RESCUING AMERICA’S INFRASTRUCTURE WITH GREEN ROOFS
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The green roofs have three main sections, a waterproofing membrane, a layer of soil, with the vegetation of choice on top. They can be broken up as seen above. The most important aspects to consider are the weight limit of the building, which limits the width of the layers, but have to be heavy enough to resist wind. The plants on top also must be withstand extreme weather and full sun and be native for sustainable reasons.

Green roof construction can cost almost twice as much as typical roofing, however, in the long run green roofs can reduce its cost by prolonging the roof’s lifespan and reducing energy costs. However, many benefits do not reduce cost even though they can be beneficial for the city.

**BENEFITS of GREEN ROOFS TABLE**

**REDUCE STORM WATER RUNOFF**
The impermeable surfaces of a city prevent the absorption of water into the ground. Therefore the rainwater in city will collect litter and spread it through the streets and to nearby waterways, green roofs act as a layer of absorption, retaining 48% more than typical roofs reducing this effect.

**IMPROVE THE AIR QUALITY**
The green roofs can reduce the risk of various health conditions such as stroke and heart disease, by reducing NO₂ by 40% and particulate matter 60% through the process of deposition, also known as desublimation that plants in the system do naturally.

**MITIGATE URBAN HEAT ISLAND EFFECT**
The urban heat island effect is an increase in temperatures specific to urban areas caused by overcrowding. This can cause increased energy consumption and heat related health issues. Green Roofs can reduce temperatures by shading and evapotranspiration, a process of evaporation and transpiration combined. On average, green roofs can reduce a building temperature by 2.5°C.