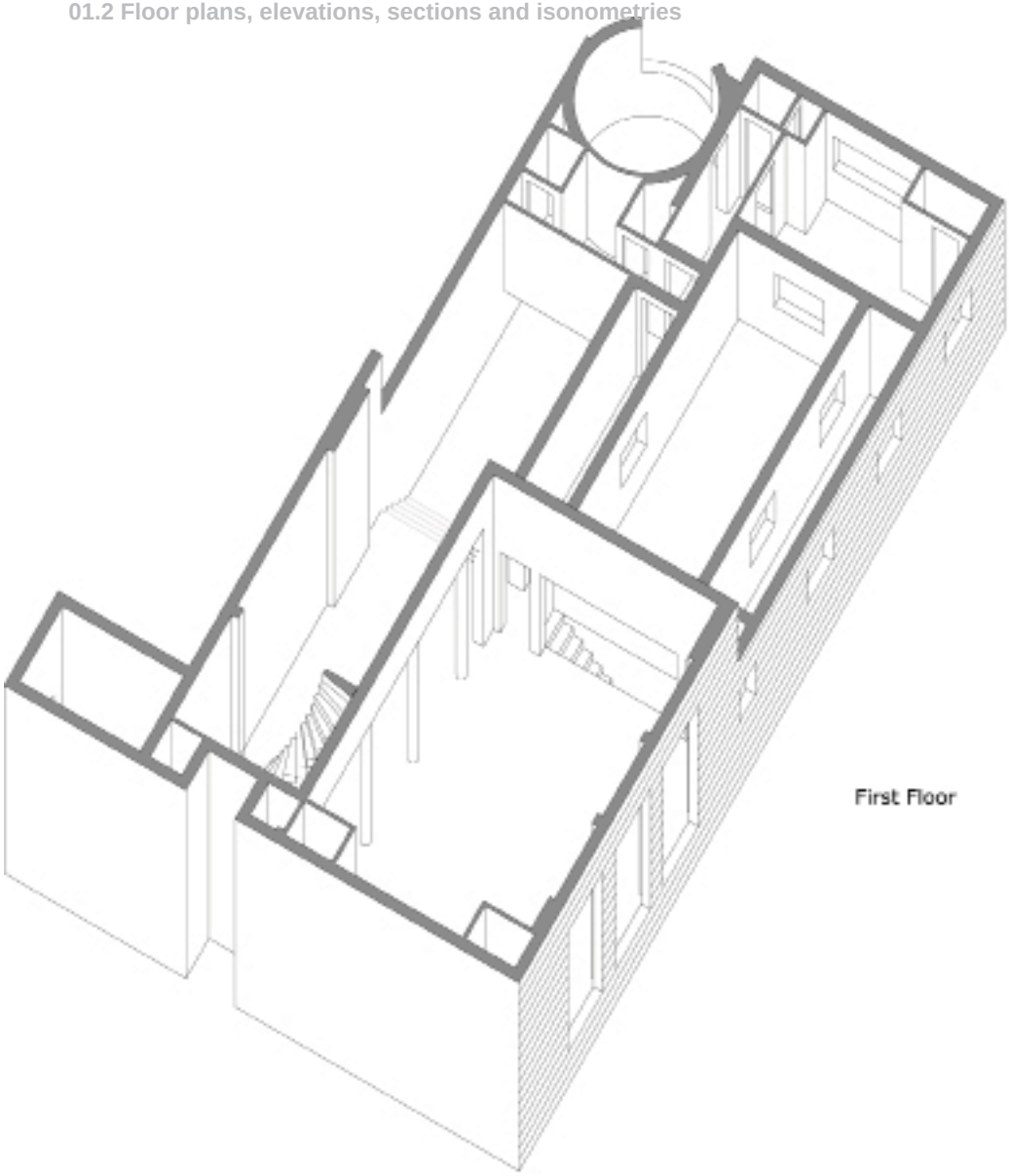
Basement



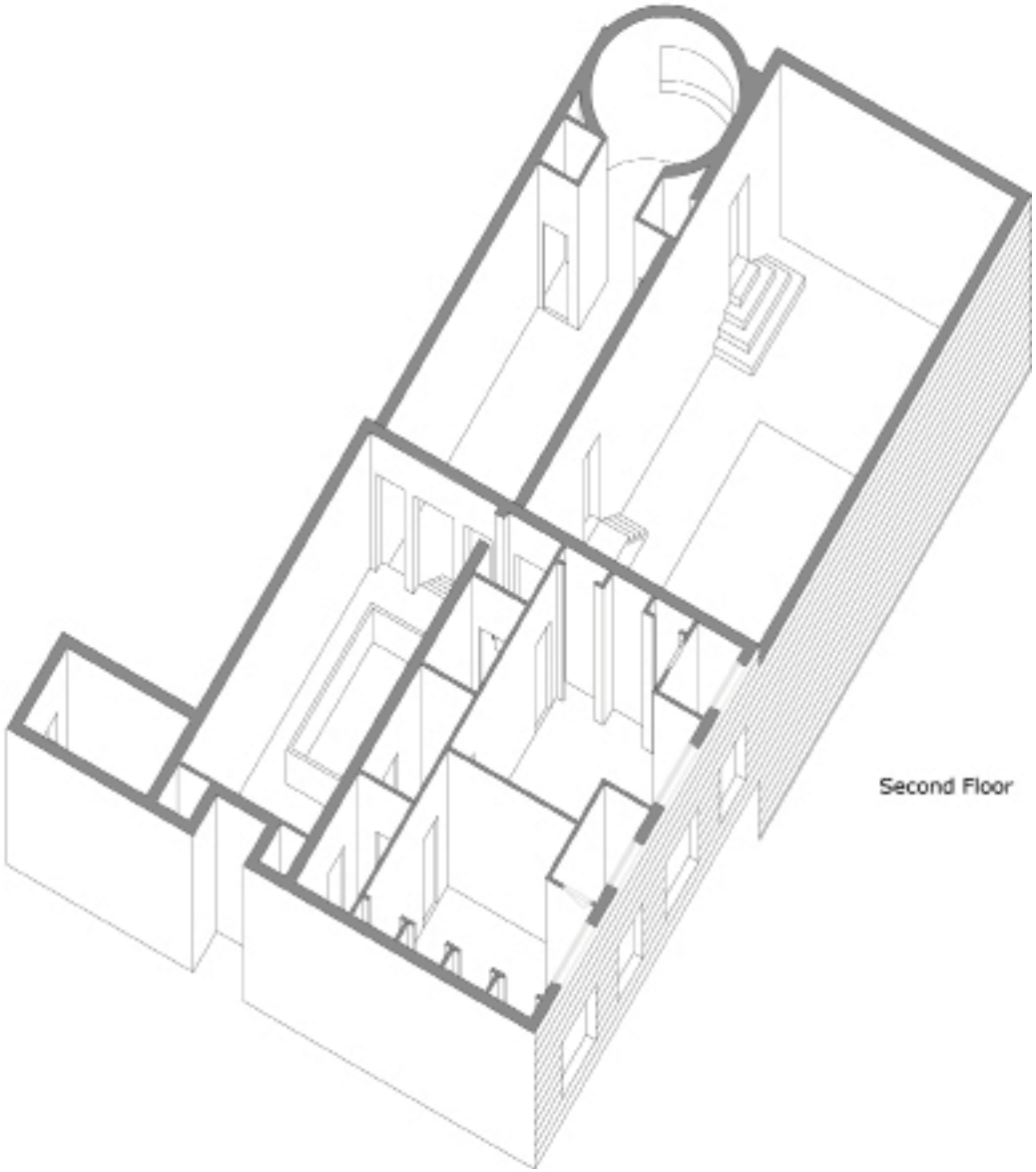
Ground Floor

scale 1:200

01.2 Floor plans, elevations, sections and isonometries



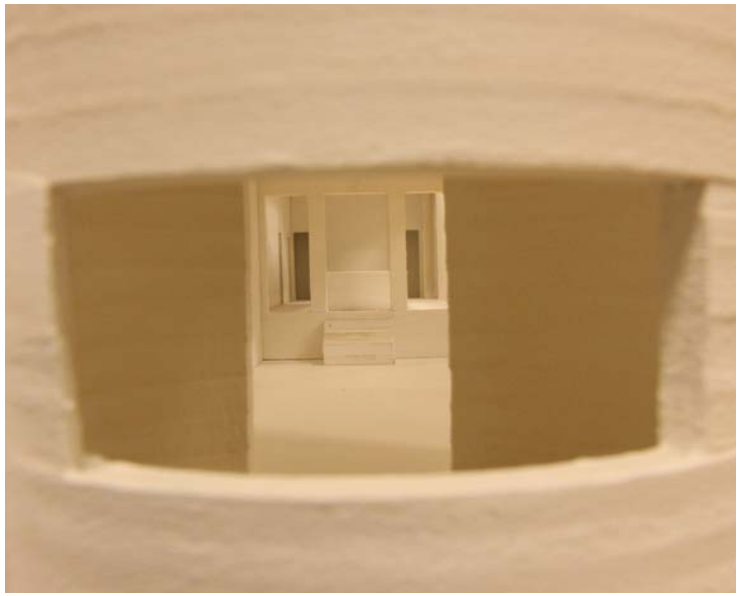
First Floor

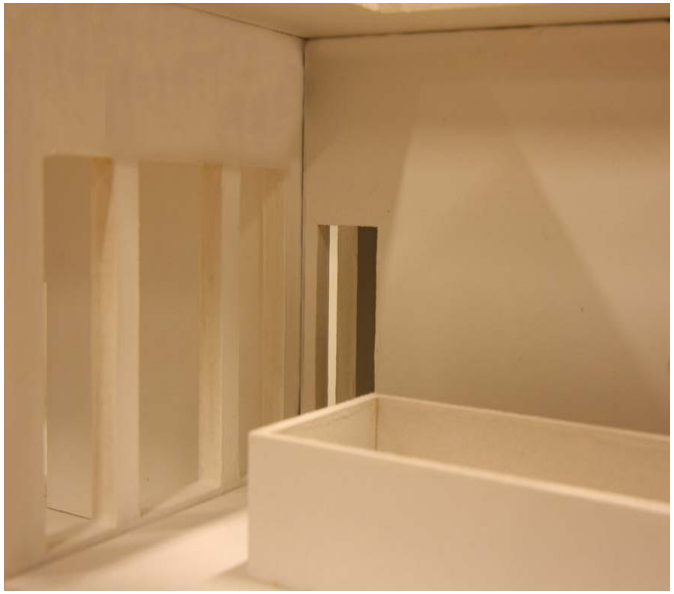


Second Floor

scale 1:200

01.3 Model





02. Context

02.1 Location

The House for Josephine Baker is located in the 16th arrondisement in Paris, France. It is a rigorous rebuilding of two existing houses on a corner of the Bugeaud Avenue. Only the outer walls would remain erect.

Josephine Baker owned the two houses but she stated that the gigantic houses had no warm family feeling to it. In 1945 she marries Jo Bouillon, who she met in 1933 and they are going to live in the castle of Les Milandes. She adopts eight children from different origin, who come to live with her in the castle.

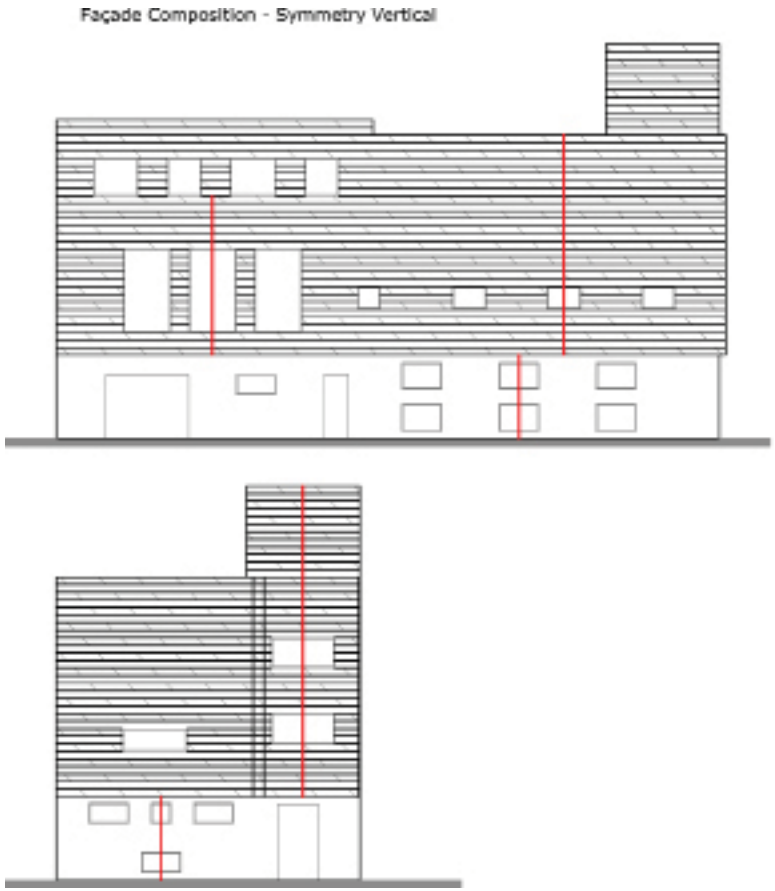
House for JB
buildings
green

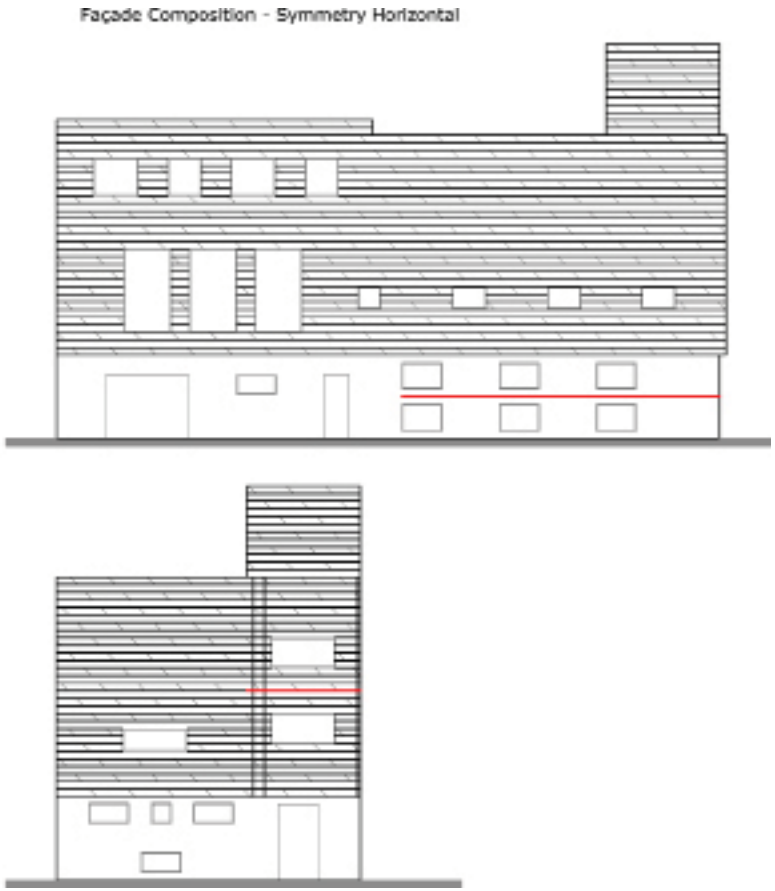
03. Exterior

03.1 Facade composition

The facade of the House for Josephine Baker might not be symmetric at first sight. However, when you take a closer look the various parts and elements show symmetry in different areas.

The facade accomodates symmetrical parts in vertical direction as well as in horizontal direction. On top in the left facade symmetry can be found in three of the four window groups. Per group the windows have the same width and height and form the basis of the (partly symmetrical) nice facade composition





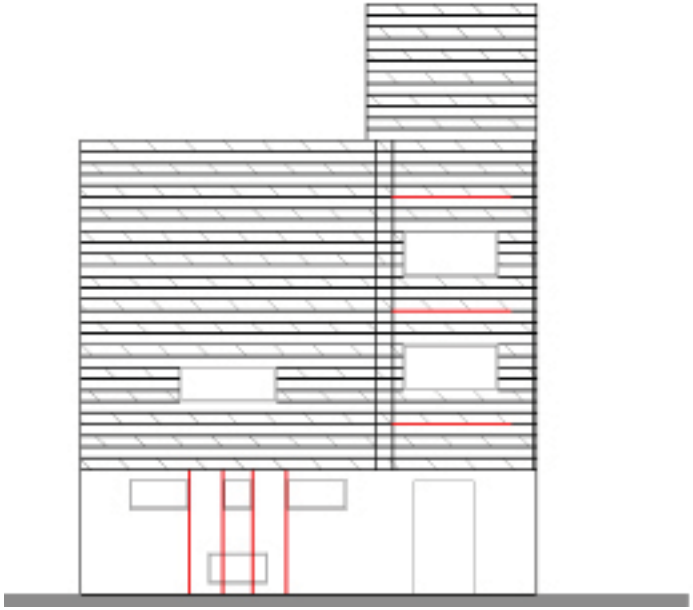
scale 1:300

03. Exterior

03.1 Facade composition

On the top right you can see depicted the rhythm in the left facade of the building, there is a certain repetition visible in the windows on top (the private rooms for Josephine Baker). The spaces between the garage door and secondary entrance are also divided with an even repetition. This rhythm, following the given symmetry before give the facade a sort of easy access for the eyes.

The facade of the entrance, depicted on the lower right, contains two elements, the flat part, following the left facade in a 90 degree corner and the cylinder-shaped tower directly above the entrance. Besides the rhythm in the lower windows this takes away any chance of a rhythm in this facade. The only rhythm and probably the most striking one is that of the crosslines black and white marble slabs.

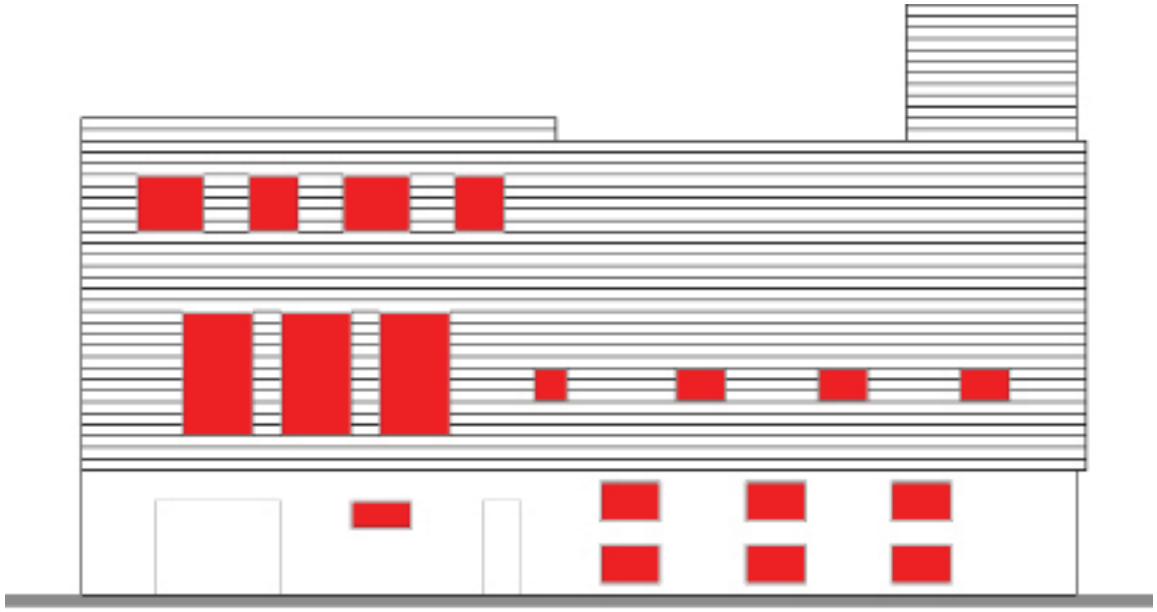


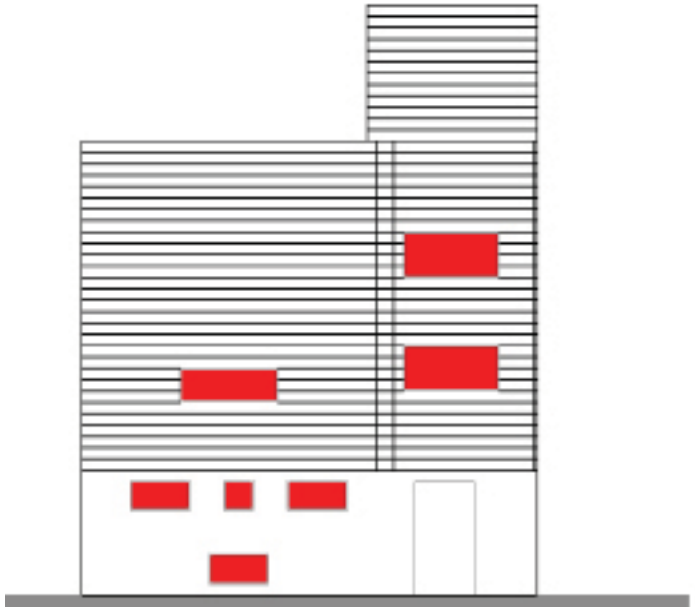
scale 1:200

03. Exterior

03.1 Facade composition

Looking at the facade composition in terms of transparency quikly shows you the lack of large glass surfaces. Except from the three larger windows bringing light into the large salon on the first floor, all windows are small and lie deep in the facade. With this it referes to African or Mediterrean housing where this happens to keep the warmth out and the coolness inside. Although it is impossible to see from the outside the windows in the facade on the right and first floor are repeated in the swimming pool directly behind it, so that visitors have a two way view, one to the outside and the other one into the large pool.



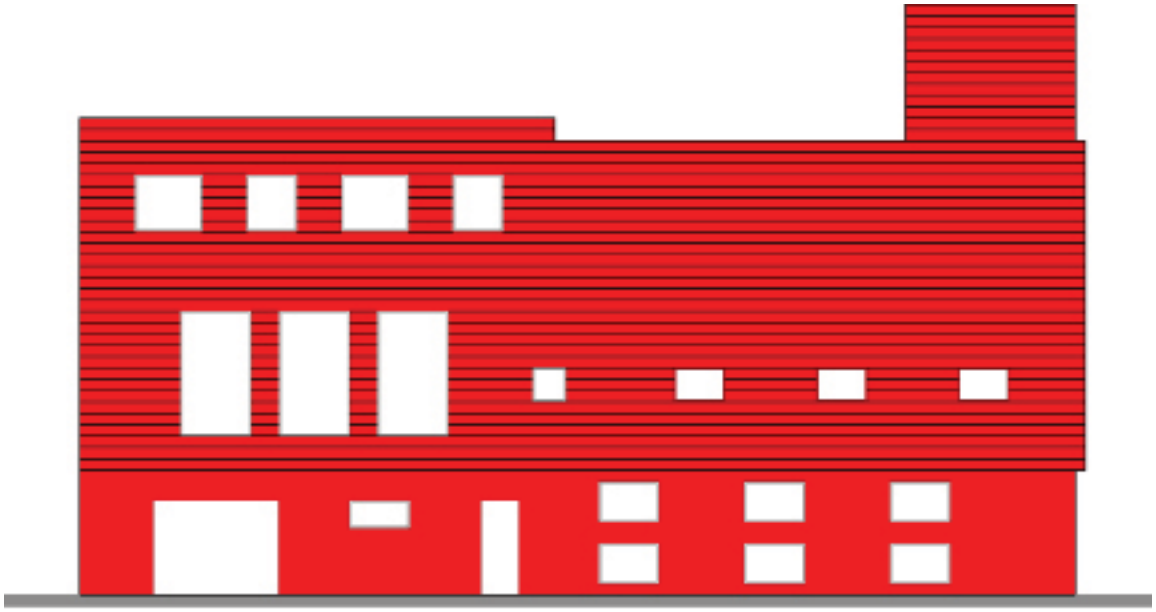


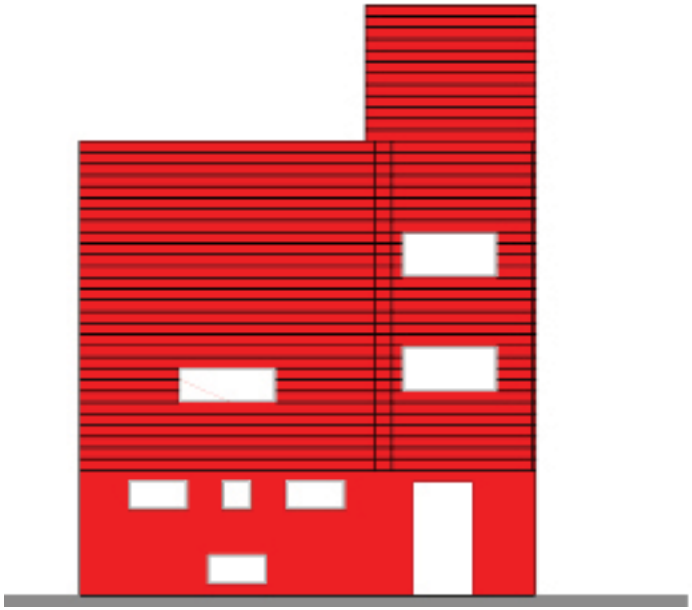
scale 1:200

03. Exterior

03.1 Facade composition

As stated before, the windows are pretty small for such a large house, but through this the walls look really thick, again as a reference to the houses in more southern spheres.



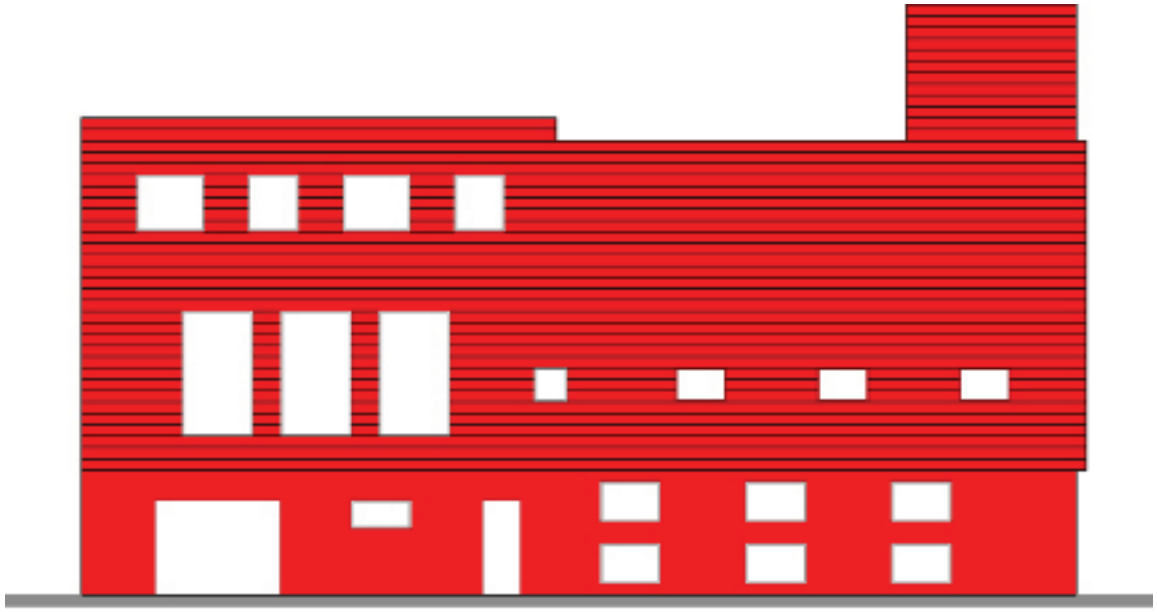


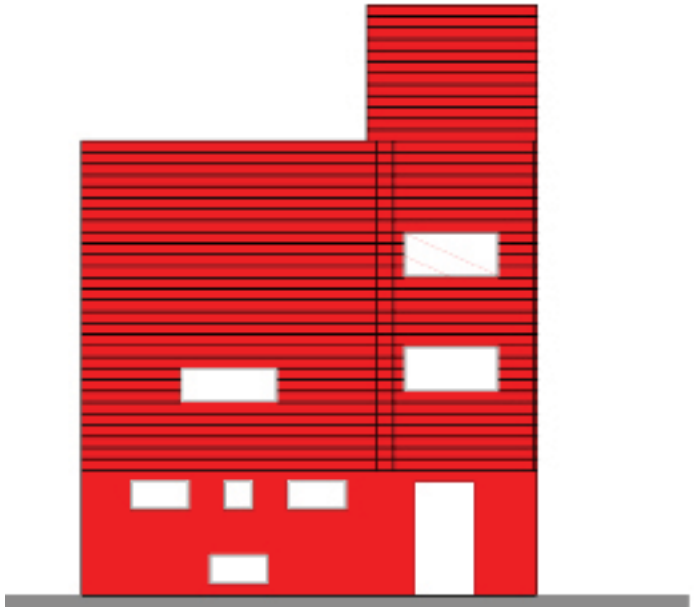
scale 1:200

03.2 Facade materials

The most important material in the House for Josephine Baker is marble. On the top two floors this is crosslined black and white marble as a reference to Josephine Baker swimming in the pool, surrounded by the light coming from above. The lower floors which provide the rooms for the servants and are covered in white marble.

The contrast given by the usage of marble closed exteriors is a constant factor in Loos'work. Also the usage of crosslined elements comes back in more of Loos' work, like the design for the gentlemen's fashion-house Goldman & Salatsch (Vienna 1909-1911).



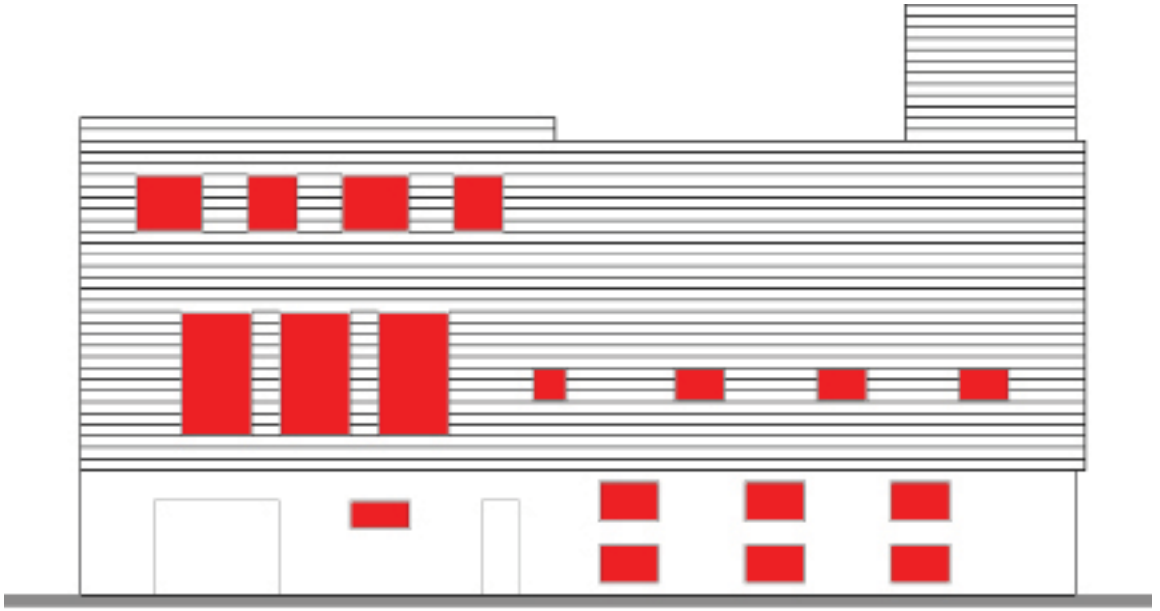


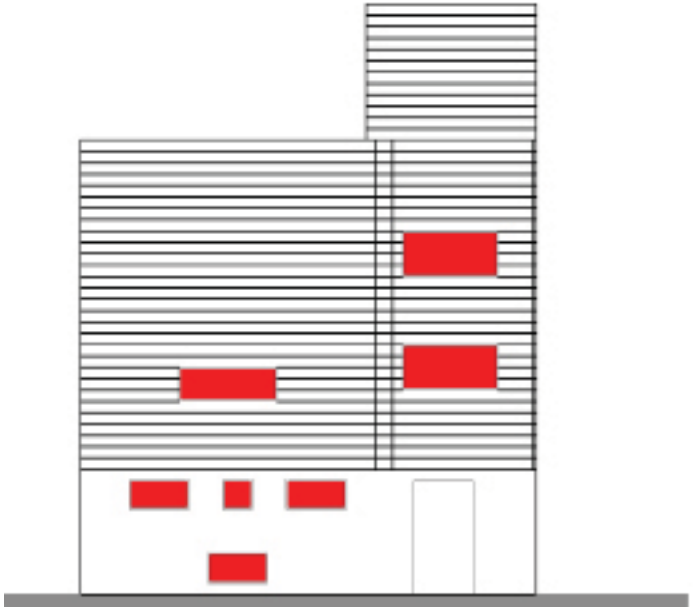
scale 1:200

03. Exterior

03.2 Facade materials

Besides the black and white marble, the other main material in the exterior is glass. Although some of the windows (the ones in the large salon) are pretty big, it is quite likely that it is a bit dark inside, for instance the windows on the lower right in the left facade show that the bottom ones are very high in the basement, so you can't look outside and the ones above it are too low in the facade to look outside. It is also pretty much impossible to use them in aproper way as they are placed too low; furniture placed there would block out all of the sun.



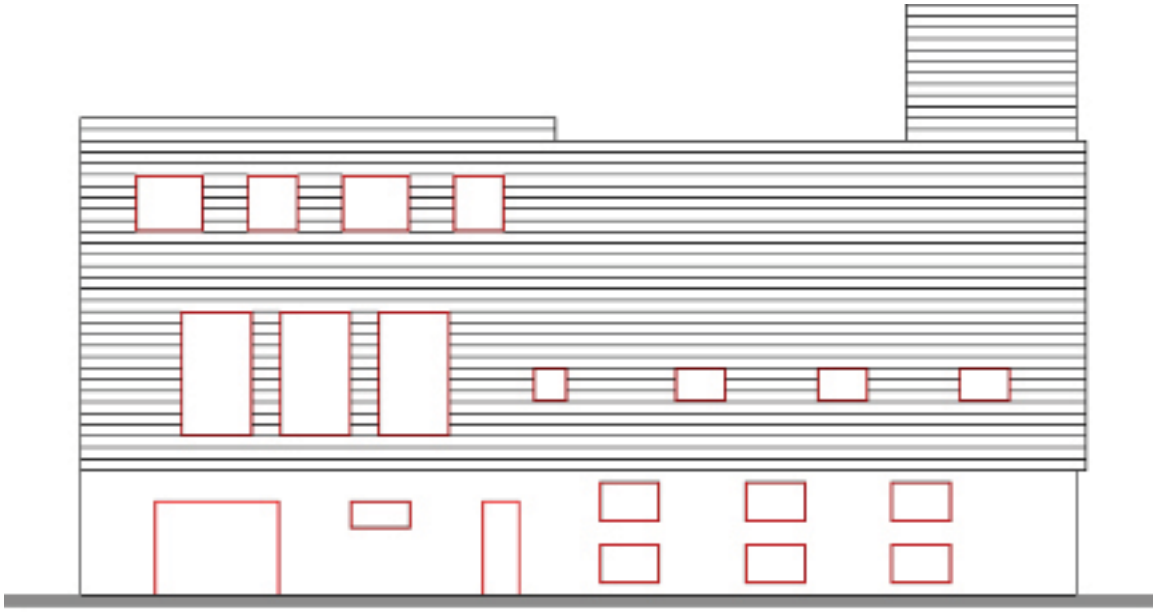


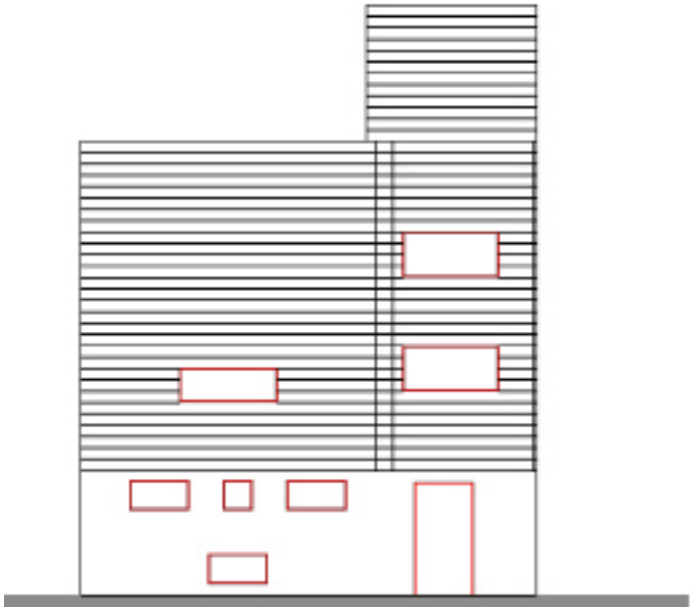
scale 1:200

03. Exterior

03.2 Facade materials

In addition to the glass, the windows are completed with the window and door frames, although it is hard to say how Loos would want them to be made (after all it is hard deriving this from the small model and four floorplans he sketched), it is most likely they have to be designed in a slim way, so they are as invisible as possible in the easy-to-the-eye facade





scale 1:200

04. Interior

04.1 Threshold

The outer-entrances can offcourse be seen as hard thresholds. Inside is where it gets interesting; pretty much all the spaces are easy accessible as the sequence of the rooms is very easy layed out, so only the stairs, which provide the way to get to another level can be viewed as harder thresholds in terms of space. The corridors can be viewed as smooth thresholds.

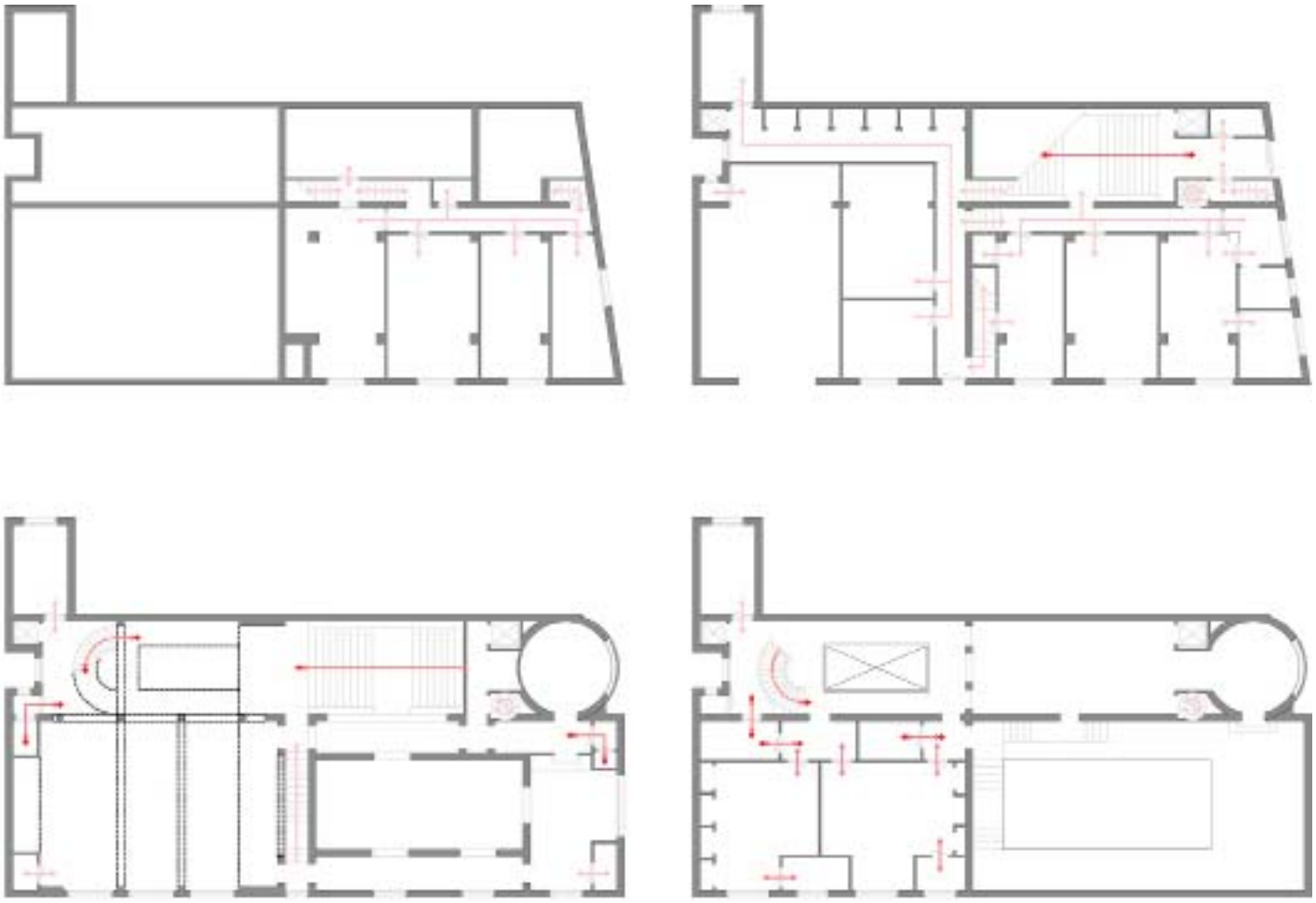
Threshold hard
Threshold smooth
Threshold space hard
Threshold space smooth

scale 1:300

04. Interior

04.2 Routing

Because this house was never build, viewing the small model which exists, you might presume the entrance is on the larger left facade, but the main entrance is actually at the smaller facade, underneath the cylindershaped tower. This main entrance is used by the guests as well as the inhabitants of the house. The staff have a separate entrance on the left side of the house. Indoors the staff also have their own way of moving between the floors in the top right corner of the floor plans these stairs are visible.

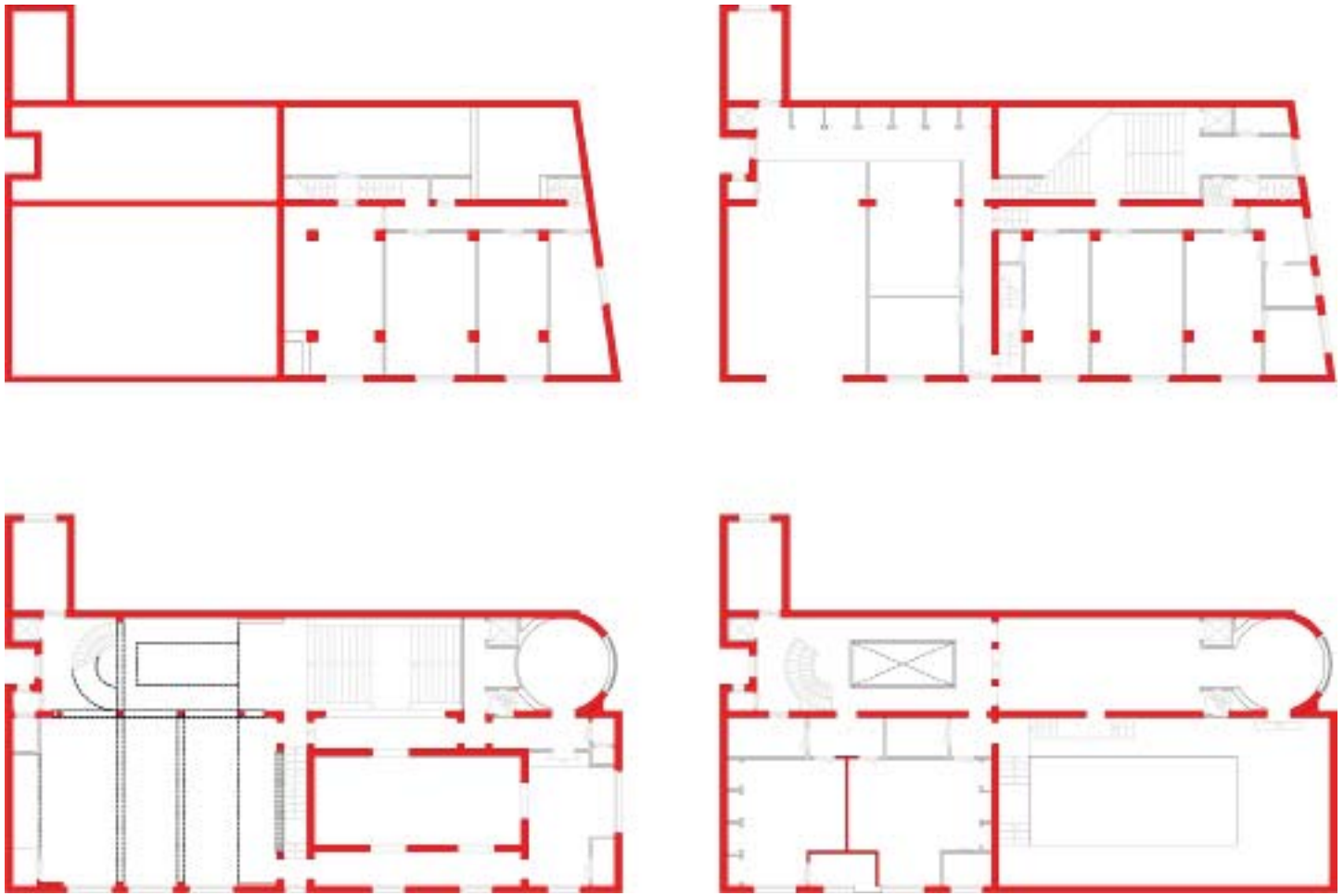


servants route
guest route
private route

scale 1:300

04.3 Construction

Starting in the basement you can see the eight columns supporting the weight of the pool and the water inside it. Besides those there are columns placed to keep the reception hall and grand salon as light as possible. Right above the reception hall there is a huge skylight, so it gets light from above and from the left, making it as light as possible in the otherwise pretty massive building.

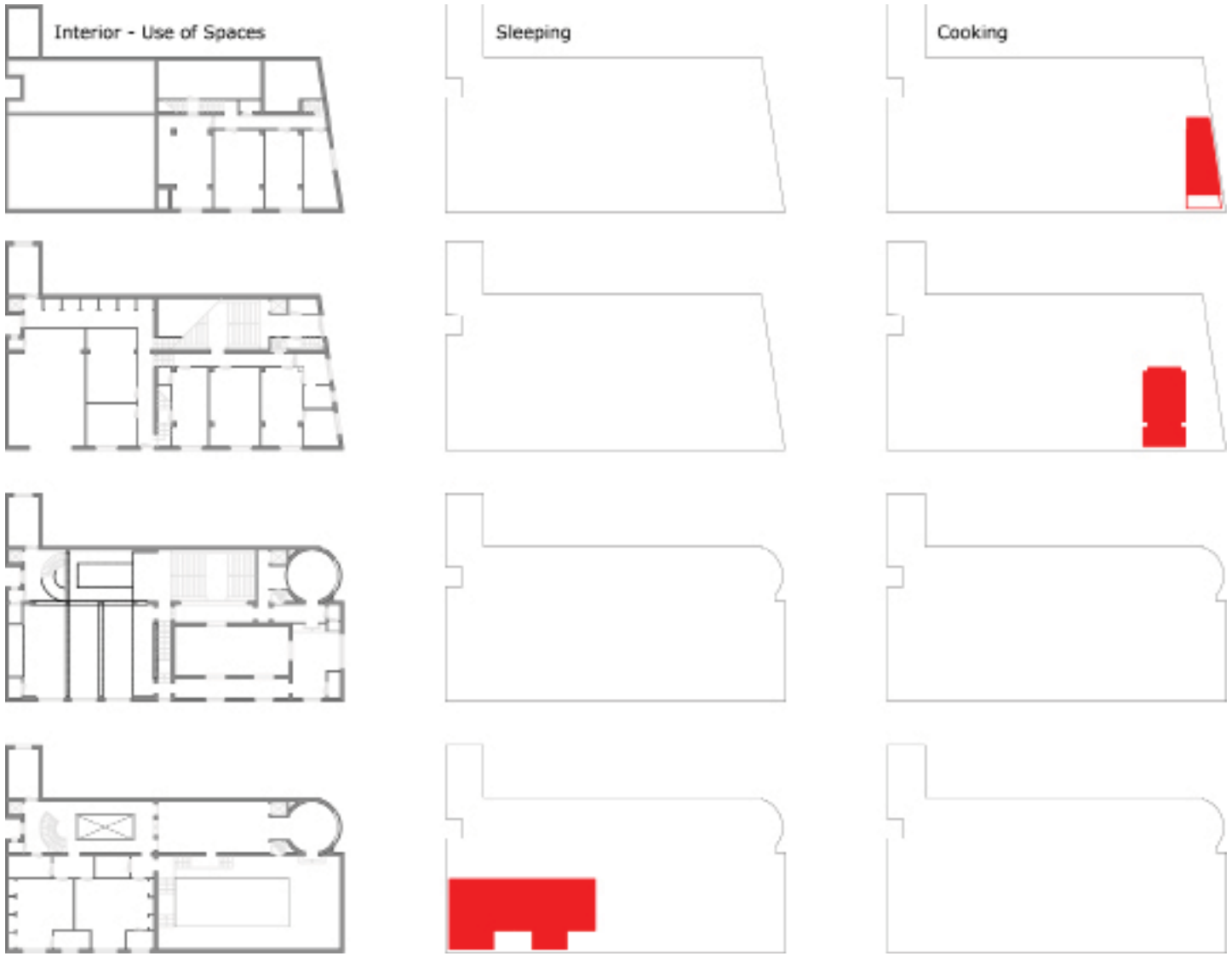


constructive

scale 1:300

04.4 Use of the spaces

One of the first things which is noted, is that there is only litlle space reserved for sleeping in an otherwise huge house. This is understandable when kept in mind that this house was not designed for Josephine Baker but by and for Adolf Loos. The inhabitant is not placed first, but the guests are. Almost as much space is used for cooking as there is space for sleeping.

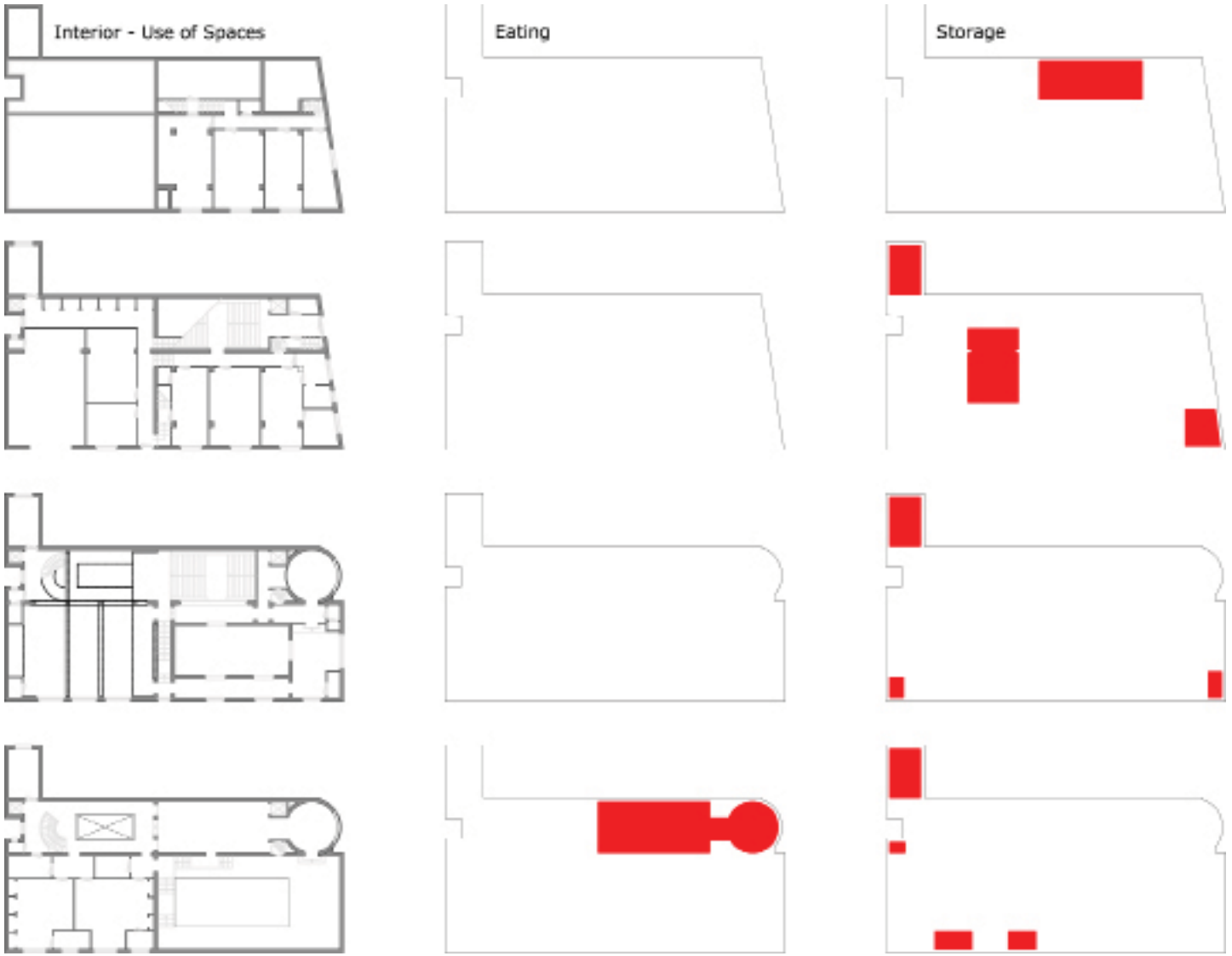


scale 1:500

04. Interior

04.4 Use of the spaces

The space for eating is not located anywhere near a kitchen, so food has to be transported through the spiral stairs or via the lift. The dining room is located on the top floor, near the main entertainment area of the house; the pool. Closets are distributed more evenly across the different floors of the house.

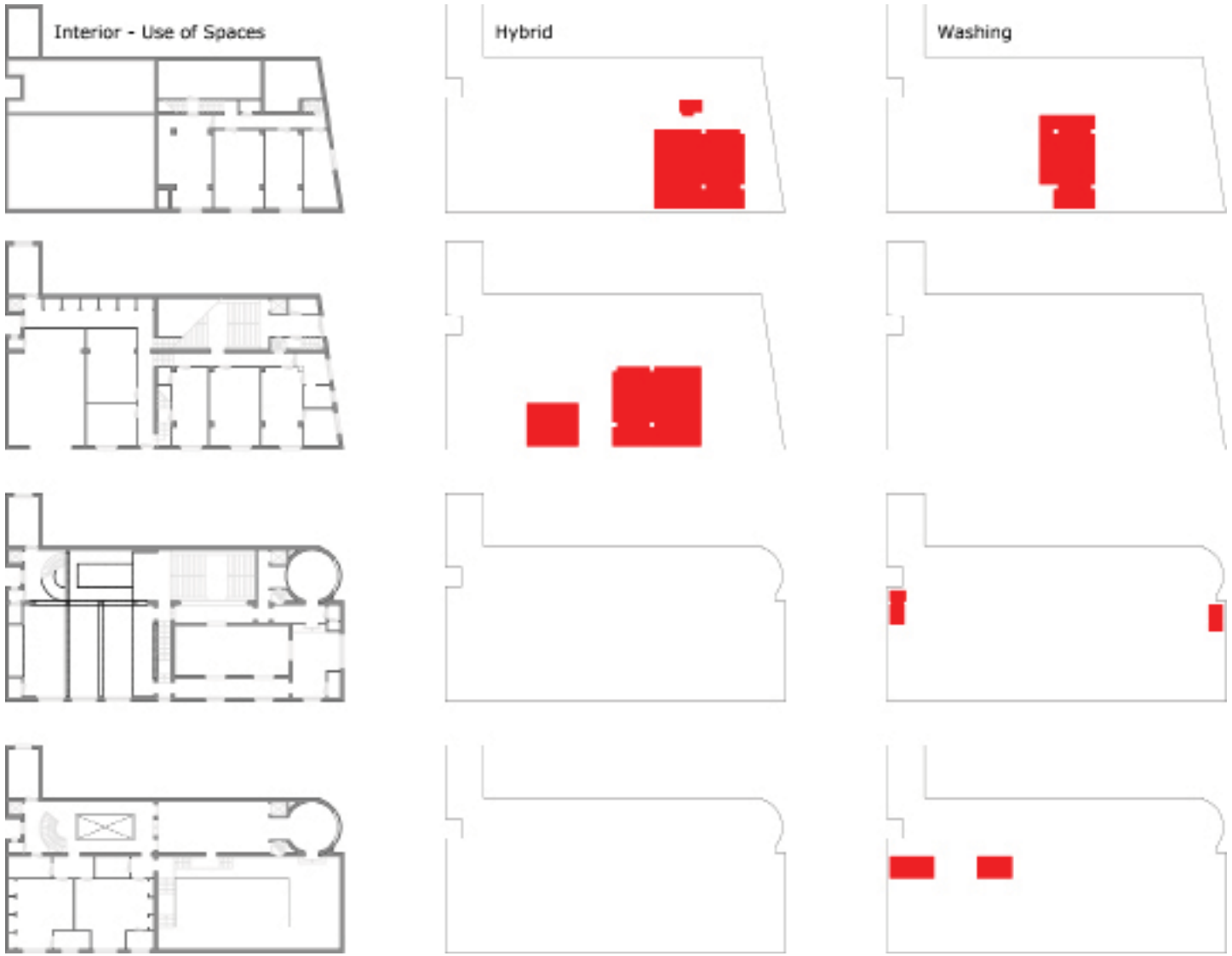


scale 1:500

04. Interior

04.4 Use of the spaces

On the ground floor and in the basement there are some hybrid spaces, these common spaces can be used for different things. The washing facilities ares spread out evenly across the different floors, with a space to wash clothes, etc. in the basement.

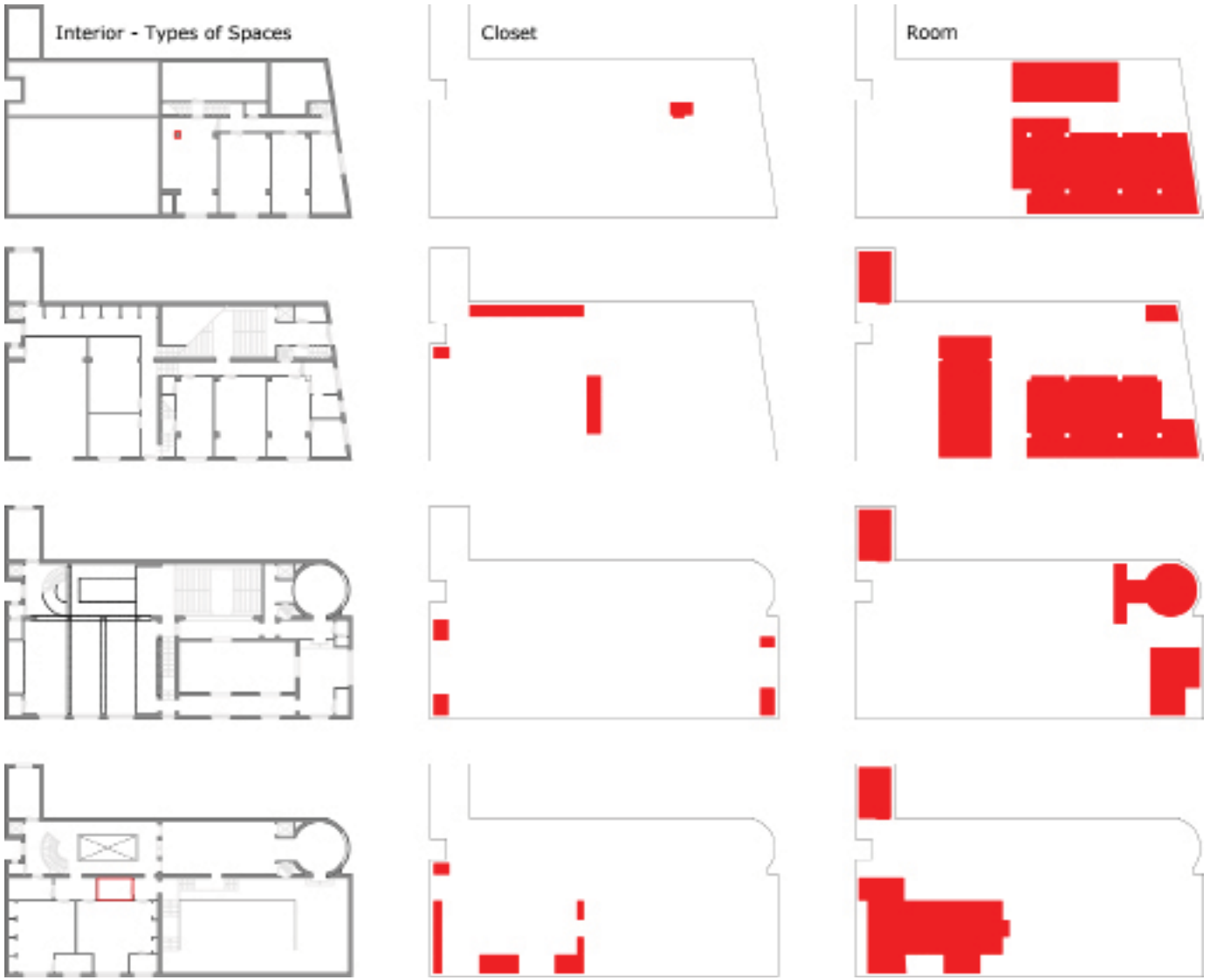


scale 1:500

04.5 Room types

Taken overall there's enough closet space across the different floors. Most of the rooms are located in the lower two floors of the house; the servants part of the house. More than enough space is available here for the different tasks needed to make sure the guests and inhabitants don't have to worry about anything.

On the top floors rooms are scarcer but still available and not in the worst parts of the house, for anyone looking for a bit more seclusion.



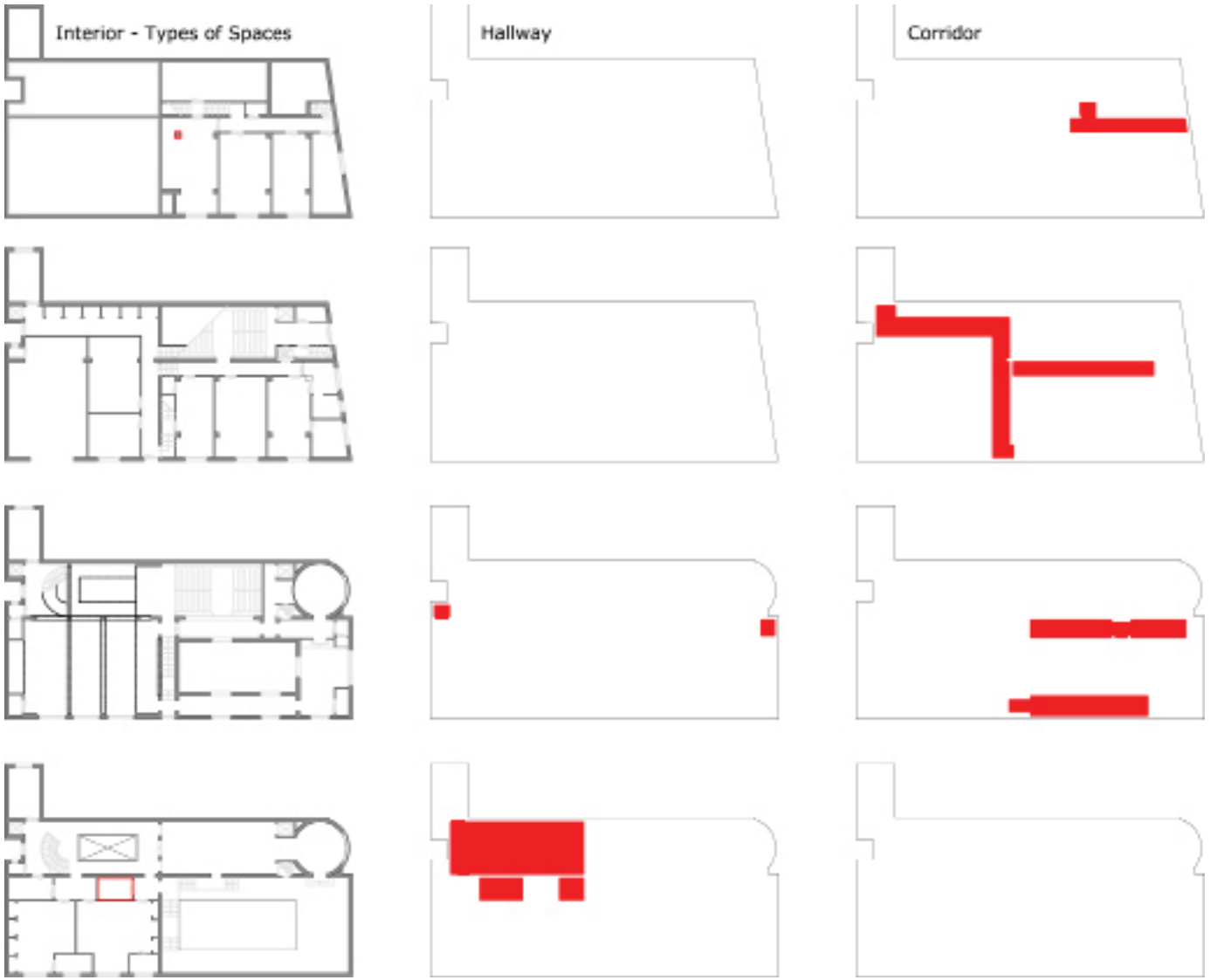
scale 1:500

04. Interior

04.5 Room types

As depicted on the right, you can see that there's only little space used as a hallway, which means that little space is lost for travelling in between destinations. On the top floor the hallway is not even a dull place as you have a fantastic view on the floor below and into the dining room.

On the first two floors, however, there's a lot of room reserved for corridors, which might be tought about less, especially considering the fact that even though there are corridors on the floor besides the pool, here they are very important to the building in experiencing the pool.



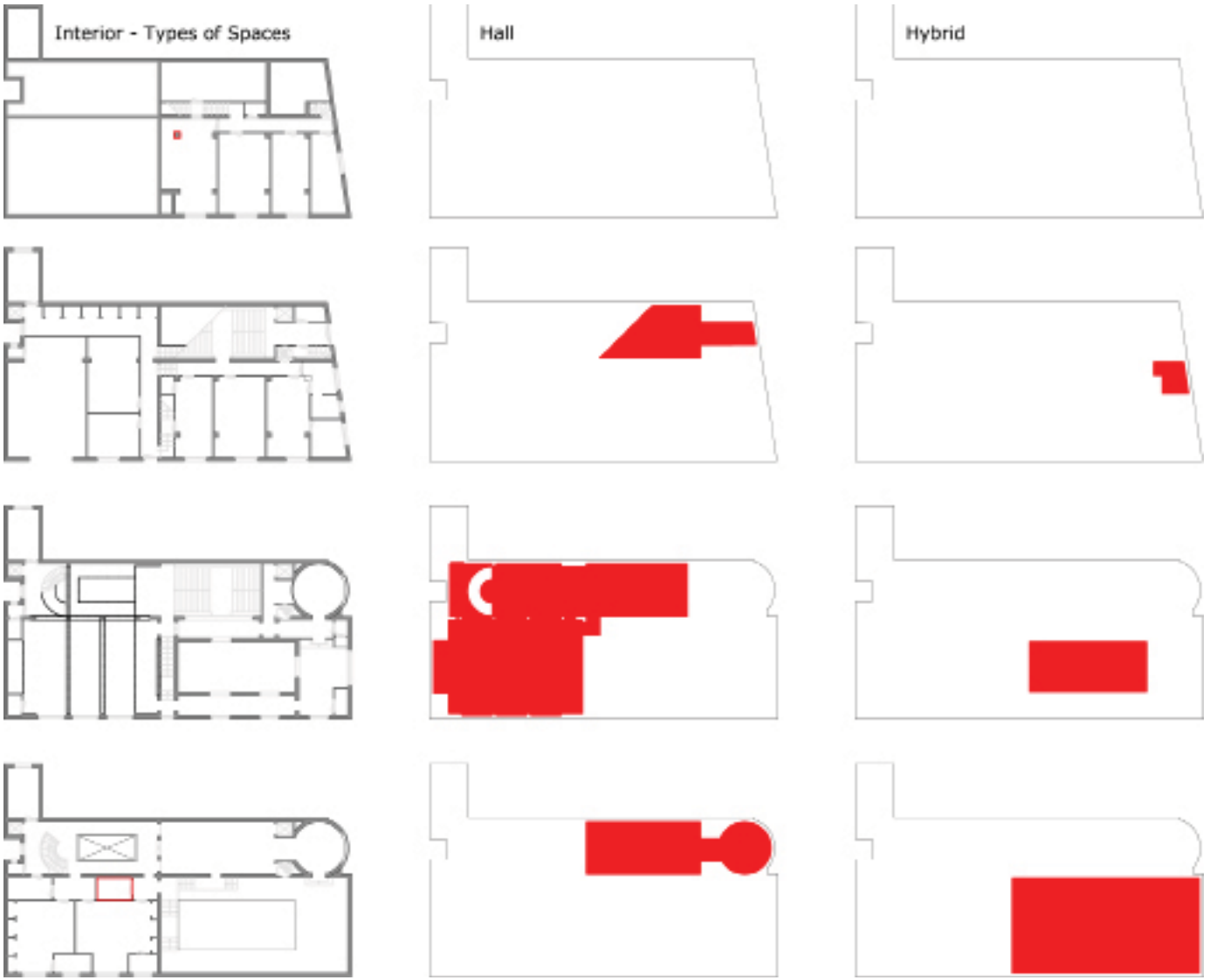
scale 1:500

04. Interior

04.5 Room types

A lot of room is reserved for the halls on the top floors, these are the main enterteinment areas and together with the pool on the top floor they are the most important part of the house. Also on ground level the entrance could be seen as a hall, since the monumental stairs give the house just that little extra class.

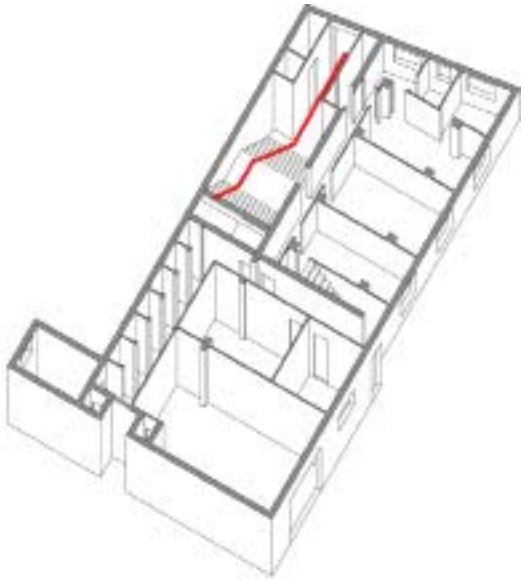
The pool can be seen as a hybrid space, that although it can be used to entertain the guests, it can als be used as a place to relax after a hard days work.

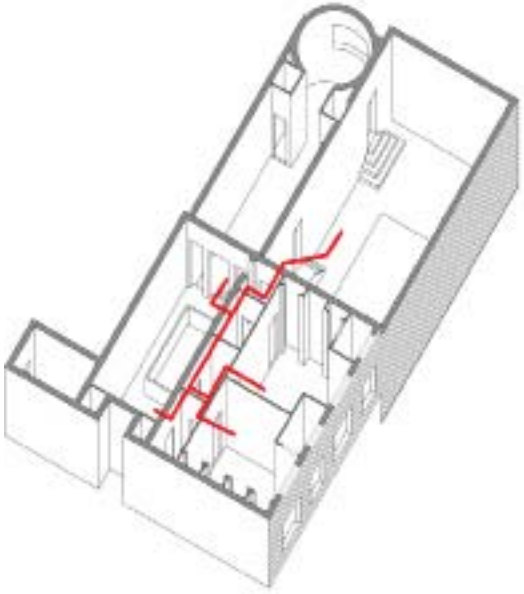


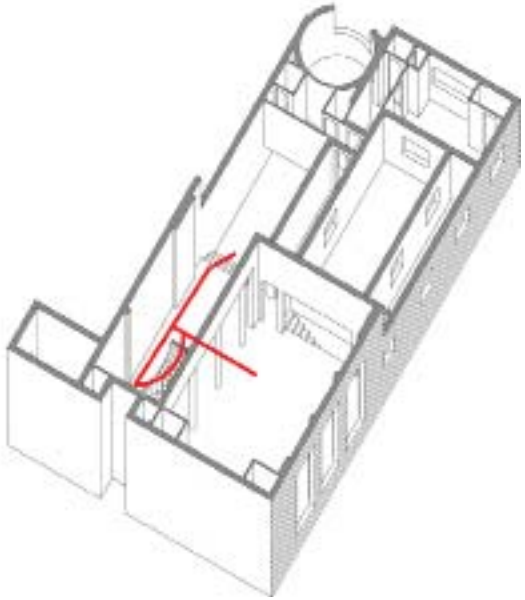
scale 1:500

04.6 Sequence of spaces

The routing for the inhabitant of the House for Josephine Baker is not that dificult; she can enter through the main entrance and go right up the monumental staircase and in doing so skipping the spaces for the staff. On the first floor she can entertain guests in the grand salon, or take the next staircase to the top level and het own private quarters or the pool and diningarea.





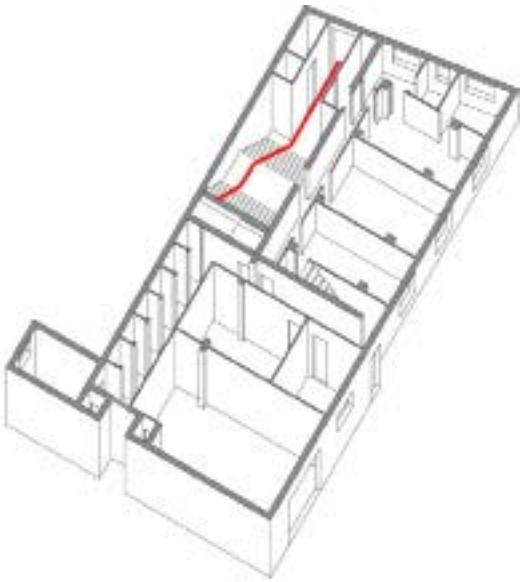


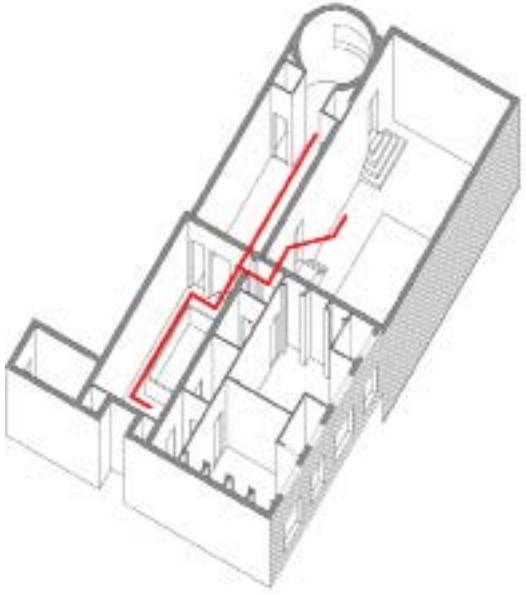
scale 1:400

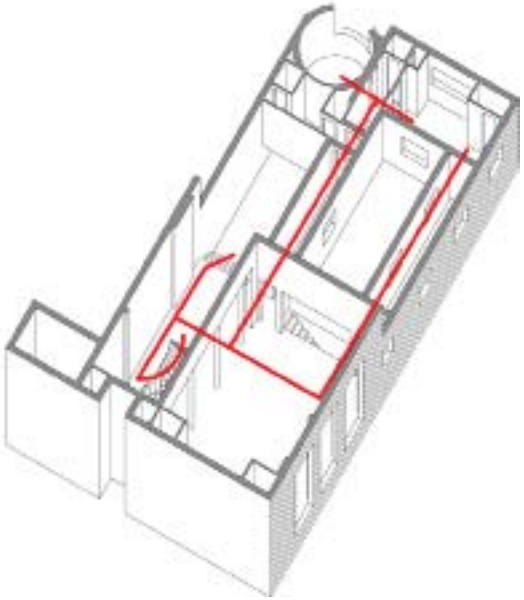
04. Interior

04.6 Sequence of spaces

The routing for the guests is just like the sequence for Josephine Baker herself, except offcourse the private quarters. It might als be interesting for them to visit the petit salon and in doing so experience the corridors along both sides of the pool end view into the pool from below the water level.





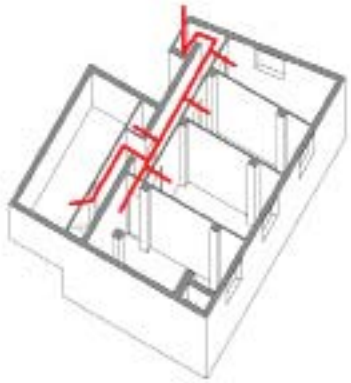


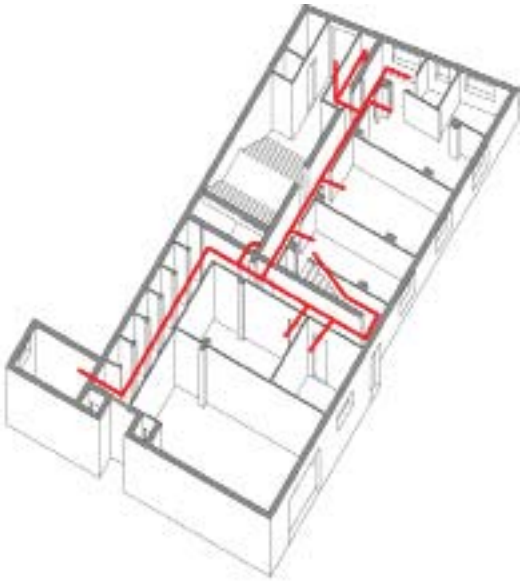
scale 1:400

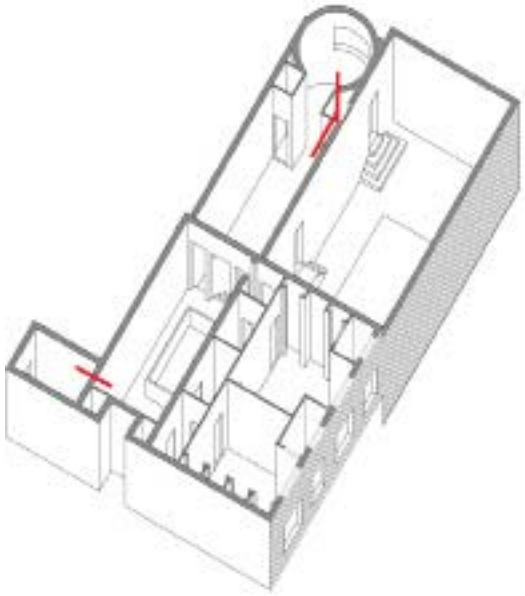
04. Interior

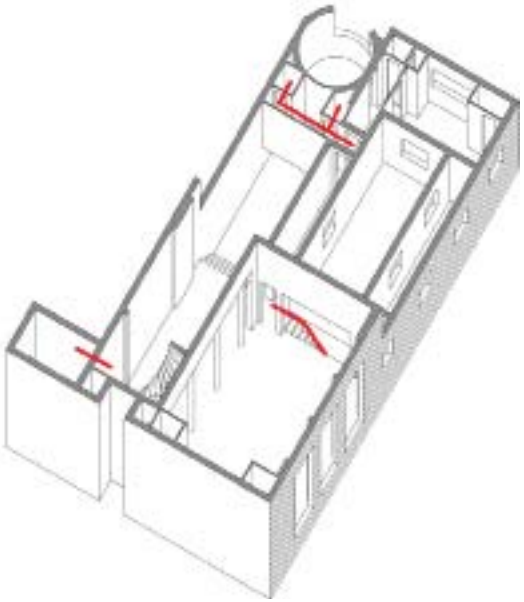
04.6 Sequence of spaces

The sequence of the spaces is different for the staff members. Most of there tasks are situated at the lower two floors of the house as they also have their own entrance situated in the large facade at ground level. They will only be seen at the higher floors to perform their duties and therefore have their own ways of travelling vertically through the house.









scale 1:400

04.8 Social hierarchy

The main part of the lower floors is meant for the staff although the garage can be used by everybody, guests, staff and offcourse Josephine Baker herself. The only private space for her can be found on the very top floor, as this is where her bedrooms can be found. The space which is left is pretty much for the guests, as this is what the whole house is about, entertaining the guests.

scale 1:300

04.9 Hierarchy of the spaces

As can be concluded from what was said before, on the lower floors the staff have their way, as on the two higher floors the staff serve the guests and the hostess.

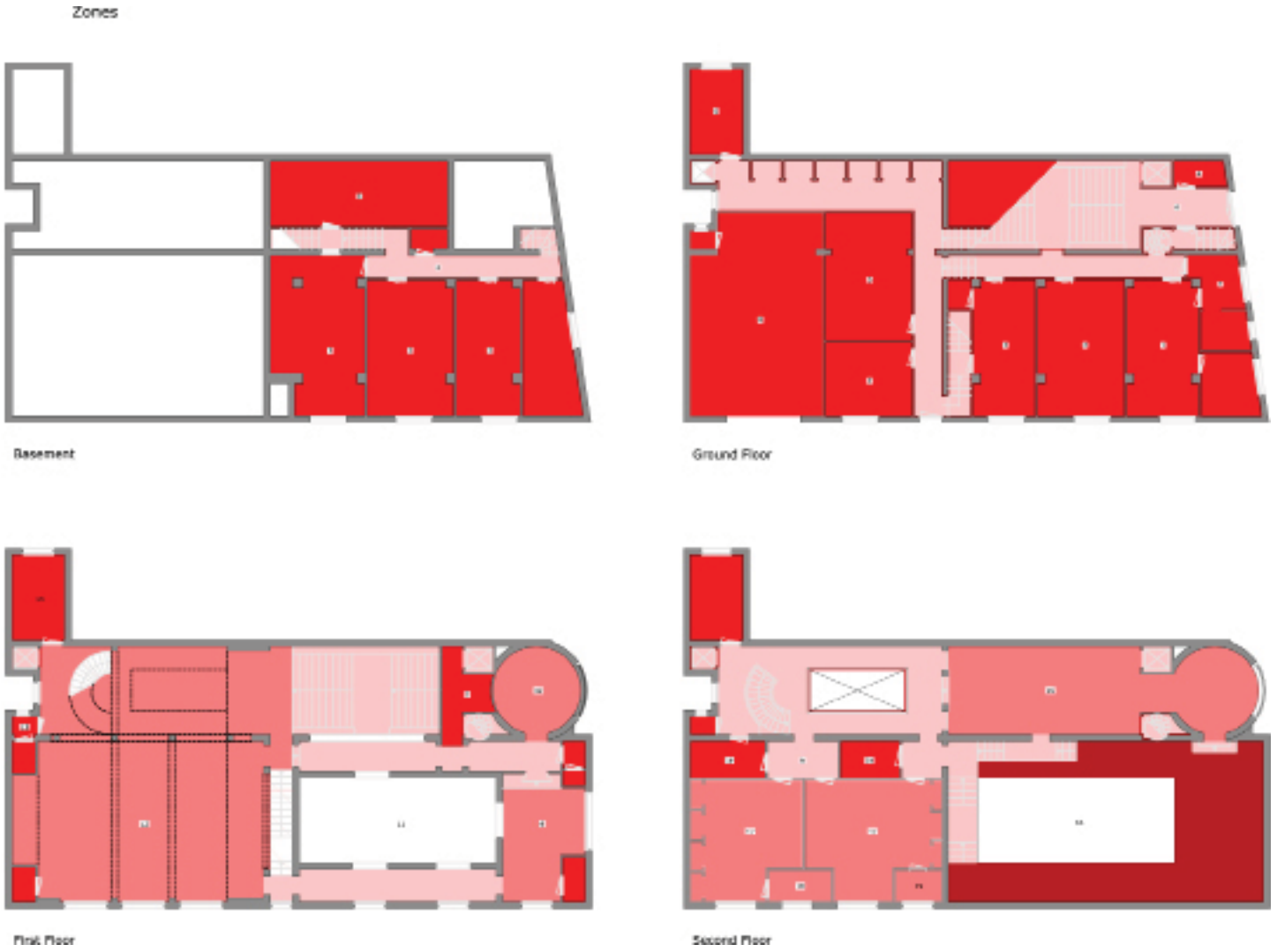
The private rooms are not filled in at all, as these should be kept entirely private to the hostess.

scale 1:300

04.10 Areas

There are four different areas present in the House for Josephine Baker.The functional area are concentrated on the lower two floors. The transition area is clearly to be seen as the space to travel between the different spaces.

The pool is marked as a hybrid space, since this space can be used in many ways. The remaining areas are the meain areas of the house; the stationary areas, like the salons and dining area.



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05. Conclusion

_Analysis

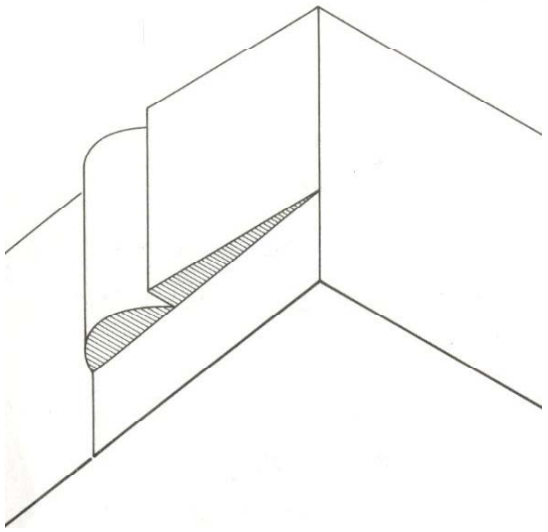
Josephine Baker (June 3, 1906 – April 12, 1975) was an American expatriate entertainer and actress. She became a French citizen in 1937. Most noted as a singer, Baker also was a celebrated dancer in her early career. She was given the nicknames the “Bronze Venus” or the “Black Pearl”, as well as “The girl with the girdle of bananas”. In France, she has always been known as “La Baker”. Adolf Loos met Josephine Baker in 1926 at Chez Josephine, a meeting place of the high society of Paris. After meeting her, Loos decided that he would design a beautiful house for her, the result was a passionate displacement of desire, an architectural reverie in which Baker was displayed for his private entertainment, including a deep indoor swimming pool with porthole-like windows below water level and a surrounding pathway, which made it possible to watch the bathers as if they were in an aquarium. For Loos the ornamental stripes on the exterior of the house and the dream of Baker’s dark body in the shimmering water were paired images of fantasy of racial and sexual superiority; the house and her body were one, and they were his, because he could indulge his desire and take pleasure in them.

In the analysis of the house the intentions of Loos stand out clearly. If the starting point is from the outside there are four features that identify the composition of the house. If you approach the house, the first feature, which probably would stand out the most, is the Mediterranean exterior. This appearance derives from a predominance of solids over voids, from the way the openings are reduced and the use of a flat roof. This Mediterranean exterior says nothing about the interior, which introduces the second feature, “the architectural introversion”. This is also a feature of typical Mediterranean houses. The third feature is defined by the cladding of the exterior; Loos tries to trick the human eye by extending the volume in the opposite direction. With white and black marble lines Loos introduces the breakdown of stylistic stereotypes of the architecture of the twenties. The last feature of the exterior is the use of the dominant primary volumes, the prism and the cylinder. With the architectural composition of these volumes Loos tries to achieve a building that is directly readable. Within this plastic arrangement, there is a split between the lower part of the building, that follows the counters of the site, and the striped upper part. This split is made up by a cylinder and a prism that project slightly on one side, as if the geometric forms had slipped a bit on the site. There is a play of plastic forms and the pattern that is created by these volumes, is more important than the function.

After experiencing the exterior of the building one would enter the interior the autonomy of the exterior is again expressed from the inside. Loos designed the house as a theater of representation, a place in which physical appearance, social behavior and personal privacy are displayed and interpreted. In the house the use of the ‘Raumplan’ gradually increases if one would move up from the lower floors (used for services) to the upper floors (intended for amusement). Going upwards, the semicircular iron staircase, from the lobby to the access gallery on the second floor, breaks the chain of classical and literary metaphors. There is a deliberate contrast of materials at the staircase that introduces a reference to modern times. From this access gallery there are two small pathways to the café in the cylinder. These small pathways are connected to the core of the house, the swimming pool. All the spaces in the building are designed around the swimming pool and

“windows made of thick transparent plates of glass were envisaged along the low corridors that would allow one to watch people swimming and diving in the crystalline water, lit from above: an underwater revue, so to speak.”(Kurt Unger).

This architecture of Loos, this domestic voyeurism, becomes more and more a peotic game, involving not a building for an actress but the pursuit of his personal idealism and of quotations and allusions to the Roman spirit.



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Illustrations

A] Photographer unknown - source: [05]

B] Interior impressions - Artist unknown - source [06]

V. Comparison

Le Corbusier, Villa Stein de Monzie - Adolf Loos, Josephine Baker House

Comparison Villa Stein de Monzie - Josephine Baker House

The analyses, two essays and conclusions regarding the analyses made clear and brought up that both Villa Stein from Le Corbusier and Josephine Baker House made by Adolf Loos are very interesting and unique houses when taken a closer look at. Both houses are characteristic for both Le Corbusier and for Adolf Loos.

Most obvious difference between the house is the fact that Villa Stein was actually build and realised and Josephine Baker House never made it further then one single model of the house and floor plans. The exact location is even unknown and consists of two possible locations in Paris.
Both houses are located in Paris in France. That's the only similarity according the location because Josephine Baker House was meant to be built in the busy city centre. Villa Stein however was built in the suburbs of Paris in a very natural and peaceful environment. This gives both houses a very different character according to facade composition, proportion and transparancy of the houses. When you compare both houses you'll immediately recognize which house is built in the suburbs and which one in the city centre. Villa Stein is very open, transparant and has big windows which connect the house with the trees and nature surrounding the house. Josephine Baker House has small windows, because of the privacy and to block out the street noise and movement. You could say that Villa Stein is opened up to the outside and Josephine Baker House is closed or opened up to the inside.
The facade compositions are also very different according proportion. Villa Stein is designed following the proportion principles develloped by Le Corbusier in his five points which also refer to the ancient Greeks and their concept for proportion. Josephine Baker House contains also a striking facade composition but the most striking are the characteristic horizontal black and white stripes in the facade and the type and shape of the windows. The facades don't have any elements or balconies but are flat and tight, opposite of Villa Stein which has a lot of these elements. The facades of the Josephine Baker House don't follow the proportion principle of Le Corbusier but has similarities and peaces which are similar to Le Corbusier. This can also be found in the essays dealing with proportion in Villa Stein and Josephine Baker House.

Villa Stein was originally designed for a very characteristic and extraordinary family containing two families with different needs, functions for the house and organisation of the house which were very unusual for that time period. The house was meant for two families with each different wishes and because of the organisation for those two families it was very difficult to design a house but functional but alsof according to the five points and design principles of Le Corbusier. The house can be seen as an ancestor of an appartment building in this time which can change it's function and can be adjusted for another owner or different needs.
This is entirely different from the Josephine Baker House because Adolf Loos didn't had to keep in mind wishes or needs for the owner. The house was entirely meant for Josephine Baker which was a very famous actress and can be seen as Adolf Loos's muse. Some sources tell that he had feelings for Josephine Baker and that was one of the reasons to design a house for her. Even though the house was meant for Josephine Baker the house was totally organised and designed for her to be seen. The house can be explained as a sort of stage or film set which can exhibit not art like Villa Stein but Josephine Baker herself. When she would be in the house visitors or others could see her everywhere moving through the house. The house doesn't fulfils her needs but more the needs and desires of Adolf Loos. This is another difference compaired to Villa Stein. The Stein couple commisioned Le Corbusier and Adolf Loos designed it as a sort of present to Josephine Baker.

Regarding the organisation there are a lot of similarities. Both houses have a very characteristic element inside the house. Villa Stein has the terraces which also gave the house it's nickname 'Les Terraces'. Josephine Baker House on the other hand has the extraordinary swimming pool in the middle of the house. This pool is also like the terraces visible from any angle in the house and can be seen on every floor level. This swimming pool was designed for Josephine Baker so everybody could see her swim.
There are more similarities which refer to a ship. Le Corbusier uses the ship or see in the design of the house. The roof terrace can be seen as the ship deck of a ocean liner or big cruise ship which gives the guests a spectacular view over the water; in this case the nature with trees and plants.

Comparison Villa Stein de Monzie - Josephine Baker House

The other reference to a ship is the solarium on the third floor which has the same function in a way as the swimming pool. On top of the solarium you'll find the look out tower which refers to the look out tower of a boat. This gives a spectacular view over the house and it's surroundings. This is a similar concept as the swimming pool which is located and organised in a way that you have a view over the swimming pool from everywhere in the house.

Another element is that both Le Corbusier as Adolf Loos are experimenting with both the five points as the Raumplan. In both designs of the house are these concepts used by each architect. Le Corbusier used the Five Points and Adolf Loos used Raumplan. These ideas and concepts give both houses an unique character and make them very important architectural buildings. They are both very different from most buildings realised and designed in that time. Both are sort of prototypes for modern architecture which started to develop in the same period.