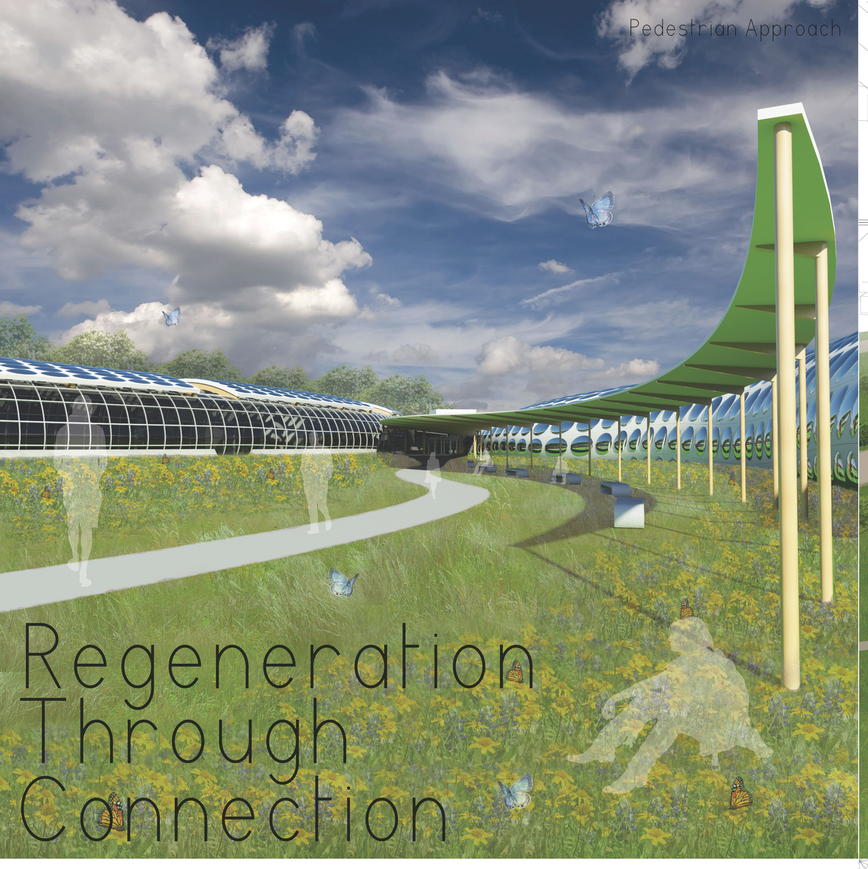
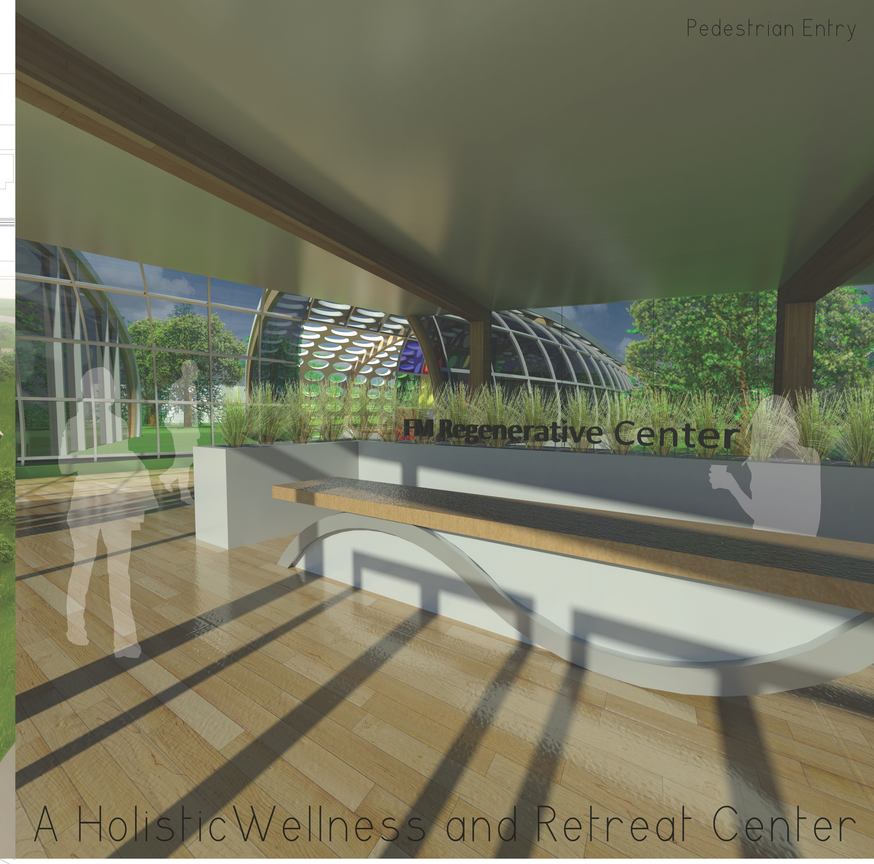


Regeneration Through Connection



A Holistic Wellness and Retreat Center

NOW → 2060

The technology for the shell of the building is still in it's infancy. It will not be available to use as a building material for another 50 years. Therefore, this thesis sought to address the theoretical premise at a time that is 50 years in the future. There were a series of assumptions that took place during the design process that became a set of principals that represent the way of life in 2060 as theoretically presumed by researchers today.

Artificial Light → Natural Light

Natural light will be the only way to light spaces during the day. The frames of the windows will house small artificial lights that are activated only by low-light situations.

Freight Line → Light Rail

The freight rail road line that runs through the site will be re-routed by 2060, and will be replaced by a light rail system to transverse the Fargo, Moorhead, West Fargo metro area.

Individual Sustainable Power → Sustainable Power Grid

Fuel to produce energy will be scarce, and so renewable energy will no longer be a luxury. Because of this, instead of individual buildings having and maintaining their own renewable energy sources, the entire power grid will be renewable.

Vehicle Dominated Transportation → Pedestrian, Bike, and Rail Dominated Transportation

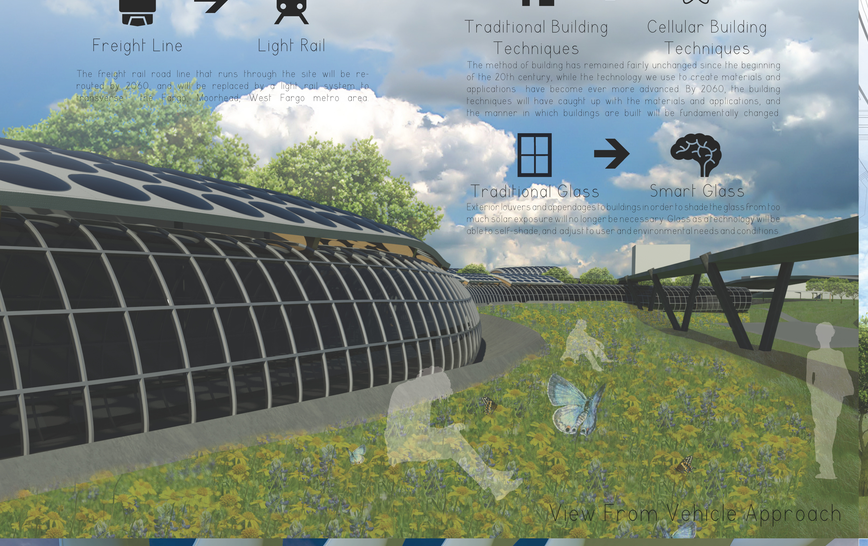
Gas for vehicles will become extraordinarily expensive and out of reach for the middle and lower class population. Therefore, the easiest and most efficient mode of transportation will be on foot, bike, or by rail.

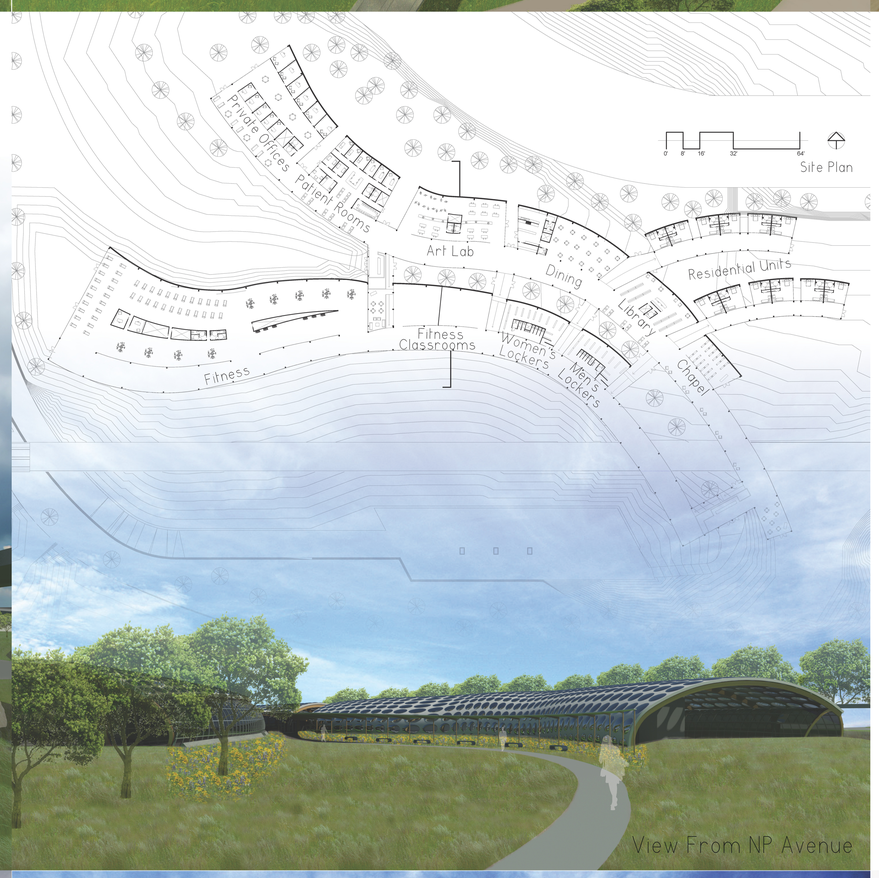
Traditional Building Techniques → Cellular Building Techniques

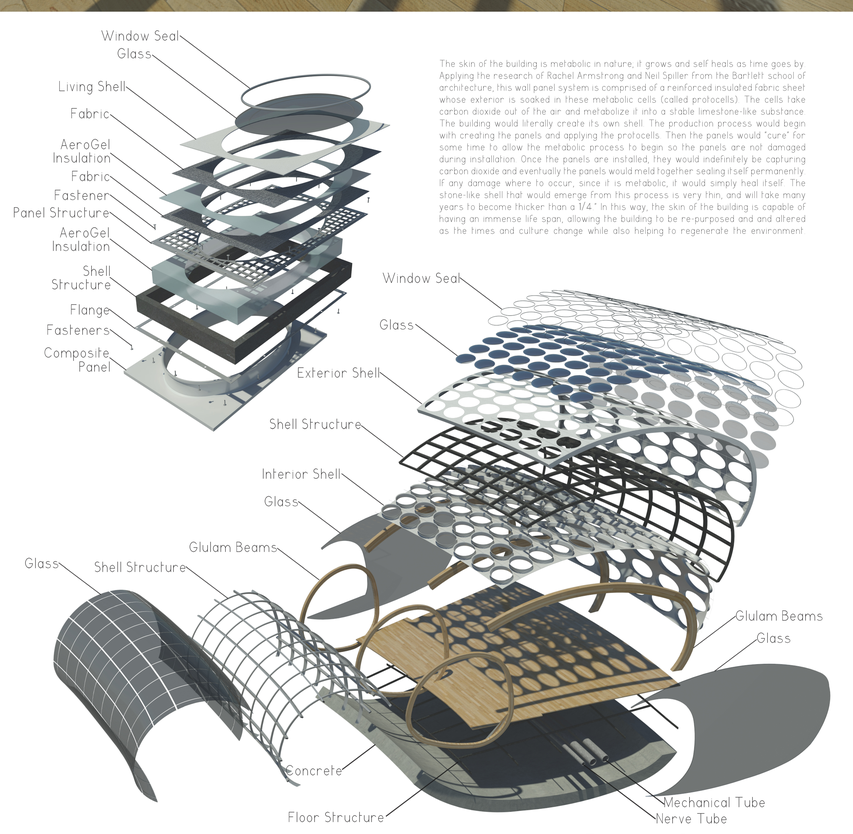
The method of building has remained fairly unchanged since the beginning of the 20th century, while the technology we use to create materials and applications have become ever more advanced. By 2060, the building techniques will have caught up with the materials and applications, and the manner in which buildings are built will be fundamentally changed.

Traditional Glass → Smart Glass

Exterior louvers and appendages to buildings in order to shade the glass from too much solar exposure will no longer be necessary. Glass as a technology will be able to self-shade, and adjust to user and environmental needs and conditions.

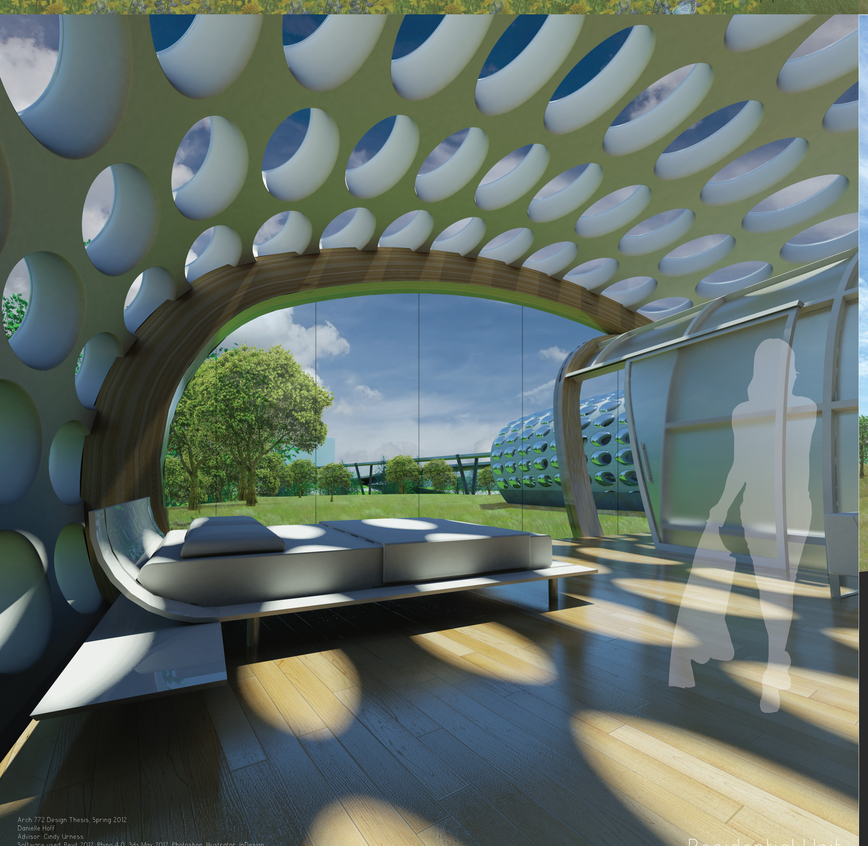




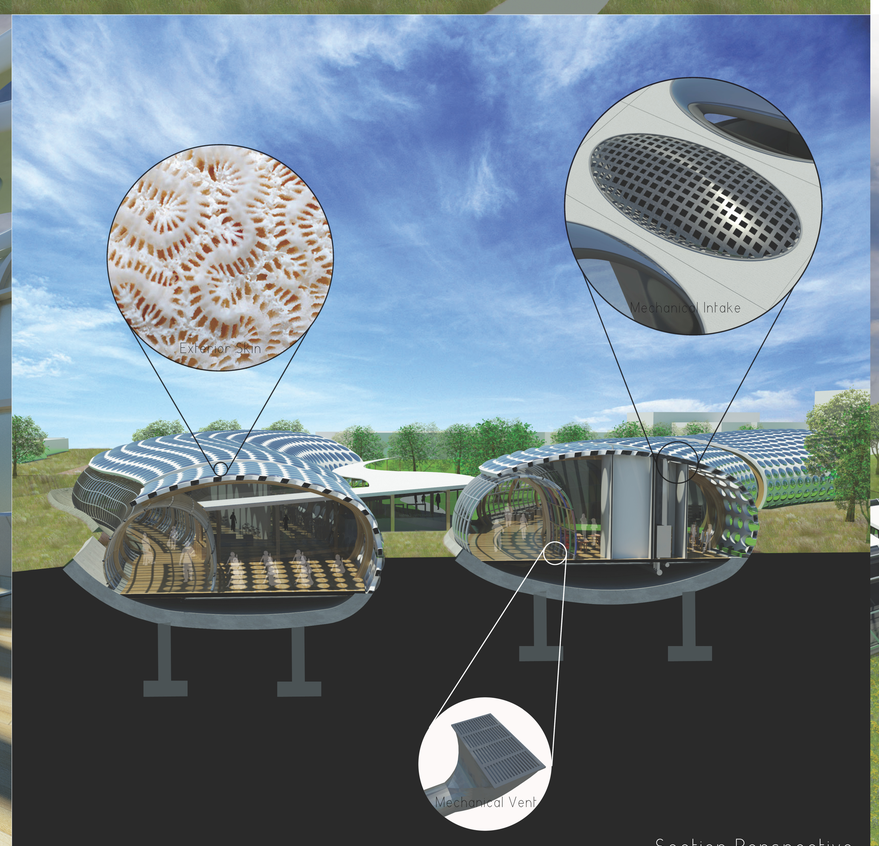


The skin of the building is metabolic in nature; it grows and self heals as time goes by. Applying the research of Rachel Armstrong and Neil Spiller from the Bartlett school of architecture, this wall panel system is comprised of a reinforced insulated fabric sheet whose exterior is soaked in these metabolic cells (called protocells). The cells take carbon dioxide out of the air and metabolize it into a stable limestone-like substance. The building would literally create its own shell. The production process would begin with creating the panels and applying the protocells. Then the panels would "cure" for some time to allow the metabolic process to begin so the panels are not damaged during installation. Once the panels are installed, they would indefinitely be capturing carbon dioxide and eventually the panels would meld together sealing itself permanently. If any damage where to occur, since it is metabolic, it would simply heal itself. The stone-like shell that would emerge from this process is very thin, and will take many years to become thicker than a 1/4." In this way, the skin of the building is capable of having an immense life span, allowing the building to be re-purposed and and altered as the times and culture change while also helping to regenerate the environment.

Exploded Building + Panel



Residential Unit

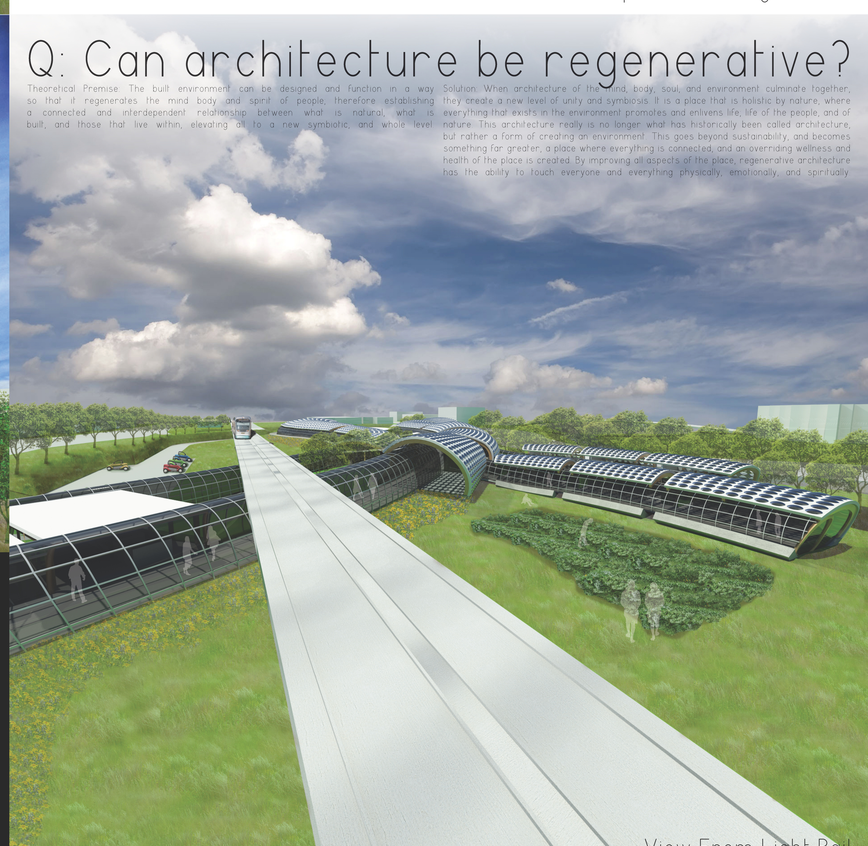


Section Perspective

Q: Can architecture be regenerative?

Theoretical Premise: The built environment can be designed and function in a way so that it regenerates the mind body and spirit of people, therefore establishing a connected and interdependent relationship between what is natural, what is built, and those that live within, elevating all to a new symbiotic, and whole level.

Solution: When architecture of the mind, body, soul, and environment culminate together, they create a new level of unity and symbiosis. It is a place that is holistic by nature, where everything that exists in the environment promotes and enlivens life; life of the people, and of nature. This architecture really is no longer what has historically been called architecture, but rather a form of creating an environment. This goes beyond sustainability, and becomes something far greater, a place where everything is connected, and an overriding wellness and health of the place is created. By improving all aspects of the place, regenerative architecture has the ability to touch everyone and everything physically, emotionally, and spiritually.



View From Light Rail