



Inspection Report

T. Smith

Property Address:
115 E. Ogden
Naperville IL



Insight Property Services, Inc.

**Joe Konopacki
IL#450.004227
115 E. Ogden Ave
Ste #117-128
Naperville, IL 60563
630.878.4192**



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Date: 1/1/2013	Time: 02:20 PM	Report ID: II - 120611 II
Property: 115 E. Ogden Naperville IL	Customer: T. Smith	Real Estate Professional:

Comment Key or Definitions

The following definitions of comment descriptions represent this inspection report. All comments by the inspector should be considered before purchasing this home. Any recommendations by the inspector to repair or replace suggests a second opinion or further inspection by a qualified contractor. All costs associated with further inspection fees and repair or replacement of item, component or unit should be considered before you purchase the property.

Inspected (IN) = I visually observed the item, component or unit and if no other comments were made then it appeared to be functioning as intended allowing for normal wear and tear.

Not Inspected (NI) = I did not inspect this item, component or unit and made no representations of whether or not it was functioning as intended and will state a reason for not inspecting.

Not Present (NP) = This item, component or unit is not in this home or building.

Repair or Replace (RR) = The item, component or unit is not functioning as intended, or needs further inspection by a qualified contractor. Items, components or units that can be repaired to satisfactory condition may not need replacement.

Standards of Practice:

ASHI American Society of Home
Inspectors

In Attendance:

Homeowner

Type of building:

Single Family (3 story), Townhome

Home Faces:

East

Weather:

Clear

Ground/Soil surface condition:

Dry

Safety Items



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Address
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The occupants of 115 E. Ogden Ave report odors of cigar and cigarette smoke from the adjacent 2210.

Using a blower door, infrared camera and fiber optic camera, large openings were discovered joining the two units above the concrete masonry unit walls that frame 2210's garage. Once smoke enters the basement/1st floor cavity, electrical, plumbing and mechanical chases connect this space to the 2nd/3rd floor space and above.

Sealing the gaps to the garage is critical for limiting the risk of fire spread between units and halting gasses and odors emanating from the garage and the adjacent unit. Other connection may exist between units at the 2nd/3rd floor requiring the removal of drywall to better inspect this area.

Connections between floors *within* the unit are not a concern for air sealing - only those connecting to the adjacent unit or the outside.

1. Combustion Appliance Zone CAZ

- 1.0 Water Heater Spillage Test
Unsafe

1. Combustion Appliance Zone CAZ



While investigating air low between units, it was noted that the water heaters in units 2208 and 2210 show signs of exhaust spillage - melted gromets and rusted surfaces.

Recommend a BPI certified building analyst perform a combustion safety test to determine the conditions that lead to exhaust spillage. Install a CO monitor above the unit on the nearest wall and when the units fail, upgrade to a power-vented or sealed combustion unit to eliminate the risk of exhaust spillage.

1.1 CO Detector

Unsafe



A carbon monoxide detector should be installed on the wall over the water heaters to alert to high CO from exhaust spillage.

Recommend one CO detector near each CO source (water heater/furnace, kitchen) and one within 15 feet of the bed rooms. The average service life of a carbon monoxide detector is 2-3 yrs. Be sure to replace batteries yearly and replace the units entirely after 3 years.

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Workscope Phase 1



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Address

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This Summary is not the entire report. The complete report may include additional information of concern to the customer. It is recommended that the customer read the complete report.

3. Air Control Layers

3.0 Attached Garage air sealing (Firewall, Combustibles, and VOCs)

Repair or Replace



The major openings between 2208 & 2210 are the gaps between the truss joist, at the top of the concrete masonry unit (CMU) wall separating the garage. This area is most easily accessed through the garage of 2210. The ceiling drywall and fiberglass insulation may be removed, the openings blocked with an appropriate fire-rated material and the walls & floor to unit 2208 air sealed and insulated with closed-cell spray applied foam. This will form an air tight barrier between 2208, 2210 and the garage. Once completed, the drywall ceiling should be replaced with all seams, holes & perimeter sealed.

Recommend the openings to 2210 be sealed as well for fire protection and limiting exhaust gas entry from the garage.

3.1 Thermal bypasses (between floors)

Repair or Replace



(1) A hole was made in the drywall behind the toilet on the 3rd floor. There was no drywall behind the insulation, on the back of the wall. A gap was observed, then the open back side of fiberglass insulation in the bathroom wall of unit 2210 indicating there is no drywall on the back of the framing separating the units in this area.

A proper partition wall (party wall) would have drywall on the back side of each framed wall (See 3.1 Pic.1). This drywall is present at the framed chase that the furnace flue passes through but apparently does not continue behind the toilet. It is unclear how extensive these areas of single layer drywall are.

3. Air Control Layers

We were not able to visually confirm the continuity of the partition wall or determine its layers of construction as it separates the 2nd & 3rd floors of the homes. There should be no breaks in the drywall between units and no air leaks. This may be confirmed by opening the drywall at the level of the 3rd floor at the stairs - on both sides of the flue chase.

Recommend these holes be made when the garage ceiling is opened. If a gap exists, further drywall may be removed in order to seal these areas. All drywall holes may be repaired along with the garage ceiling.

If significant areas of separation wall are missing the interior drywall barrier, sealing holes between floors & all penetrations to this wall at the surface drywall, on both sides, is critical for halting air flow and fire spread. Fire rated sealants must be used in this case. Recommend consulting a City of Chicago code official or an experienced contractor regarding appropriate options for establishing firewall protection in this existing construction.

Building Analysts are not required to report on the following: Life expectancy of any component or system; The causes of the need for a repair; The costs of corrections; Any component or system that was not observed; The presence or absence of pests such as wood damaging organisms, rodents, or insects; or Cosmetic items, underground items, or items not permanently installed. Building Analysts are not required to: Offer warranties or guarantees of any kind; Calculate the strength, adequacy, or efficiency of any system or component; Enter any area or perform any procedure that may damage the property or its components or be dangerous to the Building Analyst or other persons; Operate any system or component that is shut down or otherwise inoperable; Operate any system or component that does not respond to normal operating controls; Disturb insulation, move personal items, panels, furniture, equipment, plant life, soil, snow, ice, or debris that obstructs access or visibility; Determine the presence or absence of any suspected adverse environmental condition or hazardous substance, including but not limited to mold, toxins, carcinogens, noise, contaminants in the building or in soil, water, and air; Determine the effectiveness of any system installed to control or remove suspected hazardous substances; Predict future condition, including but not limited to failure of components.

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1. Combustion Appliance Zone CAZ

Items

1.0 Water Heater Spillage Test

Unsafe

- While investigating air low between units, it was noted that the water heaters in units 2208 and 2210 show signs of exhaust spillage - melted gromets and rusted surfaces.

Recommend a BPI certified building analyst perform a combustion safety test to determine the conditions that lead to exhaust spillage. Install a CO monitor above the unit on the nearest wall and when the units fail, upgrade to a power-vented or sealed combustion unit to eliminate the risk of exhaust spillage.



1.0 Picture 1

1.1 CO Detector

Unsafe

- A carbon monoxide detector should be installed on the wall over the water heaters to alert to high CO from exhaust spillage.

Recommend one CO detector near each CO source (water heater/furnace, kitchen) and one within 15 feet of the bed rooms. The average service life of a carbon monoxide detector is 2-3 yrs. Be sure to replace batteries yearly and replace the units entirely after 3 years.

2. Building Enclosure Performance/Ventilation

Styles & Materials

Conditioned Space Volume (ft3):
 15,079 Cubic Feet

Conditioned Space Floor Area (ft2):
 1,683 Square Feet

Blower Door Diagnostics:
 Measurement at CFM50=
 3,375
 Natural Air Changes per hour=
 1.01 CFMn

**MVR Minimum Ventilation Requirement
ASHRAE 62.2- 2007:**

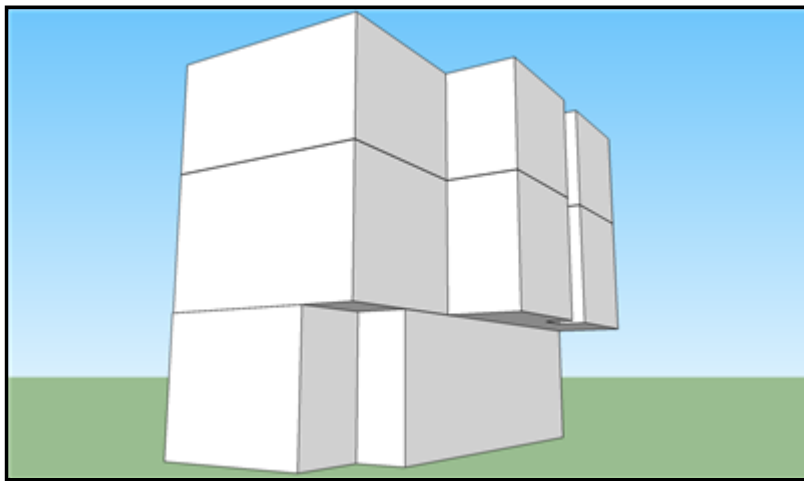
Option 1: CFM Fan Flow using MVG 47 CFM

Items

2.0 Rough outline of Air/Thermal boundary

Surveyed

The "Thermal Boundary" of your home is what separates the conditioned air inside from the outside air, attic or adjacent units. Typically the thermal boundary is made up of an air control layer (like gypsum board) and a thermal control layer (insulation). A thermal boundary has 6 sides (top, bottom, front, back and two sides). Anywhere along the thermal boundary that is not aligned properly (meaning air control layer or thermal control layer, missing or not in tact) energy loss, odor transmission and fire spread risk can occur. Unintended openings between the units and within the units allow air & odors to move throughout.



2.0 Picture 1

2.1 Home Air Leakage measurement (CFM@50)

Surveyed

The blower door measured **3,375 CFM50** of air being pulled in through air leaks in your home's Building Envelope. This air is coming in through gaps, cracks, cavities in and around the components that make up the home's Building Envelope (which is typical of all homes that have not been air sealed). A conversion calculation was done to estimate your home's "Natural" Air Changes per Hour of **1.01 ACHn**. The entire volume of air in you home is exchanged approximately once every **0.99 hour(s)**. The goal is 1 air change every 3 hours or .35 ACHn.

3. Air Control Layers

Styles & Materials

Ceiling Materials:
Drywall


Wall Material:
Drywall

Floor Material:
Concrete Slab (Lower Level)

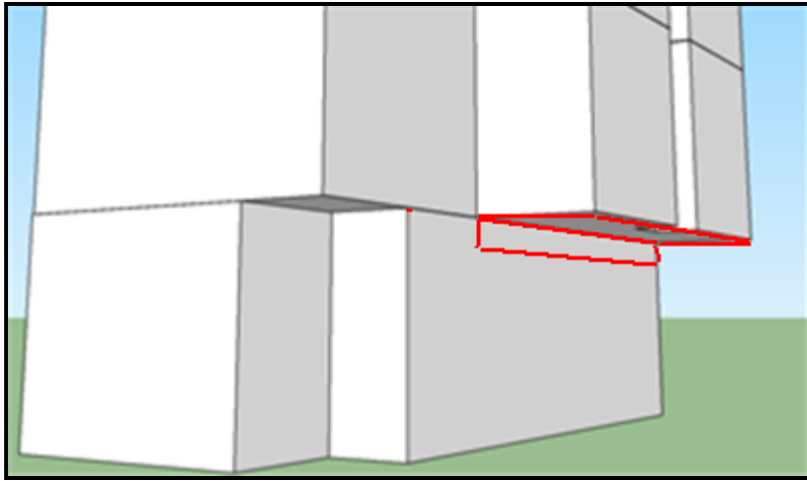
Items

3.0 Attached Garage air sealing (Firewall, Combustibles, and VOCs)

Repair or Replace

-  The major openings between 2208 & 2210 are the gaps between the truss joist, at the top of the concrete masonry unit (CMU) wall separating the garage. This area is most easily accessed through the garage of 2210. The ceiling drywall and fiberglass insulation may be removed, the openings blocked with an appropriate fire-rated material and the walls & floor to unit 2208 air sealed and insulated with closed-cell spray applied foam. This will form an air tight barrier between 2208, 2210 and the garage. Once completed, the drywall ceiling should be replaced with all seams, holes & perimeter sealed.

Recommend the openings to 2210 be sealed as well for fire protection and limiting exhaust gas entry from the garage.



3.0 Picture 1 Underside & wall openings to be air sealed



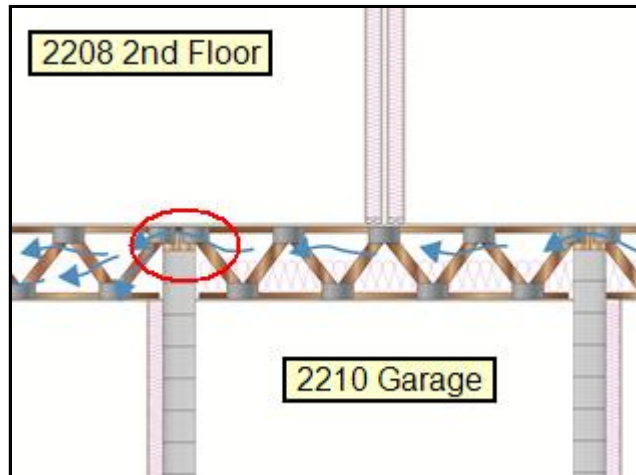
3.0 Picture 2 Air leakage along garage ceiling perimeter



3.0 Picture 3 Opening above CMU block wall to garage



3.0 Picture 4 Opening above CMU block wall to garage



3.0 Picture 5 Opening above block wall

3.1 Thermal bypasses (between floors)

Repair or Replace

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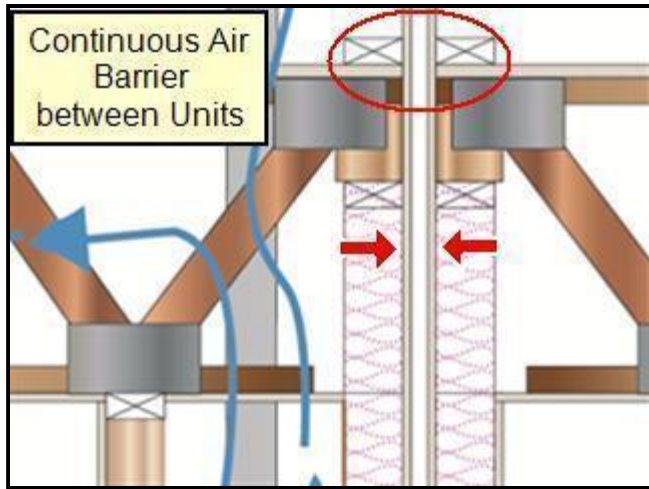
bathroom wall of unit 2210 indicating there is no drywall on the back of the framing separating the units in this area.

A proper partition wall (party wall) would have drywall on the back side of each framed wall (See 3.1 Pic.1). This drywall is present at the framed chase that the furnace flue passes through but apparently does not continue behind the toilet. It is unclear how extensive these areas of single layer drywall are.

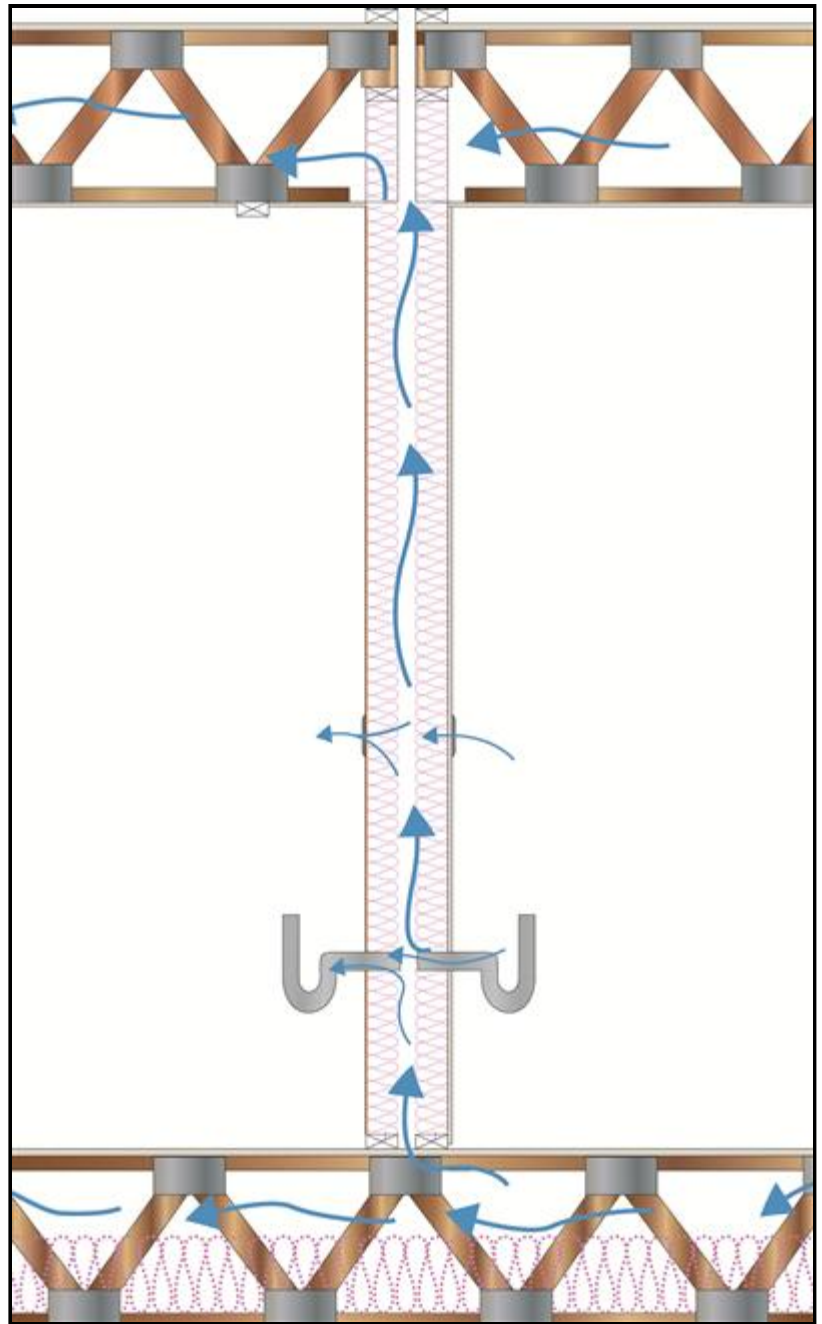
We were not able to visually confirm the continuity of the partition wall or determine its layers of construction as it separates the 2nd & 3rd floors of the homes. There should be no breaks in the drywall between units and no air leaks. This may be confirmed by opening the drywall at the level of the 3rd floor at the stairs - on both sides of the flue chase.

Recommend these holes be made when the garage ceiling is opened. If a gap exists, further drywall may be removed in order to seal these areas. All drywall holes may be repaired along with the garage ceiling.

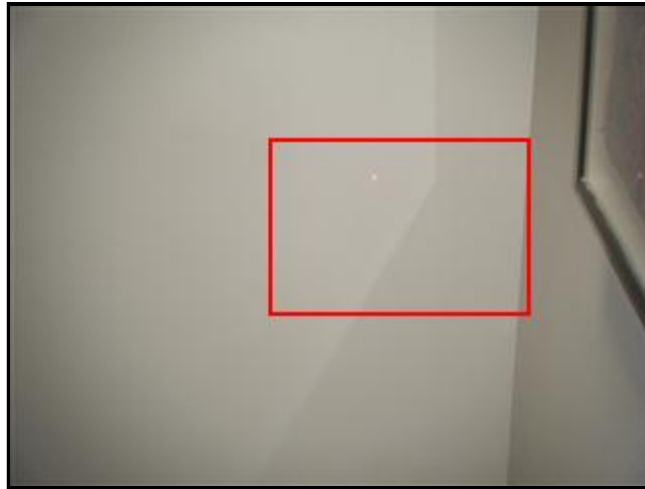
If significant areas of separation wall are missing the interior drywall barrier, sealing holes between floors & all penetrations to this wall at the surface drywall, on both sides, is critical for halting air flow and fire spread. Fire rated sealants must be used in this case. Recommend consulting a City of Chicago code official or an experienced contractor regarding appropriate options for establishing firewall protection in this existing construction.



3.1 Picture 1 Appropriate firewall separation



3.1 Picture 2 No continuous barrier allows air flow & no fire protection

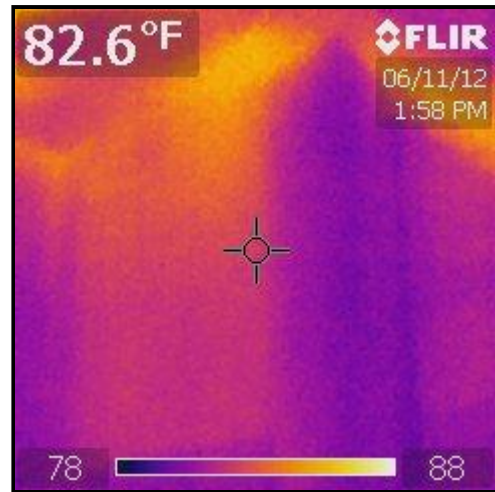


3.1 Picture 3 Cut in access above stair landing where probe hole was drilled

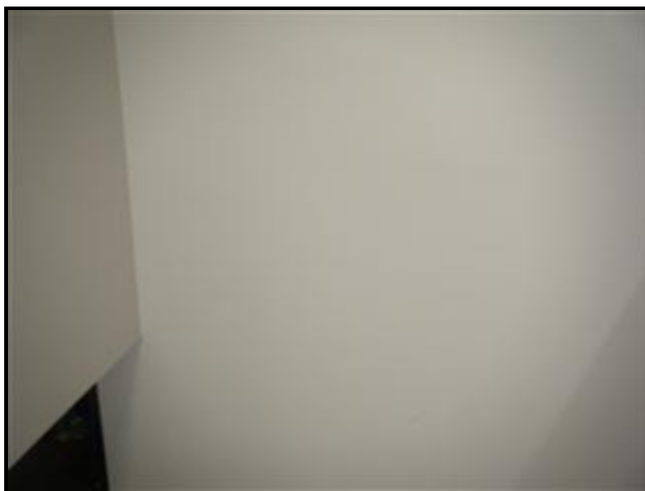
(2) Air can move horizontally through the unit by way of the open truss joists and vertically by way of plumbing, electrical and mechanical chases. This is only an issue if these cavities are open to the outside or adjacent units - as is the case here. Openings to the garage ceiling connect to all the floor spaces throughout 2208, resulting in a significant risk of fire spread and the current odor issues.



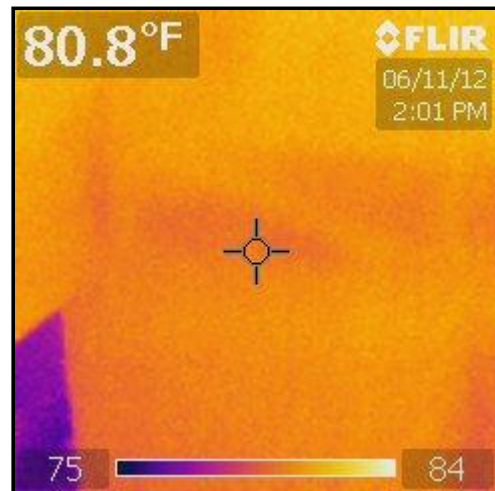
3.1 Picture 4



3.1 Picture 5



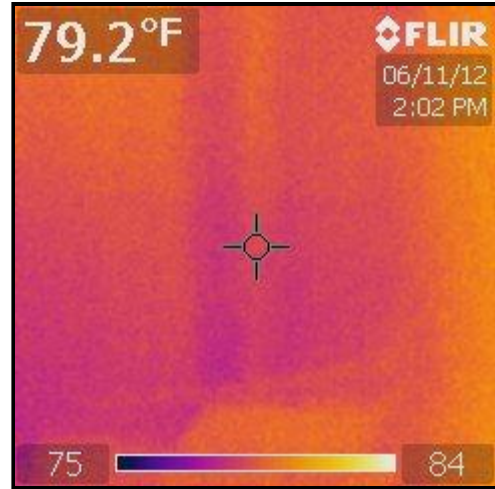
3.1 Picture 6



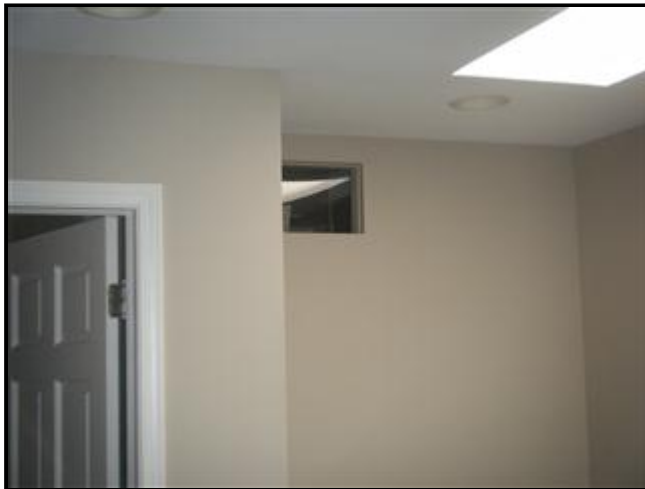
3.1 Picture 7 Truss-joist visible



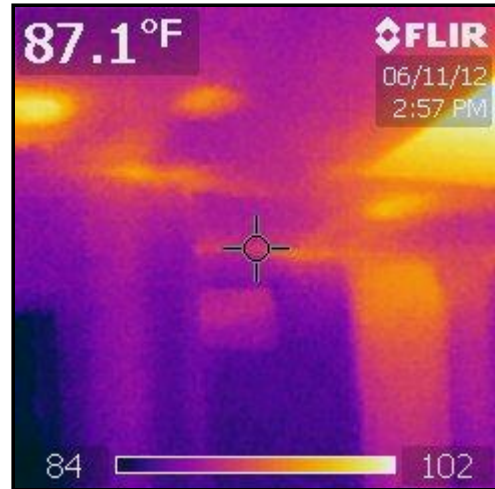
3.1 Picture 8



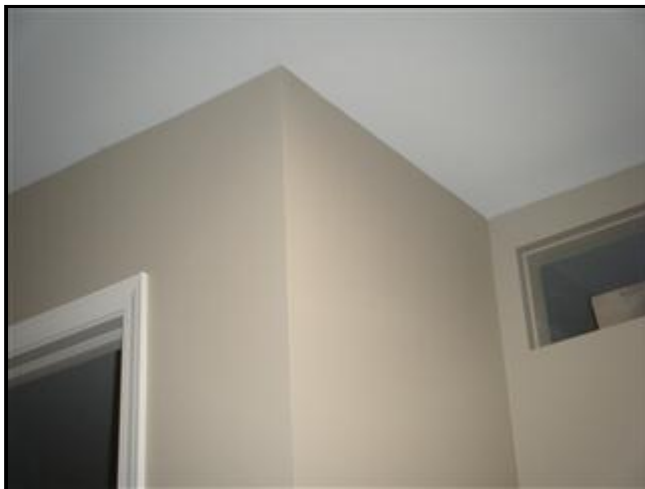
3.1 Picture 9



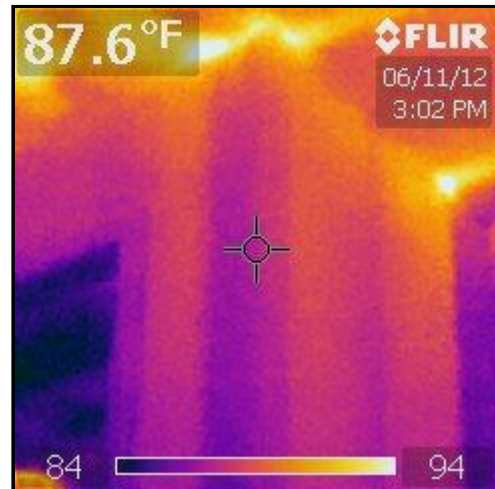
3.1 Picture 10



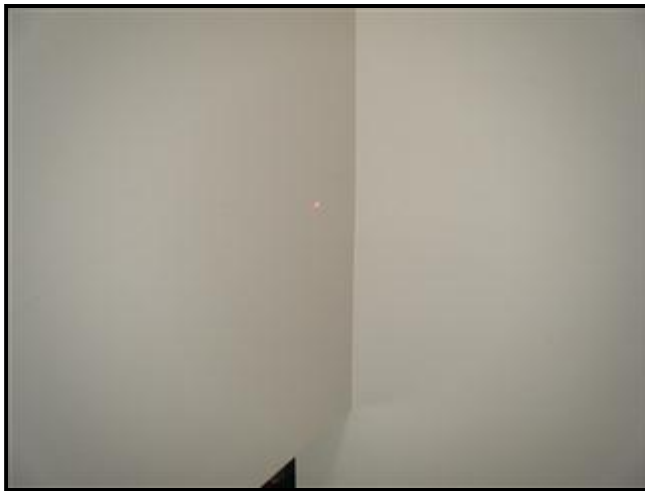
3.1 Picture 11



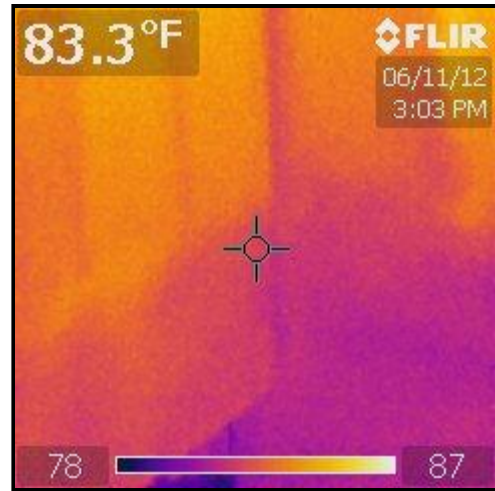
3.1 Picture 12



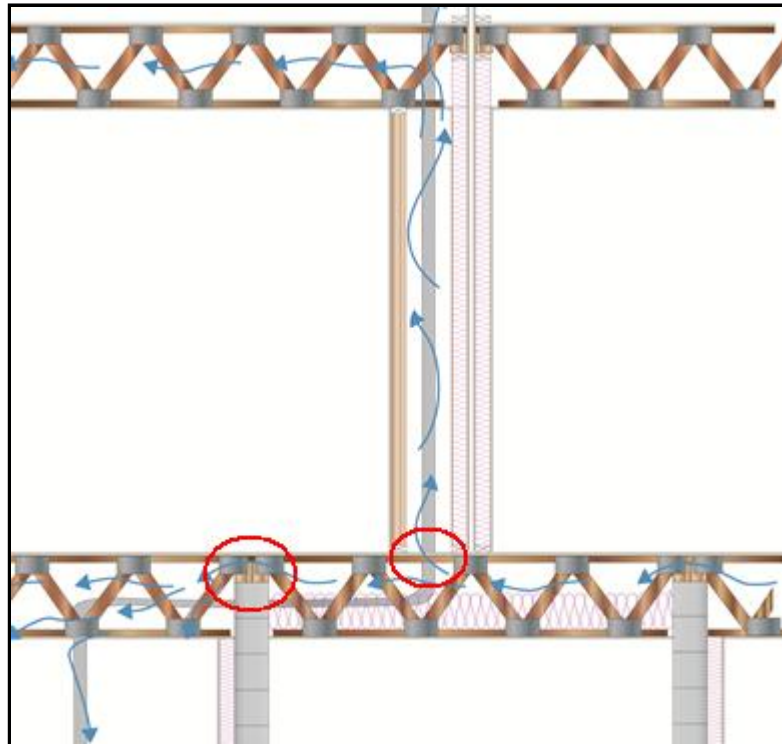
3.1 Picture 13



3.1 Picture 14



3.1 Picture 15



3.1 Picture 16

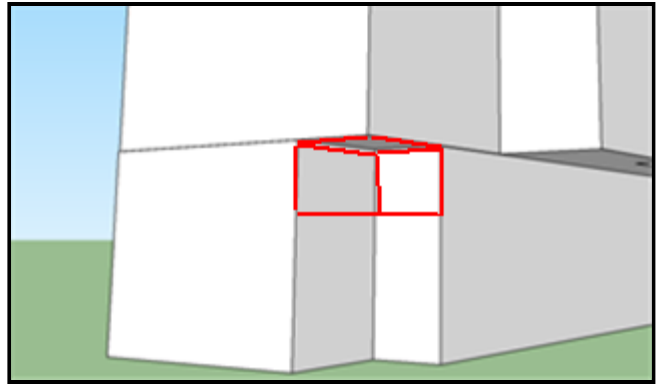
3.2 Air/thermal boundary alignment issues (i.e. cantilevered floors)

Repair or Replace

The underside of the 2nd floor that overhangs the front entry is not air sealed and insulated poorly with fiberglass, resulting in cold floors above. Recommend underside of the floor and the walls to the conditioned space be air sealed & insulated with spray applied foam when the garage is treated.



3.2 Picture 1



3.2 Picture 2

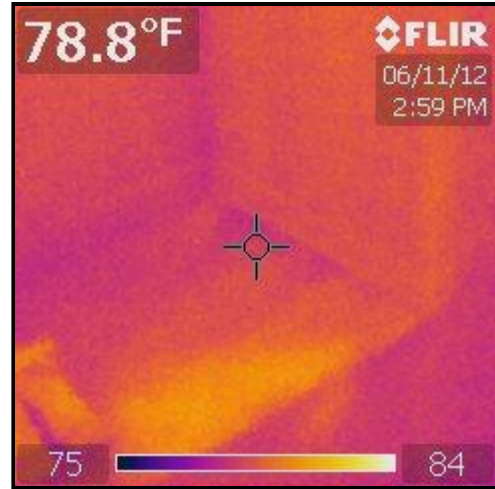
3.3 Air seal Baseboards

Repair or Replace

Air leakage around the stairs is another indicator of the connections between floor and wall cavities. Sealing the major openings should halt the minor leakage around the stairs.



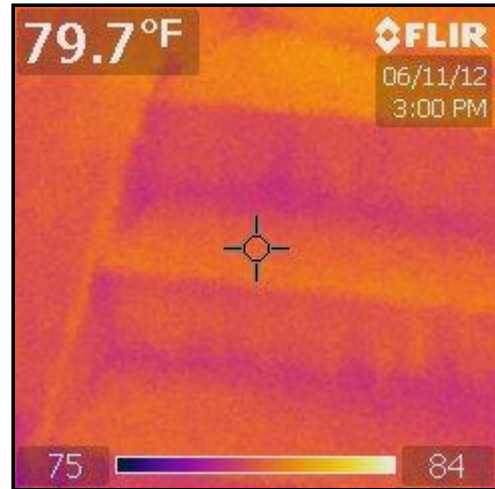
3.3 Picture 1



3.3 Picture 2



3.3 Picture 3



3.3 Picture 4



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