Backflow Design
General Guidelines for the Preparation of Drawings
Overall Site Plan
and Plan View and Elevation View of
Proposed Backflow Preventer

Site Plan:

A Site Plan of the facility containing a general location map, buildings, the public water main(s), location and size of all water services including fire services, location and size of any meter pits, yard hydrants, pumper (Siamese) sprinkler connection(s) and the location of the proposed backflow preventer and water meter.

Plan & Elevation View:

Prepare detailed schematics/drawings of the proposed installation of the meter, backflow preventer, detector check valve (required on non-hazardous fire lines 4-inch and greater), indicating dimensions from walls, the floor, the ceiling and other facilities such as furnaces, hot water tanks, boilers, etc. In addition, include the location of any domestic and/or fire booster pumps, floor drains, sump pumps, RPZ drain lines, lighting, heating, access for maintenance and testing, and the square footage of the floor level where the device will be installed.

General Drawing Considerations:

1. All equipment (meter, backflow preventers, detector check valves, etc.) associated with the installation of the water service, are to be clearly labeled as to their size, manufacturers and model number.

2. Drawings may be either to scale or not to scale. However, if the drawing is not to scale, all appropriate dimensions must be clearly labeled and shown.

3. The preparing Engineer's stamp and signature must appear in the box on the "Engineer's Report" and on each and every drawing(s) prepared for the backflow submittal.

4. Metered services need a 1 ½ - inch meter or larger required bypass around the meter.

    a. Vertical by-pass should be off-set toward the wall (or away from the meter) to provide a better clear space above the meter, (see meter detail for minimum clearance of vertical by-pass).
    b. Horizontal by-pass must be installed around the meter towards the wall (back side of the meter) so as to not obstruct access to the meter. The by-pass must be a minimum of 2 feet behind the meter.

5. The valves upstream and downstream of the meter and on the by-pass must either be gate or ball valves.

6. The Reduced Pressure Zone (RPZ) backflow device must be of a type and model approved by the New York State Department of Health. The RPZ device must be ordered with valves attached to the RPZ by the manufacturer both upstream and downstream of the device.

7. Meters 3-inch and larger must be tested annually. An opening in the outside wall (door, access panel, etc.) within 25 feet of the meter, large enough to accommodate a 2 ½ -inch fire hose, must be provided.

8. A turbine type meter requires a minimum of three (3) pipe diameters of straight pipe away from any obstructions, (valve, bend, etc.) both upstream and downstream of the meter.

9. A 3 foot wide minimum aisle must be provided between the meter and backflow preventer from any walls or other obstructions (furnace, hot water heater, etc.) to allow for testing, repair and/or replacement.