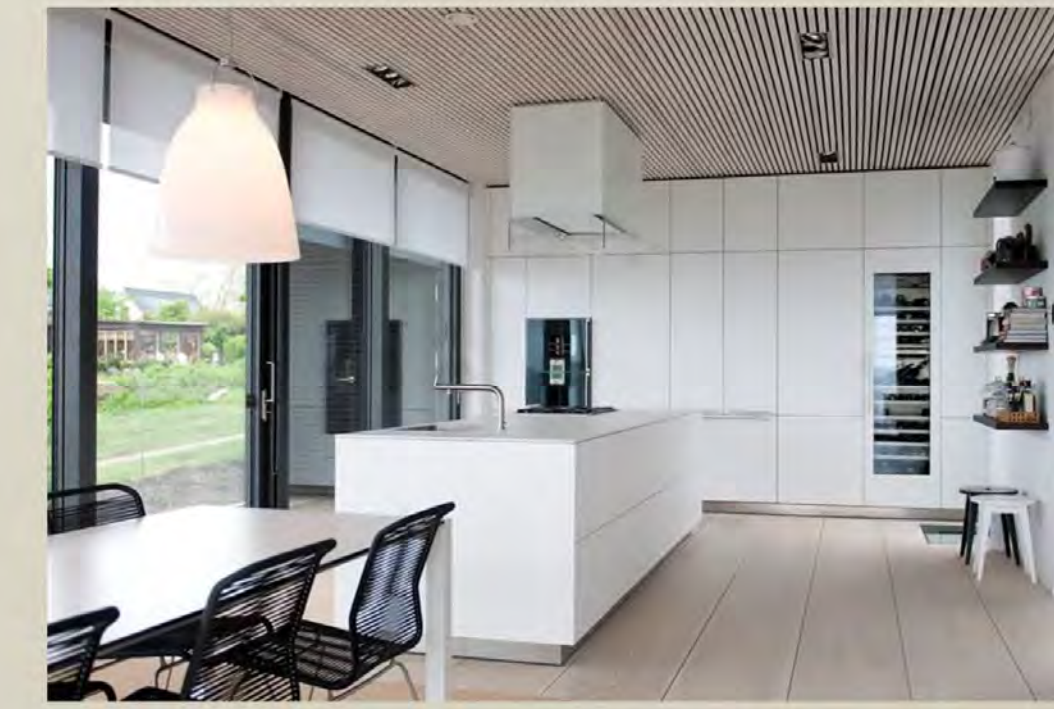
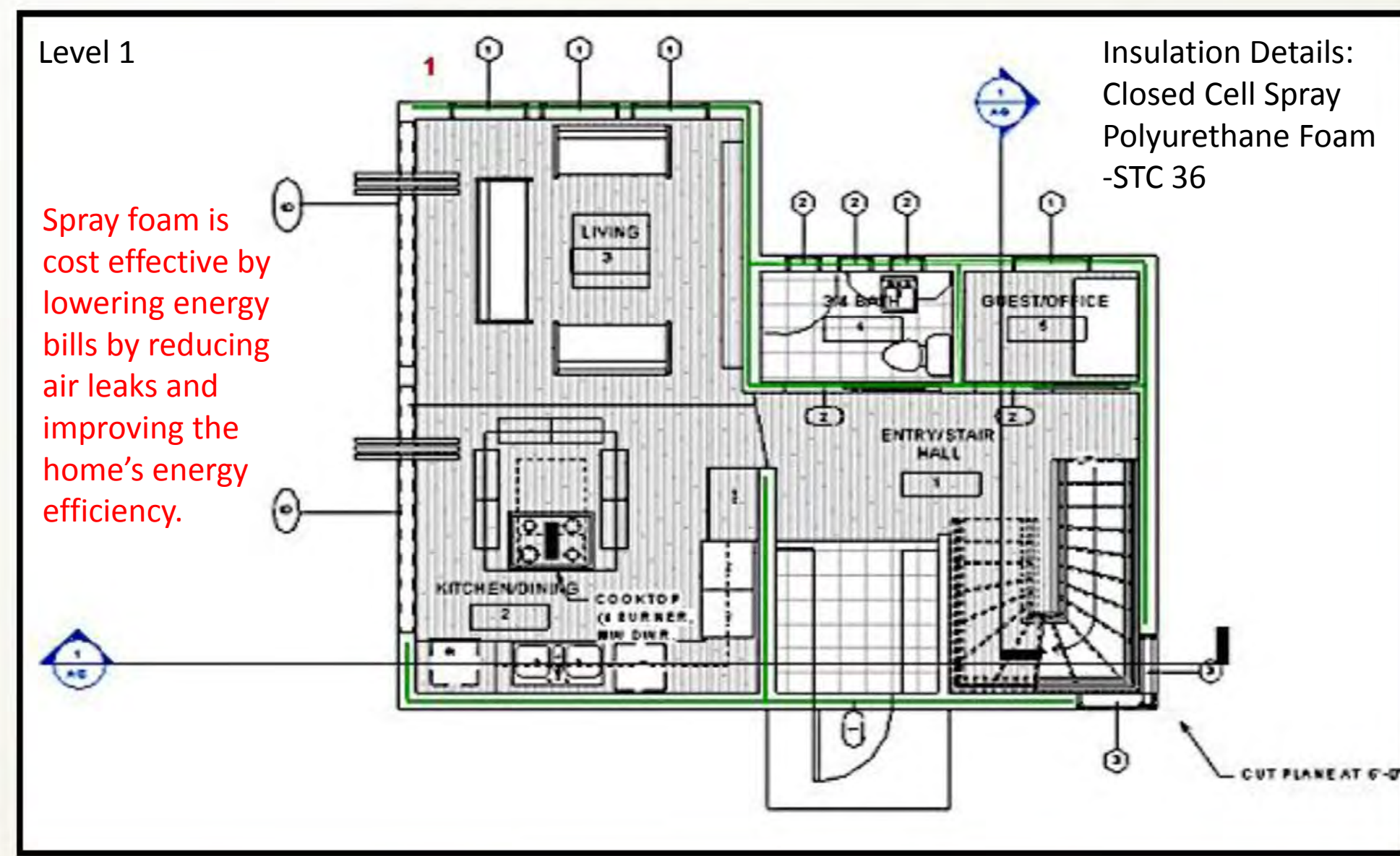


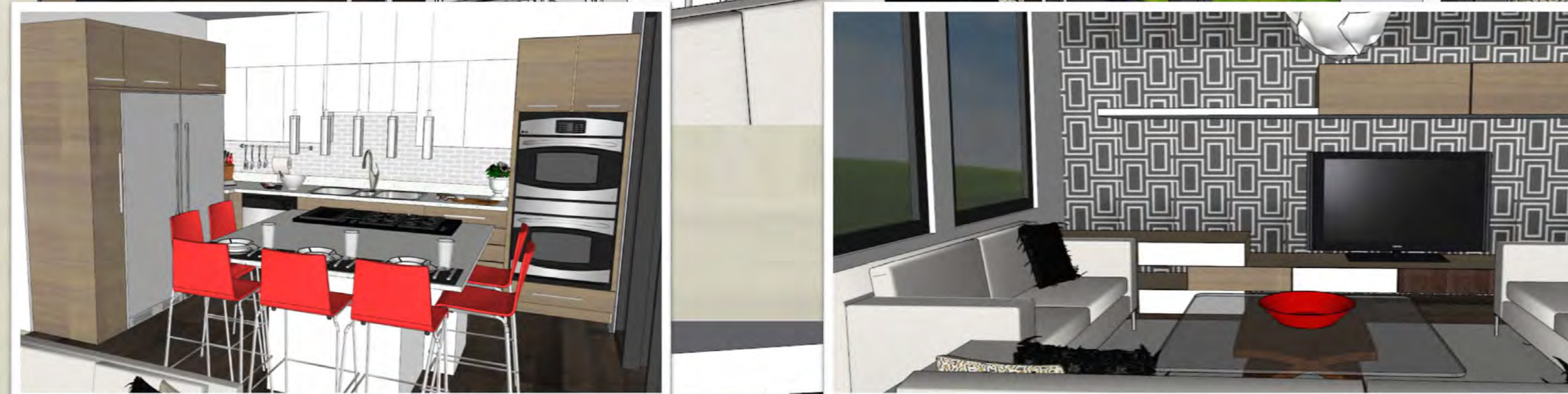
DESIGNING A RESIDENCE IN SWEDEN

By Umeki Earl & Olivia Bufalini | Sponsor: Mrs. Sally Ann Swearingen

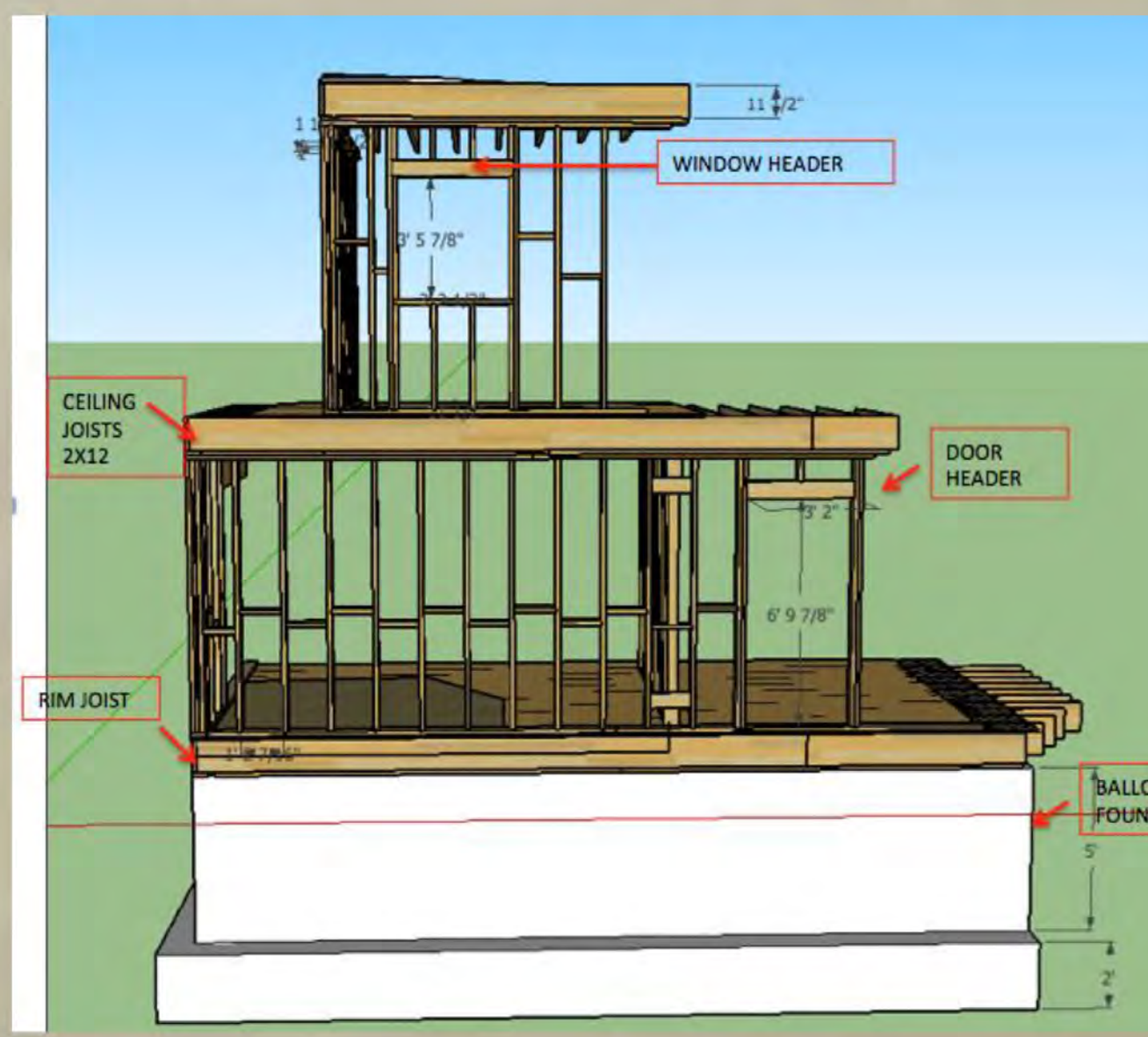
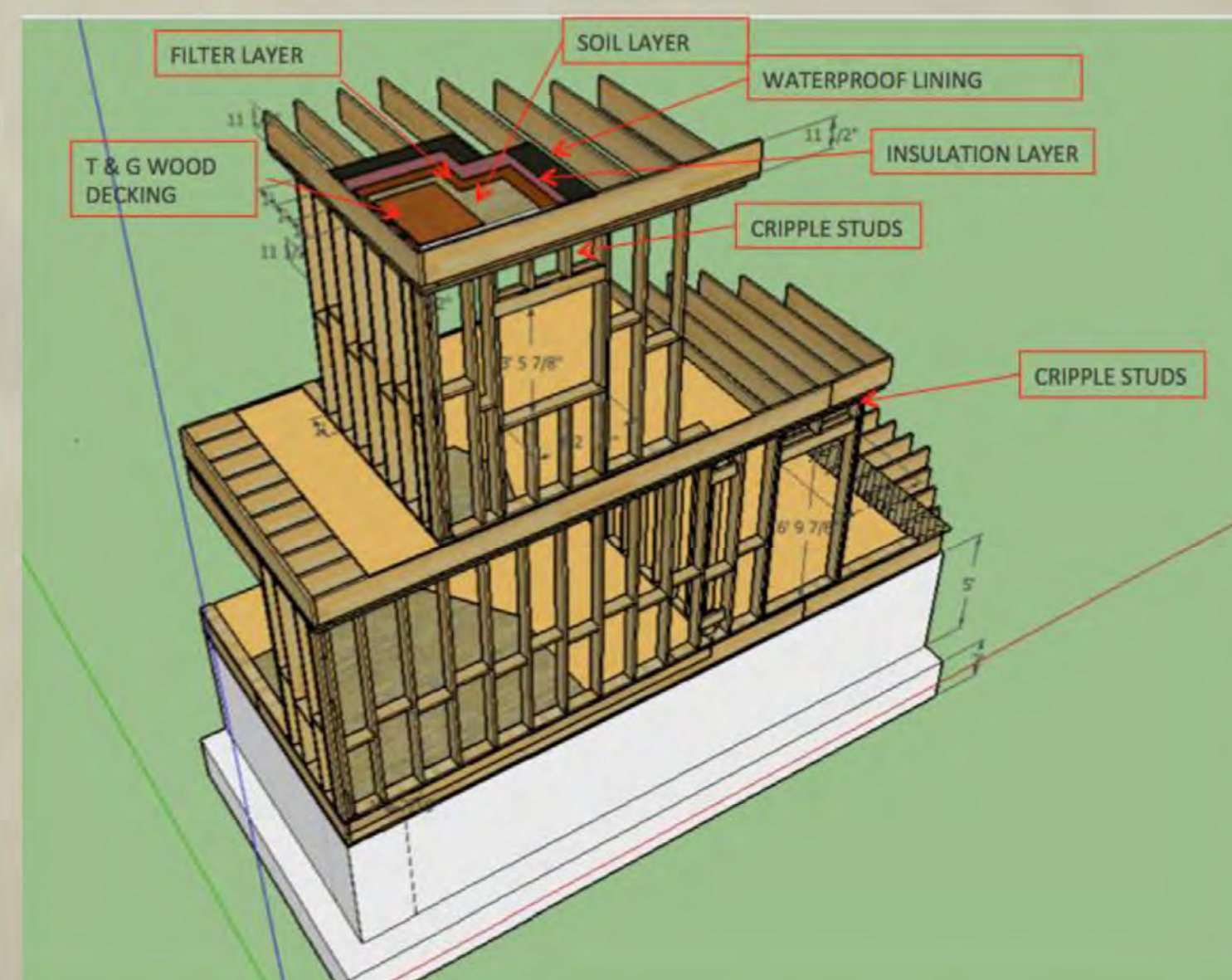


INSPIRATION IMAGES

PERSPECTIVES OF KITCHEN AND LIVING AREAS



FRAMING MODEL

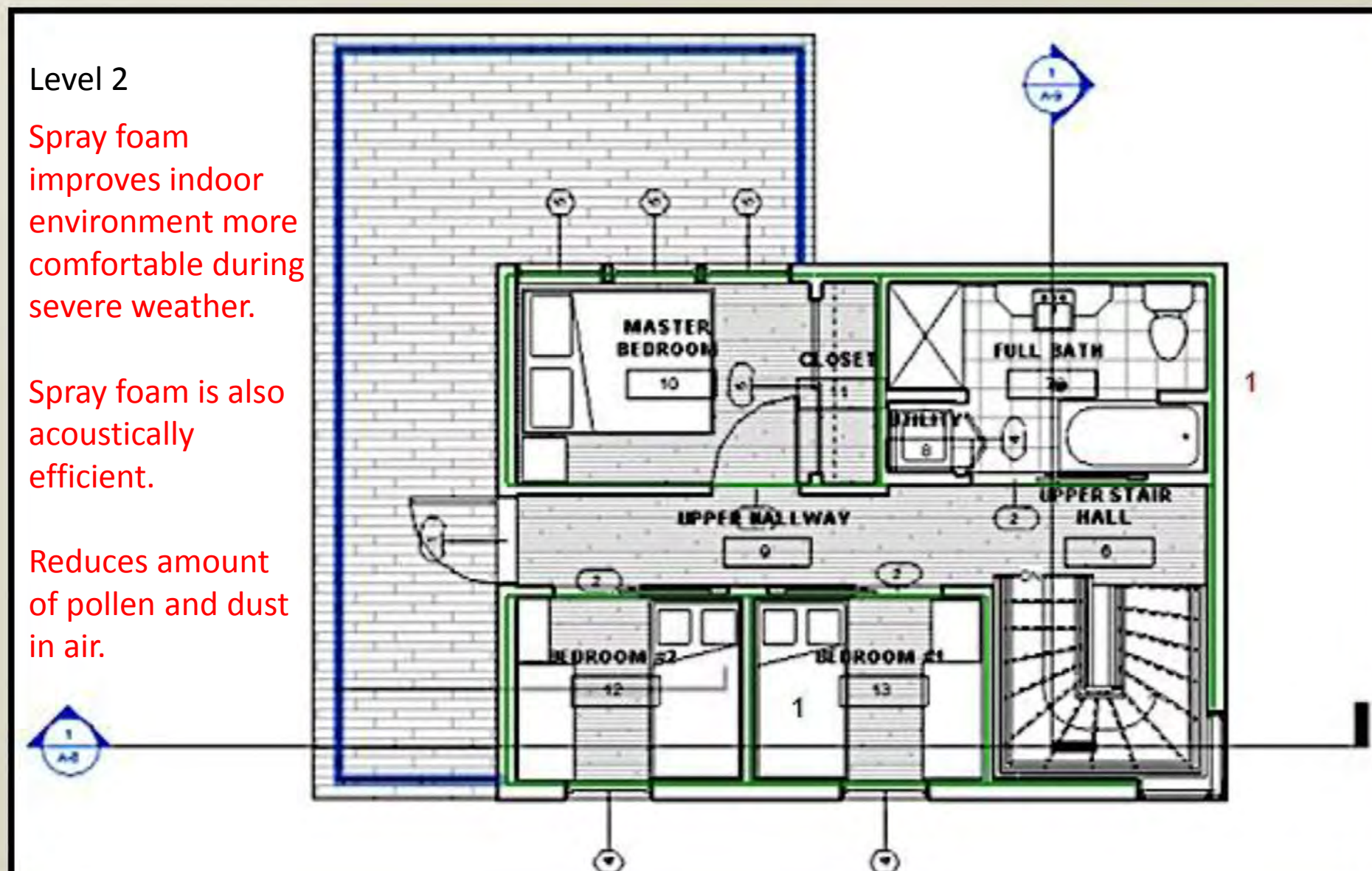


The project was to design a home for the Nordstroms, a family who lived in Sweden. The challenge was to design a home for the family of four with a maximum square footage of 1100 square feet using the codes and space allocations required for another country. Meeting the needs of the client required much research. **RESEARCH** included studying the regional climate, the municipal building codes, and city regulations. Thorough research of building construction framing methods, insulation types and installation methods, site planning, materials and finishes were also essential for completing the project.

Sweden's northern climate can be harsh, with long, dry, sometimes sub-zero temperatures in winter, and short summers. The house design needed to utilize good insulation and materials that would stand up to the harsh climate. All exterior walls were built thicker using 2 x 8 boards instead of 2 x 6 boards. The extra two inches of space in the studs allowed for more insulation for more resistance to the climate with the bonus of lower energy consumption. The insulation chosen was polyurethane spray foam, and although expensive, the design team found that spray foam was the best form of insulation for such a cold and harsh climate. The thickness given of spray foam while great for exterior walls, were also used for interior spaces to absorb sound and keep the warmth from the fire and passive heating in the house. The exterior cladding chosen for this building was IPE wood siding. The cladding was a superior choice for Sweden's environmental conditions because Ipe is 100% natural, maintenance free, and has no chemicals. Ipe also has a great resistance to termites, mold, and rotting due to its being grown in the rainforest.

Though the climate is so harsh, the Nordstrom family desired a home that would take advantage of the outdoors when the weather permitted it and having people over for entertaining, so the house was designed to bring the outdoors indoors. The team used 6' windows and accordion doors to give the space a larger feel and open the living room and kitchen to the outdoors to allow for seamless entertaining from the indoors to the outdoors. A balcony and a rooftop deck with a grass roof were added to accommodate the needs of the client. The stairs of the house had a unique feature of a two story corner window that allowed natural light and the feel of the outdoors to fill the space.

The family was a half American and half Swedish family. Moving from the United States, the family was accustomed to the abundance of space and Universal Design features common in the US. While accommodating the minimum space allocation standards of Sweden, the design team also tried to accommodate a few American Universal Design features. The first floor had a large entry, for outdoor clothing and boots to be stored, a kitchen/breakfast room with a large island for entertaining, a living room, ¾ bath, and an office that could easily convert to a guest bedroom. The second floor had 3 bedrooms and a combined bathroom and utility room.



Folding Patio Doors: Anderson

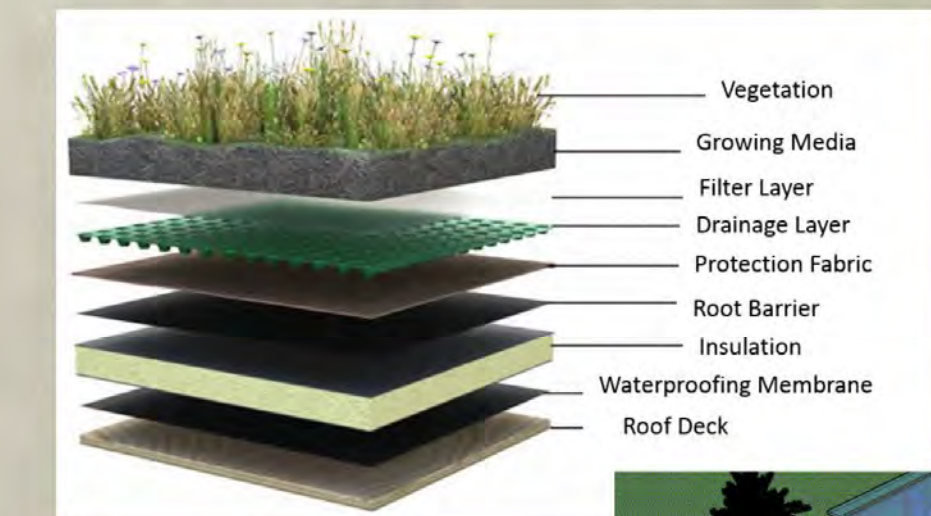


Our Folding Patio Doors will include: **LOW-E4® TEMPERED GLASS**
Outstanding overall thermal performance for climates where both heating and cooling costs are a concern. Standard.



Folding Door Inspiration

Green Roof Detail



Roofing Inspiration



ROOF:

Green Roofs provides water proofing, water retention, and thermal insulation. They can allow for an improvement of the climatic environment through the absorption of sun in the grass.

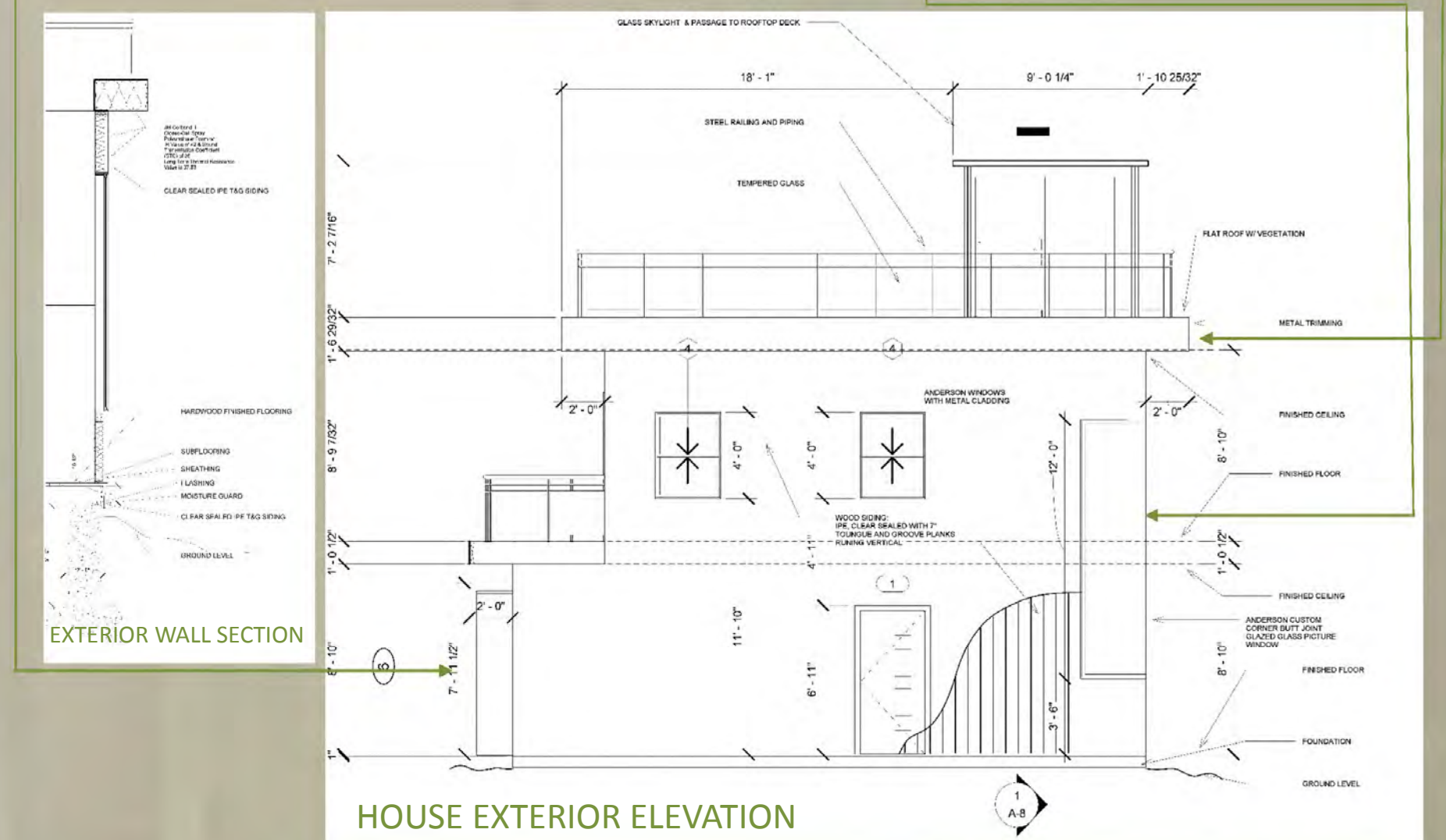
They increase energy efficiency and allow for a natural aesthetic. The clients desired a maximum use of entertaining space, so to add the square footage, we added the rooftop deck family gatherings.

CORNER WINDOW:

Custom 11' 6" tall corner window placed at the stair well. Window will offer wonderful views of the lake and land that surround the property.



Corner Window Inspiration



1"x 7" Planks Clear sealed T&G IPE Wood Siding

