

SMITH RESIDENCE - ECO ROOF REPORT

SUMMARY:

This ecoroof is on a new single family residence in NE Portland. The main roof is 867 sq' while two lower porch roofs were an additional 205sq'. The roof was designed as an ecoroof so the pitch was set at a slope that would provide good drainage but not be so steep as to require additional measures to stabilize the soil. Additionally, overhangs were created so water was never collecting or draining over heated space. There is a roof hatch skylight that allows access to the roof from an interior storage area. This was added during construction in order to provide easier access to the roof for long term maintenance.

ASSEMBLY ABOVE STRUCTURE:

- TPO Membrane
- Felt Underlayment
- 4" lightweight soil mix
- Sedum cuttings
- Jute netting

COSTS:

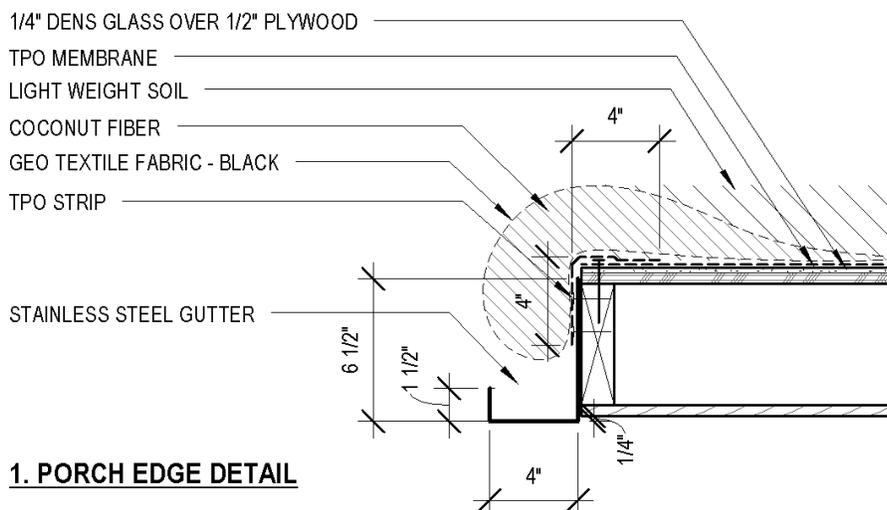
Cost for the ecoroof portion was approximately \$7.50/sq'. The TPO roofing was about the same. The initial planting is a sedum cutting mix although in the spring we will spot plug the roof with additional plants for visual effect.

INSPIRATION:

The lot that this house was built on has many trees and generally has a wild aspect to it. I really liked the idea of a green roof in general and tending to plant life vs all other roof/gutter maintenance. The planted roof is just so much more appealing visually, as well as creating a hard wearing roof that provides additional thermal and UV protection.

UNIQUE DETAILS:

One area that I wanted to experiment with is making the green roof more visible. These roofs are often high up and behind a curb. For the lower porch roofs we are trying a detail where there is no built up curb so the plant material can readily grow out the face of the roof and downwards. There is a black geo-textile mesh that holds the soil back. Initially in the photos it doesn't look that great as the white of the TPO is still visible but hopefully in a year that will be covered up. (see below) I plan to plug more highlight plants into the face of the soil as it is currently all sedum.



PHOTOS:



LESSONS LEARNED:

The roof has just been installed at the writing of this report so we haven't had any time to see how it will respond and how all the plantings will grow. It is also November so everything is frozen. My biggest area of interest will be to see how the curbless ecoroof works and if this is able to maintain its shape over time and create the intended cascading effect. Otherwise, figuring out all your mechanical roof penetrations beforehand and reducing them or otherwise planning for them will make for a better roof.