FORT LIBERTÉ MEDICAL CLINIC erin + emmie spring 2013

CLEAR CIRCULATION

Illiteracy is also a large issue in the community, and easy way finding without written signage allows movement through the space to be organized and simple. Patients and staff must be able to easily find their way around the facility. The simple u-shape allows patients to start at one point and make their way through the clinic to exit at another point. This keeps patients from having to retrace their steps and keeps the hallways clear.

WATER COLLECTION + FILTRATION

Currently, there is no system of continuous running water through the country. Each town typically provides some kind of well that members of the community walk to daily to fill their buckets. There is also not a system to filter the water to make safe for drinking. A water collection system through gathering rain water is an important aspect of the design to help supply the clinic during the dry seasons. A filtration system is also part of this system that will provide clean water for drinking and other uses within the clinic.

SIMPLE CONSTRUCTION

Few building materials are accessible in Haiti, therefore a basic underlying grid is important to the success of the design and future construction. Concrete masonry units are the most common; an eight inch grid is the basis for all column, wall, and circulation spaces. Simple construction allows for a more efficient use of time in the building process, as well as a more economic use of materials, creating a budget that is more easily attainable.

LANDSCAPE ARCHITECTURE

The climate is continuously hot and humid throughout Haiti, year round. A space for outdoor areas with plenty of shade is a key element. Courtyard areas provide a shady space for gathering and aid in the calming process needed for restoration of health.

PASSIVE VENTILATION

Air conditioning is not a guaranteed luxury, therefore, other methods of ventilation is necessary. Louvered and clerestory windows, in addition to vent block are common ways to allow the wind to circulate the space without using energy.

REGIONAL MATERIALS

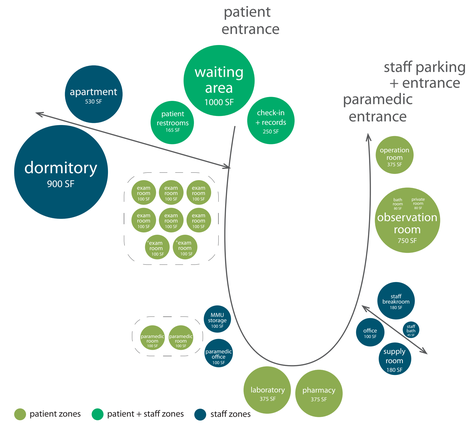
The use of regional materials is an important aspect of the design. It relates the clinic to the surrounding community of Fort Liberte, as well as supports the local economy. Concrete masonry units, wood, wicker, and iron are all common characteristics in Haitian architecture.

NATURAL LIGHTING

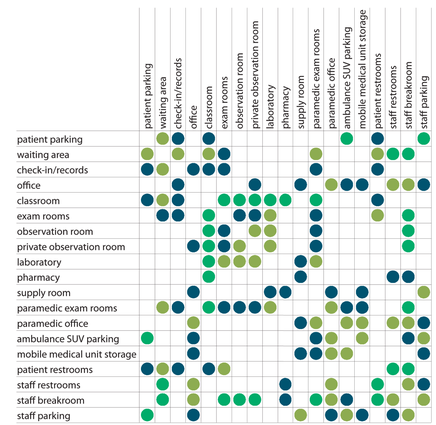
Energy to provide electricity is also not a common thing found in Haiti. Windows and vent blocks not only allow wind to pass through interior spaces, but they also allow natural light to filter in.

PRIVACY + SECURITY

A sense of privacy and security is important when visiting the doctor; which in some cases in Haiti is a completely new and foreign experience. Creating a space that allows the patient to feel more comfortable is important. There is also a need to secure certain areas of the clinic to ensure proper organization and security of valuable items and medicine.

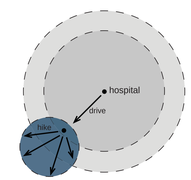


BUBBLE DIAGRAM



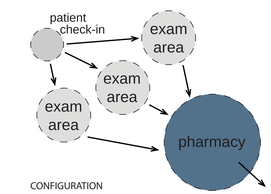
ADJACENCY MATRIX

CHECK-IN + WAITING

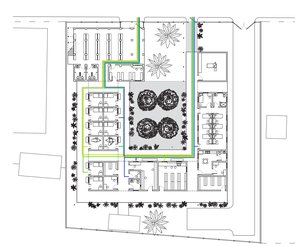


DISPERSAL

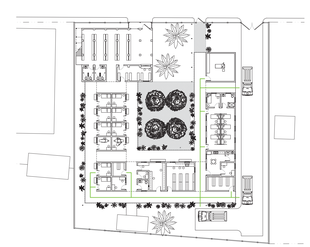
STOCK



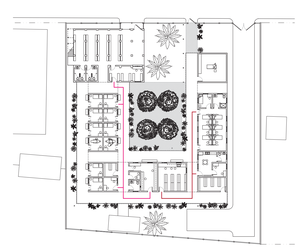
CONFIGURATION



PATIENT CIRCULATION
1/32"=1'0"



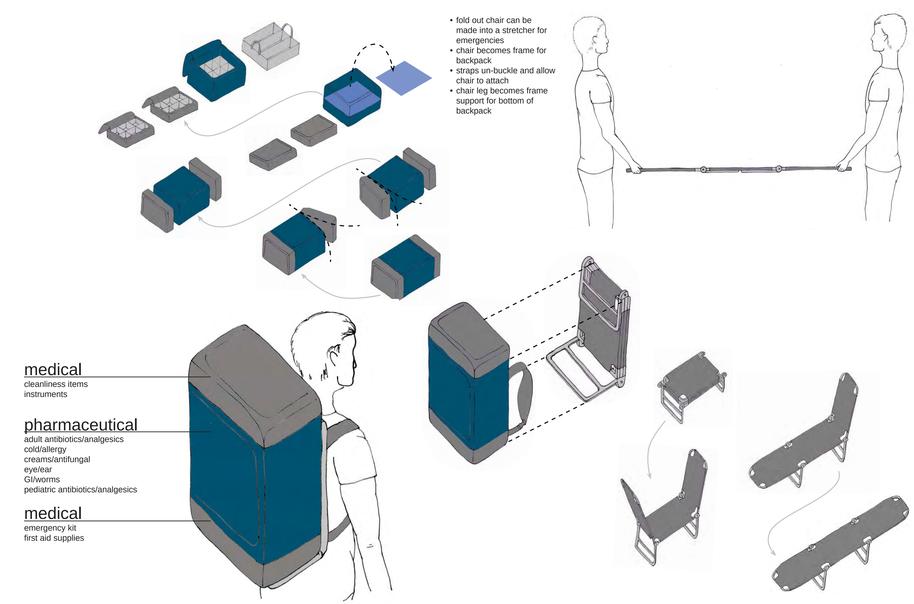
LOADING DIAGRAM
1/32"=1'0"



STAFF CIRCULATION
1/32"=1'0"

PHASING DIAGRAM
1/32"=1'0"

phase 1
phase 1: 1st floor
phase 2: 2nd floor
phase 3



MOBILE MEDICAL UNIT - detachApack

COURTYARD

WALKWAY

PHARMACY

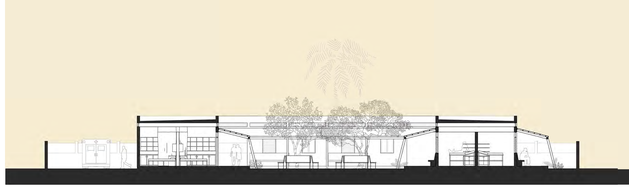
EXAM ROOM

WEST ELEVATION
1/8"=1'0

SOUTH ELEVATION
1/8"=1'0

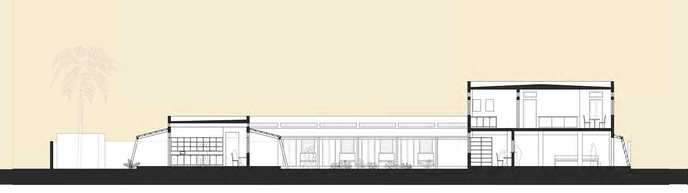
EAST ELEVATION
1/8"=1'0

NORTH ELEVATION
1/8"=1'0

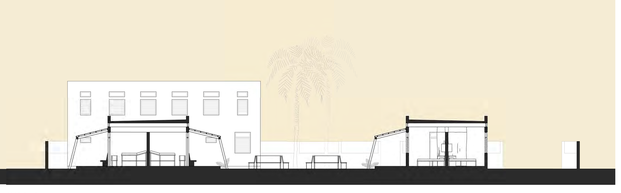


SECTION A
1/8"=1'0

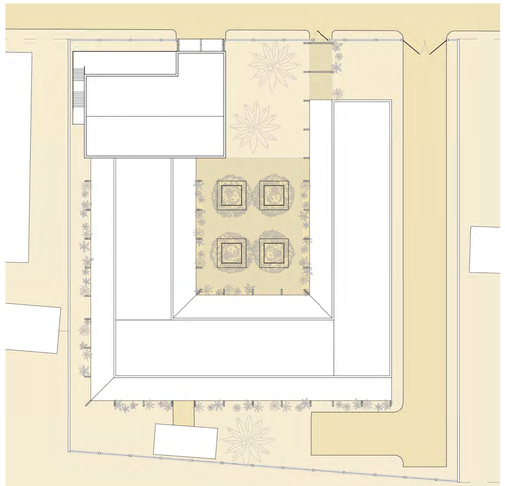
SECTION B
1/8"=1'0



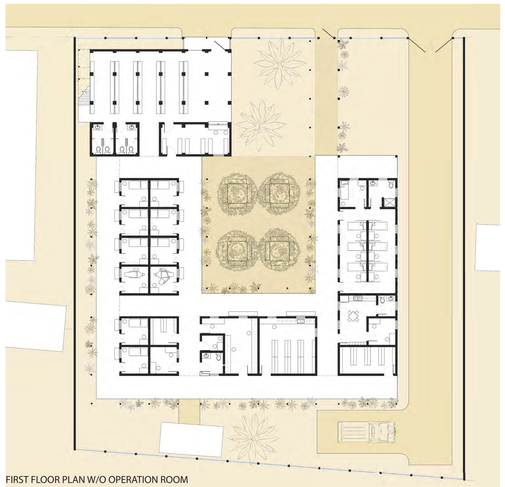
SECTION D
1/8"=1'0



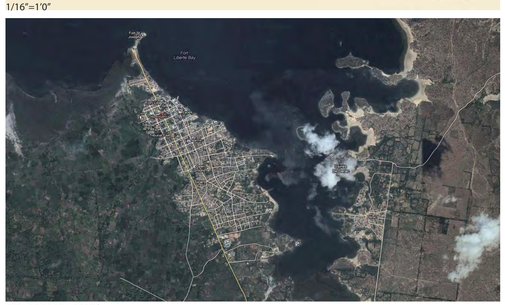
SECTION C
1/8"=1'0



ROOF PLAN
1/16"=1'0"

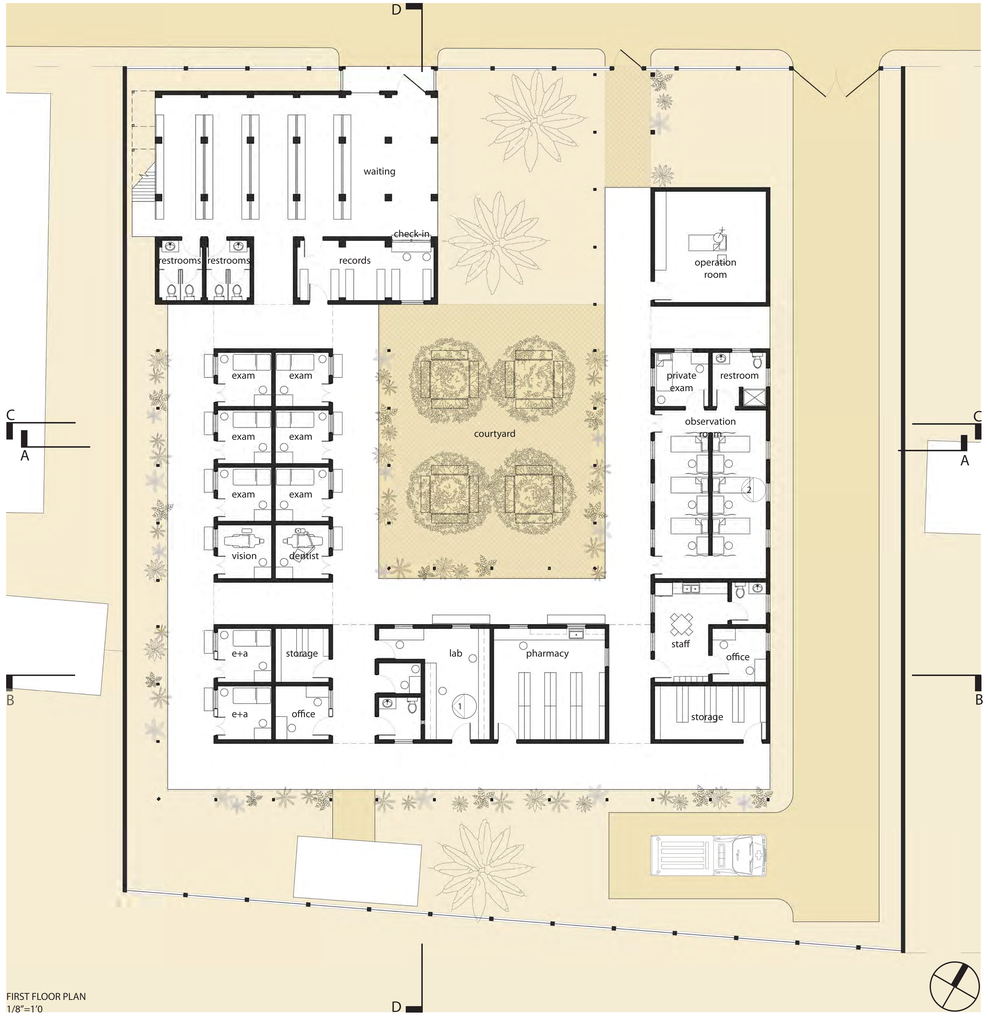


FIRST FLOOR PLAN W/O OPERATION ROOM
1/16"=1'0"

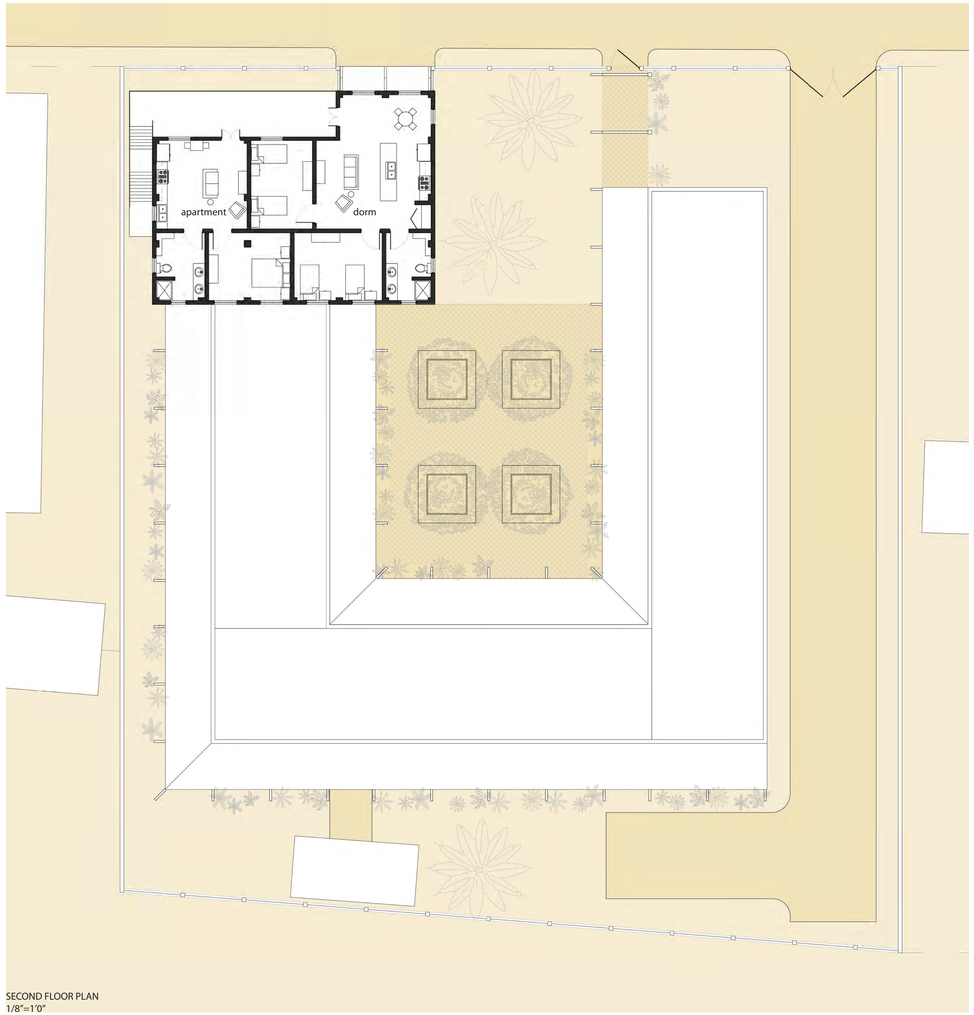


CITY OF FORT LIBERTÉ

SITE PLAN



FIRST FLOOR PLAN
1/8"=1'0



SECOND FLOOR PLAN
1/8"=1'0"

Clear way finding and clear circulation is the main focus of the design and ultimate layout of the space. The simple u-shape allows the patients to enter into one point, progress through the space, and exit through a separate point. Additionally, the shape of the clinic provides staff members with clear views of all of the spaces facing the courtyard. Different colors also differentiate between the separate buildings aiding patients in where to go. The specific spaces also progress according to a patient's severity.

The clinic is oriented to allow the north, north-eastern winds from the bay to pass through all interior spaces. These winds pass through large louvered windows or through a breathable wicker material. A central courtyard and walkways produce breezeway effects throughout the clinic.

Because there is no continuous system of running water for the clinic, a water collection and filtration system is important. Concrete roofs prevent leaking and allow all rain to be collected through a gutter a system molded into the roof itself. The water will run to various points on the roof to downspounts to then be collected in one large cistern. At night this water will be pumped into gravity cisterns to provide water in particular areas during the day.

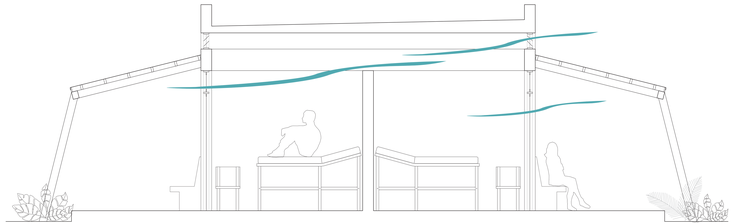
The use of regional materials on the clinic provides the local community with jobs, as well as keeps the cost of construction lower than importing all materials from another location. The use of concrete, wood, wicker, and iron also is sensitive to the existing culture of Haiti.

An underlying eight inch grid is found through all of the spaces of the new clinic. This allows for all walls and columns to align, as well as easy construction at the time of building. In addition to the eight inch grid, there is an organized structural grid for the columns and beams to algn to. This helps to keep the design simple and will conclude in a very well put together building.

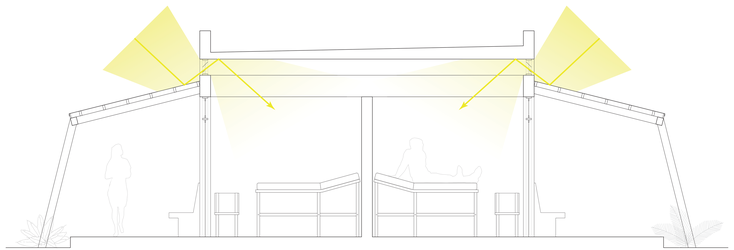
Good lighting is very important in a healthcare setting. Similar to the ventilation, large windows with either louvers or a breathable wicker material allow light to filter into all spaces of the interior. Additionally, the walls dividing the exam rooms have a lower height than the exterior walls to allow more light into the spaces. The roof above the circulation spaces also create a light shelf effect, bouncing natural light off of the roof into the clerestory windows.

A central courtyard was a key element of the design from the beginning. It creates a space for additional waiting space and a gathering place for after hour's education programs. The large trees also provide lots of shade that helps to cool down the interior rooms.

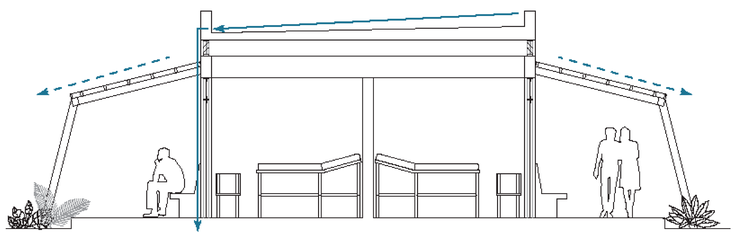
Both privacy and security are lacking in the current facility. In this design the waiting spaces are separate from the exam spaces, as well as each room is large enough for one patient, a family member, and a nurse or doctor. Iron work is located on the windows of the check-in/records room and the lab and pharmacy. This helps to provide order to the check-in process, and keep the medical supplies and pharmaceuticals secure.



PASSIVE VENTILATION
1/2"=1'0

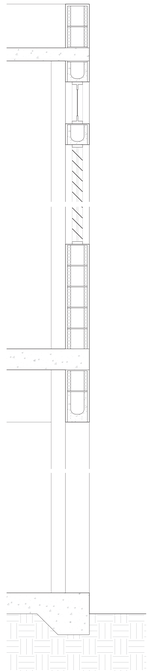


NATURAL LIGHTING
1/2"=1'0

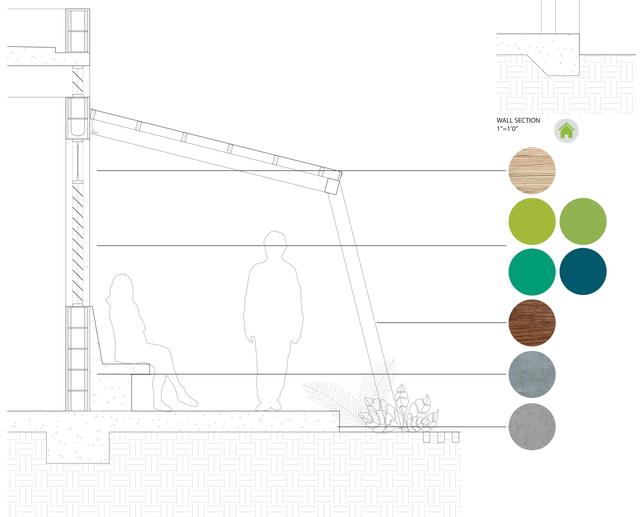


WATER COLLECTION
1/2"=1'0

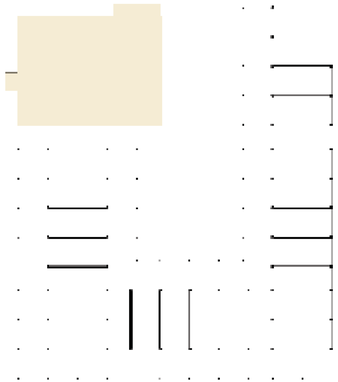
ENLARGED PARTIAL ELEVATION
1"=1'0



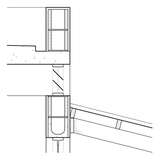
WALL SECTION
1"=1'0"



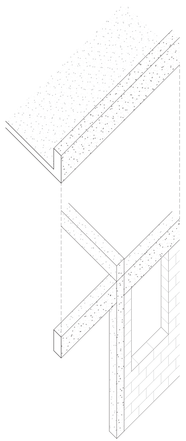
WALL SECTION
1"=1'0



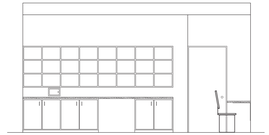
STRUCTURAL PLAN
3/32"=1'0"



JOINT DETAILS
1"=1'0"

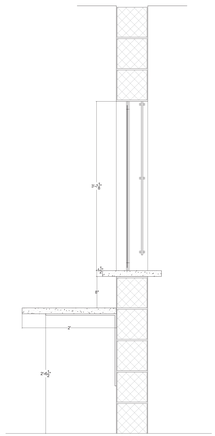


STRUCTURAL AXON
1/2"=1'0"

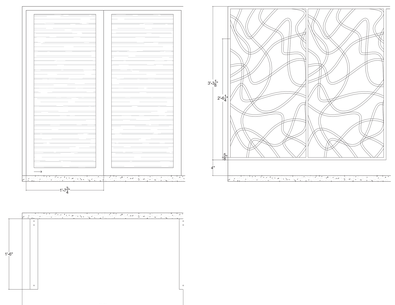


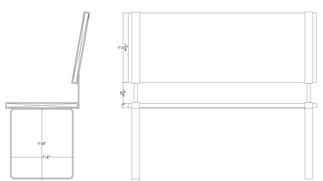
INTERIOR ELEVATION 1
3/8"=1'0

INTERIOR ELEVATION 2
3/8"=1'0

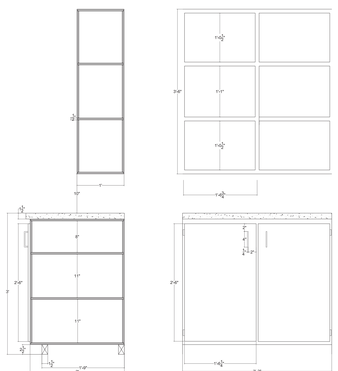


TRANSACTION COUNTER
1 1/2"=1'0





SEATING MILLWORK
1 1/2"=1'0



CABINETRY MILLWORK
1 1/2"=1'0