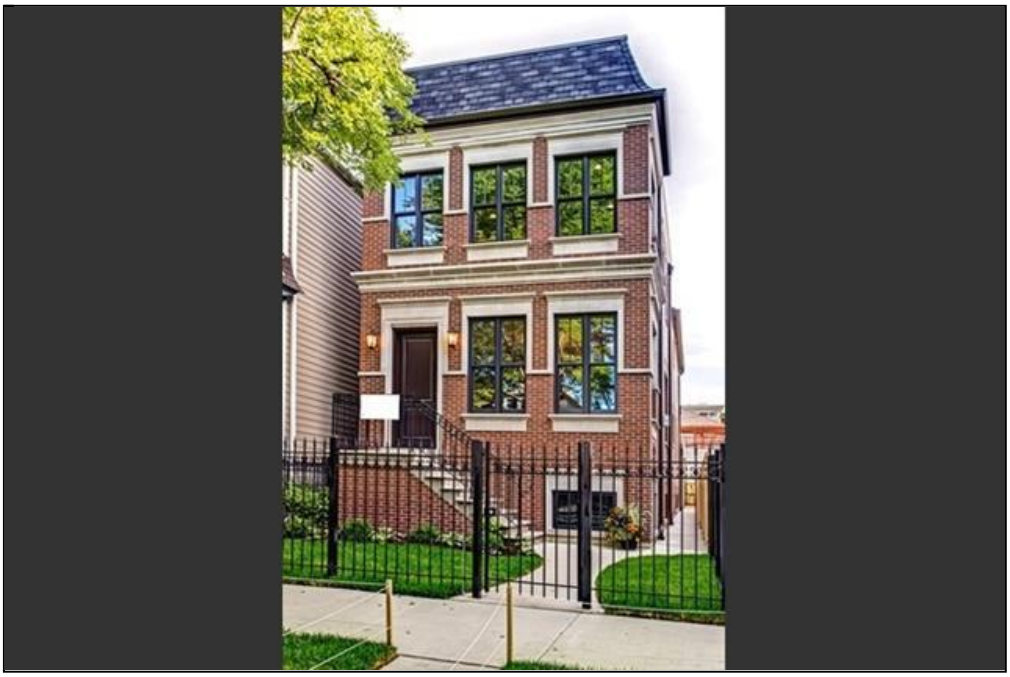
domicileconsulting
Property, Energy & Moisture Intrusion Inspections

Inspection Report

Darryl Darryl

Property Address:
1945 W Butterfly Lane
Chicago IL



1945 W. Butterfly Lane

Domicile Consulting

Dan Cullen 450.000570 Expires Nov. 2018
2545 W Diversey Ave Suite 206
Chicago IL 60647
312-488-1461

I. Domicile Consulting Report

This inspection is being conducted in accordance with the State of Illinois Home Inspector Licensing Act. No pest control, lead paint, asbestos, mold, or other types of testing are being performed. **This is a visual inspection of readily accessible systems and components of the building/s**. Some items or areas may not be inspected if they are blocked by furniture or stored items. The inspector makes no guarantees regarding any of the building's systems or components. **The inspection is performed in good faith and is a 'snapshot in time'; it is does NOT constitute a prediction that the buildings systems and components will perform adequately in the future.** Only non-invasive processes are used in the course of the inspection. Seasonal changes such as wind-driven rain, ice, and humidity may bring some defects to light that were not noted during your property inspection. Basements and attics that were dry at the time of the inspection can be damp or leak in later weeks or months. **If you discover any adverse conditions in the Property after your Domicile Consulting inspection, please call us immediately for a re-inspection and free consultation**. Your inspection fee will be refunded without question if you are unhappy with the inspection for any reason, provided the buyer/client signs a 'hold harmless' agreement when accepting the refunded fee. **No guarantees or warranties are provided in connection with this inspection**. Any disputes that cannot be resolved by the inspector and the client will be submitted jointly to the American Arbitration Association for a decision.

Styles & Materials

ROOF COVERINGS:
Composition (Asphalt or Fiberglass) Shingles
Modified Bitumen

ROOF VIEWED:
From a Raised Vantage Point Such as a Lower Roof
Roof Was Walked

GAS SHUT-OFF LOCATION:
East Exterior Wall

POTABLE WATER SOURCE:
Public

WATER SERVICE PIPING MATERIAL:
Copper
Main Water Shut-Off Location : Front Basement

WATER SUPPLY PIPING MATERIAL:
Copper
Not Fully Visible
Water Pressure and Flow : Appeared Adequate at the Time of the Inspection

COOLING EQUIPMENT STYLE:
Split System (Outside Condenser w/ Inside Evaporator)
Approximate Cooling Capacity in Tons : Approximately 5 Tons

COOLING EQUIPMENT MANUFACTURER:
Average Service Life of A/C Unit is 12-15 Years
LENNOX
Approx. Age of Condensing Unit : Less Than One Year Old

PLUMBING WASTE PIPING MATERIAL:
Not Fully Visible
PVC

WATER HEATER SIZE AND POWER SOURCE:
75 Gallons
Gas-Fired Water Heater
BTU or WATT Input Rating : 76,000 BTU

WATER HEATER MANUFACTURER:
A.O. Smith
Water Heater Statistical Service Life is 13 years.
Approximate Age in Years : Less Than One Year Old

ELECTRICAL SERVICE:
Below ground
Aluminum Service Conductors
240 volts
Location of Main Service Disconnect : Northeast Corner of Basement Family Room

SERVICE PANEL AMPACITY:
200 AMP
Main Panel and Sub-panel
Overcurrent Protection Devices : Circuit Breakers

SERVICE PANEL BRAND:
SIEMENS

BRANCH CIRCUIT CONDUCTORS:
Copper
Not fully visible
# of Circuits Used/# of Circuits Available for Use : A Large Number of Spare Breaker Spaces Are Available for Future Expansion

WIRING METHODS:
Electrical Metallic Tubing EMT (Conduit)
Not Fully Visible
Armored Cable (BX)

ELECTRICAL GROUNDING CONDUCTOR/CLAMP LOCATION:
Driven Ground Rod
Water Pipe Grounding Clamp

HEAT TYPE:
Forced Air Ducted System
Air Filter Size : 20 x 25 x 5

HEATING ENERGY SOURCE:
Natural Gas
BTU or KW Input per Hour : 88,000 BTU

HEATING EQUIPMENT MANUFACTURER:
Average Service Life of a Gas-Fired

VENTILATION:
Ducted Exhaust Fans in Bath/s
Kitchen Exhaust Ducted to Outside

Forced-Air Furnace is 15-20 years
LENNOX
Approximate age of unit : Less Than One Year Old

VEGETATION/GRADING/DRAINAGE:
No Obvious Defects Noted

FLOOR STRUCTURE:
Open Web Wood Trusses

CRAWLSPACE ACCESS:
No Crawlspace

COUNTERTOPS/CABINETS:
Natural Stone Countertops
Wood Kitchen Cabinets

ATTIC INSULATION AND VAPOR RETARDERS:
Inadequate Insulation Present
Not Fully Visible

FIREPLACES:
Metal Pre-Fab Fireplace. Can Be Used With Wood or Natural Gas
Sealed Combustion Vented Gas Log Set

MAIN FLOOR BEAM AND POSTS:
No Visible Posts or Beams

Items

A. EXTERIOR WALLS, GROUNDS, CHIMNEYS, ETC.

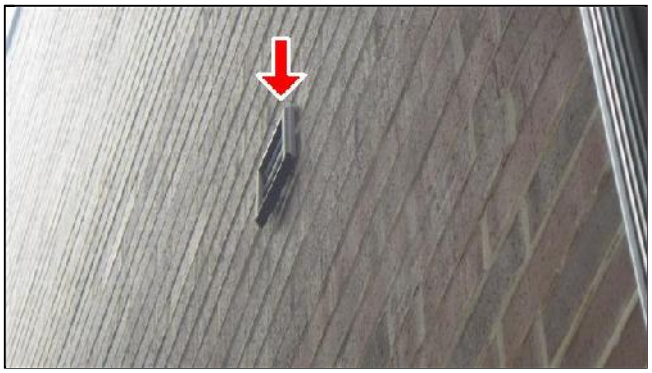
Comments: Not Functioning or in need of repair

A. Item 1(Picture) Missing Caulking

A. Item 2(Picture) Missing Caulking around Window Frame

(1) A number of areas of missing caulking or noted on the exterior of the home. The exterior caulking should be completed once weather permits.

A. Item 3(Picture) Missing Caulking



A. Item 4(Picture) Missing Caulking

A. Item 5(Picture) Missing Caulking

A. Item 6(Picture) Missing Caulking

(2) All exterior wall penetrations such as; piping, conduit, vent caps, etc. should be sealed against moisture intrusion, drafts, and energy losses through the use of the appropriate caulking methods and materials.

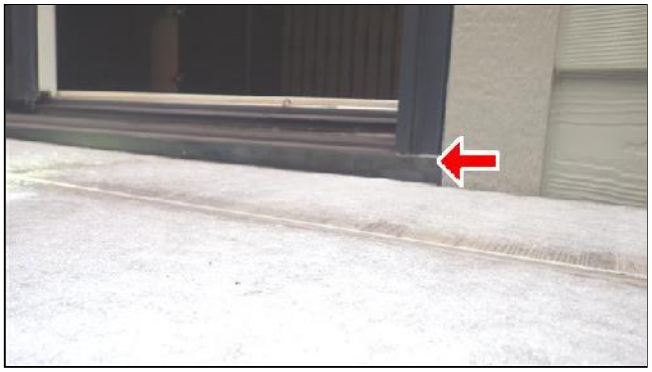
(3) Caulking is recommended at the top and sides of the exterior electrical lighting fixtures in order to prevent moisture penetration into the home and/or moisture contact with energized electrical equipment.

.

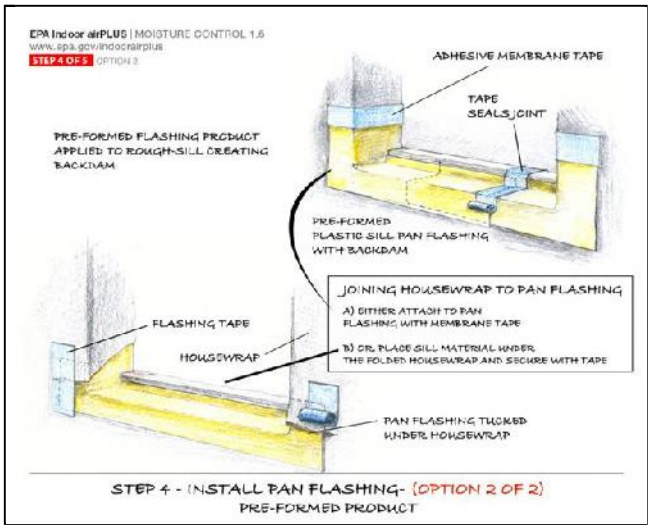
A. Item 7(Picture) Caulking Recommended

(4) The required drip cap flashing is absent from the top of the penthouse door assembly. This creates a significantly increased risk for moisture penetration and concealed moisture damage. This flashing is required by both the window manufacturer and the siding manufacturer. Repair by a qualified contractor is recommended.

A. Item 8(Picture) Missing Flashing



A. Item 9(Picture) Missing Sill Pan Flashing



A. Item 10(Picture) Sill Pan Flashing Required

(5) This exterior door has been installed without the benefit of sill pan flashing. This greatly increases the risk for moisture intrusion and damage at this critical location. It is recommended that the door be removed and that the door opening be protected from moisture intrusion by the application of the appropriate sill pan flashing, head flashing, weather resistant barrier, flashing tape, etc. Repair by a qualified contractor is recommended.

A. Item 11(Picture) Improper Siding Detail

A. Item 12(Picture) Improper Siding Detail

(6) The premier manufacturer of cement composite siding requires that an open space free of caulking be present between the horizontal edge of siding and the adjacent Z flashing. This requirement is intended to allow for moisture release at this location. It is recommended that the seller provide the siding manufacturers information and installation instructions to the buyer for further review.

(7) All of the steel window and door lintels should be finish painted in order to provide protection against corrosion and also for proper appearance.

A. Item 13(Picture) Painting Recommended

(8) Incipient corrosion was noted at the exterior metal work. A qualified painting contractor should make the necessary repairs to prevent ongoing and accelerating corrosion.

A. Item 14(Picture) Incipient Corrosion

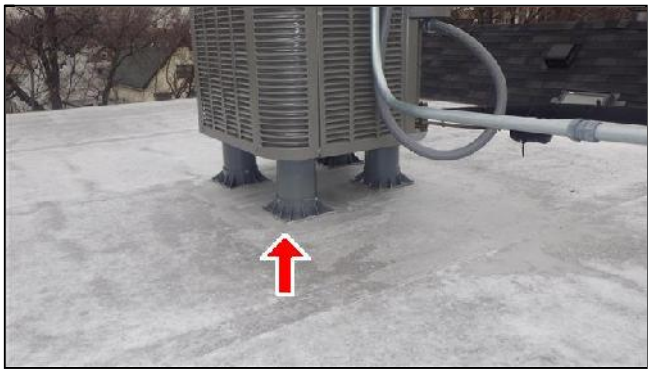
B. GARAGES & OUTBUILDINGS

Comments: Inspected

C. ROOF COVERING, ROOF FLASHINGS, ROOF DRAINAGE.

Comments: Not Functioning or in need of repair

The installation of one or more sacrificial layers of roofing material is recommended underneath the rather keen edges of the air-conditioning bases at the rooftop. During hot weather, the modified bitumen roof material will soften and that, combined with the weight and vibration of the condensing unit, can result in scarring, damage and leaking of the roof covering.



C. Item 1(Picture) Missing Protective Layer

D. STRUCTURE & FOUNDATION

Comments: Not Functioning or in need of repair

Floor trusses are engineered components which cannot be altered in the field without a stamped drawing by a qualified engineer or architect. It is recommended that the altered and weakened floor truss above the basement furnace be evaluated by a qualified professional and repaired as needed.

D. Item 1(Picture) Damaged Floor Truss

E. ELECTRICAL SYSTEM, GROUNDING, CONNECTED DEVICES AND FIXTURES

Comments: Not Functioning or in need of repair

E. Item 1(Picture) Missing Junction Box Cover

E. Item 2(Picture) Missing Cover

E. Item 3(Picture) Incomplete Installation

(1) Several of the exterior electrical junction boxes are lacking covers or other ancillary components. They should be furnished and installed as soon as practical.

(2) The evaluation of the low-voltage equipment in the home: alarm, communication, audiovisual, etc., is beyond the scope of the home inspection and should be performed by a qualified low-voltage electrical contractor.

E. Item 4(Picture) Low-Voltage Wiring Should Be Organized and Secured

(3) The basement bathroom shower door should be provided with some means for preventing impact with the electric wall switch.

E. Item 5(Picture) Wall Switch Interference

(4) The proper operation of the ceiling mounted pendant light fixture in the master bedroom should be demonstrated to the buyer at the final walk-through.

E. Item 6(Picture) Switch Not Found

(5) The installation of a protective bollard is recommended in front of the electrical meter socket and service conduit to prevent damage from vehicles.

E. Item 7(Picture) Protection Recommended

F. PLUMBING SUPPLY, DRAINS, FIXTURES AND VENTS

Comments: Not Functioning or in need of repair

F. Item 1(Picture) Missing Expansion Tank

F. Item 2(Picture) Example of Expansion Tank Installation

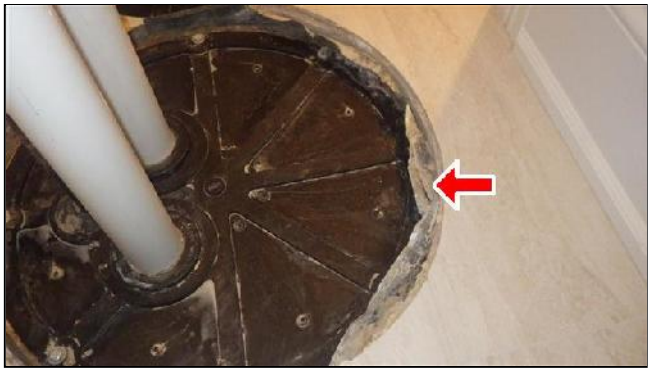
(1) The plumbing code has long required that an expansion tank be installed adjacent to the water heater in order to prevent excessive piping pressure and leaking. A qualified plumbing contractor should install the required expansion tank.

(2) All of the plumbing supply valves and gas valves in the home should be clearly labeled as to their function and areas they serve so that they may be used for emergencies, maintenance, and repairs.

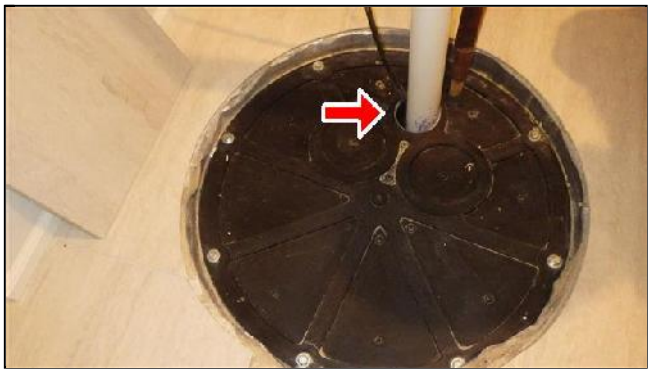
F. Item 3(Picture) Labels Recommended

(3) It is recommended that the jagged edges of the cast-iron basement floor drain be ground smooth and made flush with the adjacent concrete slab.

F. Item 4(Picture) Cast-Iron Floor Drain



F. Item 5(Picture) Sloppy Installation



F. Item 6(Picture) Sealing Recommended

(4) It is recommended that the ragged edges of the sump and ejector pit be trimmed and that both pits be sealed to a gas tight level to prevent moisture, pests, and radon gas from entering the home.

(5) The master bathroom bathtub is not properly secured in position. This presents a risk for excess movement, drain damage, leaking, etc. It is recommended that the bathtub be protected from excess movement according to the manufacturer's installation instructions.

F. Item 7(Picture) Inadequately Secured Bathtub

(6) Portions of the master bathroom shower mixer assembly are inadequately secured an at risk for allowing moisture penetration and moisture damage behind the tile. The shower mixer assembly should be repaired as needed by a qualified plumber.

F. Item 8(Picture) Loose Component

(7) **FYI:** The floor drain/s should be regularly monitored and re-filled with water as needed to prevent the migration of sewer gas into the home. The application of several drops of mineral oil can retard the evaporation of the water 'plug' in the floor drain trap.

F. Item 9(Picture) Regular Maintenance Needed

G. HEATING, AIR CONDITIONING, VENTILATION, AND GAS APPLIANCE SYSTEMS

Comments: Not Functioning or in need of repair

G. Item 1(Picture) Incomplete Furnace Installation

G. Item 2(Picture) Furnace Combustion Air Intake Opening

(1) The high efficiency furnace takes it's combustion/dilution air from the interior of the home. This reduces the fuel efficiency of the furnace. The furnace should be configured so that it's combustion/dilution air is taken directly from outside the home via the appropriate PVC piping. Further evaluation and repair of the furnace by a qualified HVAC contractor is recommended.

G. Item 3(Picture) Missing Condensate Drain Trap

G. Item 4(Picture) Air Conditioning Condensate Drain Piping Trap

(2) The installation of a air conditioning condensate trap is recommended in order to reduce the risk for energy losses and for splashing and leaking at the evaporator drain pan. Repair by a qualified HVAC contractor is recommended.

(3) Significant buildup of dust and debris was noted on the interior components of both of the HVAC units that are located inside the structure. The HVAC units should be thoroughly cleaned prior to closing. These cleaning should include evaporator coil, the heat exchanger, and the blower assembly. It appears that these units may have been used during portions of the construction process. This type of use can void the manufacturers warranty. It is also recommended that the units be evaluated by a manufacturer's representative in order to determine their warranty status.

G. Item 5(Picture) Dirty Return Air Plenum

(4) The humidistat control would ideally be placed next to the thermostat control. It's placement in the furnace closet presents an 'out of sight, out of mind' situation for the homeowner. The humidistat requires frequent adjustment during the heating season. Therefore, it is recommended that the humidistat be relocated next to the thermostat.

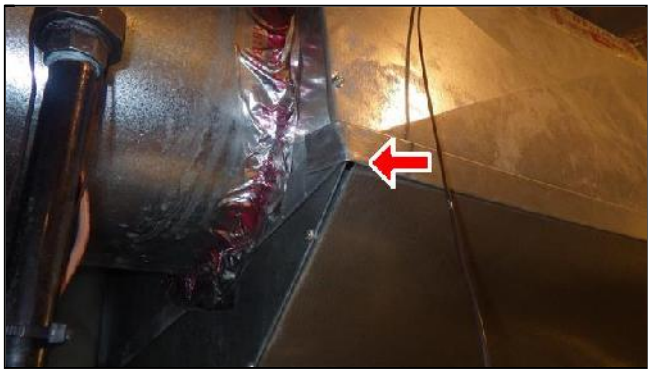
It is recommended that the homeowner purchase a digital hygrometer with which to monitor relative indoor humidity levels during the heating season. The digital hygrometer should be monitored and used as a reference when making adjustments to the furnace mounted humidifier's humidistat. It is recommended that relative indoor humidity levels between 30% and 50% be maintained in the home during the heating season via the careful use and control of the furnace mounted humidifier.

G. Item 6(Picture) Integrated Controls Recommended

(5) FYI: The hydronic boiler for the radiant slab heating system has not yet been installed.

G. Item 7(Picture) Pressure Tested Hydronic Tubing System

(6) The HVAC air ducts have not been adequately sealed against leakage. It is recommended that a qualified contractor utilize duct mastic to seal all duct joints.



G. Item 8(Picture) Inadequate Duct Sealing

(7) Best practices and industry standards, along with common sense and basic physics, require that return air capability be located at the highest and lowest living areas in the home in order to reduce the risk for temperature stratification. Also, the current International Energy Conservation Code which the city of Chicago subscribes to, requires that HVAC ducts be installed according to established criteria such as that published by the Air-Conditioning Contractors Association in their Manuals 'D', 'J' and 'S'. It is strongly recommended that the seller provide all such documentation to the buyer for further review. It is further recommended that a qualified HVAC contractor provide a plan and budget for the installation of additional return air capability at the upper walls of the penthouse level and at the lower walls of the basement level. In particular, the penthouse level is at risk for becoming untenable during hot weather due to this lack of return air capability coupled with significant areas of unshaded glazing.

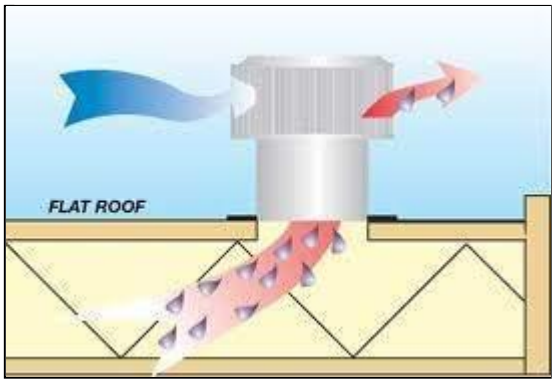
G. Item 9(Picture) Missing Return Air

(8) The gaps at the register boots should be sealed to reduce energy losses, to promote optimal HVAC airflow, and to prevent future displacement of the inadequately secured duct boots.

G. Item 10(Picture) Sloppy HVAC Duct Work

H. INSULATION, VENTILATION, ATTICS, ETC.

Comments: Not Functioning or in need of repair



H. Item 1(Picture) High-Performance Passive Roof Venting

H. Item 2(Picture) No Roof Ventilation Found

(1) The failure to provide ventilation at low slope roof assemblies, a.k.a. flat roofs, can result in wintertime condensation, wood rot, mold growth, etc. It is recommended that high-performance flat roof ventilation be installed by a qualified roofing contractor unless the seller can provide documentation that inappropriately designed and implemented unvented attic assembly is present.

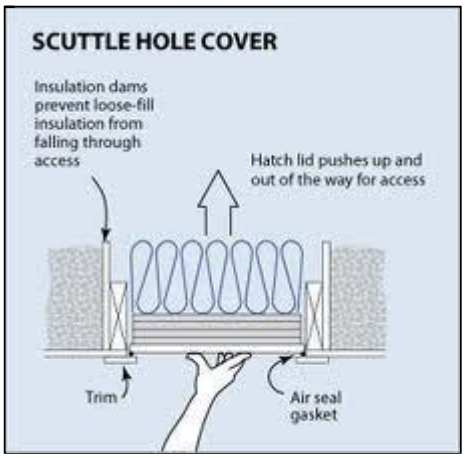
(2) The international energy conservation code requires that the type, amount, and performance value of the thermal insulation throughout the home be stated in a label attached to the electrical panel. In addition, other energy information is required at this location including window performance data. It is strongly recommended that the seller provide proof that the requirements of the existing energy conservation code have been complied with.

H. Item 3(Picture) Missing Insulation Data

(3) **The amount of insulation above the top floor ceiling provide significantly less insulation value than is currently required by the existing energy conservation code. It is most strongly recommended that a qualified third-party installation specialty contractor review the thermal insulation in the home and make all necessary improvements in order to comply with the existing energy conservation code.**

H. Item 4(Picture) Inadequate Insulation

H. Item 5(Picture) Improperly Configured Attic Hatch



H. Item 6(Picture) Attic Hatch Insulation Diagram

(4) The attic hatch should be insulated to the same R-value as the surrounding attic floor and the hatch opening should be weatherstripped in order to reduce drafts and energy losses.

(5) Mylar tubing is generally prohibited from use in kitchen ventilation systems due to its poor airflow characteristics, tendency to accumulate grease, and flammability. It is recommended that the mylar tubing be replaced with rigid, smooth walled, metal vent piping.

H. Item 7(Picture) Forbidden Material

I. FIREPLACES, WOODSTOVES, ETC.

Comments: Not Functioning or in need of repair

(1) The hearth extension in front of the wood-burning fireplace must be at least 16 inches deep in order to comply with long-standing safety codes. A qualified contractor should make the necessary repairs.

I. Item 1(Picture) Inadequate Hearth Extension Depth

(2) The gaps around the log lighter's penetration into the fireplace should be sealed to prevent flame or super-heated gases from entering the framing voids.

I. Item 2(Picture) Sealant Recommended

J. INTERIORS AND FINISHES

Comments: Not Functioning or in need of repair

(1) It is recommended that all openings through the basement bathroom tiled shower surround be sealed to prevent steam penetration.

J. Item 1(Picture) Sealant Recommended

(2) The large lid of the water meter enclosure should be provided with a safety hinged to reduce the risk for injuries to Little fingers.

J. Item 2(Picture) Safety Hinge Recommended

J. Item 3(Picture) Cabinetry Finish Damage

J. Item 4(Picture) Interior Trim Damage

(3) The wall-to-wall carpet installers appear to have caused damage to interior finishes in multiple areas. A qualified contractor should make the necessary repairs.

(4) Secure, **continuous**, and graspable handrails should be installed at all of the interior stairs in order to provide for safe stair travel.

J. Item 5(Picture) Missing Railing

(5) The grout joint at the base of the kitchen backsplash should be raked out and replaced with color matched, mildew resistant caulking.

J. Item 6(Picture) Cracked Grout

J. Item 7(Picture) Poor Workmanship

J. Item 8(Picture) Poor Workmanship

(6) defects were noted with regard to the installation of the glass tile at the kitchen backsplash. Repair by a qualified tile setting contractor is recommended in order to conform with commonly accepted appearance standards.

(7) The wooden HVAC diffusers should be made readily removable so that any dropped objects can be easily retrieved.

J. Item 9(Picture) Not Readily Removable

K. WINDOWS, DOORS, SKYLIGHTS

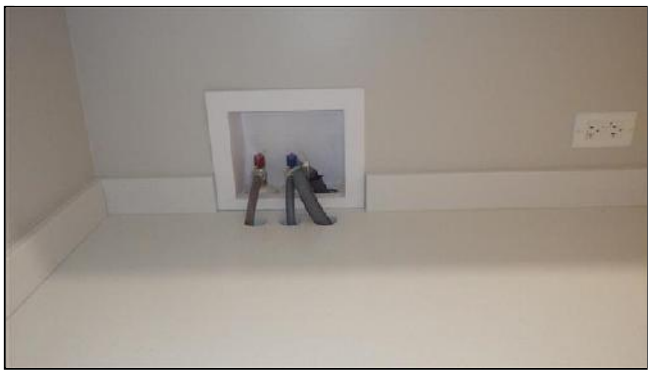
Comments: Not Functioning or in need of repair

K. Item 1(Picture) Risk for Wall Damage

K. Item 2(Picture) Inadequate Doorstop

(1) The doorstops did not appear to be appropriate or adequate. It may be advisable to install more robust doorstops or to add a second doorstop.

(2) FYI: The built-in nature of the laundry equipment prevented a thorough evaluation of multiple critical components.



K. Item 3(Picture) Concealed Components

(3) The front entry door should be repaired to stop drafts and energy losses.

K. Item 4(Picture) Front Entry Door

L. INSTALLED APPLIANCES

Comments: Not Functioning or in need of repair

L. Item 1(Picture) Missing Slope at Ceiling

L. Item 2(Picture) Steam Generator

L. Item 3(Picture) Connection for Auto Flush Mechanism

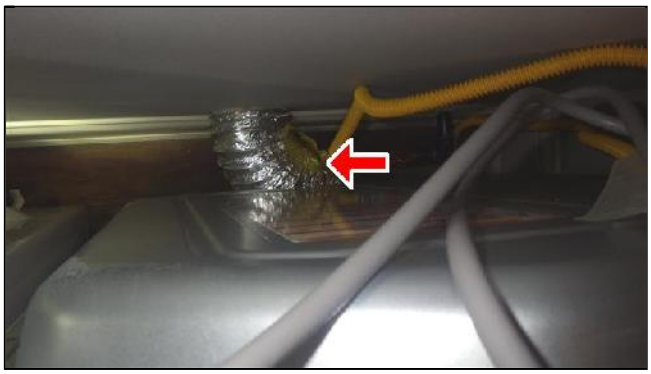
(1) The steam shower and steam generator are lacking some desirable and/or recommended features. It is strongly recommended that and in-line chlorine filter be installed in the water supply piping leading to the

steam generator in order to reduce the amount of chlorine and chlorine byproducts that are emitted during the steam cycle.

The installation of a auto flushing mechanism (recommended by and available from the steam generator manufacturer) is also recommended in order to reduce the risk for scale and sediment build up inside the steam generator and to increase the service life of the equipment. The following is a quote from the manufacturer's documentation: "Amerec's ADK auto drain option is highly recommended to automatically drain and flush the generator after every steam bath."

Also, the steam generator manufacturer and the Tile Contractors of North America recommend that the ceiling of the steam shower be sloped approximately three-quarter inches per foot in order to reduce the amount of condensation dripping onto the steam shower occupants. It is recommended that the master bathroom shower enclosure be further evaluated by a qualified tile setting contractor in order to determine cost and feasibility for repair of this apparent omission. The following is a quote from the manufacturer's documentation: "The ideal ceiling height is 7' to prevent uncomfortable temperature variations common in steam rooms with ceiling heights greater than 8'. As heat accumulates near the ceiling, bathers may experience uncomfortably cool temperatures near the floor. Amerec's EvenSteam™ Air Circulation Fan option available with our K200i Freedom Control system improves bather comfort in steam rooms with ceilings higher than 8'. The ceiling should be sloped a minimum of ¾" per foot to prevent condensation from dripping on bathers during a steam bath."

(2) The corrugated vent hose for the clothes dryer is prohibited by all appliance manufacturers due to it's poor airflow characteristics. This can result in increased drying times, reduced equipment life, and an increased risk of fire from lint build-up. The existing vent hose should be replaced with smooth wall metal vent piping.



L. Item 4(Picture) Forbidden Vent Material

L. Item 5(Picture) Missing Drip Pan

L. Item 6(Picture) Washing Machine Drip Pan

(3) The installation of a preformed drip pan is recommended underneath the washing machine in order to reduce the risk for leaking and damage in the event of an appliance malfunction.

L. Item 7(Picture) Missing Refrigerator Component

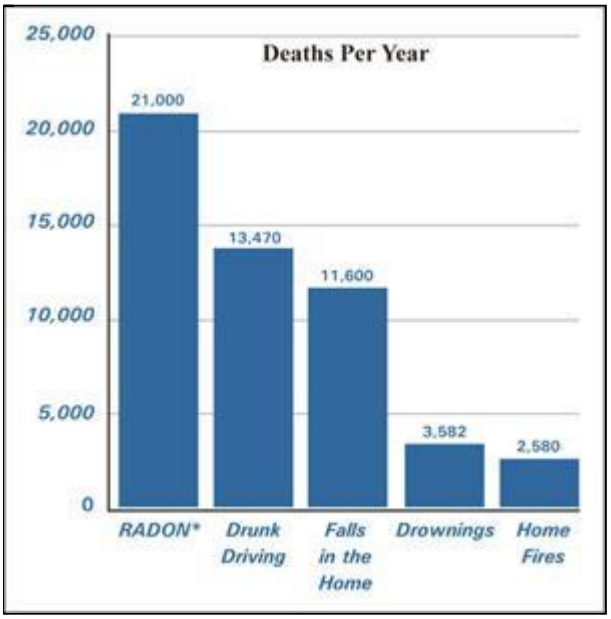
L. Item 8(Picture) Detached Trim Piece

(4) The missing refrigerator components should be furnished and installed prior to closing.

M. OTHER

Comments: Not Functioning or in need of repair

(1) **New homes have been required to have Radon Resistant New Construction components installed by state law since June of 2013. No such components were noted at this newly constructed home. The buyer should get further advice regarding this failure to comply with state law from his/her attorney.**



M. Item 1(Picture) Relative Health Risks

(2) Construction dirt and debris were noted in multiple areas. A thorough cleanup should be performed prior to closing.

M. Item 2(Picture) Additional Cleanup Recommended

M. Item 3(Picture) Missing Hardware

M. Item 4(Picture) Missing Interior Door Trim

M. Item 5(Picture) Incomplete Cabinetry Installation

M. Item 6(Picture) Missing Paint Finish

M. Item 7(Picture) Missing Window Hardware

M. Item 8(Picture) Missing Hardware

(3) A number of incompletely installed components were noted at this new construction home. It is recommended that a final walk-through be performed prior to closing.

All of the recommendations for repairs or alterations that are contained in this report should be performed by licensed and competent contractors with expertise in the appropriate trade or specialty. It is recommended that the repairs/alterations be completed prior to closing. The contractor/s who perform the recommended repairs at the seller's direction should provide the buyer/client with all appropriate documentation regarding the materials and methods used in the work. A list of contractors who have been rated and recommended by consumers can be found at www.angieslist.com

INVOICE

domicileconsulting
Property, Energy & Moisture Intrusion Inspections

Domicile Consulting
2545 W Diversey Ave Suite 206
Chicago IL 60647
312-488-1461
Inspected By: Dan Cullen

Inspection Date: 1/14/2017
Report ID:

Customer Info:	**Inspection Property:**
Darryl Darryl **Customer's Real Estate Professional:**	1945 W Butterfly Lane Chicago IL

Inspection Fee:

Service	Price	Amount	Sub-Total
5 Bedroom Single Family Detached Home	675.00	1	675.00

Tax $0.00
Total Price $675.00

Payment Method: Credit Card
Payment Status: Invoice Sent
Note: