

# Gregg Family Garage Ecoroof Completion Report

2634 SE Kelly Street

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This project began in concept well before the City of Portland Ecoroof Incentive Program was in place. We planned our new garage with a future ecoroof in mind yet at the time it seemed unobtainable. When the incentive program was discovered we excitedly participated.

The garage was designed by us and required a flat roof secondary to the proximity to the property lines. With the help of engineers whose product would be used for roof joists, we built the structure to withstand the additional weight of a potential future ecoroof. At that time there were little to no resources for a homeowner/residential application of an ecoroof. Bids for a membrane roof installation alone were over \$10,000 (> \$16 psf).

It was apparent then it would be a bigger project than we had intended to take on and the ecoroof installation may never actually happen. That was especially true as the inquiries were made into the costs above and beyond the roof membrane. Without the incentive program these would have made it totally cost prohibitive.

The project cost breakdown is as follows:

- Structural costs were increased by \$262.50 in order to meet requirements for ecoroof weight above and beyond the standard snow load. This was a difference of 16" on center roof joist spacing vs. 24" on center.
- The total cost of membrane roofing and materials was approximately \$2300.
- The ecoroof permit revision added on to the existing structural permit for the building added \$275.64.
- The growing media cost was \$462 plus \$325 for conveyed delivery. Conveyed delivery got the pile to the base of the garage but did not have reach to get it to roof.
- The five sedum mix was procured by our landscape designer from Blooming Nursery at a cost of \$850 (\$8.50 per pound). While they did not design this project, we have no relationship with wholesalers so we had to rely upon someone who did to obtain them.
- An irrigation system was set up as the planting occurred in late spring. The system was hooked up to our existing irrigation system which made it attainable at about \$65 for materials.

- No design costs were incurred as this was completely homeowner designed and installed. Therefore the only labor cost incurred was \$140 for two day laborers from VOZ at ~ \$16 per hour to assist in bucketing growing media to roof.

While the incentive program did make this project possible it was not an easy project to complete. The biggest downfall is the overall cost of such an undertaking. With a total cost for materials alone reaching nearly \$4000, it is not attainable for most working families, even if they do have the skills to do it themselves.

While it is possible to do a project like this with some basic skills it is not an easy one. The membrane installment can be very tricky, even in the most ideal conditions. It is especially nerve wracking as you consider you are one false move away from sticking a \$600 piece of rubber to itself leaving it absolutely worthless.

Phillip's Soil Products, specifically Wade Pruitt, was great to deal with. They custom make the "Extensive C" growing media to order. They also offer many different variations for packaging and delivery. Wade spent a lot of time on the phone with me figuring out the most cost effective method for us. It should be noted while it is possible to have it bagged in 1 cubic foot bags that would be easy to haul it more than doubles the cost or already expensive dirt.

Obtaining the sedum cuttings for installation was one of the most frustrating parts of the process. Each of the purveyors I contacted from the city's resource list crossed them off my list for one reason or another. It was quickly determined "plugs" would be far too expensive. Of the nurseries that dealt in cuttings they would not sell directly to a homeowner. They required the purchase be made by a professional with a wholesale relationship. This lead to us eventually calling in a favor from the landscape designers we had used for the rest of our yard to make the purchase for us. In the end this worked out fine but it took over two weeks to sort this out. This as the days got hotter and the deadline for the City came closer.

An item that we had not fully planned on doing was the irrigation system for the roof. We had hoped to get it down early enough in the fall that cooler temperatures and rain would take care of it for us. Alas, we planted when it was in the 80's and, per the nursery, required a light watering at least four times per day. This would be prohibitive had we not been able to install the irrigation relatively easily and inexpensively. Placing a yard sprinkler and hose on the roof would be an option but would be very difficult to manage.

This entire ecoroof project has been a long time coming for us. It involved more hours of work than we care to recall. It, like many projects, was not as straight forward as we thought it would be. So far we are very happy with the finished product. That said, if asked if we would do it again knowing what we know now, likely not.

# Gregg Ecoroof

