

Project Report

The BYU Solar Decathlon team has named the house that we have built the Triple Dome Home. The Triple Dome Home is three connected concrete domes, that are transportable and can be taken anywhere a crane can be placed. The team chose the Triple Dome Home because it embodies the three things The team wanted our home to be known for, sustainability, structure, and our unique story.

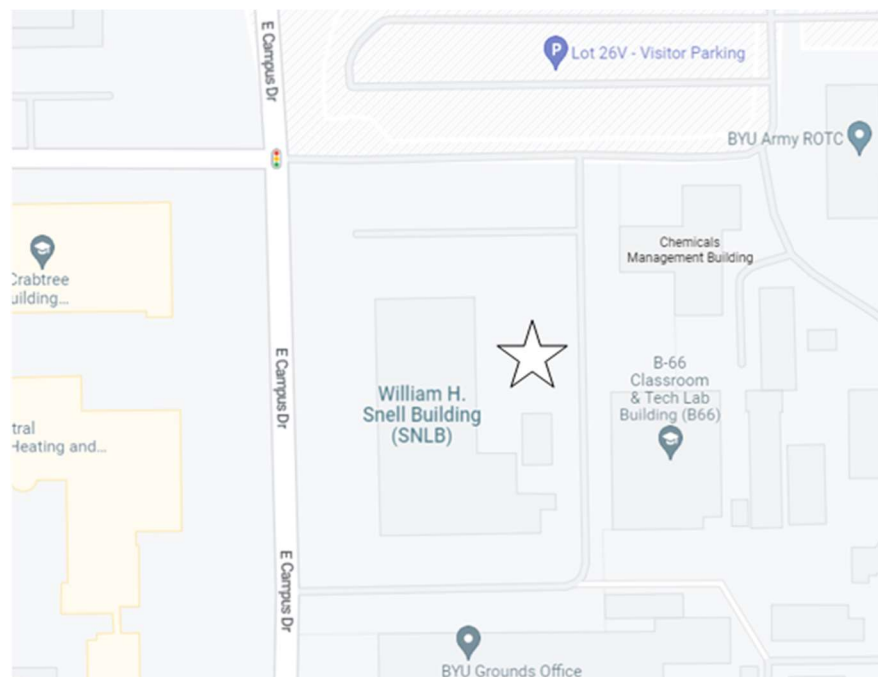
Design Philosophy

Our main goal behind the design of the house was to address energy consumption during the use of the building's lifespan. When 40%-60% of your energy load comes from your heating and cooling loads, the team made a conscious decision to focus the design of the home on maintaining the temperature within the home. The local Utah area is filled with ample home seekers, with very few starter home options, The team has sought to remedy this with our home, that is more of a starter home in size, that will save the end users money with its energy efficient abilities. We aim to target a young family that cares about sustainability and that is looking to get into a home.

Construction Site Details

The home was built on Brigham Young University Campus, right in between the B66 and the SNLL buildings. The Authority having jurisdiction is Iron County Utah, they have told us that as long as we get a third party do the inspections, and we maintain contact with them, then they will pass the house as long as the inspections pass. We have had the inspections and are about to have our final inspection to pass the house off as livable.

The construction site has been in a fenced off area right next to classrooms and guest parking. We have had a lot of student engagement, and volunteers come and donate their time to help build the Triple Dome Home. Having the home be built on campus has been helpful and allowed for a lot of student engagement.



Construction Partner Details

ESAI Designs

ZZ Consulting

BYU

South Industries

Owens Corning

Concrete Onsite Express

Sunniva

Artistic Marble and Granite

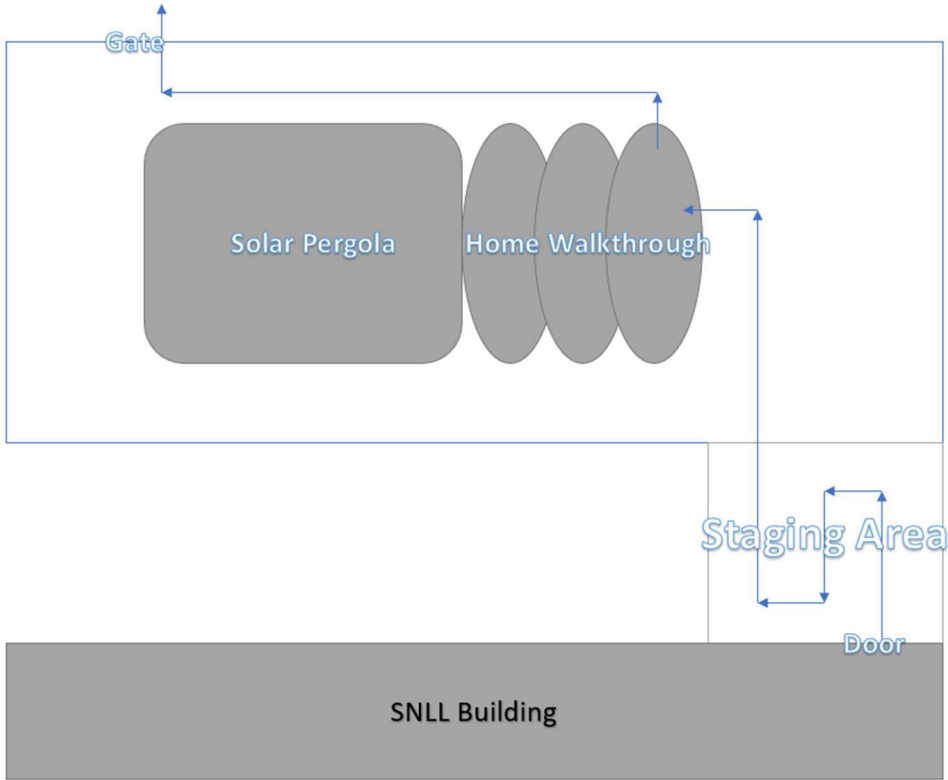
Caesarstone

Pella

Gunther's Heating and Air

SPAN

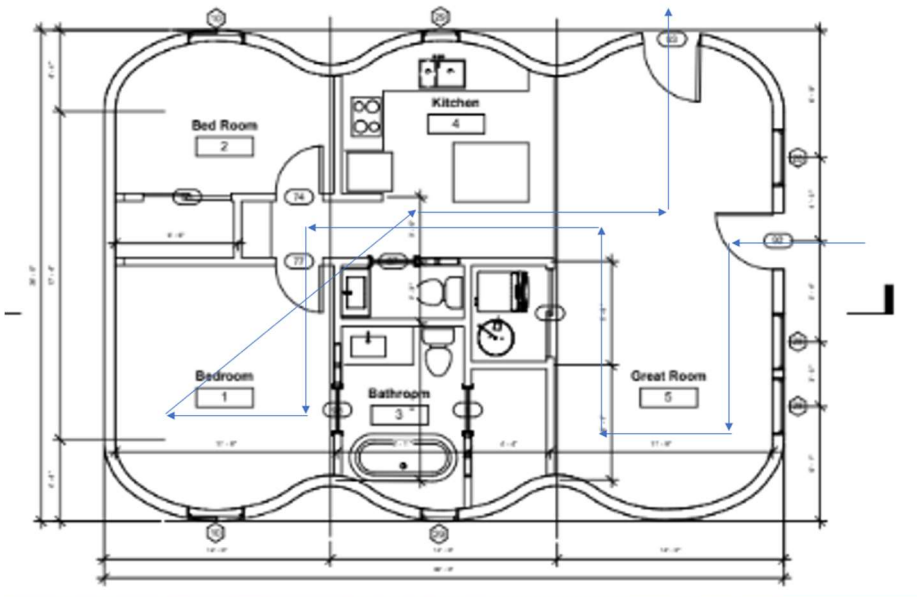
Summary of Public Exhibit and Community Exhibition Strategies Planned



The Public Exhibition tour route will proceed as indicated on the pictures here below.

We plan on having booths for our students to teach different aspects of sustainability to the touring public, and for the teams sponsors to put up information about their companies.

We plan on having a natural ramp up to the front of the house and off the side door. This will allow us to have individuals more easily in and out of the house with a more natural feel.



Future plans for the house

As for now because the team is showing off the home here at BYU for the parade of homes and is taking the home to Orange County next fall, we haven't started talking about where the Triple Dome Home will have its final destination. We will be looking for a buyer, contingent on that they will be able to pay for the structure and that they have a place for us to put the house. The BYU Solar Decathlon Team plans on doing this project again next year and can take the funds raised from selling this project into the next house we build. We have a few individuals who have expressed interest in buying the house, but we have yet to have definitive conversations about a price, and a buyer.

Final Details for the team's Community Exhibition

The team plans on showing off the house to the general public from April 4th to the 18th. We might extend the showings of the house a few more days so those who have traveled here for graduation can see the house and experience the Solar Decathlon for the first time ever here in Utah. Our house is just south of the main guest parking lot here on campus, and all of our guests can use the parking lot to park their cars before they come see the house. We are also located a block away from public transit, which will allow anyone to travel by rail and then bus from anywhere along the Wasatch mountain range, all the way up to Logan, Utah. We plan on opening the house up for visitors at 9:00am thru 6:00pm Mountain Standard Time. Having the house open on 9th and the 16th will be a challenge for multiple reasons. Primarily BYU is a religious university and Sunday is the sabbath day. We will need to reach out and see how much desire there is for our home, however many stores are closed on Sunday in the area, and most people stay with their families and don't do much out and about. We will need to have a conversation with NREL to talk about the requirement to be open on Sundays moving forward.

Summary of Online and Public Exhibition Success

We have received a few papers and videos by our universities paper the Daily Universe. The open house has yet to start, and we are working to get the news out through the social media and the through word of mouth. We had our students on a podcast done by the Utah Valley National Association of Home Builders on the 28th of March 2023. As we have yet to have the open house, we haven't had any success with the breakthrough.