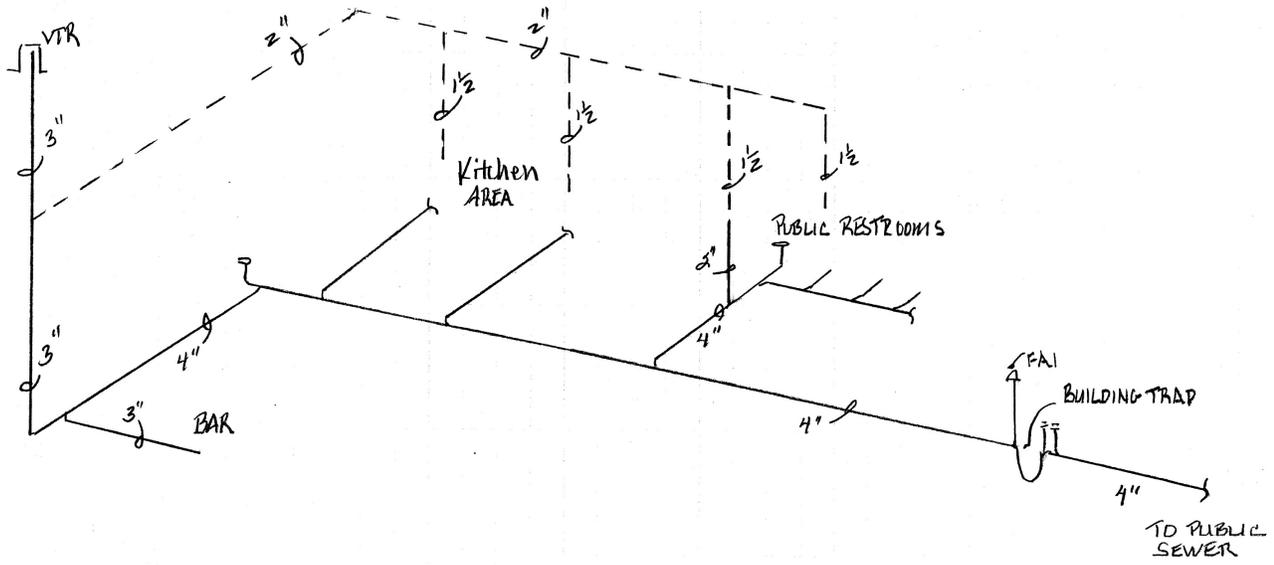


Appendix

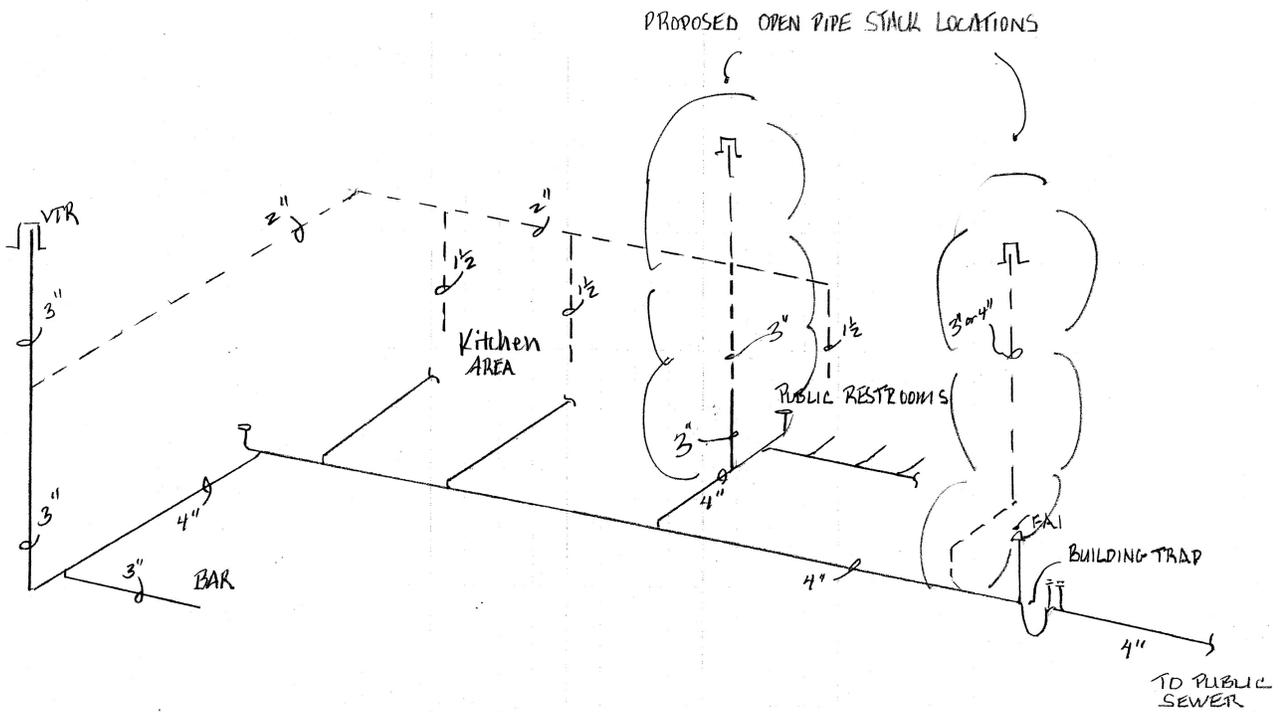
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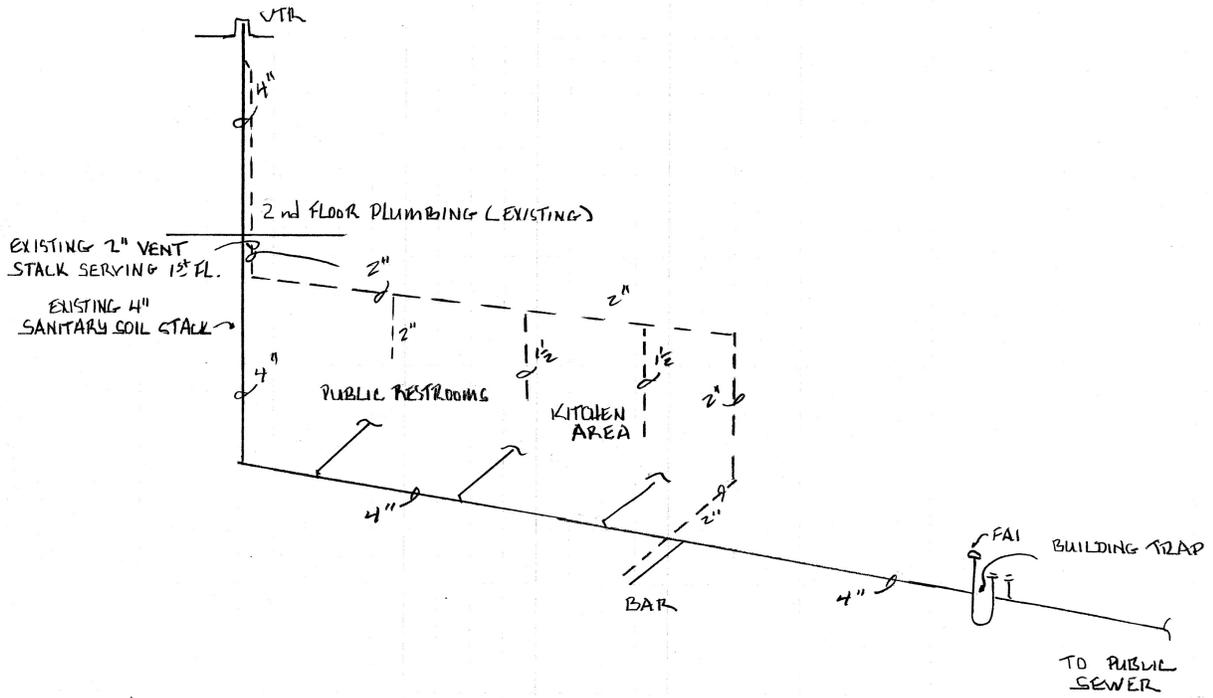
BUILDING-A DWV DETAIL

NTS



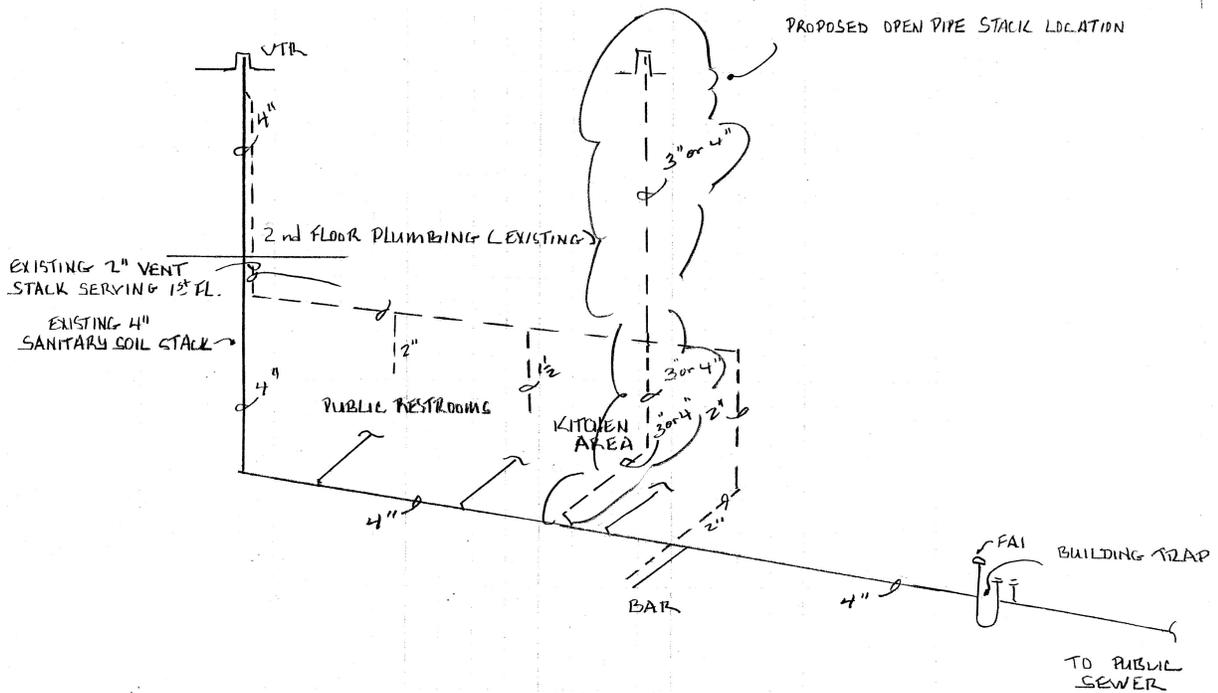
BUILDING-A DWV DETAIL (RECOMMENDED)

NTS



BUILDING-B DWV DETAIL

NIS



BUILDING-B DWV DETAIL (RECOMMENDED)

NIS

PLEASE TAKE NOTICE that the Common Council of the City of Ithaca, New York, at a Regular Meeting on August 1, 2012 adopted the following ordinance:

Ordinance #2012 - 06

BE IT ORDAINED AND ENACTED by the Common Council of the City of Ithaca as follows:

Section 1. Section 348-29(E) of the City of Ithaca Municipal Code is hereby amended to read as follows:

(E) All installations of service drains or sewers between the curb and the building shall be made by a Plumbing Contractor or Water and Sewer Installer licensed by the Examining Board of Plumbers or any homeowner working on his/her own single-family residence.

Section 2: Section 348-29 of the City of Ithaca Municipal Code is hereby amended to add the following subsections:

(J) All sanitary services connected to the public mains shall have a house (building) trap installed between the property line and the building to prevent sewer gas and other potentially harmful gases generated in the public mains from entering the building. The house trap shall be installed as close to the building as possible. The trap shall be a service weight, cast iron, double hub running trap with a minimum of 4" inside diameter. A Fresh Air Inlet shall be installed on the building side riser of the trap and terminate at 12 inches above grade with an approved air inlet fitting to allow the internal vents to draft and remove accumulated gases from the plumbing system. A brass cleanout cover shall be installed at grade level on the street side of the trap for cleaning and maintenance of the trap. A wye, 45 degree fitting with riser and brass cleanout at grade level is required immediately down-stream of the trap to facilitate cleaning between the trap and the public main.

(K) Each plumbing system connected to the City of Ithaca municipal sanitary sewer system shall have an attending vent system designed to provide for the admission and emission of air within such system to protect trap seals from siphonage, backpressure and to remove the accumulation of sewer gas within the building.

(L) Main Stack required. All plumbing systems connected to the public mains shall have at least one main stack connected to the building drain and run undiminished in size and terminate to the outside. The size of the stack shall be a minimum of 3 inches in diameter or larger if total developed length exceeds 75 feet. The stack shall connect to the building drain as close as possible to the fresh air inlet of the house trap to create the necessary stacking and circulation of air for the interior venting system. Where multiple fixture groups or stacks are located throughout a building, additional main stack(s) may be required by the local authority having jurisdiction.

(M) Air Admittance Valves. Individual, branch and circuit vents shall be permitted to terminate with a connection to an air admittance valve. The air admittance valve shall only vent fixtures that are on the same floor level and connect to a horizontal branch drain. The horizontal branch drain shall conform to the following:

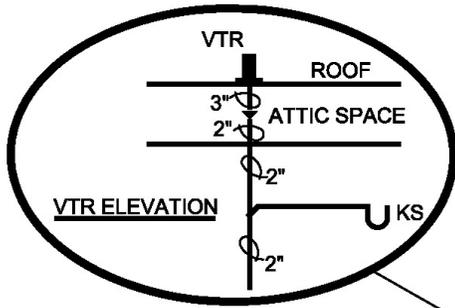
1) Location of branch. The horizontal branch drain shall connect to the drainage stack or building drain a maximum of four branch intervals from the top of the stack.

2) Relief vent. The horizontal branch shall be provided with a relief vent that shall connect to a vent stack, or stack vent or extend to the outdoors to the open air. The relief vent shall connect to the horizontal branch drain between the stack or building drain and the most downstream fixture drain connected to the horizontal branch drain. The relief vent shall be sized in accordance with existing Plumbing Code.

3) Stack-type air admittance valves shall be prohibited.

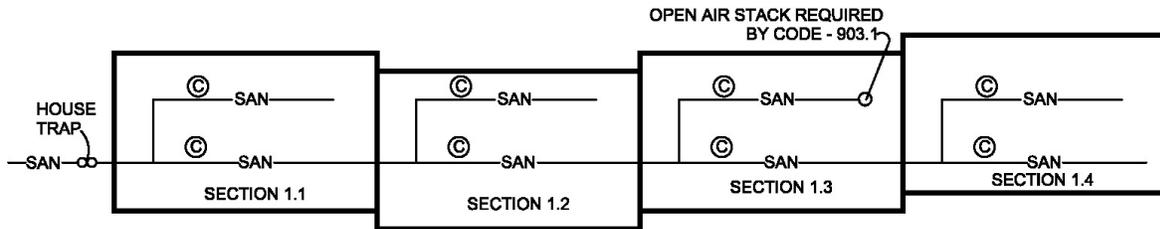
Section 3: Severability. If any section, subsection, sentence, clause, phrase or portion of this ordinance is held to be invalid or unconstitutional by a court of competent jurisdiction, then that decision shall not affect the validity of the remaining portions of this ordinance.

Section 4: Effective date. This ordinance shall take effect immediately and in accordance with law upon publication of notices as provided in the Ithaca City Charter.



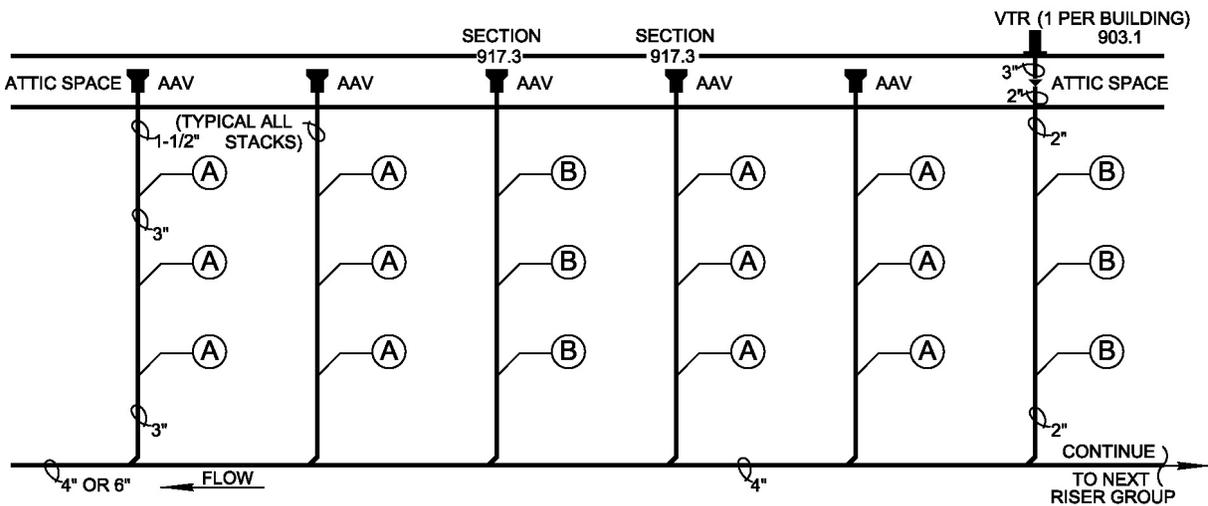
NOTES:

- 1) ALL PLUMBING STACKS TERMINATE WITH AAV.
- 2) ONE STACK REQUIRED 903.1 AND SIZED ACCORDING TO 916.2. (1/2 DIAMETER OF DRAIN PIPE)



SK-4: APARTMENT COMPLEX, PLAN VIEW - SANITARY BUILDING DRAIN - C (Typical)

NOT TO SCALE

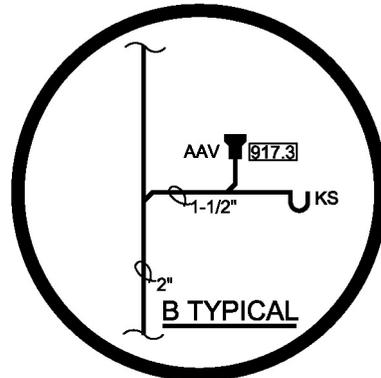
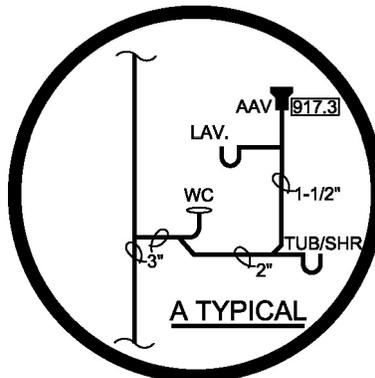


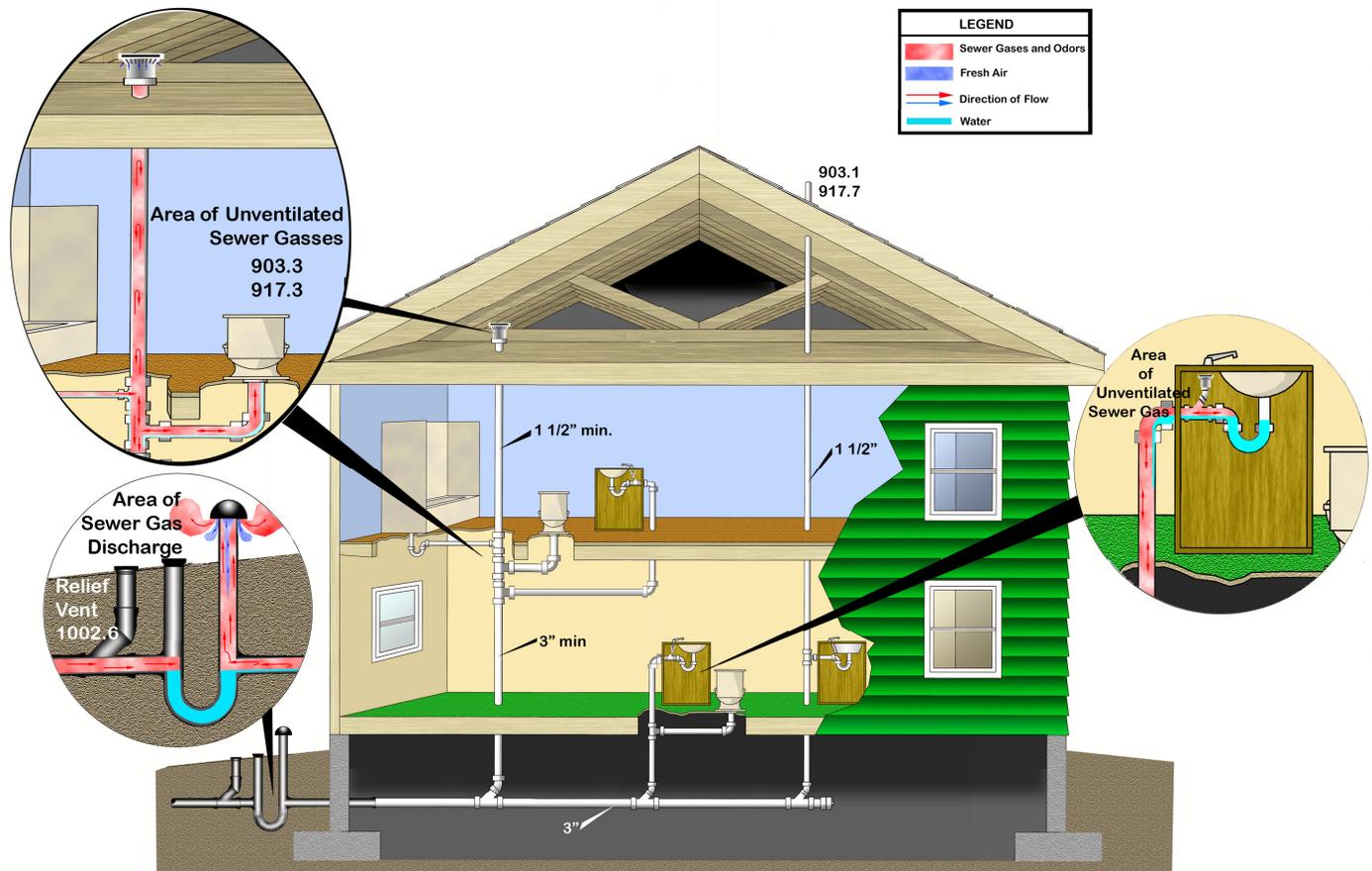
SK-5 APARTMENT COMPLEX, ELEVATION DETAIL - DWV RISERS - C (Typical)

NOT TO SCALE

NOTES:

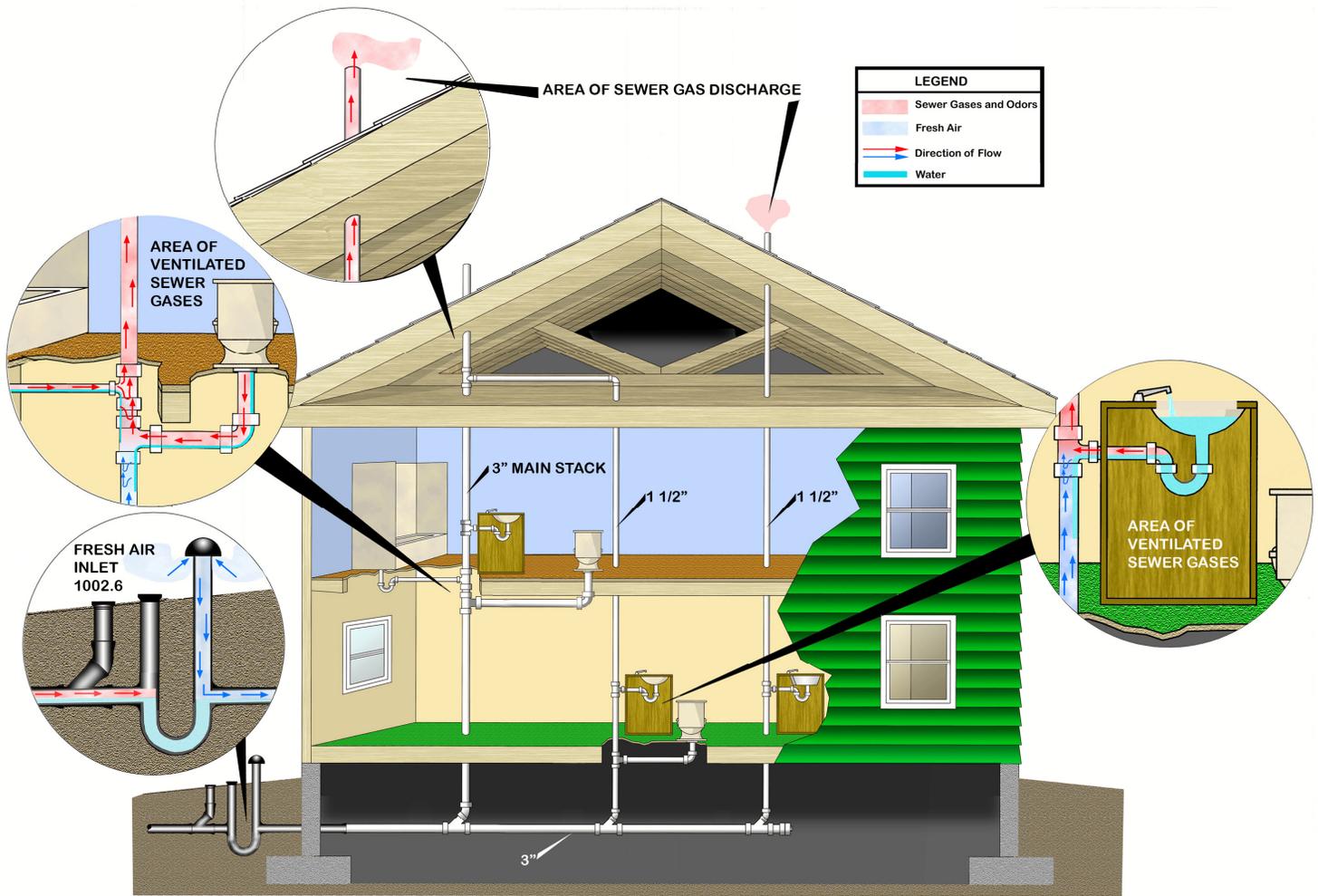
- 1) 12 BATHROOM GROUPS PER ELEVATION DETAIL.
- 2) 6 KITCHEN SINKS PER ELEVATION DETAIL.
- 3) 2 ELEVATION DETAILS PER BUILDING SECTION.
- 4) 4 BUILDING SECTIONS PER BUILDING OR 96 BATHROOM GROUPS & 48 KITCHENS PER BUILDING.





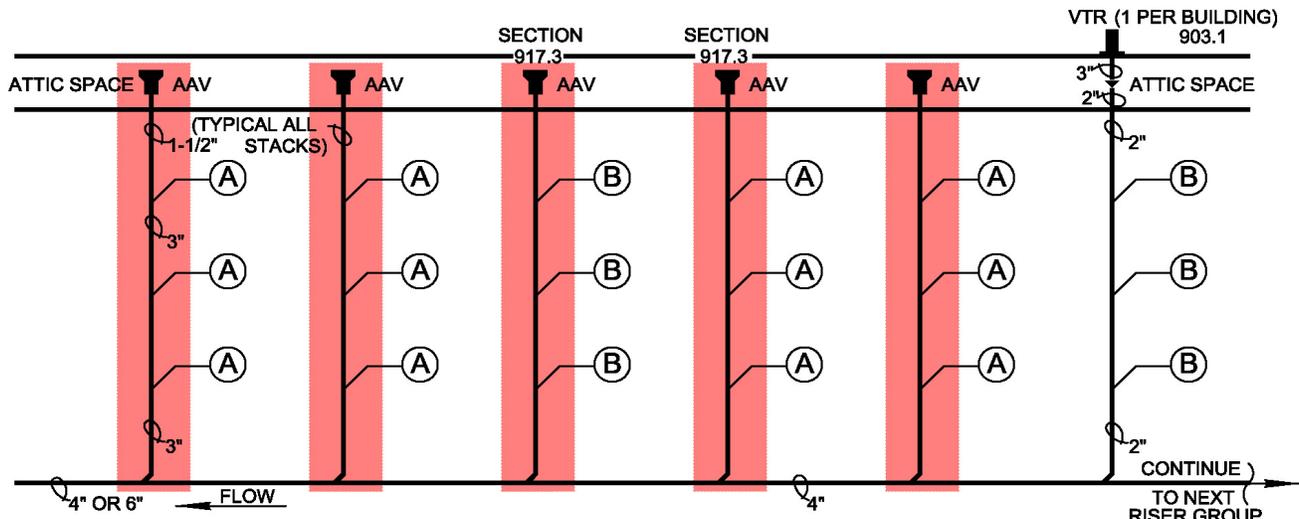
Residence A- Areas of unventilated sewer gases and discharge.

This drawing illustrates piping sections of the sanitary DWV system closed off to stack ventilation. The 1 1/2" open pipe vent is unable to draft air through the 4" FAI and 3" building drain. The result is co-current airflow in the building drain. Sewer gas is discharged or relief vented at the FAI.



Residence B- Open pipe ventilation of sewer gases and area of discharge.

The drawing illustrates the vented portions of the sanitary DWV system. Airflow is established in all sections of the piping system by the stacking effect of the 3" main stack vent. All sewer gas discharge is at the roof termination points. FAI functions as an air-inlet.

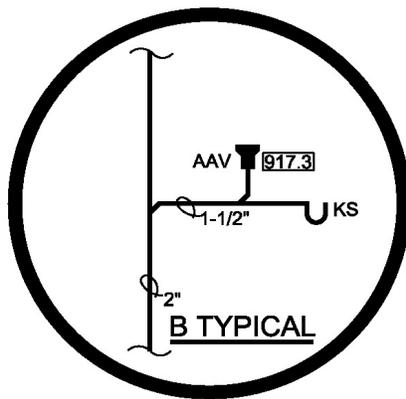
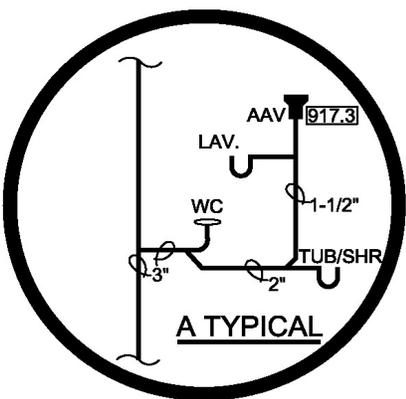


Apartment Complex—Areas of Unventilated Sewer Gases in AAV Vented Systems

NOT TO SCALE

NOTES:

- 1) 12 BATHROOM GROUPS PER ELEVATION DETAIL.
- 2) 6 KITCHEN SINKS PER ELEVATION DETAIL.
- 3) 2 ELEVATION DETAILS PER BUILDING SECTION.
- 4) 4 BUILDING SECTIONS PER BUILDING OR 96 BATHROOM GROUPS & 48 KITCHENS PER BUILDING.



Apartment Complex – Areas of unventilated sewer gases in AAV vented systems.

This drawing illustrates the enormous potential for high concentrations of unventilated sewer gases in large scale residential buildings. The red shaded areas are closed to stack ventilation. AAVs are installed in the attic area as the vent termination for each plumbing stack per Section 917.3, 2010 NYS Plumbing Code. One open vent is provided for the entire 96 bathroom complex per Section 903.1.2 and 917.7.

