Emergency HVAC Repair Pros

We solve the HVAC problems other contractors won't.

FIELD GUIDE · BIRMINGHAM, ALABAMA

Office Building Comfort Standards Guide

The ASHRAE-grounded numbers for office comfort — and what to actually do when tenants complain it's too hot, too cold, too dry, or too humid.

Who this is for: Property managers and facility managers handling tenant comfort complaints in office buildings — Class A, B, or older buildings with retrofitted HVAC.
What's inside: The ASHRAE 55 comfort envelope, the difference between thermal comfort and air quality complaints, the 5 most common office HVAC complaints and root causes, a decision tree for response, and when complaints are an equipment issue vs a control/setting issue.
Service area: Commercial HVAC across the Birmingham, AL metro

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Why Most Comfort Complaints Aren't What They Sound Like

A tenant says "it's too hot." What that almost never means: the AC is broken. What it usually means: airflow at their desk is poor, set point is too high, humidity is high making it feel warmer, or the perimeter is sun-loaded. Solving the wrong problem is expensive and doesn't resolve the complaint.

The ASHRAE 55 Comfort Envelope

ASHRAE Standard 55 defines the temperature/humidity range where 80%+ of seated office workers report being comfortable.

- Summer (light clothing): 73-79°F at 30-60% RH
- Winter (warmer clothing): 68-75°F at 30-60% RH
- Air velocity at occupants: under 40 ft/min for sedentary work
- Mean radiant temperature within 5°F of air temp (no cold-window radiance, no hot-glass radiance)

Complaint 1 — "It's Too Cold"

Likely root causes, in order of frequency:

- Air dumping from a poorly-aimed diffuser onto the complainant
- Over-cooling because the thermostat is in a different zone
- Cold-air drop from a window with poor U-value (perimeter office, winter)
- Set point is correct but tenant clothes light
- Last resort: AC is actually over-conditioning. Check supply-air temp; should be 55-58°F. Lower = excessive

Complaint 2 — "It's Too Hot"

Likely root causes:

- Diffuser blocked by file cabinets, plants, partition walls
- Sun-loaded glass (especially west-facing 2-6 p.m.)
- High occupant density (conference room with 12 people; sized for 6)
- Closed VAV box not opening
- Last resort: airside or refrigerant problem at the unit. Check supply-air temp and unit pressures

Complaint 3 — "Air Is Stuffy / I Can't Breathe"

Usually NOT a temperature issue. It's a ventilation or filtration issue.

- Outdoor air damper stuck closed → CO2 climbs above 1000 ppm → "stuffy"
- Filter loaded → airflow dropped → stratification
- Possible IAQ issue (off-gassing, mold, etc.) → IAQ test needed
- Conference rooms suffer this fastest — 12 people in a 200 sq-ft room generate 5,000+ ppm CO2 in 30 minutes if ventilation is poor

Complaint 4 — "It's So Dry"

Real symptom in winter office buildings, where outside air is cold and dry and gets heated without humidification.

- Winter RH commonly drops to 15-25% in unhumidified buildings
- 30-40% RH is target
- Solutions: humidification at AHU (capital cost), economizer adjustment, or accept and provide tenant info

Complaint 5 — "It's So Humid / The Bathrooms Smell Like Mildew"

Latent load isn't being removed.

- Oversized AC short-cycling — cools fast, never dehumidifies
- Reheat capability lost in a VAV/reheat system
- Outside-air load exceeding design at extreme weather
- Coil bypass dampers stuck open

Decision Tree for Response

When a complaint comes in:

- Step 1 — Within 4 hours: take a reading at the complainant's desk. Temp, RH, CO_2 if you have a sensor
- Step 2 — Within 24 hours: walk the zone. Check diffusers for obstruction, VAV boxes for movement, set point match
- Step 3 — Within 72 hours: if measurements show out-of-envelope, call HVAC contractor. If in-envelope, send tenant a written note with the readings and ASHRAE 55 reference
- Step 4 — Recurring complaints in same zone: zone-level imbalance. Air balance contractor should re-balance

When It's an Equipment Issue

Equipment failure shows up across multiple zones simultaneously. Single-zone complaints are almost always airflow, set point, or load issues. Multi-zone simultaneous complaints, especially during weather extremes, point to:

- AHU coil fouled or undercharged
- Chiller capacity loss
- Damper actuator failures
- Boiler / heat-source issue (winter)

About Emergency HVAC Repair Pros

> **Emergency HVAC Repair Pros** — We solve the HVAC problems other contractors won't.
>
> Commercial HVAC across the Birmingham, AL metro

This guide was written by working HVAC techs, not marketing teams. Direct, honest, practical. Real Alabama numbers, real local context, no guarantees we can't back up.

If something in here saved you a service call — or saved you from a bad one — share it with a neighbor. That's the whole point.

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