



The ACTUAL Costs and Risks of Green Roofs

Costs of Green Roofs

- Different types of installation costs include initial capital costs, ongoing maintenance costs, and lifecycle costs (i.e., green roof replacement might cost more than conventional roof replacement).
- Long-term ancillary costs, such as the increased costs of insurance, liability issues associated with weight, drainage, interior damages from roots, damage to walls and liability to personal injury.
- Annual maintenance for a green roof is typically much higher than for a traditional roof, including:
 - design fees,
 - planning and building permits,
 - permits for lifts and cranes,
 - demolition or relocation of existing infrastructure on the building and roof,
 - addition of specific hard infrastructure elements such as furniture, shade structures, decking, paving, planter boxes or structures to support climbing or trailing plants.
- The installation of a green roof currently costs approximately \$25 per square foot of roof.
- The first gallon costs (i.e. cost for first 3.785 liters of water) for extensive green roofs (defined as having a growing medium depth 6 inches/15 cm or less) range from \$28-\$35. In comparison, cisterns cost about \$2 to \$5 per first gallon treated, and urban trees about \$6 to \$8 per first gallon treated.

Health and Safety Risks

- Green roofs may pose a fire hazard – in September 2017, a green roof in Seattle caught fire, was very difficult to extinguish, and endangered building occupants.
- Not all roofs have sufficient structural capacity and require strengthening. There is an increased risk of roof collapse resulting from a green roof that was not properly constructed, installed or maintained.
- Mold and other environmental hazards as a result of poor installation and maintenance of a green roof may pose a risk to inhabitants.

Economic Risks

- Possibility of failure to attain the energy efficiency levels claimed by the installation of a green roof.
- Turning a building's uppermost level into a green roof will involve greater expenses up-front, in both the construction and the maintenance. This will hurt the local real estate industry.
- The cost burden will be handed off to the consumers and exacerbate the housing crisis.
- Building construction and tenants will move to Denver's suburbs where construction costs and rents are cheaper.