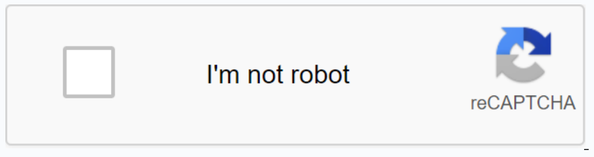

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Green roof construction details

The green roof infrastructure promises to become an increasingly important option for building owners and community planners. Green roofs can meet many of the challenges faced by city dwellers. Lifecycle costs show that green roofs cost the same or less than traditional roofs and are an investment that offers a significant amount of social, environmental and economic benefits that are both public and private. Green roofs are not a new phenomenon. They have been a standard construction practice in many countries for hundreds, if not thousands of years, mainly due to the excellent insulation properties of the combined plant and soil layers (sod). In the cold climates of Iceland and Scandinavia, the roof of the rooftops helped maintain the heat of the building, while in warm countries such as Tanzania, they keep the buildings cool. Until the middle of the 20th century, green roofs were considered mainly folk building practice. In Germany and Switzerland, however, there was growing concern in the 1960s about the deteriorating quality of the urban environment and the rapid deterioration of urban green spaces. New technical research was carried out on root repellents, membranes, sewerage, light growth agents and plant suitability for studies to be studied. Benefits High water storage • Reduced quarantine reduces drain overflows Improves the environment • Creates a useful monocliation by cooling and moistening the surrounding air. • Absorbs greenhouse gases. • Absorbs air pollution and dust. • Reduces the thermal island effect, which is the main cause of ozone production Animal and plant habitat Construction of fabric • Protects the roof from mechanical damage and ultraviolet radiation – thus extending the life of the roof. • May provide additional insulation (See article in the National Research Council Canada study) • Reduces noise levels Can recycled materials be used • Many of the materials used in green roof construction are made of recycled building materials, plastics and rubber-reducing landfill disposal. Types of green roof Wide • Building height 50 – 150mm • Suitable for large areas • Lightweight • Easy to install • Simple design • Self-sufficient plant community • No irrigation • No / low maintenance Operation: • Light roof covers • Unattainable roofs • Flat or snuffy roofs • Reducing water dryingPlanting: • Moss and sedum • Moss and sedumum and herbs • Sedum and grass and herbs • Grasses and herbs Intensive • Uptake height 150 – 1500mm • Wide range of plants and trees • Regular watering • Regular maintenance • Often distinguishable from natural gardens • Usually a mixture of hard and soft landscaping • Good insulation features: • Natural gardens • Recreation and sports • food Planting: • Lawn • Shreds • Edible plants • Universally sturdy perennies and grasses • Small deciduous trees and coniferous trees Structure The basic structure of the green roof is three layers: drainage, filter and vegetation layer. Each layer must fill in several functions to reduce the height and weight of the total betrothing. Vegetation The type of planting depends on the depth of the growing middle layer, as well as other factors. (see above) Medium growth, water storage capacity, air volume, weight and nutrient reserves. The soil must be stable, not prone to settlement, well aerated even by the saturation of water and free from the home. Sewerage This layer keeps water away from the roof, protects the root protection layer from mechanical damage, preserves the water during the drought period and provides a balanced source of water and air supply to the sub platform. Insulation (Warm roof rigid insulation) Root film This prevents the roots from damaging the waterproofing. The specification of the films depends on the design landscape and the slope of the roof. Movies • Planning Guidance for Planting Snil Roofs • Inspiring Short Film from the Ceiling of Vancouver Conference Center Releases • Green Roofs of Hassell and Coombes, CIBSE Knowledge Series: KS11, 2007 More information • Living roofs - promotes green roofs and residential ceilings in the United Kingdom (www.livingroofs.org) Disclaimer GreenSpec accepts no liability for any damage or costs arising from or related to the use of this website. The information is provided for informational purposes only and is not intended for trading purposes. GreenSpec or any of its partners are not responsible for any content errors or actions that depend on them. In the 21st century, the green roof structure can solve many of the problems that city dwellers usually face; These infrastructures are a very useful option for both building owners and community planners. Research into lifecycle costs reveals that the cost of green roofs is much lower than that of conventional roofing systems, and that a small investment in this type of structure leads to many environmental, social and economic benefits. Some common benefits of green roofs include improving energy efficiency, increasing the lifess of the roofing film, proper soundproofing and more. More scientifically, green roofs help filter and purify air and preserve stormwater. This may lead to new opportunities for habitat creation and biodiversity conservation. If you're going to build a green roof on your new house, you're in the right place. Here you can get the full details of green roof construction. Models of different types of structures, including reinforced concrete-type covers, can be implemented. Metal plates because wood construction is part of substructures suitable for the roof. The basic requirement of the green roof is a waterproof structure and efficient load capacity. GREEN ROOF AND CONSTRUCTION The green roof is a green area created by adding different layers of plants and substrats to the top of the traditional roof system. Note that it is not like a traditional roof garden, where planting is done in free-standing tanks as well as planters placed on an easy-to-use roof terrace. Instead, green roof systems have some top-down layers:Plants are selected for specially designed applications. It uses a designed substraus that does not contain soil. It uses a filter-type fabric that keeps the roots of plants and allows water to penetrate. It includes a specialized layer of drainage, which includes built-in water tanks. It contains a single roofing film or a so-called waterproofing mechanism with some integral root repellents. Traditional insulation consists of a normal roof structure. In general, there are two types of green roof systems: intensive and extensive. They are separated by plant selection, growing medium type and total cost. For both, we must follow specific procedures for the construction and maintenance of green roofs. The following is a general description of two types of green roofing systems. There is a low weighting Privacy Low cost of capital Reduced plant diversity Less maintenance requirementsFor soil and higher weightIncreased capital costMore plant diversityMore maintenance requirementsHOW TO CONSTRUCT A GREEN ROOFHere has some easy instructions for building or installing a green roof:First of all, you need to install a waterproof film with monolithic properties; it could be made of plastic or rubber and fits on top of a traditional roof terrace. Next, you need to place one plastic sheet with a maximum width of 6 millimeters on top of the waterproof film already installed. Now is the time to install one or more foam insulation plates with a width of 3/4 inch on top of the plastic sheet; this layer provides proper contact with moist soil. If there is no proper air conditioning in the space below the green roof, only protect the waterproof film. This protection can be fan-type insulation or it can be a layer of building diapers. After this layer of protection, you need to add one drainage mat with capillary spaces at the top of the insulation. To prevent the soil from cinching over the carpet, place the carpet so that the felt side points upwards. Now pay attention to the framing of the sides of the roof. This can be done with the help of wood, mesh jewellery-type shields or other types of lining material that lasts more power to keep it in the right place. Sometimes it can require medium-angled support to improve resilience to the vertical edge. The horizontal foot of this support system may be slipped under a draining carpet weighted by a certain amount of filling soil in order to avoid overturning. When the structure is ready, add the soil to the parts. After that, place the plants in certain places. Finally, you need to water the area in order for the plants to settle correctly. The above information may serve as a guide for green roof construction; these roofs are environmentally friendly and can keep your house cool all the time. This is one of the best ways to promote energy saving in urban areas. GREEN ROOF DESIGN AND CONSTRUCTIONHere has a few details about some of the most useful green roof plans:Roofs without thermal insulation:This is the best choice to cover the property's unheated areas, such as porch ceilings and garage ceilings. Roofs with thermal insulation:Green roofs are installed after a traditional roof load capacity study; thermal insulation roof installation can be done:They are also known for warm roofs; for them, we need a very high-quality vapour barrier, which is already implemented during the design and design phase. These roofs have low weight holding capacity, so we need to design a lightweight green roof structure; the cooling effect of these cold roofs is maintained by a specific layer structure. Here, thermal insulation is installed directly above the waterproofing layer; it promotes an area with varying humidity levels. These roofs consist of extra layers of heat that act like an advanced draining mechanism. Green roofs have grown in popularity in recent years and are easily visible in most towns and villages. Some highly educated cities have a green flat roof structure on top of buildings that provide easy access to the entire section and provide easy maintenance. With a flat roof structure, you can add vegetation, as it is easy to get to. However, for this type of roof, you need to make appropriate arrangements for draining rainwater; otherwise, it may damage your plants or vegetables. When building a green roof, you need to be careful when installing each floor and pay attention to the carrying capacity of the total load of the building; otherwise, it could lead to a huge loss later. Some important factors that require your attention during the green roof installation are: The steam control layer, which is placed directly above the roof structure. Rigid insulation of the tile to withstand additional loads. Waterproof root barrier, which must be created using certain materials such as polyethylene, slate-surfaced type layers, bitumen, rubber mats, etc. The emptying layer shall be capable of: Rainwater is dripping. The filter layer shall increase appropriate prevention with regard to soil placement and drainage. The substrat shall be used according to the type of roof. The choice of vegetation must be made according to the weight treatment capacity of the roof. Proper installation and long service life on the green roof must be properly planned before installation. It is advisable to familiarise yourself with green roof construction drawings so that proper alignment can be made in each place. Great attention should be paid to decision-making on the effective load of the green roof, the type of soil used and vegetation, which can easily grow over the roof. If the creation of building drawings for the planned structure is properly implemented in the first stage, the possibilities for full implementation will automatically increase. The advantages of Green Roof Systems include: Help improve the aesthetics of urban buildings. Healthily promotes the circulation of landfills. Efficient stormwater management can be implemented with green roofs. Help with moderating the heat-type effects of cities. Improves air quality to a large extent. Create space for new amenities. Help create local jobs. Improving energy efficiency by a large amount; is therefore more suitable for urban areas. Help reduce external noise. Offer excellent biodiversity opportunities. A significant improvement in health and well-being can be observed on the green roof. Boosts urban agriculture. In order to achieve sound construction plans, it is important to make an appropriate range of green-roofed building materials; these materials determine the effectiveness of the roof and keep your house out of trouble. Green roofs are the best option for energy saving in urban areas, and their popularity is growing due to their easy construction and significant benefits. Benefits.