PREFABRICATION & MODULARITY

The **repetitive module**, which can be arranged in a multitude of configurations, is comprised of a steel structure [**KIT OF PARTS**], a series of prefabricated panelized systems [**2D PANELS**], and container module(s) [**3D MODULE**].



sparent canopy provides



PREFABRICATED MODULAR **COMMUNITY HOSPITAL**

The key design goals of this design are to be adaptable, modular and sustainable while being culturally sensitive and user-centered. The design is able to adapt to multiple sites with a range of topography, site proportions, and climatic conditions by utilizing a 10 meter by 12 meter module that can be arranaged in a pavilion style.

This project utilizes three types of prefabricated components - (1) a kit of parts for the overall structure, (2) 2 dimensional panels for wall and window systems, and (3) 3 dimensional modules for "wet" areas such as toilets and kitchens. This modularity simplifies the construction and assembly process through prefabrication. The module also maximizes the use of self-sustaining and passive building systems through the use of solar panels, water collection, natural ventilation, and daylighting strategies. Narrow floor plates optimize cross-flow ventilation, the independent roof structure provides a surface for solar panels and water catchment in ad-dition to minimizing heat gain, and the pavilion arrangement creates outdoor corridors for waiting and circulag heat gain, and the pavilion arrangement creates outdoor corridors for waiting and circula-

n addition to the modular and sustainable components, the building also needs to respond to the needs of its isers and the local context that it is situated within. While this project is demonstrated on a site in Liberia, it s **capable of adapting culturally to any site.** This design allows for the overaching canopy structure to vary t each site while the occupiable space below and grid remain constant. The outdoor courtyards formed by he bars of modules also create outdoor spaces that can be programmed to engage the specific community it erves. These open spaces also allow for separation of areas for maternity, inpatient, outpatient, and staff for a within a larger communcal space.

SITE SELECTION | GREATER MONROVIA, LIBERIA, AFRICA



- Maternity Waiting and Walking Path
 Inpatient Courtyard with Outdoor Cooking Area
- **B. Outpatient Waiting**
- Water Tower & Well
- 5. Solar Panel Canopy
- (supporting well/water tower)6. Service/Delivery Area7. Community Garden

- 8. Staff Housing
 9. Wetland



MODULE ARRANGEMENTS











SECTION B