

# ZERODRAFT®

SOUTHEAST MICHIGAN

“Creating Healthier and More Energy Efficient Homes”

“IN A WORLD OF EMPTY PROMISES  
WE DELIVER TANGIBLE RESULTS”

## PROBLEMS WE SOLVE:

### HEALTH:

- Prevent mold – often harmful to respiratory or other health problems
- Poor air quality – stops uncontrolled outdoor air infiltration

### SAFETY:

- Deterioration of exterior finish – stops exfiltration of indoor air
- Prevention of ice damming

### DURABILITY:

- Structural integrity – walls, basements, crawlspaces, roofs and windows
- Quieter, better quality home, reduced obsolescence, higher resale value

### COMFORT:

- Thermal – eliminate drafts
- Dirt and pests – a sealed envelope keeps them out

### ENERGY EFFICIENCY:

- High energy bills – envelope improvement, improve efficiency, lower energy costs\* and provide a return on investment

*\*According to EPA 430-F-97-028, December 2000 publication, air leakage accounts for 25% to 40% and DTE says 39% of the energy used for heating and cooling and also reduces the effectiveness of other energy-efficient measures such as increased insulation and high performance windows. Refer to Pie-chart on last page).*



THE GOAL IS TO STOP CONTAMINATED OUTDOOR AIR GETTING INTO THE HOME AND WARM MOIST AIR FROM LEAVING. IT'S A BIG PROJECT, AND YOU MIGHT WANT TO HIRE A RELIABLE, LICENSED AND INSURED RESIDENTIAL BUILDER WITH EXPERIENCE IN AIR-SEALING.

### ATTIC:

- Attic access pull-down stair attic access hatch
- Heating and air conditioning ducts - connections and insulation - boot penetrations
- Chimneys
- Fireplace flues
- Plumbing stacks
- Wire penetrations
- Top plates (all walls)
- Dropped ceilings (over showers)
- Exhaust fans - ducted to roof, insulated, sealed joints, and perimeter sealed
- Recessed light fixtures
- Knee walls
- Duct and pipe penetrations
- Skylights
- Junction boxes for ceiling fans or surface mounted lights
- Where additions meet older sections of the house
- Split-level discontinuities
- Whole house fans (*removal recommended*)
- Supply and return air registers
- *Verify that the effective net free area of the attic ventilation meets or exceeds code and adequately vents the space.*
- Fire-stop/air-seal electrical penetrations

Contact **ZERODRAFT of Southeast Michigan** for an assessment of your home

(248) 585-0964. or [jim@zerodraftofsemi.com](mailto:jim@zerodraftofsemi.com)

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## BELOW THE ATTIC ALSO SEAL AND INSULATE:

- Basement (spray foam air-seal rim joist and insulate)
- Ductwork
- Exhaust
- Crawl space
  - Cover earth floor with vapor diffusion and Radon retarder
  - Insulate the walls, rim joist and mud sills

## SEAL ALL OTHER PATHWAYS LEADING TO THE ATTIC, INCLUDING:

- Ceiling and wall fixtures
- Electrical receptacles and switches
- Plumbing penetrations in cabinets
- Cold air return
- Exhaust fan perimeters
- Common walls
- Furnace flues
- Fireplace Flues
- Range hood ductwork
- Plumbing stacks (in basement)
- All penetrations of the first floor in the basement or crawl space.



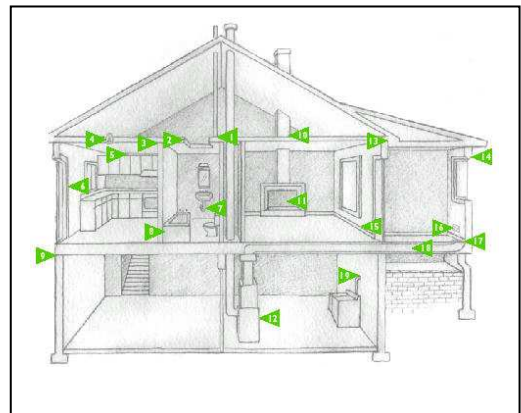
**SEALING THE ATTIC IS A BIG PROJECT, BUT WHEN YOU LOOK AT THE BENEFITS - HEALTHIER INDOOR ENVIRONMENT, EXTENDED ROOF LIFE, PREVENTION OF MOLD-GROWTH, IMPROVED COMFORT, STRUCTURAL DURABILITY, INCREASED ASSET VALUE, LOWER ENERGY BILLS, AND PREVENTING ICE DAMS - IT'S A PROJECT WELL WORTH DOING.**

## AFTER AIR-SEALING VENTILATE THE ATTIC IN ACCORDANCE WITH CODE USING:

- Soffit and Ridge Vents
- Full width rafter baffles
- Wind Baffles
- Add blown insulation to achieve overall R-value of 49 (EPA and DTE Recommendation)

## OTHER ENERGY CONSERVATION OPPORTUNITIES:

- Weather strip exterior doors
- Weather strip door into garage
- Weather strip garage door
- Weather strip windows
- Draft-stop window perimeter (between jamb and wood stud)
- Draft-stop fireplaces
- Draft-stop laundry dryer vent
- Draft-stop operable windows
- Install compact-fluorescent lamps (CFC's)



LICENSED AND INSURED BUILDER

LICENSED PROFESSIONAL ENGINEER (MI); BUILDING SCIENTIST

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## SERVICES AND EXPERTISE

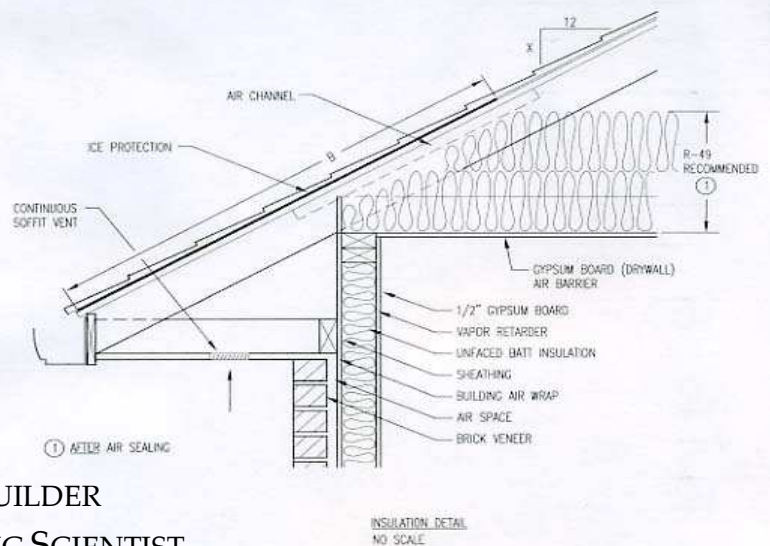
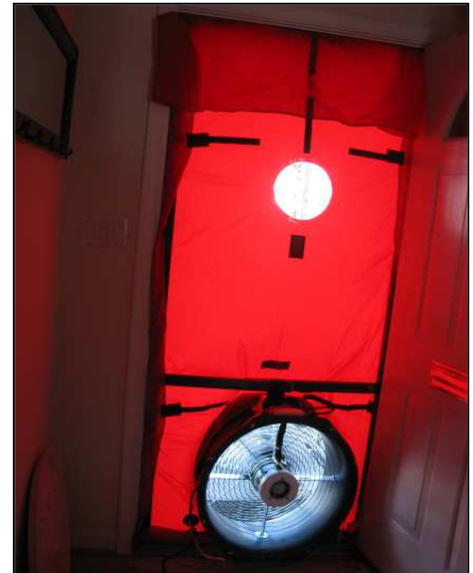
### SERVICES

ATTIC AIR INFILTRATION REDUCTION  
WINDOW AIR INFILTRATION REDUCTION  
ENVELOPE AIR INFILTRATION REDUCTION  
INFRARED ENERGY AUDIT  
BLOWER DOOR TEST  
DUCT BLASTER DUCTWORK TEST  
ATTIC INSULATION INSTALLATION  
ATTIC INSULATION REMOVAL  
ATTIC VENTILATION OPTIMIZATION  
BATHROOM EXHAUST FANS AND ROOF DISCHARGE  
CLASS 1 CODE COMPLIANT SEALANT FOAMS  
INTERIOR DUCT SEALING (CONCEALED DUCTS)  
DUCT SEALING - EXTERIOR  
CRAWL SPACE VENTILATION AND INSULATION  
CRAWL SPACE MOISTURE AND RADON BARRIER  
BASEMENT INSULATION & DRAFTSTOPPING  
COMPREHENSIVE ASSESSMENT OF HOME WITH PRIORITIZES REPORT

### EXPERTISE

REGISTERED PROFESSIONAL ENGINEER (MI)  
LICENSED RESIDENTIAL BUILDER  
BUILDING SCIENTIST  
ENERGY STAR PARTNER  
INDOOR AIR QUALITY CONSULTANT  
CERTIFIED STRUCTURAL DRYING TECHNICIAN (IICRC)  
CERTIFIED WATER DAMAGE RESTORATION TECHNICIAN (IICRC)  
ADVANCED ENERGY AUDITING (Association of Energy Engineers)  
LECTURER ON ENERGY COST AVOIDANCE  
WORLD ENERGY ENGINEERING CONGRESS - LECTURER  
AIA CONTINUING EDUCATION CONFERENCE - LECTURER  
MECHANICAL INSPECTORS ASSOCIATION  
OF MICHIGAN - LECTURER  
UNITED AUTOWORKERS LEGAL SERVICES - LECTURER  
ENERGY COST AVOIDANCE - (3) PUBLISHED ARTICLES  
MOLD LECTURES

- SOLVING WATER INTRUSION PROBLEMS
- ADVANCES IN ENVIRONMENTAL MOLD ISSUES
- MOLD, CODES, AND WATER INTRUSION
- REDUCING WATER DAMAGE AND MOLD  
POTENTIAL DURING CONSTRUCTION  
AND RENOVATION
- MOLD REMEDIATION & WATER RESTORATION



LICENSED AND INSURED RESIDENTIAL BUILDER  
PROFESSIONAL ENGINEER (MI); BUILDING SCIENTIST

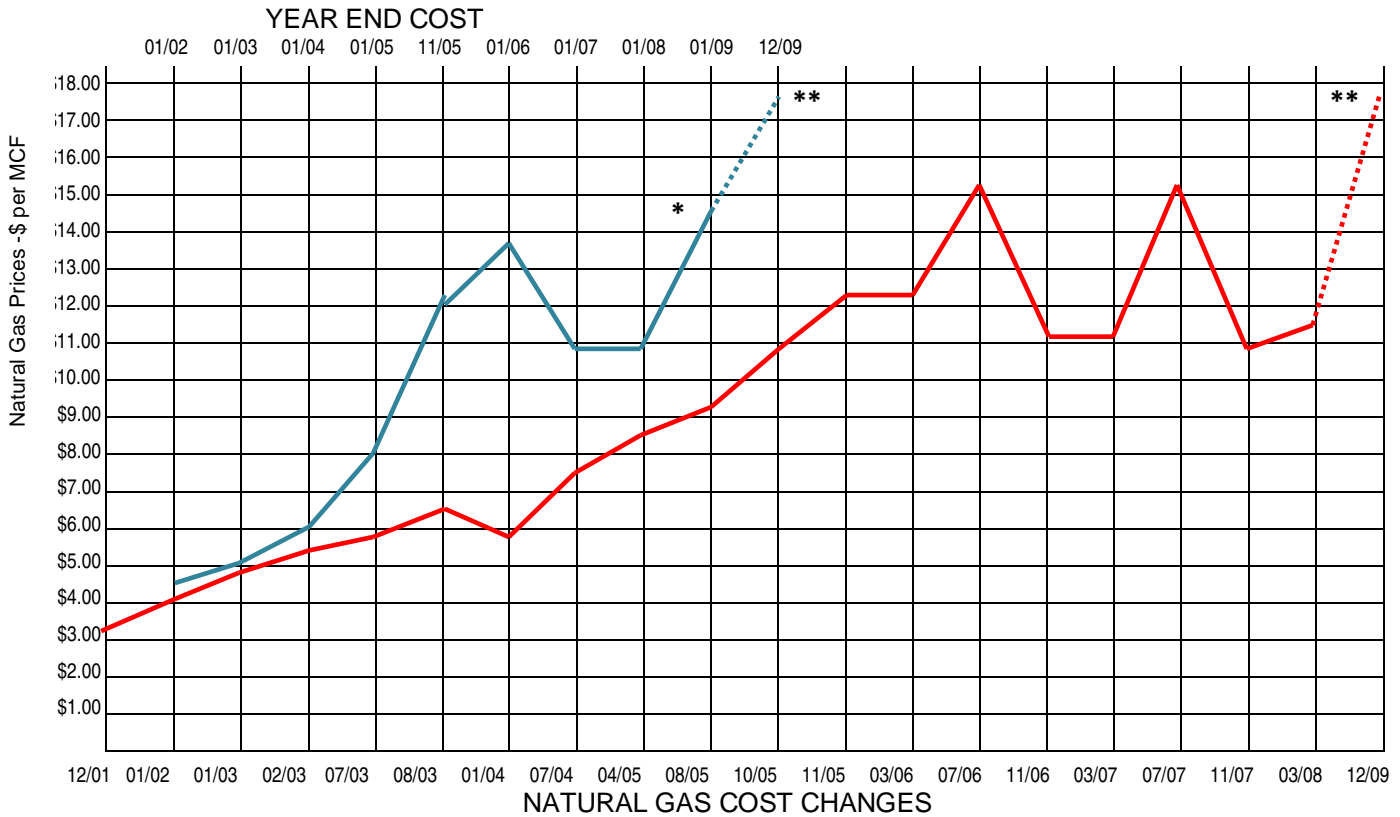
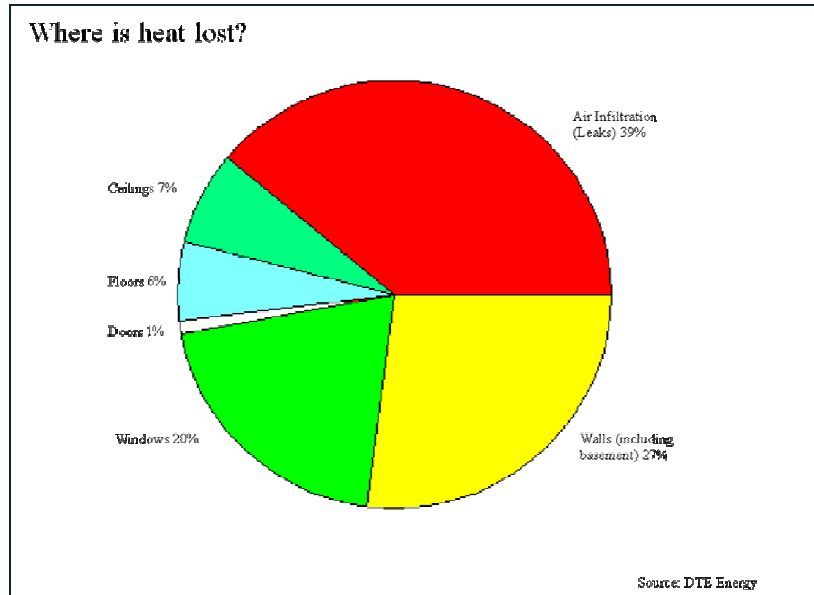
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SOURCE: DTE & ENERGY INFORMATION ADMINISTRATION

\* ANTICIPATED COST, ENERGY INFORMATION ADMINISTRATION (Short term Energy Outlook) [www.eia.doe.gov/emeu/steo/pub/contents.html](http://www.eia.doe.gov/emeu/steo/pub/contents.html)

\*\* RESIDENTIAL AVERAGE - \$17.46/mcf

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