Objective: to develop a green eye hospital design for the Andhra State incorporating innovative energy efficient materials and concepts

1. Durable, strong and stiff composite interior panels made of natural fibers and natural resins with 10 times lower embodied energy than steel and 4 times lower cost

2. Modular panel integration with vegetation on walls, roof, and inside buildings for better insulation, air quality, microclimate creation, and effective water retention

3. Modular panels with photovoltaic panels on walls/roof

4. Exterior corridors act as modified Trombe walls, providing natural heating/cooling in interior rooms

5. Sandwich panels with multifunctional core materials for extreme thermal resistance and superior fire performance

6. Prefabricated modular wall systems to minimize construction waste, incorporate robotic construction to maximize worker productivity and deliver high quality building

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American Wick Drain Company
http://www.deltechomes.com

Fire resistant panels by WVU-CFC

Wikimedia Commons

Green Eye Hospital Design - Overview
Green Eye Hospital Design - First Floor Demo

**Potential Organization:**

**First Floor**
- Administrative offices
- Records and business office
- Laboratories
- Drug store
- Food and beverage service
- Emergency care
- Meeting areas
- Elevator/stairway
- Restrooms

**Second Floor**
- Standard patient rooms
- Operating theaters
- Waiting rooms
- Elevator/stairway
- Restrooms

**Third Floor**
- Standard patient rooms
- Specialist offices
- Waiting rooms
- Conference rooms
- Elevator/stairway
- Restrooms

**Fourth Floor**
- Air conditioned, private patient rooms
- Additional food service
- Waiting rooms
- Courtyard balcony access
- Staff member offices
- Elevator/stairway
- Restrooms

**Design Features:**
- Around 30,000 ft²
- Room for 100 patients
- Heavy reliance on modular construction
- Open air courtyard for social interactions
- Tenting system to cover courtyard during rainy seasons
- Three large corridors accessing courtyard that can be left open to allow for natural ventilation and cooling
- Lower cost rooms on lower floors, private, air conditioned rooms on upper floors
- Outer corridors act as Trombe walls, cooling inner rooms

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