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ANALYSIS OF THE PROBLEM

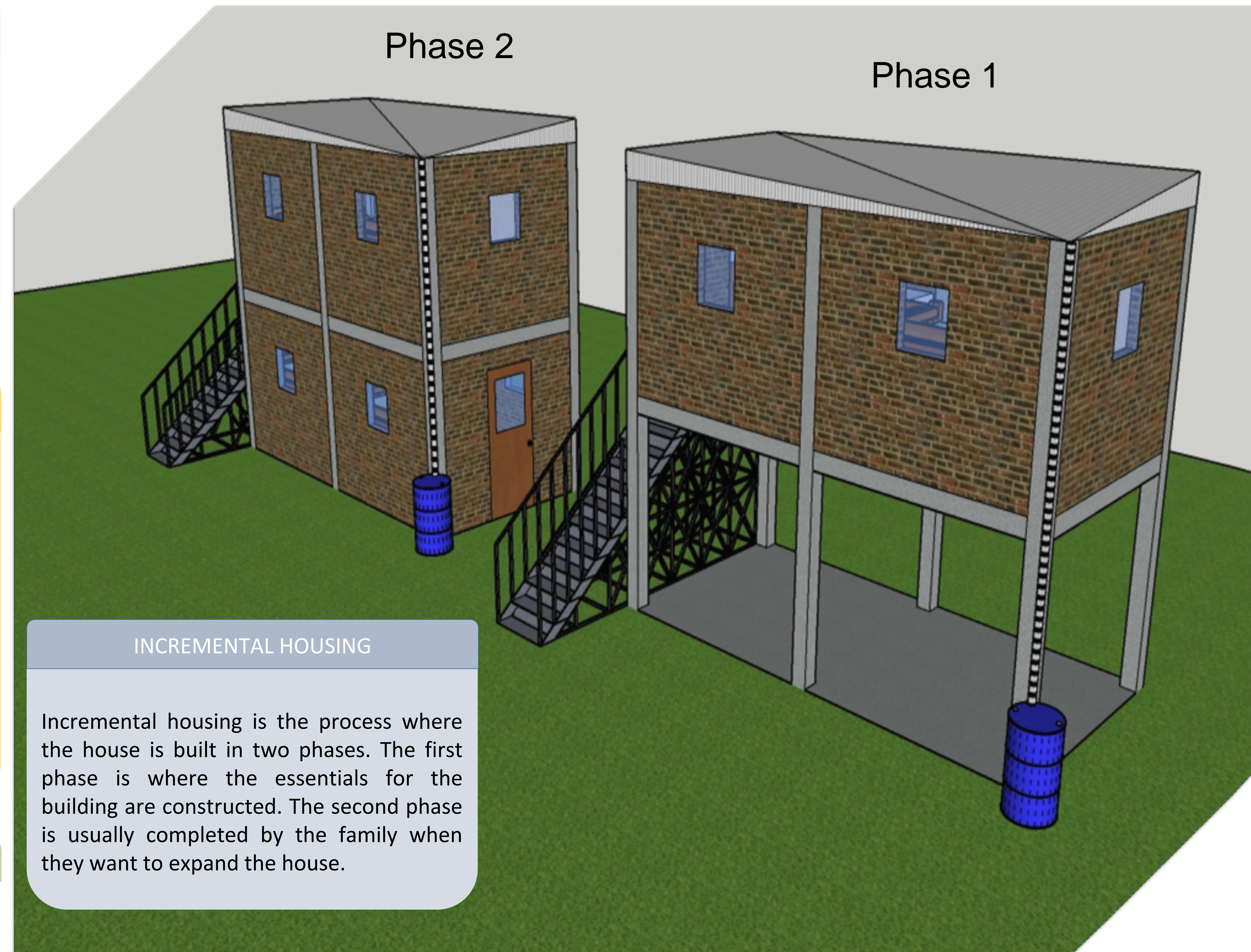
- After suffering the deadly 2015 earthquake, relief camps are now turning into slums.
- Addressing slum conditions in Kathmandu Nepal.
- Slums face poor sanitary conditions and planning which leads to flooding and the spread of disease.
- Lack of safety leads to crimes in these areas making families feeling unsafe.

BACKGROUND

- Rapid urbanization: poor planning and increase in social gaps.
- Struggling with poor infrastructure and lack of resources.
- Rise in city population:
- Poor infrastructure couldn't handle population forcing poor people to build anywhere.
- Environmental changes, Kathmandu once known as city of wood due to expansion wood has become limited
- Bagmati river sadly turned into a sewer now highly polluted.

OBJECTIVES

- Transform the slum areas into safe and affordable areas for residents and families.
- Provide proper housing that can also protect families from natural elements like rain and earthquakes.
- Since Kathmandu suffered the deadly 2015 earthquake, ensure our houses are also earthquake safe.
- Provide families proper sewage to ensure and clean environment.
- Ensure houses also get power from the city.
- As an alternative, including gravity light.

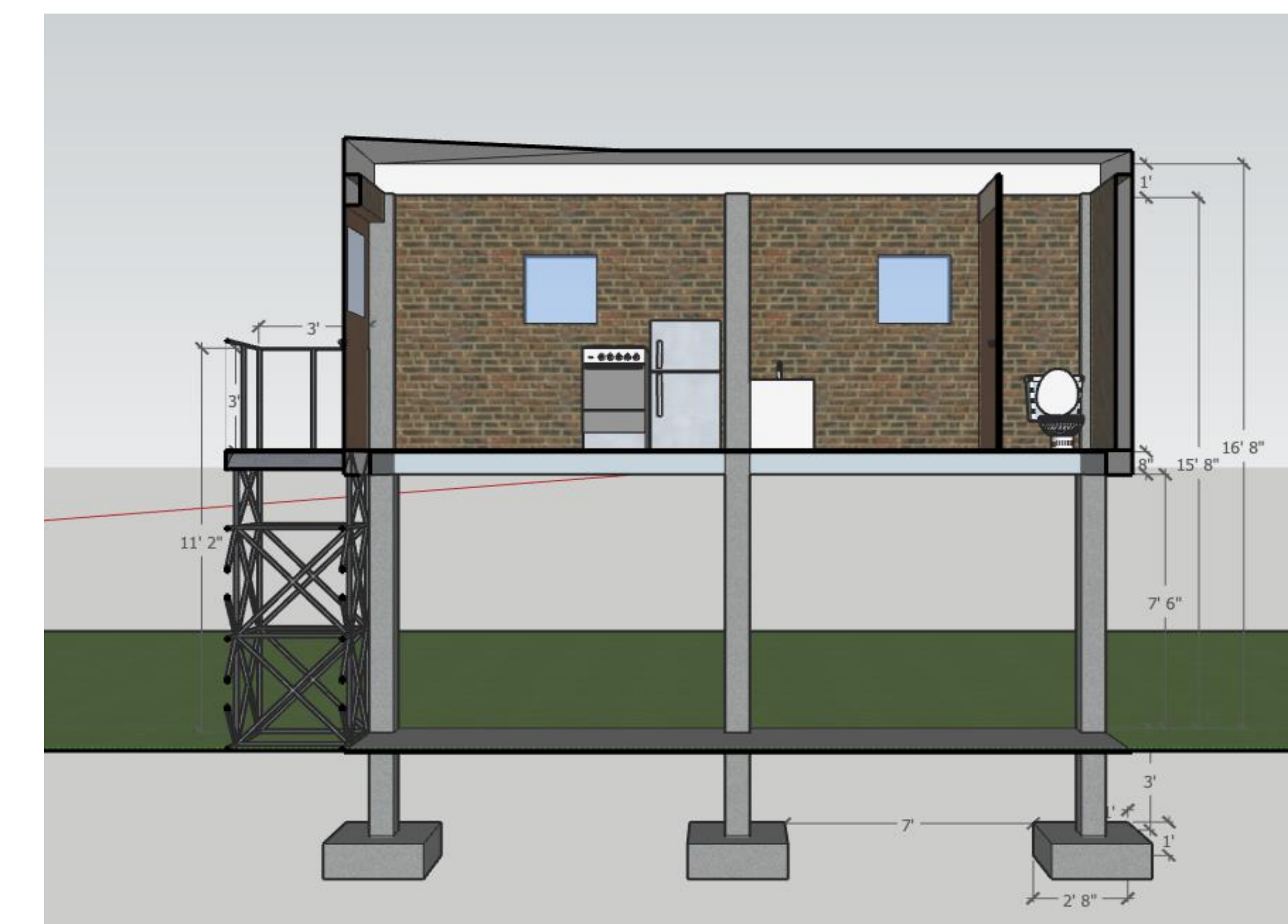


INCREMENTAL HOUSING

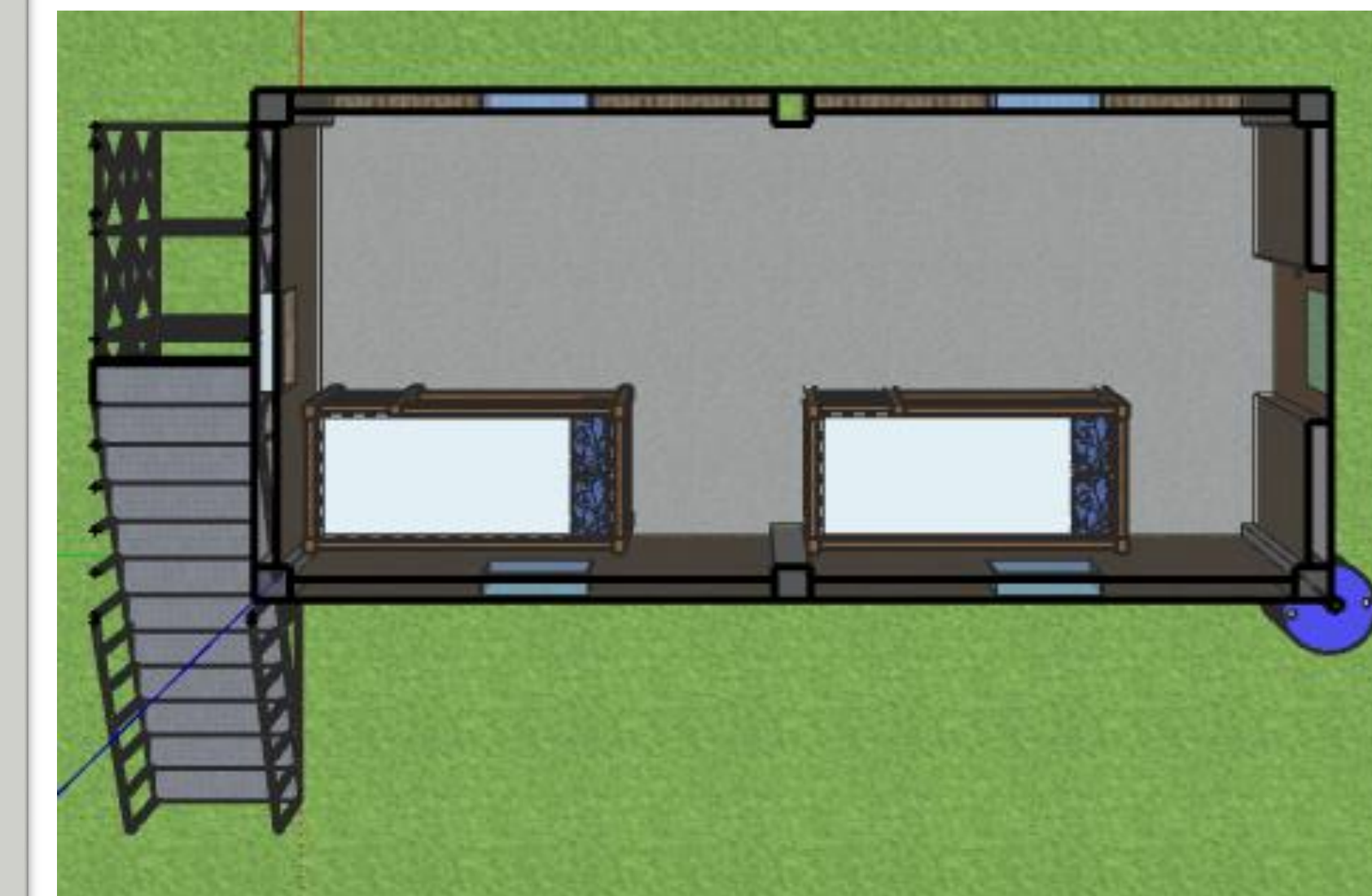
Incremental housing is the process where the house is built in two phases. The first phase is where the essentials for the building are constructed. The second phase is usually completed by the family when they want to expand the house.

DESIGN

- Participatory design, families can add first floor
- Rain collection system
- Reinforced concrete framework
- Sheet metal roof is light and safer in an earthquake
- Brick walls are strong and provide good support for earthquakes
- Estimated cost, \$740
- LED which is powered by sandbag or other weight and the force of gravity provides power as the weight falls.



Completed First Floor



Second Floor

