

THERMAL IMAGING REPORT



**Any Street
Any Town , NJ**

**PREPARED BY
LHI ANALYTICAL**



P.O Box 941, PENNINGTON, NJ 08534
609-924-1411 • 1-800-222-4301 • Fax 609-964-1741
WWW.LHinspection.com

February 24, 2011

Mr. Smith

Report: 0006719

Re: Any Street, Any Town, NJ

Dear Mr. Smith;

The report summarizing the conditions found from the visual inspection of the above referenced property done on February 24, 2011 is enclosed.

SCOPE OF INSPECTION

The purpose of the inspection is to measure the temperatures and temperature differences or variations of the visible, safely accessible, and readily accessible areas of the home by means of a non-invasive thermal digital imaging camera. To report these temperature differences and to identify areas with deficiencies in the inspected systems and components which existed at the time of the inspection and which are evident to the inspector through thermal imaging observation. Minor and cosmetic defects may be listed in the report for maintenance purposes but it is no the intent, nor will the inspection report identify and list all minor and cosmetic defects. The client is encouraged to accompany the inspector during the inspection. Client participation shall be at the client's risk for personal injury or damage to person or property for any reason or from any cause. The inspection and report are performed and prepared for the sole, confidential and exclusive use and possession of the client(s). The inspection report is not transferable. Systems and components to be inspected include (but are not limited to): Areas where temperatures are consistent with the presence of moisture including roofing, plumbing, bathrooms and kitchen, basement and crawlspaces and/or a

survey that includes evaluation for areas where temperatures are consistent with missing, non-uniformly distributed, marginal, or wet thermal insulation as well as an evaluation of the overall building envelope including air infiltration and heating and cooling losses from HVAC systems and/or areas where temperatures are consistent with the overheating of electrical related components.

This inspection report and any verbal information given during the inspection and, at any time subsequent to the inspection is **CONFIDENTIAL** and is for the sole use of the client. This report is not transferable or assignable to any third party.

Please contact our office with any questions.



Craig Lewis
LHI ANALYTICAL
CERTIFIED MEMBER ASHI #4479
License # 24GI00019400

XC:



Monitor Conditions

The following is a list of items that require monitoring. This list may contain items which were previous problems in the home or a list of older systems that are at or exceed the normal life expectancy. This section is to be used as a guide **only**, money should be budgeted for near future replacement of older systems.

EXTERIOR - FOUNDATION - BASEMENT

BASEMENT/CRAWL SPACE:

CRAWL SPACE:

Moisture stains were noted in the crawl area; around the rear septic pipe.

Maintenance and Improvements

The following are considered normal maintenance items or suggested improvement items. Failure to maintain a property can lead to major expenses and in some instances injury.

EXTERIOR - FOUNDATION - BASEMENT

WALLS:

CONDITION:

Moisture is soaking into the rear siding. Recommend diverting rain water from the upper roof.

INTERIOR

INTERIOR WALLS:

CONDITION:

Missing insulation was noted along the top of the wall on the staircase and above the master bedroom door.

CEILINGS:

CONDITION:

Missing insulation was noted above the master bathroom.

INSPECTION CONDITIONS

CLIENT & SITE INFORMATION:

CLIENT NAME: Mr. Smith.
CITY/STATE/ZIP: Sample.

CLIMACTIC CONDITIONS:

WEATHER: Overcast.
SOIL CONDITIONS: Damp.
APPROXIMATE OUTSIDE TEMPERATURE: 45 degrees.

BUILDING CHARACTERISTICS:

ESTIMATED AGE OF HOUSE: 26 years.
BUILDING TYPE: 1 family.
STORIES: 2
SPACE BELOW GRADE: Basement & Crawl space.

UTILITY SERVICES:

WATER SOURCE: Private.
SEWAGE DISPOSAL: Private.
UTILITIES STATUS: All utilities on.

OTHER INFORMATION:

HOUSE OCCUPIED? Yes.
CLIENT PRESENT: Yes.
PEOPLE PRESENT: Selling agent, Purchaser.

SCOPE OF INSPECTION

The purpose of the inspection is to measure the temperatures and temperature differences or variations of the visible, safely accessible, and readily accessible areas of the home by means of a non-invasive thermal digital imaging camera. To report these temperature differences and to identify areas with deficiencies in the inspected systems and components which existed at the time of the inspection and which are evident to the inspector through thermal imaging observation. Minor and cosmetic defects may be listed in the report for maintenance purposes but it is not the intent, nor will the inspection report identify and list all minor and cosmetic defects. The client is encouraged to accompany the inspector during the inspection. Client participation shall be at the client's risk for personal injury or damage to person or property for any reason or from any cause. The inspection and report are performed and prepared for the sole, confidential and

exclusive use and possession of the client(s). The inspection report is not transferable. Systems and components to be inspected include (but are not limited to): Areas where temperatures are consistent with the presence of moisture including roofing, plumbing, bathrooms and kitchen, basement and crawlspaces and/or a survey that includes evaluation for areas where temperatures are consistent with missing, non-uniformly distributed, marginal, or wet thermal insulation as well as an evaluation of the overall building envelope including air infiltration and heating and cooling losses from HVAC systems and/or areas where temperatures are consistent with the overheating of electrical related components.

EXTERIOR - FOUNDATION - BASEMENT

LIMITS OF THE INSPECTION

The inspection is limited to a non-invasive infrared thermal imaging scan to measure the surface temperature and the temperature differences or variations of the visible, safely accessible, and readily accessible portions of the home. The inspector will not dismantle and/or move equipment, systems, furniture, appliances, floor coverings, finished or fastened surfaces or components, personal property or other items to conduct this inspection or otherwise to expose concealed or inaccessible conditions. The inspection will not include destructive testing of any kind.

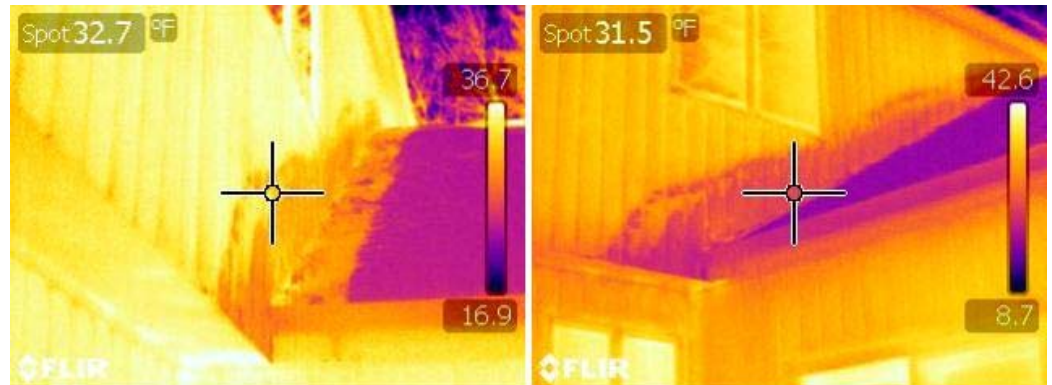
WALLS:

MATERIAL:

Wood siding includes shingles, shakes, boards, plywood panels and hardboard. Wood siding is prone to rot and decay. Dark blotchy sections of fungi or mildew should be cleaned to prevent damage to the siding. When painting, staining or using clear wood preservative; use a paint which contains a mildew-inhibitor additive; on unpainted surfaces use a penetrating preservative containing pentachlorophenol. If soil and stored wood is in contact with wood siding it may promote wood destroying insects.

Stone veneer. A veneer wall is a wood frame wall with an attached masonry facing made of clay, brick, concrete or split stone. The masonry rests on top of the foundation wall. It is attached to the wood by the means of corrosion resistant ties.

CONDITION:



Moisture is soaking into the rear siding. Recommend diverting rain water from the upper roof.

TRIM:

MATERIAL:

Wooden trim components require regular painting and maintenance. Trim components are often found to be rotted, missing, loose or damaged by vermin. Squirrels, birds and raccoons damage soffits and fascia to gain access to the attic space.

CONDITION:

Appears serviceable in most locations.

CONSTRUCTION:**MATERIALS:**

2x4 construction.

SHEATHING MATERIAL:

Plywood sheathing.

WALL INSULATION VALUES:

Wall insulation factor is approximately R-11 which is approximately 3.5 inches of insulation.

BASEMENT/CRAWL SPACE:**ACCESSIBILITY:**

Basement is fully accessible.

CRAWL SPACE:

Moisture stains were noted in the crawl area; around the rear septic pipe.

BASEMENT WALLS - TYPE:

Concrete block.

ROOF SYSTEM

ATTIC AND INSULATION:

ACCESSIBILITY AND CONDITION:

Attic is considered to be full size. All locations are fully accessible.

CONSTRUCTION:

MATERIALS:

To support the roof sheathing and transmit the roof loads to bearing walls or beams below. The term "rafter" is associated with sloped roofs. When these members are found on a flat roof, they are called "roof joists", although they do exactly the same job. Rafters can usually be seen overhead, when standing in the attic. Some rafters support finished ceilings, for example, where there is a cathedral ceiling. In this case, insulation is often fit between the rafters. Rafter construction. The typical materials utilized are wood, 2x4's, 2x6's, or 2x8's, spaced sixteen to twenty-four inches on center.

INSULATION TYPE AND CONDITION:

Fiberglass batts. Appears serviceable in most locations.

ROOF:

STYLE:

Gable.

TYPE:

Composition shingles are made by impregnating mats of either an organic felt material or fiberglass with asphalt and covering one surface with mineral granules. The mat is the vehicle for supporting the asphalt, which is water resistant. The granules protect the shingles from the damaging sun rays and also provide color. The average life expectancy of asphalt shingles is fifteen to twenty five years, dependent upon preventative maintenance done by the current owner, of which we are unaware.

INTERIOR

NOTE:

Although Infrared Thermal Imaging is a far better diagnostic tool than the naked eye, it does not guarantee 100% accuracy, unless removal or destruction of components can be achieved to validate findings. When possible, other tools are used to verify Thermal Images, but even with these considerations we do not claim to have x-ray vision. Conditions may change and cause the temperature readings revealed on Thermal Images to be different at any given time.

DOORS:

MAIN ENTRY DOOR:

Appears to be in serviceable condition.

OTHER EXTERIOR DOORS:

Sliding glass, Appears to be in serviceable condition.

INTERIOR DOOR CONDITION:

Appears to be in serviceable condition.

WINDOWS:

TYPE & CONDITION:

Double hung, Casement, A representative sampling was taken. Windows as a grouping are generally operational.

INTERIOR WALLS:

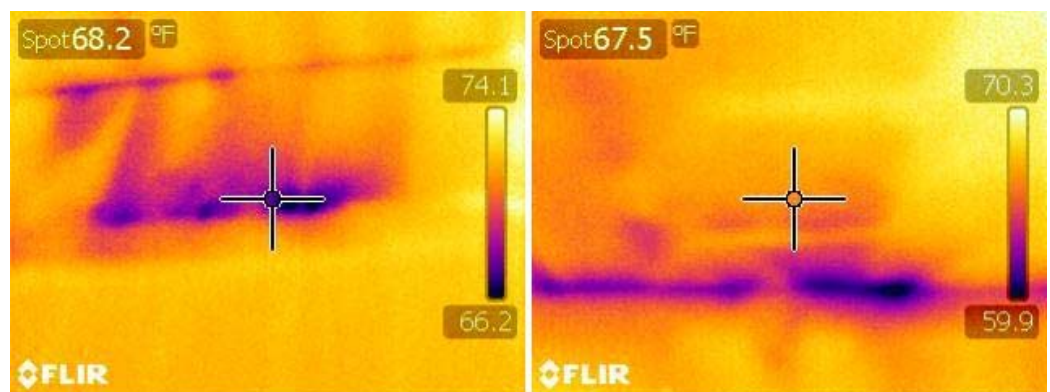
MATERIAL:

Plaster and drywall are essentially the same material. Drywall is premanufactured while plaster is mixed and applied by trowel on site. Plaster and drywall are made largely of gypsum. In some cases aggregate or fibers are added to the gypsum as stabilizers and strengtheners. These interior finishes are very common because they are inexpensive, relatively easy to apply and afford good fire resistance.

CONDITION:

Missing insulation was noted along the top of the wall on the staircase.

PHOTO

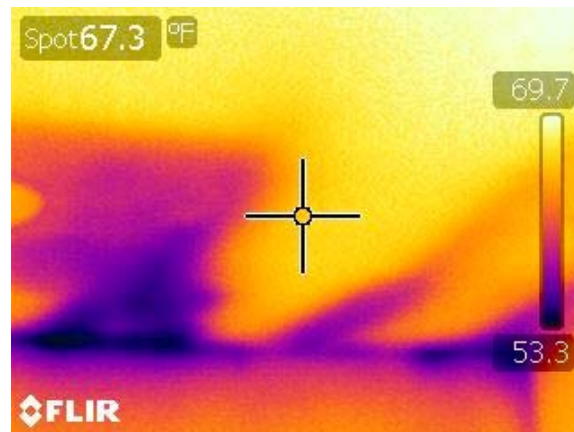


CEILINGS:**MATERIAL:**

Plaster and drywall are essentially the same material. Drywall is premanufactured while plaster is mixed and applied by trowel on site. Plaster and drywall are made largely of gypsum. In some cases aggregate or fibers are added to the gypsum as stabilizers and strengtheners. These interior finishes are very common because they are inexpensive, relatively easy to apply and afford good fire resistance.

CONDITION:

Missing insulation was noted above the master bathroom.

PHOTO

ELECTRICAL SYSTEM

Any electrical repairs attempted by anyone other than a licensed electrician should be approached with caution. The power to the entire house should be turned off prior to beginning any repair efforts, no matter how trivial the repair may seem. Aluminum wiring requires periodic inspection and maintenance by a licensed electrician. Operation of time clock motors is not verified. Inoperative light fixtures often lack light bulbs or have dead bulbs installed. Light bulbs are not changed during the inspection, due to time constraints. Smoke alarms should be installed within 15 feet of all bedrooms., and tested regularly.

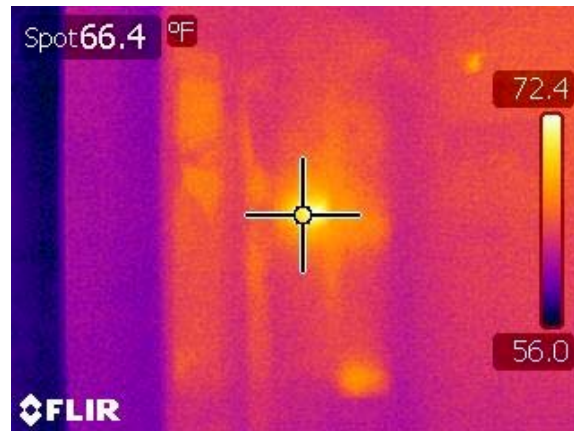
SERVICE:

TYPE AND CONDITION:

Underground, 150 Amp.

ELECTRICAL PANELS:

MAIN PANEL LOCATION AND NOTES:



Located in the basement. Appears to be in serviceable condition. No evidence of overheating was noted in the panel.

CONDUCTORS:

ENTRANCE CABLES:

Aluminum- OK.

BRANCH WIRING:

No evidence of overheating was noted.

SWITCHES & OUTLETS:

CONDITION:

Serviceable.

PLUMBING

Water quality or hazardous materials(lead) testing is available from local testing labs. All underground piping related to water supply, waste, or sprinklers use are excluded from this inspection. Leakage or corrosion in underground piping cannot be detected by a visual inspection. The temperature pressure relief valve, at the upper portion of the water heater, is a required safety valve which should be connected to a drain line of proper size terminating just above the floor elevation. If no drain is located in the floor a catch pan should be installed with a drain extending to a safe location. The steam caused by a blow off can cause scalding. Improper installations should be corrected.

MAIN LINE:

MATERIAL:

Copper.

SUPPLY LINES:

MATERIAL:

Copper.

WASTE LINES:

MATERIAL:

Plastic.

WATER HEATER:

TYPE:

Oil hot water heater. The average life of a hot water heater is eight to twelve years dependent on maintenance. It is recommended to drain about a gallon of water from the bottom of the tank every few months to flush out any sediment which accumulates at the bottom. The sediment burn off is bad for the life expectancy, efficiency and the operating noise level.

SIZE:

30 Gallons.

LOCATION:

Located in the basement.

CONDITION:



No evidence of overheating or leaking.

HEATING - AIR CONDITIONING

The inspector is not equipped to inspect furnace heat exchangers for evidence of cracks or holes, as this can only be done by dismantling the unit. This is beyond the scope of this inspection. Some furnaces are designed in such a way that the inspection is almost impossible. The inspector can not light pilot lights. Safety devices are not tested by the inspector. **Note:** Asbestos materials have been commonly used in heating systems. Determining the presence of asbestos can only be performed by a laboratory testing and is beyond the scope of this inspection. Thermostats are not checked for calibration or timing functions. Adequacy, efficiency or the even distribution of air throughout a building cannot be addressed by a visual inspection. Have these systems evaluated by a qualified individual. The inspector does not perform pressure testing on coolant systems, therefore no representation is made regarding coolant charge or line integrity. Subjective judgement of system capacity is not a part of the inspection. Normal service and maintenance is recommended on a yearly basis. Determining the condition of oil tanks, whether exposed or buried, beyond the scope of the inspection. Leaking oil tanks represent an environmental hazard which is sometimes costly to remedy.

HEATING SYSTEM DESCRIPTION:

LOCATION OF PRIMARY UNIT:

Basement.

SYSTEM TYPE:

Forced hot air. The average life expectancy of warm air systems is twenty five to thirty years. Warm air systems have advantages over other types of heating systems in that the air in the house can be cleaned. Another advantage of a warm air system is that a central cooling system can be readily installed. The major disadvantage of warm air systems is that, in the event of a faulty heat exchanger, the exhaust gases will mix with the circulation air around the house. A yearly service contract which includes inspections prior to the start of winter season is recommended. Installation of carbon monoxide detectors must be considered.

FUEL TYPE AND NOTES:

Oil.

CAPACITY OF UNIT:

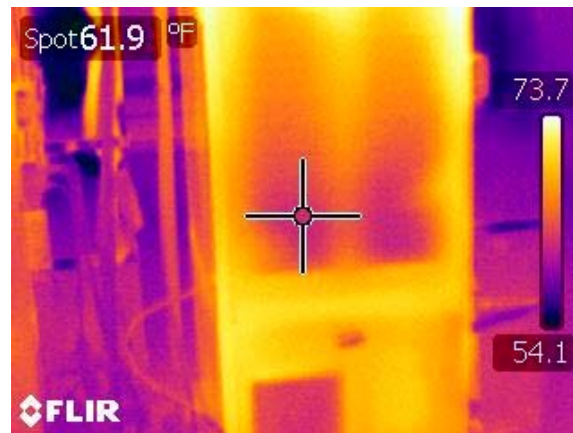
250,000.

SECONDARY HEATING SYSTEM:

Forced hot air.

HEATING SYSTEM CONDITION:

PRIMARY UNIT:



System was operational when tested. No evidence of overheating.

BLOWER FAN:

Appears to be in serviceable condition.

COMBUSTION AIR:

Appears to be in serviceable condition.

VENTING:

Appears to be in serviceable condition.

AIR PLENUM:

Appears to be in serviceable condition.