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# **Significant changes in the 2018 Virginia Residential Code**

**HENRICO COUNTY**

Department of Building Construction and Inspections



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## Virginia Residential Code

- The Virginia Residential Code (VRC) combines the 2018 International Residential Code (IRC) and the 2018 Virginia amendments in one document
- The VRC is published by the International Code Council and is available from [www.ICCsafe.org/codes/virginia](http://www.ICCsafe.org/codes/virginia)
- VMC Virginia Mechanical Code reference
- VFGC Virginia Fuel Gas Code reference
- VPC Virginia Plumbing Code reference



# Exhaust Systems

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## Clothes Dryer Exhaust Termination and Passageway - M1502.3.1

(VMC 504.4.1)

(VFGC 614.4.1)



- NEW!! code section that addresses the clothes dryer exhaust termination outlet size and passageway.
  - Termination outlet is to be undiminished in size.
  - Termination outlet requires open area to be not less than 12.5 sq. inches
  - Must be equipped with backdraft damper and be screen free.



# Exhaust Systems

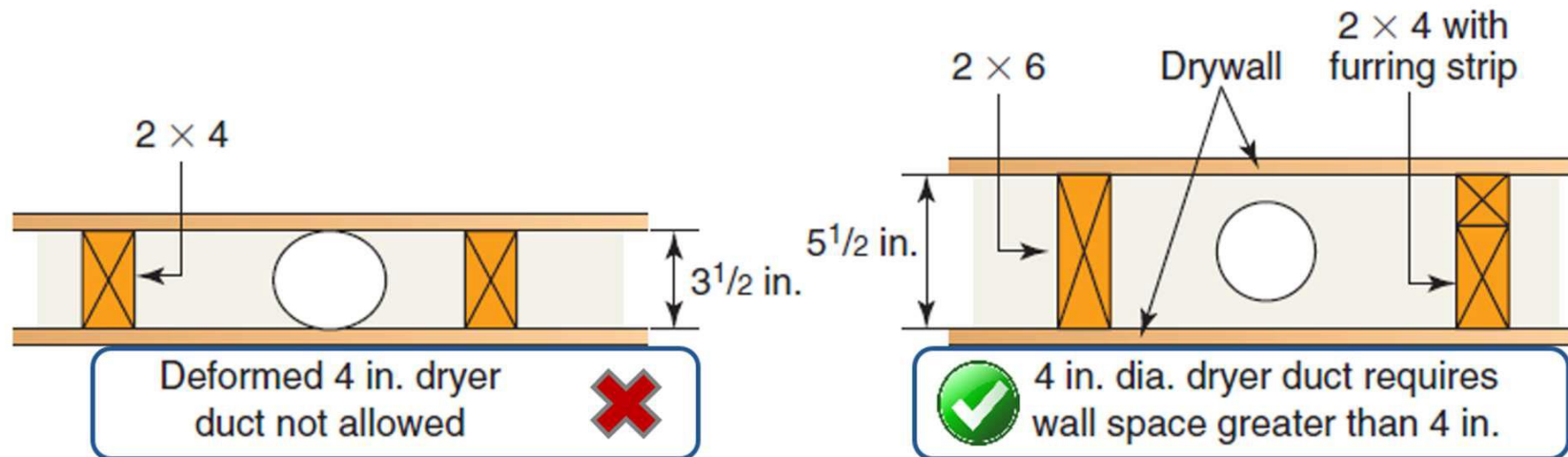
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## Duct Installation - M1502.4.2

(VMC 504.8.2)

(VFGC 614.8.2)

- Wall and ceiling cavities enclosing dryer exhaust ducts must provide sufficient space in the framing so that the 4-inch duct is not deformed out of its round shape.



Plan view

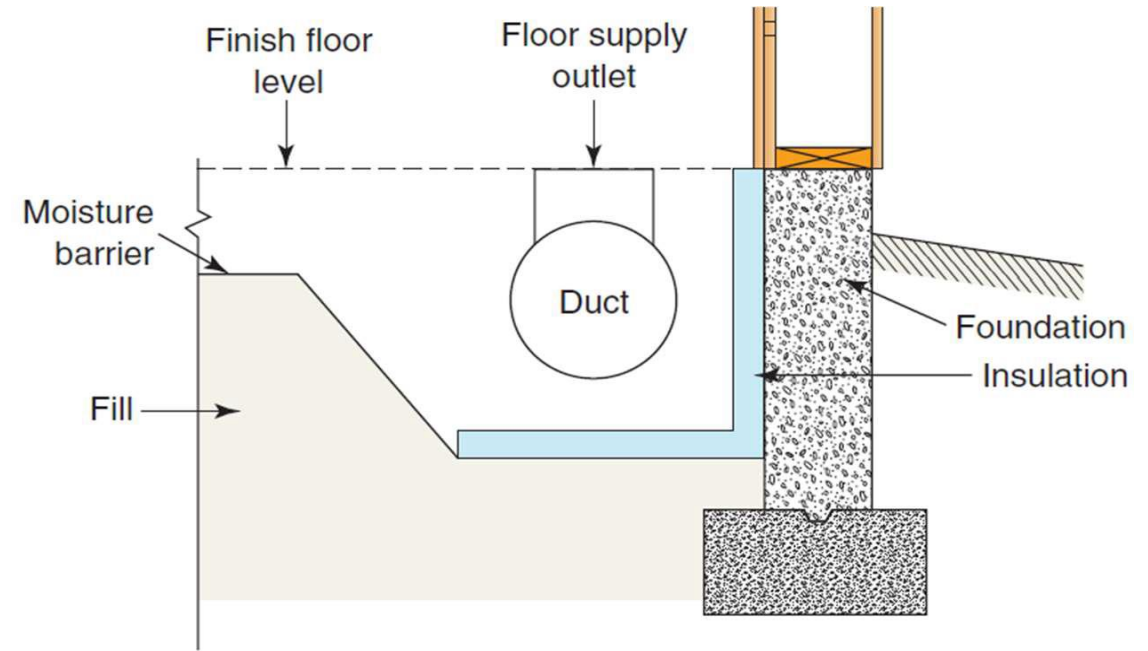


# Duct Systems

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## Underground Duct Systems - M1601.1.2

- Underground ducts, including both direct burial and those encased in concrete are required to be sealed and tested prior to concealment.



Underground ducts require sealing and testing prior to encasement or backfill.



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## Chapter 21

# Hydronic Piping

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## Air Testing Pex Hydronic Piping – M2101.10

- Compressed-air testing of PEX hydronic piping is now allowed when testing is in accordance with the manufacturer's instructions.



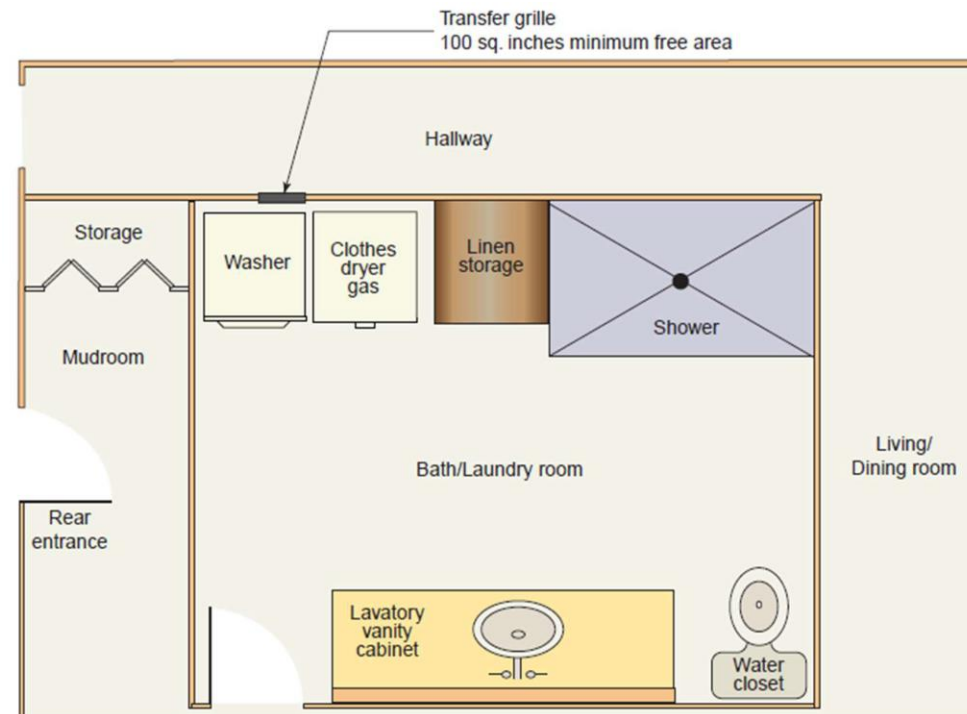




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## Gas-Fired Clothes Dryers in Bathrooms - P2406.2 (VFGC 303.3)

- A new exception allows gas-fired clothes dryers to be installed in toilet rooms or bathrooms when one permanent transfer vent opening of 100 sq. in. is provided and communicates with a room other than a bedroom, toilet room, bathroom or storage closet.

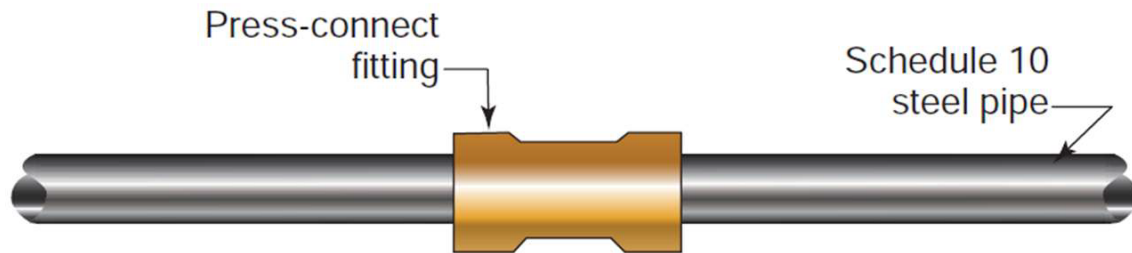




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## Schedule 10 Pipe - P2414.4.2 (VFGC 403.4.2)

- This NEW!! section allows the use of schedule 10 steel pipe for gas service.



Press-fittings use elastomeric seals and special equipment to join steel gas piping

- With thinner piping, proper pipe protection is critical.
- Press connect fittings have been clarified to be in-line with this piping change. (These mechanical fittings are commonly used with steel piping)





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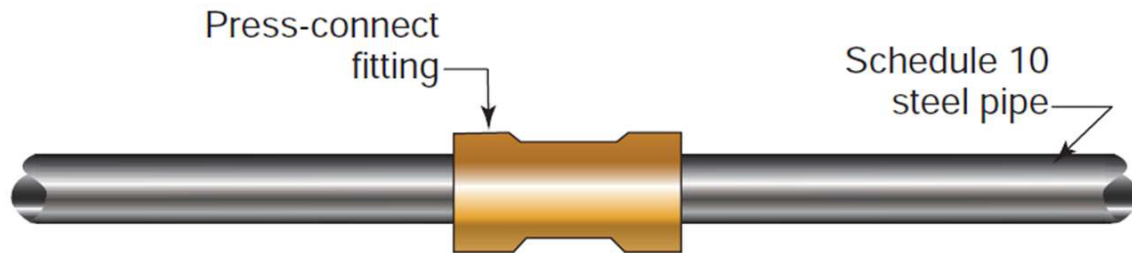
## Chapter 24

# Fuel Gas

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## Piping Joints - P2414.10.1 (VFGC 403.10.1)

- Press connect fittings have been expanded to be in-line with Schedule 10 piping change. (These mechanical fitting are commonly used with steel piping).



Press-fittings use elastomeric seals and special equipment to join steel gas piping

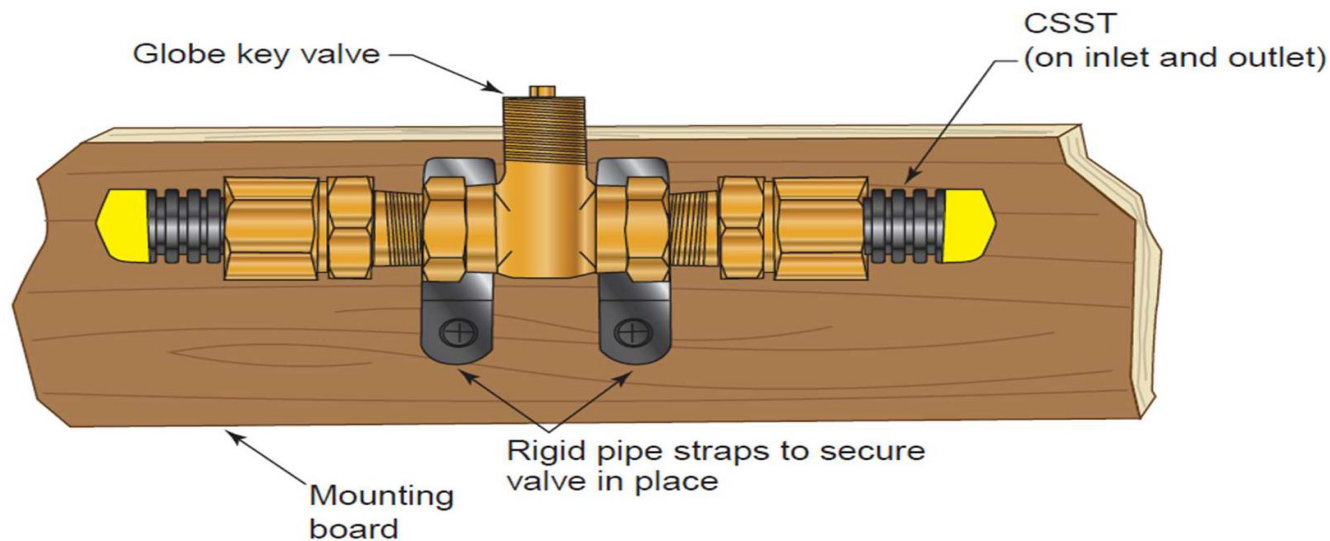




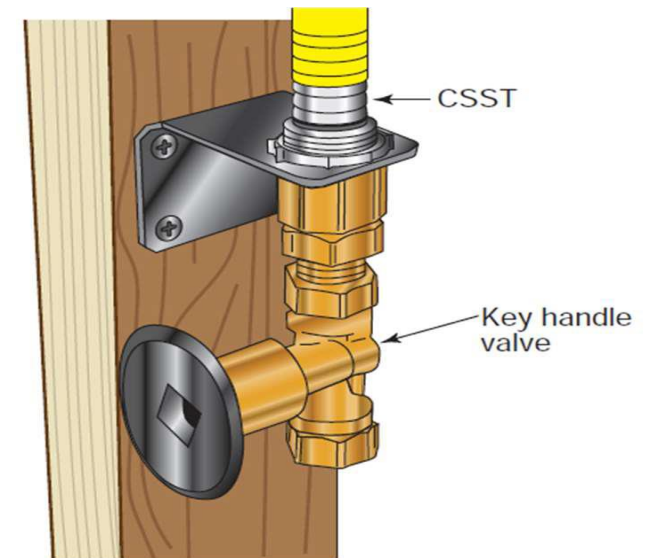
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## Support for Shutoff Valves in Tubing Systems – P2420.6 (VFGC 409.7)

- Shutoff valves installed in tubing systems require independent ridged support separate from the tubing support to prevent damage at the valve connection.



Shutoff valves require support independent of gas tubing.



Key handle valve with support independent of gas tubing

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## Cooking Appliances Prohibited Location - G2447.2 (VFGC 623.2)



- A new exception is provided to allow the installation of commercial cooking appliances when the installation is designed by a licensed professional engineer, and it is in compliance with the manufactures installation instructions.



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Chapter 25

# Plumbing Administration

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## Air Testing of PEX Piping P2503.7

- Compressed-air testing of PEX hydronic piping is now allowed when testing is in accordance with the manufacturer's instructions.





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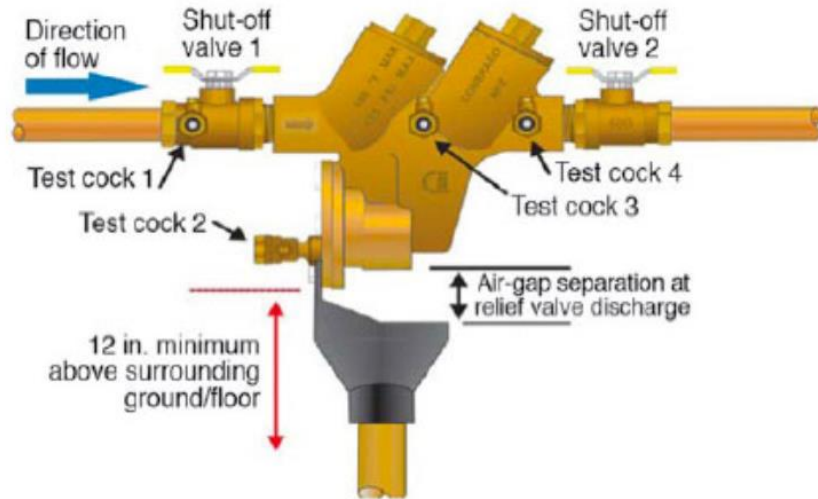
Chapter 29

# Water Supply & Distribution

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## Location of Backflow Preventers – P2902.6

- Additional installation restrictions have been added for backflow preventers.



REDUCED PRESSURE PRINCIPLE BACKFLOW ASSEMBLY

- 12 to 60 inches from grade, floor level, or service platform.
- Installation height as specified by manufacture.
- Manufacture's requirements take precedent if the code conflicts

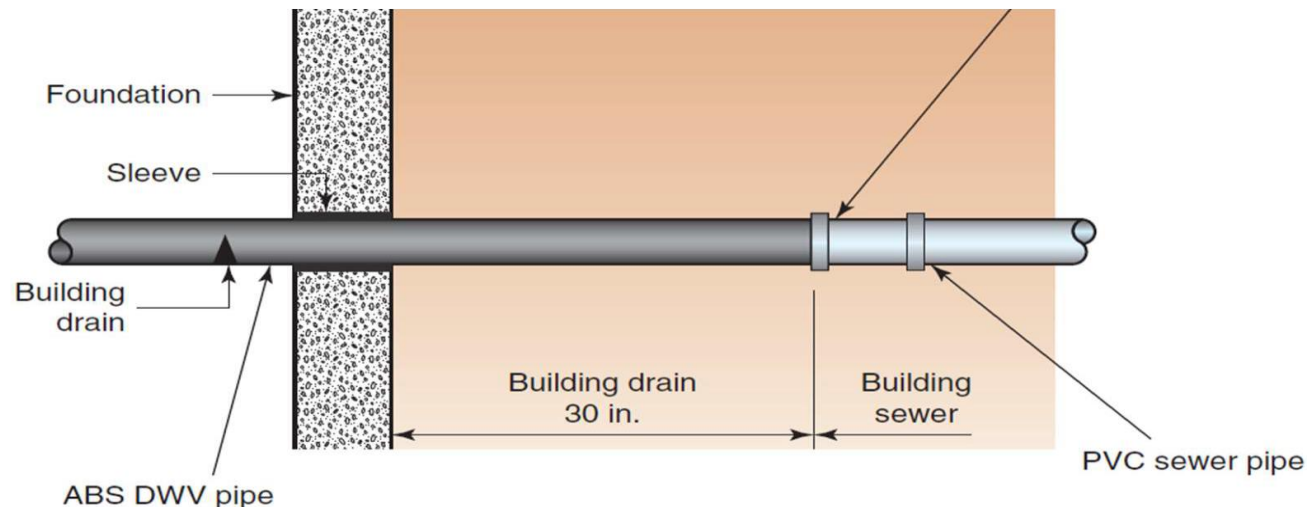


# Sanitary Drainage

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## PVC to ABS Solvent Cement Joint- P3003.2 (VPC 705.16.4)

- One joint between ABS piping and PVC piping may be solvent cemented with the proper cement (ASTM D3138).
- This cement can only be used at a single joint that is located at the end of a building drainage pipe and the beginning of the building sewer pipe.







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## Chapter 30

# Sanitary Drainage

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## Relining of Building Sewers and Building Drains- P3012 (VPC 717)



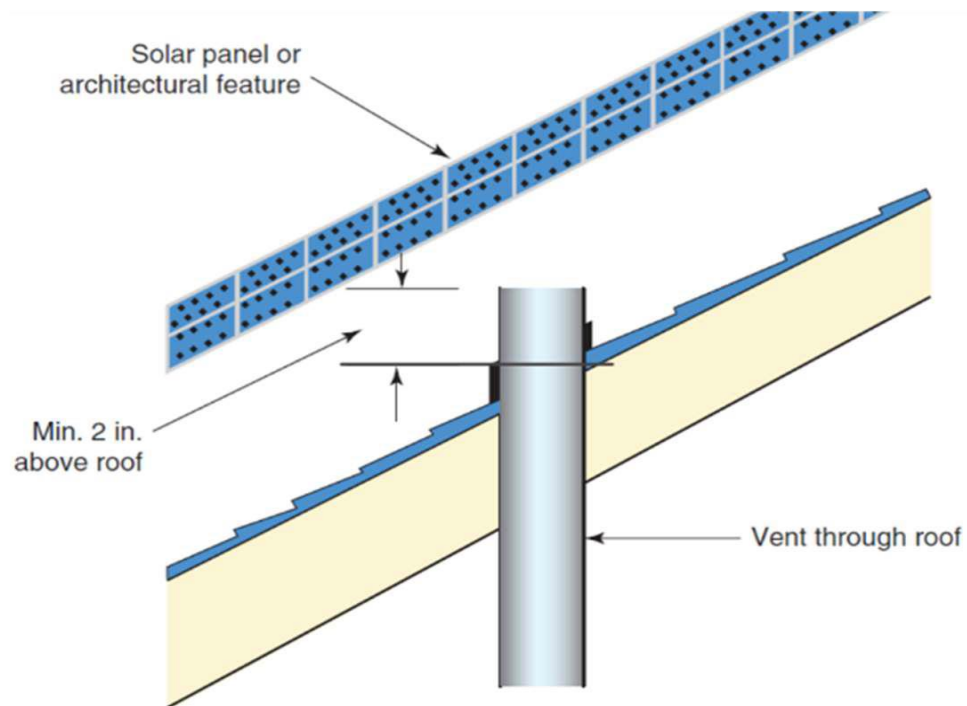
- A new section has been added to allow relining of existing building sewers and building drains as an alternative to replacement.
  - Adds references to ASTM F1871 and ASTM F1504 for specifications.
  - The piping shall be descaled, cleaned and flushed prior to the re-lining.
  - Video surveys shall be submitted confirming the condition of the piping prior and subsequent to the installation of the new liner.
  - Re-lining is prohibited for defective or damaged piping.



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## Vent Pipe Terminations- P3103.1

- The provisions for vent terminals have been reorganized. A new option has been added to allow a 2-inch vent extension through a sloped roof when the vent is covered by a solar panel or other architectural feature.



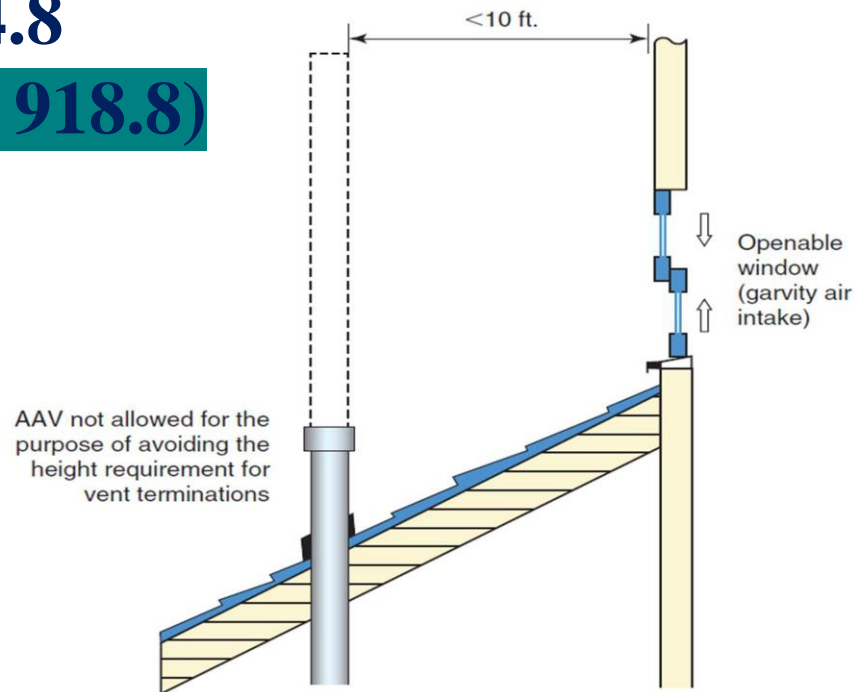
Covered vent pipe termination through roof



## Prohibited Installations (Air Admittance Valves)

P3114.8

(VPC 918.8)



Prohibited installation for air admittance valves

- "Air admittance valves shall not be installed on outdoor vent terminals for the sole purpose of reducing clearances to gravity or mechanical air intakes."
- A plumbing vent is required to be at least 10' from any air intake or building opening. AAV's are not to be installed to avoid or reduce this distance.