

SERENITY HEALTH CLINIC

Frederick Chapter

BALTIMORE HEALTH SOLUTIONS

Frederick Chapter

Problem:

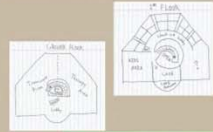
We need to create a health clinic for those in need of medical treatment, checkups and therapy. This health clinic must eliminate the fear and anxiety that is associated with visits to a doctor's office, and the comfort of adults and children as well as the "style" of the surrounding area must be taken into account.

Goals:

- Design a Health Clinic that:
- 1: Has Three Main Areas: Medical Treatment, Therapy, and Checkups
 - 2: Is "Green" Energy Efficient
 - 3: Alleviates Fear, Boredom, and Anxiety

Design Process:

The original design involved three separate buildings arranged in a triangle pattern to treat each of the three areas: medical treatment, checkups and therapy. The design then evolved into one building that would incorporate all three areas.



Location:

We chose Baltimore, Maryland as our location for our Medical Clinic. We chose Baltimore because it is one of the most stressful cities in America, and because it is close to Johns Hopkins Medical Center as well as several other major hospitals. By placing our facility nearby, any patient with a major emergency can easily be transported to a dedicated emergency room. Due to living in close proximity to Baltimore, our team is also familiar with its demographics and culture.

Double-Glazed Windows

Low E windows comprise two glass panes in a frame separated by a small space. A special coating is applied to insulated glass that reflects infrared and harmful ultraviolet light. They also enhance noise reduction and ease of cleaning. Low E glass saves energy by reducing the building's heat loss and gain.

Site:

- Building 35,000 sq/ft
- Lot 5 acres

Rainwater Harvesting System

Recycles rainwater by transferring to a storage tank, to be reused for landscape use. Rainwater recycling is an easy way to conserve water in a healthy, safe way.

Geothermal

Horizontal, closed loops (preventing contamination to external environment). The Earth's constant underground heat energy can be used to heat or cool water and air above the surface. The system is composed of the ground loop, a heat pump, and enhanced duct work. Geothermal systems are highly efficient and do not emit carbon dioxide.

Rooftop Garden

Garden on roof provides patients and their families a tranquil, peaceful region. The garden is effective in managing storm water, insulating the building, and countering heat island effect by reflecting sunlight.

Permeable Parking Lot

Porous Concrete Pavement for Parking Lot. Permeable pavement eliminates the need for a connection to city drains and also effectively manages storm water in an environmentally friendly way.

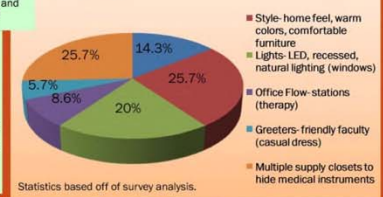
Bamboo & Cork Flooring

We will use cork flooring in the Kids Room and bamboo flooring throughout the lobby and hallways. Both are rapidly renewable and long-wearing resources which are free of PVC's, glue, or binders. In addition, they are naturally anti-fungal, anti-microbial, and hypoallergenic.

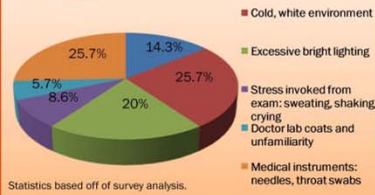
Cellulose Insulation

We will use cellulose insulation for the majority of the building, as an efficient alternative to fiberglass insulation. Cellulose insulation is composed of 75-85% recycled paper.

No Fear



Fear

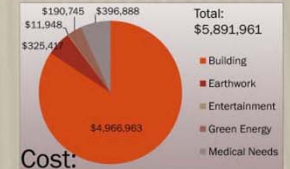


Solution:

To solve this problem, we designed a multi-purpose, three floor building in Baltimore. The building has rooms to serve those that are in need of therapy, checkups or medical treatment, and are painted with calming colors for the patients. The overall building is filled with art from the local artists, and offers and plenty of entertainment while still treating medical needs. We decided that we would not pursue the option of creating a medical clinic for a third world country, because we felt that we should excel at creating a single, highly relevant solution rather than create a dual solution that is not.

What We Learned:

As a team we learned to stay on task and have eight people focused on one topic. As well to delegate the work between everyone on the team, to get all the work done as we scheduled and to accomplish our overall project goals. While working on this project for many months we learned to follow a design process, to grow our design, thoughts, and research. Also throughout these many months we had multiple presentations to display the project's progress, this helped our team as a whole with proper presentation skills. With the excess of time for research our knowledge of Green Technologies and Medical Fields grew drastically.



Medical Fields:



Medical Treatment

The medical treatment area will simulate an urgent care center, offering basic emergency procedures. These include: casting/bracing bone injuries, monitoring respiratory infections and asthma, cleansing/stitching lacerations, and monitoring basic infections (ear, throat, eye, stomach, etc.).

Check Ups

The check up area consists of doctors ranging from Pediatricians and General Practitioners to O.B.G.Y.N.s, allowing for patients of all ages the ability to have a routine doctor visit. Basic immunizations and vaccinations including flu, H1N1, chicken pox, hepatitis, and others will be provided and offered by the doctor and nursing staff in the clinic. The O.B.G.Y.N.s will also tend to general pregnancy care; ultrasounds, lab work and nutritional needs.

Therapy

The therapy area will primarily specialize in physical and chiropractic therapy, with the main procedures consisting of sports injuries and accident rehabilitation. Many open rooms will be provided for other sources of therapies, including massage, nontraditional art, and Lamaze. Local masseuses and teachers will be allowed to use the open rooms for their practices, offering massages, acupuncture, art expression (painting/dancing), and Lamaze classes.

Entertainment:

In the building, there are many sources of entertainment to create a fear-reducing atmosphere. The main source of visual entertainment is an art theme, with many paintings and photographs of local scenery, portraits, or nature. The waiting rooms have additional interactive and passive entertainment. With Buzztime trivia, patients can face off against each other using remotes to answer trivia questions. Music stations allow patients to listen to music privately by plugging a set of headphones into the provided jack. In every waiting area, there is also a large projection television displaying world news, clinic news, and images that enhance the calming environment. A supervised "Kids Zone" on the second floor includes coloring stations, wall paints, computer games, and a jungle gym to entertain younger patients. A café located on the second floor with indoor and outdoor seating will provide patients the comfort of eating while waiting for their appointment or after their procedure.