ORANGE COUNTY DEPARTMENT OF HEALTH
BACKFLOW PREVENTION DEVICE CHECKLIST

SUBMISSION:

1. Plans must be prepared by a NYS registered Professional Engineer or Architect.
2. The application DOH-347 must be signed by the water supplier or his designated representative, prior to submission. Application must also be signed and sealed by the engineer or architect.
3. Include review fee of $200.00 per device made payable to the Orange County Dept. of Health.
4. The Design Professional will be required to submit scanned copies of the approved documents to the OCHD within 30 days following OCHD approval. Please provide an email address that will be used to submit these documents so that it can be entered in our Sharefile system. Failure to submit these documents may delay our review and/or approval of subsequent projects.

ENGINEER'S REPORT:

1. Describe the degree of hazard and the type of device selected.
2. Describe system conditions including flows and pressures as appropriate.
3. Address sizing of the unit, based on hydraulic requirements.
4. Ensure that devices appear on the list generated by the University of Southern California Foundation for Cross-Connection Control and Hydraulic Research (FCCCHR).
5. Estimate maximum possible discharge from any RPZ drain. Ensure adequate drainage is provided.
6. Appropriate protection for fire systems according to system classification (AWWA M-14).
7. Parallel units should be considered at facilities where water service cannot be interrupted.

PLAN REVIEW:

1. GENERAL:

a. The preferred installation is a separate building as close as possible to the property line, with a floor 6" minimum above grade. Where containment at the property line cannot be achieved or is waived, installation of the device may be done immediately inside the building.

b. Site plans must be provided to demonstrate that containment is achieved and the location of the device is satisfactory.

c. Ideally, no platforms or ladders should be required for access.

d. Provide adequate heat to prevent freezing.

e. Provide adequate lighting to facilitate servicing.

f. Below grade or basement installations are acceptable for DCVA's. RPZ's are allowed below grade only if at least one of the following conditions is met:

   i. Adequate gravity drainage system to accommodate relief valve on RPZ's.

   ii. Level alarms are installed to detect flow from the device.

   iii. Sump pumps are sized to accommodate a relief valve failure and are connected to an auxiliary power supply.

   iv. Floor area and volume below device could handle discharge from a relief valve failure. For 2" and smaller units, 2000 cu.ft. is acceptable. For larger units, the time to submerge the unit based on maximum discharge rate shall not be less than 8 hours.

2. CLEARANCES:

a. All assemblies must be installed with a centerline height of 30-60" above the floor.
b. All RPZ devices must have 18" minimum clearance between bottom of relief valve and floor to prevent submersion and provide access for servicing.
c. A minimum of 12 inches clearance must be provided above and behind the device for servicing.
d. 30 inches minimum clearance shall be provided in front of the device to the nearest wall or obstruction.
e. Devices shall be adequately supported and/or restrained to prevent movement.

3. DRAINAGE:

a. Drainage shall be provided to accommodate discharge during testing or relief valve discharge.
b. For RPZ devices, drainage must be sized to accommodate intermittent discharge and catastrophic failure of the relief valve.
c. Discharge from relief valves must be readily visible. Adequate lighting must be provided.
d. All drainage from RPZ's must be by gravity drains through a properly designed air gap. Sump pumps are not allowed unless they are sized to accommodate maximum discharge and they are connected to emergency power sources. Manufacturer's air gap fittings may not be sized to accommodate catastrophic discharge. Confirm capacity.
e. Discharge piping from any relief valve must terminate at least 1 inch above grade or receiving receptacle.
f. In pit installations, floors pitched to drain, and discharge piping must terminate above grade in an area not subject to flooding. The end of the pipe must be equipped with a rodent screen.

4. INSTALLATION NOTES:

a. Strainers are recommended prior to each backflow device on non-fire fighting lines **ONLY!** No strainer is to be used on a fire line without Insurance Underwriter approval.
b. Assemblies should be specified and installed with manufacturer supplied valves.
c. Water lines should be thoroughly flushed before installation of device to prevent debris fouling the device check valves.
d. Devices must be mounted horizontally unless approved for vertical installation.
e. Assemblies should not be installed in areas containing corrosive or toxic gases which could render the device inoperable.
f. Due to inherent design of RPZ assemblies, fluctuating supply pressure on a low flow condition may cause nuisance dripping. Installation of a soft seated check valve ahead of the RPZ will often hold pressure constant during periods of low flow.
g. Where the distance between the water meter and device is greater than 10 feet, all exposed piping should be marked "Feed line to Backflow Preventer – Do Not Tap" at 5 foot intervals.