

# Hazelfern Garage Green Roof

721 NE Hazelfern PL | Portland, Oregon 97232

**General Contractor:** [Orlando Construction, Inc. CCB#187346](#)  
**Green Roof Contractor:** [Dan Manning, PC / Ecoroofs Everywhere CCB#163750](#)  
**Architect:** [Thomas F. Fallon, Architect LLC](#)  
**Landscape Designer:** [Deb Rossi / Colorworks Garden Design](#)  
**Homeowner:** Thomas F. Fallon & Samer Hakimeh  
**Construction:** Structure is a garage with 6" concrete walls (constructed 1939)  
**Project Date:** Roof structure and TPO – September 2011  
Green roof – May 2012

## Project History & Summary

When we purchased the home in 2007, we noted that a previous owner had constructed a deck (without a permit) over the existing flat built-up roof of the garage. The roof under the deck was severely deteriorated and water was penetrating the structure. The garage opens directly next to the public sidewalk and the home's rear patio is only about 36" below the garage roof surface. So we were interested in a roofing solution that was aesthetically appealing and would provide a visual extension to the small rear yard.

## Project Data

**Location:** 721 NE Hazelfern PL, Portland, OR 97232  
**Roof Structure:** 2x12's @ 16" O.C.  
**Roof Membrane:** 60 mil TPO  
**Roof Area:** 200 SF Eligible Plantings  
40 SF curb and grass  
240 SF Total

**Project Costs:**

	Orlando	Manning	Actual	TOTAL	
				BUDGET	
Permit			\$835.70	\$600.00	
Base structure contract	\$9,880.00		\$9,880.00	\$9,880.00	
GC Management	\$2,500.00		\$2,500.00	\$2,500.00	
Rail	\$8,000.00		\$5,730.00	\$8,000.00	
Green roof	\$0.00	\$2,746.25	\$3,846.25	\$2,746.25	
Garage Door	\$2,194.00		\$2,342.00	\$2,194.00	Garage door painted extra
Opener	\$330.00		\$330.00	\$330.00	
Roof membrane	\$1,939.13		\$1,939.13	\$1,939.13	
Add Service - brace changes	\$3,325.00		\$3,325.00	\$3,325.00	Seismic & railing bracing
HVAC			\$483.00	\$0.00	Relocate service line
Electrical (above contract)			\$353.60		
City of Portland Anticipated Rebate		-\$1,195.00		-\$1,195.00	
<b>SUBTOTAL</b>			<b>\$30,728.98</b>		
City of Portland Anticipated Rebate			-\$1,000.00		
<b>TOTAL PROJECT COST</b>			<b>\$29,728.98</b>		

**Lessons Learned**

- Existing garage is within the City Zoned setbacks therefore any usable space must be within the City setbacks. Ideally we might have had some patio space or a deck up here as our back yard is very small – however due to the setbacks this space is not legally habitable.
- “Black Eyed Susan” and “Snowberry” may not be ideally suited for an Ecoroof – according to our landscape designer. We had gone rogue and asked our contractor to install these to get some added height on the roof. The “Autumn Joy” will definitely provide the desired height and the vine plants we installed in containers adjacent to the roof which will grow on the railings will also provide a softening at the perimeter. According to Deb Rossi, the “Black Eyed Susan” and “Autumn Joy” may require more water than is desired and also may spread roots. We will monitor these plants carefully over the next year and may relocate to the yard.
- At initial installation (we were out of the country so did not get to talk to the contractor about this) we were surprised how immature the plants appeared. What we didn’t realize and were very happy to learn was that these plants grow very fast. Don’t spend money on mature plants as after a few rains the plants will fill in quite nicely.

- The street elm trees which don't quite extend over the roof are producing a lot of seedlings. Constant monitoring and weeding of these reduces the maintenance free aspect of the roof.
- One goal for the roof garden was to provide added space for the dogs. We have determined that we cannot allow the dogs on the roof. The engineered soil is too loose and when the dogs kick even lightly plants go flying.



Garage Roof w/ TPO (Before Green Roof)



Garage (Before Green Roof)



Approximately one week after planting



"Green" view from the patio  
Photos from this one on are from 2.5 months after planting.



View towards street, artificial turf in foreground.

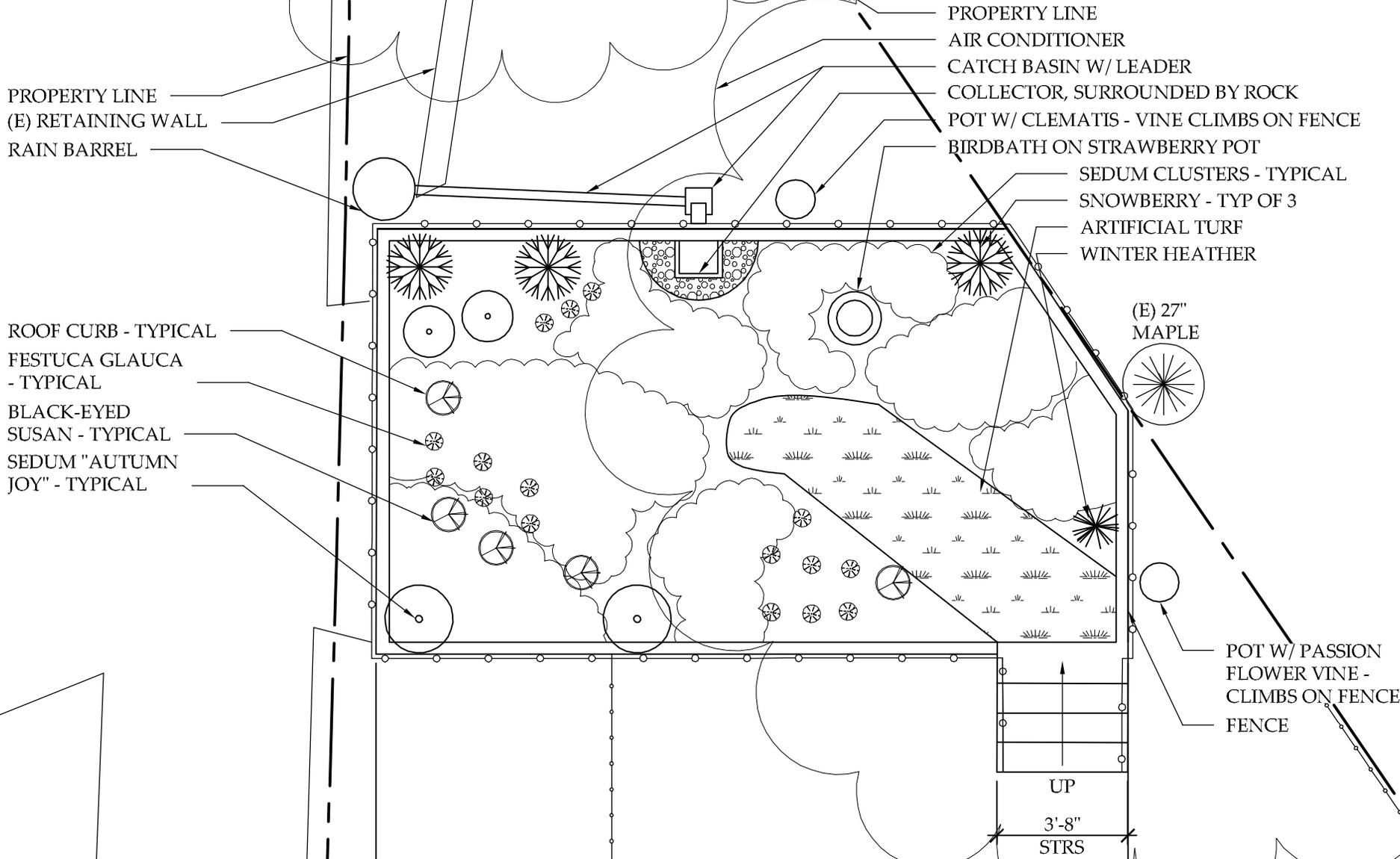




Waterfall into catch basin – I recommend a solid connection as this provides too much splash. Clematis growing up to fence for screening



Collector box w/ rock drain field



PROPERTY LINE  
 (E) RETAINING WALL  
 RAIN BARREL

PROPERTY LINE  
 AIR CONDITIONER  
 CATCH BASIN W/ LEADER  
 COLLECTOR, SURROUNDED BY ROCK  
 POT W/ CLEMATIS - VINE CLIMBS ON FENCE  
 BIRDBATH ON STRAWBERRY POT  
 SEDUM CLUSTERS - TYPICAL  
 SNOWBERRY - TYP OF 3  
 ARTIFICIAL TURF  
 WINTER HEATHER

ROOF CURB - TYPICAL  
 FESTUCA GLAUCA  
 - TYPICAL  
 BLACK-EYED  
 SUSAN - TYPICAL  
 SEDUM "AUTUMN  
 JOY" - TYPICAL

(E) 27"  
 MAPLE

POT W/ PASSION  
 FLOWER VINE -  
 CLIMBS ON FENCE  
 FENCE

UP  
 3'-8"  
 STRS



HAZELFERN GARAGE

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GREEN ROOF PLAN

1/4" = 1'-0"



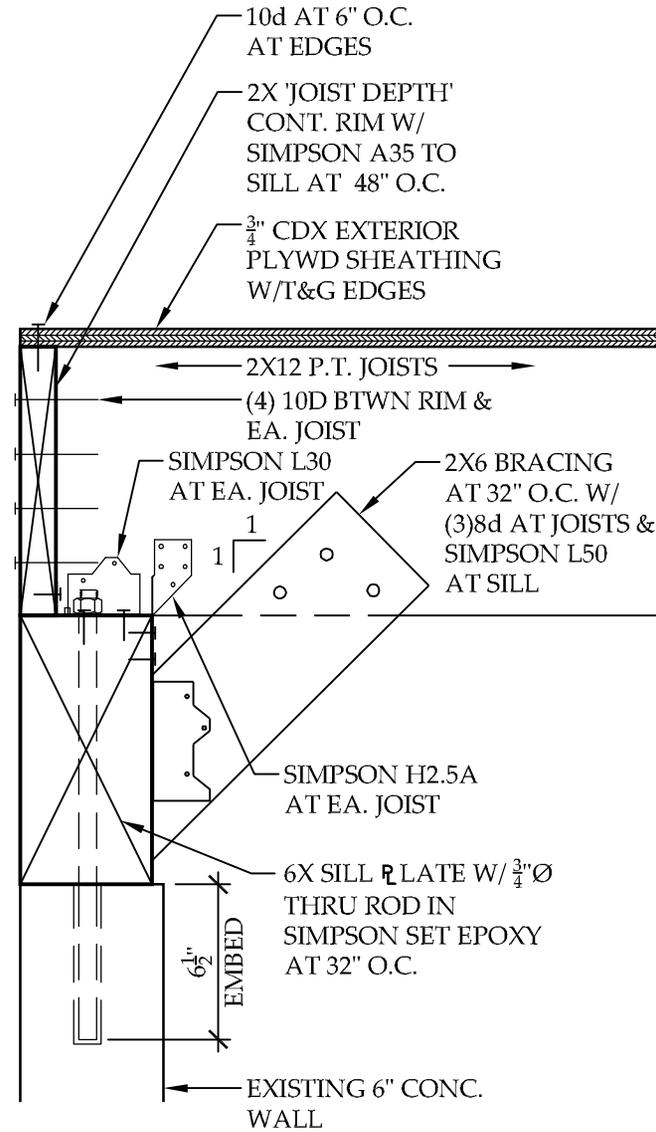
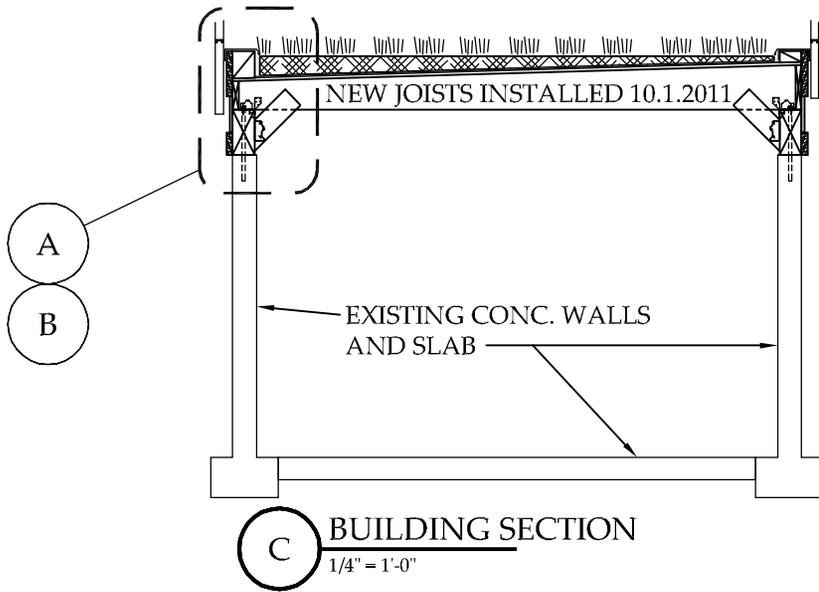
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PROJ. NO.: 2007-23  
 DATE: 9.17.2012  
 DRAWN BY: TFF

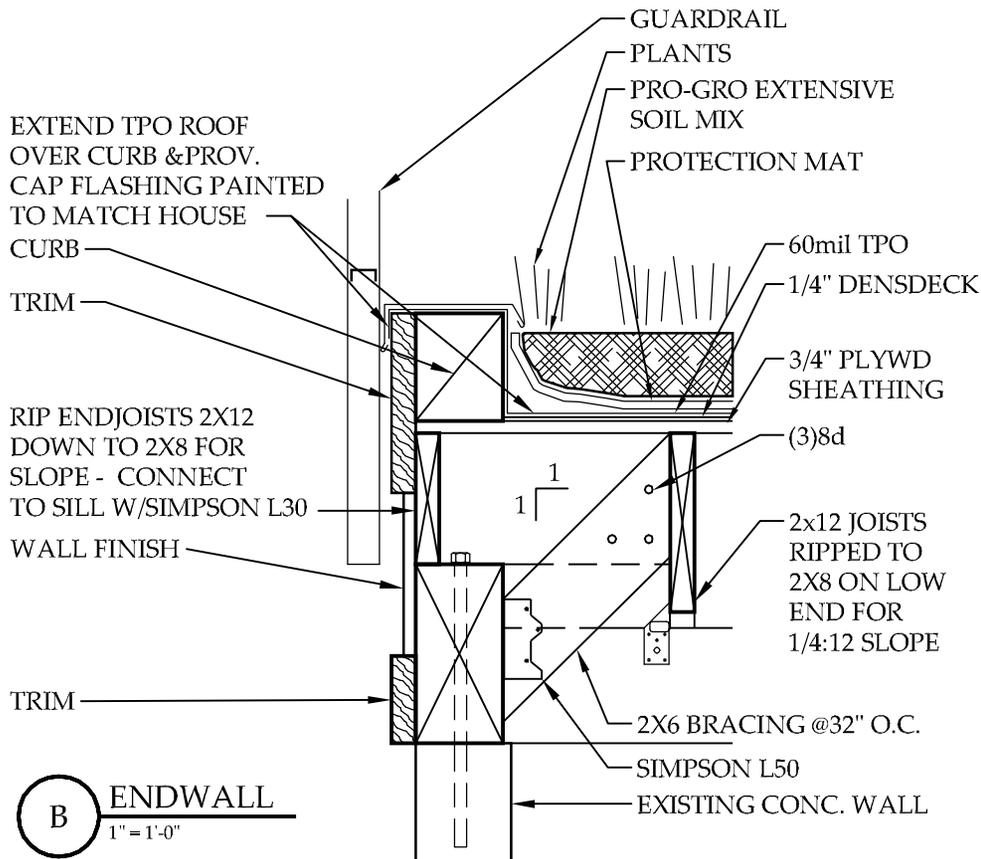
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**A** PLATE/JOIST DETAIL  
 1 1/2" = 1'-0"



**B** ENDWALL  
 1" = 1'-0"

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GREEN ROOF/SUPPORT DETAILS

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