



STANDARD DETAILS FOR ABOVE-GROUND ENCLOSURES

A COMPREHENSIVE GUIDE



SAFE-T-COVER®
BY HYDROCOWL

ENCLOSURES DESIGNED FOR THE WORLD'S WATER SYSTEMS™

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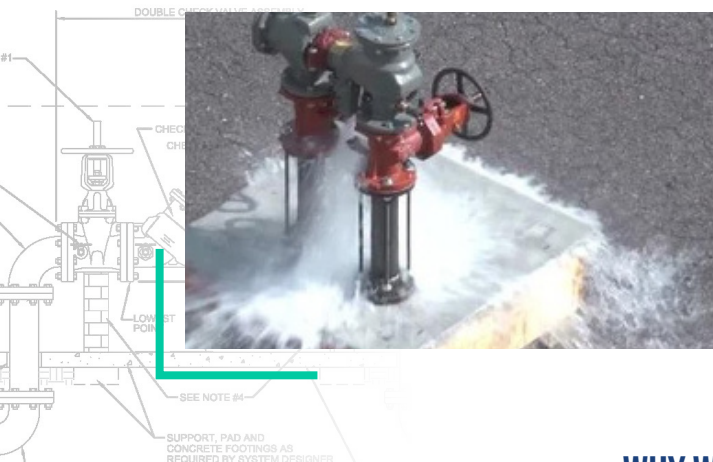
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Most municipalities allow — and many prefer — non-residential backflow assemblies to be installed outdoors, where they’re easier to access and maintain. Since annual testing is required, outdoor installations let water system employees complete far more inspections each day compared to units inside buildings, which require building access.

Legacy installations — whether inside buildings or underground vaults — pose serious safety hazards for utility workers and elevate the risk of costly flooding. Even small RPZ backflow assemblies can discharge 200–300 gallons per minute if they fail.



Water systems and city staff are consumed with reviews and approving project submittals. If details are vague, water system staff may review submittals on the same job three times before the contractor and engineer figure out what the water system wants.

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SECTION 2:

BENEFITS OF OUTSIDE AND ABOVE-GROUND STANDARD DETAILS

For decades, utility vaults have been the go-to design for backflow assembly installations, often included in standard details used by water jurisdictions. However, our discussions with water jurisdictions across the country reveal that many overlook the advantages of placing the backflow assembly in an above-ground enclosure.

— 5 KEY BENEFITS FOR WATER JURISDICTIONS, DESIGN ENGINEERS & CUSTOMERS —

1. AVOID BELOW GROUND VAULT HAZARDS

Water jurisdictions are responsible for the annual testing of backflow assemblies. Each time a tester enters a vault, they're entering a confined space which poses significant liability risks.

Entering a vault is hazardous: slippery surfaces, tight spaces, and poor air quality increase the risk of injury. Falls onto gate valve stems and the challenge of rescuing an injured coworker make the danger even greater. More than 1,000 workers in the U.S. died from occupational injuries involving a confined space from 2011-2018, according to the U.S. Bureau of Labor Statistics.

Above-ground enclosures offer a safer alternative by eliminating confined space risks. Backflow testers consistently express a preference for above-ground installations. By choosing above-ground enclosures, water jurisdictions protect their staff and reduce liability.

2. ELIMINATE CROSS-CONNECTION RISK

Water jurisdictions develop and enforce cross-connection control programs that safeguard public drinking water. To prevent contamination from re-entering the distribution system, many require backflow assemblies on domestic water lines, fire lines, and irrigation services.

However, when these assemblies are installed in below-grade vaults, the risk of contamination increases significantly. Vaults often collect runoff water — and with it, pollutants — that can submerge the backflow assembly and compromise its integrity.

Submerged assemblies pose a direct cross-connection threat, especially when test cocks are underwater. This issue is widespread; many testers report encountering water in vaults during routine checks, sometimes enough to fully submerge the device. After Hurricane Harvey, flooded vaults in Houston underscored the danger.

For nearly two decades, the [USC Foundation for Cross-Connection Control and Hydraulic Research](#) has urged water jurisdictions to avoid below-grade installations, citing the contamination risk in multiple issues of Cross Talk. Despite these warnings, some jurisdictions still allow vault installations, putting water quality at risk. It's time to adopt above-ground installation as the standard to better protect public health.

3. PREVENT COSTLY STRUCTURAL WATER DAMAGE

Installing an RPZ assembly indoors poses major flooding risks. A malfunction can release large volumes of water through the relief valve, causing costly damage and operational disruptions. Most engineers we've spoken with are unaware of just how severe this flood potential can be. By specifying outdoor, above-ground enclosures, they can eliminate this risk entirely.

Over time, insurance underwriters are likely to take note. As awareness grows, expect to see higher premiums — or even claims against responsible parties — when indoor RPZ installations result in water damage. Specifying above-ground placement not only protects property but also reduces long-term liability.



4. IMPROVE TESTING EFFICIENCY & REDUCE COSTS

Annual testing of backflow assemblies is essential for protecting drinking water, and the testing environment plays a critical role. Testing a device in a dry, above-ground enclosure is faster, easier, and more reliable than dealing with a submerged unit in a flooded vault.

Testers report that vault conditions slow down the process, drive up labor costs, and delay results. Above-ground enclosures simplify access, improve accuracy, and reduce costs for water jurisdictions.

5. PROTECT EQUIPMENT AND EXTEND ITS LIFESPAN

Backflow assemblies, often worth thousands, degrade quickly when installed in water-filled vaults. Prolonged moisture exposure damages coatings, couplings, and gaskets, leading to early failure.

Installing assemblies above ground in dry, ASSE 1060-certified enclosures protects components, extends lifespan and reduces costly repairs — saving money for the water jurisdiction and customer.



SECTION 3:

WHAT'S IN A COMPLETE SET OF ABOVE-GROUND ENCLOSURE DETAILS?

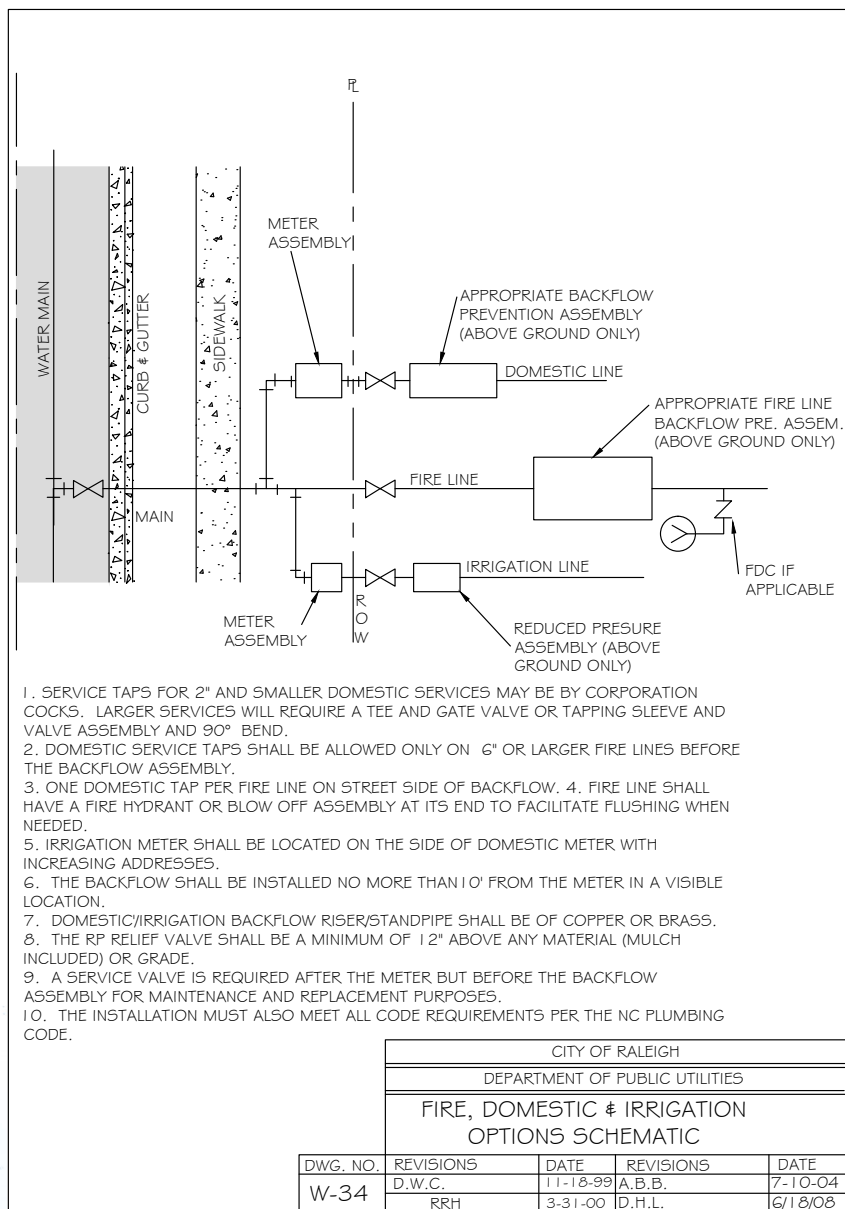
A comprehensive set of standard details for above-ground backflow assembly installation with an insulated enclosure should include:

1. LOCATION REQUIREMENTS FOR ABOVE-GROUND INSTALLATION

This detail specifies the location of the enclosure with respect to the water meter, control valves and easement. In some jurisdictions, this information is provided in a separate detail, while in others it's included in all of the above-ground details.

Important considerations:

- The maximum allowable distance from the curb or right-of-way to the meter. This is often 10 to 20 feet.
- The water tap, meter, backflow and enclosure should not obstruct the view of the building or block automotive sight lines.

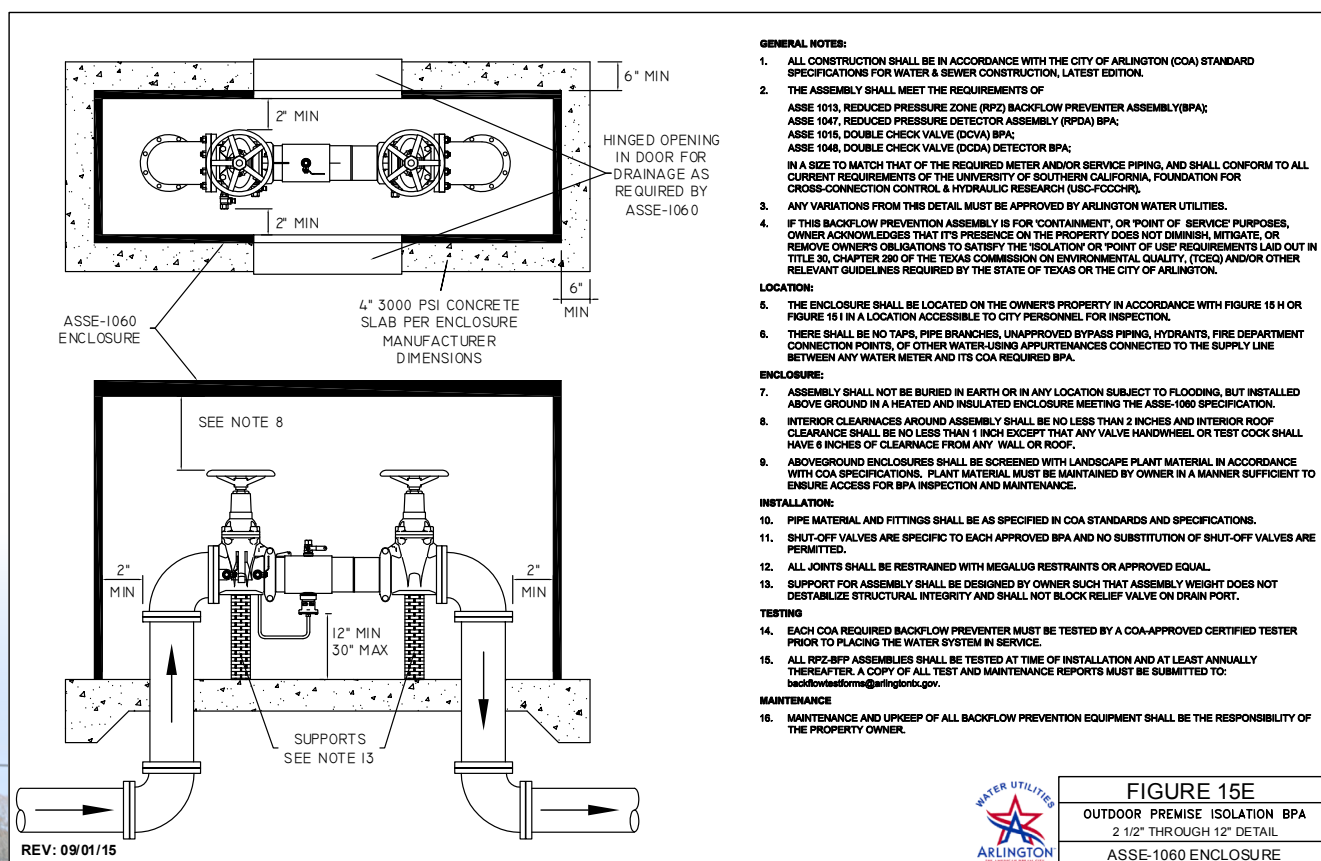


2. TYPICAL INSTALLATION DETAILS

Proper standard details for typical installations give the engineer the necessary information for the design.

An outdoor detail should be included for each of the following installations:

- Outdoor Premise Isolation for 2-1/2" through 12" domestic water. RPZ only on domestic water.
- Outdoor Premise Isolation for 2-1/2" through 12" fire sprinkler system. RPZ recommended, Double Check acceptable.
- Outdoor Premise Isolation for 3/4" through 2" irrigation or small domestic service. RPZ only.
- Outdoor Premise Isolation for compact installations. N pattern backflows provide much smaller footprints and are perfect for urban applications.



SECTION 4:

ASSE 1060: WHAT IT IS AND WHY IT MATTERS

Introduced in 1996 by the American Society of Sanitary Engineering, ASSE 1060 sets performance and safety standards for enclosures protecting outdoor backflow preventers to ensure protection from freezing, tampering and flooding. Before this standard, many enclosures had poor insulation, unsafe heating or were fiberglass boxes placed over valves.

To earn ASSE 1060 certification, enclosure manufacturers must apply and pass testing at an ASSE-approved lab. Certified enclosures like Safe-T-Cover's receive an official rating, confirming they meet strict standards for safety and performance. Many local codes already require ASSE 1060 compliance, and all water jurisdictions should clearly note this requirement in their standard documentation.



ASSE 1060 KEY PERFORMANCE REQUIREMENTS*

FEATURE	REQUIREMENT
Class I	Heated; maintains $\geq 40^{\circ}\text{F}$ at -30°F ; R-value ≥ 8.0
Class II	Freeze retardant enclosure for climates where temps rarely stay below 33°F
Class III	No freeze protection; no R-value
Structural Load	Must withstand 100 psf vertical load
Drainage	Prevents submersion during RPZ discharge. Drainage capability by diameter: $\frac{1}{4}''$ - $\frac{1}{2}''$ 27 GPM $\frac{3}{4}''$ -1" 45 GPM 1 $\frac{1}{4}''$ -2" 155 GPM 2 $\frac{1}{2}''$ -3" 260 GPM 4"+ 710 GPM
Access & Security	Hinged panels for testing; panels ≤ 70 lbs; lockable access
Materials	Exterior: Aluminum, Galvannealed steel, Prepainted galvanized steel, Stainless steel, Natural stone, Fiberglass-reinforced plastic & gelcoat (25% glass fiber by weight with 18–20 mil gelcoat on outer surface) Interior: Cedar, Redwood, Closed cell foam insulation (1% maximum water absorption), Glass fiber-reinforced facers, Approved external materials

*See our [ASSE 1060 page](#) for a complete list of all specifications.

SECTION 5: ESTABLISHING CLEARANCES INSIDE AND AROUND AN ENCLOSURE

CLEARANCES INSIDE AN ENCLOSURE

Proper clearance inside enclosures is essential to ensure that routine service, maintenance and testing of the backflow assembly is performed effectively.

The size of the enclosure, both in width and length, is influenced by the clearance between the backflow assembly and the enclosure walls. The enclosure should not be too small because insufficient clearance will complicate service, maintenance and testing. Conversely, an unnecessarily large enclosure increases costs without offering any benefits.

Established clearance guidelines help designers, contractors, distributors and manufacturers streamline their work, ensuring that installations are completed efficiently and meet approval requirements.

KEY CONSIDERATIONS FOR CLEARANCE REQUIREMENTS:

CLEARANCES FOR ABOVE-GROUND ENCLOSURES VS. BELOW-GRADE VAULTS

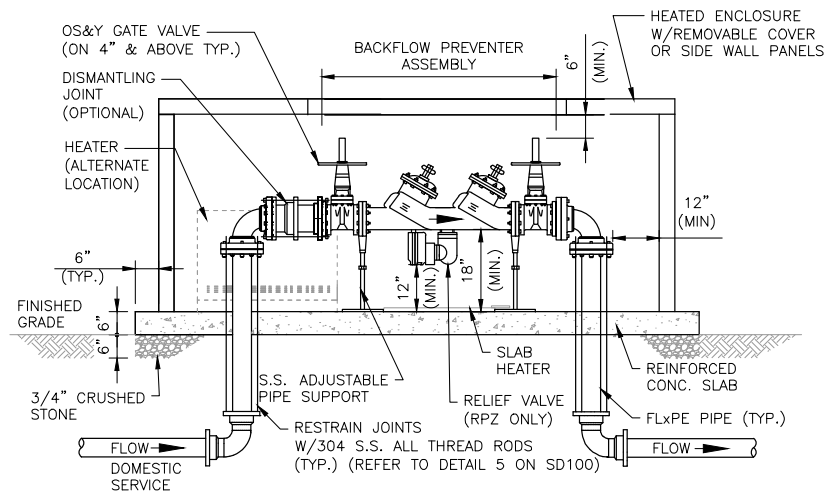
You don't need to design an above-ground enclosure as large as a vault. Vaults require extra space to allow personnel to enter and move around, but enclosures don't. Once the access panel is removed, technicians can reach the backflow assembly directly, making a more compact design both practical and efficient.



CLEARANCE BELOW AN RPZ BACKFLOW RELIEF VALVE

The clearance beneath an RPZ backflow assembly relief valve and the concrete slab is generally a minimum of 12 inches.

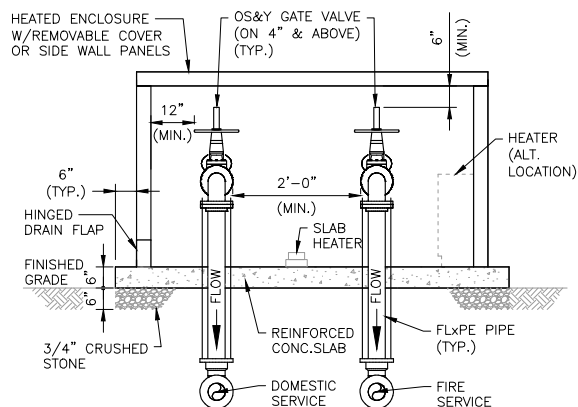
This clearance is essential to prevent the relief valve from being submerged, ensuring that potentially contaminated water is not introduced into the water distribution system.



SECTION A-A

CLEARANCE BETWEEN BACKFLOW ASSEMBLY AND ENCLOSURE WALLS

Typical clearance between the backflow assembly and the enclosure walls ranges from 6 to 12 inches. This space is required to allow for the connection of test equipment to the test cocks.



SECTION C-C

CLEARANCE BETWEEN MULTIPLE BACKFLOW ASSEMBLIES

When the enclosure contains more than one backflow assembly, such as one for domestic water and another for fire protection, a clearance of 12 to 24 inches between the centerlines of the piping runs is typically required. This ensures sufficient space for service and maintenance activities.

CLEARANCE BETWEEN GATE VALVE AND ENCLOSURE ROOF

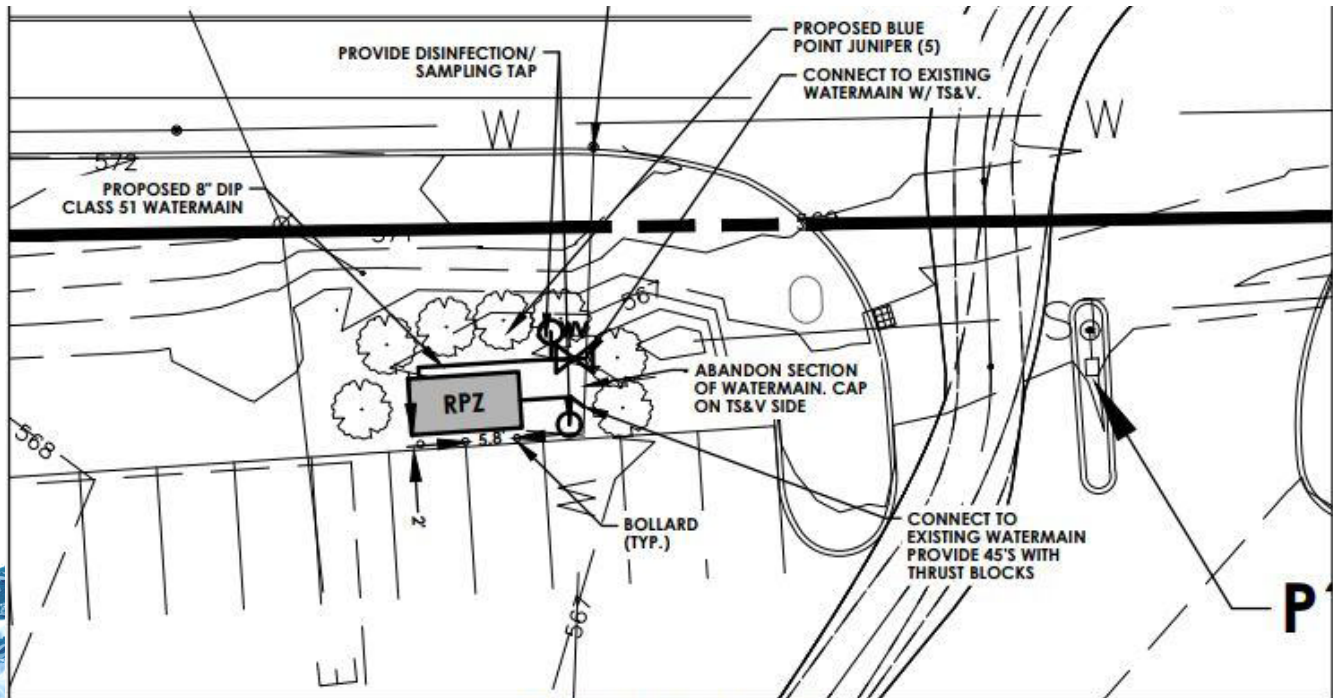
A typical clearance of 6 inches is required between the gate valve and the roof of the enclosure, regardless of whether the gate valve is OS&Y (Outside Stem and Yoke) or NRS (Non-Rising Stem). This clearance is essential to allow the use of a wrench to operate the valve's handwheel.



CLEARANCES OUTSIDE AN ENCLOSURE

Adequate space around the enclosure is essential for testing, maintenance and general accessibility. A minimum of two feet of clearance around the enclosure is recommended to ensure technicians have unimpeded access to the unit. Landscaping, fencing and hardscape elements can obstruct access, so these should be kept clear of the enclosure.

It's important to include a note on each design detail stating: **"To ensure proper access and maintenance of backflow assemblies, a minimum of two feet of clear, level space adjacent to the enclosure shall be kept free of landscaping and obstructions."**



SECTION 6:

AESTHETIC CONCERNS AND CONSIDERATIONS

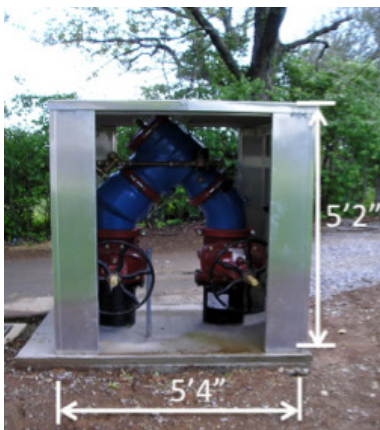
Backflow assembly enclosures are designed to protect water systems; they're made to function. But their impact on aesthetics is often a concern for architects and building owners alike. While the common-sense solution for backflow installation is an outdoor, above-ground enclosure, no one wants a backflow enclosure open in a conspicuous location, and the challenge of making an enclosure visually appealing is a common roadblock. After all, a big aluminum box at the front of a building is also far from an architectural ideal.

Even having established these points, just as electrical transformers and garbage dumpsters are made discrete using savvy design techniques, the same can be done for backflow enclosures. With strategy and creativity, enclosures can blend into the environment and become nearly invisible. As we've seen in some cases over the years, they could even become design accents.

DESIGN CONSIDERATIONS FOR DISGUIISING BACKFLOW PREVENTER ENCLOSURES

1. LOCATION, LOCATION, LOCATION

It's common for civil engineers to place a water tap as close as possible to a property's driveway. With an enclosure, however, it's wise to consider aesthetic impact from the start. Instead of positioning the enclosure directly in front of the building, think about visibility. For optimal results, place the backflow assembly closer to a zoning setback, which will often take it out of public view.



2. SMALLER FOOTPRINT

Older backflow preventers were bulky and cumbersome, but newer N-pattern designs are more compact. These smaller assemblies reduce the overall footprint of the backflow preventer and the enclosure required to protect it.

For example, a six-inch N-pattern assembly has a lay length 25% shorter than a traditional straight-line model, allowing the enclosure to also be 25% shorter. This lowers costs, minimizes visual impact and provides more flexible placement with less required space. Specifying an N-pattern assembly helps address both functional and aesthetic considerations.

Placing multiple backflow preventers in a single enclosure can further reduce the total footprint, streamlining the design and improving site efficiency.

3. LANDSCAPING: A SIMPLE SOLUTION

Landscaping is one of the easiest and most effective ways to obscure a backflow preventer enclosure. Whether it's done during or after installation, strategic landscaping blends the enclosure into its surroundings.

It's important to note that landscaping should also avoid obstructing access to the enclosure. A good rule of thumb is to provide three feet of clearance between the enclosure and any landscaping.

Choose low-maintenance plants that provide sufficient coverage but won't impede necessary access for maintenance or testing. Surprisingly, many new construction projects overlook landscaping around backflow enclosures, leaving them exposed and unattractive. With some thoughtful upfront planning, landscaping can be integrated into the design phase to seamlessly complement and camouflage the enclosure.



4. COLOR: BLENDING IN

Many designers are unaware that backflow enclosures are available in various colors. On many commercial projects, electrical transformers are green, blending them into the landscape. Similarly, enclosures can be customized to match just about any surrounding environment. Green and tan colors help blend the aluminum enclosures into natural or urban environments, whether in a wooded area or a desert landscape.

Some jurisdictions, local statutes or private commercial or residential codes require an enclosure to be a specific color. The coating used on Safe-T-Cover enclosures is the same as the metal roofing seen all over the country. Durable and resistant to chipping, these coated panels help ensure that the enclosure retains aesthetic appeal over time.

4. WRAPS: A CREATIVE OPTION

Perhaps the most innovative way to disguise backflow preventers is with vinyl wrap graphics. Similar to the wraps seen on service cars and trucks, these wraps can turn a plain aluminum enclosure into a visual asset. Vinyl wraps can be designed to match the surrounding architecture, landscaping or used as bonus branding space for signage or advertising.

Whether you want the enclosure to blend in or stand out in a unique way, we can help you with a solution that makes sense for you.



FORM MEETS FUNCTION: ELEVATING BACKFLOW ENCLOSURE DESIGN

While the aesthetics of backflow enclosures may seem like a secondary consideration, they are instrumental in maintaining a property's visual appeal. More to the point: you may not know if aesthetics were taken into consideration with thoughtful enclosure location, landscaping, color choice or graphic wraps. On the other hand, you will know if these factors weren't thought through.

By carefully selecting the location, choosing smaller backflow preventer models, incorporating landscaping, applying thoughtful color schemes and even choosing vinyl wraps, you can ensure that these enclosures are both functional and aesthetically pleasing – even fashionable! For more information on aluminum enclosure aesthetics and design choices, [review our aesthetics guide](#).

SECTION 7: METER LOCATION

Install the water meter and control valves in the same enclosure as the backflow preventer to save time and money. Many water jurisdictions are making the switch for more cost-effective installation, maintenance, service and repair.



BENEFITS OF MOVING THE METER INSIDE THE ENCLOSURE

- ✓ **It's safer for employees providing service, maintenance and testing** compared to a below-grade vault.
- ✓ **It's easier to work on** a meter above grade in an enclosure compared to working in a vault. Most enclosures are made with removable roof panels so that the worker can conveniently remove a roof panel and then lift the meter from the enclosure.



- ✓ **The time required to perform maintenance and testing is shorter** because the meter is not submerged in water like in below-grade vaults.

- ✓ **The meter components are likely to last longer** when installed in the enclosure compared to a vault that could stand full of water for extended periods of time.



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DESIGNER/ENGINEER NOTES:

- PRIOR TO SELECTION OF METER/BACKFLOW ASSEMBLY DETAIL, ENGINEER TO VERIFY EXISTING METER AND BACKFLOW CAPACITY, FIRE FLOW AND EXISTING PRESSURE AT THE ASSEMBLY INSTALLATION LOCATION.
- BASED ON RESEARCH RESULTS, IF MORE THAN ONE STANDARD METER/BACKFLOW ASSEMBLY OR MANUFACTURERS MAY BE UTILIZED THEN ALL APPLICABLE DETAILS ARE TO BE SHOWN ON THE DRAWINGS FOR CONTRACTOR SELECTION.
- ALL ASSEMBLY PIPING, CONNECTIONS AND EASEMENT SIZES TO ACCOMMODATE THE LARGEST LAYOUT OPTION REGARDLESS OF CONTRACTOR SELECTION TO AVOID CONFLICTS DURING CONSTRUCTION.

REMOVE THESE NOTES WHEN DETAIL USED

INSTALLATION NOTES:

- CONTRACTOR SHALL BE RESPONSIBLE FOR REPLACING ANY AND ALL DAMAGED OR DISTURBED EXISTING LANDSCAPING AND IRRIGATION FACILITIES, IN AND ADJACENT TO PROJECT SITE, DURING CONSTRUCTION OPERATIONS.
- CONTRACTOR TO HAVE NEVADA LICENSED PROFESSIONAL LAND SURVEYOR LOCATE LVWWD EASEMENT PRIOR TO CONSTRUCTION.
- CONTRACTOR TO LOCATE ONSITE PIPING AND CONFIRM DIAMETER, PIPE DEPTH, AND PIPE MATERIAL PRIOR TO ORDERING MATERIAL AND INSTALLATION.
- CONTRACTOR TO VERIFY DIMENSIONS OF CABINET BASED ON INSTALLED DIMENSIONS OF PIPE AND FITTINGS PRIOR TO FABRICATION.
- CONTRACTOR TO INSTALL VALVE LOCK DEVICE WITH DISTRICT PROVIDED LOCK (AS REQUIRED).

MATERIAL LIST

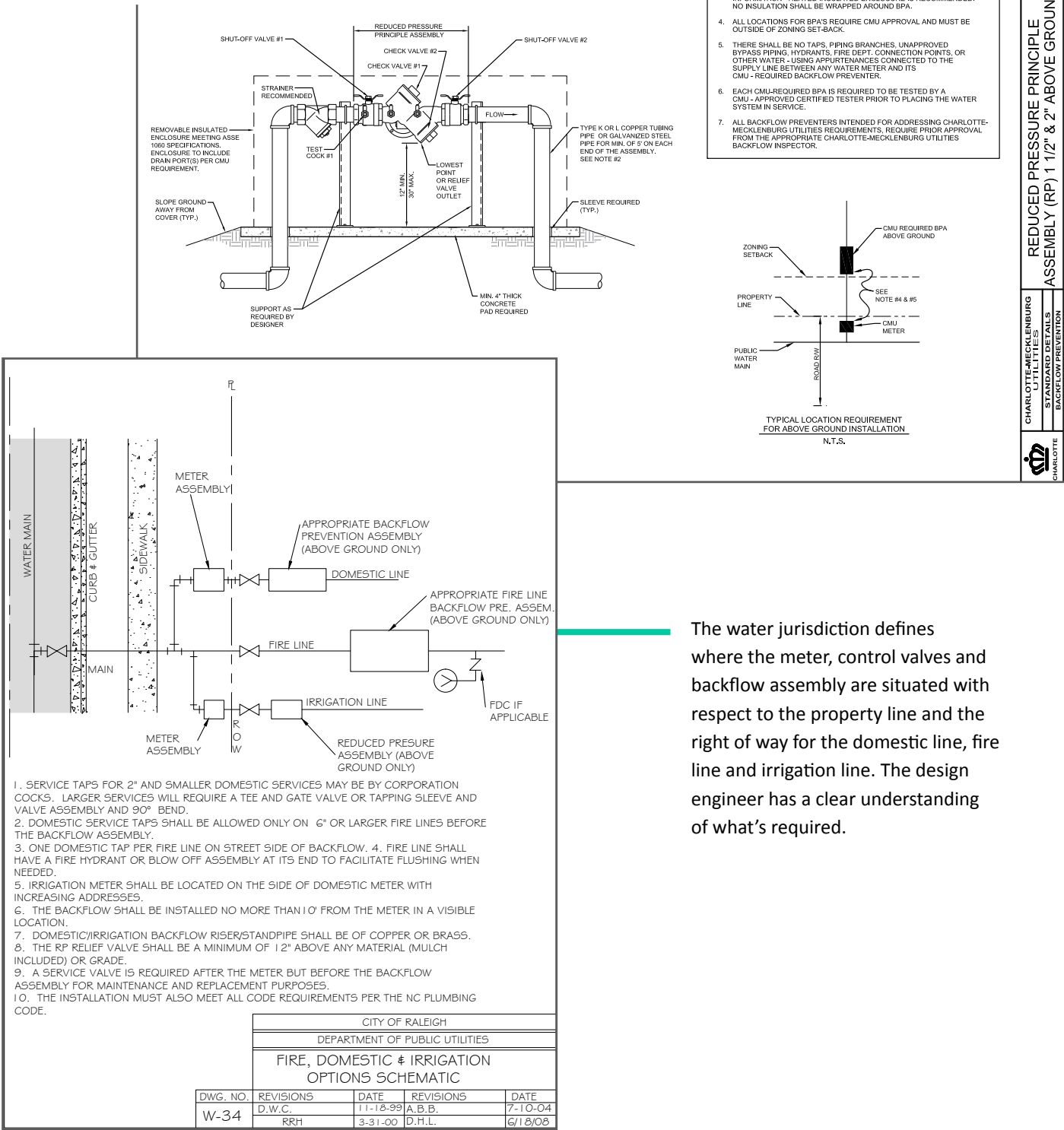
① 6" METER MASTER OCTAVE WATER METER (LVWWD FURNISHED)	⑫ CONCRETE THRUST/ANCHOR BLOCK
② 6" RESTRAINED DISMANTLING JOINT	⑬ 8" x 6" FLO REDUCER
③ 6" FLO GATE VALVE WITH HANDWHEEL	⑭ 8" AMES COLT 400 REDUCED PRESSURE PRINCIPLE (RPPA) BACKFLOW ASSEMBLY
④ 6" FLO 90° BEND	⑮ VALVE BOX AND COLLAR (NOTE 5)
⑤ 6" FLO x FLO DUCTILE IRON PIPE WITH 2" NPT OUTLET	⑯ ADJUSTABLE PIPE SUPPORT
⑥ 2" CORP STOP	⑰ APPROVED ENCLOSURE WITH 4 DOORS (CONTRACTOR TO SUBMIT SHOP DRAWINGS)
⑦ 6" ADAPTER FLANGE (RESTRAINED)	⑱ CONCRETE PAD WITH WELDED WIRE FABRIC, 4 x 4 - W1.4 x W1.4
⑧ 2" SERVICE SADDLE AND 2" CORP STOP, ROTATED 15° (BYPASS NOT REQUIRED ON LOOPED SERVICES)	⑲ 8" FLO 90° BEND
⑨ 6" FLO x PE DUCTILE IRON PIPE (CUT TO FIT)	⑳ 6" ADAPTER FLANGE (RESTRAINED)
⑩ 1/2" EXPANSION JOINT MATERIAL	㉑ 8" FLO x PE DUCTILE IRON PIPE (CUT TO FIT)
⑪ 8" FLO GATE VALVE	

6" OCTAVE WITH 8" COLT 400 REDUCED PRESSURE PRINCIPLE ASSEMBLY

SCALE: 1/2" = 1'-0" (USE NRS GATE VALVES ONLY) BF2-5 081219

SECTION 8:
EXAMPLES OF STANDARD DETAILS

This standard detail includes location requirements for above ground installation as well as enclosure details. Combining this information on the same drawing is more efficient for design engineers.

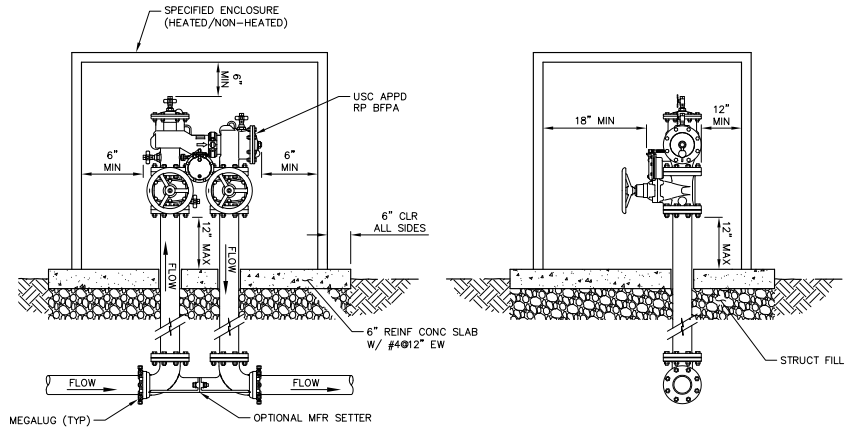


The water jurisdiction defines where the meter, control valves and backflow assembly are situated with respect to the property line and the right of way for the domestic line, fire line and irrigation line. The design engineer has a clear understanding of what's required.

The water jurisdiction has established various clearance requirements around the backflow assembly, as well as clearance from the concrete slab to the backflow assembly flange.

Notice this standard detail references the n-type backflow. This type of backflow assembly takes up a much smaller footprint and reduces costs on the project.

DEVELOPER		DATE	
OUTSIDE SETTING FOR 3" & LARGER		February 2013	
REDUCED PRESSURE PRINCIPLE ASSEMBLY		K ROSS	
N-TYPE, ABOVE GROUND		Dr. 127 No. 35	
Scale: NONE		SHEET 61	
Drawn: C.A.M.		Approved: J.A.B.	



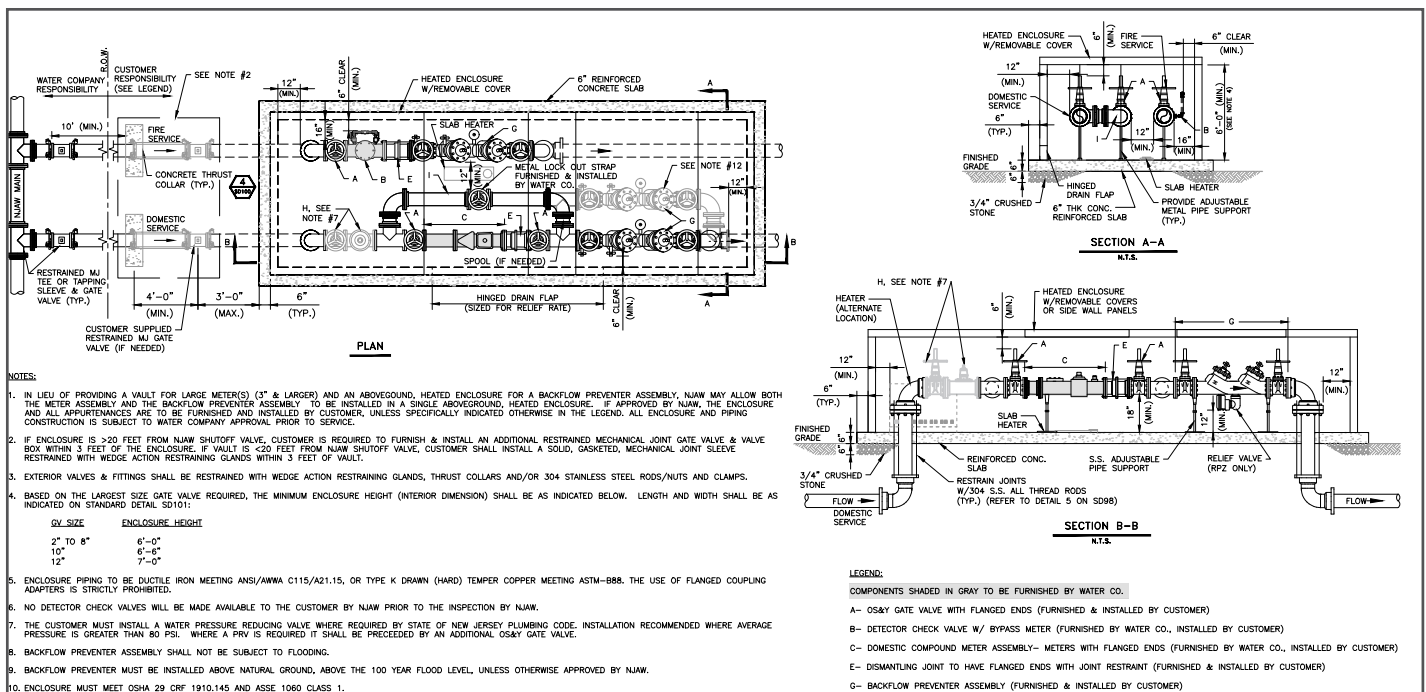
GENERAL NOTES:

1. CONCRETE PAD PENETRATIONS SHALL BE 1" LARGER THAN PIPE DIAMETER.
2. REFER TO LOCAL CODES & MANUFACTURER REQUIREMENTS FOR INSTALLATION INSTRUCTIONS.
3. HEATED ENCLOSURE SHALL HAVE SEPARATE APPROVED ELECTRICAL SERVICE & SHALL BE SIZED TO ALLOW ADEQUATE ROOM FOR TESTING & MAINTENANCE.
4. PIPING FOR 3" & LARGER SHALL BE DUCTILE IRON FROM THE METER TO THE BACKFLOW PREVENTION ASSEMBLY & DOWNSTREAM FROM THE BACKFLOW PREVENTION ASSEMBLY TO THE MANUFACTURER'S SETTER OR 90° BEND.

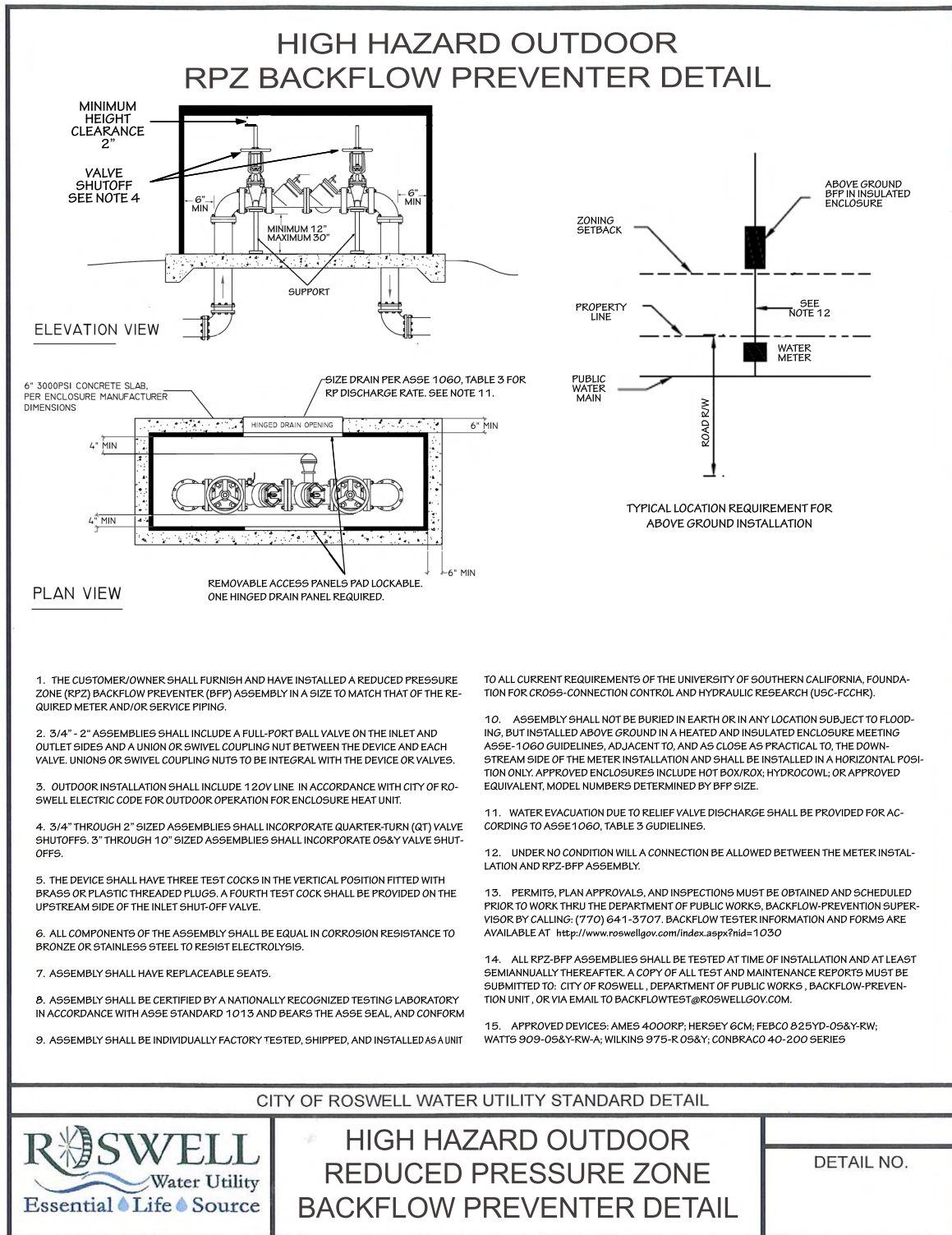
RECYCLED NOTES:

1. PIPING SHALL HAVE AN INTEGRAL PANTONE 2577U COLOR & BE EMBOSSED OR INTEGRALLY STAMPED "CAUTION: RECYCLED WATER-DO NOT DRINK."
2. THE BACKFLOW ASSEMBLY OPERATING VALVE HANDLES SHALL BE PAINTED PANTONE 2577U IN COLOR & TAGGED WITH AN INERT PLASTIC LABEL WITH BLACK PRINTING ON A WHITE FIELD READING "CAUTION: RECYCLED WATER-DO NOT DRINK."
3. ENCLOSURES SHALL BE IDENTIFIED WITH SIGNAGE "RECYCLED WATER USED FOR IRRIGATION-DO NOT DRINK" ON THE ACCESS DOOR.

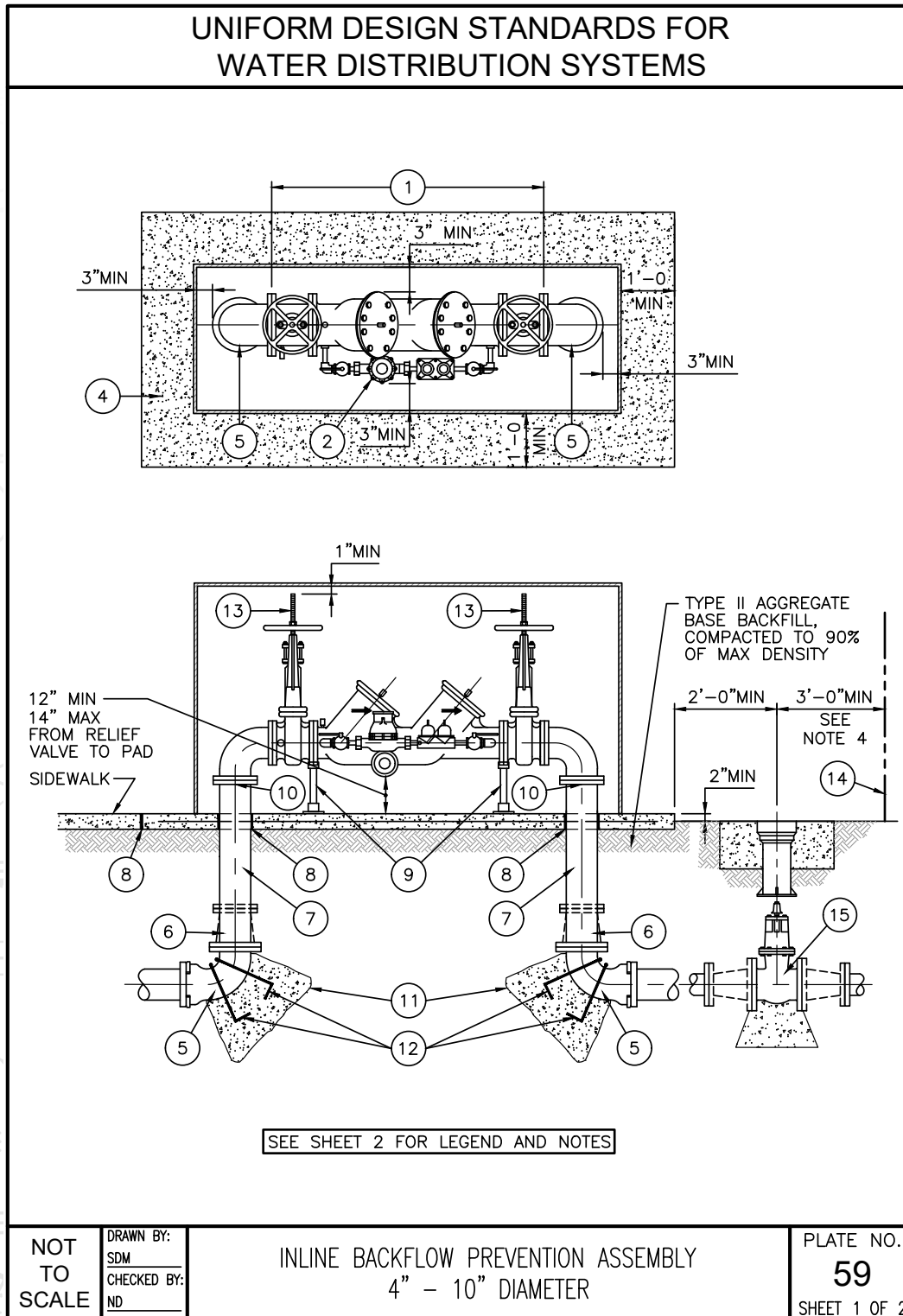
The clearances around the enclosure are 12 inches with 6 inch clearance above the OS&Y gate valve. A hinged drain flap is an ASSE 1060 requirement. The note also indicates that the enclosure must meet ASSE Class 1. With this detail, a designer can confidently design the piping layout and properly size the heated enclosure.

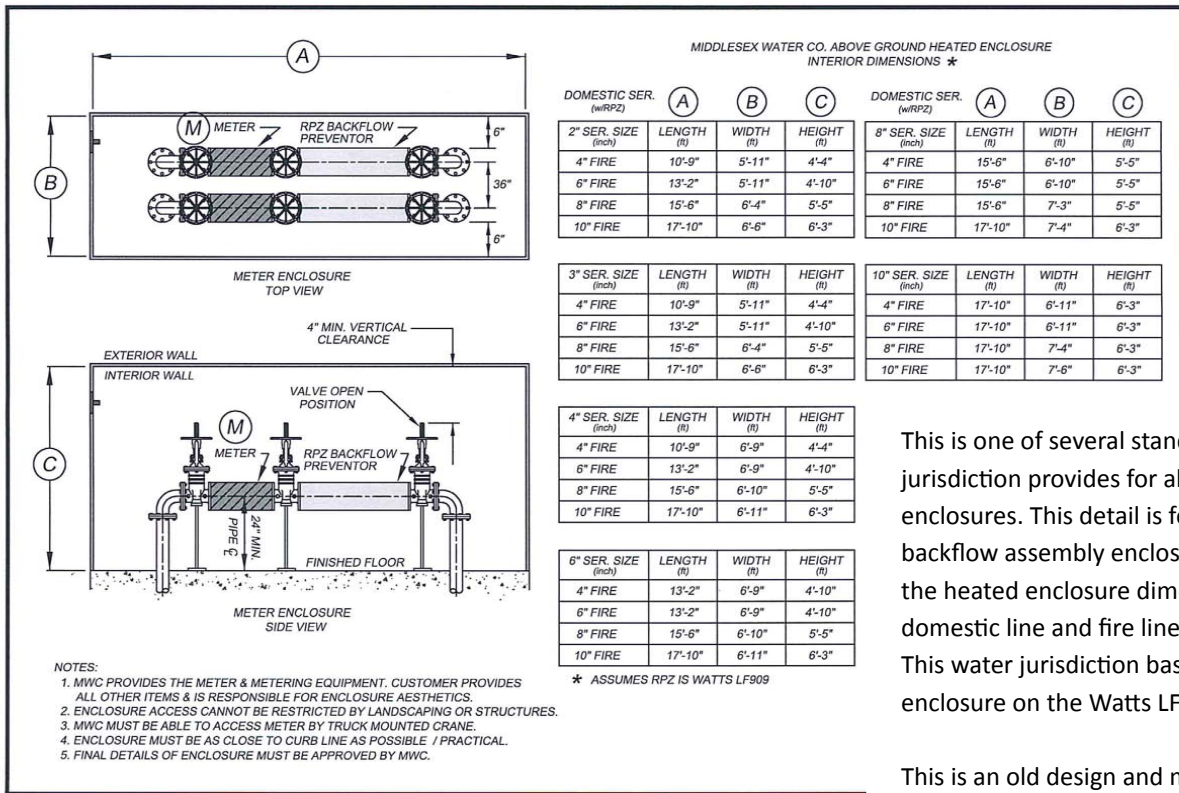


This standard detail shows clearances around the backflow assembly and from the concrete pad to the relief valve. The clearances are small which reduces the required enclosure size. The piping layout is highly detailed. This and other standard details for this water jurisdiction can be found online.



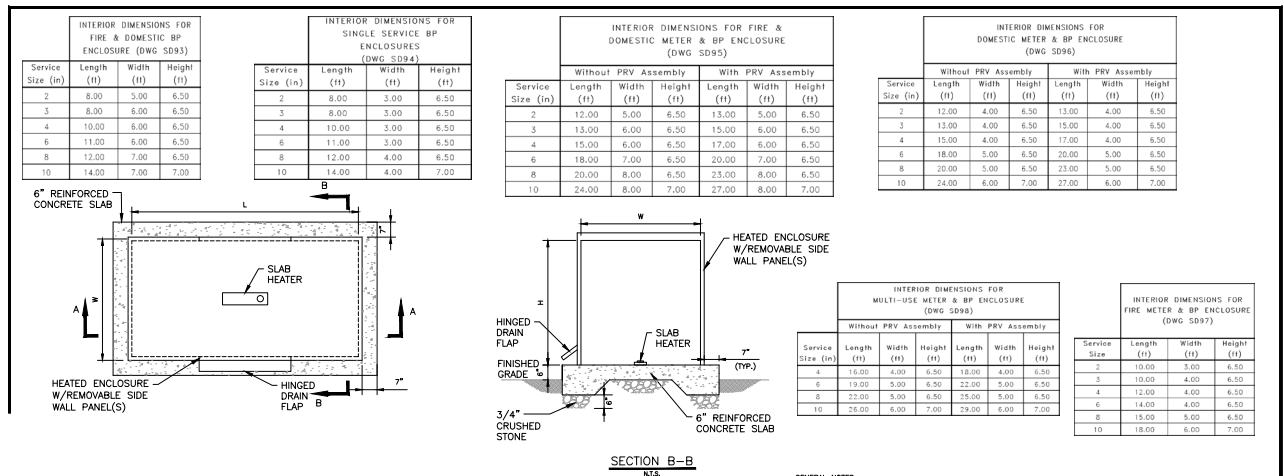
This standard detail shows clearances around the backflow assembly and from the concrete pad to the relief valve. The clearances are small which reduces the required enclosure size. The piping layout is highly detailed. This and other standard details for this water jurisdiction can be found online. This system was adopted in Nevada by the Las Vegas Valley Water District and cities of Henderson, North Las Vegas and Boulder City.





This is one of several standard details this water jurisdiction provides for above-ground heated enclosures. This detail is for a double meter and backflow assembly enclosure. The table provides the heated enclosure dimensions for the different domestic line and fire line size combinations. This water jurisdiction based the length of the enclosure on the Watts LF909 backflow assembly.

This is an old design and much longer than the newer models. The newer model backflows cost less and the heated enclosure length can be shorter.



In this drawing, several tables establish the heated enclosure dimensions based on how the domestic line and fire line are configured, and whether the meter and control valves are included on the enclosure.

The general notes provide detailed requirements for the heated enclosure and the concrete slab.

GENERAL NOTES:

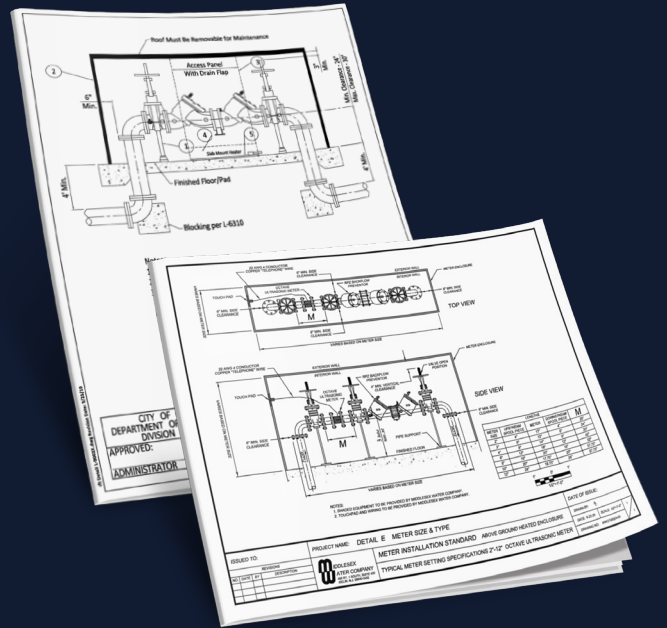
1. THE ENCLOSURE DIMENSIONS NOTED ABOVE ARE APPROXIMATE MINIMUM REQUIREMENTS BASED ON THE EQUIPMENT AND LAYOUTS SHOWN ON DRAWINGS SD93 THROUGH SD98.
2. THE DESIGN ENGINEER SHALL MAKE HIS OWN DETERMINATION TO ENSURE THAT THE REQUIRED CLEARANCES NOTED ON THE ENCLOSURE DRAWINGS ARE ACHIEVED BASED ON THE ACTUAL SERVICE SIZE(S), EQUIPMENT AND FITTINGS PROPOSED.
3. THE TABLES PROVIDED ABOVE ARE BASED ON THE LARGEST SERVICE SIZE ENTERING THE ENCLOSURE.
4. ENCLOSURE MUST MEET OSHA 29 CFR 1910.145 AND ASSE 1060 CLASS 1.
5. INSULATED HEATED ENCLOSURE CHARACTERISTICS:
A. ENCLOSURE—SD93-SD98 MARINE GRADE ALUMINUM (3003/18 GAUGE), MILL FINISH, OR 1/8" POLYESTER RESIN REINFORCED WITH FIBERGLASS STRAND.
B. INSULATION—1-1/2" (96) POLYISOCYANURATE FOAM.
C. HEATING SYSTEM—SLAB OR HEAT TRAC THERMOSTATICALLY CONTROLLED ELECTRIC HEATER MEETING SECTION 49 OF UL-2021 FOR DAMP OR WET LOCATIONS, WITH GFI RECEPTACLE, U.L. 943 NEHA OR MOUNTED 8" (MIN) ABOVE SLAB.
D. HEATER(S) SHALL BE PROVIDED AS NECESSARY TO MAINTAIN TEMPERATURE ABOVE 40° F AT ALL TIMES.
6. ENCLOSURE MUST BE A SUFFICIENT SIZE TO HOUSE ALL REQUIRED PIPING. ENCLOSURE SHALL BE LOCKABLE. ACCESS PANELS SHALL BE ABOVE THE CENTERLINE OF THE ASSEMBLY OR IN SIDE WALLS IN SUFFICIENT NUMBER AND LOCATION TO FACILITATE MAINTENANCE & REPAIRS ON ALL COMPONENTS. ENCLOSURE TO HAVE HINGED ONE-WAY DRAIN FLAP.
7. ENCLOSURE DIMENSIONS ARE MEASURED TO THE INSIDE WALLS.

AMERICAN WATER ENGINEERING 2000 CHURCH RD. MT. LAUREL, NJ 08054 (609) 261-1000 WWW.AWENGIN.COM		STANDARD DETAIL HEATED ENCLOSURE	
DRAWN BY PROJECT NO. DATE 08-24-18	CHECKED BY PROJECT NO. DATE 08-24-18	NEW JERSEY AMERICAN WATER STANDARDS PROJECT	SEE THICKNESS ONLY SCALE 1/8"=1'-0" 0201-0601-SD101

SECTION 9: DOWNLOAD THE STANDARD DETAILS DRAWINGS

We hope this guide helped your water jurisdiction create a set of standard details. To put them into action, we've developed five different templates that can be modified based on your project's needs.

- ✓ ASSE 1060 Compliant
- ✓ Field-Tested Across Multiple States
- ✓ Designer-Friendly and Easily Editable in AutoCAD
- ✓ Include Sizing and Drainage Considerations



DOWNLOAD THE DRAWINGS NOW



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