



# Blooming Lotus

## Interfaith Chapel of Peace

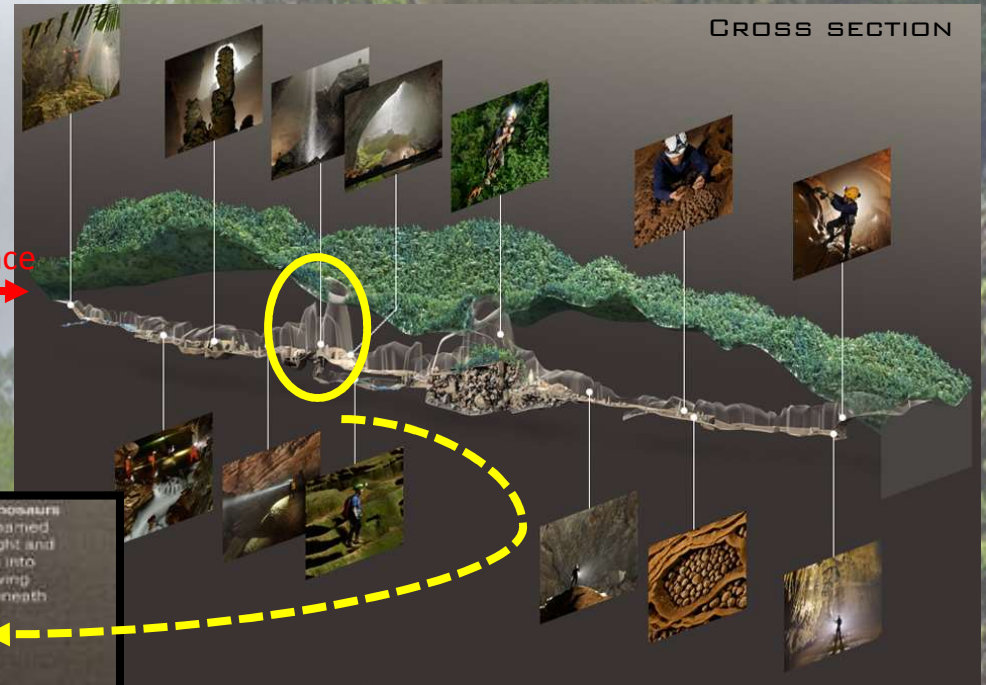
Son Doong Cave, Quang Binh province, Vietnam  
Community College Submission  
Studio Project

The challenge of this project is to design a meditation chapel that blends itself to its surrounding environment and allows one to get away from materialistic life to focus on their inner-self and spiritual belief. The project is located three miles away from the largest cave in the world, Son Doong cave in Vietnam. The concept was drawn mainly from a lotus, a significant symbol in Vietnam, which symbolizes spiritual awakening and enlightenment. This project is to celebrate procession through entry, path and arrival. As visitors arrive at the site, they will be introduced to the design concept upon entry into the portal, which combined with the pathway leads one to the arrival point of the chapel. Through the portal, one can sense the spiritual and mystical feelings creating by highlighting contrast coming from above versus the solid and narrow structure on both sides. The building is an inorganic enclosed space within the organic forms that incorporate indirect circulation to blend harmonically with the organic forms of the outdoor environment. The curved petal structures overlap and fold inward to surround the floating chapel and act as thermal mass walls for cooling. They allow filtered light to enter through the roof, reflecting back into the chapel. By using treated bamboo timber, a sustainable material with high tensile and compressive strength that is available at site, the construction helps to reduce cost and habitat loss. Due to a high amount of rain at this region, the chapel's roof is sloped, which also allows for rainwater capture. Located in International Climate Zone 3A with primarily hot and humid climate, this project would comply with the regulations of 2015 IECC.

# Location



Entrance



## South entrance

Flowing into the cave, the Rao Thuong River soon vanishes into the limestone. High water makes exploration too dangerous in summer's rainy season.

## Watch Out for Dinosaurs

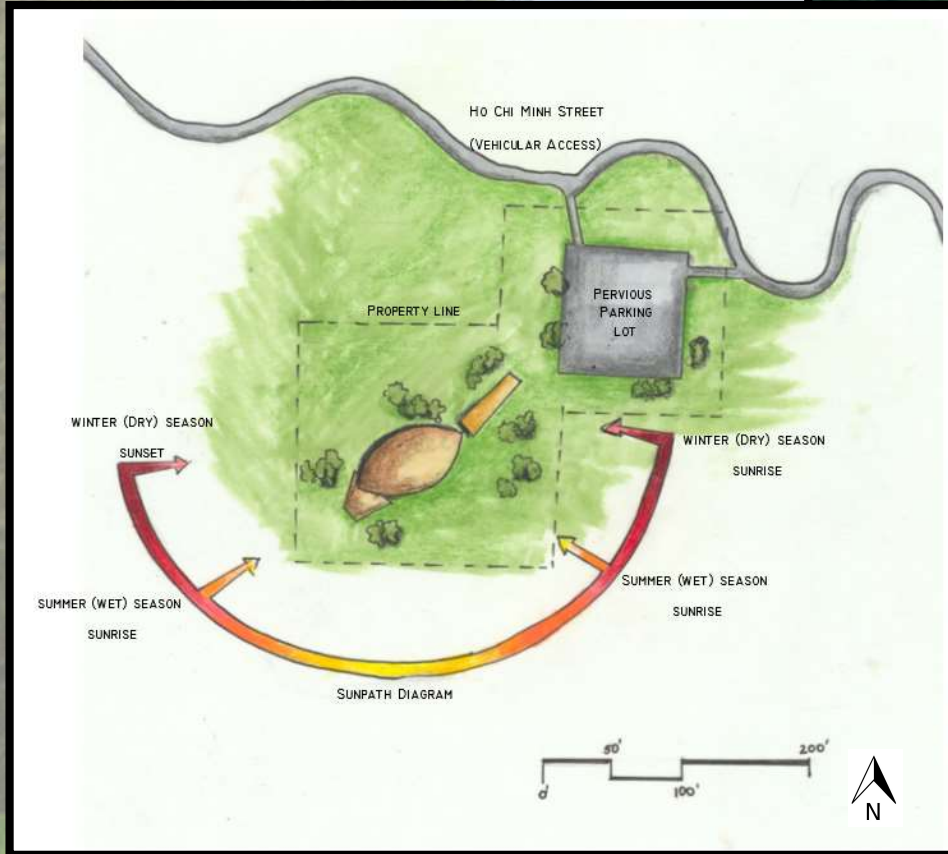
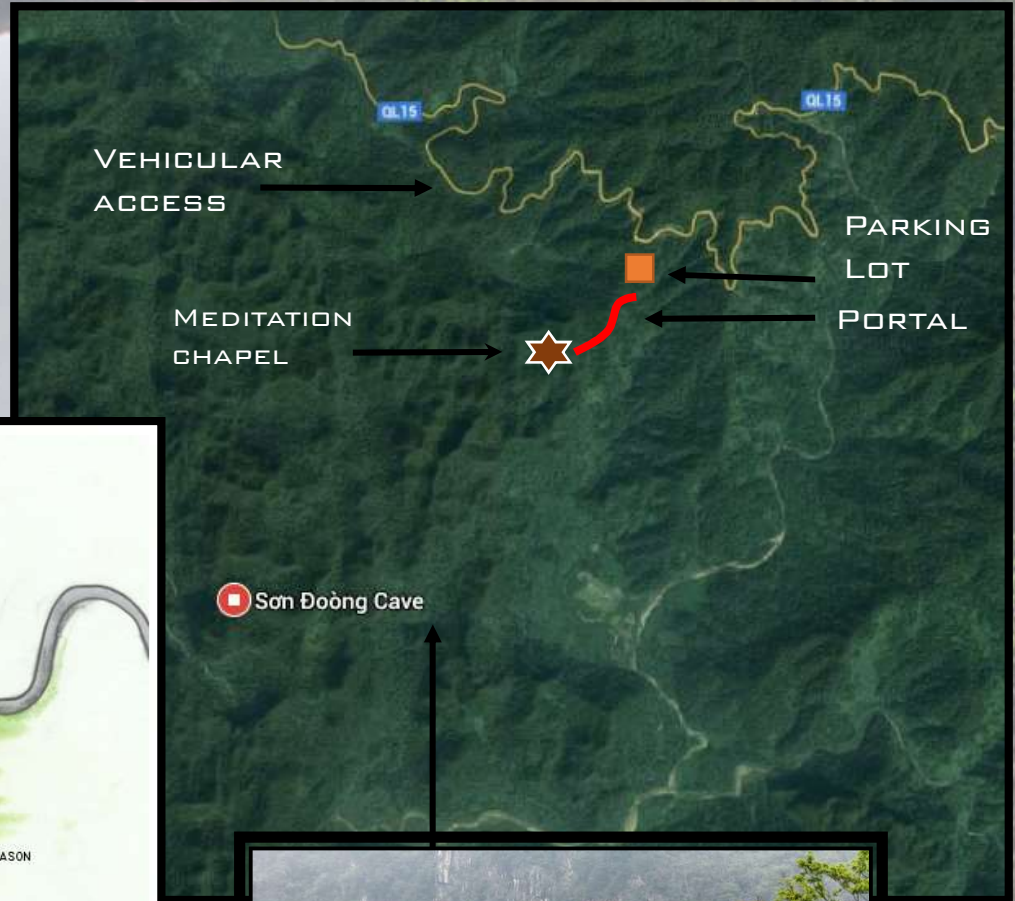
The whimsically named sinkhole lets in light and rain, which seeps into the river now carving new passages beneath the cave floor.



- "Son Doong" cave means "mountain river cave".
- It is found by a local man named Ho Khanh in 1991.
- Recently discovered in 2009 by British cavers, led by Howard Limbert.

# Site

LOCATION PLAN



SITE PLAN



OUTSIDE VIEW OF THE CAVE'S ENTRANCE

# Natural Inspiration



The Dinosaur sinkhole was created 2-5 million years ago by river water eroding away the limestone underneath the mountain. Where the limestone was weak, the ceiling collapsed creating huge opening for light. This site is composed of its own climate with natural elements of forest, river, earth, and light. It lends itself as an ideal place for meditation and focus on inner-self.



# Natural Inspiration

**Floating lotus is a significant symbol in Vietnam. Here, Buddhism is the main religion, and in Buddhism the Lotus flower is known to symbolize purity of speech, of the body, and of the mind. It also associates with spiritual awakening or enlightenment. This is why the Buddha sits on a lotus in bloom.**



# Architectural Inspiration

- Inspiration is drawn from these buildings that have the support structures, which allow these buildings to be slightly elevated above the ground, creating the floating effect, reminding one of the balance in life.
- They also allow breezes from beneath the ground to cool down the building



ONE  
PILLAR  
PAGODA,  
VIETNAM



RAY AND  
DAGMAR  
DOLBY  
REGENERATI  
ON  
MEDICINE  
BUILDING  
IN SAN  
FRANCISCO,  
CA



SUSTAINABL  
E &  
AFFORDABLE  
BAMBOO  
HOUSES  
BY H&P  
ARCHITECTS,  
VIETNAM

# Design Priority

- To design a meditation chapel that allows one to get away from materialistic life and to focus on their inner-self and spiritual belief by creating a space that incorporates elements that have invisible sources.
- Several elements that are included to accomplish this:
  - ✓ The source of light that cannot be seen
  - ✓ Supported system that is not visible
  - ✓ The indirect approach and entrance force one to explore the site

# 5 Design Principles

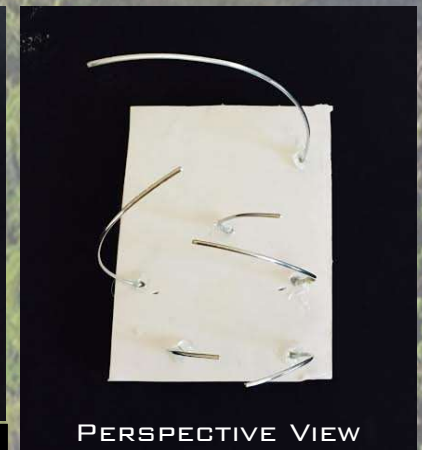
- **Proportion**: Stretch vertically to allow air to transfer heat to the ceiling, leaving cool air at occupation level.
- **Balance**: Incorporation of both rectilinear and curved shapes in order to show contrast as well as balance and to compliment each other.
- **2/3rd**: Dominance structure is placed in accordance of 2/3 grid. No center displacement.
- **Outdoor interaction**: Building and its outdoor environment blend harmonically together.
- **Circulation**: Indirect, encouraging exploration.



# Parti

Parti is composed of multiple curving pieces that fold inward. These get larger and larger, symbolizing a blooming lotus with multiple layers of petal that grow naturally with no exact pattern, shape, and size.

Lighting will infiltrate through openings in between these curve shapes, and then reflect off the surface, and bounce back to illuminate the inside without having direct sunlight entering the space, losing the effect of spiritual.



# Portal Design-Study Model

Multiple curving parts join together to create a pathway that people can walk through. These structure is covered by a solid material, bamboo strips, to create contrast between darkness and light. This portal will lead to the entrance of the portal in the direction toward the cave, creating transition from one space to the other at a leisurely pace.



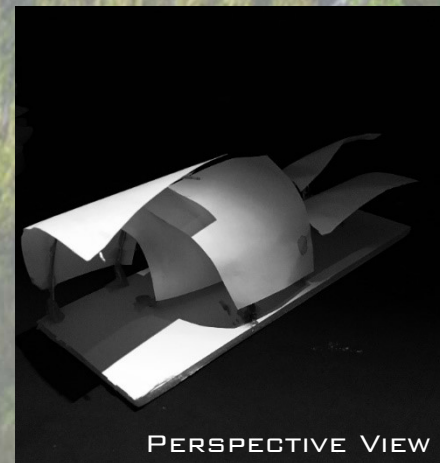
OUTSIDE VIEW OF THE CAVE'S ENTRANCE



BIRD'S EYE VIEW



PERSPECTIVE VIEW



PERSPECTIVE VIEW

# Final Portal Design

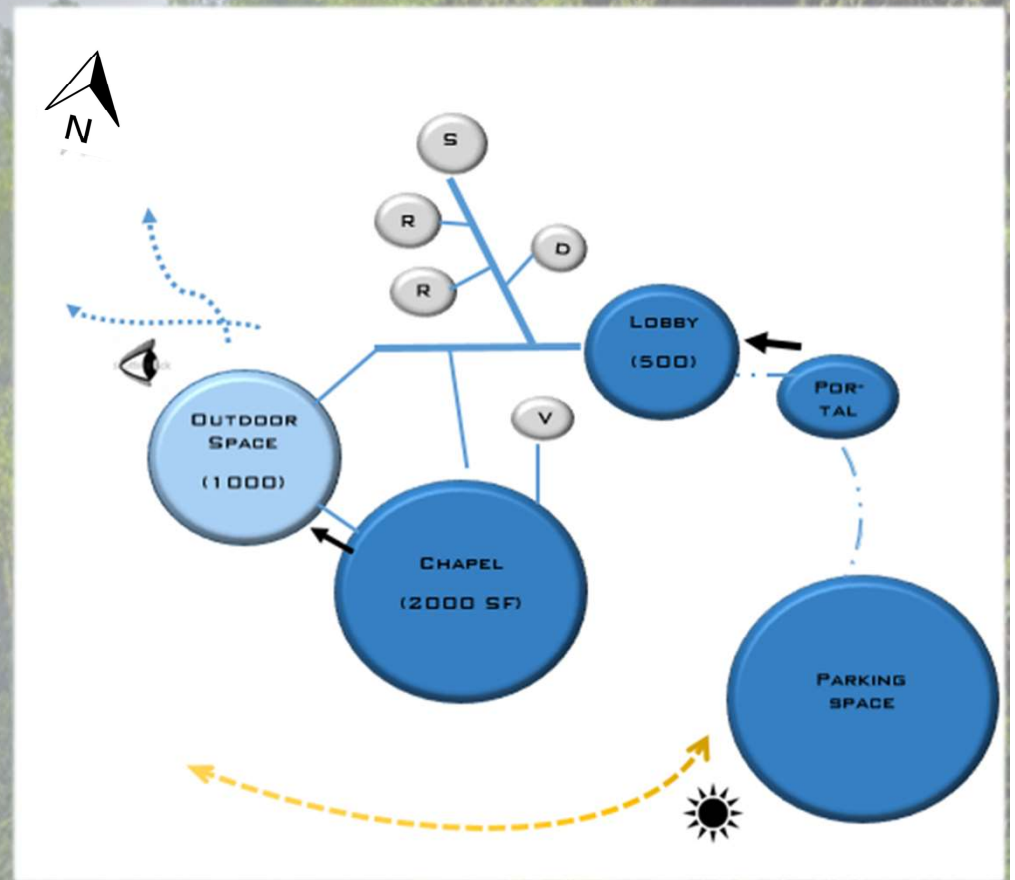


In order to emphasize more on the changes in height within the portal, the entrance side of the updated portal is more compressed. As one travels further into the portal, the height of these “petals” increases tremendously, similar to Son Doong cave’s pathway.

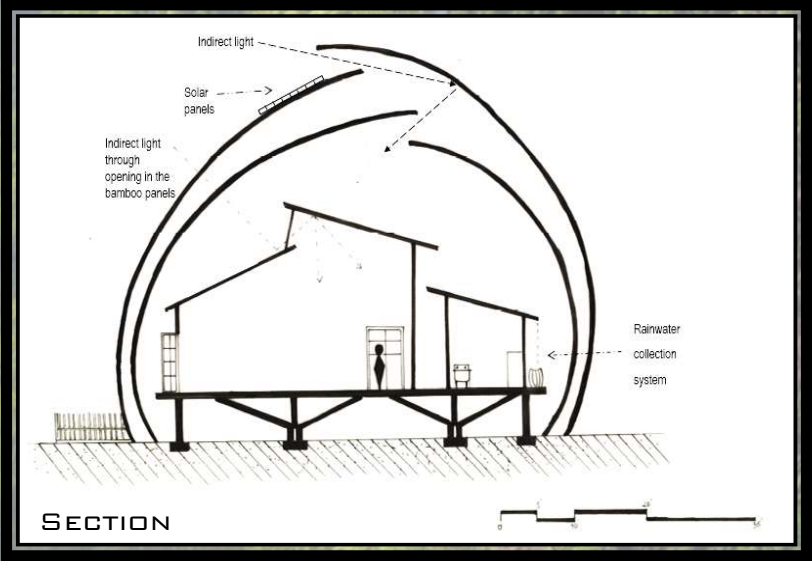
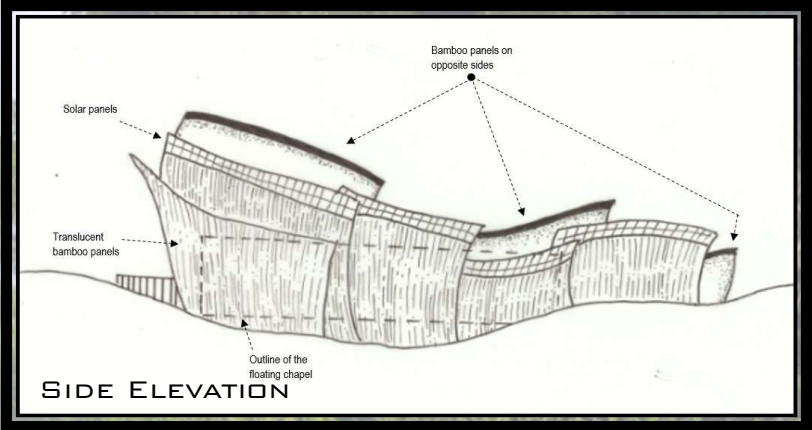
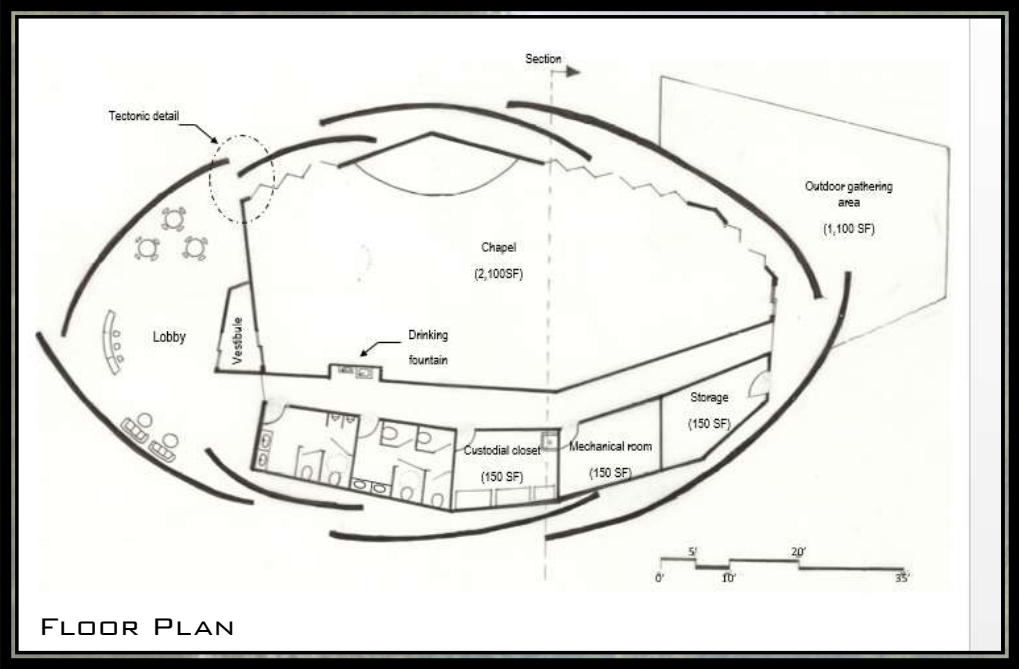
# Chapel Bubble Diagram

- **Spatial relationship:** Space within a space
- **Spatial organization:** Linear
- **Sense of Space:** Scared, calm, and peaceful (achieved by high ceiling, natural lighting)

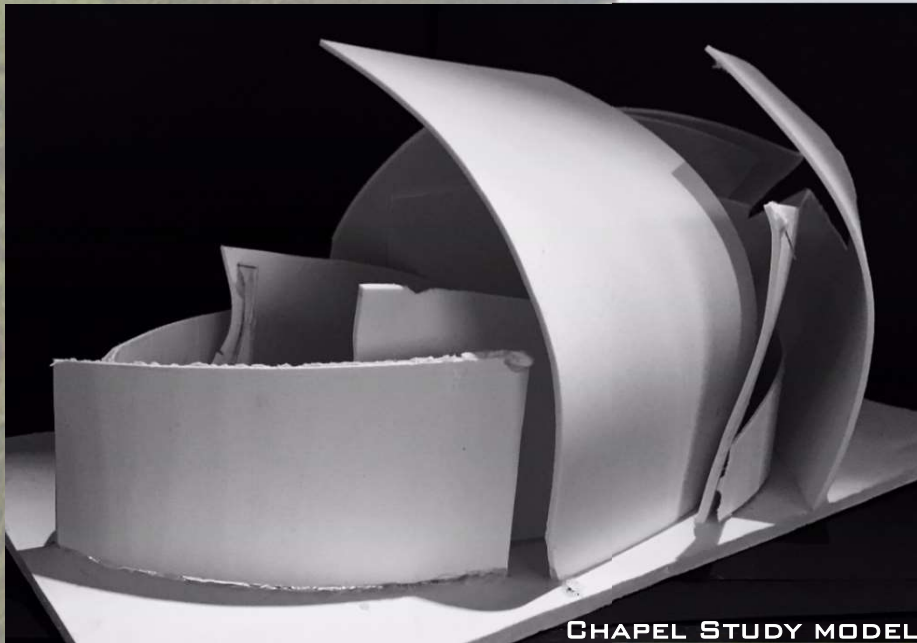
KEY	
PUBLIC AREA	●
SERVICE AREA	●
STORAGE	S
RESTROOM	R
DRINKING FOUNTAIN	D
VESTIBULE	V



# Chapel Drawings



# Chapel Views



CHAPEL STUDY MODEL

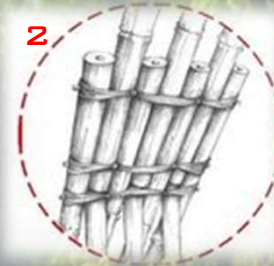
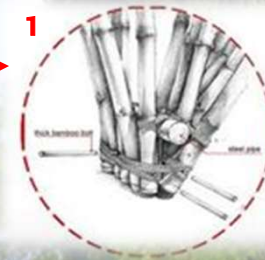
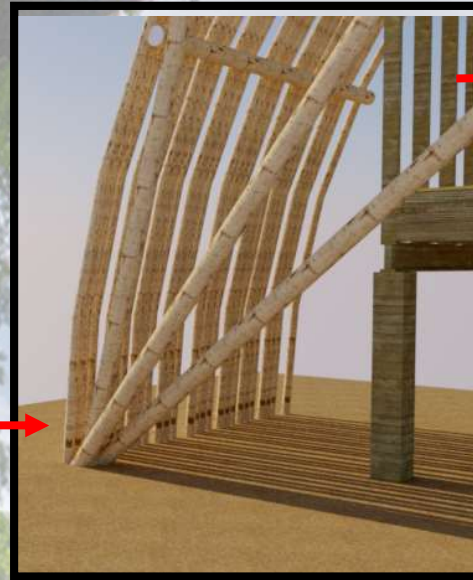
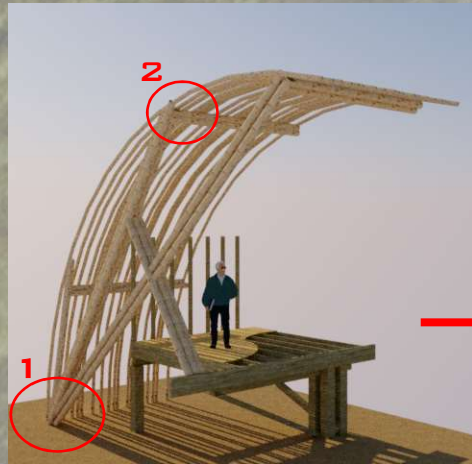


HAND RENDERING OF INTERIOR VIEW

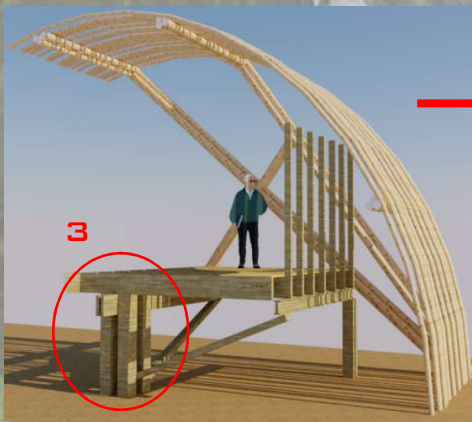


HAND RENDERING OF NORTH ELEVATION

# Chapel Tectonics



## PERSPECTIVE VIEWS



- Bamboo strips are connected by bamboo bolts and pole-lashing knot method with rope
- Heavy timbers members are connected by metal shear plates, bolts, and angles