

# Dr. James T. and Carol M. Carthel Ecoroof Final Report

## Project Data

Home Owner: Craig Carthel  
Address: 521 SE 18<sup>th</sup> Avenue, Portland OR 97214 – Buckman Neighborhood  
Project Type: small residential renovation of a 1904 garage  
Ecoroof area: 160 square feet with 2% - 4% slope  
Orientation: facing east, tree cover, dappled shade  
General Contractor: Dan Manning, PC, Ecoroofs Everywhere  
Design - construction period: November, 2010 – May, 2011

## Background

Having moved into this Victorian home in August, 2010 greening it up by degrees has been a priority of ours. In addition to adding the ecoroof we have had solar PV panels installed on the south-facing main roof via Solarize SE Portland. The ecoroof is named for my parents James and Carol Carthel who provided funds for its construction. This little garage ecoroof will be part of an Audubon Society of Portland Backyard Habitat Certification Program (gold level). The same sedums planted on the ecoroof as well as native plants have been added to the planting strip in front of the garage. It is wonderful to sit on the front porch facing SE 18<sup>th</sup> Avenue and look out over the textured green growth. The project is visible from the sidewalk by children walking to Buckman Elementary School.

## Design and Construction

A small, local firm was employed to be the general contractor (G.C.). An ecoroof with varying bloom times, heights, textures and shade tolerance was requested for the design. The G.C. recommended a designer and structural engineer. The existing aged asphalt roof was demolished and recycled and a new roof structure with the same slope built resting on the existing concrete walls.



Having an aged structure, most of the project fees went into strengthening the existing framing to support the ecoroof's weight.



Waterproofing was added on the roof and up the front porch wall, two cedar drain boxes at the front corners, flashing, new fascia trim, new cedar shingles at the gable, a jute net, soil media, plant sprigs (ten sedum varieties) and two inch diameter downspouts.



The downspouts were not built in the middle of each side of the roof as the drawings showed, so the downspouts were elongated from the front side of the garage back to the middle to keep drainage off the sidewalk.



The planted area will be weeded and watered regularly until established and gluten added as a weed suppressant. At a later date, the exterior garage walls will be painted a contrasting color to the blue house and a pair of salvaged wood carriage doors added.



### Project Fees

Engineering and architectural drafting:	\$1,380.00
Construction and permits:	\$4,694.00
Operations and Maintenance (O&M) Agreement:	\$ 56.00
<b>TOTAL:</b>	<b>\$6,130.00</b>

### Plants



2. Sedum sexangular



4. Sedum rupestre "Angelina"

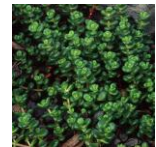


6. Sedum rupestre "Blue Spruce"

1. Sedum album "Green Ice"



3. Sedum divergens



5. Sedum hybridum "Immergrunchen"





7. Sedum spurium "Elizabeth"

8. Sedum spurium "Tri-color"



9. Sedum spurium "John Creech"

10. Sedum spurium "Dragon's Blood"

