

**Radon Program**  
**Radon Reduction for Do-it-Yourselfers - Things to Consider**

**Are you willing and capable of:**

- Accessing a crawl space (if your home has one) and working in that area
- Drilling holes through concrete floors or walls
- Excavating five to ten gallons of soil through a five inch diameter hole
- Cutting holes through finish floors, walls and ceilings
- Cutting and flashing roof penetrations
- Laying out vertical and horizontal runs of PVC pipe from your basement through the roof, or from the basement through an outside wall or floor perimeter
- Cutting, fitting, cleaning and gluing PVC pipe
- Wiring a simple fan connection
- Caulking and sealing work using solvent based caulks

**Where an experienced radon contractor will be preferable:**

- If the house has heating or air conditioning ductwork running under a slab
- If the house has a crawl space that is extremely tight to work in, or cannot be entered
- If the house has a crawl space with ductwork covered in asbestos paper or other asbestos containing materials
- If the house has a crawl space where rodents are plentiful
- If the house has an older concrete block wall foundation where the cores and block tops have not been sealed or grouted full

**Where to find a list of radon contractors who are certified: call 1-800-693-5343 or**

**National Radon Proficiency Program – Radon Certification Program**  
[www.nrpp.info](http://www.nrpp.info)

**National Radon Safety Board – Radon Certification Program**  
[www.nrsb.org](http://www.nrsb.org)

**Radon Documents Online**

**Radon Mitigation Standards**  
[www.epa.gov/radon/pubs/mitstds.html](http://www.epa.gov/radon/pubs/mitstds.html)

**EPA Consumers Guide to Radon Reduction**  
[www.epa.gov/radon/pubs/consguid.html](http://www.epa.gov/radon/pubs/consguid.html)

## **Radon Mitigation Equipment Suppliers**

### **Professional Discount Supply**

<http://www.radonpds.com/>  
1029 S. Sierra Madre, Suite B, Colorado Springs,  
CO 80903  
General Information: pdsjam@att.net  
Customer Support: 1-719-444-0646  
Orders : 1-800-688-5776  
Telephone 719-444-0646  
FAX 719-442-2384

### **Radon Supplies NA**

<http://www.radonsupplies.com/>  
sales@radonsupplies.com  
1 Eighth Street, Suite 6  
Frenchtown NJ 08825  
888-800-5955  
908-996-0400  
908-996-0707 fax

### **Radon Control Inc.**

<http://www.radoncontrol.com/>  
RADON CONTROL, INC.  
567 Industrial Drive  
Carmel, IN 46032  
Tel: (317) 846-7486 Fax: (317) 846-5882  
email: radonsuply@aol.com

### **Infiltec**

<http://www.infiltec.com>  
Infiltec (Factory - Questions, Technical Support,  
Orders, Repairs, Billing)  
108 South Delphine Avenue  
PO Box 1125  
Waynesboro, VA 22980  
Phone: (540) 943-2776  
Fax: (540) 932-3025  
Infiltec@rica.net

### **Radonaway**

<http://www.radonaway.com/>  
187 Neck Rd.  
Ward Hill, MA 01835  
email: sales@radonaway.com  
Fax Number: 978-521-3964  
Phone Number: 978-521-3703  
support@radonaway.com

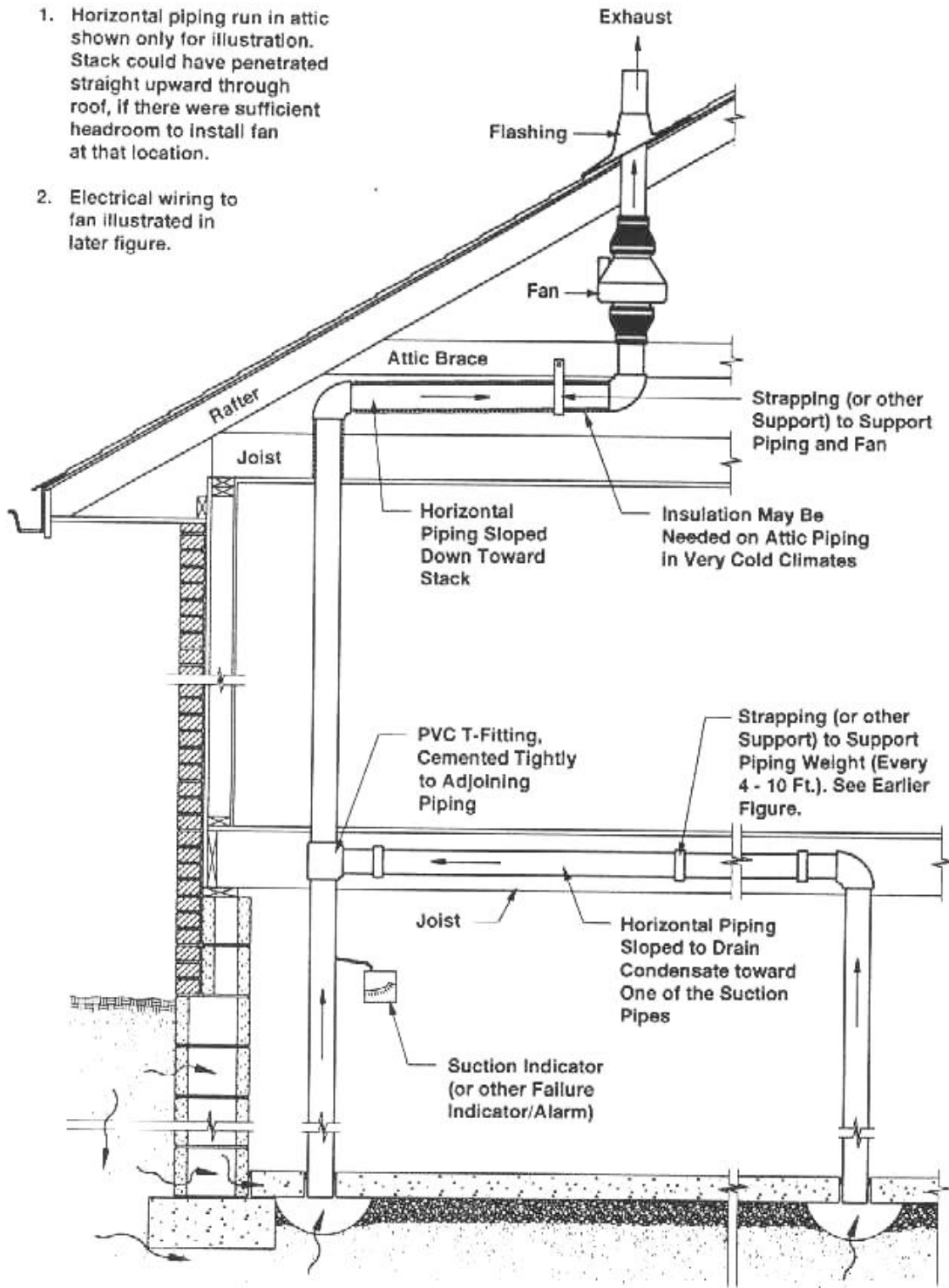
### **Festa Radon Technologies**

<http://www.festaradontech.com>  
634 North Ave  
Pittsburgh, PA  
phone: 1 (800) 806-7866  
fax: 1 (412) 932-0754  
e-mail: festaradon@prodigy.net

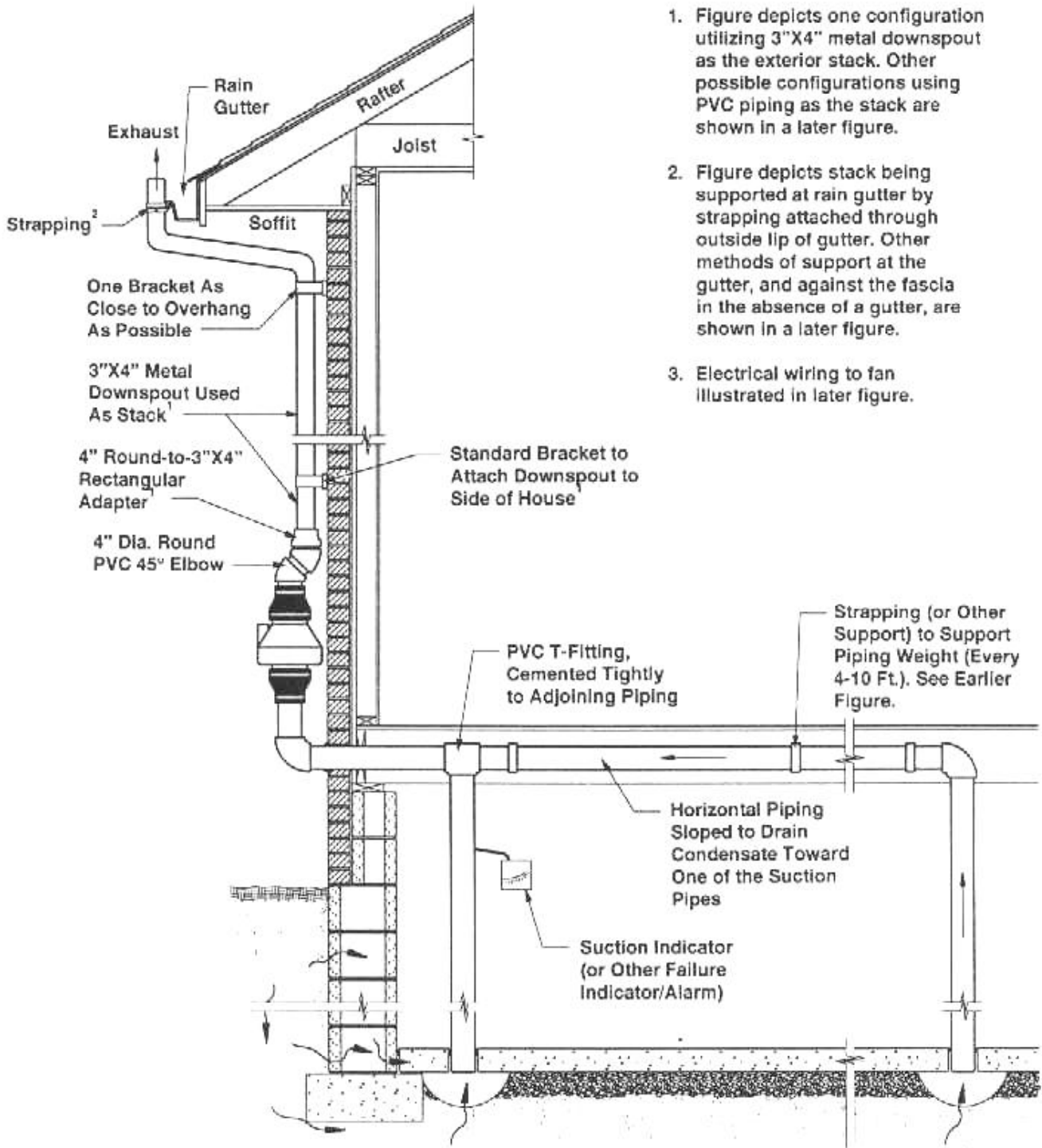
# Radon Mitigation System Drawings to Help the Do-It-Yourselfer

**Notes:**

1. Horizontal piping run in attic shown only for illustration. Stack could have penetrated straight upward through roof, if there were sufficient headroom to install fan at that location.
2. Electrical wiring to fan illustrated in later figure.



## 1. Sample piping system using an interior exhaust stack.

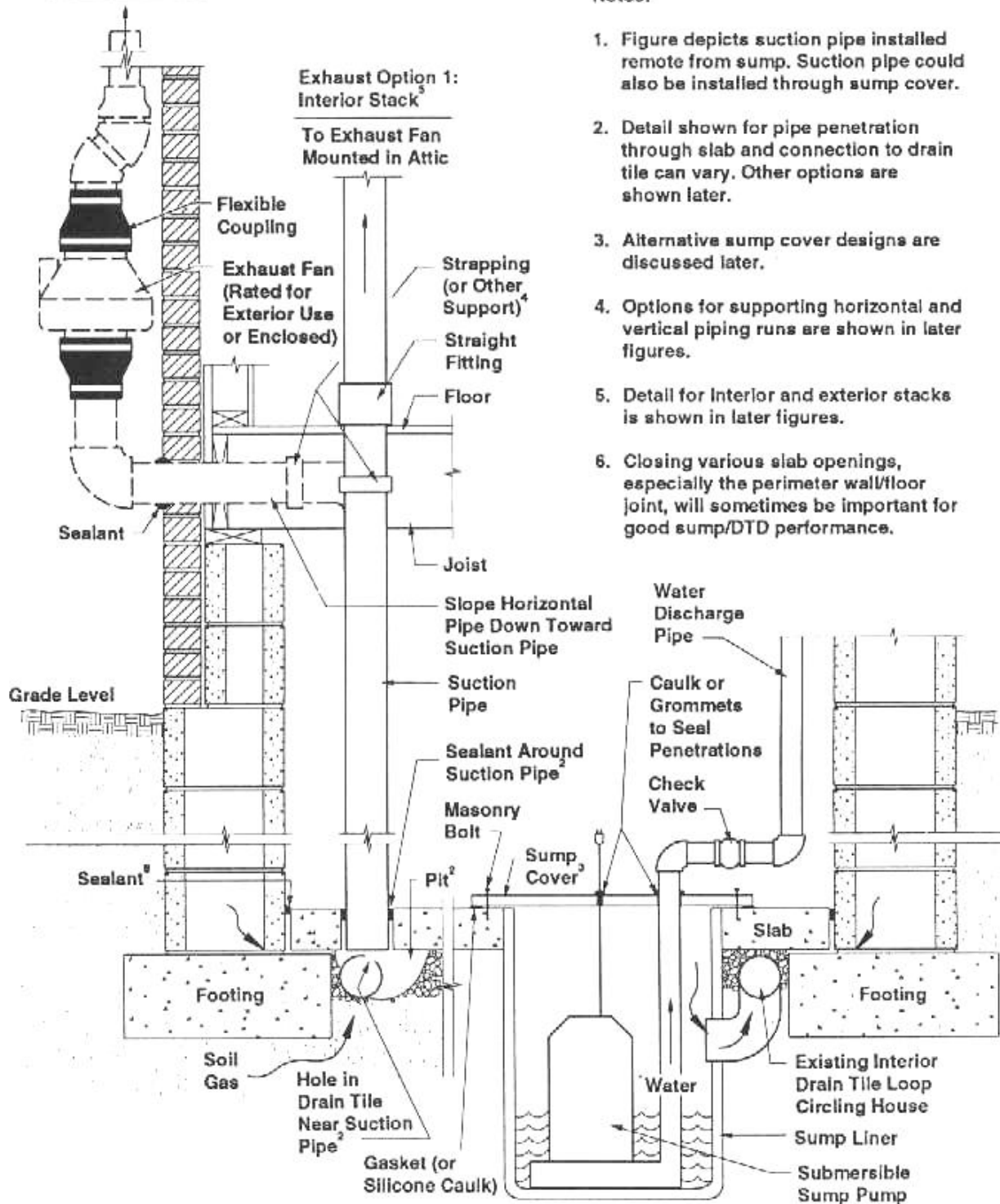


Notes:

1. Figure depicts one configuration utilizing 3"x4" metal downspout as the exterior stack. Other possible configurations using PVC piping as the stack are shown in a later figure.
2. Figure depicts stack being supported at rain gutter by strapping attached through outside lip of gutter. Other methods of support at the gutter, and against the fascia in the absence of a gutter, are shown in a later figure.
3. Electrical wiring to fan illustrated in later figure.

**2. Sample piping system using an exterior exhaust stack.**

**Exhaust Option 2:  
Exterior Stack<sup>5</sup>**



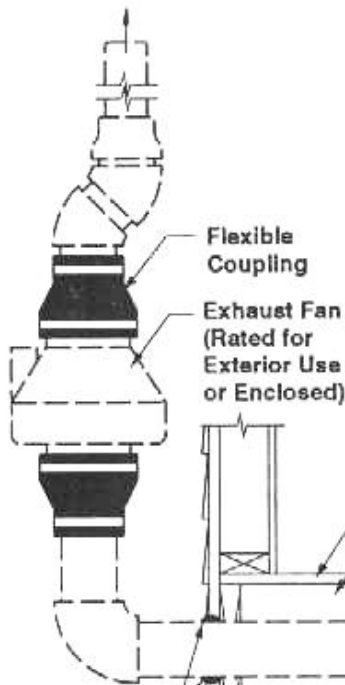
**Notes:**

1. Figure depicts suction pipe installed remote from sump. Suction pipe could also be installed through sump cover.
2. Detail shown for pipe penetration through slab and connection to drain tile can vary. Other options are shown later.
3. Alternative sump cover designs are discussed later.
4. Options for supporting horizontal and vertical piping runs are shown in later figures.
5. Detail for interior and exterior stacks is shown in later figures.
6. Closing various slab openings, especially the perimeter wall/floor joint, will sometimes be important for good sump/DTD performance.

**3. Sample piping system using suction point on a interior drain tile system that feeds into a sump in the basement.**

### Exhaust Option 2

Exhaust Released  
Above Eave

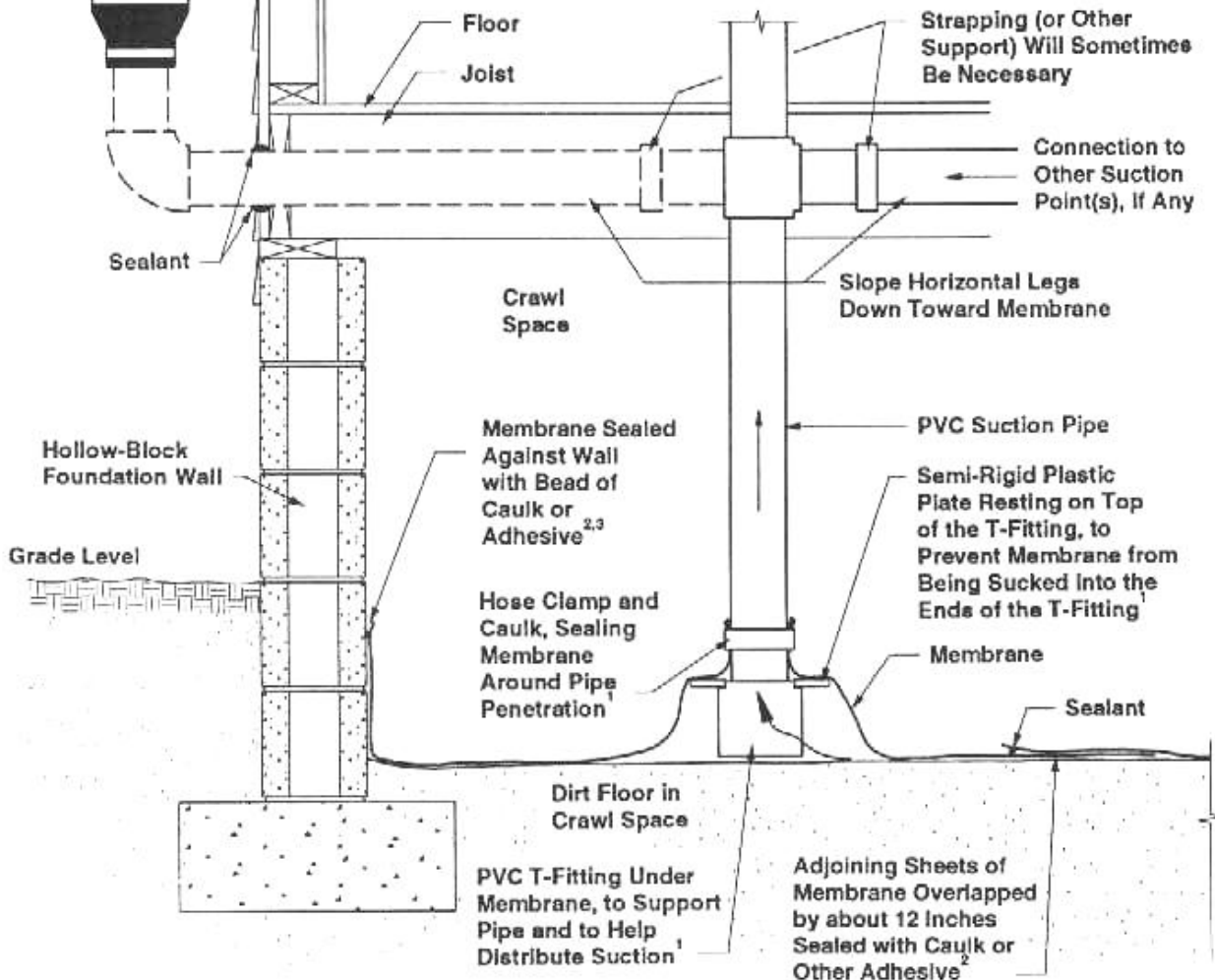


### Notes:

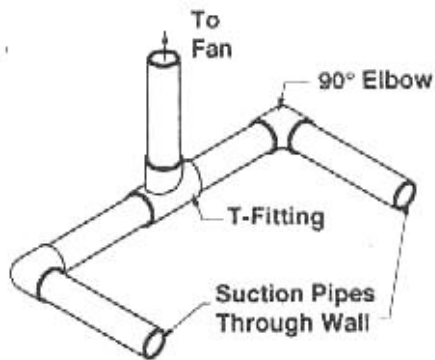
1. The specific configuration depicted for the pipe penetration through the membrane is one of a number of alternatives. Other options are shown in a later figure.
2. The membrane seams must always be sealed near the suction point. Sealing of more remote seams may not always be necessary, but is advisable.
3. The membrane can often be effectively sealed against the foundation wall using a continuous bead of properly selected sealant (urethane caulk for cross-laminated polyethylenes, other adhesive for regular polyethylenes). Other options for sealing the membrane against the wall are discussed in text.

### Exhaust Option 1

To Exhaust Fan  
Mounted In Attic



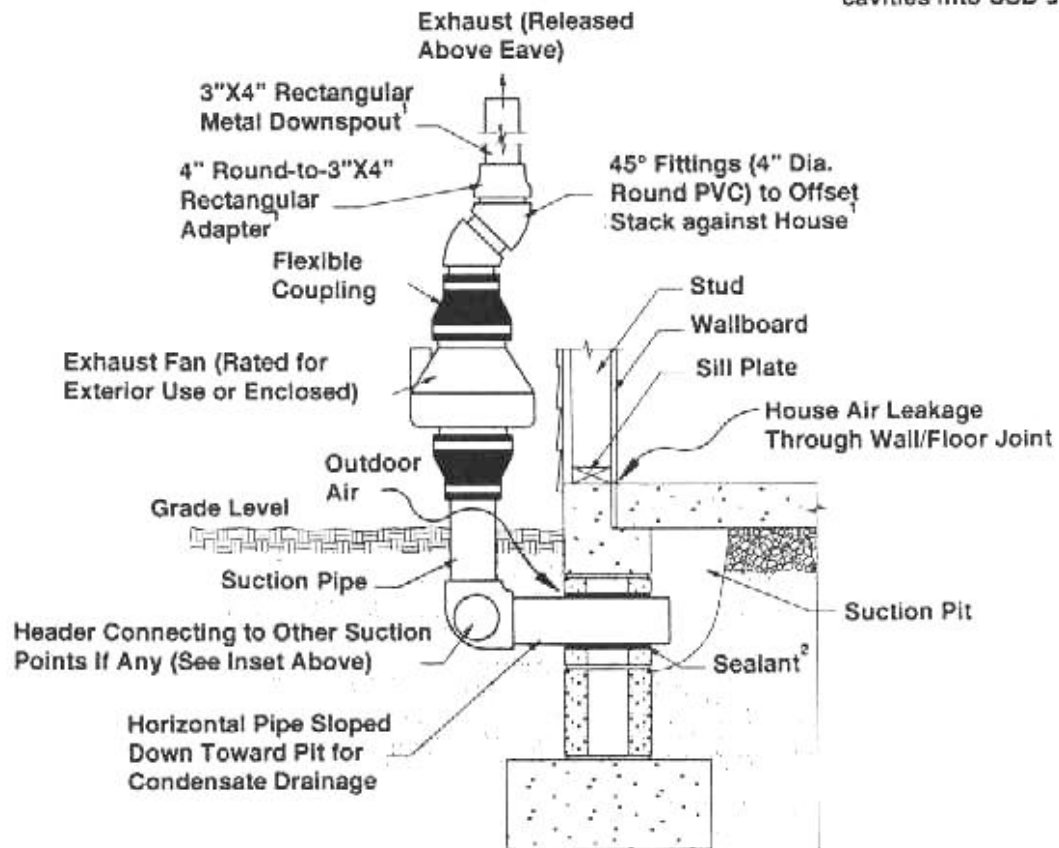
## 4. Crawl space system using suction under a membrane with one or more membrane penetrations.



One possible configuration for a multi-pipe system

Notes:

1. The exterior downspout exhaust stack illustrated here is one of several possible stack configurations, as discussed later.
2. Sealing pipe penetration through wall is important to reduce leakage of outdoor air and air from block cavities into SSD system.

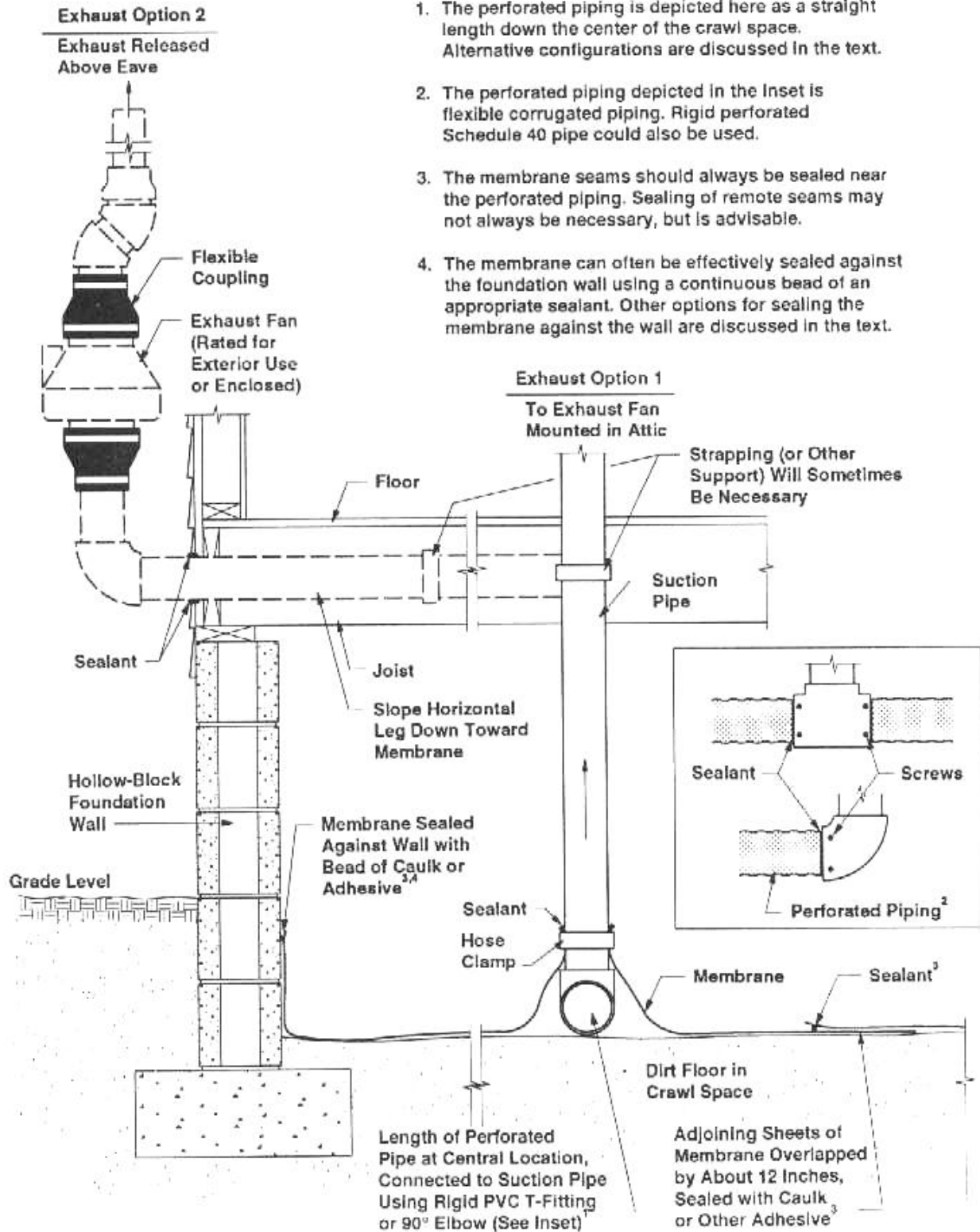


**6. A sub-slab system using pipes inserted horizontally through the foundation wall from outdoors.**

Prepared by Kansas Radon Program using EPA reference documents – 3/6/03

Notes:

1. The perforated piping is depicted here as a straight length down the center of the crawl space. Alternative configurations are discussed in the text.
2. The perforated piping depicted in the Inset is flexible corrugated piping. Rigid perforated Schedule 40 pipe could also be used.
3. The membrane seams should always be sealed near the perforated piping. Sealing of remote seams may not always be necessary, but is advisable.
4. The membrane can often be effectively sealed against the foundation wall using a continuous bead of an appropriate sealant. Other options for sealing the membrane against the wall are discussed in the text.



**5. Crawl space system using suction on a perforated pipe under a membrane.**