

# Maintenance Plans for Old Houses



**APPS**

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& Planning  
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2014 WINTER OLYMPICS

## The world meets in Sochi

» Pageantry, problems and protests as Games get underway in Russia, **A3** | » Plus: What to watch in today's events, **C5**

SATURDAY, FEB. 8, 2014

myajc.com | ajc.com

\$1

Partly cloudy

High: 57, Low: 37  
20% chance of rain



Sunday: Mostly sunny, 58/39

Monday: Partly cloudy, 52/41

Tuesday: Rain, 48/36

Details on the back of Metro

myajc.com

Today's bonus:  
Personal Journeys

Bonus coverage is just one click away at MyAJC.com. Each week, AJC journalists find an extraordinary Georgian with a great story to tell about his or her life. Those stories, plus video and photo galleries, can be found at Personal Journeys at MyAJC.com/personaljourneys. You'll have access to all of our in-depth news on MyAJC.com — including photo galleries and our rich interactive content.

NSA collects a  
third of phone  
data, officials say

The National Security Agency is collecting data on less than 30 percent of U.S. phone calls, a report says; the agency is taking in a large amount of landline phone information, but cellphone data has seen huge growth and presents additional technological hurdles, **A2**

ajc Truth-O-Meter  
PolitiFact Georgia

Cuba has "a lower child mortality rate than ours. Their life expectancy is now greater than ours." — U.S. Sen. Tom Harkin, D-Iowa, during a Jan. 29 press conference, **B1**

NATION & WORLD

# The Atlanta Journal-Constitution

Credible. Compelling. Complete.

## YOUR TAX DOLLARS



Water-absorbing towels, a fan and trash cans control water at the main entrance to the Fulton County Government Center, a downtown Atlanta building that was once dubbed the "Taj Mahal."

# Mold, leaks, rats fill county building

U.S. ECONOMY

## Mixed signals in jobs report

Hiring slower than expected, but jobless rate for U.S. declines.

By Nelson D. Schwartz  
New York Times

Employers added jobs at a slower-than-expected pace in January, the Labor Department reported Friday, marking the second month in a row that hiring has been disappointing and signaling that the U.S. labor market remains anemic despite indications of growth elsewhere in the economy.

Payrolls increased by 113,000, far fewer the 180,000 economists expected. The unemployment rate, based on a separate survey of households that was more encouraging, actually fell by a tenth of a percentage point, to 6.6 percent.

Jobs continued on A5

# Mold, leaks, rats fill county building

Government workers worry about health, safety; repairs could cost Fulton millions.

By David Wickert  
dwickert@ajc.com

With its four-story atrium, marble staircase and palm trees, the Fulton County Government Center in downtown Atlanta was dubbed the "Taj Mahal" when it opened in 1990.

But it's far from the showcase county officials envisioned. For years it has been a leaky, moldy, rodent-infested mess, and many of its occupants fear for their health and safety.

Fulton taxpayers may soon pay millions of dollars to fix the problems.

The Fulton County Board of Commissioners included about \$1.3 million for initial repairs to the building in its 2014 budget, plus another \$250,000 to study long-term solutions. Critical repairs to the building could cost more than \$4 million.

**Building** continued on A8



Rusted and mildew-covered binders sit in an abandoned Fulton County Tax Commission office.

BRANT SANDERLIN PHOTOS / BSANDERLIN@AJC.COM

**myajc.com**

The Atlanta Journal-Constitution has reported on the controversy surrounding the Fulton County Government Center since it opened in 1990. The imported palm trees, marble sculpture and other features quickly drew the ire of critics. Leaky ceilings, mildewed shelves — see more photos from Fulton's "Taj Mahal," as it looks now and from over the years, at [www.MyAJC.com](http://www.MyAJC.com).



# Fulton County Government Center 1

- Located at 141 Pryor Street
- 10-story, opened in 1990, cost \$70 million
- Houses Fulton County's main administrative offices and about 1000 employees
- 24 years ago, at its dedication, Fulton County Commission Chairman Michael Lomax said it would become a landmark that would survive well into the next century.





**Palm trees once decorated the atrium of the Fulton County Government Center. Although the atrium still is impressive on sunny days, it now leaks when it rains, requiring mats to sop up puddles. AJC 1997**



# YOUR TAX DOLLARS



Water-absorbing towels, a fan and trash cans control water at the main entrance to the Fulton County Government Center, a downtown Atlanta building that was once dubbed the "Taj Mahal."



## Building

continued from A1

In the meantime, rats and roaches skitter about. Rainwater stains the ceilings and carpets of some offices. And in others – most recently the purchasing department – leaks and mold have driven away workers.

"Employees were walking around with masks on," said County Commissioner Robb Pitts, who toured the purchasing department, where 20 staffers were relocated last month. "It reminded me of a scene from some Third World country."

That's not the image Fulton officials were shooting for when they spent \$70 million to build the government center.

The 10-story Pryor Street building houses Fulton's main administrative offices and about 1,000 employees. It's part of a stretch of government buildings downtown that includes the state Capitol, Atlanta City Hall and the Richard B. Russell Federal Building.

When it was dedicated 24 years ago, then-commissioner Chairman Michael Lomax said the government center would become a landmark that would survive well into the next century.



Palm trees once decorated the atrium of the Fulton County Government Center. Although the atrium still is impressive on sunny days, it now leaks when it rains, requiring mats to sop up puddles. AJC 1997



Janice Dudley, a supervisor with the Fulton County Tax Commission, shows one of the office areas the tax commission abandoned due to water leaks. Water issues plague the Fulton County Government Center building, causing workers to retreat into smaller work areas. BRANT SANDERLIN/BSANDERLIN@AJC.COM

Instead, it became an object of scorn for critics of government waste. They cited its \$545,000 marble sculpture and staircase, its \$148,000 clock tower and its 10 palm trees that

cost a combined \$100,000.

The trees became symbols of government waste, and critics wore palm-shaped lapel pins in protest. Former commission Chairman Mitch Skandalakis made an issue of the trees when he ran for office and had them chopped down when he won. County officials said the trees cost about \$8,200 a year to maintain but only \$5,000 to remove.

Lomax and Skandalakis did not respond to requests for comment.

Despite the building's luxurious features, county officials – constrained by budgets buffeted by tumbling property tax revenue – haven't spent the money necessary for its upkeep, and it has become a maintenance nightmare.

The atrium – impressive on sunny days – leaks when it rains, turning the floor into an obstacle course of yellow "caution" signs and mats that sop up puddles. In the tax commissioner's office, ceilings and carpets are water-stained and a hose drains fluid from one ceiling leak into a bucket.

Tales of problems at the government center have been around since at least 2005. Greg Fann, executive director of the county employees' union, said Fulton officials have neglected maintenance on the building and now will pay the price.

"If you don't make changing the oil in your car a priority,

pretty soon it will catch up with you," Fann said.

Tax Commissioner Arthur Ferdinand estimated that since 2005 he has lost a third of his office space at the government center to leaks and mold. The vacant offices are simply shut up. Some are used for storage. Others are full of moldering ceiling tiles and abandoned office furniture.

The problem has affected customers who come to Ferdinand's department for tax bills, car tags and other concerns. The tax commissioner has one-stop shopping for many services at offices around the county. But at the government center, with employees now scattered, customers sometimes have to roam from office to office.

"You take half an hour at lunchtime and try to get something resolved, you can't do that very easily," Ferdinand said.

In 2012, flooding from a busted pipe forced the tax assessor's department – which appraises property for tax purposes – to vacate some offices. Chief Appraiser David Fitzgibbon said at the time the upheaval contributed to delayed data entry on property appeals that led to about 6,500 property owners getting overcharged on their tax bills.

Also in 2012, a roach infestation and other problems forced the county to shutter the government center's cafeteria, which remains closed. A break

room in the tax commissioner's office recently closed for a time because of roaches. And employees sometimes see rats in their work areas.

"Every once in a while you hear somebody screaming," said Janice Dudley, a financial services specialist for the tax commissioner.

This week, Fulton County commissioners agreed to spend \$14,370 for emergency pest control at the government center and the nearby Justice Center Tower and Juvenile Justice Building.

County staff had asked commissioners in October to spend \$961,000 to begin fixing problems at the government center, including the purchasing department. But commissioners instead elected to spend the money on a Fairburn Road bridge project.

Pitts said commissioners weren't aware of the extent of the building's problems.

"We were told some repairs were needed to the government center," he said. "But had we been told we had employees walking around in masks and leaving because they were sick, we would have acted that day."

Fulton Chairman John Eaves said the upkeep of buildings has not been a top priority in recent years. Plummeting real estate values have cost the county property tax revenue, and budgets have been tight. Eaves said commissioners have focused on maintaining public services.

"It's a little difficult to fund a capital project that the typical citizen will not benefit from," he said.

Now, with the purchasing department's problems raising questions about employee health and safety, Fulton may not have a choice.

"We certainly have the monies earmarked to deal with the most pressing issues," Eaves said. "I feel good about that."

Last month commissioners approved a 2014 budget that includes about \$1.3 million to begin addressing the government center's needs. In October, Facilities and Transportation Director David Ricks told commissioners critical repairs to the building would cost more than \$4 million.

County Manager Dwight Ferrell said last month Fulton will study the cost of long-term improvements this year, with an eye toward beginning work in 2015. The fixes likely will take years.

"It's been a tough juggling act. Capital improvements have been deferred," Eaves said. "Now we've got to take care of it."



# Building Problems

- Atrium leaks whenever it rains
- In 2012, burst pipe caused the tax assessor's dept. to vacate some offices
- Roach infestation in 2012 caused the cafeteria to close. It's still closed.
- Employees see rats in their work areas.  
"Every once in a while you hear somebody screaming."
- Employees wear masks due to the mold

# Problems for Customers

- Employees scattered so customers have to roam from office to office
- 2012 flood in tax assessor's office contributed to delayed data entry on property appeals → 6500 property owners were overcharged on their tax bills





**Janice Dudley, a supervisor with the Fulton County Tax Commission, shows one of the office areas the tax commission abandoned due to water leaks. Water Issues plague the Fulton County Government Center building, causing workers to retreat into smaller work areas. BRANT SANDERLIN /BSANDERLIN@AJC.COM**

# Article Quotes

- Fulton officials have neglected maintenance on the building and now will pay the price.
- The upkeep of the buildings has not been a top priority in recent years.
- Plummeting real estate values have cost the county property revenue, and budgets have been tight.



- Fulton County Chairman John Eaves, “It’s a little difficult to fund a capital project that the typical citizen will not benefit from.”
- In October 2013, Facilities Director told the Commission it would cost \$4 million to make the critical repairs
- 2014 budget includes about \$1.3 million to begin addressing the building’s needs
- Eaves, “Capital improvements have been deferred.... Now we’ve got to take care of it.”

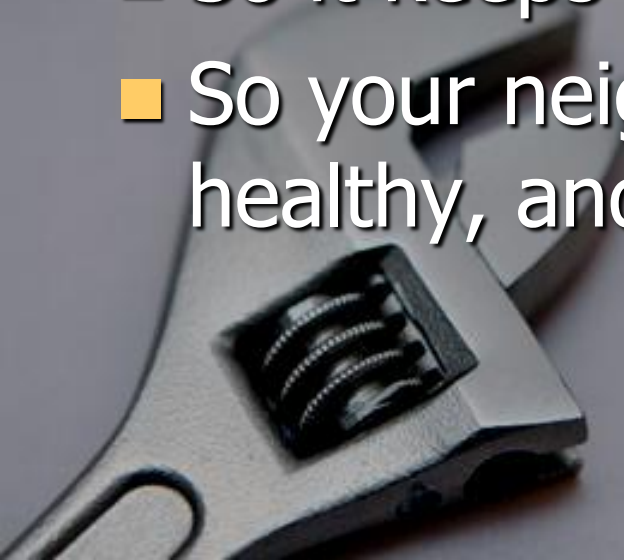


Your home is likely your most valuable monetary asset



# Why Maintain Your House?

- So it can adequately shelter you, your family, and your possessions
- So it retains (or increases) its monetary value
- So it keeps its historic character
- So your neighborhood remains a safe, healthy, and attractive place to live





# It's the LAW!

- Code of Ordinances of the City of Decatur, Georgia  
Chapter 58. Historical Preservation  
Article VI. Maintenance of Historic Properties  
Sec. 58-157. Failure to provide ordinary maintenance or repair.

Property owners of historic properties or properties within historic districts shall not allow their buildings to deteriorate by failing to provide ordinary maintenance or repair.

# **\$ave money!**

**It is cheaper to maintain your  
house  
than to replace your house.**



# Deferred maintenance =

# NEGLECT



**CONDEMNED**

**"This BUILDING is unfit for human habitation; the use of or occupation of this building for human habitation is prohibited and unlawful."**

Occupation of this building shall constitute a violation of City Ordinance.  
Removal of this posted notice shall constitute a violation of City Ordinance  
Chapter 29-6-5 of the Code of Ordinances of the City of Nokomis.  
Fines \$25.00 - \$500.00

This order posted on \_\_\_\_\_

Public Safety Commissioner      Chief of Police



# Historic Houses

## Celebrations & Challenges

- Often superior craftsmanship, materials
- Historic materials more susceptible to decay
  - Older
  - Different materials, systems, technology
- Pre-standardization
  - A 2" x 4" actually measures 2" x 4" (not 1½" x 3½")
  - Harder to get replacement parts
  - Not to code → life/health/safety issues (lead paint, asbestos, accessibility)
- Ultimate in recycling
- Unique, historic



**They don't build 'em like they used to!**

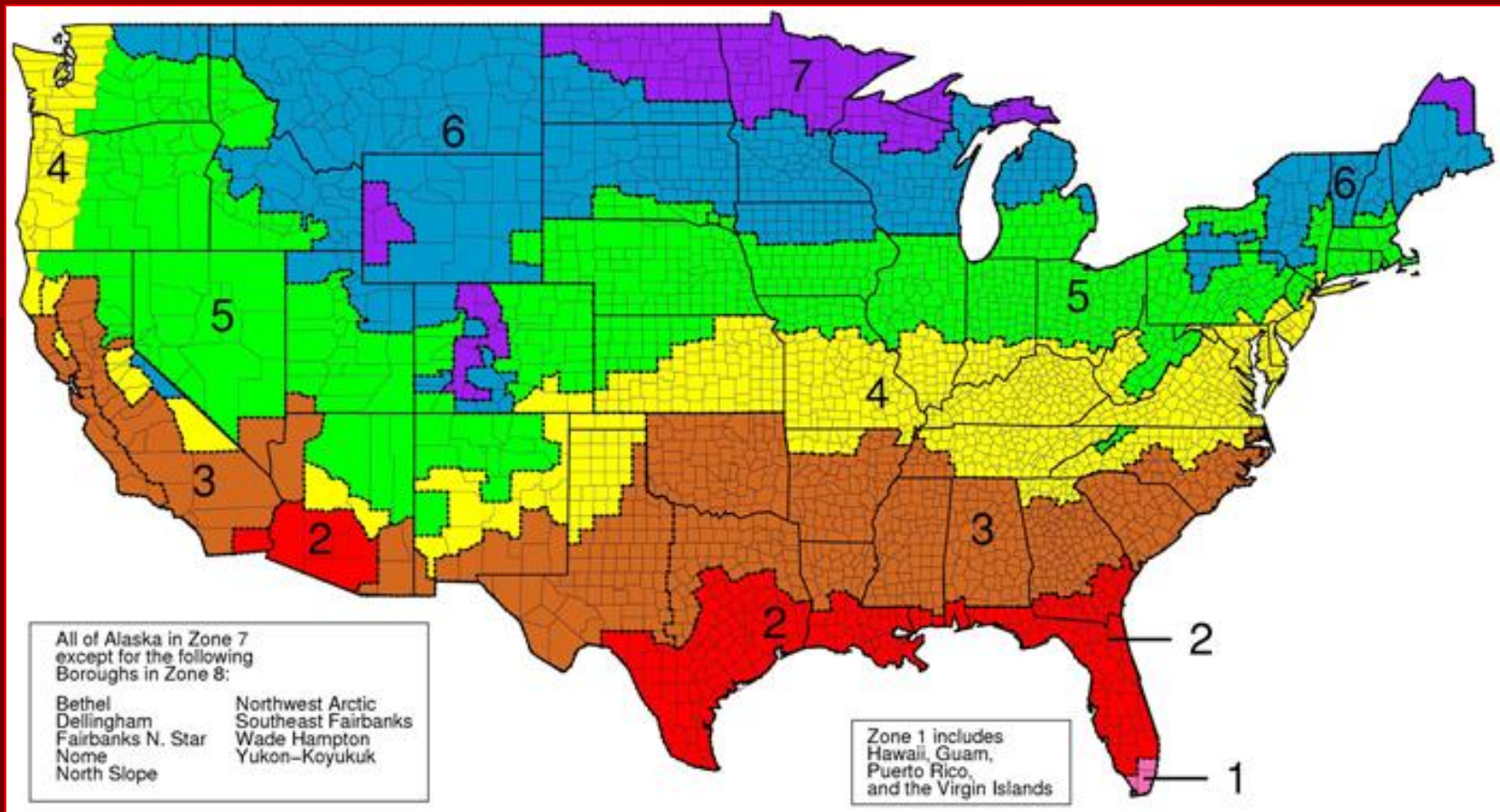




**Sometimes that's  
a good thing;  
other times, not  
so much!**







Zone	Add Insulation to Attic		Floor
	Uninsulated Attic	Existing 3–4 Inches of Insulation	
1	R30 to R49	R25 to R30	R13
2	R30 to R60	R25 to R38	R13 to R19
3	R30 to R60	R25 to R38	R19 to R25
4	R38 to R60	R38	R25 to R30
5 to 8	R49 to R60	R38 to R49	R25 to R30

# Differences between old and new

## Historic house

- Permeable—not airtight or waterproof
- Good ventilation
- Low levels of insulation
- No artificial timber preservatives
- Thick wall construction
- Bricks are softer; lime mortar is softer
- Wide eaves; may not have gutters

## Modern house

- Sealed—vapor barriers, waterproofing
- Reduced ventilation
- High levels of insulation
- Structural timber is pressure treated
- Slender wall construction
- Bricks are harder; cement mortar is harder
- Shallow eaves; typically have gutters



# What kind of house do you have?





# What kind of house do you have?





# Become the expert on your property



- What is the structure?
- What are the materials?
- What systems does it contain?
- What is the condition of each element?
- If there is a problem, what caused it?



# **BSI: Building-Site Investigation**







# “Know Your Home”

- [homeinspectordom.com/know\\_your\\_home.html](http://homeinspectordom.com/know_your_home.html)
- Excellent quick overview of home construction methods, materials, and systems
- Lucian Home Inspection Services, LLC, Mechanicville, NY

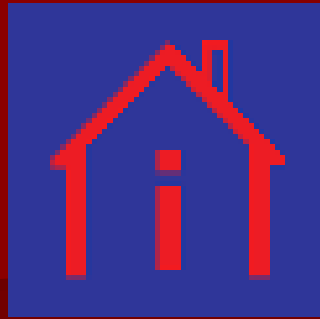




# The Craftsman Blog

- [thecraftsmanblog.com](http://thecraftsmanblog.com)
- Good resource for quick information on house styles, what to look for in an old house, historic homeownership tips, and lots of repair instructions





# InspectAPedia®

- [inspectapedia.com](http://inspectapedia.com)
- Free encyclopedia of building and environmental inspection, testing, diagnosis, repair, and problem prevention advice

# Print Resources

- Fisher and Miller, *Caring for Your Historic House*, 1998.
- Young, *Historic Preservation Technology*, 2008.
- Weaver, *Conserving Buildings*, 1997.
- Ching, *A Visual Dictionary of Architecture*, 2012.
- [Amazon.com](https://www.amazon.com) has 4,448 books in the category of “Home & House Maintenance”



OBSERVE INSPECT EXPLORE



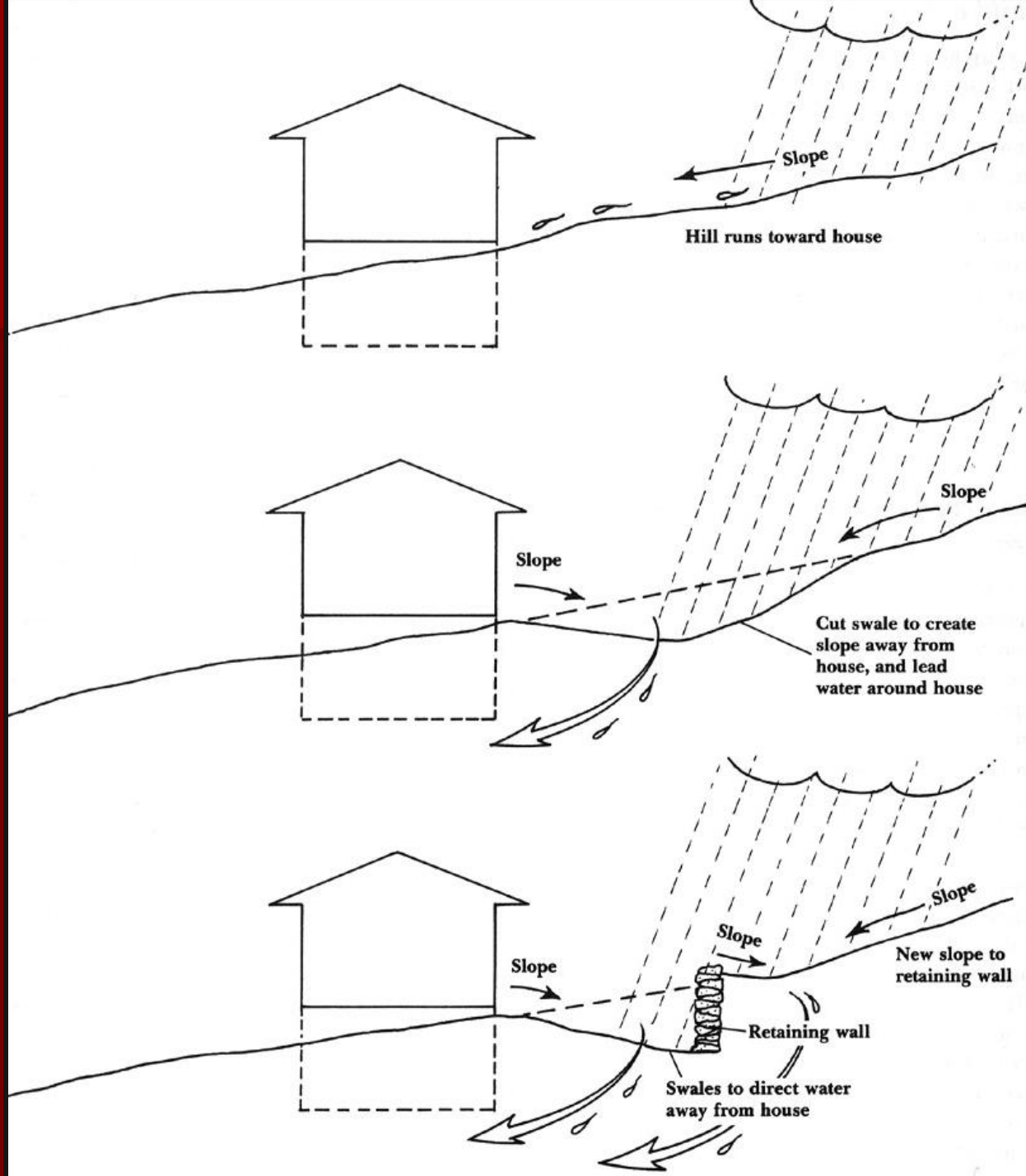


# Site

- Landscaping
- Paths/walkways, driveways
- Outbuildings
- Fences, walls
- Drainage







Grade changes, new retaining walls to direct storm runoff **AWAY** from the house's foundation.



# Building Exterior



## ■ Roofing

- Roofing material
- Chimneys
- Gutters

## ■ Siding

## ■ Windows, doors

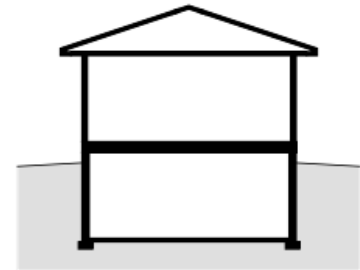
## ■ Porches, decks, stairs

## ■ Foundation

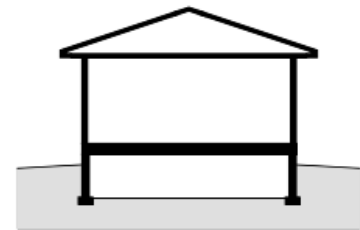


# Types of Foundations

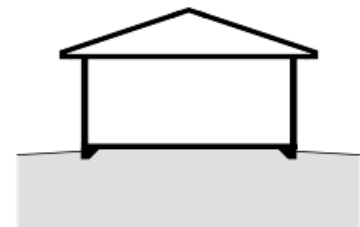
- Modern construction
  - Basement: CMU (concrete masonry units, i.e. “cinder block) or poured concrete
  - Crawlspace: piers of poured concrete or reinforced CMUs
  - Slab on grade: poured concrete



A: DEEP BASEMENT



B: CRAWL SPACE



C: SLAB-ON-GRADE

# Types of Foundations

- Historic construction
  - Structural masonry
  - Masonry piers





# Building Interior



- Basement, crawlspace
- First floor
- Upper stories
- Attic
- MEP: Mechanical (HVAC), Electrical, Plumbing





# **“BIG 10” Areas of Maintenance**

## **Outside the House**

- Roof
- Foundation
- Siding
- Windows
- Doors
- Pests

## **Inside the House**

- Attic
- Ceilings and Walls
- Floors
- Plumbing
- Electrical
- HVAC

# Where your house is most vulnerable—the building envelope

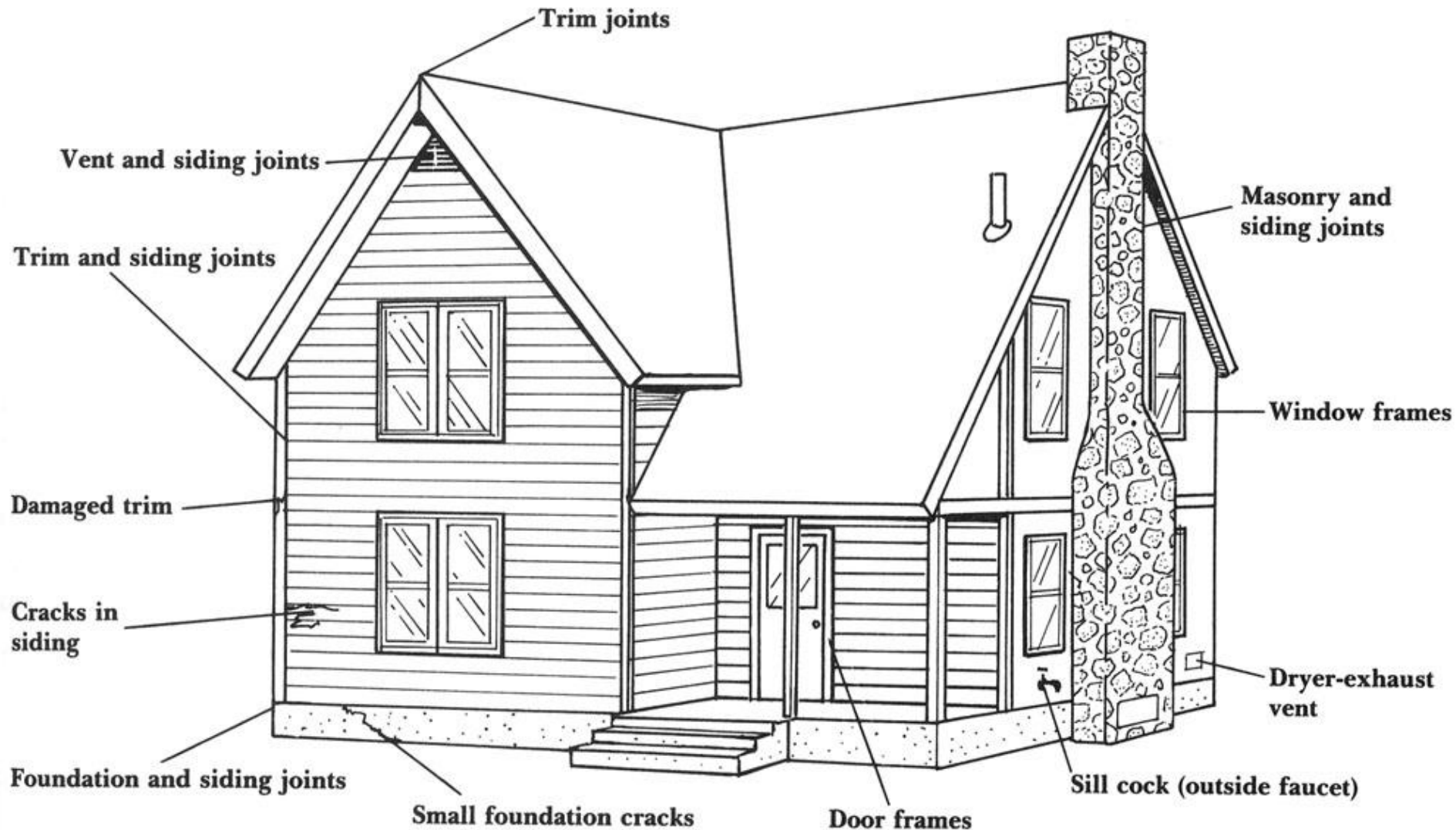
- Roof
  - Roofing material
  - Flashing
  - Gutter system
- Foundation
- Siding
- Windows
- Exterior doors





**Seal the  
Envelope**

# Where to caulk your house





What's trying to  
**DESTROY** your house?

# Macroclimatic Factors Causing Buildings to Deteriorate

- Gravity
- Solar radiation, especially ultraviolet light
- Botanical agents
- Biological agents
- Human factors
- Climate



# Water is the agent that promotes many types of decay

- Wood expands, loses its strength
- Bricks crumble
- Mortar crumbles
- Salts leach out of masonry damaging the brick or stone
- Chemical reactions cause deterioration
  - Acid rain and pollution
  - Rust (moisture + oxygen)
  - Galvanic corrosion

# Sources of Moisture

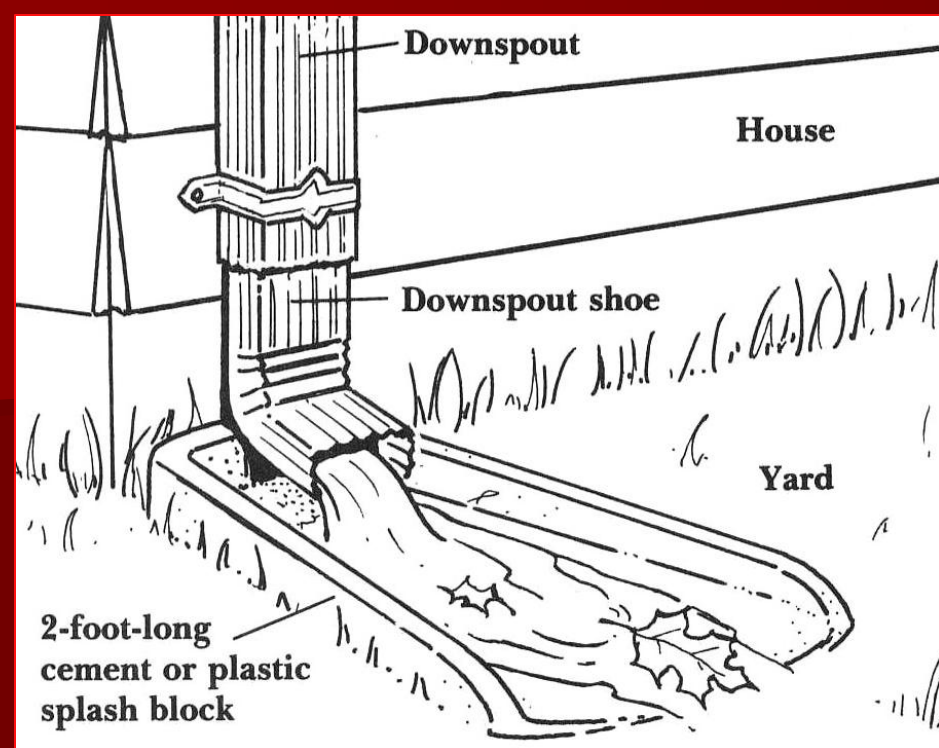
- Precipitation – Rain, sleet, snow, hail, ice
- Flooding
- Leaks (roofs, foundations, doors, windows, plumbing)
- Rising damp (capillary action)
- Condensation (inadequate ventilation, vapor barrier control)
- Poor drainage
- People – breathing, perspiring
- Modern moisture-producing amenities



**The faulty disposal of rainwater is the most frequent cause of building deterioration.**





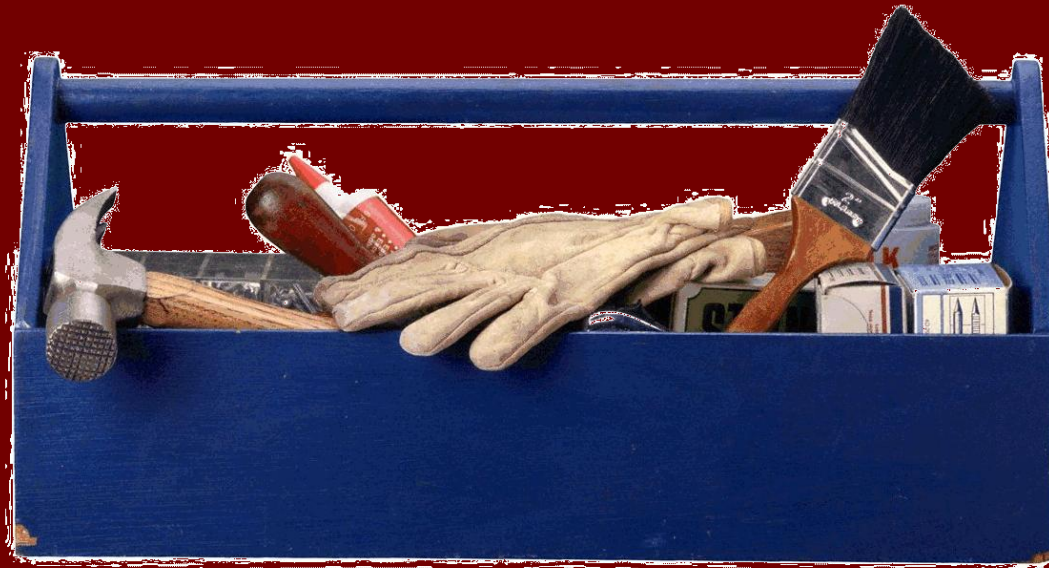


Flexible downspout  
extender



# Home Repairs

- Identify the problem.
- Understand what caused the problem.
- Address the **cause** of the problem.
- Make the repair.



# A frequent, but ineffective approach to repairs

- Observe symptom
- Search for solution
- Carry out “repair”
  - Often cosmetic, “treat the symptoms”
  - Provides temporary solution
- Recurrence of symptom
- Total replacement



# Elements of a Maintenance Plan

- Cyclical/routine maintenance
- Periodic inspections
- Prioritized maintenance tasks
- Unplanned maintenance
- Maintenance log or record
- Contractor list

# Cyclical/Routine Maintenance

- Routine maintenance tasks need to be done on a cyclical basis (daily, seasonally, annually) to keep your house in good repair. Some examples:
  - Clean gutters and downspouts—spring and fall
  - Mow grass—weekly during growing season
  - Replace smoke detector batteries—annually
  - Have chimney swept—annually



# Periodic Inspections

- Periodic inspections are scheduled checkups to see if anything needs to be repaired or serviced.
- Some inspections are done by professionals, like the termite inspector, or the HVAC service provider.



# Periodic Inspections, continued

- Some can be done by the homeowner, especially two very important inspections:
  1. Walk around outside your house **DURING** a heavy rainstorm to check for proper drainage and to make sure your gutters and downspouts are working.
  2. Walk around inside your house (don't forget the attic and basement) shortly **AFTER** a heavy rainstorm to check for any leaks.



# Inspect your attic for leaks

- Inspect during a rain
- Leak source may not be where water drips
- Cannot seal roof leaks inside the attic



# Prioritized Maintenance Tasks

- Prioritized list of required repairs. Rank each task in terms of need. The first item on the list is the one that needs to be fixed soonest. Some examples, in order of priority:
  - Fix plumbing leak
  - Replace broken glass in window
  - Repaint woodwork
  - Adjust sticking door





# Unplanned Maintenance

A dramatic photograph of a large building, possibly a warehouse or industrial structure, engulfed in intense orange and yellow flames. Thick, dark black smoke billows upwards from the fire, filling the upper portion of the frame. The building's structural elements, like windows and doors, are visible through the fire. The overall scene conveys a sense of a major, unexpected disaster.

- Storm damage, catastrophic events, unexpected failures of mechanical equipment
- Repairs for such items can wreak havoc on any budget
- Set aside contingency funds for such situations

# List of Contractors/Service Providers

- Routine maintenance contractors
  - Plumber, electrician, pest control, security, landscaper, painter, handyman
- Historic materials contractors
  - Roofer, brick mason, plasterer, architect, joiner



**Inserting modern materials or components into your house, in an attempt to reduce or eliminate maintenance, may lead to accelerated decay in unexpected ways.**

# Home Repairs

## Should you do it yourself?

- Answer depends on:
  - The size and complexity of the work
  - Your expertise and comfort level
- Ask these questions:
  - How long will it take?
  - Can I do the work safely?
  - Is more than one element/system involved?
  - Does the job require special expertise?
  - Must the repair meet local building codes?



If you feel uncomfortable,  
unsafe, or unsure of your  
abilities, hire a professional.

# For houses in historic districts

- If your house is in a local historic district, all exterior changes must comply with the district's *Design Guidelines*, and will likely require a Certificate of Appropriateness (COA) from the local Historic Preservation Commission (e.g., City of Decatur HPC, DeKalb County HPC, Atlanta Urban Design Commission)



# Tax Incentives for rehabilitation\* of houses listed in\*\* the National Register of Historic Places

- Federal tax credits

[nps.gov/tps/tax-incentives.htm](https://nps.gov/tps/tax-incentives.htm)

- State of Georgia tax incentives

[georgiashpo.org/incentives/tax/state](https://georgiashpo.org/incentives/tax/state)

\*All rehabilitations must be approved by the Georgia State Historic Preservation Office

\*\*Or are eligible for listing

# For all historic houses

- All building maintenance should be done in accordance to the Secretary of the Interior's *Standards for the Treatment of Historic Properties*,  
[nps.gov/history/hps/tps/standguide](https://www.nps.gov/history/hps/tps/standguide)

Without a firm understanding of the existing conditions, the sources of decay, and the effect of their remediation on the historic character-defining features of the building, a project may not be considered to be in compliance with the Secretary's *Standards and Guidelines for the Treatment of Historic Properties*.