

CHAPEL OF SOLACE

MAMMOTH CAVE NATIONAL PARK

MAMMOTH CAVE, KENTUCKY

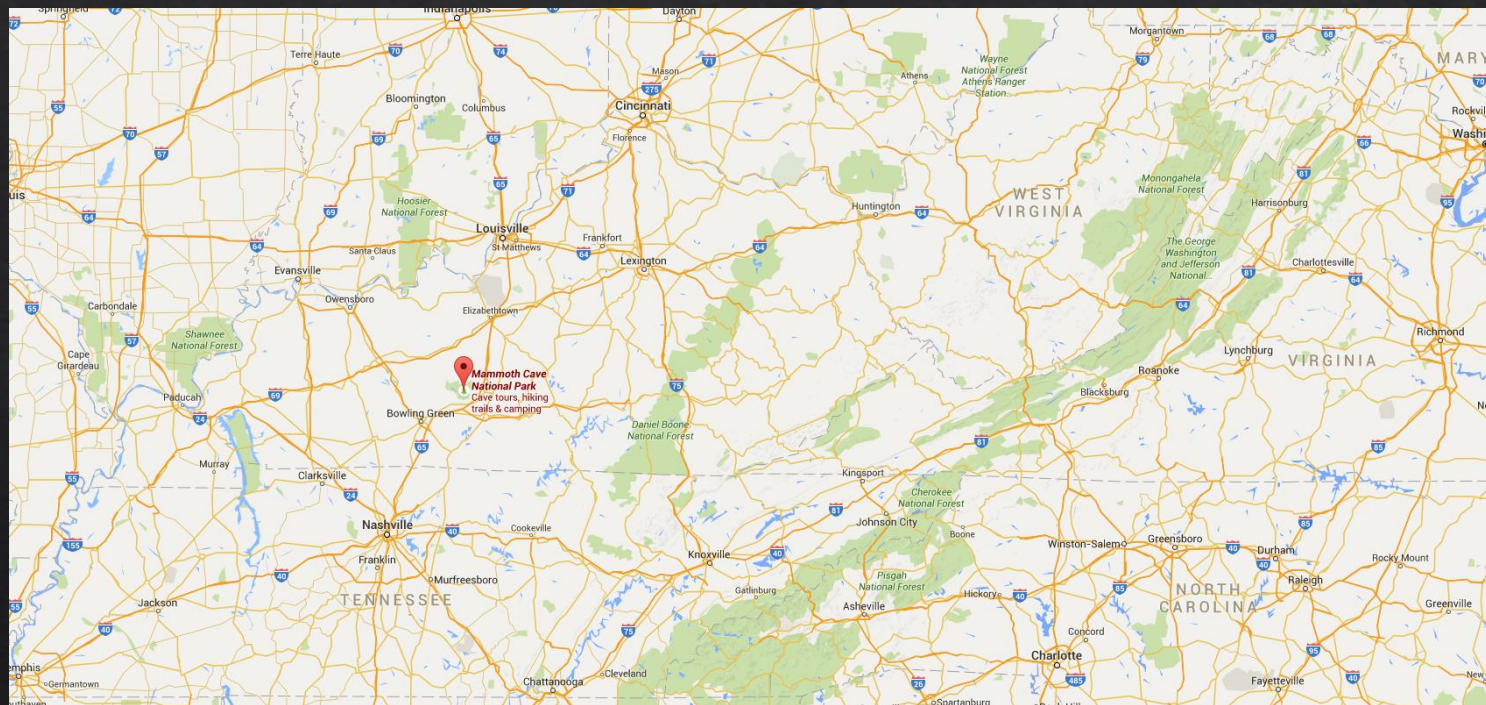
COMMUNITY COLLEGE SUBMISSION – DESIGN PROJECT

WHEN OVERBURDENED IN LIFE THE STRESS CAN GIVE ONE A FEELING OF BEING COMPRESSED, BUT AFTER REMOVING THE BURDENS RELIEF PASSES OVER AND KEEPS US MOVING TO THE NEXT TASK. THESE FEELINGS ARE ALSO EVIDENT IN NATURE, SUCH AS WHEN TRAVERSING A CAVE STRUCTURE. THE RATIONALE OF REPLICATING THESE EMOTIONS IN A SPIRITUAL SPACE WERE STUDIED THROUGH, PARTI DIAGRAMS, MODELS, AND OTHER METHODS AND ARE EVIDENT IN THE PATH THROUGH THE PORTAL AND WHILE EXPLORING THE CHAPEL.

THE JOURNEY BEGINS WHEN APPROACHING THE PORTAL. THE SPACES ARE MEANT TO ALTERNATE BETWEEN TIGHT TO OPEN PLANS IMPOSING THE EMOTIONS FELT IN THE CAVES. NATURAL DAYLIGHTING IS EVIDENT THROUGHOUT BOTH STRUCTURES WITH MULTIPLE CLERESTORY WINDOWS. ONE ENTERS THE CHAPEL THROUGH A SMALL VESTIBULE, AND COMES INTO A LARGE LOBBY WITH A UNIQUE ROOF STRUCTURE. THE ROOF SERVES TO INSPIRE BY FUNNELING WATER INTO A WATER FEATURE THAT DESCENDS THE CENTER OF THE ROOM. THE TIGHT HALLWAYS MAKE THE SACRED SPACE HAVE A GREATER IMPACT OF RELIEF. AND THE SMALL PRAYER ROOMS BRANCHING OFF FROM THE SACRED SPACE SERVE AS AREAS OF INDIVIDUAL MEDITATION AND REFLECTION.

THE STRUCTURE IS ESTABLISHED THROUGH LARGE FSC LAMINATED LUMBER BEAMS THAT CREATE A UNIQUE EXTERIOR FEATURE ANCHORING THE CHAPEL INTO THE SURROUNDING ENVIRONMENT. THE DESIGN INCORPORATES PHOTOVOLTAIC PANELS, EARTH SHELTERING, RAINWATER COLLECTION AND NATURAL DAYLIGHTING AMONG OTHER SUSTAINABLE STRATEGIES. THE SITE, WHICH IS LOCATED IN CLIMATE ZONE 4A WILL COMPLY WITH IECC 2015 AND WAS DESIGNED UNDER LEED VERSION 4 FOR PROPOSAL FOR A GOLD RATING.

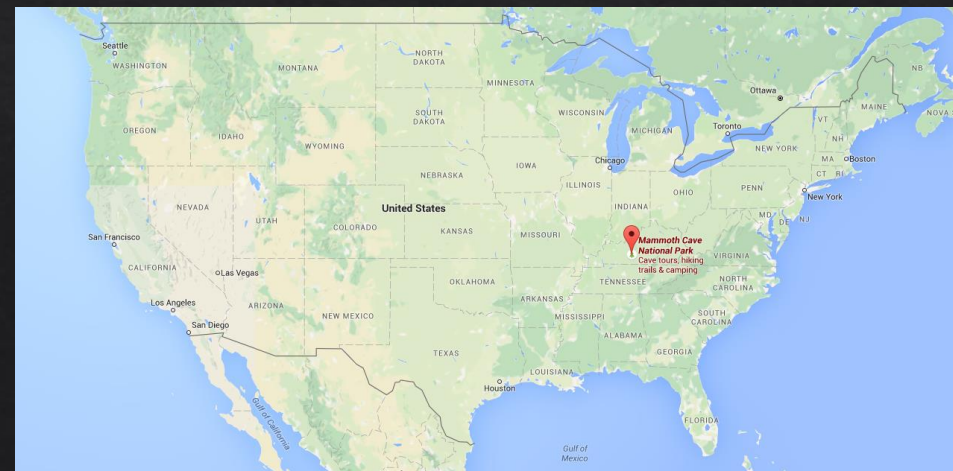
LOCATION



LOCATION IN
KENTUCKY



Birds Eye View of Entrance

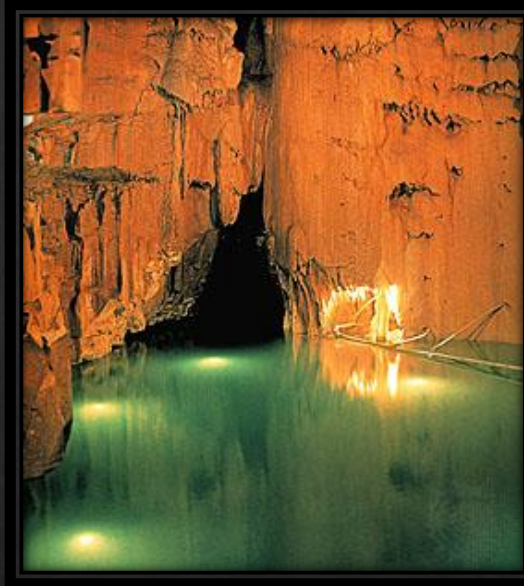


LOCATION IN
USA

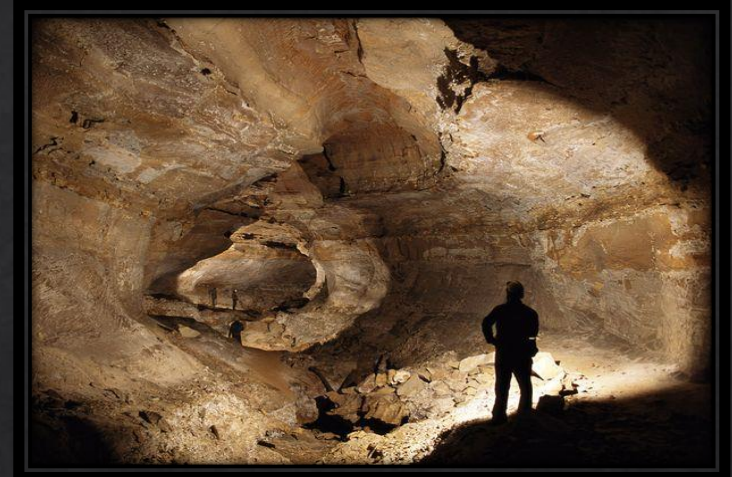
INSPIRATIONAL IMAGES: AREAS OF COMPRESSION



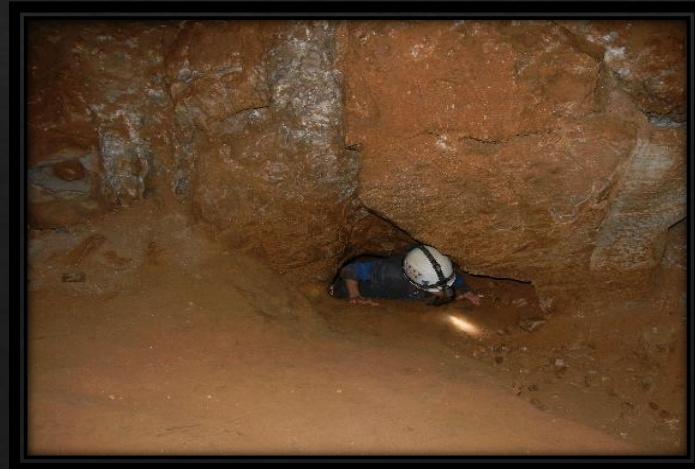
MAMMOTH CAVE - LOWER LEVEL
RIVER STYX



MAMMOTH CAVE - LOWER LEVEL



MAMMOTH CAVE - CAVERNOUS AREA



MAMMOTH CAVE - SPELUNKER IN
COMPRESSION

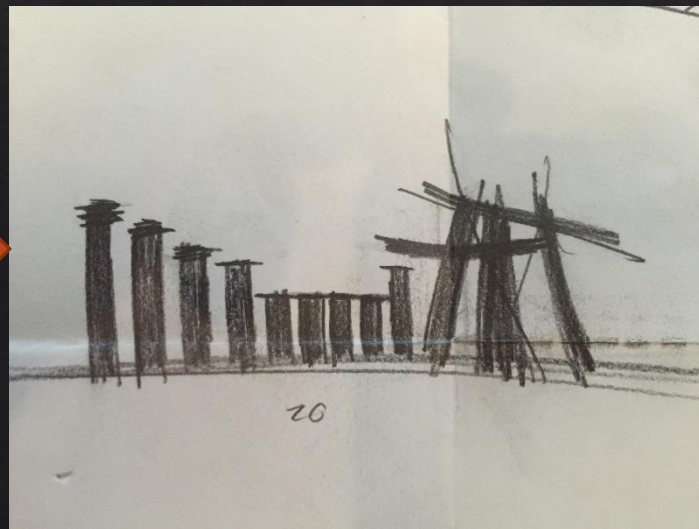
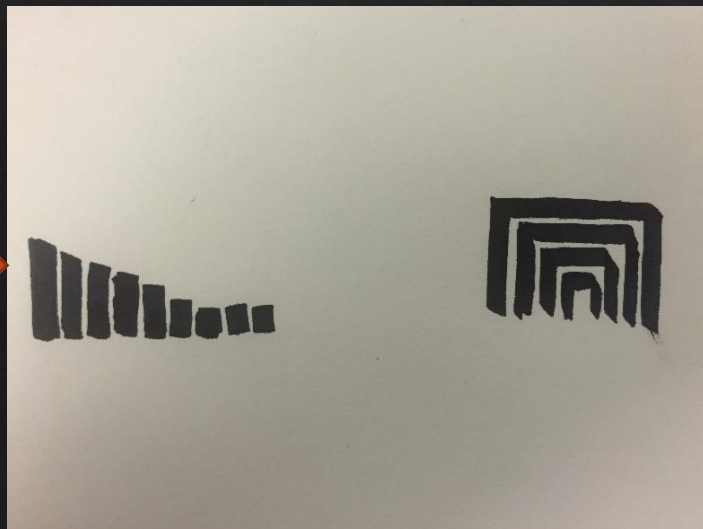
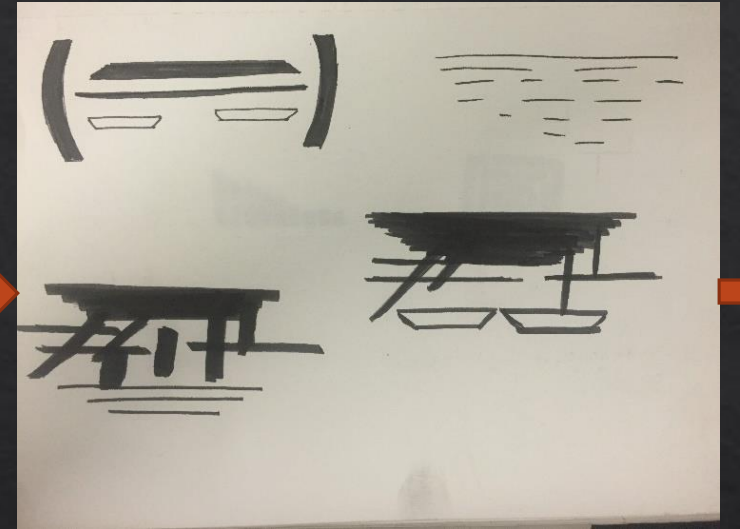
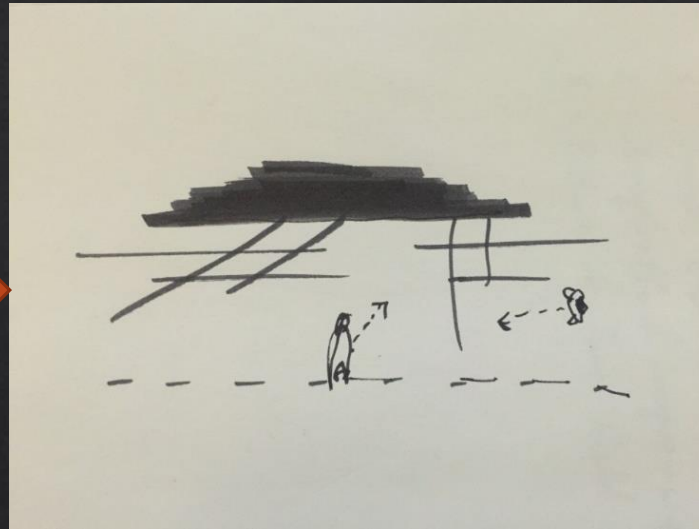
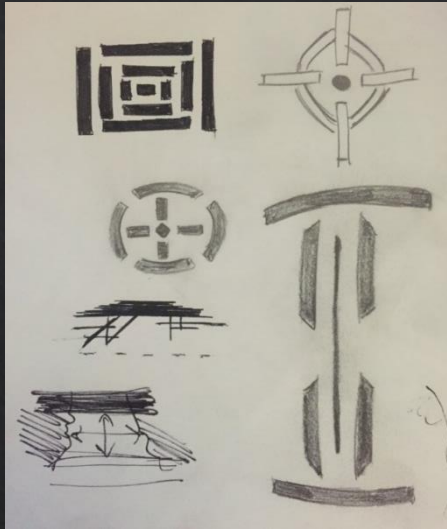


MAMMOTH CAVE - ENTRANCE



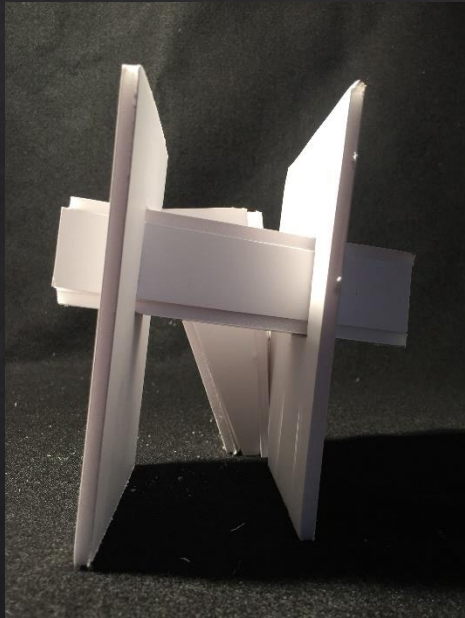
MAMMOTH CAVE - CAVERNOUS TUNNEL

PARTI IDEAS

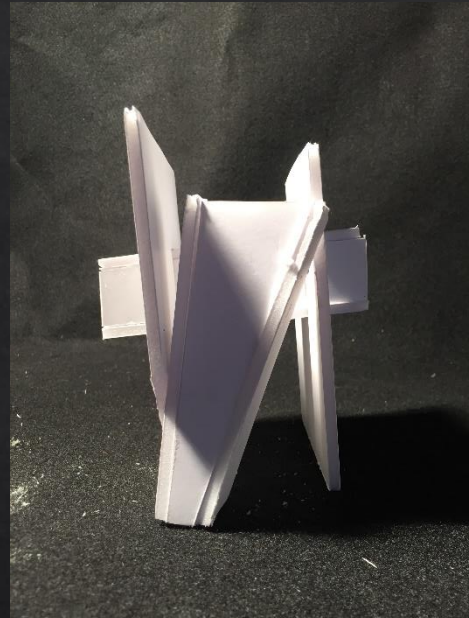


PARTI MODELS – A STUDY IN MASS

PARTI 1 – ESTABLISHING MASS



FRONT VIEW

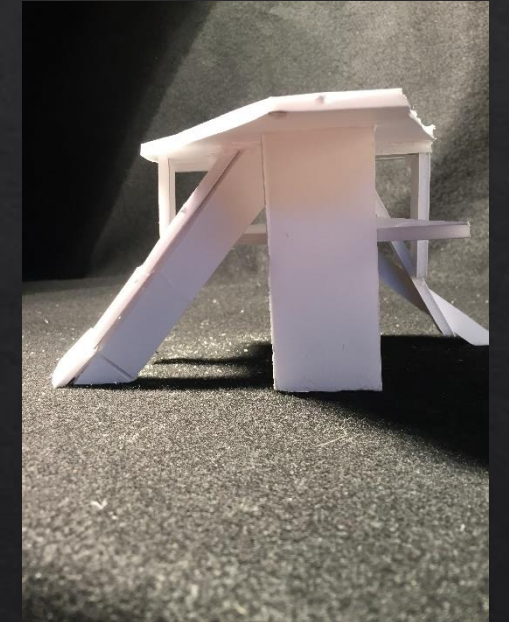


BACK VIEW

PARTI 2 – ESTABLISHING MASS



FRONT VIEW



BACK VIEW

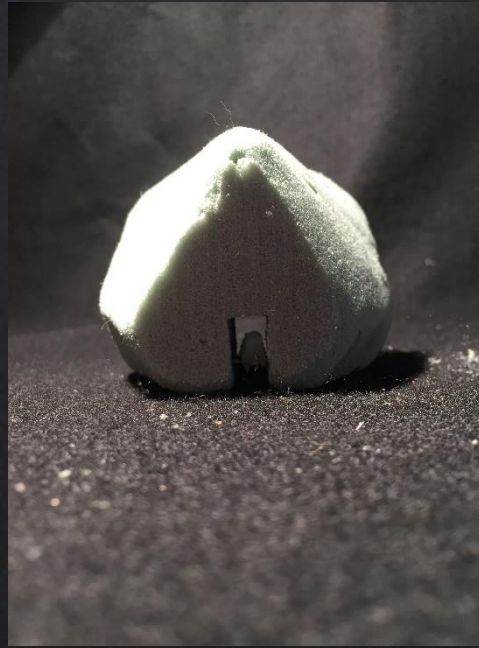
PARTI MODELS

EXECUTION OF COMPRESSION AND RELIEF

STUDY MODEL OF PATHWAY IDEA



FRONT VIEW



REAR VIEW



BOTTOM VIEW

~ IDEA OF EXTERIOR WHICH DIFFERS FROM INTERIOR ESTABLISHED ~

FINAL PORTAL MODEL



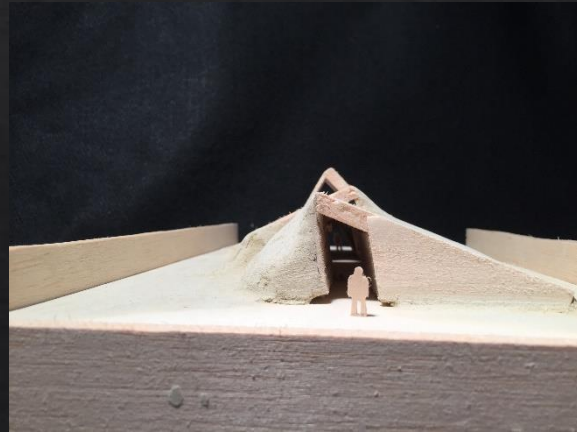
ARIAL ENTRY
VIEW



ENTRANCE



SOUTHERN
FACING



EXIT



NORTHERN
FACING

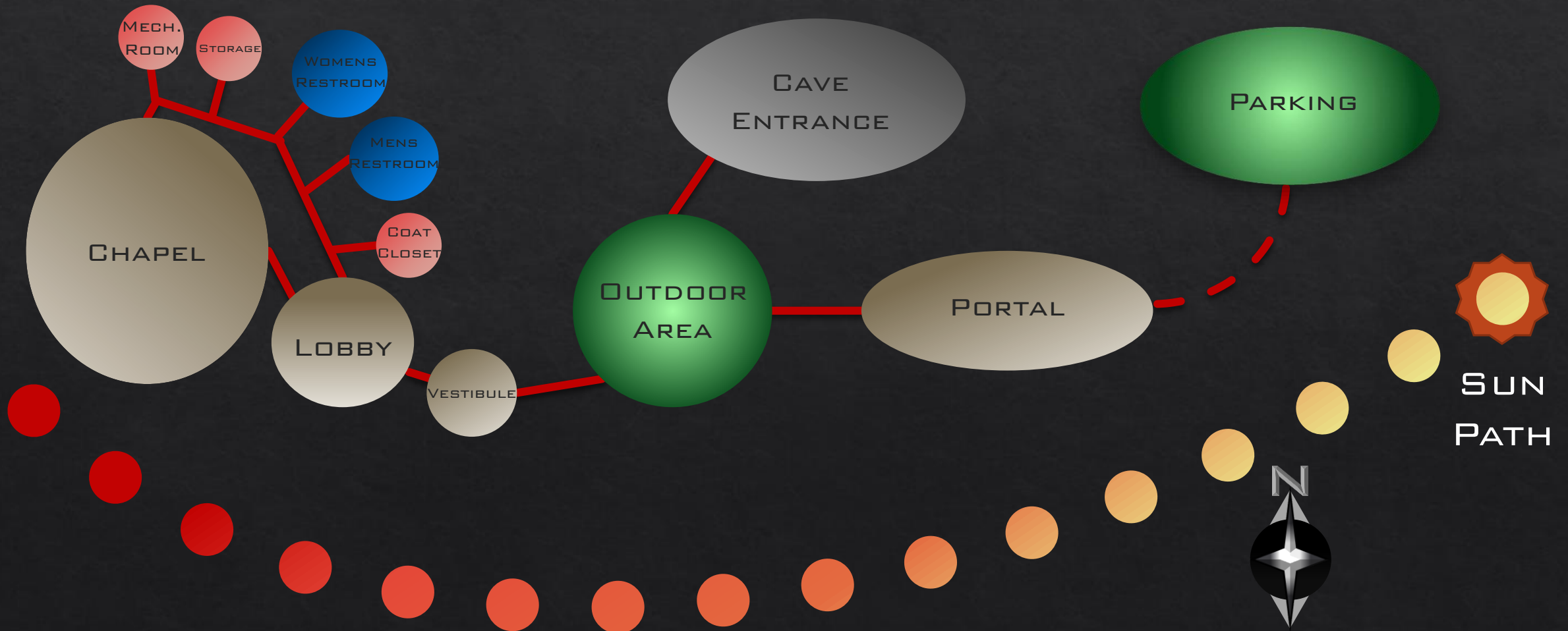


ARIAL EXIT
VIEW

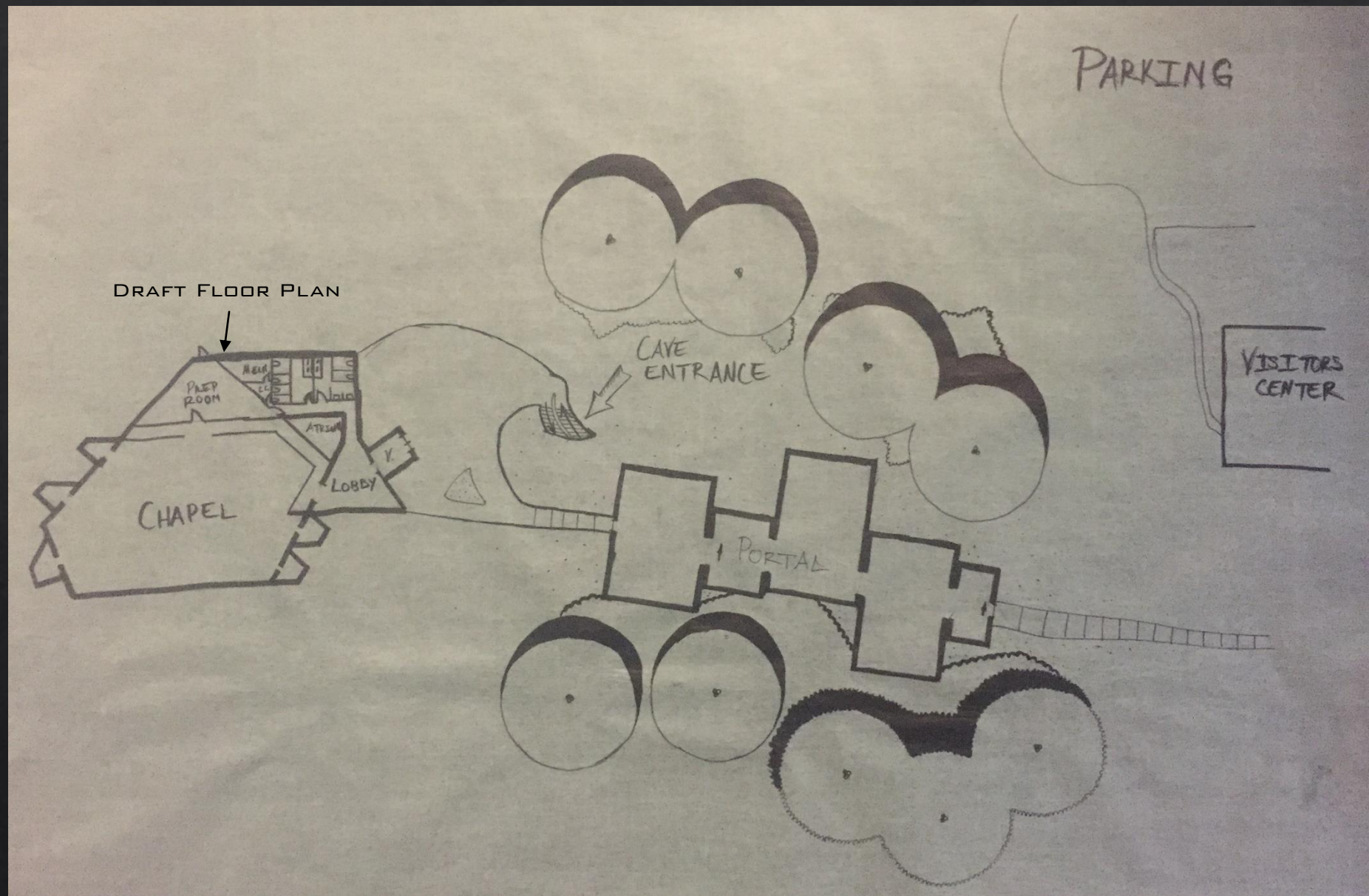
5 DESIGN PRINCIPLES

- ◆ ESTABLISH A NATURAL WELCOMING EXTERIOR
- ◆ HAVE AN UNEXPECTED INTERIOR LAYOUT
- ◆ CREATE COMPRESSION THROUGH PATHWAYS AND DOORWAYS
- ◆ INTRODUCE RELIEF THROUGH CAVERNOUS AREAS USED FOR GATHERINGS
- ◆ INTRODUCE NATURAL THROUGH UNCOVERED EXTERIOR AREAS IN UNEXPECTED LOCATIONS

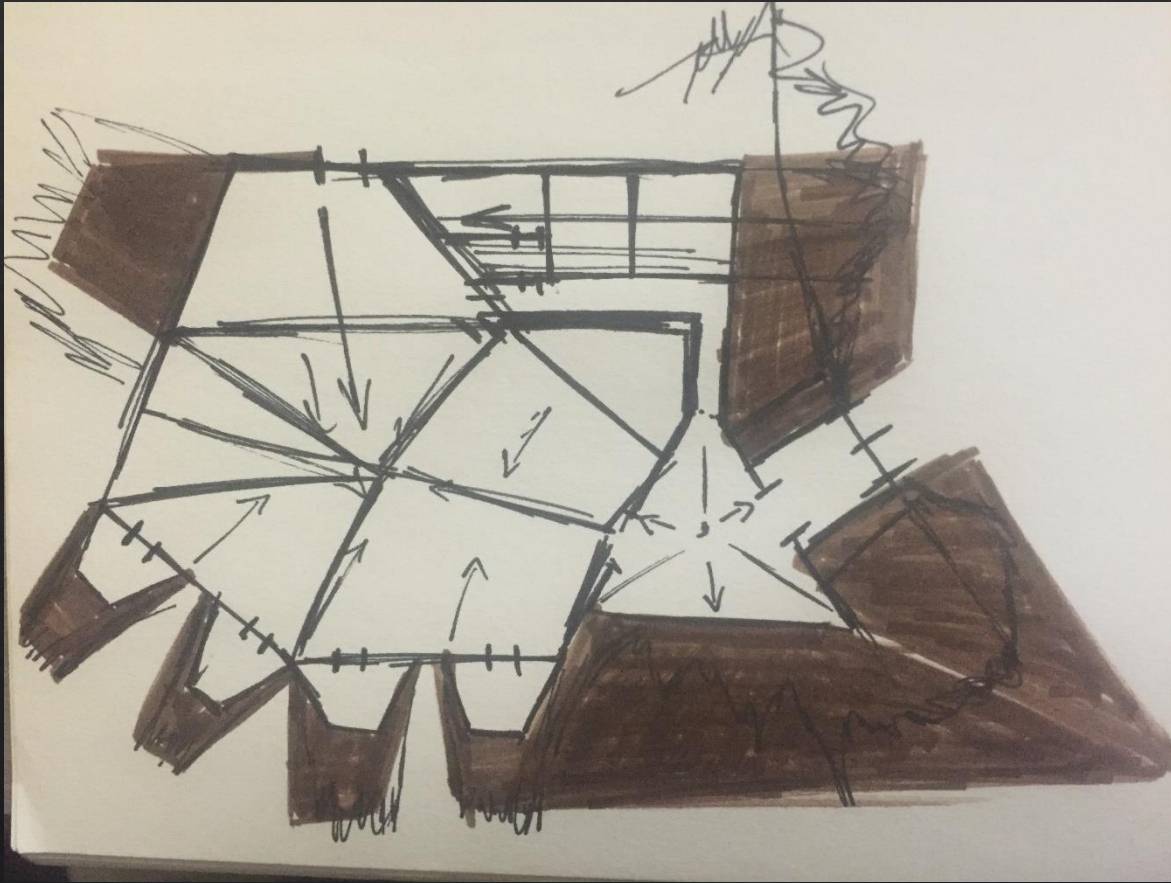
SPATIAL OUTLINE



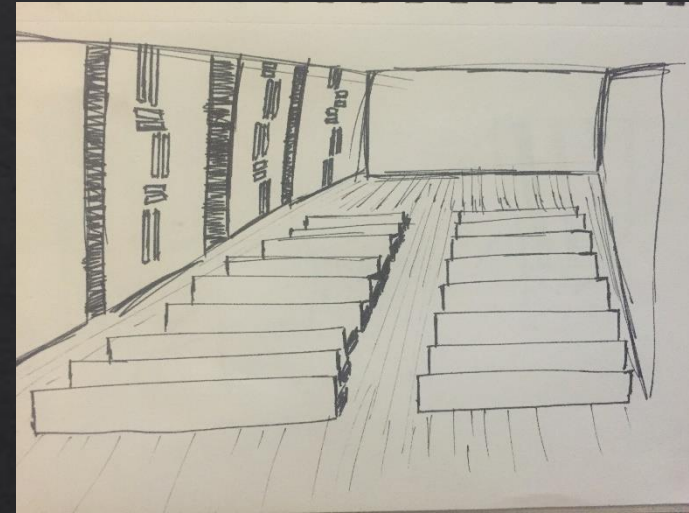
SITE PLAN



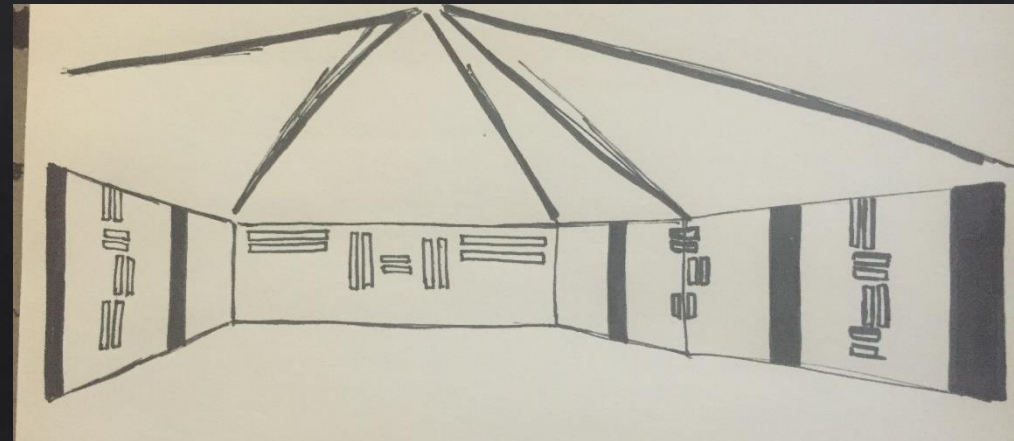
DRAFT SKETCHES



~ CONCEPT PLAN ~
INTERIOR WALLS
VS
EXTERIOR WALLS



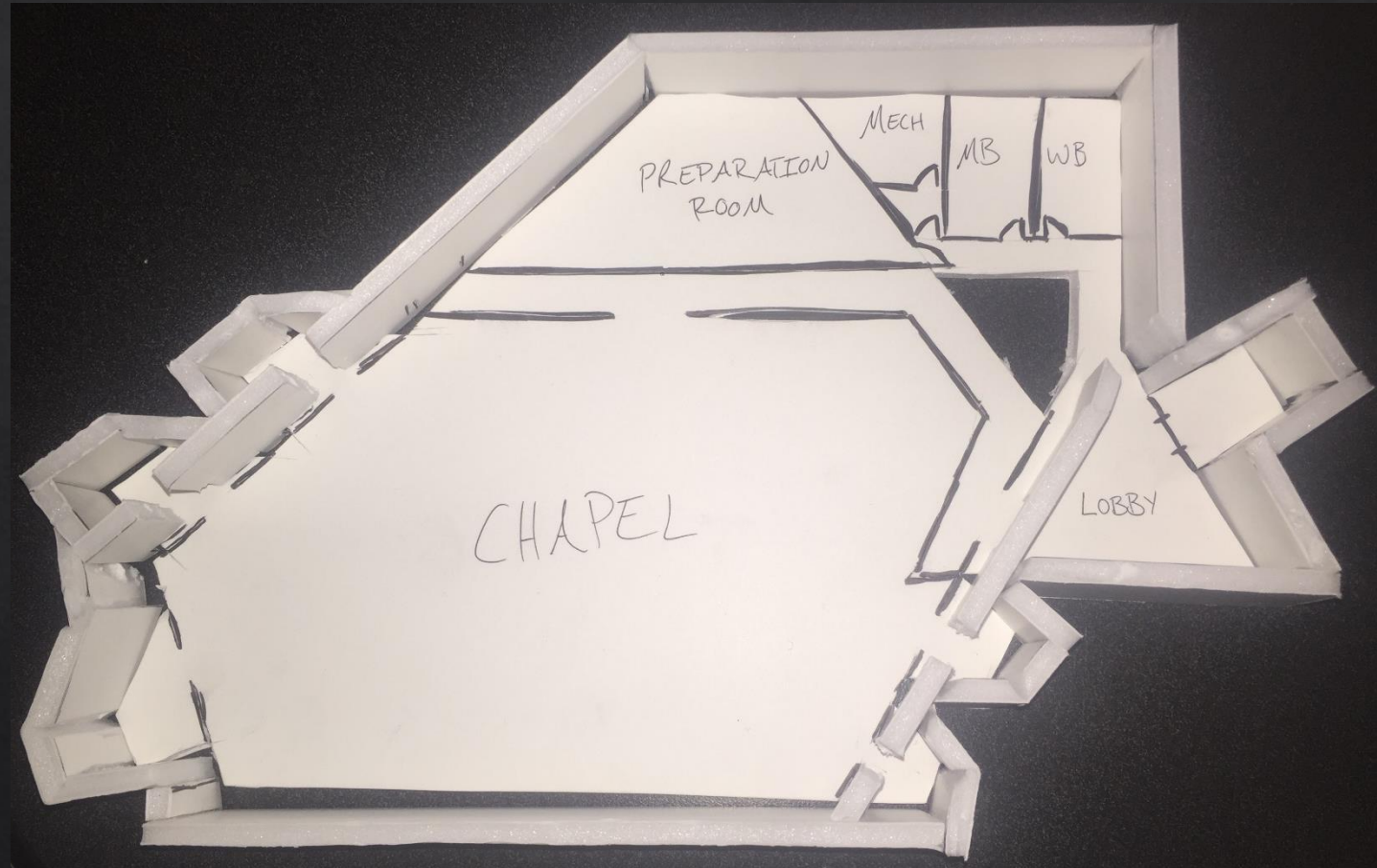
INITIAL INTERIOR CONCEPT



PROGRESSED INTERIOR CONCEPT

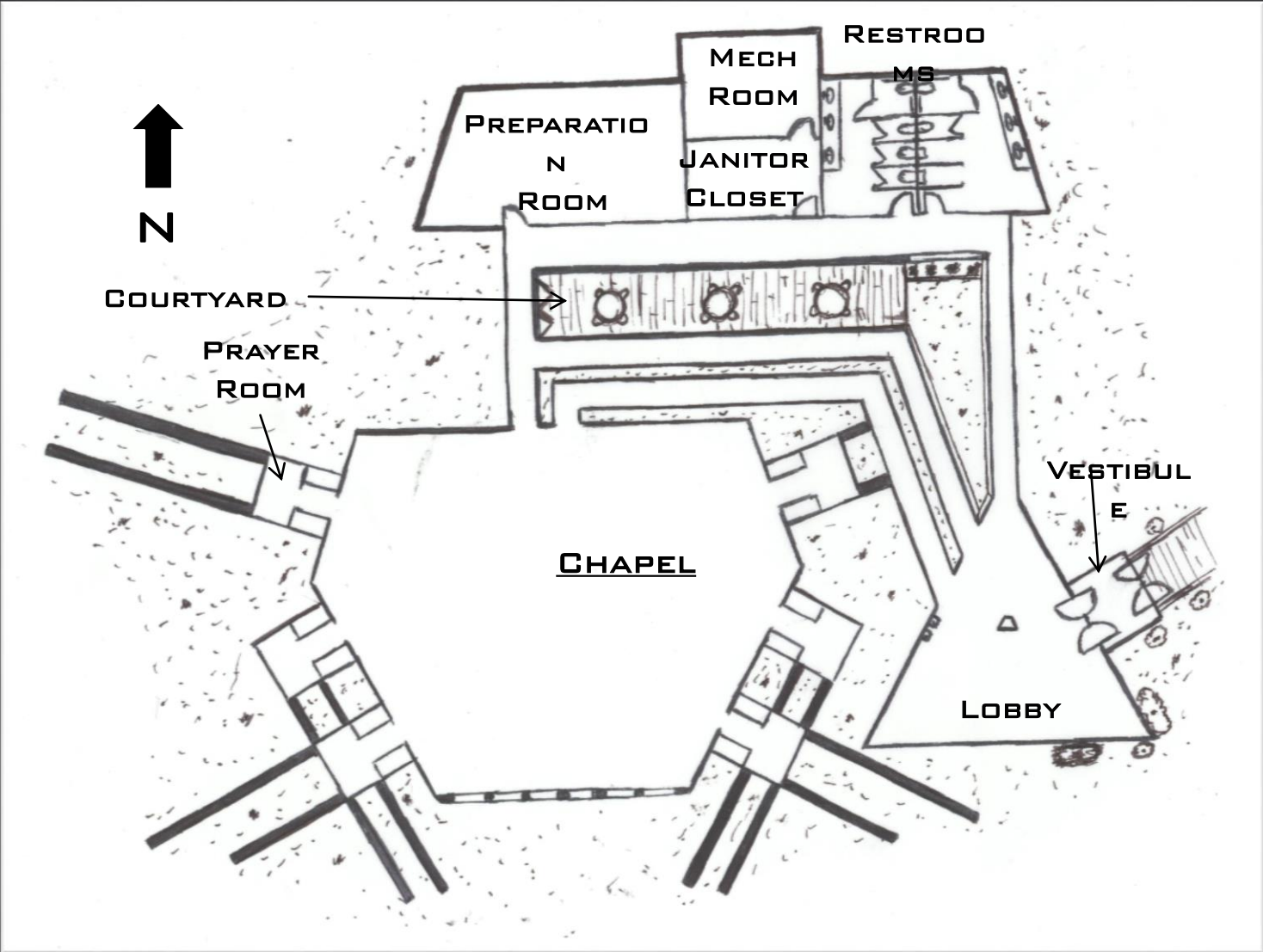
ESTABLISHES UNEXPECTED SOURCES OF LIGHT AND A FEELING OF RELIEF THROUGH THE LARGE CAVERNOUS SPACE.

CHAPEL CONCEPT MODEL

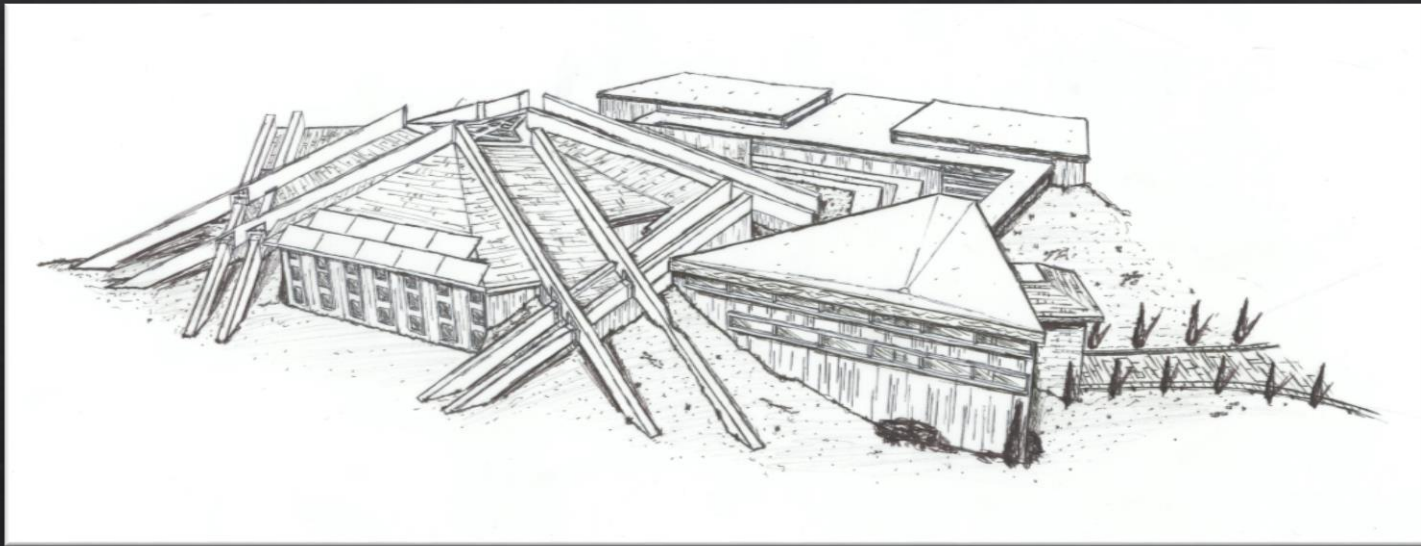


INTERIOR STRUCTURAL WALLS
ESTABLISHED

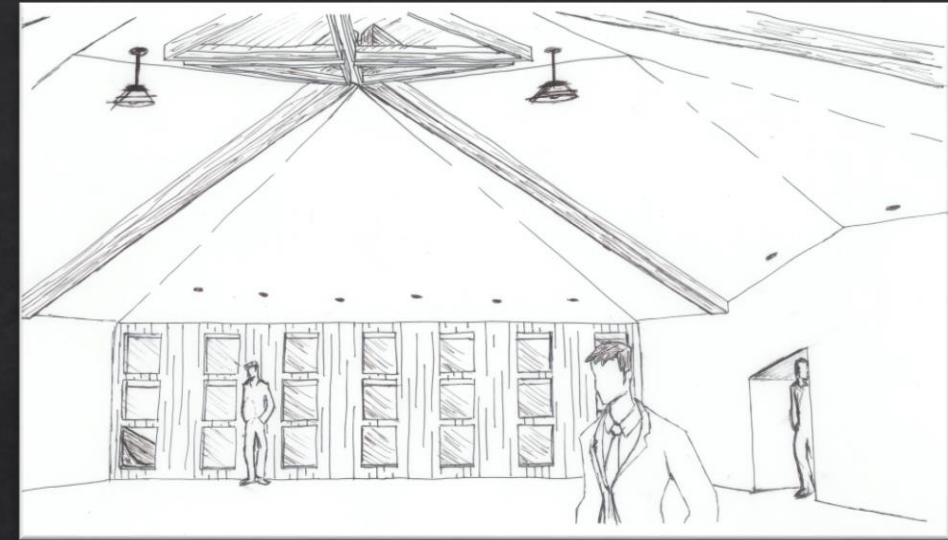
FINAL FLOOR PLAN – HAND RENDERED



HAND RENDERINGS

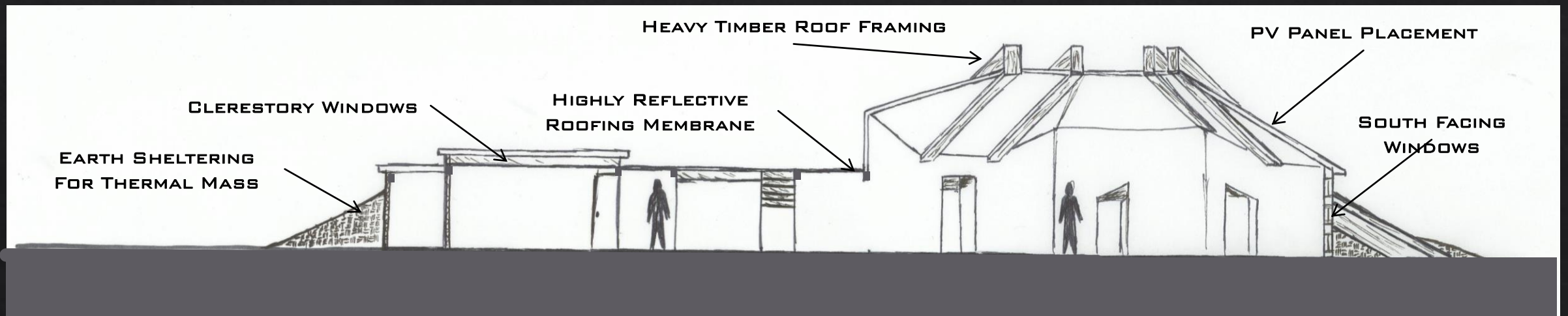


EXTERIOR PERSPECTIVE

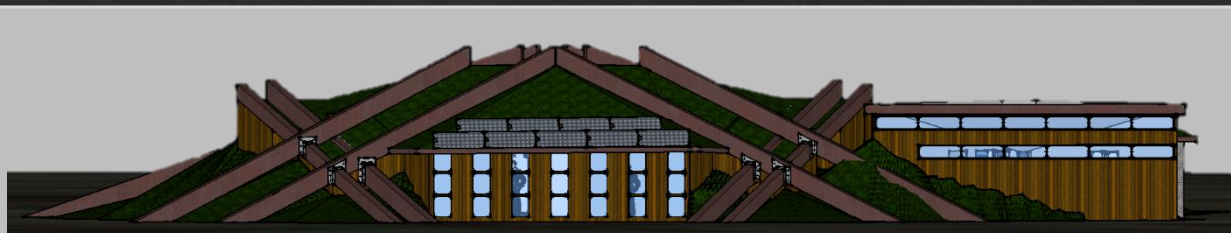


INTERIOR CHAPEL PERSPECTIVE

ELEVATION PERSPECTIVE



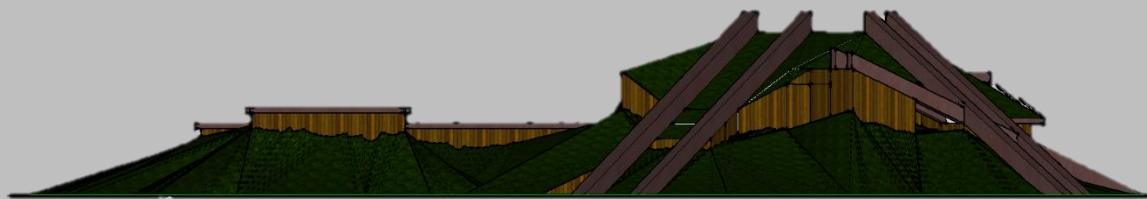
ELEVATIONS



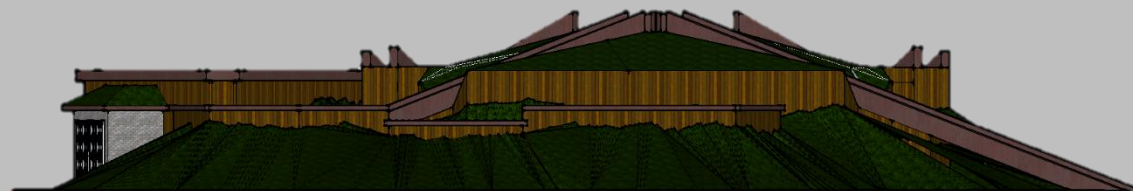
SOUTH ELEVATION



EAST ELEVATION

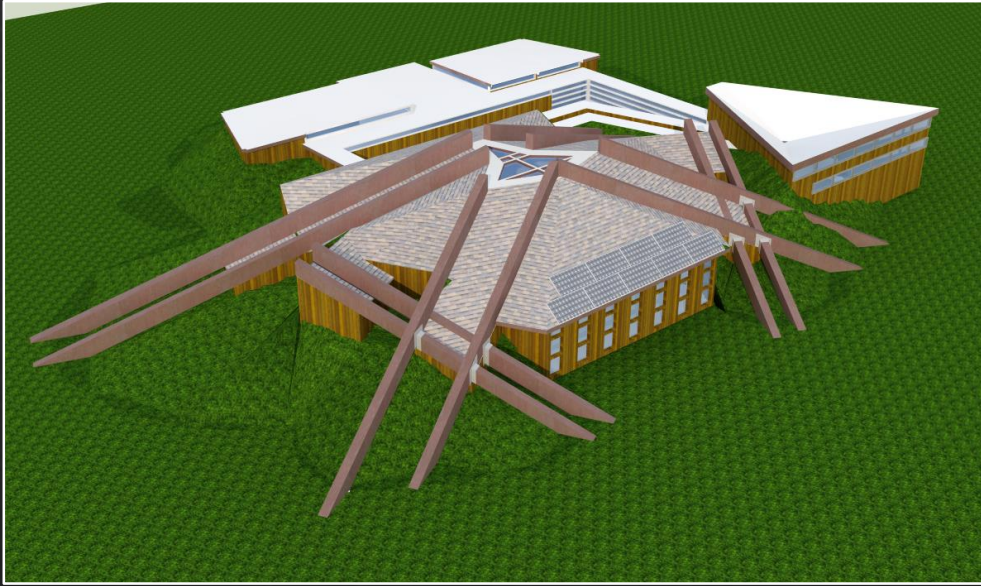


WEST ELEVATION

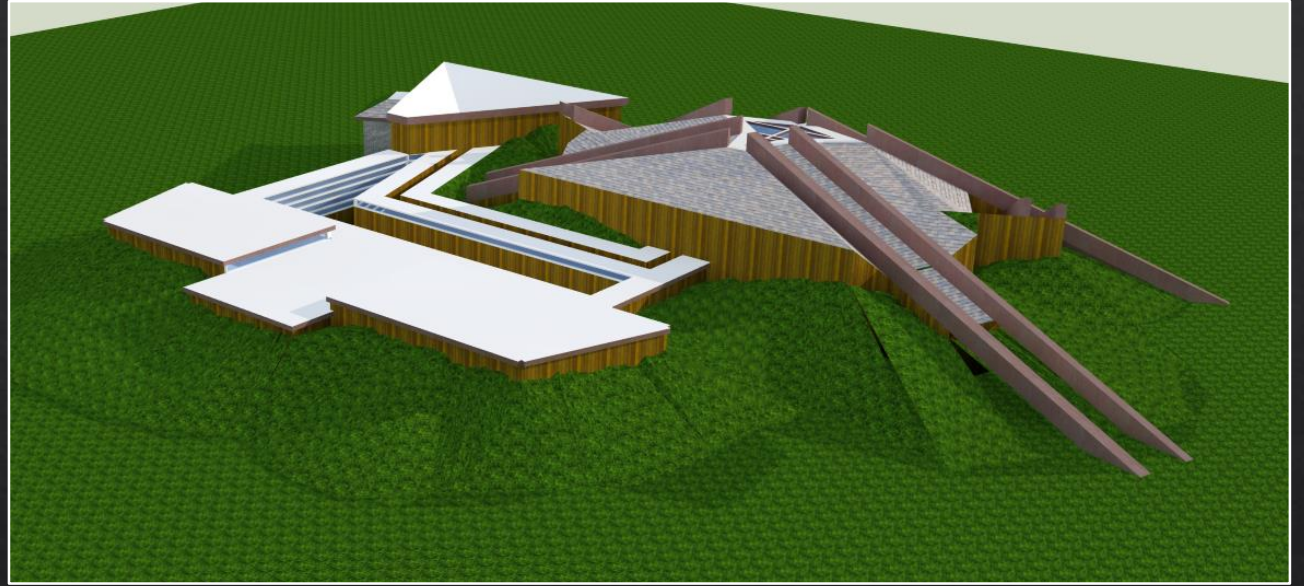


NORTH ELEVATION

EXTERIOR RENDERINGS



EXTERIOR RENDERING - SOUTH



EXTERIOR RENDERING - NORTH