

Brick, Water, and Walls

by Travis Nech

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Brick, Water, and Walls

The Homeowner's Field Guide to Keeping Water Out of Brick Veneer — Flashings, Weep Holes, Cracks, and the Repairs That Actually Work

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Chapter 1: Water Always Wins

The Prettiest Wall I Ever Fixed Twice

Back in the mid-eighties, I was still a young man cutting my

teeth on masonry crews around the Fort Worth area, and I thought I knew something about brick. I could lay a straight course, keep my mortar joints honest, and the older men on the crew had started trusting me with corners. I thought brick was brick — you stacked it right, you struck your joints clean, and that wall would stand against anything Texas could throw at it.

Then we got called out to a house that was barely five years old. Two-story, beautiful work — whoever laid it had a steady hand, I could see that plain as day. Red brick, tight joints, soldier course over every opening, cast stone sills. The kind of house that made you slow down driving past it. And the homeowner was standing in his driveway with water stains running down his sheetrock in the family room, telling us the wall behind it was supposed to be solid brick.

We opened that wall up from the inside, and I remember standing there in the dark of that wall cavity with my flashlight, watching water tracks on the back side of the brick where it had been soaking in, running down, and ponding on top of the concrete foundation where there was no way for it to get out. The brick was beautiful. The brick was also the reason water was getting in, and there was nothing in that wall built to get it back out.

That afternoon changed how I look at brick forever. I'd been taught to think of brick as armor — hard, heavy, permanent. What I learned standing in that wall cavity is that brick is not armor. Brick is a sponge wearing a good suit. Water soaks through it, mortar joints let it in, and the only thing standing between you and a rotting wall is what happens to that water after it gets behind the brick. On that house, the answer was: nothing. Nothing happened to it. It just sat there and rotted the house from the inside.

I've spent five decades in this trade since then, and I have never once seen a wall fail because the brick itself wasn't good enough. I've seen thousands fail because the water management was wrong, missing, or never thought about in the first place.

Brick Is Not Waterproof — It Never Was

Let me say the thing most people get wrong, right up front, because everything in this book hangs on it:

Brick is not waterproof. Mortar is not waterproof. Your brick wall is not a waterproof barrier.

I can feel some of you arguing with me already. "But Travis, my brick wall is a foot thick — how's water getting through that?" First off, your brick wall is almost certainly not a foot

thick. What you've got is a single layer of brick — one wythe, about four inches — with a gap behind it and then your actual house structure. We'll get into the full anatomy in Chapter 2. But even the old solid brick walls, the ones laid two wythes thick on houses a century ago, took on water. That's why those old houses had lime plaster inside and people just lived with damp basements. Water moves through brick the way sound moves through a thin wall — you can't see it happening, but it's happening.

Brick is fired clay. Fired clay is porous. Set a dry brick on a puddle and watch the water climb up into it — that's called wicking, and every brick does it to some degree. Mortar is cement, sand, and lime — also porous. Every rainstorm that hits your wall drives water into the brick and the mortar joints through wind pressure, capillary action, and plain old gravity finding the cracks. That is not a defect. That is what brick does. The men who designed the modern brick veneer wall knew it, and they built the whole system around one expectation: **water will get behind the brick, and the wall has to catch it and throw it back out.**

When that system is missing or broken — which, in my experience, happens more often than it should — the water stays in. And water that stays in a wall does what water always does: it finds everything you don't want it to find. Wood framing. Insulation. Electrical. It doesn't hurry. It has all the time in the world.

What a Texas Storm Does to a Wall

Now, most of what I've read in books about brick and water was written by people who deal with Seattle drizzle or Chicago snow. I deal with Texas. Texas doesn't drizzle. Texas opens the sky and dumps three inches on you in forty-five minutes while the wind drives it sideways at forty miles an hour, and then the sun comes out and bakes your wall at a hundred degrees before lunch.

That cycle — drench, bake, drench, bake — is brutal on a wall, and here's why. A slow rain soaks in gradually and gives the wall time to dry out between storms. A Texas gully-washer hits the wall like a pressure washer. Wind-driven rain forces water deep into mortar joints and through any crack wider than a hair. The wall gets saturated fast — brick, mortar, and everything behind it. Then the Texas sun hits, the outside face dries in a few hours, and the homeowner thinks the wall handled it fine. But behind the brick, in the dark, the inside of that wall can stay wet for days. Do that fifty times a summer and you've got a wall that's never fully dry from May to September.

And here's the part nobody tells you: the damage doesn't

show up during the storm. It shows up six months later as a white crust on the brick (efflorescence — we'll cover it in Chapter 3), or a year later as mortar joints going soft and crumbly, or two years later as a water stain on the bedroom ceiling that the roofer swears isn't the roof. Water is patient. It does its damage quietly and lets you discover it on its own schedule.

I've torn into walls where the wood framing behind the brick was black with rot while the brick outside looked perfect. The homeowner would walk past that wall every day and never know. The brick did its job — it looked great. It just couldn't do the one job it was never designed to do: keep water out all by itself.

Water Finds Every Weakness — Given Time

There is a saying in the masonry trade: water always wins. I didn't coin it, but I've watched it prove itself true for fifty years, and I want you to understand exactly what it means, because it's the foundation this whole book stands on.

Water always wins doesn't mean you can't protect your house. It means water never quits. It will test your wall every single time it rains, and it will exploit the one thing you forgot about — the weep holes somebody caulked shut, the flashing the builder skipped, the mortar joint that cracked when the house settled, the spot where the sprinkler hits the wall every morning. Water doesn't need a big opening. A hairline crack, a missing piece of flashing the size of a postage stamp, one weep hole clogged with mortar — that's all it takes to start the clock.

I've seen walls where a single clogged weep hole turned an entire section of wall into a bathtub. The water came in at the top — through a cracked mortar joint nobody noticed — ran down the back of the brick, hit the bottom, and had nowhere to go because the exit was plugged. It sat there, winter after winter, freezing and thawing, until the faces started popping off the bricks. All from one clogged hole the size of your fingertip.

That's the mindset I need you to take away from this chapter. Your brick wall is not a fortress. It's a raincoat — and a raincoat only works if the water can run off it and drain away. The moment water gets trapped inside the raincoat, you're worse off than if you had no raincoat at all, because now you can't see the damage happening.

The Mindset Shift

So here's the shift I want every homeowner to make, and if you take nothing else from this book, take this:

Stop thinking: "My brick is solid, so my wall is fine."

Start thinking: "My wall is a drainage system, and drainage systems need maintenance."

Nobody buys a house and thinks the gutters will take care of themselves forever. You know leaves clog them, you know they need cleaning, you know a sagging gutter means trouble. Your brick wall works the same way — it just hides its gutters inside the wall where you can't see them. The weep holes at the base of your brick are your wall's gutters. The flashing above your windows is your wall's drip edge. The air gap behind the brick is the downspout. Every part of that system can clog, break, or go missing, and when it does, water stops draining and starts destroying.

The good news — and there's plenty of it — is that most of what your wall needs is simple. You don't need to be a mason. You need to know what to look at, what the early warning signs mean, and when to call somebody. Most water damage I repair started as a small, cheap problem that sat ignored for years because nobody knew what they were looking at. A tube of the right sealant in the right place, applied two years earlier, would have saved some of these folks five figures. I'm not exaggerating — I've written those invoices.

What This Book Will Teach You

Here's the road map. In Chapter 2, I'm going to walk you through exactly how a brick veneer wall is built to shed water — every layer, what each one does, and where builders cut corners. You'll follow a single raindrop from the moment it hits your wall to the moment it exits the weep hole, and by the end you'll understand your wall better than most of the people who built houses in the last twenty years.

In Chapter 3, I'll teach you to read your wall like an instrument — what efflorescence means, what spalling tells you, what crumbling mortar is saying, and how to do a walk-around inspection of your whole house in under an hour with nothing but your eyes and a notebook.

Later chapters get into the fixes: what you can handle yourself, what needs a professional, how to hire the right mason and spot the wrong one, and how to keep the whole system working year after year with a simple seasonal routine.

I'm not a writer. I'm a bricklayer with fifty years of mud on my boots, and everything in this book is something I've seen with my own eyes, fixed with my own hands, or learned the hard way on somebody's wall. Water always wins — but an informed homeowner who maintains their drainage system

can hold it off for the life of the house. That's what I'm here to teach you. Let's get to work.

Chapter 2: How a Brick Veneer Wall Is Built to Shed Water

The Wall Is Not What You Think It Is

If I asked you to draw a cross-section of your brick wall, most of you would draw a thick block of brick — maybe with some wood behind it. That's what it looks like from the outside, and that's what most homeowners believe they're living behind: a solid, heavy, waterproof mass of masonry.

Here's the truth: the brick on your house is a skin. One layer, about four inches thick, standing a couple of inches away from your actual house. It holds itself up — it's got its own foundation ledge at the bottom and it's tied to the house with metal straps — but structurally, it's decoration with a job. Its job is to take the beating from the weather so your house doesn't have to. And the single most important thing it does is not keep water out. It's to manage the water that gets in.

This surprises people, so let me say it again, because it's the most important sentence in this chapter:

Your brick veneer wall is a drainage system, not a waterproof barrier. Water getting behind the brick is not a failure — it's expected. The wall is built to catch that water and get it back out.

Every layer of that wall exists to serve this one idea. Let me walk you through them, from the outside in, the way I'd walk a young apprentice through his first wall.

Layer One: The Brick Skin

The brick is the part you see, and it does three jobs. First, it's the weather face — it takes the direct hit from rain, sun, hail, and wind so the layers behind it don't have to. Second, it's the beauty — let's be honest, that's why people buy brick houses. Third, and this is the one people miss: it's the first line of water defense, not the only line. It sheds most of the rain — a well-built brick wall with good mortar joints will throw off the majority of water that hits it. But "most" is not "all," and the system is designed around the water that gets through.

Brick comes in different densities, and this matters. A dense, hard-fired brick absorbs less water than a soft, underfired one. In fifty years I've handled brick from every era, and I can

tell you the old-timers' rule still holds: harder brick, tighter pores, less water in. But even the hardest brick wicks water. There is no brick made that you can call waterproof, and any salesman who tells you otherwise is selling something.

Layer Two: The Mortar Joints

Mortar is the glue holding the brick together, and it's also one of the main ways water gets in. A good mortar joint — full, tooled, slightly concave — sheds water well. A bad one — shallow, cracked, or recessed — invites it in.

Here's what most homeowners don't know: mortar is supposed to be softer than the brick. That sounds backwards, but it's deliberate. The mortar is the sacrificial part of the wall. When the house moves — and every house moves, with settling, temperature swings, and soil shifting — something has to give, and you want it to be the mortar joint, not the brick. A cracked mortar joint is cheap to fix. A cracked brick is not. Good mortar cracks in a controlled way, gets repointed (that's the term for raking out old mortar and putting in new), and the wall goes on living. We'll talk repointing in a later chapter — it's one of the most valuable maintenance skills a homeowner can understand, even if you hire it out.

But those same joints are also water's front door. Wind-driven rain pushes into every joint. Hairline cracks from normal settling open up. Over decades, weather erodes the surface of the mortar. Every one of those is a path inward — which is fine, as long as the layers behind are doing their jobs.

Layer Three: The Air Gap — The Most Important Two Inches on Your House

Behind the brick, there is a gap. Usually about two inches of empty air between the back of the brick and the next layer in. If you take one thing from this chapter, take this: **that empty space is the single most important water-management feature in your entire wall.**

It's called the drainage cavity, and it does exactly what the name says. Water that gets through the brick and mortar runs down the back face of the brick — or drips off it — and falls through this open cavity to the bottom of the wall, where flashing catches it and weep holes let it out. As long as that cavity is open and clear, water has a highway out. The moment something blocks it, you've got a dam inside your wall.

I want you to picture it: rain hits the brick, soaks through, runs down the inside face of the brick like rain on a windowpane — except this windowpane is inside your wall, in the dark, where you can't see it. It falls two inches through

open air, lands on a piece of metal flashing at the base of the wall, and runs sideways out through little gaps in the mortar called weep holes. Elegant. Simple. Effective — when it's built right and kept clear.

Layer Four: The House Wrap and Sheathing

Behind the air gap is your actual house: wood or steel framing, covered with sheathing (usually oriented strand board or plywood on modern houses), and wrapped in a water-resistant barrier — the house wrap. You might know the brand names; what matters is the job it does.

The house wrap is the last line of defense. Its job is to stop any water that makes it across the air gap — wind can push droplets across, and in a driving storm some water will bridge that gap — from reaching the wood sheathing and framing. Good wrap sheds water downward while letting water vapor escape outward, so the wall can dry. It's a raincoat for your framing.

Here's the catch: house wrap only works if it's intact and properly lapped — upper pieces overlapping lower pieces like shingles, so water runs down and off instead of running behind. I've opened walls where the wrap was torn, poorly taped, installed backwards, or missing entirely behind sections of brick. Every one of those walls had rot. The wrap is invisible once the brick goes up, which means it's the easiest thing for a rushed crew to get wrong and the hardest thing for a homeowner to check. That, right there, is why builder shortcuts in this layer are so costly.

Layer Five: Flashing and Weep Holes — The Exits

Flashing is thin metal (or sometimes a flexible membrane) installed at every place where water needs to be caught and redirected out of the wall: at the base of the wall where the brick meets the foundation, above windows and doors, under sills, and anywhere a roof meets a brick wall. Its job is simple: catch water running down inside the wall and kick it outward, through the weep holes, back to daylight.

Weep holes are the little vertical gaps in the mortar — usually every few bricks — at the base of the wall and above openings. They're the drain at the bottom of the system. Some are just open joints; some have little tubes or wicks in them. Either way, their job is to let water out and let air in so the cavity can dry.

Flashing and weep holes are small, cheap, and invisible to anyone who isn't looking for them. They are also the two components I find missing, blocked, or botched more than any

others. A wall with perfect brick and perfect mortar will still rot from the inside if the flashing isn't there to catch the water and the weep holes aren't open to let it out. Remember the house from Chapter 1 — beautiful brick, no way out for the water. That's a flashing and weep hole failure, and it's one of the most common failures I see.

The Raindrop's Journey

Let me put it all together the way I wish somebody had explained it to me when I was starting out. Follow one raindrop on a windy Texas afternoon.

The drop hits the face of the brick about halfway up your wall. Wind pressure drives it into the brick's pores and into a mortar joint. It wicks inward through the mortar, drawn by capillary action, and emerges on the back face of the brick — inside the wall now, in the dark air gap. Gravity takes over. The drop runs down the back of the brick, joining hundreds of others, falling through two inches of open air. Near the bottom of the wall it lands on a sloped piece of metal flashing sitting on top of the foundation ledge. The flashing slopes outward — it has to, that's the whole point — and the water runs along it to the nearest weep hole. It drips out through the weep hole onto the foundation ledge and falls to the ground. Total trip: maybe thirty seconds. The inside of your house never knew it happened.

Now run the same raindrop through a wall where the builder cut corners. The drop gets through the brick — same as before. But the air gap is bridged with mortar droppings (we'll get to that), so the water hits a shelf of hard mortar halfway down and ponds. Or the flashing was never installed, so the water runs straight down onto the wood sill plate. Or the weep holes got caulked shut by a well-meaning handyman, so the water reaches the bottom and sits. It sits for days. It wicks into the sheathing. The sheathing swells. Mold starts. The framing starts to rot. Two years later there's a musty smell in the bedroom and a soft spot in the drywall, and the homeowner is calling a roofer because they think the roof leaks. The roof is fine. The wall has been quietly drowning for two years.

Same raindrop. Same brick. The only difference is whether the drainage system was built right and kept clear.

The Shortcuts That Break the System

After fifty years, I can walk up to a wall and guess its age and its builder's habits by the failures. Here are the shortcuts I see over and over — the ones that turn a good drainage design into a slow-motion disaster:

Mortar bridging the air gap. When a bricklayer works fast, mortar squeezes out the back of the joints and falls into the cavity — or worse, the mason trowels big globs that bridge all the way from the brick to the sheathing. Each blob is a bridge water can travel across, and a pile of droppings at the base of the wall is a dam. Good masons keep the cavity clean as they go. Rushed masons don't, because nobody can see it once the wall is up. This is the number one hidden defect I find in failed walls.

Missing or crushed house wrap. The wrap goes up before the brick, and on a fast job it gets torn by scaffolding, stapled sloppily, or left with gaps the crew figures "nobody will see." Sometimes on older homes there is no wrap at all — just bare sheathing or old felt paper that's disintegrated. No last line of defense means any water crossing the cavity goes straight into wood.

No flashing at ledges and openings. Flashing is fiddly work. It has to be cut, folded, lapped, and sloped correctly, and it slows the bricklayer down. On a production schedule, it's tempting to skip — especially above windows, where the lintel (the steel angle holding up the brick over the opening) is supposed to carry flashing. I've opened walls over windows with no flashing at all, just brick sitting on steel, water pouring straight through onto the window frame. Every missing piece of flashing is a waterfall inside your wall.

Weep holes sealed or omitted. This one drives me to distraction because it's so preventable. Somebody — a painter, a handyman, a pest-control tech, sometimes the homeowner — sees those little gaps at the base of the brick and thinks they look unfinished, or thinks bugs get in through them, and caulks them shut. I understand the instinct. But a caulked weep hole is a plugged drain, and a plugged drain means standing water inside the wall. If your weep holes are caulked, that caulk needs to come out. (There are proper weep-hole covers that keep bugs out while letting water through — we'll cover those in the maintenance chapter.)

No slope on the flashing, or flashing draining inward. Even when flashing is present, I've seen it installed flat or — I wish I were joking — sloping into the wall, delivering water to the framing like a gutter in reverse. Flashing must slope outward. Always.

What This Means for You

You don't need to memorize every layer. You need to carry one picture in your head: **rain gets in, the cavity catches it, the flashing directs it, the weep holes let it out.** Every problem in this book is a breakdown somewhere in that chain, and every fix is about restoring it.

In the next chapter, I'm going to teach you to read the outside of your wall the way I do — to look at a white crust, a flaking brick, or a crumbling joint and know exactly which link in the chain is failing. Your wall is talking to you all the time. Most people just never learned the language. You're about to.

Chapter 3: Reading Your Wall Like an Instrument

Your Wall Is Talking — Learn the Language

A pilot doesn't wait for the engine to quit before checking the gauges. A good instrument panel tells you what's happening long before it becomes an emergency — oil pressure drifting, temperature climbing, a vibration that's new. Your brick wall has gauges too. It broadcasts what's happening inside it, in plain sight, every single day. Efflorescence, spalling, crumbling mortar, a stain on the ceiling — these are your oil pressure light, your temperature gauge, your check-engine light.

The tragedy I see over and over is homeowners who had years of warning and never knew what they were looking at. The white crust was "just something brick does." The flaking brick was "getting old." The musty smell was "the house settling." By the time they called me, a two-hundred-dollar maintenance item had become a twenty-thousand-dollar wall rebuild. I'm not telling you this to scare you — I'm telling you because in fifty years I've learned that an educated homeowner is the cheapest insurance policy a brick wall can have.

This chapter is your instrument training. Four gauges, what each one means, and then a walk-around inspection routine you can do in under an hour, twice a year, that will catch problems while they're still small.

Gauge One: Efflorescence — The White Crust

Walk around any neighborhood with brick houses and you'll see it: a white, chalky crust blooming on the face of the brick, sometimes in patches, sometimes in streaks running down from a window or along the base of the wall. Homeowners ask me about this more than anything else. "Travis, is this mold? Is my brick going bad?"

It's called efflorescence, and here's what it is in plain terms: it's salt. Brick and mortar contain natural mineral salts. When water moves through the wall — soaking in, traveling through

brick and mortar — it dissolves those salts and carries them along. When the water reaches the outside face and evaporates, it leaves the salts behind as a white crust. The crust itself is harmless. It's cosmetic. You can brush it off.

But don't miss what it's telling you: **water is moving through your wall in enough volume to carry salts to the surface.** A little efflorescence after a wet season, in one spot, that brushes off and doesn't come back — that's your wall breathing, normal. Efflorescence that keeps coming back in the same place, or heavy crusting, or streaks running down from a specific point — that's your wall telling you water is consistently traveling a path it shouldn't, or in quantities the drainage system isn't handling.

Take a hypothetical homeowner in Dallas. She notices white streaks running down the brick under her second-story window, every spring. She brushes them off; they come back. What's happening? Water is getting in above that window — maybe a failed sealant joint, maybe missing flashing over the lintel — running down inside the wall, and exiting through the brick face under the window, depositing salts as it evaporates. The stain is under the window, but the entry point is above it. Water runs downhill — always look up from the symptom.

When you see efflorescence, note three things: where it is, how much there is, and whether it comes back after you brush it off. Location tells you where the water path is. Persistence tells you whether it's a one-time wetting or an ongoing leak. That goes in your notebook — we'll get to the notebook.

One caution: don't power-wash efflorescence off with high pressure. You'll drive water deeper into the wall and make the problem worse. A stiff dry brush is all you need for the crust itself. The crust isn't the problem — the water path behind it is.

Gauge Two: Spalling — When the Face Pops Off

Spalling is when the face of the brick flakes, peels, or pops off — sometimes in thin scales, sometimes in chunks. You'll see brick that looks like it's shedding its skin, with the inner part of the brick exposed and usually a different color. This one is not cosmetic. This is structural damage to the brick itself, and it's telling you something specific.

Here's the mechanism, and it's worth understanding because it explains so much about brick in cold climates and cold snaps: brick absorbs water. When that water freezes, it

expands — about nine percent. That expansion happens inside the pores of the brick, and it pushes outward with tremendous force. Do it once, no big deal. Do it fifty times — freeze, thaw, freeze, thaw — and the face of the brick starts to fatigue and break away. That's spalling: freeze-thaw damage, plain and simple.

Now, Texas doesn't freeze like Minnesota, but we get our snaps — and one hard freeze on a saturated wall can do more damage than a whole mild winter. The key word is saturated. A brick that gets wet and dries out between freezes is fine. A brick that stays wet — because water is trapped behind it, because the wall can't drain, because a sprinkler soaks it every morning — and then freezes, that's when faces start popping.

So when you see spalling, read it as two messages at once. Message one: this brick has been staying wet. Message two: the drainage behind it isn't working, because a wall that drains properly doesn't hold enough water in the brick to spall like that. Spalling near the base of a wall often means water is ponding at the bottom — blocked weep holes, mortar droppings damming the cavity. Spalling in a band under a window or a roofline often means water entry above with no flashing to kick it out.

A spalled brick can't heal. Once the face is gone, that brick will absorb water faster (the dense outer face was the best defense), which means it will spall more. It's a downhill slide. Individual spalled bricks can be cut out and replaced — that's standard mason's work — but the cause, the trapped water, has to be fixed first or you'll be replacing the same bricks again in five years. Fix the drainage, then fix the brick. Always in that order.

Gauge Three: Decaying Mortar Joints

Mortar is supposed to age. It's the sacrificial layer — remember Chapter 2. Over decades, weather erodes it, and eventually it needs repointing. That's normal maintenance, like replacing brake pads. What's not normal is mortar going soft, sandy, and crumbly years ahead of its time, or eroding in specific patterns that point to water trouble.

Here's how to read it. Run your finger along a mortar joint — or better, take a key and scratch lightly at the joint in an inconspicuous spot. Sound mortar resists; the key leaves a light mark. Deteriorating mortar crumbles, powders, or digs out easily. Now look at the pattern. Mortar that's uniformly weathered all over the wall is just age. Mortar that's soft and eroded in one section — under a window, along the base, below where a downspout dumps — is telling you water is concentrating there.

Pay special attention to mortar that's eroding from the inside of the joint outward, or joints that are recessed deep while neighboring joints are fine. And watch for mortar that stays damp long after rain while the rest of the wall is dry — put your hand on it. A joint that's wet two days after a storm is a joint with water feeding it from inside the wall.

There's one more mortar symptom that deserves its own mention: **white crust in the joint combined with soft mortar** — that's water moving through the joint carrying lime out of the mortar (sometimes called lime leaching). The mortar is literally dissolving from the inside. That joint needs repointing, and the water source needs finding.

Repointing — raking out the old mortar to a proper depth and packing in new — is one of the highest-value repairs in masonry. It reseals the wall's first line of defense. But like spalled brick, repointing without fixing the water problem behind it is painting over rust. The new mortar will fail the same way. Diagnose first, then repair.

Gauge Four: Interior Stains and Musty Smells

This is the gauge most homeowners notice first, and it's the one that means the problem has been running the longest. By the time water shows up inside your house — a brown stain on the ceiling, paint bubbling on an exterior wall, a musty smell in a room that won't go away — water has defeated every layer of the wall system and reached your living space. The wall's instruments have been flashing warnings for months or years; this is the alarm going off.

Read interior symptoms with one rule: **water runs downhill and shows up at the lowest easy point, not at the entry point.** A stain on the ceiling under a second-story window doesn't mean the window leaks — it means water got into the wall somewhere above the stain and traveled down until it found a way in. Could be failed flashing over the window. Could be a roof-wall intersection three feet higher. Could be a cracked mortar joint six feet up. The stain is the symptom; the entry is uphill.

Musty smells deserve respect. Musty means mold or mildew, and mold means sustained moisture — not a one-time leak but an ongoing wet condition inside the wall. If a room smells musty after rain, or a closet on an exterior wall smells musty all the time, there's water living in that wall. Don't just deodorize it. Find it.

And here's a diagnostic trick from fifty years of chasing leaks: **map your interior symptoms against the outside of the**

wall. Stand inside where the stain is. Go outside to the same spot. Look up. Look at the mortar joints, the window seals, the flashing, the roofline above. Nine times out of ten, when you line up the inside symptom with the outside wall, the entry point reveals itself — a cracked joint, a gap in the sealant, a missing piece of flashing, a downspout dumping water against the brick. The wall is one system; read both sides of it.

The Walk-Around: Your One-Hour Inspection Routine

Twice a year — I tell folks spring and fall, after the heavy weather seasons — walk your house. One hour, tops. Here's exactly how to do it.

What to bring: your eyes, your hands, a notebook and pen (or your phone's notes app — but I'll be honest, a twenty-cent pocket notebook you keep by the back door gets used more than an app), a stiff brush, and a screwdriver or old key for scratching mortar. That's it. No ladder needed for most of it — if you can't see it from the ground, note it and look closer later or have someone check it.

Where to look — the five zones:

Zone 1: The base of the wall, all the way around. Crouch down. Look at the bottom two feet of brick. This is where water exits — or where it ponds when it can't. Check every weep hole: are they open? (Poke gently with a screwdriver — if it's packed with mortar, dirt, or caulk, note it.) Look for efflorescence, spalling, or mortar erosion concentrated low on the wall. Check the ground line: is soil, mulch, or landscaping piled up against the brick, covering the weep holes? Grade should slope away from the house, and nothing should bury the bottom of the wall. This zone catches more problems than the other four combined.

Zone 2: Around every window and door. Look at the mortar joints and sealant where the brick meets the frame. Sealant (caulk) at these joints fails over time — cracked, pulled away, missing. That's a direct water entry. Look for efflorescence streaks below openings (remember: look up from the symptom — the entry is above). Check the sills: does water have a clear path off the sill and away from the wall, or does it run back against the brick?

Zone 3: Under every roof-wall intersection. Where a roof slopes down into a brick wall — over a garage, a dormer, a porch — there's supposed to be flashing kicking roof water out and away from the wall. Look for water stains on the brick below these intersections, efflorescence bands, or mortar erosion in a stripe under the roofline. If your gutters dump

roof water against a brick wall instead of carrying it away, note that too — a downspout aimed at brick is a pressure washer pointed at your wall every time it rains.

Zone 4: The mortar joints, overall. Walk the wall slowly and look at the joints the way you'd look at a road you're about to drive — scanning for cracks. Hairline cracks are normal aging; note them and watch them. Cracks you can fit a dime into, stair-step cracks running through multiple joints, or sections where mortar is missing or deeply recessed — note those as repair candidates. Scratch-test a few joints in different areas with your key. Compare: the joints should feel roughly the same hardness everywhere. Soft spots are telling you something.

Zone 5: Inside, the exterior walls. Walk every room with an outside wall. Look up at the ceiling line and down at the baseboards. Look for stains, bubbling paint, peeling wallpaper, or discoloration. Open closets on exterior walls and smell — musty is a red flag. Put your hand on the wall after a rain: a cold damp patch on drywall means water is behind it. Note anything, even if it seems small.

How to log it: Date every entry. Sketch a rough rectangle for each wall of the house — front, back, left, right — and mark what you found where: "E" for efflorescence, "S" for spalling, "M" for mortar issues, "W" for weep hole problems, "I" for interior symptoms. Next inspection, compare. What's new? What's worse? What's better? A wall that's stable year to year is a wall that's working. A symptom that's spreading is a wall asking for help.

Here's the thing about this routine: the first time you do it, you'll find things. Probably several things. Don't panic. Most of what you find will be minor — a weep hole to clear, a sealant joint to redo, a downspout to redirect. That's the whole point: you found them while they're small. The homeowner who does this walk twice a year will never be the homeowner who calls me with a rotted wall and a five-figure invoice. They'll be the homeowner who fixed a fifty-dollar problem on a Saturday morning.

You're the Instrument Now

A wall doesn't fail all at once. It whispers first — a little white crust, a soft joint, a faint musty smell in the closet. Then it talks louder. Then it shouts, usually in the form of an invoice. Everything in this chapter was about learning to hear the whispers.

In the chapters ahead, we'll get into what to do about what you found: the simple maintenance you can handle yourself, the repairs worth hiring out, how to find a mason who knows

water management and not just bricklaying, and the seasonal routine that keeps the whole system working. But none of that matters without this chapter, because you can't fix what you can't see.

Go walk your house. One hour. Notebook in hand. Your wall has been trying to tell you things for years — it's time to listen.

Chapter 4: Weep Holes: The Tiny Heroes Nobody Notices

Walk around any brick house with me and I'll show you something most folks have stared at a thousand times without ever seeing. Down near the bottom of the wall, just above the foundation, there's a row of little vertical gaps in the mortar — one open joint every few bricks. They look like the mason forgot to finish the job. Most homeowners either never notice them, or they notice them and think something's wrong. Somebody's well-meaning brother-in-law fills them with caulk. A landscaper piles mulch right up over them. A painter paints right across them. And then, a year or two later, water starts showing up inside the house and nobody can figure out why.

Those little gaps are weep holes. They are the drain holes for your entire brick wall, and in fifty years of working on brick houses, I can tell you there is no smaller detail that causes bigger trouble when it goes wrong.

Your Brick Wall Is Not What You Think It Is

Here's the first thing you've got to understand, because everything else in this book hangs on it: the brick on your house is not the wall. It's a raincoat.

A brick veneer wall — which is what nearly every brick house built in the last sixty years has — is one layer of brick, about three and a half inches thick, standing a little ways out from the actual structure of your house. Between the back of the brick and the wood framing or sheathing behind it, there's a gap. We call it the cavity, and it's usually about an inch wide. That cavity is there on purpose. It's part of the design.

Why? Because brick is thirsty. Brick soaks up water like a sponge soaks up dishwater. When rain hits your brick wall — especially wind-driven rain, the kind that comes at the wall sideways during a Texas thunderstorm — water soaks into the brick and the mortar. Some of it works all the way through to the back face of the brick. Gravity pulls it down the inside of the cavity. Condensation can form back there too, on cool mornings after a humid night. The cavity exists so that water

has somewhere to go that isn't your living room.

But a cavity is only half a drainage system. Water that runs down the inside of that cavity has to get OUT of the wall. It needs an exit door. That's the weep hole.

Think of it like this: the cavity is the gutter inside your wall, and the weep holes are the downspouts. Without downspouts, a gutter is just a trough that overflows. Without weep holes, the cavity is just a hidden bathtub behind your brick, filling up every time it rains.

Where They Should Be

Weep holes belong everywhere water collects in the wall. That means:

At the base of the wall. This is the big one. The bottom of the brick wall sits on the foundation, and there should be flashing there — a layer of metal or membrane that catches the water running down the cavity and kicks it outward. The weep holes sit just above that flashing, in the first course of brick. This is the row most homeowners can find if they go look: kneel down at the base of the wall, and you'll see the open vertical joints spaced roughly every two to three feet.

Over windows and doors. Every opening in a brick wall gets what's called head flashing — a piece of metal above the opening that catches cavity water and sends it out. And just like at the base, the water needs an exit: weep holes in the brick course directly above the flashing.

At ledges. Where a brick wall steps back — a second-story setback, the shoulders of a chimney, a decorative brick ledge — water collects on the flat spot. Flashing and weep holes belong there too.

If you walk around your house and find these locations with no weep holes at all, that's information. Write it down. We'll come back to what it means.

What They Look Like (and What People Mistake Them For)

The most common weep hole is just an open head joint — a vertical mortar joint where the mason left the mortar out. It's about three-eighths of an inch wide and two and a quarter inches tall, the height of one brick. Simple. Effective. Nearly invisible unless you're looking for it.

Sometimes you'll find a short piece of cotton rope sticking out of the joint. That's a wick — it draws water out of the cavity by capillary action, like a candle wick draws wax. You'll see

these more on older homes. Sometimes you'll find a small plastic or metal tube set into the joint. Same job, different method.

What I see constantly, though, is weep holes that somebody "fixed." A homeowner spots the open joints, decides the mason did sloppy work, and fills every one with caulk or mortar. A painter, hired to paint the trim, runs his brush right across the weep holes because nobody told him not to. A handyman stuffs them with steel wool to keep bugs out — which keeps water in, which is considerably worse than bugs.

Let me be as plain as I can: **never seal a weep hole shut.** If you take one sentence from this chapter, take that one. An open weep hole that lets a wasp in occasionally is infinitely better than a sealed weep hole that traps water inside your wall every time it rains.

How They Clog

Even when nobody seals them on purpose, weep holes clog. After fifty years of clearing them, I can sort the causes into four usual suspects:

Mortar droppings. During construction, globs of mortar fall off the mason's trowel and drop into the cavity. They pile up at the bottom of the wall, right where the weep holes are, and harden into little dams. This is the most common cause of clogged weeps in newer homes, and it's frustrating because the house can be barely five years old. A good mason keeps the cavity clean as he goes — some lay a strip of material in the cavity to catch droppings and pull it out as the wall rises — but not every crew is that careful, and you can't see the problem from outside.

Mulch and soil. Landscapers love to pile mulch up against the house. Flower beds get built up year after year. I've seen weep holes buried under six inches of mulch and topsoil, and the homeowner had no idea they were ever there. Rule of thumb: the ground, mulch, or bed soil should sit at least four inches below the weep holes at the base of the wall. If your beds have crept up over the years, pull them back. This one is free to fix and prevents a world of hurt.

Insects. Wasps, mud daubers, and spiders love a weep hole — it's a sheltered little tunnel, exactly the real estate they're shopping for. A mud dauber can pack a weep hole solid with mud in a single afternoon. You'll see the little mud caps if you look closely.

Dirt, paint, and debris. Wind-blown dirt settles in. Paint bridges over the opening. Grass clippings from the mower pile against the base of the wall. Death by a thousand small

things.

How a Homeowner Checks and Clears Them

Here's the good news: checking your weep holes is a fifteen-minute job, and you can do most of the clearing yourself.

The visual check. Once a year — spring is a fine time — walk the perimeter of your house and look at the base of the brick. Kneel down. Get your eyes level with the first course. You should see open vertical joints every couple of feet. Shine a flashlight into a few of them. If you see daylight blocked by gray mortar, mud, or mulch, that one's clogged. Check above windows and doors too, and anywhere the brick steps back.

Clearing them. For a lightly clogged weep, a straightened coat hanger or a length of weed-eater line works fine — gently work it in and out to break up the blockage. A can of compressed air (the kind for cleaning keyboards) can blow out loose debris and insect nests. For mulch or soil piled against them, just pull the material back with your hands or a trowel and re-establish that clearance below the weeps.

What NOT to shove in there. Don't ram a screwdriver or a drill bit in with force. If the clog is a mortar dropping, jabbing at it blindly can knock it loose inside the cavity where it falls and blocks the weep next to it — now you've got two clogged instead of one. Don't use a pressure washer nozzle at the weep holes; you'll drive water INTO the cavity under pressure, which is the opposite of the goal. And as I said: don't caulk them, don't mortar them, don't foam them, don't stuff them with anything.

If you've got weeps clogged solid with hardened mortar droppings that won't clear with gentle methods, that's a mason's job. A good mason can open the joint, clear the cavity behind it, and sometimes install a proper weep tube. It usually costs far less than people fear — we're talking a modest repair-visit kind of cost, not a re-brick-the-house kind of cost.

When the Wall Was Built Without Them

Here's the harder conversation. Some houses simply don't have weep holes. I see it most in homes from the seventies and eighties, built fast during boom years by crews cutting every corner they could cut — and in some houses built much later by builders who should have known better. No weeps at the base. No weeps over the windows. The cavity drains nowhere.

What happens? Every rain, water runs down the cavity and pools at the bottom of the wall with no exit. It sits there

against the wood framing and sheathing. Wood that stays wet rots. Wet sheathing grows mold. In winter, trapped water freezes and expands, stressing the brick from the inside. The homeowner sees the symptoms — a musty smell in a room, paint bubbling on an interior wall, baseboards swelling, brick mortar crumbling near the ground — and chases the symptoms for years without ever finding the cause, because the cause is a missing detail nobody can see.

If your house has no weep holes, ignoring it guarantees trouble. It's not a question of if, it's a question of when, and "when" is measured in years, not decades.

The fix is to add drainage, and this is mason's work, not a weekend project. The standard approach is to remove the mortar from selected head joints at the base of the wall and over openings — creating weep holes where they should have been — and to make sure there's flashing behind them to direct the water out. Sometimes that means opening up a section of brick at the base to install proper through-wall flashing, because weeps without flashing just let water dribble down the foundation instead of out and away. A competent mason will evaluate the whole base-of-wall assembly, not just punch holes.

Is it surgery? A little. Does it cost real money? Yes — this is measured in the low thousands for a typical house, depending on how much brick has to come out and go back. But compare that to the cost of rotted framing, mold remediation, and interior rebuilds, and it's the cheapest insurance you'll ever buy for a brick house.

The Mystery Leak

Take a hypothetical homeowner in Fort Worth — I'll call this a composite of several real calls I've run, because I've seen this exact story play out more times than I can count. Nice brick house, about twelve years old. Every time a hard rain blew in from the west, water appeared on the hardwood floor along the base of the living room's exterior wall. Not a flood — just a damp line, right where the floor met the baseboard, and a musty smell that never quite went away.

The homeowner did what most people do: called a roofer. The roofer went up, found nothing wrong, and charged for the visit. A second roofer suggested the windows needed resealing. The homeowner paid to have every window on that wall recaulked. The leak kept coming. Somebody suggested the gutters. Somebody else suggested it was condensation. Two years and a few thousand dollars of guesses, and the damp line kept appearing after every west wind rain.

I walked the outside of that wall and the answer took me

about ninety seconds. The weep holes at the base of the wall — every single one along that elevation — were packed solid. Mortar droppings from construction, mostly, sealed over by years of dirt and a mud dauber condo complex. Water running down the cavity hit the bottom of the wall and had nowhere to go, so it wicked inward through the sheathing and showed up on the floor inside.

I cleared the weeps — gentle work with wire and compressed air, about an hour — and pulled the mulch bed back off the base of the wall where it had crept up over the years. The next big rain came a week later. Dry as a bone inside. Two years of mystery, solved with a coat hanger and a trowel.

That's the thing about weep holes. They're tiny. They're boring. Nobody brags about them at a barbecue. But they are the difference between a brick wall that sheds water for a hundred years and a brick wall that quietly rots your house from the inside out. Go look at yours this weekend. Fifteen minutes. Your house will thank you for the next fifty years.

Chapter 5: Flashing — The Hidden Metal That Saves the Wall

If weep holes are the drain holes of your brick wall, flashing is the plumbing behind them — the hidden metal that catches water inside the wall and steers it out. You've probably never seen your flashing. Most of it is buried inside the wall where it was put during construction, and if it was put in right, you'll never need to see it. But when flashing is missing, skimpy, or failed, it announces itself — in streaks down the brick, in stains under the windows, in water showing up inside the house in places that make no sense until you understand the metal that's supposed to be there.

Fifty years in this trade has taught me that most brick-wall water trouble traces back to one of two things: the water can't get out (weep holes, last chapter), or nothing is steering it out (flashing, this chapter). They're partners. Flashing without weeps is a gutter with no downspout; weeps without flashing are downspouts connected to nothing.

What Flashing Actually Is

Flashing is just shaped sheet metal — or, in newer construction, a flexible membrane material — installed inside the wall at every spot where water collects. Its job is beautifully simple: catch water running down the inside of the cavity and kick it outward, through the weep holes, so it drips harmlessly outside instead of soaking into your house.

The classic materials are galvanized steel, copper, and

aluminum. Copper lasts essentially forever but costs more, so you see it on higher-end work. Galvanized steel is the workhorse — good for decades if it's the right thickness and properly installed. Modern jobs often use self-adhering rubberized membranes, which are less "metal" and more "sticky waterproof skin," but they do the same job. What matters isn't the material so much as the placement: flashing has to be continuous, it has to slope outward, and it has to extend all the way through the wall to the outside face of the brick. A piece of flashing that stops an inch short of the outside is like a diving board that stops an inch short of the pool — the water just falls where it shouldn't.

There's one more detail that separates good flashing from decoration: end dams. Where a piece of flashing ends — at the end of a window head, for instance — the ends need to be turned up so water can't run off the side and into the wall. Without end dams, flashing collects water and then pours it neatly into the worst possible spot. I mention this because it's one of the most common defects I find, and it's invisible from outside.

Head Flashing: The Umbrella Over Every Opening

Every window and door in a brick wall is a hole in the raincoat, and holes need umbrellas. Head flashing sits above the opening — above the window, above the door — running wider than the opening itself. Water traveling down the cavity hits this metal shelf and gets diverted sideways and out through the weep holes above the opening, instead of pouring down onto the top of your window frame.

When head flashing is missing or too short, the symptom is water at the top corners of windows and doors. Homeowners almost always blame the window. They recaulk the window. They replace the window. The leak persists, because the water isn't coming through the window — it's coming through the wall above the window, and the window is just the first thing in its path. I've seen people replace three windows chasing a leak that was a six-foot piece of missing metal.

Sill Flashing: The Safety Net Underneath

Under every window and door, there's a second line of defense: sill flashing. It sits beneath the sill, sloped outward, and its job is to catch whatever water gets past the window unit itself — around the frame, under the sill — and drain it back outside.

Sill flashing failures show up as rot under windows. The sill looks fine from the outside for years while the wood beneath it quietly turns to mush. By the time the sill feels soft or the

paint starts peeling under the window, the damage has been underway for a long time. This is why I tell homeowners: when you're checking windows (we'll get to the full inspection in the next chapter), press on the sill and the trim below it. Soft means water's been getting in, and failed or missing sill flashing is a prime suspect.

Through-Wall Flashing at the Base: The Most Important Piece Nobody Sees

Down at the bottom of the brick wall, where the brick meets the foundation, there should be through-wall flashing — a continuous layer running the full perimeter of the house. All the water that travels down the entire height of the cavity lands here. This one piece of metal handles more water than every other piece of flashing in the wall combined.

It has one job: kick that water out over the face of the foundation, through the base weep holes, so it drips to the ground outside. When it's there and working, the bottom of your wall stays dry inside. When it's missing — and in houses built during certain eras, it's missing more often than you'd believe — water pools at the bottom of the cavity with no exit. That's the slow-motion disaster I described in the last chapter: rot, mold, crumbling mortar near grade, mysterious damp at the base of interior walls.

Base flashing is also the piece most often damaged by later work. A homeowner has a patio poured against the house, and the concrete buries the flashing and the weeps. Somebody regrades the yard and piles soil against the brick. Each of these is a small decision that defeats a critical piece of the wall's drainage. Keep the base of your wall clear and visible, always.

Flashing at Ledges: Where the Wall Steps Back

Anywhere brick steps back — a second-story wall set back from the first, the sloped shoulders of a chimney, a decorative soldier-course ledge — you've got a horizontal surface where water lands and sits. Through-wall flashing belongs at every one of these transitions, with weep holes above it.

Chimney shoulders are the classic trouble spot. The chimney narrows as it goes up, creating little shelves on each side. Without flashing, water sits on those shelves and works into the chimney and the wall below. I look at chimney shoulders on every house I walk, because the staining there tells a story: white crusty streaks (efflorescence — mineral deposits left by evaporating water) on a chimney shoulder are practically a signed confession that flashing is missing or failed.

Kickout Flashing: Where the Roof Meets the Wall

This one deserves its own spotlight, because it's the single most overlooked piece of flashing on two-story houses, and its failure causes some of the ugliest damage I see.

Picture where a sloped roof runs into a taller brick wall — the classic two-story gable end. Rain hits the roof, runs downhill along the roof-wall joint, and arrives at the bottom of that joint carrying a lot of water. Kickout flashing is a small angled piece of metal at the bottom of the joint that "kicks" that roof water OUT, away from the wall, into the gutter.

Without a kickout, all that roof water dumps directly into the brick wall at the bottom of the joint — behind the brick, into the cavity, overwhelming everything. The symptoms are dramatic: a big dark stain on the brick below the joint, rot in the wall, water inside the house at that corner. I can spot a missing kickout from the street on some houses — there's a waterfall stain on the brick telling the whole story.

Here's what makes kickouts maddening: they're small, they're cheap, and they take a competent roofer or mason minutes to install during construction. Their absence is pure oversight — somebody just didn't put the five-dollar piece of bent metal in. But the damage from a missing kickout can run into the thousands, because years of concentrated water in one spot rots framing and sheathing fast.

If you have a two-story house, go look at every place a roof dies into a brick wall. You should see a small angled diverter at the bottom of each joint. If you see the roof just... ending at the wall, with staining below it, put kickout flashing on your fix list near the top.

What Failed Flashing Looks Like From Outside

You can't see flashing directly, but you can read its failures like a trail of clues:

Rust streaks. Orange-brown stains bleeding down the brick from a joint or opening. That means there's steel flashing in there and it's corroding — usually because it was thin material, or it was installed where water sits on it constantly instead of draining.

Dark drip stains under windows and doors. A clean wall with a dirty streak under each window head is water escaping where it shouldn't — often failed or missing head flashing letting cavity water run down the face of the wall.

Water marks under a roof-wall joint. The missing-kickout signature. A stain on the brick or siding directly below where a roof meets the wall.

Efflorescence in lines. White, crusty mineral deposits forming in horizontal lines on the brick — that's water moving through the wall and evaporating, leaving minerals behind. Lines of it at a ledge or above an opening point at flashing trouble.

Missing or visibly short pieces. Sometimes you can see flashing peeking out — at a ledge, under a sill — and see that it stops short of the brick face, or that sections are just gone. Short flashing is barely better than no flashing.

Interior clues. Water stains on the ceiling near an exterior wall, peeling paint on interior walls, musty smells in rooms with brick exterior walls — these are the inside echoes of flashing failures outside.

The Key Lesson: More Caulk Is Not the Answer

Now the most important paragraph in this chapter. When a homeowner sees a leak and the flashing is missing or failed, the instinct is to reach for a caulk gun. Seal the gap. Stop the water. It feels like action. It's the wrong action, and I need you to understand why.

Caulk seals the OUTSIDE of the wall. But the water causing the trouble is INSIDE the wall — running down the cavity behind the brick. Smearing caulk over the exterior is like putting a bandage on your shirt when the wound is underneath it. Worse, it's often actively harmful: caulk applied over weep holes or at the base of the wall can trap cavity water inside, converting a drainage problem into a sealed aquarium. I've opened walls where a homeowner's enthusiastic caulking had created a waterproof tub inside the brick that held water for weeks after every rain.

Flashing replacement is surgery, not caulk. When flashing has failed, the fix is to open the wall — remove the affected courses of brick — install proper continuous flashing with end dams, and lay the brick back. It's real masonry work. It costs real money: for a typical window head or a section of base flashing, you're generally looking at hundreds to low thousands of dollars depending on access and how much brick comes out. A full perimeter of base flashing on a house that never had any is a bigger job, a several-thousand-dollar job. These are ballpark, not quotes — every house is different — but I give them so you understand the scale: this is "hire a mason" money, not "tube of caulk" money, and anyone who

tells you a tube of caulk fixes failed flashing is selling you a future rot repair.

Why Some Houses Were Built This Way

If flashing is so obviously essential, why do so many houses lack it? Three reasons, and they all come down to human nature.

Speed. Flashing takes time. Cutting it, fitting it, turning up end dams, integrating it with the water-resistive barrier behind — it's fussy, skilled work, and it happens at exactly the moment the schedule is tightest. In boom years, when crews were throwing up houses as fast as lots sold, flashing was one of the first things to get "simplified." A crew paid by the brick has no incentive to slow down for metal work nobody will ever see.

Codes caught up late. Requirements for through-wall flashing in residential brick veneer weren't always what they are now, and enforcement varied wildly by jurisdiction. Plenty of houses were built legally, to the code of their day, with flashing details we'd consider inadequate now. The house isn't "wrong" — it's just old enough that its water management belongs to an earlier era.

Nobody inspects what nobody sees. Framing gets inspected. Electrical gets inspected. Flashing, buried in the wall as the brick goes up, often got a glance at best. What doesn't get inspected doesn't get done carefully.

The result shows up ten to twenty years later. That's the cruel timeline of flashing failures: the house looks fine for a decade. Then the stains start. Then the soft sills. Then the interior damp. The homeowner assumes the house is just "getting old," when really it's been quietly taking on water since the year it was built — it just took that long for the damage to surface.

Take a hypothetical homeowner in the Dallas area — a composite of jobs I've done, but the pattern is exact. Brick two-story, built in the late nineties, beautiful house. Around year fourteen, dark stains appeared on the brick below where the garage roof met the second-story wall. A handyman caulked the joint. The stains came back. By year seventeen, there was a soft spot in the drywall inside, right at that corner. When we opened the wall, there was no kickout flashing — never had been — and the sheathing behind that joint was rotted through in a patch the size of a card table. Twenty years of roof water, dumped faithfully into the wall at the same spot, every rain. The repair meant opening the brick, replacing a section of sheathing and framing, installing proper step flashing with a kickout, and relaying the brick. It

was a real bill — the kind with a comma in it. The kickout that would have prevented it would have cost less than a dinner out, back when the house was built.

That's flashing. Invisible, unglamorous, and utterly decisive. You can't see yours, but you can read what it's doing. Learn the stains, respect the metal, and never — ever — try to caulk your way out of a flashing problem.

Chapter 6: Windows, Doors, and Every Hole in the Wall

A brick wall wants to be one continuous raincoat. Every hole punched in it — and a house is full of holes — is a place where water can get in. Windows, doors, dryer vents, hose bibs, exterior lights, cable lines, AC lines, the gas meter: each one is a penetration, and each one depends on two things to stay dry. The first is flashing, which we covered in the last chapter. The second is sealant — the caulk or sealant joint that bridges the gap between the thing poking through the wall and the brick around it.

This chapter is the most hands-on in the book so far, because sealant is the one part of the water-management system that a homeowner can genuinely inspect and, in many cases, maintain themselves. But there's a sequence rule you need tattooed on your thinking first, because getting it backwards is the most expensive mistake in this chapter: **flashing first, sealant second**. Sealant backs up flashing. It does not replace it. If the flashing above a window is missing, no amount of perfect caulking will keep that wall dry — and as we learned last chapter, caulking over a flashing problem can trap water and make things worse.

With that understood, let's walk your house.

The Perimeter Joints: Windows and Doors

Start with the biggest holes: your windows and exterior doors. Around every one, there's a joint where the window or door frame meets the brick. That joint moves — the frame and the brick expand and contract at different rates with temperature, the house settles microscopically, wind flexes things. The joint exists precisely because the two materials can't be rigidly locked together. Sealant fills that joint, staying flexible while keeping water out.

On a well-built house, that perimeter joint is roughly a quarter to a half inch wide, filled with sealant over a foam backer rod (more on that in a minute), neatly tooled. On a lot of houses, what you'll actually find is: original sealant from construction day, now fifteen years old and tired; or a smeared-over second

layer applied by somebody who didn't remove the first; or — my personal favorite — a joint someone filled with mortar, which cracked the first summer because mortar can't flex.

Windows deserve special attention because there are so many of them and because window leaks get misdiagnosed constantly. Water showing up at a window is blamed on the window about ninety percent of the time, and the window is the actual culprit maybe half of that. Remember the last two chapters: water at the TOP of a window usually comes from above — failed or missing head flashing, clogged weeps over the opening. Water at the SIDES usually means the perimeter sealant has failed. Water at the BOTTOM or sill often means sill flashing trouble or sealant failure at the sill joint. The location of the symptom tells you which system failed. That distinction alone will save you from paying for windows you didn't need.

Doors are the same anatomy with heavier use. The perimeter joint around an exterior door takes foot traffic vibration, door slamming, and more direct weather. Check door perimeters the same way you check windows, and pay attention to the threshold — the bottom of the door — where sealant and flashing meet the traffic zone.

The Service Penetrations: Death by a Thousand Holes

Now walk around and count everything else poking through your brick. The typical house has:

Dryer vents and bath fan vents. A metal or plastic hood through the wall with a damper flap. The wall opening is almost always cut bigger than the duct — brick is hard to cut precisely — leaving a ring-shaped gap around it. That gap needs sealant. The vent hood itself should have a small flashing pan or at minimum be sealed at its top and sides (never seal the bottom — water needs a way out).

Hose bibs. The outdoor faucet. Small hole, but it's at the base of the wall where water collects, and the escutcheon plate (the round cover) is rarely sealed. Water runs down the wall, behind the plate, and into the hole. A five-minute sealant job prevents it.

Exterior light fixtures. Fixture boxes mount to the brick, and the top of every fixture is a little shelf where water sits. The box needs to be sealed at the top and sides where it meets the brick. Fixtures mounted without any gasket, slapped straight onto uneven brick, are leak points — brick is not flat, and the gaps behind a fixture are highways for water.

Doorbells, cameras, and sensors. Small, but they penetrate the wall, and their mounting screws create mini-channels. Usually sealed with a dab of silicone at install — which lasts a few years and then gives up.

Cable, satellite, and internet lines. The cable guy drills a hole, runs the line, and moves on to the next job. Sometimes he seals it. Often he doesn't. I've found unsealed half-inch holes with a cable running through them on houses less than five years old. Each one is a direct straw into your wall cavity. If you've had any service installed — cable, satellite dish, security system, holiday light outlets — go check every entry point.

AC line sets. The copper lines running from your outdoor condenser to the house pass through the wall, usually with a larger sleeve or just a rough hole. These are bigger penetrations, often an inch or more, and the gap around them needs proper sealing — not a wad of whatever was handy.

Gas meters and electrical. The gas meter mounts to the wall with piping through it; the electrical service has a mast or a meter box penetration. These are utility territory — you generally shouldn't disturb the equipment itself — but the sealant where pipes and boxes meet the brick is your business, and it's often neglected because everyone assumes it's the utility's job. It isn't.

Count them up on an average house and you're looking at twenty to forty penetrations. Every one is small. Every one matters. Water doesn't need a big door — it needs any door, and time.

Inspecting Sealant: The Look Test

Twice a year — spring and fall are the natural times — walk your house and really look at every sealant joint. You're looking for five failure signatures:

Gaps. Daylight between the sealant and the brick, or between the sealant and the frame. Even a sixteenth of an inch is enough for wind-driven rain. Gaps usually open on one side first — the sealant stays stuck to the frame and pulls away from the brick, or vice versa. That's called adhesive failure, and it means the bond let go.

Cracking. Sealant that has split down the middle or crazed into a network of fine cracks. That's cohesive failure — the material itself gave up, usually from age, sun exposure, or being the wrong product for the job.

Pulling away. Sealant that's still in the joint but visibly detached along one edge, sometimes curling. You can often

see this from a few feet away once you know to look for the shadow line.

Hardening and shrinking. Old sealant goes rigid and pulls back from the edges of the joint, leaving a thin dark line where it used to meet the brick. It looks intact from across the yard and useless from two feet away.

The decoration layer. This is the one that makes me sigh. Somebody — a homeowner, a handyman, a painter — smeared a thick bead of new caulk OVER failed old caulk, or smeared it across a gap three times wider than any caulk can bridge, or painted over everything so it looks finished. From ten feet away it looks sealed. Up close it's caulk performing as sculpture. Caulk applied over failed caulk bonds to failure. Caulk bridging a one-inch gap with no backer rod will split the first time the joint moves. If the "seal" looks lumpy, smeared, or painted, assume it's decoration until proven otherwise.

Inspecting Sealant: The Feel Test

Look with your eyes, then confirm with your thumb. Press the sealant firmly with your fingertip.

Good sealant gives slightly and springs back — it feels like a firm gummy bear. That's the flexibility doing its job; it can stretch and compress as the joint moves.

Bad sealant tells on itself three ways: rock hard (it's cured into plastic and will crack instead of flex), crumbly (it breaks apart under your thumb — it's done), or gummy and sticky (it's breaking down chemically, usually from the wrong product or petroleum contamination). Any of the three means replacement, not repair. You cannot rejuvenate dead sealant. Cut it out and start fresh.

One caution: don't go gouging at sealant that's doing its job. The feel test is a press, not an excavation. If it flexes and springs back and looks bonded on both sides, leave it alone and move on.

When Resealing Is Enough

Most failed sealant joints just need proper resealing — and "proper" is doing a lot of work in that sentence, because most resealing jobs I see skip the steps that make it last.

Cut out the old. All of it. Every bit of failed sealant comes out — a sharp utility knife, a putty knife, patience. New sealant bonds to clean brick and clean frame, not to the corpse of the old job. This is the step everyone skips and the reason most recaulking fails in two years. If the old sealant is

silicone, be extra thorough — nothing, including new silicone, bonds well to silicone residue. There are specialty removers; use them.

Backer rod. For any joint wider than a quarter inch, push foam backer rod into the gap first. It's a round foam rope, sold at every hardware store, and it does three critical jobs: it controls the depth of the sealant (you want the sealant about half as deep as it is wide — a joint twice as wide as it is deep flexes correctly), it keeps the sealant from bonding to the back of the joint (sealant should bond to TWO sides, not three — three-sided adhesion tears the sealant when the joint moves), and it keeps you from wasting half a tube filling a deep void. Skipping backer rod is the number one reason DIY recaulking fails early. A two-dollar bag of backer rod is the difference between a two-year fix and a ten-year fix.

Quality sealant. Use a proper exterior sealant — polyurethane or high-quality silicone rated for exterior masonry joints. Read the label: it should say suitable for brick/masonry, exterior, and flexible. The cheapest tube on the shelf is the most expensive tube you'll ever buy, because you'll buy it again in eighteen months along with your time to redo the work. Avoid bargain acrylic "painter's caulk" for exterior brick joints — it's for interior trim, not weather.

Tool it. After gunning the sealant in, smooth it with a wet finger or a tooling spatula, pressing it firmly against both sides of the joint. Tooling isn't cosmetic — it forces the sealant into full contact with both surfaces, which is what creates the bond. A tooled joint lasts; an untooled bead just sits there.

Done right — full removal, backer rod, quality sealant, tooled — a perimeter joint should give you eight to twelve years. Done wrong — smeared over the old stuff with no backer rod — you'll be redoing it in two, and the wall will have been leaking in between.

When the Penetration Needs a Real Fix

Resealing handles failed sealant. It does not handle failed design. Call a mason or a qualified contractor when you find:

No flashing above the opening. If water is coming in at the top of a window and the head flashing is missing (see Chapter 5), sealant is not the fix. The wall needs surgery — brick out, flashing in, brick back.

An oversized or ragged hole. Cable holes drilled three times bigger than the cable, crumbled brick around a vent, a penetration where the brick is broken rather than cut. Sealant can't bridge structural slop. These need proper repair —

sometimes a mason to cut a clean opening and set the penetration right, sometimes a mounting block that gives the sealant a proper surface.

A deteriorated surround. If the wood trim around a window is rotted, the brick around a hose bib is spalling, or the fixture box is rusted through, you're past sealant. The damaged material gets replaced first; sealant goes on the repaired assembly.

Chronic repeat failure. If you've properly resealed a joint twice and it keeps failing, the joint is telling you something else is wrong — usually missing flashing above it, or movement beyond what sealant can handle, or water arriving in volumes no surface seal can manage. Stop recaulking and diagnose upstream.

Signs of trouble inside the wall. Staining on interior drywall, soft drywall, musty smells near a penetration, or visible rot when you look closely — these mean water has been getting in for a while, and the visible sealant failure is the tip of the problem. This is "get a professional eyes-on" territory. And if you ever see signs that suggest the structure itself is compromised — sagging, significant rot in framing, cracking that steps through mortar in a stair pattern — bring in a structural engineer. That's above a mason's pay grade and above this book's.

The Sequence Rule, One More Time

Flashing first, sealant second. Sealant backs up flashing; it never replaces it.

I repeat it because the temptation runs the other way. Sealant is visible, cheap, and fast — it's Saturday-morning work. Flashing is hidden, costs real money, and requires opening the wall. Every instinct says try the easy thing first. But water obeys physics, not instincts: if flashing is missing above that window, the water is inside the wall before your caulk bead ever meets it. You'll have spent a Saturday making the wall prettier while the cavity keeps filling.

Diagnose in order: is the flashing there and working? (Chapter 5's clue list.) Are the weeps open? (Chapter 4.) THEN look at the sealant. Work from the inside systems outward to the surface. The homeowner who learns this sequence stops wasting money on symptoms and starts fixing causes.

The Homeowner Penetration Inspection Checklist

Here's your walk-around list. Twice a year, spring and fall,

clipboard in hand. For each item: what "good" looks like, and what "fix it now" looks like.

Window perimeters. GOOD: continuous flexible sealant, bonded to both frame and brick, backer rod depth correct, no gaps. FIX IT NOW: gaps at either edge, cracking through the bead, sealant pulling away, hard/shrunken material, smeared-over decoration layers, water staining on the wall below the window.

Door perimeters. GOOD: same as windows, plus a sound threshold seal at the bottom. FIX IT NOW: same failures as windows, plus daylight visible around the frame, threshold sealant cracked or missing, water staining on the floor inside near the door.

Dryer and bath vents. GOOD: hood sealed at top and sides (bottom left open to drain), damper flap moves freely, gap around duct sealed, no lint packed behind the hood. FIX IT NOW: unsealed ring gap around the duct, hood loose or pulling off the wall, damper stuck open or missing (birds and weather enter freely), lint buildup indicating poor exhaust — which is a fire conversation, not just a water one.

Hose bibs. GOOD: escutcheon plate sealed to the brick at top and sides, pipe penetration sealed, no wobble. FIX IT NOW: plate loose or unsealed, visible gap around the pipe, green corrosion streaks on the brick below, soft or stained wall inside behind the bib.

Exterior lights and fixtures. GOOD: fixture gasket intact, box sealed at top and sides to the brick, fixture sits snug with no rocking. FIX IT NOW: no gasket with visible gaps behind the fixture, rust streaks below, fixture loose, insects nesting in the gap — where bugs go, water goes.

Doorbells, cameras, sensors. GOOD: mounts sealed, wire entries dabbed with sealant, snug to the wall. FIX IT NOW: bare screw holes, unsealed wire entry, device pulling away leaving an open hole.

Cable, satellite, and data lines. GOOD: every wall entry sealed around the cable, drip loop in the cable (so water runs down to the loop and drips off instead of following the cable into the hole), unused holes sealed shut. FIX IT NOW: unsealed holes with cable through them, cable running uphill into the hole (water follows it straight in), abandoned holes from old dishes left open.

AC line sets. GOOD: penetration sealed with proper sealant (not spray foam alone — foam is insulation, not a weather seal, though it can back up real sealant), lines supported so they don't saw at the seal. FIX IT NOW: bare foam crumbling

in the sun, visible gap around the lines, lines rubbing the brick and widening the hole.

Gas meter and electrical penetrations. GOOD: pipes and boxes sealed where they meet the brick, no gaps at the wall plate. FIX IT NOW: open gaps around pipes, deteriorated old sealant, any penetration you can see daylight through. (Don't disturb the equipment — seal around it.)

General, every penetration. GOOD: sealant flexible, bonded both sides, flashing above doing its job, weeps below open. FIX IT NOW: any penetration where you find interior staining, soft drywall, or mustiness nearby — that's not a sealant touch-up, that's a diagnose-the-system call.

Take a hypothetical homeowner in Arlington — another composite, because I see this one constantly. She'd lived in her brick house for nine years and never once walked it looking at sealant. When I walked it with her, we counted: eleven windows with failed perimeter sealant, two unsealed cable entries from a satellite dish long removed, a dryer vent with a gap you could slide a pencil through, and a hose bib whose plate hung loose enough to spin. None of it was dramatic. All of it was letting water in, a little at a time, for years. We spent two weekends — proper removal, backer rod, quality sealant, tooled joints — and sealed every one. Total material cost was under a hundred dollars. The water staining on her laundry room wall, the one she'd assumed meant she needed a new roof? Never came back.

That's the moral of this chapter. Holes are inevitable — a house needs windows, vents, and faucets. Leaks are not. Every penetration is a small, inspectable, fixable detail, and the homeowner who walks the wall twice a year with eyes that know what "good" looks like will catch ninety percent of water trouble while it's still a tube of sealant and a Saturday morning, instead of a contractor's invoice with a comma in it.

Chapter 7: Gutters, Downspouts, and the Splashback Attack

I have stood in more living rooms than I can count where the homeowner pointed at a damp wall and said, "Travis, the brick is leaking." And in a whole lot of those living rooms, the brick was not the problem at all. The problem was hanging off the edge of the roof, right above it, overflowing like a waterfall in every rainstorm. The wall was just where the water ended up — and the wall always gets blamed.

Here is the thing most folks never stop to think about: your roof collects an enormous amount of water. A one-inch rain on

a two-thousand-square-foot roof sends over a thousand gallons pouring off that roof. All of that water has to go somewhere. The whole purpose of gutters and downspouts is to catch it and carry it somewhere harmless. When that system fails — a clogged gutter, a downspout that ends at the foundation, a valley dumping sheet flow onto one section of wall — all of that roof water gets delivered straight to your brick. Your wall is being asked to handle a job it was never built to handle. No wall wins that fight for long.

Your Roof Is a Water Machine

Think of your roof as a big funnel pointed at your walls. Every square foot of roof gathers rain and sends it downhill toward the eaves. In a normal rain, the gutters catch it and the downspouts carry it to the ground, away from the house. That is the system working. But gutters fill with leaves, downspouts pull loose, splash blocks get kicked aside by the mower, and extensions disappear. When the system breaks down, the funnel does not stop funneling. It just delivers the water somewhere worse.

I want you to picture this: a clogged gutter over a second-story wall. The rain comes, the gutter fills, and instead of running to the downspout, it spills straight over the front edge. Now you have a solid sheet of water pouring off the gutter, falling twelve or fourteen feet, and hitting the brick wall on its way down. That water is not trickling. It is sheeting. And it is hammering the same section of wall, the same mortar joints, every time it rains. A wall is built to shed weather, not to stand under a waterfall. Given a few seasons of that, the mortar joints saturate, water pushes through to the back side of the brick, and you start seeing damp spots on the interior wall. The homeowner sees a wall problem. I see a gutter problem wearing a wall costume.

Clogged Gutters: The Waterfall Nobody Ordered

Clogged gutters are the most common thing I run into, and they are also the most fixable. Leaves, twigs, shingle grit, the occasional tennis ball — it all collects in the gutter, and over time it forms a dam. Water hits the dam, has nowhere to go, and spills over the side. It usually spills on the outer edge, which puts it falling against or onto the wall below.

The telltale signs are easy to spot from the ground. After a rain, look for streaking or staining on the brick or siding below the gutter — dark vertical stripes that were not there a year ago. Look for a drip line in the landscaping right under the eave, or mulch that is washed out and scattered. Look for gutters that visibly sag between the hangers, because a gutter full of wet leaves and standing water is heavy, and that

weight pulls it out of shape, which only makes the overflow worse. And in winter, if you see icicles hanging thick off one section of gutter while the rest is clean, that section is probably dammed up.

Cleaning a gutter is not glamorous work, but it is some of the cheapest insurance your house has. Most houses need their gutters cleaned at least twice a year — once after the spring tree debris drops, once after the fall leaves. If you have big oaks or pecans overhanging the roof, you may need a third cleaning. Do it from a ladder on solid, level ground, with someone footing the ladder, or hire it done — the job runs in the tens to a couple hundred dollars for most homes, which is nothing compared to a wall repair.

Downspouts That Betray You

Downspouts do a simple job: take the water from the gutter and put it on the ground somewhere safe. "Somewhere safe" means away from the house. What I find constantly is downspouts that do the opposite.

The classic failure is the downspout that ends six inches above the flower bed right against the foundation. The gutter did its job, the downspout did its job, and then the last two feet of the system poured four hundred gallons of roof water directly against the bottom of your brick wall. That is concentrated roof water joining the splashback zone and the ground-line problems we will get into in the next chapter, all stacked on one spot. The wall there does not stand a chance.

Another common one: the elbow at the bottom of the downspout is missing or pointed the wrong way. The elbow is the little bend at the bottom that turns the water out away from the house. Without it, the water shoots straight down into the ground next to the wall, carving a little pool that soaks the bottom courses of brick. And then there are the downspouts that used to have extensions but do not anymore — the extension got hit by the mower, stepped on, chewed by the dog — so the water dumps at the wall again.

What you want at the bottom of every downspout is a deliberate plan for the water. A splash block is a simple concrete or plastic tray set under the downspout outlet that catches the water and flings it out away from the house. It works, but only if it is actually there and only if the ground under it slopes away. Better still is an extension — a length of downspout or pipe that carries the water four, six, eight feet out from the house before releasing it. Best of all in many situations is a buried extension that takes the water underground and releases it well out in the yard through a pop-up emitter or a daylight outlet. The principle is the same in every case: roof water should never be released against

your wall. It should be released far enough away that it cannot run back.

The Valley Problem

Roof valleys deserve their own warning, because they concentrate water in a way that surprises people. A valley is the inside corner where two roof planes meet. In a rain, all the water from both roof planes runs down into that valley and pours off the bottom of it in a concentrated stream. If that valley sits above a section of brick wall — which happens a lot on two-story homes and additions — you can get a tremendous volume of water sheeting down onto that one section of wall.

I have seen walls where one four-foot-wide section was visibly deteriorating — mortar soft, brick spalling — while the rest of the wall looked brand new. Every time, there was a roof valley right above it. The fix in those cases is not brick work first. The fix is managing that valley's discharge: sometimes a kick-out flashing or a diverter to keep the water off the wall, sometimes extending the valley's water past the wall, sometimes a gutter adjustment. You have to break the pattern before you repair the damage, or you will repair it again.

Splashback: The Enemy at the Bottom

Even with perfect gutters and downspouts, the bottom of your wall takes a beating from below. Rain hits concrete patios, driveways, and sidewalks, and it splashes back up against the brick — sometimes a foot or two high. That is splashback. The lower courses of brick get soaked over and over, and they never fully dry between storms. That is why the bottom of walls is where I see the most mortar deterioration, the most spalling brick, the most water intrusion.

Hardscaping makes it worse. A wide concrete patio butted right up to the brick is a splash factory — every rain turns it into a spray against the wall. This is not a design flaw you can easily undo, but you can manage it: keep the wall surface in good shape, keep mortar joints sound, keep the ground sloping away so the splashed water drains off instead of pooling, and do not let mulch pile against the splash zone holding moisture in.

Texas Storms Do Not Knock

Here in Texas, rain does not arrive politely. We get sudden, violent storms that dump two inches in twenty minutes, with wind driving the water sideways into walls. A gutter system that handles a gentle all-day rain fine can be completely overwhelmed by a Texas gully-washer — water pouring over the gutters, downspouts maxed out, valleys firing like hoses.

These storms find every weak spot in minutes. The half-loose downspout, the gutter with the slow dam building in it, the extension that is kind of sort of pointing away — a real storm exposes all of it at once.

That is why I tell homeowners to inspect their roof drainage before storm season, not after. Walk around the house after the first big rain of the season and watch what the water is actually doing. Do not guess from memory — look. You will learn more in one good rain than in a year of wondering.

What a Proper Discharge Setup Looks Like

Put it all together and a proper setup is simple to describe: gutters clean and firmly hung, pitched correctly so water actually runs toward the downspouts. Downspouts solidly connected, no leaks at the joints, sized and numbered to carry the roof's water without overflowing. Every downspout terminating with a plan — splash block at minimum, extension better, buried extension best — releasing water well away from the house onto ground that slopes away. Valleys managed so they are not fire-hosing a section of wall. It is not complicated. It is just maintenance, done on a schedule instead of after the damage.

The Wall That Was Innocent

Take a hypothetical homeowner in Arlington. Call it a two-story brick home, maybe fifteen years old. She notices a damp patch on the upstairs bedroom wall after rains — not every rain, but the heavy ones. It gets a little worse each year. She calls me thinking she needs brick work, maybe some repointing, maybe something worse. I walk the outside, and before I even look at the wall closely, I look up. Right above that bedroom wall, the gutter is packed solid with oak leaves — a complete dam. Every heavy rain, water backs up, pours over the front edge, and sheets down the wall. I look at the brick itself: the mortar joints in that section are saturated and starting to soften, but the rest of the wall is fine. The pattern of the damage matches the pattern of the waterfall exactly.

We did not touch the brick that day. We cleaned the gutter, rehung a sagging section, and added a downspout extension to get the water properly away. I told her to watch the wall through the next few rains. The damp patch dried up and never came back. The wall was innocent. The roof drainage was the criminal. Had she let that go two more years, those saturated joints would have needed real repair work — the kind that costs real money. Instead it cost her a gutter cleaning and some hardware. This is why I always look up before I look at the wall. Water follows gravity, and gravity starts at the roof.

How to Inspect Gutters and Downspouts From the Ground

You can do a real inspection without ever leaving the ground, and I want every homeowner reading this to do it twice a year. Here is how.

First, wait for a rain — or make your own with a garden hose on the roof. Walk the full perimeter of the house while the water is running. Look up at the gutters: is water spilling over the front edge anywhere? Is it dripping from a joint or a corner? Is any section sagging or pulling away from the fascia? Then look down: where is each downspout releasing its water? Is the elbow there and pointed away from the house? Is the splash block in place or has it wandered off? Is the extension intact? Does the released water run away from the house or pool against it? Look at the wall itself: are there fresh dark streaks under the gutters that were not there before? Is the mulch washed out in a line under an eave?

Second, on a dry day, walk the same route and look for the after-effects: stains on the brick below the gutters, green algae growth on the wall (algae loves a wall that stays wet), eroded spots in the soil or mulch under the downspouts, and any downspout sections that are dented, loose, or disconnected.

Third, check the valleys if you can see them from the ground. After a rain, you should be able to see where the valley water lands. If it is sheeting down a wall, you have a problem to solve.

Write down what you find, or better yet take photos with your phone. Date them. Then fix what you find — clean the gutters, reconnect the downspout, replace the missing elbow, reposition the splash block. Most of these fixes take an afternoon and cost little. And every one of them is water that will never reach your wall.

Your roof is going to collect that water whether you manage it or not. The only question is whether you put it where you want it, or let it pick its own target. Make it go where you want it. Your walls will thank you for the next fifty years.

Chapter 8: The Ground Line: Grade, Mulch, and Soil Against Brick

If you asked me where most water intrusion in brick walls starts, I would not point at the roof or the middle of the wall. I would point down — at the bottom two feet, right where the

brick meets the ground. That narrow band is where water lives, where soil presses, where mulch holds moisture, and where sprinklers spray day after day. It is the most abused part of every wall, and the least inspected. I have spent fifty years looking at walls, and I can tell you plainly: win the battle at the ground line, and you prevent more water damage than any other single thing you can do.

Negative Grade: The Funnel Toward Your Wall

Grade is just the shape of the ground around your house. Proper grade slopes away from the house — water lands on the ground and runs off away from your walls. Negative grade is the opposite: the ground slopes toward the house. And negative grade is a funnel that delivers every rain straight to your brick.

It happens more often than you would think, and it usually happens slowly. When a house is built, the ground is graded to slope away. Then years pass. Flower beds get topped up with soil. Mulch gets added every spring. The soil settles. Somebody installs edging that traps water. The neighbor's yard drains onto yours. And one day, without anyone deciding it, the ground next to your wall is lower than the ground five feet out — water runs toward the house instead of away from it. It pools against the brick. It sits there. It soaks the bottom courses, wicks up into the wall, and finds its way inside.

The signs are straightforward once you know to look. After a rain, do you see standing water against the house? Is the soil right at the wall darker and wetter than the soil farther out, long after everything else has dried? Is there a visible low spot or trough running along the wall where water sits? Do you see water stains or a tide line on the brick — a horizontal mark showing where water regularly stands? These are all the fingerprints of negative grade.

The fix is regrading: reshaping the soil so it slopes away from the house. The general rule of thumb in the trade is that the ground should fall away from the house at a noticeable slope for the first several feet — enough that you can see it with your eyes and water has no doubt which way to go. This is not delicate work. It is a shovel, a wheelbarrow, and some soil, or a load of topsoil and a rake for a bigger job. Pull soil away from the high spots farther out, build up the low spots near the house, and make sure the finished surface carries water off. It is honest labor, it is not expensive, and it changes everything about how water behaves at your ground line.

Mulch: The Quiet Brick Killer

Now let us talk about mulch, because mulch is the thing

homeowners love most and walls fear most. I understand the love. A fresh bed of mulch looks sharp, holds moisture for the plants, and keeps the weeds down. But year after year, that mulch gets topped up. An inch this spring, two inches next spring. And the bed creeps up the wall.

Here is what that does to your brick. First, it buries the weep holes and the flashing at the base of the wall. Weep holes are the little openings at the bottom of a brick wall that let water drain out from behind the brick — they are the wall's exit doors. Flashing is the material at the base that directs water toward those exits. When mulch and soil pile above that line, the exit doors are buried. Water that gets behind the brick has nowhere to drain, so it sits in the wall. Second, mulch holds moisture against the brick constantly. Mulch is designed to hold water — that is its job for the plants. Pressed against brick, it keeps the bottom courses damp all the time, and brick wicks that moisture upward. I have seen walls where the moisture had wicked two, three feet up the brick, all from a mulch bed that was just a few inches too high. Third, buried brick and mortar stay wet, and wet mortar softens and deteriorates over time.

The rule is simple: keep soil and mulch well below the brick line. The brick should start well above finished grade — there should be a clear, visible gap of masonry-free space between the ground and where the brick begins. In most construction around here, that means the bottom of the brick sits a good hand's width or more above the soil, with the weep holes and flashing fully exposed and open to the air. When you look at the base of your wall, you should be able to see the weep holes. If you cannot see them because mulch or soil is covering them, that is a problem to fix today, not next spring.

Pulling mulch back is free and takes an afternoon. Rake it away from the wall until you have proper clearance and the weep holes are breathing again. Then maintain it — every time you refresh the mulch, check the line. Do not let the bed creep.

Sprinklers: The Daily Soaking

Sprinkler systems are wonderful for lawns and terrible for brick walls when the heads are aimed wrong. I have seen sprinkler heads parked two feet from a wall, spraying the brick directly, running every morning for twenty minutes, year after year. That is the equivalent of a light rain hitting the same section of wall every single day for a decade. No wall is built for that.

Daily soaking does several kinds of damage. It keeps the brick and mortar saturated, which accelerates every other problem — freeze-thaw damage, mortar softening, efflorescence (those

white mineral deposits that bloom on the surface). It drives water into any tiny crack or weak joint and keeps it wet. And in winter, a sprinkler that keeps running soaks the wall right before freezes, which is the worst possible timing for freeze-thaw damage.

Walk your sprinkler zones and watch where the water actually lands. If any head is hitting the wall, adjust it, redirect it, or replace it with a head that throws away from the house. This is a ten-minute fix per head in most cases. Also check the timing — if your system runs in the evening, the wall stays wet all night. Morning watering gives the wall the day to dry. These are small adjustments with big payoffs.

How to Check Your Own Grade

You do not need surveying equipment to check your grade. You need your eyes, a level, and a straight board.

The eye test comes first. Stand back from the house and look at the ground line. Does the ground visibly fall away from the house? Or does it look flat, or worse, does it dip down toward the wall? Look after a rain for the real answer — water never lies about which way ground slopes. Where it pools is where the low spots are.

For a better read, take a six-foot straight board — a 2x4 works fine — and a carpenter's level. Lay the board on the ground with one end touching the house at the ground line and the other end pointing out into the yard. Set the level on the board. If the bubble shows the board sloping down away from the house, you are in good shape. If it is level or sloping back toward the house, you have found your problem. Do this in several spots around the house, because grade can be fine on three sides and wrong on the fourth.

While you are down there, check your clearance at the same time. Look at where the brick starts relative to the soil. Can you see the weep holes? Is there a clear gap? Put your hand against it — if soil or mulch is touching the brick or covering the bottom of the wall, pull it back. This one check takes twenty minutes and tells you more about your wall's future than almost anything else.

Edging That Works With You, Not Against You

Landscape edging is meant to keep mulch in the bed and off the lawn. But the wrong edging, or edging installed wrong, can trap water against the wall. A solid edging strip buried deep along the house side of a bed can act like a little dam, holding water in the bed against the brick. If you use edging, make sure water can still move through and away. And

whatever you do, do not let the bed itself become the high point — the bed should never be mounded up against the wall. Keep it level or sloping away, keep the clearance, and the edging is just a border, not a bathtub.

The Flower Bed That Ate a Wall

Take a hypothetical homeowner in Fort Worth. A lovely woman with a real gift for gardening — her front beds were the pride of the street, roses and all. She had been topping up the mulch every spring for about eight years, and each year the bed got a little deeper and crept a little higher up the brick. Nobody told her there was a limit.

She called me because the brick at the front of the house was crumbling — the bottom courses were soft, the mortar was powdering out, and there were damp spots on the inside of the front wall. When I got there, I could not see a single weep hole along the front of the house. The mulch was piled a good six inches above where the brick started — the bottom of the wall had been buried for years. I pulled back the mulch with my hands and the brick underneath was dark, saturated, and soft to the touch. The mortar joints had been sitting wet for so long they were failing. That flower bed had been quietly destroying that wall for years, one spring top-up at a time, and nobody knew because the damage was happening behind the mulch where nobody looked.

The repair was real work — the damaged bottom courses had to be rebuilt, proper clearance restored, the bed regraded. It was the kind of repair that runs into the thousands of dollars, all of it preventable. After we fixed the wall, we pulled the bed back, set a hard rule on the mulch line, and redirected two sprinkler heads that had been soaking the wall. That was two years ago, and the wall has been dry ever since. She still has her roses. She just keeps the mulch where it belongs now.

I tell that story because it is the most common expensive mistake I see, and it is also the most preventable. Nobody means to bury their wall. It just happens an inch at a time until the wall is drowning.

Your Ground-Line Routine

Here is what I want you to take from this chapter. Twice a year, walk your ground line. Check the grade with your eyes and your level. Check the clearance — weep holes visible, mulch pulled back, no soil touching brick. Check the sprinklers — no head soaking the wall. After every big rain, glance at the base of the walls for pooling. These are small habits. They cost nothing. And the bottom two feet of your wall is where most water intrusion starts, which means it is also where most water intrusion can be stopped — before it

ever becomes a repair.

Chapter 9: Cracks Are Doors Water Walks Through

A crack in a brick wall is never just a crack. It is a door — and water is always looking for doors. A hairline crack in a mortar joint might look like nothing, a little pencil line you barely notice. But to water, it is an open invitation. Water gets in, and then winter comes, the water freezes and expands, and that little pencil line gets pried a little wider. Next winter it happens again. And again. Every crack in a brick wall is either being watched and maintained, or it is being worked on by water — there is no third option.

I have been reading cracks in brick walls for fifty years, and I want to teach you to read them too. Not to make you a mason — but so you know which cracks are normal and fixable, which ones need watching, and which ones mean it is time to call a structural engineer. That last one matters more than everything else in this chapter, so we will come back to it plainly.

What Causes Cracks in the First Place

Brick walls crack for a handful of honest reasons, and most of them are not emergencies. The house settles — all houses settle a little in the first years, and the ground under a house moves with the seasons, especially in Texas clay soils that swell when wet and shrink when dry. That movement stresses the mortar joints, and the joints crack. That is the wall doing what it is supposed to do: the mortar gives a little so the brick does not have to.

Temperature plays its part too. Brick and mortar expand in the summer heat and contract in the cold. Long walls without enough expansion joints will crack from that thermal movement alone. Add in the occasional bump — a settling step, a tree root pushing, a downspout dumping water that softens the soil under one section — and you get cracks. The crack itself is usually the symptom, not the disease. The question is always what is moving, and whether it has stopped moving.

The most common pattern I see is the stair-step crack — a crack that follows the mortar joints in a zigzag, stepping up or down across the wall like a little staircase. It happens because the crack follows the weakest path, and in a brick wall the weakest path is the mortar joints. A stair-step crack over a window or door, or running from a corner down toward the foundation, is the classic settlement pattern. The other common one is a straight vertical crack through mortar joints,

or a crack that runs right through the middle of bricks — cracking through the brick itself rather than the joints is worth noting, because it takes more force to break brick than mortar.

Hairline Cracks vs. Serious Cracks: How to Tell the Difference

This is the part every homeowner needs, so let me be as plain as I can.

A hairline crack is thin — about the width of a credit card edge or less. It is usually in the mortar joint, not through the brick. It does not have displacement, meaning one side of the crack is not pushed out past the other — if you run your finger across it, the surface feels flat. It is stable, meaning it is not getting longer or wider over time. These cracks are common, they are usually cosmetic, and they are repairable. A mason can rake out the old mortar and tuck in new mortar — repointing — and the wall is sound again. Most of the cracks I get called about are hairline cracks, and most of them are routine.

A serious crack is a different animal. It is wide — you can fit a coin edge or a pencil into it, roughly a quarter inch or more. It has displacement — one side is pushed out, in, up, or down relative to the other, and you can feel the offset with your finger. It is growing — longer this year than last year, wider than it was. It runs through bricks, not just mortar joints. It is a stair-step crack that keeps extending. Or it comes with friends: doors that stick, windows that will not close right, floors that feel uneven — signs that something is moving beyond just the wall surface.

Here is the critical rule, and I need you to hear it clearly: hairline cosmetic mortar cracks are common and repairable — a mason's work. But widening cracks, cracks with displacement where one side has pushed out, stair-step cracks that keep growing, and cracks paired with sticking doors or windows are signs to call a structural engineer. That is beyond a mason's call, and it is beyond yours. A structural engineer is trained to determine what is moving, why, and what it will take to stabilize it. I am a mason with fifty years of hands-on field experience — I know brick, mortar, and water. When a crack suggests the structure itself is moving, I tell the homeowner to get an engineer, and I do not guess past that line. You should not either. This is not about selling you work. It is about the fact that some problems need a different expert, and knowing which expert is part of the job.

Freeze-Thaw: The Wedge That Never Rests

Even a harmless hairline crack becomes a problem if it sits

open through winter, and here is why. Water gets into the crack — rain, splash, condensation, it does not matter. Then the temperature drops below freezing, and the water in that crack freezes. When water freezes, it expands — by about nine percent — and it expands with tremendous force. That expansion pries the crack a little wider. Then it thaws, more water gets into the now-slightly-wider crack, and the next freeze pries it wider again. Every winter is a slow-motion wedge being hammered into your wall, one freeze at a time.

This is the mechanism behind so much of the brick damage I repair. It is not one dramatic event. It is thirty freeze-thaw cycles a winter, each one opening the crack a fraction more, each one letting a little more water in next time. A hairline crack that a mason could have repointed in an afternoon becomes a wide-open joint. A wide-open joint lets in enough water to saturate the wall behind it. Saturated brick spalls — the face of the brick pops off. What started as a pencil line ends as damaged brick that has to be cut out and replaced. Water is patient, and winter is its hammer.

Texas winters are sneaky about this. We do not get the months-long deep freeze of the north, so people think freeze-thaw is not their problem. But we get exactly the worst pattern for it: freeze, thaw, freeze, thaw, over and over. A northern wall freezes once and stays frozen. A Texas wall cycles dozens of times a winter. Every cycle is a hammer blow on every open crack.

This is why I say: never let a crack sit open through a wet season. If you find a crack in the fall, get it sealed or repointed before winter. Water will be working on it all winter long, and what you could have fixed cheaply in October becomes a real repair by March. The calendar is part of crack maintenance.

How to Watch a Crack: Mark It, Date It, Measure It, Photograph It

Not every crack needs immediate repair — but every crack needs watching. Here is the simple system I teach homeowners, and it takes five minutes.

Mark it. Put a small pencil mark at each end of the crack, right on the mortar. If the crack grows past your marks, you will know.

Date it. Write the date next to your marks, or write it on a piece of tape stuck nearby. The date turns a crack from a worry into a record.

Measure it. At the widest point, measure the width. A simple

way: see what fits. A credit card edge is about the thickness of a hairline crack. A dime is thicker. A pencil is a serious crack. Write down what fits and where. Measure the length too, end to end.

Photograph it. Take a clear photo with your phone, straight on, with something for scale — hold a coin or a ruler next to it. Photos let you compare over time in a way memory cannot.

Check it seasonally. Every spring and fall, go look at your marked cracks. Compare to the photo. Has it grown past the marks? Has it widened? Has a new crack appeared nearby? A stable crack that has not changed in two years is a very different thing from a crack that is longer every time you look. The one that is growing is the one that needs attention — and if it is growing, widening, displacing, or bringing sticking doors and windows with it, that is your signal to call the structural engineer, not to keep watching.

Keep it simple — a note on your phone with the date, the measurements, and the photo. That little record is worth more than any guess. When you do call someone — a mason for a stable hairline crack, an engineer for a growing one — that record tells them exactly what has been happening.

The Small Crack That Became a Big Repair

Take a hypothetical homeowner in Garland. He noticed a thin crack in the mortar above his garage — a little stair-step, maybe two feet long, hairline thin. It was 2022. He meant to get it looked at. Then it rained, then life happened, then it was 2023 and the crack was a little longer. He meant to get it looked at. Then 2024 — three rainy seasons the crack had sat open — and now it was wide enough to fit a pencil, the joints around it were saturated, and the brick above the garage door had started to shift. Water had been walking through that door for three years, and every winter had pried it wider.

By the time he called me, it was not a repointing job anymore. The damaged section had to be taken down and rebuilt — brick removed, wall rebuilt, the whole section redone. A repair that would have been a modest repointing job in 2022 became a major rebuild in 2024. Same wall, same crack, same homeowner — the only difference was three years of water and winter doing their work through an open door.

I do not tell that story to scare anybody. I tell it because it is the most ordinary story in my trade. Nobody ignores a crack on purpose. It just sits there, looking small, while water does its patient work. The lesson is not that every crack is an emergency — most are not. The lesson is that every crack is a door, and doors that stay open let things in. Mark it, watch it, and do not let it sit open through the wet season.

Your Crack Routine

Walk your walls twice a year — spring and fall — and look at every crack you can find. Mark the new ones, check the old ones against your photos, and note any change. Get hairline cracks repointed before winter; do not give freeze-thaw a season to work on them. And remember the line: stable hairline mortar cracks are a mason's repair. Widening cracks, displaced cracks, growing stair-step cracks, and cracks with sticking doors or windows mean calling a structural engineer. Knowing which side of that line you are on is the whole game — and now you know how to tell.

Chapter 10: The Fixer's Playbook: What a Real Repair Looks Like

I've been on ladders and scaffolding for fifty years, and I can tell you something most homeowners never hear until it's too late: there's a world of difference between a repair that lasts and a repair that just looks like one. The first kind you do once. The second kind you do every few years, and every time it comes back, it costs more than the time before. This chapter is the one I'd hand to my own family if they were hiring a mason. It's how a real repair is done — step by step, the way I taught my crews to do it — and how to tell whether the person you're about to hire knows it too.

Repointing Done Right: It's Demolition Before It's Repair

Repointing — cutting out old, failed mortar and packing in fresh mortar — is the most common brick repair in America, and the most commonly done wrong. The wrong way is fast and cheap: a man with a grinder scores a shallow line, smears new mortar over the surface, and drives off. That surface-only work lasts about as long as paint on a rainy windowsill. The joint underneath is still cracked, still loose, still drinking water. The new skin pops off in a season or two, and now you've paid for the illusion of a repair and still own the original problem.

Real repointing starts with removal, not addition. Failed mortar has to come out to the proper depth — about an inch deep, or down to sound, hard material if the damage runs deeper. We rake it out with hand tools or a careful grinder wheel, always working to keep the blade from chewing the edges of the brick itself. That takes time and patience, which is exactly why the cheap bids skip it. But there's no shortcut here. New mortar bonded to crumbled, dusty old mortar is a repair built on a crumbled foundation. It will fail. It's only a question of when.

Matching Mortar: Color AND Composition

Once the old mortar is out, the next decision separates the craftsman from the handyman: what mortar goes back in? And here most people only think about color. Yes, color matters — nobody wants a wall with a hundred joints screaming "repair" every time the sun hits it. My company MortarMagic does mortar color matching, and I'll tell you plainly that a well-matched joint should disappear into the wall. We work with pigments and aggregates until the repair reads as the same wall, not a patch quilt.

But color is only half the match. Composition matters just as much, and this is the part that costs people their brick. Here's the rule I drill into every apprentice: the new mortar must be softer than or equal in strength to the original. Sounds backward, doesn't it? You'd think stronger is better. It's not.

Old brick — especially brick made before the mid-1900s — is relatively soft. It moves with heat and cold, it flexes a little with the seasons. The original lime mortar was soft too, and that softness was the point: when the wall moved, the mortar gave. Modern Portland cement mortar is hard as stone. Lay hard mortar against soft brick, and the next time the wall moves, the brick loses the fight. The mortar doesn't crack — the brick does. I have torn apart walls all over Texas where a well-meaning repair with hard modern mortar shattered the faces right off old brick. The faces spall off, the water pours in, and a simple repoint turns into a rebuild.

So when a mason tells you what mortar he's using, listen. If the answer is "mortar mix from the bag, same stuff for every job," that's not a match. A real mason matches color AND strength. On old lime-mortar walls, that means a lime-based or lime-rich mix. On modern brick, a standard modern mix is fine. The test is simple: ask him what he's using and why. If he can't explain the strength match, he doesn't understand what the mortar is actually doing.

Joint Tooling and Curing: The Invisible Half of the Job

Tooling is the shaping of the finished joint — the moment the mason runs a jointer along the fresh mortar and gives it its profile. A concave joint, the gentle curved groove you see on most brick walls, sheds water and packs the mortar tight against the brick. Tooling compresses the surface of the mortar, closing the tiny pores and making the joint denser and more weather-resistant. It's a small thing, done with a small tool, and it matters enormously.

Curing is the part nobody sees and everybody skips. Mortar doesn't dry like paint — it cures through a slow chemical

reaction that needs moisture and time. Hot Texas sun can dry the surface of fresh mortar in an hour while the inside stays green and weak, and that mismatch cracks the joint before it's even lived a week. Proper curing means protecting fresh work from scorching sun and wind, sometimes misting it, sometimes tenting it — doing whatever the day demands so the mortar hardens the way chemistry intended. A mason who repoints a south wall at noon in August and walks away has done half a job.

Restoring Weep Holes During Repair

Weep holes — those small gaps at the bottom course of brick, above windows and doors — are the wall's drainpipes. Over the years they get plugged with mortar droppings, wasp nests, paint, mulch piled too high, and sometimes by a previous mason who just didn't know better and filled them in. A repointing job that doesn't address the weep holes is a repair that leaves the drainage broken.

During a real repair, we check every weep hole. We clear the plugged ones, and where the wall never had them — or where they're buried behind decades of grade buildup — we create or expose them. On some older homes we install weep vents, small vented tubes that keep insects and mortar out while letting water drain. This is unglamorous work. Nobody drives by and admires your weep holes. But they are the difference between a wall that dries out after a storm and a wall that holds water against your framing for weeks.

Flashing Replacement Surgery: Why It Costs What It Costs

Sometimes the diagnosis is flashing — the metal that should be tucked into the wall to catch water and kick it out — and it's missing, rusted through, or installed wrong. Replacing flashing is wall surgery. There is no spray-on fix, no magic caulk. You open the wall: brick has to come out in courses, the old flashing (or the empty cavity where it should be) gets exposed, proper flashing goes in with the right laps and end dams, and then the brick goes back in, matched and rebuilt.

That is labor, access, and care. Labor: a skilled mason, hour after hour, removing brick without breaking it, because reusing the original brick is how the repair disappears. Access: scaffolding on a two-story wall, landscaping protected, maybe a deck or a fence worked around. Care: every course leveled, every joint matched, the wall put back together like it was never opened.

This is why a flashing repair costs what it costs, and why the low bid that skips it is not a bargain. When I price flashing surgery, I'm pricing the mason-days, the scaffolding, the brick

cleaning and relaying, and the mortar matching. It is genuinely expensive work. It is also genuinely permanent when done right — water goes where the flashing sends it, every storm, for decades. Compare that to the bid that caulks the symptom for a tenth of the price and fails by spring. You didn't save money. You rented the problem.

Sealant Renewal Done Properly

Sealant — the flexible caulked joints around windows, doors, and where brick meets other materials — has a working life. Sun and weather harden it, it cracks, it pulls away from one side. Renewing it is not a matter of smearing a fresh bead over the old one. Old sealant comes OUT, all the way out, down to clean surfaces. Then backer rod — a foam rod that controls the depth of the joint — goes in, because sealant only works when it's the right depth and bonded on two sides, not three. Then the right sealant for the application goes in: exterior-grade, UV-stable, matched to the joint's movement.

A bead over old sealant is a patch on a patch. It lasts until the old material underneath lets go, which is already underway. Full renewal takes longer and costs more than a tube of caulk and twenty minutes. It's also the only version that works.

When the Lintel Fails

Steel lintels carry the brick above every window and door. When they rust, they expand, and that expansion lifts and cracks the brick above them — the classic stair-step crack over a window. When they sag, the brick settles with them. A rusted, sagging lintel isn't a tuck-pointing job; it's a structural support that has to be replaced.

Replacing a lintel means supporting the brick above, cutting out the failed steel, setting new support, and rebuilding the masonry. For failed lintels I use LintelLOCK, my field-developed lintel replacement system. I mention it once because it's my own answer to this exact problem, developed over years of watching standard replacements come back with the same rust in the same decade. Whoever does your lintel work, the questions are the same: how will you support the brick during the replacement, what are you putting back in, and how is it protected against the rust that killed the last one?

How to Vet a Mason: Questions and Red Flags

Hire slowly. A good mason is an investment, and the vetting is simple.

Ask these questions:

- "How will you match my mortar?" Listen for color AND strength. "Mortar's mortar" is a fail.
- "Where will you put flashing?" If the job involves water entry, flashing has to come up. If he never mentions it, he's treating symptoms.
- "How do you handle weep holes?" He should check, clear, and restore them, not fill them in.
- "What do you remove before you repair?" Removal to proper depth is the mark of repointing done right.
- "Can I drive past some of your local work?" Then actually drive past it. Old repairs tell the truth that new ones can't.

Red flags:

- The caulk-everything bid. If the whole proposal is tubes of sealant, he's not repairing — he's postponing.
- No questions about flashing on a water-intrusion job. The flashing question IS the diagnosis.
- Pressure tactics. "This price is only good today." A real repair is worth a week's thought.
- No local references you can drive past. If all his work is "out of town," you can't verify it.

What a Good Repair Costs — In General Terms

Let's talk money honestly, without fake precision. Every wall is different, so anyone quoting you a firm price over the phone is guessing.

Cost drivers: access (a first-floor wall beside a driveway vs. a third-story gable over a sloped roof — scaffolding and lift time are real money), height (everything gets slower and more expensive the higher it goes), amount of teardown (repointing joints is one world; opening a wall for flashing surgery is another), and matching work (custom mortar color matching and relaying original brick cost more than slapping up new).

Broad ballparks: a straightforward repoint of one wall section is a modest job — real money, but the kind of money a homeowner plans for. A flashing replacement that opens a wall and rebuilds it is a different world of money entirely — multiple mason-days, scaffolding, teardown and relay. They're not the same category, and they shouldn't be compared.

And the rule that has held true for fifty years: the cheapest bid is usually the most expensive repair. The cheap bid skips the depth of the rake-out, skips the mortar match, skips the flashing, caulks the symptom, and leaves you the problem — now worse, and now with a failed repair on top of it. Pay for the real repair once. That's the cheapest money you'll ever spend on your brick.

Chapter 11: The Wall Killers: What NOT to Do

After fifty years in this trade, I've seen more brick walls destroyed by good intentions than by storms. The wall almost never fails on its own. It fails because somebody — usually with the best motives in the world — did something to it that seemed right and backfired. This chapter is the rogues' gallery: the most common mistakes I see, why each one backfires, and what to do instead. Read it before you hire anyone to "fix" your brick, and before you pick up a brush, a pressure washer, or a tube of anything yourself.

The Paint Trap: Ordinary Paint on Brick

The single most destructive thing I see done to brick walls is painting them with ordinary, non-breathable paint. I understand the appeal. A fresh coat of paint covers stains, hides aging mortar, and for about a year the house looks brand new. The problem is what's happening underneath.

Brick is a breathing material. Water gets into brick walls — always has, always will. In an unpainted wall, that moisture moves back out through the face of the brick and evaporates. That's the design. Now wrap that wall in ordinary latex or acrylic paint — a vapor barrier — and the water that gets in can't get out. It sits inside the wall. In winter, freeze cycles turn that trapped water into ice, and ice expands, and the faces of the brick pop off in sheets. That flaking, crumbling brick surface is called spalling, and once the hard fired face of the brick is gone, the soft inner brick drinks water even faster. The wall is now in a death spiral, and it started the day it was painted.

Meanwhile the paint itself starts peeling in big sheets, because it's being pushed off from behind by moisture and salts. So the homeowner repaints. And repaints. Every coat adds another layer to a problem that is getting worse underneath. Behind that painted wall, wood framing is staying damp longer than it should, and damp framing rots. I've opened painted brick walls and found rot that had been quietly advancing for years — all of it hidden behind a pretty face.

Take a hypothetical homeowner in Plano. She bought a lovely brick ranch, and the brick was tired-looking, so she had it painted a fashionable white. Two years later the paint was bubbling at the base of the walls. A painter scraped and repainted. Two years after that, sheets of paint were falling off, and under them the brick faces were flaking away like stale crackers. By the time she called us, the lower four feet of three walls had spalled brick that needed replacing, the

paint had to come off — an agonizing, expensive process — and the wall needed its drainage restored before any coating went back on. The paint job that was supposed to cost a few thousand ended up costing many times that, and the wall will never be what it was before the first brush stroke. She did nothing wrong except trust the wrong advice.

There IS a balanced truth here, and I want to be honest about it: not every coating on brick is a death sentence. Breathable mineral or silicate-based coatings — the kind formulated specifically for masonry, that let water vapor pass through — CAN be appropriate, on the right wall, with the right product. But the conditions are strict: the wall's drainage system must be working first (weep holes open, flashing intact), the coating must be genuinely vapor-permeable, and it must be applied to a dry, sound wall. Paint as the fix for a wet wall is always wrong. Coating as the finish on a dry, healthy wall can be fine. Drainage first, coating last — never the reverse.

Sandblasting: Erasing the Brick's Skin

Sandblasting strips paint and grime off brick fast, and it strips something else too: the hard fired face of the brick itself. That thin, glassy outer skin is the brick's armor. It's what makes brick weather-resistant. Blast it off and what's left is the soft, porous inner body of the brick — which soaks up water like a sponge.

I can spot a sandblasted wall from the street: the brick looks fuzzy, soft-edged, almost pillowy, and it's often already spalling a few years later. There is no putting the fired face back on. Gentle cleaning methods exist — low-pressure washing, proper chemical cleaners chosen for masonry — but sandblasting brick is destruction with a hose. If a contractor proposes it, that's your sign to hire someone else.

Aggressive Power Washing: Driving Water In

A pressure washer in untrained hands does two kinds of damage. First, it chews up mortar. A zero-degree nozzle held close will cut a mortar joint open like a knife. Second, and worse, it drives water deep into the wall — past the face, into the cavity, behind the brick — at pressures nature never produces. That wall then stays wet far longer than it would after any rainstorm, and wet walls grow mold, rot framing, and spall brick.

Brick can be washed. The rule is low pressure, fan tips held back at a respectful distance, and never aimed up under the brick or into joints. If your house wash guy is carving lines in your mortar, stop him. You're paying him to damage your wall.

"Waterproof" Sealers Applied Blind

This one breaks my heart because the logic sounds so reasonable: water's getting in, so seal the wall. But a sealer on a wall with no working drainage is a raincoat on a drowning man — actually worse, because now the water that's getting in through the top, through cracks, through failed flashing, can't get back out. You've sealed it IN.

Sealers have their place, and I use them — but only AFTER the drainage system works. Weep holes open, flashing correct, cracks properly repaired, sealants renewed: then, and only then, does a breathable sealer on the face make sense as a final layer of protection. Applied blind to a wall that's already wet inside, a "waterproof" sealer is one of the fastest ways to destroy a brick wall. The order of operations is everything.

Smearing Mortar Over Cracks

A cracked mortar joint needs the cracked mortar removed and replaced — that's repointing, done right, from the previous chapter. What I see instead is a smear: fresh mortar buttered over the crack, feathered out, maybe tooled to look tidy. It looks repaired. It isn't.

The crack is still there underneath, still moving, still admitting water. The smear bonds to the surfaces around the crack, and the first time the wall moves through a season, the smear cracks right along the same line — now with a little shelf of failed mortar holding water against the joint. Worse, the smear hides the real problem from the next person who looks at it. A visible crack says "fix me." A smeared crack says "fixed" while the water keeps coming in. I've chased leaks for homeowners that turned out to be three smeared cracks deep — each one a repair that hid the problem instead of solving it.

Ignoring Gutters and Grade While Treating Wall Symptoms

Here's a scene I've walked into a hundred times: a homeowner has paid for tuck-pointing, caulking, maybe even a sealer, and the wall is still wet — because the gutter above it pours water down the face every rain, and the grade beside it slopes toward the foundation, and the flower bed mulch is piled six inches up the brick, burying the weep holes.

Water management starts at the top and the ground, not at the wall. Gutters that dump water against the house, downspouts that end at the foundation, grade that funnels water to the brick, irrigation that hammers the wall daily — these are the sources. The wall is just where the symptoms show up. Treating the wall while ignoring the water aimed at

it is mopping the floor with the faucet running. Before any wall repair, look up and look down: where is the water coming from, and where is it supposed to go?

The Rescue Story: What Saving a Painted Wall Actually Takes

Let me take you through what rescuing a painted brick wall really looks like, because "we'll fix it" is easy to say and hard to do. A hypothetical homeowner in Arlington called us after the pattern I described: painted brick, peeling paint, spalling underneath, damp smell in the rooms behind the worst walls.

First came the assessment — which walls were salvageable and which brick was too far gone. Spalled brick can't be un-spalled; the damaged units had to come out and be replaced with matching brick, which meant hunting down a match for a thirty-year-old brick. Then the paint removal: chemical strippers formulated for masonry, dwell time, gentle removal — weeks of careful work, because aggressive removal damages what's left of the brick. Then the wall's drainage had to be rebuilt from scratch: weep holes that had been painted shut were opened, flashing details corrected, cracks repointed with properly matched mortar. Only after all of that — dry wall, working drainage, sound brick — did we discuss any coating, and then only a breathable mineral coating, with the full understanding that the drainage stays maintained forever.

That rescue cost many times what the original paint job cost. The homeowner was gracious about it, but I could see the frustration: she had paid good money, twice, for work that hurt her house. The lesson she asked me to put in this book: nobody told her paint could do this. Now you've been told.

The Honest Bottom Line

Every wall killer in this chapter shares one trait: it treats the surface and ignores the system. Paint covers the brick but blocks its breathing. Sandblasting cleans the face but destroys the armor. Sealers block the water but trap it inside. Smears hide the crack but leave the leak. The wall is a system — brick, mortar, flashing, weep holes, sealants, gutters, grade — and it only stays dry when the whole system works together. Respect the system, and your brick will outlive you. Fight it, and you'll pay for the fight many times over.

Chapter 12: Your Homeowner Maintenance Calendar

Here's the best news in this whole book: keeping your brick

walls dry for decades doesn't take a contractor, a ladder truck, or a second mortgage. It takes about ten minutes a year and the habit of actually looking at your house. I'm going to give you the exact routine — season by season, step by step — that I wish every one of my customers followed. The homeowners who do this almost never call me with emergencies. The ones who don't are the ones who call me with five-figure problems. Ten minutes a year beats ten thousand dollars once. That's not a slogan. That's fifty years of watching it play out.

Spring: The Storm Check

In Texas, spring brings the big rains — the gully-washers that test every wall on the house. After the spring storm season has done its worst, take a walk. This is your most important inspection of the year, and it has one rule: look at the wall after it's been tested.

Walk the full perimeter of the house, slowly, and look for new stains on the brick — dark streaks below windows, discoloration under sills, any damp-looking patch that wasn't there last fall. Stains are the wall telling you where water went. Check the weep holes along the bottom course: are they open, or plugged with mud, mulch, or mortar droppings? Crouch down and look. Check the sealants around windows and doors: any gaps, cracks, or places where the sealant has pulled away from one side? Mark anything suspicious — a piece of painter's tape on the brick, a photo on your phone. You're not fixing anything today. You're gathering intelligence.

Summer: The Irrigation Audit

Summer in Texas means sprinklers running hard, and sprinklers are one of the most common sources of chronic wall wetting I see. A sprinkler head that throws water against the brick every morning, all summer, keeps that wall damp for months. Damp brick grows algae, mortar stays soft, and water migrates inward day after day.

Walk the irrigation zones while they're running — early morning is fine, coffee in hand. Watch where the water actually lands, not where you think it lands. Any head hitting the brick directly needs adjusting: redirect it, swap the nozzle, or move the head. Check the timers too — overwatering near the house doesn't just waste water, it saturates the soil against the foundation and keeps the bottom of the wall wet. This audit takes twenty minutes and prevents the slow, silent damage that shows up as spalling brick two years later.

Fall: Gutters and Pre-Winter Sealants

Fall is preparation season. Before the wet winter months and the freeze cycles, two jobs: gutters and sealants.

Clean the gutters. I know — nobody's favorite job. But a clogged gutter overflows exactly where you don't want it to: down the face of your brick wall, in sheets, every rain. While you're up there (or while the gutter guy is), check that downspouts are connected, extended away from the house, and not dumping water at the foundation. Water against the base of the wall finds its way in.

Then check sealants before the freeze cycles start. The joints around windows and doors need to be intact before winter, because freeze-thaw is merciless on failed sealant: water gets into the gap, freezes, expands, and pries the joint wider with every cycle. Walk the house, look at every sealant joint, and mark the failures with tape. Small sealant touch-ups in the fall are cheap. Freeze damage in February is not.

Winter: Watch, Don't Work

Winter is for watching. Masonry work in freezing weather is a bad idea — mortar doesn't cure right in the cold, and sealants don't bond right either. So put the tools away and use your eyes instead.

After winter rains, note what you see: any new staining, any place where water seems to be getting in, any sealant that failed since fall. Write it down. Photograph it. This is reconnaissance for the spring repair list, not a work season. The wall will tell you everything if you look — winter just asks you to look and wait.

The 10-Minute Annual Walk-Around: Step by Step

If you do nothing else in this chapter, do this one walk, once a year — spring is best. Ten minutes, no tools except your eyes and your phone.

1. Start at the front door and walk the perimeter clockwise. Don't rush.
2. Look at the base of every wall. Mulch, soil, or grade piled against the brick? It should be several inches below the weep holes. Note anywhere it's too high.
3. Look up at every window and door. Stains below sills? Cracks in a stair-step pattern above openings? Sealant gaps?
4. Crouch at the bottom course. Weep holes open or plugged? A quick visual — you're not digging today.
5. Look at the mortar joints generally. Anywhere the mortar is

- crumbling, missing, or cracked through?
6. Check where gutters and downspouts meet the wall. Overflow stains? Downspouts dumping at the foundation?
 7. Glance at the grade. Does the ground slope toward the house anywhere? Standing water after rain?
 8. Photograph anything that looks wrong. Your phone is your memory.

That's it. Ten minutes. You've just done what most homeowners never do, and you've caught the small stuff while it's small.

Keep a Simple Log

Memory is unreliable; a notebook isn't. Keep a simple log — a paper notebook in the junk drawer or a notes app on your phone, whichever you'll actually use. Four columns: date, what you looked at, what you found, what you did.

"April 12 — spring walk — weep holes on east wall plugged with mud — cleared with a stiff brush." "October 3 — gutters cleaned — north downspout reattached." "January — noticed stain under guest room window after rain — watching."

Add photos. A photo of a stain in April and the same spot in October tells you whether it's growing, stable, or gone. When you eventually call a mason, this log is gold — it turns "there's a wet spot somewhere" into a dated history of exactly what happened and when. Professionals love an informed homeowner, and informed homeowners get better diagnoses.

When to Call Us vs. What You Can Handle Yourself

Here's the honest division of labor. Plenty of this maintenance is homeowner-safe:

You can safely do: clear a plugged weep hole with a stiff brush or a gentle flush of water. Adjust a sprinkler head that's hitting the brick. Clean your gutters (carefully, ladder safety first). Pull mulch back from the base of the wall. Caulk a small, simple sealant gap with the right exterior sealant — if you can reach it safely from the ground.

Call us at Champion Brick Repair, (817) 900-6324, when: you see stair-step cracking, especially over windows and doors — that can signal lintel trouble or movement, and it needs a professional eye. When mortar is crumbling out of joints across whole sections — that's repointing, skilled work. When stains keep coming back after you've handled the obvious causes — that's a flashing or drainage problem inside the wall. When brick faces are spalling or flaking — the wall needs assessment, not a hardware-store fix. And when

anything looks like it might be structural — a leaning wall, a bulging section, wide cracks — call us, and if it looks structural to us, we'll tell you straight to bring in a structural engineer. We fix brick walls. We don't guess at structures.

The rule of thumb: maintenance is yours; repair is ours. If it involves opening the wall, matching mortar, replacing flashing, or supporting brick — that's craftsman work. If it involves looking, clearing, adjusting, and noting — that's homeowner work, and it's the work that keeps the craftsman visits small.

The Mindset: Ten Minutes Beats Ten Thousand

I'll close with the story this whole chapter is really about. Take a hypothetical homeowner in Fort Worth — the kind of person who actually did the walk-around every spring, kept the little log, cleared his weep holes, adjusted his sprinklers. One April he noticed a small stain under a bedroom window and wrote it down. By fall it was slightly bigger. He called us. The diagnosis: a failed sealant joint and one plugged weep hole — a morning's work, a modest bill, problem solved before a single brick was damaged.

Now the version where he never looked: the stain grows for three years, water migrates behind the brick, the sheathing stays damp, the lintel rusts, the brick above the window starts to sag. By the time someone calls, it's a lintel replacement, brick rebuild, flashing surgery — the kind of bill that makes a grown man sit down.

Same house. Same wall. Same starting problem. The only difference was ten minutes a year and the habit of looking.

Your brick walls were built to last a century. They don't need much from you — just your eyes, once in a while, and the willingness to act on what you see while it's small. That's the whole secret. There is no product to buy, no subscription, no magic. Just a walk around the house, a notebook, and ten minutes. Do that, and your walls will take care of you the way they were built to.

Conclusion

If you take one thing from this book, let it be this: a dry wall is not a lucky wall. It is a managed wall.

I have spent fifty years with my hands on brick across Texas, and I can tell you the houses with dry walls are never the ones that got blessed with special brick or some miracle

coating. They are the ones whose owners understood the simple truth we started with in Chapter 1: your brick wall is a raincoat, not a suit of armor. It is a drainage system. It lets water in, moves it down, and pushes it back out through weep holes and flashing — and every part of that system needs somebody paying attention to it now and then.

Water is patient. I want you to sit with that for a minute, because it is the whole game. Water does not care that you are busy. It does not care that the wall looked fine last year. A gutter clogs a little more each month. Mulch creeps a little higher each season. A sealant joint pulls back a sixteenth of an inch at a time. None of it is dramatic. All of it is water, patiently, doing what water does — until one spring storm finds the one weak spot you never walked around to look at, and you are staring at a stain on your drywall wondering where it came from.

The good news — and there is real good news — is that the homeowner who beats water does not have to be a mason. You just have to be the patient one too. Ten minutes in the spring after the big rains. A look at the gutters in the fall before the wet season. A glance at the sprinkler heads in the summer to make sure they are watering the lawn and not the brick. A notebook with the date and what you saw. That is it. That is the whole secret, and it costs nothing.

Everything in this book was written so you could do two things: catch small problems while they are small, and know the difference between a repair you can handle and a repair that needs a professional with the wall opened up. If you walk away from these pages able to look at your wall and read it — the white crust telling you water is traveling, the clogged weep hole telling you the drain is plugged, the flashing gap telling you the surgery is needed — then you are ahead of nine out of ten homeowners I have ever met.

Do not let a crack sit open through a wet season. Do not bury your weep holes in mulch. Do not caulk your way around missing flashing. Do not paint a sick wall and hope the paint fixes it. Handle the water, and the wall will take care of itself for longer than you will own the house.

I wrote this book because I believe a homeowner who understands their wall is the best protection that wall will ever have. You do not need my permission and you do not need a license — you need your eyes, a notebook, and the willingness to walk around your own house twice a year. Water is patient. Be more patient.

Your wall will thank you by staying dry.

— Travis Nech

Resources & Next Steps

Travis Nech has spent 50 years in brick, masonry, and foundation work across Texas. He owns and operates Champion Brick Repair, Metro Foundation Repair, LintelLOCK, MortarMagic, and WhiteStone Construction.

- Champion Brick Repair — brick & masonry repair, Dallas-Fort Worth — championbrickrepair.com — (817) 900-6324
 - Metro Foundation Repair — pressed concrete pile foundation repair — metrofoundationrepair.com — (817) 523-1540
 - LintelLOCK — the field-developed lintel replacement system — lintlerepair.com — (469) 730-0650
 - MortarMagic — mortar color matching & the Mortar Bucket — mortarmagic.netlify.app
 - WhiteStone Construction — stone, ranch & property work, Hamilton TX country — (254) 723-5040
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About the Author

Travis Nech has spent 50 years working brick, masonry, and foundation repair across Texas — starting as a young man with a trowel and building, job by job, into the owner and operator of five Texas trade companies. He has laid it, repaired it, matched it, torn it out, and put it back better than he found it, in every kind of Texas weather and on every kind of Texas ground.

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