

Design Brief for a Tiny House at Luscher Farm
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Client: Seasonal farmworkers who typically work from spring through fall. Due to housing costs they are currently forced to live far from the farm and drive an hour each way during the early morning and after a long working day. Some of the workers are families and having housing that allows for privacy while giving space for multiple occupants is necessary. Having housing that's affordable and local would allow the workers much more personal time for relaxation or socializing as well as decrease risks from driving while tired.

Site: The site is Luscher Farm in an open field area which could accommodate multiple small dwellings of different designs with this house sitting on the northern side of the group. This house is designed to share a communal kitchen space with the other houses though it could be reconfigured during construction to have its own kitchen at the cost of some living space. While the site is relatively flat the house is also designed to take advantage of any small degree of slope present.

Physical and Mechanical Needs: The house would need electricity and water service and the ground would need to be suitable for a concrete foundation set down into the ground. Solar panels on the house would be able to offset a significant portion of the electricity needed, particularly ventilation.

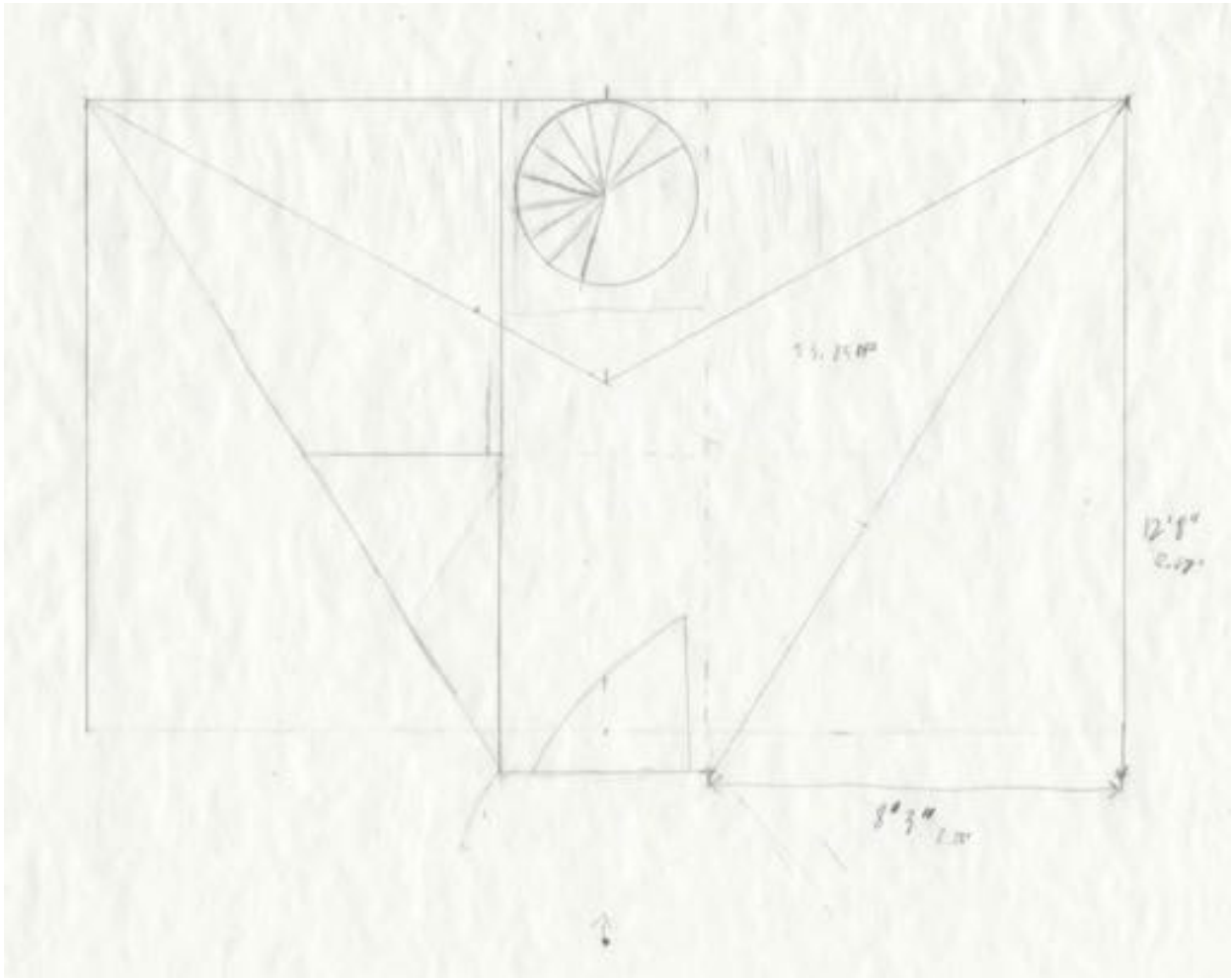
Overall Design: The house is a two story trapezoidal structure with the first floor set into the ground. Total floor space across both floors is approximately 280ft². The front door is on the short side of the trapezoid with the soil banked away from the entry way to slope down gradually towards it. On the exterior the most immediately visible features are the metal roof and light colored walls with large windows on the top floor. The exterior would be planted to absorb rainwater runoff from the roof and to keep it away from the front door area to avoid creating a damp space.

Moving through the front door there is an entry hallway the runs the length of the house with rooms to either side and a spiral staircase at the far end. The ground floor would contain the bathroom and the other room is designed either as a spare bedroom for a child, for sleeping on

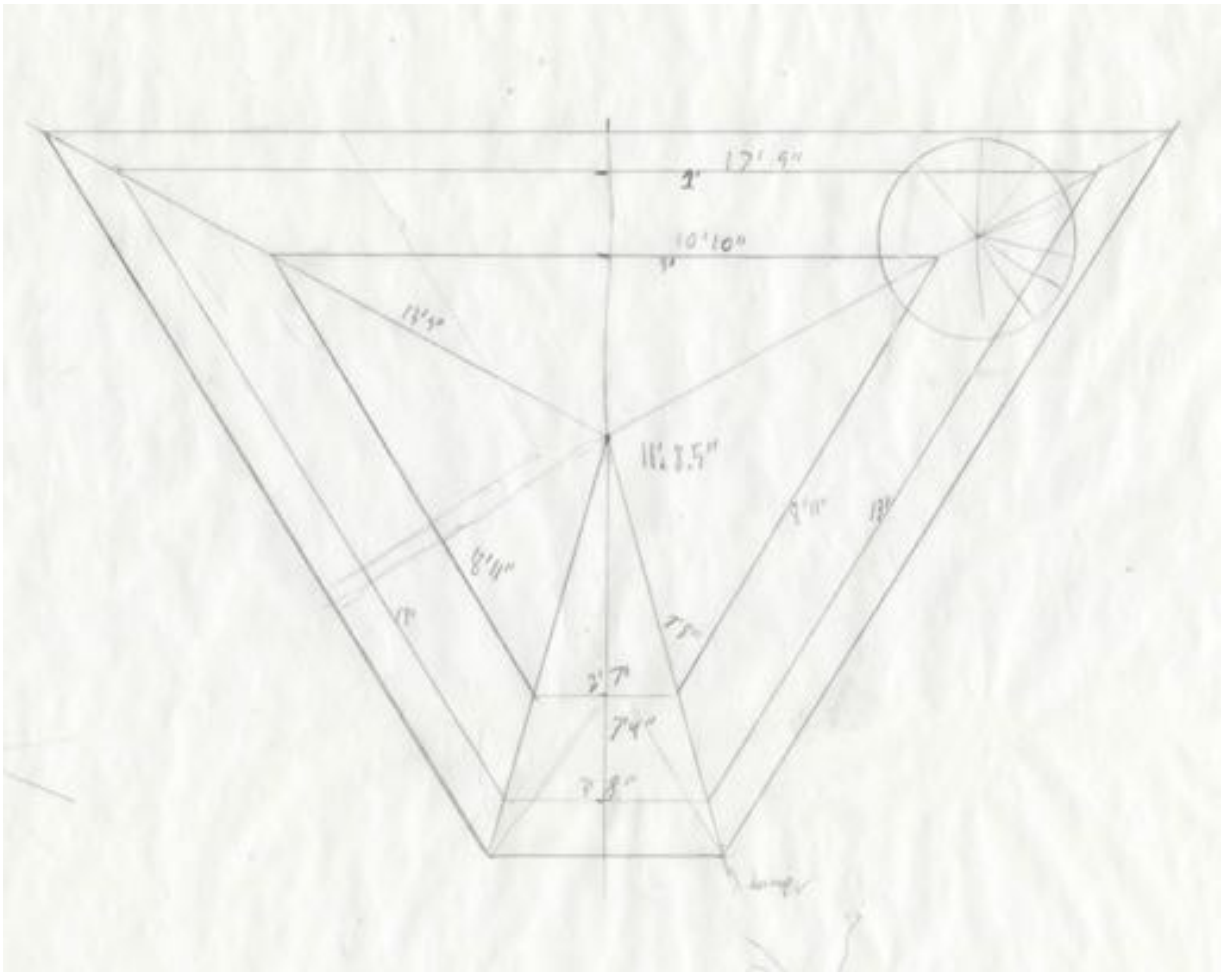
particularly hot nights or storage but it could be converted into a kitchen during construction. The upper floor is a large open space which is partially split by the staircase to form a sleeping area and a living space which could feature a desk built into the corner. The large windows on the upper floor are designed to let in a large amount of natural light, particularly in the morning and evening.

The first floor being partially underground creates a large heat sink for warmth from the top floor with its large windows. With the top floor, while the north, east, and west sides all have large windows, the most sun exposed south side has smaller windows to reduce heating during the summer.

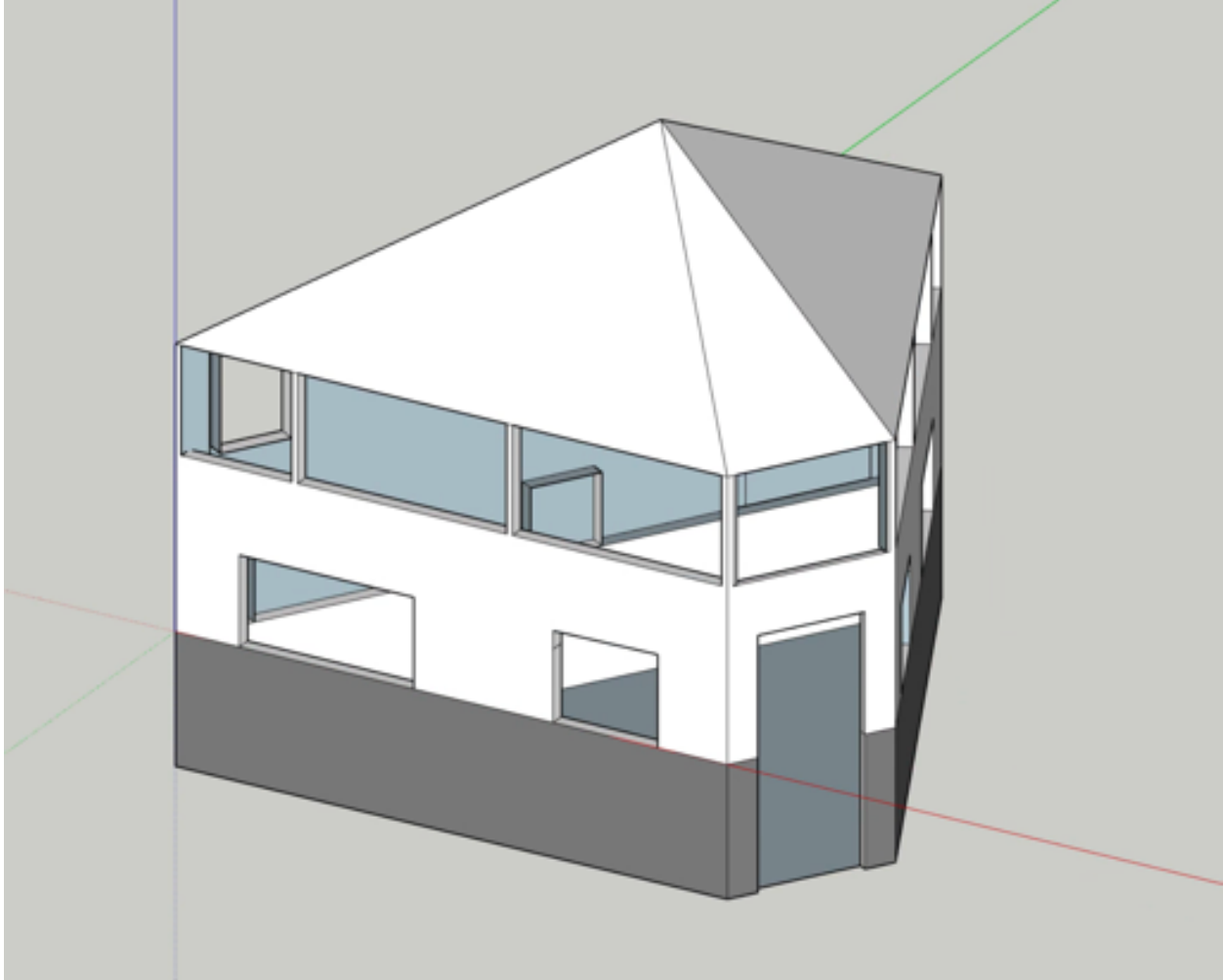
Design Motivation: My main motivation was to break away from normal designs and rectangles and explore another shape. The design initially started as a triangular house then one corner was cut off to form the entryway. The first floor was sunk into the ground at that point to avoid a building that towered over someone near it. That also played well with the secondary motivation of creating a structure that was energy efficient and open as the first floor provided passive cooling.



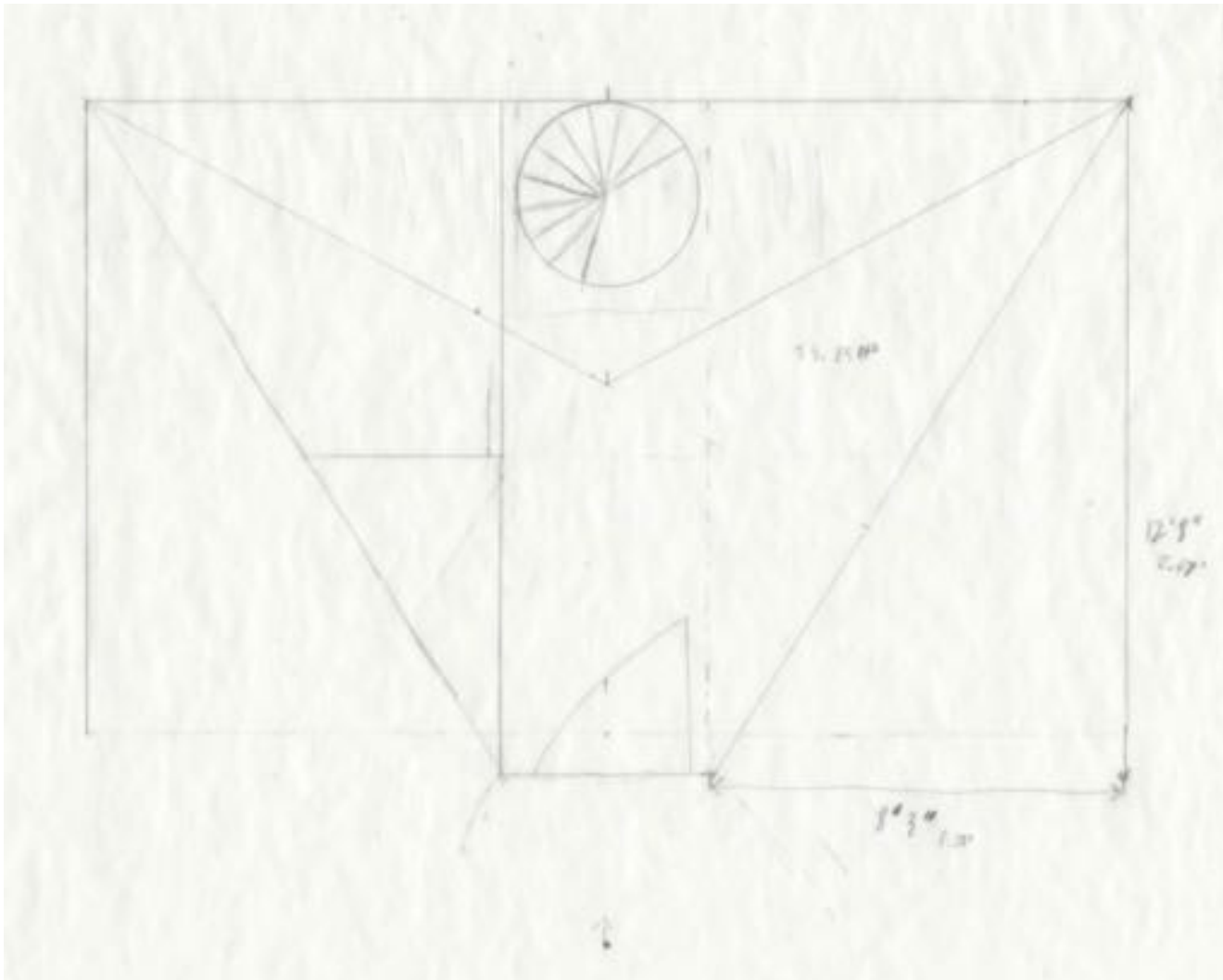
One of the initial floor plan ideas while working through the general shape of the building and what interior space would be available.



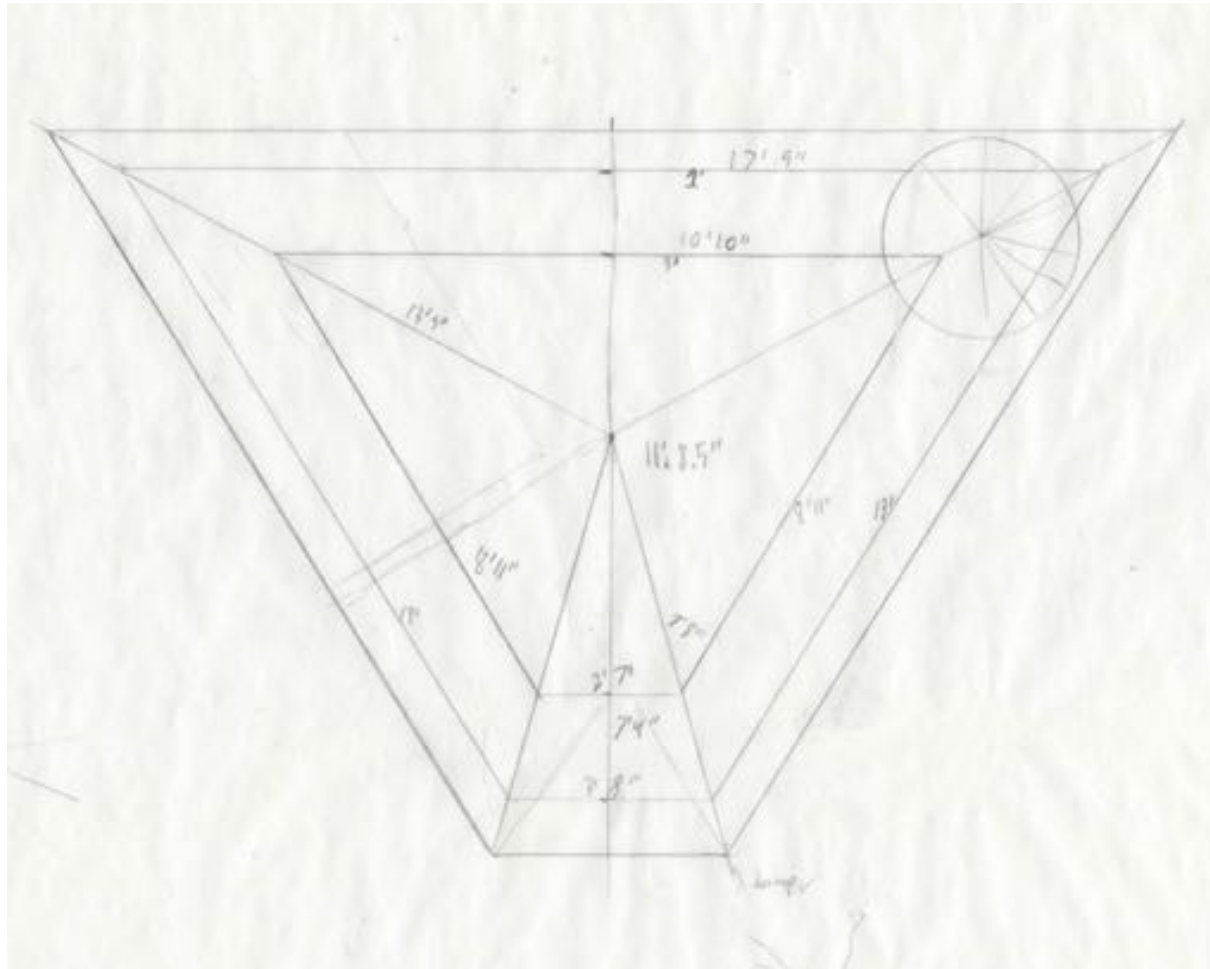
A second floor plan testing both an idea of relocating the staircase to the corner and calculating the available ceiling height. The top floor ceiling is sloped but there needs to be enough ceiling area over 7 feet to meet building codes for a sleeping area. Part of this issue was what led to the large windows which allowed for the same openness and added height without needing a very sharp roof point.



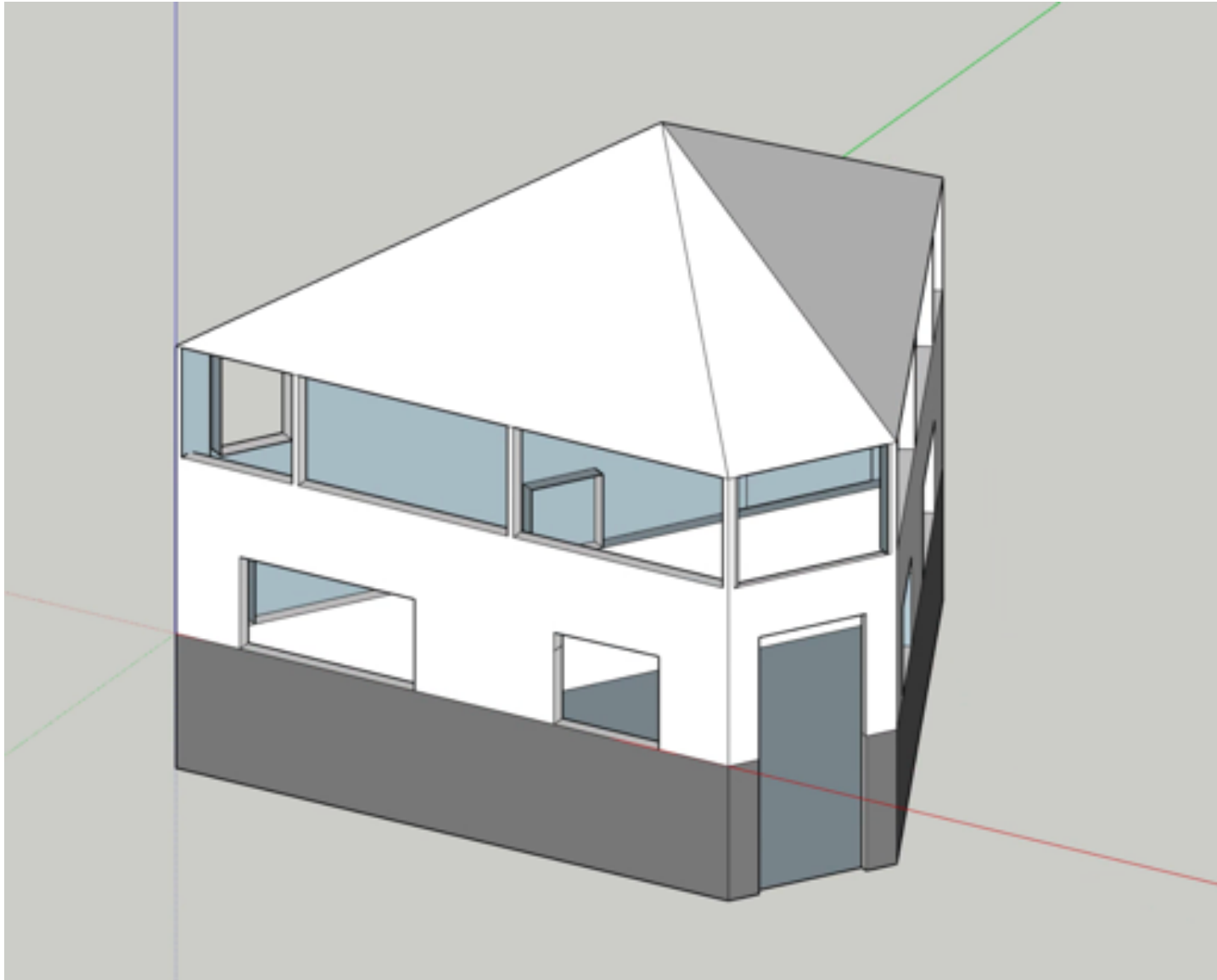
I moved to working with SketchUp when I realized that my skill at perspective drawings of anything other than 90 degree angles was not at all up to the task.



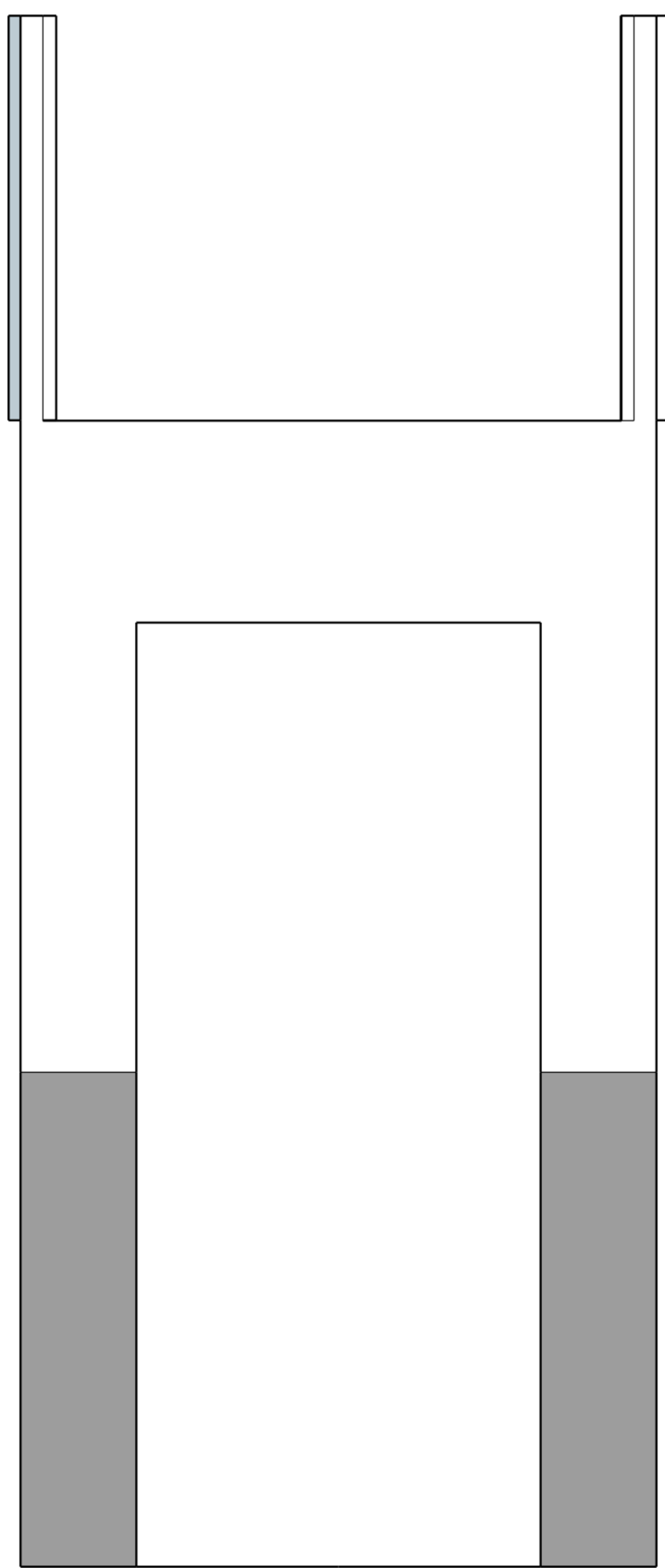
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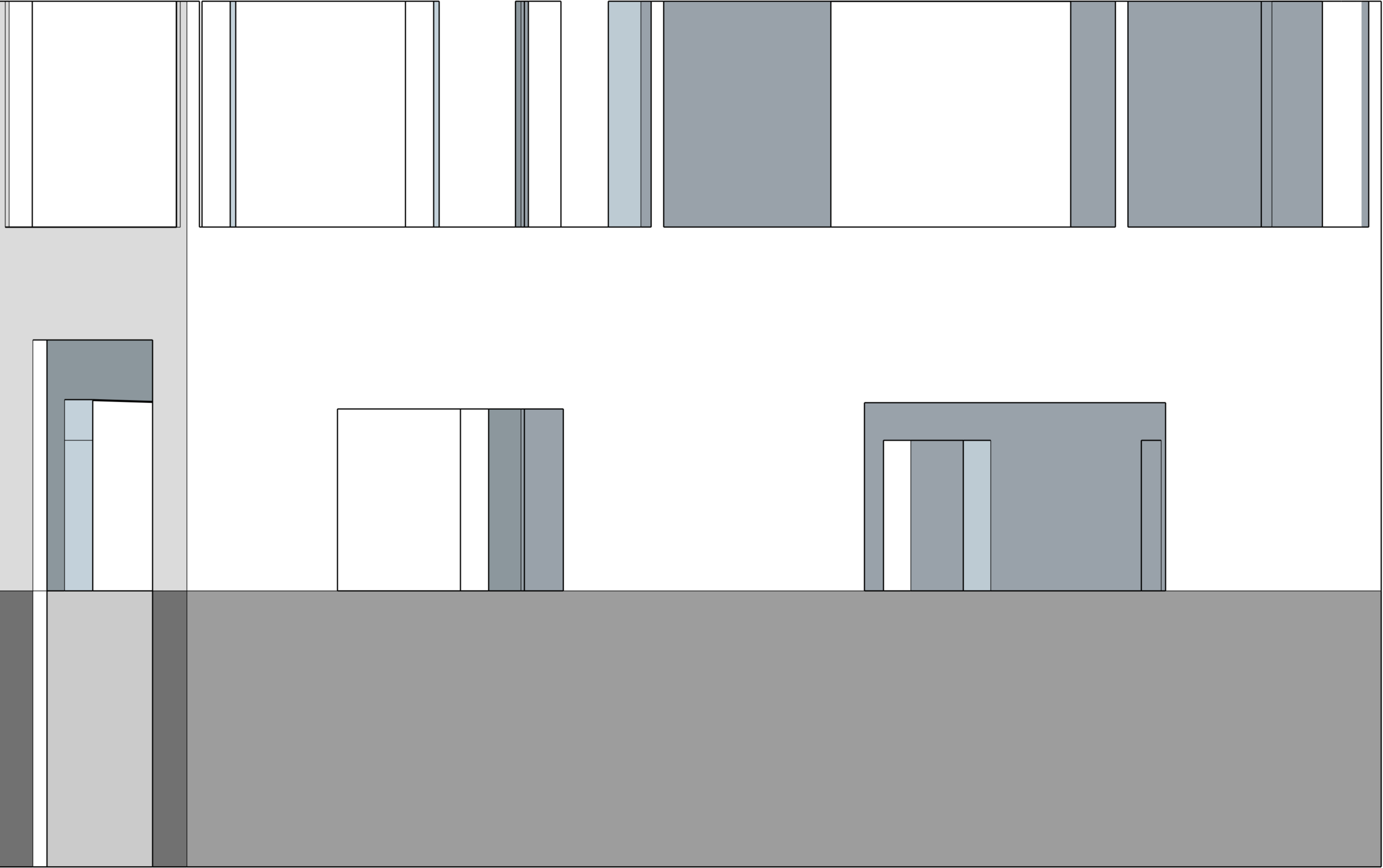


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SCALE BASED ON A PARKING SPACE- 10' WIDE X 20' LONG

