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Technologics and material to built green building

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***Abstract*— India is experiencing dramatic growth in the construction industry and real estate. Due to this rise in the construction industry has raised many environmental issues as well sustainability. As per the economic policy forum, the inits report has highlighted India's potential use in heating buildings, ventilation and air conditioner accounts in between45% and 65% of total electricity consumption. Another study says construction India's industry emits about 22% of the annual emissions of CO2 which is extremely toxic nature. So in order to address the situation a new and important concept is still emerging in India which is the Green Building. So this article gives you an insight into grproperties, How the green structure gets the rating from rating agencies, The value of green structures, as well as examples of specific companies and organizations that benefit us the green wave flourishes.een**

Keywords— Sustainability, Sustainable Construction, LEED,Life Cycle Assesemen…..t

INTRODUCTION

THE GREEN CONCEPT

Green is not just a color today! With rising energy costs, tightening budgets,increasing populations and diminishing resources, it is becoming increasingly important that business and individuals conserve or —go green Green – or sustainable-building practices help to create healthier and more

WHAT IS A GREEN BUILDING?

A green building depletes the natural resources to the minimum during its construction and operation.Main aim is to minimize the

demand on non renewable resources maximize the utilization efficiency of these resources, when in
B.USE
maximize the reuse, recycle and utilization of renewable resources.
Optimizes the use of on-site resources sinks by bio-climatic architectural properties

Uses efficient equipments to meet its lighting, air condition and other
C. NEEDS
efficient waste and water management practices Provides comfortable and hygienic indoor working conditions.In sum, the following aspects of building design are looked into an In sum, the following aspects of building design are looked into an integrated way in a green building:
SITE PLANNING
Building envelope design integrated way in a green building:
Building system design (HVAC, heating , ventilation and air conditioning,
lighting, electrical and water heating)
Integration of renewable energy resources to generate energy on site.Water and waste management Selection of ecologically sustainable materials(with high recycled content, rapidly renewable resources with low emission potential, etc.)Indoor environmental quality

C.WHY MAKE A GREEN BUILDING ?
All over the world we are finally beginning to recognize the threat that building
construction is posing to the civilization. Buildings have major environmental impacts over their life cycle. There are various problems arising in the presentscenario:
PROBLEM 1- BUILDINGS CONSUME:
40% of all energy
71% of all electricity
50% of all gas demand
12% of all fresh water
88% of all potable water
40% of all wood, steel and other raw materials.

LITRATURE REVIEW

1.1.Energy conservation case study -1

ENERGY CONSERVATION IN LIGHTING SURVEY: USE COMPACT FLUORESCENT LAMP (CFL) IN PLACE OF INCANDESCENT LAMPS
COMMONLY T12 FLUORESCENT TUBE IS USED WHICH CONSUMES 40W POWER BY TUBE PLUS 10-18W POWER BY ELECTROMAGNETIC BALLAST. REPLACE THESE LAMPS WITH MORE EFFICIENT T8 OR T5 LAMPS. USE OF METAL HALIDE LAMPS IN PLACE OF LPMV OR HPSV LAMPS.
USE LED LIGHTING.
PROPER INSTALLATION OF LUMINARIES.
IMPROVING LIGHTING CONTROL (OCCUPANCY SENSORS).
USE MAXIMUM DAYLIGHT.
PROPER MAINTENANCE.

1.2.
ENERGY MANAGEMENT SYSTEMS. RAIN WATER HARVESTING (CASE STUDY 2)

INTRODUCTION

RAIN WATER HARVESTING IS THE PROCESS OF COLLECTING RAIN WATER AS MUCH AS POSSIBLE AND STORE IT FOR FURTHER BENEFICIAL USE. IN DESERT OR AREAS WHERE OVERALL RAINFALL IS COMPARATIVELY LESS THE RAIN WATER HARVESTING (RWH) IS THE KEY MEASURE OR SOLUTION TO DROUGHT.
RAIN WATER IS FRESH WATER, IT IS SAID THAT WATER IS THE LIQUID GOLD. HENCE IT IS NECESSARY TO STORE AS

MUCH AS POSSIBLE. FLOWING WATER THROUGH THE STREETS JOINS VARIOUS MAIN AND SUBMAINS STREAMS, RIVER AND FINALLY MIX WITH SEA WATER AND BECOME NON-USABLE. ALSO THE FRESH RAIN WATER MIX WITH DRAINAGE WATER AND GETS POLLUTED AND INCREASE LOAD ON TREATMENT UNITS. HENCE IT IS NECESSARY TO PREVENT WASTAGE OF WATER BY ADOPTING PROPER METHOD OF RAIN WATER HARVESTING

Green Building Material

Using green construction materials has benefits outside of the obvious environmental benefits. It can be beneficial for health, productivity, and sometimes even the pocketbook. Consider materials based on their source.

Grown and Renewable Material Building materials that are natural, and can be cultivated are one of the most popular in green buildings, since they can be renewable, and in many cases need little or no processing. These materials can all be recycled after use.

2.1.Wood

Wood the traditional building material is still popular. It is considered one of the most sustainable. It requires little processing making it low energy-embodied. The Environmental Protection Agency (EPA) recommends using wood certified by recognized accrediting agencies to that the harvest practices and source sites do not damage precious forest ecosystems. These certificates also require that the wood is not treated by "toxic binders, coatings, preservatives, and pesticides."

2.2. Bamboo

Bamboo takes five to seven years to mature as opposed to the 50-100 years of other trees like maple and oak used for hardwood flooring. This makes it an environmentally sound. Some bamboo is even harder than red oak. It can withstand some wetting and though is prone to scratches, can be refurnished easily to remove traces of wear and tear and look new again. Homedit recommends checking for Forest Stewardship Council certification to be sure the material is harvested sustainable and treatment will later not produce emissions.

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