PORTFOLIO

Spring 2020

Carrie Tam

Carrie Tam is a second-year undergraduate student at Northeastern Unviersity pursuing a Civil Engineering and Architectural Studies degree. This work done in this portfolio was crafted and edited during the Spring 2020 semester of the Fundamental Architectural Representation and Fundamental Architectural Design courses taught by Professors Mariano Luque and Cyrus Dochow, respectively.

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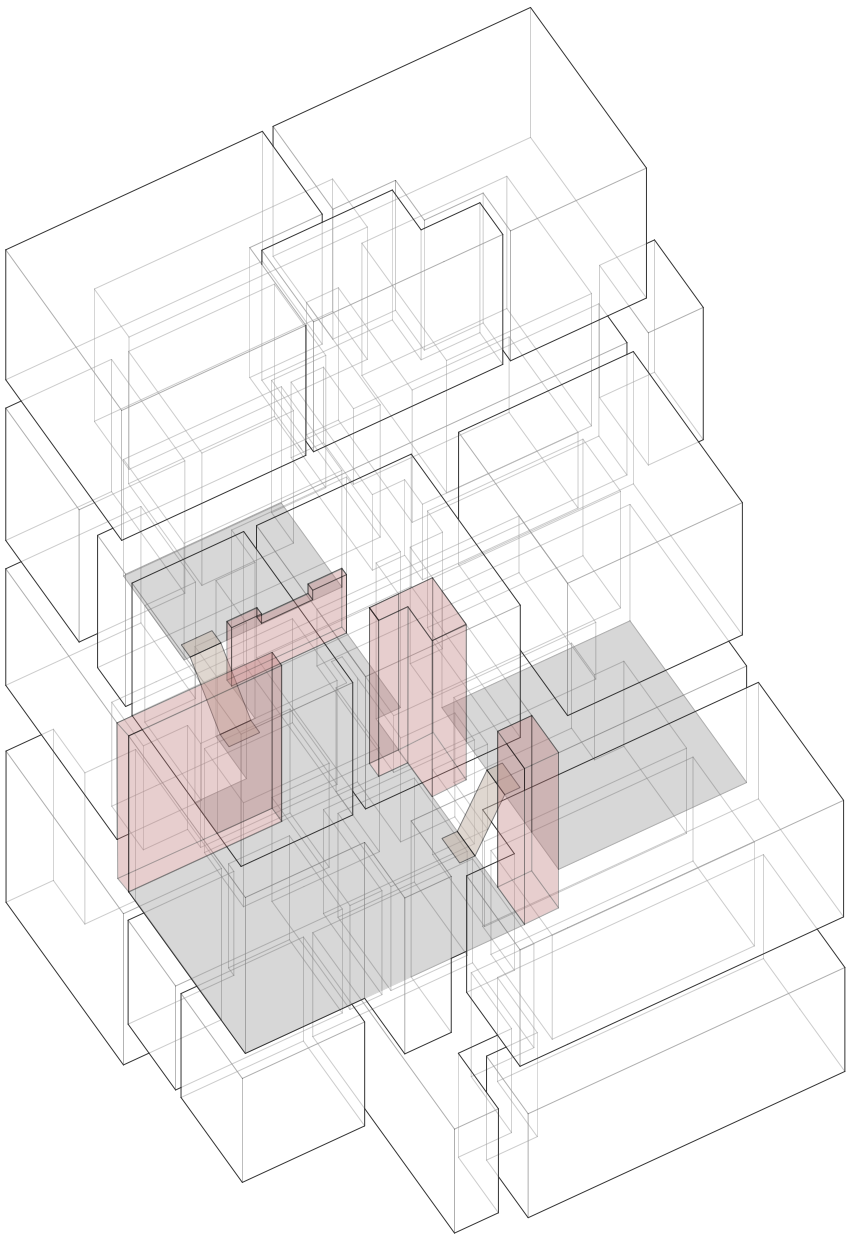
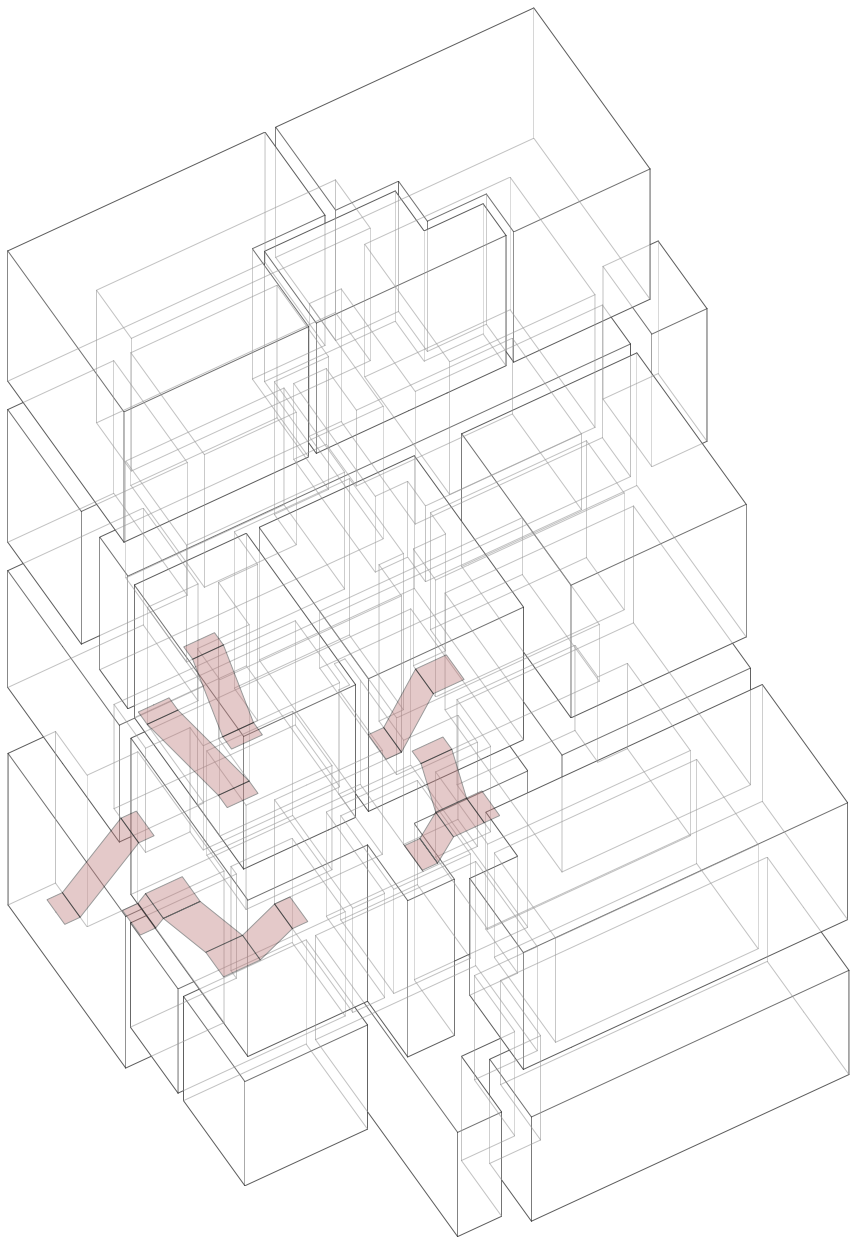
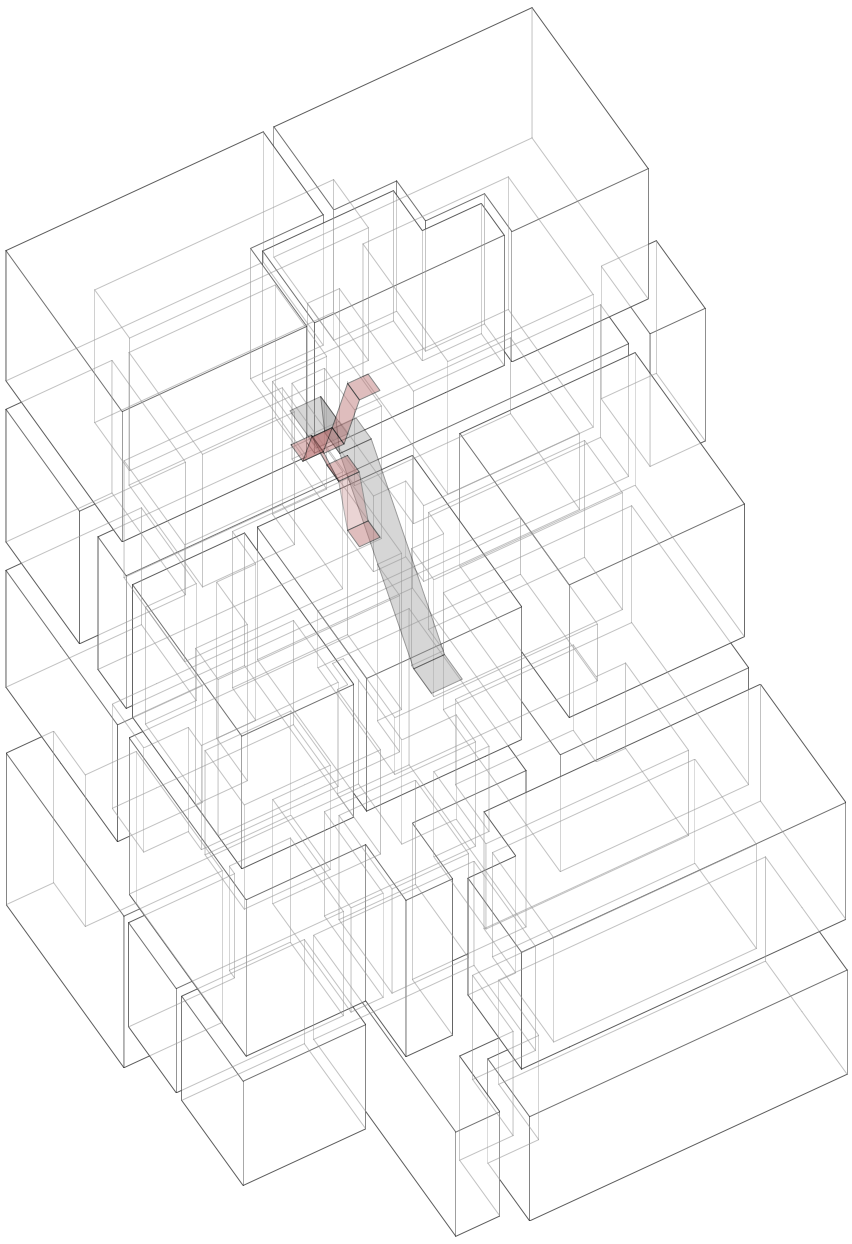
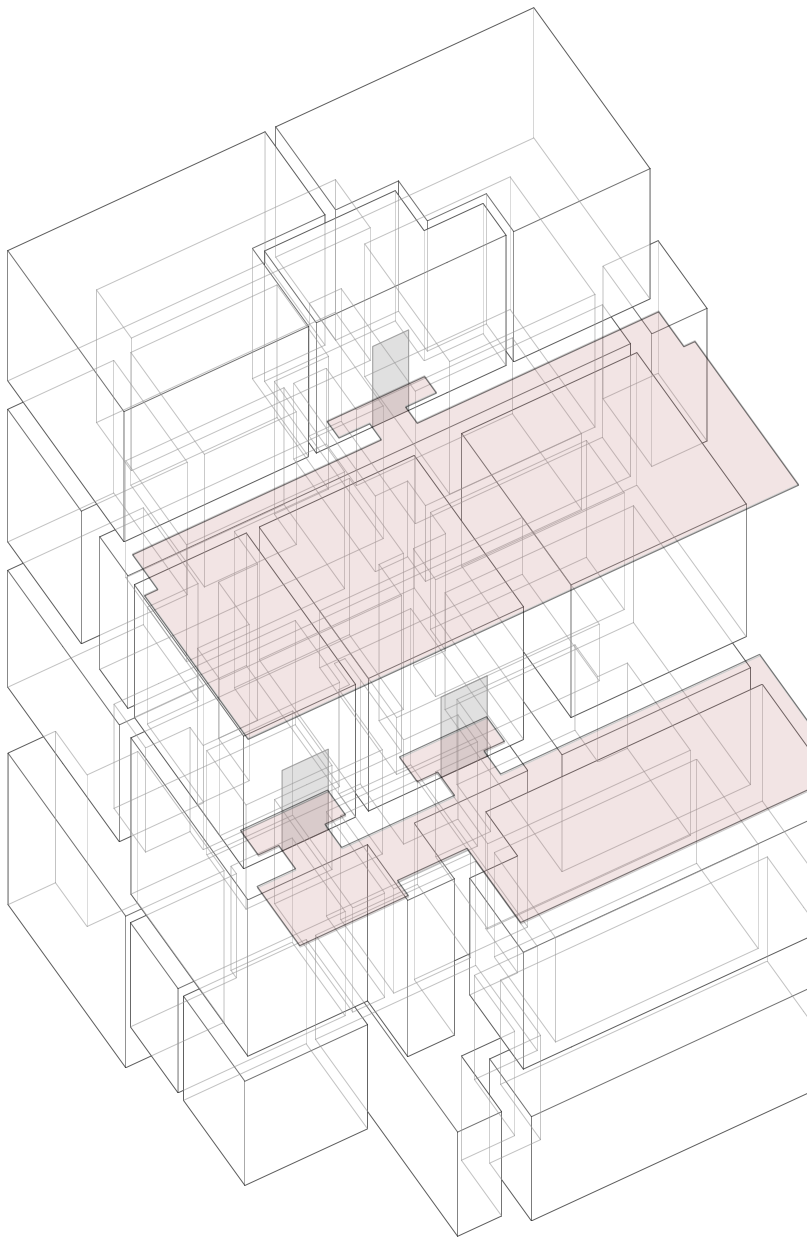
Carrie Tam | tam.c@northeastern.edu | www.tamcarrie.com

Villa Moller Oblique





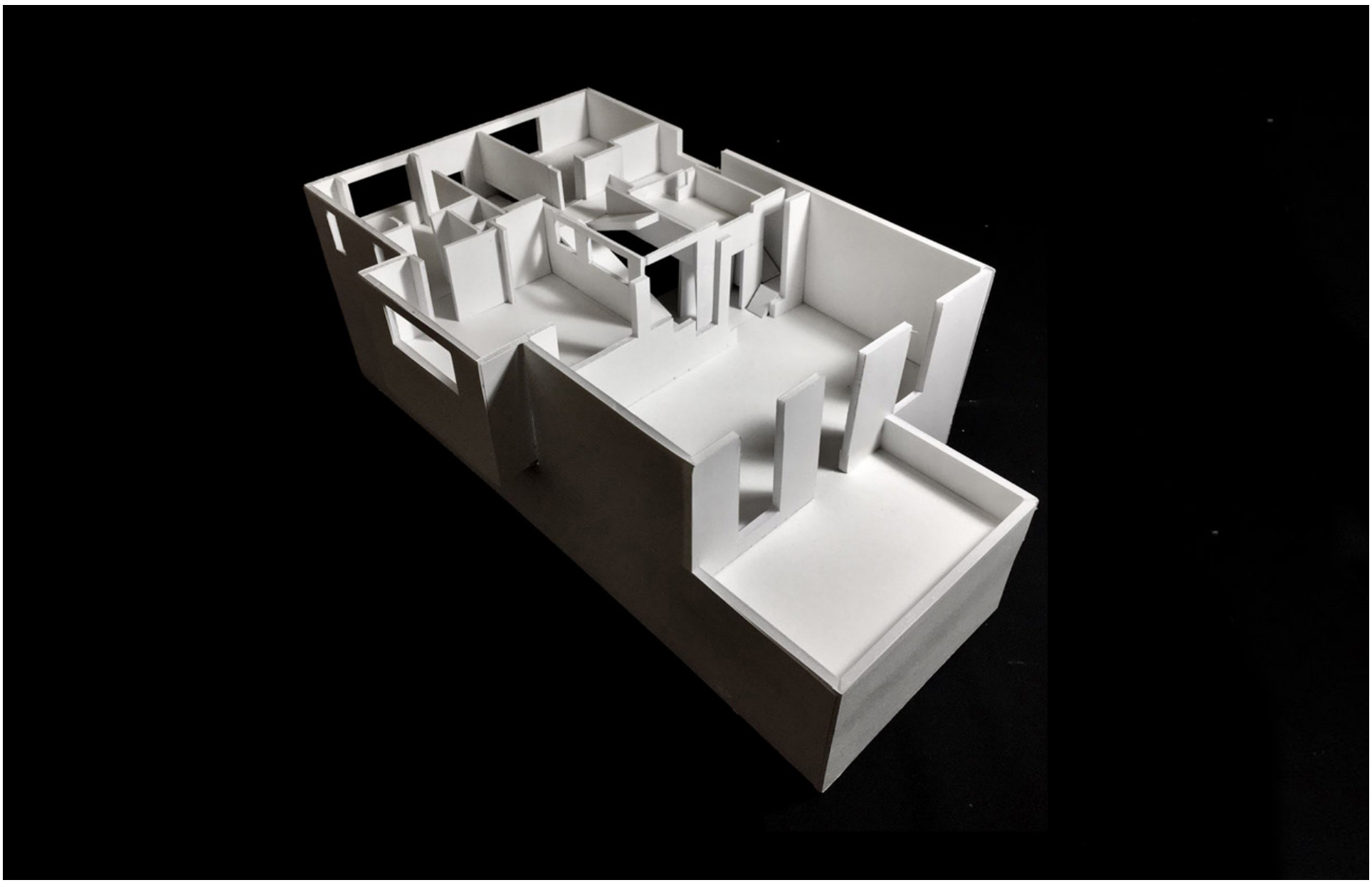


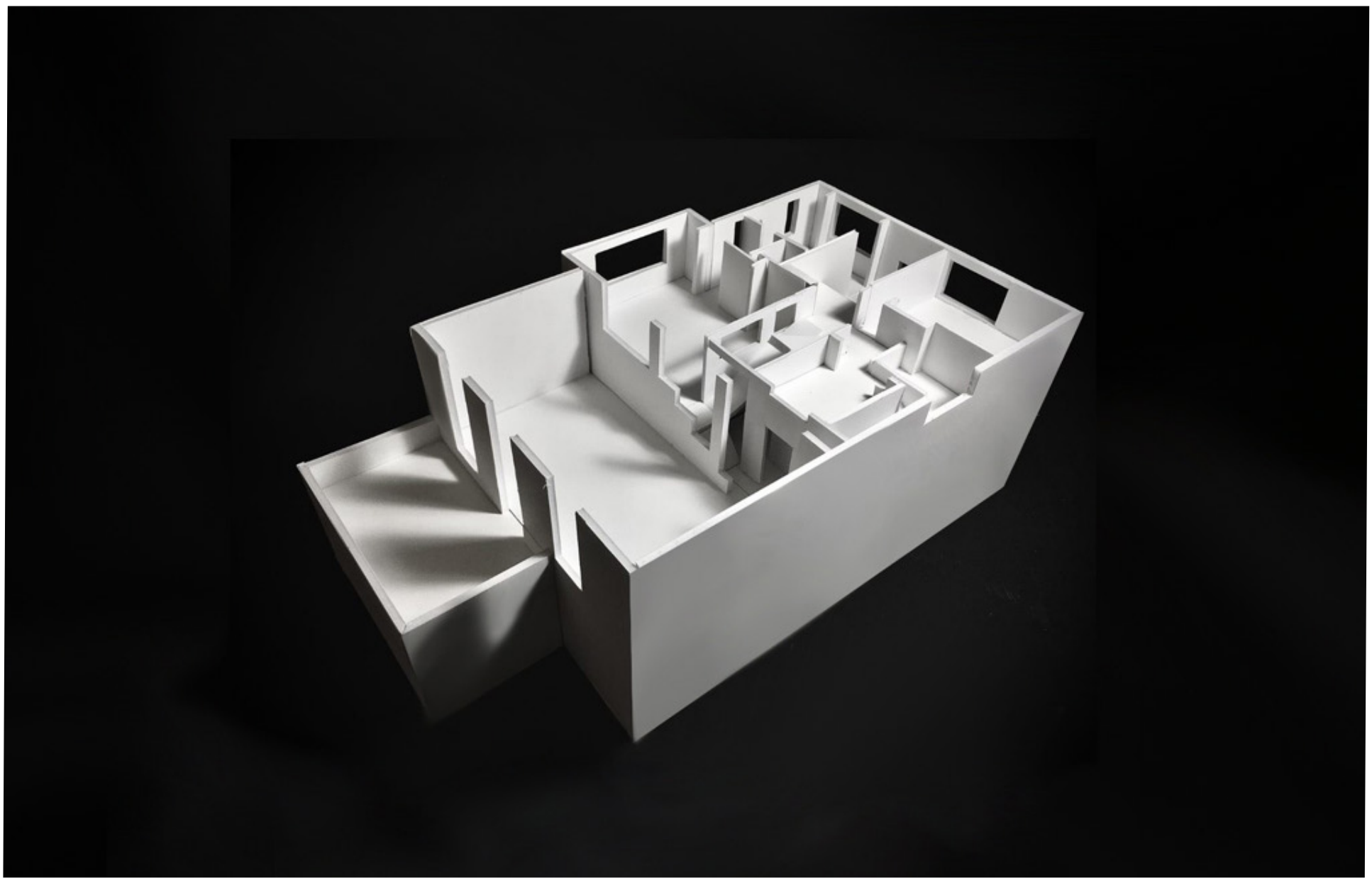


This case study of the Villa Moller by Adolf Loos [1927-1928] hones in on the living space platforms and their relationships. Displayed in red is the vertical partitioning featured in the house which lays the groundwork for the horizontal connections created by the slow stair circulation.

Carrie Tam | tam.c@northeastern.edu | www.tamcarrie.com

Mueller House Model





The Mueller House designed by Adolf Loos is a prime example of the raum plan. Loos expertly partitions the rooms in the house with subtle varieties in floorheight. He then reconnects these spaces with multiple apertures that range in size and shape. Because of this, the subdivided house appears more connected, as seen by this model of the main entertainment floor.

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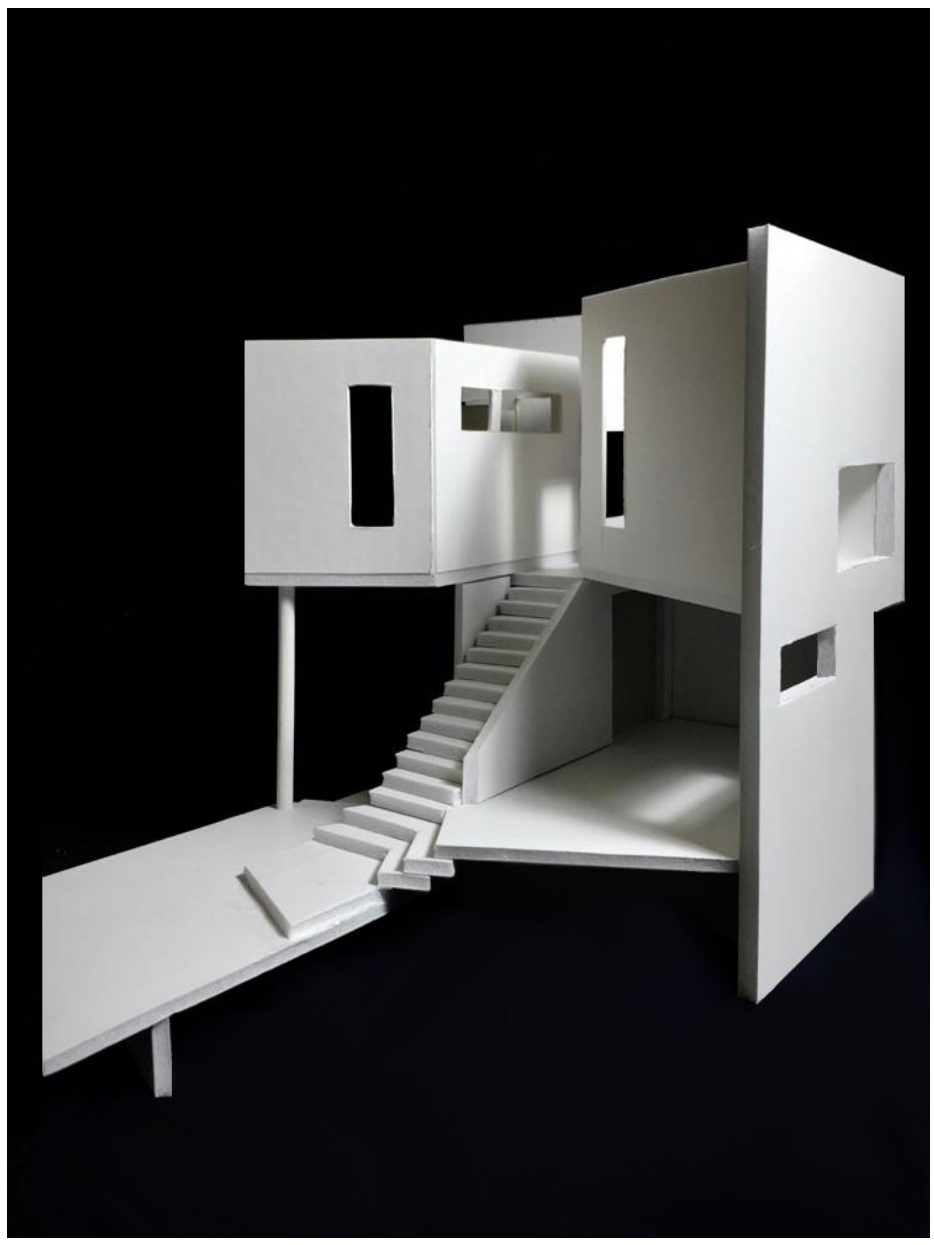
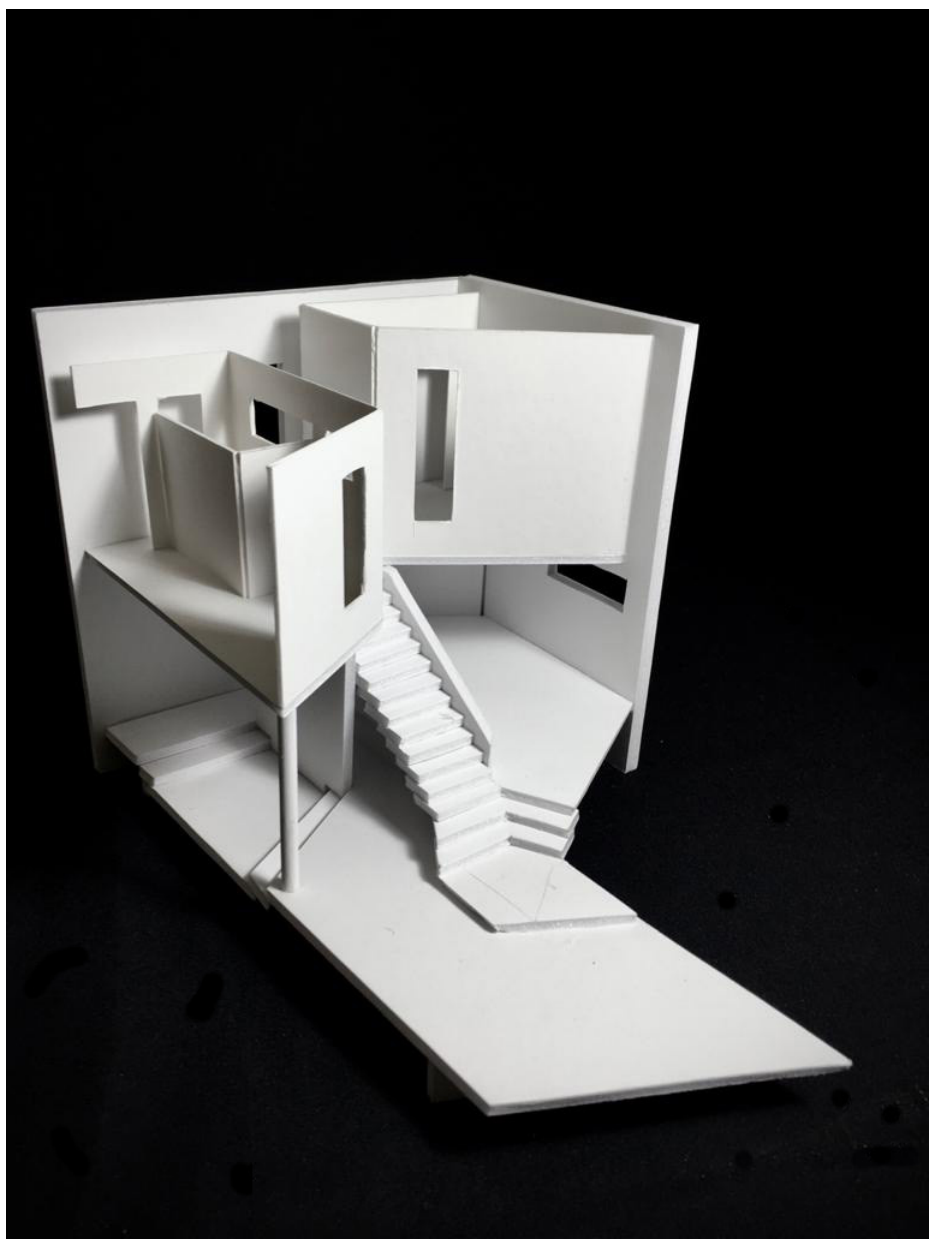
Raum Plan Design





The raum plan is a design tactic that creates spaces with various floor levels. This two-story residence was designed with this tactic in mind, demonstrated through the slight elevation between floorplates. Living space areas like the kitchen and other entertainment areas can be differentiated through these levels.

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Poli House Perspective Drawing

The Poli House, designed by Pezo von Ellrichshausen in 2005, is a case study which can be attributed to the flexibility that occurs in a residence due to the tectonic movement of spaces. The pushing and pulling of different floorplates and walls are empahsized in this perspective drawing, which is based off of a section cut through the largest open living space in the house.

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Pittman Dowell Residence Model

The thick-thin tactic is evident in Michael Matlzan’s Pittman Dowell Residence. Matlzan designed the circulation in the building to bring residents from narrowing hallways to large expanses of space so that the immensity of the area would be palpable. Another feature of the Dowell Residence is the transparency. From one point in the house, a viewer can see up to four other spaces within the residence.

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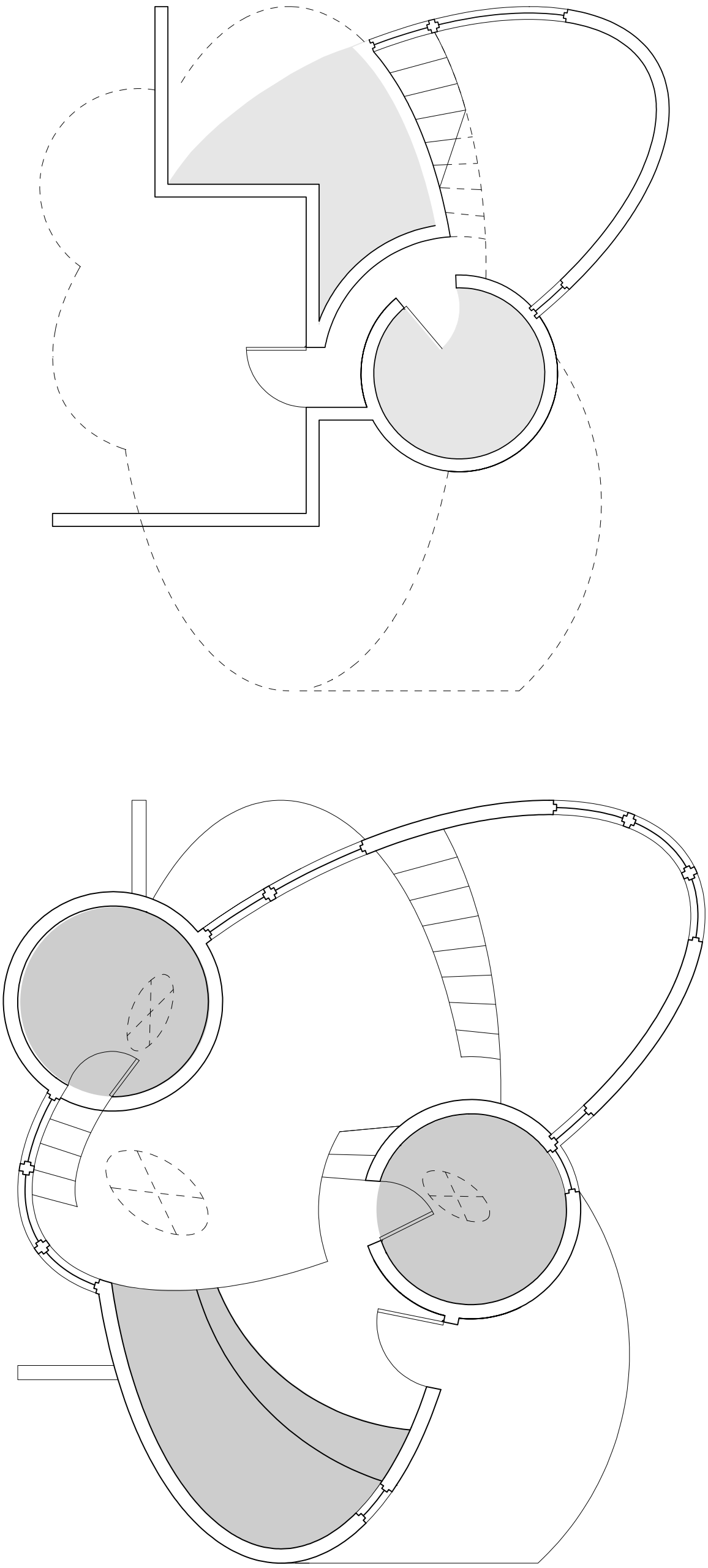
Thick-Thin Analysis Design



Sited on a nine-foot hill, this design explores the intersection of repeating shapes and the varying geometries these collisions can produce at various elevations. The notion behind this design is that the two ellipses are shapes which are allowed to pivot; however, the rotationally symetric circle locks the shapes in place.

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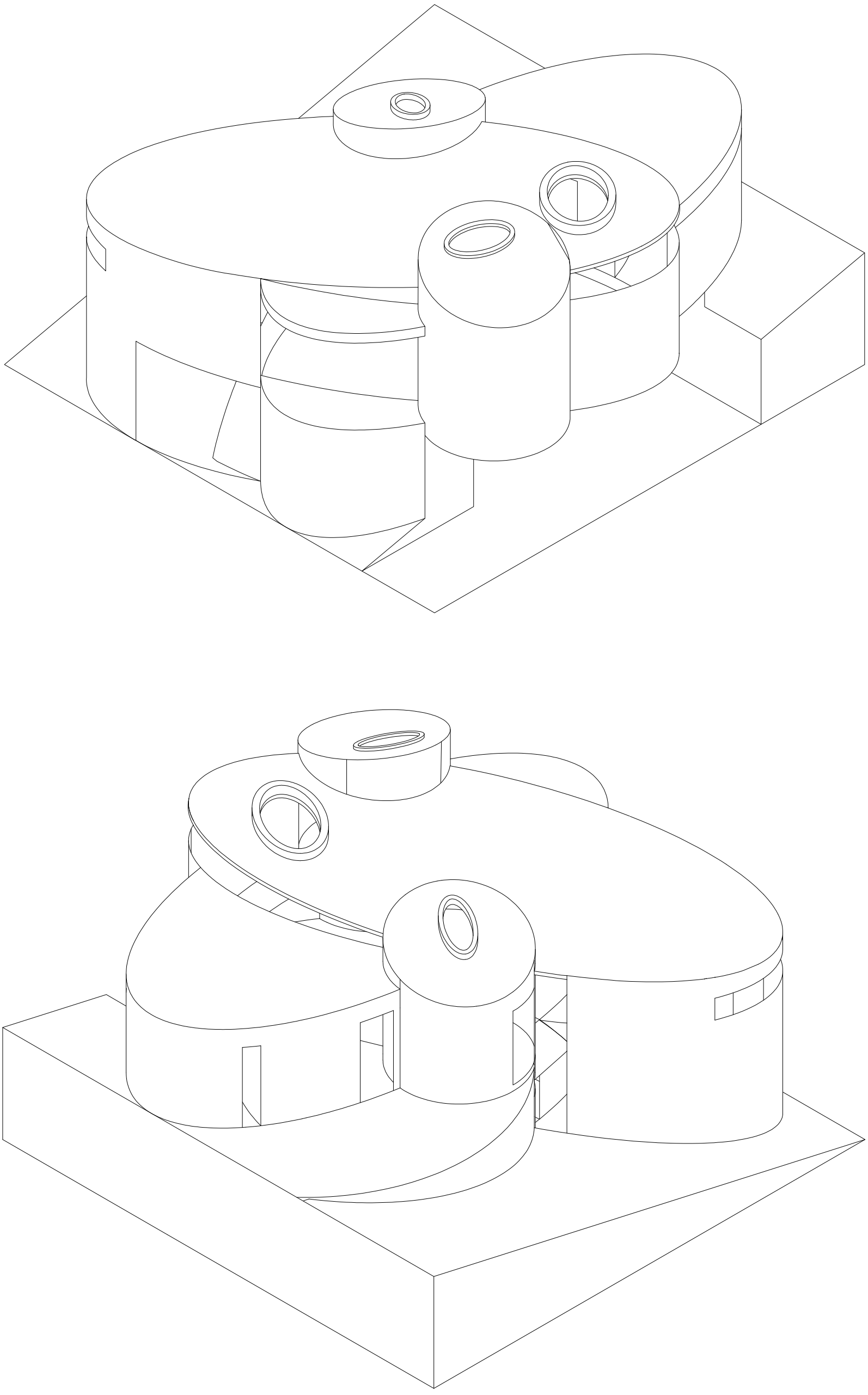
Thick-Thin Analysis Perspective Models



[Top-Left] - Plan of lower level
[Bottom-Left] - Plan of entry level
[Top-Right] - Perspective drawing from the South-West made in Rhino
[Top-Left] - Perspective drawing from the North-East made in Rino

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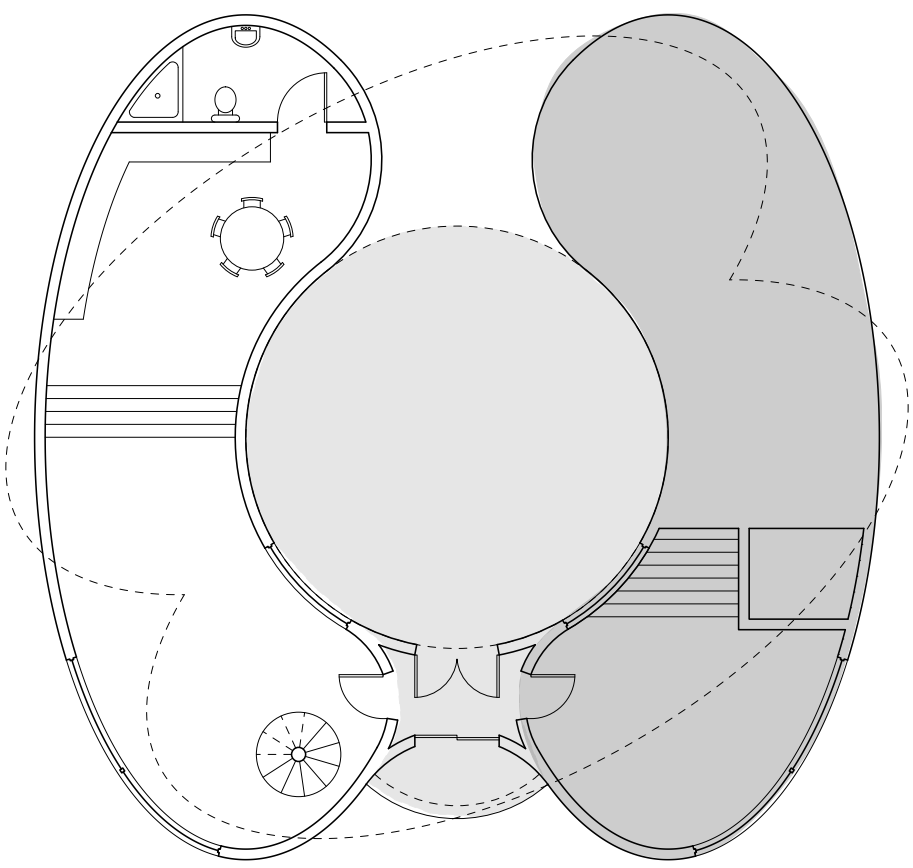
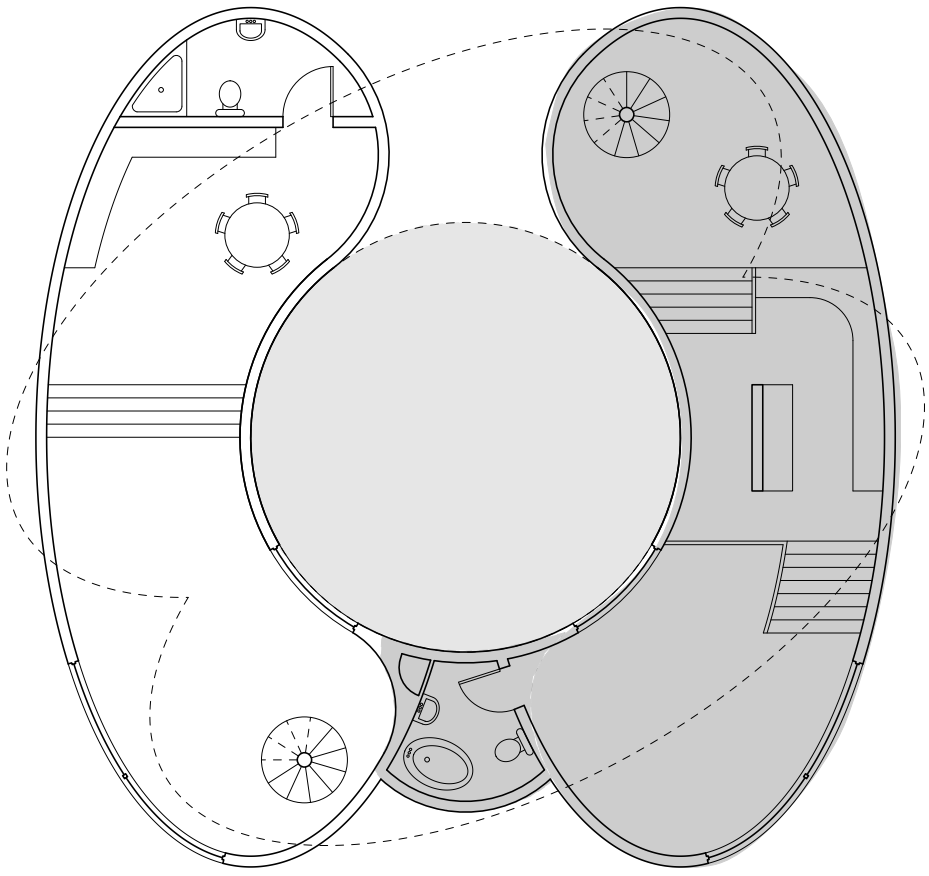
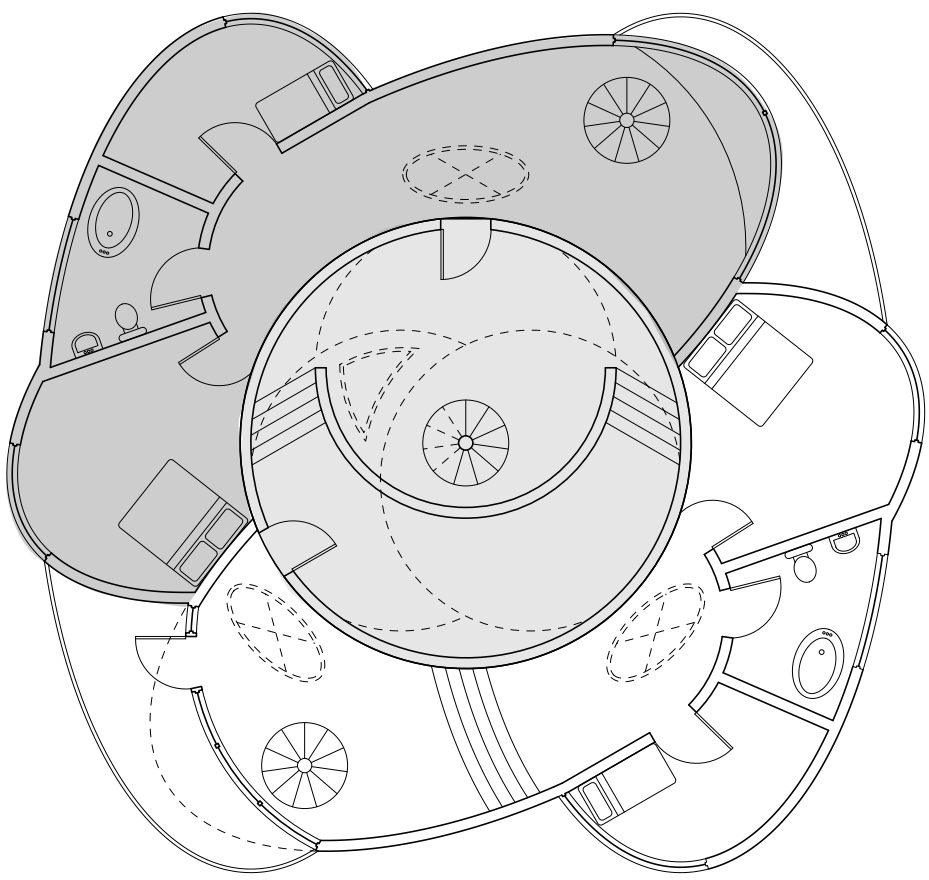
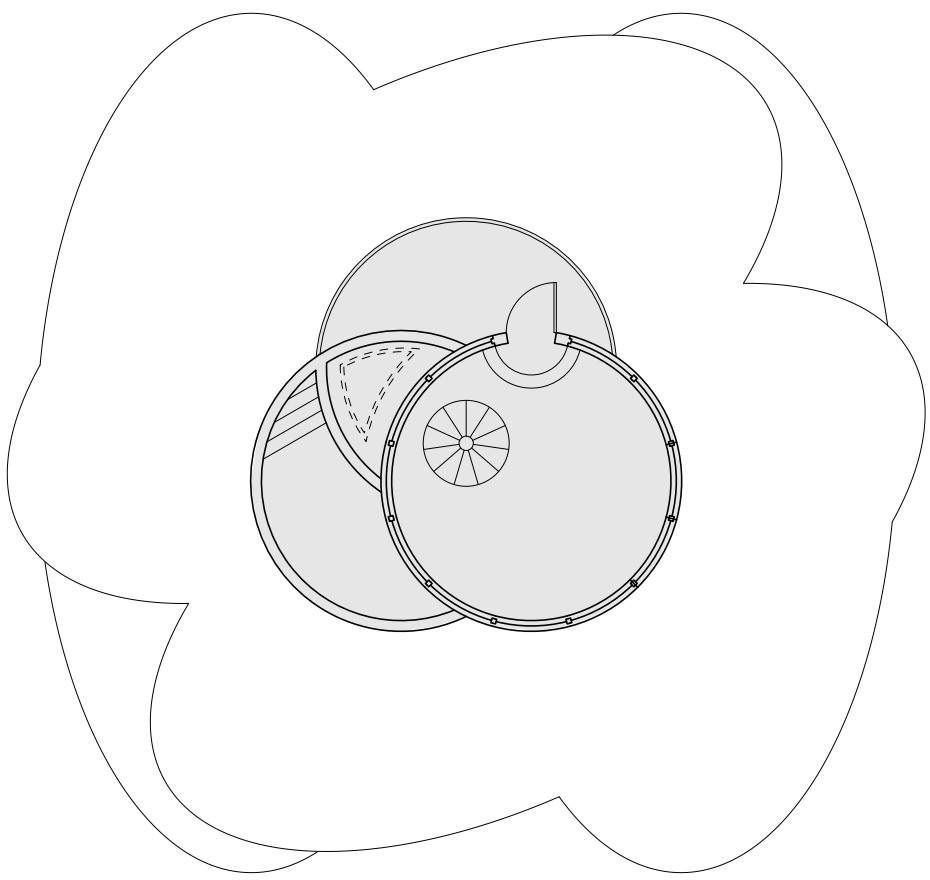
Double House Floorplans



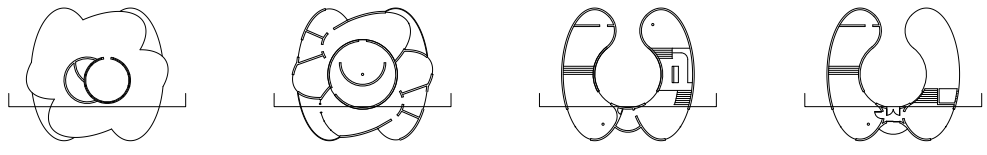


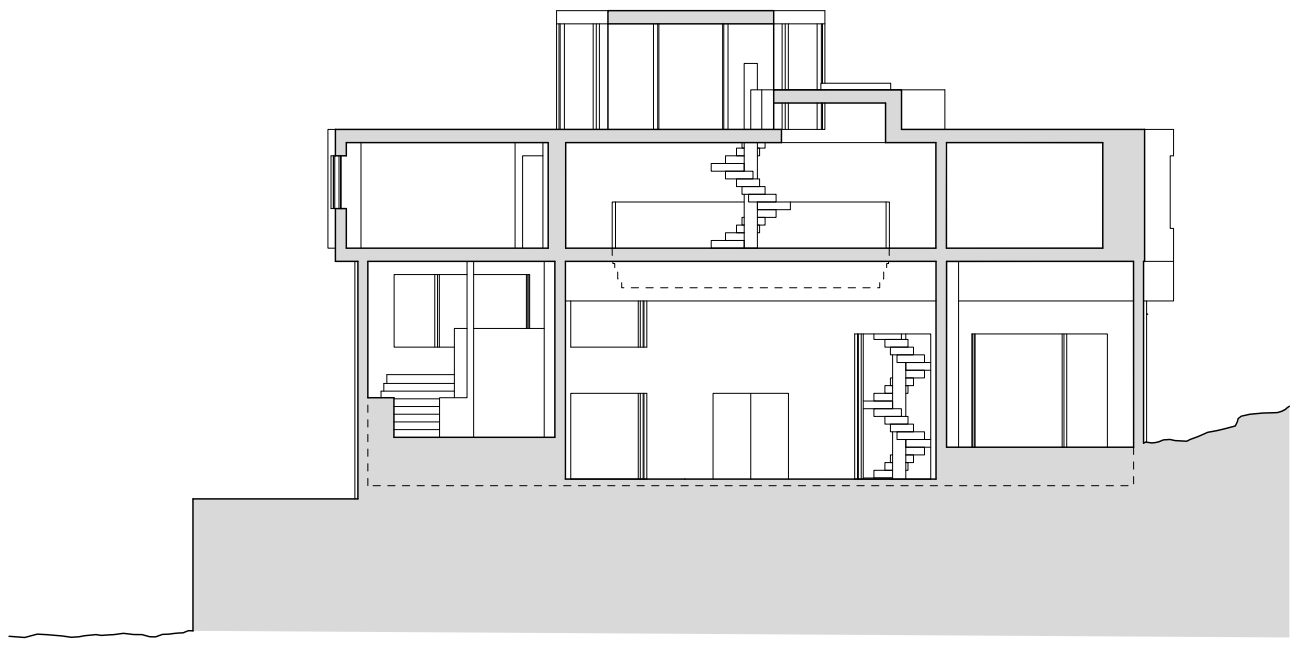


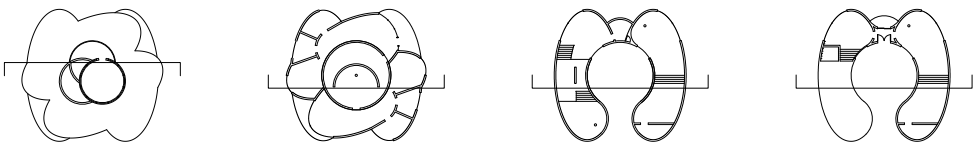


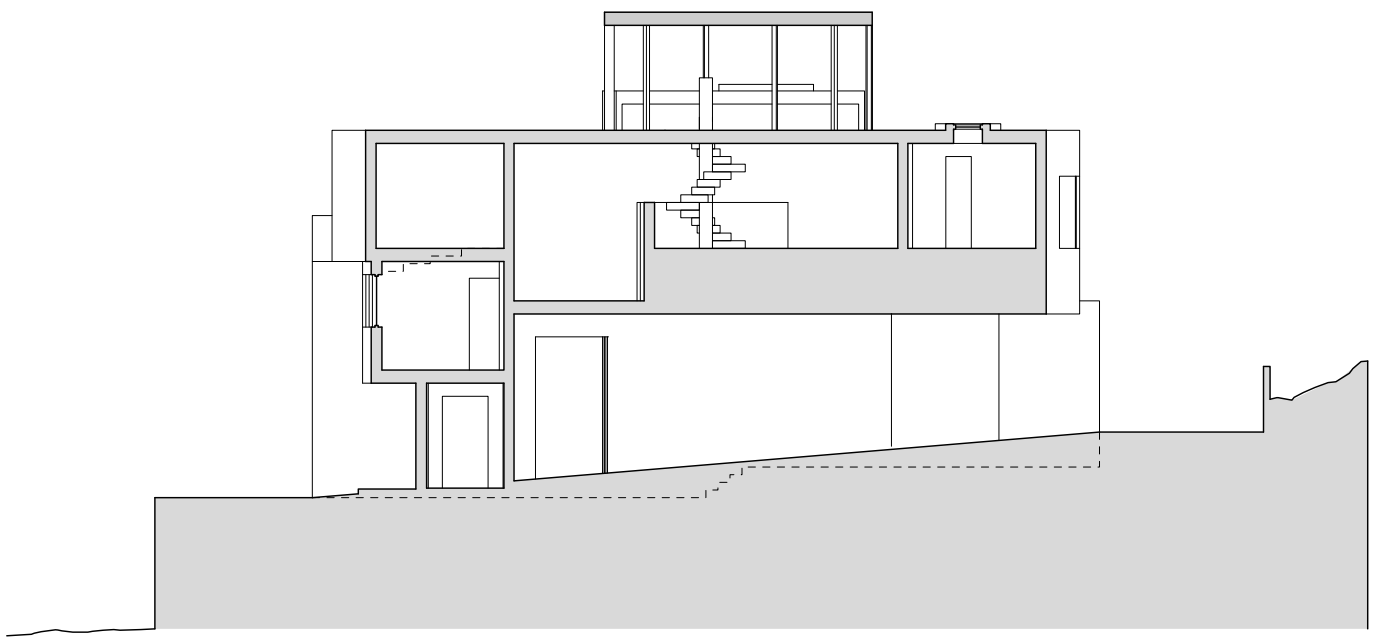
This design is meant to be a development and a doubling of the thick-thin analysis plan. Again, the circles are the stabilizing and locking pieces of geometry in the plan; additionally, they serve as shared living space between the two residents. The ellipses on the other hand are more flexible and malleable personal spaces for the residents and they are allowed to rotate about the center of the design.

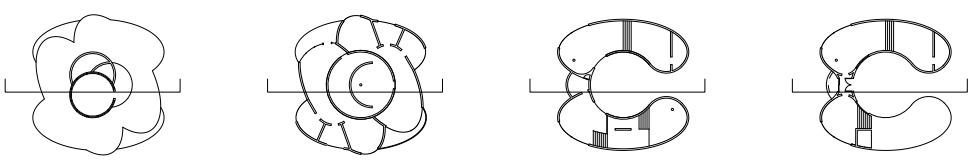
Double House Sections











[Left]
Left to Ritght, Top to Bottom:
Entry Level Plan, Living Space Plan, Bedroom Floor Plan, Rooftop Plan

[Right]
Top to Bottom:
Section A-A', Section B-B', Section C-C'

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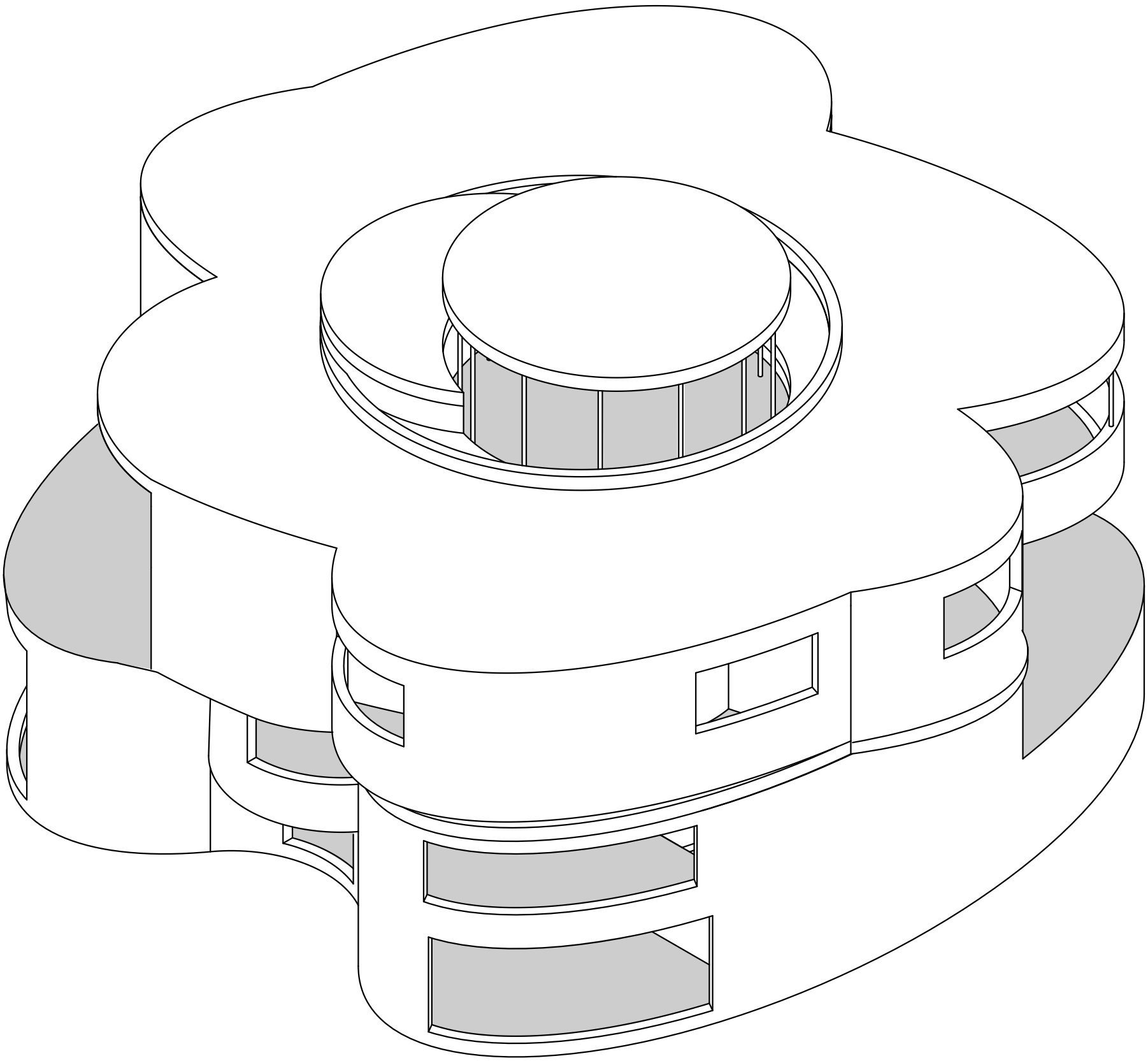
Double House Isometric View



Above is an isometric view of the Double House from the SouthWest made using SolidWorks, picturing all the house components cohesively. The shaded regions are the inhabitable floor areas. The two residences are meant to have similar, but different living areas, as can be represented by the opposing balconies on each side of this isometric drawing.

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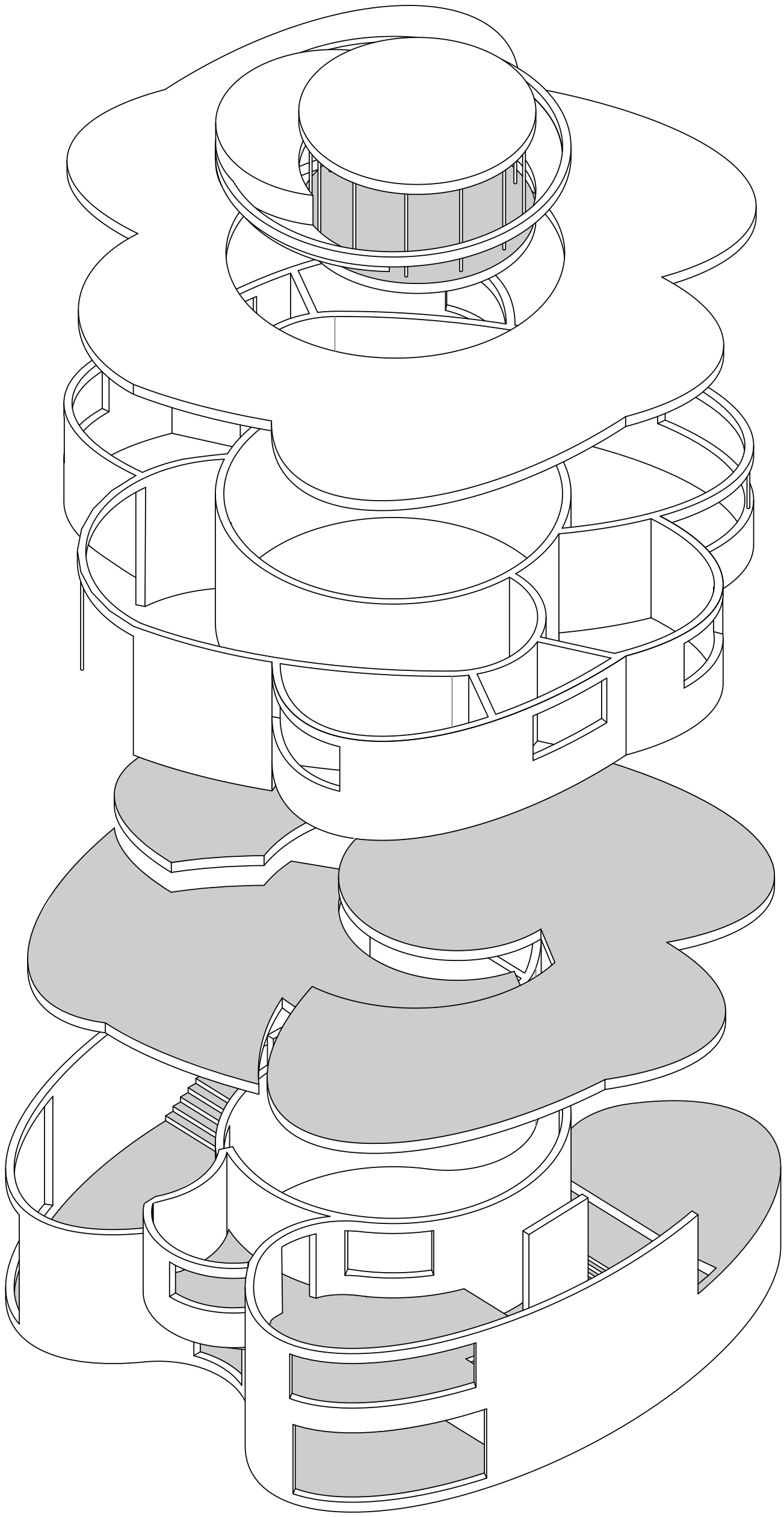
Double House Exploded Isometric View



The same isometric view from the previous page is shown above as an exloded drawing; this is meant to emphasize the relationship between the horizontal floorplates and the vertical comonents which partition the floor. Although the walls divide the space into smaller areas, the territories in the house which share the same horizontal level share, in general, the same purpose.

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