

# LiveRoof® vs. Other Modular Systems

## 22-Points of Differentiation

1. **System Function:** LiveRoof® brand green roofs function like nature. LiveRoof is the only modular system that is monolithic; it has a continuum of soil. This means that it functions like nature and shares water, nutrients and beneficial biological organisms across the roof continuum. By not chopping the roof into metal or plastic grids, LiveRoof green roofs help to eliminate hot, cold, wet spots by not segmenting the soil. The result is healthy sustainable plants.
2. **System Function:** Because it is monolithic, LiveRoof® brand green roofs are sealed; therefore they have higher R value, which means greater cooling and heating savings. Other systems have air gaps between the modules, therefore they are leaky and do not have equivalent R values. Brad Rowe, green roof researcher at MSU told us that testing LiveRoof standard modules' R value is probably a waste of time as it should test equal to 4 inches of soil which is R 1.9. Other modular systems have been tested as low as ½ of this. LiveRoof green roofs will save money on both heating and cooling.
3. **System Function:** LiveRoof® brand green roof systems have more soil because their sidewalls are not angled. Other modules may have sharply angled sides which reduces soil and increases air space. As a result, LiveRoof green roofs contain more storm water. This is important to engineers and city planners.
4. **System Function:** Because the LiveRoof® brand module has moisture portals, the water and roots are shared from one module to the next. This means the system will be more resistant to drought. It is also “locked together” by the root system, and therefore more stable, which is especially important on steeply pitched roofs.
5. **System Function:** LiveRoof® brand modules have the very best drainage design. There are not water reservoirs in the design. This avoids root rot, and over time the plants will remain much healthier.
6. **System Function Longevity:** Because the LiveRoof module is subterranean, it is sheltered from sunlight, and therefore will not undergo photo-degradation like other systems that have edges or seams exposed to sunlight It is warranted for up to twice as long as other systems.
7. **Soil:** LiveRoof® brand green roof modules use the very best soil. It has been laboratory tested to meet or exceed German FLL standards. More importantly, it has proven to work incredibly well, shrink minimally, and hold fertility very well. We have tested the components of other's soils and have found that the plants have not always been very happy or that they shrink up due to decomposition, sometimes leading to poor drainage and decreased storm water retention. LiveRoof, LLC actually went through approximately 50 different formulations with various components before we signed off on our mix. We have been thrilled with how it has performed. It is formulated to be sustainable, and in many cases, after just one season, it may not require annual fertilizer input.
8. **Biologically Balanced** LiveRoof plants are cultured using organic and biologically focused production methods. Instead of using pesticide focused production methods, LiveRoof utilizes compost, mulch, and beneficial insect attracting “banker plants” in the production process. All LiveRoof cuttings are harvested within 60 feet of banker plants. What this means is that the LiveRoof plants are surrounded by and inoculated with beneficial organisms which will travel with the plants once shipped to the rooftop.
9. **System Aesthetics:** LiveRoof® brand green roofs look and “are” natural. Because LiveRoof green roofs are monolithic and have a continuum of soil, their module bases are subterranean and invisible

12 months out of the year (remember, the dormant season may be 5 to 7 full months). Other modular systems will always show plastic for ½ of the year. LiveRoof green roofs will look like a beautiful meadow year-round.

10. **Plant Material:** The LiveRoof® brand green roof system offers the best plant material and design options. LiveRoof, LLC can formulate plant mixes in almost any color scheme, height, or bloom time. LiveRoof offers many plants that other companies do not offer.
11. **Plant Material:** LiveRoof plants are started from a mixture of evergreen and deciduous cuttings. They are only started from plugs if specifically requested. A mixture of cuttings means continuous cover 12 months out of the year. When plants are started from plugs, the deciduous plants drop their leaves from Oct. to May, and therefore present big gaps of exposed soil where weeds infiltrate. Therefore, plug-planted modules cost up to 10 X as much to maintain.
12. **Design Flexibility:** LiveRoof® brand modules can be custom cut to almost any shape or size. The same can not be said of many other modular systems.
13. **Quality Control/Professionalism:** LiveRoof only sells to “certified/trained” installers.
14. **Delivery/Installation:** LiveRoof is delivered on retractable trailers, and the LiveRoof driver does all of the hooking up of the Hoppits® to the crane. The installer does not need anyone on the ground except for the crane operator. Other systems typically require a fork lift operator, to remove pallets from the truck, and a pallet jack operator in the box of the truck. LiveRoof can save the cost of two workers and the cost of the fork lift.
15. **Delivery/Installation:** The LiveRoof brand green roof system is delivered on specialized Hoppits, which are engineered approved metal racks for safe conveyance of the LiveRoof system to the roof top. Hoppits reduce labor costs for installers.
16. **Delivery/Installation:** LiveRoof offers a motorized “Roll-a-Roof” conveyor that is set on wheels and facilitates installation. An installer typically installs 3 truck loads (4320 to 5180 sf depending upon DOT load limits) per day, with only 6 people on the roof. As many as 4 trucks per day have been installed with an experienced crew of 6 when the roof is easily accessed (5760 to 6912 sf depending upon DOT load limits).
17. **Maintenance:** Because the LiveRoof® brand module is underground, the plants can easily be maintained. You can walk on the system without tripping hazards, push a fertilizer spreader over it, and push a mower over it. Other modular systems have edges to trip on and pose a safety hazard with their exposed plastic ridges. This is great importance to maintenance personnel.
18. **Maintenance:** LiveRoof® brand green roof maintenance is extremely simple, predictable, and inexpensive. The cost in west Michigan is often less than a dime per square foot per year. It is possible to maintain a 45,000 sf LiveRoof in just 15 to 20 minutes when serviced every two weeks.
19. **Quality Control/Professionalism:** With most jobs, a LiveRoof representative is on site to help ensure that quality control measures are met.
20. **Plant Warranty:** LiveRoof® brand green roof plants are warranted, free of charge, for the first year (subject to proper/documented maintenance).
21. **Service:** LiveRoof, LLC is located nearby. LiveRoof personnel regularly visit our rooftops and help out the owner’s staff. At a moments notice, we can be out there and help your maintenance staff with any questions that may come up. We have done this several times, and never have charged for consulting.

22. **Commitment:** LiveRoof provides a twice monthly informational email newsletter, free of charge, that shares current best maintenance practices, seasonal topics related to plant care, and chronologically guides the maintenance contractor through the various steps of the maintenance protocol beginning April 1 and ending Nov. 1 of each year.