



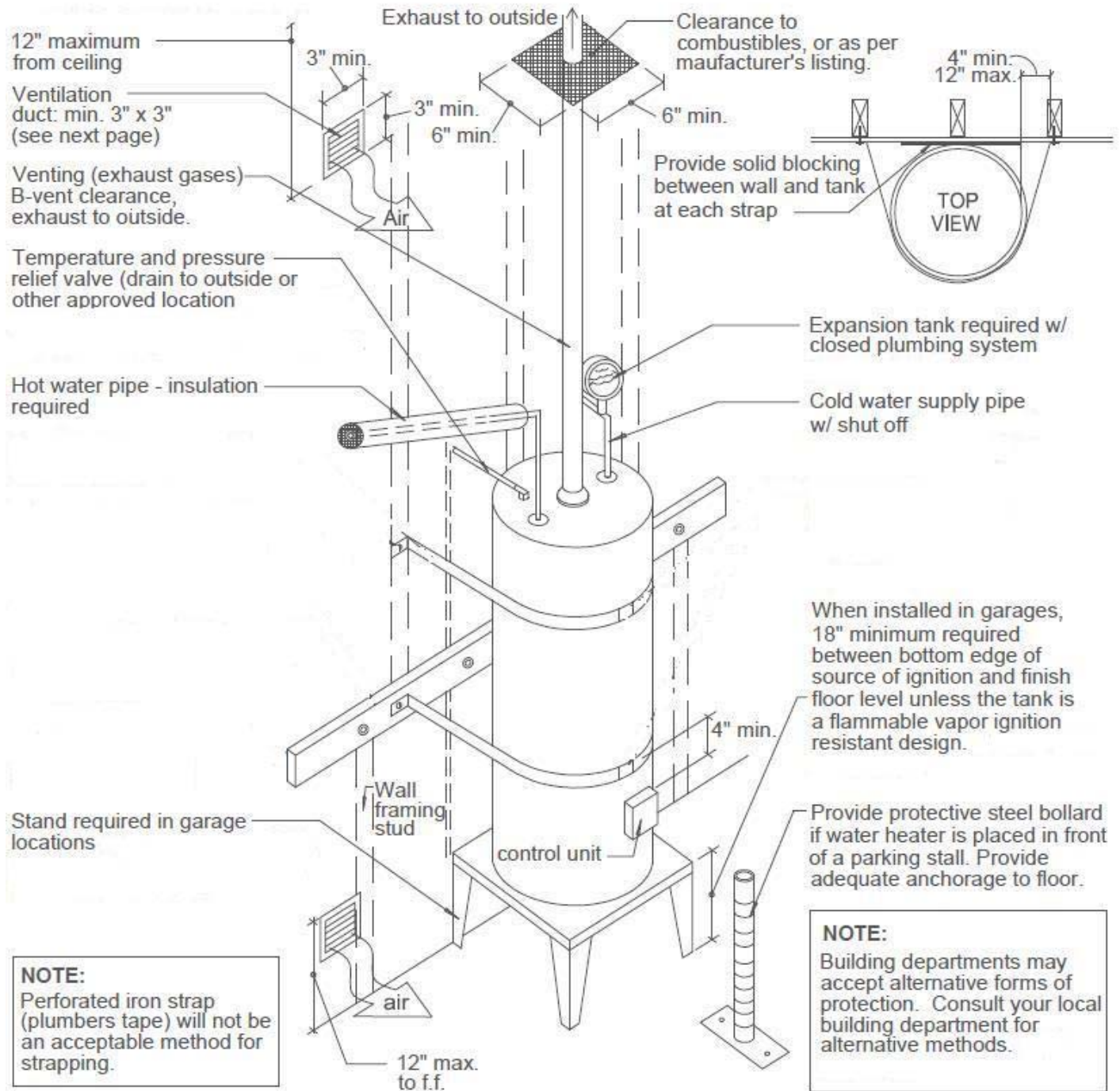
101 S. George St
 City of York
 York, PA 17405
 (717) 849-2329

116 E. Gas Ave
 QDOT Engineering, LLC
 York, PA 17405
 (717) 744-8315



CONSTRUCTION TIP SHEET – WATER HEATERS

2010 Codes



GENERAL INFORMATION:

- Strapping is optional
- For combustion air requirements, see below.
- Unless built into the appliance from the factory, a vacuum relief valve in the cold water supply line about the highest point of the tank is required. No valve shall be placed between the relief valve and the tank.

Size of Combustion Air Openings or Ducts for Gas or Liquid-burning Water Heaters

Buildings of Ordinary Tightness Conditions	Size of Opening or Duct
Appliance in unconfined space	May rely on infiltration alone.
Appliance in confined space: 1. All air from inside building	Provide two openings into enclosure (1) high, (1) low, each having 1 sq. in. per 1,000 btu/h input freely communicating with other unconfined interior spaces. Minimum 100 sq. in. each opening.
2. Part of air from inside building	Provide two openings into enclosure from other freely communicating unconfined space, each having an area of 100 sq. in. plus one duct or plenum opening to outdoors having an area of 1 sq. in. per 5,000 btu/h input rating.
3. All air from outdoors: obtain from outdoors or from space freely communicating from outdoors.	Use any methods listed for confined space in unusually tight construction.
Buildings of Unusually Tight Construction. Appliance in Unconfined Space.	Size of Opening or Duct
Obtain combustion air from outdoors or from space freely communicating with outdoors.	Provide two openings, each having minimum 1 sq. in. per 1,000 btu/h and (1) to outdoors of 1 sq. in. per 5,000 btu/h.
Appliance in <u>confined space</u> : obtain combustion air from outdoors or from space freely communicating with outdoors.	Use any methods listed for confined space in unusually tight construction. <ol style="list-style-type: none"> 1. Provide two vertical ducts or plenums: 1 sq. in. per 4,000 btu/h input each. 2. Provide two horizontal ducts or plenums: 1 sq. in. per 2,000 btu/h input each. 3. Provide two openings in an exterior wall of the enclosure: 1 sq. in. per 4,000 btu/h input each. 4. Provide 1 ceiling opening to ventilated attic and 1 vertical duct to attic: 1 sq. in. per 4,000 btu/h input each. 5. Provide 1 opening 1 enclosure ceiling to ventilated attic and 1 opening to ventilated crawl space: 1 sq. in. per 4,000 btu/h input each.