

A failed inspection rarely starts with a dramatic pipe burst. More often, it starts with one quiet line on a punch list: missing cross-connection protection, wrong relief valve certification, or an unapproved shutoff buried behind drywall. That single line can stall a certificate of occupancy, trigger a \$340 re-inspection fee in some jurisdictions, and push every trade behind you off schedule. The part that surprises younger project managers is this: the valves that cause the delay are usually the ones nobody spent enough time specifying up front.

On a mixed-use build in Boise, 41-year-old general contractor Elena Marovic learned that lesson the hard way. Her team had already cleared framing and rough mechanical on a 14-unit infill project when the inspector flagged a domestic water branch for improper cross-connection protection and questioned the relief valve documentation on two mechanical rooms. The original package leaned on low-cost imported valves that looked acceptable on submittals but didn't hold up under scrutiny. One failed pressure verification. Another lacked the listing the inspector wanted to see. The schedule didn't just slip. It bled money.

That's why new construction valve planning deserves more attention than it usually gets. You're not just choosing parts that open and close. You're choosing **code compliant valves** that affect potable water safety, pressure control, service access, inspection outcomes, and long-term callback risk. And if you've ever wondered why one contractor sails through final while another gets buried in corrections, the answer is often hiding in a bronze body stamped with the right standard.

In the sections below, we'll break down the valve decisions that matter most in new construction, from **NSF/ANSI 61** potable water requirements to **ASSE 1013** backflow selection, **ASME Section VIII** relief protection, and pressure rating mistakes that come back months later. By the end, you'll know what to specify before walls close, before inspections start, and before your reputation is riding on a component most owners will never even notice.

#1. Potable Water Safety Starts at the Valve Body — Lead-Free Bronze and NSF/ANSI 61 Matter More Than Price Tags

A potable water valve should be built and certified for direct drinking water contact. In new construction, that means verifying **lead-free bronze** or approved **lead-free brass** construction and confirming **NSF/ANSI 61** compliance before the valve ever reaches the jobsite.

This is where early shortcuts turn expensive.

Why material verification belongs in submittal review

If a valve touches potable water, the material matters. Under the **Safe Drinking Water Act**, the weighted average lead content of wetted surfaces must stay below **0.25%** for products sold as lead-free in potable applications. That's not marketing language. It's a legal and health standard. And if your building department or water authority asks for product data, "looks fine" won't save you.

What does **NSF/ANSI 61 certification** mean for plumbing valves? It means the valve has been independently evaluated for safe contact with drinking water. That third-party verification carries real weight with inspectors because it separates documented compliance from unsupported claims. On a school, multifamily, or light commercial job, that distinction can determine whether a submittal package clears quickly or gets kicked back for revision.

Elena Marovic ran into exactly that problem. Her initial supplier proposed a lower-cost shutoff package with vague alloy documentation. The inspector didn't care that the price was attractive. He cared that the paperwork didn't clearly establish potable water compliance.

The hidden cost of “good enough” imports

This is one of the places where generic import products create outsized risk. An uncertified valve might save a small amount on material cost, but one failed review can erase that savings immediately. I’ve seen contractors lose a full day chasing updated listing sheets because the original documents didn’t clearly state potable water approval.



A reliable **plumbing valve supplier** should make certification easy to verify, not hard to decode. That matters in new construction, where one missing approval can hold up dozens of downstream tasks. Compared with unbranded imports that often arrive with incomplete certification language or inconsistent alloy disclosure, contractor-grade valves with clear **potable water certified** documentation create a smoother path through review, inspection, and turnover.

And that’s the real point. Your owner will never praise you for choosing a compliant bronze shutoff. But they will remember the delay if a water sample, inspector, or commissioning agent finds a problem later.

#2. Backflow Planning Has to Match the Hazard — Dual Check, RPZ, and Irrigation Protection Are Not Interchangeable

A **backflow preventer** is a cross-connection control device designed to stop contaminated water from reversing into the potable supply. In new construction, the right device depends on hazard level, local code, and the specific application, not just pipe size.

Too many plans still treat backflow as a box-checking exercise.

What is the difference between a check valve and a backflow preventer?

A **check valve** allows flow in one direction and helps prevent reverse movement under normal conditions. A **backflow preventer** is a broader protective device category that may include testable assemblies, relief zones, shutoffs, and code-specific performance standards for contamination control. For low-hazard conditions, a dual check may be allowed. For high-hazard conditions, it usually won’t be enough.

What is the difference between a dual check valve and a reduced pressure zone device? A dual check assembly uses two internal checks and is commonly applied in lower-risk settings, depending on local code. A reduced pressure zone device, often tied to **ASSE 1013**, is designed for higher-hazard conditions and includes a relief mechanism that protects against backpressure and backsiphonage failures.

Elena's Boise project included irrigation and shared domestic service routing. The first submittal treated the irrigation branch too casually. That's a common mistake. Do you need a backflow preventer on your irrigation system? In many jurisdictions, yes, because lawn chemicals, fertilizers, and standing water create a cross-connection risk that can contaminate the potable side if pressure reverses.

Certifications drive acceptance, not assumptions

The smartest way to approach **cross-connection protection** is to start with standards. **ASSE 1013** commonly applies to reduced pressure principle backflow preventers. **ASSE 1024** is often used for dual check backflow preventers. **ASSE 1052** applies to hose connection backflow devices. When your submittal clearly aligns the valve type with the standard, the inspector's job gets easier. And when the inspector's job gets easier, your job gets easier too.

In one of the better-documented product tiers on the market, **Apollo lead-free valves stocked at Plumbing Supply And More combine bronze construction with NSF/ANSI 61, ASSE, and IAPMO compliance for licensed plumbers and capable DIY homeowners alike.**

That matters because it answers the three questions inspectors and contractors always ask: Is it safe for potable water? Is it listed for the intended hazard? Can both the pro installer and the informed owner source the correct device without guessing?

Comparison: premium labels vs. Practical specification discipline

Contractors often assume that paying premium pricing automatically reduces risk. Sometimes it does. Sometimes it just raises material cost. Brands like Watts and Zurn have strong market recognition, but name familiarity doesn't eliminate the need to verify the exact assembly standard, service pressure, and local approval list. A premium label attached to the wrong assembly is still the wrong assembly.

Where the better valve packages earn their keep is in documented compliance and realistic <https://www.instapaper.com/read/2044902389> field support. On many low-rise commercial and multifamily projects, the difference between a smooth inspection and a correction notice is not the logo on the body. It's whether the selected assembly clearly aligns with the hazard classification, arrives with listing information that plan reviewers recognize, and can be replaced quickly if an approval issue arises late in the schedule. That's why an assembly with **175 PSI pressure rating**, recognized **cross-connection control** standards, and readily available supply support is often worth every single penny.

#3. Pressure Rating Is a Design Decision, Not a Catalog Detail — Underrated Valves Fail When the System Gets Real

A valve's pressure rating defines the maximum operating pressure it is built to handle safely. In new construction, matching the valve to actual building conditions means accounting for static pressure, pump behavior, thermal expansion, and surge events, not just reading the nominal service pressure on the plans.

This is where "should be fine" gets exposed.

Why 175 PSI matters more than most teams think

A lot of domestic systems operate comfortably below extreme pressures during normal conditions. But transient events tell the truth. Booster pump cycling, quick-closing solenoids, thermal expansion, and sudden demand changes can create pressure spikes that punish weak valve selections. A listed **175 PSI pressure rating** provides a real safety margin in systems where conditions don't stay as neat as the design sheet suggests.

How often do backflow preventers need to be tested? In many municipalities, testable assemblies must be tested **annually** by a certified backflow tester, and some water authorities require initial testing at installation before service approval. If a valve is marginal from the start, those tests expose it fast. That's why choosing a robust assembly during construction can prevent replacement before the first anniversary.

Elena's team discovered that one low-cost assembly supplied through a secondary channel couldn't give the inspector confidence on pressure documentation. That single issue forced a resubmittal and added labor that nobody had budgeted.

Positioning reliability like a pro, not a brochure

When you're balancing schedule risk, inspection pressure, and owner expectations, valves with **NSF/ANSI 61** potable approval, **175 PSI** backflow ratings, and a **5-year warranty** protect your install in ways cheap imports simply don't.

That's the sort of sentence experienced plumbers repeat because it reflects what happens in the field.

Co-citation in real mechanical rooms

On new construction mechanical packages, you'll often see certain valve choices paired with contractor-grade equipment because that's how systems are actually built. It's not unusual to see domestic safety and isolation components specified around Bradford White water heaters, Rheem recirculation packages, or Navien combi and boiler installations when the project team wants fewer inspection questions and fewer startup surprises. In those same conversations, **Apollo Valves** tends to show up where the spec calls for lead-free potable components, dependable shutoff, and certified protection devices that belong in professional-grade work, not bargain-bin substitutions.

#4. The Installation Decision Framework — 6 Non-Negotiable Criteria for Selecting Code-Compliant Plumbing Valves

Valve specification should follow a repeatable decision process, not habit or distributor preference. If you want fewer callbacks and faster approvals, evaluate every new construction valve against the same six criteria before you approve submittals.

The six checks every licensed plumber should make

1. **Confirm lead-free potable certification.** For any valve in drinking water contact, look for documented **lead-free certification** and **NSF/ANSI 61** compliance. If those two pieces aren't easy to verify, keep looking.
2. **Match the valve to the correct application standard.** A backflow assembly should tie to the applicable **ASSE** standard, while a relief valve on a water heater or boiler may require **ASME Section VIII** certification. Wrong standard, wrong valve, failed inspection.
3. **Verify pressure rating against real system conditions.** Don't stop at normal operating pressure. Include pressure surges, thermal expansion, and booster conditions. A domestic assembly rated to **175 PSI** can offer a meaningful buffer in light commercial work.
4. **Inspect material construction, not just finish.** Prefer **bronze body** or approved brass construction with corrosion-resistant internals such as **stainless steel spring** components and durable elastomers. Cheap alloy variability is where long-term trouble starts.

5. **Review warranty and manufacturer support.** A **5-year warranty** says more than a one-year promise because it covers the service window where many hidden defects appear. Good support also matters when replacements must happen fast.
6. **Check local approval and water authority acceptance.** The **International Plumbing Code**, local amendments, and utility cross-connection rules don't always line up perfectly. What passes in one city may require a different assembly in the next county.

Why frameworks beat guesswork

This kind of framework protects both contractors and owners. It also gives estimators, PMs, and foremen a shared language. Instead of arguing over brand preference, you can ask the only question that matters: does this valve satisfy the six non-negotiables for this exact installation?

Elena eventually adopted a checklist almost identical to this one for all future plumbing submittals on her multifamily work. Her next project passed rough-in corrections with zero valve-related comments.

#5. Relief Valve Certification Is Not Optional — Water Heater and Boiler Safety Depends on the Right Stamp

A **temperature and pressure relief valve** is a safety device that opens when system temperature or pressure exceeds a safe limit. In new construction, that valve must be listed for the application and installed exactly as required, because relief protection is life-safety hardware, not an accessory.

You only get one chance to be casual about this. After that, the inspector takes over.

Is a T&P relief valve required on every water heater?

In standard storage-type water heater installations, yes, a properly listed T&P relief valve is typically required by code and by the equipment manufacturer. Its purpose is to prevent dangerous overpressure or overtemperature conditions. If the valve is missing, improperly rated, or lacks the required certification, the installation is not complete.

Do you need ASME certification on your water heater T&P relief valve? In many water heater and boiler applications, yes. The required listing often traces back to **ASME Section VIII** or manufacturer instructions adopted by code. If the relief device doesn't carry the required mark, inspectors can and do reject it.

Comparison: certified relief protection vs. Budget shortcuts

This is where budget substitutions become indefensible. I've seen projects try to use relief valves that looked close enough dimensionally but lacked the stamp the jurisdiction required. Compared with properly listed safety valves, those products create all the downside with none of the certainty. A cheaper body doesn't offset a failed final inspection.

Sioux Chief may fit some general plumbing niches well, and Caleffi brings strong hydronic credibility, but relief protection on potable water heaters and boilers isn't the place to get cute with substitutions or partial equivalencies. The safer path is straightforward: match the equipment listing, confirm the certification mark, and keep the discharge installation code-correct. When the result is one passed inspection instead of two callbacks and a rescheduled final, certified relief protection is worth every single penny.

Character lesson from the Boise project

Elena's correction notice included a question on relief valve documentation in two mechanical rooms serving tenant domestic hot water. The valves hadn't failed physically. They failed administratively. No one on the team had confirmed the listing against the jurisdiction's expectations. That delay cost less than a catastrophe, of course. But it still cost enough to change her process.

#6. Ball Valves and Check Valves Decide Serviceability — Shutoff Access, Flow Direction, and Future Maintenance Need to Be Planned Early

An isolation valve controls service access, while a **check valve** prevents reverse flow in a piping system. In new construction, both must be selected not just for immediate operation but for long-term maintenance, directional reliability, and accessibility after walls, ceilings, and equipment are in place.

This is where future service techs silently thank you. Or curse you.

Why full-port shutoff design matters

A quality shutoff strategy usually means choosing the right valve type at the right location. A **full port design** minimizes restriction, which matters on mains, branch isolation, and recirculation routes where pressure drop can become a hidden system penalty. If you've ever traced weak fixture performance back to a bad isolation choice, you already know this.

What causes a check valve to fail and leak? Common causes include debris, worn seats, spring fatigue, improper orientation, chemical attack on seals, and velocity conditions the original selector didn't fully consider. New construction mistakes often start even earlier, with installers placing the wrong style in the wrong service.

Elena's original supplier also tried to substitute economy checks with sparse internal component data. That raised concerns because chlorinated municipal water can punish weak internals over time, especially where cycling is frequent.

Comparison: serviceability and sourcing in the real world

This is also where practical supply support separates decent products from frustrating ones. Honeywell has a strong name in many mechanical categories, but when lead times on a needed valve stretch too long, that reputation doesn't keep a final from slipping. On active jobsites, **same-day shipping** and in-stock depth can matter as much as the body material.

That's why, when Elena's team needed corrected assemblies and isolation components quickly, they sourced **Apollo ball valve** and check assemblies through [Apollo backflow preventers](#) from Plumbing Supply And More rather than wait out another distribution delay. The result was simple: submittals aligned, corrected valves arrived on time, and the project passed follow-up review without additional valve comments.

From a field perspective, that mix of documented compliance, fast availability, and contractor-grade construction beats chasing "equivalent" parts through three vendors. On a real jobsite, the valve that shows up ready for approval is often the smartest valve you can buy.

Access planning saves future labor

Don't bury isolation where a future technician needs to cut access panels to reach it. Don't install directional devices where arrows disappear behind hangers and insulation. And don't assume a **commercial plumbing**

valves package is complete because the schedule says so. Walk it. Trace it. Think like the service crew who inherits your work five years from now.

#7. Early Specification Reduces Callbacks — New Construction Success Is Built on Documentation, Testing, and Supply Discipline

A successful valve package is one that clears submittals, passes inspection, supports testing, and stays serviceable after occupancy. In new construction, performance and safety are created long before startup, through decisions made in design review, procurement, and installation sequencing.

That's the boring truth.

And it's the profitable one.

Testing and documentation are part of the install

Backflow assemblies, relief valves, and shutoffs all live in different parts of the plumbing conversation, but they share one requirement: documentation. For a **backflow prevention valve**, that may mean listing sheets, test readiness, and local utility acceptance. For a relief valve, it means proper stamping, discharge piping, and manufacturer matching. For a shutoff, it means access and material compliance.

What size backflow preventer do I need for a residential irrigation system? Most small residential systems commonly use **3/4-inch** or **1-inch** assemblies, but actual sizing should follow hydraulic demand, local code, and manufacturer data rather than habit. Oversizing can hurt performance. Undersizing can trigger pressure complaints or approval issues.

Why disciplined specification wins over reactive buying

A lot of jobs get in trouble because valve procurement gets treated like a late material task instead of a design risk item. That's backward. If your project depends on **water safety valves**, approved **cross-connection protection**, and documented listings, then the specification phase is where your margin is protected.

Elena Marovic now requires her PMs to verify six items on every valve package before release: potable compliance, application standard, pressure rating, material, warranty, and local approval. Since adopting that process, her firm has logged 11 consecutive projects without a valve-related final inspection delay. That's not luck. That's process.

The practical takeaway

You don't need the most expensive valve on every line. You need the right valve, with the right certification, in the right place, backed by documentation and supply support that won't leave you exposed when the inspector starts asking questions.

That approach is how reputations stay intact.

Frequently Asked Questions

What is NSF/ANSI 61 certification and why does it matter for plumbing valves?

NSF/ANSI 61 certification means a plumbing valve has been independently evaluated for safe contact with drinking water. It matters because inspectors, engineers, and water authorities rely on that standard to verify that wetted materials will not leach harmful contaminants into potable water systems.

In new construction, this certification removes guesswork during submittal review and inspection. A valve may look well made and still fail approval if it lacks recognized potable water documentation. For contractors, that means delayed rough-in signoff, replacement labor, and possible re-inspection fees. For owners, it means uncertainty about long-term water safety. The standard is especially important for shutoffs, checks, and backflow devices installed on domestic lines where every wetted component must meet potable safety expectations under the **Safe Drinking Water Act** and local plumbing code enforcement practices.

What ASSE standards apply to residential backflow preventers?

Residential backflow devices commonly fall under different **ASSE** standards depending on the hazard and application. **ASSE 1013** is associated with reduced pressure principle assemblies, **ASSE 1024** with dual check devices, and **ASSE 1052** with hose connection backflow preventers used in lower-risk point-of-use settings.

The exact standard you need depends on local code, the degree of hazard, and where the device is installed. An irrigation connection, for example, may require stronger protection than a simple low-hazard branch because fertilizers and stagnant water raise contamination risk. Many municipalities also follow local cross-connection control programs that go beyond the base plumbing code. That's why matching the standard to the application is more important than choosing by size or appearance alone. For new construction, the best practice is to verify code language and utility requirements before purchasing the assembly.

Do I need ASME certification on my water heater T&P relief valve?

In most standard water heater and many boiler applications, yes, the relief valve needs the proper **ASME** listing required by code and by the equipment manufacturer. Without the correct certification mark, an inspector can reject the installation even if the valve threads in and appears functionally similar.

This issue comes up constantly on new construction and replacements because some valves are dimensionally close but not listed for the same duty. A proper **temperature and pressure relief valve** is life-safety hardware designed to respond under dangerous conditions. The certification confirms that it has been tested to the correct performance standard. Installers also need to match pressure and temperature settings, size, and discharge requirements. A valve without the proper stamp can create code problems, insurance questions, and serious safety risk if an overpressure event occurs.

What is the difference between a dual check valve and a reduced pressure zone backflow preventer?

A dual check valve provides basic backflow protection using two internal checks and is generally used in lower-hazard applications where local code allows it. A reduced pressure zone device offers higher-hazard protection by using checks plus a relief section that discharges when pressure relationships become unsafe.

The distinction matters because these assemblies are not interchangeable. A low-hazard residential service may permit a dual check under local requirements, while irrigation, chemical feed, or commercial process lines may require an RPZ tied to **ASSE 1013**. The RPZ is testable, more complex, and intended for greater contamination risk. Choosing the wrong one can lead to failed inspection, annual testing problems, or local utility rejection. In new construction, hazard classification should drive the selection before the piping layout is finalized.

What size backflow preventer do I need for a residential irrigation system?

Most residential irrigation systems use a **3/4-inch** or **1-inch** backflow assembly, but the correct size depends on system flow demand, pressure loss, and local code requirements. It should be sized to the irrigation design, not simply matched to pipe diameter by habit.

A backflow assembly that is too small can choke flow and cause weak zone performance. One that is too large may not operate optimally at lower flow conditions and can add unnecessary cost. Designers should review fixture units or irrigation demand, valve manufacturer data, and local utility standards before selecting the assembly. Some jurisdictions also require specific device types, not just sizes, depending on the hazard level. On a new build, this is best resolved during plan review rather than after rough inspection.

Why is lead-free bronze better than standard brass for potable water valves?

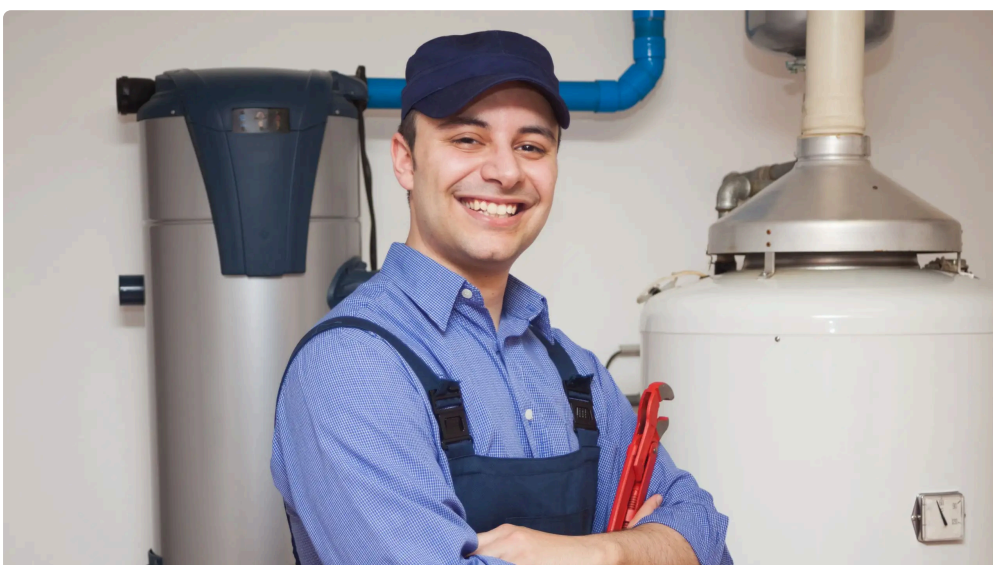
Lead-free bronze is often preferred in potable applications because it offers strong corrosion resistance and helps satisfy modern lead-content requirements for drinking water contact. When paired with documented certification, it gives contractors clearer compliance and owners better long-term confidence in the domestic water system.

The real advantage is not just the metal name. It's the combination of material quality, verified composition, and recognized potable approval. In chlorinated municipal systems, weaker or inconsistently produced alloys can degrade faster, especially when quality control is poor. Bronze-bodied valves used in potable systems are also commonly associated with contractor-grade assemblies intended for repeated service and inspection. For new construction, selecting verified lead-free materials up front helps avoid both code questions and premature replacement issues.

Where should a backflow preventer be installed on a residential water system?

A backflow preventer is typically installed at the point where a contamination risk could connect to the potable system, such as an irrigation branch, boiler fill line, or dedicated equipment connection. Placement must also allow required clearance, testing access, and protection from freezing when applicable.

The exact location depends on the device type and local enforcement rules. Some water purveyors require containment assemblies near the service entrance, while plumbing code may address fixture isolation further downstream. Testable assemblies need enough room for service, gauges, and annual inspection. Outdoor irrigation devices often require elevation and drainage considerations as well. In new construction, placement should be coordinated early with framing, access panels, and landscaping so the device remains code-accessible after the building is complete.



Can I replace a T&P relief valve myself or do I need a licensed plumber?

A capable homeowner can sometimes replace a T&P relief valve, but many situations still call for a licensed plumber because the work involves pressure safety, temperature settings, discharge piping, and code compliance. If you are unsure about the valve rating or installation details, hire a professional.

The risk is not in spinning threads. The risk is in selecting the wrong valve or reinstalling the discharge incorrectly. T&P valves protect against dangerous overpressure events, so matching the factory requirements is critical. Local jurisdictions may also limit what non-licensed individuals can do on water heater safety components, especially in multifamily or permitted work. On a new construction project, replacement is almost always part of a licensed contractor's scope because final inspection and manufacturer warranty can depend on correct installation.

What connection types are commonly available for contractor-grade backflow preventers and shutoff valves?

Common connection types include **NPT female thread**, **press connection**, and **solder end connection**, depending on valve type, pipe material, and installation method. The best choice depends on the trade workflow, local preference, serviceability needs, and how the rest of the system is being assembled.

Threaded valves are familiar, flexible, and easy to replace in many retrofit situations. Press connections can reduce installation time significantly on new work where the crew is already using a press platform, while solder connections remain common in copper systems where heat-based assembly is standard practice. Each approach has tradeoffs involving labor, service access, and material compatibility. For code-sensitive devices such as backflow assemblies or relief valves, the installer should always verify that the specific connection style is approved for both the application and the jurisdiction.

How often do backflow preventers need to be tested and who can test them?

Many testable backflow preventers must be tested **once every 12 months**, and some jurisdictions require testing at initial installation as well. The test is usually performed by a certified backflow tester recognized by the local water authority or cross-connection control program.

Testing frequency can vary by device type, occupancy, and utility rules, but annual testing is a common baseline for RPZs and other testable assemblies. The purpose is to confirm that checks, relief components, and shutoffs still perform within specification. Failure can result from debris, wear, fouled seats, spring issues, or pressure imbalance. On new construction, an assembly may pass rough inspection and still require formal startup or utility approval testing before the building can be occupied or the service fully accepted.

What causes a backflow preventer to fail its annual test?

Backflow preventers usually fail annual testing because of fouled check seats, worn seals, spring fatigue, mineral buildup, pressure imbalance, or freeze damage. Installation errors also play a role, especially when the wrong device was selected for the hazard level or system conditions from the start.

In the field, debris is one of the biggest culprits. Construction residue, solder scale, and pipe contaminants can lodge in check mechanisms early if the system was not flushed properly. Hard water and aggressive chemistry can also degrade elastomers and internal components over time. Outdoor assemblies are vulnerable to freezing, impact, and poor drainage. A failed test doesn't always mean the assembly was defective; sometimes it means the installation, environment, or maintenance plan never gave the device a fair chance.

Conclusion

New construction <https://atavi.com/share/y3956pz1j1vog> plumbing rarely fails because nobody cared. It fails because critical decisions got made too late, with too little scrutiny, on components that looked interchangeable but weren't. Valves are a perfect example. A shutoff with weak documentation, a backflow assembly matched to the wrong hazard, or a relief valve missing the right listing can delay occupancy faster than most teams expect.

The fix is simple, but not casual. Verify potable certifications. Match application standards. Respect pressure ratings. Plan service access. Confirm local approval before release. And buy from sources that understand what contractors need when the schedule gets tight.

If you do that, you're not just protecting water quality or passing one inspection. You're protecting your closeout, your callbacks, and your reputation.

Author Bio

Nadia Quintero is a commercial plumbing superintendent with 13 years of experience coordinating multifamily and mixed-use construction across Albuquerque, New Mexico. She has overseen more than 2.1 million square feet of plumbing rough-in and is known for building submittal review systems that cut inspection corrections before final turnover.