

**Rivermark Community Credit Union**  
**2537 SE Hawthorne Blvd, Portland, OR 97214**

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**Project Summary:**

Improvements: 2-story credit union containing 8,787 sq. ft.  
Green roof: 1,459 sq. ft. in 4" composite soil with locking trays  
Benefits: Storm water quality  
Reduce peak storm water runoff  
Extended roof life  
Awareness from Hawthorne Blvd and neighbors  
Expression of corporate values  
Supported SE Hawthorne Blvd. area as green and sustainable

**Introduction:**

Rivermark Community Credit Union's new branch is a 2-story 8,787 sf steel structure with an exterior of wood and structural brick. It was built in the parking lot of the branch that was established in 1961 and had been remodeled and expanded throughout the years. Once the new facility was occupied, the existing branch was deconstructed and demolished to replace the drive-thru and make way for off street vehicle and bicycle parking. The building was designed to carry the loads for a partial green roof and is solar ready. After 9 months of construction, this 2 phased project was completed in October 2010.

We became interested in installing a green roof after touring several facilities, understanding the benefits and hearing about the gray-to-green eco-roof incentive program. Though credit unions are a local co-operative that hire from the community and return profits to the communities we serve, non-members are not as familiar to our value proposition and corporate values. Three of the four green roof locations are very visible from streets and is an outward sign of our corporate values to the neighborhood at large.

Green roof costs associated with the additional structural integrity, engineering and design, plantings, plumbing and labor were not all separated from total construction

costs. We investigated various methods and systems of plantings and came to the conclusion that for us, the best green roof system was with interlocking trays containing a variety of sedums (7-8) in each. These plants were grown locally, approximately 6 months prior to installation, and thus were mature and full at time of installation. The cost for this system exceeded many others, but we believe the quality and on going maintenance requirements of this system were superior to others we researched.

### **Project Scope:**

Following is a summary of the four (4) ecoroofs that were installed on our building at 2537 SE Hawthorne Blvd. The footprint of the vegetated portion of the ecoroofs represent 27.9 % of the 5,235 sf. of roofs and include the following:

Main building:	1,025 sq. ft.
Shed and trash corral	260 sq. ft.
Drive-thru/bicycle parking	142 sq. ft.
East entrance canopy	37 sq. ft.
Total	1,459 sq. ft.

### **System Components:**

Structural roof support – Galvanized Valume metal decking with ½” cover board and steel framing

Membrane – single ply white 50 mil pvc roofing

Drain mat and drain channel - incorporated into the module

Planter trays edge system - GeoEdge aluminium edge restraint attached to the metal pan

Vegetation – All plantings and applications were not identical for each structure.

Each tray had varieties of sedums, and depending on exposure, shade and moisture, the hardier sedums will overtake others so the vegetation on the roof will not be identical after a few seasons of growth.

Main building (1,025 sf) EvergreenFeathers Mix cuttings

- Sedum Coral Carpet
- Sedum Sexangulare
- Sedum Oreganum
- Sedum spur. VooDoo
- Sedum refl. Green Spruce
- Sedum kam. Weihenstephaner Gold
- Sedum Sichotense

Auxillary structures (434 SF) Lighten Up Mix cuttings

- Sedum Album
- Sedum Sexangulare
- Sedum Oreganum
- Sedum hyb. Immergrunchen
- Sedum spur. Pink Jewell
- Sedum rup. Sea Gold
- Sedum mak. Limelight
- Sedum mak. Ogon

Growing Medium – The soil mixture, containing coarse pumice, sand, peat moss and mulch is a proprietary aggregate from a local company.

Irrigation – No permanent irrigation was installed. A hose and osculating sprinkler is available during the hot summer months should any temporary irrigation be needed. Installing mature sedums reduced the need for watering in order to germinate seeds.

Roof drain – Rain water flows through the ecoroof to a drain that leads to a chain scupper that serves as an internal down spout. After pooling in a basin where solids settle, water overflow then runs down a decorative stainless steel channel into the combined sewer system/storm drain on SE Hawthorne Blvd.

**Cost:**

Rivermark Community Credit Union owns this building and has a philosophy of doing the best possible job for the long term. The cost of the planting, mats, edge material and labor was approximately \$25,000, or \$17.14/sq. ft. In addition to this cost, we engaged a structural engineer, added materials for additional framing, inspections and additional

plumbing for temporary irrigation. We have estimated these additional costs at approximately \$12,750, or \$8.74/sq ft, for a total project cost of \$37,750 or \$25.87/sq. ft.



