# Stop Chasing Ceiling Stains. Fix the Attic Causing Them.

A Homeowner's Guide to Coastal Attic Heat, Humidity & Condensation — and the System That Fixes It for Good

**Call 910.408.6026** **rgrconstructionllc.com/contact/**

# You're Not Imagining It

Sweating ductwork. A brown ring spreading across the ceiling near a vent. That musty smell in the hall closet no matter how much you clean. The upstairs bedroom that never quite cools down, even when the AC runs half the night.

If any of that sounds familiar, here's something that might surprise you: these aren't separate problems. They're symptoms of the same thing happening above your head, in a space you probably haven't thought about since the day you moved in.

Your attic.

# The Iced Tea Test

Picture a glass of iced tea sitting outside on a humid August afternoon. Within minutes, the outside of the glass is dripping wet. The glass isn't leaking — the moisture in the warm air is simply hitting a cold surface and turning back into water.

Now picture your attic on that same afternoon: 130-plus degrees of thick, moisture-loaded coastal air surrounding ice-cold air conditioning ducts and equipment. The math is identical. Your ductwork is the iced tea glass.

That's why so many “roof leaks” along the coast turn out to be something else entirely once someone actually looks: condensation, quietly soaking insulation and staining drywall, month after month, storm or no storm.

Most homes here were built with vented attics — soffit vents pull outside air in, ridge vents let it out. It's a reasonable design for an attic with nothing in it. But once you put HVAC equipment and ductwork up there, in our climate, you've built a condensation machine.

# The Fix Isn't More Insulation. It's a Different Attic Entirely.

Here's the idea that changes everything: what if the attic simply wasn't “outside” anymore?

That's the whole premise of RGR's Conditioned Attic System. Instead of trying to out-insulate a fundamentally hot, humid, vented space, we move the boundary of your home's protected envelope from the ceiling up to the roofline. The attic stops being a hot, damp no-man's-land connected to the outdoors — and becomes a sealed, conditioned part of your house, the way a finished basement is part of your house.

Your ductwork and HVAC equipment go from working in the harshest environment on your property to working in one of the most stable.

# RGR Conditioned Attic System

**Building Systems Involved**

- Roof
- HVAC
- Insulation
- Air Quality Monitoring

## 1. We diagnose before we insulate.

Every home is different, and spray foam is not a bandage. Before we recommend anything, we get into your attic and find out what's actually going on — roof condition, existing moisture damage, duct problems, decking condition. We find the source before we cover anything up.

## 2. We make sure your roof is ready.

Closed-cell foam bonds tightly to the underside of your roof deck — which means once it's in, that deck is much harder to inspect from below. So we want real confidence in your roof first. If it's newer and in strong shape, you may be a great candidate as-is. If it's aging or due for replacement, we'll usually recommend handling the roof and the attic together — which, as it turns out, is the best time to do this anyway.

## 3. We pair it with a FORTIFIED Roof, when it makes sense.

A FORTIFIED Roof strengthens the parts of your roof most exposed to coastal wind and wind-driven rain — stronger deck attachment, a fully sealed deck. Add closed-cell foam underneath, and you've got two coordinated layers of resilience: a tougher roof above, a controlled, stable attic below. There's real money on the table for this. Eligible NCIUA policyholders can qualify for a FORTIFIED Roof grant — up to $6,000 through the Strengthen Your Coastal Roof program, or up to $10,000 for eligible barrier-island properties. Funding is limited and first-come, first-served, so this is worth checking into sooner rather than later.

# How We Do It

### 4. Out with the old insulation.

Since the thermal boundary is moving to the roofline, the old attic-floor insulation comes out. This isn't just prep work — it's often the first time in years anyone's actually seen what's underneath. Old water stains, air leaks, duct issues, pest activity — we find it and deal with it now, not after it's sealed up.

### 5. We seal the attic into one continuous, protected space.

Every soffit vent, ridge vent, and gable vent that used to let outside air in gets properly closed and air-sealed, with special attention to the eaves and roof intersections where most leaks actually happen. The goal isn't “more insulation” — it's a continuous barrier with no weak points.

### 6. Closed-cell spray foam goes in.

We use closed-cell over open-cell here specifically because of our climate — it gives far stronger vapor control, more insulation per inch, and a dense, rigid bond to the roof deck that adds real structural stiffness. In properly designed applications, that stiffness has been shown to meaningfully improve the roof deck's resistance to wind uplift. We don't sell it as a replacement for good roof construction — it's an added layer on top of doing the roof right.

# How We Do It

## 7. We don't just seal it and walk away — we monitor it.

A sealed attic that nobody checks on again isn't a finished job. We install permanent temperature and humidity monitoring so you (and we) can actually see how the space performs, not just hope it's working. For homes that need extra help, we can add a dedicated attic dehumidifier — especially valuable during muggy stretches when your AC isn't running long enough on its own to dry the air out. The goal was never just “make the attic cooler.” It's a dry, controlled attic — with data that proves it's staying that way.

## 8. Optional: we watch your roof from the sky, every year.

Closed-cell foam's one real trade-off is that it makes some leaks harder to spot from inside the attic once it's sealed. Our answer: optional annual drone-based thermal roof mapping. It flags unusual temperature patterns that may deserve a closer look, and because we do it every year, you build a performance record over time — not just a one-time snapshot.

# What the conditioned-attic approach looks like

**Attic HVAC equipment**

**Closed-cell spray foam at the roofline**

**Roofline ventilation / soffit detail**

The goal is a stable, dry attic environment: inspect first, address roof and moisture conditions, move the thermal boundary to the roofline when appropriate, and monitor performance afterward.

Representative installation image; not an RGR project photo.

# What Changes for You

- Far less risk of condensation soaking your ductwork, insulation, and drywall, reducing maintenance.
- A dramatically more moderate environment for attic-located HVAC equipment, extending the life of your HVAC system.
- A more comfortable upstairs, without the AC working overtime
- Real air sealing and vapor control at the roofline — not just more fiberglass
- Lower energy loss from ducts that were previously losing heated or cooled air into a hostile attic
- A stiffer, more storm-resilient roof deck
- Ongoing data on your attic's health, with optional thermal monitoring from above
- Healthier air quality, with less chance for mold growth.

## “Is This Worth the Investment?”

We'll be straight with you: a closed-cell conditioned attic is a premium improvement, and it costs more up front than a bag of blown-in insulation. It's not the right call for every home. But the sticker price is only one half of the real math. Here's the other half — what you're likely already paying, quietly, every year:

| What It's Costing You Now | How the System Changes That |
|---|---|
| **Energy bills** | Ducts and equipment running in a much less extreme attic lose far less energy. (Savings vary by home.) |
| **HVAC lifespan** | Less heat and moisture stress can mean a longer service life for equipment stuck in the attic. |
| **Repeat repairs** | Fewer condensation events means fewer stained ceilings, drywall patches, repaints, and rusted vent covers. |
| **Roof replacement** | Eligible homeowners can offset the cost with a $6,000–$10,000 NCIUA FORTIFIED grant, depending on location. |
| **Insurance & storm risk** | FORTIFIED improvements can qualify for insurance credits and reduce storm damage severity. |

**The real question isn't just “what does this cost?” It's “what does it keep costing me if I don't fix it?”**

# The Honest Trade-Offs

We're not going to oversell this. Closed-cell foam costs more than standard insulation, it reduces the roof deck's ability to dry toward the attic, and — as mentioned — it can make certain leaks harder to spot later without thermal monitoring. That's exactly why we build the whole system together: roof condition checked first, humidity monitored continuously after, and optional thermal inspection to keep watching from outside. Done right, in the right home, we think the benefits are well worth it. Done piecemeal, they're not.

# Is This Your Home?

**If you're dealing with any of these, it's worth a conversation:**

- Sweating ductwork or rusted vent covers
- Ceiling stains that keep coming back
- Musty smells or visible mold in the attic or closets
- A hot, uncomfortable upstairs no matter what the thermostat says
- A roof that's already due for replacement
- A general “why does this house feel like it's fighting me” feeling

Not every home needs a full conversion — sometimes the real fix is a duct repair or a targeted roof repair, and we'll tell you that if it's true. Our first move is always finding out which problem you actually have, not selling you the biggest solution on the shelf.

# Start With a Real Diagnosis

Your roof, attic, insulation, ducts, and HVAC system aren't separate problems — they're one system, and they've been quietly fighting each other for years. Along the coast, keeping water out of your home isn't only about what happens when it rains. Sometimes it starts with the air itself.

## Ready to find out what's really going on in your attic?

**Schedule your free attic diagnosis.**

## Sources & Program Information:

Building Science Corporation (buildingscience.com), U.S. Department of Energy Building America Program (energy.gov), IBHS FORTIFIED Home (fortifiedhome.org/roof), NCIUA Strengthen Your Coastal Roof (strengthenyourcoastalroof.com), NCIUA Strengthen Your Roof (strengthenyourroof.com), NC Department of Insurance. Grant availability, eligibility, and program terms change — homeowners should verify current eligibility directly with NCIUA. Thermal imaging is a diagnostic aid, not a guarantee every leak will be found. Energy savings and equipment lifespan vary by home.

### Clickable report links

- Building Science
- DOE Building America
- IBHS FORTIFIED Roof
- Strengthen Coastal Roof
- Strengthen Your Roof
- NC Department of Insurance

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