

Crawl Space Inspection

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Apex, NC 27539



Sealed Solution

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Prepared for:

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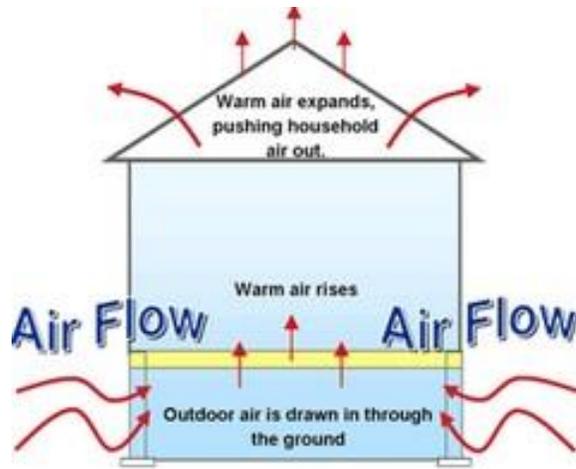
Outline:

- 1. Your crawl space dynamics**
- 2. NC Case study**
- 3. Your wood moisture % reading**
- 4. Your Vapor Barrier**
- 5. Standing water review**
- 6. Evidence of crickets that eat mold**
- 7. Evidence of mice and snakes**
- 8. Moved insulation**
- 9. Any duct work to close to ground**
- 10. Specific Recommendations**

*** Pictures in this Report are from YOUR crawl space**

50% of your homes air comes from the crawl space

Warm, humid air comes in through your foundation vents and gets trapped and then because your home is 72-78 degrees the warm air finds its way easily through your insulation and up through your floor.



Now this warm moist air rises through your home as your AC tries to cool it and it then leaves out of your attic out the soffit vents.

Your AC works hard to cool this air to satisfy the thermostat in your home. Stopping warm air coming in through your floor saves the homeowner in new homes 15.8% on their energy bill. Upto and greater than 20% in older homes.

Stopping this air transfer also GREATLY increases your homes air quality.

[NC CASE STUDY](#)

The average 2200 sf home in America loses 2 Goodyear blimps of air each day because of this transfer of air through the crawl space.



This Effect is called [THE STACK EFFECT](#). (Quick video)

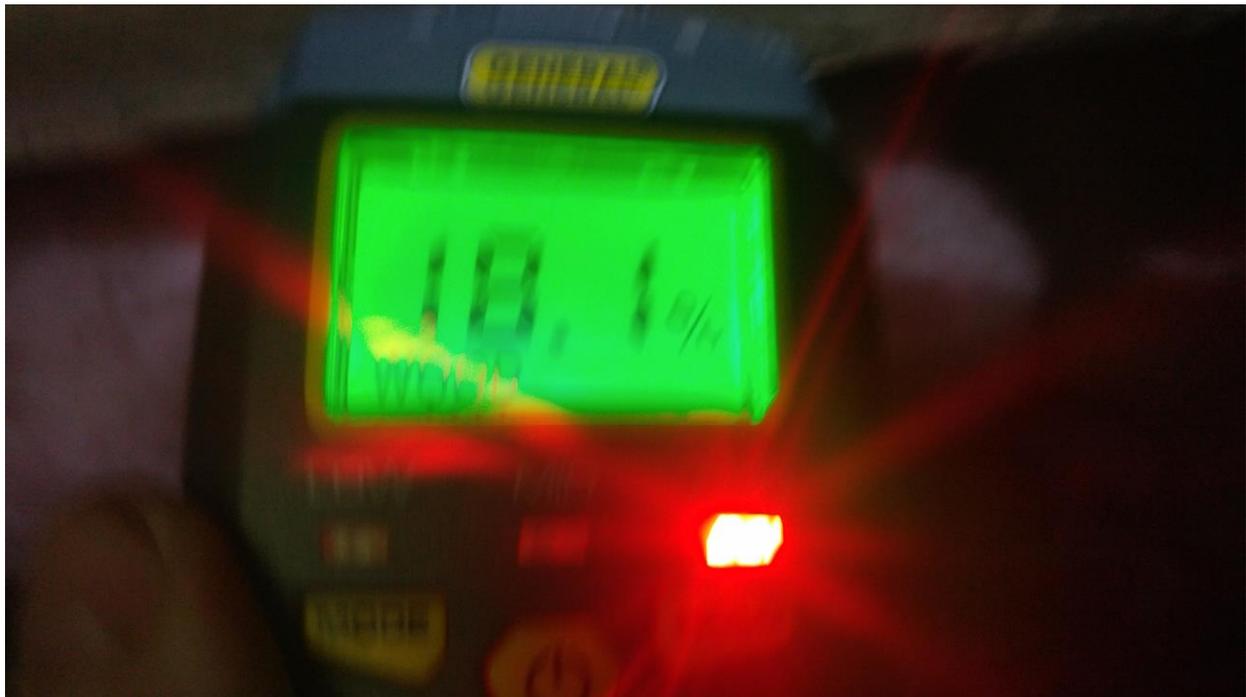
Mold likes:

- 70%+ humidity in the air
- Wood moisture content of 17% or greater
- Still air
- Bio matter (wood joists) to get nutrients from.

Your crawl spaces wood joists average moisture measures **21.1%**.

Mold starts to grow on wood when the moisture content is above 17%.

Wood moisture content this high leads to a vast amount of mold on the beams in the near future.





Most readings in vented crawl spaces in late May are between 11% and 13%. This is the dryer part of the Summer season, so comparatively your **21.1% wood moisture content is very high.**

STANDING WATER

NONE

Mold originates from the exposed ground:

Mold comes from the ground when it is moist and the air is still







Mold has collected on top of the insulation hidden when its in place







Notice the white mold spores waiting for a light wind to blow around the crawl

Notice the lack of mold growth and visible spores that can be blown around with the covered ground.

This is why it is SOOOO important to cover every inch of your crawl floor. Every spot of dirt that is not covered will eventually upset your crawl space. Which when left uncovered mold spores easily find there way to your moist joists and flourish.

Crawl space floor left uncovered is an easy path for mold to flourish.

The crawl space appears to have a fairly new vapor barrier laid down due to there is no dust yet on top of the plastic. It has 100% coverage and has overlapping seams and staked down in good places.

-New studies show that vapor barriers slow down but do not prevent mold spores rising up and getting to the above 17% wood moisture content beams and flourishing.

The vapor barrier (usually 6 mil thick) yours is clear and **surpresses mold spores** from being able to transfer mold easily from the ground, where mold originates from, to your moist wood joists.



The entire floor dirt is soft and damp shown here you can see the moisture puddles show on the plastic on top of it. It hasn't rained for a few days before inspection.



The reason why that's important because now a proper vapor barrier has 100% coverage with ALL seams taped. Anything short leads to excess ground moisture exposure and mold spores.

Mold loves moisture...

Crickets love mold...

Mice love crickets...

Snakes love mice...

So your crawl has been having "Critter Wars" where snakes are hunting mice. Snakes stay in the ground and come out every 7-12 days to feed. They're very solitary. From the appearance of your insulation it looks like there is a good handful of mice and a snake(s) or 2 hunting them down in the insulation. Snakes will sense mice in the insulation and move it to get at the mice.

Not your homes picture but a typical 10 year old vented crawl space



Moisture brings mold...mold brings Camel Crickets
Camel Crickets eat the mold then poop on the beams





SNAKES:











etc...

Other signs of snakes:





Remains of animals that had a bad day.



Critter poop

Missing Insulation:

Your crawl ceiling is missing 3% of its insulation. Since warm air comes in through your foundation vents and then rises through your floor ... that much insulation missing and displaced is like leaving your front door open 12 inches and trying to condition your air inside your home. Not as efficient!

Many people notice specific area's of there hardwood floors that are more cupped than the rest...this is due to that area's moved insulation making an easier path for warm air to rise..







50% of your homes air comes filtered through your insulation

Nest of ?

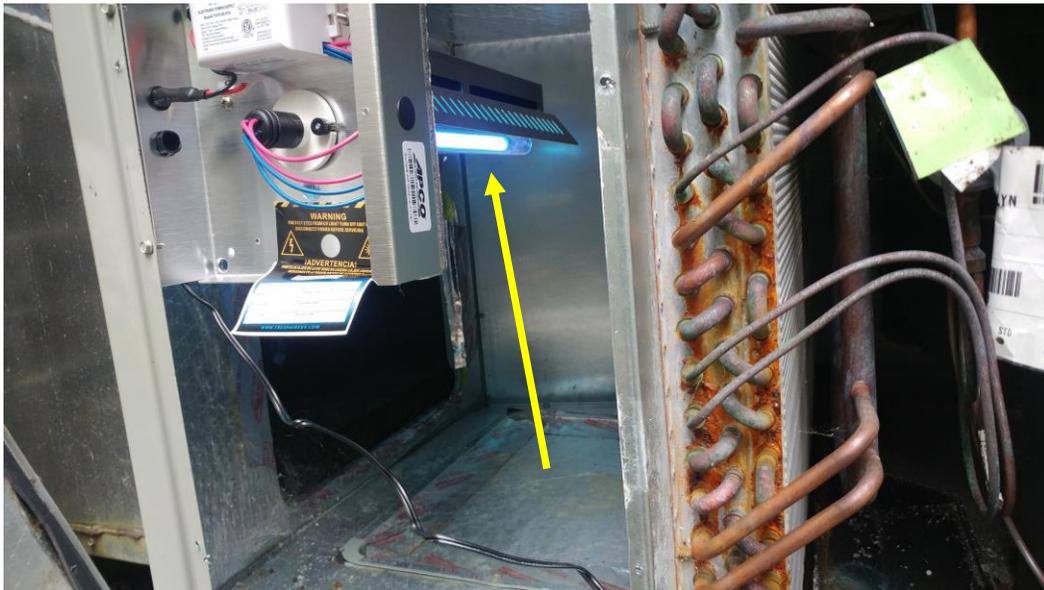


But if I pulled down any piece Im sure I would find shells of nuts and other remnants of what mice and snakes do.

LOW HANGING AC DUCT:

All duct work is properly off the ground

Because years of air came through rising up from your crawl and pulled into you're AC return ... We also have an option to install a [UV light](#) to take care of this problem after you chose your method to handle your 98% sealed vented crawl space. UV lights are used in all NC commercial buildings by code that have more than 10 people occupying them.



The UV light costs wholesale only \$125 ... it is one of the best ways to give a family great air.... killing 99.99% of all germs, viruses, molds,..etc !!!

Again 50% of your homes air comes from your crawl:

Your decision stems around how important air quality is to you and your family.

I am strongly aware that there is always a monetary concern on the investment. That is why my **step up method** allows a client to get a less expensive solution WHICH IS AN INTRGAL PART OF THE NEXT SOLUTION and not loose any value starting the process and at any time The Sealed Solution Team can add it it to get your family to that ultimate level of superior air quality. But in the mean time ... save on your energy bill and reducing the events that bring about mold gain.

One would ask:

Why did builder build vented crawl spaces?

The anwser is that in the 70s when AC came throughout America placing the cooling AC units in HOT attics didnt seem like a good idea for COOLING equipement.

So they built crawl spaces tall enough to assemble the AC units in and can easily run duct work from room to room. And there lies the problem.

One would ask why do builders (and all builders know that vented crawl spaces leads to all these problems that this home is under) still build vented crawl spaces?

Many of the new mega neighborhoods like 12 Oaks, Holly Springs and all of Wakefield, in Wake Forest are all sealed crawl spaces. But these homes cost \$8,000 - \$10,000 more and are slightly harder to sell than less expensive vented crawl spaces if they were next to a vented crawl space. So developers now know that sealed crawl spaces are better for energy efficiency and air quality NOW TELL THE BUILDERS in this subdivision ALL homes will be sealed crawl. So homes are comparative and a less efficient home can't sneak in to sell quicker BUT rob the uninformed new buyer of precious energy efficiency.

So now new neighborhoods are usually all SEALED CRAWL or vented because the word isn't out strong enough yet on problems their vented crawl space produces and the energy robbing that happens by NOT sealing the crawl space. Because a VENTED crawl home next to a SEALED crawl home looks more appealing at \$8000 less. The MLS doesn't let the consumer know that the energy savings from day 1 pays a new homeowner back more than the increase in mortgage payment of \$8000 additional over 30 years.

Many BIG builders like Meritage have turned the corner and are sealing ALL their homes crawl spaces and attics thereby reducing the price of a sealed crawl space home and bringing their customers far greater value with energy savings of 50% or greater. Winning them ENERGY STARS partner of the year. BRAVO [MERITAGE!](#)

Full sanitizing and encapsulation process:

1. Pull Insulation and dispose
2. [Spray sanitize](#) entire crawl space...all wood, ac, ducts, pipes...etc

3. Seal and Insulate all foundation vents:

To stop the moist warm outside air from entering the home and adding 17.8%-20% + energy efficiency.



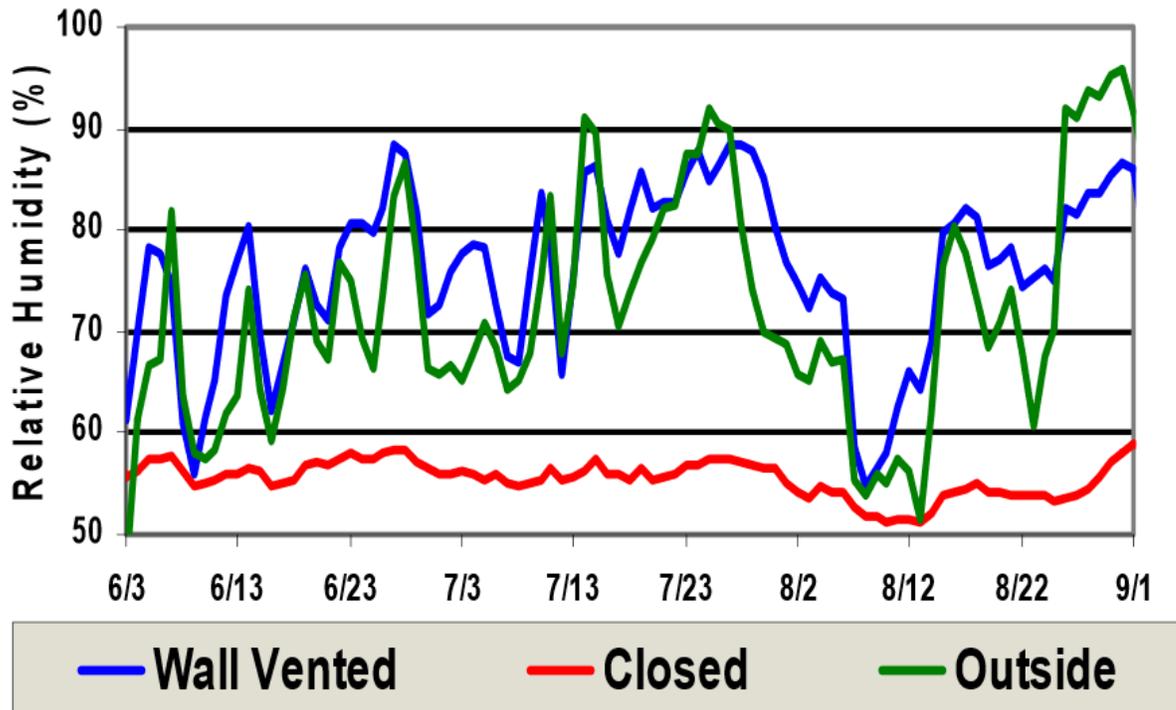
4. To insure your sealed crawl spaces temperature and humidity we leave behind a remote humidity & Temperature display that shows you your crawl space humidity and temperature from from the display on your first floor.



This ensures YOU DONT HAVE TO CRAWL IN YOUR CRAWL SPACE TO MAKE SURE IT IS OPERATING PROPERLY. Simply glance over at your display and you will know immedietely. THIS IS OUR PROOF AFTER THE

SERVICE that our work is quality today and in the future. No other company leaves you with this.

A [sealed crawl space study](#) shows these are the results in RED you would expect from your sealed crawl space.



5. Seal all intrusions:



6. Especially ... seal the [sill plate](#) (quick 2 min video by ASK THE BUILDER .com on how important sealing your sill plate is) ... which no other company does. The sill plate is a 2x6 piece of wood that rests on

your foundation block (then the floor joists rest on the sill plate) but cannot lay PERFECTLY so as to create a seal. Most homes you can see light through the entire sill plate across their entire crawl space. Not sealing the sill plate would be like leaving 3 vents totally open.



7. To pull CONDITIONED/DRY air into the crawl we usually make a 4 inch hole in the supply side of the AC duct system 1 per 1500 sf like what is done in ALL new residential construction sealed crawl spaces.



A spring loaded butterfly rubber gasket sealed air supply is used so air can only come out and not into your AC system and be pushed around the house.

8. I would highly recommend insulating the walls PER CODE

If it were my home I would seal the floor with white 10 mil and insulate the walls with hardboard insulation and air seal wrap columns and door which would give me the best air quality for the homes lifetime and best energy savings as well as preserve my AC to last 20%+ longer and gives me great room to store a ton of stuff in CONDITIONED AIR space. Sealing the floor also keeps the mice and snakes out.



9. Mold comes from the ground so sealing away the ground from your homes air raises your air quality to superior.



Then you can have Hard Board Insulation fastened to your crawl wall foundation.

Your crawl walls instead of the crawl ceiling are your new thermal

envelope.



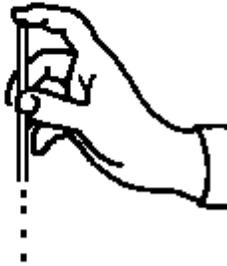
A 3 inch gap is left on top to expose the foundation block for easy termite detection and is required by the BUILDING CODE.

3 inches is also left on the bottom so your foundation wall wont hold water as easily by letting the block "breath".

Not leaving a 3 in space at the bottom would not allow your block wall

to drain water like holding a straw after filling it up with water called the capillary effect.

Air supports water in a glass tube



10. Insulate door



11. **Air seal** door with weatherstripping for even greater energy efficiency



12. A remote light switch is placed on your crawl door so you can LIGHT UP your entire crawl space **before even sticking your head in.**



13. **Add lights** to illuminate YOUR ENTIRE CRAWL SPACE and make it friendlier!!!!

Sealed Solution has the friendliest most sanitized most energy efficient sealed crawl space at sometimes 1/3 the price of the national mega marketing competitors! Great marketing doesn't make a great product. We do!





14. Since your home was exposed to constant lite mold passing through your home ... to ensure proper superb air we install a UV light that purifies your air as it passes through your system. Like a tanning bed tans you after 15 minutes ... air exposed to this light kills 99.99% of germs, viruses ...etc immediately. This inexpensive last system between you and bad air completes the air protection your family

deserves. All new commercial buildings by CODE have several installed to purify air. We feel residential air quality is as important as workplace air quality.

<http://sealedsolution.com/uv-blue-tube-air-disinfectant/>



15. Sump pumps are air/critter sealed with air sealed tops so the crawl air and critters dont have access to the moisture in the sump. The red stopper is a 4 inch removable air sealed access so as to reach ones hand in to test the pump valve switch to ensure system is working properly.



Overall benefits of sanitizing then sealing your crawlspace:

- Sanitized for SUPERIOR air
- Your AC lasts 20% longer
- Floor support system will always be the optimum wood moisture content and mold free making it last SIGNIFICANTLY longer than vented crawl spaces floor system.
- Hard wood floors wont buckle any more because of the conditioned air.
- Repairs in the crawl are **FAR** more easier to accomplish yourself ... like running new cable or ethernet wires...etc.
- Great for storage since the temperature and humidity is similiar to your first floor.
- FAR fewer critters since there is no standing water, mold or food source nor places to hide.

Thank you for your time to review this information!

Good reading material for entire home health issues:

[My Home is Killing Me](#), Jeffrey May \$4.00

Pardon the title it is a very educational read to learn about your entire home and how to keep it healthy.

Feel free to check out or quick 3 min video of before and after crawl space encapsulation

[Video 1](#)

[Video 2](#)