

# Green Affordable Housing

Technological Solutions for  
Cost-Effective and  
Energy- Efficient Housing.

**By:**



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**Green Buildings means...**

**Sustainable architecture  
VS  
PRODUCTIVE ARCHITECTURE**



## Possible Solutions?

**Integration in design**  
**Resource mapping**  
**Technology**  
**Skills**

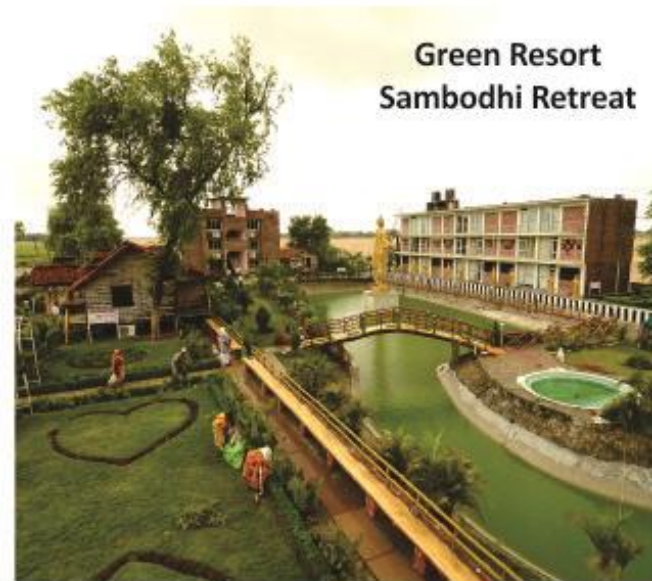


# Resource Mapping

- Local Availability of building Materials.
- Manpower.
- Geo-Climatic Characteristics.
- Vernacular Architecture.
- Economics.
- Scalability

# Green Bungalow or Green Resort

@ 650 / Sq Ft.





# Green 1 BHK Flat

included Land with Development  
Just @ 4 Lacs



# 50% Energy Free

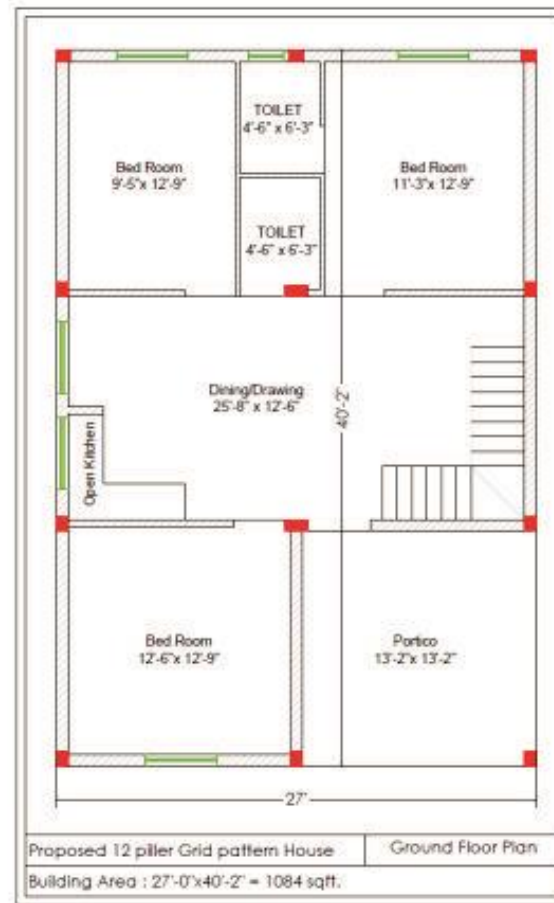


# 50% Energy Free

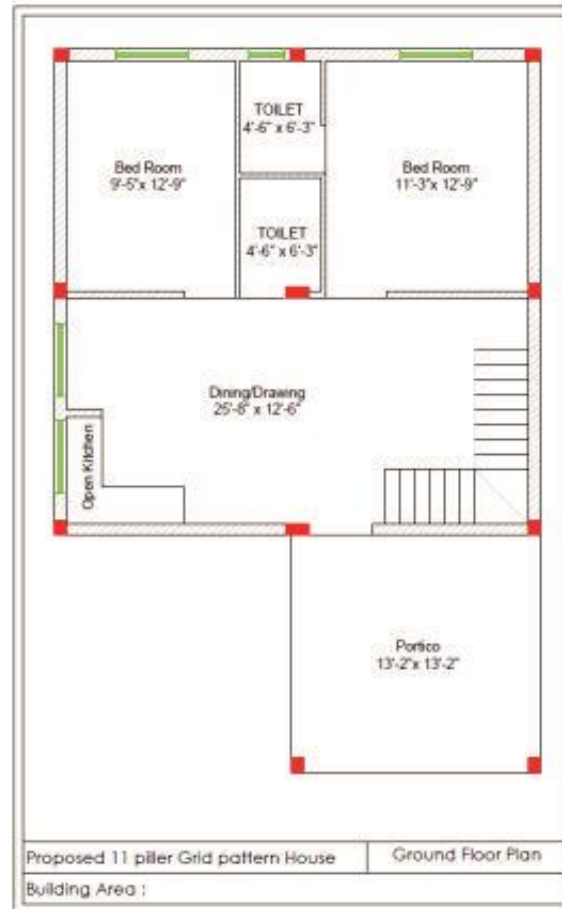




# Design: Square Grid Pattern Design



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# 8" Cavity Wall by 50% Less Bricks & Mortar

- Reduces cost

- Enhances Insulation



## Wall Exposed vein

## Building Made with Above Technology G+2





# BACTERIAL INDUCED CALCITE ANTI CORROSION TREATMENT

(BACILLUS PASTEURII + COW DUNG)



# Interior Design with Scrape of Wooden from Industrial Packaging Material

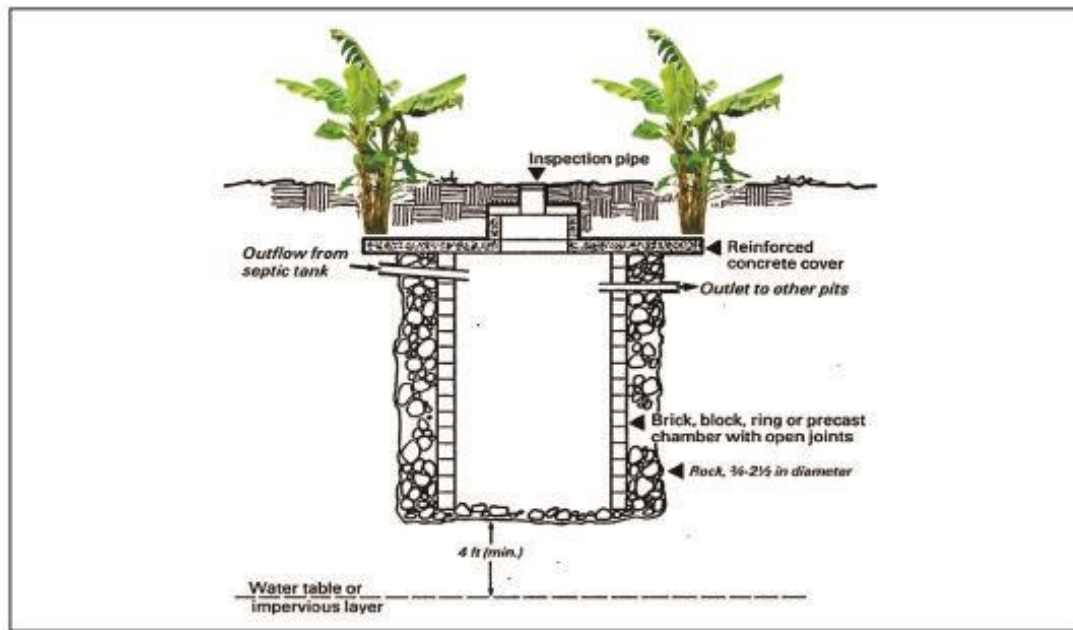


# Welded Wire Girder as Structural Steel





# Drainage & Influent Treatment From Banana Toilet and Banana Production





# SOLAR HYBRID AIRCONDITIONER



**Save 60% Electricity**

# ROTATING SOLAR ROOF VS FIXED SOLAR ROOF

## 25% More Energy Production



# Interlocking wall blocks

- Made of Waste Brick Field dust with Sludge Lime
- Good for Exposed Walling
- Reduces Weight of Structure, Cost and Finishing Cost as Well



We made 600 Duplexes in Ranchi-Jharkhand  
For Mixed Income Categories



# R.C.C FILLER SLAB WITH THERMOCOL

Reduces structural cost and provides Insulation



8" Slab for 25'x25' Span Hall without Intermediate beam



# Ferrocement Three Storied

## Hotel Unit with Egypt Pyramidal Look

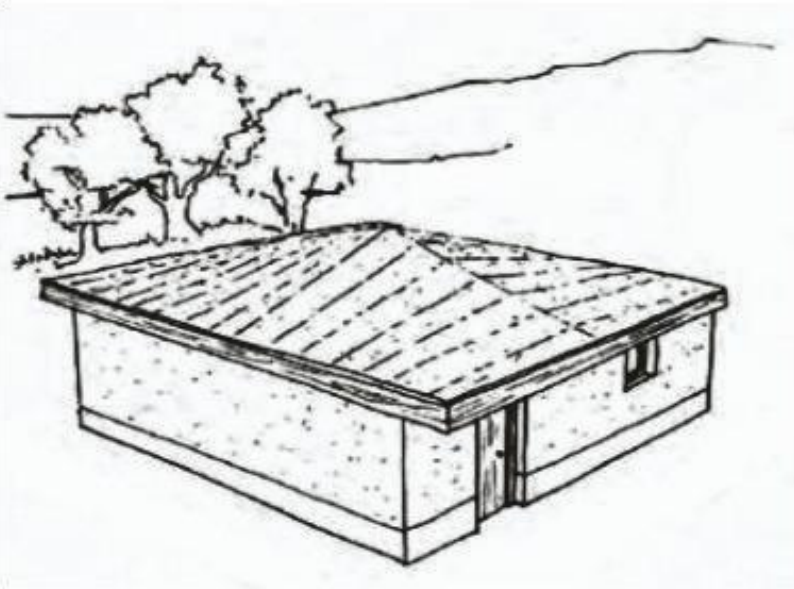
Low Cost | Locally Available Materials | Best for Resorts and Hotels



**Saves 50-60% Concrete**

## Compressed Brick Pyramid With Top Ring Beam On Wall

- Required slope is Just 5" to 15"
- Roof span up to 25' without Reinforcement
- Best for School Building, Community Halls Etc.



- Significantly Lower Cost
- Less Impact on Environment

# Diagonal Brick Pyramid

- Zero Iron Structure
- This can be Constructed without Beam
- Cost Effective Construction





# Waste Cement Bag

- Cement Bag filled with waste Sand and 5% Cement
- Pilled one Above Other and Low Cost
- Best Suited for Monumental Structure and Rural Housing





# Green Bricks

- Baked not by coal but by poultry waste
- Bacterial treatment of poultry waste on source reduces the pathogenicity And odor of poultry waste.
- Casted as normal brick
- Calorific value of poultry waste is normally 60-70% of coal
- After burning Poultry waste it generates ash, rich in phosphorous, Potash, Calcium, Magnesium, Zinc etc.
- It acts as a very good fertilizer.
- Low cost
- Less Impact on Environment



# Energy: Electricity And Fuel

- Pyrolysis of agro-waste to generate producer gas.
- Producer gas can be used directly for cooking food & electricity Generation
- Low cost green solution for electricity generation.



# Thank you

