



DESIGN APPROVAL CRITERIA
(Per Requirements of the N.Y.S.D.O.H. and E.C.W.A.)

Provide four (4) copies of each item listed below.

- 1. Letter of Transmittal**
 - a. Listing all information submitted for the back-flow application.
 - b. Copy of this completed checklist.

- 2. Application (DOH-347)**
 - a. Items 1 thru 12 completed with all information that is applicable to the project.
 - b. Item #5 answered fairly specifically. Information for 2 devices maybe listed if space permits.
 - c. Items 13 & 14 completed per enclosed example.

- 3. Engineer's Report** - The report shall include:
 - a. General use of water in the facility
 - b. Size and descriptions of all fire and domestic water services
 - c. Number of floors within the facility
 - d. Actual or estimated maximum flow demand
 - e. Pressure - existing and after the installation of back-flow preventers
 - f. Description of fire fighting facility - indicate the AWWA manual M-14 class of sprinkler service. (State if back-flow device is required or if done by outside firm.)
 - g. Description of the proposed installation of the back-flow preventer with the locations, drainage, lighting, heating, access to the unit, square footage of the floor level where the back-flow preventer is to be located.
 - h. Description of existing or proposed booster pump system answering the following questions:
 - 1. After the installation of the proposed back-flow preventer(s), will the net positive suction head (NPSH) required for the proper operation of the booster pump system be adequate?
 - 2. After the installation of the back-flow preventer(s) in the suction line to the booster pump system, will the booster pump system operate properly at peak demand to deliver adequate pressure to the highest elevation and/or the most remote fixture unit or any other operation requiring a certain pressure? The NYS Uniform Fire Prevention and Building Code Part 902.4c requires the **minimum** pressure at water outlets at all times to be as follows:
 - Fixture - non flush valve - 8 Psi
 - Fixture - flush valve - 15 Psi
 - 3. Does the booster pump system have a pressure cutoff switch in the suction line? What is the pressure setting of the switch? An existing or proposed cutoff switch must be set at the following settings:
 - For a cutoff switch where a back-flow is located upstream of the booster pump(s) - set at 10 psi
 - For a cutoff switch where a back-flow is located downstream of the booster pump(s) - set at 20 psi
 - i. The need for dual back-flow preventers. Does this facility need a continuous water supply?

- j. The evaluation and location of 100 year flood plain in relation to the facility. A reduced pressure zone (RPZ) back-flow preventer must generally be installed 1' above the 100-year flood plain elevation.
 - k. An inventory of any existing containment devices to include the make, model, size and serial number of the device. Current annual test reports must also be submitted. The degree of hazard for these services must be determined to insure that the device provides the correct protection.
 - l. Enclose a copy of the checklist. Any items left blank, could result in a delay in reviewing the back-flow application.
 - m. A statement that it is the owner's responsibility to keep snow clear of any drain ports or exterior drains for the RPZ device.
 - n. A statement that all RPZ enclosures (i.e. "Hot Box") shall be designed with security measures such as locking doors and panels, flow alarms or flow indicator lights, power indicator lights, outlet ports with rodent screens, etc...
 - o. Designers stamp and signature.
- 4. Site Plan** - (to scale or w/dimensions) of facility containing:
- a. General Location Map (with north arrow)
 - b. Name and address of facility
 - c. Property line
 - d. Buildings
 - e. Size and location of public water mains
 - f. All fire and domestic water services to include items to be installed by ECWA:
 1. Size of Corporation Stop, Tapping Sleeve or Saddle w/Valve.
 2. Size of Service Line within R.O.W.
 3. Size of Curb Stop or Line Valve at R.O.W.
 - g. Meter Pit or Tile Set
 - h. Fire Sprinkler System
 1. Show a riser detail (maybe submitted as a separate sheet and must include: Name & address of the facility, design engineer's/architect's stamp & signature.)
 2. State AWWA M-14 Classification.
 - i. Yard piping, private hydrants and Pumper connection(s)
 - j. Location and size of proposed tap to public waterline and back-flow enclosures. Label distance from R.O.W. back-flow enclosures (not more than 150 LF).
 - k. Lawn Irrigation Systems
 - l. Proposed location of back-flow preventers
 - m. If site is in 100 year flood plain indicate elevation on drawing.
 - n. Designer's stamp and signature (stamp must be by a N.Y.S. Licensed Engineer/Architect.)
- 5. Plumbing Floor Plan** - (to scale or w/dimensions indicated from walls and nearby objects) Plan view or partial floor plan indicating:
- a. Water Services
 - b. Name and address of facility
 - c. Water meter layout
 - d. Proposed back-flow preventer(s)
 - e. Booster pump system(s)
 - f. Floor drain(s)
 - g. All nearby objects (electrical panels, boilers, chillers, storage tanks, fire pumps, sprinkler risers, etc.)

- h. All required clearance dimensions shown or noted
 - i. With device manufacturer's name, model number & size of device shown or noted, in plan view or cross-section.
 - j. Presence of heat & light shown or noted
 - k. Information regarding RPZ enclosure (i.e. "Hot Box")
 - l. Designer's stamp and signature
- 6. Vertical Cross-Section(s)** - Elevation view (to scale or w/dimensions) of the proposed installation with elevations from the floor, ceiling, outside grade and all nearby objects.
- a. All required clearance dimensions shown or noted (including air breaks and air gaps)
 - b. Size & routing of floor drains
 - c. Pipe diameters and material types
 - d. Indicate direction of flow
 - e. Pipe supports (if needed)
 - f. Designer's stamp and signature