

# HEALING BY THE SEA: AN EMPIRICAL STUDY INTO BIOPHILIC DESIGN

Arch 772 Design Thesis

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## **PROBLEM STATEMENT**

To what extent can biomimicry benefit occupants of a tropical biophilic design?



## **PROJECT TYPOLOGY**

A tropical biophilic resort



## PROJECT CLAIM

Vacationing is essential to creativity, health, and overall well-being. A tropical region offers a lot of beneficial aspects, both environmentally and architecturally, to successfully accomplish these objectives.



## PROJECT JUSTIFICATION

Not only does the environment in which we spend time affect our perception, but the space connecting us with nature is crucial to a successful healthy rejuvenation of mind, body, and soul. Tropical regions and coastal environments have shown to have healing properties and welcome relief from stress, anxiety, and tension (Aqua for Balance, 2011).

I believe that the connection between the nature in a tropical region and the traveler can be enhanced by biophilic architecture. A successful design can promote a more healthy life for not only the guests, but also the environment in which the design is built. The resort will improve the local economy and provide more job opportunities for local residents.



## PROJECT EMPHASIS

Biophilic design is defined as “the deliberate attempt to translate an understanding of the inherent human affinity to affiliate with natural systems and processes - known as biophilia - into the design of the built environment” (Kellert, Heerwagen, & Mador, 2008). Coastal regions have been proven to have positive health benefits and therefore is the ecosystem being used for this proposal.

First, it is becoming increasingly clear that biophilic elements have real, measurable benefits relative to such human performance metric as productivity, emotional well-being, stress reduction, learning, and healing.

Second, biophilic features foster an appreciation of nature, which, in turn, should lead to greater protection of natural areas as well as efforts to eliminate pollution and maintain a clean environment (Kellert, Heerwagen, & Mador, 2008, p. 326).



**CASE STUDIES**

## CASE STUDY : THE OUTPOST KRUGER NATIONAL PARK, SOUTH AFRICA



Architect: Enrico Daffonchio and Associates

Construction: Complete February 2003

Size: 24,757 Square Feet and 12 Units

Enrico Daffonchio needed to design an environmentally responsive piece of architecture with an atmosphere of relaxed comfort in the wilderness. The conceptual idea was to set the resort into the landscape subtly; providing certain luxuries while offering an intense and direct experience with the natural surroundings. The structure is touching the ground plane lightly with the use of stilts. This feature is adaptable and can be removed without a trace. A designed bonus for a site located within a National Park.



Information and images were courtesy of the December 2006 edition of Architectural Record. The article was written by Sarah Amelar.



## CASE STUDY : AMANGIRI RESORT CANYON POINT, UTAH



Architect: I-10 Studio, Marwan Al-Sayed,  
Wendall Burnette, and Rick Joy  
Construction: Complete October 2009  
Size: 78,400 Square Feet and 34 Units

Some key elements I pulled from this project revolve around privacy, focus, relaxation, minimalism, and purity. This set of words paraphrases the entire resort as a whole. The project architects focused on nature, and intentionally highlighted it with the minimal furnishings. Spareness and purity are dominant, materials are similar to those of the surrounding desert landscape. "Isolation and austerity meet extravagance of the most refined nature."

This specialty project, in my opinion, could be classified as a wellness resort.



Information and images were courtesy of the May 2010 edition of Architectural Record. The article was written by James Reginato and Suzanne Stephens.



**SITE SELECTION**

JAMAICA

2011



**GREEN CASTLE ESTATE HOUSE - ECO RESORT**



HUSKING THE OUTER SHELL OF THE COCONUT



GRINDING THE FLESH FROM THE SHELL



**DRYING THE FLESH OVER SMOLDERING HUSKS**



LEARNING THE PROCESS OF MAKING COCONUT OIL





FINAL STEP IS TO PRESS THE DRY COCONUT TO EXTRACT OILS



COCOA BEANS



**LARGEST ORCHID GREENHOUSES IN JAMAICA**



**WIND MILL REMAINS**



STRAWBERRIES FIELDS FOREVER - ECO RESORT



**SIMPLE, ELEGANT HAND MADE STRUCTURES**



**INDIVIDUAL GUEST VILLAS**



ENJOYING THE BEAUTIFUL COAST



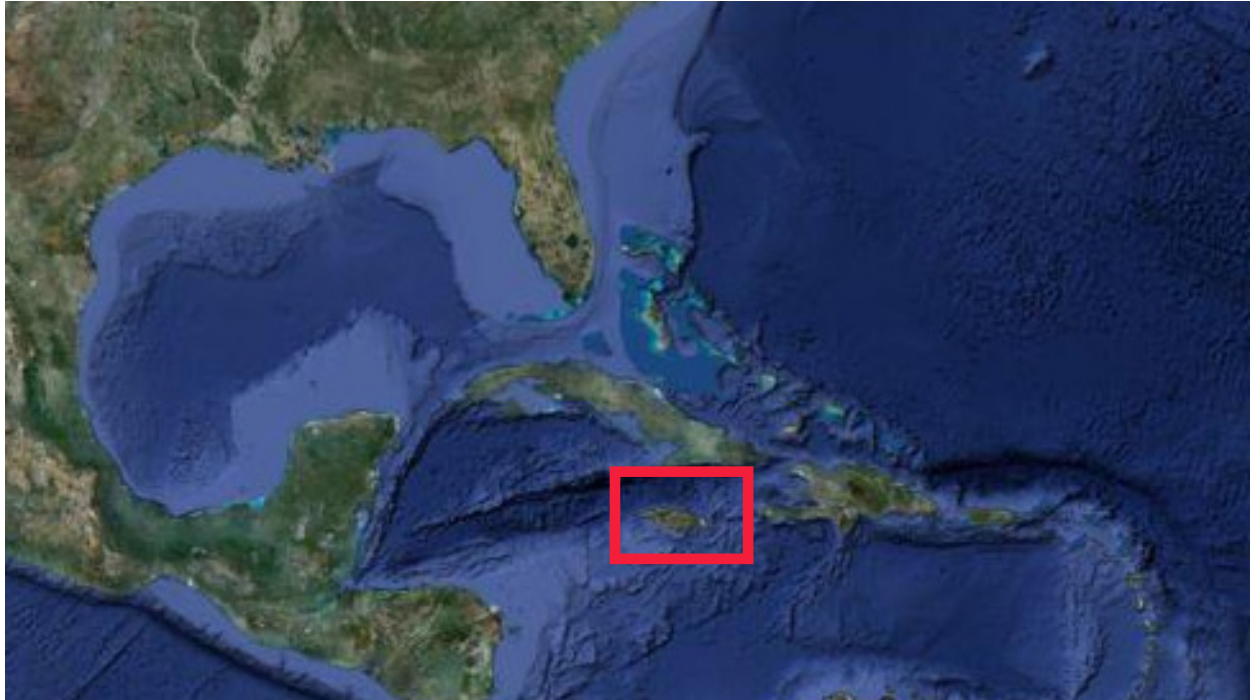


**CARIBBEAN VIEWS FROM EVERY GUEST ROOM**



IMMERSION OF ARCHITECTURE AND NATURE

**MACRO SITE**



**CARIBBEAN SEA**

**MACRO SITE**



**JAMAICA**

**MICRO SITE**



**SAINT ANN PARISH**

## MICRO SITE



**SALEM, RUNAWAY BAY**

360 DEGREE FROM CENTER VIEW



180 DEGREE NW CORNER VIEW



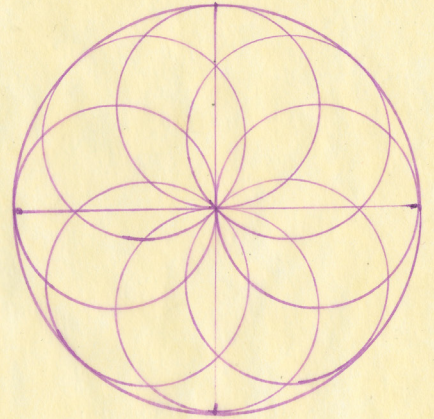
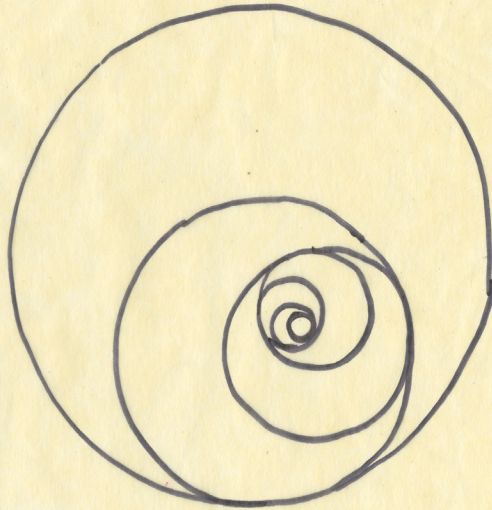
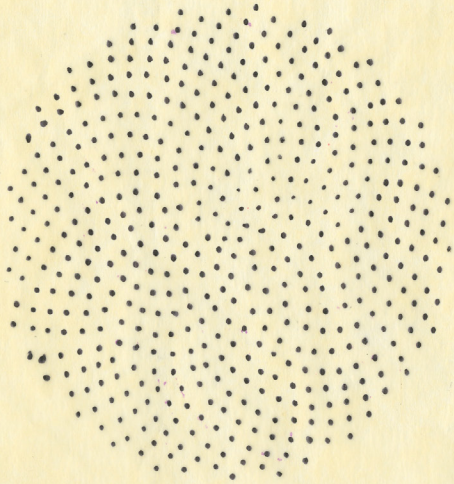


## ISLAND INSPIRATIONS

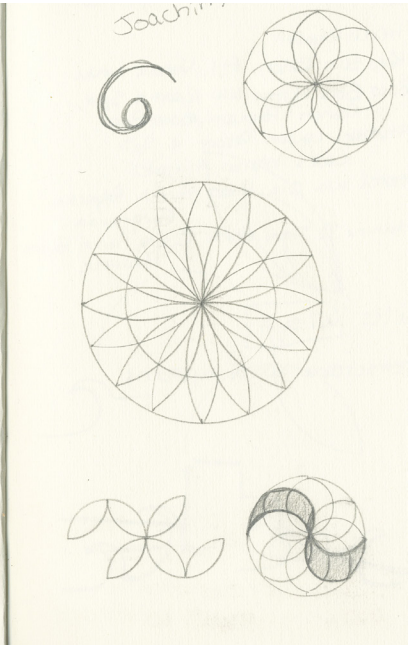
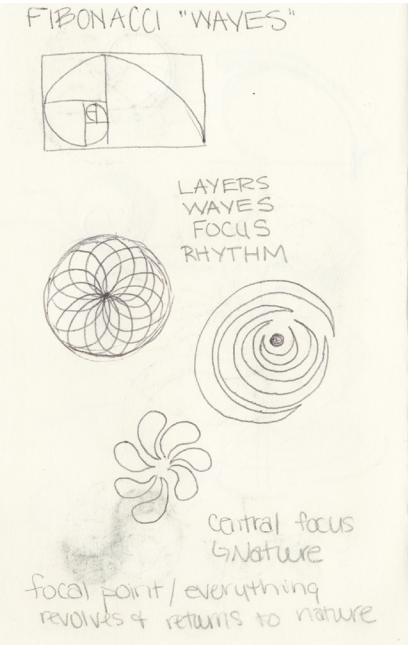
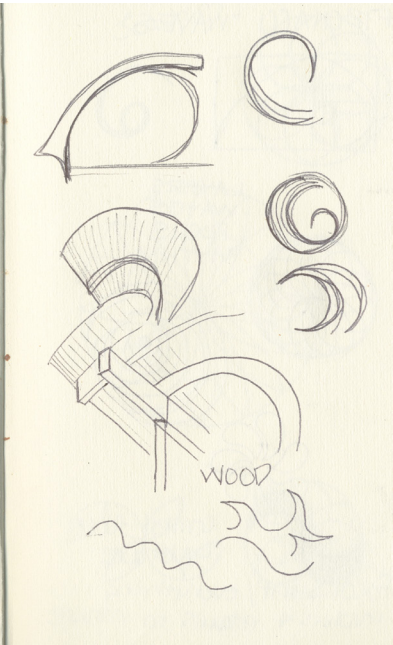
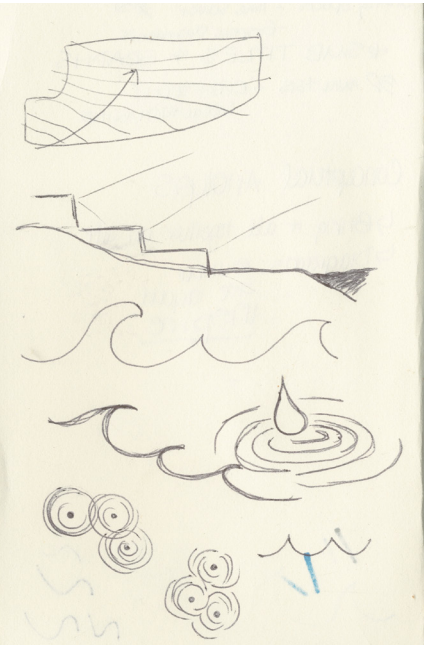


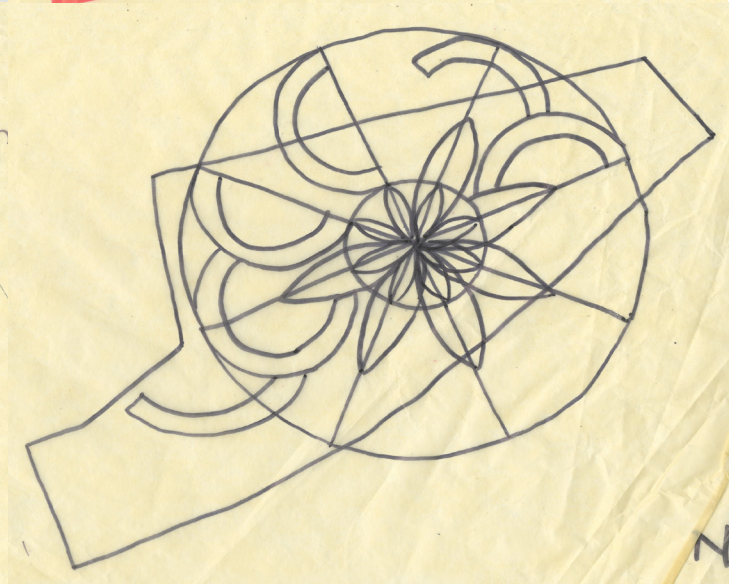
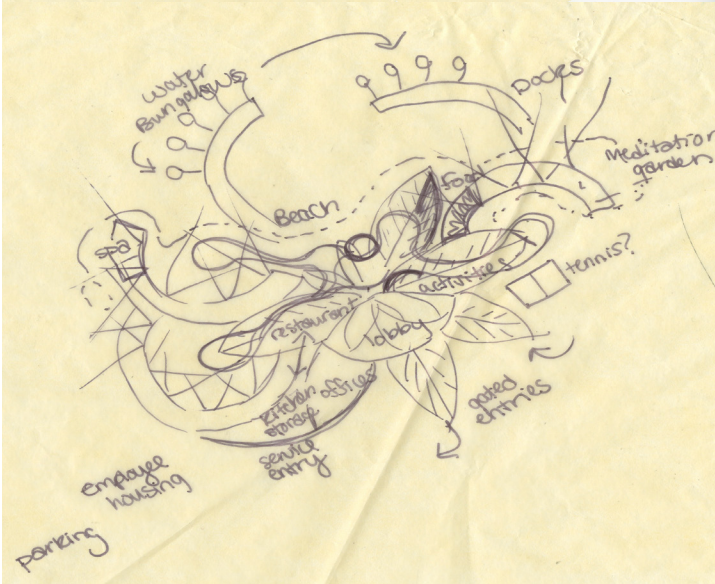
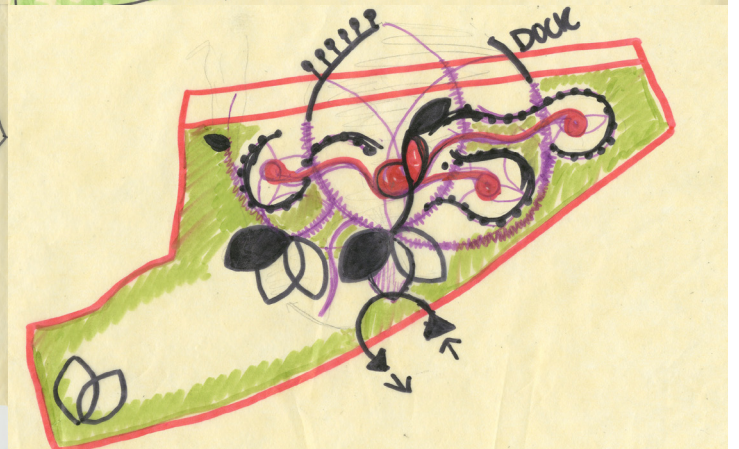
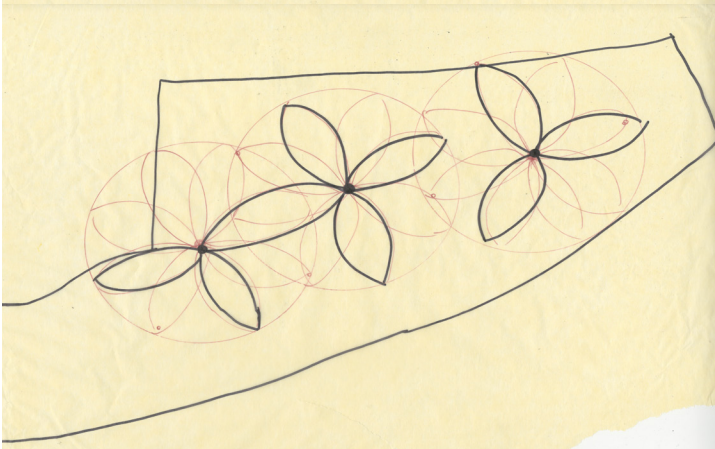
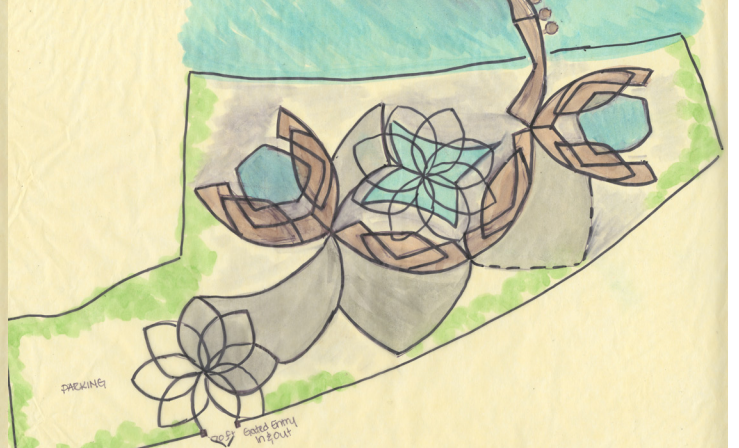
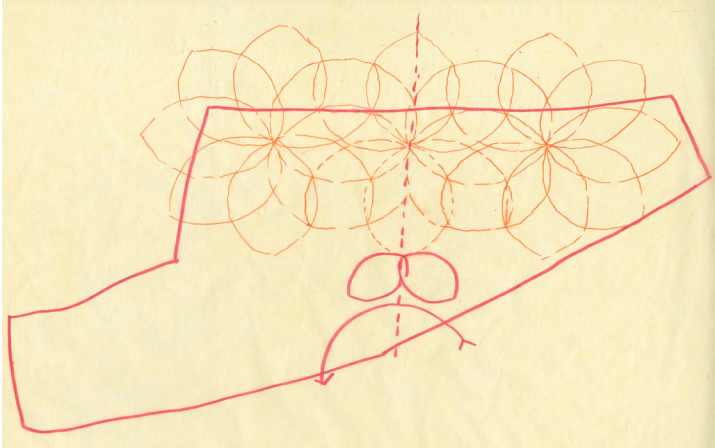
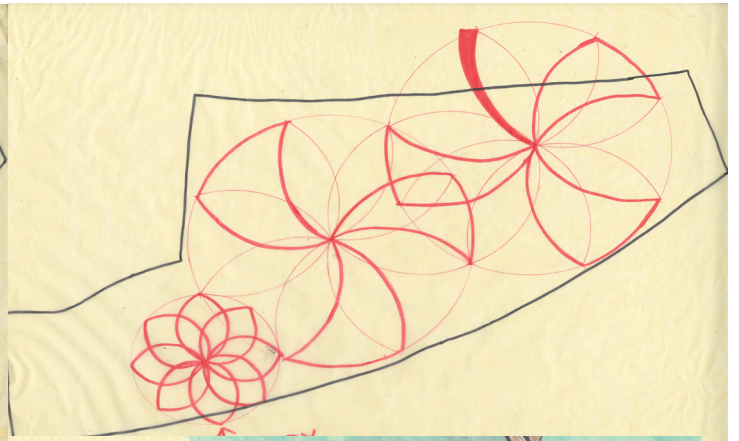
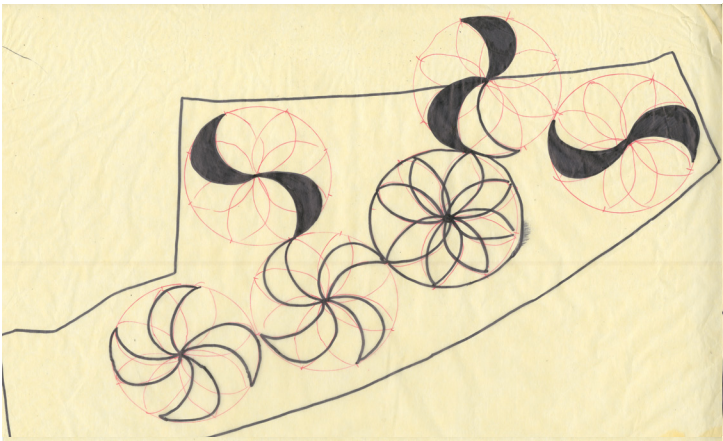
1. Heliconia
2. Ginger Lily
3. Perry Winkle
4. Bamboo
5. Almond Tree
6. Hibiscus
7. Courtney Plant
8. Lobster Claw
9. Orchid

# INSPIRATIONAL FORMS



# PROCESS SKETCHES







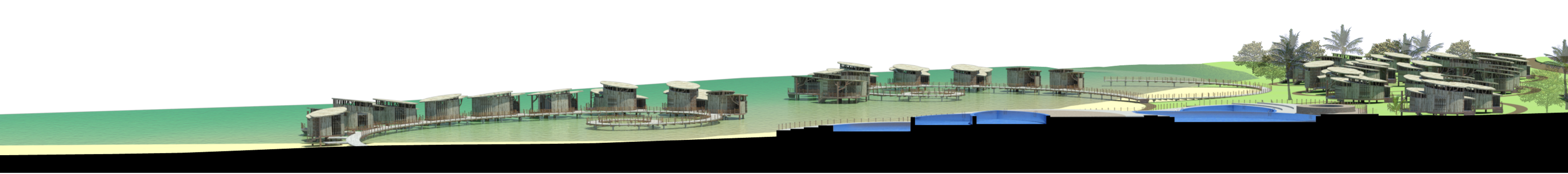
FINAL DESIGN

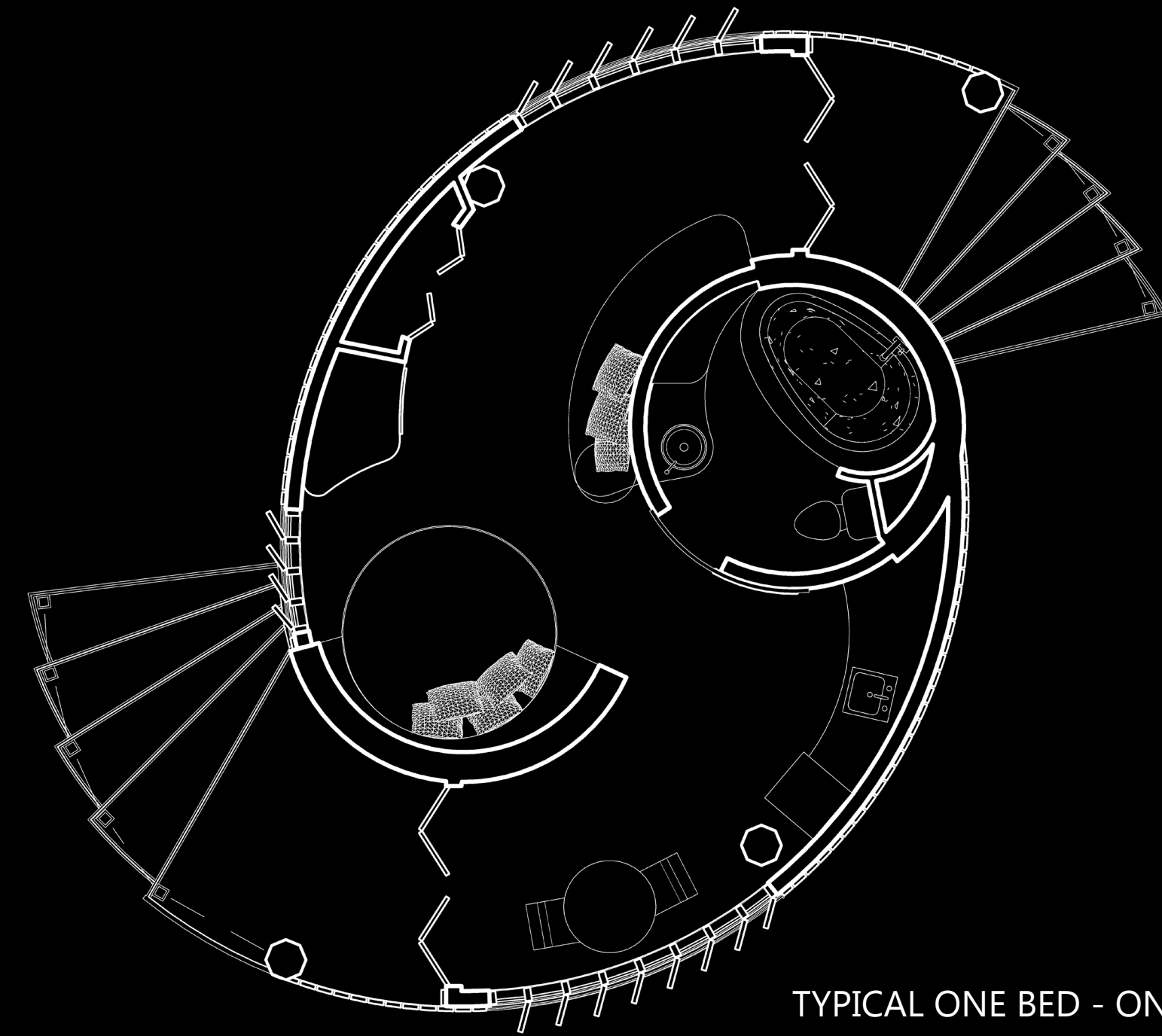


**RESORT MASTER PLAN**

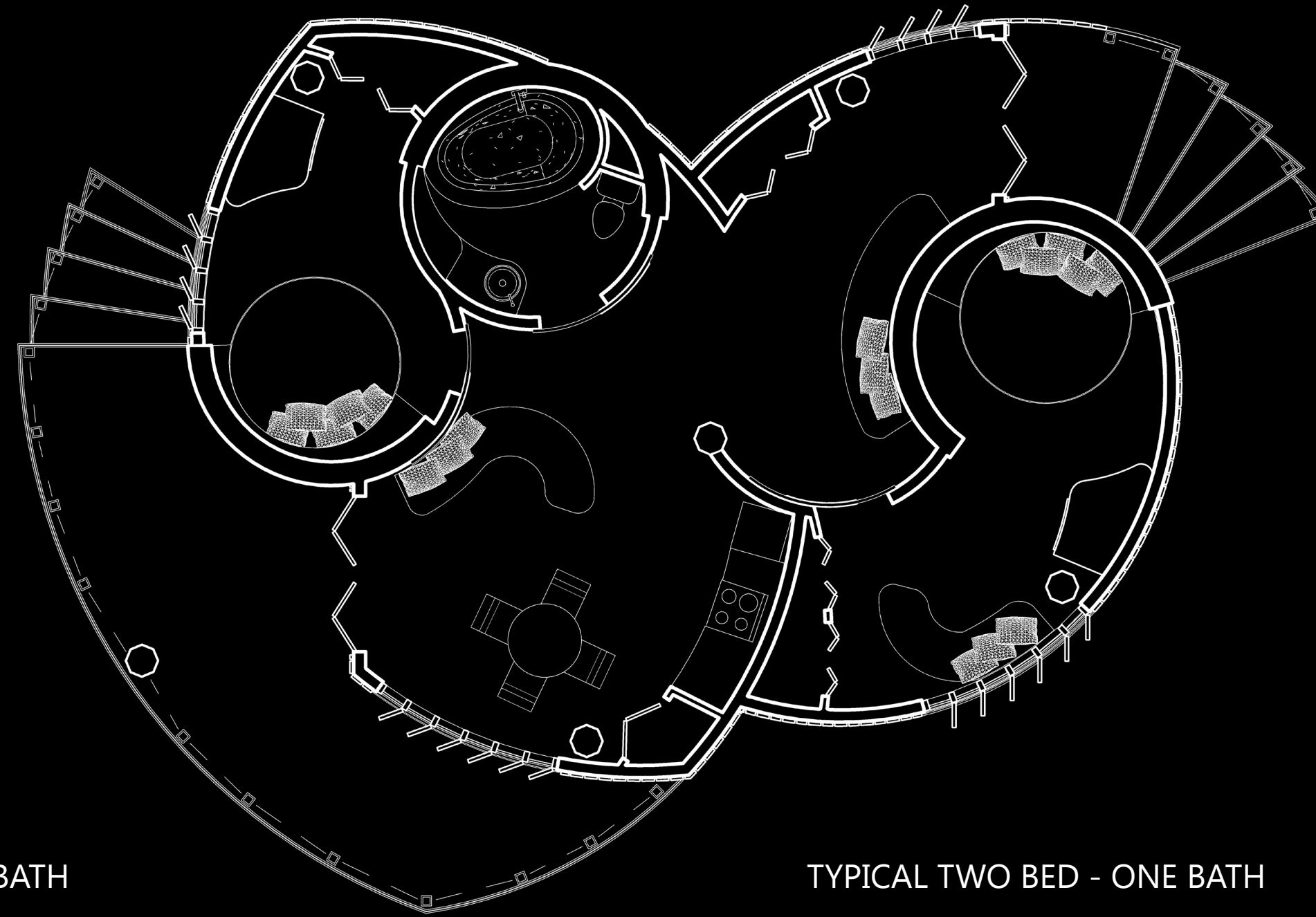
- 01 LOBBY
- 02 FRONT DESK
- 03 ORGANIC STORE - LOCAL MARKET
- 04 ADMINISTRATION BUILDING
- 05 PUBLIC RESTROOMS
- 06 MULTI-PURPOSE SPACE
- 07 ACTIVITIES OFFICE
- 08 RESTAURANT
- 09 STAFF ROOM
- 10 LAUNDRY FACILITIES
- 11 LANDSCAPE AND MAINTENANCE
- 12 STAFF HOUSING
- 13 FACILITY MAINTENANCE AND SUPPORT
- 14 TENNIS COURTS
- 15 CENTRAL LOUNGE
- 16 POOL(S)
- 17 JACUZZI SPA
- 18 MEDITATION AND SPA
- 19 BOAT DOCK
- 20 COURTYARD
- 21 RESORT PARKING
- 22 PRIVATE BEACH
- 23 CARIBBEAN SEA



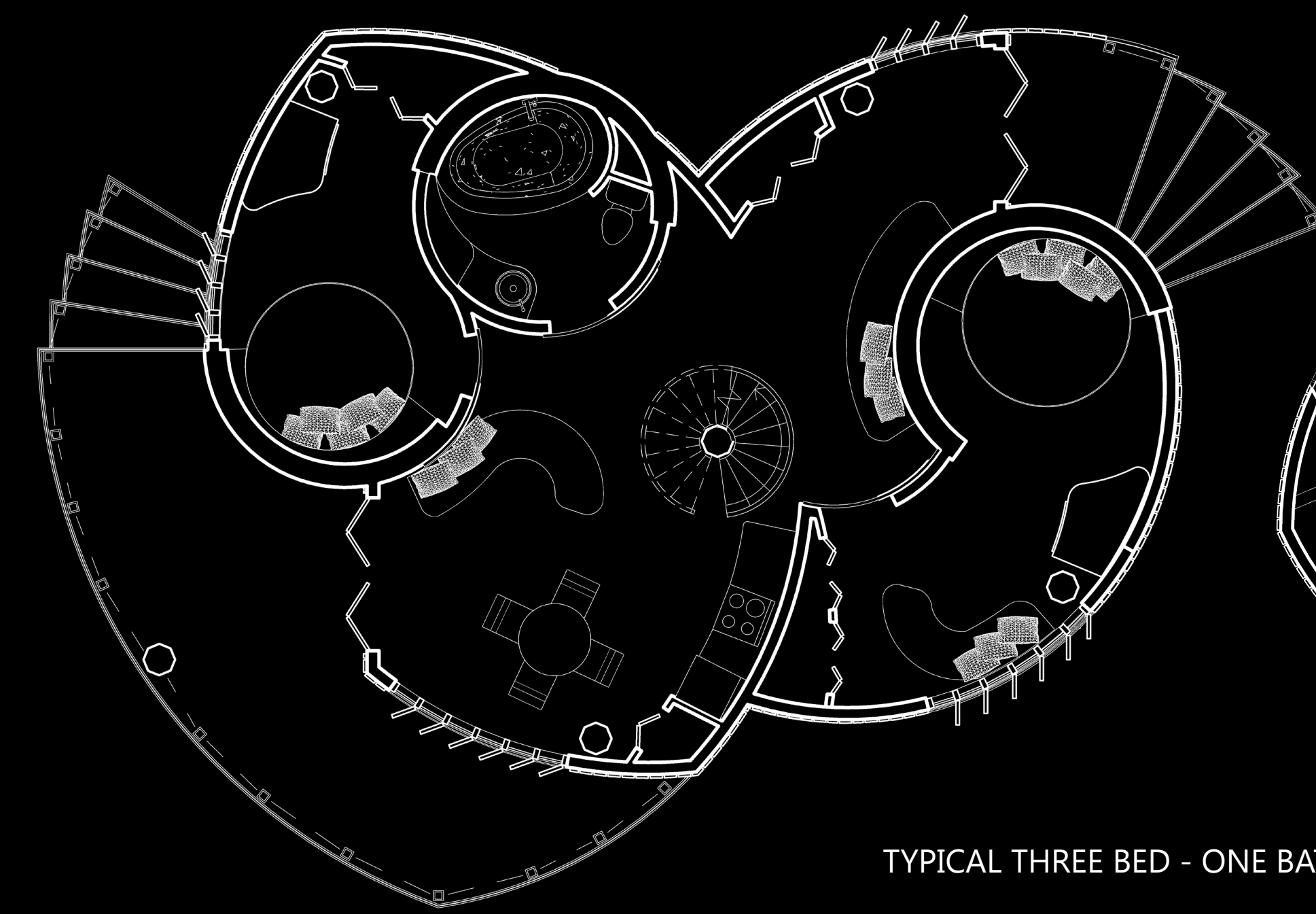




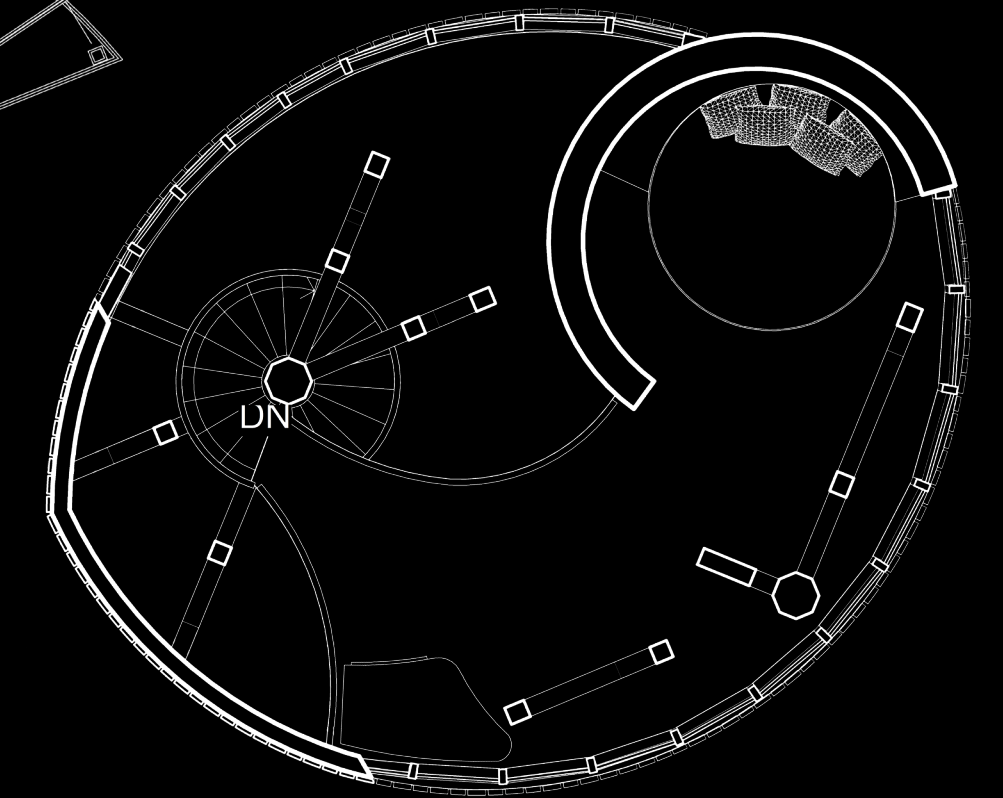
TYPICAL ONE BED - ONE BATH



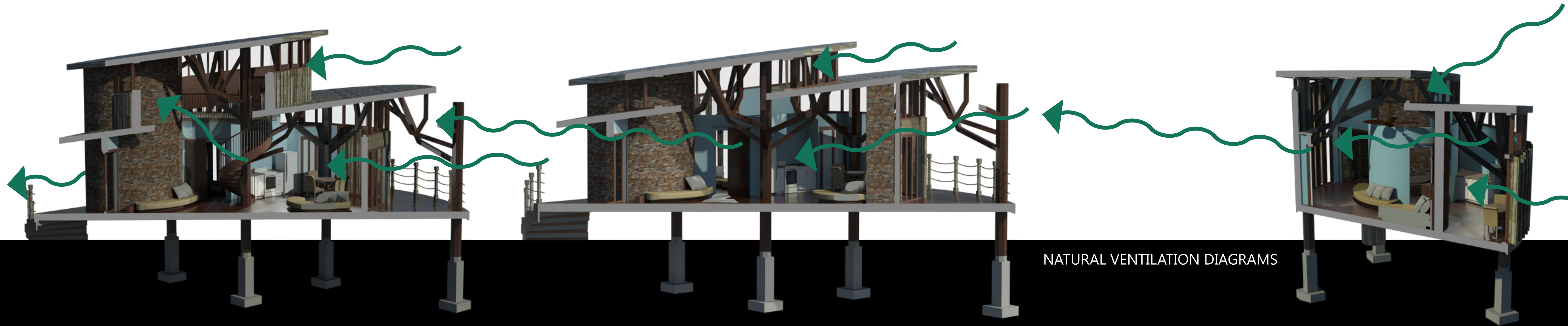
TYPICAL TWO BED - ONE BATH



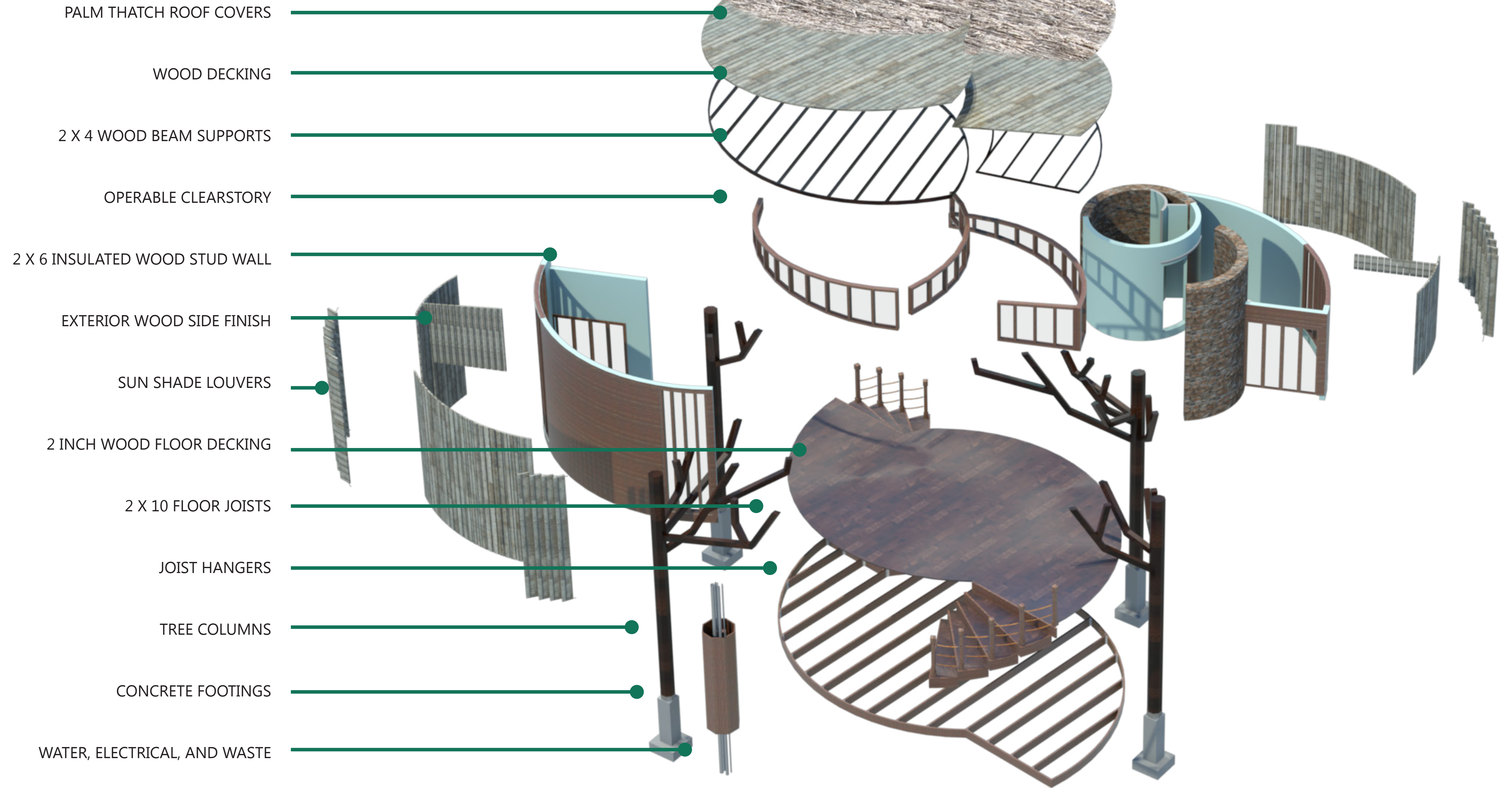
TYPICAL THREE BED - ONE BATH LOFTED SUITE







## TYPICAL VILLA CONSTRUCTION







TYPICAL CARIBBEAN VIEWS



TYPICAL SINGLE UNIT



TYPICAL LOFT SUITE









THANK YOU,  
QUESTIONS??