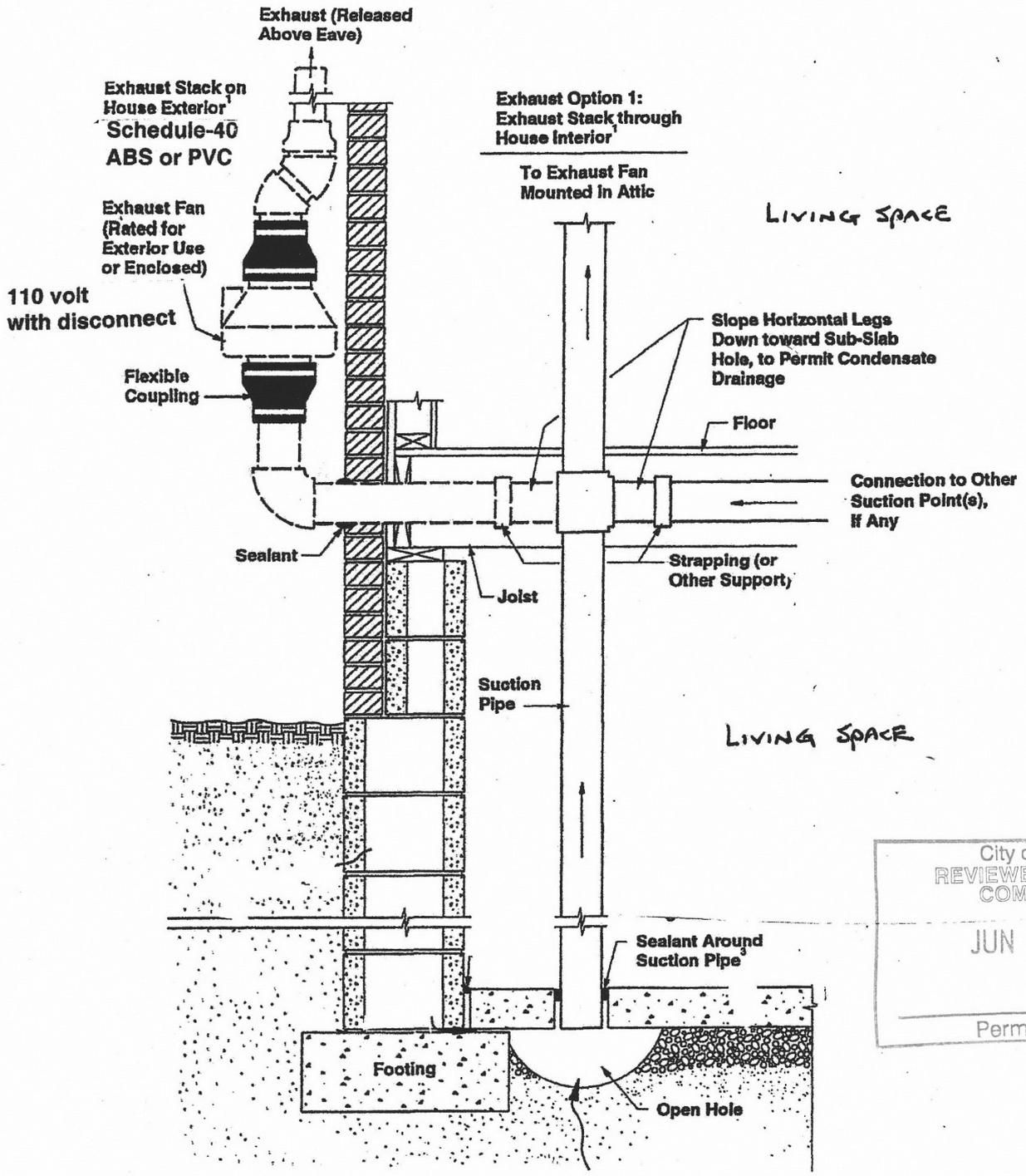


# Sub-Soil Depressurization System

(no scale)

2  
LN-92781  
1873626-17  
181

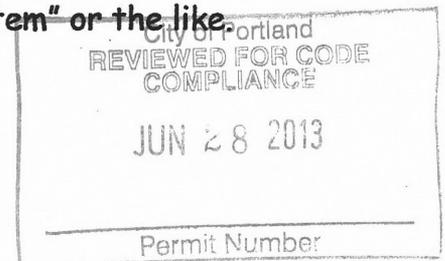


City of Portland  
REVIEWED FOR CODE  
COMPLIANCE  
JUN 28 2013  
Permit Number

## Active Sub-Soil / Sub-Slab Depressurization

### General Installation Notes:

1. System(s) to be Active Sub-Soil / Sub-Slab Depressurization.
2. All work to comply with EPA protocols and Indoor Air Quality code requirements.
3. Exhaust fan(s) to be located so as to be accessible for installation, maintenance, and future replacement, and in a vertical run of vent pipe.
4. More than one system may be needed for the building.
5. Continuously running electric, inline duct exhaust fan(s) to be used. Exhaust fan specs: 21-150 W, 60 hz, 115 V, 1.5 amps, 60 cycle.
6. Plastic vent piping shall be 3 inch (min.) Schedule 40 ABS or PVC.
7. Exterior vent piping to be primed and/or painted to match existing building.
8. Vent termination to be 12 inches above the roof/eave line.
9. All vent pipe joints/connections to be sealed and air tight.
10. Vent pipes shall not have low points so as to allow any condensate within pipes to flow back to the sub-soil suction point(s).
11. Electrical fan disconnect shall be located within sight of exhaust fan unit. Electrical power to be drawn from existing building circuitry.
12. Provide proper flashing at all roof penetrations.
13. When possible, a manometer (air pressure gauge) shall be installed on or near the vent piping, and shall be a visible and/or audible mechanism that is simple to read or interpret.
14. All penetrations through existing concrete slab flooring or concrete perimeter footings shall be sealed and water-tight.
15. All fans and vent piping to be adequately secured: minimally every 8-feet for vertical runs, and every 4-feet for horizontal runs.
16. System shall be clearly labeled "Radon Reduction System" or the like.  
System shall also be labeled as to:
  - a. Date activated.
  - b. Installers name.
  - c. Information on how to contact installer.



Side: North arrow and street(s).

Eave Height 11' with NRP

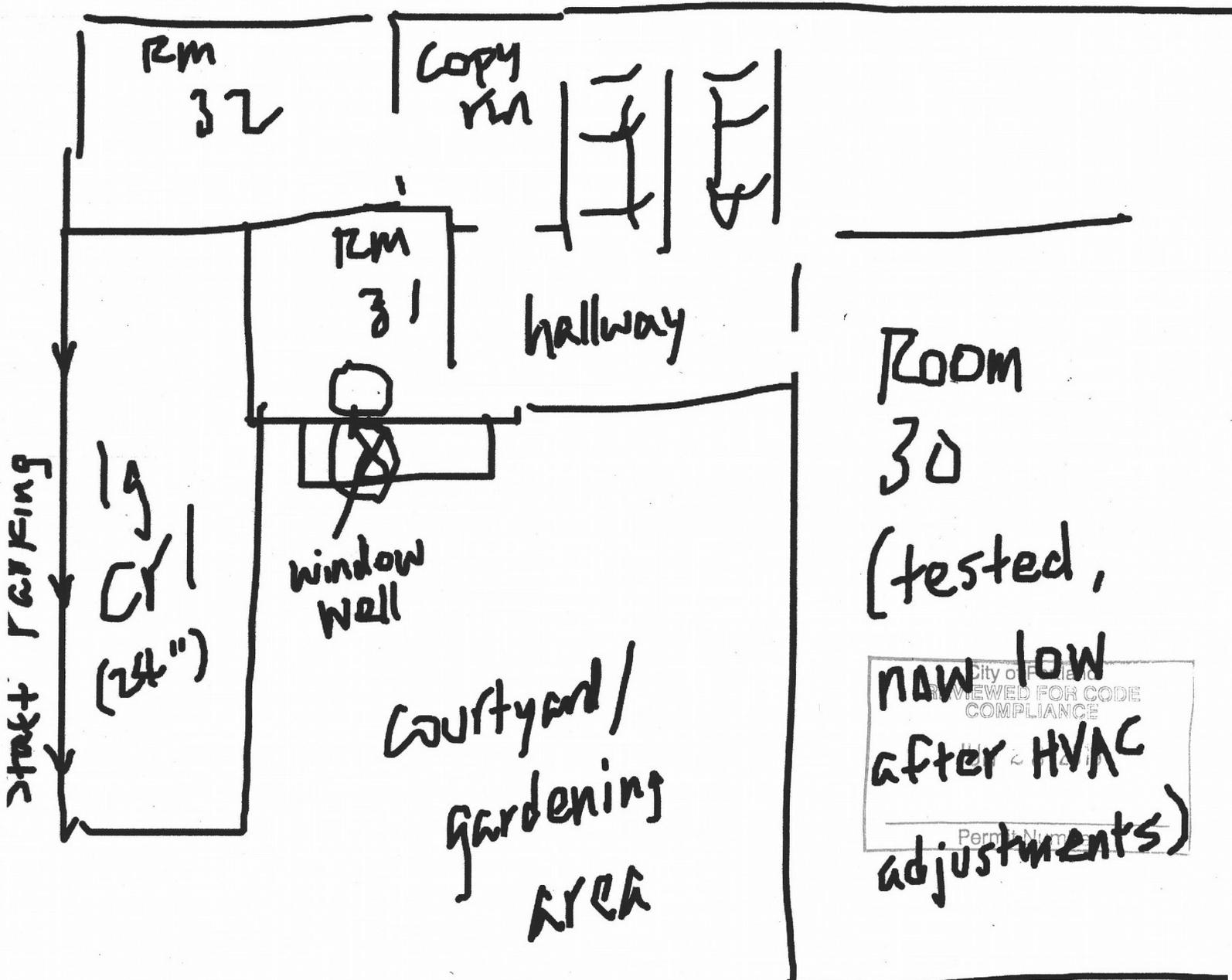
Existing layout.  
 Bedroom / Bath / Kitchen sides  
 Fan, Suction Point, Pipe Routing.  
 Roofer needed?   
 Roof type EPDM  
 Crawl space dimensions 26x40 (adjacent to room)  
 Fire collars?   
 Start with temp system?

Sump Pumps?   
 French Drains?   
 Holes, Major Cracks?   
 Oil tank lines running under floor?   
 Condo/Homeowner's Association?   
 Structure of Historic Note?   
 Building plans (foundation) available?   
 Pre-mitigation diagnostics? done

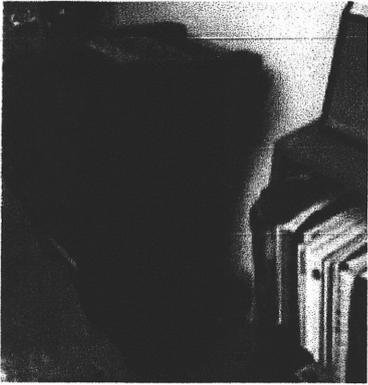
- street -

North

Entry / Admin



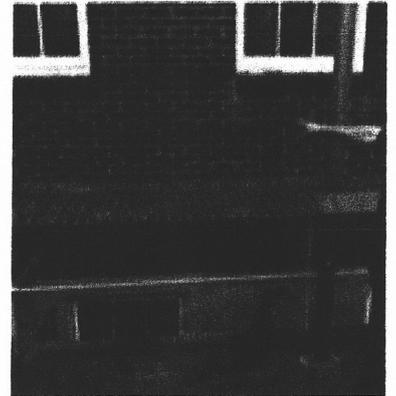
Suction point location



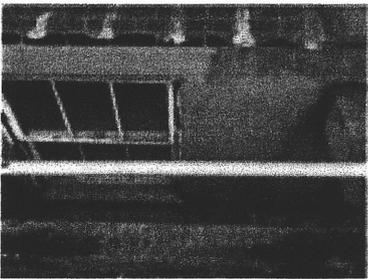
Window well outside



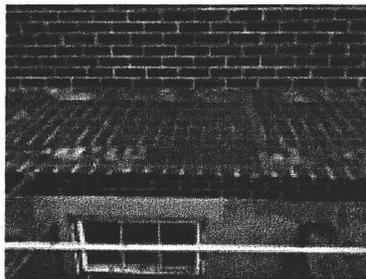
Exterior, plastic awning



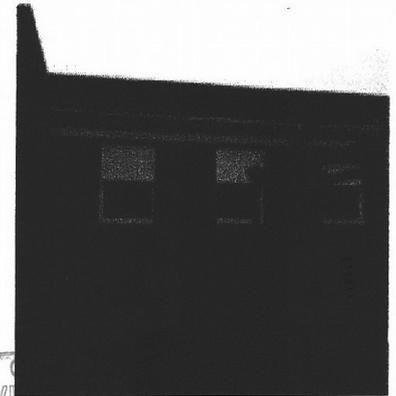
Fan approved for well



Awning detail



Roof detail, NRP



REVIEWED  
COMPLIANCE

JUN 28 2013

Permit Number



# MECHANICAL PERMIT APPLICATION

City of Portland, Oregon - Bureau of Development Services

1900 SW 4th Avenue, Portland, Oregon 97201 • 503-823-7363 • TTY 503-823-6868 • www.portlandoregon.gov/bds

### Type of work

- New construction  Addition/alteration/replacement  
 Demolition  Other:

### Category of construction

- 1 & 2 family dwelling  Commercial/industrial  Accessory building  
 Multifamily  Master builder  Other:

### Job site information and location

Job no.: 1308275 Job address: 12500 SE Ramona Street

City/State/ZIP: Portland, Oregon 97236

Suite/bldg./apt. no.: Project name:

Cross street/directions to job site:

Subdivision: Lot no. Tax map/parcel no.

### Description of work (example: upstairs bath fan/dryer exhaust)

Radon mitigation

Provide RS permit no.

### Property owner Tenant

Name: David Callaway E-mail:

Address: 12500 SE Ramona Street

City/State/ZIP: Portland, Oregon 97236

Phone: 971-563-1298 FAX:

Owner installation: This installation is being made on property that I own, which is not intended for sale, lease, rent, or exchange.

Owner signature: Date:

### Contractor Subcontractor

Business name: Cascade Radon E-mail: office@casaderadon.com

Address: 2761 NE Dalway Street, Suite B

City/State/ZIP: Portland, Oregon 97237

Phone: 503-421-4813 FAX: 503-281-6176

Lic. no. 180537 CCB lic. no.

Authorized signature:

Print name: Date:

### Applicant Contact Person

Business name: Cascade Radon

Contact name: Ame Tucker

Address: 2761 NE Dalway Street, Suite B

City/State/ZIP: Portland, Oregon 97237

Phone: 503-421-4813 FAX: 503-281-6176

E-mail: office@casaderadon.com

RS Permit/No Fees Due

This permit application expires if a permit is not obtained within 180 days after it has been accepted as complete.

### Commercial Fee Schedule - Use Checklist

Mechanical permit fees\* are based on the value of the work performed. Indicate the value (rounded to the nearest dollar of all mechanical materials, equipment, labor, overhead and profit.

Value: \$ 2995.00

### Residential Equipment / Systems Fees

For special information use checklist

Description	Qty.	Fee	Total
<b>Heating / cooling</b>			
Air conditioner (site plan required)		\$26	
Furnace / burner including duct work / vent / liner		\$55	
Heat pump (site plan required)		\$51	
Air handling unit		\$26	
Hydronic hot water system		\$32	
Residential boiler (radiator or hydronic) includes piping		\$32	
Unit heaters (fuel type, not electric) in-wall, in-duct, suspended, etc.		\$26	
Vent for appliance other than furnace		\$22	
Alteration of existing HVAC system		\$32	

### Other fuel appliances

Decorative gas fireplace		\$26	
Flue vent for water heater or gas fireplace		\$22	
Wood / pellet stove		\$57	
Gas or wood fireplace / insert		\$57	
Chimney / liner / flue / vent		\$22	
Other:		\$32	

### Environmental exhaust and ventilation

Range hood / other kitchen equipment		\$14	
Clothes dryer exhaust		\$14	
Single-duct exhaust (bathrooms, toilet compartments, utility rooms)		\$14	
Attic / crawl space fans		\$14	
Other:		\$32	

### Gas fuel piping

\$14 for the first four, \$2.57 for each additional. Please indicate number of fuel gas piping outlets below:

Furnace, etc.			
Gas heat pump			
Wall / suspended / unit heater			
Water heater / boiler			
Fireplace			
Range			
Barbecue			
Clothes dryer			
Other:			

### Other appliances

Including oil tanks, gas and diesel generators, gas and electric kilns, gas appliances / equipment not included above		\$32	
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### Mechanical permit fees

Subtotal	
Minimum permit fee (\$95)	
Commercial plan review (60% of permit fee)	
State surcharge (12% of permit fee)	
<b>TOTAL PERMIT FEE</b>	